THE APRIL 1933

RADEX

THE ALL-WAVE RADIO MAGAZINE



25°

Cutting Out Line Noise

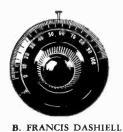
Building a Filtering Device

Amending the DX Rules

Short Wave Stations of the World by

Frequencies and Wave Lengths

APRIL 1, 1933



Reg. U. S. Patent Office

FRED CLAYTON BUTLER

Editor and Publisher



PAGE TAYLOR Short Wave Editor **NUMBER 68**

NINTH YEAR

Technical Editor

CONTENTS

Frontispiece—Sarah Ann McCabe

1
2
4
3
12
15
19
25
26
28
34
35
44
46
60
67
70
75

Published Monthly Excepting July and August See Subscription Blank on Page 24

\$1.75 per Year

THE RADEX PRESS, INC.

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

ADDRESS ALL CORRESPONDENCE TO CLEVELAND OFFICE

25c per Copy

APRIL DX CALENDAR

Special Programs for Distant Listeners

A. M. time is given as the night before. Thus early Monday morning programs are listed under Sunday night. Time is given in Eastern Standard so that programs may be listed in proper sequence.

proper sequence.					
					
SUNDAY NIGHT	April 14th				
April 23rd	2:00-4:00 - WHET, 1210, Troy, Ala.				
4:00-5:00 OAX, 790, Lima, Peru	4:00-6:00—KFBI, 1050, Abilene, Kans.				
April 30	April 21st				
4:00-4:30-KGAR, 137, Tueson, Ariz.	5:00-6:00-WJBU, 1210, Lewisburg, Pa.				
April 2nd, 9th, 16th, 23rd, 30th 12:00-1:00-WSAZ, 580, Huntington, W. Va.	April 7th, 14th, 21st, 28th 12:30-1:30-WCAL 590 Lincoln Neb				
12:15-1:00—KSOO, 1110, Sioux Falls, S. D.	1:00-2:00-CFCN, 985, Calgary, Alta.				
12:15-1:00—KSOO, 1110, Sioux Falls, S. D. 1:00-3:00—WGES, 1360, Chicago, Ill.	1:00-3:00—CKCL, 580, Toronto, Ont.				
MONDAY NIGHT	12:30-1:30 — WCAJ, 500, Lincoln, Neb. 1:00-2:00 — CFCN, 985, Calgary, Alta. 1:00-3:00 — CKCL, 580, Toronto, Ont. 1:30-3:30 — KGEK, 1200, Yuma, Colo. 4:30-5:00 — CMJH, 1150, Ciego de Avila, Cuba				
April 3rd, 17th					
4:30-5:15—WEAO, 570, Columbus, Ohio.	SATURDAY NIGHT April 1st				
April 3rd, 17th, May 1st 5:00-6:00—WAWZ, 1350, Zarephath, N. J.	19:00 9:00 CMCH 1:05 H C. L.				
April 24th	12:00-2:00—WBR, 1410, Roanoke, Va. 1:00-2:00—WBR, 1410, Roanoke, Va. 1:00-2:00—CMCY, 1325, Havana, Cuba. 1:30-2:30—CHGS, 1120, Summerside, P. E. I. 1:30-2:30—WTAG, 580, Worcester, Mass. 2:00-3:00—CHWL, 880, Hamilton, Ont.				
3:00-4:00—KDLR, 1210, Devils Lake, N. D.	1:00-2:00—CMCY, 1325, Havana, Cuba.				
April 3rd, 10th, 17th, 24th	1:30-2:30—CHGS, 1120, Summerside, P. E. I.				
12:00-2:30—WMIL, 1500, Brooklyn, N. Y.	2:00-3:00 - CHML 880 Hamilton Ont				
1:00-5:00—WABZ, 1200, New Orleans, La. 1:00-5:00—WSUI, 880, Iowa City, Iowa					
2:00-4:00-KOY, 1390, Phoenix, Ariz.	2:30-4:30-KXO, 1500, El Centro, Calif.				
2:00-4:00—KOY, 1390, Phoenix, Ariz. 3:00-4:00—CFJC, 1120, Kamloops. B. C. 5:15-5:30—WHP, 1430, Harrisburg, Pa.	3:00-5:00—KPCB, 650, Seattle, Wash. April 1st, 8th				
	1:00-5:00-WJEJ, 1210, Hagerstown, Md.				
TUESDAY NIGHT April 4th, May 2nd	April 1st. 15th				
3:00-6:00—WOPI, 1500, Bristol, Tenn.	2:00-4:00—10-AB, 1200, Moose Jaw, Sask. 3:00-5:00—10-AT, 1055, Trail, B. C.				
April 11th					
2:00-3:00 WDEV, 550, Waterbury, Vt.	April 8th, 22nd 1:00-3:00—KUSD, 890, Vermilion, S. D.				
April 18th	April 15th				
2:00-3:00—WJMS, 1420, Ironwood, Mich. April 25th	2:00-3:00-WTOC, 1260, Savannah, Ga.				
2:30-3:30—WCLO, 1200, Janesville, Wis.	April 22nd				
April 4th, 11th, 18th, 25th	3:00-4:00-WFAS, 1210, White Plains, N. Y.				
12:00-1:00—XEH, 1132, Monterrey, Mex.	April 29th				
5:00-6:00—KFGQ, 1310, Boone, Iowa	12:00-4:00-WIBW, 580, Topeka, Kans. April 1st, 8th, 15th 22nd, 29th				
WEDNESDAY NIGHT April 5th	9:00-2:00-WWRL, 1500, Woodside, N. Y.				
2:00-2:30—WHBF, 1210, Rock Island, IM.	12:00-1:00-WGBI, 880, Scranton, Pa.				
April 19th	12:00-1:00-WJBK, 1370, Detroit, Mich. 12:00-1:30-WWVA, 1160, Wheeling, W. Va.				
2:30-5:00-10-BI, 1200, Prince Albert, Sask.	12:00-2:00 WCAH, 1430, Columbus, Ohio.				
April 5th, 12th, 19th, 26th 11:30-1:00—KFUO, 550, St. Louis, Mo.	IZ:00-5:00-CDVICD, 9Z5, Hayana Ciiba				
12:00-1:00-WHBL, 1410, Sheboygan, Wis.	12:30-3:00—WBBZ, 1200, Ponca City, Okla.				
2:00-3:00-KFXJ, 1310, Grand Junction, Colo.	1:00-1:30-WKY, 900, Oklahoma City, Okla. 1:00-2:00-KQV, 1380, Pittsburgh, Pa.				
2:00-3:00—KFXJ, 1310, Grand Junction, Colo. 2:30-4:30—CKWX, 730, Vancouver, B. C. 2:30-4:30—KGFF, 1420, Shawnee, Okla.	1:00-1:30—WKY, 900, Oklahoma City, Okla. 1:00-2:00—KQV, 1380, Pittsburgh, Pa. 1:00-2:00—KTFI, 1240, Twin Falls, Idaho 1:00-2:00—WGBF 630, Evansyille, Ind				
	1:00-2:00—WGBF, 630, Evansville, Ind.				
THURSDAY NIGHT	1:00-3:00 — KRLD, 1040, Dallas, Texas. 1:00-3:00 — WGES, 1360, Chicago, Ill. 1:00-3:30 — WOW, 590, Omaha, Neb. 1:00-4:00 — KGU, 750, Honolulu, T. H.				
April 6th, 20th 11:30-3:00—WMBC, 1420, Detroit, Mich.	1:00-3:30 - WOW, 590. Omaha, Neb.				
April 20th	1:00-4:00—KGU, 750, Honolulu, T. H.				
5:30-7:00-WRAK, 1370, Williamsport, Pa.	1:30-3:00—KMAC, 1370, San Antonio, Texas				
April 6th, 13th, 20th 27th	2:00-3:00—CMGE, 1337, Cardenas, Cuba.				
12:00-2:00—WHOM, 1450, Jersey City, N. J.	2:00-4:00—KFEL, 920, Denver, Colo.				
1:00-2:00—WENC, 1420, Americus, Ga.	2:00-5:00-WMMN, 890 Fairmont, W Va				
12:00-2:90—WHÓM, 1450, Jersey City, N. J. 12:00-2:30—WMIL, 1500, Brooklyn, N. Y. 1:00-2:00—WENC, 1420, Americus, Ga. 2:00-3:00—CFAC, 690, Calgary, Alta.	2:30-4:30-CKWX, 730, Vancouver, B. C.				
FRIDAY NIGHT	2:30-5:00—10-BI, 1200, Prince Albert, Sask.				
March 31st	1:00-4:00—KGU, 750. Honolulu, T. H. 1:15-2:30—WOMT, 1210, Manitowoc, Wis. 1:30-3:00—KMAC, 1370. San Antonio, Texas. 2:00-3:00—CMGE, 1337, Cardenas, Cuba. 2:00-4:00—KFEL, 920. Denver, Colo. 2:00-4:00—WWAE, 1200, Hammond, Ind. 2:00-5:00—WMAN, 890. Fairmont, W. Va. 2:30-4:30—CKWX, 730, Vancouver, B. C. 2:30-5:00—10-Bl, 1200, Prince Albert, Sask. 3:00-5:00—CFCT, 630, Victoria, B. C. 3:00-4:00—KDB, 1500. Santa Barbara, Calif. 3:00-4:00—KFXM, 1210, San Bernardino, Calif. 3:00-4:00—KGER, 1360, Long Beach, Calif. 3:00-4:00—KGCX, 1310, Wolf Point, Mont. 4:00-6:00—KVOA, 1260. Tucson, Ariz. 4:00-6:00—XFB, 840, Jalapa, Mex.				
2:00-4:00—10-BQ, 1200, Brantford, Ont. 4:00-4:30—KGAR, 1370, Tucson, Ariz.	3:00-4:00-KFXM, 1210, San Bernardino, Calif.				
4:00-6:00—WOV, 1130, New York City.	3:00-4:00—KGER, 1360, Long Beach, Calif.				
March 31st, April 14th	0:00-4:00 KAL, 1420, Portland, Ure. 3:00-5:00 CKOV 1200 Kalowna B C				
1:00-5:00—KASA, 1210, Elk City, Okla.	3:00-6:00—KGCX, 1310, Wolf Point, Mont.				
April 7th, 21st	4:00-6:00—KVOA, 1260 Tucson, Ariz.				
4:00-5:00—XES, 1055, Tampico, Mex.	4:00-6:00-XFB, 840, Jalapa, Mex.				

MINIMIZING the

Noise NUISANCE

• • • By the TECHNICAL EDITOR

T is next to impossible to distinguish between the many forms of static which crash from our loud speakers. Natural static is quite beyond our control. Inductive, or "manmade" static is elusive, for, like natural static, it is picked up by the antenna and ground wires. But it can be controlled to a certain extent. Another important source of radio noise is in the 110-volt power line leading directly into the receiver. Battery operated sets, obviously, are free from line interference, but it is the a.c. set that gets every known form of static and noise.

The problem of noise elimination in a.c. and d.c. receivers has been attacked by most radio engineers and scientists. Progress has been made in devising new antenna systems which filter out some inductive and natural static before it reaches the radio set. But, in this discussion we are concerned with the noise that originates in the source of electrical power that operates the receiver. It seems to be more practicable and possible to conquer power-line noises than to eliminate other forms of static.

Power line noises account for more static than most people realize. Electric light lines that lead directly into a.c. or d.c. sets are a part of a vast system used for the transmission of electrical energy. The wires collect stray oscillations which appear in the form of radio interference or static noises. In the congested areas, such as built-up districts where apartment houses, hotels, office buildings, and others abound, these power lines are connected to electrical apparatus and devices that are operated by the opening and closing of contacts.

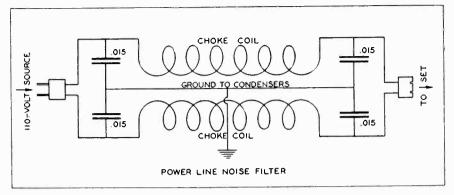
When a contact is made or broken

a heavy inductive surge of current takes place; sparks are produced; waves of high-frequency and damped oscillations occur; and there flows out over the line a radio-frequency current that is detected in all radio sets as a quick, sharp crash of static noise. The intensity of the flash when the electric contact is broken depends upon the amperage used in the apparatus, and this controls the strength of the surge over the wires and the degree of noise which is heard.

Radio receivers made for operation on 110-volt electric lines are equipped with filter devices. But these are particularly for the purpose of smoothing hum and ripple from the rectified current within the set so as to make the set humless. But such filters are



Gertrude Niesen, exotic young singer and impersonator. On the CBS Saturday at 10:45 p. m. and with Columbia Revue Monday and Friday at 10 p. m. EST.



designed for the elimination of 60-cycle hum; they do not take into account stray surges coming into the set over the power line at a much higher frequency.

Choking the H. F. Noise

The problem, then, is to provide additional and external filtering devices that will effectively block the higher frequency noise oscillations, but still permit the 60-cycle alternating current needed for the operation of the set to pass unmolested or unchanged in characteristics. While it is impossible, of course, to block out all noise coming over the power line, it is practicable to reduce the intensity of all, and totally to eliminate much. This is due to the inductive reactance of a coil of wire, called a choke, when it is placed in the power lines. Reactance is the resistance offered to the flow of an alternating current by a coil, and the larger it is the greater will be its reactance. A low frequency current, such as the 60-cycle a.c. source, will flow through a coil that effectively blocks currents of a higher frequency. Small coils, which are used in short wave work, choke back high frequencies very easily, while much larger coils are needed to control the low frequencies.

Power-line noises are created by frequency cycles much higher than the 60 cycles used in alternating current in the line. It is possible, then, to use choke coils of less reactance than would be required to block the 60-cycle current. Therefore, no resistance to the flow of power for the operation of the receiver is introduced, provided the d.c. resistance of the coil in ohms is held down by using a wire of sufficient size. But, since a coil of fixed size must be used, it is likely that some noise surges will leak through, for these coils cannot be tuned so easily only to the 60-cycle alternating current.

If we provide a filtering device constructed of choke coils and by-pass condensers, which will permit slowly alternating currents to pass while rapidly oscillating currents blocked or absorbed by the reactive resistance of the coil and reflected back into the power line, we take a step toward the reduction of noise caused by sudden changes produced by the opening and closing of circuits when elevators, light switches, refrigerators, fans, motors, cleaners, and other types of electrical machinery are operated.

Building Your Filter

The filter described herewith for RADEX readers consists of two choke coils, each connected in one of the leads of the a.c. power line between the lighting socket and the radio receiver. Each end of a coil is grounded through by-pass condensers to shunt any stray oscillations into the earth. The two coils are wound on fiber or bakelite tubes that are about six

(Continued on page 80)

AMENDING THE RULES

• • • Close of the Debate

UT of a bushel of letters regarding the proper rules for DX, we can find room for but a dozen but these are typical of them all. Only one rule meets unanimous approval and that is No. 1 which we repeat here: Do not log a station nor ask for verification unless you are positive in your own mind of the identity of the station. Our correspondents are agreed that the socalled Dxer who shoots in a report to the most likely prospect on or near the wave he heard, is hurting the game fearfully by tending to bring all DXers into disrepute with the station authorities. An example of this has just come to our attention.

Early in the fall station CKPR. Fort William, Ontario, notified us that, commencing in November they would have a DX program every Saturday morning at one o'clock. some reason they were unable to carry out their plan and overlooked notifying us. As a result this program appeared in our DX Calendar. Notwithstanding the fact that the station was not on the air "we have been pestered with letters from would-be DXers who comment on the clarity, etc., of our programs" says Ralph H. Parker of that station. Surely even the most obtuse of DXers must see that incidents of this kind bring an impulse to station managers to throw all DX letters and reports into the waste-basket.

There are listeners who, if they cannot understand a program, immediately look for the foreign station nearest to that channel and report reception of that station! If a man happens to be giving a Dutch monolog on the program, they look for a German station. If it is the Volga Boat Song, they look for a Russian. If it happens to be the

"Peanut Vendor," they look for a Cuban, and so on ad nauseum. What shall we do with this sort of person?

Rule Number One may therefore be framed and hung over every radio set. Do not log a station nor ask for verification unless you are positive in your own mind of the identity of the station.

The Diverse Views

The other five rules are the subject of furious debate. Each has its defenders and each has its opponents. We can only present some typical letters regarding them before we proceed to draw our conclusions.

Murray Bryce, R. M. D. 1, Royal Oak, V. I., B. C., agrees that the DX family certainly needs to agree on one set of rules. He thinks that one's log should be an honest measure of results. "I think it ridiculous to count a station twice merely because of a change in call letters. I disagree with your rules in counting a station twice because of a frequency change. Take KRLD for example, could anyone fairly say that it is five stations, just because it has changed its frequency that many times?"

Robert Brady, Jr., 47 Eastman Ave., Rochester, N. Y., thinks a change of locations should not count unless it is a material one in distance. He does not think that a change in frequency should permit a station to be counted again.

Says William P. Hinkelman, 385 Elizabeth St., Pasadena, Calif., "A glance at some of the DX logs reported in your magazine, indicates that they have been logged over a long period of time, from far and near, operating and deleted and new ones added each time some minor changes are made. This I would call gross collecting and it should not belong to DXing. I think DXing ought to be along the lines of mile-

age collected from distant stations logged during the period of a year's time, then submitted for comparison, instead of dragging out a log covering a period of four or five or more years. Then the beginner would have an equal chance with the old timers. It is my firm belief that rules along the above lines would be welcomed by true Dxers everywhere, would eliminate confusion and shooting for mileage would make for real DXing."

Howard Judson, Route 2, Rochester, Mich., agrees with A. E. Armstrong of Glendale, Calif., who, thinks Mr. Judson, has really the best idea of any vet submitted. a station changes its call letters (said Mr. Armstrong in the January issue) I also change the letters on my log but I do not count it as a new sta-Mr. Judson comments: "If tion." that idea were adopted and changes in frequency and call letters and minor changes in location were not counted, the totals would give a true impression of the number of transmitters actually heard.

"You certainly keep yourself in hot water," sympathizes Mrs. L. R. Ledbetter, 1109 Grammar Street, Vicksburg, Miss., "so here I am for the defense. Anyone who knows radio realizes that tuning is sharper on the higher frequencies. I have received CJGC, London, Ont., clearly before dark on 960 kcs., but I consider it impossible for me to log it on 695. CFRB came in on 960 as early as four p. m. but they are seldom heard on 690."

Channel Changes

Wm. A. Stead, 736 West 181 St., New York City, objects to the count of call letters each time they are changed. "Take, for instance, KMIC, Inglewood, Calif. They changed their call to KMCS and now it is KRKD. How the same station could be logged as three stations, is beyond my comprehension. I have logged 940 stations since 1922 and if I had included stations that had changed their frequencies and call letters, my



Well, well, here are "Goldy & Dusty" back again after five long years. On an Eastern CBS net every morning except Saturday and Sunday at 9:15.

log would now be about 2,000 stations."

Stuart Walmsley, 1641 West 60th Street, Los Angeles, Calif., agrees that a station should not be counted a second time merely because it changes its call letters. "Of course, if one has a large number of stations, it makes a fine showing in print but after all is said and done, it is not the number of calls that counts so much as the stations received."

Richard D. Caddell, 1115 Pender St. W., Vancouver, B. C., writes: "I do not count a station that changes its call letters as a new station but, on the other hand, I do count a station that moves to a new location. It seems foolish to consider a station that merely changes its call letters as a new station."

Harry P. Rosenbrock, 252 East 4th Street, Clifton, N. J., gets close to the heart of the matter when he says: "My opinion is that a DXer should have two logs—one a list of active stations he has received and

the other a list of all the stations he has received. It seems a bit foolish for me to count all the stations I've received since 1922 or earlier."

Simplicity is the keynote of the plan used by A. L. Long, 523 N. Dewey, Oklahoma City: "I do not worry about DX rules. I never log a station unless I hear the call letters as I do not want to take a chance on logging the wrong station. I do not ask for verifications because I know I have the station. I am DXing for my own pleasure and do not care whether anyone else believes that my log is correct or not. I keep my log up to date with the latest issue of RADEX. If a station has been deleted I drop it from my log. new stations have been added I try to get them."

Verifies His Locals

Heinz Milark, 102-10 135th St., Richmond Hill, N. Y., and E. L. Kimmons, 309 Leland St., Austin, Texas, takes exception to the rule against verifying local or nearby stations. Says the former: "I disagree about not writing to locals for verifications for I am sorry I have not done just that; many of my locals got the ax." And from Mr. Kimmons: "I take exception to the matter of 'wall-papering.' I have a verification-a personal letter from the manager-of our own local station, not because the report on volume or tone was any benefit to him, but it did let him know that I enjoy his station and I feel sure any local station will be glad to verify his home-town DXers." In regard to the other rules, Mr. Kimmons says: "Let's take rule No. 1. I certainly agree with you on this. About two months ago I copied a program from WWSW, a little 100watter in Pittsburgh, for one hour and thirty minutes before I was positive it was WWSW. Their selections were clear at times but the static messed up the announcements; finally I got a break and heard his station call several times. The same thing happened to YV1BC. Now if all DXers would stop jumping at conclusions and send a correct report to the right station all of us would receive our verifications more promptly and the stations wouldn't get sore at us because of another's faults.

"Now let's take rule No. 2: Last year two little stations in Iowa, (KWCR at Cedar Rapids was on 1310 and WIAS at Ottumwa was on 1420) changed frequencies. I already had those stations verified but on their first night on the changed waves, I heard both programs. Under your rule I would have had four stations."

Robert Emory Base, 4105 Alto Road, Windsor Hills, Baltimore, Md., quotes from a letter he received from Frank Scott in charge of issuing the DX certificates for the Newark News Radio Club: "In counting stations, we count calls only. If a station moves from one part of a state to another part of the same state, and uses the same call, it should be counted only as one station. station keeps the same call and moves to another state you may count it as another station. If a station remains in the same state and changes call, you may count it as another station."

Radically Different

An old DXer who asks that his name be not used has this to say: "I agree with you that there should be a uniform system of logging stations. I also agree with you that your proposed method is technically correct. However, it is so radically different from the methods generally used that I do not intend to follow Here are my reactions to the six First, to this point I give points: my wholehearted support, absolutely and completely. This is one of the cardinal points of DX I think. ing to guess the identity of stations by type of program, frequency or operating hours accounts for a very large portion of the unanswered reports, verifications refused and unfavorable attitude toward DXers as taken by many station officials.

"If a station changes its frequen-

cy. I do not relog it. Your argument is technically correct, a change in frequency gives an entirely new problem. Still I prefer to use the simpler system. Third, if a station changes its call I am going to relog it, the call being really the name of the station. The records will show that hardly ever is a call changed without some other major changes being made. Rule 4: To this one I agree-it's not an important one (rather silly to count phantom calls) -but every one seems to be doing it and I am too. Rule 5: I don't believe in logging police and other stations from outside the broadcast band but heard on harmonics or on sets which reach below the b.c.b. According to my way of thinking, a broadcast log should be a broadcast log and such other stations should be listed in a separate log."

Summing It Up

Earle H. Morris, 716 Beech Ave., Charleston, W. Va., sums the matter up thusly: "It isn't often that I mix in controversies raging in magazines but in this case of DX rules, I have very strong convictions. I agree wholly with your rules Nos. 1, 4, 5 and 6 but as to Nos. 2 and 3 I would like to offer this suggestion:

"What we DXers are really after is to keep as large a number of the present broadcasting stations upon Stations our DX lists as possible. that have been deleted are so much water under the bridge. Why keep them on our lists? As for old call letters, just because Mary Jones changes her name to Smith but continues to live at the same location. there is no reason for sending her two invitations to a party, is there? Rewrite No. 2 as follows: If a station moves to a new location it is to be deleted from your log. It is to be logged again only when received at its new location. No. 3: A station merely changing its power or call letters at the same location makes no change in the list."

There are the arguments, for and against. As some of the debaters



Claire Willis, 23-year-old singer, with the Travelers Quartet and Dolph Martin's Orchestra, Monday, Wednesday and Friday, Columbia network at 7:30 p.m. EST.

point out, there are really two sorts of records in DXing. The clubs all seem to award honors in accordance with the aggregate logs, that is the grand total of stations received whether in one year or ten. This magazine, on the other hand, is much more interested in logs of existing stations. The fact that a DXer received a WPDQ when that station existed a number of years ago, is not nearly so interesting to us as it would be to know that he has received WKEU, the new station we are adding this month.

We have avoided publishing huge logs very many times, not because we doubted them, but because those DX-ers were not in a class with the great majority of our listeners. It was too much like entering a golf pro whose usual score was in the sixties, in a public-course contest where breaking a hundred was a major

(Continued on page 80)

HELPFUL ADVICE to the TROUBLED

• • • Improving Your Set

HAVE a Silvertone 93 receiver that uses two -26 tubes which rapidly weaken after being inserted in the sockets. Should I use some of the new tubes in this set, or what do you advise to remedy this expensive tube trouble?

The -26 tubes in your set are the second and third radio-frequency amplifiers, and the obvious reason for weakening is overheating of the filaments and damage to the coating of thorium material through an excess potential. The rated voltage to be applied is 1.5 volts, and the current should be 1.05 amperes, approximately 1.6 watts per tube. Test across the filament contacts of these two tube sockets with a sensitive voltmeter while the set is turned on and operating. The potential should read slightly less than 1.5 volts. is higher steps must be taken to reduce to the rated voltage by suitable resistances. The -26 tube requires only a very low temperature (a dull red) to operate satisfactorily.

The first -27 tube (first radio-frequency) may be replaced by a new 56. The -71As cannot be replaced with -45s with any degree of satisfaction. The -71A tube requires only .25 ampere while the -45 consumes 1.5 amperes, or 6 times as much. The -45 uses only 2.5 volts while the -71A takes 5.0 volts, thus necessitating the insertion of suitable resistors to cut down the filament potential. It would be likely that the powerpack unit would be overheated in order to supply this additional current.

Mysterious Interference

A strange buzzing sound appears at intervals in my set. It ceases upon disconnecting the aerial. When it occurred the other night I went to several neighbors' homes and they found that the noise stopped too when the antenna was disconnected. How can we locate this interference, or to whom shall I communicate for aid?

The fact that the sets in the neighborhood hear the same buzzing sounds shows that the trouble does not lie in your receiver. Such troubles are hard to locate. It is likely that some X-ray machine, or similar appliance, is being operated evenings in your neighborhood. Does some physician reside nearby? There are other electrical devices—motors, fans, cars, etc., with sparking parts that cause serious interference.

The District Radio Supervisor in charge of your section can give you some good advice. He will be found in New York City. Or you can write the Federal Radio Commission, in Washington, D. C., for the name of your local radio inspector, who may be prepared to locate this interference for you.

Foreign Tubes

As I contemplate a journey to Germany I wish to take my little International radio set. Can I buy tubes in that country which will fit this set, or should I carry a supply of American tubes?

German tubes can not be substituted for our own forms. The Telefunken tube has longer and slimmer prongs which may not fit your sockets, and, as the International uses types 36, 38, 39 and the special rectifier KR1, it is advisable to carry proper tubes. Also, much German broadcasting is on longer waves, and the tuning limits of your receiver may not give you satisfactory reception in that country.

Grebe Control Values

Can I use new type tubes in my Grebe model 6 receiver? What are the values of the volume control and tone control used in this set?

We doubt whether substitution of 58s for the -35s in your set would be worth-while, and it is likely that the adapters under the 58s would raise them so high that they would interfere with shielding. Try 56s in place of -27s in the second detector and first audio "driver" tube sockets. Do



Edwin C. Hill on "The Human Side of the News" Monday, Tuesday and Wednesday at 10:30 p.m. And—don't miss this—Fridays at 9:30 p.m. "The Inside Story of Names that Make News." All CBS.

not use in the oscillator.

It is our understanding that the resistance of the volume control is 5,000 ohms, while that of the tone or "color" control is 100,000 ohms.

Wants Circuit Diagrams

If I install new tubes in my Philco model 90-A will they improve its performance? Can you furnish me with circuit diagrams for the Steinite receiver using -99 and -12A tubes, and advise me the value of its voltage divider? I also would like a diagram of my Stewart-Warner short-wave converter. Can I run the converter from my Philco?

New tubes for old in the Philco 90A is not recommended. This modern receiver is critical and replacements of tubes for which the circuit was not designed will tend to upset the balance. The 90A is an excellent set as it is.

A circuit diagram of the model 991 Steinite has been mailed you. None of the new tubes can be used to replace the -99s and the -12A in this set, for all the -99s are connected in series. A complete change of wiring would be necessary. A -71A can be substituted for the -12A, but a greater grid bias may be necessary. A 221/2-volt "C" battery can be attached in series with the lead to the grid of the present -12A socket and experiments made until the proper C voltage is obtained. It is not easy to provide greater C negative bias from the voltage divider.

The voltage divider is a series resistance made into several sections—1,000, 1,000, 250, 0, 250-ohms. A duplicate of the original may be procured from Wholesale Radio Service, 100 Sixth Avenue, New York City.

A schematic diagram of the Stewart-Warner short-wave converter has been sent to you. The plate voltage may be obtained from your Philco 90A at some point delivering filtered DC at a potential of the recommended 250 volts. A wafer adapter is the best method of tapping the plate contacts, together with the plate plug tip of the converter.

Wants Police Calls

What sort of simple device can I purchase to attach on my RCA Victor 10-tube receiver so that it will bring in the police calls in addition to the regular broadcasts?

Any short-wave converter, when attached to a broadcast receiver, will enable one to receive broadcasts made on the shorter waves, including the police calls. But, for the latter, a small and less sensitive device will be satisfactory. Such a single tube,

inexpensive short-wave converter for police calls, airplane and Coast Guard communications, is made by the Insuline Corporation of America, 23 Park Place, New York City, and may be ordered direct or through RADEX.

Tubes For Sparton

My Sparton 79A receiver uses the special Cardon tubes. Can you tell me what other standard types will match the tubes in this set?

Type -10 tube can be used in place of the Cardon 585 used in the Sparton receiver. The latter uses 7.5 volts on the filament the same as the -10. The six 484s, all of which are radio-frequency tubes and a detector, may be replaced by -27s. These -27s can not be replaced by the newer 56s to advantage in this set. The 485, replaced in your set by a serviceman, is the detector. Sylvania also makes tubes similar to the Cardons, for Sparton receivers.

The 484 and 485 uses 3.0 volts on the filament while -27s and 56s use only 2.5 volts. This means that -27s, when used in place of 484s, are slightly overloaded with filament current, but it may not materially shorten the effective life of the -27.

Bosch Plate Voltages

I wish to use a 2-tube Doerle shortwave converter with my 8-tube Bosch receiver and at the same time take off the necessary operating current for the two tubes. How, and where, may I find proper filament and plate potentials?

We assume you have Bosch model 58, using four -24s and one -27, with two -45s in power push-pull and -80 rectifier. Unfortunately, we have no data on the Doerle short-wave receiver. However, if this set's two tubes are similar to the above, you may take 2.5 volts off the filament secondary of the main power transformer which supplies the filaments of all the tubes without risk of serious overheating. Plate voltages may be taken from certain tubes of the Bosch. The plates of the first three

radio-frequency tubes have a potential of 170 volts; the -27 uses 150 volts; the plates of the two -45s take 250 volts; and 75 volts may be found on the screens of all the -24s. These tube plate voltages may be tapped by means of wafer adapters slipped over the prongs of the tube which is to furnish the voltage needed.

Unsatisfactory Connections

I have been using a General Motors short-wave converter with my Philoo 77 receiver, but the volume is very weak. There is a wire 25 feet in length running from the converter to the broadcast set. If I use the new tubes will it make the short waves work better?

The heterodyne converter should be placed as close as practicable to the broadcast receiver and the connecting high potential lead made as short and direct as possible—a few inches being too much in some cases. The long extension cord used by you is far too much.

Changing the -27 tube in the Philco will not increase sensitivity, for it is



"John Henry, Black River Giant" (Juano Hernandez) with Georgia Burke of the allnegro cast on the Columbia network Sundays at 8:00 and at 8:45 p. m.

an audio tube. A 56, in this socket, may improve the volume a small fraction. We do not recommend changing the -45s over to -47s in your set. No changes must be made in the converter.

New Tube Oscillates

After reading that a 56 type tube could be used to replace a -27 I inserted one in my Majestic 62 set. Now the circuit oscillates and fails to operate as it did before with the -27. Why is this?

When you substituted a 56 for the -27 tube in your Majestic it was the oscillator that you replaced. This portion of the circuit is very critical and cannot be altered. It is not good to replace oscillators with 56s or other tubes. Many changes in wiring and resistors would be necessary to permit the use of a 56 in place of your -27 in this instance.

Adding A Power Stage

As I wish to use a phonograph attachment on my RCA 60 receiver I believe another audio stage must be added to give me more power. Is this a practicable step, and how can it be accomplished?

The RCA model 60 utilizes one stage of audio amplification with one -71A power tube. This is insufficient for phonograph amplification. A new stage can be connected to the two terminals to which the present loud speaker is attached.

Connect the ends of the primary coil of a low-ratio (21/2 or 3 to 1) audio transformer to these two terminals in place of the loud speaker. The secondary coil is connected to another -71A tube in the same way the existing -71A is wired. G of the transformer secondary goes to the grid of the new tube, and F to the lower end of the grid coil that connects to the grid of the old -71A tube. Plate (P) of the new tube goes to the loudspeaker and thence to the B supply which is taken off the plate of the old -71A tube with a wafer adapter. If the loudspeaker has no output



Fred Waring's little brother, Tom, is heard in the vocal choruses when Old Gold broadcasts Wednesdays at 10 p.m. He also doubles at the piano. CES.

transformer, one must be used and connected into the plate circuit, with the speaker across the secondary output coil to prevent the plate direct current from burning out the speaker coil.

Converter And Headphones

I am using a Philco short-wave converter with my Philco 8-tube neutrodyne receiver. Will new tubes improve it? But I am particularly anxious to use headphones with the converter, if possible.

There will be no advantage in substituting the 56 for the -27, because the location of the latter, in the circuit, is such that the benefits of the 56 cannot be obtained. The Philco converter must be attached to the antenna terminal of the Philco receiver. Earphones cannot be used on the converter. The purpose of these converters is to take a weak signal of

(Continued on page 76)

VISITING RADIO STARDOM

with "Betty"

To innumerable thousands, Annette Hanshaw is known as Gay Ellis, Dot Dare and Patsy Young—names she has used over a period of years on the air and in making recordings. A native of New York, Annette first learned music from her talented father. She attended New York public schools until the family moved to Florida. Then she attended several convent schools and later a boarding school.

Her musical talent was apparent early in her life. Before she was fifteen, Miss Hanshaw had been offered two musical scholarships, but turned them both down to study art. She came to New York to attend the National Academy of Design, and for the time being completely forgot her music, which was to bring her fame in a comparatively short time.

After a year of art work she began to study piano. Later she took up the ukulele, and learned to play well enough to accompany herself. fame as an entertainer soon enabled her to get work at social functions in New York and nearby points. It was at one of these parties that a representative of a recording company asked her to make a test. That was in 1928, and since that time she has been heard in many parts of the Then she sailed with her world. mother and younger brother The moment her boat docked, she was asked to appear on the radio. She signed for a series of commercial broadcasts for a real estate firm in Clearwater, Florida.

Again she returned to New York where she turned down an offer from the late Florenz Ziegfeld to join one of his shows, but instead moved to Mount Kisco in Westchester, New York. There, between recording engagements, she opened a music shop. It was during this music shop era that

several sponsors of radio programs asked Miss Hanshaw to appear for them. She was invariably signed up after the first audition.

During the next two years she sang on many outstanding programs, and her voice is now heard on the Maxwell House Show Boat and with the Clicquot Club Eskimos. On the latter program she is known as Gay Ellis.

She spends her winters in New York and her summers in Scarsdale, but when it comes to vacation, she prefers Maine woodlands. She is not married because she hasn't "met him yet." She loves to go to bed late nights, read until she falls asleep and to remain in bed as late as possible. She is one of the best dressed artists in radio, and prefers blue.

Julia Sanderson

Julia Sanderson was born in Springfield, Mass., the only child of Mr. and Mrs. Albert Sackett. Instead of meeting discouragement when she proposed going on the stage, her parents helped her at every opportunity. At the age of thirteen she was going to school in the morning and studying for the stage in the afternoon. When she was fifteen, Miss Sanderson went to New York to engage in chorus work. Her first show was "Winsome Winnie," where Shubert saw her and offered her a contract. After she had made her debut, other opportunities came rapidly. But her first great chance came when Charles Frohman heard her sing and decided to star her. She went into the rehearsals of "Sunshine Girl" and was an immediate success. Marion Davies was in the chorus.

Other successes followed, and then she joined "Tangerine" in 1922. At the very first rehearsal she met Frank Crumit. He was her leading man and from that moment on they hit it off and have been together ever since.

Five years ago they married. Their

last show was "Oh Kay!"

They finally decided they were weary of travel and began to plan their home. They chose an ideal spot at Longmeadow, near Springfield, Mass., which they appropriately called "Dunrovin." It has been a happy home, says Miss Sanderson, for there she has found peace and quiet that the road could never give. Frank keeps up with his golf and she maintains her own garden and oversees her charming home. She also assists Frank in the preparation of their Blackstone Plantation programs and writes many of the personal letters that go to their listeners.

Miss Sanderson is five feet, three inches tall and weighs 126 pounds. Her complexion is fair and her hair is golden. Her hobby is collecting photographs and autographs of stage celebrities. She has almost 500

photographs.

Frank Crumit

Frank Crumit was born in Jackson, Ohio, September 26, 1889. Was graduated from old Jackson High, went to Culver Military Academy, and later matriculated at Ohio University at Athens. He went into vaudeville with a couple of fraternity brothers and in 1915 broke into "Queen of the Movies" with his uke. But vaudeville called again and Frank returned to the stage to bill himself as the "One Man Glee Club."

From then on, Frank clicked. He starred in "Betty Be Good" in 1918, and "Greenwich Village Follies" in 1920. In that year he made many records and found himself nationally famous because of them. In 1922 he accepted an offer to play the lead in "Tangerine" and met, as he puts it, "a girl with a funny little giggle."

While listening to a radio program one day at their cottage at Longmeadow, Frank suddenly got the notion that radio was for both of them. It had never entered Miss Sanderson's head to appear publicly again. Life stretched before her with ease and comfort a delightful certainty.



Gay Eilis, Dot Dare. Patsy Young and Annette Hanshaw—all in one.

But once ignited, their enthusiasm was boundless and the two famous musical comedy stars were soon familiarizing themselves with all of the technique of broadcasting. They began their air careers over NBC in 1928 and have been heard without a break since.

Pictures of Miss Sanderson and Mr. Crumit appear on page 17.

STAR DUST

Roy Atwell, the word-scramblerheard on Fred Allen's Revue, has a featured part in "Strike Me Pink", the new Brown and Henderson musical show. Others starred in the production are Jimmie Durante, Hope Williams, Lupe Valez and Hal LeRoy.

Sunday evening is both the busiest and the pleasantest time of the week for Ernest Hutcheson, the distinguished pianist who is heard in weekly CBS recitals. Mr. and Mrs. Hutcheson regularly give Sunday evening parties for approximately twenty of the outstanding young students at the Juilliard Graduate School of Music, of which Mr. Hutcheson is Dean. Following supper and a few games of bridge and ping-pong, the party journeys to the CBS studios, where the student group witnesses the radio recital from select seats directly beside the distinguished pianist. Following the broadcast, the Hutchesons usually drop in at one of Author John Erskine's regular Sunday night parties, where Hutcheson frequently entertains those present with his playing until the small hours of the morning.

After years and years of struggling along on their own resources, Amos 'n' Andy (Freeman Gosden and Charles Correll) have employed a secretary. Now the two NBC comics admit that it keeps them busy trying to find enough work to keep her busy.

Jack Pearl, the Baron Munchausen of the Thursday night Magic Carpet, has postponed his movie career until June 27th. He'll return in October to the air waves, but there'll be a national convention of Baron Munchausen clubs held in Central Park Mall in New York early in June—before Der Baron turns film star.

Don't be surprised if Carson Robison, noted hillbilly exponent, lands on a Middle Western station this summer. They're begging him to come out to do his stuff nightly.

Many of the torrid arrangements for Ben Bernie's orchestra come from the facile pen of Dick Stabell, saxophone player for the Old Maestro. And of his work Ben says, "Dick puts fire in his arrangements, but sometimes we have to put his arrangements in the fire."

B. A. Rolfe's startling return to the air was engineered by Douglas Storer, New York advertising agency man, who pointed out to NBC that since the Magic Carpet was giving up the Saturday night spot where Rolfe became famous, that if they put Rolfe in there to hold listeners, he'd get a sponsor for the hour within a week's time. NBC called his offer—so an auto manufacturer (Hudson-Essex) sponsors the hour. That's radio history, because the famous "ten-to-eleven" hour was saved with the same music listeners have been getting at that spot for four years. The "Men About Town" also appear on the hour.

Those "Three California Nuts", Ken Browne, Cliff Arkell and Red Corcoran, who appear at 7:30 p. m. EST Sunday nights over the WEAF network, were the "Three Public Enemies" on the Pacific Coast. Unless all experts are wrong, they will be radio's next great comedy sensation.

At last an Irish baritone is looming on the horizon. For years the words "Irish" and "tenor" went together. But Tommy McLaughlin, the "Romantic Bachelor," is making folks like an Irish baritone. Incidentally, Tommy holds the radio record for being a godfather, standing up for four different children in five weeks.

How do you like the new "Sammy" and "Rosie" on the Goldberg's program?

* * *

Brickbats

"I think Ray Perkins is the most tiresome person on the air. His efforts to be funny are pathetic."

Mrs. R. C. F., Topeka, Kans.

"I always jump for the dials when I hear that dirge that precedes 'Chandu the Magician.' Do you suppose anyone listens to it?" J. L. K., McKeesport, Pa.

"Advertisers who pay good money to put murders and gangster stories on the air, have a queer sense of values."

Miss B. C. J., Denver, Colo.

Bouquets

"I never used to care for Rudy Vallee but I think he is now putting on the very best show on the air."

K. L. S., St. Petersburg, Fla.

"Don't you think 'The Magic Voice' is unusually well prepared and presented? I do You are always anxious to hear the next one." Miss F. C. J., Kalamazoo, Mich.

"In my opinion the dramatic interview of Warden Lawes by Edwin C. Hill in 'The Inside Story' was the best thing I ever heard."
W. A. B., Shreveport, La.

The INTRIGUING Field of the SHORT WAVES

• • • B_{γ} PAGE TAYLOR

EDITOR'S NOTE: This department of our magazine has aroused a widespread interest among those readers who have heretofore confined their tuning to the broadcast band. These listeners are anxious to try the short waves with their present receivers. Mr. Dashiell and Mr. Bradford of the National Radio Institute are collaborating on an article on a simple but efficient short-wave converter which Mr. Bradford has designed. article will appear in the May issue of this magazine and will present full instructions for building this inexpensive converter.

. . .

ATTENTION is invited to the complete list of the Short Wave Stations of the World in the present issue. It is true that a shorter list presenting only those stations that can be heard at the present time has its advantages, but due to the fact that short wave reception conditions change rapidly and long-forgotten stations sometimes suddenly reappear, it is well to give, occasionally, a complete list such as this one to facilitate the identification of those stations.

The advantages of this list can readily be appreciated by recalling that the list which appeared in RADEX last October included such stations as PHI, DJC, DJD and DJE, none of which was, at that time, on the air. They have since been heard, however, and RADEX readers who heard them were not handicapped in identifying them as one would be who uses the shorter lists exclusively.

Warning!

Because most point-to-point stations (telephone stations) transmit material of a nature private to the

user of this service, whether it be radio telephone service or program material intended for some foreign point, both the station and any chance listener are required by International Treaty and United States Law not to divulge the nature or even the existence of such transmissions. For this reason listeners are advised not to request confirmation of reception from these stations. However, since foreign telephony stations often request reports regarding the interception of their experimental transmissions this advice cannot be made to apply in all cases. Stations that do not acknowledge reports from listeners are indicated in our lists by an asterisk (*).



Here is Augustus Barratt who writes the scripts and takes a prominent role in "The Magic Voice" Tuesdays and Saturdays on CBS at 8:15 p. m.

Easy Lesson in H. F.

This paragraph is written especially for beginners. In previous issues of RADEX instructions were given with regard to careful and patient tuning. Included here are two more impor-First, do tant rules to remember. not expect foreign stations to be weak and thereby pass up all the loud stations; many times a foreign station will be the loudest one in the band. Secondly, do not pass up a station if it is playing American jazz or announcing in English, as it may be German, Spanish or even Japanese. One never knows. It is quite possible that some of you are overlooking distant stations due to the volume or the nature of the program, as this has been done many times by even veteran tuners. This month we are listing ten stations that have been regularly received at good speaker volume in nearly every part of the continent. If you are having trouble finding foreign stations our suggestion is that you concentrate on this small group until you have heard some and learned how easy it is to tune them in. The time given is about when they reach maximum volume. Time shown is in EST.

Daventry, England, 8:30 p. m. 6.050 49.56 GSA. daily. Caracas, Venezuela, 8:00 p. m., 6.119 49.00 YV1BC. dally. Riobamba, Ecuador, 10 p. m., 6.618 45.31 PRADO, Thursday. Geneva, Switzerland, 5:00 p. m., 7,872 38.47 HBP, Geneva, Switzeriand, 5:00 a.m. Melbourne, Australia, 5:00 a.m. Wednesday and Saturday. Daventry, England, 4:00 p. m., 9.503 31.55 VK3ME, 9.585 31.28 GSC. daily. Madrid, Spain, 6:00 p. m., 9.862 30.40 EAQ, daily. Pontoise, France, 5:00 p. m., 11.711 25.60 daily.

Zeesen, Germany, 3:00 p. m.

Rome, Italy, 5:00 p. m. daily. 11.753 25.51 DJD. 11.800 25.40 I2RO,

The Thrill of Big Ben

Undoubtedly one of the most famous time signals in the world is Big Ben atop the Houses of Parliament in London, which thousands of short wave listeners throughout the world have heard chiming the hour of midnight through station G5SW. With the passing of 5SW in December, however, Big Ben was not discarded as the new Daventry stations continue the custom of broadcasting this bell.

Any short wave fan who has never heard the thunderous, deep-throated tones of Big Ben should tune in GSA just a few moments before 8:00 p.m. any night and hear the Westminster chimes, which will be followed by Big Ben striking one o'clock.

Old Friends Back

One of the world's pioneer short wave stations has returned to the air after an absence of nearly three years. This is PHI located at Huizen, Holland, and operating on 16.88 meters. We understand, unofficially, that it will soon be heard on 25.57 meters with the call letters PHOHI.

Another old friend, VE9DR, has also returned and, judging by the volume with which it is received most listeners thought the original power of 2000 watts was used but the station officials inform us that the power has been reduced to 50 watts and the transmitter is now located in the heart of the City of Montreal. The present schedule is: Daily except Sunday, from 7:30 a.m. to midnight, and on Sunday from noon to 11:15 p.m.

The Maritime Broadcasting Co., Ltd., of Halifax, Nova Scotia, advise us that their station VE9HX has been moved down to 48.95 meters and uses a power of 200 watts.

For Code Readers

Mr. L. F. Stetson, 3420 Janssen Ave., Chicago, Ill., kindly sends information which will be of interest to anyone who can read code transmissions. He writes: "Amateur station VU2FY, Mr. O. A. F. Spindler, Coromandel P. O., South India, will be carrying out a special series of tests on CW on the 13th, 14th and April, wavelength of15th meters, frequency 7,224 kc/s, at 5:00 a.m. Indian Standard Time (6:30 p.m. E.S.T.). He will be grateful if all British amateurs, members of the B. E. R. U. and A. R. R. L. and all USA fans will look out for him. Each test will last fifteen minutes and all reports should be sent direct which will be acknowledged by a special QSL card. The call sign will be sent frequently with a series of V's, then call sign, and a short message will follow. This message must be correctly read to get the QSL."

Some Good Reports

A long and interesting letter was received from J. G. Richard Heck-1558 Massachusetts Cambridge, Mass., from which we quote the following: ". . . I have forwarded to you a copy of my log for the past five months. In logging these stations I have followed the inviolable rule that a station does not go on the log until it is either positively identified by its call letters or by an announcement of its location in conjunction with its frequency; consequently I am reasonably sure of the reception of many stations which do not appear in the log. In every case they are stations which come in very well here in Cambridge despite my receiver's being surrounded by apartment houses, situated in one itself, within two hundred feet of a trolly line. This log should be an adequate reply to many of your more cynical correspondents as to what is actually possible in even the worst of locations with a good high frequency receiver in conjunction with a little patience; this in five months only and using the set only at odd times during the day and night."

We regret that we have not the space to include Mr. Heckscher's log in its entirety, but it includes all of the commonly received broadcast and telephone stations, in addition to numerous police, airport and ship stations. Some of the seldom-heard stations are T1RC, 9.505 megs., San José, Costa Rica; RV59, Moscow; FRO, St. Assise, France, on 19,420 kc/s. and FTO on 18,250 kc/s. His log shows a total of 232 stations, which is a good record for any s.w. fan and particularly outstanding as a record of only five months' tuning.

"I have a Kennedy long and short wave 12-tube super-het with rather ordinary aerial equipment," writes George K. Glass, 1320 Cadillac Blvd.,



Julia Sanderson and Frank Crumit

Detroit, Mich. "Short waves sure are full of thrills," he continues, "but as yet have heard nothing in England. Here are all the calls I have had since November, 1932: EAQ, DJB, YV1BC, YV11BMO, PRBA, HKD, I2RO, FQE, KKP, PRADO, TGW, HBL and HBP. I listened from 1 to 3 a.m. this morning for VK2ME and am sending them a log with comments on every bit of their program. Tuned them in so loud on a couple of selections that I woke up the wife.

"I've solved the problem regarding dial settings for any desired station. I have plotted curves between dial settings as actually found and wave lengths. Then I can take any desired wave length and hit the probable dial setting almost on the nose." This is a very good idea that Mr. Glass suggests and one that we recommend to all our readers as it solves quickly and surely the problem of where to find any desired station.

Distressing calls for help come from two of our readers. Frank R.

Slama, c/o First National Bank, St. Paul, Minn., uses a Midwest converter with an 11-tube Philco while Henry King, Jr., 743 Simpson St., N. W., Atlanta, Ga., uses a long and short wave 11-tube Philco. These two gentlemen have had their sets for a year and have not yet located any foreign stations. They both would like to hear from users of similar sets who can offer them any assistance. In the meantime Mr. Glass' suggestion regarding curves between known stations might be of some help.

More Help Wanted

"I am much interested in DX and short wave programs," comments C. C. Turner, Box 186, Oceanside, Calif., "Though I devote much time to the set I have little success receiving distant stations. It does not seem possible that the trouble could be in the sets I am using (a Lincoln 33 and a Sparton converter with a Sparton 410 set). I am a semi-invalid, and by reason of this have the entire twenty four hours of each day to codger with my radio. I would be pleased to hear from anyone who could give me any idea about an antenna that would enable me to bring in foreign s.w. programs."

Verifies Geneva

"EAQ, Spain, on 30.4 meters comes in with volume enough to be heard 200 feet away every Saturday from 1 to 3 p.m." reports Edmund J. Bieglecki, 3309 E. Warren Ave., Detroit, Mich. "I2RO and HBP are very good. I am sending a verification from HBP and hope it will prove of interest to your readers. My receiver is the 16-tube Midwest and I would like to hear from other owners of this set." The verification follows:

"In reply to your letter, I am glad to be able to tell you that you have in fact picked

up one of our broadcasts.

"Since September 25th, broadcasts on the work of the League of Nations are given every Sunday from the League wireless-station 'Radio-Nations,' in English from 5:00 station 'Radio-Nations,' in English from 6:10 to 5:15 p. m.; in French from 5:30 to 5:45 p. m. (Eastern Standard Time) on wavelengths 31.3 and 38.47 meters.

"We carry our weekly programmes, on some Sundays giving talks by statesmen known to audiences all over the world, on

others interviews between a journalist and an official of the Secretariat of the League Nations on current problems.

"Any letters on our programmes and their

reception will be welcome.
"Perhaps you would address them to G. Gallarati, League of Nations, Geneva. Switzerland.'

Does J1AA Scramble?

"Did I hear J1AA on February 24th?" asks George W. Burns, 2466 Wahl Terrace, Cincinnati, Ohio. first heard this station this afternoon shortly before three o'clock talking in a high, sing-song voice close to 15,-760 kc/s. (19.02 m.). The talking was unlike anything I have ever heard before. The station was rather faint at first, later coming up until it equalled the Hawaiian phones in volume and clarity. After preliminary talking and calling, a 'scrambler' was used, making the speech unintelligible. The station went off at 3:45 p.m. Perhaps some of those west-coasters who have heard other Japs will be able to help." This question is respectfully submitted to our readers; this station has never been reported using inverted speech, but perhaps some other fan heard this same transmission and can identify Mr. Burns' station.

More Records

"The best short wave stations I am hearing at the present time," advises Edward C. Houlgate, 351 Adelaide St., London, Canada, "are Pontoise on 25.6 m. at 3:30 p. m. EAQ Madrid, 30.4 meters from 5:30 to 7:00 p.m. GSA 49.6 meters, 8 to 10 p.m. YV1BC from about 6 to 10 p.m. I2RO during the afternoon, sometimes DJD on 25.51 during the afternoon. When on the air they usually sign off around 4:30 p.m. Also hear YVQ on 22.48 working with WNC at Hialeah, Fla., on 19.91 during the At the present time afternoon. VE9DR seems to be on nearly all day as I get them regularly."

Eleven-year old Bill Reeder, 729 Belvidere Ave., Plainfield, N. J., is interested in the 75-meter amateurs. having heard all the districts and X5N in Mexico. He would like to

(Continued on page 79)

READING the Editor's MAIL

• • • Our Readers' Views

NCE more let us advise our readers to be seen of May and June issues of this magazine. In these issues will appear full instructions and diagrams for building the simple short wave converter mentioned in Page Taylor's department on another page. In the May issue our regular Index by Frequencies will make way for a new list by frequencies which will give the data used by stations in making their announcements including the name of hotel or building housing the main studio, the full name of owner and the mail address and the slogan used. This list should be carefully preserved as it will be of inestimable value in identifying those stations whose announcements are caught only in part.

The Whole World

In the June issue, in addition to the second and concluding part of the article on building a short wave converter, the Index by Frequencies will contain not only the usual North American broadcasting stations but those of the whole world as well. This is an issue that should be kept for years.

And again the warning: The number printed of the May and June issues is always very much smaller than the run in the winter months. This means that these editions must be spread much more thinly and some of the smaller dealers may not receive any at all. If, therefore, you do not find the May and June issues on your favorite newsstand on the first day of those months, send your order direct to us.

Are We Punctual?

Beginning with the February number we changed our entire method of distribution in the hope of increasing our coverage and getting all copies on the newsstands not later than the first day of each month. Very naturally this resulted in some confusion and a few dealers and even some cities lost out. We have been greatly helped by readers who called these omissions to our attention. We will consider it a very great favor if our readers will notify us promptly if their favorite dealer does not have this magazine on sale on the first day of each month. Be sure to give us dealer's name and address.

Let us now open the month's mail,

Those Wave "Hogs"

When we rage over the super-power stations growing up on the Mexican side of the Rio Grande and filling the ether with rubbish, it looks like it might be a case of the pot calling the kettle black. Some of the U.S. A. stations are boring our neighboring nations greatly, particularly those that "hog" their wave all night and even 24 hours a day. Writes Alfred H. Bacon, 928 13th St., New Westminster, British Columbia: "A number of DXers here have asked me to take up the following matter with vou. In your DX Calendar are quite a number of early morning programs on the 1200 frequency. Sir, on the coast here we have the 24-hour-a-daystation KGFJ, Los Angeles, Calif., 100 watts, 1200 kcs. 'Hogging it' you hear him right through the night and morning advertising the Consolidated Hotels program with recordings. This early Sunday morning was terrible on 1200. I never heard such miserable broadcasting in my six or seven years with receiving sets. Canaccomplished something be through your channels to overcome this nuisance? Is there any medium whatever in which KGFJ could be approached and asked to show a little courtesy by going off the air, say for two hours, while those DX programs are on? The interference is nightly, not now and then. After about 1:00 a. m. KGFJ opens up wide and just throws his broadcasts to the air regardless of his wave-length. Just abuse, I would call it."

Stations which adopt a "public-bedamned" policy are digging their own graves. If the National Association of Broadcasters cannot control pests like this they are going to bring about a censorship of the air as sure as fate. There is no station in existence that can provide worth-while programs for 24 hours a day, seven days in the week. They must use trash and, sooner or later, something is going to be done to take this trash off the air.

That Amateur Chatter

"Isn't there something that can be done for these amateurs?" plaintively inquires Mrs. G. H. Morton, East Marion, N. Y. "The difficulty these young fellows have in keeping up a conversation is actually painful to listen to. I just turned off a poor fellow who kept saying 'Hi there, old boy, you were doing fine business. Ha Ha.' over and over again so many times that I became desperate. Now I like to tune in these amateurs because they are different but it surely becomes tiresome to hear a boy repeat the same thing over and over a dozen times. Is there any law against their expressing views on politics, news, movies, jokes, etc.? only would I'd rather listen to them than to a regular broadcast. It might increase the sale of short wave sets too." We suppose every one of our readers who listens to the short waves will sympathize with Mrs. Morton in her "pet peeve." Under the laws that govern them, these amateurs are forbidden to use any matter smacking of broadcasting but it does seem some concerted movement should be undertaken to develop their conversational powers. Almost without exception their talk seems painfully forced and it is evident that they just don't know what to sav next. "Well, I guess that'll be all

now, old man" and then after some long ah-hhhs-"You are through fine, old man; well I guess that'll be all now, old man" and so on and on and on. We recommend to their excellent organization, the American Radio Relay League, that these youngsters be taught how to talk as well as how to send code and the suggestion is a serious one, for the sort of palaver that goes on now is bound to create a strong public feeling that the boys are merely enoumbering the air and ought to give up their choice wave-lengths to some more valuable purpose. QST; please copy.

Army Broadcasters

Those mysterious stations, EQ-7 and EW-7 have been traced to their respective lairs by our readers. E. A. Feichtner, 53 Chestnut Lane, Erie, Pa., and Earl R. Roberts, Cambridge, Ohio, report upon them as follows: EW-7 is located in Jackson, Michigan, and is owned by the 119th Field Artillery, Headquarters Battery, 2nd Battalion of the U.S. Army Corp. John B. Osburn, 1321 North Waterloo Ave., Jackson, Mich., in charge. EQ-7 is at Lansing, Corp. Cross in charge. These are both Army stations and their permits are issued by the War Department. The stations use 50 watts power and are supposed to reach out about twenty miles although the distance from Jackson to Lansing is about 38 miles. They test with each other on Tuesdays at 2:00 a. m. EST. Mr. Roberts comments as follows: "I picked them up Tuesday, Feb. 14th, at 3:00-3:17 a. m. EST. on 750 kcs. EW-7 uses a directional aerial pointing East and has been heard in Hartford, Conn." Feichtner adds: "They expect broadcast every Tuesday and Wednesday morning between 2:00 and 3:30 on 750 or 800 kcs. EW-7 is anxious to see how far out he is getting so if you live at a distance, he would greatly appreciate hearing from you. They use code quite a bit but they announce often."

It seems very strange that our laws

permit the Army to set up stations on the broadcast band and use as their call the letter E which belongs to other nations.

Experience with Batteries

"We have been using the Everready 1000-hour aircell A battery," reports P. J. Hoffmann, Annaheim, "This held up well but last fall we decided to try a two-volt wet The results were unsatishattery. factory and we noticed our set did not seem to reach out as far as it used to do with the aircell battery. We found that we should have taken out the resistor which was used with the set when using the aircell. did not remove it but put in a jumpwire which eliminated the resistor. Immediately our set functioned better than ever; in fact, daylight reception of U.S. A. stations which had been very difficult, was so much improved that one day we got WABC, New York, at 10:30 a. m., MST. At night we are able to reach out and have no difficulty pulling in most eastern stations such as KDKA, WBZ, WBZA, WOR, WTIC, WBT, WLWL, WRVA and many others. Last night at 11:45 p. m. MST, we caught KGU, There was considerable Honolulu. static and we had quite a time holding on until the station announcement was made; we got the call letters but nothing else but we are certain we can catch this station again and then verify our reception."

KZRM AGAIN

"After having read in several issues of RADEX that KZRM will not verify reports of reception," says Dora Newcomb, Oxnard, Calif., "wish to say that I believe they will if approached in the right manner. For instance, when writing to them on October 24th, after logging their entire program from 2:51 to 4:00 a.m. PST, I particularly asked them to write 'Reception verified' on their usual blue card of acknowledgment. I told them of the necessity of this as I could not count their station as logged without this notation. When the card arrived,



The profit and loss account of the "Easy Aces" is something terrible. Jane thinks Ace is "downright abdominal" about it. CBS Tuesday, Thursday and Saturday at 8:00 p. m. EST. Photo by Maurice Seymour Studios

Mr. B. H. Silen, Broadcast Manager, had complied with my request. In a few days another fine verification arrived in the form of a letter from Rajah Chanda, Astrologer, of KZRM. I believe if the DX fans will go carefully into detail about the necessity of verifications, giving plenty of material for verification, that KZRM will be glad to do it. Impress upon them the necessity of those precious words, 'Reception verified.'"

Raymond Corbett, 619 12th St., Sacramento, Calif., also submits his original verification card received from KZRM. He received them but once but heard them then very clearly, Raymond is getting XGOA, Nanking, China, quite regularly, but best at 3:00 a.m. PST. He also reports that KGU comes in in great shape between midnight and 12:30 PST.

Verifying XEPN

Those who have had trouble getting verification from XEPN, will appreciate this information which comes from Homer G. Gosney, 431 South Elena Ave., Redondo Beach, Calif.: "I have received a reply at last from this station, therefore, on behalf of those concerned, pleased be advised that Jessie Doak, bookkeeper, is in charge of XEPN's correspondence, address Yolanda Hotel, Eagle Pass, Texas. She advised me that XEPN's new postcards would be ready in the near future."

Changing Aerial Works Wonders

"I enjoy RADEX," is the pleasant opening of an interesting letter from Mrs. Carol Ross, P. O. Box 296, Middletown, N. Y. "I have been ill with pneumonia since last Christmas and here it is February, but I have passed the time pleasantly for the most part. Have a four-tube Emerson electric radio and hooked up to that a Sears-Roebuck Silvertone four-tube short wave converter. I found I could not get anything much but locals and calls between 'hams.' Although my husband thought it wouldn't make any difference, I got the radio man to change the aerial from north-south to east-west and, oh, what a difference it made. The very first week long distance stations rolled in. It wasn't any trouble at all to get the big French station in Montreal and I got stations all over the world. EAQ, Madrid, came in fine during its evening broadcast."

Those "Outlaws"

"I got quite a surprise today," writes R. B. Rolfe, 1741 Burnett Ave., Waco, Texas. "While listening to KFJZ in Fort Worth, I heard a station in the background and was very pleasantly surprised to hear the announcer say 'You are listening to WSVS, Buffalo, N. Y.' a 50-watt station." Mr. Rolfe tells us there is a small station at Rosebud, Texas, on the air every day at 9:45-11:00 a. m., but he does not give us their call or frequency. Earl Roberts of Cam-

bridge, Ohio, also mentions some outlaws, WJM, which is the former WAIR moved to Massillon, Ohio, and still using 850 kcs. WUMS is another located somewhere in southern Ohio on about 1385 kcs. What are the Radio Inspectors doing about these unlicensed stations?

Old Issues Available

"I have in my possession every edition of RADEX from No. 51 (September, 1931) to date, and I am curious to know what editions are available prior to No. 51," writes Richard Labate, RFD No. 1, Bordentown Road, Bordentown, N. J. We still have a few copies of the following old issues: 25, 26, 27, 28, 29, 30, 33, 34, 35, 36, 38 and from No. 41 to date. These are available as long as our supply lasts. The price is 25c per copy, five for \$1.00 or ten for \$1.75. We also have a very few of No. 2, published in 1925, but this number was in a 50c edition.

"I would like to ask a couple of questions, perhaps your readers can answer them," remarks Carl M. Hansman, Bethel, Maine. "Where is station NPG? And has CMAY been broadcasting lately on 1200 kcys.? Friday, February 10th, from about 11:00 to 11:30 p.m. EST, there was a Cuban broadcasting on 1200 kcys. I heard the call in English two or three times, and it sounded like CMAY, but the only Cuban on that wave listed in my February RADEX is CMGB. Can anyone explain this?"

How to be an Amateur

We receive a great many inquiries from readers who have become interested in code through their experiences on the short waves. Most of them ask how they may become amateurs. This subject has been fully covered in a booklet issued by the American Radio Relay League, West Hartford, Conn., which may be secured for twenty-five cents.

The chapters include the following: Learning the Code, Building the Receiver, Operation of the Receiver, Building the Transmitter, the Power Supply, the Transmitting Antenna, Tuning the Transmitter, Arranging the Station, Getting Your Licenses, Going on the Air.

The Long-Wave Stations

A. Gottfried, 2241 Creston Ave., Bronx, N. Y., wants a list of the long wave stations, that is, those below 550 kcs., as he intends to build the one-tuber described in the March and May, 1932, issues of this magazine. We listed fifty such stations in September, 1931, issue No. 51, which we can send to those who do not have it.

"What do you know about a new station in Mexico operating on about 1170 kcs. but announcing 1185?" is an inquiry from P. J. Hauss, 221 S. Butler Ave., Indianapolis, Ind., that the Editor cannot answer. "I am quite sure the call was XETN and I believe he said the power was ten watts."

Has CMW changed back to 1180 from 585? Edward J. Bieglecki, 3309 E. Warren Ave., Detroit, Mich., reports positively identifying CMW on 1180 kcs., Saturday night, Feb. 4th. A new official Cuban list just received shows CMW changed from 585 only to 590.

In answer to a query from Alfredo Rozzundo in the February issue, Howard Sharpless, 564 N. Pearl St.,

Bridgeton, N. J., says: "WKAQ, 1240 kcs., San Juan, Porto Rico, broadcasts regularly from 12:30 to 3:00 a.m. and from 6:30 to 10:00 p.m. their time."

Samuel A. Meyer, Jr., 83 Canterbury Road, Rochester, N. Y., tells us that XEP did not move from Nuevo Laredo to Mexico City but that the N. Laredo station burned down and was not rebuilt. XEP, Mexico City, is a new station with the old call.

"This Tuesday morning (February 28th) I listened to a station in Havana on 1345 kcys., whose call was like CMBD or CMBE," reports Earl R. Roberts, 105 Gomber Ave., Cambridge, Ohio. "KFPY interfered. The time was 1:30-2:30 a.m."

"What station in Texas broadcasting on 1370 kcs., uses the sound of an airplane as they sign off?" queries I. E. Beitman, 249 Gates Ave., Elyria, Ohio. He heard them on Feb. 11th at 1:06 a.m. EST.

Allen E. Knain, Northwood, N. Dak., experienced interference on 720 kcs. and by careful tuning he brought it out and it was 2YA. Now he says he can raise this station every night three times out of four.

D. C. Hamilton, Jr., picked up a station on 720 kcs. on Feb. 17th which announced the time at intervals in Pacific Standard. Our guess is that this was one of the British Columbia stations on 730.

Jim Hanvey. the famous detective of Octavus Roy Cohen (Thurston Hall) is putting Ann Townsend (Joyce Meredith) and "Shirley P'emberton" (Elaine Temple) "on the spot" while Chief of Detectives "Al Sheppard" (John Humilton) looks on. On NBC-WJZ net Tuesdays. Thursdays and Saturdays at 7:45 and 11:15 p. m. EST.



The FRC has denied the application for renewal of license of KGDA, Mitchell, S. Dak., for reasons unknown and also refused permission to move the station from Mitchell to Aberdeen.

"What station on 1310 after 11 p. m. CST, announces 'Little Holland, Come to Little Holland,' asks Miss C. A. Brinkerhoff, 317 Clinton Ave., Oak Park, Ill.

A Phonograph with Tubes ND now the phonograph has

Here is a really portable phonograph which uses an electric amplifier and dynamic speaker which reproduces records with a tone quality and volume formerly associated only with large radio-phonograph combinations. Volume may be con-

trolled from a mere whisper to auditorium intensity and a tone-control permits the emphasis of either the high or low frequencies.

The Ansley Portable Dynaphone is manufactured by the Ansley Radio

The Radex Press, Inc. Hanna Building

67



Corp., 147 West 23rd Street, New York, N. Y. It operates on either alternating or direct current. The turntable is operated by a universal motor. The four-tube amplifier uses one -37, two -89s in push-pull and one -80. The change from a. c. to d. c. is made by a simple plug arrangement. Provision is made for use with a microphone as a portable public address system.

The case, which may be secured in either black or brown, measures $20x14x8\frac{1}{2}$ inches and the weight is 30 pounds.

INSURE YOUR RADIO ENJOYMENT SEND THIS BLANK TODAY

☐ One Radio World Map and Time Converter.
 ☐ One copy of the next RADEX.
 ☐ Trial subscription, next five issues of RADEX.
 ☐ One year's subscription to RADEX, 10 issues and World Map-Con-

Write Name Plainly....

No extra charge outside the U.S. A.

Verifying

Foreign Stations

By OLLIE ROSS

THE greatest disappointment to a DX fan is to receive a program from a distant foreign station, write for verification and then, after weeks of waiting, have the verification fail to come. The fault cannot always be blamed to the broadcasting station for they are happy to verify especially for their distant listeners. The trouble seems to be with the DX fans themselves, for, in nine-tenths of the cases, the report of reception is lacking in details or items heard.

I would advise DXers writing for foreign verifications to use the following course and I am sure they will not be disappointed. First, be absolutely sure to get the call letters of the station, the city and country or any special identification. Second, be sure to have enough of the program so that it can be verified: don't just say "I heard your program" for in this case the station cannot verify. They must know that their program was actually received. Third, be sure always to give the time-your own local standard time. Do not try to figure out their time for often mistakes are made in converting. Fourth, state exactly on what wave length their program was received for in many cases foreign broadcasting stations change their wave lengths without notice.

But the main thing is first to be sure of the station broadcasting, for here, I find, DXers make most of their mistakes. They receive a program on a certain wave length but being unable to get the call, it is often taken for granted that the station listed in the log on that particular wave length is the one that was heard. In many instances this is the wrong station entirely.

During my European tour of broadcasting stations I was allowed to read the letters of our American DXers writing for verifications, and, really,

nine-tenths of them could not have been verified at all. In many instances the date was given one or two days later than the actual broadcast, the exact time was omitted, no details nor items of identification were given.

It must be remembered that broadcasting stations receive hundreds and hundreds of such letters from the DX fans, often two and three weeks after the day of the broadcast, and they must search through their logs to ascertain each particular broadcast for verification.

Every station will verify providing of course enough proof is submitted that their program was received. I have over 1300 verifications and in seven years I have never found a station that refused to verify.

Editor's note: Let us repeat once more—do not send U. S. postage stamps to foreign stations; they are worthless to them. Get an International Reply Coupon from your postmaster and send that for the return postage.

A New

RHEOSTAT

A SMALL, high-quality, inexpensive slide wire rheostat for radio experimenters is presented by G-M Laboratories, Inc., 1735 Belmont Ave., Chicago. Wound on one-piece porcelain form with adjustable contact for varying the resistance, it will dissipate 75 watts continuously. They are supplied in twelve ratings from 5000 ohms, 0.12 amperes to 4.8 ohms, 4 amperes. For service-men a special kit of six rheostats of different ratings, is supplied.

Binding screws at each end of the winding permit the use of this rheo-

stat as a potentiometer.



4-RK Verifies Cricket Game Also . . .

W E thought we had written "finis" to that series of cricket broadcasts. There seemed to be no doubt left that they came from the studios of Poste Parisien on 914 kcs. Many of our readers were chalking up the Paris station in their logs with But-and here's the catch-4RK. Rockhampton, Queensland. Australia, on 910 kcs. is now verifying the reception of the same games! J. W. Robinson, Acting-Manager of 4RK, writes Clyde I. Boyer, 204 N. 2nd St., Darby, Pa., as follows: "We are in receipt of your letter of Dec. 3rd, reporting reception from 4RK. Reference to our log confirms your reception and we congratulate you. We presume you are aware that 4RK is a relay station simultaneously broadcasting 4QG's programs and only on very rare occasions does it provide a local entertainment." P. J. Hauss, 221 S. Butler Ave., Indianapolis, Ind., also received a verification from 4RK but he is now convinced that it was Poste Parisien he heard instead. He bases this conclusion upon the fact that his reception faded as it went on whereas Australia would have been apt to get better.

Of course there is no doubt that Poste Parisien sent out broadcasts covering these games from cable reports but evidently 4RK sent out the actual game play-by-play. Harry R. Kenney, 607 Mt. Vernon St., Camden, N. J., is sure his report was from "ring-side" as one statement was "The heat here is terrible." Leslie G. Briscoe, 3743 Hutchison St., Montreal, is also sure his reception was not read from cables as the announcer mentioned the plays exactly such as "they cross once-twicethree runs" slowly just as they would be called.

Those who logged these cricket matches will have to decide for themselves whether they were tuned to

Poste Parisien or 4RK. Theodore Vail Bullard, South Orleans, Mass., says it is no longer a novelty to tune in Poste Parisien on Cape Cod between 4:30 and 5:30 p. m. When he first tuned them in he was surprised at their volume and clarity and called up some of his friends to tune in and see if they heard what he did and even those with less powerful sets had no difficulty in receiving PP at the same time. Herbert J. Blythe, 3 North Cornwall Ave., Ventnor City, N. J., reports that PP should be an easy catch for Eastern listeners during the early evening hours as he has heard this station several times within the past few days (Feb. 10th) as strong as most U.S. A. high-powered stations. Joaquin T. Russe, 21 Standish St., Provincetown, Mass., thought he had CFLC, Prescott, Ont., on 915. but he distinctly heard "Poste de Parisien, Paree" and then a moment later in the background "CFLC, Prescott." The latter station seemed to be three or four kcs. higher than

E. L. Peters, Box 65, Westport, N. S., tells us that Poste Parisien also broadcast the results of the U. S. A. elections, working in conjunction with the European edition of the Chicago Tribune and the New York Herald-Tribune.

From D. Miller, 88 Eastgate, Inverness, Scotland, comes confirmation of the relay of the cricket games by Poste Parisien which agrees with the reports of the broadcast published in previous issues of this magazine. Mr. Miller adds that he receives the following stations on his "three-valve" set although not regularly: WCAU, Philadelphia, WPG, Atlantic City, WTAM, Cleveland, WTIC, Hartford, WBZ, Springfield and WABC, New York.

Inquiries still come to us regarding mysterious interference between 910 and 915 kcs. Perry Worisiheck, 5 Walnut St., Teaneck, N. J., says he listened to this station which he thought was a Cuban or Mexican for an hour and a half without hearing an announcement. The interfering station on this channel is undoubted-

ly Poste Parisien.

P. J. Soper, 256 Burroughs Terrace, Union, N. J., sends the schedule of Poste Parisien. Daily, including Sunday, it begins at 5:00 p. m. EST. and ends as follows: Tuesday, Thursday and Friday, 5:30; Monday 5:45; Sunday and Wednesday, 6:00; Saturday, 7:00. After giving news items in French they play the "Marseilles" and leave the air. This station comes in just a hairline below the setting of XEW, Mexico City.

Now A Wrestling Match

 $H^{
m \, AVING}$ disposed of the cricket games, now comes a mysterious report of a wrestling bout. The report is from T. W. Rowe, Grand Junction, Colo., who says: "On the morning of Saturday, Jan. 28th, at 4:00 o'clock, I set my dial at 760 kcs. for JQAK, Darien, Japan. Was rewarded with one hour and fifteen minutes of a wrestling or boxing match, very plain and in English. Now what was mystifying was this: I have never heard a wrestling match announced by rounds or a boxing match by such terms as 'hammerlock, toe-hold, neck-hold or shoulders on the mat.' The cheering of the crowd was immense at stages of the game. At the beginning of the fourth round the announcer said, 'You ought to be here and see the crowd that is here tonight.' It was then just 4:30 a. m. MST. (Editor's note: This would have been 8:30 p. m. in Japan and 11:00 p. m. in New Zealand.)

"The match or bout went to or through the eighth round where one of the contestants, a Greek, refused to shake hands with the other. In a moment the crowd was in an uproar and were yelling 'They are fighting, they are fighting' and a band began playing. During all this time I never heard one word that would give me any idea where this event was taking place, no station announcement nor name of city. KFAB, Lincoln, went on the air at 6:15 a. m. and cut me out altogether.

"I will thank you very much if there is any way by which you could help me ascertain where this match or bout happened or tell me if it is usual anywhere in North America to hold sporting events at the hour this took place—4:00 to 5:15 a. m. MST—remembering that the announcer used the words 'Tonight'."

Did any other Radexers catch this

program?

NNRC DX Tips

The following stations broadcast DX tips for the Newark News Radio Club weekly:

WAAT-Jersey City, N. J. WHBU-Anderson, Ind. WDEV-Waterbury, Vt. WSIX-Springfield, Tenn. WFAS-White Plains, N. Y. WHOM-Jersey City, N. J. WWRL-Woodside, L. I. WTFI—Athens, Ga. KFOR-Lincoln, Neb. WHET-Troy, Ala. WTAG-Worcester, Mass. WOMT-Manitowoc, Wis. CKOV-Kelowna, B. C. CFCO-Chatham, Ont. KFXM-San Bernardino, Cal. KTFI-Twin Falls, Ida. WNBH-New Bedford, Mass. 10AB-Moose Jaw, Sask. WMMN-Fairmont, W. Va. WMBH-Joplin, Mo. CKPC-Preston, Ont. KGER-Long Beach, Cal.

Try for OAX, Lima, Peru, on 790 kcs. Monday morning, April 24th, at 4:00 to 5:00 o'clock.

RECEPTION Reports by Readers

• • • From Scotland to Zealand

THERE is no doubt about it. Our Radexers are pulling in real foreign stations with much greater frequency than in the past. With the wide-spread reception of Poste Parisien broadcasting the now-famous cricket matches from Europe, South America is coming to the front with both YV1BC at Caracas, Venezuela, and HJN at Bogota, Colombia. Both of the latter stations are now so generally received that we are listing them in our regular indices. Following are a few of our readers who have tuned in HJN recently: George Fabian, 1463 Virginia Park, Detroit; Colvin MacCracken, Vassar College, Poughkeepsie, N. Y.; J. C. Arp, 208 Washington Blvd., Williamsport, Pa.; O. R. Spitler, 4835 Thomas St., Chicago; R. N. Putnam, 920 12th Ave. No., Fargo, N. Dak.; J. A. Shanks, Russellville, Tenn.; A. L. Beaty, 1207 33rd Ave., Tampa, Fla.; Mrs. R. Furley, R. 6, Mt. Vernon, Ohio; R. M. Ballard, Visalia, Calif.; T. R. Grosvenor, 302 S. Lorraine, Wichita, Kans.

Regarding HJN, Mr. Fabian says: "I think RADEX is right in listing this station on 685 kcs. (Page 78, No. 63) I listened to their very interesting program dedicated to the people of the U. S. A., from 3:14 a. m. until sign-off at 5:02 a. m. EST, Feb. 26th. They were on exactly 685 kcs. and came in with enormous volume. Gave call and location 15 times." Mr. Arp says HJN announced that verifications for the reception of the program on December 17th are now being sent out.

From New Zealand

"Hands across the sea" are reached out to us this month by two readers in New Zealand. "You may be interested in a few remarks on DXing in Invercargill—the most southerly city in the world," writes S. Robson,

of 100 Islington St., in that city, who is, by the way, the President of the New Zealand DX Club. ways we have an excellent locality as we have the whole world to receive. Unlike most parts of New Zealand, we in this city find your American stations the hardest to receive well. Very few of your 100-watters can be heard here and yet Mr. Barnett (December RADEX No. 64) only 110 miles north has a wonderful log of these stations. Europeans are very easily received here; I have heard nearly 70 of them and have just received two of my best verifications-Berlin, Germany, 715 kcs. power 1500 watts, and Lyons, France, 644 kcs., 1500 My best American verifications are KPCB, CFRB, WKBF. WBIG, WCSH, WQBC, KTRH, KTBS, WSMB, and XETR. logged at least one station in every continent and, with the exception of a South American station whose verification is not due yet, I have a station on all continents verified. set is a six-valve Stewart-Warner; aerial 85 feet long, 35 feet high. have a number of log books on American stations but RADEX is by far the best."

From George E. Bott, 507 Southampton St., Hastings, New Zealand, comes a list of changes in Australasian stations and these corrections together with some from Mr. Robson, will appear in the Index to All World Broadcasting stations which will be found in the coming June issue. Mr. Bott uses a Grebe five-valve battery receiver about six years old with which he has logged 183 stations including about 80 from the U. S.

A Society of Experts

"The International DXers Alliance is unique," writes its President, Charles A. Morrison, 1204 No. Prai-

rie St., Bloomington, Ill., "in that it is open only to those DXers who have verifications from foreign stations on the broadcast band at least 2000 miles away (excluding Cuba, Canada and Mexico). The membership is not restricted to the U.S., as we have members and representatives in Alaska, Yukon, Nova Scotia, Newfoundland, South Africa, Switzerland, Canary Islands, England, Malay, Hawaii, Australia, New Zealand, Siam, West Indies, etc. These qualifying verifications must be passed upon by the President, or one of the directors, before membership is allowed. The dues of \$1.00 a year, in the U.S. and Canada, or \$2.00 in foreign countries, are used to publish a monthly bulletin called the 'Globe Circler, which contains the latest and most authentic information available concerning the activities of foreign broadcasting stations, letters, special broadcast tips, honor rolls, 'The Best Catch of the Month,' etc. Those possessing necessary verifications may obtain information and application blank from the President, at the above address. Those living in Australia or New Zealand may apply to Mr. F. H. A. Barnett, Dunedin, New Zealand, and those in Europe to Mr. George Evans, Lime Tree Park, Coventry, England."

The T-P Log Brought Them

"Through your Trans-Pacific log I tuned in all the larger Japanese stations, nine of the chain, anyway," reports Len Cooper, 334 Milton St., Nanaimo, B. C. "Other Pacific stations are KGU (which comes in regularly here), ZL2YA, 1YA, VK2BL and 5CK. The Alaskans, KGBU and KFQD, come in good immediately after the nearer stations leave the air. I think your correspondents who calmly jump on reports of freak reception and judge truth by mileage, must not listen in during the early hours. I have a 1932 Marconi 7tube, and while trying for a small Washington station, heard the announcer state, 'WEXL, Royal Oak, of 50 watts strength,' yet equal in power at the time to a Vancouver station. Then during the day WIOD came in very strong, although KALE almost local, on the same wave, was missing completely. I have logged 240 stations and heard from all but three states, i. e., Maine, New Hampshire and Vermont, which never seem to do any DX broadcasting. There seemed to be a second broadcast of the cricket match over 850 kcys., and as the announcer continued the program, several listeners here make it from VK2BL."

His Lucky Month

"February has been my lucky month for foreign reception, as well as local this winter," says Earl R. Roberts, 105 Gomber Ave., Cambridge, Ohio. "I received the following foreigners: SBH, Horby, Sweden, on 1166 kcys., from 1:35-2:00 a. m., on a Tuesday morning; Frankfort-am-Main. Germany, 1157 kcys., from 1:08-1:32 that same morning; Heilsberg, Germany, 1085 kcys., from 2:05-2:30 a. m., also that morning. Remember my saying I wrote to Heilsberg, thinking that was the station I heard on 1157? Well. I received a card from them saving the station I had was Frankfort, since they used 1085 kcys. Might have known RADEX was right and not that DXer who claimed it was Heilsberg. Consequently, I don't have my veri from Germany yet, but should receive two from there and SBH at about the same time next month. That makes four Europeans now. On the other hand, I logged 2YA, 5CK and 2BL and received my veri from 4BC. Seems funny to me I have why I cannot get the Japs. never even thought I heard one."

"Best Yet" Says Soper

"Radio reception this season is the best in my experience," concludes P. J. Soper, 256 Burroughs Terrace, Union, N. J., "and I have DXed since 1922. There have been few nights this winter when static prevented the reception of a west-coast station. I have kept a log since 1925 and for

the seasons since then I have had KFI on an average of three times a week. This season I am sure there has not been a single night since October that KFI was not audible. No doubt other old-timers could make the same report. I can remember the time when I would be willing to lose a night's sleep in order to hear a Cuban or Mexican station-now I would gladly lose a night's sleep figuring out a way to keep from hearing them interfere with better stations. Mexico must have little respect for quality in radio entertainment when permits to broadcast are given to so many high-powered stations sending out the cheapest form of entertainment. I must, however, make exception of XEW. This station in Mexico City does have fine program features."

A Half-Mile Aerial

"Thanks to RADEX, I have been fortunate enough to log YV1BC (Feb. 11th)," records K. C. Zabawski, Pine Ridge, Manitoba. "To me it seems almost unbelievable to receive such a distant station with volume to spare. I have been DXing just a little over six weeks and my log is now at 223 stations, all heard on the loudspeaker. My best catches are WEXL, 2YA, CMJE and, of course, YV1BC. I have a few hundred-watt stations in Mexico, U. S., and Canada. I own a Minerva 8-tube Super, battery model, and I am sure pleased with it. I get tremendous volume from my barbed-wire aerial which I have found by experiment works the best. I just had an insulated wire soldered to an ordinary fence wire which stretches for half a mile, yet selectivity is just as good as on my 60-foot filtered aerial. I have the Ollie Ross ground and I think it is a good combination. Your magazine is really a Radio Encyclopedia. I have introduced it to quite a few of my neighbors and they, too, say they won't ever be without it."

"I made very good use of your DX tips Saturday night, Feb. 11th," reports J. A. Ringness, Morris, Minn.

"YV1BC came in clearly at 1:25 a. m. CST. after XEAW signed off. Also I heard plainly KGU at Honolulu. Besides these I added to my log WGNY, KIEV, WTRC, KTW, 10-AT, 10-BQ—a pretty good night's work when one already has 665 stations logged. I seemed to be tuned to KZRM at about 4:00 a. m., Sunday morning, but it would blast at that frequency when I increased the vol-This seemed strange as this did not occur at any other place or any other time. Can you tell me what station was broadcasting Newark News Radio Club tips at 1:00 a. m., CST. on 1500 kcs.? I heard some of the tips but did not catch the call letters."

A number of readers have heard stations broadcasting NNRC DX tips and, through the kindness of Louis Hahn, we are giving elsewhere a list of the stations which broadcast for the NNRC regularly.

From Station 10-AT

"We have had wonderful success with our DX programs," writes 10-AT, Trail, B. C. "Using 25 watts we have had thousands of verifications from the Atlantic to the Pacific and as far away as the Hawaiian We make one stipulation Islands. for all verifications: exact time and name of selection played must be given. We have had numerous requests for verifications and many DX fans evidently think because they hear "10-" and some letters that it is 10-AT. As 10-BI in Saskatchewan sometimes uses 1155 kcs. for DX and 10-AB at Moose Jaw is on 1190. they are confusing as to call letters and we will not give verification on call letters only. We are anxious to have our listeners write to us but we wish to be sure that it is 10-AT they heard."

"I received a station on 1360 or 1370 kcs., but could not get the call letters or city," reports Earl Sucher, 6340 Isabella Ave., St. Louis, Mo. "The only thing I could get was their slogan 'The Voice of the West.' I

am very anxious to find out what station this is." In the Index by Frequencies in the May issue of this magazine, we will give, in place of our usual data, the owners, mail addresses, and points that are usually given in announcements such as the names of buildings, hotels, etc., and the slogans used. Unfortunately we do not find among them, the slogan "The Voice of the West." Who can identify it?

A Night of Nights

"The night of January 27th-28th can go down in radio history as a night of nights for strength of radio signals," concludes Hugo L. Markland, Box 401, Steamboat Springs, "I started at 1500 kcs. and after pulling in KPQ, Wenatchee, Wash., and KVO, El Centro, Calif., a couple of hundred-watters, I kept going up the dial picking up five other Then at 2:05 a. m. 100-watters. MST., after KHJ signed off, I picked up KGBU, Ketchikan, Alaska, with his program and advice to fur trappers, and then in quick order I got the following: 2BL, 4QG, 2YA, JOQK, JOAK, JOIK, JOHK, and JOBK."

"I have no opportunity to DX except during holidays and occasionally weekends," says Carl M. Hansman, Bethel, Maine. "But despite this great handicap, I have built up a log totaling 433. I have received stations from 46 states and the District of Columbia (Arizona and Wyoming alone being missing) and I have also had stations in seven foreign countries. I have heard 30 stations on the Pacific Coast, and have a total of 48 stations from over 2000 miles."

From a Cuban DXer

From a subscriber in Cienfuegos, Cuba, Enrique Hidalgo, Prado 210, comes a report of his DX experiences: "I do not think there is a more fascinating hobby than DXing although the geographical location of this city is not good for DX purposes. My best catch so far is KGNO, a 100-

watter, of Dodge City, Kansas, 1500 miles from Cienfuegos. Other good catches are WKAQ, HIM and HJN, Bogota. You are responsible for my tuning in WOPI, WNAD and YV1BC. What a thrilling moment I had when YV1BC bade goodbye saying 'Buenas noches' three times and then 'Good night.'"

"KFAB and WBBM still continue to exchange signals with very bad results," observes Gerald McGrath, 2211 South Clinton St., Sioux City, Iowa. "WBBM makes a bad mess of Chicago has plenty of radio KFAB. service and WBBM ought to move out and let KFAB hold that wave or else make up their mind on when Gerald says 2BL to share time." comes in on some of their morning programs loud enough to be heard across the street. He has a variometer, evidently in series with his antenna, which he says boosts volume and helps selectivity.

One from Mexico

Manuel R. Medrano, 710 Juarez Ave., Juarez, Chih., Mexico, states that although his location is "terrible" he has received 339 stations of which 28 are 100 watts or less. He uses a Model 480, 1933 Atwater Kent all-wave receiver and suffers greatly from power-line noises which are "working in my set 24 hours a day." We feel sure that our Juarez friend and many other similarly afflicted will benefit from Mr. Dashiell's article in this issue.

"Very disgustedly yours," signs Joaquin T. Russe, 21 Standish St., Provincetown, Mass. In spite of the fact that he can pull in YV1BC at 5:15 any night and WKAQ at 5:30 and has had KOA and KNX at 7:00 p. m., yet he just cannot get a JO or a VK even though he gets up at three and four o'clock every morning. He says his new Majestic 12tube will bring in hundred-watters on the Pacific Coast without any trouble at all but his heart is set on Australia and Japan and he wants someone in the East who gets the T-P's to tell him how and when.

G. Dana Boylan, 2205 Monroe St., Wilmington, Del., tells us his two-tube battery set is regenerative as we suspected (page 25, January) but as Dana is in the radio business we feel sure he is able to keep it from oscillating and driving his neighbors insane. He now reports logging KGMB, the 250 watt Honolulu station, on the morning of Jan. 3rd, and he considers their verification his prize.

J. T. Campus, P. O. Box 252, Strathmore, Calif., says he picks up KGU, Honolulu, every night around ten o'clock, PST., but they come in best after 10:30 after XER signs off. Mr. Campus used to live in Hawaii and would like to hear from readers in the Islands. He uses a Model 95 Philco and receives Alaska, Porto Rico, Manila, Manchuria, Korea, Salvador, New Zealand, Cuba, Australia, and Japan.

"The last two Sunday mornings I have tuned in on CMJK, Camaguey, Cuba, on 790 kcys., from 3 to 4:30 a. m.," comments A. W. Jollin, 44 Benefit St., Worcester, Mass. "They were reading letters sent in by fans from the U. S. As they do not send verifications, they would verify the fans' letters over the station by reading the letter and then saying, 'O. K., verified!"

Is VPN Back Again?

Paul W. Craven, 190 Commonwealth Ave., Buffalo, N. Y., reports receipt of a verification from VPN, Nassau, Bahamas, dated Jan. 30th. He picked them up from 1:00 to 1:30 p. m., on Jan. 22nd. Evidently this station is again on the air. Who else has heard them and what was their frequency?

"At last I have a catch that anyone can be proud of," declares Robert Rosenberger, 17 Janssen Place, Kansas City, Mo. "Although I have had stations in 26 different countries, I consider RV26 in Stalino my best yet. They were doing some 'Gazotskies' and announcing in Russian."

Station WHDL notifies the NNRC

that it has adopted a strict rule that only those reports will be verified which bear a postmark within 24 hours of the broadcast. This is a policy that could well be adopted by all stations.

Thumb-Nail Records

"I thought that you would be interested in having a DX record that I have kept from September 25th to December 9, 1932," writes Granville H. Wood, 249 Thomas Ave. So., Minneapolis, Minn. "During this time I have received 214 stations including 29 out of 48 states in the U. S. Also have received 7 Canadian stations, and 6 Mexican. They are XER, XEB, XEFO, XEGN, XEW and XEPN. These stations were received using a 5-tube superhet Jackson Bell receiver."

"There is one thing I have been looking for in RADEX that I have been unable to find," remarks C. L. Powell, 6837 Ave. S., Houston, Texas. "I have not seen any letters from a Texan showing their log for distance. I would like to hear from someone in Texas who is breaking through all these Mexican and Cuban stations. I have a 12-tube Silvertone and in the month I have had it, have received over 150 stations, but only on the North American Continent and Cuba."

"I am 16 years old," admits Reinhold Peterson, 2516 So. Lenox St., Milwaukee, Wis., "and I have been DXing since January, 1931. I have been using a pair of your headphones and adapter for a year. So far my log totals 398 stations, including 29 in California, 8 in Washington, 8 in Oregon. I have heard every state except several in the New England group. On December 4th I heard KGCX, Wolf Point, Mont., coming in fine, for about four straight hours."

"I have logged about 75 stations during the past few months," writes Ralph V. Caldwell, R. D. 1, Clarksville, Pa. "I have at least one station in all states but Wyoming, with 20 in California. I have 125 stations

of 100 watts or less with a total of 548. I have a dozen Cuban stations, including CMGC, a 30-watter; CMGE, 30-watter; also WKAQ, Porto Rico. Most of these I have received on a 3-tube Philmore radio."

"I use a Crosley 42-S which I have had for three years," says W. H. Waters, Wyaconda, Mo. "I think my best catch is KPCB, 100 watts, Seattle. I picked this station up one morning as loud as some thousandwatters. I use the ground wire on the antenna post; nothing on the ground post. I have every channel from 540 to 1500 and 41 of the states. My total is 299 on the b. c. band with 10 or 15 police."

"I have a 9-tube Philco baby-grand superhet and have logged 166 stations," reports Fred Ansell, 3101 N. Natoma Ave., Chicago, Ill. "I have 39 states, quite a few Canadians and Mexicans and one Cuban, CMC. I use a short picture mold aerial and no ground. The reason for no ground is this: When I run a wire from the radiator or cold-water pipe there is quite a large spark."

Likes the DX Calendar

"I hope you continue to print the DX calendar, for without it I probably would not have over 75 percent of the stations that I have logged," says N. A. O'Harra, 1712 N. 4th St., Columbus, Ohio. "I got six new Canadians within a space of twenty-five minutes, which brought my total to 481, using an Amrad 81 receiver, with 90 feet of aerial including lead to the set."

"With my Atwater Kent Model 82 I have been successful in tuning in 548 stations," advises Fred Wakerell, 68 Rochester St., Ottawa, Ont., "according to your way of counting stations. Do you really think a frequency change should count as a new station? My best efforts are 2CO, Corowa; YV1BC, Caracas; KGBU, Ketchikan; HHK, Port-au-Prince, and WKAQ, San Juan."

"Thanks to your tips," says Earl R. Roberts, 105 Gomber Ave., Cambridge, Ohio, "I logged CMJF very loud, CKIC like a local, and CFJC weakly, this morning. Last night I heard CMBW at 9:30 on 955 kcys., and CMBZ loud at 8:30 on 1005 kcys. XEAW, Reynosa, has been very loud on 960 kcys., to midnight and after. Also XEPN, Piedras Negras, on 885, with 75 kw to 11 p. m."

His Greatest Season

"This year has been the greatest DX season for me in my three years of trying," says Bruce Vaughan, 1312 Tenth Ave., Huntington, W. Va. "I have logged a new one each day since early August. I now have 28 Californians and have only six states yet to log, namely, Delaware, Idaho, Montana, Nevada, Wyoming and Vermont. I use a Majestic model 70."

"I have received eighty 100-watt stations, 43 being over 500 miles distant, 13 over 1,000 miles, and 4 over 1,500 miles; also five 50-watters and two 10-watters," reports Walter W. Bronson, 2nd, 1485 Chapel St., New Haven, Conn. "The best catches on my log of 370 stations are: ZYA, 4QG, YV1BC, KUMA, KIDW, KFXJ, KGEK and KGGM."

"I have been Dxing for about two years, but as my parents have not become as interested in it as I am, I haven't been able to sit up very late at night," confesses James Owen, 1019 W. Webster St., Springfield, Mo. "Up to this time, however, I have received 327 different stations, including 8 shortwave."

"I use a one-tube d.c. receiver, using a 201-A tube. I had the set built last March and since then I have received 150 stations," writes George Greensward, Brampton, Ont. "Here are some of my best catches: KECA, Los Angeles; KNX, Hollywood; KEX, Portland, Oregon; WDAE, Tampa; KVOR, Colorado Springs."

"Although I have not verified any, my total number of stations is 209," reports Clayton Lamb, 125 W. Cleveland St., Stockton, Calif. "Some of my best catches are XEN, JOAK, JOIK, JOCK, JFAK, WRHM, JOBK,

(Continued on page 79)

The Book of the Air

VITH the introduction of the new, small tubes, efficient radio receivers are being packed in unbelievably small cabinets. Resembling a pair of beautiful books, this Stewart-Warner Receiver operates on both a.c. and d.c. and special adapter cords make it available for use on 6, 12 and 32-volt d.c. as well as the 220-volt currents of steamships and foreign countries.



An ingenious, powerful circuit embodies the latest tube equipment—36 power output, -39 r.f. and 12Z3 rectifier. It has a wide range of tuning enabling the listener to bring in police calls in addition to the regular b.c. stations.

The manufacturers claim that the quality of tone is surprising, comparing favorably with large radios. The sets come in seven editions, a variety of colors in handsome leatherette and rich leather bindings with gold stamping on the backs and covers.

What a far cry from the huge, ugly cabinets of just a few years ago.

This Month's Changes

	FREQUENCIES				
	579	HIX	Santo Domingo, D. R., from 630		
	590	CMW	Havana, Cuba, from 585		
	66 0	CMAF	Havana, Cuba, from 680 Juarez, Mexico, from 1000		
	1015	XEJ	Juarez, Mexico, from 1000		
	1020	XEFC	Merida, Mexico, from 1050		
	1185	CMBN	Havana, Cuba, from 1444		
	1230	CMBY	Havana, Cuba, from 1235		
	1230	CMCA	Havana, Cuba, from 1235		
	1240	CMJN	Camaguey, Cuba, from 1270		
	1335	CMJI	Ciego de Avila, Cuba, from 1260		
	1340	KGDY	Huron, S. D., from 1200		
	1360	CMJP	Moron, Cuba, from 1310		
	1365	CMCR	Havana, Cuba, from 1375		
	1405	CMCH	Havana, Cuba, from 1395		
	1405	CMCM	Havana, Cuba, from 1395		
	1485	CMBR	Havana, Cuba, from 1500		
	POWER				
	660	CMAF	Havana, Cuba, 1000 to 500		
	780	WEAN	Providence, R. I., 250 to 500		
	890	WJAR	Providence, R. I., 250 to 500		
	1015	XEJ	Jaurez, Mexico, 100 to 500		
	1030	XEB	Mexico City Mexico 1000 to 10000		
	1075	XEG	Mexico City, Mexico, 1000 to 10000 Mexico City, Mexico, 250 to 500		
	1110	CMJO	Ciego de Avila, Cuba, 15 to 50		
	1150	CMJH	Ciego de Avila, Cuba, 50 to 30		
	1185	CMBN	Havana, Cuba, 30 to 150		
	1230	CMBY	Havana, Cuba, 350 to 250		
	1290	KLCN	Blytheville, Ark., 50 to 100		
	1335	CMJI	Ciego de Avila, Cuba, 5 to 45		
	1340	KGDY	Huron, S. D., 100 to 250		
	1370	XEFV	Juarez, Mexico, 50 to 100		
	1460	KSTP	St. Paul, Minn., 10000 to 25000		
NEW					
	560	XEAO	Mexicali, Mexico		
	660	XEM	Matamores, Mexico		
	685	HJN	Bogota, Colombia		
	875	XEAD	Mexico City, Mexico		
	1090	XEAL	Mexico City, Mexico		
	1295	XEAC	San Luis Potosi, Mexico		
	1340	WLEC	Portland, Maine		
	4	TETT A ST			

Portland, Maine

XEAB N. Laredo, Mexico **OWNERS**

630 WMAL Washington, D. C., to National Broadcasting Co. Seattle, Wash., to Fishers Blend Stations. 970 KJR

Inc. Havana, Cuba, to G. de Sequeira CMBN 1185 1200 KGHI Little Rock, Ark., to Lloyd Judd Co.

PERMIT TO CHANGE LOCATION San Francisco, Calif., to Oakland, Calif.

THE RADEX MARKET PLACE

1450

Classified Advertising

A Department for the Use of Advertisers and Readers in bringing Used Sets and Parts, Merchandise, Books or Services to the Attention of the Public. Rate: 10 cents a word; minimum charge, \$4.00.

EARPHONES CAN NOW BE USED ON ANY RECEIVER WITHOUT PHONE-JACK. Our PHONE RECEPTOR, attached in two minutes without tools, AUTOMATICALLY DISCONNECTS SPEAKER when phone-plug is inserted. NO CHANGES IN RECEIVER WIRING. Complete with cable, metal box, adapters, \$3.95.

BALDWIN type C phones, \$3.75

LYNCH No-stat Antenna \$3.00

AMPLIVOX LABORATORIES, 82 East 95th St., Brooklyn, N. Y.

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

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.

Editor's Note: These programs are correct at the time of going to press but are subject to change thereafter.

MONDAY

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

B — Little Orphan Annie CKGW KDKA WBAL 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 — Elizabeth Barthell

C — Elizaben Barton.
CFRB CKOK KFAB KFH KLZ
KMOX KSCJ KSL KTRH KVOR
WAAB WABC WADC WBCM WBIG
WBRC WBT WDAE WDBJ WDOD
WDRC WDSU WFAN WFBL WFEA
WGR WGST WHEC WP WISN WGR WGST WHEC WP WISN
WJAS WKBH WKBN WJBW WLBZ
WNAX WNOX WODX WOKO WORC
WQAM WREC WSBT WSFA WSJS
WSPD WTAQ WTOC
R—Waldorf-Astoria Orchestra

H — WAIDOTI-ASTORIA UTSHESSIA CKGW KFYR KGO KOA KPRC KSD KTBS WBEN WCAE WCKY WCSH WDAF WEAF WENR WFBR WFI WHO WIBA WIOD WJAR WKY WMC WOAI WOC WRC WSB WSMB WTAG WWNC

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

C—Reis and Dunn
CFRB CKOK KFAB KFH KLZ
KMBC KSCJ KSL KTRH KVOR
WAAB WADC WBEM WBIG WBRC
WBT WCAO WDAE WDBO WDOD
WDSU WEAN WFAN WGR WHEC
WIP WISN WJAS WJSV WKBH
WJABW WLBZ WNAX WOKO WORC
WQAM WSFT WSFA WSJS WSPD
WTAQ WTAR WTOC

E-6:30 p.m., C-5:30, M-4:30, P-3:30 C— Jad Salt Program CFRB WABC WCAO WCAU WHK WKBW WKRC WSPD

WARW WARC WSFD

R— King Kong Drama
KFYR KGO KGW KHQ KOA KOMO
KPRC KSD KTBS KTHS KVOO
WEAF WFBR WFI WIBA WIS
WMAQ WMC WOAI WSB WSMB

B — Three X Sisters
KSO KWCR KWK WBAL WJZ
WREN WSYR

E-6:45 p.m., C-5:45, M-4:45, P-3:45 C — Just Plain Bill

CKOK WAAB WABC WCAO WCAU WHK WJSV WKBW

R — Andrea Marsh

WESN KGO KGW KOMO KSD WBEN WCAE WDAF WEAF WFBR WHO WIS WJAR WMAQ WMC WOC WSAI WSB WSM WTAG WWNC

B — Lowell Thomas

CKGW KDKA WBAL WBZ WBZA WGAR WHAM WJR WJZ WLW B — Little Orphan Annie

KFYR KOIL KPRC KSO KSTP KTBS KWCR KWK WBAP WDAY WEBC WENR WKY WOAI WREN

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

C — Myrt and Marge
CKOK KRLD WABC WADC WCAO
WOAU WDRC WEAN WFBL WGR
WHK WJAS WJSV WKRC WNAC
WOKO WSBT WSPD WWVA
B — Amos 'n' Andy
CKGW KDKA WBAL WBZ WBZA
WCKY WFLA WGAR WHAM WIOD
WJAX WJR WJZ WLW WPTF WRC
WRVA WWNC
R — Gruen and Hall Biang Dug

R - Gruen and Hall, Piano Duo

K TYL KFI KFSD KFYR KGO KOA KSTP KTBS KVOO KYW WCSH WDAF WEAF WEBC WFBR WGY WHO WIBA WKY WOC WOW WSAI WSM WTAM

E-7:15 p.m., C-6:15, M-5:15, P-4:15 C—Buck Rogers—Year 2433 CKOK KMOX WABC WBBM WCAU WCCO WGR WHAS WHK

R — Wheatenaville Ray Knight WHO

WDAF WEAF WEEL WGY WHO WJAR WLIT WMAQ WOC WOW WRC WTAM WWJ WIRC WIAM WWJ B — Tastyeast Jesters KDKA WBAL WBZ WBZA WCKY WHAM WJZ

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

- Five Star Theatre KDKA KTBS WBAL WBZ WBZA WHAM WIS WJZ WMAL WMC WPTF WRVA WSAZ WSMB WWNC

C — Dolph Martin's Orchestra WABC WCAO WCAU WDRC WEAN WHEC WFBL WFEA WGR WJAS WJSV WLBZ WNAC WOKO WORC

R - Elvia Allman WCKY WCSH WDAF WEAF WEEL WENR WFBR WGY WJAR WSAI

E-7:45 p.m., C-6:45, M-5:45, P-4:45 C — Boake Carter, News Flashes CKOK KMBC KMOX WABC WBBM WBT WCAO WCAU WCCO WGR WHAS WHK WJSV WNAC

R — The Goldbergs KFYR KPRC WBEN WCAE WCSH WEAF WEEL WEAA WJAR WKY WLIT WFBR WGY WOAI WRC WTAG WTAM WWJ

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

E-0:00 p.m., C-7:00, M-0:00, P-0:00 C- Whispering Jack Smith CKOK KMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WFBM WGN WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO

WSPD R — Soconyland Sketches

WBEN WCSH WEAF WJAR WTAG WTIC WEEL WGY

B - Clicquot Club Eskimos KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WCKY WGAR WHAM WJZ WLS WREN

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

C — Singin Sam CKOK KMBC KMOX WABC WADC WCAU WCCO WDRC WEAN WFBL WFBM WGN WGR WHK WJAS WJSV WKRC WNAC WOKO WSPD

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

E-8:30 p.m., cf:30, m-cs.0, r-cs.30

C — Fu Manchu Mystery
CFRB CKOK KMBC KMOX KRLD
WABC WADC WBT WOAO WCAU
WDRC WEAN WFBM WGN WGR
WHAS WHK WIAS WJSV WKRC
WNAC WOKO WOWO WSPD

" - voice of Firestone
CFCF CKGW KPRC KSD KTBS
KVOO WBEN WCAE WCSH WEAF
WEEL WFAA on 8.45 WFBR WFLA
WGY WHO WIOD WIS WJAR WJDX
WKY WLIT WLW WMAA WLIT WLW WMAQ WOC WOW WRC WRVA WOAI WSB WSM WSMB WTAG WTAM
WTIC WWJ WWNC

B — Don Carney Dog Chats KDKA KWK WBAL WBZ WBZA KDKA KWK WBAL WBZ W WGAR WJR WJZ WLS WREN

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

E-9:00 p.m., C-8:00, M-7:00, P-6:00
C— Chesterfield Program
CKOK KBD KERN KFBK KFPY
KFRC KGB KHJ KLRA KLZ KMBC
KMJ KMOX KOH KOIN KOL KOMA
KRLD KSL KTRH KTSA KYI KWG
WABG WADC WBRC WBT WCAH
WCAO WCAU WCCO WDAE WDBJ
WDBO WDRC WDSU WEAN WFBL
WFBM WGN WGST WHAS WHEC
WHK WISN WJAS WJSV WKBW
WKRC WLAC WJBZ WMBG WMT WIRC WLAC WLBZ WMBG WMT WNAC WOKO WORC WOWO WPG WQAM WREC WSPD WTAR WTOC

R A & P. Gypsies
KSD WBEN WCAE WCSH WDAF
WEAF WEEI WGY WHO WJAR
WLIT WMAQ WOC WOW WRC
WSAI WTAG WTAM WTIC WWJ

MONDAY—(Continued)

B - Sinclair Minstrels KDKA KFYR KOIL KPRC KSO KSTP KTBS KTHS KVOO KWCR KWK WAPI WBAL WBZ WBZA KSIP KIBS KIHS KVOO KWCK KWK WAPI WBAL WBZ WBZA WDAY WEBC WFAA WFLA WGAR WHAM WIBA WIOD WIS WJAX WIDX WIR WJZ WKY WLW WMC WOAI WREN WRVA WSB WSM WSMB WTMJ WWNC

E-9:15 p.m., C-8:15, M-7:15, P-6:15 C — The Mills Brothers CKOK KMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WGN WHAS WHK WJAS WJSV WKBW WKRC WNAC WOKO WSPD

F-9:30 p.m., C-8:30, M-7:30, P-6:30 C — Mysteries in Paris CKOK KMBC KMOX WABC WADC

WBT WCAO WCAU WEAN WFBL WGN WHK WJAS WJSV WKBW WKRC WNAC WOKO WOWO WSPD

WKRC WNAC WOKO WOWO WSPD

R—Paul Whiteman and Orchestra
KDYL KFI KFSD KFYR KGHL
KGIR KGO KGW KHQ KOA KOMO
KPRC KSD KSTP KTAR KTHS
WBEN WCAE WCSH WDAF WDAY
WEAF WEBC WEEI WFAA WFBA
WFLA WGY WHO WIBA WIOD
WJAR WJAX WJDX WKY WLIT
WMAQ WMC WOAI WOC WRC
WRVA WSAI WSB WSM WSMB
WTAG WTAM WTMJ WUJ WWNC
B—Jack Frost's Melody Moments B — Jack Frost's Melody Moments KDKA WBAL WENR WGAR WHAM

WJR WJZ WLW

E-10:00 p.m., C-9:00, M-8:00, P-7:00 R — Contented Program CFCF CKGW KFYR KPRC KSD CFCF CKGW KFYR KPRC KSD KSTP WBEN WCAE WDAF WEAF WEBC WENR WFAA WFLA WGY WHO WIOD WJAX WKY WMC WOAI WOC WRYA WSAI WSB WSM WTAM WTMJ WWJ

C — Columbia Revue

C—Columbia Revue
CFRB CKOK KJRA KLZ KMBC
KSCJ KSL KTRH KTSA KVOR
WAAB WABC WADC WBBM WBCM
WBIG WBRC WBT WCAH WCAO
WCAU WCCO WDAE WDBJ WDOD
WGAU WCCO WDAE WDBJ WDOD
WGAU WCCO WDAE WBBJ WHOD
WST WHAS WHEC WHK WHP
WJAS WJSV WKBH WKBN WKBW
WJBW WBZ WMBD WMT WNAX
WNOX WODX WOKO WORC WPG
WQAM WREC WSJS WSPD WTOC
B—The Sizylers, Harmony Trio

B— The Sizzlers, Harmony Trio KDKA KDYL KPSD KGHL KGIR KOA KOIL KSO KWCR KWK WBAL WCKY WGAR WJR WJZ WMAQ WREN WSYR

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

E-10-19 p.m., U-9:15, M-8:15, P-7:15 B — Vic and Sade KDYL KFSD KGO KOA KWCR KWK KYW WBAL WCKY WJZ WREN WSYR

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

CFRB CKOK KLRA KLZ KMBC
KMOX KSCJ KTRH KTSA KVOR
WAAB WABC WADC WBCM WBIG
WBRC WBT WCAH WCAO WCCO
WDAE WDBJ WDOD WDRC WDSU
WFAN WFBL WFBM WFEA WGST
WHAS WHEC WHP WIP WISN
HAS WHEC WHP WIP WISN
HAS WHEC WHP WIP WKDW WIAS WISV WKBH WKBN WKBW WLBW WLBZ WMBD WNAX WNOX WODX WOKO WORC WQAM WREC WSJS WSPD WTOC

R — National Radio Forum

R— National Radio Forum
KECA KGA KPO KSD KTAR KTBS
WBEN WCSH WDAF WEAF WEEI
WENR WFBR WFLA WIBA WIOD
WIS WJAR WJDX WKY WOAI
WRC WRVA WSAI WTAG WTAM
WWJ 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 WLAC

E-11:00 p.m., C-10:00, M-9:00, P-8:00 C — Howard Barlow's Symphony CFRB CKOK KFAB KFH KLZ KMBC KSCJ KSI, KTRH KVOR KMBC KSCJ KSI, KTRH KVOR WBC WADC WADC WBCM WBRC WBT WCAO WDOD WDRC WDSU

WEAN WEAN WEBM WHK WIBW
WICC WIP WISN WAS WISD
WKBN WKBW WLBW WLBZ WMBD
WNAX WODX WOKO WORG WQAM
WSBT WSJS WSPD WTAR WTOC — Ted Weems and Orchestra

KFYR KGO KOA KSD WBEN WCAE WCKY WDAF WEAF WEBC WFBR WGY WHO WIBA WJAR WOC WRC

WTAG WTAM WWJ

G — Amos 'n' Andy

KDYL KFI KFSD KGO KGW KHQ KOA KOIL KOMO KPRC KSTP KTHS KWK WBAP V/DAF WENR WJDX WKY WMAQ WMC WOAI WREN WSB WSM WTMJ

E-11:30 p.m., C-10:30, M-9:30, P-8:30
C—Guy Lombardo and Orchestra
CFRB CKOK KFAB KFH KLZ
KMBC KMOX KSCJ KSL KTRH
KVOR WAAB WABC WADC WBCM
WBRC WBT WCAO WCAU WCCO
WDOD WDCR WDSU WEAN WFBM
WHK WIBW WICC WISN WJSV
WKBN WKBW WLBW WLBZ WMBD
WNAC WODX WOKO WORC WPG
WQAM WSBT WSJS WSPD WTAR WTOC

R - Jack Denny and Orchestra WEAF WFBR WJAR WRC WTAG WTIC

M TO Voice of Firestone
KDYL KFI KFSD KFYR KGHL
KGIR KGO KGU KGW KHQ KOA
KOMO KSTP KTAR WDAY WEBC
WIBA WTMJ

B — Harold Sanford's Brass Band

D — HAUGU SAHOTUS BYASS BANG CFCF CKGW KFYR KSO KSTP KWCR KWK WBAL WCKY WDAY WEBG WENR WFLA WGAR WHAM WIBA WIS WJAX WJZ WREN WSYR WWNC

E-12:00 p.m., C-11:00, M-10:00, P-5:00 C — Abe Lyman and Orchestra CKOK KFAB KLZ KMBC KMOX KRLD KSCJ KSL KTRH KVOR WABC WBRC WBT WCAU WCCO WDOD WDSU WIBW WICC WISN WJSV WKBW WLBW WMBD WNAC WNAX WOKO WPG WSBT WSPD WTOC

B — Freddie Martin and Orchestra KDKA KOIL KWCR KWK KYW WBZ WBZA WGAR WJZ WRC WREN

R — The Goldbergs KDYL KECA KEX KGA KJR KOA KPO

TUESDAY

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

E-6:00 p.m., C-5:00, M-4:00, P-3:00 C — Reis and Dunn

CFRB CKOK KFAB KFH KLZ KSCJ KSL KVOR WAAB WABC WACO WBIG WBRC WDAE WDBJ WACO WBIG WBRC WDAU WFEA
WDBO WDOD WDRC WDSU WFEA
WGST WHP WICC WIP WISN
WKBH WKBN WLBW WLBZ WMT WNAX WNOX WODX WOKO WORC WQAM WREC WSBT WSFA WSJS WSPD WTAQ WTAR WTOC

R — Waldorf-Astoria, See Monday

E-6:30 p.m., C-5:30, M-4:30, P-3:30 R — Mid-Week Hymn Sing KPYR KGO KOA KOMO KTBS KTHS KVOO WBEN WDAF WEAF WFBR WFI WIS WMAQ WMC WOAL WPTE WSB WSMB WTAG

WWNC

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

C - Just Plain Bill, See Monday

R — Harding Sisters, Piano Duo WBEN WEAF WFBR WFI WIS WJAR WMAQ WPTF WRC WSAI WSM WTAG WWNC

E-7:00 p.m., C-6:00, M-5:00, P-4:00
R — Vincent Lopez and Orchestra
KDYL KFSD KFYR KGO KHQ
KOA KOMO KTBS WCSH WDAF
WDAY WEAF WEBC WFBR WFI
WHO WIBA WJAR WMAQ WMC
WOC WRC WSAI WTAG WWJ
C. MWAT AND MARCH See Moviey

C — Myrt and Marge, See Monday B — Amos'n' Andy, See Monday

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

- Radio in Education

B— Hadio in Education KDKA KDYL KECA KEX KFSD KFYR KGA KGIR KJR KOA KOIL KPO KTBS KVOO KWCR WBZ WBZA WENR WFLA WIBA WIS WJDX WJZ WMC WOAL WFTF WREN WSB WSM WSMB WWNC

E-7:30 p.m., C-6:30, M-5:30, P-4:30 C — Keller, Sargent and Ross CKOK KMBC KMOX WABC WCAO WCAU WDRC WGN WGR WHAS WHK WJAS WJSV WKRC WNAC

R — James Melton Tenor KYW WBEN WCSH WDAF WEAF WFBR WFI WGY WHO WOC WSAI WTAG WWJ

E-7:45 p.m., C-6:45, M-5:45, P-4:45 B — Octavus Roy Cohen Mystery KDKA KOIL KSO KWCR KWK KYW WBZ WBZA WGAR WJZ WREN WSYR

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

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

C — Easy Aces
CKOK KMBC KMOX WABC WADC
WCAO WCAU WCCO WEAN WFBL
WFBM WGN WGR WHAS WHK
WJAS WJSV WKRC WNAC WOKO WSPD

R — Blackstone, Sanderson-Crumit KSD KSTP KYW WBEN WCAE WCSH WDAF WEAF WEBC WEEL WFI WGY WHO WJAR WOC WOW WRC WSAI WTAG WTAM WWJ B — Eno Crime Club

KDKA KOIL KSO KWCR KWK

TUESDAY—(Continued)

WBAL WBZ WBZA WGAR WHAM WJZ WLW WMAQ WREN

E-8:15 p.m., C-7:15, M-6:15, P-5:15 C -- Magic Voice CKOK KMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WFBM WGN WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO

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

CKOK KMBC KMOX WABC WADO CROR RMBC RNOA WABC WADC WBCM WCAII WCAO WCAU WCCO WFBL WFBM WGN WGR WHAS WHEC WHK WISN WJAS WJSV WKBH WKRC WOKO WOWO WSPD

R — Wayne King and Orchestra KSD KSTP WBEN WCAE WCAE WCKY WCSH WEAF WEBC WEEL WFBR WFI WGY WHO WIBA WJAR WMAQ WOC WOW WRC WSAI WTAG WTAM WTMJ WWJ

B - Horlick-Health Talks KDKA KOIL KWCR KWK WBAL WBZ WBZA WGAR WHAM WJZ WLS WLW WREN

E-8:45 p.m., C-7:45, M-6:45, P-5:45 C — Abe Lyman and Orchestra CKOK KMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WFBM WGN WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO

WOWO WSPD

E-9:00 p.m., C-8:00, M-7:00, P-6:00 C — Chesterfield, See Monday

- Ben Bernie and Orchestra R—Ben Bernie and Urenessra KFYR KOA KPRC KSTP WBAP WBEN WCAE WCKY WCSH WDAY WDAY WEAF WEEL WFBR WFI WGY WHO WJAR WKY WLS WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WWJ B—Housebuld Musical Memories

B — Household Musical Memories KDKA KSO KWK WBAL WBZ WBZA WHAM WJR WJZ WMAQ

E-9:15 p.m., C-8:15, M-7:15, P-6:15 - Threads of Happiness

C — Threads of Happiness
CKOK KDB KERN KFBK KFH
KFPY KFRC KGB KHJ KLRA KLZ
KMBC KMJ KMOX KOIN KOMA
KRLD KSL KTRI KTSA KVI KWG
WABC WADC WBRC WBT WCAO WABC WADC WBRC WBT WCAO WCAU WCCO WDAE WDBO WDOD WCAU WCCO WDAE WDBO WDOD WGN WGST WHAS WHEC WHK WJAS WJSV WKBW WKRC WLAG WNAC WOKO WOWO WQAM WREC WSPD WTAR WTOC

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

E-9:30 p.m., U-0:30,

R — Ed Wynn-Don Voorhees

CFCF KDYL, KFI KFSD KFYR

KGHL KGIR KGO KGW KHQ KOA

LDDC KSD KSTP KTAR KOMO KPRC KSD KSTP KTAR KTBS KTHS KVOO WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEL WFBR WFL WFLA WEBC WEEL WIBF WPDAY WEAF
WCY WHO WIBA WIOD WIS WJAR
WJAX WJDX WKY WLW WMAQ
WMAC WOAL WOO WOW WRC
WRVA WSB WSM WSMB WTAG
WTAM WTMJ WWJ WWNC
C—California Melodies

CFRB CKOK KFH KLZ KMBC
KMOX KSCJ KSL KTRH KTSA

WABC WBCM WBIG WBRC WBT WCAO WCAU WCCO WDAE WDOD WDRC WEAN WFBM WFEA WHEC WHK WIBW WJAS WKBH WKBN WLBW WLBZ WMBD WNAC WNAX WODX WOKO WQAM WSJS WTAR WTOC

Willard Robison and Orchestra KDKA KSO KWK WBAL WBZ WBZA WCKY WENR WJR WJZ WREN WSYR

E-10:00 p.m., C-9:00, M-8:00, P-7:00 C — Five Star Theatre

KLRA WABC WBIG WBT WCAO WCAU WDBJ WDOD WDRC WDSU WEAN WFBL WFEA WHP WICC WEAU WIDEJ WIDD WIDRC WIDSU WEAN WFBL WFEA WHP WICK WJAS WJSV WKBW WIAC WMBG WNAC WNOX WOBU WOKO WORC WREC WSJS WTAR

B — Sigmund Spaeth, Tune Detective CFCF KDKA KOIL KSO KWCR KWK WBAL WCKY WGAR WHAM WJR WJZ WMAQ WREN WSYR

E-10:15 p.m., C-9:15, M-8:15, P-7:15 B — Vic and Sade, See Monday

E-10:30 p.m., C-9:30, M-8:30, P-7:30 C — Edwin C. Hill, See Monday

B - Homay Bailey, Soprano KSO KWCR KWK WBAL WCKY WGAR WHAM WJR WJZ WMAQ

E-10:45 p.m., C-9:45, M-8:45, P-7:45
C—Charles Carlile, Tenor
OFRB CKOK KFAB WAAB WABC
WADC WBCM WDRC WFAN WFBL
WFEA WHEC WHK WIP WIAS
WJSV WKBN WKBW WLBZ WOKO
WORC WFG WSBT WSPD
B—Professor Jack McLallen
OKCW KODKA KOLL KSO KWCR

CKGW KDKA KOIL KSO KWCR KWK WBAL WCKY WGAR WHAM WJR WJZ WMAQ WREN WSYR - Myrt and Marge, See Monday

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

Dennis and Roese

CKGW KSD WCAE WCKY WEAF WFBR WHO WOC WRC WSAI WWJ

E-11:15 p.m., C-10:15, M-9:15, P-8:15 E-11:15 p.m., U-10:15, M-3-13, F-6:18

— Heart Songs, Women's Octe
CFCF CKGW KFYR KGIR KPRC
KSTP KTBS KWK WBAL WCKY
WENR WFLA WGAR WHAM WIBA
WIS WJR WJZ WMC WRC WREN
WSM WSYR WWNC

WSM WSTR THE TOTAL STATE OF THE WEBC WEAR WIBA WJDX WI WMC WOAI WSB WSMB WTMJ

E-11:30 p.m., C-10:30, M-9:30, P-8:30 — Isham Jones and Orchestra C—Isham Jones and Orchestra CFRB CKOK KFAB KFH KLZ KMBC KSCJ KSL KTRH WAAB WABC WADC WBCM WBRC WBT WCAO WCAU WCCO WDAE WDBO WDDD WDRC WDSU WEAN WFBM WHEC WHK WIBW WICC WISN WJSV WKBN WKBW WILBW WLBZ WMBD WAX WODX WOKO WORC WPG WQAM WSJS WSPD WTAR WTOC WWYA WTOC WWVA

E-12:00 p m., C-11:00, M-10:00, P-9:00 R - The Goldbergs, See Monday

B—Cab Calloway and Orchestra
KDKA KOIL KPRC KSO KTBS
KWCR KWK WAPI WBZ WBZA WMC WREN WSB WSM WSMB WWNC

C — Joe Haymes and Orchestra
CKOK KFAB KLZ KMBC KSCJ KSL
KTRH KVOR WABC WBRC WBT
WCAH WCAU WDAE WDOD WDSU WEBL WGST WHAS WHK WHP WISN WJAS WJSV WKBW WLBW WMBD WMT WNAX WNOX WOKO WPG WREC WSBT WSPD WTOC

E-12:30 a.m., C-11:30, M-10:30, P-9:30 R — Sam Robbins and Orchestra

R — Sam Roddins and County WAPI WCAE WEAF WFBR WFI WFLA WIOD WJAR WMAQ WMC WFLA WIOD WGM WSMB WTAM WWNC

 Ben Bernie and Orchestra KFI KFSD KGO KHQ KOMO KSD

KTAR Mark Fisher and Orchestra

KOIL KPRC KSO KSTP KTBS KWCR KWK WDAY WEBC WENR WFAA WGAR WIBA WJR WJZ WKY WLW WOAI WREN WTMJ

WEDNESDAY

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

E-6:00 p.m., C-5:00, M-4:00, P-3:00 - Dick Mansfield and Orchestra

C — Dick Mansfield and Orchestra CFRB CKOK KFH KLZ KSCJ KSL KVOR WAAB WABC WACO WBIG WBRC WDAE WDBJ WDBO WDOD WDRC WDSU WFFA WGST WHAS WHEC WIP WISN WKBH WKBN WLBW WLBZ WMT WNAX WNOX WODX WOKO WORC WQAM WREC WSBT WSFA WSJS WSPD WTAQ WTOC

R-Walderf-Asteria, See Monday

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

B — Three X Sisters, See Monday

— Back of the News — Wm. Hard

KECA KEX KFYR KGA KJR KOA

KPO KSD KTBS KTHS WBEN

WCKY WDAF WEAF WFBR WIBA

WIOD WIS WJAR WMAQ WMG

WOAI WSB WTAG WWNC

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

R — Andy Sannella KEGA KEX KFSD KGA KJR KPO KSD WBEN WCAE WCSH WEAF WFBR WFI WHO WIS WJAR WMAQ WMC WOC WOW WRC WSAI WSM WTAG WTAM

C - Just Plain Bill, See Monday B — Lowell Thomas, See Monday
 B — Orphan Annie, 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 — Jacqueline Solomons, Violinist RDYL KFYR KGO KHQ KOA KOMO KTBS KYW WDAF WEAF WFBR WGY WHO WIBA WJAR WFBR WGY WHO WIBA WJAR WMC WOC WRC WSAI WSB WSM WTAG

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

WEDNESDAY—(Con'd)

E-7:30 p. m., C-6:30, M-5:30, P-4:30 C — Dolph Martin, See Monday R — Elvia Allman See Monday

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

E-8:00 p.m., C-7:00, M-6:00, P-5:00 C — Whispering Jack Smith, See Mon. B — Eno Crime Club, See Tucsday B— George Olsen-Fanny Brice
KSD WBEN WCAE WCSH WDAF
WEAF WEEI WFBR WGY WHO
WJAR WLIT WLS WOC WOW WRC
WSAI WTAG WTAM WTIC WWJ

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 $\rm Tuesday$ WBEN WCSH WEAF WEEI WFBR
WGY WJAR WLIT WRC WTAG

Pickens Sisters KDKA KWCR KWK WBAL WGAR WHAM WIS WJAX WJR WJZ WLS WREN WWNC

E-8:45 p.m., C-7:45, M-6:45, P-5:45 C — Abe Lyman, See Tuesday

E-9:00 p.m., C-8:00, M-7:00, P-6:00 C — Chesterfield, See Monday Sherlock Holmes

8 — Sheriock Holmes
CFCF CKGW KDKA KOIL KWCR
KWK WBAL WBZ WBZA WGAR
WHAM WJR WJZ WJZ WJW WREN
R — General Tire Program
KFI KFSD KFYR KGHI, KGIR
KGO KGW KJIQ KOA KOMO KPRC
LSD KEJEL KTAD KTOS KYOO

KSD KSIP KIAR KTBS KVOO WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEL WFBR WFLA WEAR WEBG WEEL WEEK WILL
WGY WHO WIBS WJAR
WJAX WJDX WKY WMAQ WOAI
WOC WOW WRC WRVA WSAI
WSB WSM WTAG WTAM WTIC
WTMJ WWJ WWNC

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

C-Romantic Bacheler
CKOK KDB KERN KFBK KFH
KFPY KFPC KGB KILJ KLRA KLZ
KMBC KMJ KMOX KOIN KOL
KOMA KRLD KSCJ KSI, KTRH
KTSA KVI KWG WABC WACO
WADC WEIG WBRC WBT WCAO
WCAU WCCO WDBJ WDOD WDRC
WDSU WEAN WFBL WFBM WGN
WGST WHAS WIIK WIBW WISN
WJAS WJSV WKBH WKBW WKRC
WJAC WLBZ WMBG WMT WNAC
WNAX WNOX WODX WOKO WOWO
WREC WSPD WTAR

E-9:30 p.m., C-8:30, M-7:30, P-6:30 C—Guy Lombardo-Burns and Allen CKOK KMBC KMOX KOM, KRLD KTRH KTSA WABC WADC WCAO WCAU WCCO WDRC WEAN WPBL WFBM WGN WHIK WJAS WJSV WKEBW WKRC WNAC WOKO WOWO WSPD

MSFD Morton Downey and Donald Novis KDKA KDYL KFI KGHL KGIR KGO KGW KHQ KOA KOIL KOMO KPRC KTAR KTBS KFHS KVOO KWCR KWK WBAL WBZ WBZA WENR WFAA WGAR WHAM WJDX

WJR WJZ WKY WLW WOAI WREN WSB WSM WSMB

E-10:00 p.m., C-9:00, M-8:00, P-7:00 C — Old Gold—Fred Waring CKOK KDB KERN KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOI, KOMO KSL KTAT KTRH KTSA KVI KWG ASL KTAT KTRH KTSA KVI KWG
WAAB WABC WADC WBRG WBT
WACH WCAO WCAU WCCO WDAE
WDBO WDOD WDRC WDSU WFBL
WFBM WGN WGST WHAS WHEC
WHK WIBW WJAS WJSV WKBW
WKRC WODX WOKO WOWO WQAM
WEBG WRR WSPD

R — COR COR PIO CLUB

Corn Cob Pipe Club H — Corn Cob Pipe Club KDYL KFI KGHI, KGIR KGO KGW KHQ KOA KOMO KSD WBEN WCAF WCSH WDAF WEAF WEEL WENR WFIR WGY WHO WJAR WLIT WLW WOC WOW WRC WRVA WTAG WTAM WTIC, WWJ

B — D. W. Griffith's Hollywood KDKA KOIL KPRC KWK WBAL WBZ WBZA WFAA WGAR WJR WJZ WKY WMAQ WMC WREN WSB

E-10:15 p.m., C-9:15, M-8:15, P-7:15 B — Vic and Sade See Monday

E-10:30 p.m., C-9:30, M-8:30, P-7:30 B - Ruth Lyon Soprano KSO KWCR KWK WBAL WENR WFLA WHAM WIOD WJR WJZ WRC WREN WSYR WWNC

R — Carveth Wells

KDYL KFYR KGA KGHL KGIR KOA KPRC KSD KSTP KTBS KTHS WDAF WDAY WEAF WEBC WFA
WFBR WHO WIBA WKY WMA
WOAI WOC WOW WRVA WTMJ
C — Edwin C. Hill, See Monday WFAA

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

CFRB CKOK WAAB WARC WCAO WDRC WEAN WHEC WLBW WLBZ WOKO WORC WSPD

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

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C — Isham Jones, See Tuesday B — Sixteen Malc Voices KSO KWCR KWK WBAL WBZ WBZA WCKY WENR WGAR WHAM

WJZ WREN

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

C — Eddie Duchin and Orchestra
CKOK KFAB KLZ KMBC KSCJ
KTRH KVOR WABC WBRC WBT
WCAH WCAU WCCO WDAE WDOO
WDSU WEAN WFBL WGST WHAS
WHK WHP WICC WISN WJAS
WJSV WKBW WLBW WMBD WMTO
WNAC WNAX WNOX WOKO WORC
WPG WREC WBBT WSPD WTOC

R — The Goldbergs, See Monday B — Ben Bernie and Orchestra KDKA KFYR KOIL KSO KWCR KWK WBZ WBZA WEBC WENR WFLA WGAR WIBA WIOD WJZ WREN WWNC

E-12:15 p.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-5:45 p.m., C-4:45, M-3:45, P-2:45 B — Orphan Annie, See Monday

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

C—H. V. Kaltenborn
CFRB CKOK KFAB KFH KLZ
KSCJ KVOR WAAB WABC WACO
WBIG WBRC W DAE WDBJ WDBO
WDOD WDRC W DSU WEAN WFEA
WGST WHAS WHEC WHP WICC
WIP WISN WKBH WKBN WLBW
WLBZ WMT WNAX WNOX WODX
WOKO WORC WQAM WREC WSBT
WSFA WSJS WSPD WTAQ WTAR

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

C-UZZIE RESON AND UTCHESTA CFRB CKOK WAAB WABC WACO WBIG WBRC WCAO WDAE WDBJ WDBO WDOD WDRC WDSU WFEA WGST WHEC WHP WLBW WLBZ WNOX WODX WOKO WORC WQAM WREC WSBT WSFA WSJS WSPD WTAR WTOC

E-6:30 p.m., C-5:30, M-4:30, P-3:30 R — Three Keys KECA KEX KFSD KFYR KGA KJR KOA KPO KSD KTBS KTHS WAPI WDAY WDAY WEAF WFBR WFI WIBA WIS WJAR WMAQ WMC WOAI WSAI WSB WSMB WTAG WWJ WWNC

E-6:45 p.m., C-5:45, W-4:45, P-3:45 C — Just Plain Bill, See Monday

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

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

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

- Wheatenaville, See Monday B — Concert Footlights

KOA KOLL KSO KWCR WBAL WIS WJZ WMAQ WREN WSM WSYR WWMC

E-7:30 p.m., C-6:30, M-5:30, P-4:30 C — Keller, Sargent, See Tuesday

E-7:45 p.m., C-6:45, M-5:45, P-4:45 B — Murder Mystery, See Tuesday

C — Boake Carter, See Monday
 R — The Goldbergs, See Monday

E-8:00 p.m., C-7:00, M-6:60, P-5:00 R — Rudy Vallee and Orchestra CFCF CKGW KDYL KFI KFYR

GFGF CAGW ADTL AFT AFTA KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR WAPI WBAP WBEN WCAE WCKY WCSH WDAF WDAY WEAF WEBC WEEL WFBR WFI WFLA WGY WHO WIOD WJAR WIAX WJDX WKY WMAQ WMC WJAX WJDX WKY WMAQ WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ C — Easy Aces, See Tuesday

E-8:15 p.m., C-7:15, M-6:15, P-5:15 C — Whispering Jack Smith CKOK KMBC KMOX WABC WADC WCAO WCAU WDRO WEAN WFBL WFBM WGN WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO WSPD

THURSDAY—(Continued)

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

B — Howard Thurston, Magician KDKA KOIL KWK WBZ WBZA WGAR WHAM WJR WJZ WLS WLW WREN

E-9:00 p.m., C-8:00, M-7:00, F-6:00 R — Maxwell House Showboat R — Maxwell House Showboat
KDYL KFI KFSD KGO KGW KHQ
KOA KOMO KPRC KSD KSTP
KTAR KTBS WAPI WBEN WCAE
WCKY WCSH WDAF WEAF WEFI
WFBR WFI WPLA WGY WHO
WIOD WIS WJAR WJAX WJDX
WKY WMAQ WMC WOAI WOC
WOW WRC WRVA WSAI WSB WSM
WSMB WTAG WTAM WTMJ WWJ
WWNC WWNC

C — Chesterfield, See Monday

B — Death Valley Days

KDKA KOIL KWK WBAL WBZ

WBZA WGAR WHAM WJR WJZ WLS WLW WREN

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

E-9:30 p.m., C-8:30, M-7:30, P-6:30
C — Col. Stoopnagle and Budd
CKOK KDB KERN KFBK KFH
KFPY KFPC KGB KHJ RLRA KLZ
KMBC KMJ KMOX KOIN KOL
KOMA KSCJ KSL KTRH KTAT
KTSA KVI KWG WABC WADC
WBRC WBT WCAH WCAO WCAU
WCCO WDAE WDBO WDRC WDSU
WEAN WFBL WFBM WGN WGST
WHAS WHEC WIK WJAS WJSV
WKBW WKRC WLAC WNAC WOKO
WOWO WOAM WRCC WRR WSPD WOWO WQAM WREC WRR WSPD WTAR

B — Wayne King and Orchestra KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WENR WJZ WREN

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

C—The Foreign Legion
CFRB CKOK KLRA KLZ KSCJ
KTRH KTSA KVOR WAAB WABC
WBBM WBIG WBRC WCAO WCAU
WCCO WDAE WDBJ WDBO WDOD
WDRC WDSU WEAN WFBM WFEA
WGST WHEC WHK WIP WIBW
WICC WKBN WLBW WLBZ WMT
WNAX WNOX WODX WOKO WORC
WQAM WREC WSJS WSPD WTAR — The Foreign Legion WTOC

R — Lucky Strike—Jack Pearl KDYL KFI KFSD KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS KTHS KVOO WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WENR WFBR WEI WELA WGY WHO WIBA WIOD WIS WIAR WIAX WIDX WKY WLW WMC WOAI WOC WOW WRC WRVA WSB WSM WSMB WTAG WTAM WTMJ WWJ WWNC

- Carson Robison's Pioneers CFCF CKGW KDKA KOIL KSO KWCR KWK WBAL WCKY WJR WJZ WMAQ WREN WSYR E-10:15 p.m., C-9:15, M-8:15, P-7:15 B — Vic and Sade, See Monday

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

Morton Downey C — Morton Downey
CKOK WAAB WABC WADC WBCM
WCAU WDRC WEAN WFBL WFEA
WHEC WHK WICC WJAS WJSV
WKBW WLBW WLBZ WOKO WORC WOWO WSPD

E-11:00 p.m., C-10:00, M-9:00, P-8:00 R — James Melton, Tenor KSD WCAE WCKY WEA WRC WSAI WTAG WWJ WEAF WFBR

C — Howard Barlow, See Monday B — Amos 'n' Andy, See Monday

E-11:15 p.m., C-10:15, M-9:15, P-8:15 B — Murder Mystery, See Tuesday

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

C — Isham Jones, See Tuesday R — Jack Denny, See Monday B — Willard Robison and Orchestra

CFCF CKGW KDYL KEX KFSD KFYR KGA KJR KOA KOIL KPO KSO KWCR KWK WBAL WBZ WBZA WEBC WFLA WGAR WHAM WIBA WIS WJAX WJR WJZ WMC WRC WREN WSB WSMB WWNC

E-12:00 p.m., C-11:00, M-10:00, P-9:00 R — The Goldbergs, See Monday

FRIDAY

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

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

R — Waldorf-Astoria, See Monday
C — Do Re Mi Girls
CFRB CKOK KFH KLZ KSCJ KSL
KTRH KVOR WAAB WABC WACO
WBIG WBRC WDAE WDBJ WDBO
WDOD WDRC WDSU WFEA WGST
WHAS WHEO WHP WICC WIP
WISN WKBH WKBN WKBW WLAC
WJBW WLBZ WMT WNAX WNOX
WODX WOKO WORC WQAM WREC
WSBT WSFA WSJS WSPD WTAQ
WTAR WTOC

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

E-6:45 p.m., C-5:45, M-4:45, P-3:45 C — Just Plain Bill, See Monday

B — Lowell Thomas, See Monday

B — Orphan Annie, See Monday

E-7:00 p.m., C-6:00, M-5:00, P-4:00 C — Myrt and Marge, See Monday B — Amas 'n' Andy, See Monday R— Donald Novis, Tenor KDYL KFYR KGO KOA KOMO KSTP KTBS KYW WAPI WCSH WDAF WDAY WEAF WEBC WEEL WEBR WGY WIBA WJAR WMC WOW WEG WSAI WSB WSM WTAM WOW WRC WSAI WSB WSM WTAM WWI

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

E-7:30 p.m., C-6:30, M-5:30, P-4:30 B — Five Star Theatre, See Monday C — Dolphin Martin, See Monday

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

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

C— ITAUE AND MARK
CKOK KIZ KMBC KMOX KSL
WABC WADC WCAO WCAU WCCO
WDRC WEAN WFBL WFBM WGN
WGR WHAS WHK WJSV WKRC
WNAC WOKO WSPD

R - Cities Service Concert R—Cities Service Concert
CKGW KDYL KOA KPRC KSD
KSTP KTBS KYW WBEN WCAE
WCSH WDAF WEAF WEBC WEI
WFAA WFBR WGY WHO WJAR
WKY WLIT WOAL WOC WOW WRC WSAI WTAG WTAM WTIC WTMJ

B — Nestle's Program
KDKA KOIL KWK WBAL WBZ
WBZA 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 KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KSL KYL KWG WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGN WGR WHAS WHK WJAS WJSV WKERC WAAC WOKO WO WKRC WNAC WOKO WOWO WSPD B - Horlick Program, 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 C — Chesterfield, See Monday

B — First Nighter, Drama KDKA KDYL KFI KFSD KGO KGW MADA ADTA BY BAGO RGW KHQ KOA KOIL KOMO KPRC KSTP KTAR KTBS KWK WAPI WBAL WBZ WBZA WCKY WEBC WGAR WHAM WJR WZY WKY WLS WOAI WREN WSB WSM WSMB WTMJ

 Musical Grocery Store N — MUSICAI GROCETY STORE KSD WBEN WCSH WDAF WEAF WEEI WFBR WGY WJAR WLIT WMAQ WRC WTAG WTAM WTIC

E-9:15 p.m., C-8:15, M-7:15, P-6:15
C — Mary Eastman, Soprano
CFRB CKOK KFH KLRA KLZ
KMBC KMOX KSCJ KSL KTRH
KTSA KVOR WAAB WABC WACO
WADC WBCM WBIG WBT WCAH
WCAO WCCO WDAE WDBJ WDOD
WDRC WDSU WEAN WFBL WFBM
WFEA WGST WHAS WHEC WHP
WIBW WICC WISN WJAS WJSV
WKBH WKBW WLBZ WNAX
WNOX WODX WOKO WORC WQAM
WREC WSBT WSJS WSPD WTOC

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

WTAG WTAM WWJ
C — Edwin C. Hill, Inside Story
CKOK KFH KLRA KMBC KMOX
KOMA KRLD KTRH KTSA WABC
WADC WBCM WCAH WCAO WCAU
WCCO WDRC WEAN WFBL, WFBM
WGN WHAD WHAS WHK WHP
WIBW WJAS WJSY WKBH WKBC
WLBW WLBZ WMBD WNAC
WOKO WORC WOWO WREC WSPD
E— Armur Poerra

B — Armour Program KDKA KDYL KFI KGO KGW KHQ

FRIDAY—(Continued)

KOA KOIL KOMO KPRC KSO KSTP KWK WAPI WBAL WBZ WBZA WEBC WFAA WGAR WHAM WIOD WJAX WJR WJZ WKY WMC WOAI WREN WRY WSM WSMB WTMJ WWNC WMAO WRVA WSB

E-10:00 p.m., C-9:00, M-8:00, P-7:00 R — Chevrolet—Jack Benny KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS KTIIS KVOO WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WDAF WDAY WEAF WEBC WEDI
WENR WFAA WFBR WFLA WGY
WHO WIBA WIOD WIS WJAR
WJAX WKY WLIT WLW WMC
WOAI WOC WOW WRC WRVA WSB
WSM WSMB WTAG WTAM WTIC
WTMJ WWJ WWNC

B — Dorothy Fields – Jimmy McHugh CFCF KOIL KPRO KSO WBAL WCKY WHAM WJR WJZ WMAQ WREN WSYR

E-10:15 p.m., C-9:15, M-8:15, P-7:15 B — Vic and Sade, See Monday

E-10:30 p.m., C-9:30, M-8:30, P-7:30 R — Neighbors — Dramatic Sketch KSD WBEN WCAE WCKY WCSH WDAF WEAF WEEL WENR WFBR WGY WHO WJAR WOC WOW WRO WSAI WTAG WTAM WWJ

B - Homay Bailey See Tuesday

E-10:45 p.m., C-9:45, M-8:45, P-7:45
C — Fray and Braggiotti
CFRB CKOK WAAB WABC WCAO
WDRC WEAN WFEA WHEC WICC
WIP WJAS WJSV WKBW WLBW
WLBZ WOKO WORC WFG WSPD
B — Jack McLallen See Tuesday C - Myrt and Marge, See Monday

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

E-11:15 p.m., C-10:15, M-9:15, P-8:15
B — Welcome Lewis, Vocalist
CFCF CKGW KSO KSTP KWCR
KWK WBAL WBZ WBZA WCKY
WFLA WGAR WHAM WIBA WIOD
WIS WJAX WJR WJZ WREN WSYR WWNC

E-11:30 p.m., C-10:30, M-9:30, P-8:30
C— Abe Lyman and Orchestra
CFRB CKOK KFAB KFH KLZ
KMBC KSCJ KSL KTRH KVOR
WAAB WABC WADC WBCM WBRC
WBT WCAO WCAU WCCO WDAE
WDBO WDOD WDAV WEAN
WFBM WHEC WHK WICC WISN
WJSV WLBW WLBZ WMBD WAX
WOKO WORC WQAM WSBT WSJS
WSPD WTAR WTOC

E-12:00 p.m., C-11:00, M-10:00, P-9:00 C — Ben Pollack and Orchestra C-Ben Pollack and Urchestra CKOK KFAB KIZ KMBC KRLD KSCJ KSL KTRH KVOR WABC WBRC WBT WCAU WCCO WDAE WDOD WBSU WICC WISN WJSV WLBW WMBD WNAC WNAX WOKO WPG WSBT WSPD WTOC

R — The Goldbergs, See Monday B — Cab Calloway, See Tuesday

SATURDAY

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

E-6:00 p.m., C-5:00, M-4:00, P-3:00 C — America's Grub Street CFRB CKOK KFAB KFH KSCJ KSL

KTRH KVOR WAAB WABC WADC WBBM WBCM WBIG WBRC WBT WBSM WBCM WBIG WBRC WBTWCAO WCAU WCCO WDAE WDBO WDOD WDRC WDSU WEAN WFEA WHEC WICC WISN WJSV WKBII WLBW WLBZ WNAX WOKO WORC WQAM WSBT WSFA WSJS WSPD WTAQ WTAR WTOC WWVA

R - Walderf-Asteria, See Monday

E-6:30 p.m., C-5:40, M-4:30, P-3:30 B — Laws That Safeguard KDYL KEX KFSD KFYR KGA KGIR KJR KOA KOIL KPO KPIR KGA KGIR KSTP KTAR KTBS KTHS KWCK KSTP KTAR KTBS KTHS KWCKY WEBC WELA WIBA WIOD WIS WJAX WJR WJZ WKY WMAQ WMC WOAI WREN WRVA WSB WSYJA WSB WSMB WWNC

R - King Kong See Monday

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

C — The Funnyboners
CFRB CKOK KPAB KFH KLZ
KMBC KSCJ KTRH KVOR WAAB
WABC WACO WBBM WBIG WBRC
WCAO WCAU WDAE WDBJ WDOD
WDRC WDSU WEAN WFEA WGST
WHAS WHEC WHP WISN WJAS
WKBW WLAC WJBW WJBZ WMT
WMAY WYON WODY WORKO WORC WNAX WNOX WODX WOKO WORC WQAM WREC WSBT WSFA WSJS WSPD WTAQ WTAR WTOC WWVA B — Fields and Hall

WBAL WGAR WHAM WIOD WIS WJR WJZ WMC

B - Orphan Annie, See Monday

E-7:00 p.m., C-6:00, M-5:00, P-4:00 B — Vincent Lopez and Orchestra

B — VICENT LOPEZ AND UTCHESTRA
CFCF CKGW KDKA KDYL KFYR
KOA KSO KTBS KWK WBAL WBZ
WBZA WCKY WEBC WFLA WGAR
WHAM WIBA WJR WJZ WLW
WMC WSB WSMB WWNZ Frederic William Wile

C — Freesric William Wile
KMBC KRLD KTRH WABC WADC
WBBM WBCM WBIG WBRC WBT
WCAO WCAU WDAE WDBO WDOD
WDRC WDSU WEAN WFBM WFEA
WGR WHEC WHK WICC WIAS
WJSV WLBW WLBZ WNAC WOKO
WQAM WSFA WSPD WTAR WWVA

E-7:15 p.m., C-6:15, M-5:15, P-4:15
B — Merie Thorpe Talk
KDYL KECA KEX KFSD KFYR
KGA KJR KOA KOLL KPO KPRC
KSTP KTBS KWCR KWK WBAL
WBZ WBZA WEBC WENR WFLA WBZ WBZA WEBG WENK WFLA WGAR WHAM WIBA WIOD WIS WJDX WJZ WKY WMC WOAI WREN WSB WSMB WWNC

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

C — Street Singer
CFRB CKOK KMBC KMOX KRLD
KSCJ KSL KTRH KVOR WABC
WADC WBCM WBIG WBRC WBT
WCAO WCAU WCCO WDAE WDBO
WDOD WDRC WDSU WEAN WFBM
WFEA WGR WHEO WISN WJAS
WJSV WKBH WLBW WJBZ WNAC
WOKO WQAM WSFA WSPD WTAQ
WTAR WTOC

R — Murder Mystery See Tuendur

B - Murder Mystery, See Tuesday

E-8:00 p.m., C-7:00, M-6:00, P-5:00 C — Easy Aces, See Tuesday

R — Archer Gibson, Organist KEX KGA KJR KOA KPO KPRC KSD KTBS WBEN WDAF WEAF KSD KTBS WBEN WDAF WEAF WEBC WEEI WFI WHO WIBA WIS WJAR WMAQ WMC WOAI WOC WSB WSMB WTAG WTAM WWJ WWNC

B — American Taxpayers' League KDKA KDYL KEX KFSD KFYR RDRA RDIL REX KFSD RETER KGA KGHL KGIR KJR KOA KOIL KPO KPRC KTAR KWK WAPI WBAL WCKY WDAY WEBC WFLA WHAM WBA WIOD WJAX WJDX WJZ WLS WRC WREN WSM WSMB WWNC

E-8:15 p.m., C-7:15, M-6:15, P-5:15 C — Magic Voice, See Tucsday B — Boston Symphony Orchestra CFCF CKGW KDKA KOIL, KSO KWCR KWK WBAL WBZ/ WBZ/A WCKY WGAR WHAM WJR WJZ

E-8:30 p.m., C-7:30, M-6:30, P-5:30
R — Economic World Today
KDYL KFSD KFYR KGA KFHL
KGIR KJR KOA KPO KPRC KSD
KSTP WAPI WBAP WBEN WCSH
WDAY WBAP WBEN WESH
WFBR WFI WFLA WGY WHO WIBA
WIOD WIS WJAR WJDX WKY
WMAQ WMC WOAI WOC WOW
WRC WSAI WSMB WTAG WTAM
WWJ WWNC

— Isbam Jones and Orchesta

WWJ WWNC

C— Isham Jones and Orchestra

CFRB CKOK KFH KLRA KLZ

KMBC KSCJ KTRH KTSA KVOR

WABC WBIG WBRC WCAO WCAU

WCCO WDAE WDBJ WDBO WDOD

WDRC WDSU WEAN WFBM WFEA

WGST WHEC WHK WHP WIBW

WICC WISN WJAS WKBH WLAC

WLBW WIDZ WMT WNAC WNAX

WNOX WODX WOKO WORC WQAM

WREC WSFA WSPD WTAQ WTAR

E-9:00 p.m., C-8:00, M-7:00, P-6:00
R — Riesenfeld's Viennese Program
KDYL KFI KFSD KFYR KGO
KGW KHQ KOA KOMO KPRC KSD
KSTP KTAR KTBS WAPI WBAP
WBEN WCAE WCSH WDAF WDAY
WEAF WEEI WFBR WGY WIBA
WJAR WJDX WKY WMAQ WMC
WOAI WRG WSAI WSB WSMB WTAG WTAM WWJ

C — Chesterfield, See Monday

WTOC

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

C — BOSWEII DISIETS
CFRB CKOK KFH KLRA KLZ
KMBC KMOX KRLD KSCJ KSI,
KTRH KTSA KVOR WAAB WABC
WACO WADC WBBM WBCM WBIG
WBRC WBT WCAH WCAO WCCO
WDAE WDBJ WDBO WDOD WDSU
WDSIA WDBJ WBBM WFEA WGST WEAN WEBL WIFBM WFEA WGST
WHAS WHEC WIBW WICC WIP
WISN WIAS WISV WKBH WKBW
WLBBW WLBZ WMT WNAX WNOX
WODX WOKO WORC WOWO WQAM
WREC WSPD WTAR WTOC

E-9:30 p.m., C-8:30, M-7:30, P-6:30 R — George Oisen and Orchestra

KDYL KFI KFSD KFYR KGO KGW KDYL KFI KFSD KFIK RAGO KUM KHQ KOA KOMO KSD KSTP WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WEBR WFI WGY WHO WIBA WJAR WKY WLW WMAQ WOAI WOC WOW WRC WSAI WSB WTAG WTAM WTMJ SATURDAY—(Continued)

E-9:45 p.m., C-8:45, M-7:45, P-6:45 E-9:45 p.m., C-8:45, M-7:45, P-6:45
C — Guy Lombardo and Orchestra
GFRB CKOK KFHI KLRA KLZ
KMBC KMOX KSCJ KSL KTRH
KTSA KVOR WAAB WABC WBBM
WBIG WBRC WCAO WCAU WCCO
WDAE WDBJ WDBO WDOD WDRC
WDSU WEAN WFBM WFEA WGST
WHAS WHEC WIK WHP WIBW
WICC WJAS WJSV WKBH WKBW
WLAC WJBW WLBZ WMBD WMT
WNAX WNOX WODX WOKO WORC
WQAM WREC WSJS WSPD WTAR

E-10:00 p.m., C-9:00, M-8:00, P-7:00 R — B. A. Rolfe and Orchestra

CECE CKGW KDYL KI KSD KSTP WBAP KDYL KFI WBEN NOA RSD RSTP WBAP WBEA WCAE WCSH WDAF WEAF WEEL WFBR WFI WGY WHO WJAR WLW WMAQ WOC WOW WRC WSB WSMB WTAG WTAM WWJ

E-10:15 p.m., C-9:15, M-8:15, P-7:15 C — Public Affairs Institute_

C — PUBLIC ARBIS INSTITUTE
KFH KLZ KSCJ KTRH KTSA KVOR
WAAB WBAC WADC WBBM WBCM
WBIG WBRC WBT WCAO WCAU
WCCO WDAE WDBO WDDD WDRC
WDSU WEAN WEBM WFEA WHEO
WDSU WEAN WEBM WFEA WHEO WIDS WEAR WIBM WIEA WHEC WICC WJAS WJSV WKBH WLBW WIBZ WMBD WNAX WOKO WORC WPG WQAM WSBT WSJS WSPD WTAR WTOC WWVA

B - Salon Singers CFCF CKGW KDKA KOIL KSO KWCR WBAL WBZ WBZA WGAR WHAM WJZ WMAQ WREN

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

CKGW KDKA KOIL KSO KWCR KWK KYW WBAL WCKY WGAR WHAM WJZ WREN WSYR

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

CFRB CKOK KFH KLRA KLZ KMBC KSCJ KTRH KTSA KVOR WAAB WABC WBIG WCAO WDAE WAAB WABC WBIG WCAO WDAE WDBJ WDBO WDOD WDRC WDSC WEAN WFEA WGST WHAS WHEC WHK WHP WICC WIP WISN WJAS WJSV WKBW WLAC WLBW WLBZ WMBD WMT WNAX WNOX WODX WOKO WORC WPG WQAM WREC WSBT WSJS WSPD WTAR WTOC WWYA

E-11:00 p.m., C-10:00, M-9:00, P-8:00 B — Buccaneers, Vocal Trio CFCF KDKA KOLL KSO KWCR KWK WBAL WBZ WHAM WJZ WREN E-11:00 p.m., C-10:00, M-9:00, P-8:00

E-11:10 p.m., C-10:10, M-9:10, P-8:10
R — Jack Denny and Orchestra
KSD WBEN WCAE WCKY WCSH
WDAF WEAF WEEL WFBR WFI
WGY WHO WJAR WMAQ WOC
WRC WSAI WTAG WWJ

E-11:15 p.m., C-10:15, M-9:15, P-8:15 B — Lew White, Organist KOIL KSO KWCR KWK WBAL WBZ WBZA WGAR WHAM WJR WJZ WRC WREN

B - Murder Mystery, See Tuesday

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C — Leon Belasco and Orchestra CFRB CKOK KFAB KLRA KLZ

KMBC KSCJ KTRH KVOR WAAB WABG WACO WBRC WCAO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WGST WHK WHP WIBW WICC WIP WISN WJAS WJSV WKBW WAC WLBW WLBZ WMBD WMT WNAX WNOX WODX WOKO WOLG WAAM WEEC WSBT WSIS WORC WOAM WREC WSBT WSJS WSPD WTAR WTOC WWVA

B - Harold Stern and Orchestra KSD WBEN WCAE WCKY WCSH WDAF WEAF WEEL WFBR WFI WGY WHO WJAR WMAQ WOC WRC WSAI WTAG WTAM WWJ

E-12:00 p.m., C-11:00, M-10:00, P-9:00 B — Mark Fisher's Orchestra
KOIL KSO KWCR KWK KYW
WGAR WIZ WLW WRC WREN

- Ted Weems and Orchestra R — Ted Weems and Orchestra KDYL KFSD KFYR KGA KGIIL KJR KOA KPO KPRC KSD KSTP KTAR KTBS WCAE WCKY WDAF WDAY WEAF WFAA WFBR WFI WGY WHO WIBA WIOD WJAR WJAX WMAQ WMC WOAI WOC WRC WSB WSMB WTAG WTAM

WWNC C - Joe Haymes, See Tuesday

E-12:30 a.m., C-11:30, M-10:30, P-9:30 R - Don Erwin and Orchestra

R—Don Erwin and Orchestra
KSD WBEN WCAE WCKY WDAF
KSD WBEN WCAE WCKY WDAF
WEAF WFBR WFI WHO WJAR
WOO WRC WTAG WTAM
B—Sam Robbin's Bermudians
KDYL KECA KEX KFSD KFYR
KGA KJR KOIL KPO KPRC KSTP
KTBS KVOO KWCR KWK KYW
WDAY WEBC WFAA WFLA WGAR
WHAM WIBA WIOD WJAX WJZ
WKY WLW WMC WOAI WREN
WSB WSMB WWNC

SUNDAY

E-11:15 a.m., C-10:15, M-9:15, P-8:15 R — Major Bowes' Family KDYL, KEX KFSD KFYR KGA KJR KDYL KEX KFSD KFYR KGA KJR

KDAL KEX KISD KIYAK KGA KJA KOA KPO KPRC KVOO WBAP WDAF WDAY WEAF WFBR WE! A WGY WHO WIOD WJAR WJAK WKY WMC WOC WRC WSM WSMB WTAG WTAM WTMJ WWJ WWNC

E-12:00 p.m., C-11:00, M-10:00, P-9:00
C—Salt Lake Tabernacle Choir
GFRB CKOK KFAB KLZ KSCJ KSL
KTRHI KTSA KVOR WABC WADC
WCCO WDAE WDBO WDOD WDRC
WDSU WEAN WFFA WGR WHEC
WJIK WBW WISN WJAS WJSV
WKBH WKBN WLBW WLBZ WMBD
WNAC WAX WODX WOKO WORC
WPG WQAM WSBT WSJS WSPD
WTAQ WTAR WWVA

E-12:15 p.m., C-11:15, M-10:15, P-9:15

B—Roxy's Gang CFCF CKGW KDKA KDYL KECA KEX KFSD KFYR KGA KJR KOA KOIL KPO KPRC KSTP KTAR KVOO KWK WAPI WBAL WBZ WBZA WDAY WEBC WFAA WFLA WBZA WDAY WEBC WFAA WFLA WGAR WHAM WIBA WIOD WIS WJAX WJR WJZ WKY WLW WMAQ WOAI WRC WREN WRVA WSB WSM WSMB WSYR WWNC

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

R — Walter Logan Pop Concert

CFOF CKGW KDYL KFYR KOA

KPRC KSTP KTBS KVOO WAPL

WBEN WCAE WCKY WCSH WDAF WDAY WEAF WEBC WEEL WFAA WFBR WFI WGY WHO WIBA WIOD WIS WJAR WKY WOAI WOC WRVA WSAI WSB WSM WSMB WTAG WTAM WWJ WWNC

E-12:45 p.m., C-11:45, M-10:45, P-9:45 C - Street Singer

CFRB CKOK KFAB KLZ KMBC KSCJ KSL KTRH KTSA KVOR WABC WADC WBCM WBIG WBT WABC WADC WBCM WBIG WBT WCAO WCCO WDAE WDBO WDOD WDSU WGR WHEC WHK WIBW WISN WAS WASY WKBII WKBN WLBW WLBZ WMBD WNAX WODX WOKO WPG WQAM WSJS WSPD WTAQ WTAR WTOC WWVA

E-1:15 p.m., C-12:15, M-11:15, P-10:15

B — Cook Travelogues KDKA WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WMAL WMAQ WSYR

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

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

R — Moonshine and Honeysuckle

CFCF CKGW KFI KFSD KFYR

KGO KGW KHQ KOA KOMO KFRC

KSD KSTP KTBS KVOO

WAPI

WBEN WCAE WCKY WCSH WDAF

WDAY WEAP WEBC WFAA WFI

WGY WHO WIBA WIOD WIS WJAR

WJAX WKY WMAQ WOAI

WOW

WOW WRC WRVA WSAI

WSM WSMB WTAG WTAM WWJ

WWNC WWNC

C - Columbia Church of the Air CERB CKOK KLZ KSCJ KSL KTRH KTSA KVOR WAAB WABC WADC WECM WBIG WCAO WCCO WDAE WECM WBIG WCAO WCCO WDAE WDBO WDDOD WDRC WDSU WGR WHEC WIBW WJAS WJSV WKBH WJBW WJBW WAX WODX WOKO WFG WQAM WSBT WSJS WSPD WTAQ WTAR WTOC WWVA

E-2:00 p.m., C-1:00, M-12:00, P-11:08 C — Smiling Ed McConnell

C — Smiling Ed McConnell
CKOK KERN KFBK KFFY KFRC
KGB KHJ KLZ KMBC KMOX KOIN
KOL KSL KVI KWG WABC WBBM
WBT WCCO WDSU WGR WGST
WHAS WHEC WJAS WJSV WKRC
WLAC WNAC WOWO WQAM WRR

B — Monarch Mystery Tenor KDKA KDYL KFI KFYR KGO KOA KOIL KSO KSTP KWCR KWK WBZ WBZA WCKY WDAY WEBC WGAR WHAM WIBA WJAR WJAX WJR WJZ WMAQ WREN WTMJ WWNC

R — Clyde Doerr's Saxophone Octet N — CIYDE DOET'S DAXOPHORE UCCEY CFCF KSD KTBS KTHS WAPI WBEN WCAE WCKY WEAF WFAA WFBR WGY WHO WJAR WJDA WMC WOAI WOC WOW WSAI WSM WSMB WTAG WTAM WWJ

E-2:15 p.m., C-1:15, M-12:15, P-11:15
C—Albert Bartlett Tango King
CKOK KMBC KMOX WABC WBBM
WCAO WCAU WGR WHEC WHK
WJAS WJSV WKRC WNAC WOKO wowo

— International Radio Forum CFCF KDYL KFI KFSD KFYR KGHL KGIR KGO KHQ KOA KOMO KGHI KGH KGO KIQ NOA NOAW KPRC KSD KTAR KTBS KTHS KVOO KYW WAPI WBEN WCAE WCKY WDAY WEAP WEBC WFAA WFBR WFLA WGY WIBA WIOD WIS WJAR WJAX WIDX WKY WMC WOAI WOW WPTF WRVA SUNDAY—(Continued)

WSAI WSM WSMB WTAG WTAM WWJ WWNC

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

B — Charlie Agnew's Orchestra KDKA KDYL KFI KFSD KGHL KGIR KGO KGW KHQ KOA
KOIL KOMO KPRC KSO KSTP
KTAR KTBS KTHS KVOO KWCR
KWK KTBS KTHS KVOO KWCR
KWK KYW WAPI WBAL WBZ
WBZA WDAY WEBC WFAA WFLA
WGAR WHAM WIOD WIS WJAX
WJDX WJR WJZ WKY WLW WMC
WOAI WPTF WREN WRVA WSB
WSM WSMB WSYR WTMJ WWNC
C—Victor Arden and Orchestra
CKOK KMBC KMOX WARC WBBM
WCAO WCAU WGR WHEC WHK
WJAS WJSV WKRC WNAC WOKO KGHL KGIR KGO KGW KHQ KOA

E-3:00 p.m., C-2:00, M-1:00, P-12:00 C-N. Y. Philharmonic Orchestra CFRB CKOK KFAB KFH KLZ KMBC CFRB CNOW KFAB KFH KLZ KMBC
KRLD KSCJ KSL KTRH KVOR
WAAB WABC WADC WBCM WBIG
WBRC WBT WCAO WCOO WDAE
WDBO WDOD WDRC WDSU WFAN
WFBM WFEA WHEC WHK WIBW
WICC WIP WISN WJAS WJSV WKBH WKBN WKBW WLBZ WMBD WODX WOKO WORC WQAM WSBT WSFA WSJS WSPD WTAQ WTAR WTOC WWVA

WTOC WWYA

R— Wayne King and Orchestra

KDYL KFI KGO KGW KHQ KOA

KOMO KPRC KSD KSTP KTBS

KTHS KVOO KYW WBEN WCAE

WCKY WCSH WDAF WEAF WEBC

WEBL WFAA WFBR WGY WHO

WIBA WJAR WKY WLLT WOAI

WC WOW WRC WSAI WTAG

WTAM WTMJ WWJ

— Our American Music

B — Our American Music

KOIL KWCR KWK WBAL WFLA WGAR WIOD WJAX WJZ WMAQ WREN WRVA WSB WSM WSMB WWNC

E-3:30 p.m., C-2:30, M-1:30, P-12:30
R — Dr. S. Parkes Cadman
KDYL KFSD KFYR KGHL KGO
KGW KHQ KOA KOMO KPRC KSD
KSTP KTAR KTHS KVOO WBEN
WCAE WCSII WDAF WDAY WEAF
WEBC WEEI WFBR WGY WHO
WIBA WJAR WKY WLIT WOAI
WOC WOW WRC WSAI WTAM WWJ

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

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

— raner Cougnin

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

B - Temple of Song

B — Temple of Song
CFCF KDKA KFI KFSD KFYR
KGHL KGO KGW KOA KOIL KSO
KSTP KTBS KWCR KWK WBAI,
WBZ WBZA WCKY WEBC WGAR
WHAM WIBA WIOD WIS WJAX
WJR WJZ WKY WMAQ WMC WREN
WRVA WSB WSM WSMB WWNC

E-4:15 p.m., C-3:15, M-2:15, P-1:15 R — Wildroot—Vee Lawnhurst KDYL KFI KGO KGW KHQ KOA KOMO WBEN WCAE WCSH WDAF WEAF WEEI 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 — Squibb's Program
WBEN WCAE WCSH WDAF WEAF
WEEL WFBR WGY WJAR WMAQ
WOW WRC WTAG WTAM WWJ
B — National Youth Conference

WPTF WREN WRVA WSB WSM WWNC

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 WCAO WCCO WDSU WGN WGR WHAS WHK WJAS WJSV WKRC

R — Lowell Thomas

WBEN WCAE WEAF WEEL WFBR WGY WJAR WRC WSAI WTAG WTAM WWJ

B - National Vespers

B — National Vespers
KFSD KFYR KGHIL KGO KGW
KFSD KFYR KGHIL KGO KGW
KHQ KOA KOIL KOMO KPRC KSO
KTAR KTBS KWCR KWK WAPI
WBAL WBAP WBZ WBZA
WFLA WGAR WIOD WIS WJAX
WJDX WJZ WOAI WPTF
WREN
WSB WSM WSMB WWNC

E-5:15 p.m., C-4:15, M-3:15, P-2:15 R — Big Ben's Dream Dramas WBEN WCAE WCSH WEAF WEEI WFBR WFI WGY WJAR WMAQ WRC WSAI WTAG WTAM WWJ

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

WOKO B — Pages of Romance, Drama KDKA KOIL KSO KWCR KWK KYW WBAL WBZ WBZA WGAR WJR WJZ WLW WREN

MJR WJZ WLW WRED B Josef Koestner's Orchestra KDYL KFI KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSTP KTAR KTBS KVOO WAPI WBAP WDAF WDAY WEBC WIBA WJDLX WKY WMC WOAI WS WSM WSKEP WEYN WC WOAI WS WSM WSMB WTMJ

R - Swift Garden Program CKGW KSD WBEN WCAE WDAF WEAF WEEI WFBI Y KSD WBEN WCAE WCSH F WEAF WEEI WFBR WFI WHO WJAR WMAQ WOC WRC WSAI WTAG WTAM WGY wow WWJ

E-6:00 p.m., C-5:00, M-4:00, P-3:00 R — Catholic Hour

N — CARDONIC HOUR
KURK KEX KFYR KGHL KGIR
KUR KOA KPRC KSD KTAR KTBS
KVOO WAPI WBAP WBEN WCAE
WCKY WCSH WDAF WDAY WEAF
WEBC WEEL WENR WFBR WFLA
WEAV WHO WID WILL WAN WEBU WEEI WENR WFBR WFLA
WGY WHO WIBA WIOD WIS WJAR
WJAX WJDX WKY WLIT WMC
WOAI WOC WOW WRC WRVA
WSAI WSB WSM WSMB WTAG
WTAM WWJ WWNC

B — Josef Koestner's Orchestra KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WCKY WENR WGAR WHAM WJR WJZ WREN

C—The Lawyer and Public CFRB KFAB KFH KLZ KRLD

KSCJ KSL KVOR WAAB WABC WACO WBCM WBIG WBRC WCAO WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFEA WGST WHAS WHP WHBW WICC WISN WKBH WLBW WLBZ WNAX WNOX WODX WOKO WORC WPG WQAM WREC WSFA WSJS WSPD WTAQ WTAR WTOC WWVA

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

C—Cathedral Hour
CFRB CKOK KFH KLZ KMBC
KRLD KSCJ KSL KVOR WAAB
WABC WADC WBBM WBCM WBIG
WBRC WBD WCOO WOAL
WCO
WDAE WDBO WDOD WDRC WDSU
WFBM WFEA WHEC WIBW WICC
WISN WIAS WJSV WKBH WKBN
WWKB WLBW WLBZ WNAX WKO
WORC WQAM WSBT WSFA WSJS
WSPD WTAR WTOC WWVA
M—OUR American Schools

R—Our American Schools
KDYL KECA KEX KFSD KFYR
KGA KOA KPO KPRC \(\frac{1}{3}\)STP
KTBS KVOO WBAP WBEN WCAE
WCSH WDAY WEAF WEBC WEDI
WENR WFBR WFLA WGY WIBA
WIOD WJAR WKY WLIT WMC
WOAI WOW WPTF WRC WRVA
WSAI WSM WSMB WTAG WWJ R — Our American Schools WWNC

E-7:00 p.m., C-6:00, M-5:00, P-4:00 C — H. V. Kaltenborn

C — H. V. Kaltenborn
KFAB KFH KLZ KMBC KSCJ KSL
KTRH KVOR WABC WACO WBCM
WBIG WBRC WCAO WDAE WDBJ
WDBO WDOD WDRC WDSU WEAN
WFBM WFEA WGST WHAS WHP
WIBW WICC WIP WISN WKBH
WKBN WLBW WLBZ WMT WNAC
WNAX WNOX WOKO WORC WPG
WQAM WREC WSPT WSFA WSPD
WTAR WTOC WWVA
R — James Melton Tenor

WIAR WIOC WWVA

R James Melton Tenor

KDYL KFYR KOA KPRC KSD

KSTP KTBS KVOO WBEN WDAF

WDAY WEAF WEBC WEEI WFBR

WFLA WGY WIBA WIOD WIS

WJAR WMAQ WOAI WRVA WSAI

WSMB WTAG WWJ WWNO

E-7:15 p.m., C-8:15, M-5:15, P-4:15
C — Morton Downey
CKOK KFAB KFH KLZ
KMBC
KSCJ KSL KTRH KVOR WABC
WACO WBCM WBIG WBRC WDAE
WDBJ WDBO WDOD WDRC WDSU
WEAN WFBM WFFA WGST WHAS
WHP WIBW WICC WIP WISN WEAN WEBM WELA WGST WHAS WIP WIBW WICC WIP WISN WKBH WKBN WLBW WLBZ WMT WNAC WNAX WNOX WORC WQAM WREC WSBT WSFA WSIS WSPD WFAR WTOC WWVA

R-Wheatenaville, See Monday

E-7:30 p.m., C-6:30, M-5:30, P-4:30 B — Great Moments in History

B — Great Moments in History
KDKA KDYL, KFI KFSD
KFYR
KGO KGW KHQ KOA KOIL KOMO
KPRC KSTP KTAR KVOO KWCR
KWK WBAL WBZ WBZA WDAY
WEBC WFAA WFLA WBZA WDAY
WEBC WFAA WFLA WGAR WHAM
WIBA WIOD WIAX WJDX WJR
WJZ WKY WLS WLW WMC WOAI
WPTF WREN WRVA WSB WSM
WSMB WTMJ WWNC
SEA WAR WING WAR WSB WSM

— Fray and Braggiotti

C—Fray and Braggorii.

CKOK K.I.RA K.LZ KMBC KSCJ
KSL KTRH KVOR WABC WACO
WBCM WBIG WCAO WCCO WDAE
WDBJ WDBO WDOD WDRC WDSU
WEAN WFBM WFEA WGST WHAS
WHP WIBW WIP WISN WKBH

SUNDAY—(Continued)

WKBN WLBW WLBZ WMT WNAC WNAX WNOX WOKO WORC WQAM WREC WSBT WSFA WSJS WSPD WTAR WTOC WWVA

R — Three California Nuts WCSH WEAF WEEL WJAR WTAG

E-7:45 p.m., C-6:45, M-5:45, P-4:45 C-Angelo Patri, Your Child CKOK KMBC KMOX WABC WCAO WCAU WCCO WFBL WGN WGR WHAS WHK WJAS WJSV WKRC WNAC

R — Trade and Mark KSD WBEN WCAE WDAF WEAF WFBR WGY WJAR WMAQ WRC WSAI WTAG WTAM WWJ

E-8:00 p.m., C-7:00, M-6:00, P-5:00
R — Chase and Sanborn—Eddie Cantor
CFCF CKGW KDYL, KFI KFSD
KFYR KGO KGW KHQ KOA KOMO
KPRC KSD KSTP KATR KVOO
WBEN WCAE WCAF WDAF WDAY
WEAF WEBC WFAA WFBR WFLA
WGYWHO WION WIS WIAP WID WEAF WEBC WFAA WFBR WFLA WGY WHO WIOD WIS WJAR WJDX WKY WLIT WLW WMAQ WMC WOAI WOC WOW WRC WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC

WWJ WWNG
C— John Henry-River Giant
CKOK KI.RA KLZ KMBC KRLD
KSCJ KSL, KTRII KTSA KVOR
WABC WACO WADC WBBM WBCM
WBRC WBT WCAH WCAO WCCO
WDAE WDBJ WDOD WDRC WSW WDAE WDBJ WDDD WDRC WDSU WFBL WFBM WFEA WGR WGST WHEC WHK WHP WISN WJAS WKBH WLBW WLBZ WNAX WNOX WOKO WORC WREC WSFA WSJS WSPD WWVA

E-8:15 p.m., C-7:15, M-6:15, P-5:15
C—Andre Kostelanetz Presents
CKOK KLZ KMBC KMOX KRLD
KSCJ KSL KTRH KTSA KVOR
WABC WADC WBBM WBCM WBRC
WBT WCAO WCAU WCCO WDAE
WDBO WDOD WDRC WDSU WEAN
WFBM WFEA WGR WHEC WHK
WIBW WISN WJAS WJSV WKBH
WJBW WJSN WJAS WJSV WKBH
WJBW WJSW WJAS WJSV WKBH
WJBW WJSW WJAS WJSV WSPD
WTAR WTOC WWVA

E-8:45 p.m., C-7:45, M-6:45, P-5:45 E-8:39 B.M., U-1:35, M-0:35, F-9:39
C— John Henry—River Giant
CKOK KLRA KI.Z KMBC KRLD
KSCJ KSL KTRH KTSA KVOR
WABC WADC WBBM WBCM WBRC
WBT WCAH WCAO WCCO WDAE
WDBJ WDOD WDRC WDSU WFBL
WDBJ WDOD WDRC WDSU WFBL
WDBJ WDOD WDRC WDSU WFBL

WFBM WFEA WGR WGST WHK WHP WISN WJAS WHEC WIR WHE WISN WIAS WEBH WKBN WLBW WLBZ WNAX WODX WOKO WORC WREC WSFA WSJS

E-9:00 p.m., C-8:00, M-7:00, P-6:00
C—Fred Allen's Bath Club
CKOK KDB KERN KFBK KFPY
KFRC KGB KHJ KLRA KLZ KMBC
KMJ KMOX KOIN KOL KOMA KSCJ
SSL KVI KWG WABC WADC WBTA
WCAH WCAO WCAU WCCO WDAE
WDBO WDOD WDDR WDSU WEAN
WFBL WFBM WGN WGR WGST
WHAS WHEC WHK WISN WJAS
WSPV WRC WLAC WMT WNAC
WSPD WTAR WSPD WTAR

R — General Electric Concert KDYL KFI KFSD KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS KTHS WAPI WBEN WCAE WCSH WDAF WDAY WEAF WEBC WENR WFAA WFBR WFI WFLA WGY WHO WIBA WIS WJAR WJAX WJDX WKY WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ WWNC

B — Warden Lawes—Sing Sing KDKA KOIL KSO KWCR K KYW WBAL WBZ WBZA WO WHAM WJR WJZ WLW WREN KWK WGAR

C-8:30, M-7:30, P-6:30 E-9:30 p.m., C-8:30 C — Pennzoil Parade CKOK KLRA KMBC KMOX KOMA

CKOK KLRA KMBC KMOX KOMA
KTSA WABC WADC WBRC WBT
WCAO WCAU WCCO WDRC WEAN
WFBL WGN WGR WGST WHAS
WHEC WJAS WJSV WKRC WLAC
WLBZ WNAC WOKO WSPD
R — Album of Familiar Music

H — Album of ramiliar Music KDYL KFI KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTHS WAPI WBEN WCAE WCKY WCSH WEAF WENR WFAA WFBR WFI WFLA WGY WHO WIOD WJAR WJAX WJDX WKY WMC WOAJ WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ

B - Walter Winchell KDKA KOII, KSO KWCR KWK KYW WBAL WBZ WBZA WGAR WHAM WJR WJZ WLW WREN

E-9:45 p.m., C-8:45, M-7:45, P-6:45 B — Pickens Sisters CFCF CKGW KDKA KOIL KSO KWCR KWK KYW WBAL WHAM WJR WJZ WREN WSYR

E-10:00 p.m., C-9:00, M-8:00, P-7:00 B — D. W. Griffith, See Wednesday R — David Lawrence

R — David Lawrence KDYL KFI KFSD KFYR KGO KGW KHO KOA KOMO KPRC KSTP KTBS WBEN WCAE WCKY WCSH WDAF WDAY WEAF WEBC WEEL WFBR WFI WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WKY WMC WOAL WOC WRC WSAI WSM WSMB WTAG WTAM WTIC WWJ WWNC

E-10:15 p.m., C-9:15, M-8:15, P-7:15 R — Rex Chandler and Orchestra

WISH WEAF WEAF WEN WRC WSM WGY WIS WJAR WOW WRC WSM WTAG WTAM WTIC WWJ WWNC

WTAG WTAM WTIC WWJ WWNC
C—Ernest Hutcheson, Pianist
CFRB CKOK KFH KLRA KLZ
KMBC KSCJ KTRII KISA KVOR
WAAB WABC WADC WBBM WECM
WBIG WBT WCAH WCAO WCAU
WCCO WDAE WDBJ WDOD WDRC
WDSU WFBL WFBM WFEA WGR
WGST WHEC WHK WHP WISN
WJAS WKBN WKBW WLBW WLBZ
WMBD WMT WNAX WNOX WODX
WOKO WORC WPG WQAM WREC
WSBT WSJS WSPD WTOC
B— Vincent Lopez; Pratt-Sherman

WSBT WSJS WSPD WTOC

B — Vincent Lope; Pratt-Sherman

KDKA KDYL KFI KGO KGW KHQ

KOA KOII, KOMO KPRC KSTP

KTHS KWK WBAL WBAP WBZ

WBZA WGAR WIBA WJDX WJR

WJZ WKY WLW WMAQ WOAI

WREN WSB WSM WSMB WTMJ

E-10:30 p.m., C-9:30, M-8:30, P-7:30 R — Donald Novis Tenor CFCF CKGW KYW WBEN WCAE

WCKY WCSH WDAF WEAF WEEI WFBR WFI WFLA WGY WHO WIOD WIS WJAR WOC WOW WRC WRVA WSAI WTAG WTAM WTIC WWI WWNC

E-10:45 p.m., C-9:45, M-8:45, P-7:45
R — Sunday at Seth Parker's
CFCF CKGW KDYL KFSD KFYR
KGHL KGIR KGO KGW KHQ KOA
KPRC KSTP KTAR KTBS KTHS
KYW WAPI WBAP WBEN WCASH
WCSH WDAF WDAY WEAF
WEEC WEEL WFBR WFL WFLA
WCAYWLAW WAR WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ

B — Orange Lantern, Mystery Drama KDKA KSO KWCR KWK WBAL WGAR WHAM WJZ WREN

C — The Gauchos C—THE GAILORS
CKOK KFAB KFH KLZ KSCJ KTRH
KYOR WAAB WABC WADC WBCM
WBRC WBT WCAO WDAE WDBO
WDOD WDRC WDSU WEAN WFAN
WFBM WGR WHEC WIBW WICC
WIP WISN WJAS WJSV WKBN
WLBBW WLBZ WMBD WNAX WODX WOKO WPG WQAM WSJS WSPD WTAR WTOC

E-11:15 p.m., C-10:15, M-9:15, P-8:15
C — Isham Jones and Orchestra
KLRA KTRH WAAB WABC WBCM
WBRC WCAO WDAE WDBJ WDBO
WDOD WDRC WDBU WEAN WGST
WICC WLBZ WNOX WODX WORC
WPG WQAM WREC WSJS WTAR
WTOC

Walter Winchell KDYL KFI KGHL KGIR KGO
KGW KHQ KOA KOMO KPRC
KTAR KTBS KTHS WAPI WBAP
WJDX WKY WMC WOAI WSB

WSM WSMB

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C --- Eddie Duchin and Orchestra

C—Eddie Duchin and Orchestra
CKOK KFAB KFH KLRA KLZ
KMOX KSCJ KTRH KVOR WAAB
WABC WBCM WBRC WCAO WCAU
WCCO WDAE WDBJ WDBO WDOU
WDRC WDSU WEAN WGST WHK
WHP WIBW WICC WISN WKBN
WLBW WLBZ WMBD WMT WNAC
WNAX WNOX WOKO WPG WQAM
WREC WSBT WSJS WSPD WTAR WTOC

B - Jesse Crawford, Organist KDKA KOIL KSO KWCR KYW WBAL WBZ WBZA WCKY WHAM WJZ WREN

E-12:00 p.m., C-11:00, M-10:00, P-9:00
C — Ben Pollack and Orchestra
CKOK KFAB KLZ KMOX KSCJ
KTRH KVOR WABC WBRC WBT
WCAU WCCO WDAE WDOD WEAN
WGR WIBW WICC WISN WSV
WLBW WMBD WNAC WNAX
WOKO WPG WSBT WSPD
B — William Stoess and Orchestra

B — WINLAM Stocess and Urchestra KFYR KGILL KGO KGW KHQ KOA KOIL KOMO KPRC KSTP KTBS KWCR KWK WBZ WBZA WDAY WEBG WENIR WFLA WGAR WHAM WIBA WIOD WIS WJR WJZ WKY WLW WMC WREN WSB WSM WSMB WWNC

R — Joe Furst and Orchestra WCAE WEAF WPBR WGY WJAR WOW WTAM WTIC

CLASSIFIED INDEX TO CHAIN PROGRAMS

Time in Eastern Standard

CONCERTS Howard Barlow, 11:00 p.m., daily, ex. Sat. and Sun., C Howard Barlow, 11:00 p.m., daily, ex. Sat. and Boston Symphony, 8:15 p.m., Saturday, B Concert Footlights, 7:15 p.m., Thursday, B Gauchos, 10:45 p.m., Sunday, C General Electric 9:00 p.m., Sunday, R Walter Logan, 12:30 p.m., Sunday, R New York Philharmonic, 3:00 p.m., Sunday, R New York Philharmonic, 3:00 p.m., Saturday, R Jacqueline Solomons, 7:00 p.m., Wednesday, R Jacqueline Solomons, 7:00 p.m., Wednesday, R Waldorf-Astoria, 6:00 p.m. daily ex Sunday, I

Waldorf-Astoria, 6:00 p.m., daily, ex. Sunday, R DANCE BANDS Charlie Agnew, 2:30 p.m., Sunday, B Victor Arden, 2:30 p.m., Sunday, C Albert Bartlett, 2:15 p.m., Sunday, C Albert Bartlett, 2:15 p.m., Sunday, C Leon Belasco, 11:30 p.m., Saturday, C Ben Bernie, 12 md. Wed., B; 9:00 p.m. and 12:30 a.m., Tuesday, R Tuesday, R
Cab Calloway, 12 mid., Tuesday and Friday, B
Rex Chandler, 10:15 p.m., Sunday, R
Jack Denny, 11:30 p.m., Mon. and Thurs.; 11:10 p.m.,
Saturday, R
Clyde Doerr, 2:00 p.m., Sunday, R
Glyde Doerr, 2:00 p.m., Sun; 12 mid., Wednesday, C
Don Erwin, 12:30 a.m., Saturday, R
Mark Fisher, 12:30 a.m., Tues, and Wed., 12 mid. Sut. B
Joe Furst, 12 mid., Sunday, R.
Joe Haymes, 12 mid., Tuesday and Saturday, C
Isham Jones, 11:15 p.m., Sun; 11:30 p.m., Tues., Wed.,
Thurs.; 8:30 p.m., Saturday, C
Wayne King, 3:00 p.m., Sun; 18:30 p.m., Tues, R, 9:30 p.m. Wayne King, 3:00 p.m., Sun.; 8:30 p.m., Tues., R: 9:30 p.m., Thursday, B Guy Lombardo, 11:30 p.m., Mon.; 9:30 p.m., Wed.; 9:45 p.m., Saturday, C Vincent Lopez, 7:00 p.m., Tues., R; 10:15 p.m., Sun., 7:00 p.m., Saturday, B

ynticine Lopez, 1-30 p.m., 1ucs., n., 10-15 p.m., Suin., 1-30 p.m., Staturday, B.

Abe Lyman, 12 mid., Mon., 11:30 p.m., Fri.; 8:45 p.m., Tucsday, Wednesday, Thursday, C.

Dick Mansfield, 6:00 p.m., Wednesday, C.

Dolph Martin, 7:30 p.m., Mon., Wed., Fri., C.

Freddie Martin, 12 mid., Monday, B.

Ozzie Nelson, 6:15 p.m., Thursday, C.

George Olsen, 8:00 p.m., Wednesday, 9:30 p.m., Saturday, R.

Ben Pollack, 12 mid., Sunday and Friday, C.

Sam Robbins, 12 mid., Thurs; 12:30 a.m., Saturday, B.

Willard Robison, 9:30 p.m., Ties:, 11:30 p.m., Thurs., B.

B. A. Rolfe, 10:00 p.m., Saturday, R.

Harold Sanford, 11:30 p.m., Monday, B.

Harold Sanford, 11:30 p.m., Saturday, R.

William Stoess, 12 mid., Sunday, B.

Rudy Vallee, 8:00 p.m., Thursday, R.

Fred Waring, 10:00 p.m., Wednesday, C.

Ted Weems, 11:00 p.m., Wednesday, C.

Ted Weems, 11:00 p.m., Monday; 12 mid., Saturday, R.

Paul Whiteman, 9:30 p.m., Monday, R.

DIALOG

Fred Allen, 9:00 p.m., Sunday, C

Amos 'n' Andy, 7 and 11 p.m., daily, ex. Sat. and Sun., B

Jack Benny, 10:00 p.m., Friday, R

Burns and Allen, 9:30 p.m., Wednesday, C

Cuckoo, 10:30 p.m., Saturday, B

Easy Aces, 8:00 p.m., Tues, Thurs, and Saturday, C

Funnyboners, 6:45 p.m., Saturday, C

Tom Howard, 9:00 p.m., Friday, R

Marx Bros., 7:30 p.m., Monday, B

Jack McLallen, 10:45 p.m., Tues, and Friday, B

Baron Munchausen, 10:00 p.m., Thursday, R

Jack Osterman, 2:30 p.m., Sunday, C

Drs. Pratt and Sherman, 10:15 p.m., Sunday, R

Reis and Dunn, 6:15 p.m., Mon.; 6:00 p.m., Tuesday, C

Stoopnaple and Budd, 9:30 p.m., Thursday, C

Three California Nuts, 7:30 p.m., Sunday, R

Vic and Sade, 10:15 p.m., daily, ex. Sat. and Sunday, B

Solly Ward, 10:00 p.m., Tuesday, C

DRAMA

Big Ben, 5:15 p.m., Sunday, R. Octavus R. Cohen Mystery, 7:45 and 11:15 p.m., Tues.. Thurs., Sat., B Death Valley Days, 9:00 p.m., Thursday, B Eno Crime Club, 8:00 p.m., Tuesday and Wednesday, B

First Nighter, 9:00 p.m., Friday, B
Poreign Legion, 10:00 p.m., Thursday, C
Fu Manchu Mystery, 8:30 p.m., Monday, C
General Tire, 9:00 p.m., Wednesday, R.
Goldbergs, 7:45 p.m., and 12 mid., daily, ex. Sat. and Sun., R
Great Moments in History, 7:30 p.m., Sunday, B
Griffth's Hollywood, 10:00 p.m., Sun. and Wed., B.
John Henry, 8:00 and 8:45 p.m., Sunday, C
Sherlock Holmes, 9:00 p.m., and 12:15 a.m., Wednesday, B
King Kong, 6:30 p.m., Monday and Saturday, R
Magic Voice, 8:15 p.m., Tuesday and Saturday, C
March of Time, 8:30 p.m., Friday, C
Moonshine and Honeysuckle, 1:30 p.m., Sunday, R
Myrt and Marge, 7:00 and 10:34 p.m., Sunday, R
Myrt and Marge, 7:00 and 10:34 p.m., Sunday, R Myrt and Marge, 7:00 and 10:45 p.m., daily, ex. Sat. and Sunday, C
Mysteries in Paris, 9:30 p.m., Monday, C
Neighbors, 10:30 p.m., Friday, R
Orange Lantern, 10:45 p.m., Sunday, B
Pages of Recoverage, School and Sunday, B Orange Lattern, 10:45 p.m., Sunday, B Pages of Romance, 5:30 p.m., Sunday, B Rin Tin Tin, 8:30 p.m., Thursday, B Buck Rogers, 7:15 p.m., daily, ex. Sat. and Sun., C Roses and Drums, 5:00 p.m., Sunday, C The Shadow, 8:30 p.m., Wednesday, R Soconyland Sketches, 8:00 p.m., Monday, R Squibb's 4:30 p.m., Sunday, R Wheatenaville, 7:15 p.m., daily ex. Friday and Saturday. R

IANO AND ORGAN

Jesse Crawford, 11:30 p.m., Sunday, B Fray and Braggiotti, 7:30 p.m., Sunday; 10:30 p.m., Thurs, 10:45 p.m., Friday, C 10:49 p.m., Friday, C Archer Gibson, 8:00 p.m., Saturday, R Gruen and Hall, 7:00 p.m., Monday, R Harding Sisters, 6:45 p.m., Tuesday, R Ernest Hutcheson, 10:15 p.m., Sunday, C Vec Lawahurst, 4:15 p.m., Sunday, R Ohman and Arden, 2:30 p.m., Sun, C, 9:30 p.m., Sun., R Lew White, 11:15 p.m., Saturday, B

POPULAR PROGRAMS

POPULAR PROGRAMS

A. & P. Gypsies, 9:00 p.m., Monday, R. Album of Familiar Music, 9:30 p.m., Sunday, R. Armour Program, 9:30 p.m., Friday, B. Bath Club, 9:00 p.m., Sunday, C. Blue Coal Revue, 5:30 p.m., Sunday, C. Major Bowes' Family, 11:15 a.m., Sunday, R. California Melodies, 9:30 p.m., Tuesday, C. Chase and Sanborn, 8:00 p.m., Sunday, R. Chevrolet Program, 10:00 p.m., Friday, R. Cities Service, 8:00 p.m., Friday, R. Clieguet Club Eskinnos, 8:00 p.m., Monday and Friday, C. Contented Program, 10:00 p.m., Monday and Friday, C. Contented Program, 10:00 p.m., Monday, R. Firestone, 8:30 and 11:30 p.m., Monday, R. Firestone, 8:30 and 11:30 p.m., Monday, R. Firestone, 8:30 and 11:30 p.m., Monday, R. Fire Star Theatre, 10:00 p.m., Tues., C; 7:30 p.m., Monand, Friday, B. and Friday, B Jack Frost's Melody, 9:30 p.m., Monday, B Household Musical Memories, 9:00 p.m., Tuesday, B Household Musical Memories, 9:00 p.m., Tuesday, F Inside Story, 9:30 p.m., Friday, C Jad Salt, 6:30 p.m., Monday and Wednesday, C Lucky Strike, 10:00 p.m., Thursday, R Manhattan Merry-Go-Round, 3:30 p.m., Sunday, B Maxwell House, 9:00 p.m., Triday, B Old Gold, 10:00 p.m., Wednesday, C Pennzoil Parade, 9:30 p.m., Friday, R Roxy's Gang, 12:15 p.m., Sunday, C Pond's Program, 9:30 p.m., Friday, R Roxy's Gang, 12:15 p.m., Sunday, B Royal Vagabonds, 8:00 p.m., Wednesday, R Andy Sanella, 6:45 p.m., Wednesday, R Sinclair Minstrels, 9:00 p.m., Monday, B Swifts' Garden, 5:30 p.m., Sunday, R Swifts' Garden, 5:30 p.m., Sunday, R. Wildroot Institute, 4:15 p.m., Sunday, R. Ed Wynn, 9:30 p.m., Tuesday R

QUARTETS

Mills Brothers, 9:15 p.m., Monday and Thursday, C Revelers, 4:30 p.m., Sunday, R Rollickers, 9:30 p.m., Monday, R Singing Cylinders, 5:30 and 6:00 p.m., Sunday, B

RELIGIOUS

Dr. S. Parkes Cadman, 3:30 p.m., Sunday, R Cathedral Hour, 6:30 p.m., Sunday, C Catholic Hour, 6:00 p.m., Sunday, R Catholic Hour. 6:00 p.m., Sunday, R Church of the Air. 1:30 p.m., Sunday, C Rev. Charles E. Coughlin. 4:00 p.m., Sunday Mid-Week Hynn Sing, 6:30 p.m., Tuesday, R National Vespers, 5:00 p.m., Sunday, B National Youth Conference, 4:30 p.m., Sunday, B Our American Music, 3:00 p.m., Sunday, B Seth Parker's, 10:45 p.m., Sunday, R Salt Lake Choir, 12 noon, Sunday, C Temple of Song, 4:00 p.m., Sunday, B

SINGERS
Frances Alda, 6:00 p.m., Tuesday, R
Elvia Allman, 7:30 p.m., Monday and Wednesday, R
Ilomay Bailey, 10:30 p.m., Tuesday and Friday, B
Elizabeth Barthell, 6:00 p.m., Monday, C
Boswell Sisters, 9:15 p.m., Saturday, C
Fanny Brice, 8:00 p.m., Wednesday, R
Buccaneers, 11:00 p.m., Saturday, B
Eddie Cantor, 8:00 p.m., Sunday, R
Charles Carlile, 10:45 p.m., Tuesday, C
Richard Crooks, 8:30 and 11:30 p.m., every other Monday, R
Bing Crosby, 9:00 p.m., Wednesday and Saturday, C
Dennis and Reese, 11:00 p.m., Tuesday, R
Do Re Mi, 6:00 p.m., Friday, C
Morton Downey, 7:15 p.m., Sun., 10:45 p.m., Thurs., C;
9:30 p.m., Wednesday, B
Jessica Dragonette, 8:00 p.m., Friday, R 9:30 p.m., Wednesday, B
Jessica Dragonette, 8:00 p.m., Friday, R
Jessica Dragonette, 8:00 p.m., Friday, R
Mary Eastman, 8:15 p.m., Sunday; 9:15 p.m., Friday, C
Ruth Etting, 9:00 p.m., Monday and Thursday, C
Fields and Hall, 6:45 p.m., Saturday, B
Jane Froman, 9:00 p.m., Tuesday and Friday, C
Jeannie Lang, 9:30 p.m., Tuesday and Friday, C
Jeannie Lang, 9:30 p.m., Thursday, C; 9:00 p.m., Friday, R
Welcome Lewis, 11:15 p.m., Friday, B
Little Jack Little, 10:45 p.m., Wednesday, C
Ruth Lyon, 10:30 p.m., Wednesday, B
Andrea Marsh, 6:45 p.m., Monday, R
Nine Martino, 11:00 p.m., Wednesday and Friday, C
Smiling Ed McConnell, 2:00 p.m., Sunday, C
Tommy McLaughlin, 9:15 p.m., Tuesday, C
James Melton, 7:00 p.m., Sun, 7:30 p.m., Tues; 11:00 p.m.,
Thursday, R Thursday, R Thursday, M Monarch Mystery Tenor, 2:00 p.m., Sunday, B Frank Munn 9:30 p.m., Sunday, R. Gertrude Niesen, 6:30 p.m., Thurs.; 10:45 p.m., Sat., C Donald Novis, 10:30 p.m., Sun.; 7:00 p.m., Fri., R; 9:30 p.m., Wednesday, B Pickens Sisters, 9:30 p.m., Mon., R; 9:45 p.m., Sun., 8:30 p.m., Wednesday, B

Carson Robison's Pioneers, 10:00 p.m., Thursday, B Lanny Ross, 9:00 p.m., Thursday, R Romantic Bachelor, 9:15 p.m., Wednesday, C Salon Singers, 10:15, p.m., Saturday, B Sanderson-Crunit, 8:00 p.m., Tuesday, R Ethel Shutta, 9:30 p.m., Saturday, R Singin' Sam, 8:15 p.m., Monday, Wednesday, Friday, C Sixteen Male Voices, 11:30 p.m., Wednesday, B Sizzlers Trio, 10:00 p.m., Monday, B Kate Smith, 8:30 p.m., Tuesday, Wednesday, Thursday, C Street Singer, 12:45 p.m., Sunday; 7:45 p.m., Saturday, C Tastycust Jesters, 7:15 p.m., Monday B Three Keys, 6:30 p.m., Thursday, R; 10:45 p.m., Tuesday and Friday, B Carson Robison's Pioneers, 10:00 p.m., Thursday, B Three X Sisters, 6:30 p.m., Mon., Wed., Friday, B Lawrence Tibbett, 8:30 and 11:30 p.m., every other Mon-Trade and Mark, 8:00 p.m., Fri., C; 7:45 p.m., Sunday, R Gus Van, 9:30 p.m., Saturday, R Whispering Jack Smith, 8:00 p.m., Mon. and Wed.: 8:15 p.m., Thurs., C Women's Octet, 11:15 p.m., Tuesday, B

TALKS

America's Grub Street, 6:00 p.m., Saturday, C American Taxpayers' League, 8:00 p.m., Saturday, B Boake Carter, 7:45 p.m., daily, ex. Sat. and Sun., C Don Carney Dog Chats, 8:30 p.m., Monday, B Cook Travelogues, 1:15 p.m., Sunday, B Economic World Today, 8:30 p.m., Saturday, R William Hard, 6:30 p.m., Wednesday, R Edwin C. Hill, 10:30 p.m., Mon., Tues., Wed.; 9:30 p.m., Friday, C Horlick's Health, 8:30 p.m., Tuesday and Friday, B International Forum, 2:15 p.m., Sunday, R H. V. Kaltenborn, 7:00 p.m., Sunday, 6:00 p.m., Thurs., C Warden Lawes, 9:00 p.m., Sunday, B David Lawrence, 10:00 p.m., Sunday, R. Laws That Safeguard, 6:30 p.m., Saturday, B. Lawyer and Public 6:00 p.m., Sunday, C National Radio Forum, 10:30 p.m., Monday, R Our American Schools, 6:30 p.m., Sunday, R Angelo Patri, 7:45 and 11:15 p.m., Sunday, C Public Affairs Institute, 10:15 p.m., Saturday, C Radio in Education, 7:15 p.m., Tuesday, B Sigmund Spaeth, 10:00 p.m., Tuesday, B Lowell Thomas, 6:45 p.m., daily, ex. Sat. and Sun., D; 5:00 p.m., Sunday, R. Merle Thorpe, 7:15 p.m., Saturday, B. Howard Thurston, 8:45 p.m., Thurs, and Fri., B. Carveth Wells, 10:30 p.m., Wednesday, R Frederic William Wile, 7:00 p.m., Saturday, C Walter Winchell, 9:30 and 11:15 p.m., Sunday, B

KEY TO SYMBOLS

As Shown in the Index by Frequencies and Dial Numbers

Frequency is given in kilocycles; wavelength in meters. Night power is shown in watts in third column. Daytime power is shown in parenthesis in fourth column in kilowatts, thus (.25) indicating 250 watts. Some stations outside the United States use a "split frequency." Their exact frequency is shown in fourth column. 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 post-
- Verifies only occasionally.
- Does not verify.
- Verification 10c; letter 25c.
- Sends Ekko stamp for 10c. Sends Ekko stamp for 5c.
- Sends Ekko stamp for postage.
- Sends own station stamp for 10c.
- Sends own station stamp for 5c.
- Sends own station stamp for post-
- Has no stamps. k
- No information available.

Fourth Column Symbols

These stations are synchronized.

- National "Blue" network. Columbia network.
- Daytime only.
- Dn Daytime with occasional evening hours
- Trans-Canada network.
- Canadian National Railways net-
- All Canadian networks.
- Yankee network. Orange and gold network.
- ĸ Mexican networks. Canadian Pacific Ry. network
- (Dominion) Canadian Radio Corp. network.
 - National "Red" and "Blue" networks.

- Has construction permit only.
- Great Lakes network.
 National "Red" network.
- S Sunday only.
- Т Don Lee System.
- U 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.

NOTICE OF COPYRIGHT

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

FOR KEY TO SYMBOLS SEE PAGE 45										
540 kil	ocycle	s 555	.2 meters							
CKOK ac XEY z	e 5000 105	CG 546.8	Windsor, Ont. Merida, Mex.	Essex Broadcasters, Ltd. Partido Socialista S. E.						
550 kil	ocycle	s 545	.1 meters							
KFDY a KFUO a KFYR a KOAC a KSD a WDEV a WGR a WKRC a	e 1000 h 1000 k 1000 k 500 e 500 e 1000	1 2(1) 1N(2.5) 2R D C C	Brookings, S. D. St. Louis, Mo. Bismarck, No. Dakota Corvallis, Ore. St. Louis, Mo. Waterbury, Vt. Buffalo, N. Y. Cincinnati, Ohio	South Dakota State College Evangelical Lutheran Church Meyer Broadcasting Co. Oregon State Agricultural College Pulitzer Publishing Co. Harry G. Whitehill Buffalo Broadcasting Corp. WKRC, Inc., Hotel Alms						
	ocycle		.4 meters							
KFDM a KLZ a KTAB a WFI au WIBO au WLIT al WNOX al WPCC au WQAM au XEAO z	e 1000 e 1000 e 500 e 1000 k 500 k 1000 k 500	(1) C Y 1R (1.5)a 1R C(2) Sa C	Beaumont, Texas Denver, Colo. San Francisco, Calif. Philadelphia, Pa. Chicago, Ill. Philadelphia, Pa. Knoxville, Tenn. Chicago, Ill. Miami, Fla. Mexicali, Mex.	Sabine Broadcasting Co., Inc. Reynolds Radio Co., Inc. Associated Broadcasters, Inc. WFI Broadcasting Co. Nelson Bros. Bond & Mtg. Co. Lit Bros. Broadcasting System, Inc. WNOX Inc. North Shore Congregational Church Miami Broadcasting Co. Luis L. Castro						
570 kil	ocycle	s 526	.0 meters							
HIX KGKO Z KMTR A KVI WEAO WKBN A WMCA WMCA WNYC WSYR WWNC A A WWNC A A A A A A A A A A A A A A A A A A A	250 eh 500 e 500 e 1000 c 500 c 500 c 500 c 250	579 (.5) C 1 1C 3 C(2.5) 3 B2 N	Santo Domingo, D. R. Wichita Falls, Texas Hollywood, Calif. Tacoma, Wash. Columbus, Ohio Youngstown, Ohio New York, N. Y. Yankton, S. D. New York, N. Y. Syracuse, N. Y. Asheville, N. C.	The Dominican Government Wichita Falls Broadcasting Co. KMTR Radio Corp. Puget Sound Broadcasting Co. Ohio State University WKBN Broadcasting Corp. Knickerbocker Broadcasting Co., Inc. House of Gurney, Inc. Dept. of Plant & Structures Central N. Y. Brdestg. Corp., (WMAC) Citizens Broadcasting Co., Inc.						
580 kil	ocycle	s 516	.9 meters 🔲							
CFCY ac CHMA al CKCL al CKUA al CMDD z KMJ al KSAC al WDBO ac WOBU al WSAZ ac WTAG ac XEPN z	500 ks 250 500 150 ks 500 250 250 250 ks 2	E 4S	Charlottetown, P. E. I. Edmonton, Alta. Toronto, Ont. Edmonton, Alta. Havana, Cube Fresno, Calif, Manhattan, Kans. Orlando, Fla. Topeka, Kans. Charleston, W. Va. Huntington, W. Va. Worcester, Mass. Piedras Negras, Mex.	Island Radio Broadcasting Co., Ltd. Christian & Missionary Alliance The Dominion Battery Co. University of Alberta G. deSequeira McClatchy Radio Stations (Fresno Bee) State Agricultural College Orlando Broadcasting Co., Inc. Topeka Brodcstg Assn., Inc. WOBU, Inc., Ruffner Hotel WSAZ, Inc. Worcester Telegram Pub. Co., Inc. (Yolanda Hotel), Eagle Pass, Texas						
590 kil	ocycle	s 508	2 meters							
CJGC ac CMW ac KHQ al WCAJ ac WEEI al WKZO ac	1400 1000 500 1000 1000	595GZ N(2) 1 R D 1R	London, Ont. Havana, Cuba Spokane, Wash. Lincoln, Neb. Boston, Mass. Kalamazoo, Mich. Omaha, Neb.	Free Press Printing Co., Ltd. Troncoso y Gil Louis Wasmer, Inc. Nebraska Wesleyan University Edison Electric Illuminating Co. WKZO, Inc., Burdick Hotel Woodmen of the World						

INDEX BITTE	_		
600 kilocycles 499.7	meters		KCYS.
CNRO ak 500 F Or KFSD ah 1000 N Se WCAC ak 250 2 St WCAO ae 250 C Br WICC ae 250 2H(.5)C Br	ttawa, Ont. an Diego, Calif. torrs, Conn. altimore, Md. ridgeport, Conn. aterloo, Iowa	Canadian National Raily Airfan Radio Corp. Connecticut Agricultura Monumental Radio Co. Bridgeport Bdctg. Statio Waterloo Broadcasting C WREC, Inc.	1 College MTRS. n, Inc. 440.9
610 kilocycles 491.5	meters		
WDAF ac 1000 R K WIP ak 500 C PI WJAY ac 500 D C	an Francisco, Calif. ansas City, Mo. hiladelphia, Pa. leveland, Ohio lexico City, Mexico	Don Lee Broadcasting Sy Kansas City Star Co. Pennsylvania Bdctg. Co. Cleveland Radio Broadce Cia. Difusora Mexicana S	(WFAN)
620 kilocycles 483.6	meters		
KTAR ac 500 NJ(1) Pl WFLA ac 1000 Na(2.5) C WLBZ ak 500 C WSUN ac 1000 Na(2.5) St	ortland, Ore. hoenix, Ariz. clearwater, Fla. angor, Maine t. Petersburg, Fla. filwaukee, Wis.	Oregonian Publishing Co. KTAR Broadcasting Co. Florida West Coast Bdct Maine Broadcasting Co., Florida West Coast Bdct Journal Company	g. Co., Inc.
630 kilocycles 475.9	meters _		
CFCT ae 500 G V C C G Ae 500 FL Y C G Ae 500 FL Y C G Ae 1000 635aG H C K T B ae 1000 635aL S: C M C Z 150 H C M Z 250 H C M Z 250 H C M A AE 700 F M K F R U Ak 500 I C M G F X W G B F AE 500 W — I E W M AL ae 250 (.5)—B W W S Ak 500 I D P W G B AE 500 I D J P W G B AE 500 I D J P W G B AE 500 I D J P W G B AE 500 I D J P W G B AE 500 I D J P W G B AE 500 I D J P W G B AE 500 I D J D J D J D J D J D J D J D J D J D	cictoria, B. C. corkton, Sask. Iamilton, Ont. t. Catharines, Ont. Iavana, Cuba Iavana, Cuba Ioncton, N. B. columbia, Mo. cierre, S. D. conswille, Ind. Vashington, D. C. efferson City, Mo. ceracruz, Ver., Mexico Mexico City, Mexico	Victoria Broadcasting As Winnipeg Grain Exchan Wentworth Radio Bdctg Wentworth Radio Bdctg Jorge Garcia Serra Jose Fernandez Canadian National Rails KFRU, Inc. Dana McNeil Evansville On the Air, In National Broadcasting C Missouri State Marketin Manuel Angel Fernande Sria. de Guerra y Marin	ge . Co., Ltd Co., Ltd
640 kilocycles 468.5	meters 🗌		
CKCR ak 100 645G W KFI ah 50000 N1 L WAIU ae 500 1 C	Quebec, Que. Quebec, Que. Vaterloo, Ont. Los Angeles, Calif. Columbus, Ohio Ames, Iowa	CHRC, Ltd., Victoria Ho Le Soleil, Ltd. Mitchell & Liddle Earls C. Anthony, Inc. Associated Radiocasting State College of Agricult	
650 kilocycles 461.3	meters		
KPCB ac 100 S WSM acj 50000 N	Seattle, Wash. Nashville, Tenn.	Queen City Broadcastin National Life & Acciden	at Ins. Co.
660 kilocycles 454.3	3 meters 📃		
CJRM z 500 665 M CJRW z 1000 665 F CMAF ak 500 I RUS z 500 664 S WAAW agh 500 D C WEAF ak 50000 R	Chilliwack, B. C. Moose Jaw, Sask. Fleming, Sask. Havana, Cuba Salvador Omaha, Neb. New York City Matamoros, Mex.	Chilliwack Broadcasting Jas. Richardson & Sons Jas. Richardson & Sons International Broadcas Republic of El Salvador Omaha Grain Exchange National Broadcasting of Gumaro Lizarraga	, Ltd. , Ltd. ting Co.
670 kilocycles 447.5	meters 🗀		
WMAQ ae 5000 N	Chicago, Ill.	WMAQ, Inc. (NBC Less	sees)
300	9 meters 📃		
KFEQ ae 2500 D KPO ak 5000 N	Bogota, Colombia St. Joseph, Mo. San Francisco, Calif. Raleigh, N. C.	Scroggin & Co., Bank National Broadcasting Durham Life Insurance	Co., Inc.

INDER DI I	REQUERCIES A.	NO DIAL NUMBERS
690 kilocycles 434	1.5 meters	
CFAC ak 500 1G CFRB ae 10000 CM CJCJ ak 500 ILE NAA z 1000 VAS z 2000 685(4) XET ck 500	Calgary, Alta. Toronto, Ont. Calgary, Alta. Arlington, Va. Glace Bay, N. S. Monterrey, Mexico	Calgary Herald, Ltd. Rogers-Majestic Corp., Ltd. Albertan Publishing Co., Ltd. U. S. Navy Canadian Marconi Co. Cadena Radio Difusora Mexicana S. A.
700 kilocycles 428	3.3 meters	
NLW ae 50000 N	Cincinnati, Ohio	The Crosley Radio Corporation
710 kilocycles 422	2.3 meters	
⟨MPC ae 500 Dn ⟨WOR ak 5000 X ⟨KEN agj 1000 711K ⟩	Beverly Hills, Calif. Newark, N. J. Mexico City	R. S. MacMillan Bamberger's Broadcasting Service, Inc. Cerveceria Modelo S. A.
720 kilocycles 416	.4 meters	
VGN ak 25000 C	Chicago, III.	WGN, Inc., Drake Hotel
730 kilocycles 410	0.7 meters	
CHLS ak 100 1b CHYC z 5000 Sa CKAC ak 5000 CaM CKCD z 100 1b CKFC ak 50 1 CKWX ak 100 1L CMK ach 3150 CKF-XER z 75000 735-665	Vancouver, B. C. Montreal, Que. Montreal, Que. Vancouver, B. C. Havana, Cuba Villa Acuna, Mexico	W. G. Hassell (Province Bldg.) Northern Electric Co., Ltd. La Presse Publishing Co., Ltd. Vancouver Daily Province United Church of Canada Sprott-Shaw Radio Co. Western Broadcasting Co., Ltd. National Broadcasting Co. of Cuba Villa Acuna Broadcasting Co., Inc.
740 kilocycles 405	.2 meters	
CJCA ae 500 745EL KMMJ bk 1000 Dn WSB aeh 5000 N WHEB ak 250 D	Edmonton, Alberta Clay Center, Neb. Atlanta, Ga. Portsmouth, N. H.	Edmonton Journal, Ltd. M. M. Johnson Co. (R/C Lincoln) Atlanta Journal, Biltmore Hotel Granite State Broadcasting Co.
750 kilocycles 399	.8 meters	
GU aj 2500 NX OWR ak 750 WJR ak 10000 B CEAN ach 5000	Honolulu, Hawaii St. John's, N. F. Detroit, Mich. Juarez, Chih., Mexic	Advertiser Publishing Co. Wesley United Church WJR, The Goodwill Station, Inc. o Radio Difusora National S. A.
760 kilocycles 394	.5 meters	
XXA ae 250 (.5) WBAL ae 10000 BA WEW ae 1000 D WJZ ck 50000 BA	Seattle, Wash. Baltimore, Md. St. Louis, Mo. New York City	American Radio Tel. Co. (See 1060 kcys. also) St. Louis University National Broadcasting Co., Inc.
770 kilocycles 389	.4 meters	
KFAB ac 5000 1C WBBM ac 25000 1C	Lincoln, Neb. Chicago, Ill.	KFAB Broadcasting Co. WBBM Bdctg. Corp. (Wrigley Bldg.)
780 kilocycles 384	.4 meters	
CKY z 5000 CMBS z 150 CMCQ z 1000 KELW aeh 500 2 KTM ae 500 2(1) WEAN ak 500 CH WMC ak 500 N(1) WPOR aeh 500 b WTAR aeh 500 bC KEP z 1000	Winnipeg, Man. Havana, Cuba Havana, Cuba Burbank, Calif. Los Angeles, Calif. Providence, R. I. Memphis, Tenn. Portsmouth, Va. Norfolk, Va.	Manitoba Telephone System Enrique Artalejo Andres Martinez Magnolia Park, Ltd. Pickwick Broadcasting Corp., Ltd. Shepard Broadcasting Service, Inc. Memphis Commercial Appeal, Inc. WTAR Radio Corp. (Norfolk) WTAR Radio Corp. Cia. Difusora de Mexico S. A.
790 kilocycles 379	.5 meters 📋	
CMHC z 250 CMJK ach 300 KGO ak 7500 N WGY ak 50000 R	Tuinucu, Cuba Camaguey, Cuba San Francisco, Calif. Schenectady, N. Y.	Frank H. Jones Tano Gomez General Electric Co. (Opr. NBC) General Electric Co.

11	ADEN OF T	KEQUEITOIES III	
800 kilocy	cles 374	.8 meters 🗌	
WBAP ak 5	0000 Na 0000 Na	Fort Worth, Texas Dallas, Texas	Carter Publications, Inc. Dallas News-Dallas Journal
810 kilocy	veles 370	.2 meters 🗌	
CHNS ac CNRH ak VOAS ak	500 815aZG 500 815aZ 200 D 0000 C 500 D 350 1000 818	Halifax, N. S. Halifax, N. S. St. John's, N. F. Minneapolis, Minn. New York City Aguascalientes, Mex. Mexico City, Mexico	Maritime Bdctg. Co., Ltd. Oprs. Canadian National Railways Ayre & Sons, Ltd. Northwestern Broadcasting, Inc. Eastern Broadcasters, Inc. Goblerno del Estado de Aguascalientes Sria. de Ind. C. y Trabajo
820 kiloc	vcles 365	.6 meters	MI
CMGC z	30 5000 C	Matanzas, Cuba Louisville, Ky.	Oscar S. Mechoso The Louisville Times Co., Inc.
830 kiloc	ycles 361	.2 meters	DI
CMGA z	100 834 2500 NJ 1000 D 1000 D 5000 DnC 500	Colon, Cuba Denver, Colo. Reading, Pa. Boston, Mass. Gainesville, Fla. Mexico City, Mexico	L. Valdes Figueroa General Electric Co. (NBC Opr. Berks Broadcasting Co. Matheson Radio Co., Inc. State of Florida (Univ. of Fla.) Rafael M. Pena
840 kiloc	ycles 356	.9 meters	
CHNC z CKGW ae CKLC ak CMC z CPRY ae XETH z	5000 a 5000 NEa 1000 G 500 5000 La 100 0,000 P845 500	Toronto, Ont. Toronto, Ont. Red Deer, Alta. Havana, Cuba Toronto, Ont. Puebla, Mexico Matamoros, Mex. Jalapa, Mexico	Canadian National Carbon Co., Ltd. Gooderham & Worts, Ltd. Alberta Pacific Grain Co., Ltd. Cuban Telephone Co. Canadian Pacific Co., Royal York Hotel Ramon Huerta Miguel Musquiz, A. Estado de Vera Cruz
850 kiloc	ycles 352	.7 meters 📗	
KIEV z KWKH ac	100 D 10000 1 10000 1DnX	Glendale, Calif. Shreveport, La. New Orleans, La.	Cannon Systems, Inc. Hello World Broadcasting Corp. WWL Development Co. (Loyola Univ.)
860 kiloc	ycles 348	3.6 meters 🗌	
VOGY z WABC ac	500 P 50000 aC 50000 a 500 D 500	St. John's, N. F. 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
870 kiloc	ycles 344	.6 meters	Plus G. NPC O-
WENR ak	50000 Na 50000 Na 250 875	Chicago, III. Chicago, III. Mexico City, Mex.	Great Lakes Bdctg. Co. NBC Opr. Agricultural Broadcasting Co. Julio Zetina Osorio
880 kiloc	ycles 340).7 meters 📋	
CHML ac CJCB ak CKCV ak CKPC ak KFKA ak KLX ac KPOF ac WCOC ac WGBI ah W QAN ak WSUI ac	50 4G 100 G 100 100 4L 500 2(1) 500 2 500 (1) 250 Q1 250 1	Hamilton, Ont. Sydney, N. S. Quebec, Que. Preston, Ont. Greeley, Colo. Oakland, Calif. Denver, Colo. Meridian, Miss. Scranton, Pa. Scranton, Pa. Iowa City, Iowa	Maple Leaf Radio Co., Ltd. Nathansan's Radio Headquarters Vandry, Inc. Cyruis Dolph Mid-Western Radio Corp. Tribune Publishing Co. Pillar of Fire Mississippi Broadcasting Co., Inc. Scranton Broadcasters, Inc. Scranton Times State University of Iowa
890 kiloo		5.9 meters	
CFBO z CKCO z CKPR ak CMCF ak CMX ae KARK ak KFNF ak KSEI ae KUSD ae	500 100 3 100 3G 250 1 500 1 250 500 2(1) 250 (.5) 500 2	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

		INDE	A DI	FREQUENCIES A	ND DIAL NUMBERS
VOGT WGST WILL	ae ak	400 250 250	893 C(.5) 2(.5)	Wabana, N. F. Atlanta, Ga. Urbana, Ill.	The Gaiety Theatre Southern Broadcasting Co University of Illinois
W JAR WMM			R (.5)	Providence, R. I. Fairmont, W. Va.	The Outlet Co. A. M. Rowe, Inc.
XETU	z 1 • 1	100		Pachuca, Mexico	Rodrigo Mariquez
		cycle	es 33	3.1 meters	
KGBU KHJ	ak ae	500 1000	CT	Ketchikan, Alaska Los Angeles, Calif. Buffalo, N. Y.	Alaska Radio & Service Co. Don Lee Broadcasting System
WBEN WJAX WKY	ae aeh	1000 1000	R N N	Jacksonville, Fla.	WBEN, Inc., Buffalo Evening News City of Jacksonville
WKY WLBL	ac ac	1000 2000	N D	Oklahoma City, Okla Stevens Point, Wis.	a. Oklahoma Publishing Co. Wis. Dept. Agriculture & Markets
910	kilo	cycle	es 32º	9.6 meters	Wish Dept. Agriculture di Warkets
CFQC	z	500		Saskatoon, Sask.	The Electric Shop, Ltd.
CFLC TICR	ae z	100 50	915 911	Prescott, Ont. San Jose, Costa Rica	Radio Association of Prescott
XEW XFF	ak z	5000 500	915	San Jose, Costa Rica Mexico City, Mexico Chihuahua, Mex.	Cadena Radio-difusora Mexicana S. A. Gobierno del Estado de Chihuahua
920	kilo	cycle		5.9 meters	Sobietilo del Estado de Chindanda
CMBW	z	150	925	Havana, Cuba	Alvarez-Moris
CMCN CMDE	z z	250 250	925 925	Havana Cuba	Antonio Ginard
HHK KFEL	z ak	1000 500	111111	Havana, Cuba Port au Prince, Haiti Denver, Colo.	Republic of Haiti
KFXF	ae	500	î	Denver, Colo. Denver, Colo. Seattle, Wash.	Colorado Radio Corp.
KOMO KPRC	aj ac	1000 1000	N N(2.5)	Seattle, Wash. Houston, Texas	Fisher's Blend Station, Inc.
WAAF WBSO	ak	500 500	D D	Chicago, Ill. Babson Park, Mass.	Houston Printing Co. (Houston Post Drovers Journal Publishing Co.
wwj	ak	1000	Ř	Detroit, Mich.	Broadcasting Service Org., Inc. The Detroit News
		cycle		2.4 meters 🗌	
CFCH CFRC	ak ak	100 5 0	3LM 3(.2)	North Bay, Ont. Kingston, Ont. Brandon, Manitoba	Northern Supplies, Ltd. Queen's University
CKX CMJF	ak z	500 200	E , _,	Brandon, Manitoba	Manitoba Telephone System
KFWI	aj	500	i	Camaguey, Cuba San Francisco, Calif.	John L. Stowers Radio Entertainments, Ltd.
KGBZ KMA	ak	500 500	2(1) 2(1)	York, Neb. Shenandoah, Iowa	Dr. Geo. R. Miller Earl E. May Seed & Nursery Co.
KROW WBRC	ak ak	500 500	2(1) 1(1) C(1)	Oakland, Calif.	Educational Broadcasting Corp.
WDBJ	ae	250	C(1) C(.5)	Birmingham, Ala. Roanoke, Va. Glenside, Penna.	Birmingham Bdctg. Co., Inc. Times-World Corp.
WIBG	ае -:1	25 1 -	D 210		WIBG, Inc. (Keswick Bldg.)
940 1 KOIN		-		.0 meters [WON I
WAAT WCSH	zk ae	1000 300	CT D	Portland, Ore. Jersey City, N. J.	KOIN, Inc. (New Heathman Hotel) Bremer Broadcasting Corp.
WCSH WDAY	ae	1000 1000	R(2.5) N	Portland, Maine Fargo, No. Dakota	
WFIW WHA	ak	1000 1000	C D	Hopkinsville, Kv.	WDAY, Inc. (Black Bldg.) WFIW, Inc. Liniuszeity of Wisconsin
XEFO	ak ak	5000	(3.5)	Madison, Wis. Mexico City, Mexico	University of Wisconsin National Revolucionario Party (XFO)
950 k	ciloc	ycle	s 315	.6 meters	
CMHD KFWB	z ak	.250 1000		Caibarien, Cuba Los Angeles, Calif.	Manual Alvarez
KGHL KMBC	ak	1000	NJ(2.5)	Billings Mont	Warner Bros. Broadcasting Corp. Northwestern Auto Supply Co.
VONA	ae z	1000 100		Kansas City, Mo. St. John's, N. F.	Midland Bdctg. Co. (Pickwick Hotel) Lane, Gillard & Avery
WRC	ak	500	N	wasnington, D. C.	National Broadcasting Co., Inc.
960 k		-	s 312	.3 meters [
CHCK	ak ak	100 500	V 3FL	Charlottetown, P.E. I. Regina, Sask.	J. A. Gesner & W. E. Burke R. H. Williams & Sons, Ltd.
CKCK CKNC	ak ak	500 500	3FL M	Regina, Sask. Regina, Sask.	Leader Post, Ltd. (Leader Bldg.)
CMAY	z	150	965	Toronto, Ont. Havana, Cuba	Canadian National Carbon Co., Ltd. Efigenio Oliver
CMBD CMCW	z ak	150 150	965 965	Havana, Cuba Havana, Cuba	Luis Perez Garcia Vilarino y Cervantes
XEAW CMJL	z z	10000 50	965	Reynosa, Mexico	International Broadcasting Co.
YVIBC	ak	5000		Camaguey, Cuba Caracas, Venezuela	Enrique Artimes Broadcasting Caracas

970	kilo	cycle	es 309	.1 meters		
KJR WCFL	ae ak	5000 1500	N RX	Seattle, Wash. Chicago, Ill.	Fishers Blend Station, Inc. Chicago Federation of Labor	
980 1	kilo	cycle	s 303	.9 meters		
CFCN	ak	10000	985FL	Calgary, Alberta	The Voice of the Prairies, Ltd.	
CMGF KDKA	z ak	100 50000	987 B	Matanzas, Cuba Pittsburgh, Pa.	Bernabe R. de la Torre Westinghouse Elec. & Mfg. Co.	
990 1	kilo	cycle	s 302	.8 meters		
WBZ	ak	25000 1000	BA BA	Boston, Mass. Springfield, Mass.	Westinghouse Elec. & Mfg. Co. Westinghouse Elec. & Mfg. Co.	
WBZA XEK	ak z	101		Mexico City, Mexico	o Arturo Martinez	
1000	kilo	ocycl	es 29	9.8 meters		
KFVD	ak z	250 5000	Dn RAX	Los Angeles, Calif. Des Moines, Iowa	Los Angeles Broadcasting Co. KCYS Central Broadcasting Co.	
WHO WOC	ak	5000	RAX	Davenport, Iowa	Central Broadcasting Co. 1050)
WORK	aj	1000	D	York, Pa. Guadalajara, Mexic	York Broadcasting Co. Radiofonografica de Guadalajara, S.A. MTRS	
XEA XEC	ak z	100 50		Toluca. Mexico	Jesus R. Benavides	
XEFB	z	100		N Laredo Tams. N	Mex. Rafael T. Carranza 200.	J
XEFI XEFJ	z	100 100		Chihuahua, Mexico Monterrey, Mexico Queretaro, Mexico	Rodolfo Junco de la Vega DIAL	_
XEFS	z	40		Queretaro, Mexico	Salvador Sanchez	
XETC	ak z	10 100		Saltillo, Mexico Jalapa, Ver. Mexico	Antonio Garza Castro y J. T. Perez O Juventino Sanchez	_
1010	kilo	ocycl	es 290	5.9 meters		
CFCO	ak	250	• • • • •	Chatham, Ont. Wolfville, N. S.	John Beardall (Wm. Pitt Hotel) Acadia University	
CKIC CMBZ	ak ak	50 150		Havana, Cuba Havana, Cuba	Manuel & Guillermo Salas	
CMCX	z	150		Havana, Cuba	Diario "El Mundo"	
KGGF KQW	ak ae	500 500	2(1) T	Coffeyville, Kans.	Powell & Platz Pacific Agricultural Foundation, Ltd.	
WHN	ae	250	1	San Jose, Calif. New York City	Marcus Loew Booking Agency	
WIS	ae	500	N(1)	Columbia, S. C.	WIS, Inc. University of Oklahoma	
WNAD WPAP	ae ae	500 250	2 1a	Norman, Okla. New York City	Marcus Loew Booking Agency	
WOAO	ae	250	la	New York City	Marcus Loew Booking Agency	
WRNY	z	250	1 K1015	New York City Juarez, Mexico	Marcus Loew Booking Agency Juan G. Buttner & Leo Allande	
XEJ XEU	ak ak	500 100		Veracruz, Mexico	Baltasat Pazos Sosa	
	kilo	ocycl		3.9 meters	The state of the s	
KYW WRAX	ae ae	10000 250	N D	Chicago, Ill. Philadelphia, Pa.	Westinghouse Elec. & Mfg. Co. (KFKX) WRAX Broadcasting Co.	
XEFC	z	10		Merida, Yuc.	Hugo Molina Font	
XEFD	z 1 • 1	300	20	Tiajuana, Mex.	Carlos de la Sierra	
1030	K110	ocycl		1.1 meters		
CFCF	ae	500	NG	Montreal, Que. Santa Clara, Cuba	Canadian Marconi Co. Laviz & Paz	
CMHI CMKC	ck z	30 150	a 1034a	Santiago de Cuba	Pinol Batlle y Co.	
CNRV	ak	500		Vancouver, B. C.	Canadian National Railways El Buen Tono, S. A.	
XEB	ak 1_:1.	10000	200	Mexico City, Mexico	o El Buen Tono, S. A.	
		ocycl	es 200	3.3 meters	O I Alwara	
CMGH KRLD	z ae	15 10000	iC	Matanzas, Cuba Dallas, Tex.	O. y J. Alvarez KRLD Radio Corp. (Adolphus Hotel)	
KTHS	ae	10000	1N	Hot Springs, Ark. Elmira, N. Y.	Chamber of Commerce	
WESG	ae ae	1000 1000	D D	Elmira, N. Y. East Lansing, Mich	WESG, Inc. Michigan State College	
1050		ocycl		5.5 meters		
CMJG	Z	50 50	20 200	Camaguey, Cuba	Jose Antonio Lefran	
KFŠI	ae	5000	Dn	Abilene, Kans.	Farmers & Bankers Life Ins. Co.	
KNX XES	ae dk	25000 250	X 1055K	Hollywood, Calif. Tampico, Mexico	Western Broadcast Co. Difusora Portena	
				- '	•	

1060	kile	ocycl	es	282.8 meters	
KWJJ	z	500	Dn	Portland, Ore.	KWJJ Broadcast Co., Inc.
WBAL	ae ak	10000 1000	1B Dn	Baltimore, Md.	Consolidated Gas, Elec. L. & Pwr. Co. Norfolk Daily News
WJAG WTIC	ak	50000	iR	Norfolk, Neb. Hartford, Conn.	Travelers' Bdctg. Service Corp.
1070	kile	ocycl	es	280.2 meters	
CMBG	z	225		Havana, Cuba	John L. Stowers
CMCB	af	150		Havana, Cuba	Metropolitan-Radio de Cuba
KJBS WCAZ	ae ae	100 50	D	San Francisco, Calif.	Julius Brunton & Sons Co. Superior Bdctg. Service, Inc.
WDZ	ak	100	Ď D	Carthage, Ill. Tuscola, Ill.	James L. Bush National Broadcasting Co., Inc.
WTAM XEG	ak z	50000 500	R 1075	Cleveland, Ohio Mexico City, Mexico	National Broadcasting Co., Inc. Ricardo Gonzales Montero
	_			Mexico City, Mexico	Ricardo Gonzales Montelo
1080	kile	ocycl	es	277.6 meters	
WBT	ae	25000	CU	Charlotte, N. C.	Station WBT, Inc.
WCBD	ae	5000	lDn	Zion, Ill.	Station WBT, Inc. Wilbur Glenn Voliva
WMBI	ck	5000	1Dn	Chicago, Ill.	Moody Bible Institute
1890	kild	ocycl	es	275.1 meters	
KMOX		50000	_		Voice of St. Louis Inc.
XEAI	ak z	100	C	St. Louis, Mo. Mexico City, Mex.	Voice of St. Louis, Inc. Carlos Gonzales Caballero
	_				
1100	kil	ocycl	es	272.6 meters	
KGDM	ak	250	D		E. F. Peffer
- WLWL	ae	5000	1 1C	Stockton, Calif. New York City	Missionary Society of St. Paul
WPG	ae	5000	ic	Atlantic City, N. J.	Municipality of Atlantic City
1110	kile	ocycl	es	270.1 meters	
CMJO	z	50		Ciego de Avila, Cuba	Rey-Borges
KSOO	ac.	1000	Dn(2.5) Sioux Falls, So. Dak. Richmond, Va.	Sioux Falls Broadcast Assn., Inc.
WRVA XENT	ae z	5000 150000	N 1115	Neuvo Laredo, Mex.	Larus & Bros. Co., Inc. Compania Industrial Universal, S. A
	_				compania mousema cinversar, o. A.
1120	kilo	ocycl	es	267.7 meters	
CFCA	ak	500	G	Toronto, Ont.	Toronto Daily Star
CFCA CFJC CHGS	ak ce	100	EL VX	Kamloops, B. C.	Review Publishing Co., Ltd.
CJOC	ce ak	100 100	VA	Summerside, P. E. I. Lethbridge, Alta.	R. T. Holman, Ltd. Harold R. Carson
CMHJ	ac	40	1125	Cienfuegos, Cuba Spokane, Wash.	Victorino Lopez (Hotel Bristol)
KFIO KFSG	ae l.	100	D	Spokane, Wash.	Spokane Broadcasting Corp.
KRKD	ak aeh	500 500	a. a	Los Angeles, Calif. Los Angeles, Calif.	Echo Park Evangelistic Assn. Fireside Broadcasting Co.
KRSC	ak	100	Ď	Seattle, Wash.	Radio Sales Corp. (Wash. Ath. Club)
KTERH WDEL	ak	500 250	2C (.5) 1C	Houston, Tex.	KTRH Broadcasting Co. (Rice Hotel)
WHAD	aj ac	250 250	ic	Wilmington, Del. Milwaukee, Wis. Milwaukee, Wis.	WDEL, Inc. Marquette University
WISN	ak	250	1C	Milwaukee, Wis.	American Radio News Corp.
WTAW	ae	500	2	College Station, Texas	_ Agricultural & Mech. College
1130	kilo	ocycl	es	265.3 meters	
KSL	ae	50000	С	Salt Lake City, Utah	Radio Service Corp. of Utah
WJJD WOV	ze	20000	Dn	Chicago, Ill. New York City	WJJD, Inc. (Palmer House)
WOV XEH	ae ak	1000 250	D 1132	New York City Monterrey, Mexico	International Broadcasting Corp. Tarnava & Cia
1140	kilo	ocycl	es	263.0 meters	
CMBJ	z	150		. Havana, Cuba	Emilio Perera
CMCD	aeh ae	250 5000	iN	⊶ Havana, Cuba Tulsa, Okla.	Angel Bertematy y Garcia
KVOO WAPI XETA	ae aj	5000	1N	Birmingham, Ala.	Southwestern Sales Corp. WAPI Broadcasting Corp.
XETA	z	250		Birmingham, Ala. Mexico City, Mexico	Manuel Espinosa Tagle
1150	kilo	ocycl	es	260.7 meters	
CMIH	ak	30			Luis Monard Manda
WHAM	ac	5000	BX 1155	Ciego de Avila, Cuba Rochester, N. Y.	Luis Marauri Mendoza Stromberg-Carlson Tel. Mfg. Co.
XED	z	500	1155	Guadalajara, Mex.	International Broadcasting Co.
10-AT	ak	25	1155	Trail, B. C.	Trail Amateur Radio Assn.

		INDE.	X B	I FREQUENCIES A	and dial numbers	
1160	kilo	ocycle	es	258.5 meters		
WOWO WWVA	ae ae	10000 5000	1C 1C	Fort Wayne, Ind. Wheeling, W. Va.	Main Auto Supply Co. West Virginia Broadcasting Corp.	
1170	kilo	ocycle	es	256.3 meters		
CMJE WCAU	z ae	50 50000	1175 C	Camaguey, Cuba Philadelphia, Pa.	Manuel Fernandez WCAU Broadcasting Co.	
1180	kilo	ocycle	es	254.1 meters		
CMBN CMCJ KEX KOB WDGY WINS	ak z ak ae ak ae	150 250 5000 20000 1000 500	1185 1185 2N 2 Dn	Havana, Cuba Portland, Ore. Albuquerque, N. M Minneapolis, Minn. New York City	American Radio News Corp.	
WMAZ	ak 1-i1-	500			Southeastern Broadcasting Co.	
WOAI		ocycle 50000	es N	252.0 meters San Antonio, Texas	Southern Equipment Co.	
VONF	Z	500 1	195	St. John's, N. F.	Dominion Brdestg. Co., Ltd.	
1200	kilo	ocycle	es	249.9 meters		
CHCH CHLP CKOV CMGB KBTM	z ak z ak	100 100 100 30 100 100	2 2 1205 D CT	Montreal, Que. Montreal, Que. Kelowna, B. C. Matanzas, Cuba Paragould, Ark. Bakersfield, Calif.	Montreal Radio Corp. La Patrie, Ltd. Okanagan Broadcasters, Ltd. Jose Anorga Beard's Temple of Music Bee Bakersfield Broadcasting Co.	
KERN KFJB KFWF	ak ak	100 100	(.25)) Marshalltown, Iowa		KCYS.
KFXD KFXJ	ak ae	100		St. Louis, Mo Nampa, Idaho Grand Junction, Co	Frank E. Hurt (R/C Boise)	1210
KGDE KGEK	ak ae	100 100	(.25)	Fergus Falls. Minn. Yuma, Colo.	Jaren Drug Co. Beehler Electrical Equipment Co.	MTRS.
KGEW KGFJ	ak ak ae	100 100	9	Ft. Morgan, Colo.	City of Fort Morgan Ben, S. McGlashan	247.8
KGHI KGVO	ak	100		Little Rock, Ark.	Lloyd Judd Co.	DIAL
KMLB	ak ae	100 100		Monroe, La.	Lloyd Judd Co. Mosby's, Inc. Liner's Broadcasting Station, Inc.	
KVOS KWG	ak	100 100	CT	Bellingham, Wash. Stockton, Calif.	McClatchy Newspapers	
WABI WABZ	ak ak	100 100	i	New Orleans, La.	First Universalist Society Samuel D. Reeks	
WBBZ WBHS	ak ak	100 100	4	Ponca City, Okla. Huntsville, Ala.	C. L. Carrell (R/C various cities) Radio Station WBHS, Inc.	Í
WCAT WCAX	ak ak	100 100	D	Rapid City, S. D.	State School of Mines Burlington Daily News	
WCLO	ak	100	1	Janesville, Wis.	WCLO Radio Corp. (R/C Beloit)	1
WCOD WFAM	ae ak	100 100	3 8C	Harrisburg, Pa. South Bend, Ind.	Keystone Broadcasting Corp. South Bend Tribune (WSBT) News-Piedmont Co.	r I
WFBC WFBE	z ak	100 100	(.25) (.25)	4 Greenville, S. C.	News-Piedmont Co. Radio Station WFBE, Inc.	
WHBC	ak	10		Canton, Ohio	Edward P. Graham	
WHBY WIBX	ak z	100 100	(.3)	Green Bay, Wis. Utica, N. Y.	WHBY, Inc. WIBX, Inc.	
WIL	ae ae	100 100	5(.25 6	5) St. Louis, Mo. LaSalle, Ill.	Missouri Broadcasting Corp. Kaskaskia Broadcasting Co.	
WJBC WJBL	ae	100	6	Decatur, Ill.	Commodore Broadcasting, Inc.	
WJBW WKJC	ak ae	100 100	1 3	New Orleans, La Lancaster, Pa.	C. C. Carlson Lancaster Bdctg. Service, Inc.	
WLĂP WNBO	ae aeh	100 100	(.25)	Louisville, Ky Washington, Pa.	American Broadcasting Corp. of Ky.	ĺ
WNBW	z	10	(.1) CH	Carbondale, Pa. Worcester, Mass.	Spriggs Symplex WNBW, Inc. A. F. Kleindienst	
WORC WPHR	ak ae	100 100	(.25)	Petersburg, Va.	WLBG, Inc.	
WRBL WWAE	ak aeh	100 100	8	Columbus, Ga.	WRBL Radio Station, Inc. Hammond-Calumet Bdctg, Corp.	
10-AB	ak	25			Moose Jaw Radio Assn. M. I. Higgins Elec. & Radio Co.	
10-AK 10-BI	ak ak	15 25		Prince Albert, Sask.	M. I. Higgins Elec. & Radio Co. Prince Albert Radio Club W. T. Cruickshank	
10-BP	ak ak	25 15	1199	Wingham, Ont.	W. T. Cruickshank Tom Brown & Harold Brown	
10-BQ 10-BU	ak Z	15		Canora, Sask.	Canora Radio Assn.	1
1210	kilo	cycle	28	247.8 meters		
CFNB	ae	100	E	Fredericton, N. B.	James S. Neill & Sons, Ltd.	ļ

			INDE	Z DI	FREQUENCIES AN	D DIAL NUMBERS
	CJOR	ak	500	E	Vancouver, B. C.	George C. Chandler
	CJOR CKMC KASA	ak	100	8	Cobalt, Ont.	R. L. McAdam E. M. Woody (Casa Grande Hotel)
	KASA	ak	100		Elk City, Okla.	E. M. Woody (Casa Grande Hotel)
	KDLR KFJI	ak ak	100 100		Devils Lake, N. Dak. Klamath Falls, Ore.	KDLR, Inc. KFJI Broadcasters, Inc.
	KFOR	ak	100	(.25)	Lincoln, Neb.	Howard A. Shuman
	KFPW	ak	100		Fort Smith, Ark.	Southwestern Hotel Co.
	KFPW KFVS	ae	100	6	Cape Girardeau, Mo. San Bernardino, Calif	Oscar C. Hirsch . J. C. & E. W. Lee
	KFXM	ak	100	9	San Bernardino, Calif	. J. C. & E. W. Lee
	KGCR	ah	100		Watertown, S. Dak.	Greater Kampeska Radio Corp.
	KGNO	ak ak	100 100		Dodge City, Kans. Olympia, Wash. Eureka, Calif.	Dodge City Broadcasting Co. KGY, Inc. (Capitol Park Bldg.) Harold H. Hanseth
	KGY KJEM	z	100	DP	Eureka, Calif.	Harold H. Hanseth
	KPPC	ak	50	9	Pasadena, Calif.	rasadena Fresbyterian Church
	KWEA	z	100		Shreveport, La.	Hello World Broadcasting Corp.
	WALR WBAX	ae	100 100	i	Zanesville, Ohio	WALR Broadcasting Corp.
	WBBL	ak	100	¹ S	Wilkes-Barre, Pa.	John H. Stenger, Jr. (Morris Bldg. Grace Covenant Pres. Church
	WCBS	ak	100	2	Springfield, Ill.	WCBS, Inc.
	WCRW	ae	100	4	Richmond, Va. Springfield, Ill. Chicago, Ill.	Clinton R. White
	WEBQ	ae	100	6	Harrishurg, III.	Harrisburg Broadcasting Co.
	WEDĆ WFAS	z ak	100 100	4 3	Chicago, Ill. White Plains, N. Y. Freeport, N. Y.	Emil Denemark, Inc. Westchester Broadcasting Corp.
	WGBB	ae ae	100	3	Freemort N Y	Harry H. Carman
	WGCM	ae	100		Gulfport, Miss.	Great Southern Land Co.
	WGCM WGNY		5 0	P	Gulfport, Miss. Chester, N. Y.	Peter Goelet (Orange County)
	WHBF	ae	100		Rock Island, Ill.	Rock Island Broadcasting Co.
	WHBU WHET	aj ak	100 100	D	Anderson, Ind.	Anderson Broadcasting Corp.
	WIRD	ak ae	100	D	Troy, Ala. Poynette, Wis.	Troy Broadcasting Co. Wm. C. Forrest
	wjbi	ak	100	3	Red Bank, N. J.	Monmouth Broadcasting Co., Inc.
	WJBI WJBU WJBY	ae	100	1	Lewisburg, Pa.	Bucknell University
	WJBY	aeh	100	B	Gadsden, Ala.	Ingrams Broadcasting Co.
	WJEJ WJW WKFI	aeh ae	100 100	D	Hagerstown, Md. Akron, Ohio	A. V. Tidmore WJW, Inc.
	WKFI	ak	100		Greenville, Miss.	J. Pat Scully
	WMBG	aj	100	7C	Richmond Va	Havens & Martin, Inc.
	WOCL WOMT	ak	50	*****	Jamestown, N. Y. Manitowoc, Wis.	A. B. Newton
	WPAW	ae ak	100 100	aY	Providence, R. I.	Francis Mangin Kadow
	WPRO	ak	100	άŶ	Providence, R. I.	Cherry & Webb Broadcasting Co. Cherry & Webb Broadcasting Co.
	WQDX WSBC	z	100		Thomasville, Ga.	Stevens Luke
-	WSBC	z	100	4	Chicago, Ill.	WSBC, Inc.
	WSEN WSIX	ak ae	100 100		Columbus, Ohio Springfield, Tenn. Gastonia, N. C.	Columbus Bdctg. Corp. (Seneca Hotel) 638 Tire & Vulc. Co. (R/C WLW)
	WSOC	ae	100		Gastonia, N. C.	WSOC. Inc.
	WTAX	ae	100	2	Springfield, Ill.	WSOC, Inc. WTAX, Inc.
	XEX	z	500		Mexico City, Mexico	Excelsior, Cia Editorial S. A.
	1220	kilo	cvcle	es 2	45.8 meters	
	CMHK	z	15	1225		V Villanaus
	KFKU	ae	500	a .	Cruces, Cuba	V. Villaneuva University of Kansas
	KTW	z	1000	2S	Lawrence, Kans. Seattle, Wash.	First Presbyterian Church
	KTW KWSC	ae	1000	2(2) D	Pullman, Wash. Canton, N. Y.	State College of Washington St. Lawrence University
	WCAD	ak	500		Canton, N. Y.	St. Lawrence University
	WCAE WDAE	ae ak	1000 1000	R C	Pittsburgh, Pa.	WCAE, Inc. and Sun-Telegraph
	WREN	ak	1000	aВ	Tampa, Fla. Lawrence, Kans.	Tampa Daily Times (Tampa Terrace) Jenny Wren Co.
						Jenny William Co.
	1220	1-21-	arra1.		12.9	
	1230	KHO	cycle	es z	43.8 meters	
	CMBY	Z	250		Havana, Cuba	Callejas-Estefani
	CMCA	z .	150		Havana, Cuba	Manuel Cruz
	KFOD KGGM	aj ak	250 250	(5)	Anchorage, Alaska	Anchorage Radio Club, Inc.
	KYA	ae	1000	(.5) N	Albuquerque, N. M. San Francisco, Calif.	New Mexico Broadcasting Co. Pacific Broadcasting Co.
	WFBM	aeh	1000	ıc	Indianapolis, Ind.	Indianapolis Power & Light Co.
	WNAC	ae	1000	CH	Boston, Mass.	Shepard Broadcasting Service, Inc.
	WSBT	ak	500	1C	South Bend, Ind.	South Bend Tribune (WFAM)
	1240	kilo	cvcle	es 2	41.8 meters	
	CMAB	z	20	1249		T 00
	CMJN KGCU	z	50		Pinar del Rio, Cuba Camaguey, Cuba	Jose Silvera E. de Ugarriza
	KGCU	ak	250	3	Camaguey, Cuba Mandan, N. Dak. Minot, N. Dak.	Mandan Radio Asen
	KLPM	ak	250	3	Minot, N. Dak.	John B. Cooley

IN.	DEX BY FR	EQUENCIES AND	DIAL NUMBERS	
KTFI ak 5 WACO ak 10 WKAQ ac 10	500 000 1C 000	Fort Worth, Texas Twin Falls, Idaho Waco, Texas San Juan, P. R. Detroit, Mich. Tampico, Mex.	KTAT Broadcast Co., Inc. Radio Broadcasting Corp. of Idaho Central Texas Broadcasting Co. Radio Corp. of Porto Rico Kunsky-Trendle Broadcasting Corp. Jose Expedito Martinez	
1250 kilocy	cles 239	.9 meters		
KFOX ae 16 WAAM ae 16 WCAL ae 16 WDSU ak 16 WGCP ak 2 WLB ak 16 WODA z 16 WRHM ae 16	000 2 000 CT 000 1(2.5) 000 2 000 C 2550 1 000 2 000 1 000 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, Inc WAAM, Inc. St. Olaf College Jos. H. Uhalt May Radio Broadcasting Co. University of Minnesota Richard E. O'Dea Minnesota Broadcasting Corp. Eduardo Limon Segui	
1260 kilocy	cles 238	.0 meters 🗀		
KRGV ac KVOA ak KWWG z WLBW ac WNBX ak	000 B 500 1 500 500 C(1) 250 D 500 CU	Council Bluffs, Iowa Harlingen, Texas Tucson, Arizona Brownsville, Texas Erie, Pa. Springfield, Vt. Savannah, Ga.	Mona Motor Oil Co. KRGV, Inc. (Rio Grande Na. Life Bldg.) Robert M. Riculfi Frank P. Jackson Broadcasters of Pennsylvania, Inc. WNBX Broadcasting Corp. Savannah Broadcasting Co., Inc.	
1270 kilocy	ycles 236	.1 meters		Í
KGCA ak KOL ae 10 KVOR ae 10 KWLC ak WASH ak WFBR ae WJDX ak 10	150 D2 000 CT 000 C 100 D2 500 a 500 R 000 N	Havana, Cuba Decorah, Iowa Seattle, Wash. Colorado Springs, Col. Decorah, Iowa Grand Rapids, Mich. Baltimore, Md. Jackson, Miss. Grand Rapids, Mich.	Domingo Fernandez Chas. W. Greenley Seattle Broadcasting Co. Reynolds Radio Co., Inc. Luther College Kunsky-Trendle Broadcasting Co. Baltimore Radio Show, Inc. Lamar Life Insurance Co. Kunsky-Trendle Broadcasting Corp.	KVC=
1280 kilocy	ycles 234	.2 meters 🗀		1300
WCAM ac WCAP ac WDOD ac 1 WIBA ac WOAX ach	000 (2.5) 500 1 500 1C 000 C(2.5) 500 N(1) 500 C	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 Hall Tower) Radio Industries Broadcast Co. WDOD Bdctg. Corp. (Hotel Patten) Badger Broadcasting Co., Inc. Trenton Broadcasting Co. City of Dallas (Hilton Hotel)	MTRS. 230.6 DIAL
1290 kilocy	ycles 232	2.4 meters 🗀		
KFUL ak KLCN z KTSA ak 1 WEBC ae 1	20 000 N 500 1 100 D 000 1C(2.5) 000 N(2.5) 000 C(2.5) 50 D 100 1295	Cienfuegos, Cuba Salt Lake City, Utah Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. San Luis Potosi, Mex.	Oscar Zayas Intermountain Broadcasting Corp. News Publishing Co. (Buccaneer Hotel) C. L. Lintzenich Southwest Broadcast Co. (Plaza Hotel) Head of the Lakes Broadcasting Co. Pittsburgh Radio Supply House Smith & Mr ce Francisco de P. Cabrera	
1300 kiloc	ycles 230).6 meters 🗀] [
KFH ac I KFJR ag WBBR acj I WEVD ac WFAB z I WHAZ ac WIOD ach	20 500 3C 1000 C 1 500 3 1000 1 500 1 1000 1 500 1 1000 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.	Luis Morlote KALE, Inc. Los Angeles Broadcasting Co. Wichita Eagle—Hotel Lassen Ashley C. Dixon—KFJR, Inc. Peoples Pulpit Assn. Debs Memorial Radio Fund, Inc. Fifth Avenue Broadcasting Corp. Rensselaer Polytechnic Institute Isle of Dreams Broadcasting Corp. Unity School of Christiani	

	1310	kile	ocycle	es 22	8.9 meters	
	KCRI	ak	100	D 22	Jerome, Arizona	Chas. C. Robinson
	KFBK	ak	100	č	Sacramento, Calif.	Jas. McClatchy Co.
	KFGQ	ak	100	7	Boone, Iowa	Boone Biblical College
	KFPL	ck	100		Dublin, Texas	C. C. Baxter
	KFPM	ae	15		Greenville Texas	New Furniture Co-
	KFXR KFYO	ak ak	100 100	(.25) (.25)Z	Oklahoma City, Okla Lubbock, Texas	. Exchange Ave. Baptist Church
	KGRX	ae	100	(.25)2	Springfield, Mo	Kirksey Brothers KGBX, Inc. First State Bank of Vida Donald C. Treloar
	KGBX KGCX	ak	100	(.25)	Springfield, Mo. Wolf Point, Mont.	First State Bank of Vida
	KGEZ	aj	100		Kalispell, Mont.	Donald C. Treloar
	KGFW	ah	100		Kearney, Neb.	Central Nebraska Buctg. Corp.
	KIFH KIT	z ak	100 100		Yakima Wash	Juneau Broadcasting Co. Valley Broadcasters, Inc.
	KMED	ak	100		Juneau, Alaska Yakima, Wash. Medford, Ore.	Mrs. W. J. Virgin
	KRMD	ak	100		Shreveport, La.	Mrs. W. J. Virgin KRMD, Inc. (Jefferson Hotel)
	KTSM KXRO	z . 1	100	а	El Paso, Texas	Tri-State Broadcasting Co., Inc.
	WAML	ak z	100 100		Aberdeen, Wash. Laurel, Miss.	KXRO, Inc. (Hotel Morck) Southland Radio Corp.
	WBEO	z	100		Marquette, Mich.	Lake Superior Broadcasting Co.
	WBOW WBRE	ak	100		Terre Haute, Ind.	Banks of Wabash, Inc.
	WBRE	z	100		Wilkes-Barre, Pa.	Louis G. Baltimore WCLS, Inc.
	WCLS WDAH	ae z	100 100	b	Joliet, Ill.	Tri-State Broadcasting Co., Inc.
	WEBR	ae ·	100	Q(.25)	El Paso, Texas Buffalo, N. Y. Royal Oak, Mich.	Howell Broadcasting Station
	WEXL	ak	50		Royal Oak, Mich.	Royal Oak Broadcasting Co.
	WFBG	ae	100	3	Altoona, Pa.	The Gable Broadcasting Co. Frank D. Fallain (Union Ind. Bldg.)
	WFDF	ae	100 100	5	Flint, Mich.	Frank D. Fallain (Union Ind. Bldg.)
	WGAL WGH	ae ae	100	3	Lancaster, Pa. Newport News, Va.	WGAL, Inc. (Lancaster Newsp. Bldg. Hampton Roads Broadcasting Corp.
	WHAT	ak	100	4	Philadelphia, Pa.	Independence Broadcasting Co.
	WIAS	ak	100	7	Ottumwa, Iowa	Iowa Bdctg. Co. (Hotel Ottumwa)
	WJAC WKAV	a¢ ae	100 100	3	Johnstown, Pa.	WJAC, Inc.
	WKBB	86	100	ьүг	Laconia, N. H. Joliet, Ill.	Laconia Radio Club Richard W. Hoffman
	WKBC	z	100		Birmingham, Ala.	R. B. Broyles Furniture Co.
	WLBC	ak	50	6	Muncie, Ind. Auburn, N. Y.	D. A. Burton—A. I. Marriott
	WMBO WNBH	ak se	100 100	H(.25)	Auburn, N. I.	WMBO, Inc. (Masonic Temple)
	WOL.	86	100	11(.23)	New Bedford, Mass. Washington, D. C.	WMBO, Inc. (Masonic Temple) New Bedford Bdctg. Co. (N. B. Hotel) American Broadcasting Co.
	WRAW	ak	100	5X	Reading, Pa.	Reading Broadcasting Co
	WROL	ak	100		Knoxville, Tenn.	
	WSAJ WSJS	ae ae	100 100	Ċ	Grove City, Pa. Winston-Salem, N. C.	Grove City College
	WTEL	ae	100	4	Philadelphia, Pa.	Grove City College Winston-Salem Journal Co. Foulkrod Radio Eng. Co., Inc. Sup. Publishing Co. (Sup. Bldg.)
	WTJS WTRC	ak	100	(.25)	Jackson, Tenn. Elkhart, Ind.	dan i ubiisiinig Co. (Sun Diug.)
	WTRC XEFB	ak	50	6 (.1)	Elkhart, Ind.	
	XEI	ak ak	100 150	1315	Monterrey, N. L., Mex Morelia, Mexico	. Quintanilla y Stevenson Carlos Gutierrez M.
					Wierena, Wierres	Carlos Gatierrez M.
	1320	kilo	cycle	25 22	7.1 meters	
					_	D D II
- 1	CMBF	z ak	150 1000	1325 1325	Havana, Cuba	Ramon Bardales
	CMCY KGHF	ak	250		Havana, Cuba Pueblo, Colo. Honolulu, Hawaii	M. D. Autran C. P. Ritchie & Geo. J. Ikleman
	KGMB	ak	250	(.5) C	Honolulu, Hawaii	Honolulu Broadcasting Co.
	KID WADC	ae	250 1000	(.5) C	Idaho Falls, Idaho	KID Broadcasting Co., Inc.
	WSMB	ae ae	500	Ň	Akron, Ohio New Orleans, La.	Allan T. Simmons WSMB, Inc.
			200		Oricalis, Da.	
	1220	1-:1-	.077-1	22	E 4	
			ocycle		5.4 meters 📋	
	CMJI	ak	45	1335	Ciego de Avila, Cuba	Gilberto Gessa Lopez
	KGB KMO	ae	1000	CT	San Diego, Calif. Tacoma, Wash.	Don Lee Broadcasting System
í	KMU KSCJ	ak ah	250 1000	1C(2.5)	Sioux City Jowe	KMO, Inc. (Hotel Winthrop) Perkins Bros. Co.
,	WDŘC	ae	500	CH	Sioux City, Iowa Hartford, Conn.	WDRC, Inc.
,	WSAI	ae	500	R(1)	Cincinnati, Ohio Eau Claire, Wis.	The Crosley Radio Corp.
	WTAQ	ae	1000	1C	Eau Claire, Wis.	The Gillette Rubber Co.
	1240		•	22		
		kilo	eyele		3.7 meters 📋	
į	KFPY KGDY	ae	1000	CT	Spokane, Wash. Huron, S. D.	Symons Bdctg. Co. (Symons Bldg.)
1	WCOA	ak agj	250 500		Huron, S. D.	Voice of South Dakota, Inc.
1	WLEC	z z	250	P(.5)	Pensacola, Fla. Portland, Me.	Pensacola Bdctg. Co. (San Carlos Hot)
•	WSPD	ae	1000	C'	Toledo, Ohio	Casco Bay Broadcasting Co. Toledo Bdctg. Co. (Com. Perry Hotel)
					F = 0.7	So. (Som. Ferry Hotel)

1350 kilocycles 222.1 meters

1000 Boise, Idaho **KIDO** ak B 1000 St. Louis, Mo. KWK ae Zarephath, N. J. WAWZ 250 1 a e New York City New York City WBNX 250 1a ae WCDA 250 la ae Emory, Va. New York City 500 DY WEHC ae WMSG 250 18

C. G. Phillips & Frank Hill Thomas Patrick, Inc. (Hotel Chase) Pillar of Fire New York Met. Broadcasting Corp. Italian Educ. Bdctg. Co., Inc. Emory & Henry College New York Met. Broadcasting Corp.

1360 kilocycles 220.4 meters

Havana, Cuba Moron, Cuba 1365 150 **CMCR** CMJP KGER 7.5 z Long Beach, Calif. ah 1000 NJ Butte, Mont. Charleston, S. C. Syracuse, N. Y. Chicago, Ill. 500 KGIR ak WCSC 500 ac C(2.5) WFBL ak 1000 WGES 500 1(1) ae WJKS WQBC 1000 1Ž Gary, Ind. agj ak 500 Vicksburg, Miss. Mexico City, Mexico XEFH 250 z

Aurelio Hernandez Cesar Canals Consolidated Bdctg. Co. (R/C Los An.) KGIR, Inc. So. Carolina Broadcasting Co., Inc. Onondaga Radio Broadcasting Corp. Oak Leaves Broadcasting Station, Inc. Johnson-Kennedy Radio Corp. Delta Bdctg. Co. (Post-Herald Station) Francisco Hornedo

1370 kilocycles 218.8 meters

Cardenas, Cuba Enid, Okla. Everett, Wash. Grand Forks, N. Dak. Fort Worth, Texas Galveston, Texas 1375 30 2(.25) 3 KCRC KFBL 100 ak 50 aj zk KFJZ KFLX 100 100 8e 100 z 100 (.25)Tucson, Arizona KGAR ae Mitchell, S. Dak.
Oklahoma City, Okla.
Santa Fe, N. Mex.
San Angelo, Texas
Clovis, N. Mex. 100 KGDA KGFG KGFL bk 100 100 4 zk KGKL KICA ak 100 100 z ak San Antonio, Texas San Antonio, Texas KMAC 100 100 KONO KOOS 5 ak Marshfield, Ore. Berkeley, Calif. 100 ae KRE KSO 100 ak Des Moines, Iowa Walla Walla, Wash. 100 B(.25) KUJ KVL ák 100 Seattle, Wash. Kansas City, Mo. 100 z KWKC WBTM 100 z 100 Danville, Va. ak Z(.25) (.25) Baltimore, Md 100 WCBM ae Philadelphia, Pa. Hudson Falls, N. Y. WDAS aeh 100 50 WGLC (.1)Z. WGL WHBD 100 Fort Wayne, Ind. Mount Orab, Ohio seh 100 hk Memphis, Tenn. Calumet, Mich. Jackson, Mich. Detroit, Mich. 100 WHBQ ek WHD 100 (.25)ak WIBM 100 aeh WIBM WJEQ WJTL WLEY WLVA iQ 6P 100 ae Williamsport, Pa. 100 z 100 Atlanta, Ga. ac (.25) 7 100 Lexington, Mass. aeh Lynchburg, Va. Tampa, Fia. 100 ck WMBR 100 ak D Hattiesburg, Miss. St. Albans, Vt. WPFB ek 100 WQDM WRAK 100 ae Williamsport, Pa. Wilmington, N. C. 100 ak 100 WRAM ae Augusta, Maine Racine, Wis. Buffalo, N. Y. WRDO WRJN WSVS 100 ве ae 100 ak 50 Juarez, Mexico XEFV

Genaro Sebater Enid Radiophone Co. (Oxford Hotel) Leese Bros. University of North Dakota Fort Worth Broadcasters, Inc. George Roy Clough Tucson Motor Service Co. Mitchell Broadcasting Corp. Oklahoma Broadcasting Co., Inc. KGFL, Inc. KGKL, Inc. (St. Angelus Hotel) Note, The Co. Angeles Froety Southwest Broadcasting Co. Walmac Co., Inc. (Blue Bonnet Stud.) Mission Broadcasting Co. H. H. Hanseth, Inc. (Hall Bidg.) First Cong. Church of Berkeley Iowa Broadcasting Co. KUJ, Inc. (Marcus Whitman Hotel) KVL, Inc. Wilson Duncan Broadcasting Co. Piedmont Broadcasting Corp. Baltimore Broadcasting Corp. WDAS Bdctg, Sta., Inc. (Elks Hotel) O. T. Griffin & G. F. Bissell F. C. Zieg F. P. Moler F. P. Moler Station WHBQ, Inc. (Hotel Claridge) Upper Michigan Broadcasting Co. WIBM, Inc. (Otsega Hotel) James F. Hopkins, Inc. (Curtiss Bldg.) WRAK, Inc. Oglethorpe University Lexington Air Station Lynchburg Broadcasting Corp. F. J. Reynolds Hattiesburg Broadcasting Co. A. J. St. Antoine & E. J. Regan WRAK, Inc. Wilmington Radio Assn., Inc. WRDO, Inc. (Augusta House)
Racine Bdctg. Corp. (Hotel Racine)
Seneca Vocational School

1380 kilocycles 217.3 meters

Camaguey, Cuba Reno, Nevada Pittsburgh, Pa. LaCrosse, Wis. Dayton, Ohio CMJC KOH KQV WKBH WSMK 1382 150 z C ak 500 ak 500 ĩc 1000 ai 200 ak 2 Torreon, Coah., Mex. XETB 125

Feliciano Isaac McClatchy Newspapers KQV Bdctg. Co. (Investment Bldg.) WKBH, Inc. (Radio Bldg.) Stanley M. Krohn, Jr. Jose A. Berumen

Jose Onofre Meza

ксуs. 1**380** мткs. 2**17.**3

DIAL

		1141062	נם בי	. TREQUENCIES A	IND DIAL NOWIBERS
1390	kilo	cycle	es	215.7 meters	
CMDB	z	40	1395 1C	Havana, Cuba	Julio Powers
KLRA	ae	1000	1C	Little Rock, Ark.	Arkansas Broadcasting Co.
KOY KUOA	ae bk	500 1 0 00	C(1)	Phoenix, Arizona Fayetteville, Ark.	Nielson Radio & Sporting Goods Co. Southwestern Hotel Co. (Ft. Smith)
WHK	ae	1000	C(2.5	i) Cleveland, Ohio	Radio Air Service Corp. (Highee Store)
1400	kilo	cvel	es	214.2 meters	
	ak	50	1405		Wifredo & Hum. Fontanals Sanchez
CMCH CMCM	z	15	1405	Havana, Cuba Havana, Cuba Ogden, Utah	Aurelio Balino
KLO KOCW	ae z	500 250	(5)	. Ogden, Utah	Interstate Bcg. Corp. J. T. Griffin
WBAA	ak	500	(.5) 1	Chickasha, Okla. Lafayette, Ind. Brooklyn, N. Y. Brooklyn, N. Y.	Purdue University
WBBC	ae	500	2 2	Brooklyn, N. Y.	Brooklyn Broadcasting Corp.
WCGU WFOX	ak ak	500 500	2	Brooklyn, N. Y. Brooklyn, N. Y.	United States Broadcasting Corp.
WKBF	ak	500	ĩw	Indianapolis, Ind.	Paramount Broadcasting Co. Indianapolis Broadcasting, Inc.
WLTH	ae	500	2	Indianapolis, Ind. Brooklyn, N. Y.	Voice of Brooklyn, Inc.
1410	kilo	cvcl	es	212.6 meters	
KFLV	ak	500	4		Rockford Broadcasters, Inc.
KGRS	ae	1000	1	Rockford, Ill. Amarillo, Texas	E. B. Gish
WAAB WBCM	ae ae	500 500	CH C	Boston, Mass. Bay City, Mich.	Bay State Broadcasting Corp. James E. Davidson
WDAG	ae	1000	ĭ	Bay City, Mich. Amarillo, Texas	National Radio & Bdctg, Corp.
WHBL	ac	500	4	Sheboygan, Wis. Bluefield, W. Va.	The Press Publishing Co. Daily Telegraph
WHIS WODX	ak ca	250 500	2 3CU	Mobile, Ala.	Mobile Broadcasting Corp.
WRBX	ae	250	2	Roanoke, Va.	Richmond Development Corp.
WSFA	ak	500	3C	Montgomery, Ala.	Montgomery Broadcasting Co., Inc.
1420	kilo	cycl	es	211.1 meters	
KABC	ak	100	200	San Antonio, Texas	
KBPS KCMC	aj ak	100	4	Portland, Ore. Texarkana, Ark.	Student Body Benson Polytech. School Texarkana Gazette & Daily News
KFIZ	ak	100		Fond du Lac, Wis.	Reporter Printing Co.
KGFF KGGC	ak ak	100 100			KGFF Bdctg. Co. (Aldridge Hotel)
KGIW	ak	100	1	Trinidad, Colo.	Leonard E. Wilson
KGIX	ak	100		I as Veras Nevada	J. M. Heaton
KGKX	z	100 100	Y	. Lewiston, Idaho	Sand Point Broadcasting Co.
KICK KIDW	ak	100	ı	Lewiston, Idaho Red Oak, Iowa Lamar, Colo.	Red Oak Radio Corp. Lamar Broadcasting Co.
KORE	aeh	100		Eugene, Ore.	Frank L. Hill & Curtie G. Philling
KUMA	ak ae	100 100	B(.2	Yuma, Arizona Cedar Rapids, Iowa	Dr. Albert H. Schermann Cedar Rapids Broadcast Co.
KWCR KXL	ae	100	4	Portland, Ore.	KXL Broadcasters (Hotel Multnomah)
WAGM		100	****	Presque Isle, Maine	Aroostook Broadcasting Corp. Raymond C. Hammett (Alabama Hot.
WAMC WAZL	ae z	100 100	2	Hazleton, Pa.	Hazleton Brdcstg. Service, Inc.
WEHS	ak	100	a	Cicero, Ill. Battle Creek, Mich	WEHS, Inc.
WELL WENC	z ak	50 100	D	Battle Creek, Mich	. Enquirer-News Co.
WERE	ae	100	. 77	Americus, Ga. Erie, Pa.	Americus Broadcast Co. Erie Broadcasting Corp.
WHDL	aeh	100	D	Tupper Lake, N. Y.	Tupper Lake Broadcasting Co. Inc.
WHFC WILM	ae ae	100 100	a 2	Cicero, Ill. Wilmington, Del.	WHFC. Inc.
WJBO	z	100	Ď	New Orleans, La.	Delaware Broadcasting Co. Baton Rouge Brdcstg. Co., Inc.
WJBO WJMS WKBI	ak	100		. Ironwood, Mich.	WIMS Inc (St. James Hotel)
WKBI	ak ae	100 100	a	Cicero, III. Kansas City, Kans.	WKBL Inc.
WMAS	ak	100	CH	Kansas City, Kans. Springfield, Mass.	WMAS, Inc. (Aladdin Hotel)
WMBC	ae	100	(.25) (.25)	Detroit, Mich. Joplin, Mo.	Michigan Broadcasting Co.
WMBH WPAD	ak ak	100 100	(.25)	Joplin, Mo. Paducah, Ky.	W. M. Robertson
WSPA	aeh ae	100	(.25)	Spartanburg, S. C.	Paducah Bdctg. Co. (Ritz Hotel) The Voice of South Carolina
			(.25)	Cumberland, Md.	Associated Brdcstg. Corp.
WTBO	80	100			
			es	209.7 meters	
1430 KECA		cycle	N	209.7 meters Los Angeles, Calif.	Barle C. Anthony Inc.
1430 KECA KGNF	kilo	cycle	N D	Los Angeles, Calif. North Platte, Neb.	Earle C. Anthony, Inc. Great Plains Broadcasting Co
1430 KECA	kilo	cycle	N	_	Earle C. Anthony, Inc. Great Plains Broadcasting Co. Pennsylvania State Police

	INDEX	RALP	REQUENCIES ANI	DIAL NUMBERS	
WCAH ae WFEA ae WHEC ae WHP ak WNBR ae WOKO ae	500 500 500 500 500 500	1C CH C 1C(1)	Columbus, Ohio Manchester, N. H. Rochester, N. Y. Harrisburg, Pa. Memphis, Tenn. Albany, N. Y.	Commercial Radio Service Co. New Hampshire Broadcasting Co. WHEC, Inc. (Roch. Sav. Bank Bldg.) WHP, Inc. (Harrisburg Telegraph) Memphis Bdctg. Co. (WGBC) WOKO, Inc. (Hotel Ten Eyck)	
1440 kilo	cycle	es 208	3.2 meters]
CMBL ak KDFN ak KLS ae KXYZ ak WBIG ae WCBA ah WMBD ae WSAN z WTAD ak	20 500 250 250 500 250 500 250 500	1445 D C(1) a 3C(1) a 3	Havana, Cuba Casper, Wyo. Oakland, Calif. Houston, Texas Greensboro, N. C. Allentown, Pa. Peoria, Ill. Allentown, Pa. Quincy, Ill.	Julio C. Hidalgo Donald L. Hathaway Warner Bros. Harris County Broadcast Co. No. Carolina Broadcasting Co., Inc. B. Bryan Musselman Peoria Broadcasting Co. Allentown Call Publishing Co., Inc. Illinois Broadcasting Corp.	
1450 kilo	cycle	es 206	.8 meters]
KTBS ae WGAR ak WHOM ae WNJ ak WSAR aeh WTFI ak XEAB z	1000 500 250 250 250 250 500 7.5	N B(1.) 1 1	Shreveport, La. Cleveland, Ohio Jersey City, N. J. Newark, N. J. Fall River, Mass. Athens, Ga. N. Laredo, Mex.	Tri-State Bdctg. System, Inc. WGAR Broadcasting Co., Inc. New Jersey Broadcasting Corp. Radio Investment Co., Inc. Doughty & Welch Electric Co., Inc. Liberty Broadcasting Co. Humberto Garcia R.	3
1460 kilo			5.4 meters 🗀	No. 1 Part Professional Company	.)
KSTP ac WJSV ck	25000 10000	C	St. Paul, Minn. Washington, D. C.	National Battery Broadcasting Co. Old Dominion Broadcasting Co. (Transmitter at Alexandria, Va.)	
1470 kilo	cycle	es 204	l.0 meters 🗀]
KGA ak WLAC ac	5000 5000	B C	Spokane, Wash. Nashville, Tenn.	Northwest Broadcasting System Life & Casualty Insurance Co.	
					-
1480 kilo	cycle	es 202	2.6 meters 🗀)
1480 kilo CMBK z CMBR z KOMA ak WKBW ae	15 40 5000 5000	1485 1485 C C	_	Alberto Alvarez Tomas Basail National Radio Mfg. Co. Buffalo Broadcasting Corp.]
CMBK z CMBR z KOMA ak	15 40 5000 5000	1485 1485 C C	2.6 meters Havana, Cuba Havana, Cuba Oklahoma City, Okia.	Tomas Basail National Radio Mfg. Co.]
CMBK z CMBR z KOMA ak WKBW ae	15 40 5000 5000	1485 1485 C C	A.6 meters Havana, Cuba Havana, Cuba Oklahoma City, Okia. Buffalo, N. Y.	Tomas Basail National Radio Mfg. Co.]
CMBK z CMBR z KOMA ak WKBW ae 1490 kilo	15 40 5000 5000 cycle 5000	1485 1485 C C S N	2.6 meters Havana, Cuba Havana, Cuba Oklahoma City, Okia. Buffalo, N. Y. 1.2 meters	Tomas Basail National Radio Mfg. Co. Buffalo Broadcasting Corp.)]]
CMBK z CMBR z KOMA ak WKBW ac 1490 kilo WCKY ac 1500 kilo KDB ak	15 40 5000 5000 0cycle 5000 0cycle	1485 C C C C C C C C C C C C C C C C C C C	Havana, Cuba Havana, Cuba Cuba Oklahoma City, Okia. Buffalo, N. Y. Covington, Ky. Market States St	Tomas Basail National Radio Mfg. Co. Buffalo Broadcasting Corp. L. B. Wilson, Inc. (Mabley & Carew) Santa Barbara Broadcasters, Ltd.)))
CMBK z KOMA ak WKBW ae 1490 kilo WCKY ae 1500 kilo KDB ak KGFI aj KGFK ak	15 40 5000 5000 cycle 5000 cycle 100 100	1485 C C Es 201 N es 199	Havana, Cuba Havana, Cuba Oklahoma City, Okia. Buffalo, N. Y. 2 meters Covington, Ky. 9 meters Santa Barbara, Calif. Corpus Christl, Texas Moorhead, Minn.	Tomas Basail National Radio Mfg. Co. Buffalo Broadcasting Corp. L. B. Wilson, Inc. (Mabley & Carew) Santa Barbara Broadcasters, Ltd. Eagle Broadcasting Co., Inc. Red River Broadcasting Co., Inc.)))
CMBK Z KOMA BK WKBW BE 1490 kilo WCKY BE 1500 kilo KDB BK KGFI BJ KGFK BK KGIZ BK	15 40 5000 5000 cycle 5000 cycle 100 100 100	1485 1485 C C es 201 N es 199 CT (.25)	Havana, Cuba Havana, Cuba Oklahoma City, Okia. Buffalo, N. Y. 2 meters Covington, Ky. 9 meters Santa Barbara, Calif. Corpus Christl, Texas Moorhead, Minn.	Tomas Basail National Radio Mfg. Co. Buffalo Broadcasting Corp. L. B. Wilson, Inc. (Mabley & Carew) Santa Barbara Broadcasters, Ltd. Eagle Broadcasting Co., Inc. Red River Broadcasting Co., Inc. Grant City Park Corp. East Texas Broadcasting Co.)))
CMBK Z KOMA ak WKBW ae 1490 kilo WCKY ae 1500 kilo KGFI aj KGFK ak KGIZ ak KGKB bk KGKY ck	15 40 5000 5000 cycle 5000 cycle 100 100 100 100	1485 1485 C C es 201 N es 199 CT (.25)	Havana, Cuba Havana, Cuba Oklahoma City, Okia. Buffalo, N. Y. 1.2 meters Covington, Ky. 9.9 meters Santa Barbara, Calif. Corpus Christl, Texas Moorhead, Minn. Grant City, Mo. Tyler, Texas Scottsbluff, Neb.	Tomas Basail National Radio Mfg. Co. Buffalo Broadcasting Corp. L. B. Wilson, Inc. (Mabley & Carew) Santa Barbara Broadcasters, Ltd. Eagle Broadcasting Co., Inc. Red River Broadcasting Co., Inc. Grant City Park Corp. East Texas Broadcasting Co.)))
CMBK Z KOMA ak WKBW ae 1490 kilo WCKY ae 1500 kilo KGFI aj KGFK ak KGIZ ak KGKB kKKBW ak KPIM ak	15 400 5000 5000 5000 5000 5000 600 100 100 100 100 100 100	1485 1485 C C es 201 N es 199 CT (.25)	Havana, Cuba Havana, Cuba Oklahoma City, Okia. Buffalo, N. Y. 2 meters Covington, Ky. 9 meters Santa Barbara, Calif. Corpus Christl, Texas Moorhead, Minn. Grant City, Mo. Tyler, Texas Scottsbluff, Neb. Austin, Texas Rescott, Arizona	Tomas Basail National Radio Mfg. Co. Buffalo Broadcasting Corp. L. B. Wilson, Inc. (Mabley & Carew) Santa Barbara Broadcasters, Ltd. Eagle Broadcasting Co., Inc. Red River Broadcasting Co., Inc. Orant City Park Corp. East Texas Broadcasting Co. Hilliard Co., Inc. KUT Bdetg. Co. (Driskill Hotel) Scott & Sturm)))
CMBK Z KOMA ak WKBW ae 1490 kilo WCKY ae 1500 kilo KGFI aj KGFK ak KGIZ ak KGKB kKKBW ak KPIM ak	15 5000 5000 6CYCle 5000 0CYCle 100 100 100 100 100 100 100	1485 1485 C C ES 201 N ES 199 CT (:25)	Havana, Cuba Havana, Cuba Oklahoma City, Okia. Buffalo, N. Y. 2 meters Covington, Ky. 9 meters Santa Barbara, Calif. Corpus Christl, Texas Moorhead, Minn. Grant City, Mo. Tyler, Texas Scottsbluff, Neb. Austin, Texas Rescott, Arizona	Tomas Basail National Radio Mfg. Co. Buffalo Broadcasting Corp. L. B. Wilson, Inc. (Mabley & Carew) Santa Barbara Broadcasters, Ltd. Eagle Broadcasting Co., Inc. Red River Broadcasting Co., Inc. Orant City Park Corp. East Texas Broadcasting Co. Hilliard Co., Inc. KUT Bdetg. Co. (Driskill Hotel) Scott & Sturm Wescoast Broadcasting Co.)))
CMBK Z KOMA ak WKBW ae 1490 kilo WCKY ae 1500 kilo KGFI ai KGFK ak KGIZ ak KGKB bk KKNOW ak KPJO ai KREG ak KXO az	15 5000 5000 5000 5000 5000 5000 5000 100 1	1485 1485 C C C C C C C C C C C C C C C C C C C	Havana, Cuba Havana, Cuba Oklahoma City, Okia. Buffalo, N. Y. 2 meters Covington, Ky. 9 meters Santa Barbara, Calif. Corpus Christl, Texas Moorhead, Minn. Grant City, Mo. Tyler, Texas Scottsbluff, Neb. Austin, Texas Brescott, Arizona Wenatchee, Wash. Santa Ana, Calif.	Tomas Basail National Radio Mfg. Co. Buffalo Broadcasting Corp. L. B. Wilson, Inc. (Mabley & Carew) Santa Barbara Broadcasters, Ltd. Eagle Broadcasting Co., Inc. Red River Broadcasting Co., Inc. Grant City Park Corp. East Texas Broadcasting Co. Hilliard Co., Inc. KUT Bdctg. Co. (Driskill Hotel) Scott & Sturm Wescoast Broadcasting Co. Voice of Orange Empire, Inc. E. R. Irey and F. M. Bowles)))
CMBK Z KOMA ak WKBW ae 1490 kilo WCKY ae 1500 kilo KGFI ak KGFI ak KGKY ak KGKY ak KGKY ak KPJM ak KPJ	15 5000 5000 5000 cycle 5000 100 100 100 100 100 100 100 100 10	1485 1485 C C es 201 N es 199 CT (.25)	Havana, Cuba Havana, Cuba Cuba Havana, Cuba Cuba City, Okia. Ruffalo, N. Y. L.2 meters Covington, Ky. D.9 meters Santa Barbara, Calif. Corpus Christi, Texas Moorhead, Minn. Grant City, Mo. Tyler, Texas Scottsbluff, Neb. Austin, Texas Brescott, Arizona Wenatchee, Wash. Santa Ana, Calif. EliCentro, Calif. Rome, Ga.	Tomas Basail National Radio Mfg. Co. Buffalo Broadcasting Corp. L. B. Wilson, Inc. (Mabley & Carew) Santa Barbara Broadcasters, Ltd. Eagle Broadcasting Co., Inc. Red River Broadcasting Co., Inc. Orant City Park Corp. East Texas Broadcasting Co. Hilliard Co., Inc. KUT Bdetg. Co. (Driskill Hotel) Scott & Sturm Wescoast Broadcasting Co. Voice of Orange Empire, Inc. E. R. Irey and F. M. Bowles Rome Broadcasting Copp.)]
CMBK Z KOMA ak WKBW ae 1490 kilo WCKY ae 1500 kilo KGFI aj KGFK ak KGKY ak KGKY ak KGKY ak KPJM ak KPJM ak KPJM ak KYO az WFDV ak WHEF ak WKBV z	15 5000 5000 5000 CYCL 5000 100 100 100 100 100 100 100 100 10	1485 1485 C C es 201 N es 199 CT (.25)	Havana, Cuba Havana, Cuba Cuba Havana, Cuba Oklahoma City, Okia. Buffalo, N. Y. 1.2 meters Covington, Ky. 1.9 meters Santa Barbara, Calif. Corpus Christi, Texas Moorhead, Minn. Grant City, Mo. Tyler, Texas Scottsbluff, Neb. Austin, Texas Brescott, Arizona Wenatchee, Wash. Santa Ana, Calif. EliCentro, Calif. Rome, Ga. Kosciusko, Miss. Connersville, Ind.	Tomas Basail National Radio Mfg. Co. Buffalo Broadcasting Corp. L. B. Wilson, Inc. (Mabley & Carew) Santa Barbara Broadcasters, Ltd. Eagle Broadcasting Co., Inc. Red River Broadcasting Co., Inc. Grant City Park Corp. East Texas Broadcasting Co. Hilliard Co., Inc. KUT Bdetg. Co. (Driskill Hotel) Scott & Sturm Wescoast Broadcasting Co. Voice of Orange Empire, Inc. E. R. Irey and F. M. Bowles Rome Broadcasting Corp. Attala Milling & Produce Co. William O. Knox	ксуs 1500
CMBK Z KOMBR Z KOMBR Z KOMBR Z KOMBR Z Z KOMB Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	15 5000 5000 5000 CYCL6 5000 100 100 100 100 100 100 100 100 10	1485 1485 C C ES 201 N ES 199 CT ((25)	Havana, Cuba Havana, Cuba Cuba Havana, Cuba Cuba City, Okia. Ruffalo, N. Y. L.2 meters Covington, Ky. Rometers Santa Barbara, Calif. Corpus Christi, Texas Moorhead, Minn. Grant City, Mo. Tyler, Texas Scottsbluff, Neb. Austin, Texas Brescott, Arizona Wenatchee, Wash. Santa Ana, Calif. EliCentro, Calif. Rome, Ga. Kosciusko, Miss. Connersville, Ind. Ludington, Mich.	Tomas Basail National Radio Mfg. Co. Buffalo Broadcasting Corp. L. B. Wilson, Inc. (Mabley & Carew) Santa Barbara Broadcasters, Ltd. Eagle Broadcasting Co., Inc. Red River Broadcasting Co., Inc. Grant City Park Corp. East Texas Broadcasting Co. Hilliard Co., Inc. KUT Bdctg. Co. (Driskill Hotel) Scott & Sturm Wescoast Broadcasting Co. Voice of Orange Empire, Inc. E. R. Irey and F. M. Bowles Rome Broadcasting Corp. Attala Milling & Produce Co. William O. Knox K. L. Ashbacker Marshall & Malcolm	1500
CMBK Z KOMBR Z KOMBR Z KOMBR Z KOMBR Z Z KOMBR Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	15 5000 5000 5000 5000 5000 5000 5000 100 1	1485 1485 C C es 201 N es 199 CT (.25)	Havana, Cuba Havana, Cuba Cuba Havana, Cuba Cuba City, Okia. Ruffalo, N. Y. L.2 meters Covington, Ky. Rometers Santa Barbara, Calif. Corpus Christi, Texas Moorhead, Minn. Grant City, Mo. Tyler, Texas Scottsbluff, Neb. Austin, Texas Brescott, Arizona Wenatchee, Wash. Santa Ana, Calif. EliCentro, Calif. Rome, Ga. Kosciusko, Miss. Connersville, Ind. Ludington, Mich.	Tomas Basail National Radio Mfg. Co. Buffalo Broadcasting Corp. L. B. Wilson, Inc. (Mabley & Carew) Santa Barbara Broadcasters, Ltd. Eagle Broadcasting Co., Inc. Red River Broadcasting Co., Inc. Grant City Park Corp. East Texas Broadcasting Co. Hilliard Co., Inc. KUT Bdctg. Co. (Driskill Hotel) Scott & Sturm Wescoast Broadcasting Co. Voice of Orange Empire, Inc. E. R. Irey and F. M. Bowles Rome Broadcasting Corp. Attala Milling & Produce Co. William O. Knox K. L. Ashbacker Marshall & Malcolm Boston Broadcasting Co.	1500 MTRS
CMBK Z KOMBR 2 KOMBR 2 KOMBR 2 KOMB 2	15 5000 5000 5000 5000 5000 5000 5000 100 1	1485 1485 C C ES 201 N ES 199 CT ((25)	Havana, Cuba Havana, Cuba Havana, Cuba Oklahoma City, Okia. Buffalo, N. Y. 1.2 meters Covington, Ky. 1.9 meters Santa Barbara, Calif. Corpus Christi, Texas Moorhead, Minn. Grant City, Mo. Tyler, Texas Scottsbluff, Neb. Austin, Texas Brescott, Arizona Wenatchee, Wash. Santa Ana, Calif. EliCentro, Calif. Rome, Ga. Kosciusko, Miss. Connersville, Ind. Ludington, Mich. LaGrange, Ga. Boston, Mass. Brooklyn, N. Y. Brooklyn, N. Y.	Tomas Basail National Radio Mfg. Co. Buffalo Broadcasting Corp. L. B. Wilson, Inc. (Mabley & Carew) Santa Barbara Broadcasters, Ltd. Eagle Broadcasting Co., Inc. Grant City Park Corp. East Texas Broadcasting Co. Hilliard Co., Inc. KUT Bdetg. Co. (Driskill Hotel) Scott & Sturm Wescoast Broadcasting Co. Voice of Orange Empire, Inc. E. R. Irey and F. M. Bowles Rome Broadcasting Corp. Attala Milling & Produce Co. William O. Knox K. L. Ashbacker Marshall & Malcolm Boston Broadcasting Co. Paul J. Gollhofer Arthur Faske	1500
CMBK Z Z KOMBR A A A A A A A A A A A A A A A A A A A	15 5000 5000 5000 6CYCle 5000 100 100 100 100 100 100 100 100 10	1485 1485 C C es 201 N es 199 (.25) (.25)	Havana, Cuba Havana, Cuba Havana, Cuba Oklahoma City, Okia. Buffalo, N. Y. 2 meters Covington, Ky. 9 meters Santa Barbara, Calif. Corpus Christl, Texas Moorhead, Minn. Grant City, Mo. Tyler, Texas Scottsbluff, Neb. Austin, Texas Rescott, Arizona Wenatchee, Wash. Santa Ana, Calif. El[Centro, Calif. Rome, Ga. Kosciusko, Miss. Connersville, Ind. Ludington, Mich. LaGrange, Ga. Boston, Mass. Brooklyn, N. Y. Brooklyn, N. Y. Brooklyn, N. Y. Lapeer, Mich.	Tomas Basail National Radio Mfg. Co. Buffalo Broadcasting Corp. L. B. Wilson, Inc. (Mabley & Carew) Santa Barbara Broadcasters, Ltd. Eagle Broadcasting Co., Inc. Red River Broadcasting Co., Inc. Grant City Park Corp. East Texas Broadcasting Co. Hilliard Co., Inc. KUT Bdctg. Co. (Driskill Hotel) Scott & Sturm Wescoast Broadcasting Co. Voice of Orange Empire, Inc. E. R. Irey and F. M. Bowles Rome Broadcasting Corp. Attala Milling & Produce Co. William O. Knox K. L. Ashbacker Marshall & Malcolm Boston Broadcasting Co. Paul J. Gollhofer Arthur Faske First Methodist Protestant Church	1500 MTRS 199.9
CMBK Z KOMBR Z KOMBR AR WKBW BE BY BE BY BE BY	15 5000 5000 5000 5000 5000 5000 5000 100 1	1485 1485 C C es 201 N es 199 (.25) (.25)	Havana, Cuba Havana, Cuba Havana, Cuba Oklahoma City, Okia. Buffalo, N. Y. 1.2 meters Covington, Ky. 1.2 meters Covington, Ky. 1.3 meters Santa Barbara, Calif. Corpus Christi, Texas Moorhead, Minn. Grant City, Mo. Tyler, Texas Scottsbluff, Neb. Austin, Texas Rrescott, Arizona Wenatchee, Wash. Santa Ana, Calif. EllCentro, Calif. Rome, Ga. Kosciusko, Miss. Connersville, Ind. Ludington, Mich. LaGrange, Ga. Boston, Mass. Brooklyn, N. Y. Brooklyn, N. Y. Lapeer, Mich. Binghamton, N. Y. Bristol, Tenn.	Tomas Basail National Radio Mfg. Co. Buffalo Broadcasting Corp. L. B. Wilson, Inc. (Mabley & Carew) Santa Barbara Broadcasters, Ltd. Eagle Broadcasting Co., Inc. Red River Broadcasting Co., Inc. Grant City Park Corp. East Texas Broadcasting Co. Hilliard Co., Inc. KUT Bdetg. Co. (Driskill Hotel) Scott & Sturm Wescoast Broadcasting Co. Voice of Orange Empire, Inc. E. R. Irey and F. M. Bowles Rome Broadcasting Copp. Attala Milling & Produce Co. William O. Knox K. L. Ashbacker Marshall & Malcolm Boston Broadcasting Co. Paul J. Gollhofer Arthur Faske First Methodist Protestant Church Howitt-Wood Radio Co., Inc. Radiophone Bdetg. Station WOPI	1500 MTRS
CMBK Z KOMBR Z KOMBR Z KOMBR Z KOMBR Z Z KOMBR Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	15 5000 5000 5000 CYCL 5000 100 100 100 100 100 100 100 100 10	1485 1485 C C C C N CS 199 CT (.25) 	L.6 meters Havana, Cuba Havana, Cuba Oklahoma City, Okia. Buffalo, N. Y. L.2 meters Covington, Ky. 9.9 meters Santa Barbara, Calif. Corpus Christl, Texas Moorhead, Minn. Grant City, Mo. Tyler, Texas Scottsbluff, Neb. Austin, Texas Rescott, Arizona Wenatchee, Wash. Santa Ana, Calif. Elicentro, Calif. Rome, Ga. Kosciusko, Miss. Connersville, Ind. Ludington, Mich. LaGrange, Ga. Boston, Mass. Brooklyn, N. Y. Brooklyn, N. Y. Bristol, Tenn. Philadelphia, Pa.	Tomas Basail National Radio Mfg. Co. Buffalo Broadcasting Corp. L. B. Wilson, Inc. (Mabley & Carew) Santa Barbara Broadcasters, Ltd. Eagle Broadcasting Co., Inc. Grant City Park Corp. East Texas Broadcasting Co. Hilliard Co., Inc. KUT Bdetg. Co. (Driskill Hotel) Scott & Sturm Wescoast Broadcasting Co. Voice of Orange Empire, Inc. E. R. Irey and F. M. Bowles Rome Broadcasting Corp. Attala Milling & Produce Co. William O. Knox K. L. Ashbacker Marshall & Malcolm Boston Broadcasting Co. Paul J. Gollhofer Arthur Faske First Methodist Protestant Church Howitt-Wood Radio Co., Inc. Radiophone Bdetg. Station WOPI Wm. Penn Broadcasting Co.	1500 MTRS 199.9
CMBK Z KOMBR Z KOMBR Z KOMBR Z KOMBR Z KOMBR Z Z KOMBR Z Z KGE Z Z KGKY CK KOW AK KEJIM AK KPO A Z WFDV AK KWBV Z WKBV Z WWBV Z WWBW Z WWB Z WWB Z WWB Z WWB Z W WWB Z W WWB Z W WWB Z W W Z WWB Z W W Z W W W W	15 5000 5000 5000 6CYCle 5000 100 100 100 100 100 100 10	1485 1485 C C es 201 N es 199 (.25) (.25)	Havana, Cuba Havana, Cuba Havana, Cuba Oklahoma City, Okia. Buffalo, N. Y. 1.2 meters Covington, Ky. 9.9 meters Santa Barbara, Calif. Corpus Christl, Texas Moorhead, Minn. Grant City, Mo. Tyler, Texas Scottsbluff, Neb. Austin, Texas Rescott, Arizona Wenatchee, Wash. Santa Ana, Calif. El[Centro, Calif. Rome, Ga. Kosciusko, Miss. Connersville, Ind. Ludington, Mich. LaGrange, Ga. Boston, Mass. Brooklyn, N. Y. Brooklyn, N. Y. Brooklyn, N. Y. Brostol, Tenn. Philadelphia, Pa. Augusta, Ga. Rutland, Vt.	Tomas Basail National Radio Mfg. Co. Buffalo Broadcasting Corp. L. B. Wilson, Inc. (Mabley & Carew) Santa Barbara Broadcasters, Ltd. Eagle Broadcasting Co., Inc. Red River Broadcasting Co., Inc. Grant City Park Corp. East Texas Broadcasting Co. Hilliard Co., Inc. KUT Bdctg. Co. (Driskill Hotel) Scott & Sturm Wescoast Broadcasting Co. Voice of Orange Empire, Inc. E. R. Irey and F. M. Bowles Rome Broadcasting Corp. Attala Milling & Produce Co. William O. Knox K. L. Ashbacker Marshall & Malcolm Boston Broadcasting Co. Paul J. Gollhofer Arthur Faske First Methodist Protestant Church Howitt-Wood Radio Co., Inc. Radiophone Bdctg. Station WOPI Wm. Penn Broadcasting Co. Musicove, Inc. (Relays WLW) Philin Weiss Music Co.	1500 MTRS 199.9
CMBK Z KOMBR Z KOMBR Z KOMBR BK	15 5000 5000 5000 5000 5000 5000 5000 100 1	1485 1485 C C ES 201 N ES 199 (.25) 	L.6 meters Havana, Cuba Havana, Cuba Oklahoma City, Okia. Buffalo, N. Y. L.2 meters Covington, Ky. 9.9 meters Santa Barbara, Calif. Corpus Christl, Texas Moorhead, Minn. Grant City, Mo. Tyler, Texas Scottsbluff, Neb. Austin, Texas Rescott, Arizona Wenatchee, Wash. Santa Ana, Calif. Elicentro, Calif. Rome, Ga. Kosciusko, Miss. Connersville, Ind. Ludington, Mich. LaGrange, Ga. Boston, Mass. Brooklyn, N. Y. Brooklyn, N. Y. Bristol, Tenn. Philadelphia, Pa.	Tomas Basail National Radio Mfg. Co. Buffalo Broadcasting Corp. L. B. Wilson, Inc. (Mabley & Carew) Santa Barbara Broadcasters, Ltd. Eagle Broadcasting Co., Inc. Grant City Park Corp. East Texas Broadcasting Co. Hilliard Co., Inc. KUT Bdetg. Co. (Driskill Hotel) Scott & Sturm Wescoast Broadcasting Co. Voice of Orange Empire, Inc. E. R. Irey and F. M. Bowles Rome Broadcasting Corp. Attala Milling & Produce Co. William O. Knox K. L. Ashbacker Marshall & Malcolm Boston Broadcasting Co. Paul J. Gollhofer Arthur Faske First Methodist Protestant Church Howitt-Wood Radio Co., Inc. Radiophone Bdetg. Station WOPI Wm. Penn Broadcasting Co.	1500 MTRS 199.9

							-	$\overline{}$
ALABAMA	Watts	ĸ	суз.		Watts		1	Ксуз.
Anniston O-21 tr	100		420	San Jose J-1	500	Kow		1010
Birmingham O-21	5000	WAPI N 1	140	Santa Ana M-3	100	KQW KREG	_	1500
	500	WBRC C	930	Santa Barbara M-2 Stockton J-2	100 250	KDB KGDM	С	1500 1100
Gadsden O-21	100 100	WKBC 1 WJBY 1	310 210	Stockton y=2	100	KWG	С	1200
Huntsville N-21 c	100	WBHS 1	200	COLORADO				
Mobile Q-20	500	WODX C 1	410	Colorado Springs K-1	1 1000	KVOR	С	1270
Montgomery P-21 Troy P-21 rc	500 100	WSFA C 1	410 210	Denver K-11	500	KFEL	C	920
1109 1 -2110	100	***************************************			500	KFXF	_	920
ALASKA					1000 12500	KLZ KOA	C	560 830
Anchorage	250	KFQD 1	230		500	KPOF	17	880
Juneau	100	KIFH 1	310	Fort Morgan J-11	100	KGEW KFXJ		1200
Ketchikan	500	KGBU	900	Grand Junction K-9		KFXJ KFKA		1200
ARIZONA			- 1	Greeley J-11 Lamar L-12 lc	500 100	KIDW		880 1420
Jerome M-6	100	KCRJ 1	310	Pueblo L-11	250	KGHF		1320
Phoenix N-6	500	KOY C 1	390	Trinidad L-11	100	KGIW		1420
Prescott M-6	500 100		620 500	Yuma J-12	100	KGEK		1200
Tucson O-7	100		370	CONNECTICU	T			
	500	KVOA 1	260	Bridgeport H-27	250	WICC	С	600
Yuma O-5 tl	100	KUMA 1	420	Hartford H-27	500	WDRC	C	1330
ARKANSAS				Storrs H-28	50000 250	WTIC WCAC	R	1060
Blytheville M-19	100	KLCN 1	290	300114 11-20	230	WCAC		000
Fayetteville M-16	1000		390	DELAWARE				
Fort Smith N-16	100	KFPW 1	210	Wilmington J-26	250	WDEL		1120
Hot Springs N-17 Little Rock N-17	10000 250	KTHS N 1 KARK	040 890		100	WILM		1420
Ettie Rock 14-17	100	KGHI 1	200	DISTRICT OF	COT 1	11 / D. T. A		
	1000	KLRA C 1	390	DISTRICT OF			_	
Paragould M-18 Texarkana O-17 bl	100 100		200	Washington J-26	10000	wjsv	ç	1460
	100	KCMC I	420		250 500	WMAL WRC	B	630 950
CALIFORNIA					100	WOL		1310
Bakersfield L-2 br	100		200	FLORIDA				
Berkeley J-2 Beverly Hills M-3 bl	100 500	KRE 1	370	Clearwater R-24	1000	WFLA	N	620
Burbank M-3	500	KMPC KELW	710 780	Gainesville Q-24	5000	WRUF	С	830
Bl Centro N-4	100	KXO 1	500	Jacksonville Q-24	1000	WJAX	Ŋ	900
Bureka H-1 tc Fresno K-2	100 500		210 580	Miami T-25	1000 1000	WIOD	Ŋ	1300 560
Glendale M-3	100		850 II	Orlando R-24	250	WQAM WDBO	C	580
Hollywood M-3	500	KMTR	570	Pensacola Q-21	500	WCOA		1340 620
Long Booch M 3	25000 1000		050	St. Petersburg S-24 Tampa R-24	1000 1000	WSUN WDAE	N C	1220
Long Beach M-3	1000		250 360		100	WMBR	~	1370
Los Angeles M-3	1000	KECA N 1	430	GEORGIA				
	1000		300	Americus P-22 c	100	WENC		1420
	50000 500	KFSG 1	640 120	Athens N-23 bc	500	WTFI		1450
	250	KFVD 1	000 	Atlanta O-22	250	WGST	С	890
	1000 100	KFWB KGEL	950		100 5000	WJTL WSB	N	1370 740
	1000		200 900	Augusta O-23	100	WRDW		1500
	500	KRKD 1	120	Columbus O-22	100	WRBL		1200
Oakland I 1	500	KTM	780 📗	LaGrange O-22 1 Macon O-23	100 500	WKEU WMAZ		1500
Oakland J-1	250 500		440 880	Macon Ö-23 Rome N-22	100	WFDV		180 1500
	500	KROW	930	Savannah O-24	500	WTOC	С	1260
Pasadena M-3	50	KPPC 1:	210	Thomasville Q-22	100	WQDX		1210
Sacramento J-2 San Bernardino M-3	100 100		310 210	HAWAII				
San Diego N-3	1000	KFSD N (600	Honolulu	250	KGMB	С	1320
_	1000	KGB C 1	330		1000	KGU	Ň	750
San Francisco J-1	1000 500	KFRC C KFWI	610 9 3 0	IDAHO				
	100	KGGC 14	120	Boise G-5	1000	KIDO		1350
	7500	KGO N 7	790	Idaho Falls G-7	250	KID		1320
			070 080	Nampa G-5 Pocatello H-7	100 250	KFXD KSEI		1200 890
	1000	KTAB 5	60	Lewiston E-5 rc	100	KGKX	1	1420
	1000	KÝA N 12	30	Twin Falls H-6	500	KTFI		240

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	Dodge City L-13	100	KGNO 1210 WLBF 1420
	500 25000	WAAF 920 WBBM C 770	Kansas City K-16 Lawrence K-16	100 500	KFKU 1220
	1500	WCFL R 970	Dawrence 10-10	1000	WREN B 1220
	100	WCRW 1210	Manhattan K-15	500	KSAC 580
	100	WEDC 1210	Topeka K-16	1000 1000	WIBW C 580 KFH C 1300
	50000 500	WENR N 870 WGES 1360	Wichita L-15	1000	KI11 C 1500
	25000 1000	WGN C 720 WIBO 560	KENTUCKY		
	20000	WIID 1130	Covington K-22	5000	WCKY N 1490
	50000	WJJD 1130 WLS N 870	Hopkinsville M-20	1000	WFIW C 940
	5000	WMAQ N 670 WMBI 1080	Louisville L-21	25000 100	WHAS C 820 WLAP 1200
	5000 500	WMBI 1080 WPCC 560	Paducah M-19	100	WPAD 1420
	100	WSBC 1210			
Cicero I-20	100	WEHS 1420	LOUISIANA		
	100 100	WHFC 1420 WKBI 1420	Monroe P-18	100	KMLB 1200
Decatur K-19	100	WJBL 1200	New Orleans R-19	100	WABZ 1200
Harrisburg L-19	100	WEBQ 1216		1000	WDSU C 1250
Joliet I-19	100	WCLS 1310		100 100	WJBO 1420 WJBW 1200
I . C-11- I 10	100 100	WKBB 1310 WJBC 1200	l	500	WSMB N 1320
La Salle J-19 Peoria J-19	500	WMBD C 1440		10000	WWL 850
Quincy K-18	500	WTAD 1440	Shreveport P-17	100 1000	KRMD 1310 KTBS N 1450
Rockford I-19	500	KFLV 1410		1000	KTBS N 1450 KWEA 1210
Rock Island I-18 Springfield K-19	100 100	WHBF 1210 WCBS 1210		10000	KWKH 850
Spinighete 1(-1)	100	WTAX 1210	MATNE		
Tuscola K-20	100	WDZ 1070 WILL 890	MAINE		
Urbana J-20	250 5000	WILL 890 WCBD 1080	Augusta F-28	100	WRDO 1370 WABI 1200
Zion I-20	5000	WCDD 1000	Bangor F-29	100 500	WLBZ C 620
			Portland F-28	1000	WCSH R 940
INDIANA			December Into D. 30 to	250 100	WLEC 1340 WAGM 1420
Anderson J-21	100	WHBU 1210.	Presque Isle D-29 lc	100	WAGM 1420
Connersville K-21	100	WKBV 1500	MARYLAND		
Elkhart I-21 bc	_50	WTRC 1310	Baltimore J-26	10000	WBAL B 1060
Evansville L-20	500 100	WGBF 630 WGL C 1370		250	WCAO C 600
Fort Wayne J-21	10000	Wowo C 1160		100 500	WCBM 1370 WFBR R 1270
Gary I-20	1000	W IKS 1360	Cumberland J-25	100	WTBO 1420
Hammond I-20 bc	100	WWAE 1200	Hagerstown J-25 rc	100	WJEJ 1210
Indianapolis J-21	1000 500	WFBM C 1230 WKBF 1400	NA COA CHILICI	тте	
Lafayette J-20	500	WBAA 1400	MASSACHUSI		
Muncie J-21	50	WLBC 1310	Babson Park G-28	500	WBSO 920
South Bend I-20	100	WFAM C 1200 WSBT C 1230	Boston G-28	500 25000	WAAB C 1410 WBZ B 990
Terre Haute K-20	500 100	WBOW 1310		1000	WEEI R 590
Telle Haute IX-20	200			1000	WHDH 830
			}	100	WLOE 1500 WNAC C 1230
IOWA			Fall River H-28	1000 250	WSAR 1450
	5000	WOI 640	Lexington G-28	100	WLEY 1370
Ames I-17 Boone I-17	100	KFGQ 1310	Lexington G-28 New Bedford H-28	100	WNBH 1310
Cedar Rapids I-18	100	KWCŘ B 1420	Springfield H-27	1000 100	WBZA B 990 WMAS 1420
Council Bluffs J-16	1000	KOIL B 1260	Worcester G-28	100	WORC C 1200
Davenport I-18	5000 100	WOC R 1000 KGCA 1270	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	250	WTAG R 580
Decorah H-18	100	KWLC 1270	MICHIGAN		
Des Moines I-17	100 5000	KSO B 1370 WHO R 1000	Battle Creek I-21	_50	WELL 1420
Iowa City I-18	500	WSUI 880	Bay City H-22 Calumet E-19	500	WBCM C 1410
Marshalltown I-17	100	KFJB 1200	Calumet E-19	100 100	WHDF 1370 WJBK 1370
Ottumwa J-17	100 100	WIAS 1310 KICK 1420	Detroit H-22	10000	WIR B 750
Red Oak J-16 Shenandoah J-16	500	KFNF 890	11	100	WMBC 1420
	500	KMA 930	1	1000 1000	WWJ R 920 WXYZ 1240
Sioux City I-15	1000 500	KSCJ C 1330 WMT C 600	East Lansing H-21	1000	WKAR 1040
Waterloo I-17	500	44141 C 000			

			· · · · · · · · · · · · · · · · · · ·	_		_	
	Watts	Kcys.	NEVADA	11/			17.
Flint H-22	100 WFDF	1310	II	Watts 100			Kcys.
Grand Rapids H-21	500 WASH	1270	Las Vegas L-5 Reno I-3	500	KGIX KOH	С	1420 1380
	500 WOOD	1270	1 110110 1 0	000	11011	~	1000
Ironwood F-18 rc Jackson I-21	100 WJMS 100 WIBM	1420 1370	NEW HAMPSH	IIDE			
Kalamazoo I-21 tl	1000 WKZO	590			*****		
Lapeer H-22	100 WMPC	1500	Laconia G-28 lc	100 500	WKAV WFEA	С	1310 1430
Ludington H-20 Marquette F-19	100 WKBZ 100 WBEO	1500 1310	Manchester G-28 Portsmouth G-28 tc	250	WHEB	-	740
Royal Oak H-22	50 WEXL	1310	I II				
			NEW JERSEY				
MINNESOTA			Asbury Park I-27	500	WCAP	Č	1280
Fergus Falls F-15	100 KGDE	1200	Atlantic City J-27 Camden I-26	5000 500	WPG WCAM	С	1100 1280
Minneapolis G-17	50000 WCCO 1000 WDGY	C 810. 1180	Jersey City I-27	300	WAAT		940
	1000 WLB	1250	I -	250	WHOM		1450
	1000 WRHM	1250	Newark I-27	1000	WAAM WGCP		1250
Moorhead F-15	100 KGFK 1000 KFMX	1500	ll .	250 250	WNJ		1250 1450
Northfield G-17	1000 KFMX 1000 WCAL	1250 1250	ll	5000	WOR		710
St. Paul G-17	25000 KSTP	N 1460	Paterson I-27	1000	WODA		1250
			Red Bank I-27 Trenton I-26	100 500	WJBI WOAX		1210 1280
MISSISSIPPI			Zarephath I-27	250	WAWZ		1350
Greenville O-18	100 WKFI	1210	il				
Gulfport Q-19 Hattiesburg Q-19	100 WGCM 100 WPFB	1210 1370	NEW MEXICO				
Jackson P-19	1000 WJDX 1	N 1270	Albuquerque N-7	250	KGGM		1230
Kosciusko O-19 bc	100 WHEF	1500		20000	KOB		1180
Laurel P-19 br Meridian P-20	100 WAML 500 WCOC	1310 880	Clovis O-11 tr Santa Fe M-10	100 100	KICA KGFL		1370 1370
Vicksburg P-18	500 WQBC	1360	Santa re M-10	100	KGFL		13/0
-	•		NEW YORK				
MISSOURI			Albany G-27 bl	500	woko	_	1430
Cp. Girardeau L-19	100 KFVS	1210	Auburn H-25	100	WMBO		1310
Columbia K-17	500 KFRU	630 1500	Binghamton H-26	100	WNBF		1500
Grant City J-16 Jefferson City L-17	100 KGIZ 500 WOS	630	Brooklyn I-27	500 1000	WBBC WBBR		1400
Jefferson City L-17 Joplin M-16	100 WMBH	1420		500	WCGU		1300 1400
Kansas City K-16	1000 KMBC 0			500	WFOX		1400
	100 KWKC 1000 WDAF I	1370 R 610	l .	500	WLTH		1400
	500 WHB	860		100 100	WMBQ WMIL		1500 1500
St. Innert V 16	1000 WOQ	1300	Buffalo H-24	1000	WBEN	R	900
St. Joseph K-16 St. Louis L-18	2500 KFEQ 500 KFUO	680 550		100	WEBR	_	1310
or. Eouis E-10	100 KFWF	1200	ł	1000 5000	WGR WKBW	č	550 1480
	50000 KMOX (J _	50	wsvs	_	1370
	500 KSD F 1000 KWK F	3 550 S	Canton F-26	500	WCAD		1220
	1000 WEW	760	Chester Twp. Elmira H-25 c	50 1000	WGN Y WESG		1210 1 04 0
6	100 WIL	1200	Freeport I-27	100	WGBB		1210
Springfield M-17	100 KGBX	1310	Hudson Falls G-27	50	WGLC		1370
MONTANA			Jamestown H-24 New York City I-27	50 50000	WOCL WABC	С	1210 860
Billings F-9	1000 KGHL N	1 950	Total Caty 1 2	250	WBNX		1350
Butte F-7	500 KGIR N	1 1360		50000	WBOO		860
Great Falls E-8 Kalispell D-7	1000 KFBB 100 KGEZ	1280		250 50000	WCDA WEAF	R	1350 660
Missoula E-7	100 KGEZ 100 KGVO	1310 1200	a a constant	500	WEVD		1300
Wolf Point E-11	100 KGCX	1310		1000	WFAB		1300
NEDDACKA		i i		500 250	WINS WHN		1180 1010
NEBRASKA		- N		50000	wjz`	В	760
Clay Center J-14	1000 KMMJ	740		5000	WLWL		1100
Kearney J-14 bc Lincoln J-15	100 KGFW 5000 KFAB C	1310 770		500 250	WMCA WMSG		570 1 3 50
	100 KFOR	1210		500	WNYC		570
N6-11- 1 17	500 WCAJ	590		1000	wov		1130
Norfolk 1-15 North Platte J-13	1000 WJAĞ 500 KGNF	1060 1430		250 500	WPAP WPCH		Ю10
Omaha J-15	500 WAAW	660		250	WQAO	,	810 1 01 0
Scottsbluff I-11	1000 WOW R		Back sets C 25	250	WRNY	1	010
York J-15	100 KGKY 500 KGBZ	1500 930	Rochester G-25	5000 500	WHAM I	B 1	1150
				500	WIEC (- 1	430
						_	

						_	
	Watts	Kcys	. [Watts		1	Kcys.
Saranac Lake F-26	50	WMBZ 129		500	KALE	С	1300+
Schenectady G-27	50000	WGY R 79		5000	KEX		1180
Syracuse G-25	1000	WFBL C 136		100	KBPS		1420
Syracuse G-20	250	WMAC 57		500	KFJR		1300
	250	WSYR B 57	i II.	1000	KGW	N	620
Troy G-27	500	WHAZ 130	H)	1000	KOIN	C.	940
Troy G-27 Tupper Lake F-26	100	WHDL 142	· [[500	KWJJ		1060
Utica G-26	100	WIBX 120		100	KXĽ		1420
Woodside I-27	100	WWRL 150					
White Plains H-27 bl	100	WFAS 121	· II				
Wille I lamb 11-27 St	100		PENNSYLVAI	NIA			
			Allentown I-26	250	WCBA		1440
NORTH CARO	LINA			250	WSAN		1440
		WWNC N 57	Altoona I-25	100	WFBG		1310-
Asheville M-23	1000	WWNC N 570 WBT C 1080	C 1 - 1-1-11 11 16	10	WNBW		1200
Charlotte M-24	25000	WSOC 121	11 12-1-11 24	100	WERE		1420
Gastonia M-24	100	WBIG C 144	'	500	WLBW	С	1260
Greensboro M-24	500	WPTF N 680		25	WIBG		930.
Raleigh M-25	1000 100	WRAM 137	Grove City I-24	100	WSAJ		1310
Wilmington N-26	100	WSJS C 131	II The model to seem 1 25	500	WBAK		1430
Winston-Salem M-24	100	W3J3 C 131	1	100	WCOD		1200
			II .	500	WHP	С	1430
NODELL DATE	т		Hazleton I-26 lc	100	WAZL		1420
NORTH DAKO			Johnstown J-24	100	WJAC		1310
Bismarck F-13	1000	KFYR N 550	Lancaster I-26	100	WGAL		1310-
Devila Lake E-14	100	KDLR 1210	- 31	100	WKJC		1200
Fargo F-15	1000	WDAY N 940	Lewisburg I-26	100	W JBU WCAU	_	1210
Grand Forks E-15	100	KFJM 137	Philadelphia I-26	50000	WCAU	С	1170
Mandan F-13	250	KGCU 124		100	WDAS	_	1370-
Minot E-13	250	KLPM 124	· ii	500	WFI	R	560
			H	100	WHAT	_	1310
			11	500	WIP	č	610
OHIO			il .	500	WLIT	R	560
Akron I-23	1000	WADC C 132	· H	100	WPEN		1500
ARION 1-20	100	WJW 121		250 100	WRAX WTEL		1020 1310
Canton I-23	10	WHBC 120		50000	KDKA	В	980
Cincinnati K-22	100	WFBE 120		500	KOVA	ь	1380
C.1.01.11.	1000	WKRC C 550		1000	KQV WCAE	R	1220
	50000	WLW N 70		1000	WJAS	ĉ	1290
	500	WSAI R 133		100	wwsw	~	1500
Cleveland I-23	500	WGAR B 1450		1000	WEEU		830
	1000	WHK C 139	· II	100	WRAW		1310
	500	WJAY 610		250	WGBI		880
	50000	WTAM R 107	11	250	WOAN		880
Columbus J-22	500	WAIU 640		100	WQAN WNBO		1200-
	500	WCAH C 143	II m D 1 26	100	WBAX		1210
	1000	WEAO 57	II.	100	WBRE		1310
	100	WSEN 1210		100	WRAK		1370
Dayton J-22	200	WSMK 1386	11	100	WJEQ		1370
Dayton J-22 Mount Orab K-22	100	WHBD 1370	York J-25 tr	1000	WORK		1000
Toledo 1-22	1000	WSPD C 134 WKBN C 57					
Youngstown I-23	500 100	WALR 121					
Zanesville J-23	100	WALK 121	PHILIPPINES				
			Cebu	500	KZRC		937.5
OKLAHOMA			Manila	1000	KZKA		1110
	250	KOCW 140		50000	KZRM		618.5
Chickasha N-14	100	KASA 121					
Elk City N-13	100	KCRC 137)			
Enid M-14 Norman N-15	500	WNAL) 101			WIZAG		1240
Oldshome N-15	100	KFXR 131		1000	WKAQ		1240-
Oklahoma N-15	100	KGFG 137					
	5000	KOMA C 148)	NID			
	1000	WKY N 90	KHODE ISLA				
Ponce City M-15	100	WBBZ 120		500	WEAN	C	780·
Ponca City M-15 Shawnee N-15	100	KGFF 142) [[500	WJAR	R	890
Tulsa M-15	5000	KVOO N 114	1	100	WPAW		1210
			II	100	WPRO		1210
OREGON				N T			
- ·	1000	KOAC 55	SOUTH CAR				
Corvallis E-2	1000	KORE 142	Charleston O-25	500	WCSC WIS		1360
Eugene F-2	100	KFJI 121	H Columbia N-24	500	WIS	Ν	1010
Klamath Falls G-3 c	100	KOOS 137	ll Greenville N-23 tc	100	WFBC		1200
Marshfield F-1	100	KMED 131	Spartanburg N-23	100	WSPA		1420
Medford G-2	100						
and the control of the latest terminal						_	

SOUTH DAKO	TAWatts	Kcys.	VIRGINIA	Watts		Keys.
Brookings H-15	1000 KFD		Arlington J-25	1000	NAA	690
Huron H-14	250 KGD	Y 1340	Danville L-25	100	WBTM	1370
Mitchell H-14	100 KGD		Emory L-23	500	WEHC	1350
Pierre G-13 Rapid City H-12	200 KGF 100 WCA	K 630 T 1200	Lynchburg L-25 Newport News L-26	100 100	WLVA WGH	1370
Sioux Falls H-15	1000 KSO	1110	Norfolk L-26	500	WTAR C	1310 780
Vermillion I-15	500 KUSI	890	Petersburg L-26	100	WPHR	1200
Watertown G-15	500 KUSI 100 KGC	R 1210	Portsmouth L-26 to	500	WPOR	780
Yankton I-15	1000 WNA	X C 570	Richmond K-26	100	WBBL	1210
			II.	100 5000	WMBG C	1210
TENNIEGGEE			Roanoke L-24	250	WRVA N WDBJ C	1110 930
TENNESSEE			Rodnoke B-24	250	WRBX	1410
Bristol L-23	100 WOP					
Chattanooga N-21	1000 WDO	D C 1280	WASHINGTO	N		
Jackson M-19 br Knoxville M-22	100 WTJ: 1000 WNO:	S 1310 X C 560	Aberdeen D-2	100	KXRO	1310
KIIOXVIIIE IVI-22	100 WRO	L 1310	Bellingham C-3	100	KVOS	1200
Memphis N-19	100 WHB	O 1370	Everett C-3	50	KFBL	1370
•	500 WMC	N 780	Olympia D-3 tl	100	KGY	1210
	500 WNB	R 1430	Pullman E-5 Seattle C-3	1000 5000	KWSC	1220
Nashville M-21	500 WRE 5000 WLA		Seattle C-3	1000	KJR N KOL C	970 1270
Mashville M-21	50000 WSM			1000	KOMO N	920
Springfield M-20	100 WSIX	1210		100	KPCB	650
			ll .	100	KRSC	1120
			ll .	1000	KTW	1220
TEXAS			li .	100 250	KVL KXA	1370 760
Amarillo N-12	1000 KGR	S 1410	Spokane D-5	100	KFIO	1120
	1000 WDA	G 1410		1000	KFPY C	1340
Austin Q-14	100 KNO		ll .	5000	KGA B	1470
Beaumont R-17 Brownsville U-15	500 KFD!	M 560 /G 1260	T D 3	1000	KHQ N	590
	500 KWW 500 WTA	W 1120	Tacoma D-3	250 500	KMÒ KVI C	1330 570
College Sta. Q-15 Corpus Christi S-14	100 KGF	I 1500	Walla Walla E-5	100	ŔŬĴ	1370
Dalias P-15	10000 KRL	D C 1040	Wenatchee D-4	100	KPQ	1500
	50000 WFA		Yakima D-4	100	KIT	1310
Dublin P-14	500 WRR 100 KFPI		WEST VIDOR	. T A		
El Paso P-9	100 KTSN	1310	WEST VIRGIN			
	100 KTSN 100 WDA	H 1310	Bluefield L-24	250	WHIS	1410
Fort Worth P-15	100 KFJZ		Charleston K-23 Fairmont J-24	250 250	WOBU	580
	1000 KTAT 50000 WBA		Huntington K-23	250 250	WMMN WSAZ	890 580
Galveston R-16	100 KFLX		Wheeling J-24	5000	WWVA C	1160
	500 KFUI					-100
Greenville O-15	15 KFPN	A 1310	WISCONSIN			
Harlingen T-14	500 KRG	V 1260	Eau Claire G-18	1000	WTAQ C	1330
Houston R-16	1000 KPRO 500 KTRI	C N 920 I C 1120	Fond du Lac H-19	100	KFIZ	1420
	250 KXY		Green Bay G-19	100	WHBY	1200
Lubbock O-12 tr	100 KFY0) 1310	Janesville I-19	100	WCLO	1200
San Angelo Q-13	100 KGK	1370	La Crosse H-18 Madison H-19	1000 10 0 0		1380
San Antonio R-14	100 KABO			500	WHA WIBA N	940 1280
	100 KMA 100 KON	C 1370	Manitowoc H-20	100	WOMT	1210
	100 KONG		Milwaukee H-19	250	WHAD C	1120
	50000 WOA	N 1190		250	WISN C	1120
Tyler P-16 rc	100 KGK	B 1500	Pounatta II 10	1000	WTMJ N	620
Waco O-15	1000 WAC	O C 1240 I	Poynette H-19 Racine I-20	100 100	WIBU	1210
Wichita Falls O-14	250 KGK	D 570	Sheboygan H-20	500	WRJN WHBL	1370 1410
			Stevens Point G-19	2000	WLBL	900
UTAH			Superior F-17	1000	WEBC N	1290
Ogden I-7	500 KLO	1400	WYONANIC			
Salt Lake City I-7	1000 KDYI	N 1290	WYOMING			
	50000 KSL	C 1130	Casper H-10	500	KDFN	1440
VERMONT			CA	NADA	4	
Burlington F-27	100 WCA	1200			-	
Rutland G-27	100 WSYE	1500	ALBERTA			
St. Albans F-27	100 WOD! 250 WNBX	√I 1370	Calgary B-7	500	CFAC	690
Springfield G-27 Waterbury F-27 c	250 WNB) 500 WDEV	1260 550		10000	CFCN.	985
	OUT WEEK	990		500	CJCJ	690
					- 20	

	Watts		Kcys.		Watts	i	Kcys.
Edmonton A-8	250	CHMA	580 745	Quebec D-27	100 100	CHRC CKCI	645 645
	500 500	CJCA CKUA	580		100	CKCV	880
Lethbridge C-8 Red Deer A-8	100	CJOC CKLC	1120 840	SASKATCHEW			
BRITISH COLU				Canora B-13 tl Fleming C-13	15 1000	10-BU CIRW	1200 665
Chilliwack B-3	100	CHWK	665	Moose Jaw C-11	500	CJRW CJRM	665
Kamloops B-5	100 100	CJFC CKOV	1120 1200	Prince Albert A-11 rc	25 25	10-AB 10-BI	1200 1200
Kelowna C-6 tl Trail C-6 c	25	10-AT	1155	Regina C-12	500 500	CKCK	960 960
Vancouver B-3	100 500	CHLS CJOR	730 1210	Saskatoon B-11	500	CFQC CJGX	910 630
	100 50	CJOR CKCD CKFC	730 730	Yorkton B-13	500		030
	100	CKMO	730	NEWFOL	ナNDL 200	AND VOAS	810
	100 500	CKWX CNRV	730 1030	St. Johns A-35	500	VOGY	860
Victoria C-3	500	CFCT	630		100 500	VONA VONF	950 1195
MANITOBA				NV 1 - 4 25	750	VOWR VOGT	750 893
Brandon D-14	500 5000	CKX CKY	930 780	Wabana A-35	400		073
Winnipeg D-15		CKI	,00	CENTRAL	AM.	ERICA	
NEW BRUNSW Fredericton D-29	100	CFNB	1210	COSTA RICA	50	TICR	911
Moncton D-30	700 500	CNRA CFBO	630 890	San Jose FF-23 SALVADOR	30	TICK	,,,,
St. John D-30	300	CIPDO	0,0	Salvador CC-19 br	500	RUS	664
NOVA SCOTIA	2002	W. C	605		XICC	1	
Glace Bay C-32 Halifax E-31	2000 500	VAS CHNS	685 815	l		,	
Sydney C-32	500 100	CNRH CJCB	815 880	AGUASCALIEN Aguascalientes W-11 t		XFC	805
Wolfville D-31	50	CKIC	1010	BAJA CALIFO			
ONTARIO				Mexicali O-4 tc	7.5	XEAO	560
Brantford H-23 tr	15	10-BQ	1200 1010	Tiajuana N-3 bc	300	XEFD	1020
Chatham H-22 Cobalt E-23	250 100	CFCO CKMC	1210	CHIHUAHUA		TARRET.	1000
Ft. William E-19 bl Hamilton H-24	100 50	CKPR CHML	890 880	Chihuahua R-9	100 250	XEFI XFF	915
,	1000 50	CKOC	635 930	Juarez P-9	5000 100	XEAN XEFV	750 1370
Kingston G-25 London H-23	5000	CFRC CJGC CFCH	595	1	500	XEJ	1015
North Bay F-23 c Ottawa F-25	100 100	CFCH	930 890	COAHUILA			
	500 100	CNRO CFLC	600 915	Piedras Negras S-12 tr Saltillo, Coah. U-12	100000 10	XEPN XEL	585 1000
Prescott F-25 Preston H-23	100	CKPC	880	Torreon U-11 ti	125 75000	XETB XER-XEF	1380
St. Catherines H-24 t Stratford H-23 tc	1 1000	CKTB 10-AK	635 1200	Villa Acuna R-12 c	/5000	AER-AEI	, , , ,
Toronto G-24	500	10-AK CFCA CFRB	C 690	D, F,	100		1500
	10000 5000	CHNC	840	Mexico City Y-13	250 100		875 1090
	500 5000	CKCL CKGW	580 N 840		10000	XEB	1030
	500	CKNC CPRY	960 840		500 250	XEFH	1250 1360
Waterloo G-23	5000 100	CKCR	645	· []	500 100		1075 990
Windsor I-22 tc	5000 25	CKOK 10-BP	C 540		1000	XEN	711 940
Wingham G-23 PRINCE EDW		_)	1	5000 1000	XEP	780
Charlottestown C-31	500	CFCY	580		250 1000	XETA	1140 610
	100 100	CHCK CHGS	960 1120		500	XETW	830
Summerside C-31	100	0.100			5000 500) XEX	910 1210
QUEBEC Montreal E-26	500	CFCF	N 103		2000 1000	XFG XFI	638 818
	100 100	CHLP	120 120	3∥	5000	XFO	940 860
	5000	CHYC	73 C 73	011	500 50		1000
	5000	CRAC	C /3	1			

HIDALGO	Watts	Ксуз.		Watte	Keys
Pachuca Y-13 rc	100 XETU	890	Colon W-24	100 CMGA	834
JALISCO			Cruces	15 CMHK	1225
Guadalajara, Ja. X-10		1000	Guantanamo X-28 tc Havana W-23	20 CMKJ 500 CMAF	1300 660
MICHOLGAN	500 XED	1155	1	150 CMAY	965
MICHOACAN				150 CMBC 150 CMBD	1270 965
Morelia, Mich. Y-12	125 XEI	1310		150 CMBF	1325
NEUVO LEON		//	l	225 CMBG	1070
Monterrey, N. L. U-13		1315	ľ	150 CMBJ 15 CMBK	1140 1485
	100 XEFJ 250 XEH	1000	1	20 CMBL	1445
	250 XEH 500 XET	1132 690	l	150 CMBN 40 CMBR	1185 1485
PUEBLA				150 CMBS	780
Puebla Z-13	100 XETH	840		150 CMBW	925
QUERETARO				250 CMBY 150 CMBZ	1230 1010
-		. 1		500 CMC	840
Queretaro X-12 br	40 XEFS	1000		150 CMCA 150 CMCB	1230 1070
SAN LUIS POT				250 CMCD	1140
San Luis Potosi W-12	be 100 XEAC	1295		250 CMCF 50 CMCH	890
TAMAULIPAS	'			50 CMCH 250 CMCJ	1405 1185
Matamoros U-14 tr	500000 XEM 150000 XETM	660		15 CMCM	1405
N. Laredo S-13	7.5 XEAB	845 1450	H	250 CMCN 1000 CMCO	925 780
	100 XEFE	1000		150 CMCR	1365
Reynosa, Tams. T-14	150000 XENT 10000 XEAW	1115 965		150 CMCU	630
Tampico, Tams. W-14	70 XEFW	1240	8	150 CMCW 150 CMCX	965 1010
VERA CRUZ	250 XES	1055		1000 CMCY 40 CMDB	1325
Jalapa Y-14	100 XETC	1000		150 CMDD	1395 588
-	500 XFB	840		250 CMDE	925
Vera Cruz, Ver. Z-14	500 XETF 100 XEU	630		3150 CMK 250 CMO	730 630
YUCATAN	100 XEU	1010		1400 CMW	590
Merida, Yuc. X-19	10 XEFC	1020	Matanzas W-24	500 CMX 30 CMGB	890 1265
	105 XEY	546.8		30 CMGC	820
WEST	INTERC	- 11		100 CMGF	987
	INDIES	- 11	Moron	15 CMGH 7.5 CMJP	1040 1360
CUBA		- 11	Pinar del Rio W-22	20 CMAB	1249
Caibarien W-25 Camaguey W-26	250 CMHD 150 CMJC	950	Santa Clara W-25 Santiago X-28	30 CMHI 150 CMKC	1030 1034
Camaguey W-20	50 CMJE	1382 1175	Tuinucu W-25 rc	250 CMHC	790
	200 CMJF 50 CMJG	930	DOMINICAN R	EPUBLIC	
	300 CMJK	790	Santo Domingo X-31	1000 HIX	579
	50 CMJL 50 CMJN	960 1240	HAITI		
Cardenas W-24	30 CMGE	1375	Port au Prince X-30	1000 HHK	920
Ciego de Avila W-26	30 CMJH 45 CMJI	1150 1335			-20
a.	50 CMJO	1110		AMERICA	
Clenfuegos W-25	40 CMHJ 20 CMHL	1125 1290	Bogota, Colombia GG- Caracas Venz. DD-31		685 960
Cienfuegos W-25	40 CMHJ	1125	Bogota, Colombia GG- Caracas Venz. DD-31		

Map Key: For locating cities not shown on the RADEX Map of North America, use the small letters following the square in which that city is located thus: tl top left, tc top center, tr top right, bi bottom left, be bottom center, br bottom right, l left, c center, r right.

TIME CONVERSION TABLE

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

```
Brookings, S. D., CST.
                                                                                                    KFDY | 550
                                                                   Havana, Cuba.
                                                 CMCA
                                                           1230
                 Calgary, Alta. MST.
                                                                   Havana, Cuba, EST.
Havana, Cuba, EST.
                                                                                                                     Denver, Colo., MST.
CFAC
                                                                                                               920
                                                                                                    KFEL
                                                 CMCB
                                                           1070
                 St. John, N. B.
                                                                                                                     St. Joseph, Mo., CST.
CFBO
           890
                                                                                                               680
                                                                                                    KFEQ
                                                 CMCD
                                                            1140
                 Toronto, Ont., EST.
CFCA
         1120
                                                                                                                     Boone, Iowa, CST
                                                                                                    KFGQ
                                                                                                              1310
                                                                   Havana, Cuba, EST.
                                                 CMCF
                                                             890
                 Montreal. Que., EST
CFCF
                                                                                                                     Wichita, Kans., CST.
Los Angeles, Calif., PST
          1030
                                                                                                              1300
                                                                                                   KFH
                 North Bay, Ont., EST
Calgary, Alta., MST
                                                 CMCH
                                                                   Havana, Cuba, EST.
                                                            1405
           930
CFCH
                                                                                                   KFI
                                                                                                               640
                                                                   Havana, Cuba.
                                                            1185
                                                                                                                     Spokane, Wash., PST
CFCN
           985
                                                                   Havana, Cuba.
Havana, Cuba.
Havana, Cuba.
Havana, Cuba.
                                                                                                   KF10
                                                                                                              1120
                 Chatham, Ont., EST.
Victoria, B. C., PST.
Charlottetown, P. E. I
                                                 CMCM
                                                            1405
                                                                                                                     Fond du Lac, Wis., CST
CFCO
          1010
                                                                                                   KFIZ
                                                                                                              1420
                                                  CMCN
                                                             925
CFCT
           630
                                                                                                                     Marshalltown, Iowa.
                                                                                                              1200
                                                                                                   KFJB
                                                  CMCQ
                                                             780
CFCY
           580
                                                                                                                     Klamath Falls, Ore.
                                                                                                              1210
                                                                                                    KFJI
                  Kamloops, B. C., PST
                                                  CMCR
                                                            1365
CFJC
                                                                                                                     Grand Forks, N. D
          1120
                                                                                                   KFJM
                                                                                                              1370
                                                  CMCU
                                                             630
                                                                   Havana, Cuba.
                 Prescott, Ont. EST.
Fredericton, N.B., AST.
                                                                                                                     Portland, Ore., PST
CFLC
           915
                                                                                                              1300
                                                                                                   KFJR
                                                  CMCW
                                                             965
                                                                   Havana, Cuba, EST.
                                                                                                                     Fort Worth, Texas, CST.
CFNB
          1210
                                                                                                   KFJZ
                                                                                                              1370
                                                                   Havana, Cuba.
                                                            1010
                 Saskatoon, Sask.
Toronto, Ont., EST.
                                                  CMCX
CFQC
           910
                                                                   Havana, Cuba, EST.
Havana, Cuba.
Havana, Cuba.
Havana, Cuba
                                                                                                                     Greeley, Colo., MST
                                                                                                               880
                                                                                                    KFKA
                                                  CMCY
                                                            1325
CFRB
           690
                                                                                                                     Lawrence. Kans. CST.
                                                                                                    KFKU
                                                                                                              1220
                                                  CMDB
                                                            1395
           930
                  Kingston, Ont.
                                                                                                                     Chicago, Ill.
CFRC
                                                                                                    KFKX
                                                                                                              1020
                                                  CMDD
                                                             588
                  Montreal, Que.
CHCH
          1200
                                                                                                                     Rockford, Ill., CST.
                                                                                                    KFLV
                                                                                                              1410
                                                  CMDE
                 Charlottetown, P. E. I.
Summerside, P. E. I.
                                                             925
CHCK
           960
                                                                                                              1370
                                                                                                                     Galveston, Texas.
Northfield, Minn., CST
                                                                                                    KFLX
                                                             834
                                                                    Colon. Cuba.
CHGS
          1120
                                                                    Matanzas, Cuba.
Matanzas, Cuba.
                                                                                                    KFMX
                                                                                                              1250
                  Montreal, Que.
Vancouver, B. C., PST.
Edmonton, Alta., MST.
                                                            1205
                                                  CMGB
          1200
                                                                                                                     Shenandoah, Iowa, CST
CHLP
                                                                                                               890
                                                                                                    KFNF
                                                                                                                     Lincoln, Nebr., CST.
Long Beach, Calif., PST.
Dublin, Texas, CST.
                                                  CMGC
                                                             820
            730
CHLS
                                                                                                              1210
                                                                    Cardenas, Cuba, EST.
                                                                                                    KFOR
                                                  CMGE
                                                            1375
CHMA
           580
                                                                                                    KFOX
                                                                                                              1250
                                                                    Matanzas, Cuba.
Matanzas, Cuba
                                                  CMGF
                                                             987
                  Hamilton, Ont., EST.
            880
                                                                                                    KFPL
                                                                                                              1310
                  Toronto, Ont., Est.
Toronto, Ont., Halifax, N. S., AST.
Quebec. Que., EST.
Regina, Sask., MST.
Chilliwack, B. C., PST.
                                                  CMGH
                                                            1040
           840
                                                                                                                     Greenville, Texas, CST
CHNC
                                                                                                    KEPM
                                                                                                              1310
                                                                    Tuinucu, Cuba.
                                                             790
                                                  CMHC
                                                                                                                      Fort Smith, Ark., CST.
CHNS
            815
                                                                                                    KFPW
                                                                                                              1210
                                                             950
                                                                    Caibarien, Cuba.
                                                  CMHD
                                                                                                                     Spokane, Wash., PST.
 CHRC
            645
                                                                    Santa Clara, Cuba, EST.
Cienfuegos, Cuba, EST.
                                                                                                              1340
                                                                                                    KFPY
                                                  CMHI
                                                            1030
CHWC
            960
                                                                                                                      Anchorage, Alaska.
                                                                                                    KFQD
KFRC
                                                                                                              1230
                                                  CMHK
CMHK
CMHL
                                                            1125
            665
                                                                                                                      San Francisco, Calif
                                                                                                               610
                                                            1225
                                                                    Cruces, Cuba.
                  Montreal, Que.
                                                                                                                      Columbia, Mo., CST
            730
 CHYC
                                                                                                    KFRU
                                                                                                               630
                  Edmonton, Alta, MST.
Sydney, N. S., AST.
Calgary, Alta, MST.
London, Ont., EST.
Yorkton, Sask., CST.
                                                            1290
                                                                    Cienfuegos, Cuba.
                                                                                                                      San Diego, Calif., PST
            745
 CJCA
                                                                                                               600
                                                                                                    KF$D
                                                                    Camaguey, Cuba.
                                                            1382
                                                                                                                     Los Angeles, Calif. PST. Galveston, Texas, CST. St. Louis, Mo., CST.
 CJCB
            880
                                                                                                              1120
                                                                                                    KFSG
                                                                    Camaguey, Cuba.
                                                            1175
                                                   CMJE
 CICI
            690
                                                                                                              1290
                                                                    Camaguey, Cuba.
Camaguey, Cuba.
                                                                                                    KFUL
                                                   CMJF
                                                              930
 CJGC
            595
                                                                                                    KFUO
                                                                                                               550
                                                   CMJG
                                                            1050
            630
                                                                                                                      Los Angeles, Calif., PST
 CJGX
                                                                                                              1000
                                                   CW1K
CW1I
CW1H
                                                                    Ciego de Avila, Cuba.
Ciego de Avila, Cuba.
                                                                                                    KFVD
                  Lethbridge, Alta., MST.
Vancouver, B. C., PST.
                                                             1150
                                                                                                                      Cape Girardeau. Mo.
 CJOC
           1120
                                                                                                              1210
                                                                                                    KFVS
                                                             1335
                                                                                                                      Los Angeles, Calif., PST
St. Louis, Mo., CST.
           1210
 CJOR
                                                                                                     KFWB
                                                                                                               950
                                                              790
                                                                    Camaguey, Cuba
                  Moose Jaw, Sask., MST
            665
 CJRM
                                                                                                    KFWF
                                                                                                              1200
                                                   CMJL
                                                                    Camaguey, Cuba
Camaguey, Cuba
                  Fleming, Sask., MST.
 CJRW
            665
                                                                                                    KFWI
                                                                                                               930
                                                                                                                      San Francisco, Calif.
                                                   CMJN
                  Montreal, Que., EST.
Vancouver, B. C.
                                                             1240
            730
                                                                                                                      Nampa, Idaho, MST
Denver, Colo., MST.
 CKAC
                                                                                                              1200
                                                                                                    KFXD
                                                             1110
                                                                    Ciego de Avila, Cuba.
 CKCD
            730
                                                                                                    KFXF
                                                                    Moron, Cuba.
                  Quebec, Que., EST.
Regina, Sask., MST
                                                   CMJP
                                                             1360
                                                                                                                      Grand Jet., Colo., MST
San Bernardino, Calif.
 CKCI
            645
                                                                    Havana, Cuba, EST.
                                                                                                    KFXJ
                                                                                                              1200
                                                   CMK
                                                              730
 CKCK
            960
                                                                                                    KFXM
                                                                                                              1210
                                                                    Santiago, Cuba.
                                                   CMKC
                                                             1034
                   Toronto, Ont., EST.
 CKCL
            580
                                                                                                              1310
                                                                                                                      Oklahoma City, Okla
                                                                    Guantanamo, Cuba.
                                                                                                     KFXR
                                                             1300
                                                                                                                      Lubbock, Texas, CST.
Bismarck, N. D., CST.
Spokane, Wash. PST.
            890
                  Ottawa, Ont.
 CKCO
                                                                                                     KFYO
                                                                                                              1310
                                                   CMQ
                                                              630
                                                                    Havana, Cuba.
                   Waterloo, Ont., EST.
 CKCR
            645
                                                                    Havana, Cuba, EST.
Havana, Cuba, EST.
                                                                                                                550
                                                                                                     KFYR
                   Quebec, Que., EST.
                                                              590
            880
 CKCV
                                                                                                     KGA
                                                                                                               1470
                                                   CMX
                                                              890
                   Vancouver, B. C.
                                                                    Moneton, N. B., AST.
Halifax, N. S., AST.
Ottawa, Ont., EST.
Vancouver, B. C., PST.
                                                                                                                      Tueson, Ariz., MST.
            730
 CKFC
                                                                                                     KGAR
                                                                                                              1370
                  Toronto, Ont. EST.
Wolfville, N. S., AST.
Red Deer, Alta. MST.
                                                              630
                                                   CNRA
 CKGW
            840
                                                                                                               1330
                                                                                                                      San Diego, Calif., PST
                                                                                                     KGB
                                                   CNRH
                                                              815
 CKIC
           1010
                                                                                                                      Ketchikan, Alaska
                                                                                                     KGBU
                                                                                                                900
                                                   CNRO
                                                              600
 CKLC
            840
                                                                                                              1310
                                                                                                                      Springfield, Mo., CST.
                                                                                                     KGBX
                                                   CNRV
                                                             1030
                                                                                                                       York, Neb., CST
                   Cobalt, Ont., EST.
 CKMC
           1210
                                                                    Toronto, Ont., EST.
                                                                                                     KGBZ
                                                                                                                930
                                                              840
                                                   CPRY
                                                                                                                      Decorah, Iowa, CST.
Watertown, S. D., CST.
Mandan, N. D., MST.
                   Vancouver, B. C.
            730
 CKMO
                                                                                                     KGCA
                                                                                                              1270
                                                              920
                                                                     Port-au-Prince, Haiti
                                                   HHK
                   Toronto, Ont., EST
 CKNC
            960
                                                                                                     KGCR
                                                                                                               1210
                   Hamilton, Ont., EST.
Windsor, Ont., EST.
Kelowna, B. C., PST.
Preston, Ont., EST.
                                                              579
                                                                     Santo Domingo. EST.
                                                   HIX
 CKOC
            635
                                                                                                     KGCU
                                                                                                               1240
                                                   HJN
                                                              685
                                                                     Bogota, Colombia.
                                                                                                                      Wolf Point, Mont., MST.
Mitchell, S. D., CST.
 CKOK
            540
                                                                                                     KGCX
                                                                                                               1310
                                                                     San Antonio, Tex.,
                                                   KABC
                                                             1420
           1200
                                                                     Portland, Ore., PST
                                                                                                     KGDA
                                                                                                               1370
                                                   KALE
                                                             1300
 CKPC
                                                                                                                      Fergus Falls, Minn.
                                                                     Little Rock, Ark., CST
                                                                                                     KGDE
                                                                                                               1200
                   Ft. William, Ont., EST.
                                                   KARK
                                                              890
                                                                                                                      Stockton, Calif., PST.
Huron, S. D., CST.
Yuma, Colo., MST.
Long Beach, Calif., PST.
 CKPR
            890
                                                                     Elk City, Okla., CST.
Portland, Ore., PST.
                                                                                                     KGDM
                                                                                                               1100
                                                             1210
                                                   KASA
                   St. Catharines, Ont.
             635
 CKTB
                                                                                                               1340
                   Edmonton, Alta., MST.
Vancouver, B. C., PST.
Brandon, Man., CST.
                                                                                                     KGDY
                                                   KBPS
                                                             1420
             580
  CKUA
                                                                                                               1200
                                                                     Paragould, Ark., CST
                                                                                                     KGEK
                                                   KBTM
                                                             1200
             730
  CKWX
                                                                                                     KGER
                                                                                                               1360
                                                   KCMC
                                                                                       CST.
                                                             1420
                                                                     Texarkana, Ark
             930
                                                                                                                       Ft. Morgan, Colo., MST
  CKX
                                                                                                     KGEW 1200
                                                                     Enid, Okla., CST
                   Winnipeg, Man., CST.
Pinar del Rio, Cuba.
                                                             1370
                                                   KCRC
  CKY
             780
                                                                     Jerome, Ariz., MST
                                                                                                                       Kalispell, Mont., MST.
                                                                                                     KGEZ
                                                                                                               1310
                                                   KCRJ
                                                             1310
  CMAB
           1249
                                                                     Santa Barbara, Calif.
                                                                                                                       Shawnee, Okla., CST.
                                                    KDB
                                                             1500
                                                                                                     KGFF
                                                                                                               1420
                   Havana, Cuba, EST
             660
  CMAF
                                                                     Casper, Wyo., MST.
                                                    KDFN
                                                             1440
                                                                                                                       Oklahoma City, Okla.
                                                                                                     KGFG
                   Havana, Cuba.
                                                                                                               1370
             965
  CMAY
                                                                     Pittsburgh, Pa., EST.
Devils Lake, N. D. CST.
                   Havana, Cuba, EST.
Havana, Cuba.
                                                    KDKA
                                                               980
                                                                                                               1500
                                                                                                                       Corpus Christi, Texas.
  CMBC
           1270
                                                                                                     KGFI
                                                   KDLR
                                                             1210
  CMBD
            965
                                                                                                               1200
                                                                                                                       Los Angeles, Calif.
                                                                                                     KGFJ
                                                                     Salt Lake City, Utah
                                                    KDYL
                                                              1290
           1325
                   Havana, Cuba.
                                                                                                                       Moorhead, Minn., CST.
  CMBF
                                                                                                     KGFK
                                                                                                               1500
                                                              1430
                                                                     Los Angeles, Calif., PST
                                                    KECA
                   Havana, Cuba.
                                                                                                                       Santa Fe, N. M., MST.
  CMBG
           1070
                                                                                                     KGFL
                                                                                                               1370
                                                                     Burbank, Calif., PST.
                                                   KELW
                                                               780
                   Havana, Cuba.
  CMBJ
            1140
                                                                                                               1310
                                                                                                                       Kearney, Neb., CST.
                                                                     Bakersfield, Calif., PST
                                                                                                     KGFW
                                                    KERN
                                                             1200
                   Havana, Cuba.
           1485
                                                                                                                       Pierre, S. D.
  CMBK
                                                                                                     KGFX
                                                                                                                 630
                                                                     Portland, Ore., PST.
                   Havana, Cuba, EST.
                                                              1180
                                                    KEX
            1445
  CMBL
                                                                                                                       San Francisco, Calif.
                                                                                                      KGGC
                                                                                                                1420
                                                                     Lincoln, Neb., CST
                                                               770
                                                    KFAB
           1185
                   Havana, Cuba, EST.
  CMBN
                                                                                                                       Coffeyville, Kans., CST.
                                                                     Los Angeles, Calif., PST.
                                                                                                      KGGF
                                                                                                               1010
                                                    KFAC
                                                              1300
            1485
                   Havana, Cuba.
                                                                                                      KGGM 1230
  CMBR
                                                                                                                       Albuquerque, N. M.
                                                                     Great Falls, Mont., MST.
                                                    KFBB
                                                              1280
                   Havana, Cuba.
             780
                                                                                                                       Pueblo, Colo., MST.
  CMBS
                                                                                                      KGHF
                                                                                                               1320
                                                                     Abilene, Kans., CST.
                                                    KFBI
                                                              1050
                   Hayana, Cuba.
                                                                                                                       Little Rock, Ark., CST.
  CMBW
             925
                                                                                                                1200
                                                                     Sacramento, Calif., PST.
                                                                                                      KGHI
                   Havana, Cuba.
                                                    KFBK
                                                              1310
  CMBY
            1230
                                                                                                      KGHL
                                                                                                                 950
                                                                                                                       Billings, Mont., MST.
                                                                     Everett, Wash., PST.
                   Havana, Cuba, EST.
                                                    KFBL
                                                              1370
            1010
                                                                                                                       Butte, Mont., MST
  CMBZ
                                                                                                      KGIR
                                                                                                                1360
                                                                     Beaumont, Tex., CST
                                                               560
                                                    KFDM
             840 Havana, Cuba.
  CMC
```

```
KGIW
              1420
                      Trinidad, Colo., MST.
                                                           KROW
                                                                                                                                       Harrisburg, Pa., EST.
Baltimore, Md., EST.
Ft. Worth, Texas, CST
                                                                       930
                                                                               Oakland, Calif., PST.
                                                                                                                    WBAK
   KGIX
              1420
                      Las Vegus, Nev., PST.
Grant City, Mo., CST.
                                                           KRSC
                                                                      1120
                                                                               Seattle, Wash., PST
                                                                                                                    WBAL
                                                                                                                               1060
                                                                               Manhattan, Kans., CST.
Sioux City, Iowa, CST.
St. Louis, Mo., CST.
Pocatello, Idaho, MST.
Salt Lake City, Utah.
Dec Misser, Tyron.
   KGIZ
              1500
                                                           KSAC
                                                                       580
                                                                                                                    WBAP
                                                                                                                                800
   KGKB
             1500
                       Tyler, Texas, CST
                                                           KSCJ
                                                                      1330
                                                                                                                    WBAX
                                                                                                                               1210
                                                                                                                                       Wilkes Barre, Pa., EST
                                                                                                                                      Wilses Barre, Pa. EST. Brooklyn, N. Y., EST. Richmond, Va., EST. Chicago, Ill., CST. Brooklyn, N. Y., EST. Ponca City, Okla., CST Bay City, Mich., EST. Buffalo, N. Y., EST. Marquette, Mich., CST. Huntsville, Ala. CST.
   KGKL
              1370
                      San Angelo. Texas, CST.
                                                           KSD
                                                                       550
                                                                                                                    WBBC
                                                                                                                               1400
                      Wichita Falls, Texas.
   KGKO
               570
                                                           KSEI
                                                                       890
                                                                                                                    WBBL
                                                                                                                               1210
   KGKX
              1420
                     Lewiston, Idaho.
Scottsbluff, Neb., MST.
                                                           KSL
                                                                      1130
                                                                                                                    WBBM
                                                                                                                                770
  KGKY
KGMB
              1500
                                                           KSO
KSOO
                                                                      1380
                                                                              Des Moines, Iowa.
Sioux Falls, S. D., CST.
                                                                                                                    WBBR
                                                                                                                               1300
                      Honolulu, Hawaii.
                                                                      1110
                                                                                                                    WBBZ
                                                                                                                               1200
  KGNF
              1430
                      North Platte, Neb.
                                                                                                                    WBCM
                                                           KSTP
                                                                      1460
                                                                               St. Paul, Minn., CST.
                                                                                                                               1410
   KGNO
             1210
                     Dodge City, Kans.
San Francisco, Calif
                                                                               San Francisco, Calif.
                                                           KTAB
                                                                       560
                                                                                                                   WBEN
  KGO
               790
                                                           KTAR
                                                                       620
                                                                               Phoenix, Ariz., MST.
Ft. Worth, Texas.
                                                                                                                   WBEO
                                                                                                                              1310
  KGRS
             1410
                      Amarillo, Texas, CST.
                                                                      1240
                                                                                                                   WBHS
                                                           KTAT
                                                                                                                              1200
                                                                                                                                       Huntsville, Ala., CST
                     Amarino, Hexas, CST.
Honolulu, Hawaii.
Missoula, Mont., MST.
Portland, Ore., PST.
Olympia, Wash., PST.
Los Angeles, Calif., PST.
Spaleas, West. BST.
  KGU
               750
                                                           KTBS
                                                                      1450
                                                                              Shreveport, La., CST.
Twin Falls, Idaho, MST
                                                                                                                                       Greensboro, N. C., EST
New York City, EST.
New York City.
                                                                                                                   WBIG
                                                                                                                              1440
  KGVO
             1200
                                                           KTFI
                                                                      1240
                                                                                                                   WBNX
                                                                                                                              1350
  KGW
               620
                                                          KTHS
                                                                      1040
                                                                              Hot Springs, Ark., CST
Los Angeles, Calif., PSZ
                                                                                                                   WBOQ
  KĞŸ
              1210
                                                          KTM
                                                                       780
                                                                                                                   WBOW
                                                                                                                                       Terre Haute, Ind., CST.
Birmingham, Ala., CST.
                                                                                                                              1310
  KHJ
              900
                                                          KTRH
                                                                      1120
                                                                              Houston, Texas, CST
                                                                                                                   WBRC
                                                                                                                               930
  KHO
               590
                     Spokane, Wash., PST.
Clovis, N. M.
                                                          KTSA
                                                                      1290
                                                                               San Antonio, Tex., CST.
                                                                                                                   WBRE
                                                                                                                              1310
                                                                                                                                       Wilkes Barre, Pa.
Babson Park, Mass
                                                                              El Paso, Texas.
Seattle, Wash.
Walla Walla, Wash.
  KICA
             1370
                                                                                                                   WBSO
                                                           KTSM
                                                                      1310
                                                                                                                               920
  KICK
             1420
                     Red Oak, Iowa
                                                          KTW
                                                                      1220
                                                                                                                                       Charlotte, N. C., EST.
Danville, Va., EST.
Boston, Mass., EST.
                                                                                                                   WBT
                                                                                                                              1080
  KID
             1320
                     Idaho Falls, Idaho, MST.
                                                          KUJ
                                                                      1370
                                                                                                                   WBTM
                                                                                                                              1370
                                                                     1420
  KIDO
             1350
                      Boise, Idaho, MST.
                                                          KUMA
                                                                              Yuma, Ariz., MST.
Fayetteville, Ark., CST.
Vermillion, S. D., CST.
                                                                                                                   WBZ
                                                                                                                               990
  KIDW
             1420
                     Lamar, Colo., MST
Eureka, Calif., PST
                                                          KUOA
                                                                                                                                      Springfield, Mass. EST.
Storrs, Conn., EST.
Canton, N. Y., EST.
Pittsburgh, Pa., EST.
                                                                     1390
                                                                                                                   WBZA
                                                                                                                               990
  KIEM
             1210
                                                          KUSD
                                                                       890
                                                                                                                   WCAC
                                                                                                                               600
  KIEV
              859
                     Glendale, Calif., PST.
                                                          ΚVI
                                                                       570
                                                                             Tacoma, Wash., PST.
Seattle, Wash.
                                                                                                                   WCAD
                                                                                                                              1220
  KIFH
                                                                                                                   WCAE
             1310
                     Juneau, Alaska
                                                          KVL
                                                                     1370
                                                                                                                              1220
                     Yakima, Wash., PST.
San Francisco, Calif.
Seattle, Wash., PST.
Blytheville, Ark.
  KIT
             1310
                                                          KVOA
                                                                     1260
                                                                              Tucson, Ariz.
Tulsa, Okla., CST
                                                                                                                   WCAH
                                                                                                                              1430
                                                                                                                                       Columbus, Ohio, EST.
             1070
                                                                                                                                      Lincoln, Neb., CST.
Northfield, Minn., CST
Camden, N. J., EST.
  KJBS
                                                          KVOO
                                                                     1140
                                                                                                                   WCAJ
                                                                                                                               590
  KJR
                                                          KVOR
                                                                     1270
                                                                              Colorado Springs, Colo.
                                                                                                                   WCAL
                                                                                                                              1250
  KLCN
             1290
                                                          KVOS
                                                                              Bellingham, Wash.
Cedar Rapids, Ia., CST.
                                                                     1200
                                                                                                                   WCAM
                                                                                                                              1280
                     Ogden, Utah.
Minot, N. D., CST.
Little Rock, Ark., CST.
Oakland, Calif., PST.
Oakland, Calif., PST.
Denver, Colo., MST.
Shannadah, Low. CST.
  KLO
             1400
                                                          KWCR
                                                                     1420
                                                                                                                   WCAO
                                                                                                                                      Baltimore, Md., EST.
Asbury Park, N. J., EST
Rapid City, S. D., CST.
Philadelphia, Pa., EST.
                                                                                                                               600
  KLPM
                                                                             Shreveport, La.
Stockton, Calif., PST.
             1240
                                                          KWEA
                                                                     1210
                                                                                                                   WCAP
                                                                                                                              1280
  KLRA
             1390
                                                          KWG
                                                                     1200
                                                                                                                   WCAT
                                                                                                                              1200
  KLS
             1440
                                                          KWJJ
                                                                     1060
                                                                             Portland, Ore.
St. Louis, Mo., CST.
                                                                                                                   WCAU
                                                                                                                             1170
                                                          KWK
KWKC
  KLX
              880
                                                                     1350
                                                                                                                   WCAX
                                                                                                                                      Burlington, Vt., ES
Carthage, Ill., CST
                                                                                                                              1200
  KLZ
                                                                             Kansas City, Mo.
Shreveport, La., CST
Decorah, Iowa, CST
              560
                                                                     1370
                                                                                                                  WCAZ
                                                                                                                              1070
  KMA
                                                          KWKH
              930
                     Shenandoah, Iowa, CST
                                                                      850
                                                                                                                  WCBA
                                                                                                                              1440
                                                                                                                                      Allentown, Pa., EST
  KMAC
             1370
                     San Antonio, Tex., CST.
                                                                     1270
                                                                                                                  WCBD
                                                                                                                             1080
                                                                                                                                      Zion, Ill., CST.
  KMBC
                     Kansas City, Mo., CST.
Medford, Ore., PST.
Fresno, Calif., PST.
              950
                                                          KWSC
                                                                     1220
                                                                             Pullman, Wash., PST.
Brownsville, Texas.
                                                                                                                  WCBM
                                                                                                                             1370
                                                                                                                                      Baltimore, Md., EST
 KMED
KMJ
            1310
                                                          KWWG
                                                                                                                  WCBS
                                                                     1260
                                                                                                                             1210
                                                                                                                                      Springfield, Ill., CST
              580
                                                          KXA
                                                                      760
                                                                             Seattle, Wash., PST
                                                                                                                               810
                                                                                                                  WCCO
                                                                                                                                      Minneapolis, Minn
                     Monroe, La., CST.
Clay Center, Neb., CST.
 KMLB
             1200
                                                          KXL
                                                                     1420
                                                                             Portland, Ore., PST.
                                                                                                                  WCDA
                                                                                                                                     New York City, EST.
Chicago, Ill., CST.
                                                                                                                             1350
                                                         KXO
KXRO
 KMMJ
              740
                                                                     1500
                                                                             El Centro, Calif.
Aberdeen, Wash., PST
Houston, Texas, CST.
                                                                                                                  WCFL
                                                                                                                              970
 KMO
             1330
                     Tacoma, Wash., PST
St. Louis, Mo., CST.
                                                                     1310
                                                                                                                  WCGU
                                                                                                                             1400
                                                                                                                                      Brooklyn, N. Y., EST
 KMOX
            1090
                                                          KXYZ
                                                                                                                  WČKY
                                                                     1440
                                                                                                                                     Covington, Ky., CST.
Janesville, Wis. CST.
Joliet, Ill., CST.
Pensacola, Fla., CST.
                                                                                                                             1490
 KMPC
                                                          KYA
              710
                                                                                                                  WCĽO
                     Beverly Hills, Calif
                                                                     1230
                                                                             San Francisco, Calif.
                                                                                                                             1200
 KMTR
              570
                     Hollywood, Calif., PST.
                                                          KYW
                                                                             Chicago, Ill., CST.
Manila, P. I.
                                                                     1020
                                                                                                                  WCLS
                                                                                                                             1310
 KNOW
                     Austin, Texas, CST.
            1500
                                                         KZRM
                                                                     618.5
                                                                                                                  WCOA
                                                                                                                             1340
 KNX
                     Hollywood, Calif. PST
                                                         NAA
            1050
                                                                      690
                                                                             Arlington, Va.
                                                                                                                  WCOC
                                                                                                                              880
                                                                                                                                      Meridian, Miss., CST
 KOA
             830
                     Denver, Colo., MST
                                                         RUS
                                                                      664
                                                                                                                                     Harrisburg, Pa., EST.
Chicago, Ill., CST.
Charleston, S. C., EST.
Portland, Maine EST.
                                                                             Salvador.
                                                                                                                  WCOD
                                                                                                                             1200
                                                                            San Jose, C. R.
Glace Bay, N. S., AST.
St. Johns, N. F.
Wabana, N. F.
St. Johns, N. F.
 KOAC
             550
                    Corvallis, Ore.. PST.
                                                         TICR
                                                                      911
                                                                                                                  WCRW
                                                                                                                             1210
 KOB
            1180
                     Albuquerque, N. M.
                                                         VAS
                                                                                                                  WCSC
                                                                      685
                                                                                                                             1360
 KOCW
            1400
                    Chickasha, Okla
                                                         VOAS
                                                                      810
                                                                                                                  WCSH
                                                                                                                              940
 KOH
            1380
                    Reno, Nev., PST
                                                         VOGT
                                                                      893
                                                                                                                  WDAE
                                                                                                                             1220
                                                                                                                                      Tampa, Fla., EST
 KOIL
            1260
                    Council Bluffs, Ia. CST .
                                                         VOGY
VONA
VONF
                                                                      860
                                                                                                                  WDAF
                                                                                                                                     Kansas City, Mo., CST
                                                                                                                              610
 KOIN
             940
                    Portland, Ore., PST.
                                                                     950
                                                                             St. Johns, N. F
                                                                                                                  WDAG
                                                                                                                                     Amarillo, Texas, CST.
El Paso, Texas.
Philadelphia, Pa., EST.
                                                                                                                             1410
 KOL
                    Seattle, Wash., PST.
                                                                            St. Johns, N. F.
St. Johns, N. F.
Boston, Mass. EST.
            1270
                                                                    1195
                                                                                                                  WDAH
                                                                                                                             1310
 KOMA
            1480
                    Oklahoma City, Okla.
Seattle, Wash., PST.
San Antonio, Tex., CST.
                                                         VOWR
                                                                      750
                                                                                                                  WDAS
                                                                                                                             1370
 KOMO
KONO
             920
                                                                                                                                     Fargo, N. D., CST.
Roanoke, Va., EST.
                                                         WAAB
                                                                    1410
                                                                                                                  WDAY
                                                                                                                              940
            1370
                                                         WAAF
                                                                            Chicago, Ill., CST.
Newark, N. J., EST.
Jersey City, N. J., EST.
                                                                     920
                                                                                                                  WDBJ
                                                                                                                              930
 KOOS
                    Marshfield, Ore.,
                                          PST
            1370
                                                         WAAM
                                                                    1250
                                                                                                                                     Orlando, Fla. EST
                                                                                                                  WDBO
                                                                                                                              580
 KORE
            1420
                    Eugene, Ore., PST
                                                         WAAT
                                                                     940
                                                                                                                  WDEL
                                                                                                                             1120
                                                                                                                                     Wilmington, Del., EST
                    Phoenix, Ariz., MST
Seattle, Wash., PST
Prescott, Ariz., MST
 KOY
                                                         WAAW
            1390
                                                                            Omaha, Neb., CST.
New York City, EST.
                                                                     660
                                                                                                                  WDEV
                                                                                                                                     Waterbury, Vt., EST.
Minneapolis, Minn.
                                                                                                                              550
                                                         WABC
 KPCB
             650
                                                                     860
                                                                                                                  WINGY
                                                                                                                             1180
 KPJM
            1500
                                                         WABI
                                                                    1200
                                                                            Bangor, Maine, EST
                                                                                                                 WDOD
                                                                                                                             1280
                                                                                                                                     Chattanooga, Tenn
KPO
                    San Francisco, Calif.
                                                         WABZ
                                                                    1200
                                                                            New Orleans, La., CST.
                                                                                                                 WDRC
                                                                                                                            1330
                                                                                                                                     Hartford, Conn., EST.
KPOF
             880
                    Denver, Colo., MST.
                                                         WACO
                                                                   1240
                                                                            Waco, Texas, CST.
                                                                                                                 WDSU
                                                                                                                            1250
                                                                                                                                     New Orleans, La., CST.
KPPC
           1210
                    Pasedena, Calif., PST
                                                         WADC
                                                                  1320
                                                                            Akron, Ohio, EST.
                                                                                                                 WDZ
                                                                                                                             1070
                                                                                                                                     Tuscola, Ill., CST
KPO
           1500
                    Wenatchee, Wash., PST.
                                                         WAGM 1420
                                                                            Presque Isle, Me., EST.
                                                                                                                 WEAF
                                                                                                                             660
                                                                                                                                     New York City, EST.
KPRC
            920
                    Houston, Texas, CST.
                                                         WAIU
                                                                     640
                                                                            Columbus, Ohio, EST.
                                                                                                                  WEAN
                                                                                                                              780
                                                                                                                                    Providence, R. I., EST.
KQV
           1380
                   Pittsburgh, Pa., EST
                                                         WALR
                                                                    1210
                                                                            Zanesville, Ohio, EST.
                                                                                                                 WEAO
                                                                                                                              570
                                                                                                                                    Columbus, Ohio, EST.
KQW
           1010
                   San Jose, Calif., PST.
                                                         WAMC 1420
                                                                            Anniston, Ala., CST.
                                                                                                                 WEBC
                                                                                                                            1290
                                                                                                                                    Superior, Wis. CST.
KRE
           1370
                   Berkeley, Calif., PST.
                                                         WAML 1310
                                                                            Laurel, Miss.
                                                                                                                 WEBQ
                                                                                                                            1210
                                                                                                                                    Harrisburg, Ill., CST.
KREG
           1500
                   Santa Ana, Calif., PST.
                                                        WAPI
                                                                   1140
                                                                            Birmingham, Ala., CST
                                                                                                                 WEBR
                                                                                                                            1310
                                                                                                                                    Buffalo, N. Y., EST.
KRGV
           1260
                   Harlingen, Texas, CST
                                                        WASH 1270
                                                                            Gd. Rapids, Mich., EST.
                                                                                                                 WEDC
                                                                                                                            1210
                                                                                                                                    Chicago, Ill.
KRKD
          1120
                   Los Angeles, Calif., PST.
                                                        WAWZ 1350
                                                                           Zarephath, N. J., EST.
                                                                                                                 WEEL
                                                                                                                             590
                                                                                                                                    Boston, Mass., EST.
KRLD
          1040
                   Dallas, Texas, CST.
                                                        WAZL
                                                                   1420
                                                                           Hazelton, Pa., EST.
                                                                                                                 WEEU
                                                                                                                             830
KRMD
         1310
                   Shreveport, Iowa, CST
                                                                                                                                    Reading, Pa., EST.
                                                        WBAA
                                                                  1400
                                                                           Lafayette, Ind., CST.
                                                                                                                 WEHC
                                                                                                                          1350
                                                                                                                                    Emory, Va., EST.
```

```
Memphis, Tenn., CST.
                    Cicero, Ill., CST
                                                         WILL
                                                                      899
                                                                             Urbana, Ill., CST.
                                                                                                                   WMC
WEHS 1420
                                                                             Wilmington, Del., EST.
                                                                                                                   WMCA
                                                                                                                               570
                                                                                                                                       New York City, EST.
                                                         WILM
                                                                    1420
WELL
                    Battle Creek, Mich.
           1420
                                                                                                                                      Brooklyn, N. Y., EST.
Fairmont, W. Va., EST.
                                                                                                                   WMIL
                                                                                                                            1500
                                                         WINS
                                                                    1180
                                                                             New York City, EST.
Miami, Fla., EST.
WENC
           1420
                    Americus, Ga., EST.
                                                                                                                  WMMN 890
WENR
                    Chicago, Ill., CST.
                                                         WIOD
                                                                    1300
            870
                                                                                                                  WMPC 1500
                                                                             Philadelphia, Pa., EST.
Columbia, S. C., EST.
                                                                                                                                      Lapeer, Mich., EST
WERE
                   Erie, Pa., EST.
Elmira, N. Y.
                                                         WIP
                                                                      610
           1420
                                                                                                                                      New York City, EST
                                                                                                                  WMSG 1350
WESG
           1040
                                                         WIS
                                                                    1010
                   New York City, EST.
St. Louis, Mo., CST.
                                                                             Milwaukee, Wis. CST.
Johnstown, Pa., EST.
Norfolk, Neb., CST.
                                                                                                                  WMT
                                                                                                                               600
                                                                                                                                      Waterloo, Iowa, CST
                                                         WISN
                                                                    1120
WEVD
           1300
                                                                    1310
                                                                                                                  WNAC
                                                                                                                              1230
                                                                                                                                      Boston, Mass., EST
WEW
            760
                                                         WJAC
                                                                                                                                      Norman, Okla., EST.
Yankton, S. D., CST.
Binghamton, N.Y., EST.
                                                                                                                  WNAD
                                                                                                                             1010
                    Royal Oak, Mich., EST.
Dallas, Texas, CST.
                                                         WJAG
WEXL
           1310
                                                                    1060
                                                                             Providence, R. I., EST.
Pittsburgh, Pa., EST.
                                                                                                                  WNAX
WNBF
                                                                                                                               570
WFAA
            800
                                                         WJAR
                                                                      890
                                                                                                                             1500
WEAR
           1300
                    New York City, EST.
South Bend, Ind., CST.
                                                         WJAS
                                                                    1290
                                                                                                                                      New Bedford, Mass
                                                         WJAX
                                                                     900
                                                                             Jacksonville, Fla., EST.
                                                                                                                  WNBH 1310
WFAM
           1200
                                                                             Cleveland, Ohio. EST.
LaSalle, Ill., CST.
Red Bank, N. J., EST.
                                                         WJAY
                                                                      610
                                                                                                                  WNBO
                                                                                                                             1200
                                                                                                                                       Washington, Pa., EST
                    White Plains, N. Y. Greenville, S. C.
WFAS
           1210
                                                         WJBC
                                                                                                                  WNBR 1430
                                                                                                                                      Memphis, Tenn., CST
                                                                    1200
WFBC
           1200
                                                                                                                  WNBW 1200
WNBX 1260
WNBZ 1290
                                                                                                                                      Carbondale, Pa., EST.
Springfield, Vt., EST.
Saranac Lake, N. Y.
Newark, N. J., EST.
Knoxville, Tenn., CST
                    Cincinnati, Ohio, EST.
                                                         WJBI
           1200
                                                                    1210
WFBE
                                                                    1370
                                                                             Detroit, Mich., EST.
WFBG
           1310
                    Altoona, Pa.
                    Syracuse, N. Y., EST.
Indianapolis, Ind., CST.
                                                         WJBL
                                                                             Decatur, Ill., CST.
WFBL
                                                                    1200
           1360
                                                         WJBO
                                                                                                                  WNJ
                                                                                                                              1450
                                                                    1420
                                                                             New Orleans, La.
WFBM
           1230
                                                         WJBU
                                                                                                                  WNOX
                                                                    1210
                                                                             Lewisburg, Pa., EST
                                                                                                                               560
WFBR
           1270
                    Baltimore, Md., EST.
                                                                                                                                      New York City, EST.
San Antonio, Tex., CST.
Trenton, N. J., EST.
Charleston, W. Va., EST.
                                                                             New Orleans, La., CST.
Gadsden, Ala., CST.
                                                                                                                               570
                   Flint, Mich., EST.
Rome, Ga., CST.
Manchester, N. H., EST.
                                                         WJBW
WFDF
           1310
                                                                    1200
                                                                                                                  MOAL
                                                                                                                             1190
WFDV
           1500
                                                         WJBY
                                                                    1210
                                                                                                                  WOAX
WFEA
                                                         WJDX
                                                                    1270
                                                                             Jackson, Miss., CST.
                                                                                                                             1280
           1430
                                                                                                                  WOBU
                    Philadelphia, Pa., EST
                                                         WJEJ
                                                                    1210
                                                                             Hagerstown, Md.
                                                                                                                               580
WFI
            560
                                                         WJEO
                                                                                                                  WOC
                                                                                                                             1000
                                                                                                                                      Davenport, Iowa, CST
WFIW
                    Hopkinsville, Ky., CST
                                                                    1370
                                                                             Williamsport, Pa
            940
                                                                            Chicago, Ill., CST.
Gary, Ind., CST.
Ironwood, Mich., CST.
                                                                                                                                      Jamestown, N. Y., EST.
Paterson, N. J.
                    Clearwater, Fla., EST.
Brooklyn, N. Y., EST.
Lancaster, Pa., EST.
                                                                                                                  WOCL
                                                                                                                             1210
                                                         MIID
                                                                    1130
WFLA
            620
                                                         WJKS
                                                                                                                             1250
                                                                                                                  WODA
                                                                    1360
WFOX
           1400
                                                                                                                  WODX 1410
                                                                                                                                      Mobile, Ala., CST.
WGAL
           1310
                                                         WJMS
                                                                    1420
                                                                            Ironwood, Mich., CST.
Detroit, Mich., EST.
Washington, D. C., EST.
Atlanta, Ga., CST.
Akron, Ohio, EST.
New York City, EST.
San Juan, P. R., AST.
E. Lansing, Mich. EST.
Laconia, N. H., EST.
Joliet, Ill., CST.
Birmingham, Ma
                                                                                                                  WOL
                                                                                                                               640
                                                                                                                                      Ames, Iowa, CST.
Albany, N. Y., EST
WGAR
                    Cleveland, Ohio, EST.
Freeport, N. Y., EST.
                                                         WJR
                                                                      750
           1450
                                                                                                                  WOKO 1430
                                                         WJSV
                                                                    1460
WGBB
           1210
                   Evansville, Ind. CST.
Scranton, Pa., EST.
Gulfport, Miss. CST.
                                                                                                                                       Washington, D. C., EST.
                                                         WJTL
                                                                    1370
                                                                                                                  WOL
                                                                                                                              1310
WGBF
            630
                                                                                                                                      Manitowoc, Wis., CST
Gd. Rapids, Mich., ES
                                                                                                                  WOMT 1210
                                                         WJW
                                                                    1210
WGBI
            880
                                                                      760
                                                         WJZ
                                                                                                                  WOOD
                                                                                                                             1270
WGCM
           1210
                                                                    1240
                                                                                                                  WOPI
                                                                                                                             1500
                                                                                                                                      Bristol, Tenn. EST
                                                         WKAQ
WGCP
                    Newark, N. J., EST.
           1250
                                                                                                                  WOO
                                                                                                                              1300
                                                                                                                                      Kansas City, Mo., CST.
Newark, N. J., EST.
WGES
           1360
                    Chicago, Ill., CST.
                                                         WKAR
                                                                    1040
                                                                                                                               710
                                                         WKAV
                                                                    1310
           1310
                    Newport News, Va
WGH
                                                                                                                                      Worcester, Mass. EST.
York, Pa., EST.
Jefferson City, Mo.
                                                                                                                  WORC
WGL
                    Fort Wayne, Ind., CST.
Hudson Falls, N.Y. EST
                                                         WKBB
                                                                    1310
                                                                                                                             1200
           1370
                                                                                                                             1000
                                                                                                                  WORK
                                                         WKBC
                                                                    1310
                                                                             Birmingham, Ala.
Indianapolis, Ind., CST.
WGLC
           1370
                   nuoson Falls, N.Y., E
Chicago, Ill., CST.
Chester, N.Y., EST.
Buffalo, N.Y., EST.
Atlanta, Ga., CST.
Schenectady, N.Y., E
Madison, Wis., CST.
Milwaukee Wie CS
                                                         WKBF
                                                                    1400
                                                                                                                  wos
                                                                                                                               630
WGN
             720
                                                                             LaCrosse, Wis. CST.
Cicero, Ill., CST.
                                                                                                                  WOV
                                                                                                                                      New York City, EST
Omaha, Neb. CST.
                                                         WKBH
WKBI
                                                                                                                              1130
                                                                    1380
WGNY
           1210
                                                                    1420
                                                                                                                  WOW
                                                                                                                               590
WGR
            550
                                                                             Youngstown, Ohio, EST.
Connersville, Ind., CST.
Buffalo, N. Y., EST.
                                                                                                                  WOWO 1160
WPAD 1420
                                                                                                                                       Fort Wayne, Ind
                                                         WKBN
WGST
            890
                                                                     570
                                                                                                                                      Paducah, Ky., CST
                                                         WKBV
                                                                    1500
WGY
             790
                                                                                                                                      New York City, EST.
Providence, R. I., EST.
                                                                                                                  WPAP
                                                                                                                              1010
                                                         WKBW
                                                                    1480
WHA
            940
                   Madison, Wis., CST.
Milwaukee, Wis., CST.
Rochester, N. Y., EST.
Louisville, Ky., CST.
Philadelphia, Pa., EST.
Troy, N. Y., EST.
Kansas City, Mo., CST.
                                                                                                                  WPAW
WPCC
                                                                                                                             1210
                                                                             Ludington, Mich., CST.
WHAD
           1120
                                                         WKBZ
                                                                    1500
                                                                             LaGrange, Ga.
Greenville, Miss., CST.
Lancaster, Pa., EST.
                                                                                                                                      Chicago, Ill
                                                         WKEU
                                                                    1500
                                                                                                                               560
MAHW
           1150
                                                                                                                                      New York City, EST
                                                         WKFI
                                                                    1210
                                                                                                                  WPCH
                                                                                                                               810
WHAS
            820
                                                                    1200
                                                                                                                  WPEN
                                                                                                                             1500
                                                                                                                                      Philadelphia, Pa., EST
WHAT
           1310
                                                                             Cincinnati, Ohio, EST.
Oklahoma City, Okla.
Kalamazoo, Mich., EST.
                                                         WKRC
                                                                      550
                                                                                                                   WPFB
                                                                                                                              1370
                                                                                                                                      Hattiesburg, Miss., CST
Atlantic City, N.J. EST.
WHAZ
           1300
                                                                      900
                                                                                                                  WPG
                                                                                                                              1100
WHB
             860
                                                         WKY
                                                                                                                  WPHR 1200
                                                                                                                                      Petersburg, Va., EST.
                                                         WKZO
WHBC
                    Canton, Ohio, EST
                                                                     590
           1200
                                                                                                                  WPOR
                                                                                                                               780
                                                                                                                                      Norfolk, Va.
                    Mt. Orab, Ohio, EST
                                                         WLAC
                                                                    1470
                                                                             Nashville, Tenn., CST.
           1370
WHBD
                    Rock Island, Ill., CST.
Sheboygan, Wis., CST.
Memphis, Tenn., CST.
Anderson, Ind., CST.
Green Bay Wis. CST.
                                                                                                                                      Providence, R. I., EST.
Raleigh, N. C., EST.
Miami, Fla., EST.
                                                                                                                            1210
                                                         WLAP
                                                                    1200
                                                                             Louisville, Ky., CST.
Minneapolis, Minn., CST.
                                                                                                                  WPRO
WHBF
           1210
                                                         WLB
                                                                    1250
                                                                                                                  WPTF
                                                                                                                               680
WHBL
           1410
                                                                             Muncie, Ind., CST.
Kansas City, Kans., CST.
                                                         WLBC
                                                                                                                  WQAM
                                                                    1310
                                                                                                                               560
WHBQ
           1370
                                                                                                                               880
                                                                                                                                      Seranton, Pa., EST
                                                         WLBF
                                                                    1420
WHBU
           1210
                   Anderson, Ind., CST.
Green Bay, Wis., CST.
Calumet, Mich., CST
Boston, Mass., EST.
Tupper Lake, N.Y., EST.
Portsmouth, N. H., EST.
Rochester, N. Y., EST.
                                                                             Stevens Point, Wis., CST.
                                                                                                                   WOAD 1010
                                                                                                                                       New York City. EST
                                                         WLBL
                                                                      900
           1200
WHBY
                                                                                                                   WOBC
                                                                                                                                      Vicksburg, Miss., CST.
St. Albans, Vt., EST.
                                                                                                                             1360
                                                         WLBW
                                                                    1260
                                                                             Erie, Pa., EST.
WHDF
           1370
                                                                                                                  WQDM 1370
                                                                             Bangor, Maine, EST
Portland, Me., EST.
                                                         WLBZ
                                                                      620
WHDH
            830
                                                                                                                  WQDX 1210
                                                                    1340
                                                                                                                                       Thomasville, Ga.
                                                         WLEC
WHDL
           1420
                                                                                                                                      Williamsport, Pa., EST. Wilmington, N. C., EST.
                                                                             Lexington, Mass., EST.
Philadelphia, Pa., EST.
                                                                                                                   WRAK 1370
                                                         WLEY
                                                                    1370
 WHEB
            740
                                                         WIT
                                                                      560
                                                                                                                   WRAM 1370
 WHEC
           1430
                    Rochester, N. Y., EST.
Kosciusko, Miss.
Troy. Ala., CST.
Cicero, Ill., CST.
Bluefield, W. Va., EST.
Cleveland, Ohio, EST.
New York City, EST.
                                                                             Boston, Mass., EST.
Chicago, Ill., CST.
Brooklyn, N. Y., EST.
                                                                                                                   WRAW
                                                                                                                             1310
                                                                                                                                       Reading, Pa., EST
                                                         WLOE
                                                                    1500
 WHEF
           1500
                                                                                                                   WRAX 1020
                                                                                                                                       Philadelphia, Pa., EST.
                                                         WLS
                                                                      870
 WHET
           1210
                                                                                                                   WRBL
                                                                                                                                      Columbus, Ga., CST
Roanoke, Va., EST
                                                                                                                              1200
WHEC
           1420
                                                         WLTH
                                                                    1400
                                                                                                                             1410
                                                         WLVA
                                                                    1370
                                                                              Lynchburg, Va., EST
 WHIS
           1410
                                                                                                                               950
                                                                                                                                       Washington, D. C., EST.
                                                                             Cincinnati, Ohio, EST
                                                         WLW
                                                                      700
                                                                                                                   WRC
 WHK
            1390
                                                                             New York City., EST.
Syracuse. N. Y.
Washington, D. C., EST.
Chicago. Ill., CST.
                                                                                                                   WRDO 1370
                                                                                                                                       Augusta, Maine, EST.
                                                         WLWL
                                                                    1100
WHN
            1010
                                                         WMAC
                                                                                                                   WRDW 1500
                                                                                                                                       Augusta, Ga., EST
                                                                      570
 WHO
                     Des Moines, Iowa.
            1000
                    Jersey City, N. J., EST.
Harrisburg, Pa., EST.
Ottumwa, Iowa, CST.
Madison, Wis., CST.
Glenside, Pa., EST.
                                                                                                                   WREC
                                                                                                                               600
                                                                                                                                       Memphis, Tenn.
                                                          WAML
 WHOM
            1450
                                                                      630
                                                                                                                   WREN
                                                                                                                              1220
                                                                                                                                       Lawrence, Kans., CST.
                                                          WMAQ
                                                                      670
 WHP
            1430
                                                                                                                   WRHM
WRJN
                                                          WMAS 1420
                                                                             Springfield, Mass., EST.
                                                                                                                              1250
                                                                                                                                       Minneapolis, Minn., CST.
 WIAS
            1310
                                                                                                                                       Racine, Wis. CST
                                                                                                                              1370
                                                          WMAZ 1180
                                                                              Macon, Ga., EST
 WIBA
            1280
                                                                                                                                       New York City.
Knoxville, Tenn., CST.
                                                          WMBC 1420
                                                                              Detroit, Mich., EST.
                                                                                                                   WRNY
                                                                                                                              1010
 WIBG
             930
                                                          WMBD 1440
                                                                              Peoria, Ill., CST.
                                                                                                                   WROL
                                                                                                                              1310
            1370
                    Jackson, Mich., EST
 WIBM
                                                                                                                   WRR
                                                                                                                              1200
                                                                                                                                       Dalias, Texas, CST
                                                                              Richmond, Va., EST.
                                                          WMBG 1210
 WIBO
             560
                    Chicago, Ill., CST.
                                                                             Joplin, Mo., CST.
                                                                                                                   WRUF
                                                                                                                               830
                                                                                                                                       Gainesville, Fla., EST.
                                                          WMBH 1420
 WIBU
            1210
                    Poynette, Wis., CST.
                                                                                                                   WRVA 1110
                                                                                                                                       Richmond, Va., EST
                                                          WMBI 1080
                                                                             Chicago, Ill., CST.
                     Topeka, Kans., CST.
 WIBW
             580
                                                                                                                   WSAI
                                                                                                                              1330
                                                                                                                                       Cincinnati, Ohio, EST
                                                          WMBO 1310
                                                                             Auburn, N. Y., EST.
 WIBX
            1200
                     Utica, N. Y
                                                                             Brooklyn, N. Y., EST.
                                                          WMBQ 1500
                                                                                                                   WSAJ
                                                                                                                              1310
                                                                                                                                       Grove City, Pa
                    Bridgeport, Conn., EST.
             600
 WICC
                                                                                                                   WSAN 1440
                                                                                                                                       Allentown, Pa., EST
                                                          WMBR 1370
                                                                              Tampa, Fla., EST.
                    St. Louis, Mo., CST
            1200
 WIL
```

WSAR	1450	Fall River, Mass., EST.	WWJ	920	Detroit, Mich., EST.	XEL	1000	Saltillo, Mex., CST.
WSAZ	580	Huntington, W. Va., EST.	WWL	850	New Orleans, La., CST.	XEM	660	Matamoros, Mex.
WSB	740	Atlanta, Ga., CST.	WWNC	570	Asheville, N. C., CST.	XEN	711	Mexico City, CST.
WSBC	1210	Chicago, Ill., CST.	WWRL	1500	Woodside, N. Y., EST.	XENT	1115	Neuvo Laredo, Mex.
WSBT	1230	South Bend, Ind., CST.	WWSW	1500	Pittsburgh, Va., EST.	XEP	780	Mexico City, Mex.
WSEN	1210	Columbus, Ohio, EST.	WWVA	1160	Wheeling, W. Va., EST.	XEPN	585	Piedras Negras, Mex.
WSFA	1410	Montgomery, Ala., CST.	WXYZ	1240	Detroit, Mich., EST	XER	735	Villa Acuna, Mex.
WSIX	1210	Springfield, Tenn., CST.	XEA	1000	Guadalajara, Mex., CST.	XES	1055	Tampico, Mex., CST.
WSJS	1310		XEAB	1450	N. Laredo, Mex.	XET	690	Monterrey, Mex., CST.
		EST.	XEAC	1295	San Luis Potosi, Mex.	XETA	1140	Mexico City, Mex.
WSM	650	Nashville, Tenn., CST.	XEAD	875	Mexico City, Mex.	XETB	1380	Torreon, Mex.
WSMB	1320	New Orleans, La., CST.	XEAL	1090	Mexico City, Mex.	XETC	1000	Jalapa, Mex.
WSMK	1380	Dayton, Ohio, EST.	XEAN	750	Juarez, Mex., MST.	XETF	630	Veracruz, Mex., CST.
WSOC	1210	Gastonia, N. C., EST.	XEAO	560	Mexicali, Mex.	XETH	840	Puebla, Mex.
WSPA	1420	Spartanburg, S. C., EST.	XEAW	965	Reynosa, Mex.	XETM	845	Matamoros, Mex.
WSPD	1340	Toledo, Ohio, EST.	XEB	1030	Mexico City, Mex., CST.	XETR	610	Mexico City, Mex
WSUL	880	Iowa City, Iowa, CST.	XEC	1000	Toluca, Mex.	XETU	890	Pachuca, Mex.
WSUN	620	St. Petersburg, Fla. EST.	XED	1155	Guadalajara, Mex.	XETW	830	Mexico City, Mex.
WSVS	1370	Buffalo, N. Y., EST.	XEF	735	Villa Acuna, Mex.	XEU	1010	Veracruz, Mex., CST.
WSYB	1500	Rutland, Vt., EST.	XEFA	1250	Mexico City, Mex.	XEW	910	Mexico City, Mex., CST.
WSYR	570	Syracuse, N. Y., EST.	XEFB	1315	Monterrey, Mex., CST	XEX	1210	Mexico City, Mex.
WTAD	1440	Quincy, Ill., CST.	XEFC	1020	Merida, Mex.	XEY	546.8	Mexida, Mex.
WTAG	580	Worcester, Mass., EST.	XEFD	1020	Tijuana, Mex.	XFB	840	Jalapa, Mex.
WTAM	1070	Cleveland, Ohio, EST.	XEFE	1000	Laredo, Mex.	XFC	805	Aguascalientes, Mex.
WTAQ	1330	Eau Claire, Wis., CST.	XEFH	1360	Mexico City, Mex.	XFG	638.3	Mexico City, Mex.
WTAR	780	Norfolk, Va., EST.	XEFL	1000	Chihuahua, Mex.	XFL	818.1	Mexico City, Mex
WTAW	1120	College Station, Texas.	XEFJ	1000	Monterrey, Mex.	XFO	940	Mexico City, Mex.
WTAX	1210	Springfield, Ill., CST.	XEFO	940	Mexico City, Mex., CST	XFX	860	Mexico City, Mex.
MLRO	1420	Cumberland, Md., EST.	XEFS	1000	Queretaro, Mex., CST.	YV1BC	960	Caracas, Venz.
WTEL	1310	Philadelphia, Pa., EST.	XEFV	1370	Juarez, Mex.	10-AB	1200	Moose Jaw, Sask., MST.
WTFI	1450	Athens, Ga., EST.	XEFW	1240	Tampico, Mex.	10-AK	1200	Stratford, Ont., EST.
WTIC	1060	Hartford, Conn., EST.	XEFZ	1500	Coyoacan, Mex., CST.	10-AT	1158	Trail, B. C., PST
WTJS	1310	Jackson, Tenn., CST.	XEG	1075	Mexico City, Mex.	10-BI	1200	Prince Albert, Sask.,
WTMJ	620	Milwaukee, Wis., CST.	XEH	1132	Monterrey, Mex., CST.			MST.
WTCC	1260	Savannah, Ga., EST.	XEI	1310	Morelia, Mex., CST.	10-BP	1199	Wingham, Ont., EST.
	1310	Elkhart, Ind., CST.	XEJ	1015	Juarez, Mex., CST.	10-BQ	1200	Brantford, Ont., EST.
WWAE	1200	Hammond, Ind., CST.	XEK	990	Mexico City, Mex.	10-BU	1200	Canora, Sask.
					• ,			

The World Short Wave Stations

According to Frequencies in Megacycles (thousands of kilocycles) and Wave Lengths in Meters. For time on the air, see the list of the "100 Best Short Wave Stations" in March issue. Stations marked with an asterisk (*) will not verify.

1.558 12.43 KGPD Santon, Mass. WPD Mineapolis, Minn.									
WFY	Megs. 1.558	Meters 102.43	Call KGPD	City, State or Country			WCK	Detroit, Mich.	
1.570 191.08 WPEU WPEU Baton Rouge, Ia. WPD WPD WPD WPD WPD WPD Atlanta, Ga. WPD Atlan	1.000	132.10							
WPEQ WPEW WRDS	1.570	191.08							
Northampfon, Mass. Shreveport, I.a WRDR WRDR WRDR WRDR Framingham, Mass. 2.416 124.09 WRDR WRDR Framingham, Mass. 2.416 124.09 WRDR WRDR WRDR East Lansing, Mich. WRDR WRDR	2.0.0	202.00							
1.574 190.48 KGPY WMP Framingham, Mass WRDR WRDR WRDS East Lansing, Mich. WPDS WRDR WRDD East Lansing, Mich. WPDS KGPB WPDS KGPG WRDD WRDD									
WMP	1.574	190.48							
WRDS					2.416	194.00			
1.596 187.85 WCF Web Work City WCF W					2.110	121.00			
WKDT	1.596	187.85		New York City	2.422	123.79	KGPE		
WRDU									
RGP								Topeka Kansas	
RGPC	1.712	175.13						Berkeley, Calif.	
KGPJ Beaumont, Texas 2.430 123 45 ClW St. John, N. B.								Buffalo, N. Y.	
KGPL								Washington, D. C.	
KGPR Fort Worth, Texas WPD Columbus, Ohio Dayton, Ohio					2.430	123.45		St. John, N. B.	
KGZB									
KVP			KG / R						
UYR Montreal P Q 2.442 122.77 KGPP Portland, Ore.			L'VD						
WKDU					0.110	100.77			
WPDB					2.442	122.77			
WPDC Chicago, III. WWDZ Indianapolis, Ind. Louisville, Ky. WPDF Flint, Mich. WPDF Flint, Mic									
WPDD									
WPDU Pittsburgh, Pa. WPDF Flint, Mich. WPDF Flint, Mich. Richmond, Ind. WPDF WPDF									
WPED Arlington, Mass WPDH Richmond, Ind.									
WPEH Sommerville, Mass WPDL Larsing, Mich.									
2.004 149.61 VEBRM Toronto, Ont. WPEB Grand Rapids, Mich.			WPEH						
2.100 142.80 VE908 Montreal, Que. WPES Saginaw, Mich. Oklahoma City, Okla. KGPS Bakersfield, Calif. KGP0 Tulsa, Okla.				Toronto, Ont.					
2.414 124.20 KGPA Seattle, Wash. 2.450 122.40 KGPH Oklahoma City, Okla. KGPO Tulsa, Okla. KGPO Tulsa, Okla.									
KGP8 Bakersfield, Calif. KGPO Tulsa, Okla.	2.414	124.20	KGPA		2.450	122.40			
								Tulsa Okla	
			KGZA	Fresno, Calif.					

		KGPZ	Wichita, Kans.	3.178	94.34	KFM KGE	Sacramento, Calif.
		WPDK WPEE	Milwaukee, Wis. Brooklyn, N. Y. Bronx, N. Y. New York, N. Y. Winnipeg, Man.			KGT	Medford, Ore. Fresno, Calif.
		WPEF	Bronx. N. Y.			KQX	Bakersfield, Calif.
		WPEG	New York, N. Y.			KVO	Portland, Ore.
2.458	121.97	UYW	Winnipeg, Man.	3.189	94.01	KZJ	Seattle, Wash. Burbank, Calif.
		WPDG WPDN	Youngstown, Ohio Auburn, N. Y.	3.490	85.91	KEU KGTF	San Diego, Calif.
		WPDO	Akron. Ohio	0.100	00.01	KGTS	Umana, Neb.
		WPDR	Rochester, N. Y.			KGUA	El Paso, Tex.
		WPDV	Charlotte, N. C. Syracuse, N. Y.			KGUB	Houston, Tex.
		WPEA WRDH	Cleveland, Ohio			KGUC	Fort Worth, Tex.
2.470	121.40	KGOZ	Cedar Rapids, Iowa			KGUD KGUE	San Antonio, Tex. Brownsville, Tex.
2.2.0		KGOZ KGPD	San Francisco, Calif.			KGUF	Dallas, Tex.
		KGPI	Omaha, Neb.			KGUG	Big Springs, Tex.
		KGPK KGPM	Sioux City, Iowa San Jose, Calif.			KGUH	Waco, Tex. Shreveport, La
		KGPN	Davenport, Iowa			KGUK KGUL	Shreveport, La. Abilenc, Tex. Frijole, Tex.
		KGPW	Salt Lake City, Utah Des Moines, Iowa			KGUM	Frijole, Tex.
		KGZG	Des Moines, Iowa			KGUN	Douglas, Ariz.
		WPD P WPDT	Philadelphia, Pa. Kokomo, Ind.			KGUP KGUQ	Phoenix, Ariz. Indio, Calif.
		WPDZ	Fort Wayne, Ind.			KĞÜR	Burbank, Calif.
		WPEC	Memphis, Tenn.			KGUR KGUS	Burbank, Calif. Blythe, Calif.
		WPEM	Woonsocket, R. I.			KGUT KGUU	Robertson, Mo.
		WPEY WRDQ	Chattanooga, Tenn. Toledo, Ohio			WAEJ	Little Rock, Ark. Springfield, Ill.
2,502	119.83	KGPV	Des Moines, Iowa			WQDP	Atlanta, Ga.
2.506	119.64	KGZE	San Antonio, Tex.			WQDP WQDQ	New Orleans, La.
$2.589 \\ 2.735$	115.80	WOU	Green Harbor, Mass.			WSDB	Jackson, Miss.
2.735 3.100	109.62 96.72	VE9CI KGPL	London, Ont. Kingman, Ariz.			WSDE WSDF	Tuscaloosa, Ala. Louisville, Ky.
3.100	90.72	KGSC	Oklahoma City, Okla.			WSDG	Chicago, Ill.
		KGTD KGTJ	Wichita, Kans.			WSDH	Nashville, Tenn.
		KGTJ	Las Vegas, Nev.			WSDI WSDK	Cincinnati, Ohio Memphis, Tenn.
		KGTN KGTQ	Las Vegas, Nev. Springfield, Mo.			WSDP	Columbus, Ohio
		KGTŘ	St. Louis, Mo.			WSDZ	Indianapolis, Ind.
		KSI KST	Los Angeles, Calif.	3.750	79.95	I3RO	Rome, Italy
		KST	Kansas City, Mo.	4.095 4.105	$73.21 \\ 73.03$	*WND NAA	Hialeah, Fla.
		KSW KSX	Amarillo, Tex. Albuquerque, N. M.	4.129	72.60	WEEB	Arlington, Va. Baltimore, Md.
		KSY	Tulsa, Okla.			WEEC	Charleston, S. C.
		WAEA WAEB	Indianapolis, Ind.			WEEF WEEG	Spartansburg, S. C Greensboro, N. C.
		WAEC	Columbus, Ohio Pittsburgh, Pa.			WEEJ	Jacksonville, Fla.
		WAED	Harrisburg, Pa. Camden, N. J. Newark, N. J.			WEEM	Miami, Fla.
		WAEE	Camden, N. J.			WEEO WEER	Orlando, Fla.
		WAEF WHG	Newark, N. J. Columbus, Ohio	4.174	71.82	GDLI	Richmond, Va. S.S. Homeric
		WHM	Indianapolis, Ind.	1.111	71.02	GDLJ GFWV	S.S. Majestic
3.170	94.58	KDD	Pasco, Wash.			GKFY	S.S. Minnetonka
		KFO	Oakland, Calif.			GLSQ GMBJ	S.S. Olympic S.S. Empress of Britain
		KGQZ KGTE	San Diego, Calif. Wichita, Kans.			GMJQ	S.S. Belgenland
		KJE	Reno, Nev.			*VTSX	S.S. Monarch of Bermuda
		KKO	Reno, Nev. Elko, Nev.			*WSBN	S.S. Leviathan
		KMP KMR	Omaha, Neb.			DDAC DDAS	S.S. Europa S.S. Breinen
		KNAS	No. Platte, Neb. Kansas City, Mo.			DDBR	S.S. Berlin
		KNAT	Dallas, Tex.			DDCB	S.S. Columbus
		KNAV	Oklahoma City, Okla.			DDCG DDCP	S.S. Resolute S.S. Cap Polonio
		KOE	Chevenne, Wyo.			TOOG	S.S. Deutschland
		KQC	Rock Springs, Wyo.			DDDX	S.S. Hamburg
		KQD	Salt Lake City, Utah			DDEA	S.S. Cap Arcona
		KQE	Cheyenne, Wyo.			DDED	S.S. New York
		KQK	Bakersfield, Calif.			DDFF	S.S. Reliance
		KQM	Des Moines, Iowa			DDFT	S.S. Oceana
		KQQ	Iowa City, Iowa	., 540	20.00	DDNY	S.S. Albert Ballin Khabarovsk, U.S.S.R.
		KRA	Boise, Idaho	4.273	70.65	RW15 *WIR	Rocky Point, N. Y.
		KRD	Redding, Calif.	4.272 4.283	70.17 70.00	IBEJ	S.S. Conte Rosso
		KRF WNAK	Lincoln, Neb. Cleveland, Ohio	4.200	10.00	ICEJ	S.S. Rex
		WNAL	Brooksville, Pa.			IDLI	S.S. Conte di Savoia
		WNAM	Bellefonte, Pa.	4.307	69.60	WTDV	St. Thomas, V. I.
		WQDU	Aurora, Ill.	4.467	67.11	YID	Bagdad, Iraq
		WUCG	Chicago, Ill.	4.508	66.50	VPN	Nassau, Bahamas

4.748	63.13	*WOO	Ocean Gate, N. J.				KGUG	Big Springs, Tex.
4.782	62.70	CGA	Drummondville, Que.				KGUH	Waco, Tex.
4.797	62.50	W9XAM W2XV	Elgin, Ill. Long Island City, N.	v			KGUK KGUL	Shreveport, La.
4.975	60.27	GBC	Rugby, England				KGUL KGUM	Abilene, Tex. Friiole, Tex.
$5.045 \\ 5.143$	59.42 58.30	*VRT-ZFA	Hamilton, Bermuda				KGUN	Douglas, Arız.
5.169	58.00	OK1MPI	Bandoeng, Java Prague. Czechoslovakia				KGUP KGUQ	Phoenix, Ariz. Indio, Calif.
5.257	57.03	*WQN KNWA	Prague, Czechoslovakia Rocky Point, N. Y. St. Paul, Minn.				KGUR KGUS	Burbank, Calif.
5.373	55.80	KNWA	St. Paul. Minn. Fargo, N. D.				KGUS KGUT	Blythe, Calif. Robertson, Mo.
		WAEH	Milwaukee, Wis.				KGUU	Little Rock, Ark.
		WSDL WSDR	Duluth, Minn.				WAEJ	Springfield, Ill.
		WSDS	Madison, Wis. Chicago, Ill.				WQDP WQDQ	Atlanta, Ga. New Orleans, La.
.411	55.40	KGJW	Brownsville, Tex.				WSDB WSDE	Jackson, Miss.
		$\begin{array}{c} \text{WKDL} \\ \text{WMDU} \end{array}$	Miami, Fla. San Juan, P. R.				WSDE	Tuscaloosa, Ala. Louisville, Ky.
5.560	53.92	KGPL	Kingman, Ariz. Oklahoma City, Okla.				WSFG	Chicago, Ill.
		KGSC KGTD	Oklahoma City, Okla.				WSDH	Nashville, Tenn.
		KGTJ	Wichita, Kans. Las Vegas, Nev.				WSDI WSDK	Cincinnati, Ohio Memphis, Tenn.
		KGTN KGTQ	Las Vegas, Nev. Springfield, Mo.				WSDP	Columbus, Ohio
		KGTQ KGTR	Springfield, Mo. St. Louis, Mo.	5	.649	53.07	$\begin{array}{c} \mathrm{WSDZ} \\ \mathrm{WEEB} \end{array}$	Indianapolis, Ind. Baltimore, Md.
		KSI	Los Angeles, Calif.		.010	00.01	WEEC	Charleston, S. C.
		KST	Kansas City, Mo.				WEEF	Spartansburg, S. C.
		KSW KSX	Amarillo, Tex. Albuquerque, N. M.				WEEG WEEJ	Greensboro, N. C. Jacksonville, Fla.
		KSY	Tulsa, Okla.				WEEM	Miami, Fla.
		WAEA WAEB	Indianapolis, Ind. Columbus, Ohio				$egin{array}{c} \mathbf{WEEO} \\ \mathbf{WEER} \end{array}$	Orlando, Fla. Riehmond, Va.
		-WAEC	Pittsburgh, Pa.		5.657	53.00	KEU	Burbank, Calif.
		WAED	Harrisburg, Pa. Camden, N. J.				KFM	Sacramento, Calif.
		WAEE WAEF	Newark, N. J.				KGE KGT	Medford, Ore. Fresno, Calif.
		WAEG	Cresson, Pa.				KQX KVO	Bakersfield, Calif.
		WHG WHM	Columbus, Ohio Indianapolis, Ind.				KVO K7I	Portland, Ore.
5.600	53.54	KDD	Pasco, Wash.				KZJ WSDC	Seattle, Wash. Newark, N. J.
		KFO KGQZ	Oakland, Calit.				WSDM	Newark, N. J. Albany, N. Y. Buffalo, N. Y.
		KGTE	San Diego, Calif. Wichita, Kans.				→WSDO →WSDQ	Cleveland, Ohio
		KGŤE KJE	Reno, Nev. Elko, Nev.		.678	52.80	VK3LR	Melbourne, Australia
		KKO KMP	Omaha, Neb.	5	.689 .766	$\frac{52.70}{52.00}$	FIUI XAM	Tananarive, Madagascar Merida, Yucatan
		KMR	No. Platte, Neb.	-5	.868	51.09	*WNB	Lawrenceville, N. J.
		KNAS	Kansas City, Mo. Dallas, Tex.	5	.879	51.00	HKB *XDA	Tunja, Colombia
		KNAS KNAT KNAV	Oklahoma City, Okla.	5	.925	50.60	НЈ4АВЕ	Mexico City, Mex. Medellin, Colombia
		KOE KQC	Cheyenne, Wyo.	5	,968 . 9 96	50.26	HVJ	Medellin, Colombia Vatican City, Rome Barranquilla, Colombia
		KQD	Rock Springs, Wyo. Salt Lake City, Utah	υ	.990	50.00	HJ1ABB RV59	Moscow, U.S.S.R.
		KQE	Cheyenne, Wyo.				ZGE	Kuala Lampur, Malay
		KQK	Bakersfield, Calif.	. 6	.000	49.97	EAJ25 YV2BC	Barcelona, Spain Caracas, Venezuela
		KQM KQQ	Des Moines, Iowa Iowa City, Iowa				ZL3ZC	Christchurch, N. Z.
		KRA	Boise, Idaho	25-6	.005	49.93	VE9DR	Bucharest, Roumania Montreal, P. Q.
		KRD	Redding, Calif.		.020	49.80	DJC	Konigs Wusterhausen, Ger.
		KRF	Lincoln. Neb.		.036	49.67	*W4XB	Miami, Fla.
		WNAK	Cleveland, Ohio		.040	49.64	WIXAL	Boston, Mass.
		WNAL WNAM	Brooksville, Pa. Bellefonte, Pa.		.050 .057	49.56 49.50	GSA	Daventry, England
		WQDU	Aurora, Ill.	0	.037	49.00	CMCI ZL2ZX	Havana, Cuba Wellington, N. Z.
		WUCG	Chicago, Ill.				W3XAU	Philadelphia, Pa.
5.609	53.45	KGTV	Beaumont, Calif.	-6	.060	49.48	W8XAL	Cincinnati, Ohio
		KGUO WAEK	Tucson, Ariz.		0.05	10.11	VQ7LO	Nairobi, Kenya, Africa
		WSDD	Mobile, Ala. Boston, Mass.		065	49.44	SAJ	Motala, Sweden
5.630	53.25	KGTF	San Diego, Calif.		.070 .072	49.39 49.37	VE9CS UOR2	Vancouver, B. C. Vienna, Austria
		KGTS	Omaha, Neb.		076	49.34	W9XAA	Chicago, Ill.
		KGUA	El Paso, Tex.	6.	.090	49.23	VE9BJ	St. John, N. B.
		KGUB	Houston, Tex.		094	49.20	JВ	Johannesburg, So. Africa
A.		KGUC KGUD	Fort Worth, Tex. San Antonio, Tex.		095	49.19	W9XF	Chicago, Ill.
		KGUE	Brownsville, Tex.		096 110	49.18 49.07	W3XAL VUC	Boundbrook, N. J.
		KGUF	Dallas, Tex.	6.		49.07	W2XE	Calcutta, Ind a Wayne, N. J.
						- 0.00		majne, IV. J.

WORLD SHORT WAVE STATIONS

-6.119	49.00	YV1BC	Caracas, Venezuela	8.562	35.02	*WOO	Ocean Gate, N. J.
6.121	48.98	VE9HX	Caracas, Venezuela Halifax, N. S.	8.566	35.00		S.S. Conte Rosso
6.125	48.95	YV11BMC	J Maracaibo, Venezueia			ICEJ IDLI	S.S. Rex S.S. Conte di Savoia
6.140 6.150	48.83 48.75	W8XK VE9CL	E. Pittsburgh, Pa. Winnipeg, Man.	8.646	34.56	GBC	Rugby, England
6.220	48.20	I2RO	Rome, Italy	8.690	34.50	W2XAC GDLJ	Schenectady, N. Y.
6.250	47.97	CN8MC	Casablanca, Morocco	8.830	33.95	GDLJ	S.S. Homeric
6.335	47.33	VE9AP	Drummondville, Que.			GFWV	S.S. Majestic
6.378	47.00	HKS HC1DR	Cali, Columbia			$\frac{\text{GKFY}}{\text{GLSQ}}$	S.S. Minnetonka S.S. Olympic
6.386	46.96	W3XL	Quito, Ecuador Boundbrook, N. J.			GMBJ	S.S. Empress of Britain
6.430	46.63	PCM	The Hague, Holland			GMJQ *VTSX	S.S. Belgenland
6.480	46.27	TGW	Guatamala City, Guatamala Moseow, U.S.S.R.			*VTSX	S.S. Monarch of Bermuda
6.611	45.35	REN	Moseow, U.S.S.R.	8.872	33.79	WSBN NAA	S.S. Leviathan Arlington, Va.
6.618	45.31	PRADO IAC	Riobamba, Ecuador Coltana, Italy	8.072	33.19	NPO	Cavite, Manila, Ph. Is.
6.648	45.09	XFD	Mexico City, Mex.	8.925	33.59	*WEC	Rocky Point, N. Y.
6.675	44.91	DGK	Nauen, Germany	8.945	33.52	*WEL-	D I DI IN M
6.705	44.71	*WER	Nauen, Germany Rocky Point, N Y.	0.050	22.50	*W2XBJ TGX	Rocky Point, N. Y.
6.720	44.61	*WQO *WEJ-	Rocky Point, N. Y.	$8.950 \\ 9.012$	33.50 33.27	*KEJ	Guatemala City, Guatemala Bolinas, Calif.
6.732	44.54	*W2XBJ	Rocky Point, N. Y.	9.014	33.26	GSC	Rugby, England
6.752	44.41	*WOA	Lawrenceville, N. J.	9.091	32.97	XFD	Mexico City, Mex.
		*WOB	Lawrenceville, N. J.	9.104	32.93	LST	Olivos, Argentina
6.791	44.15	GDB	Rugby, England Drummondville, Que.	9.162 9.168	$\frac{32.72}{32.70}$	*WNA *YVR	Lawrenceville, N. J. Maracay, Venezuela
6.840 6.860	43.82	CFA *KEL	Bolinas, Calif.	-9.273	32.33	GCB	Rugby, England
6.888	43.71 43.54	*KEQ	Kahuku, Hawaii	9.290	32.27		Rugby, England Rabat, Morocco
6.900	43.45	IMA	Roma, Italy	9 .340	32.10	CGA CT3AQ	Drummondville, Que.
		GDS	Rugby, England Rocky Point, N. Y.	9.370	32.00	*XDA	Funchel, Madeira Mexico City, Mex.
6.924	$\frac{43.30}{42.20}$	*WEZ HKN	Rocky Point, N. Y. Nedelin, Colombia	9.375 9.410	31.97 31.86	PLV	Bandoeng, Java
$7.105 \\ 7.122$	42.20	HKK	Cali, Colombia	9.448	31.74	*WES-	
7.139	42.00	HJ4ABB	Manizales, Colombia			*WES- *W2XBJ	Rocky Point, N. Y.
7.184	41.75	CM2MK VK6AG .	Havana, Cuba	9.455	31.71	*WKJ	Rocky Point, N. Y.
7.195	41.67	VK6AG . VS1AB	Perth, Australia Singapore, Straits Settlement	9.480 - 9.488	$\frac{31.63}{31.60}$	PLW *WEF-	Bandoeng, Java
7.207	41.60	EAR58	Teneriffe, Canary Islands	8.400	01.00	*W2BJ	Rocky Point, N. Y.
7.312	41.00	CM5RY	Matanzas, Cuba	9.492	31.58	PRBA	Rio de Janeiro, Brazil
7.384	40.60	ZLT	Wellington, N. Z.	9.500	31.56	YV3BC	Caracas, Venezuela
7.396	40.54	*WEM	Rocky Point, N. Y.	9.503 9.510	31.55 31.53	VK3ME GSB	Melbourne, Australia Daventry, England
7.402	40.50	*W2XBJ H KI	Rocky Point, N. Y. 58 Bogota, Colombia	9.520	31.49	OYY	Copehagen, Denmark
7.410	40.46	*WEG	Rocky Point, N. Y.	9:530	31.46	W2XAF	Schenectady, N. Y.
7.465	40.16	*HJB	Bogota, Columbia	-9.552	31.38	DJA	Zeesen, Germany
7.501	39.97	RKI	Moscow, U.S.S.R.	-9.560 9.570	31.36 31.33	W1XAZ SR1	Springfield, Mass. Poznan, Poland
7.518	39.89	*KDK- *KKH	Kahuku, Hawaii	9.570 9.580	31.30	HBL	Geneva, Switzerland
7.550	39.71	CGE	Calgary, Alta.	9.585	31.28	GSC	Daventry, England
		CKS	Calgary, Alta. Dixon, Calif.			VK2ME	Sydney, Australia
7.562	39.65	*KWY *KWX	Dixon, Calif. Dixon, Calif.	9.592	31.25	W3XAU CT1AA	Philadelphia, Pa. Lisbon, Portugal
7.605	$\frac{39.42}{39.34}$	RIM	Irkutsk, U.S.S.R.	9.600	31.23	LQA	Buenos Aires, Argentina
7.621 7.685	39.01	TIR	Cartago, Costa Rica	9.609	31.20	DĞU	Nauen, Germany
7.715	38.86	*KEE	Cartago, Costa Rica Bolinas, Calif.	9.670	31.00	TI4NRH	Heredia, Costa Rica
7.758 7.770	38.65	FTF	Kootwijk, Holland St. Assise, France	9.702	30.90	GCA	Rugby, England
7.770	38.59 38.49	HBP	Geneva, Switzerland	9.742	30.77	*WOF	Lawrenceville, N. J.
7.830	38.29	PDV	Kootwijk, Holland	9.750	30.75	VK2ME-	Colon Ametrolia
7.876	38.07	J1AA	Kemikawa-Cho, Japan			VLK	Sydney, Australia
7.940	37.76	VK2ME	Sydney, Australia	9.772	30.68	EAM	Madrid, Spain
7.995	37.50	HC2JSB	Quito, Ecuador	9.798	30.60	GCW FTI	Rugby, England St. Assisse, France
8.103	37.00	нсјв	Quito, Ecuador	9.840	30.47	WON	Lawrenceville, N. J.
8.180	36 .65	PSK	Rio de Janeiro, Brazil	9.862	30.40	-EAQ	Madrid, Spain
8.328	36.00	DDAC	S.S. Europa	- 6	11	JIAA	Kemikawa-Cho, Japan
		DDAS	S.S. Bremen	9.890	30.32	LSA	Buenos Aires, Argentina
		DDBR	S.S. Berlin	9.895	30.30	LSN	Buenos Aires, Argentina
		DDCB DDCG	S.S. Columbus S.S. Resolute	9.928	30.20	*HJY	Bogota, Columbia
		DDCG	S.S. Cap Polonio	9.942	30.15	GBU	Rugby, England
		DDDT	S.S. Deutchland	9.993	30.00	LSL	Buenos Aires, Argentina
		DDDX	S.S. Hamburg	10.000	29.98		Belgrade, Yugo Slavia
		DDEA	S.S. Cap Arcona	10.051	29.83	SUV	Cairo, Egypt
		DDED	S.S.New York	10.060	29.80	*VRT-ZFI	Hamilton, Bermuda
		DDFF	S.S. Reliance	10.135	29.58	OPM	Leopoldville, Belgian Congo.
		DDFT	S.S. Oceana	10.163	29.50		S.S. Europa
		DDNY	S.S. Albert Ballin			DDAS	S.S. Breinen
8.464	35.42		Norden, Germany			DDBR	S.S. Berlin

WORLD SHORT WAVE STATIONS

							1117
		DDCB	S.S. Columbus	13.074	22.93	JIAA	Kemikawa-Cho, Japan
		DDCG	S.S. Resolute	13.220	22.68	GDLJ	S.S. Homeric
		DDCP DDDT	S.S. Cap Polonio S.S. Deutschland			GFWV GKFY	S.S. Majestic S.S. Minnetonka
		DDDX	S.S. Hamburg			GLSQ	S.S. Olympic
		DDEA	S.S. Cap Arcona			GMBJ	S.S. Empress of Britain
		DDED DDFF	S.S. New York			GMJQ *VTSX	S.S. Belgenland
		DDFT	S.S. Reliance S.S. Oceana			WSBN	S.S. Monarch of Bermuda S.S. Leviathan
		DDNY PSH	S.S. Albert Ballin	13.296	22.55	CGA *YVQ	Drummondville, Que
10.212	29.35	PSH	Rio de Janeiro, Brazil	13.337	22.48	*YVQ	Maracay, Venezuela
$10.250 \\ 10.285$	29.25 29.15	PMN	Bandoeng, Java Zeesen, Germany	13.380 13.469	22.40 22.26	*WMA *WAJ	Lawrenceville, N. J.
10.324	29.04	DIQ ORK	Brussels, Belgium	13.591	22.26	GBB	Rocky Point, N. Y. Rugby, England
10.345	29.98	LSX	Buenos Aires, Argentina	10.001		ĞBC	Rugby, England
10.410	28.80	*KEZ	Bolinas, Calif.	13.671	21.93	HAS	Skékèsfehevar, Hungary
		LSY PDK	Buenos Aires, Argentina Kootwijk, Holland	13.690 13.740	21.90 21.82	*KKZ CGA	Bolinas, Calif.
		PKP	Medan, Sumatra	13.776	21.77	*KKW	Drummondville, P. Q. Dixon, Calif.
10.520	28.50	VK2ME	Sydney, Australia	13.816	21.70	SUZ	Cairo, Egypt
10.540	28.44	*WOK	Lawrenceville, N. J.	13.860	21.63	*WIY-	
10.601	28.28 28.12	*WEA	Rocky Point, N. Y.	12 005	01.50	*W2XBJ	Rocky Point, N. Y.
10.664 10.761	27.86	*CEC GBP	Santiago, Chile Rughy, England	13.925 14.310	21.53 20.95	*WIK G2NM	Rocky Point, N. Y. Sonning-on-Thames, Engla
10.830	27.68	*KWV	Rugby, England Dixon, Calif. Lima, Peru	14.450	20.75	GBW	Rugby, England
10.962	27.35	*OCI	Lima, Peru	14.464	20.73	*WMF	Lawrenceville, N. J. Buenos Aires, Argentina
10.980	27.30	ZLW	Wellington, N. Z.	14.480	20.70	LSN	Buenos Aires, Argentina
11.111 11.174	$\frac{26.98}{26.83}$	CT34O	Mexico City, Mex.	$14.545 \\ 14.530$	$20.69 \\ 20.65$	*RXC LSA	ranama City, Panama
11.187	26.80	CT3AQ XAM	Funchal, Madeira Merida, Yucatan	14.550	20.60	HBJ	Buenos Aires, Argentina Geneva, Switzerland
11.470	26.15	IBDK	S.S. Electra	14.582	20.56	*WMN	Lawrenceville, N. J.
11.644	25.75	PPQ *YVQ	Rio de Janeiro, Brazil	14,630	20.50	*XDA	Chapultepec, Mex.
11.680	25.67	*KIO	Maracay, Venezuela Kahuku, Hawaii	14.682 14.706	20.42 20.27	PSS *WKU-	Rio de Janeiro, Brazil
11.711	25.60	1110	Pontoise, France	14.700	20.21	*W2XBJ	Rocky Point, N. Y.
		-VE9JR	Winnipeg, Man. Huizen, Holland	14.930	20.08	*HJB	Bogota, Colombia
11.725	25.57	РНОНІ	Huizen, Holland	15.051	19.92	*WNC	Hialeah, Florida
11.753	25.51	DJD	Koenigswusterhausen, Germany	15,066 15.104	19.90 19.85	TI4NRH	
	19	-GSD	Daventry England	15.120	19.83	RAU HVJ	Tashkent, U.S.S.R. Vatican City, Italy
11.760	25.50	*XDA	Daventry, England Mexico City, Mex.	15.140	19.81	GSF	Daventry, England
11.790	25.42	WIXAL	Boston, Mass.	15.190	19.73	DJB	Daventry, England Zeesen, Germany
11.800 11.822	$25.40 \\ 25.36$	I2RO W2XE	Rome, Italy Wayne, N. J.	15.204 15.234	19.72	W8XK	Pittsburgh, Pa.
	20.00	***************************************	wayne, 14. 5.	15.280	19.68 19.62	W2XE	Pontoise, France Wayne, N. J.
11.870	25.27	VUC	Calcutta, British India	15.320	19.57	W2XAD	Schenectady, N. Y.
1 1.872	05.05	GSE	Daventry, England	15.344	19.54	*KWU	Dixon, Calif.
11.898	$25.25 \\ 25.20$	W8XK	Pittsburgh, Pa. Pontoise, France	$15.410 \\ 15.681$	19.46 19.12	*KWO FTK	Dixon, Calif.
11.923	25.16	RW5O	Moskva Imeni Popova, USSR	15.760	19.12	JIAA	St. Assise, France Tokyo, Japan
11.935	25.12	FTA	St. Assise France	15.950	18.80	PLG	Bandoeng, Java
11.969	25.05	*KKQ	Bolinas, Calif. Saigon, Indo-China	16.024	18.71	*KKP	Bandoeng, Java Kahuku, Hawaii
12.000 12.045	$24.99 \\ 24.89$	FZG NAA	Saigon, Indo-China	16.060	18.66	NAA	Arlington, Va.
	23.00	NSS	Arlington, Va. Annapolis, Md.	16.150	18.56	GBX	Rugby, England
12.150	24.68	FQO-FQI	5 St. Assise, France	16.162 16.200	18.55 18.51	PSA FZR	Rio de Janeiro, Brazil
12.190	24.60	GBS	Rugby, England Rugby, England	17.080	17.55	GBC	Saigon, Indo-China
12.290	24.40	GBX PLM		17.110	17.52	*W00	Rugby, England
2.290	24.40	ZLW	Bandoeng, Java	17.122	17.52	HAS	Ocean Gate, N. J.
12.394	24 .19	DAF	Wellington, N. Z.	17.260	17.37	DAF	Skékèsfehevar, Hungary
2.780	23.46	GBC	Norden, Germany Rugby, England	17.287	17.34	IBEJ	Norden, Germany S.S. Conte Rosso
2.785	23.45	IAC	Coltana, Italy	11.201	11.01	ICEJ	S.S. Rex
12.820	23.38	1.10	Rabat, Morocco			IDLI	S.S. Cente di Savoia
2.836	23.36	*W00	Ocean Gate, N. J.	17.512	17.12	DFB	Nauen, Germany
3.040	23.00	DDAC	S.S. Europa	17.580	17.05	GDLJ	S.S. Homeric
		DDAS	S.S. Bremen			GFWV	S.S. Majestic
		DDBR	S.S. Berlin			GKFY	S.S. Minnetonka
		DDCB	S.S. Columbus			GLSQ	S.S. Olympic
		DDCG	S.S. Resolute			GMBJ	S.S. Empress of Britain
		DDCP	S.S. Cap Polonio			GMJQ	S.S. Belgenland
		DDDT	S.S. Deutschland			*VTSX	S.S. Monarch of Bermuda
		DDDX	S.S. Hamburg			WSBN	S.S. Leviathan
		DDEA	S.S. Cap Arcona	17.719	16.92	HSP	Bangkok, Siam
		DDED	S.S. New York	17.760	16.88	DJE	Konigswusterhausen, Ger.
		DDFF	S.S. Reliance			GSG	Daventry, England
		DDFT DDNY	S.S. Oceana			$_{ m PHI}$	Huizen, Holland
		DUNI	S.S. Albert Ballin	17,772	16.87	W3XAL	Bound Brook, N. J.

17.780	16.86	W8XK	Pittsburgh, Pa.	19.282	15.55	FTM	St. Assise, France
17.830	16.82	PCV	Kootwijk, Holland	19.400	15.45	FRO-FRE	St. Assise, France
17.850	16.80	W2XAO	New Brunswick, N. J.	19.460	15.40	FZU	Tamatore, Madagascar
211000		PLF	Bandoeng, Java	19.678	15.24	*CEC	Santiago, Chile
17.894	16.76	*WLL	Rocky Point, N. Y.	19.684	15.23	EAQ	Madrid, Spain
18.000	16.67	*KQJ	Bolinas, Calif.	19.816	15.13	*WKN	Lawrenceville, N. J.
18.105	16.56	W9XAA	Chicago, Ill.	19.830	15.12	FTD	St. Assise, France
18.170	16.50	CGA	Drummondville, Que.	19.895	15.07	LSG	Buenos Aires, Argentina
10,110	10.00	PMC	Bandoeng, Java	19.950	15.03	DIH	Nauen, Germany
18.193	16.48	GAW	Rugby, England	20.028	14.97	DHO	Nauen, Germany
18.240	16.44		St. Assise, France	20.020		OPL	Leopoldville, Belgian Congo
10.210		FTE	St. Assise, France	20.140	14.88	DWG	Nauen, Germany
18.296	16.39	*ŶŶQ	Maracay, Venezuela	20.400	14.70	GBA	Rugby, England
18.310	16.38	FZS	Saigon, Indo-China	20.600	14.55	PMB	Bandoeng, Java
		GAS	Rugby, England	20.680	14.50	FSR	Paris-Saigon, Indo-China
18.340	16.35	*WLA	Lawrenceville, N. J.	_0.000		LSN	Monte Grande, Argentina
		ZLW	Wellington, N. Z.			LSX	Buenos Aires, Argentina
18.365	16.32	FZA	Saigon, Indo-China	20.710	14.47	LSY	Buenos Aires, Argentina
18,400	16.29	PCK	Kootwijk, Holland	21.000	14.28	OKI	Podebrady, Czechoslovakia
18.444	16.25	*HJY	Bogota, Colombia	21.020	14.27	LSN	Buenos Aires, Argentina
18.600	16.12	PDM	Kootwijk, Holland	21.054	14.24	*WKA	Lawrenceville, N. J.
18.620	16.10	GBJ	Bodmin, England	21.069	14.23	PSA	Rio de Janeiro, Brazil
		GAU	Rugby, England	21.129	14.19	LSM	Buenos Aires, Argentina
18.670	16.06	*OCI	Lima, Peru	21.400	14.01	*WKK	Lawrenceville, N. J.
18.820	15.93	PLE	Bandoeng, Java	21.420	14.00	W2XDJ	Deal, N. J.
18.856	15.90	ZSS	Capetown, S. Africa	21.470	13.96	GSH	Daventry, England
18.892	15.87	*WDS	Rocky Point, N. Y.	21.540	13.92	W8XK	Pittsburgh, Pa.
18.958	15.82	*LSR	Buenos Aires, Argentina	22.291	13.45	GBU	Rugby, England
18.963	15.81	GAG	Rugby, England	29.803	10.06	IAF	Fiumicino, Italy
19.012	15.77	*WKW-	0.07	30.593	9.80	IAG	Golfo Aranci, Sardinia
		*W2XBJ	Rocky Point, N. Y.	31.000	9.67	W8XI	Pittsburgh, Pa.
19.121	15.68	LSM	Buenos Aires, Argentina	34.600	8.67	W2XB	New Brunswick, N. J.
19.194	15.62	ORG	Brussels, Belgium	42.530	7.05		Berlin, Germany
19.207	15.61	*WKF	Lawrenceville, N. J.	51.400	5.83	W2XBC	New Brunswick, N. J.
19.240	15.58	DFA	Nauen, Germany	51.724	5.79	RW61	Moskva Vei, U.S.S.R.
19.270	15.57	PPU	Rio de Janeiro, Brazil	59.964	5.00	PK4PA	Palembang, Sumatra

The Hundred Best S. W. Stations by Calls . . .

				•
British Ships 13.219 22.68 8.831 33.95	P	DJD Zeesen, Germany 11.753 25.51	В	GSB Daventry, England B 9.510 31.53 Broadcasts for South Africa 1:00-3:00
4.174 71.82 CEC Santiago, Chile	P	DJE Zeesen, Germany 17.761 16.88	В	p.m.; West Africa 3:00-5:30 p. m.;
19.678 15.24 11 a.m4 p.m CGA Drummondville, Que. 13.296 22.55 9 a.m. to 2 p.m.	P	-EAQ Madrid, Spain 9.862 30.40 5:30-7 p.m.; Sat.	B 1-	Canada 8-10 p.m. GSC Daventry, England B 9.585 31.28
CMCI Havana, Cuba 6.057 49.50 9 p.m11 p.m. CM5RY Matanzas, Cuba	B B	3 p.m. 19.684 15.23 Phones	_	GSD Daventry, England B 11.750 25.51 Broadcasts for Australasia 4:30-6:30
7.312 41.03 Sat. 10:45-11: p.m.	30	FTM St. Assise, France 19.282 15.55 10 a.m2 p.m.	P	a.m.; 1:00-3:00 p. m.; 3:30-5:30 p.m.
CNR Rabat, Morocco 12.820 23.38 CT1AA Lisbon, Portugal	P B	FZS Saigon Indo-China 12.000 24.98 9-10 a.m.	P	GSE Daventry, England B 11.865 25.27 Broadcasts for India 9:30-11:30 a.m.
9.592 31.25 TuesFri. 5-7 p.m CT3AQ Funchal, Maderia	В	German Ships 13.035 23.00 10.163 29.50	P	GSF Daventry, England B 15.140 19.81 GSG Daventry England B
11.174 26.83 TuesThur. 5-6: p.m.; Sun. 10:	30- 30-	8.328 36.00 4.174 71.82		17.770 16.90 Broadcasts for India 9:30-11:30 a.m.
DAF Norden, Germany 17.260 17.37 Talks to Ships	P	GBB Rugby, England 13.500 22.09		GSH Daventry, England B 21.470 13.96 HBJ Geneva, Switzerland P
12.394 24.19 8.464 35.42 DFB Nauen, Germany	P	GBC Rugby, England 12.780 23.46	P	14.550 20.60 HBI, Geneva, Switzerland B
17.512 17.12 Phones YVQ DGK Nauen, Germany	P	17.080 17.55 GBW Rugby, England	P	9.580 31.30 Sun. 5-5:45 p.m. HBP Geneva, Switzerland B
6.675 44.91 DHO Nauen, Germany 20.028 14.97	P	14.450 20.75 6 a.m6 p.m. GBX Rugby, England 16.150 18.56 4 p.m11 p.m.	P	7.790 38.49 Sun. 5-5:45 p.m. HCJB Quito, Ecuador B 8.103 37.0 7:30-9:45 p.m.; ex-
DIQ Nauen, Germany 10.246 29.26	В	GSA Daventry, England 6.050 49.56 Broadcasts for Sc	Bouth	cept Monday HJB Bogota, Colombia P
DJA Zeesen, Germany 9.552 31.38 2 p.m6:30	В	Africa 1:00- p.m.; West Af 3:30 - 5:30 p.	3:00 rica	14.930 20.08 HJY Bogota, Colombia P 9.928 30.20
DJB Zeesen, Germany 15.190 19.73 8 a.mnoon	В	Canada 8-10 p		18.444 16.25 11 a.m4 p.m.

HJ1ABB Barranquilla, Colombia	а В	PLW Bandoeng, Java	P	VRT-ZFB Hamilton, Bermuda P
5.996 50.0 8-10 p.m. HJ4ABB Manizales, Colombia	В	9.480 31.63 PMC Bandoeng, Java	P	10.060 29.80 WKA Lawrenceville, N. J. P
7.139 42.00 Sat. 10 p.mmid		18.170 16.50 3:30-9 a.m.	_	21.054 14.24 8 a.m4 p.m.
HJ4ABE Medellin, Colombia 5.925 50.60 Mon., Wed.,	B Fri	Pontoise, France 15.234 19.68 8-11 a.m.	В	WKK Lawrenceville, N. J. P 21.400 14.01 8 a.m4 p.m.
7:30-10:30	p.m.;	11.898 25.20 11:30 a.m2:30 11.710 25.60 4-7 p.m.) p.m.	WNC Hialeah, Florida P
Tues., Thurs. and Sun., 6-8	, Sat.	PPU Rio de Janeiro, Brazil	P	15.051 19.92 Phones Pan-Ameri-
HVJ Vatican City	р.ш. В	19.270 15.57 10:30 a.m3:30		woo Ocean Gate, N. J. P
15.120 19.83 5-5:15 a.m.	-	PRADO Riobamba, Ecuador 6.618 45.31 Thurs., 9-11 p.	В	12.839 23.36 Phones Ships
IAC Coltano, Italy	P	PSA Rio de Janeiro, Brazil	m. P	8.561 35.02
6.648 45.10 I2RO Rome, Italy	ъ	21.069 14.23 8 a.m.		4.749 63.13 W1XAL Boston, Mass. B
11.800 25.40 11 a.m12:30	B n.m.:	PSH Rio de Janeiro, Brazil 10.212 29.35	P	6.040 49.64 Irregular
2:30-5:30 p.m	1	PSS Rio de Janeiro, Brazil	P	W1XAZ Springfield, Mass. B
Italian Ships 8.566 35.00	P	14.682 20.42 5-6 p.m.	_	9.560 31.36 7:00 a.m1:00 a.m.
4.283 70.00		Rabat, Morocco 9.290 32.27 Sun., 3-5 p.m.	В	W2XAD Schenectady, N. Y. B 15,320 19.57 Daily 1-3 p.m.; Sat.,
J1AA Kemikawa-Cho, Japan	В	RAU Tashkent, USSR.	P	Sun. to 4.
9.862 30.40 5:00-7:45 a.m. 13.074 22.93 Phones		15.104 19.85 Phones Moscov		W2XAF Schenectady, N. Y. B
15.760 .19.02 Phones		RV-15 Khabarovsk, USSR. 4.273 70.65 3-9 a.m.	В	9.530 31.46 Daily, 7-11 p.m.
KDK-KKH Kahuku, Hawali	P	RV59 Moscow, USSR.	В	W3XAL Boundbrook, N. J. B 6.096 49.17 Sat. 4:30 p.m1 a.m.
7.518 39.89 9 p.m2 a.m.	P	5.996 50.0 3-7 p.m. RXC Panama City, Panama	P	17.772 16.87 8 a.m4 p.m.
KEJ Bolinas, Calif. 9.012 33,27	P	14.485 20.69	r	W3XAU Philadelphia, Pa. B
KKP Kahuku, Hawaii	P	SR-1 Poznan, Poland	В	9.585 31.28 Irregular 6.057 49.50
16.024 18.71		9.570 31.33 Tues., 6-8 a.m.	_	W4XB Miami, Fla. B
KWO Dixon, Calif. 15.410 19.46 2-5 p.m.	P	SUZ Cairo, Egypt 13.816 21.70 7 a.m3:30 p.m	P	6.036 49.67
KWV Dixon, Calif.	P	VE9AP Drummondville, Que.	. в	W8XAL Cincinnati, Ohio B 6.060 49.48 Relays WLW 6a.m,-
10.830 27.68	-	6.335 47.35	_	10:30 a.m.; 1:30-
LSG Buenos Aires, Arg. 19.895 15.07 10:30 a.m3:30	P n m	VE9BJ St. John, N. B. 6.090 49.23 5 p.m11 p.m.	В	3:30 p.m.; 7 p.m
LSN Buenos Aires, Arg.	P	VE9CI London, Ont.	В	1:30 a.m. W8XK Pittsburgh, Pa. B
9.895 30.30 6 p.m6 a.m.		2.735 109.62 Daily 9-11		W8X.K. Pittsburgh, Pa. B 6.140 48.83 Relays KDKA 4-11
21.020 14.27 8 a.m4 p.m. LSR Buenos Aires, Arg.	P	Sun. 11 a.m7		p.m.
18.958 15.82 11 a.m4 p.m.	•	VE9CS Vancouver, B. C. 6.070 49.39 Daily, 8-10 p.m	В	11.872 25.25 15.204 19.72 Relays KDKA 9 a.
LSY Buenos Aires, Arg.	P	VE9DR Drummondville, Que.	В	m4 p.m.
20.820 14.40 OCI Lima, Peru	P	6.005 49.93 7:30 a.mmid.;	Sun.,	W9XAA Chicago, III. B
18.670 16.06 2 p.m.	r	vE9JR Winnipeg, Man.	p.m. B	6.076 49.34 Sun. 11 a.m9 p.m. W9XF Chicago, III
OPM Leopoldville, B. Congo	P	11.710 25.60 Tues. 6:30-8:30	p.m.	6.095 49.18 4:30-8 p.m.; 9:30-2
10.090 29.70 ORK Brussels, Belgium	P	Fri. to 9.		XAM Merida, Yucatan P
10.340 28.99	r	VK2ME Sydney, Australia 9.585 31.28 Sun. 1-3 a.m.	. B	5.766 52.00
OXY Skamleback, Denmark	В	a.m.; 9:30-11		11.530 26.00
9.520 31.49 2-6:30 p.m.	_	VK3ME Melbourne, Australia	В	XDA Mexico City P 5.879 51.00 P
PCK Kootwijk, Holland 18.400 16.29	P	9.503 31.55 Wed. 5-6:30 a Sat. 5-7 a.m.	a.m.;	11.760 25.50
PCV Kootwijk, Holland	P	VPN Nassau, Bahamas.	P	YVQ Maracay, Venezuela P 13.278 22.58
17.830 16.82 6-9 a.m. PHI Huizen, Holland	В	4.508 66.50 Phones WNC		11.680 25.67 5-7 p.m.
17.761 16.88 Irregular	Д	VQ7LO Nairobi, Kenya 6.060 49.48 Daily 11 a.m.	.3:30	18.296 16.39 YV1BC Caracas, Venz. B
PHOHI Huizen, Holland 11.725 25.57	В	p.m.; Tues.	3-4	6.119 49.00 Relays 960 kcs.;
PLE Bandoeng, Java	P	a.m.; Thur,	8-9	I0:30 a.m1 p.m.;
18.820 15.93 Tues., Fri., 5	:40-	VRT-ZFA Hamilton, Bermuda	P	YVIIBMO Maracaibo, Venz. B
10:40 a.m.		5.045 59.42		6.125 48.95 8-11 p.m.
TT 1 (1				

Helpful Advice

(Continued from page 11) changed radio frequency to the broadcast receiver in the same way a broadcast signal is carried into the set from the antenna. Headphones may be used on the Philco broadcast receiver to listen to the short-wave signals supplied by the converter.

"RADEX is compact, complete, convenient and correct" alliterates A. C. Spear, 1825 Hamlin St., N. E., Washington, D. C.

Using A Microphone

I have tried to attach a microphone to a model 931 Sparton broadcast receiver without results except a severe shock and the detuning of the set. Please tell me how to use the microphone.

The shock and detuning of the set came from crossing with some plate circuit having high potential, and detuning was caused by changing a grid circuit through improper attachment. The small microphones usually come fitted with a wafer adapter to be slipped beneath the second detector tube for connection between the grid and cathode, or in the grid circuit.

The best results are obtained by using the microphone with an input transformer and external battery. Connect the microphone in series with a single dry cell and the primary coil of a small audio transformer. The secondary coil should then be placed in the grid circuit return by opening that lead between the bottom of the grid coil and the cathode of the detector tube. The volume control is turned down to stop all broadcast reception. Turn up the volume control to bring back broadcasting. It may be necessary to use a small switch across the secondary coil of the transformer to short circuit it when the microphone is being used to prevent any chances of detuning the circuit.

Larger Speaker

After changing the -45s and -27s in my radio set to -47s and 56s, I find that the volume of sound is about doubled. This now gives some trouble because of the small speaker (8-inch) and I wish to know whether I can use a larger speaker.

This additional volume appears to be too much for the 8-inch speaker. You can replace it with a 10-inch dynamic speaker provided it will fit into your cabinet space. The 10-inch speaker will be approximately 10½ inches in diameter and nearly one inch deeper than the 8-inch speaker. You must procure a speaker having an input transformer for two -47s in push-pull, and a field resistance of 2.500 ohms.

Choking And Fading

I have a model 91 Philco which appears to choke up and fade at times. Do you think the new tubes will help? This trouble seems a serious matter and hardly caused by station interference

Sometimes these symptoms are due to heterodyne action effects between stations. But serious fading and choking of signals in the receiver frequently is due to broken down coupling condensers in the audio amplifier. A defective grid resistor in the audio system would cause similar trouble if one has broken open at some place in the circuit. A defective plate resistor will have the same effect on the operation of the receiver. We advise testing all grid and plate resistors in the set, and replace those showing incorrect values or open circuits.

The following require particular attention: Locate from the manufacturer's diagram accompanying the set, resistors numbers 3, 26, 38 and 43 (all of 1,000,000 ohms); No. 32 (99,000 ohms); No. 39 (490,000 ohms); numbers 40 and 41 (25,000 ohms each); and No. 14 (1,000 ohms). Trouble may appear in the condensers, particularly numbers 6, 24, 13, 35 and 42.

Philco 91 employs 6.3-volt tubes and, therefore, the new 50 series cannot be substituted because of the difference in filament voltages. This circuit, with tubes, is efficient, and there could be no gain in changing tubes. Tubes are not causing the trouble you are experiencing.

Telephone Adapter On Scott

Please tell me how to use an ICA headphone adapter on my Scott all-wave set.

See the article in the February issue of RADEX. The adapter may be inserted into the second detector—a -27 tube, which must be removed. This connects the phones between the grid input of the -27 tube and the filament side. Two adapters, placed in the -45 push-pull sockets with phones and tips in series, will give maximum volume. Or one adapter may be used with the remaining -45 tube removed to quiet the speaker.

Hum In Philco 87

My Philco, model 87 receiver, has a steady hum between 1000 and 1190 kilocycles which drowns out all reception on that portion of the dial. While a power line is a long distance away, I do not see how that can cause the trouble, and hope you can advise me what to do.

Usually man-made static affects all settings of the dial equally. Such is not always the case as there is an effect known as tunable hum or tunable interference. Sometimes it is caused by internal conditions such as dust on some part of the condenser plates, or the shaft of the condensers may make poor contact at some positions of the dial.

Your location may have something to do with this trouble. The fact that a power line is some distance off may make little difference. Again, a heterodyne effect between two nearby powerful stations may influence your locality. You can ascertain whether or not this noise is in the receiver by removing the antenna. If the hum interference reduces in the same proportion as the signal intensity it obviously is outside interference. If there is no change it is in the set. In this latter case we advise that you have the neutralization and tuning of the circuits checked. The facts given by you do not permit of a complete analysis, but we suggest that the above points be carefully checked.

Distortion Troubles

When the automatic volume control of my ten-tube Crosley set goes into action there is a very disagreeable form of distortion. I hope you can help me out and tell me why this is and what must be done to remedy the mushy distortion.

Some distortion of this type is characteristic when two stations are operating on almost the same frequency. When the station being received fades away badly the automatic volume control goes into action with full energy in an attempt to bring up the sound level of the fading station, but the adjacent station interference, which has not faded, or may be becoming stronger at that

moment, becomes louder and there is apt to be some heterodyne action and disagreeable distorting interference.

Other than this the action of a properly designed and adjusted automatic volume control is at all times absolutely noiseless, and the only indication that it is functioning is the disappearance of background noises when a station is approached on the dial. or the failure of the signal to exceed a certain gain in intensity. Sometimes the opening of the plate by-pass condenser of the automatic volume control tube will cause trouble, or a defective resistor filter in the grid return of the tubes controlled by the a.v.c. will show similar effects. As the serviceman's set analyzer is practically useless in searching for this trouble, it is recommended that each piece of suspicious apparatus associated with the a.v.c. tube be tested individually, but not until you have exhausted the possibilities of station heterodyne interferences as outlined in the first paragraph.

Headphones And Oscillation

I have an Atwater Kent 55 set and use headphones with adapter in one -45 socket after removing both tubes. If I turn the volume control higher to increase the signal of the station the set whistles, but as soon as the volume is cut down the station comes in. On frequencies from 1100 to 550 kilocycles I can turn the volume on full and the whistling ceases.

We believe that the oscillation occurs on the stated frequencies because it is taking place in the radio-frequency amplifier of the Atwater Kent model 55 receiver because of excessive plate voltage, excessive screen voltage, or an open cathode or screen-grid by-pass condenser. The obvious treatment is to test the two types of by-pass condensers mentioned on the -24 i.f. tubes. Also test the plate by-pass condensers between the positive end of the voltage divider and ground and the last resistance of the divider leading to the -24 cathodes. It does not seem possible to us that the introduction of the adapter can cause oscillation unless it is due to the removal of the two -45 power tubes and consequent unbalancing of the power from the rectifier unit.

In May Mr. Dashiell will give instructions and diagrams for building that simple short wave converter.

Reception Reports

(Continued from page 33)

JOGK, CMK, CKGW, KGBU, CJOC, WDAE, WSPA, WNAD, WMPC, WROL, WBZ, KGU, WPG and WCAU."

"In eight nights I have picked up 216 stations," reports Warren R. Davee, 222 No. Monitor St., West Point, Nebr., "16 of which are in Australia, 2 in New Zealand, 5 in Japan, 2 in Hawaii, 12 in Canada, 3 in Mexico, one in Porto Rico and one in Cuba."

"I have had 251 stations on a onetube receiver, using a 227-tube with 90 volts on the plate," writes Herbert Chambers, 4335 Belmar Ave., Toledo, Ohio. "78 of these stations are of 250 watts and under, the farthest one being KABC, San Antonio, Texas, 1175 miles."

"I have picked up KFI night after night as early as 8:45 EST," reports Philip A. Fecher, 3027 Chesterfield Ave., Baltimore, Md. "KOA at Denver, XER, XEPN, etc., all regulars from the beginning. I use a 10-tube a.c. superhet, Sonora 1932 model."

Robert Rosenberger, 17 Janssen Place, Kansas City, Mo., has a Majestic 291 with which he is very much pleased. He reports receiving Radio Kaiserslautern, Germany, LV7, 5CK, G5GB and CMAK with a total of thirty different countries.

"Thanks to your very fine DX table," remarks E. L. Williams, 4295 W. Buena Vista Ave., Detroit, Mich., "I was able last weekend to hear KGU, Honolulu; CFBO, St. John, N.

B.; CMCY, Havana; XEJ, Juarez, and XES, Tampico."

"I have had a radio only since March, 1932," writes Robert E. Lee Hunt, 1105 Harmon Ave., Danville, Ill., "but I have logged 380 stations. I started to verify only last August and now have 260. I use a 7-tube Sentinel RCA."

"In the 13 weeks I have had my Philco Model 20, 7-tubes, I have heard 120 stations," records J. S. Goral, R 2, Box 35, Latrobe, Pa. "I have been interested in radio ever since KDKA and a few others were the only stations on the air."

"I've been logging those elusive stations since early in 1929 and to date have just passed the 500 mark," writes Henry Larent, 243 Rand St., Central Falls, R. I.

"I have every issue of RADEX since March, 1930, and wouldn't part with them for anything," writes George Nahas, 147 Seeley Street, Brooklyn, N. Y.

Field of Short Waves

(Continued from page 18)

hear from other boys of his age who tune on 75 meters.

"I just recently purchased a new Stewart-Warner all-wave set," remarks Carl S. Seigfreid, 1022 Madison Ave., Reading, Pa. "I have had the set a week and have received 15 police stations, 8XK, 1XAL, 2XAF. On the foreign s.w. band I have not done so well. I receive GSA at Daventry. England, every night in the week from 8 to 10 p.m. I also hear EAQ each night. This is all I have been able to pick up on the foreign bands. Have any owners of Stewart-Warner radios done better? I would appreciate it if other owners of this set will write to me and tell me their experiences on the short and long wave bands."

Clarence Sargent, 18 Clinton St., Dansville, N. Y., reports reception of LSN, XAM, EAQ, YV1BC, GSE, DJD and RXC.

"I have answered several foreign

stations and sent return postage," writes R. F. Brink, E. Stroudsburg, Pa., "but I have never received a reply. Can you account for their not answering?" We cannot account for their not answering, but there are several things to be remembered in writing to foreign stations. States stamps are of no use to them, International Reply should be sent; these can be purchased at any post office. Furthermore, those stations receive a tremendous amount of mail every day from all parts of the world and they necessarily require considerable time for reading and answering these letters. Do not forget to ask for a verification, and most important of all, be sure to give at least a part of the program heard to prove the reception.

F. L. Naylor, Jr., 176 Argyle Place, Arlington, N. J., writes, "I picked up several stations, VE9JR, GSD, VE9DR, I2RO, GSE, EAQ and several stations in America. I think it would have been impossible to have received any of these without the aid of

RADEX."

Amending The Rules

(Continued from page 7)

event.

We aren't nearly so much interested in knowing how many different calls a listener has heard since 1919 as in how many of the stations he has logged in this month's Index by Frequencies at their present location and on their present frequency. The more we consider the problem, the more we are convinced that we should leave the professional or all-time records to the radio clubs and publish in this magazine only those records composed of stations which appear in this magazine. All-time records are not fair to beginners or those who have taken up DXing in the last two or three years. They can never hope to catch up with their competitors because scores and hundreds of stations on the latter's logs have disappeared never to return again.

We fear it is quite out of the question to get all clubs to agree upon a uniform set of rules as each one naturally thinks that its present rules are the right ones. We think it much simpler to make a set of rules for the guidance of this publication and then to publish those records which comply with such rules. The formulation of these rules will be given further study and our plan will be fully set forth in a future issue of this magazine. In the meantime, we welcome suggestions of our readers resulting from their consideration of this article.

The Noise Nuisance

(Continued from page 3)

inches in length and two inches in diameter. The wire used is No. 18 gage double-cotton-covered and is wound in two layers of 100 turns each over a length of five inches. The d.c. resistance of each of the coils will be less than one ohm.

The condenser arrangement requires four by-pass condensers each having a capacity of .015 microfarads at about 200 volts. They must be arranged by pairs in series and connected between the ends of the coils as shown in the diagram. The inner common terminals are connected together, and this contact must be well grounded to a cold water pipe with a separate wire. Do not use the wire that grounds the radio receiver.

A number of filter devices can be purchased at radio supply houses if the reader does not care to make one up for himself. They are very efficient and should give satisfaction. Two outstanding makes are universally in use. The Insuline Corporation of America filters come in several sizes to cover various intensities of noise sources, from the little ICA Junior, to the ICA Popular, Utility, Service and Senior models. The Tobe Deutschmann filterizer has been described at length on page 6 in the October, 1932 (No. 62) issue of RADEX.

Here's Something You Have Wanted . . .

♦ ♦ A RADIO PROGRAM

RADIO PROGRAMS

	MONDAY			TUESDAY				
Time	Program	Call	Dial	Program	Call Die			
6:00								
6:15								
6:30								
6:45								
7:00								
7:15								
7:30								
7:45								
8:00								
8:15								
8:30								
8:45								
9:00								
9-15								
9:30								
9:45			1		\rightarrow			
10:00		\rightarrow	+		++			
10:15			1		-+-			
10:30			1		-1-1			
10:45		_	+		-			
11:00		_	+					
11:15		_	1					
11:30			1		-			
11:45		_	1					
12:00								

Actual size 5 x 7 inches

"SLATE" + +

For those favorite programs which are so frequently overlooked.

Spaces for each 15-minute period for Sunday afternoon and every evening of the week.

Four pages; printed on fine Bristol board so entries may be erased and kept up-to-date.

After you have used it you will wonder how you ever got along without it.



Price, 10 cents each, two for 15c, four for a quarter.

THE RADEX MAP OF THE WORLD

with Time Converting Dial

Just turn the dial to the time in your own zone and instantly the time is shown for every other zone in the world—quite the most ingenious device for converting time ever published.

Shows clearly which times are yesterday, today or tomorrow. Indicates graphically where the periods of twilight, darkness and dawn lie. No adding or subtracting.

On the double inside pages is a large and accurate map of the world showing the principal cities of every nation and the zones in which they are located.

Gives the call letters assigned to each country in the world.

Price 25 cents each postpaid to any part of the world.

THE RADEX PRESS INC.

HANNA BUILDING

CLEVELAND, OHIO, U. S. A.

"I'll PROVE That It's Easy

To Learn At Home In Spare Time

To Fill A Good Radio Job"



Clip the coupon and mall it. I'm so sure I can train you at home in your spare time for a big pay job in Radio that I'll send you a sample lesson free. Examine it, read it, see how clear and easy it Is to understand. Then you will know why many men with less than a grammar school education and no technical experience have become Radio Experts and are earning two to three times their Clip the coupon and mail it. I'm so sure I can former pay as a result of my training.

Many Radio Experts Make \$50 to \$100 a Week

In about ten years the Radio Industry has grown from \$2,000,000 to hundreds of millions of dollars. Over 300,000 00 to industries of millions of dollars. Over 300,000 jobs have been created by this growth, and thousands more will be created by its continued development. Many men and young men with the right (raining—the kind of training I give you in the N. R. I. course—have stepped into Radio at two and three times their former salaries.

Many Make \$5, \$10, \$15 a Week Extra in Spare Time Almost at Once

The day you enroll with me 1 send you instruction which you should master quickly for doing 28 job common in most every neighborhood. for spare-tim money. I give you the plans and ideas that have made \$200 to \$1.000 a year for N. R. I. men 1 their spare time.

Talking Movies, Television, Short Wave

Special training in Talking Movies, Tele-Special training in Talking Movies, Television, Short-Wave, Radio's use in Aviation, Servicing and Merchandising Sets, Broadcasting, Commercial and Ship Stations are included. I am so sure N. R. I. can train you satisfactorily that I agree in writing to refund every penny of your tuition if you are not satisfied with my Lesson and Instruction Service upon constitution.

Book of Information FREE

Get your copy today. It's free to all residents of the United States and Canada over 15 years old. It tells you where Radio's good jobs are, what they pay, tells you about my Course, what others who have taken it are doing and making. Find out what Radio offers you without the slightest obliga-tion. ACT NOW!

J. E Smith, President National Radio Institute Dept. 3DO Washington, D. C.



SPECIAL Radio Equipment for Broad Practical Experience Given Without Extra Charge

My course is not all theory. I'll show you how to use my special Radio equipment for conducting experiments and building circuits which illustrate important principles used in such well-known sets as Westinghouse, General Electric, Philco, R. C. A., Victor, Majestic, and others. You work out with your own hands many of the things you read in our lesson books. This 50-50 method of training makes learning at home easy, interesting, My course is not all theory. I'll show you how to

" I hay	ve do	ubled		
and a	triple	d the		
salar:	triple ies of 1	nany		
Find	out ab	out 🎉	1 300	The same of the sa
this t	ested	way	4	30)
to D	ICCE	P	Tio.	137
DI DI	GGE	7 100		17/
MMMy.	PA	Y	74Rn	0.0
Get 4		AN	Dia	
a Job 🕏	EILL O	UT AND	AIII	
with a	TUIS	COUPC	-	ODAY
Future 🔊		WOUPL		UUAI
TO PROMOTE STATE OF THE PARTY O			1	1
J. E.	SMITH,	President		7
Natio	nal Radio	Institute,	Dept	3DO

Washington, D. C.

I want to take advantage of your offer. Send me your Free Sample Lesson and your book, "Rich Rewarls in Radio." I under-stand this request does not obligate me.

NAME

ADDRESS..... CITY.....STATE.....

LEB