THE MAY 1936

# 25°

# RADIO INDEX

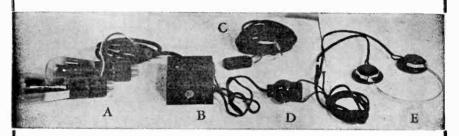
The All-wave DX Log of the World



Tuning the Antenna Circuit
The Annoying Problem of Fading
Where and When to Tune
for the Day's News
All the Broadcast Stations of the World

## The "Perfect" Phone Adapter

permits the use of head-phones on any radio receiver. It is easily attached by anyone without tools and will not affect the operation of the set in any way. It comes with either one or two small socket-adapters (A) which are placed under the last or power tubes. The hard of hearing may listen on the phones while others listen to the speaker. Or the speaker may be silenced when others in the house are asleep or ill.



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Perfect Phone Adapter (A & B)	\$3.95	
Adapter with 2000-ohm phones	6.70	
Adapter with "Featherweight" 24,000-ohm phones		
Distant Volume Control		
Extension cord and connector	.50	

All prices postpaid. If you live in Ohio add 3% for state sales tax.

The 2000-ohm phones will give excellent service. The 24,000-ohm phones are perhaps the very finest made being especially light and extremely sensitive. They were developed especially for the hard of hearing, airplane pilots, short wave work, etc.

In ordering be sure to give make and model of receiver and a list of the tubes used.

The Radex Press, Inc. Conneaut, Ohio



Jou'te in the mid1t of living history!—tremendous events in Europe—modern music—the Asiatic military giants rocking the pillars of the world—news and new experiments of the inventor-amateurs! It's your world!—enjoy it to the utmost with a SCOTT, the magnificent 23 tube Full Range Hi-Fidelity receiver which has been making world DX reception records for 9 years.

## COMPARE THIS DX LIST

Here is but one of dozens of SCOTT records—from Official Radio News Listening Post—39 foreign stations, on the broadcast band alone, in 7 hours!

## COMPARE THESE FEATURES

.6 Microvolt Sensitivity with unmodulated carrier—twice the average useable sensitivity. Variable Selectivity 2 to 16 K.C.—three times more station separation.

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— beat frequency oscillator button signals instantly.

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More Performance Features—including True Separate Bass and Treble Controls; 23 Tubes; and Oversize Construction throughout.

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These and other exclusive laboratory developments impossible to include in production type receivers, have made the SCOTT world-famous for distance-getting ability—have won for it distinguished owners in more than 146 countries—musicians, broadcasters, amateurs, princes and presidents! You can own the SCOTT for no more than you would pay for a good radio!

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Put the SCOTT in your own home anywhere in U. S. A. on 30-day trial! Put it to a side by side comparative performance test with any other receiver at any price! If after making this test you are not convinced that the SCOTT gives you wastly superior performance, brings you more foreign stations with more enthralling volume, with more diamond sharp clarity and more beautifully true tone—you may return it for refund without any obligation whatever.

Every SCOTT is custombuilt to the highest precision standards known. Every SCOTT carries a five year perfect performance guarantee. Sent direct to you from the laboratories, fully aged, tested and proved with nation-wide installation service. Mail Coupon—NOW—for one of the most extra-

or the most extraordinary records in all the history of worldwide DX reception!

State ...

	DETAILS ARE FREE
L	E. H. SCOTT RADIO LABORATORIES, INC.
	4424 Ravenswood Ave., Dept. 15H6, Chicago, Ill.
	Send details of unsurpassed performance and life-true ton of new 23-tube SCOTT.
3	Name —

City

## May 1, 1936



# RADEX

Reg. U. S. Patent Office

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Editor and Publisher



B. FRANCIS DASHIELL Technical Editor CARLETON LORD DX Editor

PAGE TAYLOR Short Wave Editor

TWELFTH YEAR

NUMBER 99

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## Closing the MYSTERY CONTEST

#### • • • Announcing the Winners

FTER several weeks of checking and rechecking entries, the judges have closed the books of the first Mystery DX Contest. The winners have been determined beyond shadow of doubt, individual station reports have been sent on to the respective broadcasters, and the final announcement is ready for our readers.

As brought forth in the April issue, Station CFCO decided at the last moment to remain on the air for a total of four hours. Although a few contestants reported this station four times, we were obliged to consider this as but a single program, eligible for a maximum of 20 points, regardless of when it was heard. While we regretted the necessity of subtracting as high as 60 points from some scores, final analysis has shown that this policy alone could be fair to every contestant

No less than 57 non-participating stations were reported. Some of these were broadcasting special test or DX



Here is the staff of WTRC at Elkhart, Ind. which broadcast a fine special program for the RADEX Mystery DX Contest on February 23rd. From left to right are the Announcer, Mr. Schrock; Chief Engineer Singleton; Asst. Engineer Zellmer; Station Director Baker, and Mrs. Ethel Geiss, the studio pianist.

programs, while others were operating on their regular late schedules. Most widely claimed were KROC and WTAL, each of whom was reported by 13 contestants. Neither of these two stations had been contacted by us in regard to the contest

In judging all reports, we considered only the following "official" stations:

February 22

1:45-2:45	CKLW	1030	Windsor, Ont.
2:00-3:00	KFNF	890	Shenandoah, Iowa
	W9XBY	1530	Kansas City, Mo.
	WBIG	1440	Greensboro, N. C.
	WFBR	1270	Baltimore, Md.
	KFYR	550	Bismarck, N. D.
2:00-6:00	CFCO	630	Chatham, Ont.
3:00-4:00	KGIW	1420	Alamosa, Colo.
	WDNC	1500	Durham, N. C.
	WNEW	1250	Newark, N. J.
4:00-5:00	WEXL	1310	Royal Oak, Mich.
	WLAC	1470	Nashville, Tenn.
	WSUI	880	Iowa City, Iowa
5:00-6:00	KWBG	1420	Hutchinson, Kans.
	WHAM	1150	Rochester, N. Y.
			reconcistor, iv. 1.
	F	ebruary	/ 23rd
2:00-3:00	кон	1380	Reno, Nevada
	WPHR	880	Petersburg, Va.
	W8XO	700	Cincinnati, Ohio
	XEPN	585	Piedras Negras, Coah.
3:00-4:00	KOMA	1480	Oklahoma City, Okla.
	WAAW	660	Omaha, Neb.
	WBBR.	1300	Brooklyn, N. Y.
	WIBM	1370	Jackson, Mich.
1	WSYR	570	Syracuse, N. Y.
	WTFI	1450	Athens, Ga.
	WTRC	1310	Elkhart, Ind.
4:00-5:00	WHJB	620	Greensburg, Pa.
	WNEW	1250	Newark, N. J.
	WOI	640	Ames, Iowa
5:00-6:00	GJLS	1310	Yarmouth, N. S.
	CKNX	1200	Wingham, Ont.
	WCSH	940	Portland, Me.
		_	
		bruary	24th
2:00-3:00	CFCN	1030	Calgary, Alta.
IIII	KWYO	1370	Sheridan, Wyo.
3:00-4:00	CKOV	630	Kelowna, B. C.
	KVOD	920	Denver, Colo.
	WADC	1320	Akron, Ohio
4 .00-2 .00	MITS A	0.40	3.6 41

Readers will note that this schedule coincides with that published in the April issue, with the exception of the elimination of KDYL, previously included in the 2:00-3:00 period on February 24th, and the addition of

940

1300

1260

Madison, Wisc.

Springfield Vt.

Greenville, S. C.

4:00-5:00

5:00-6:00

WHA

WFBC

WNRY



This is how the Mystery Program from W8XO was broadcast. At the microphones are Announcers Al Godwin at the left and Durwood Kirby at the right. At the piano are the Devore Sisters. Billie. Marjorie and Ruth. while standing behind them are Rex Griffith. tenor, and Louise Raymond, soprano. Freddie Roehr is at the organ and Production Man Lewis Valentine is cueing the song.

CKOV to the 3:00-4:00 spot on the same date. The former had agreed to come on, but failed to do so; while the latter was not reported among the early entries and we assumed that it, too, had failed to broadcast its program.

And now for the winners:

The first prize, a 23-tube Scott All-Wave receiver, was won by S. R. Lewis, R.F.D. 3, Box 660, Toledo, Ohio. Scoring a total of 765 points, Mr. Lewis gained maximum credit for 38 stations and wound up a fine report with 5 points for KOH. The only station missing was little CKOV and a check on the entries reveals that this station was not reported East of the Mississippi.

Long established as a DXer of outstanding ability, Mr. Lewis wins new laurels through his excellent work in this contest. In another section of this issue, we present an article by Mr. Lewis which was written before the contest and we are of the opinion that it will be of special interest to our readers.

Second prize, a 7-tube Hallicrafters Super-Seven receiver, goes to C. R. Herman, 605 S. Cedar St., Owosso,

Mich. Scoring a total of 720 points with correct reports from 36 participating stations, Mr. Herman is to be congratulated for the fine bit of listening which won so valuable an award.

Tied for third place, with 700 points each, were Arthur E. Foerster, 1926 Hoyt Ave., Indianapolis, Ind., and William Vornkahl, Jr., Westport, Conn. For his prize, Mr. Foerster chose a replacement set of Raytheon tubes, while Mr. Vornkahl will receive a set of National Union tubes.

In fifth place, Mrs. Ella B. Smith, Owosso, Mich., received a total of 695 points and a set of Study and Reference Texts for the National Radio Institute courses.

In order of final standing, the remaining prize winners are:

- 6. Earl R. Roberts, 2308 Roosevelt Ave., Indianapolis, Ind.—replacement set of Radiotron tubes.
- 7. W. H. Ronecker, 2630 Burd Ave., St. Louis, Mo.—set of the famous Trimm headphones.
- 8. Vane A. Jones, 1105 W. 31st St., Indianapolis, Ind.—his choice of any Lynch antenna system.
- 9. Harry M. Gordon, 317 E. 10th St., Erie, Pa.—Candler Code Course.
- 10. Bireley Ross, 2426 Alco St., Dallas, Tex.—Set of Radiotron tubes.
- 11. Hiram A. Crain, 25 St. Leonards Ave., Toronto, Ont.—a Perfect Phone Adapter.
- 12. H. E. Bash, 913 E. Indiana Ave., Elkhart, Ind., subscription to RADEX.
- 13. David M. Walton, Box 515, Picton, Ont.—a World Globe.
- 14. Donald W. Shields, Box 345, Roseville, Ohio—Amateur Radio Call Book Magazine.
- 15. William Tawzer, Jr., R.F.D. 2, Glenshaw, Pa.—subscription to RADEX.
- 16. C. M. Zimmerman, 323 Chestnut St., Sunbury, Pa.—subscription to RADEX.

17. Charles Wright, 1309 N. Haugh St., Indianapolis, Ind.—subscription to RADEX.

18. Robert W. Wood, R.F.D. 1, Hillsboro, N. H.—subscription to RADEX.

19. H. J. Arbic, 23 Guelph St., Acton, Ont.—Radio Amateur Call Book Magazine.

20. Ray McCann, Greensboro, Pa.—Radio Amateur Call Book Magazine.

21. Claude Rainbolt, 375 E. Malacca Ave., Akron, Ohio—Radio Amateur Call Book Magazine.

22. R. H. Weaver, 605 W. Market St., York, Pa.—Radio Amateur Call Book Magazine.

23. Kermit Geary, R.F.D. 2, Walnutport, Pa.—Candler Course in Touch Typing.

Tied for last place among the prize winners were Walter J. Budd, St. Mihiel Dr., Burlington, N. J., and Anthony Sousa, East State Highway.



"Smiling Bill" Parker, announcer of WBIG at Greensboro, N. C. conducted the special program transmitted by that station for the RADEX Mystery Contest on Feb. 22. "Smiling Bill" is one of the most popular announcers in the south,

same city. The final award of a subscription to RADEX will be divided among these two readers, each receiving 5 copies.

Honorable mention goes to Harry M. Emerick, Shanksville, Pa.: James Thurlow, Scottsville, N. Y .: Lavern D. Mitchell, Marquette, Iowa: Floyd Biss, Brittmount, Minn.; Kenneth R. Leu, Rockford, Ill.: Kenneth C. McCartt, Lexington, Ky.: John Grund, Hillsboro, N. H.; Irwin Beitman, Elyria, Ohio; James E. Hathhorn, Glenshaw, Pa.: Sanford Morris. Metuchen, N. J.; L. H. Windisch, Toledo, Ohio; Mrs. A. G. Hayslette. Covington, Va.; Max P. Guinn, Lafayette, Ind.; B. F. Smith, Sault Ste. Marie, Ont., Canada: Robert R Rawstron, Worcester, Mass.: Edward S. Kocsan, Johnstown, Pa.: Harold A. Hayne, Kalamazoo, Mich.; Norval B. Davis, Columbus, Ohio: Forrest D. Poole, Portsmouth, Ohio; Donald Barnes. Grinnell, Iowa; Leighton Hanev. Norristown, Pa.; Robert Small, Winona, Minn.; John E. Ott, Sanborn, Iowa; W. H. Applegate, Chicago, Ill.; John L. Clark, Binghamton, N. Y.; and Lloyd J. French. West Hartford, Conn.

To other contestants, we extend congratulations for fine reports and hopes for better luck next time.

To the stations which took part in the contest, we can only repeat our sincere appreciation for the generous cooperation which made the contest possible, and we trust that the reports received were of some value.

To the following contributors of the valuable awards we add to our own the thanks of the prize winners, and suggest that readers of RADEX show their appreciation by patronizing these firms when in the market for the various products and services represented: E. H. Scott Radio Laboratories, Inc., 4450 Ravenswood Ave., Chicago, Illinois; The Hallicrafters, Inc., 3001 Southport Ave.,



The transmitter building of KFYR, Bismarck, N. Dak., 550 kcs.. one of the stations which participated in the RADEX Mystery Contest on February 22nd.

Chicago, Illinois; National Radio Institute, 16th & U Streets, Washington, D. C.; RCA Manufacturing Co., Inc., Camden, N. J.; Arthur H. Lynch, Inc., 227 Fulton St., New York City; Trimm Manufacturing Co., 1770 W. Berkau Ave., Chicago, Illinois; The Candler System Co., Box 331, Asheville, N. C.; National Union Radio Corp., 570 Lexington Ave., New York City; Raytheon Production Corp., 30 East 42nd St., New York City; and Radio Amateur Call Book, Inc., 608 South Dearborn St. Chicago, Illinois.

This is to certify that all of the entries in the RADEX Mystery DX Contest have been carefully checked, and that the final standings and the awarding of prizes, as covered in the preceding article, are correct.

Signed,

Harry T. Curnow

County of Summit State of Ohio

Sworn to before me and subscribed in my presence this 28th day of March 1936.

Frances M. Burgess Notary Public

My Commission Expires Aug. 29, 1938

## The Contest and Western Listeners

882 Portal Ave. Oakland, Calif. Feb. 25, 1936

"I N REFERENCE to your contest, I should like to state that there were no Pacific Coast stations on the air with your contest. The closest stations to us were CFCN, Calgary, Alta., and XEPN, Piedras Negras, Coah.

"It is not at all probable that I could have failed to receive any stations on the coast, as our receiver has consistently received the weakest stations all over the West. Moreover, during part of the contest, I received a 100-watt station in Mexico City with good volume.

"It was not a matter of failing to tune for the stations at the right time, as I was constantly trying all parts of the dial. Even by taking into consideration the uncertainty of reception and the hit-or-miss character of the contest, I should have obtained far better results if the schedule had been carried out as announced.

"Our set has all the qualities necessary for good reception — power, little noise, selectivity.

"While we appreciate your efforts in organizing this contest, I do not feel that it was entirely fair to West Coast listeners, unless, of course, many stations failed to carry out their part, in which case you cannot be blamed. In view of all the circumstances, I think some adjustment should be made so that Western listeners might get an even break with listeners in other parts of the country.

"Of course, if you can show proof that other West Coast listeners had satisfactory results in the contest, the foregoing complaint is entirely withdrawn, but I do not believe this is possible."

Yours truly, (signed) Luis Ireland

Conneaut, Ohio, March 23, 1936 Mr. Luis Ireland,

882 Portal Avenue, Oakland, Calif. Dear Mr. Ireland:

As your letter of February 25th might be classed as a typical complaint from a West Coast listener, we have delayed reply until we had an opportunity to check all contest results carefully.

We agree that, as the contest turned out, Western listeners were obliged to work under a handicap. It is quite true that a majority of the participating stations were located in the East and Middle West. However, we cannot accept the blame for this condition.

When we started to work on the contest, we planned to have one station from each of the 48 states, the District of Columbia, the Territories of Hawaii and Puerto Rico, and the nine provinces of Canada. This would have brought the total to the anticipated sixty. Unfortunately for you Western listeners, we were unable to secure the cooperation of Pacific Coast broadcasters.

From our first batch of letters, two stations refused our request and several others did not reply. Carrying on with our station-per-state idea, we followed up the letters to the stations which had not replied and attempted to secure substitutes for those which had refused. Later, a third batch of letters was sent promiscuously to Western stations and, finally, a whole broadside of requests for programs was distributed.

While the Pacific Coast stations were refusing or ignoring our requests, the Eastern and Middle Western broadcasters were gradually falling into line, and that was the situation when the contest finally took place. We had done everything

possible to effect an equal distribution of programs.

In an effort to learn which stations had been reported by Western listeners, we segregated all of the reports from the Pacific Coast. We believe that you will be interested to learn that all but six of the 40 participating stations were correctly reported by listeners in the far West. Thus, it would have been possible for a Western listener to have scored 680 points, which would have placed him high among the winners and entitled him to a very nice award.

Of these six stations, we admit that interference from Western stations may have prevented reception in many instances. KFAC probably spoiled the WBBR program and KMTR, if on, may have been too strong for WSYR. Also, KOL might have interfered with WFBR. Several stations on 1370 keys undoubtedly made it impossible to hear WIBM and may even have drowned out KWYO, while KGFJ must swamped CKNX.

In passing, it is interesting to note that only 21 of the 423 entries originated West of the Rockies. With this in mind, it would seem that any advantages shown by the schedule favored sections where the interest was the greatest.

However, we have learned a great deal from our first attempt to sponsor an event of this nature and you may be sure that any future contests will have a number of changes in structure.

Thanking you for your interest, we are,

Yours sincerely,
RADEX
(signed) Carleton Lord
DX Editor

The station which has been known for so many years as KWKC is changing its call to KCMO. It will remain on 1370 kcs.

## Five Years Of DXing

● ● By S. R. Lewis\*



Mr. S. R. Lewis, Grand Winner of the Mystery Contest

HEN I concluded my fifth consecutive year of DXing last October, I found that I was embarking upon the new season with an enthusiasm greater than that of my first year of dial twisting.

Five years is a long time to have been crawling out of bed at unearthly hours for a try at listening, and I must admit that my interest has been maintained solely by a gradual improvement in radio receivers, transmitting facilities and co-operation of broadcasters. Foreign as well as domestic stations seem to have many more DXes than in former years.

I prefer to term our present setup as "organized DXing," since it has been the union of listeners into eight or ten DX clubs which has made current conditions possible. So today we have organized groups of DXers working for the common good of the listeners at large, and there is the reason for the present popularity of this pastime.

Perhaps some may take exception to my contention that organized DX-ing is better than the old hit-or-miss style. While I will grant that there was a thrill to the accidental snagging of an unexpected station, I contend that that same pleasure is present today, enhanced by the knowledge that you can count on hearing additional new broadcasters on special programs.

I believe that I have been a DXer at heart ever since the inception of radio. It was fourteen years ago that local newspapers first presented articles on how to build receivers, and I still have my original oatmeal-box set. Graduating to a one-tube set and then to a three-lunger with a loudspeaker and everything, I arrived at the super-powered five-tuber which could pick up KFI after 1:00 A. M., although very weak.

In 1930, a man in my neighborhood, William Bowers, heard me talk about my "remarkable" reception of KFI and invited me over to his home. There, my good opinion of my listening ability was completely deflated, for he had cards and letters of verification from more than 20 West Coast stations. What a thrill for me to see actual proofs of reception, and how I resolved to go and do me likewise!

So, with Mr. Bowers' help, I erected a decent antenna. With RADEX as our guide, we located various stations by frequency on my dial, and I was ready to go.

Immediately, there began a contest between my friend and myself, to see who could verify the most West Coast stations. Gradually, I found that I wasn't hearing enough of these broadcasters to keep me busy, so I set about verifying ev-

erything I heard. I would allot myself a channel and strive to hear everything listed on that frequency. Many was the night I lay on a frequency for hours, waiting patiently for the needed station to break through the interference.

It was at about this time that I first tuned in KDFN, which was broadcasting a program for the NNRC. This was my first knowledge of the existence of DX clubs, and it was indeed a revelation to know that there were so many fellows interested in DX.

After reaching 300 verifications, the bug had bitten me so hard that I wasn't satisfied with hearing American stations alone. I went after every bit of information on the identities and schedules of the foreign stations.

Also, I set a goal of verifying every U. S. station listed in RADEX. In June of 1934, I nearly achieved this goal when I had all but two active stations.

Naturally, the monthly frequency checks have helped no end, and I cannot help but think of the decided break given the younger crop of DXers when stations began these tests on cleared channels. Why, I know of one Toledo DXer who heard and wrote to 30 stations in one night. He ran up a total of 500 veries during his first year of DXing. This is a far cry from my early days, when five new catches in a night and 300 in a year were tops!

For many years I DXed with a Crosley 8-tuber, which netted me my first 800 veries. This set was rewired for newer and more powerful tubes, and its conglomeration of dials resembled some sort of an infernal machine. There were even adjustments on the neutralizing condensers, which enabled me to peak the receiver on any desired frequency in the broadcast band. With the help of my antenna tuner, I

could boom a distant signal through and get selectivity which was unbelievable on so ancient a horseand-buggy model,

I am still a firm advocate of the antenna tuner and always use one when tuning for DX on my present receiver, an 11-tube Silver Marshall of 1931 vintage.

Having well over 1000 BCB veries at this writing, I cannot help but say a word about the absolute necessity of using good antenna and ground installations. There is no point in telling what I think is the best, since my preference might well be unsuitable for other locations. Suffice it to say that I have three aerials, and a like number of grounds. I have found that the familiar inverted L antenna, 125 feet



Erlu Neese, one of North Carolina's favorite vocalists, wom every singing contest he ever entered and is now a star on WBIG. He took part in the Mystery Contest on February 22nd over WBIG at Greensboro, N. C.

long and 40 feet high, is my best bet for distant reception. I have had no success with the newer type transposed systems on the broadcast band. I find that an aerial of this type works fine on the short waves, but does not function to advantage on BCB signals.

For a ground, I like something in the copper line, buried about six feet in the earth. A radiator, hot water coil or sheet copper, firmly soldered to insulated wire running to the set, works well.

For evening reception, especially on split frequencies where foreign signals are covered up, I like to use my booster loop antenna. It has the pick-up usually absent from ordinary loops, while it retains all the advantages of directional effects.

It is sometimes surprising what can be done in the way of foreign reception in the evenings. though a desired station does not operate on a split frequency and is apparently covered up by locals, not a few worth-while catches may be made. Listeners in the northern part of the United States frequently report LS2 through WOAI, LS4 in back of WMAQ, LR4 through WBZ, and many others. My latest bit of this type of reception was hearing Radio El Mundo, LR1, announce very clearly through WTAM.

At the time of writing, my foreign verifications are divided as follows: Canada—92; Cuba—38; Mexico—48; South America—14 stations in 7 countries; Africa—1; Europe—30 stations in 10 countries; Australia—14; New Zealand—3; two each in Alaska, Hawaii, Puerto Rico, and the Dominican Republic; and one each in Costa Rica, Haiti, Bahama Islands, Guatemala, Miquelon Island, and San Salvador.

About 600 of my verifications are in card form, and these are placed in an enormous album, properly (Continued on page 47)

#### The Editor Says—

R ADIO Station WCSH sends us some of the so-called reports of reception of the Mystery program which they received. It makes one boil just to go over them. Here is one that is all too typical, and on a postcard at that as many others were.

"I heard your program on Sunday morning, February 23, 1936, on 940 kc. with the power of 1000 watts. It come in fair and faided. Pleas send me verification."

All of the postcard reports demanded a verification. What nerve a man has who asks someone to do something for him and throws even the cost of the stamp onto the other fellow. We sugest that those who cannot afford to pay their own postage, give up DXing and go to collecting pins or pieces of string. So far as we are concerned we wish every station would make a practice of throwing postcard reports into their waste-basket. It is the postcard addicts who are going to ruin DX.

#### To the Hard of Hearing

To those whose hearing is defective. radio brings their greatest enjoyment. It also brings a problem. They cannot enjoy the programs unless the volume is turned up to a point which annoys others in the room. To such, headphones are a God-send. We have had many peculiar problems put up to us by the hard of hearing and so far we have been able to solve all of them. With the Perfect Phone Adapter, the deaf may listen to the radio with the speaker operating or with it silent. They may listen at a distance from the set and control the volume of the receiver from their chair. Or they may control only the volume of the phones leaving the volume of the speaker set at a point where it pleases the others. We are particularly anxious to be of service to those who are afflicted and if they will write us fully just what they would like in the way of radio service, we will try to help them.

#### Floods and Radio

Radio demonstrated the vast service it can render in the recent floods. In every devastated region, broadcasting stations were kept operating without rest for days at a time. When every other means of communication had failed, radio kept relief officials in touch with the needs of particular localities. Undoubtedly radio saved hundreds of lives and brought relief to thousands.

The amateurs are to be especially commended for the great service they rendered. It has come to be taken as a matter of course for the amateurs to leap into the breach at the first sign of trouble. Anyone listening to the amateur bands during the floods must have been impressed with the service they were rendering.

On the other hand, one was also impressed most disagreeably with those amateurs who did not have sense enough to keep off the air with their chatter and leave the channels free for their brethren who were doing relief work. It was terribly annoying to hear the signals of those who were doing important work all mixed up with the "ers" and "ahs" of those who didn't know what to say next.

#### Station News

WJAS. Pittsburgh, has been authorized to increase its day power to 5,000 watts with 1,000 watts night, effective May 19.

A new station in Redding, Calif., has been authorized and assigned to 1200 kc. with 100 watts, unlimited time. Effective April 21.

Three stations - KFPY, Spokane, WSPD, Toledo, and WFBM, Indianapolis-have been given day increases in power to 5.000 watts.

WIND, Gary, Ind., will be the Chicago metropolitan outlet for the new ABC, the third system headed by Samuel Insull.

KIUN, Pecos, KNEL, Brady, KGKL, San Antonio and KRLH, Midland, have formed the West Texas Broadcasting System.

### TRIMM **FEATHERWEIGHT**





for your radio will greatly increase its

DX range. Built to a higher standard than ever before, incorporating the best materials available. vides a higher signal to noise ratio due to unique construction.

RADIO MANUFACTURING CO 1770 W. Berteau Ave., Chicago, III.

WHO, Des Moines, seeks an experimental license for the use of 500 kilowatts, putting it on a par with WLW.

WHIO, Dayton, has been authorized to increase its day power to 5,000 watts. It now uses 1,000 watts day and night on 1260 kc.

The NBC has been granted the sole right to broadcast the maiden voyage of the giant new German Zeppelin Von Hindenburg.

KSL, Salt Lake City, will broadcast every week from 6:30 a.m. Saturday to 1:00 a.m. Monday, MST.

KEUB is the new call of the 100watt station recently licensed for the city of Price, Utah. It will operate on 1420 kc.

KWK, St. Louis, will install a new Western Electric 5,000-watt transmitter in Baden which was formerly a part of the bed of the Mississippi River. Over eight miles of copper wire will be buried for a ground. The vertical radiator will rise 400 feet above the ground.

The CBS has bought Station KNX. Los Angeles, for a reported consideration of \$1,250,000.00. It will be used as the Pacific Coast key outlet.

Newspaperman Hearst has bought KTAT, Fort Worth, WACO, Waco, and KOMA, Oklahoma City. He already owns KTSA, San Antonio, and KNOW, Austin.

## Our READERS' TROUBLES

### • • • By B. FRANCIS DASHIELL

HAVE a Ciscin Air Scout radio.

Could I use the parts in this to build a short-wave converter to work with my 7-tube Marconi broadcast set? Will I require any additional parts so that I can make the RADEX converter described in the magazine some years ago? Also, is it possible to use the latest type tubes in the broadcast set? I am using 56s at present in place of the 27s, but find that a 56 will not act as oscillator in this circuit.

We do not think that you can build a short-wave converter from the parts in your "Air Scout" receiver. A short-wave converter, to give pleasing results, must be carefully constructed and must use specified parts so as to get proper capacities and inductances. It is better, at this age, to build a converter from some carefully designed and assembled kit of parts. The RADEX converter was a simple device and met the problem in its day, but improvements now in evidence compel us to advise you to build something more modern and efficient.

There is a very good short-wave converter kit, that can be purchased. It is easily assembled, and it really works without tricky tuning and other adjustments. We have mailed you a copy of a circular describing this converter kit. Just because you have a few spare parts, does not mean that it is easy to assemble a radio set or converter from a diagram showing merely the connections.

We also feel that perhaps it is a good idea to steer clear of an attempt to use the latest types of tubes in your set. Engineers now design their receivers around the tubes, and the layman can not hope to do more than ruin the best efforts of these engineers by trying to use tubes which will not work at their best with the existing parts

and wiring layout. Of course, by the use of adapters, some new tubes can be used, but results are seldom so good that the expense and worry is worth while

The Arcturus Company has a new line of metal tubes which are counterparts of the more popular glass tubes. They may be used with adapters, and will work just as well as the originals. We suggest, in this case you discuss the change with a local Arcturus dealer or the engineers at the plant, in Newark, N. J.

#### Economy 8 Has Hum

My problem concerns a bad hum in a home constructed a-c Economy Eight receiver. The output of the 56 a-f driver tube has no hum when checked with telephones, yet removal of the tube does not stop the hum. A resistor across the secondary of the push-pull transformer reduces the hum, but also the volume. Removal of one 59 push-pull tube stops the hum, while removal of the other does not. We recently replaced the power transformer and also the push-pull transformer. What do you believe to be wrong?

If the receiver worked satisfactorily before replacing the transformers, we feel, then, that the hum is being picked up by the audio transformer. Perhaps it is in the magnetic field of some other part. Changing the position of the transformer may clear up the trouble. It would be advisable to have the 59 type tubes carefully tested. If possible, try new ones as a temporary test. Make sure that the grid returns of both tubes are complete to the chassis. Try removing the 0.5 microfarad condenser across the filter choke. Substitute smaller values.

The position of the parts and wiring in the audio circuit of this set is highly

important, for there is always possible the least bit of pick up and regeneration. You should follow the manufacturer's layout to the letter.

#### Set Cuts Off

My Philco 14L cuts on and off after it has been playing for about an hour. It does this 3 or 4 times and then is all right. When it cuts off it has a mushy or sputtering sound, and moving the volume control or jarring the set makes it worse for a moment. Then the set, when tuned to a station, soon moves up about ten kilocycles on the dial and has to be returned. What is wrong?

From what you state about this set, we think the trouble is isolated in the audio system. Replace all coupling condensers with new ones. Generally, the replacement of all the condensers in the black cases or containers may be required to stop this type of intermittent reception.

The March, 1936, issue of RADEX contained an article on signal creeping in superheterodynes. In your case, however, we suggest that you try a new 6A7 tube. Go over all connections in this circuit with a hot soldering iron. Replace all fixed and trimmer condensers (just the mica dielectric in the condensers). This should stop the trouble of which you complain.

#### Playing Records

I have a RCA model 281 set and an Orthophonic Victrola that I should like to hook up together so I could play records through the radio loudspeaker. Must I have anything else besides an electrical pickup unit as I understand that the radio has the phonograph oscillator attached on the rear of the set? I see that some pickup units have different impedances. What about this?

If your receiver has a built-in phonograph oscillator such the RCA RK-24, you will need only a good phonograph pickup to work from your present turntable into your phonograph oscillator.



The attractive studies of KWYO at Sheridan, Wyoming are shown here. The RADEX Mystery Program from this station was heard on February 22nd.

We suggest a pick-up having an impedance of about 2500 ohms. Pickups are made with different value of impedance in order that they may match the circuit to which they are to feed. Impedance matching is necessary because maximum power transfers occur when the "source" impedance matches the load impedance. Any pick-up can be matched to any load by means of a matching transformer.

We would not advise the purchase of any expensive "high fidelity" pick-up device. The degree of fidelity will be entirely limited by the audio system of your receiver, which is the controlling factor. Be sure and get an arm which will take the 16-inch records if those are the ones you wish to play. The firm from which you purchase the pick-up will be glad to advise you as to which matching transformer you need, if such is required in your case.

#### Adjusting Trimmers

The line ballast on my Majestic model 100 broke down. A local service man tuned the set by adjusting the trimmers by inserting a tool through openings in the chassis. This did not help any, and later I found the line ballast bad and replaced it. Now I have good volume, but cannot tune many stations. How can I adjust those trimmers myself now to get the set in good shape?

The trimmer condensers of your model 100 Majestic receiver are located on your condenser gang unit. Tune your receiver to a high frequency station in the vicinity of 1400 kilocycles. Adjust the trimmers with an insulated or wooden tool for maximum signal output.

If the set squeals or whistles when tuning a station, it must be neutralized. This is accomplished by opening the filament circuit of the tube in the stage to be neutralized. Tune in a strong station at the high frequency end of the dial. Adjust the neutralizing condenser of that stage for minimum signal pick-up. Resolder the filament lead and proceed to the next r-f stage. After all of the r-f stages have been neutralized, realignment may be necessary. We believe that a special re-alignment tool with an offset adapter is required for aligning this set. It will be best to call in an experienced service man to do the work.

#### Tube Tester

I purchased a Sterling Professional Vacuum Tube Tester, No. R-402. It will handle only 4-prong tubes and is obsolete as far as testing the newer tubes is concerned. Can you give me some information about re-wiring this tester so it will work on the newer tubes? I recently enrolled in one of the larger radio schools and may need this tester in my service practice work.

Unfortunately, there is no practical possibility of bringing this old type tester up to date. The experimental work involved would amount to several times the price of the best tube tester you could buy. Then would come your calibration difficulties, and they will be many. You would also need a large number of good and bad tubes to make actual tests and comparison, and recording your readings for future use. Of course, there are a number of tube adapters that can be purchased that will permit of the testing some of the elements of multiprong tubes in 4-hole tester sockets.

We think re-wiring is highly impracticable, and if you should discuss this matter with the school giving you the service lessons we feel sure they will give you very little encouragement along similar lines.

Due to the low sensitivity of the meters in this tester, with the possible exception of your milli-ammeter, we doubt their real value for use in modern service work. Low resistance meters place a very heavy drain on radio circuits, causing the voltages to drop below normal and giving you a very misleading reading. Of course, once you learn how to interpret your readings, you can get along fairly well.

#### Boop-Boop-A-Doop

I have a 1935 Patterson model 85 receiver. When tuned to the low-frequency end of the 5th wave band (15 to 35 megs.), it goes "boop-boop-boop-pop" very rapidly, like a motor boat. It does not do this on any other bands except for the low-frequency end of the broadcast band during daylight. I use a 35-foot antenna; is it too short? If I hold my finger on the doublet post and on the antenna post, this popping noise stops and the stations still come in well.

From what you say, oscillations are occurring in your receiver. We suggest that you have the set checked for open by-pass condensers by letting the set "motor-boat," and then shunting the condensers in the set with others of about the same size, known to be in good condition. The test is made one at a time.

As this is an expensive set, it may be that changing your antenna will eliminate all your trouble. The fact that a signal increase is noted by placing your fingers on the binding posts, shows either poor antenna pick-up or an open circuit in the antenna coil of that particular wave band. Check up carefully on this situation, and also look for poor contacts in the waveband switching contacts. Equal sensitivity on all the wave bands in any set is not always possible, so we think

you should not become unduly alarmed about this.

#### Installing A-V-C

I have a 1930 TRF Lyric set and wish to apply some sort of automatic volume control. The set works very nicely, but fading comes all too frequently it seems. I would appreciate it if you can devise some practicable system that will apply to this set.

The receiver mentioned by you hardly has sufficient sensitivity to incorporate an automatic volume control. An attempt at such an installation would be a waste of time and you might stand a chance of losing the excellent results the set now gives.

Such work is always an experiment. While it might be worthwhile if you were a service man owning meters and testing apparatus, about the only really successful change-overs that have been accomplished are on extremely powerful and selective "supers."



Mr. Lee Fetcher, studio control engineer, snapped as he sent the W8XO Mystery DX Contest for RADEX over the air waves on Sunday morning, Feb. 23rd. W8XO is the experimental call sign of WLW at Cincinnati, Ohio, on 700 kcs.

If you wish to have the pleasure of building an a-v-c into a set, why not try building a modern set from a kit. For instance, the Thor Radio Company, 167 Greenwich Street, New York, N. Y., has some excellent kits incorporating a-v-c. There are other kits, too. that can be selected from advertise-As you reside in ments. another country, we believe that you could get a kit of parts through Customs at far less expense than an assembled re-Modern kits are easily asceiver. sembled, for most of the work is factory made, and every step of the work is laid out in the instructions

#### S-W Converter

I have a Kolster K-20 receiver, and desire to use a Stewart-Warner 301-A short-wave converter with this set. I have been told, however, that the highest voltage obtainable from the Kolster is only 170 volts, whereas the converter requires 250 volts on the plate. Can you help me find a way to get the necessary plate potential for the converter?

We think it is very likely that the converter may work quite well with as little as 170 volts on the plate. There is a resistor in the plate supply lead of the converter having a value of 25,000 ohms. Decrease this value to about 10,000 ohms, and 170 volts should work nicely. A higher voltage can be obtained by connecting the B plus lead of the converter to the junction of the filter chokes. If you are in doubt as to the proper connections. call in a service man. You might try an eighty-volt B battery in with the 170-volt lead from the receiver to the 250-volt contact on the converter. This might not be so satisfactory in the long run.

#### New Condenser

I have a four-tube Majestic "International" radio receiver. The condenser was taken out and was lost. I have no way of finding out the number and type of condenser required for the radio. Can you tell me the size and style number so I can procure one?

Unfortunately, we have no information that is available about the Majestic "International" receiver. These sets are made, so we are told, by different circuit diagrams, and not all are similar. The size of the set, however, limits the design possibilities, and an 8 mfd. electrolytic filter condenser should prove suitable for replacement in any of these three different makes of radio sets.

But you have not stated which condenser is missing. If the condenser is used to couple the detector tube to the power tube, use a .02 mfd. tubular replacement. Then there are from ten to fifteen other bypass and coupling condensers in any small receiver so we suggest you see a service man about this. The same applies to a missing tuning condenser, if such is the case.

#### Static Eliminator

Some time ago I read in a literary magazine that a new device had been made that would cut down man-made interference and static in receivers. Do you know about this new invention, and where may it be purchased and how much?

We have not had an opportunity to witness a demonstration of the static eliminator to which you refer. It has been devised by a well-known radio man who edits much radio material of a technical nature. The device is an extremely quick-acting automatic volume control. A burst of static or man-made interference, if greater in intensity than the received signal, will be sufficiently strong to operate the eliminator, causing the amplification of the receiver to drop for the duration of the interfering noise. This invention may cause a bit of distortion with weak moments appearing during the program, all of which is better than the noise that otherwise would occur. It is a step in the right direction, for we all hope that some day static will be a thing of the past, and the device is worthy of the fine technician who invented it. We suggest that you

communicate with QST Magazine, Hartford, Conn., for information as to how the device is used in existing sets.

#### Fading

I have been disappointed in my new receiver because of the fact that it does not prevent fading. I thought that the modern sets, with their efficient automatic volume controls, held the signal at the proper level and fading was more or less a thing of the past. Can I do anything about it?

You must not expect the impossible of any automatic volume control. If a signal entirely fades out, no amount of a-v-c action will bring the signal back. An a-v-c only increases the gain of a set when the signal strength goes down close to the vanishing point, but when it vanishes there no longer is any signal to amplify, and only just so much sensitivity is practical in a set. You have a good receiver, but fading, fluttering and distortion on distant stations will occur in any set, and they cannot be overcome by present methods of design. So far, radio receivers can reproduce only what is fed to them from their antennas, and we certainly have not reached radio's millennium!

#### Croslev 42-S

I wish to connect a phonograph pickup to my Crosley 42-8 receiver. I expect to use a Bosch Recreater unit. I did try to connect it by means of an adapter to one of the 27 tubes, but there was no result at all. On the back of my Crosley are three terminals, one marked A, one marked P and the other marked G. What is the purpose of P? If I can not use the Bosch pick-up with the Crosley can it be used with a Philco 616-B?

You have connected the pick-up to the first a-f stage, and not much gain is available at that point. You can connect the pick-up in the grid return of the detector tube, a type 27, which is placed rather by itself toward the center of the chassis.

But we suggest you connect the pickup to the centacts made for that pur-(Continued on page 46)

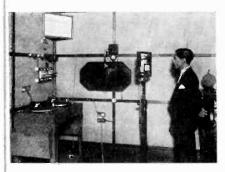
## Around The ALL-WAVE Dial

• • • By PAGE TAYLOR

IFTY-FIVE news broadcasts are shortwaved to the world every twenty-four hours by the radio stations of four major European countries, England, Germany, France and Italy, according to information compiled by the Short Wave Institute of America at Washington. England supplies only seven of these daily broadcasts, but it sends each of them out on two or three different frequencies so all the world can hear. France contributes eighteen, Germany sixteen and Italy, fourteen of these broadcasts.

The British stations at Daventry use the English language exclusively; the first broadcast is heard at 4 o'clock in the morning, EST, with subsequent broadcasts at 0800, 1130, 1300, 1645, 1945 and 2245, EST.

The French shortwave stations cover eighteen hours out of the twenty-four, and a large share of their time is devoted to news broadcasts in various languages. English is heard at 0445, 0700, 1430, 2000 and 2320, EST. Besides English, the French stations use French,



Shortwave station PRA8 is not widely heard in the United States but it is expected that with their increase in power to 5 kw. this summer it will be well received. PRA8 transmits on 6040 kes. and is owned by the Radio Club do Pernambuco, Brazil.

German, Spanish, Arabic, Italian and Portuguese.

Germany sends out six daily broadcasts in English, at 0430, 0700, 0900, 1400, 1600 and 2015. Other languages used on the balance of their news periods are German, French, Spanish, Dutch and Portuguese.

Italy so far holds the record for the number of languages used, fourteen, as follows: Italian, English, French, German, Spanish, Portuguese, Hungarian, Croation, Bulgarian, Albanian, Arabic, Greek, Roumanian and Esperanto. English is used at 1045, 1330 and 1800, EST.

#### Mum's The Word

A station in Goderich, Ontario, has aroused considerable comment during the past five months. Last November we were requested to keep this information to ourselves but as it seems to have been passed along to everyone else in the country, we may as well publish a letter Albert Steinmetz, 411 W. Girard Ave., Philadelphia, Pa. received from Goderich.

"Many thanks for your good letter and this will verify your reception of the 15 watt experimental station you heard operating in 6030 kcs. at 5:59 am, EST. We are experimenting with this low power station to determine the radius that a club station of 50-100 watts would The programs are entirely for DXers. It is unlicensed and hence no call sign is used and for this same reason kindly do not give it any This station has been republicity! ported on the other side of the Atlantic." This is something like the Kingfish trying to keep a secret after telling it to the Battle Axe. Goderich wants everyone to know about its radio station except the Radio Commission,

Mr. Steinmetz has been sending reports to the Hungarian stations regularly every week and has HAT4 verified twenty times as a reward. He has an interesting letter from the station which is partly quoted here: "The reason we do not have any 'propoganda' at the present time is that our programs at the present time are only experimental. We do not have special overseas programs and the allotted one hour each week However, we shall is not enough. soon build directional antennae and reception will be much better." It is assumed that the directional antennae will be directed towards the United States.

The new shortwaver HIT at Trujillo City, Dominican Republic gives this schedule on its QSL card but does not state the standard time used. Most likely it is Dominican Time, twenty minutes faster than Eastern Standard. The hours: 1230-1400 and 1800 to 2100 daily except Sunday, with special DX programs on Saturdays from 2300 to 0100. HIT works on 1050 and 6630 kcs. with 200 watts power on the shortwaves. Reports should be addressed to Sr. F. A. Sanabia, Apartado 1105.

#### Radio Bangkok Reappears

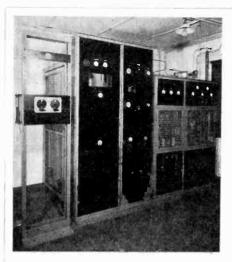
Sr. Miguel Rivera, formerly of Peru but now residing in Hong Kong, sends information which should be highly interesting. He reports Radio Bangkok, HS8PJ, an experimental broadcasting station on 27.83 meters, but they announced they may scon change their wavelength to 29.5 meters (10.165 megs.). The aerial power is 10 kilowatts and the transmission schedule runs from 1300 to 1500 GMT, daily; (8 to 10 am EST). "XGOX, Nanking, is now transmitting in the evenings, but come in with interference, and their power seems be quite low compared with HS8PJ." continues Sr. Rivera.

Additional information on station VQG has been obtained. This telephony station in Nairobi, Kenya Colony, was first reported in RADEX in April on about 15.2 meters. We understand from Mr. Pybus of Manchester, England, that VQG is on 19.630 megs. and is heard daily calling London. One listener in the United States reports hearing it.

A new shortwave broadcasting station was inaugurated in La Ceiba, Honduras, on March 1. It uses the call letters HRD, is of 250 watts power and operates on a frequency of 6235 kcs., according to the American Consul located in that city. One or two of our readers give the call sign as HRV. This station is truly an international one, as the transmitter is a Collins, manufactured in Iowa: one of the owners is Dr. Tulio Castaneda of Guatemala and the other is Sr. Emilio A. Crespo of Honduras. Sr. Tito del Morales of Chile is the program director.

#### Another HJ1ABC

The call sign HJ1ABC is quite popular in Colombia. A third station is now reported using it. Ralph Gozen, 60 Warburton Ave., Yonkers, N. Y., states it is located in Cartagena and works on about 9600 kcs. at 2200 EST. Other information submitted by this tireless tuner is most timely. XDA at Chapultepec, Mexico, works irregularly on 6535 kcs. Station HI4V at Trujillo City, Dominican Republic is on 6480 kcs., and HI3C at La Romana, D. R. transmits on 6900 nearly every night until about 1930 EST. Another new Dominican is HIG at Trujillo, on 6290 kcs. early in the evenings. HRV, La Ceiba, Honduras, "La Voz de Atlantico," on 6240 kcs. tests often and is heard with a very good signal. Three Javanese stations, PLV, PLP and PMN broadcast simultaneously on Sunday mornings from 5:30 to 10 am, EST., and the Hong Kong station ZBW was heard on a Sunday morning at 8750 kcs.



A view of experimental transmitter 3LR operated by the Australian National Broadcasting Service. 3LR works on 9580 kcs. daily except Sunday from 4 until 8 a.m., EST.

#### Greetings from Germany

Many American listeners will be glad to hear that DJD, 11,770 megs., has returned to the air with the North American programs, but we are all sorry to know that the best of all German stations, DJB, had to be discontinued. "DJD is usually considered as the star performer during the summer season," write the operators, "whereas, during the winter time DJC steps in as a worthy successor, provided our broadcasting friends in South and Central America are kind enough to stick to their proper frequencies."

The German shortwave station has inaugurated a novel policy; this is a special program schedule in which every type of broadcast has its special, fixed day. Thus, listeners can always tune in concerts by leading artists on Mondays; operatic transmissions and military music on Tuesdays; chamber music and vaudeville on Wednesdays; radio plays and sketches on Thursdays; symphonic concerts on Fridays; operettas, musical comedies and dance music on Saturdays, and on Sundays, concerts, light music and poetry.

Two of the highlights of the Zeeson programs should be of interest to all readers. One of these is the Letter Box Program in which personal greetings are sent to listeners. This feature proved so popular that the station decided to make it a daily broadcast, fixing the time from 4:55 to 5:00 pm, EST, for these messages. It is hoped that listeners will continue to provide sufficient material for these daily five minutes: this is a fine opportunity for any radio fan to hear his name announced from Berlin

Several months ago a new type of broadcast was undertaken under the name of "Fun from Overseas," a program which gives fans a chance to write their own radio continuity. Listeners the world over are invited to send in short stories about strange happenings in their daily lives and work which could be considered of general interest to other listeners to the station. The best of the stories are broadcast and the writers receive a prize consisting of a book on broadcasting in Germany, and a beautifully illustrated book of the country. Strangely, no response has been received from the United States and Canada, but as the competition is being continued, amateur short story writers on this continent still have a chance to participate.

#### The Elusive Javanese

It is quite a task to keep up with the many low powered Javanese stations, but some information recently received from Sourabaya, although not in agreement with other advices, may prove helpful. It seems that programs heard on the NIROM Network originate sometimes in Batavia and sometimes in Sourabaya. The Batavia station is YDA, which has two frequency assignments, and the Sourabaya station in YDB. Last fall the YDA programs were radiated for a while over PLP on 11,000 megs., adding further to the confusion, but

now YDA works on 3040 and 6040 kcs. YDB worked formerly on 4470 kcs. but moved up to 9650 a few months ago. The NIROM programs are relayed on Sundays only over two commercial phone stations, PLP on 11 megs, and PMN on 10,260 megs. All these stations are received well.

Mr. L. W. Bewick, of Radio Station CHSJ, tells us that shortwave station VE9BJ is now owned by the New Brunswick Broadcasting Co., Ltd., with offices in the Admiral Beatty Hotel, St. John, New Brunswick VE9BJ works on 6090 kcs. with 50 watts power, relaying CHSJ irregularly.

HJU gradually shifts its frequency, having moved from 9060 to 9510 kcs, in easy stages during the past two months. Richard Bradley, 107 Baltimore, Md., Beechdale Road. heard the station announce they would remain on 9510 and that their schedule was Monday, Wednesday and Friday from noon to 1400 and from 2000 to 2300, EST. Richard uses a 23-tube Scott and says it was necessary to advance the volume only 1/4 th of its capacity to receive HJU with good volume.

"HRN at Tegucigalpa, Honduras, is coming in excellently now," post-cards Don Gross, Box 6052, W. Asheville, N. C. "Their Sunday night broadcasts should not be missed by any shortwaver. HH3W at Port-au-Prince is very good between 1900 and 2015, EST on 9590 kcs.; announcements are in French and the musical programs are enjoyable. Two other good catches are TIGPH, 5820, at San Jose, C. R., and TI5HH, 5480 kcs. at San Ramon, Costa Rica."

#### New Skyways Stations

Lisle Hodnett, 72 John St., Ottawa, Ont., comes through with more interesting Canadian station news. "The call for the Toronto police is, I believe, VYQ instead of CYQ," he tells us. "The Ottawa police department operates CZ5O on about 2.35

megs. Some of the Dominion Skyways stations are CZ5K somewhere in Quebec; CZ5L, Mud Lake, P. Q.; CZ5M, Chibougamon, P. Q.; and CYS, Shoemaker, Ont. Another new station in the Dominican Republic is HIT, 6630 kcs., in Trujillo City, formerly Santo Domingo City."

No further reports have been received on reception of the apex stations, although it seems we have quite a number of readers who own sets capable of tuning below 10 meters or above 30 megacycles. schedule of one of these stations, W8XWJ, is sent to us by Ernst 4732 Williams, Detroit. Dukatz. W8XWJ, 31.6 megs. relays Mich. the Detroit News station WWJ from 6:15 am to 12:30 pm; from 2 to 5 pm and from 7 to 10 pm, EST. It was not stated but we believe this is a daily schedule.

Some schedules of a few of the other apex stations are given for the benefit of tuners having ultra shortwave equipment. W8XKA (KDKA) works on 55.5 megs. daily from 1500 to 2300, EST, and W8XAI relays WHAM of Rochester, N. Y. on 31.6 megs. from 0730 to 2400 EST daily. This station is justly proud of a recent report received from a listener in Panama.

Anthony Tarr, 909 W. Lee St., Seattle, Wash., has enjoyed reception from five of the six continents. "I have heard LRX on their frequency of 9.580 megs," he writes. "This Buenos Aires station heard testing with a fairly good signal between 2200 and 2300, EST. At about the same time the new CB960, Santiago de Chile on 9600 megs. is often heard. HJU, Buenaventura, Colombia was first heard on 9490 kcs. but later they moved 10 kcs. to 9500 because of cw QRM. W9XAA is asing their 11830 kcs. frequency almost exclusively now, being on the air daily until midnight. Just after daybreak here the Germans DJB and DJE come through.

GSB is the best of the Daventry stations now, producing an R9 signal on their evening transmissions. The other Europeans, Spain and Italy, do not come in so well. The Pontoise stations have now been given call letters, as follows: TPA2, 25,243 megs.; TPA3, 11.885 megs, and TPA4, 11.713 megs.

"The best South American here is HJN, which has moved to 5950 kcs. I have just logged my 100th s.w. station and now have 28 countries represented on all continents except Africa.'' Mr. Tarr wishes to exchange SWL cards.

#### S. W. for Reliability

"As reception on the broadcast band has been so bad during the past few months I have turned to the shortwaves for most of my DXing," explains Ray Corbett, 619-12th St., "The British Sacramento, Calif. stations seem to be the best, especially in the mornings, although the Italian on 25 meters is very good. I believe that before long I will succumb to the shortwaves; one doesn't need to stay up all night to hear DX."

"I have been reading RADEX for a year and a half now, and have not yet seen a strictly CW DXer mentioned," complains John Kofron, Jr., 3171 Euclid Hts. Blvd., Cleveland Heights, Ohio. "I know that 999 out of every 1000 DXers consider code as a mere bit of annoying static, but to me it carries a great deal more interest than 'phone DX. For this reason I would be very glad to get in touch with another DXer who is interested in code. My receiver is a new 7-tube Skyrider."

Dale Smith, Eugene, Oregon, says he believes a log of 1000 stations in less than three months on a five tube set is pretty good, "I have heard 40 of the states on the broadcast band and the same number of states on the 75-meter amateur band," Mr. Smith calculates, "Of the total more than



One of radio's most novel studios. This view of Studio "A" of WIBM at Jackson, Mich., is taken from the street outside. The entire front and side of the studio is open to public view through 16-foot high windows outlined in neon tubing. Two hundred persons can be seated inside and crowds numbering up to 600 have witnessed broadcasts from outside.

half are amateurs, 107 are police and 13 airways stations. My best distance on 75-meters is YV12RM. Maracaibo, Venezuela,"

"The Japanese stations are coming in well out here," avers Wm. Hamilton, 520 Benicia Road, Vallejo, Calif. "On Sunday evening at 9:40 pm PST (12:40 am EST) I tuned in Nazaki on 10.660 megs. They were giving a talk in Japanese but signed off in excellent English, then the National Anthem. This reception was on a Stromberg-Carlson table set and a 50-foot antenna." Mr. Hamilton is a firm believer in a good ground and believes his good success is due more, or at least as much to having his set well-grounded as it is to his efficient aerial system.

Mr. L. D. Brewer of 2246 N. 9th St., Phoenix, Ariz., has had considerable experience erecting aerials. "During the past year I have erected 21 aerials of various sizes and kinds for my Philco 16X. The Philco 60foot doublet seems to be the best for shortwave work but a 100-foot flattop proved the best for broadcast band. I use 40-foot masts running N to S and NW to SE. During the

(Continued on page 47)

## A Tuned Antenna System

NCE the coming of short waves and all-wave receivers, noise reducing antennas have found widespread use. In the days of the broadcast receiver local static noises were not an important factor, and any type of antenna was fairly satisfactory. But now that every form of electrical device broadcasts interferences that are picked up on the short waves, it is essential that efficient noise-eliminating antennas be used. An antenna that will pick up a maximum of energy on all signals will tend to over-ride interfering noises and make possible the reception of weaker stations.

The standard types of noise-reducing doublet antennas follow dimensions that approximately resonate in the short-wave bands. Simple tuning of the antenna is obtained by giving the flat top a length which causes it to resonate at about 49 meters, or 6,000 kilocycles, and again on the second harmonic, 25 meters, or 12,000 kilocycles. Certain combinations, such as double doublets, permit of fundamental resonance on additional wave lengths or harmonics, and thus a fixed degree antenna tuning automatically exists.

#### Adjustable Antennas

As we cannot have an elastic antenna, which changes length as we rotate the dial to different waves, we cannot provide a length of wire which resonates exactly to every signal being received. So the next best thing is to tune the antenna by hand. If we do this we have an antenna that responds to all signals and gives a maximum of sensitivity and volume. Some people object to this additional tuning, so antenna manufacturers have leaned back-

wards from this essential feature.

Philco recently made a concession to the tuned antenna principle. They installed a separate set of coils, tuned to the different wave bands covered by the receiver, and which are automatically cut in or out by the band changing switch. This feature eliminates the necessity of manual tuning; it is an advantage, but it still prevents tuning to each individual signal in the wave band being used.

Maximum efficiency of any antenna system calls for exact resonance to every signal. This can be obtained only by tuning, which means separate adjustments must be made. But to DX listeners and others interested in obtaining the fullest measure of signal sensitivity and selectivity, as well as volume, the simple additional operation of tuning the antenna is a work of love rather than just another nuisance.

#### The R9 Tuned Antenna

The new Silver Corporation's R9 tuned antenna is said to give from three to six times the volume obtainable from an ordinary doublet antenna. This audible increase in volume on the short waves results in the reception of signals so weak as to be unheard on older antenna systems. This sensitivity, coupled with the improved noise rejecting system and the ability to tune every signal between 9 and 200 meters, should prove of considerable interest to DX listeners.

The R9 antenna consists of a doublet 50 feet long—25 feet to each side—and 131 feet of twisted noise-rejecting transmission line or leadin, and a tuner and switch box. This system comes as a complete kit, all connections soldered, and

wire cut to length. To erect the antenna, it is merely necessary to attach hoisting lines to the two insulators at the ends of the 50 foot flat top, uncoil the transmission line and raise the antenna tight between its supports.

#### Where To Place

The higher it is hoisted the better, and the farther it is away from electrical apparatus and automobile highways, the better also. The long leadin is carried down to the radio set. It comes in an established length. All of it must be used, and if any is left over it can be coiled behind the receiver. If a longer leadin is required, a length of 78 feet must be added to the original leadin.

The small tuner box contains three balanced coupling transformers, the antenna tuning condenser, and a five-position selector switch. Three positions of the switch select the three transformers for different wave bands, the fourth feeds the transmission line directly through the tuning condenser to the receiver, and the fifth cuts off one half of the antenna top and connects it for ordinary broadcast reception.

#### How To Operate

This switching arrangement provides any desired type of atnenna for broadcast or short-wave reception, from a fully tuned antenna to the usual noise-reducing doublet, or a simple "L" type antenna. As a broadcast reception antenna need not be tuned, the tuning is confined to the three short-wave bands, covering from 9 to 200 meters.

In operation, the two tuner leads are connected to the antenna doublet binding posts of any all-wave receiver. It is necessary initially to select that dial setting which, in conjunction with one of the four switch positions, gives greatest volume on any one of the short-wave bands.



Benny Goodman with his celebrated "swing" orchestra, and Helen Ward, songstress, are heard each Tuesday over the new Elgin Swing Revue Program at 10 p.m., EST. Benny Goodman has risen to international fame in less than eighteen months, and is today an outstanding exponent of the new "swing" music cycle.

Once the readings are noted down for these bands, it is only necessary to reset the dial for maximum results on the band.

It is not absolutely necessary to reset the tuner dial for each different station received, but to set the tuner and switch knobs for the loudest signals or greatest "R" deflection, is this form of meter is used, on the 16, 19, 25, 31 or 49 meter bands. In extreme DX work, individual station tuning will improve the volume a little, but it will be found that in most cases one initial setting for the desired band is all that need be done by hand. This makes the use of a tuned antenna system a very simple matter.

The new St. Paul, Minn., station on 1370 kcs. is to be known as WMIN. Edward Hoffman is the licensee.

## Turning Our READERS' DIALS

• • • With the DX Editor

Atlantic reception of the medium waves dates back to the Stone Age of broadcasting, it has only been during the past three or four years that listeners have enjoyed any degree of success in this direction. And even today, most of us are unable to boast of truly reliable reception of European signals during the proper season.

While searching for an "Open Sesame" to regular R7-8 signals from across the Atlantic, not a few DXers have considered the possibilities of tuning for the long wave stations. On the surface, it would appear that everything would be in favor of such reception.

However, despite the appearance of new receivers which cover the 1000 to 2000 meter bands, reports of European reception on the long waves are few and far between. The first in many a moon comes from Robert D. Munn, Box 667, St. John's, Nfd.

"When I bought by RCA Victor Model 263," he writes, "my radio dealers told me not to expect too much from the X band, and that this band would only be good when the standard broadcast band was exceptionally fine. Actually, my experience with Droitwich, England, during the past Fall and Winter has shown that it comes in more consistently and with better volume than the English stations on the medium waves.

"For instance, any evening I have been home to tea—and I have been home for that meal most of the time this Fall and Winter→I can switch to Droitwich at six o'clock, Newfoundland time, for the news bulletins. In fact, I have been surprised at the consistency with which this station has been coming in."

Perhaps other readers have had suc-

cess in tuning foreign long wave stations. We are sure that accounts of such reception would be of interest to DXers.

While Atlantic Coast fans have an edge when it comes to European reception, W. A. Seaman casts a vote for his home town, Houghton, Mich., as "one of the best geographical locations on the continent for DXing." Checking over a diagram which he submitted, we find that CKPR (100 miles), WCCO (300 miles), WMAQ and the other Chicago stations (400 miles), WTMJ (300 miles), and WLW (600 miles) can be heard with R7-8 volume every noon. Usual mid-day reception brings in KOA (900 miles), WSM (785 miles) and WOR (800 miles) at about R5-6, while late night DX shows KGU (4200 miles), LRS (6000 miles), and VE9EK (1100 miles), among others. audible at R5 volume.

#### Checking Winter Logs

"DXing has been pretty slack here," admits Clarence Burnham, 147 E. Main St., Gloucester, Mass. "My log stands at about 675, with 450 verified. The best veries include TGW, HHK, WKAQ, LS2, YV1RC, Poste Parisien, North National, Bordeaux, I1RO, EAJ1, and 4RK, while reports are out to LR3, LR5, LR6, PRB9 and Radio Normandie. Argentine stations certainly fool a fellow if he isn't careful. Thought I had a Cuban at 10:00 p.m. one night and I was certainly dumbfounded to find that it was LR3."

"The other evening I brought home a Super Sky Rider 9 from the shop where I work," offers Warren E. Winkley, Hughson, Cal. "I hitched her up and galloped all over the world. From 11:00 p.m. until 4:30 a.m. I picked up 25 Japs, nine Aussies, three Zedders and four Chinese

stations, all of which came in well enough to hear with good volume."

"DX conditions have been pretty ghastly at my domicile," laments R. T. Coales, 54 Chelsea Rd., Southsea, "I suppose the sun spots England. are at the bottom of it and I am convinced that we will not have peak conditions until the 1938 sun-spot maximum is long past. Reception from North America has been hit harder than that from South America. It is rare to hear even the big stations on the East Coast, let alone the smaller transmitters. I've hardly been able to get a whisper out of WLW, yet he used to put in an R9 wallop when DX was really DX! Stations such as WABC, WOR, WBZ, WTIC, WBT, and WCAU put in fairly good signals once in a blue moon, but that's all."

"I have been DXing for six years," recalls Lawrence Lundberg, 1020



Albert Steinmetz, 411 W. Girard Ave., Philadelphia, Pa. was one of the first short-wavers in this country to pick up the transmissions of the Eudapest stations. The Hungarian Coat-of-Arms is prominently displayed here along with the pick of his QSL cards.

Lowry Ave. N., Minneapolis, Minn., "and have logged 632 stations, of which 335 are verified. My receiver is not very good for DX work, but I am quite proud of a few veries such as 10BP, CRCS, XES, XEU, WKAQ, KFPM, WPHR and a number of 100-watters on both coasts. WPHR sent me a gold fountain pen and pencil set for the most distant report on one of their test programs. I haven't heard any foreigners yet, but I am buying a new receiver this summer and have hopes for next season."

"My log stands at 708 stations," informs John C. Burke, 136 S. Kensington Pl., Springfield, Ohio, "and this includes hams, short wave and BCB stations. Although I have put off verifying except on a few better catches, I do have confirmations from 3ME. 3LR, 3WW. HIX and Zeesen stations. Would like to correspond with some one in Canada, on the West Coast or in Central America."

#### Radio Friendships

One of the nicer rewards of DXing is the opportunity to "meet" fellow enthusiasts in distant cities. Many fine friendships have resulted from the exchange of letters and we are only too glad to publish the following note from a shut-in.

"I would like to ask a favor of you," pens Floyd M. Murphy, 615 W. Franklin St., Palestine, Ill. "I am confined to my bed and have been for almost two years. Would like to have some pen pals. Do you think you could help me get some—especially from foreign countries? I will answer all letters, trade QSL cards and photos."

"I like to correspond with foreign listeners," greets Gordon Gliddon, George St., Pleasant Point. South Canterbury, Timaru. New Zealand, "and I would esteem it a great favor if you would remind your readers that I would like to hear from any DXer in the world. I am also a keen

stamp collector, so you might say that I would like to receive stamps and will be sure to exchange ZL stamps by return mail."

There you are, boys! Consider yourselves properly introduced, and we'll see who writes the first letter.

"I have wondered for years why stations do not spell out their call letters in code as a means of identification," wonders E. E. Ely, R.F.D. 1, Box 9, Astoria, Ore. "This would carry and identify a station much farther than its modulations could be heard. The first, or last, note of the signal could take the place of an hourly time signal, thus providing a double service to listeners everywhere."

"The New Zealand DX Radio Association recently conducted a new competition to determine the Champion All-Around DXer of N. Z.," advises an unsigned member of that fine "The winner was H. organization. J. Looker, 110 Harbour Terrace, Dunedin, who scored a total of 592 Some very good confirmapoints. tions were entered, including VK3LH (6 watts), VK4EA (6 watts), VK5IV (3 watts), XHHG (100 watts), CKWX (100 watts), KDB, KGKB, KGCX and KGFK. Other veries were noted from the East, Europe and New Zealand."

"CKCO, Ottawa, has a permit to increase its power to 1000 watts," submits Hiram A. Crain, Jr., 25 St. Leonards Ave., Toronto, Ont., "but they are not likely to make the boost for a while. CKCO is really the oldest station in Canada. It was once called OA and was run by the government. Their initial communication to Montreal was the first radiophone message heard over 100 miles. This was at about the same time that KDKA started up."

"On February 2nd, I picked up two new Cubans which are not listed in RADEX," reports William Tawzer, Jr., Glenshaw, Pa. "The first was CMGH on 790, and they came in with good signal strength and no fading. The other, CMJX (not positive about the last two letters) was heard on 1190. They were strong at times, but faded badly. They had a lady announcer."

#### No Foreigners

"I have noticed in the March issue that many DXers have heard European and Australian stations on medium waves," remarks Robert Shellard, R.F.D. 5, Brantford, Ont. "How is it done? I have a GE Model K52 and have never heard them. I have tuned as far West as KPO, KFI, KFAC, W6XAI and KSL, as far South as XEPN and XEW, and as far East as Nova Scotia. Do the other DXers have powerful sets of 18 to 24 tubes, or what? I will not say that such reception is impossible, but I do say that there is some catch which we new DXers don't know about.''

About the only catch we know of is the vital knowledge of how, when and where to tune. Of course, a sensitive receiver and an efficient aerial and ground system are absolutely necessary, but satisfactory results are obtained only when a listener knows how to make the most of his equipment. A fairly comprehensive report on tuning foreign stations was given in our October, 1935, issue, and we plan to revise this information for presentation early next fall.

In this connection, we would like to hear from readers in all parts of the country in regard to their foreign reception. We will condense and tabulate all tips on tuning so that listeners in every section will have an idea of how to tune for foreigners.

From Robert Homsher, 3440 Flora Ave., Kansas City, Mo., comes a reminder of the necessity of enclosing postage when asking stations for verifications or QSL cards. He quotes a letter from D. Reginald Tibbets, operator of W61TH, Berkeley, Cal., who says:

"You may wonder at this letter in reply to your card. I am just writing to thank you for the manner in which your request for the QSL card was sent, the complete report, and the enclosure of the stamp. I receive about 20 SWL cards and letters a day. All of them are favored with my QSL card, but I do know that most amateur stations will pay no attention to a SWL card unless a stamp is enclosed. They would rather spend the postage money on equipment."

Whether listeners report to broadcast band stations, commercial short wave transmitters or the hams, return postage is always a vital factor, not to say a courtesy. Readers must remember that station operators are making a very definite concession when they send out verifications or acknowledgements.

#### Station Briefs

"DXers who have been unable to tune WACO in the past are going to get a break," promises R. B. Wolfe, Waco, Texas. "The station is going to build a radiation tower on top of the Amicable Building, which houses their studios and transmitter. The building is 22 stories high, so a tower on top of that should push their signals plenty far."

"The owner of CMQ, Miguel Gabriel, has gone to the United States to purchase a Western Electric short wave transmitter with 1 KW output," offers Alec Kinghorn, Box 2488, Havana. Cuba.

"Station WOCL has just been sold to John C. Drummond, of Utica," notes Edward Shirley, 802 N. Main St., Jamestown, N. Y., "and he plans to rebuild the station and make it a CBS outlet."

"CJRC has been heard testing their new 1 KW transmitter on 630 kcys," prefaces Anthony C. Tarr, Fort Lewis, Wash. "By finally logging KYW, I



Mildred Monson, the featured soprano of the Kellogy Singers has been engaged to entertain smart audiences at the Rainbow Room aton the RCA Building in Raino City. The Kellogy Program is broadcast each Friday at 8:30 p.m. EST, on the NBC-Blue Network.

at last have a station on every channel. The March frequency checks came through very well and I heard 95 per cent of those scheduled for the first three nights. Recent foreign veries which have come in are 2CO, 2GZ, 2UE, 3GI and JOCK1. The Aussuies and Japs are beginning to come through very nicely, with 3YA and 4YA the best of the bunch. 1YA is not so good. I have noticed that some of the lower power stations Down Under have nearly as much sock as the 10,000 watters."

"I have often wondered what DXers consider an ideal verie," wonders Morton D. Meehan, 563 Adams Ave., Elizabeth, N. J. "I, for one, prefer a card in several colors, with the call letters in large, bold-face type. I know that many others would rather have a letter, while some are contented with a mere stamp. I think it would be a swell idea if you asked readers what type of confirma-

tions they desire. The opinions could be tabulated and passed on to the radio stations."

#### On Reporting

Much has been written on the necessity of giving definite information on reception when reporting to a station. This is a little courtesy on the part of listeners which may be of some value to the engineering department. The following item from Harry M. Gordon, 317 E. Tenth St., Erie, Pa., brings an interesting slant to the matter of reporting.

"Last fall." he relates. "an engineer showed me a letter which his station had received from a listener The report includin New Zealand. ed a chart which showed the signal level, and I noticed that the station's signal had faded out completely at 4:05 AM., EST, on that particular morning. Prior to this time, the station had been showing a signal of QSA3, R4. The engineer showed me his log book for that date and I noticed that, at exactly 4:05 AM, the power had been doubled. Then, at 4:25, the power was cut in halfback to its original strength-and the New Zealand chart showed that the signal had come back to its R4 level at that very moment. Thus, the engineer got some very good dope from this report. He learned that his signal faded out, when his power was increased, and came back to normal when the output was reduced. Reports such as these will keep DXing going for us."

"In your December issue, you remarked about the race being run by DX clubs to schedule to greatest number of special programs," recalls Bireley Ross, 2426 Alco St., Dallas, Texas. "I think this is all wrong. It seems to me that there should be no more than two or three specials from one station during an entire winter season. I do favor having more than one special, since a DXer might run into a bad night

and might be unable to get the station.

"I think it is silly to schedule specials from stations which put on monthly frequency checks. We have chance at these stations every month, so what good does a special accomplish for the DXers? I believe that clubs should concentrate broadcasters who do not give frequency checks and whose regular programs are buried under local inter-Here in the Middle West, ference. the Eastern stations are hard to get because of near-by stations on the same frequency. As most of the clubs are located in the East, they seldom take into consideration their Western members, with the result that stations on the Atlantic Coast come on with specials before Western stations on the same channels have signed off. An hour or two difference in time would make all the difference in the world for the DXers out here, so I should think the stations would be more than anxious to reach the greatest possible number of listeners."

#### **Balloon Aerials**

"The aerial put up with balloons certainly has my interest," asserts Carl L. Sackett, Jr., 402 W. 31st St., Cheyenne, Wyo. "I hope that you will publish the results of this experiment."

"In suggesting the balloon or kite aerial," informs E. E. Ely, R.F.D. 1, Box 9, Astoria, Ore., "I am sorry to note that you did not caution prospective users to be very careful to avoid electric transmission lines in the vicinity. All of these carry at least 440 volts, which is enough to be fatal, and generally much higher voltages. The danger from even an insulated wire coming into contact with these lines is very great."

We admit that the idea of a balloon aerial, quoted from a URDXC bulletin of some weeks ago, seemed most interesting. While we have

been of the opinion that such an arrangement would be beyond the means of the average DXer, we are grateful for Reader Ely's warning. Not having heard any more of the experiments by the originator of the idea, we trust that his wires haven't become tangled with the "big kick lines."

"I would like to correct an error I made in my last letter," points out Rober J. Flynn, 541 Beach St., Belle Harbor, L. I., N. Y. "When I said that I had seven verifications, I was referring to my short wave log. tually, I have heard 275 broadcast band stations, of which about 45 are verified. My best catches are HHK. 2BL, XEFL, 1YA, YV3RC (880) 10AK, LR5, LS2, kcvs). KELD. CFJC, CHCK, CKMC, CKCH, KFVS, WNEL, Poste Parisien, Fecamp, Cardiff and others."

#### New Club Announced

International 6000-12,500 Mile Club was formed by me in August, 1935," advises Oliver Amlie, President, 56th City Line Ave., Overbrook, Philadelphia, Pa., "for the betterment of broadcast, short waves and amateur bands. To be eligible for membership, an applicant must send one of three groups of verifications: (1) 5 veries for short wave stations more than 6000 miles distant; (2) five veries of BCB stations more than 3500 miles away; or (3) 10 veries from amateur code or phone stations more than 6000 miles distant. veries must be inspected by the President before membership cards will be issued.

"The more verifications sent in, the higher the honors received. While 5 veries will entitle a DXer to membership, 10 veries will receive the Official DX Ace certificate. Twenty veries will win the Professional DX Ace degree and 40 veries will bring the Doctor of Degrees certificate.

"There are no dues or fees for members when joining—everything is

free to all. We do expect members to send in their photographs for our album, and everyone must enclose return postage with their veries and for membership cards or certificates. Listeners everywhere are cordially invited to join our organization and to attend our bi-weekly meetings at 438 Market St., Philadelphia."

"If a self-addressed card is used with a report, I find that KSEI will verify!" supplies Frank W. Hoxie, Box 15, South Orrington, Maine. "I heard them request this on a broadcast, so I sent my card for a verie and received it O.K. They don't want letters, as they receive so many verification requests which have not enclosed return postage."

#### South Sea Air Mail

"I was quite anxious to have something come out on the recent KNX special about the coming air mail service to the South Seas," submits E. O. Cutler, Room 1313, 36 West 44th Street, New York City. "It will mean a lot to organized radio clubs in New Zealand and Australia. all know that New Zealanders, especially, listen in to American programs regularly, but the time taken by ordinary mail via steamer makes co-operation difficult in DX matters. Often special and elaborate broadcasts, which can be received in the South Seas, are arranged three or four weeks in advance, but details have been received too late for publicity down there."

Ernest Frank, 5424 S. Cornell Ave., Chicago, has just purchased a new Scott 23-tube receiver and would like to correspond with DX fans in or near that city, particularly those who are receiving TA or TP stations on the b. c. b.

The FCC has granted construction permit for a new station in Waycross Ga., to operate on 1200 kcs. with 100 watts.

## Leaves From A DXer's Scrapbook

#### • • • By COUNT DE VERIES

PON the receipt of one fan letter, thereby establishing beyond question the wide-spread popularity of this column, your correspondent takes up the reins after a two months' vacation.

One of the contest stations, WCSH. Portland, Maine, has forwarded all reports received by them after their RADEX program on February 23rd. Upon checking against the station log, we have found all of the reports to be correct, and the requested verifications have gone forward to most of the listeners. If the following "postcard reporters" will forward return postage, they, too, will receive their confirmations: Clinton W. Mc-Graw, 93 First St., Hamden, Conn.; Ray L. Boucher, 53 Pleasant St., Southbridge, Mass.; Richard Daneker, 152 E. Second St., Lansdale, Pa.: Charles B. Marshall, Jr., 26 Victoria St., Washington, Pa.; and James Walker, Romney, W. Va. (Address RADEX, Conneaut, Ohio).

A number of amusing incidents were uncovered while checking early entries in the contest.

Fred Bisset, CDXR president, bemoaned local static and predicted that he would not win even a toothpick. President Bisset was wrong. He won a whole box of toothpicks, which have been forwarded to him.

A Buffalo listener was perhaps the most distraught of all contestants. After delivering his entry into the hands of his mailman at 3:00 p.m. on February 25th, we can appreciate his dismay when the negligent postman confessed the next day that he had forgotten to mail the entry until after the deadline. The contestant was prepared to submit a sworn statement from the letter carrier to the effect that the entry had actually

been in his hands in ample time to be mailed on February 25th.

Several listeners ran into difficulties with their receiving equipment. One Connecticut resident blew out a power pack while listening to Major Bowes on Sunday night and was unable to listen in on the final morning, truly having received the gong. Another listener was obliged to replace two tubes, one fuse and a pilot light during the height of the contest, but managed to stay the limit. A West Coast DXer confessed that his aerial blew down during the first night

#### F. C. C. Checks WEDC

Another report from the Commission indicates that WEDC has been refused permission to broadcast after-midnight programs for a period of 30 days. The significance of this action is unknown at the present time, but every DXer hopes that it is the first step in the elimination of interference from the all-night stations.

As pointed out in another section of this issue, there seems to be economic justification for late programs by some stations—that is, if these broadcasters are to continue in operation. Consequently, it is difficult to demand the absolute cessation of allinight broadcasts. Rather, it can only be hoped that cleared channels may be available for DX and test transmissions at regular intervals.

A number of suggestions for such action have come for readers. Of these, only two appear to have a chance for success. The first calls for the segregation of all 24-hour stations on a few frequencies, leaving all other channels free for occasional late programs at will. The second



Unlucky Lucy Monroe will not receive this new RCA radio, but it will be given instead to the 1.000,000th guest of the NBC studio tours. In addition this millionth guest will be dined and entertained in Radio City and featured on a coast-to-coast network broadcast.

suggests that all regularly-scheduled broadcasting stop at 1:00 a.m., local time, and begin again no earlier than 6:00 a.m. This would insure nationwide clear channels between 4:00 and 6:00 a.m., EST, and corresponding hours in other time zones.

Possibly a combination of these two ideas might be worked out. Let the stations with 24-hour ambitions commit themselves to such a stand and take their places on channels reserved exclusively for broadcasters of this class. All other stations would be required to sign off no later than 1:00 a.m. local time. Of course, special, test or DX transmissions would be permitted after 1:00 a.m., local time, but under no circumstances should these be permitted to be scheduled regularly nor should they have commercial sponsors.

Arthur E. Foerster. prominent NNRC official, has been appointed chairman of a committee to study the all-night situation and arrive at some definite recommendation. Other DX clubs have designated members to assist Mr. Foerster. RADEX is pleased to work with this committee and will lend its assistance towards the successful consummation of the campaign.

#### Need For Action

That there is need for organization among DNers is evidenced by a recent news dispatch from Washington telling about a new bill, which may soon be passed and which would call for a nation-wide distribution of radio facilities, opening the way for the establishment of hundreds of new stations. The bill, introduced by Senator Wheeler of Montana, would scrap the current plan under which radio facilities are determined by density of population and would permit the F. C. C. to authorize stations where they might be needed.

Needless to say, the dumping of any number of stations upon the already-crowded broadcasting spectrum would only aggravate the present situation and do untold damage to the existing stations and listeners alike. Therefore, it is essential that any new plan for re-allocation of radio facilities should consider the problem of all-night stations.

Let us hope it will be possible to save the air for DXing before it is too late.

## S. W. Observations

SINCE the China Clipper winged its way from San Francisco to Manila, the air route to the Orient has become merely routine procedure. This 8000 mile span is now being covered on a regular 5-day schedule, yet only four years ago it was thought to be impossible.

Although an important milestone in the progress of aviation, it is a fact that the route would be impossible were it not for shortwaye radio.

Air bases had to be established by the Pan American Airways Co. at San Francisco, Midway, Honolulu, Wake, Guam, Manila and Macao, and at each of these points the initial task was the erection of a 200-watt transmitter.

This chain of radio stations now maintains hourly communication schedules with California and Manila on 5165 kcs. Unfortunately for DX-ers, these transmissions are not on voice, but if one can read Morse they can be identified by these call letters:

KNBD, Alameda, and KNBE, Giendale, Calif.; KNBF, Mokapu, Hawaii; KNBG, Guam; KNBH, Midway and KNBI, Wake Island.

. . . .

Commissioner Payne of the FCC brought up a subject the other day that has been perplexing many of us for some time.

It is understood that, in the United States, a "shortwave broadcasting station" does not exist. All the transmitters in this country working on the s.w. are either commercial stations of private interests, or "relay" stations. Shortwave broadcasters are considered as "experimental" and bear experimental call letters. In this respect we are way behind several other countries, particularly Germany and England, who long ago took their stations from the experimental class and considered them as full-fledged commercial stations and gave them commercial call letters.

As experimental stations, our shortwavers cannot accept commercial advertising, so they must be maintained through the income from the sister stations which they relay. It naturally follows that some programs emanating from our stations have only local interest and the programs must be irksome to some overseas listeners.

While it is not our purpose to criticize American broadcasting, than which there is none better, we cannot fail to mention that shortwave programs originating in London, Berlin, Paris, Madrid, Rome, Moscow, Tokyo, Melbourne, Sydney, Lisbon and Geneva, only to mention a few of the more important, are drawn up with a world-wide audience in mind rather than a local audience. Truly enough, some of the NBC and CBS programs that are shortwaved are the best entertainment in the world, but some of the day-time broadcasts from Boston, Pittsburgh. Schenectady and Chicago fail to interest listeners in other sections of our country or overseas.

Getting back to Mr. Payne; he is quite "het up" about the situation here and has decided the government itself can clear it up. It is proposed that cultural and intellectual programs be sponsored by the State Department and broadcast from the government stations at Arlington on five wavelengths which have been reserved. The State Department has not yet replied to the proposal but it is believed in some quarters that the reply will be unfavorable. We wonder why.

The British Broadcasting Corporation has a headache and admits it in one of their regular weekly releases. When one learns that the headache is over television, though, the news is not so startling, for who hasn't a headache over television? Engineers tax their brains for solutions and we tax our patience waiting for the engineers to give us a chance to peek into the studios.

This British headache is due to the fact they must transmit two different systems of television, the Marconi and the Baird. Each system requires an entirely different broadcasting technique, but they must be capable of being received on the same receiver. To defray the expense of the transmissions, the BBC will authorize sponsored programs paid for by business firms, a radical

departure from their long-established practice of selling no time.

Some types of programs to be scanned are musicales, cabarets, concerts, fashion shows, etc. One interesting feature will be a large clock by which the televiewer can actually see the correct time.

Public broadcasting of television in London will begin in May of this year. For the USA we cannot even say "it may begin this year." Television news trickles into our office now and then from England, Germany, France, Italy and Japan, but so far not even the slightest dribble cemes from television centers in the USA.

The most definite statement we have seen was from David Sarnoff. President of RCA, who predicts we will see television in five years, but, he adds. in a relatively short time we will have facsimile in our homes. Facsimile permits the transmission of letters, newspapers, maps, or still pictures, printing the picture on paper similar to the telephoto method of sending pictures over telegraph wires.

## The CFCO DX Policy

• • • By JOHN BEARDALL, Owner and Builder

THE writer has been chastised in a gentlemanly way by nearly every radio DX Club in existence because of the unwillingness of station CFCO to set dates for DX programs.

Our system of DXing is quite simple. First, we refrain from any advance publicity; second, we study atmospheric conditions before broadcasting, and third, we give positive replies to every correct report received if return postage or its equivalent is enclosed. This system has yielded us some 14,000 letters in the past three years as a result of ten special programs sent from this 100-watt station.

We believe that the DX fan gets a much greater kick out of reporting a station which appears to have come on the air by chance and endeavors to secure reports in a purely spontaneous manner.

We announce that we are broadcasting a special test program, and as a special inducement we offer a five dollar gold piece to the person sending in the most distant report.

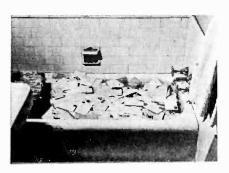
When we decide to run a DX program we always start at about 2:45 a,m., which is the approximate time most of the Pacific Coast stations leave the air for the night. Before the broadcast is actually put on, however, we check on reception conditions for the evening by contacting several reliable local listeners at about 11 p.m. and have them check on the reception of a western, southern, eastern and northern station at If these a considerable distance. reports are favorable in all directions, we commence our program.

Sometimes we have stood by as much as ten days after deciding to put on a program, waiting for what we consider ideal atmospheric conditions.

As a result of our DX system, all our prizes, with three exceptions, have gone to New Zealand fans, this being, we believe, sufficient evidence to justify our DX policy. The remaining three prizes went to mariners on the high seas at distances considerably greater than any distance in the United States or Canada.

Our biggest thrill of the past three years was a cablegram from Gordon Ramsay, Vogel St., Dunedin, New Zealand, which read: "Test prize program. Reception good. Roll on Mississippi. Lets Get Together Again. Time on my Hands."

So bulky has become our mail that we have used one of the bath tubs in the operating room of the Wm. Pitt Hotel to hold the 14,000 letters from all parts of the world, the United States and Canada. The following



The CFCO Bath-tub

foreign countries are represented: New Zealand, 13; Hawaii, 3; South Africa, 2; Bermuda, 3; Puerto Rico, 5; Newfoundland, 3; Cuba, 5; Mexico, 1; Venezuela, 1, and eight from ships on the Pacific and Atlantic Oceans. A second bath tub is now being set aside for mail and already contains about 3000 letters.

## The Clearing House Reports

• • By EMILY GRISWOLD Sectretary

A S THE Clearing House of the Inter-Club Cooperation Plan finishes its first season, DXers may be interested in learning something of what our work has been, what we have accomplished, and what the future holds in store for us.

The Clearing House worked directly in cooperation with the Chairmen of the various Courtesy Programs Committees. Each CPC chairman reported to me weekly on the programs scheduled by the members of his committee. These reports were generally received on Thursdays, and it was my job to check them over carefully and have my report in the mail the following day. My reports contained anywhere from 2 to 125

special programs. On but two occasions was I late with the work.

When the notice of a scheduled program came in, we checked to see if the particular frequency was already filled for the time in question. With the exception of foreign stations—which always came first—we gave preference to the card or letter which bore the earliest postmark.

If two stations were reported by different clubs for the same frequency at the same time, the broadcast with the later postmark was considered to be a conflict and, therefore, had to be cancelled in favor of the earlier special.

Some of the announcements of special programs came in from two days to six weeks in advance of the broadcast. Those which came in late didn't make the club bulletins. Programs reported far ahead of schedule seldom conflicted with other programs, while those which were announced about ten days prior to the transmission were the ones which caused the cancellations. Even so, there were but 20 or 25 conflicting programs during the entire season.

I have asked the various CPC chairmen to advise me of the reaction of stations whose programs had to be cancelled. So far, there have been no protests or "kicks" and, in most cases, the specials were pushed ahead to a later date. I do not know how the individual CPCer felt about having a program cancelled after working so hard to get a dedication, since I came in contact only with the chairmen and they, in turn, with their own committeemen.

I have noticed that some club bulletins have, on occasion, failed to report part of the special programs announced in the Clearing House reports. After all the work of arranging a program and checking it through the Clearing House, it seems to me that the least those editors can do is give their members the full advantage of all that is reported. While some DXers may have the sta-

tions in question and may feel that it is useless to print the announcement, I am sure that there are many listeners who would be only too glad to try for a program if they only knew that the station was testing.

In the October issue of RADEX. there appeared the suggestion that the CPC of one club have a certain frequency one week, another club another week, etc. The smaller clubs were to receive but certain hours and one club wasn't to enter the plan at all, due to the nature of its programs. It struck me that this did not give the small club the breaks it needed to get ahead and push out of the "small club class." I thought all clubs should be free to get dedications whenever they could. didn't have enough conflicting programs this past season to warrant any classing of clubs.

I am not sure who will be running the Clearing House for the 1936-37 season, as it is up to the clubs to pass judgment upon the way it has been run this year. However, I would like to make a few suggestions which might assist the person selected to get the reports out and keep down the number of conflicts.

1. Have all CPC chairmen arrange their programs far enough in advance to enable specials to be shifted in case of conflict at any hour. Plenty of time is needed for this.

2. Arrange with the stations to start and conclude their programs on the hour and half-hour. This would eliminate some of the conflicts before they started. For example, a program from 3:45 to 4:15 would conflict with programs on both the 3:00 to 4:00 and the 4:00 to 5:00 periods.

3. Have only broadcast band programs listed on the Clearing House report. If a short wave bulletin is wanted, let that be kept separate and sent out on a different sheet as a SWL bulletin.

4. Let all reports from CPC chairmen be received at the Clear-

ing House on a Tuesday and give the operator until Thursday morning to mail the weekly reports. This gives a bit more time to check over the reports at the House and also allows a few days for the mail to travel before the week-end. The editors of the club bulletins would then have an opportunity to prepare their tip sheets over Saturday and Sunday.

I do hope that the Clearing House will continue to help the DXers as well as the stations. I know that unless something is done to see that stations get valuable reports on their dedications, we will be left without the grand hobby of DXing. After all, this special program business works both ways. A good report does help the station, while a good verification helps us as well.

Too much credit cannot be given Elwin Bullard for the work which he has done to bring the ICCP into existence. He has accomplished a great deal to help his own club, as well as all other organizations and each and every DXer.

# What I Like About The GCDXC

# ● ● By REGINALD VINING\*

WITH the purchase of a small radio in 1933, the natural desire to see what it would receive left that opening for the bite of the DX bug. I am happy to say that the first bite was fatal and long lasting.

While RADEX became sort of a monthly celebration for me, it was not until the spring of 1935 that I summoned courage to write in of my rapidly-growing log. In that letter, which was printed in the May, 1935 issue, I asked for DX correspondents.

An enthusiastic Bronx, N. Y., DXer was the first to reply to that notice. He was Ray Geller, Secretary and Treasurer of the Globe Circlers DX Club, and his letter paved the way for my connection with this organization.

I was able to compare a sample GCDXC bulletin which he forwarded with similar publications from three other clubs. The many features of the Globe Circlers bulletin led me to believe that this society was offering just what I wanted, and so I became a member of this rapidly-growing DX fraternity.

I found the "Hot Spot," official organ of the club, to be the hot spot in every sense of the phrase in regard to current DX news and radio listeners fellowship. It was an eight-page publication which did not stop with a few tips and letters from members. By inspecting a few copies of this bulletin, I noticed the following features:

- 1. Interesting and pertinent editorials by one who really DXes, William Wheatley, the president of the club.
- 2. A mail bag well-filled with reports and comments from the club's many active members.
- 3. An occasional column of genuine humor for the members who like to break the strain of dignified DXing with a chuckle.
- 4. A news column embracing lastminute flashes on the doings of the F.C.C., other clubs and the various stations.
- 5. A distinguished short wave tips section, crammed full of meaty information of real value to the beginner as well as the full-fledged DX-er. This column is edited by Joe Stokes, of the KDKA tip period, ably assisted by Eric Butcher.
- 6. An occasional Rogues Gallery column, giving the names and addresses of members who desire to exchange photographs with other members
- 7. A very interesting and well-patronized Singleton and Eliminator contest, conducted by Ed Bachman, former president of the club.
  - 8. A "Calling CQ" column, which

brings together members who wish to correspond, sell or swap secondhand radio parts, identify unknown stations etc.

- 9. Frequent "Jr. Winchell" humorous biographies of various officers and members in turn.
- 10. Notices of Good Will trips which the officers make to the homes of distant members.
- 11. A new feature in this rapidly growing bulletin, not found in the publication of any other DX club. This is a cartoon and caricature page, with drawings to interest the members in DXing and in each other.

Continued inspection has shown that the Hot Spot has open-minded editors who are continually soliciting the ideas of members on how to improve the bulletin and the organization. Better yet, many of these ideas are put into effect.

A club fellowship is thus engendered which can be illustrated no better than by citing the case of Ray Stockdale, of Zanesville, Ohio. When learning of Ray's illness last fall, the Editor of the Hot Spot passed on the sad news to other GCDXC members. The result of this small notice can best be told by quoting from a letter written to me by Mrs. Stockdale on March 17th:

"The pile of GCDXC letters has reached very near the 900 mark, along with over 300 cards."

I am proud to be a member of a club which stands for the better class of DX, despises cheaters who attempt to fake veries, and emphasizes Quality and not Quantity when requesting special DX programs.

The Globe Circlers DX Club was organized in 1932 with about 50 members, having since absorbed a number of smaller organizations. It has constantly enrolled active members from all parts of the world. It is going places — and here is one member who is going with it.

\*105 Tompkins St., Cortland, N. Y.

# Stromberg-Carlson's New Receivers

• • • By the TECHNICAL EDITOR

HEN Stromberg-Carlson is mentioned to oldtimers in telephone and game, it immediately brings back memories of fine telephone apparatus. So it was natural that when Stromberg-Carlson of Rochester put its 41 years of experience into radio receivers, most of us knew that fine radios would be the outcome. Time has proved this, and so this month. RADEX is pleased to present to its readers a summary of the newest 1936 models offered by Stromberg-Carlson.

Their line embraces twenty entirely new and different all-wave models. Eleven of these models are similar in that they cover three wave bands — 540 to 1500 kcs.; 1450 to 3500 kcs. and 5600 to 18,000 kcs. In addition, there are three models that cover a slightly different range: 540 to 1700 kcs.; 1700 to 5400 kcs.; and 5400 to 18,000 kcs. Then there are six larger models of four wave bands each — 520 to 1600 kcs.; 1500 to 4200 kcs.; 3700 to 10,000 kcs.; and 8500 to 23,000 kcs.

### All-Wave Models

All models cover the regular broadcast, foreign, police, aircraft and amateur wave bands, and some include the ultra-short wave band of 23,000 kilocycles (23.0 megacycles). Each model has its pre-selector stage for all bands, tuning range indicator, automatic volume control and manual volume control, tone control and clarifier, powerful class "A" audio amplification, the new Stromberg-Carlson speaker, and an attractive table or console cabinet made of walnut.

The smallest models have 6 tubes



The New Stromberg-Carlson

and the largest has 16 tubes. Some models are fitted with metal tubes and others have glass tubes. Delicate and positive tuning, necessary in all-wave reception, is made easy and accurate with the new dual-ratio tuner. A small center knob permits turning at normal speeds, and a larger rim, which is easily grasped, makes it possible to slow down the movement of the dial indicator. There is no troublesome gearshift, or pulling and pushing of knobs, to operate this tuning apparatus.

### Music Goes 'Round

Tone reproduction is one of the prime purposes of any radio, and it is natural that efforts should be directed toward the perfection of the tone units of radio receivers. The ability of any radio to reproduce all pitch tones and overtones of speech and music is of more consequence than any other quality. A proper balance between bass and treble, at all intensities from a whisper to full room volume, will not accentuate either tone. This is the goal of every radio manufacturer.

We do not know whether Stromberg-Carlson took a tip from a pair of popular song writers, or if these writers got their idea from Stromberg-Carlson, but in either case, it is a fact that in the newest Stromberg-Carlson high-fidelity receivers some of the music goes down and 'round and 'round. But it does not come out like it does in the song, and that strange event is worth a brief story in itself.

## "Acoustical Labyrinth"

The Stromberg-Carlson engineers have coined one of those new phrases that every radio manufacturer expects of his publicity department. So we were not greatly surprised when we began to hear about the "Acoustical Labyrinth". Actually, however, this is more than a name, for the engineers have hit upon a very ingenious scheme to overcome booming and vibration.

We know that sound is projected from all sides of a speaker, and some low notes slip around through the back of the cabinet to cause boominess and distortion to annoy careful "Labyrinth" listeners, The eliminates these annovances: it is attached to the back of the speaker. and all sounds from that source are led around and around through the winding passages constructed of sound absorbing material until they are entirely muffled out. As a result, the only sounds that are heard are the ones projected directly from the front of the speaker. The confined air-column within the labyrinth back of the speaker has a cushioning or shock-absorbing effect, and it permits a greater speaker volume without rattling or vibration.

# A New Speaker

The use of this "labyrinth" makes possible the perfect reproduction of sound between 50 and 7500 cycles. It takes the unnatural boom out of voices and music, and provides reproduction of bass notes with a new regard for true fidelity. This feature is not incorporated in all Stromberg-Carlson sets, because of the cabinet space that is required. However, all the speakers have a new design that is worth of mention.

A newly discovered animal hide provides edge suspension for the loud speaker cone. It is called Carpinchoe leather, and is not affected by moisture and age. The chamoislike quality of this hide permits it to smooth out the harsh notes because it correctly absorbs the vibrations around the edge of the cone, and thus maintains high fidelity of tone.

#### The Model 84

The most popular of the larger Stromberg-Carlson radios is model 84. This all-wave receiver covers a range between 520 kcs. to 23,000 kcs. It has twelve tubes, of which eleven are metal and one is of glass. The a.c. input power consumption is 150 watts per hour, and the large speaker handles easily an output of 15 watts. The intermediate frequency used by this modern superhetrodyne circuit is 465 kilocycles.

The four tuning ranges of the set cover all important broadcast and special service bands of both American and foreign stations. In addition to the improved speaker and sound absorbing labyrinth, mentioned previously, audio reproduction is further improved by employing sound diffusing vanes in front of the loud speaker opening. These break up the otherwise directional higher frequencies,



Benay Venuta, often starred as a guest of Al Jolsen, is so popular that she is invited and re-invited to sing her blues songs with Victor Young and his Orchestra. Miss Venuta is returning to her old spot with Freddie Rich on the Penthouse program after a long absence due to her featured engagement in the road production of "Anything Goes."

thereby providing reproduction of the high notes in all parts of the room.

#### Metal Tubes

The line-up of the tubes in this model is as follows: The first metal tube is a type 6K7 that functions as a radio-frequency amplifier in the pre-selector stage: next comes a type 6A8 first detector or modulator: then a type 6C5 is used as the oscillator which is coupled to the modulator; a type 6K7 operates as the intermediate-frequency amplifier; the second detector or demodulator and automatic-volume-control combined is a type 6H6; a third 6K7 serves as the first audio amplifier; two 6F6 type tubes are connected in parallel and operate as an audio driver stage feeding the primary of a large pushpull audio transformer; and the output of this transformer feeds into another pair of 6F6 tubes that operate in push-pull for the audio power output stage. There is a type 6J7 tube that is used in an interstation noise-suppressing or "Q" circuit, and the only glass tube is a type 5Z3 rectifier.

Stromberg-Carlson has a new manual volume control of stainless steel working against nickeled silver for quietness. There is a similar unit that also gives noiseless treble tone control. A fidelity control increases the fidelity of the receiver when reception conditions warrant. The fullvision four-section airplane type dial is of an attractive design. Only the section of the dial that corresponds to the tuning range in use, as determined by the band-selector switch, is illuminated at any time. The dial is easy to read, and its tuning is very simple. A calibrated visual meter (not available on all models) enables the user to tune to exact resonance.

#### Antennas

A wave-band control switch selects the tuning range; illuminates the proper section of the dial; grounds out idle coils so as to maintain full sensitivity; and selects the proper antenna. Automatic antenna selection provides pre-selection on stages of reception, and automatically selects the correct antenna matching impedance for the wave band being used. There is a new Stromberg-Carlson broadcast short-wave antenna kit designed for the new models. It tends to eliminate man-made noises and improve shortwave reception. But any good singlewire antenna, about 100 feet long, will work nicely. And the set has several antenna terminals on the rear of the chassis so that two or three different "L" antennas doublets may be connected if desired.

Permits for new stations at New London, Conn., and St. Augustine, Fla., have been granted for 100 watts on 1500 and 1210 respectively.

# WHAT ABOUT FADING?

# $\bullet \bullet \bullet By$ B. FRANCIS DASHIELL

HEN radio signals come and go, without warning or apparent reason, we say they are "fading". Many readers of RADEX are very much concerned when hard-to-find DX signals fade away and are lost. Although these signals become so weak they cannot be heard, it is not long before they return to full volume.

The fading action repeats itself in cycles, time after time, but seldom with any degree of regularity. At certain moments fading seems more pronounced than at others, and often there is associated an inability of signals to penetrate through a blanket or curtain that seems to veil distant stations. Thus we find that distant reception is fine at times, while at others it is almost impossible to pick up weak, far-away stations.

#### Automatic Volume Control

The makers of radio receivers have done all they can to overcome the fading that is associated with the transmission of radio waves through space. They have devised the automatic volume control system. It tends to hold constant the volume of the incoming signal to a level which is predetermined by the adjustment of the manual volume control knob.

But when the incoming signal falls away entirely, the automatic volume control has nothing to work on. The fading signal cannot be amplified because there is nothing to boost up. So the best of receivers, although fully fitted with automatic volume control circuits, cannot always prevent fading. They do, however, minimize fading, for as long as the signal does not disappear entirely, it can be

boosted up to the established level at such times. We seldom are aware that the signal is fading in the antenna; it is only when the signal is completely lost to the antenna that we realize that fading is happening in a modern radio set.

One of the readers of RADEX, writing to the Technical Editor, stated that he had been advised by the makers of his new radio set, that a spell of unwarranted fading might not be the cause of the set, but perhaps due to an increased activity of natural fading.

# What Is Fading?

Naturally, this letter raised an interesting question, for fading is important to all radio listeners, particularly DX enthusiasts. So RADEX has made a survey of present-day fading, and a brief discussion of this strange phenomenon will not be amiss. In any case, there is little that we can do about these mysterious forces of nature over which we have no control. But, as we shall see later, if fading is due to any mechanical or electrical failure, we can correct the defect

Radio signals are shot out with the speed of light from the transmitting station. There is one wave that travels along the ground. This ground wave does not go so very far, and it is never subject to fading. Many short-wave signals from nearby transmitters are received entirely via the ground wave, for they are in the skip-distance area of the sky wave. The wave that moves out into space is called the sky wave, and it is here that fading usually occurs. But, of course, there is also some interaction between the ground and sky waves which produces fading at intervals.

The sky wave travels out toward space, and it would move into the Universe if it continued as a projected wave or beam. However, there is a mysterious something which we choose to call the radio roof or ceiling, that bends these waves around the curvature of the earth and reflects them down to the surface. When a broadcast signal, or wave, passes through the region surrounding the earth, it becomes entangled in various opposing forces that tend to check its free passage. Thus, intermittent fading, or even a total loss of the wave, may result. At times these mysterious interferences become very severe, but as a rule they do not oppose world-wide reception to a serious degree.

# Above The Stratosphere

High above us is a region that, while unlike the lower atmosphere in which we live, is composed of some sort of gas that is easily and quickly ionized or broken up into tiny electrons and electrical ions through the action of the sun. In the early days of radio research this high region or level was given the name Heaviside Layer. after the physicist who promulgated the theory. But now most scientists give the region a more distinctive term the ionosphere.

Our atmosphere is divided into several layers or belts. We live in the lower region — the troposphere. About 20 miles up is the beginning of another belt. This is the stratosphere, and we have heard much about trying to reach it with balloons. Still higher is the ionosphere — that strange region where the northern and southern lights play in winter, and where great magnetic storms spread their influence to the earth beneath to put land telegraph lines out of commission and blanket all radio reception.

Any change in the upper atmosphere will have a direct bearing on

radio waves. Its under-surface, dense with ions, acts as a reflector. Let us suppose that a station in London is broadcasting and a person in Omaha is listening. The wave that is propagated from London rushes up to the sky, but when it reaches the radio ceiling it is bent back toward the earth and reflected down where it is picked up by the antenna at Omaha. This is similar to a beam of light thrown against a mirror and then reflected to another position.

# Why Fading Occurs

Now let us suppose that the density and height of the reflector or radio mirror is made to vary. If it is less dense, the radio wave will penetrate deeper into the ionsphere and be weakened by absorption; if the surface beneath is undulating constantly changing in height above the earth, the angle of reflection will be changed from time to time. As a result the London signal being received at Omaha will vary in intensity or die out entirely. This action is similar to that which can be demonstrated if a glass mirror is held in a shaking hand, and if clouds pass over the sun; the intensity of the reflected light beam will vary or fade out from time to time.

When anything disturbs the radio ceiling or reflecting layer, fading is certain to occur. But what can be of such magnitude that it can influence the density and smoothness of this gigantic, invisible region where ions abound, and which has the power to reflect downwards the radio waves shot out from thousands of transmitters on earth?

The sun is the only source of the vast energy necessary to affect our outer atmosphere. It ionizes the rare gas and varies the density of the ionosphere. This is demonstrated by the fact that, during the day, when the sun's rays ionize the lower levels of our atmosphere, the reflecting layer lies closer to the earth and the angle

of reflection is less. Broadcast reception does not cover the distance by day that it does by night when the reflecting level rises higher above the earth.

### The Sun And Radio

As long as the power of the sun is thrown off steadily, radio waves go about their business without much solar interference. The sun, therefore, becomes the indirect reason for the fading and blanketing of signals. But as soon as the sun goes off into some sort of erratic spree, radio and land communications will be affected to a serious extent.

The principal cause of the sun's misbehavior in this respect is a breaking out with sun spots. These large black spots are occasionally observed in the sun's equatorial belt, and sometimes may be seen through smoked glass by the naked eye. The greatest spots may measure up to 150,000 miles across, and such activity may mean magnetic troubles on earth.

Sun spots appear with greatest activity every eleven years. Back in 1924 there was a period when very few sun-spots were in evidence. But the cycle gradually rose to a maximum in July, 1928, when great sunspot activity was noted on the sun. Radio reception was then at a low level, and distant stations simply could not be heard with any satisfaction at all. Magnetic storms surged through the earth, and telegraph lines were rendered useless many times. The year 1928 will long be remembered as one of radio's most troublesome eras.

#### More Sun Spots Due

The sun-spot cycle began to diminish until August, 1933, when radio reception was very good on the broadcast bands, and magnetic interferences caused no trouble. This cycle is again on the upturn, and should reach its peak in 1939. It appears that radio reception on the

broadcast and long wave bands will meet many troubles during the coming three or four years. Fading should become more general, while an occasional blanketing of distant signals may be noted at times.

But when sun-spot activity increases and the upper regions rapidly change in electronic density, the short waves travel greater distances and come through with less interference. So, at the present time, we are entering an era of good shortwave reception. This should gradually increase until 1939, and then drop off to 1945, when indifferent short-wave reception from long distances may be expected. However, during that time, good broadcast and long-wave reception will be the rule.

There is much that can be said about this complicated subject, but many scientists are making daily observations and studies, and some day more will be known about the phenomenon of fading. It is sufficient to say, however, that with better receivers constantly appearing and more power being used by transmitters, the fading and absorption of signals noticed in 1928 should not be so troublesome in the years that are approaching, particularly in 1938-39.

### Power Fading

We now come to the question of what causes fading within the receiver, and how it may be corrected. When a set seems to fade with unusual severity it should be looked upon with suspicion. Once the set is known actually to be faultless, then we are safe in assuming that natural fading is causing the annoyance, and that nothing further can be done about it.

Fading also may be caused by trouble in the power circuit. The unit may not be producing a steady flow of electricity, and slight intervals of voltage variation can easily change the operating characteristics of the tubes. Thus the volume of the signals being amplified may fall at irregular intervals. Sometimes this is due to interaction or coupling between the power unit and the circuit, and a more complete separation of the two circuits might correct the trouble.

Then, too, if the a-c power lines leading to the receiver carry a flow of current that varies its line potential a few volts up or down, the rectified current furnished to the tubes will cause the operating potentials of the tubes to swing up or down with corresponding changes in volume, similar to fading.

# Antennas And Tubes

Antennas are one of the principal causes for worry when sets seem to fade. If the wire sways in the wind, or the leadin swings close to some grounded surface, such as a metal down-spout, fading of signals will occur. Apartment-house antennas, usually strung in racks and closely parallel to each other, are affected by the tuning of different sets attached to adjacent antennas. This kind of fading appears only at times, and provokes much concern, for it is difficult to locate the reason for such erratic behavior.

The tubes in a receiver often cause many forms of grief, and fading is one of these. Temperature variations within the tube tend to change the positions of some of the elements, and therefore influence the smooth action of the tube to such an extent that fading is observed. Sometimes even the color or degree of redness of the heated cathode or flament will be seen to change when signals fade away or come back louder than ever.

And, of course, many times the cause of fading is found in a defective automatic-volume-control circuit. A tube that is gassy will be unfit for this purpose. Poor connections, or parts subject to change be-

cause of heat, will vary the coupling between the automatic-volume-control tube and the rest of the circuit it operates. Gassy tubes in the r-f and i-f stages of the receiver may prevent those stages from being properly controlled by the a-v-c tube.

## Defective Parts

There is a form of fading that is caused by faulty tuning condensers. The vibration of the speaker may bring about a shifting of the position of the plates, and thus detune the set. Frequency-shifting produces a similar effect, and this phase of signal "creeping" has already been thoroughly discussed in an article that appeared in the March, 1936, issue of RADEX.

Defective parts, such as bypass condensers or resistors, result in severe fading at times. When a condenser is shorted, it is possible that momentary fading will occur. If the condensers in the r-f or a-f circuits of the receiver are leaky, they should be replaced. And a defective biasing circuit, with its grid condensers and resistors, is a likely point for suspicion.

A common fault lies in poorly soldered contacts, imperfectly fitted tubes in their sockets, defective grid leaks, and the vibration of the chassis due to the speaker. These all tend to alter the constant resistance at these points of contact and cause changing potentials in the operating circuits. A hot soldering iron, or a piece of fine emery cloth, as well as a careful readjustment of tension parts, will cure this form of fading.

#### Errata

Harold J. Clark, secretary of the Plainfields' DX Club, writes us that our statement regarding dues in that organization was in error. They are 75 cents for the first year and 50 cents thereafter.

# The Problem of Man-Made Interference

• • • By Carleton Lord

PVER since the early days of broadcasting, listeners have been obliged to endure barrages of static interference in varying degrees of intensity. Some of this static can be traced to natural causes and must be expected at certain seasons of the year, while the rest is known to be the result of electrical equipment of man's design.

Although engineers have been unable to eliminate the natural static, it is an established fact that the manmade variety can be prevented. With that in mind, it is astonishing to realize that few, if any, attempts have been organized to conquer this bugbear of ordinary reception.

In certain sections of large cities and towns, the racket caused by various electrical appliances limits reception at all times to powerful local stations, while localities are few and far between where some degree of man-made noise is not prevalent.

While long-distance devotees have been the first to cry out at this wanton waste of reception possibilities, there are few average listeners who can truthfully state that they are not affected in some degree by electrical interference.

During the past few years, many manufacturers have capitalized on the situation through the merchandising of so-called noise eliminating devices. Possibly the first gadget to appear on the market was an ordinary filter intended to cut out disturbances coming into a receiver through the power line. While this served its purpose, it did not begin to affect the interference picked up by the aerial and lead-in system.

Next in line came the original

noise-reducing antenna system, and listeners are divided on their opinions of the effectiveness of these de-Designers of the systems worked on the principle that most of the noise was picked up by the lead-in, so they pitched their aerials in the skies, away from all interference, and defied the racket to penetrate the armored lead-in wires. Whatever else may have resulted such an installation, the chances were excellent that signal strength would be reduced to a point where noise wouldn't be noticed.

More recent developments in antenna design have been more effective in the reduction of interference, but we have yet to receive a report which has claimed complete elimination of noise without sacrifice of signal—and that should be the aim of engineer and listener alike.

While a tooth-ache may be relieved temporarily by home remedies, a good dentist will go to the root of the trouble and correct the cause. By the same reasoning, radio interference should be attacked at its source rather than at its destination, and the sooner listeners realize this and act accordingly, the better reception will be for all of us.

Although pretending to be a leader in radio broadcasting, the United States is woefully weak on the interference problem. Only a few scattered communities have ordinances covering this subject, and even then the enforcement of the laws cannot be said to be stringent. A listener is usually faced with the choice of enduring the racket or convincing an unsympathetic power company of the necessity of tracing the source of the noise-and the results are likely to be the same in either case.

While American listeners scurry for cover at the approach of a barrage of interference, the same cannot be said for their contemporaries in foreign countries. In Great Britain, for example, Post Office engineers investigate all complaints about noise, and are usually successful in tracing and eliminating the cause. Special displays at radio shows distribute information on the suppression of interference, while competent authorities are always ready to give advice on individual problems.

French statutes have a special section devoted to radio interference, and filters are prescribed for specified noise-making apparatus. Manufacturers are compelled to provide such filters on all new equipment, owners and operators while required to install the necessary de-Heavy fines are in order discovered sources of noise when are not immediately suppresed. standard of interference-free reception has been established and set owners are requested to report for investigation any apparent excesses of noise.

German engineers have recently developed special equipment for the tracing of interference-producing apparatus, and the location of source of racket is comparatively simple. Here again, government regulations provide for the prompt elimination or correction of the offending equipment.

Down in New Zealand, the Post and Telegraph Department has been applying pressure as the result of increasing complaints about interference. It was ordered that a whole section of a street railway system install proper suppressing devices. The cost of filters for each car ran in excess of \$20 and a comprehensive survey was started to determine whether the entire system could be cleared up.

A comparison of these examples with conditions in the United States would be superfluous. Manufacturers continue to put out vacuum cleaners, fuel oil burners, electric mixers, washing machines, refrig-

erators and countless other electrical equipment without regard for filtering of the resultant interference. Signs and traffic lights flash continuously. X-ray machines and high-frequency devices buzz in hospitals and doctors' offices. Automatic machinery in factories clutter the air with maddening racket. Street cars, garages and filling stations combine to lay down a heavy blanket of noise.

And the American listener goes about his business, protesting a bit when interference spoils a favorite program, yet doing absolutely nothing about it!

He may erect a noise-reducing antenna, spending \$20 or \$25 for the proper masts and equipment, but even then he is applying only a deadening anesthetic for a partial relief. He seldom thinks of the only sure elimination of his trouble—an attack upon the actual source of the noise.

How much simpler and more effective it would be to rout out the interference - producing equipment and see that proper filters were installed. Why should a neighborhood of twenty or thirty families be obliged to spend hundreds of dollars for noise-reducing equipment when a few inexpensive filters would eliminate all of the racket at its source?

The answer lies with the listener himself. As long as he protests vaguely at existing conditions, he can expect no change. When he finally arouses himself to a state of action, he has a chance of ridding himself of annoyance for all time.

Italy is reported building a powerful 500,000 watt radio station to compete with the huge broadcasting plant in the Soviet Union, claimed to be the most powerful in the world. We still believe WLW is the biggest, however. It has 500,000 honest watts.

# Hollywood Salutes The World

A N EXAMPLE of what can be done by a station when broadcasting a DX program was afforded listeners during the gigantic international good-will program from KNX, Hollywood, Cal., between 3:00 and 7:00 a.m., EST, on March 1st.

Presented in co-operation with the Newark News Radio Club, on the inspiration of its vice-president, E. O. Cutler, KNX arranged a colorful program of sustained interest, and dedicated portions of the broadcast to countries whose radio reception at a particular hour made it possible for listeners to tune this station at the highest peak of efficiency.

The significance of the occasion was better exemplified by the fact that British, Japanese and Argentine consuls, and other international dignitaries, spoke directly to the nations which they represented. Among the nations saluted were England, Canada, Mexico. Spain. Algeria, Sweden. Norway, Alaska, Japan. Siberia, China, Australia, Argentina and the Philippine Islands.

Other guests included well-known artists as well as civic and industrial leaders. Established Pacific Coast radio entertainers were supplemented by special talent from many of the Hollywood motion picture studios.

Of special and dramatic interest was the placement by Pan-American Airways of their entire Pacific facilities at the disposal of KNX for the period of the broadcast, for among the focal points of the program were the isolated Pacific islands on the course of the trans-Pacific clipper ships. The lonely ground crews were addressed by Colonel Clarence M. Young, General Manager of Pan-American Airways for the Pacific Coast.

Listeners who tuned to KNX on this morning were rewarded by an outstanding program of international interest.

# Our Readers' Troubles

(Continued from page 16)

pose. As you state, there are three posts on the back of the Crosley set. A is for antenna, G is for ground, and P is for the phonograph pick-up. A short piece of wire will be found connecting P with G in your set. This wire must be broken or removed when the pick-up is connected across P and G. The broken gap must be closed when the set is used for radio purposes. With proper connections your pick-up can be used with any radio receiver.

#### New Tubes

Can I change the tubes in my Philco 211 receiver for newer glass tubes without changing the wiring? Does a tube control the automatic-volume control circuit, and if so, which one? My volume control knob is very noisy. Is it possible to lower the tone of the phonograph, when used, but the radio tone seems to be very satisfactory when signals are tuned in? A rattle has started in the speaker at some of the low notes, and must I get a new cone for the speaker?

A change in the tubes in your present set would not be advisable as the set uses an automatic volume control. However, the Arcturus Tube Company, of Newark, N. J., is making metal counterparts of your glass tubes, and with adapters they may be used in your receiver. We suggest you write to them. The 27 type detector-rectifler is the a-v-c tube, and has nothing to do with the action of the hand-operated volume control knob. From what you say a new volume control unit should be installed.

It is likely that a new cone in your speaker may be required to stop rat-

tling on low notes, although a recentering by an experienced service man may be all that is necessary.

You can lower the tone of the set when high pitched phonograph records are being played through the pick-up unit, by the use of a tone control. The same effect may be obtained by connecting a .02 mfd. 600-volt condenser between the plates of the 45 type tubes. A single-pole single-throw switch in series with the condensers and either of the 45 plates will enable you to bring the tone back to normal when signals are being received. As some high voltage will be on part of this switch, care must be exercised in its use.

# The All-Wave Dial

(Continued from page 21)

year I have verified three stations in Japan, five in Java, ZBW in China, three in Australia, VPD in the Fiji Islands, five in Africa (including CR6AA), and many stations on all the other continents. At the present time I have 42 letters out for verifications."

Allie Landgraf promises to answer every letter he receives from users of Midwest 18-tube receivers. Mr. Landgraf, 97 Park St., Chilton, Wisc., is a new DXer and is trying to build up a good log. So far he has heard GSC, DJC, DJI, EAQ and CRCX.

The popularity of Esperanto as an international language has gradually been growing ever since its inception in 1887, although it still seems doubtful that it will replace either French or English as a universally understood language. A number of radio stations in Europe announce in this language and some of them even write their letters in Esperanto. Mr. George Sholin, 55 Lapidge St., San Francisco, Calif., feels that Esperanto should be most valuable in

international broadcasting and is trying to popularize it among shortwave fans. He has offered to send to any RADEX reader a small grammar in return for five cents in unused United States stamps, or foreign readers can obtain one for the equivalent of ten cents in stamps. The grammar can be learned in an hour and the vocabularly is sufficiently large for daily use.

The Editor has one of Mr. Sholin's books and feels that it is worth a nickle to anyone who is interested. We haven't tried to learn Esperanto yet but a glance through the book almost convinces us that it could be easily learned.

"I have been concentrating on the 20-meter amateur phones lately," confesses Walter Wallin, 89 Garvan St., E. Hartford, Conn. "All American districts, Newfoundland, Mexico, Dominican Republic, Costa Rica, G5's and G6's in England are in my log. I would like very much to have the address of a Belgian amateur I just heard, ON4VK. He stated in his transmission that he just came on 20-meters on March 30 and would like reports on his station. I would like to correspond with anyone interested in logging amateurs."

# Five Years of DX

(Continued from page 10)

marked by states, countries, etc. Letters are divided in a like manner in a large box file.

I have a small trunk full of DX souvenirs and mementos of past dial-twisting achievements. Quite a number of prizes are included, as well. One easily-remembered souvenir is a small birthday cake, with the call letters KGVO done in colored sugar on top of the frosting. This was sent to me way back in 1932. Too, there is a miniature bale

of cotton from Baton Rouge, a Mexican bird made up of feathers, and so many more.

The pictures of stations, personnels and transmitters are framed if possible, and there are a lot of them, too. One of the best is from I1NA, Napoli, Italy, which shows the Bay of Naples in the background.

It is small wonder that I take my DX seriously. With all of these fine memoirs of many happy hours spent at my radio, how can I but hope for more thrill-packed sessions in the future? I think that my DX hobby has brought me something which mere money cannot buy. Pleasure such as this can be acquired only after long practice and perseverance at dial twisting.

Rt. No. 3, Box 660, Toledo, Ohio.

# THE MONTH'S CHANGES ON THE SHORTWAVES

2.414 KACN, San Buenaventura, Calif. New KACO, Tracy, Callf. New

KACS, Bakersfield. Calif. New. KNHG, Prescott, Ariz. New WAKH, Bloomfield, N. J. New. WCPD, Charleston, S. C. New. KACR, Seminole, Okla. New.

2.450 WAKG, Clearwater, Fla. New. KACQ, Kalaloch, Wash. New. 2,466

2,490

WAJJ, -K, -L, -M, -N, portables in Florida. YDO6, Sourabaya, Java, from 2.730. 3.190 3.430

KNBE, Glendale, Calif.; KNBF, Mokapu, Ha-5.165 wali; KNBG, Sumay, Guam; KNBH, Mid-way; KNBI, Wake. New alrways.

HCK, Quito, Ecuador, from 5.815. 5.890 6.090 VE9BJ, new owner: New Brunswick Brdcstg. Co., Admiral Beatty Hotel, St. John, N. B.

6.155 COKG, Santiago, Cuba. Formerly CO9GC on 6.150.

HRD, La Ceiba, Honduras. New HIG, Trujillo, D. R. New. 6.235 6.280

HIIS, Puerto Plata, D. R. New. 6.420HIT, Trujillo, D. R. New. HI3C, La Romana, D. R. New. 6.630

6.980

PRF5, Rio de Janeiro, from 9.505. 9.500 HJU, Buenaventura, Colombia, from 9.500.

9.510 9.520 XEME, Merlda, Yuc. New.

9.700 CQN, Macau. from 6.072

DZB, Nauen, Germany, from DJJ. 10.042 10.165 HS8PJ, Bangkok, Siam. New

DZC, Nauen, Germany, from DIQ 10.285 DZB, Nauen, Delete. 10.420

VRR4, Stoney Hill, Jamaica, from 11.495. 11.595

TPA4, Pontolse, France, from 11.720. 11.715 GSN, Daventry, Great Britain. New. 11,820

11.880 TPA3, Pontoise, France. GBB2, Rugby, G. B., from GBB, 13.500. 13.595

13.827 HRF, Tegucigalpa, Honduras, New. GBA2, Rugby, G. B., from GBA, 13.984. 13.990

GSO, Daventry, G. B. New. 15.180

TPA2, Pontoise, France, from 15.250. 15.245

GSP, Daventry, G. B. New. GAD, Rugby, G. B. New. 15.310

19.480 VQG, Nairobi, Kenya. New. 19 630

# THE MONTH'S CHANGES IN STATION DATA

980 XEF Nuevo Laredo, Tams. 1000 XEBK

1200 1210 XEAT 1240 XEAC 1310

1370 1420

KEUB 1500 KTEP

730 760 790 810

910 CMX 920 1320 KID

680 810 CMCF 820 970

1060 1110 1300 1370 HIZ

1380 1420 1460 1420 CMGI

1500

Juarez, Chih

Hidalgo, Chih. Tijuana, L. C

CMHX CMGH CMCF CJAT

640 CMBC CMCG

> CMHW CMBX CMBX CMCJ WHBL

CMCR CMCQ CMCU

CMCN

Redding, Calif.

Cordoba, Ver XEAG New Albany, Ind. Price, Utah

El Paso, Texas POWER Havana, Cuba, 3000 from 250

Cienfuegos, Cuba, 200 from 500 Matanzas, Cuba, 250 Havana, Cuba, 600 from 250 Trail, B. C., 1000 from 250 Havana, Cuba, 1000 from 650 Idaho Falls, Ida., 500 from 250 FREQUENCIES

Havana, Cuba, from 970 Havana, Cuba, from 1255 Havana, Cuba, from 815 Cienfuegos, Cuba, from 810 Havana, Cuba, from 640

Havana, Cuba, from 1380 Havana, Cuba, from 1100 Sheboygan, Wisc., from 1410 Trujillo, D. R., from 1300 Havana, Cuba, from 1410 Havana, Cuba, from 680 Havana, Cuba, from 1280

DELETE Matanzas, Cuba Havana, Cuba

# Stop Press Notes

KWSC. Pullman, Wash., is to increase day power from 2000 to 5000 watts.

WCLO, Janesville, Wis., may increase power from 100 to 250 watts.

KIEM, Eureka, Calif., will change from local to regional channel and increase power from 100 to 500 watts.

WEED, Rocky Mount, N. C., will increase day power from 100 to 250 watts.

Until August 1, KIRO, Seattle, Wash., will use 1000 instead of 500 watts on 710 kc.

WORL will move its studio from Babson Park to 610 Beacon Street, Boston, Mass.

WAIM, Anderson, S. C. has permission to change frequency from 1200 to 630 kc. and power from 100 to 1000 watts.

# Assorted S. W. INFORMATION

READERS who are not acquainted with some of the radio abbreviations or expressions which are often seen and heard, may find something of interest in the assortment given below.

### The Spanish Alphabet

A, pronounced ah; B, bay; C, say or thay\*; D, day; E, ay; F. effay; G, hay; H, ah-hay; I, ee; J, ho-tah; K, kah L, el-lay; M, em-may; N, en-nay; O, oh; P, pay; Q., koo; R, airray; S, ess-say; T, tay; U, oo; V, vay W, doo-ble-vay; X, eckis, ay-kis, ek-key\*; Y, yay, ee-grek, ee-gray-yee-ah\*; Z, zed.

\*These pronunciations are given the way they sound on the radio and may not agree with Spanish textbooks. Slightly different accents are heard in the various Spanish-speaking countries, which accounts for the difference in pronunciation of some of the letters. One, oo-no; Two, dose; Three, trace; Four, koo-at-tro; Five, think-ko; Six, sase; Seven, sate; Eight, oh-cho; Nine, noo-ay-ve; Ten, diez.

## Amateur Abbreviations

To save the trouble of sending a lot of extra dots and dashes, many words are shortened by the amateurs and these short forms are often seen in print. The letter X is used for "trans-" as in "xmitter," xmission," etc. "Xtal" is the shortened form for crystal. Schedule is spelled "sked."

You, u; Your, ur; Thanks, tnx or thanx; Good, gud; From, de; Phone, fone; Again agn; Some, sum; Very, vy; And, es; With, wid; Please, pse; Best regards, 73; "Love and kisses," 88.

An operator is an "op"; his typewriter is a "mill"; he proudly refers to his xmitter as "junk" or "a rig," while his aerial is usually a "sky wire" and the pylons supporting the sky wire are "sticks." Instead of typing on his typewriter, he "pounds" the mill, and the hand with which he operates his key is his "fist." A good op is said to have a "gud fist."

While programs for retransmission are being lined up, some interesting lingo is sometimes used by the commercial ops, such as "Down in the mud," which means that the signals are of low volume, or the modulation is too low. Those who sing as if they were tired are said to have "lock jaw" and those who skip over notes, especially in scales, are "scoopers."

All radio operators, amateur and professional alike, seem to be "old men" and "young ladies," regardless of their respective ages. OM and YL are the abbreviations for "old man" and "young lady."

CQ is a general call to any station wishing to QSO.

A QSO is a communication between two stations.

A QSL is an acknowledgment, as a QSL card, which verifies reception of a transmission.

K means "go ahead." When an operator finishes his own part of a transmission and wishes the communicating station to reply, he terminates his own transmission by sending K in code. or, if using phone, says "K," or "wah dit dah" (the way K sounds in code), or he merely says "go ahead."

CUL means "see you later," or CU agn, "see you again."

QRA, a station's address.

QRM, interference from other stations, or local QRM can be interference caused by faulty electrical appliances nearby (man-made static).

QRN, Atmospherics, or natural static.

QRT, "quit."

QSA, The understandability of signals is expressed by the QSA Code. QSA1 being signals which are not at all intelligible and QSA5 being perfectly understandable signals.

QSB, fading.

R, The R Code describes the volume of signals, ranging from R1, the faintest signals which can be heard in the headphones, to R9, the very best signals on the loudspeaker.

A1, Continuous wave (code) emission.

A2, Interrupted continuous wave (code) emission.

A3. Voice emission.

CW. Continuous wave.

ICW, Interrupted continuous wave. Condition A, Inverted modulation or "scrambled speech."

Condition B, Intelligible speech.

CMC, Canadian Marconi Co.

BBC, British Broadcasting Corp.

RCA, Radio Corporation of America.

NBC, National Broadcasting Co. CBS, Columbia Broadcasting System.

AWA, Amalgamated Wireless (A/sia), Ltd.

A/sia, Australasia.

AT&T. American Telephone and Telegraph Co.

FRC, Federal Radio Commission. PTT, (Bureau des, or Regie des) Postes. des Telegraphs et des Telephones. The abbreviation PTT is often given, erroneously, as the call-sign of various French or French Colonial stations. It is the abbreviation for the governmental bureau or department which controls the station.

TSF, another common French abbreviation, which is translated by our words "wireless" or "radio." TSF is Telegraphie sans fil, or, telegraphy without wire.

M. S., (preceding the name of a ship)), Motor Ship, or M. V., Motor Vessel.

H. M. S., His Majesty's Ship.

R. M. S., Royal Mail Ship,

AST, Atlantic Standard Time,

EST, Eastern Standard Time (EDST, "daylight time").

CST, Central Standard Time (CDST, "daylight time").

MST, Mountain Standard Time.

PST, Pacific Standard Time (PDST, "daylight time").

JST, Japanese Standard Time.

EAST, Eastern Australia Standard Time.

CET, Central European Time.

MEZ. The German abbreviation for CET.

LST, Local Standard Time.

GMT, Greenwich Mean Time. GST, Greenwich Summer Time.

Greenwich Mean Time is the time system in which noon occurs at the time the sun passes over the meridian of Greenwich, England, and the standard time of nearly every locality in the world is calcuated to agree with Greenwich in minutes and seconds but the different hours by whether

onds, but to differ in hours by whole numbers. The true sun time of New York is 4 hours and 56 minutes slower than Greenwich, but the standard time differs by exactly five hours.

Publications which have readers in every part of the world, cater to only a minority of their subscribers when only Eastern Standard Time is given, as all their subscribers, except those living in the Eastern Time Zone, must convert the time to their own standard. A better way is to give time as RADEX does, in GMT and the five Standard times of North America.

midnight GMTcommences at (0000) and continues through 24 hours to 11:59 pm (2359), without starting over at noon, as we do, thereby averting the necessity of us-Thus, in GMT. ing AM and PM. 12:45 am is expressed 0045, and 12:45 pm. is 1245. 1 pm is 1300, or 13 hours past midnight. To convert GMT into EST, it is necessary only to subtract 5 hours and no minutes (500) from GMT, because EST is exactly 5 hours slower than GMT. Thus, 1400 GMT is 900 EST, or 9:00 am. If the result of this subtraction is greater than 1200, subtract 1200. Thus, 2100 GMT, minus 500 gives 1600, or 16 hours past midnight. Subtract the 12 hours of the morning (1200) and obtain 400, or 4:00 pm, EST.

Persons living in the Central time zone must subtract 600, as their time is 6 hours slower than Greenwich.

MST, subtract 7 hours.

PST, subtract 8 hours.

AST, subtract 4 hours.

Hawaii, subtract 10 hours and 30 minutes (1030). Thus, 2145 GMT, minus 1030 gives 1115, or 11:15 am,

Hawaiian Time.

Out in California some of our readers are hearing a Mexican station on 730 kcs. which may be XEBC back on the air. This station, located in Agua Caliente, B. C., was temporarily discontinued several months ago, according to information from the Mexican radio authorities.

# Where to Get the DAY'S NEWS

Daily except Sunday unless otherwise noted.

- 1 Thursday only
- 2 Sunday only
- 3 Monday only
- 4 Except Monday
- 5 Except Saturday
- 6 Tuesday and Friday
- 7 Tues., Thurs. and Sat.
- 8 Mon., Wed., and Fri.
- 9 Saturday only
- a Including Sunday
- b Tuesday and Wednesday
- c Tues., Thurs. and Fri.
- d Thurs., Fri. and Sat.

# ATLANTIC TIME

7:50 a.m.	12:15 p.m.	7:00 p.m.
CHSJ 1120	CKCW 1370	CFNB 550
9:00 a.m.	12:30 p.m.	CJCB 1240
CKCW 1370	CHNC 1410	7:30 p.m.
9:30 a.m.	CJLS 1310	CFCYa 630
CHNS 930	1:00 p.m.	8:00 p.m.
	CJCB 1240	CJCB 1240
10:30 a.m.	5:05 p.m.	11:45 p.m.
CJCB 1240	CHS1 1120	CECV 630

# EASTERN STANDARD TIME

7:00 a.m.	WPRO 630	WBSO 920	11:00 a.m.	WKJC 1200	WMBO 1310	WID 550	4:00 p.m.
WIBX 1200	WSPD 1340	9:30 a.m.	Red & Blue <sup>2</sup>	WKOK 1210			WHDL 1420
WJR 750	WTAG 580	KQV 1380	CMKM 1120	WLEU 1420	CKCV 12103	WINAC 1230	WKJC 1200
WNEL 1290	WTIC 1040	WFDF 1310	WCKY 1490	12:03 p.m.	CKTB 1200	1.45	
7:15 a.m.	WWVA 1160	WHDL 1420	WGBI 880	WWJ 920			WNEL 1290
WCMI 1310	8:05 a.m.	WIP 610	WKJC 1200	12:15 p.m.		WTAR 780	WSPA 920
WKZO 590	WEEI 590	WKBZ 1500	WMBC 1420	WBIG 1440	WCSH 940		
WNAC 1230	8:15 a.m.	WNEW 1250	WNEL 1290	WBZA 990			4:15 p.m.
WNBX 1260	WASH 1270		WSAR 1450	WCAP 1280		WKJC 1200	CKLW 1030
WSAJ 13101	WBSO 920	9:45 a.m.	WTIC 10402	WDAS 1370	WALET 1970	WKRC 550	WHEC14305
7:30 a.m.	WIP 610	WGBI 880	11:15 a.m.	WHAM 1150	WELL 1940	WSPD 1340	
WAAT 940	WKZO 590	9:55 a.m.	WMPG 1200	WKBN 570			
WBT 1080	WNBC 1380	CKLW 1030	WSPD 1340	WOL 1310	12:55 p.m.	2:15 p.m.	WQAN 880
WMBC 1420	WSAR 1450	WOKO 1430	11:30 a.m.	WSOC 1210	WBRE 1310		
WSAI 1330	8:30 a.m.	10:00 a.m.	WAGM 1420	WEEI 590			WAIM 1200
7:35 a.m.	WCAU 1170	Red & Blue	WBNS 1430	WHEC 1430	1:00 p.m. CKCV 13104		WCNW 1500
WICC 600	WEHC 1420	CBS	WDBO 580	WNBC 1380			
7:45 a.m.	WFBC 1300		WSYB 1500	WOPI 1500		2:45 p.m.	WBSO 920
WBIG 1440	WHK 1390	WCAU 1170 WDEL 1120	11:45 a.m.	WWVA 1160	WFBC 1300	WAAB 1410	WMBX 1260
WFIL 560	WOPI 1500		WNAC 1230	12:20 p.m.	WIDG 1510	WEEU 830	
WINS 1180	8:45 a.m.	WELL 1420	WSYR 570	WBCM 1410	WJBK 1500 WJSV 1460		WKJC 1200
WKRC 550	WJEJ 1210	WIBX 1200	11:55 a.m.	12:25 p.m.		WBAL 1060	WKRC 550
WLW 700	8:55 a.m.	WJSV 1460	CFCF 600	CFRB 690		WBNS 1430	
WMAZ 1180	WEAN 780	WKJC 1200	WBAL 1060	12:30 p.m.	W.MBR 1370	WCAE 1220	
WSAZ 1190	9:00 a.m.	WNBH 1310	Noon	WBEN 900		3:00 p.m.	WSPD 1340
7:55 a.m.	WAIM 1200	WNYC 810	CJIC 890	WBT 1080 <sup>2</sup>		WBRE 1310	
WB NS 1430	WBEN 900	WOR 710 <sup>2</sup>	CMJA 1010	WCAE 1220	WSAR 1450		CMCF 815
WMBR 1370	WBIG 1440	WPAR 1420	WBZ 990	WELL 1420			WB1G 1440
8:00 a.m.	WCSC 1360	WPTF 680	WCAE 1220	WFDF 1310			WBZ 990
CFRB 690	WGAR 1450	WSPA 920	WDAE 1220	WIBM 1370	W 1 1C 1040	WKJC 1200	
CKLW 1030	WIS 1010	10:15 a.m.	WFBR 1270	WJAS 1290	1:10 p.m.		WCSH 940
CMJH 1360	WJBK 1500	WKZO 590	WFIL 560	WKBZ 1500		WFAS 12101	
CMKM 1120	WKJC 1200	WLW 700	WFMD 900	WKRC 550	1:15 p.m.		WSAR 1450
WAAB 1410	WLEU 1420	WSAR 1450	WGAR 1450	WKZO 590	WCAU 1170	WMAZ 1180	
WADC 1320	WMAZ 1180	10:30 a.m.	WIBX 1200	WOR 710	WMAZ 1180		5:20 p.m.
WCKY 1490	WMBR 1370	WBIG 1440	WINS 1180	WPAX 1210		WJSV 1460	
WFBR 1270	WMFF 1310	WMAZ 1180	WIOD 1300	WQAN 880	1:20 p.m.	WMCA 570	5:30 p.m.
WKBN 570	WSOC 1210	CBS Sun.	W1P 610		WHEB 740	3:45 p.m.	
WKJC 1200	9:15 a.m.	10:45 a.m.	WIS 1010	WSPA 920 12:35 p.m.			WBRB12106
WOR. 710	WBRE 1310		WJW 1210		CKLW 1030		WFLA 620
	1010		1210	CJKL 530	WBTM 1370	MGBI 8802	WICC 600

WNBC 1380	WCSC 1360	CBS	WGBI 880	7:30 p.m.	WKJC 1200 WNBH 1310 WHEC 1430
WOCL 1210	WGAR 1450	Red & Blue	W1MS 1180	WFAS 12109	WTAR 780 WNEL 1290 WIBX 1200
	WIBX 1200	CFRB 690	WMBO 1310	WMAZ 1180	9:15 p.m. 10:05 p.m. WJAS 1290
5:35 p.m.	WIS 1010	WFBC 1300	6:55 p.m.	7:45 p.m.	WOPI 1500 WBT 1080 WKJC 1200
WWVA 1160	WKJC 1200	WFBR 1270	WCKY 1490	WELL 1420	WBT 10802 WGAR 1450 WLW 7005
5:45 p.m.		WFDF 1310	WJSV 1460	WEEL 5902	9:30 p.m. WSAR 1450 WNAC 1230
CRCO 880	WMBC 1420	WFIL 560	WOKO 1430	WFBC 1300	CMJK 7805 10:15 p.m. WOR 710
WCMI 1310	WMMN 890		7:00 p.m.	WGBI 8806	WBTM 1370 CKLW 1030 WPRO 630
WEHC 1420	WNAC 1230	WHAM 1150 WJBK 1500	CMJA 1010	7:55 p.m.	WEXL 1310 10:30 p.m. WTAG 580
WIOD 13077	WPRO 630		CMKM 1120	WBNS 1430	WMBR 1370 WBIG 1440 WTIC 1040
WKOK 1210	WSOC 1210	WKBZ 1500	WAAB 1410	8:00 p.m.	WMCA 570 WBNS 1430 11:05 p.m.
WMAZ 1180	WSVA 550	WKRC 550			9:45 p.m. WOL 1310 WEEL 590
WNBH 1310	6:05 p.m.	WNEW 1250	WKJC 1200	WKJC 1200	WAAB 1410 WSPD 1340 11:10 p.m.
WBRE 1310	WWJ 920	WOPI 1500	WLBZ 620	WWVA 1160	
WBT 1080	6:15 p.m.	WOR 710	WTBO 800	8:10 p.m.	
5:55 p.m.	WGH 1310	WSAI 13308	WRDO 1370	WIBM 1370	
CKLW 1030	WJAS 1290	WTAG 580	7:15 p.m.	WIP 610	10:00 p.m. CHRC 580 CBS Sun.
WBNS 1430	WKBN 570	WTIC 1040	WBBR 1300	8:30 p.m.	WBRE 1310 WIP 610 11:20 p.m.
WEEI 590	WPAR 1420	6:35 p.m.	WBIG 1440	CKCO 1010	WCKY 1490 11:00 p.m. WICC 600
WJSV 1460	WRVA 1110	WEAN 780	WBRE 1310	WCKY14902	WCSC 1360 CFCF 6005 11:30 p.m.
WMBR 1370	WSAR 1450	WPTF 680	WEBR 1310	WFDF 1310	WGBI 880 CFRB 690 Red Net <sup>2</sup>
6:00 p.m.	WSPD 1340	6:40 p.m.	WIBX 1200	9:00 p.m.	WIS 1010 CRCK 1050 WHK 1390
CJIC 890	WWSW15005	WIOD 13008	WMPG 1200	CKOC 1120	WJR 750 WBEN 900 WOR 710
KDKA 980	6:20 p.m.	WIP 610	WNEW 1250	CMCD 960	WKBZ 1500 WCAE 1220 WTIC 10402
WAGM14201	WMCA 570	6:45 p.m.	WNYC 810	WFBC 1300	WKJC 1200 WEEI 5902 Midn't.
WBEN 900	WEEL 590	CFCH 930		WGBI 880	WKRC 550 WFBR 1270 WCAU 1170
WCAE 1220		WDAE 1220	WTFI 1450	WJBK 1500	WLW 700 WFIL 560 WCKY 1490
W CAE 1220	0.30 p.m.		,		

WCAE 1220	6:50 p.m.	WDRE 1220 /	************			
	$\mathbf{C}^{1}$	ENTRA	I STA	NDARD	TIME	
	C.	DIA LIZZ	L GIM	. 11/11/1/	TIME	
5:30 a.m.	KFNF 890	9:05 a.m.	KGDE 1200	WJTL 1370	WSFA 1410 WISN 1120 WTMV 150	0
KFNF 890	8:00 a.m.	WILL 890	WBEO 1310	WMBD 1440	1:00 p.m. WLBC 1310 5:15 p.m.	
6:15 a.m.	KARK 890	WRTN 1370	WIND 5602	WOC 1370	CKY 960 WSGN 1310 WCCO 81	
KFEQ 680	KFAB 770	9:15 a.m.	10:40 a.m.	WSIX 1210	KCRC 1360 WTMV 1500 WMC 78	0
WBAP 800	KFYO 1310	KARK 890	KFEQ 680	WTMV 1500	KFOR 1210 3:05 p.m. 5:20 p.m.	
WFAA 800	KGFW 1310	KFAB 770	10:45 a.m.	WTRC 1310	KGKL 1370 KFNF 890 KGGF 101	υ
6:30 a.m.	WDAY 940	KFEQ 680	WKEU 1500	XEWZ 1150	KRNT 1320 3:15 p.m. 5:30 p.m.	
KASA 1210	WFBM 1230	KPAC 1260	11:00 a.m.	12:15 p.m.	WCBS 1420 WGST 890 CBS	_
KMBC 950	WJJD 1130	KSTP 1460	KFJZ 1370	KGGF 1010	WDOD 1280 3:30 p.m. Red & Blu	9
WHO 1000	WJTL 1370	WLBC 1310	KFNF 890	WBRC 930	WHBU 1210 KSOO 1110 KASA 1210 WMT 600 KSTP 1460 KFAB 77	
6:45 a.m.	WKBB 1500	WMBD 1440	KSTP 1460	WCLS 1310		
KWBG 1420	WKBH 1380	9:30 a.m.	WHBU 1210	WFBM 1230	WSM 650 WGBF 630 KFJB 120 WTAX 1210 WHO 1000 KPAC 126	
7:00 a.m.	WMBH 1420	KF1Z 1420	WSGN 1310	WHBY 1200		
KABR 1420	WMFN 1210	KFYO 1310	WTMV 1500	WKBB 1500	WTMJ 620 3:45 p.m. WOAI 119 WTMV 1500 KABR 1420 5:35 p.m.	
KFJZ 1370	WTMV 1500	KTBS 1450	11:15 a.m.	WROK 1410	1:15 p.m. KOIL 1260 KVOO 1140	d
KRNT 1320	8:15 a.m.	KTWO 560	WDAF 610	WOWO 1160	KPAC 1260 WKEU 1500 WENR 87	<u>.</u>
WCCO 810	KFJM 1370	WJBC 1200	11:25 a.m.	12:20 p.m.	KTBS 1450 WTAX 1210 5:40 p.m.	U
WIBW 580	KGFK 1500	WJJD 1130	WDAY 940	KFNF 890	KWTO 560 <sup>2</sup> 4:00 p.m. CKY 96	Λ
WMT 600	WAAW 660	WKBB 1500	11:30 a.m.	WRTN 1370	1:30 p.m. KBTM 1200 5:45 p.m.	•
WTAD 900	KASA 12102	WMT 600	KFPW 1210	WTAW 1120 12:25 p.m.	WLBC 1310 WHBU 1210 KFYO 131	n
WTCN 1250	8:30 a.m.	WTRC 1310	KRNT 1320	KDLR 1210	WMBH 1420 WTMV 1500 WDAY 94	ň
KSO 1430	KGKB 1500	CBS <sup>2</sup>	WBG 1420 WMT 600	12:30 p.m.	1:45 p.m. 4:15 p.m. WDSU 125	
7:05 a.m.	KLPM 1240	9:45 a.m.	WMT 600 KSO 1430	KFEQ 680	KFDY 780 KWTO 560 WFBM 123	
WSGN 1310	KSD 550	KMBC 950 WJBO 1420 <sup>2</sup>	11:45 a.m.	KFJM 1370	KGEX 630 WHB 860 WKEU 150	
7:15 a.m.	KSTP 1460	KDLR 1210	KABR 1420	KWTO 560	WHEF 1500 WJAG 1060 WNOX 56	
KGGF 1010	KWBG 1420 WCCO 810	10:00 a.m.	KASA 1210	WAGF 1370	2:00 p.m. 4:30 p.m. WTRC 131	
KPAC 1260	WGPC 1420	KFVS 1210	KFAB 770	WIBA 1280	WHBU 1210 KFAB 770 5:50 p.m.	
WHO 1000 WKEU 1500	WJBO 1420	KLCN 1290	KGKB 1500	WJAG 1060	WJJD 1130 KGEX 630 KSTP 146	0
7:20 a.m.	WSFA 1410	KVOS 1210	KV00 1140	WKBH13802	WJTL 1370 KMBC 950 KFJM 137	0
WHB 860	WTAQ 1330	WCCO 810	WBAA 890	WKEU 1500	WTMV 1500 KSTP 1460 5:55 p.m.	
WOI 640	8:45 a.m.	WGST 890	WCCO 810	WNBR 1430	2:15 p.m. WDAF 610 WMT 60	0
7:30 a.m.	KNOW 1500	WHBU 1210	WDSU 1250	12:35 p.m.	KWBG 1420 WOC 1370 6:00 p.m.	
KFRO 1370	WSGN 1310	WIND 560	WIND 560	WJMS 1420	WBAP 800 WTMJ 620 KARK 89	
KGBZ 930	9:00 a.m.	WJTL 1370	11:55 a.m.	12:45 p.m.	WFAA 800 5:00 p.m. KFEQ 68	
KMBC 950	Red & Blue	WMBH 1420	KFAB 770	KBTM 1200	WKEU 1500 KFEQ 680 KVOL 131	
KSTP 1460	CBS	WROK 1410	WOAI 1190	KFIZ 1420	WNAD1010b KFIZ 1420 KWTO 560	
KWTO 560	KGCA 1270	WTAX 1210	Noon	KFRO 1370	2:20 p.m. KFJZ 1370 WHBY 120	
WIBA 1280	KGBY 1340	WTMV 1500	CJGX 630	KFYO 1310	WCCO 810 KFXR 1310 WJBO 142	90
WDSU 1250	WDAF 610	10:05 a.m.	KARK 890	KLPM 1240	2:25 p.m. KOMA1480 <sup>5</sup> WTAQ 133	
XEFO 940	WGST 890	KLPM 1240	KGDY 1340	KRGV 1260	WTCN 1250 KSOO 1110 WTAX 121	0
7:40 a.m.	WHBU 1210	10:15 a.m.	KGEX 630	KSTP 1460	2:30 p.m. WHBU 1210 WTMV 150	Ю
KFEQ 680	WHBY 1200	CJGX 630	KGNF 1430	WBAA 8909	KSTP 1460 WHO 10009 6:10 p.m.	
7:45 a.m.	WIND 560	WBOW 1310	KMBC 950	WBOW 1310	KVOS 1210 WIRE 1400 KLPM 124	
KRGV 1260	WKEU 1500	WDOD 1280	KVOL 1310	WCCO 810	WDAY 940 WJJD 1130 6:15 p.m.	
KV00 1140	WNOX 560	WJMS 1420	WGPC 1420	WHO 1000	WIND 560 WJTL 1370 KFNF 89	
WNBR 1430	WOWO 1160	10:25 a.m.	WHB 860	WKBH 1380	3:00 p.m. WMBD 1440 KFRO 137 KARK 890 WOI 640 KFRU 63	
WOAI 1190	WTMJ 620	WTCN 1250	WHBU 1210	WLBC 1310		
7:50 a.m.	WTMV 1500	10:30 a.m.	WISN 1120	WMFN 1210		
KABR 1420	WIND 560 <sup>2</sup>	KFOR 1210	M 1130	WNOX 560	WIND 1210 WICK 1230 WEBC 131	

# WHERE TO GET THE DAY'S NEWS

WMFN 1210	6:55 p.m.	7:30 p.m.	8:30 p.m.	WHBY 1200	WIBW 580 WTMJ 620 10:30 p.m.
WGL 1370	KGDE 1200	WIND 560	KFJZ 1370	WJTL 1370	WOAI 11902 WTMV 1500 Red Net <sup>2</sup>
6:30 p.m. KASA 1210	7:00 p.m.	7:45 p.m.	KFOR 1210 WIND 5604	WMT 600 WNBR 1430	9:45 p.m. XENT 910 WHO 10009 WROK 1410 XEWZ 1150 WRTN 1370
KDLR 1210	KGKB 1500	WRTN 1370	WEBQ 1210	WNOX 560	10:00 p.m. 10:05 p.m. 10:45 p.m. WCCO 810
KFOR 1210	KWBG 1420	WTAD 900	8:45 p.m.	WSFA 1410	
KOIL 1260	WAVE 940	8:00 p.m.	KFNF 890	WTCN 1250	WDAY 940 10:10 p.m. 11:00
KWKC 1370	WBOW 1310	KARK 890	KGKB 1500	9:15 p.m.	
WDOD 1280 WHO 1000	WJTL 1370 WKBB 1500 WMBH 1420	KFIZ 1420 KVOO 1140 <sup>2</sup>	WSGN 1310 9:00 p.m.	KFPW 1210 KSD 550	WENR 8705 Bille Net KMBC 950
WNBR 1430 WSGN 1310	WNAX 570	WGN 720 WHBU 1210	KFYO 1310 KGKL 1370	WFBM 1230 9:30 p.m.	WHBU 1210 CBS <sup>2</sup> WHBU 1210 WJTL 1370 WIBA 1280 KLPM 1240 WTMV 1500
6:45 p.m. KRGV 1260	7:15 p.m.	WTMV 1500 XENT 9102	KMBC 950 KRNT 1320	KRNT 13202 KTBS 14502	WIBA 1280 KLPM 1240 WTMV 1500 WMBD 1440 WGBF 6309 XENT 910
WKBH 1380	KFNF 890	8:15 p.m.	KSO 1430	WDOD 1280	WNBR 1430 WHO 1000 Midn't.
WSFA 1410	WJMS 1420	KGBX 1230	KTBS 1450	WGBF 630€	WOAI 1190 WTCN 1250 KSTP 1460

# MOUNTAIN STANDARD TIME

6:00 a.m.	8:30 a.m.	11:00 a.m.	12:20 p.m.	3:15 p.m.	5:00 p.m.		
KFKA 880	CBS Net <sup>2</sup>	XETB 1310	KOY 1390	CHCK 1010	KVOR 1270 K		KTSM 1310
7:45 a.m.	CHAB 1200	11:45 a.m.	12:25 p.m.	3:30 p.m.	5:30 p.m.		
KGKY 1500	CKBI 1210	KICA 1370	KDFN 1440	KIUL 1210	KDFN 1440 C		
KLZ 560	9:15 a.m.	KLZ 560	12:30 p.m.	KSL 1130	6:00 p.m. C		Blue Net <sup>2</sup>
	KDYL 1290	Neon	KFKA 880	3:45 p.m.		VOR 1270	
8:00 a.m.	KICA 1370	KFEL 920	KGEZ 1310	KLZ 560	KOY 1390 X		9:30 p.m.
Red & Blue 2	KIUL 1210	KTAR 620	1:00 p.m.	4:00 p.m.	6:15 p.m.		Red Net <sup>2</sup>
CBS Net <sup>2</sup>	KIUP 1370	12:15 p.m.	CFCN 1030	CHWC 1010	CHAB 1200 K		
CHWC 1010	9:30 a.m.	KFBB 1280	KVOR 1270	KFEL 920	KGEZ 1310 K		CFCN 1030
KFEL 920	CKCK 1010	KGHL 780	2:00 p.m.	KICA 1370	KGVO 1260		
KVOR 1270	10:00 a.m.	KGVO 1260	KICA 1370	4:30 p.m.			KGHL 780
8:15 a.m.	KOY 1390	KGIR 1340	2:30 p.m.	Red & Blue	KGCX 13109		
CFRN 1260	10:30 a.m.	KIUP 1370	KDYL 1290	CBS Net	6:45 p.m. X		
KGVO 1260	KDFN 1440	XEAF 990	KSUN 1200	KIDW 1420	KDFN 1440	9:00 p.m.	KTAR 620

# PACIFIC STANDARD TIME

6:00 a.m.	7:15 a.m.	8:30 p.m.	KVOS 1200	10:15 a.m.		222423	12:45 p.m.
KJBS 1070	KERN 1370	CRCV 1100	KGDM 1100	KELW 780			CKOV 630
KRSC 1120	KFBK 1490	KGFJ 1200	9:30 a.m.	10:20 a.m.			KFXM 1210
₩6:30 a.m.	KMJ 580	KXRO 1310	KJR 970	KLX 880		W6XAI 1550	
KOIN 940	7:30 a.m.	8:45 a.m.	KMPC 710	11:00 a.m.	KRSC 1120	40.00	KGFJ 1200
	CBS Net2	KOIN 940	9:45 a.m.	KRSC 1120	KUJ 1370	12:20 p.m.	KOIN 940
6:45 a.m.	7:45 a.m.	KWJJ 1040	KFI 640	11:15 a.m.		KIT 1310	
KRLC 1420	KFPY 890	9:00 a.m.	KFOX 1250	KOIN 940	KOAC 550	12:30 p.m.	
7:00 a.m.	KRKD 1120	KFRC 610		11:30 a.m.	12:10 p.m.	KFPY 890	1:30 p.m.
CBS Net	8:00 a.m.	KFXM 1210	9:51 a.m.	CJAT 910	CHWK 780	KIEM 1210	KMPC 710
Red & Blue 2	KIT 1310	KOOS 1390	KPQ 1500	KRKD 1120	CKWX 1010		1:45 p.m.
KGDM 1100	KRSC 1120	KRSC 1120	10:00 a.m.	11:45 a.m.	12:15 p.m.	KPQ 1500	CHWK 780
KOW 1010	KUJ 1370	KWG 1200	KJBS 1070	KGHF 1200	KECA 1430	KRLC 1420	KRKD 1120
KRSC 1120	8:15 a.m.	9:15 a.m.	KOW 1010	Noon	KHSL 950	KTRB 740	2:00 p.m.
KUJ 1370	KROW 930	KOL 1270	KÜJ 1370	KFJR 1300	KOL 1270	KXRO 1310	KRSC 1120

# WHAT'S ON THE AIR TONIGHT

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

COLUMBI	A (C)
Call	Dial

NATIONA	L, Red (R)
Call	Dial

NATIONAL, Blue (B)						
Call	Dial					

TIME: ED Eastern Daylight; E Eastern; C Central; M Mountain For Pacific Time subtract one hour from Mountain. RADEX is the only publication listing stations in alphabetical order for your convenience.

While these programs are correct at the time of going to press, changes are made from time to time.

Due to change to Daylight Saving Time on April 26, some of the stations listed will be unable to carry particular features.

#### MONDAY

#### ED-5:45 p.m., E-4:45; C-3:45; M-2:45 C - The Goldbergs

KFH KGKO KMBC KRLD KRNT KSCJ KTRH KTSA KVOR KWKH WAAB WABC WACO WBNS WBRC WBT WCAO WCCO WHAS WIBW WJAS WJR WKBW WKRC WMBD WOC WREC

#### ED-6:00 p.m., E-5:00, C-4:00, M-3:00 C - Buck Rogers 25th Century

KFAB KMBC KMOX KRLD KRNT WAAB WABC WBBM WCAO WCAU WCCO WFBL WHAS WHK WJAS WJR WJSV WKBW WKRC WOKO

ED-6:15 p.m., E-5:15, C-4:15, M-3:15 C — Bobby Benson—Sunny Jim WAAB WABC WCAU WDRC WEAN WFBL WGR WHEC WOKO

ED-6:45 p.m., E-5:45, C-4:45, M-3:45 C - Renfrew of the Mounted KFAB KFH KLRA KMBC KMOX KOMA KRLD KRNT KSCJ KTUL KWKH WABC WADC WBBM WBNS WCCO WDRC WFBM WHEC WIBX WICC WISN WJSV WKBN WKBW WMAS WMBG WNAC WOC WREC WSMK WSPD WWVA

#### B - Lowell Thomas

CRCT KDKA WBAL WBZ WBZA WFLA WIOD WJAX WJZ WLW WMAL WOOD WRVA WSYR WTAM

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

C — Myrt and Marge WABC WADC WBT WCAO WCAU WDAE WDBO WDRC WEAN WFBL

WGR WHK WJAS WJR WJSV WKRC WNAC WOKO WQAM WSPD WTOC WWVA

### R - Amos 'n' Andy

KSD KYW WBEN WCAE CRCT WCSH WEAF WEEL WFBR WGY WJAR WLW WRC WTAG WTAM WTIC WWJ

#### ED-7:15 p.m., E-6:15, C-5:15. M-4:15 C — Ted Husing and Charioteers

CFRB KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMJ KOIN KOL KSL KVI KWG WABC WBBM WCAO WCAU WCCO WEAN WFBL WFBM WGR WJAS WJSV WKRC WNAC WOKO

# R — Uncle Ezra's Radio Station

KYW WBEN WCAE WCSH WDAF WEAF WEEI WFBR WGY WHIO WIRE WJAR WMAQ WOW WRC WSAI WTAG WTAM

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

KFAB KMOX KRNT WABC WADC WBBM WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGR WHAS WHK WJAS WJR WJSV WKRC WNAC WOKO WSPD

#### Lum and Abner WBZ WBZA WENR WGAR WJZ WLW WSYR

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

KMBC KMOX KOMA KRLD WABC WBBM WBT WCAO WCAU WCCO WDRC WEAN WFBL WGR WHAS WJAS WJR WJSV WHK WKRC WNAC

C — Renfrew of the Mounted KDB KERN KFBK KFPY KFRC KGB KHJ KMJ KOIN KOL KSL KVI KWG

ED-8:00 p.m., E-7:00, C-6:00, M-5:00 Guy Lembardo and Orchestra KLRA KWKH WABC WBIG WBT WCAI WCAU WCHS WCSC WDBJ WDNC WDOD WDRC WEAN WFBC WFBL WGR WHEC WHP WIBX WICC WJAS WJSV WLAC WLBZ WMAS WMBG WNAC WNBF WNOX WOKO WORC WPG WREC WSJS WWLIWWVA

### R — Hammerstein's Music Hall

KSD KYW WBEN WCAE WCSH WDAF WEAF WEEL WFBR WGY WHO WHIO WJAR WMAQ WOW WRC WSAI WTAG WTAM WTIC WW.I

## B - Fibber McGee and Molly

KDKA KDYL KFI KFSD KFYR KGW KHQ KOA KOIL KOMO KPO KPRC KSO KSTP KTBS KVOO WAVE WBAL WBZ WBZA WCKY WDAY WEBC WFAA WFIL WGAR WHAM WIBA WIRE WJDX WKY WLS WMAL WMC WMT WOAI WREN WSB WSM WSMB WSYR WTMJ WXYZ

#### ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C — Pick and Pat

KFAB KMBC KMOX KRNT KSCJ WABC WADC WBBM WCAO WCAU WDRC WEAN WFBL WFBM WGR WGST WHAS WHEC WHK WJAS WJR WJSV WKRC WMAS WNAC WOKO WORC WSPD

#### R - Voice of Firestone

CFCF CRCT KFYR KPRC KSD CFCF CRCT KFYR KPRC KSD
KSTP KTBS KVOO KYW WAVE
WBEN WCAE WCSH WDAF WDAF
WEAF WEBC WELI WFAA WFBR
WFLA WGY WHO WIIIO WIBA
WIOD WIRE WIS WJAR WJAX
WJDX WKY WMAQ WMC WOAI
WOW WPTF WRC WRVA WSB
WSM WSMF WGOC WTJG WTAM WSM WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

#### Evening in Paris

KDKA KOIL KSO KWK WBAL WBZ WBZA WCKY WFIL WGAR WHAM WJZ WLS WMAL WMT WREN WSYR WXYZ

ED-9:00 p.m., E-8:00, C-7:00, M-6:00 C - Lux Radio Theatre CFRB CKAC KDB KERN KFAB

KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KLRA KOIN KOL KOMA KRLD KRNT KSL KTRII KTSA KTUL KVI KWG WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDRC WEAN WFBL WFBM WGST WHAS WHEC WHK WICC WISN WJAS WJR WJSV WKBW WKRC WLAC WNAC WNAX WOKO WORC WQAM WREC WSPD WWL

### - A. & P. Gypsies

KSD KYW WBEN WCAE WCSH WDAF WEAF WEEL WGY WHO WHIO WIRE WJAR WMAQ WOW WRC WSAI WTAG WTAM WTIC

### Sinclair Greater Minstrels

KDKA KDYL KFYR KOA KOIL KPRC KSO KSTP KTBS KTHS KVOO KWK WBAL WBZ WBZA WDAY WEBC WFAA WFLA WGAR WHAM WIBA WIOD WIS WJAX WJDX WJZ WKY WLS WLW WMAL WMC WMT WOAI WPTF WREN WRVA WSB WSM WSMB WSOC WSUN WSYR WTAR WTMJ WWNC WXYZ

ED-9:30 p.m., E-8:30, C-7:30, M-6:30 R — Sigmund Romberg; Barrymore KDYL KFI KFYR KGW KHO KOA KOMO KPO KPRC KSD KSTP KTBS KTHS KVOO KYW WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBR WGY WHO WIBA WJAR WKY WLW WMAQ WOAI WOW WRC WTAG WTAM WTIC WTMJ WWJ

#### B - A Tale of Today

KDKA KOIL KSO KWK WBAL WBZ WBZA WCKY WENR WFIL WGAR WHAM WJZ WMAL WMT WREN WSYR WXYZ

#### ED-10:00 p.m., E-9:00, C-8:00, M-7:00 R — Contented Program

CFCF CRCT KDYL KFI KGW KHQ KOA KOMO KPO KPRC KSD KYW WBEN WCAE WCSH WDAF WEAF WEEI WFBR WFLA WGY WHO WIOD WIS WJAR WJAX WKY WMAQ WMC WOAI WOW WPTF WRVA WSAI WRC WSB WSM WTAG WTAM WTAR WTIC WWJ

#### ED-10:39 p.m., E-9:30, C-8:30, M-7:30 C — The March of Time

KALE KOB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMJ KMOX KOIN KOL KRLD KSL KVI KWG WABC WADC WBBM WBT WCAO WCAU WCCO WDAE WDBO WDRC WEAN WFBL WFBM WGR WGST WHAS WHK WJAS WJR WJSV WKRC WNAC WOKO WQAM WSPD WWI

#### ED-10:45 p.m., E-9:45, C-8:45, M-7:45 C — Public Opinion

CFRB CKAC KFH KFPY KLRA

# MONDAY (Continued)

KRNT KSCJ KTRH KTSA KVOR KWKH WAAB WABC WACO WADO WALA WBIG WBNS WBRC WBT WCAO WCAU WDAE WDBJ WDBO WDNC WDOD WDRC WFBL WFBM WFEA WGR WHAS WHEC WHP WIBW WIBX WISN WJAS WJSV WKBN WKRC WLAC WLBZ WMAS WMMN WNAX WMBD WMBR WNOX WOC WOKO WORC WPG WOAM WREC WSBT WSJS WSMK WSPD WTOC

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

CFRB CKAC WAAB WABC WADC WCAO WCAU WDRC WFBL WFEA WHEC WHK WIBX WJAS WKBN WKBW WLBZ WMAS WOKO WORC WPG WSBT WSPD

- Myrt and Marge

KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KTRH KVI KWG WALA WBBM WBRC WCCO WFBM WGST WHAS WLAC WREC WSFA WWL

R - Amos 'n' Andy KDYL KFI KGW KHQ KOA KOMO KPO KPRC KSD KTHS WBAP WDAF WHO WKY WMAQ WMC WOAI WOW WSB WSM WSMB

ED-11:15 p.m., E-10:15, C-9:15, M-8:15 C -- Singing Sam

KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOIN KOL KSL KVI KWG

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

CRFB CKAC KLRA WAAB WABC WADC WALA WBNS WBRC WBT WCAO WCAU WDAE WDBJ WDBC WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WIBX WICC WJAS WJR WJSV WKBN WKBW WKRC WLAC WLBZ WMAS WMBG WMBR WNOX WOKO WORC WOAM WREC WSBT WSJS WSMK WSPD WTOC

C - Pick and Pat

KDB KERN KFBK KFPY KFRC KGB KIIJ KLZ KMJ KOIN KOL KSL KVI KWG

Voice of Firestone

KDYL KFI KFSD KGHL KGIR KGU KGW KHQ KOA KOMO KPO

## TUESDAY

ED-5:45 p.m., E-4:45, C-3:45, M-2:45 C — The Goldbergs, See Monday

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

C — Benay Venuta, Songs KFH KGKO KLRA KLZ KMBC KOMA KRLD KRNT KSCJ KTRH KTSA KVOR KWKH WABC WACO WALA WBBM WBIG WBRC WCAO WCAU WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WESG WFBL WFEA WGR WGST WHEC WHP WIBX WJR WKBN WLAC WLBZ WMAS WMBD WMBG WMBR WNOX WOC WOKO WORC WQAM WREC WSBT WSJS WSMK WSPD WTOC WWL

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

KMOX WAAB WABC WADC WALA WBBM WBNS WBRC WCAO WCAU WDBO WDRC WEAN WFBL WFEA WHP WICC WKBN WLBZ WMAS WMBG WMBR WOKO WORC WSBT WSFA WWVA

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

- Renfrew of the Mounted KFAB KFH KLRA KMBC KMOX KOMA KRLD KRNT KSCJ KTUL WADC WRBM KWKH WABC WBNS WCCO WDRC WFBM WHEC WIBX WICC WISN WJSV WKBN WMAS WMBG WKBW WNAC WNBH WREC WSMK WSPD WWVA

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

- Amos 'n' Andy, See Monday

- Easy Aces

KDKA KDYL KFI KGW KHQ KOA KOIL KOMO KPO KSO KWK WBAL WBZ WBZA WCKY WENR WFIL WGAR WHAM WJZ WMAL WMT WSYR WXYZ

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

WABC WBIG WBT WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFEA WGR WGST WIBX WICC WJSV WLBZ WMAS WMBG WMBR WNAC WNBF WNOX WOKO WORC WQAM WTOC

– Human Side of the News

KSD KYW WBEN WCAE WCKY WCSH WDAF WEAF WEEL WFBR WGY WHIO WIRE WJAR WMAQ WOW WRC WTAG WTAM WTIC WWJ

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

KFAB KMBC KMOX KRLD KRNT KTRH WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDRC WEAN WFBL WFBM WHAS WHK WISN WGR WGST WJAS WJR WJSV WKBN WKRC WLBZ WMAS WMBG WMBR WNAC WOKO WWL WWVA

B - Lum and Abner, See Monday

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

C - Boake Carter, See Monday Renfrew of the Mounted KOB KERN KEBK KEPY KERC KGB KHJ KMJ KOIN KOL KSL

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

C - Frank Munn; Lucy Monroe KFAB KMBC KMOX KRNT WABC WADC WBBM WCAO WCAU WDRC WEAN WFBL WFBM WGR WHAS WHK WJAS WJR WJSV WKRC WNAC WOKO WSPD

KVI KWG

R - Leo Reisman and Orchestra KFYR KPRC KSD KSTP KTBS KVOO KYW WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEL WFBR WFLA WGY WHO WIBA WIOD WIRE WIS
WJAR WJAX WJDX WKY WMAQ
WMC WOAI WOW WPTF WRC
WRVA WSB WSM WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

B -- Eno Crime Clues

KDKA KOIL KSO WBAL WBZ WBZA WFIL WGAR WHAM WJZ WLS WLW WMAL WMT WREN WSYR WXYZ

ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C - Russ Morgan; Ken Murray

CFRB KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KRNT KSL KTRH KTSA KTUL KVI KWG WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDRC WEAN WFBL WFBM WGR WGST WHAS WHEC WHK WICC WISN WJAS WJR WJSV WKRO WLAC WNAC WNAX WOKO WORO WQAM WREC WSPD WWL

R - Wayne King and Orchestra

KFYR KPRC KSD KSTP KTBS KVOO KYW WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEEI WGY WHO WIBA WIRE WJAR WJDX WKY WMAQ WMC WOAI WOW WRC WSAI WSB WSMB WTAG WTAM WTAR WTIC WTMJ WW.I

B - Edgar Guest, Welcome Valley KDKA KOIL KSO KWK WBAL WBZ WBZA WFIL WGAR WHAM WJZ WLW WMAL WMT WREN WLS WSYR WXYZ

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

C — Walter O'Keefe; Glen Gray KFAB KFH KGKO KLRA KMBC KMOX KOMA KRLD KRNT KSCJ KTRH KTSA KTUL KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WIBW WIBX WICC WJAS WHP WJR WJSV WKBN WKBW WKRC WLAC WLBZ WMAS WMBD WMBG WMBR WNAC WNAX WNOX WOKO WORC WOWO WPG WQAM WREC WSBT WSFA WSJS WSPD WTOC WWL

R — Vox Pop; Sidewalk Interviews KSD KYW WBEN WCAE WCKY WCSH WDAF WEAF WEEI WFBR WGY WHO WHID WIRE WJAR WMAQ WOW WRC WTAG WTAM WTIC WWJ

B - Ben Bernie and Orchestra

KDKA KOIL KPRC KSO KTBS KTHS KVOO KWK WBAL WBAP WBZ WBZA WFIL WFLA WGAR WHAM WIOD WIS WJAX WJZ WKY WLS WLW WMAL WMT WOAI WPTF WREN WRVA WSOC WSYR WTAR WWNC WXYZ

ED-9:30 p.m., E-8:30, C-7:30, M-6:30 C - Fred Waring's Pennsylvanians CFRB CKAC KFAB KFH KGKO KLRA KLZ KMBC KMOX KOH KOMA KRLD KSCJ KSL KTRH KTSA KTUL KVOR KWKH WABC WACO WADO WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WCOA WCSC WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WIBX WICC WISN WJAS WJR WJBV WKBW WKRC WKBH WKBN WLAC WLBZ WMAS WMBD WMBR WNAC WNAX WNBF WNOX WOC

## TUESDAY (Continued)

WOKO WORC WOWO WPG WQAM WREC WSBT WSFA WSJS WSPD WTOC WWL

R - Texaco Fire Chief

KDYL KFI KFSD KFYR KGHL
KGIR KGW KHQ KOA KOMO KPO
KPRC KSD KSTP KTAR KTBS
KTHS KVOO KYW WAVE WBAP
WBEN WCAE WCSH WDAF WDAY
WEAF WEBC WEEI WFBR WLFA
WGY WHO WHIO WIBA WIOD
WIRE WIS WJAR WJAX WJDX
WKY WLW WMAQ WMC WOAI
WOW WPTF WRC WRVA WSB
WSM WSMB WSOC WTAG WTAM
WTAR WTIC WTMJ WWJ WWNC

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

KFAB KFH KLRA KLZ KMBC KMOX KOMA KRLD KRNT KSL KTRH KTSA KTUL KWKH WABC WACO WADC WBBM WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDOD WEAN WFBL WFBM WGST WHAS WHEC WHK WJAS WJR WJSV WKBW WKRC WLAC WMBG WMBR WNAC WOKO WQAM WREC WTCC WWL.

R - Elgin Swing Time Revue

KDYL KFI KFYR KGW KHQ
KOMO KPO KPRC KSD KSTP
KTBS KTHS KYW WAPI WAVE
WBAP WBEN WCAE WCKY WCSH
WDAF WDAY WEAF WEBC WEEI
WFBR WFLA WGY WHO WHIO
WIBA WIOD WIRE WIS WJAR
WJAX WJDX WKY WMAQ WMC
WOAI WOW WFTF WRC WRVA
WSB WSM WSMB WSOC WTAG
WTAM WTAR WTIC WTMJ WWJ
WNC

#### ED-10:30 p.m., E-9:30, C-8:30, M-7:30 C — March of Time. See Monday

R—Jimmy Fidler; Hollywood Gossip KDYL KFI KGW KHQ KOMO KPO KPRC KSD KTBS KTHS KYW WAPI WAVE WBEN WCAE WCKY WCSH WDAF WEAF WEEI WFAA WFBR WGY WJAR WJDX WKY WMC WOAI WOW WRC WSB WSM WSMB WTAG WTAM WTIC WWJ

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

CKAC WAAB WABC WADC WCAO WCAU WDRC WFBL WFEA WHEC WHK WIBX WJAS WJSV WKBW WLBZ WMAS WOKO WORC WSBT WSPD

C - Myrt and Marge, See Monday

R — Amos 'n' Andy, See Monday

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

CFRB CKAC KLRA KSCJ WAAB WABC WADC WALA WBBM WBNS WBRC WBT WCAU WCCO WDAE WDBJ\*WDBO WDNC WDOD WDRC WEAN]WFBL WFBM WFEA WGST WHAS WHEC WHK WIBX WICC WISN WJAS WJR WJSV WKBMW WKRCJWLAC WLBZ WMAS WMBD WMBQ WMBR WNAX WNOX WOC WORO WORC WQAM WREC WSBT WSJS WSMK\*WSPD WTOC

C — Walter O'Keefe; Glen Gray KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOH KOIN KOL KSL KVI KVOR KWG R — Leo Reisman and Orchestra KDYL KFI KFSD KGHL KGIR KGW KHQ KOA KOMO KPO KTAR

ED-12:00p.m., E-11:00,C-10:00,M-9:00 C — Fred Waring's Pennsylvanians KDB KERN KFBK KFPY KFRC KGB KHJ KMJ KOH KOIN KOL KVI KWG

#### WEDNESDAY

ED-5:45 p.m., E-4:45, C-3:45, M-2:45 C — The Goldbergs; See Monday

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

ED-6:15 p.m., E-5:15, C-4:15, M-3:1 C — Bobby Benson, See Monday

ED-6:45 p.m., E-5:45, C-4:45, M-3:45 C — Renfrew of Mounted, See Mon. B — Lowell Thomas, See Monday

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

R — Amos 'n' Andy, See Monday B — Easy Aces, See Tuesday

ED-7:15 p.m., E-6:15, C-5:15, M-4:15 C — Paris Night Life

KFAB KMOX KRNT WABC WBBM
WBT WCAO WCAU WDRC WEAN
WFBL WFBM WGR WHAS WHEC
WHK WJAS WJSV WKRC WNAC
WOKO WORC

R — Uncle Ezra, See Monday

ED-7:30 p.m., E-6:30, C-5:30, M-4:30 C — Kate Smith, See Tuesday

8 — Lum and Abner, See Monday

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

C - Renfrew of Mounted, See Mon.

ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C — Cavalcade of America

KDB KERN KFAB KFBK KFPY
KFRC KGB KHJ KLZ KMBC KMJ
KMOX KOIN KOL KRLD KRNT
KSL KVI KWG WABC WACO
WBBM WCAO WCAU WCCO WDRC
WEAN WFBL WFBM WGR WGST
WHAS WHK WJAS WJR WJSV
WKRC WLAC WMBG WNAC WOKO
WSPD WWL

R -- Your Hit Parade

KDYL KFI KFYR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTAR KTBS KVOO KYW WAVE WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEL WFAA WFBR WFLA WGY WHO WHIO WIBA WIOD WIRE WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAL WOW WPTF WRC WRVA WSB WSM WSM WTAM WTIC WTMJ WWJ WWNC

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

CFRB CKAC KFAB KFH KLRA
KMBC KMOX KOMA KRLD KRNT
KSCJ KTRH KTSA KTUL KWKH
WABC WADC WBBM WBNS WBRC
WBT WCAO WCAU WCCO WDAE
WDBJ WDBO WDRC WEAN WFBL
WFBM WFEA WGR WGST WHAS
WHEC WHK WHP WIBW WIBX
WICC WJAS WJR WJSV WKRC
WLAC WLBZ WMAS WMBD WMBG
WMBR WNAC WNAX WNOX WOKO
WORC WPG WQAM WREC WSPD
WWL

R - Wayne King, See Tuesday

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

C — Chesterfield Program
KDB KERN KFAB KFBK KFH
KFPY KFRC KGB KGKO KGMB
KHJ KLRA KLZ KMBC KMJ
KMOX KOH KOIN KOL KOMA
KRLD KRNT KSCJ KSL KTRH
KTSA KTUL KVI KVOR KWG
KWKH WABC WACO WADC WALA
WBBM WBIG WBNS WBRC WBT
WCAO WCAU WCCO WCOA WDAE
WDBJ WDBO WDNC WDOD WDRC
WEAN WFBL WFBM WFFA WGST
WHAS WHEC WISN WJAS WJR
WJSV WKBH WKBW WKRC WLAC
WLBZ WMAS WMBD WMBG
WMBR WNAC WNAX WNBF WNOX
WOC WOKO WORC WOWO WPG
WQAM WREC WSFA WSJS WSPD
WTOC WWL

R — Town Hall: Fred Allen

KFYR KPRC KSD KSTP KTBS
KTHS KVOO KYW WAVE WBEN
WCAE WCSH WDAF WDAY WEAF
WEBC WEEI WFAA WFBR WFLA
WGY WHO WIBA WIOD WIS WJAR
WJAX WJDX WKY WLW WMAQ
WMC WOAI WOW WPTF WRC WSB
WSM WSMB WSOC WTAG WTAM
WTAR WTIC WTMJ WWJ WWNC

B — Corn Cob Pipe Club KDKA KDYL KFI KGW KHQ KOA KOIL KOMO KPO KSO KWK WBAL WBZ WBZA WCKY WFIL WGAR WHAM WHIO WIRE WJZ WLS WMAL WMT WREN WRVA WSYR

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

WXYZ

C — Ray Noble and Orchestra CFRB KDB KERN KFAB KFBK KFH KFPY KFRC KGB KGKO KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD KRNT KSCJ KSL KTRH KTSA KTUL KVI KWG KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WCOA WDAE WDBJ WDBO WDOD WDRC WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WJAS WHP WIBW WIBX WICC WJAS WJR WJSV WKBH WKBW WKRC WMBD WLAC WLBZ WMRG WMBR WNAC WNOX WOC WOKO WORC WOWO WPG WQAM WREC

ED-10:00 p.m., E-9:00, C-8:00, M-7:00
C — Crime Crusade: Phil Lord
KFAB KLZ KMBC KMOX KOMA
KRLD KRNTT KSL KTRH KTSA
KTUL KWKH WAAB WABC WBBM
WBNS WBRC WBT WCAO WCAU
WCBL WCCO WDAE WDBJ WDBO
WDRC WEAN WFBL WFBM WGST
WHAS WHEC WHK WJAS WJR
WJSV WKBW WKRC WLAC WMBG
WMBR WOKO WORC WOWO
WQAM WREC WTOC WWL

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ED-10:30 p.m., E-9:30, C-8:30, M-7:30 C — March of Time, See Monday

ED-11:00 p.m.,E-10:00,C-9:00,M-8:00 C — Myrt and Marge, See Monday R — Amos 'n' Andy, See Monday

ED-11:15 p.m.,E-10:15,C-9:15,M-8:15 C -- Paris Night Life KDB KERN KFBK KFPY KFRC

Wednesday (Continued) KGB KHJ KLZ KMJ KOIN KOL K8L KVI KWG

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

CKAC KLRA WAAB WABC WADC WALA WBRC WBT WCAO WCAU WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WICC WJAS WJR WJSV WKBW WKRC WLAC WLBZ WMBG WMBR WNOX WOKO WORC WQAM WREC WSPD WTOC

C - Burns and Allen

KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOIN KOL KSL KVI KVOR KWG

ED-12:00p.m., E-11:00, C-10:00, M-9:00 R — Town Hall; Fred Allen KDYL KFI KGW KHQ KOA KOMO KPO,

## THURSDAY I

ED-5:45 p.m., E-4:45, C-3:45, M-2:45 C — The Goldbergs, See Monday

ED-6:00 p.m., E-5:00, C-4:00, M-3:00 C - Vocals by Verrill KFH KGKO KLRA KMBC KMOX KOMA KRLD KRNT KSCJ KTRH KTSA KVOR KWKH WAAB WABC WALA WBIG WBNS WBRC WBT WCAO WCAU WDAE WDBO WDNC WDOD WFBL WFBM WGST WHK WISN WJAS WJR WJSV WKBW WLAC WMBG WMBR WNOX WOKO WOAM WREC WSJS WTOC

ED-6:15 p.m., E-5:15, C-4:15, M-3:15 C — News of Youth, See Tuesday

ED-6:45 p.m., E-5:45, C-4:45, M-3:45 - Renfrew of Mounted, See Mon.

B - Lowell Thomas, See Monday

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

C - Myrt and Marge, See Monday R - Amos 'n' Andy, See Monday

B - Easy Aces, See Tuesday

ED-7:15 p.m., E-6:15, C-5:15, M-4:15 C - Musical Toast, See Tuesday

R - Edwin C. Hill, See Tuesday

ED-7:30 p.m., E-6:30, C-5:30, M-4:3 0 C - Kate Smith, See Tuesday

B - Lum and Abner, See Monday

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

C - Renfrew of Mounted, See Mon.

ED-8:00 p.m., E-7:00, C-6:00, M-5:00 - Chrysler Airshow

KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KRNT KSL KTRH KTSA KVI KWG KWKH WABC WBBM WBNS WBT WCAO WCAU WCCO WDAE WDRC WEAN WFBL WFBM WGR WGST WHAS WHEC WHK WJAS WJR WJSV WKRC WMBR WNAC WOKO WQAM WWL

R - Rudy Vallee's Variety Hour CFCF CRCT KDYL KFI KFYR KGW KHQ KOA KOMO KPO KSD KSTP KTAR KYW WBEN WCAE WCSH WDAF WDAY WEAF WEBC

WEEI WFBR WGY WHO WJAR ED-10:30 p.m., E-9:30, C-8:30, M-7:30 WLW WMAQ WOW WRC WTAG C— March of Time, See Monday

— Pittsburgh Symphony

KDKA KOIL KPRC KSO KTBS KWK WAPI WAVE WBAL WBAP WBZ WBZA WCKY WENR WFAA WFIL WFLA WGAR WHAM WIOD WIRE WIS WJAX WJDX WJZ WKY WLS WMAL WMC WOAI WPTF WREN WRVA WSB WSM WSMB WSOC WSUN WSYR WTAR WWNC WXYZ

ED-9:00 p.m., E-8:00, C-7:00, M-6:00 C — Walter O'Keefe, See Tuesday

R -- Maxwell House Show Boat KDYL KFI KFSD KFYR KGHL KGIR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTAR KTBS KYW WAPI WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WERC WEEL WEBR WELA WGY WHO WHIO WIBA WIOD WIRE WIS WJAR WJAX WJDX WKY WMAQ WMC WOAI WOW WPTF WRC WRVA WSAI WSB WSM WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

- Death Valley Days

KDKA KOIL KSO KWK WBAL WBZ WBZA WFIL WGAR WHAM WJZ WLS WLW WMAL WMT WREN WSYR WXYZ

ED-9:30 p.m., E-8:30, C-7:30, M-6:30 C - Ed Wynn; Lennie Hayton

KDB KERN KFAB KFBK KFH KFPY KFRC KGB KGKO KIIJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KRNT KSCJ KSL KTRH KTSA KTUL KVI WADC WALA WBBM WBIG WBNS
WBRC WBT WCAO WCAU WCCO
WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WIBX WICC WISN WJAS WJR WJSV WKBN WKBW WKRC WLAC WLBZ WMAS WMBD WMBG WMBR. WMMN WNAC WNAX WNBF WNOX WOC WOKO WORC WOAM WREC WSFA WSJS WSPD WTOC WWL

ED-10:00 p.m., E-9:00, C-8:00, M-7:00 C — Horace Heidt and Orchestra KDB KERN KFAB KFBK KFH KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KRLD KRNT KSL KTRH KTSA KTUL KVI KWG WABC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDBO WDRC WFBL WFBM WGST WHAS WHK WISN WJAS W.IR. W.ISV WKBW WKRC WLAC WMBG WNAC WNAX WOC WOKO WQAM WREC WWL

R — Bing Crosby; Jimmy Dorsey CFCF CRCT KDYL KFI KFYR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTAR KTBS KTHS KVOO KYW WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WCAE WCSH WDAY WEAF WEBC WEEI WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WSOC WTAG WTAM WTAR WTIC]WTMJ WW.I. WWNC

ED-10:45 p.m., E-9:45, C-8:45, M-7:45 C — Goose Greek Parson

KDB KERN KFBK KFPY KFRC KGB KHJ KMJ KOIN KOL KSL KVI KWG

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

WAAB WABC WADC WCAO WCAU WFBL WHK WIBX WJSV WKBN WKBW WLBZ WMAS WOKO WORC WPG WSRT WSPD

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

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

CFRB CKAC KLRA WAAB WABC WADC WALA WBNS WBRC WBT WCAO WCAU WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WIBX WICC WJAS WJR WJSV WKBN WKBW WKRC WLAC WLBZ WMAS WMBG WMBR WNOX WOKO WORC WOAM WREC WSBT WSJS WSMK WSPD WTOC

C - Walter O'Keefe, See Tuesday

### FRIDAY

ED-5:45 p.m., E-4:45, C-3:45, M-2:45 C — The Goldbergs, See Monday

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

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

ED-6:45 p.m., E-5:45, C-4:45, M-3:45 C - Renfrey of Mounted, See Tues.

B - Lowell Thomas, See Monday

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

R — Amos 'n' Andy, See Monday

ED-7:15 p.m., E-6:15, C-5:15, M-4:15 - Lazy Dan, Minstrel Man

CKAC KFAB KMOX KOMA KRNT WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGR WGST WHAS WHK WJAS WJR WJSV WMBG WNAC WKRC WMAS WOKO WSPD WWL

R - Uncle Ezra, See Monday

ED-7:30 p.m., E-6:30, C-5:30, M-4:30 - Lum and Abner, See Monday

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

C-Renfrew of Mounted, See Tues.

ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C — Flying Red Horse Tavern

KFAB KFH KMBC KMOX KRNT WABC WADC WBBM WBNS WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGR WHAS WHEC WHK WIBW WICC WJAS WJR WJSV WKRC WLBZ WMAS WMBD WNAC WOC WOKO WORC WSPD

R - Cities Service Concert CRCT KOA KPRC KSD KSTP KTBS KTHS KYW WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFAA WFBR WGY WHO WHIO WIOD WJAR WKY WMAQ WOAI WOW

# FRIDAY (Continued)

WRC WRVA WSAI WTAG WTAM WTIC WTMJ WWJ

B -- Irene Rich: Drama

KDKA KDYL KFI KGW KHQ KOIL KOMO KPO KSO KTAR KWK WAVE WBAL WBZ WBZA WCKY WFIL WGAR WHAM WIRE WJZ WLS WMAL WMC WMT WREN WSB WSM WSYR WXYZ

ED-8:15 p.m., E-7:15, C-6:15, M-5:15 B — Wendell Hall

CFCF KDKA KOIL KSO KWK WBAL WBZ WBZA WCKY WFIL WGAR WHAM WIRE WJZ WLS WMAL WMT WOOD WREN WSYR WXYZ

ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C — Broadway Varieties

KDB KERN KFAB KFBK KFPY
KFRC KGB KHJ KLZ KMBC KMJ
KMOX KOIN KOL KOMA KRNT
KSI. KVI KWC WABC WADC
WBBM WBNS WBRC WBT WCAO
WCAU WCCO WDRC WEAN WFBL
WFBM WGR WGST WHAS WHK
WJAS WJA WJSV WKRC WMAS
WMBG WNAC WOKO WSPD WWL

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

C - Hollywood Hotel

CFRB CKAC KOB KERN KFAB
KFBK KFH KFPY KFRC KGB KHJ
KLRA KLZ KNIBC KMJ KMOX
KOIN KOL KOMA KRLD KRNY
KSCJ KSL KTRH KTSA KTUL KVI
KVOR KWG KWKH WABC WADC
WBBM WBNS WBRC WBT WCAO
WCAU WCCO WDAE WDBJ WDBO
WDRC WEAN WFBL WFBM WFEA
MGST WHAS WHEC WHK WHP
WIBW WIBX WICC WJAS WJR
WJSV WKBW WKRC WLAC WLBZ
WMAS WMBD WMBG WMBR
WNAG WNAX WNOX WOKO WORC
WPG WQAM WREC WSPD WWL

R — Frank Munn; Bernice Claire KSD KYW WBEN WCAE WCSH WDAF WEAF WEEI WFBR WGY WJAR WLW WMAQ WOW WRC WTAG WTAM WWJ

ED-9:30 p.m., E-8:30, C-7:30, M-6:30 R — True Story Court

KDYL KFI KFSD KGW KOA KOMO KPO KSD KTAR KYW WBEN WCAE WESH WEAF WEEI WFBR WGY WHO WHIO WJAR WMAQ WOW WRC WTAG WTAM WTIC WWJ

B — Fred Waring's Pennsylvanians KDKA KDYL KFYR KOA KOLL KPRC KSO KSTP KTBS KTHS KWK WAPI WAVE WBAL WBZ WBZA WCKY WDAY WEBC WENR WFAA WFIL WFLA WGAR WHAM WHIO WIBA WIOD WIRE WIS WJAX WJDX WJZ WKY WMAL WMC WMT WOAI WOOD WPTF WREN WIVA WSB WSM WSMB WSOC WSYR WTAR WTMJ WWNC

ED-10:00 p.m., E-9:00, C-8:00, M-7:00 R—Campana's First Nighter KDYL KFI KFSD KGW KHQ KOA

KOMO KPO KPRC KSD KSTP KTAR KVOO KYW WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFAA WFBR WFLA WGY WHO

WIOD WJAR WJAX WKY WKLW WMAQ WMC WOAI WOW WRC WRVA WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC

ED-10:30 p.m., E-9:30, C-8:30, M-7:30 C — March of Time, See Monday

R — Marion Talley and Orchestra RDYL KFI KFYR KGW KRQ KOA KOMO KPO KSD KSTP KYW WBEN WCAE WCKY WCSH WDAF WDAY WEAF WBC WEEL WFBR WGY WHIO WIBA WIRE WJAR WMAQ WOW WRC WTAG WTAM WTIC WTMJ WWJ

ED-11:00 p.m.,E-10:00,C-9:00,M-8:00 C — Myrt and Marge, See Monday

R — Amos 'n' Andy, See Monday

ED-11:15 p.m.,E-10:15,C-9:15,M-8:15 C — Dance Orchestra

C — Lazy Dan, Minstrel Man KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOIN KOL KSL KVI KWG

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

CFRB CKAC KLRA WAAB WABC
WADC WALA WBNS WBRC WBT
WCAO WCAU WDAE WDBJ WDBO
WDNC WDOD WDRC WEAN WFBL
WFBM WFEA WGST WHAS WHEC
WHK WIBN WICC WJAS WJR
WJSV WKBW WKRC WLAC WLBZ
WMAS WMBG WMBR WNOX
WOKO WORC WQAM WREC WSBT
WSJS WSMK WSPD WTOC

ED-12:00p.m.,E-11:00,C-10:00,M-9:00 B — Fred Waring's Pennsylvanians KFI KFSD KGHL KGIR KGW KHQ KOMO KPO KTAR

#### SATURDAY

ED-6:00 p.m., E-5:00, C-4:00, M-3:00 C — Frederic William Wile KFH KGKO KLRA KLZ KMBC

KFH KGKO KLRA KLZ KMBC KMON KOMA KRLD KSCJ KSC KMON KOMA KRLD KSCJ KSK KTRH KTSA KVOR KWKH WAAB WABC WACO WADC WALA WBBM WBIG WBRC WBT WCAO WCCO WDAE WDBJ WDBO WDNC WDOD WESG WFBL WFBM WGST WHEC WHK WIBW WIBN WISN WJS WJR WJSW WKBW WKRC WLAC WLBZ WMBG WMBR WNON WOKO WORC WQAM WREC WSBT WSJS WSMK WSPD WTOC

ED-6:15 p.m., E-5:15, C-4:15, M-3:15 C — News of Youth, See Tuesday

ED-7:00 p.m., E-6:00, C-5:00, M-4:00 C — Atlantic Family; Frank Parker WABC WADC WBIG WBNS WIRE WBT WCAO WCAU WCBA WDAE WDBJ WDBO WDRC WEAN WFBG WFBL WGBI WGR WGST WHEC WIK WHP WIBX WICC WJAS WMAS WMBG WMBR WNAC

WNBF WOKO WORC WORK WQAM WRAK WSJS WTOC WWVA

ED-7:15 p.m., E-6:15, C-5:15, M-4:15 R — Edwin C. Hill, See Monday

ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C — Ziegfeld Follies; Fannie Brice CKAC CKCL KFAB KLZ KMBC KMOX KOMA KRLD KRNT KSL KTRH KTSA KTUL KWKH WABC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDRC WEAN WFBL WFBM WGR WHAS WHEC WHAS WHEC WHAS WJSV WKRC WLAC WLBZ WMBG WMBR WMBC WMBC WOKO WQAM WREC WTOC WWL

ED-9:30 p.m., E-8:30, C-7:30, M-6:30 R — Shell Chateau

KDYL KFI KFSD KFYR KGHL KGIR KGW KHQ KOA KOMO KPO KSD KSTP KTAR KYW WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WGY WIBA WJAR WLW WMAQ WOW WRC WTAG WTAM WTIC WTMJ WWJ

B - National Barn Dance

KDKA KOIL KPRC KSO KTBS
KTHS KVOO KWK WAPI WAVE
WBAL WBAP WBZ WBZA WFIL
WGAR WHAM WIRE WJDX WJZ
WKY WLS WMAL WMC WMT
WOAI WOOD WREN WSB WSMB
WSYR WXYZ

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

CFRB CKAC KFH KOKO KLRA
KLZ KMBC KMOX KOMA KSCJ
KTRII KTSA KVOR KWKH WABC
WACO WADC WALA WBBM WBIG
WBNS WBRC WBT WCAO WCAU
WCCO WDAE WDBJ WDBO WDNC
WDOD WDRC WEAN WFBL WFBM
WFEA WHAS WHEC WHK WIBW
WIBX WICC WISN WJAS WJR
WJSV WKBW WKRC WLAC WLBZ
WMAS WMBD WMBG WMBR
WNAC WNOX WCC WOKO WORC
WPG WQAM WREC WSBT WSJS
WSMIK WSPD WTOC

ED-10:30 p.m., E-9:30, C-8:30, M-7:30 R — George Olsen; Ethel Shutta

KDYL KFI KFYR KGW KHQ KOA KOMO KPO KSD KSTP KYW WAVE WBEN WCAE WCKY WCSH WDAF WDAY WEAF WMBC WEEI WFBR WGY WHO WIBA WIRE WJAR WJDX WMAQ WMC WOW WRC WSB WSMB WTAG WTAM WTIC WTMJ WWJ

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

CFRB CKAC KFH KGKO KLRA
KLZ KMBC KMOX KOMA KRLD
KSCJ KSL KTRH KTSA KVOR
KWKH WABC WACO WADC WALA
WBBM WBNS WBRC WBT WACO
WCAU WCCO WDAE WDBJ WDBO
WDNC WDOD WDRC WFBL WFBM
WFEA WGST WHAS WHEC WHK
W1BW WIBX WICC WISN WJAS
WJR WJSV WKBW WKRC WLAC
CLBZ WMAS WMBD WMBG
WMBR WNAX WNOX WOC WOKO
WORC WQAM WREC WSHT WSJS
WSMK WSPD WTOC

B - National Barn Dance

KDYL KFI KFSD KFYR KGHL KGIR KGU KGW KHQ KOA KOMO

# SATURDAY (Continued) KSCJ KSL KTRH KTSA KVOR WJR WKBN WKBW WKRO WLAC

KPO KSTP KTAR WDAY WEBC WIBA WLW WIMI

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

CFRB CKAC KFH KGKO KLEA KLZ KMBC KMOX KOMA KSL KTRH KTSA KVOR KWKH WABC WACO WADC WALA WBNS WBRC WBT WCAO WCAU WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WIBW WIBX WICC WJAS WJR WKBW WKRC WLAC WLBZ WMAS WMBG WMBR WNOX WOKO WORC WOAM WREC WSBT WSJS WSMK WSPD WTOC

ED-12:00p.m.,E-11:00.C-10:00.M-9:00 C — Ziegfeld Follies; Fannie Brice KDB KERN KFBK KFPY KFRC KGB KHJ KMJ KOIN KOL KVI KWG

### **SUNDAY**

ED-11:30 a.m., E-10:30, C-9:30, M-8:30 C - Salt Lake Tabernacle Choir

KFH KGKO KLRA KLZ KMBC KOMA KRLD KSCJ KSL KTRH KTSA KWKH WACO WADC WALA WBIG WBNS WBRC WBT WCCO WDBO WDNC WDOD WDRC WFBL WFBM WFEA WGST WHAS WIBW WIRX WISN WJAS WJR WKBN WKRC WLAC WLBZ WMAS WNAC WNAX WMRD WMBR WNOX WOKO WORC WOAM WREC WSBT WSMK WSPD WTOC

R - Major Bowes' Capitol Family CFCF CRCT KDYL KFI KFYR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTBS KTHS KVOO KYW WAPI WAVE WBAP WBEN WCAE WCSC WCSH WDAF WDAY WEAF WEBC WEEL WEAA WEBC WEBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WOSC WSUN WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

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

Radio City Music Hall CFCF CRCT KDKA KDYL KFI KFYR KGO KGW KHQ KOIL KOMO KPRC KSO KVOO WAPI WBAL WBZ WBZA WCKY WDAY WEBC WGAR WHAM WIS WJDX WKY WMAL WOAI WREN WSMB WSYR WWNC

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

Trans-Atlantic Broadcast CFRB CKAC KFH KGKO KLRA KLZ KMBC KRLD KSCJ KTRH KTSA KVOR WABC WACO WADC WCCO WDAE WDBJ WDBO WDRC WEAN WESG WFBL WFBM WFEA WGR WHAS WIBX WJAS WJSV WKBN WLAC WLBZ WMBD WMBR WNAC WOC WOKO WORC WPG WQAM WREC WSJS WSMK WSPD WTOC WWI.

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

KWKH WABC WACO WALA WBNS WBT WCAO WCCO WDAE WDBJ WDBO WDOD WESG WFBM WGR WHAS WHEC WIBW WIBX WJAS WJSV WKBN WKRC WLAC WLBZ WMBD WMBR WOC WOKO WORC WPG WQAM WREC WSBT WSJS WSPD

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

Musical Footnotes

KMBC KMOX KRNT WABC WBBM WBNS WCAU WCCO WHAS WHE WJAS WJR WJSV WKBW WKRC

#### ED-1:45 p.m., E-12:45, C-11:45, M-10:45

 Kaltenborn Edits the News CFRB KFH KFPY KGKO KHJ KLRA KLZ KMBC KMOX KRLD KRNT KSCJ KSL KTRH KTSA KVOR KWKH WAAB WABC WADC WALA WBIG WBRC WBT WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WESG WFBL

WGST WHAS WHK WIIP WIEW WIBX WISN WJAS WJR WKBN WKBW WKRC WLAC WLBZ WMAS WMBD WMBG WMBR WMMN WNAC WNOX WOC WOKO WORC WOAM WREC WSBT WSJS WSMK WSPD WTOC

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

 Poet's Gold; David Ross KFAB KLRA KLZ KMBC KMOX KOMA KRLD KRNT KSL KTRH KTUL WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDRC WEAN WFBL WFBM WHAS WHEC WHK WJAS WJR WJSV WKBW WKRC WLAC WNAC WOKO WOWO WREC WWL

## - Magic Key of RCA

CFCF CRCT KDKA KDYL KFI KFYR KGU KGW KHQ KOA KOIL KOMO KPO KPRC KSO KSTP KTBS KTHS KVOO KWK WAPI WAVE WBAL WBZ WBZA WCKY WDAY WEBC WENR WFAA WFIL WFLA WGAR WHAM WHIO WIBA WIOD WIRE WIS WJAX WJDX WJZ WKY WMAL WMC WMT WOAI WPTF WREN WRVA WSB WSM WSMB WSOC WSYR WTAR WTMJ WWNC WXYZ

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

Jose Manzanares and Orchestra KFAB KMBC KMOX KOMA KRLD KRNT KTRH WABC WADC WBBM WBT WCAO WCAU WCCO WDAE WDRC WEAN WFBL WFBM WHAS WHK WISN WJAS WJR WJSV WKBW WKRC WMBR WNAC WOKO WQAM WREC WSPD WWL

#### ED-3:00 p.m., E-2:00, C-1:00, M-12:00 C — Philharmonic Symphony

CFRB CKAC KFH KGKO KLRA KLZ KOMA KRLD KSCJ KSL KTRH KTSA KVOR KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WESG WFBL WFBM C — Church of the Air KFH KGKO KLRA KOMA KRLD WIBW WIBX WICC WISN WJAS

WLBZ WMAS WMBD WMBG WMBR WNAC WNOX WOC WOKO WORC WQAM WREC WSBT WSJS WSMK WSPD WTOC

B — Your English

KDKA KDYL KFI KGW KHQ KOA KOIL KOMO KPO KPRC KSO KSTP KTHS KVOO KWK WAPI WAPI WAVE WBAL WBZ WBZA WDAY WEBC WENR WFAA WFIL WFLA WGAR WHAM WIOD WJAX WJZ WKY WLW WMAL WMC WMT WOAI WPTF WREN WRVA WSB WSM WSMB WSYR WXYZ

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

KFEL KNX KSFO KSTP KVOD KWK WATR WCAO WCAU WDRC WEAN WFBL WFEA WGAR WGR WHB WHO WICC WISN WJAS WJJD WJR WLBZ WLLH WLW WMAS WNAC WNBH WOKO WOL WOR WORC WOW WRDO

#### ED-5:00 p.m., E-4:00, C-3:00, M-2:00 - Abe Lyman and Orchestra

CFRB KFAB KMBC KMOX KRNT WAAB WABC WADC WBBM WCAO WCAU WCCO WDRC WEAN WFBL WFBM WHAS WHEC WHK WJAS WJR WJSV WKBW WKRC WOKO WSPD

ED-5:30 p.m., E-4:30, C-3:30, M-2:30 C - Frank Crumit; Julia Sanderson KFH KMBC KMOX KOMA KTUL WAAB WABC WADC WBNS WCAO WCAU WDRC WEAN WFBL WFBM WGR WHAS WHEC WHK WIBX WICC WJR WJSV WMAS WOKO WORC WSPD WWL WWVA

C — Jose Manzanares and Orchestra KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOIN KOL KSL KVI KWG

ED-6:00 p.m., E-5:00, C-4:00, M-3:00 C - Phil Spitalny and Orchestra

C — Phil Spitalny and Orchestra
KFAB K KFH K KFPY K FRC K GB
KGKO KHJ KLRA KLZ KMBC
KMOX KOIN KOL KOMA KRLD
KRNT KSCJ KSL KTRH KTSA
KTUL KVI KVOR KWKH WAAB
WABC WADC WBBM WBIG WBNS
WBRC WBT WCAO WCCOU
WCAE WURL WURLOW WDRO WDAE WDBJ WDBO WDOD WDRC WEAN WFBL WFBM WFEA WGR WGST WHAS WHEC WHE WHP WIBW WIBX WICC WISN WJAS WISN WJAS WJR WJSV WKBN WKRC WLAC WLBZ WMAS WMBR WNAX WNOX WOC WOKO WORC WPG WQAM WREC WTOC WWL WWVA

#### ED-6:30 p.m., E-5:30, C-4:30, M-3:30 C — Smiling Ed McConnell

KDB KERN KFAB KFBK KFH KFPY KFRC KGB KHJ KLZ KMJ KMOX KOIN KOL KRLD KRNT KSL KVI KWG WAAB WABC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDBJ WDRC WEAN WFBL WHAS WHEC WHK WJAS WJR WJSV WKBW WKRC WLAC WWL WWVA

#### ED-6:45 p.m., E-5:45, C-4:45, M-3:45 C - Voice of Experience

KMOX WAAB WABC WADC WBBM WBT WCAO WCAU WCCO WDRC WEAN WFBL WFBM WHAS WHEC

### SUNDAY (Continued)

WHK WJAS WJR WKBW WKRC WSPD WWVA

#### ED-7:00 p.m., E-6:00, C-5:00, M-4:00 C - Eddie Cantor

KFAB KFH KLRA KLZ KMBC KMOX KOMA KRLD KRNT KTRH KTSA KTUL KWKH WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDOD WDRC WEAN WFBL WFBM WGR WGST WHAS WHEC WHK WICC WJAS WJR WJSV WKRC WLAC WNAC WOKO WOWO WREC WSPD WWL

Jack Benny: Johnny Green CFCF CRCT KDKA KFYR KOIL KPRC KSO KSTP KTBS KVOO KWK WAVE WBAL WBZ WBZA WDAY WEBC WENR WFAA WFIL WFLA WGAR WHAM WIBA WIOD WIS WJAX WJDX WJZ WKY WLW WMAL WMC WMT WOAI WPTF WREN WRVA WSB WSM WSMB

# WSOC WSYR WTAR WTMJ WWNC ED-7:30 p.m., E-6:30, C-5:30, M-4:30 C - Phil Baker: Hal Kemp

KLRA KLZ KRLD KTRH KTSA KWKH WABC WACO WADC WALA WBIG WBNS WBRC WBT WCAO WCAU WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGR WGST WHAS WHEC WHK WHP WIBX WICC WJAS WJR WJSV WKBN WKRC WLAC WLBZ WMAS WMBR WNAC WNBF WNOX WOKO WORC WQAM WREC WSBT WSFA WSJS WSMK WSPD WTOC WWL WWVA

#### - Fireside Recitals

WXYZ

KSD KYW WBEN WCAE WCSH WDAF WEAF WFBR WGY WHIO WIRE WJAR WMAQ WOW WRC WSAI WTAG WTAM WTIC WWJ

B - Ozzie Nelson; Robt. L. Ripley KDKA KDYL KFI KFYR KGW KHQ KOA KOIL KOMO KPO KPRC KSO KSTP KTAR KVOO KWK WBAL WBZ WBZA WCKY WDAY WEBC WFAA WFLA WGAR WHAM WIBA WIOD WJAX WJDX WJZ WKY WLS WMAL WMC WMT WOAI WPTF WREN WRVA WSB WSM WSMB WSYR WTMJ WWNC WXYZ

ED-7:45 p.m., E-6:45, C-5:45, M-4:45 R — Sunset Dreams; Morin Sisters CFCF CRCT KSD KYW WBEN WCAE WCSH WDAF WEAF WFBR WGY WHO WHIO WIRE WJAR WLW WMAQ WOAI WOOD WOW WRC WTAG WTAM WTIC WWJ

#### ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C-World Dances; Lud Gluskin

KFAB KFH KFPY KLRA KLZ KMBC KMOX KOMA KRLD KRNT KTRH KTSA KTUL KWG KWKH WABC WADC WALA WBBM WBNS WBRC WBT WCAO WCAU WCCO WDOD WDRC WEAN WFBL WFBM WGR WGST WHAS WHEC WHK WHP WICC WJAS WJR WJSV WKRC WLAC WNAC WNAX WOC WOKO WOWO WREC WSPD WWL

- Major Bowes' Amateur Hour CFCF CRCT KDYL KFI KFYR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTAR KVOO KYW WAVE WBEN WBZ WBZA WCAE WCSH WDAF WDAY WEAF WEBC WFAA WFBR WFLA WGY WHO WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WOW WPTF WRC WRVA WSB WSM WSMB WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

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

CFRB CKAC KDB KERN KFAB KFBK KFH KFPY KFRC KGB KGKO KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD KRNT KSCJ KSL KTRH KTSA KTUL KVI KVOR KWG KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WIBX WICC WISN WJAS WJR WIBX WICC WJSV WKBH WKBN WKBW WKRC WLAC WLBZ WMAS WMBD WMBR WNAC WNAX WNOX WOC WOKO WORC WOWO WQAM WREC WSBT WSFA WSJS WSMK WSPD WTOC WWT.

R - Manhattan Merry-Go-Round CFCF KDYL KFI KFYR KGW KHQ KOA KOMO KPO KSD KSTP KYW WBEN WCAE WCSH WDAF WDAY WEAF WEBC WFBR WGY WHO WHIO WIBA WJAR WMAQ WOW WRC WSAI WTAG WTAM WTIC WTMJ WWJ

 Jack Hylton; Pat O'Malley KDKA KOIL KSO KWK WBAL WBZ WBZA WENR WFIL WGAR WHAM WJZ WLW WMAL WMT WREN WSYR WXYZ

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

CECE CRCT KDYL KFI KFYR KGW KHQ KOA KOMO KPO KPRC WAVE WBEN WCAE WCSH WDAY WDAY WEAF WEBC WEEI WFAA WFBR WFLA WGY WHO WHIO WIBA WIOD WIS WJAR WJAX WJDX WKY WMAQ WMC WOAI WOW WPTF WRC WRVA WSAI WSB WSM WSMB WSOC WTAG WTAM WTAR WTMJ WWJ WWNC

Walter Winchell KDKA KOIL KSO KWK WBAL WBZ WBZA WENR WFIL WGAR WHAM WJZ WLW WMAL WMT WREN WSYR WXYZ

ED-9:45 p.m., E-8:45, C-7:45, M-6:45 **B-Paul Whiteman's Musical Varieties** KDKA KOIL KSO KWK WBAL WBZ WBZA WENR WFIL WGAR WHAM WJZ WMAL WMT WREN WSAI WSYR WXYZ

ED-10:00 p.m., E-9:00, C-8:00, M-7:00 C-Freddie Rich and Orchestra

KDB KERN KFAB KFBK KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRLD KSL KVI KWG WAAB WABC WADC WALA WBNS WCAO WCAU WCCO WDRC WFBL WFBM WHAS WHK WHP WIBW WJAS WJR WJSV WKBW WKRC WOC WOKO WSPD WWL

General Motors Concert

CFCF CRCT KDYL KFI KFSD KFYR KGHL KGIR KGU KGW KHQ KOA KOMO KPO KPRC KSTP KTAR KTBS KTHS KYW WAPI WAVE WBAP WBEN WCAE WCSH WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEL WFBR WFLA WGY WHO WHIO WIBA WIOD WIRE WIS WJAR WJAX WJDX WKY WMAQ WMC WOAI WOW WPTF WRC WRVAA WSAI WSB WSM WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWI WWNC

ED-10:30 p.m., E-9:30, C-8:30, M-7:30 C - Understanding Opera CFRB CKAC KGKO KLRA KOH
KOMA KRLD KSL KTSA KTUL
KWKH WABC WACO WADC WALA
WBIG WBNS WBRC WBT WCAO
WCAU WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFEA WGST WHEC WHP WIBX WICC

WJAS WKBN WKBW WLAC WLBZ WMAS WMBG WMBR WMMN WNAC WOKO WORC WQAM WREC WSJS WSMK WTOC WWVA

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

KDB KERN KFBK KFPY KFRC KGB KHJ KMJ KOIN KOL KSL KVI KWG

- Sunset Dreams; Morin Sisters KDYL KFI KFSD KGW KHQ KOA KOMO KPO KPRC KTAR KTBS KTHS WBAP WDAF WKY

ED-11:15 p.m., E-10:15, C-9:15, M-8:15 B — Walter Winchell

KDYL KFI KFSD KGHL KGIR KGW KHQ KOA KOMO KPO KPRC KTAR KTBS KTHS WAPI WAVE WBAP WJDX WKY WMC WOAI WSB WSM WSMB

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

KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOIN KOL KSL KVI KWG

Jack Benny: Johnny Green KDYL KFI KFSD KGHL KGIR KGU KGW KHQ KOA KOMO KPO KTAR

8-Paul Whiteman's Musical Varieties KECA KEX KFSD KGA KGO KJR KPRC KTBS KTHS WAPI WAVE WBAP WJDX WKY WMC WOAI WSB WSM WSMB

ED-12:00p.m.,E-11:00,C-10:00,M-9:00 B - Jack Hylton; Pat O'Malley KDYL KFI KGW KHQ KOA KOMO KPO

We have prepared a very interesting circular on methods of attaching head phones and distant speakers to radio sets. One of these will be sent you for the asking. Address The Radex Press, Inc., Conneaut, Ohio.

# CLASSIFIED INDEX TO CHAIN PROGRAMS

Time in Eastern Daylight Saving

C-Columbia: R-National (Red); B-National (Blue)

#### CONCERTS

Ford Concert, 9:00 p.m. Sunday, C General Motors Concert, 10:00 p.m. Sunday, R Philharmonic Symphony, 3:00 p.m. Sunday, C Pittsburgh Symphony, 8:00 p.m. Thurs., B Radio City Music Hall, 12:30 p.m. Sunday, B Understanding Opera, 10:30 p.m. Sun., C

### DANCE BANDS

Victor Arden, 8:30 p.m. Friday, C Ben Bernie, 9:00 p.m. Tuesday, B Ray Block, 7:15 p.m. Tues, and Thurs., C Jimmy Dorsey, 10:00 p.m. Thursday, R Eddle Duchin, 9:30 p.m. Tues., R Lud Gluskin, 8:00 p.m. Sunday, C Al Goodman, 8:00 and 12:00 p.m. Sat., C Benny Goodman, 10:00 p.m. Tuesday, R Glen Gray, 9:00 and 11:30 p.m. Tuesday and Thursday, C Johnny Green, 7:00 and 11:30 p.m. Sunday, B Louis Gress, 7:00 p.m. Sunday, C Lennie Hayton, 9:30 p.m. Thurs., C Horace Heidt, 10:00 p.m. Thursday, C Richard Himber, 10:00 p.m. Tues.. B Halkemp, 7:30 p.m. Tuesday and Wednesday, R. Wayne King, 8:30 p.m. Tuesday and Wednesday, R. Benny Kruger, 8:30 p.m. Mon., C Guy Lombardo, 8:00 p.m. Monday, C Abe Lyman, 5:00 p.m. Sunday, C Al Lyons, 10:00 p.m. Tuesday, C Jose Manzanares, 2:30 and 5:30 p.m. Sunday, C Russ Morgan, 8:30 p.m. Tues., C Ozzie Nelson, 7:30 p.m. Sunday, B Ray Noble, 9:30 p.m. Wednesday, C George Olsen, 10:30 p.m. Saturday, R George Oisen, 10:30 p.m. Saturday, R Raymond Paige, 9:30 p.m. Friday, C Leo Reisman, 8:30 and 11:30 p.m. Tuesday, R Freddie Rich, 10:30 p.m. Sunday: 8:30 p.m. Friday, C Phil Spitalny, 6:00 p.m. Sun., C Rudy Vailee, 8:00 p.m. Thursday, R Fred Waring, 9:30 and 12:00 p.m. Tuesday, C: 9:30 and 12:00 p.m. Friday, B Paul Whiteman, 9:45 and 11:30 p.m. Sunday, B Victor Young, 9:30 p.m. Saturday, R

#### IALOG

Fred Allen, 9:00 and 12:00 p.m. Wednesday, R Amos 'n' Andy, 7:00 and 11:00 p.m. daily, except Sat. and Sun., R Phil Baker, 7:30 p.m. Sunday, C Jack Benny, 7:00 and 11:30 p.m. Sunday, B Burns and Allen, 8:30 and 11:30 p.m. Wednesday, C Eddle Cantor, 7:00 and 11:00 p.m. Sunday, C Easy Aces, 7:00 p.m. Tues., Wed., and Thurs., B Fibber McGee and Molly, 8:00 p.m. Monday, B Lum and Abner, 7:30 p.m. daily, except Sat. and Sun., B Ken Murray, 8:30 p.m. Tues., C Walter O'Keefe, 9:00 and 11:30 p.m. Tuesday and

Thursday, C Pick and Pat, 8:30 and 11:30 p.m. Monday, C Stoopnagle and Budd, 9:00 p.m. Wed., R Ed. Wynn, 9:30 p.m. Thursday, C

#### DRAMA

Cavalcade of America, 8:00 p.m. Wednesday, C Crime Crusade, 10:00 p.m. Wednesday, C Death Valley Days, 9:00 p.m. Thursday, B Eno Crime Clues, 8:00 p.m. Tuesday, B First Nighter, 10:00 p.m. Friday, R Goldbergs, 5:46 p.m. daily exc. Sat. and Sun., C Phillips Lord, 10:00 p.m. Wednesday, C Lux Radio Theatre, 9:00 p.m. Monday, C Myrt and Marge, 7:00 and 11:00 p.m. daily, except Sat. and Sun., C

and Sun., C
News of Youth, 6:15 p.m. Tues., Thur., Sat., C
Parties at Pickfair, 10:00 p.m. Tues., C
Renfrew of the Mounted, 6:45 and 7:45 p.m. Mon.
thru Fri., C

Irene Rich, 8:00 p.m. Friday, B Buck Rogers, 6:00 p.m. Mon., Wed., and Fri., C A Tale of Today, 9:30 p.m. Mon., B True Story Court, 9:30 p.m. Friday, R Welcome Valley, 8:30 p.m. Tuesday, B

Album of Familiar Music. 9:30 p.m. Sunday, R

A. & P. Gypsies, 9:00 p.m. Monday, R.

#### POPULAR PROGRAMS

Atlantic Family, 7:00 p.m. Saturday, C Major Bowes, 11:30 a.m. and 8:00 p.m., Sunday, R Broadway Varieties, 8:30 p.m. Friday, C Camel Program, 9:00 and 11:30 p.m. Tues. and Thurs., Chesterfield Program, 9:00 p.m. Wed., C Chrysler Airshow, 8:00 p.m. Thursday, C Cities Service Concert, 8:00 p.m. Friday, R Contented Program, 10:00 p.m. Monday, R Corn Cob Pipe Club, 9:00 p.m. Wednesday, B Elgin Swing Time, 10:00 p.m. Tues., R Eigin Swing Time, 10:00 p.m. Tues., R Evening in Paris, 8:30 p.m. Monday, B Fireside Recitals, 7:30 p.m. Sunday, R Fleischmann Variety Hour, 8:00 p.m. Thursday, R Flying Red Horse Tavern, 8:00 p.m. Friday, C Goose Creek Parson, 10:45 p.m. Thurs., C Hammerstein's Music Hall, 8:00 p.m. Monday, R Hit Parade, 8:00 p.m. Wed., R Hollywood Hotel, 9:00 p.m. Friday, C Krueger Musical, 7:15 p.m. Tuesday and Thursday, C Magic Key of RCA, 2:00 p.m. Sunday, B Manhattan Merry-Go-Round, 9:00 p.m. Sunday, R March of Time, 10:30 p.m. Mon. thru Fri., C Maxwell House Show Boat, 9:00 p.m. Thursday, R Musical Footnotes, 1:30 p.m. Sunday, C National Barn Dance, 9:30 and 11:00 p.m. Saturday, B Paris Night Life, 7:15 and 11:15 p.m. Wednesday, C Poet's Gold, 2:00 p.m. Sun., C Shell Chateau, 9:30 p.m. Saturday, R. Sinclair Minstrels, 9:00 p.m. Monday, B Swift Studio Party, 9:30 p.m. Mon., R Texaco Fire Chief, 9:30 p.m. Tuesday, R Town Hall Tonight, 9:00 and 12:00 p.m. Wed., R Uncle Ezra, 7:15 p.m. Mon., Wed., and Fri., R Voice of Firestone, 8:30 and 11:30 p.m., Monday, R. Vox Pop, 9:00 p.m. Tuesday, R. Ziegfeld Follies, 8:00 and 12 p.m. Sat., C

#### SINGERS

Armida, 7:15 and 11:15 p.m., Wednesday, C Smith Ballew, 9:30 p.m. Sat., R Connie Boswell, 9:30 p.m. Wednesday, C Fannie Brice, 8:00 and 12:00 p.m. Sat., C Patti Chapin, 8:00 and 12:00 p.m., Sat., C Chariotteers, 7:15 p.m. Monday, C Vivian Della Chiesa, I:30 p.m. Sunday, C Bernice Claire, 5:00 p.m. Sunday, C, and 9:00 p.m. Friday, R. Prindy, R. Jerry Cooper, 7:15 p.m. Tuesday and Thursday, C. Bing Crosby, 10:00 p.m. Thursday, R. Crumit-Sanderson, 5:30 p.m. Sunday, C. Morton Downey, 8:30 p.m. Mon., B Jessica Dragonette, 8:00 p.m. Friday, R Jessica Dragonette, 8:00 p.m. Friday, R. Phill Duey, 8:00 and 11:30 p.m. Tuesday. R. Alexander Gray, 8:00 p.m. Thursday, C. Wendell Hall, 8:15 p.m. Friday, B. Frances Langford, 9:00 p.m. Friday, C. La Prelle Bros., 8:30 p.m. Monday, C. Lazy Dan, 7:15 p.m. Friday, C. Pletre LeKreune, 7:15 and 11:15 p.m. Wed., C. Flizabeth Lennox. 8:30 p.m. Friday. C. Fletze Lekreune, 7:19 and 17:13 p.m. Wed., C Elizabeth Lennox, 8:30 p.m. Friday, C James Melton, 8:00 p.m. and 12:00 p.m. Sat., C Lucy Monroe, 8:00 p.m. Tuesday, C and 9:30 p.m. Sunday, R Morin Sisters, 7:45 and 11:00 p.m. Sunday, R Frank Munn, 8:00 p.m. Tuesday, C: 9:30 p.m. Sunday and 9:00 p.m. Friday, R Donald Novis, 9:30 p.m. Tuesday, R.

Frank Parker, 7:00 p.m. Saturday, C
Pickens Sisters, 8:30 p.m. Monday, B
Lily Pons, 9:00 p.m. Wednesday, C
Carmella Ponselle, 8:30 p.m. Friday, C
Dick Powell, 9:00 p.m. Friday, C
Lanny Ross, 9:00 p.m. Thusday, R
Fritzi Scheff, 8:00 p.m. Tuesday, C
Oscar Shaw, 8:30 p.m. Friday, C
Ethel Shutta, 10:30 p.m. Sat., R
Singin' Sam, 7:30 and 11:15 p.m. Monday, C
Smilling Ed McConnell, 6:30 p.m. Sunday, C
Kate Smith, 7:30 p.m. Tues, Wed., and Thurs., C
Oliver Smith, 5 p.m. Sunday, C
Marion Talley, 10:30 p.m. Fri., R
Benay Venuta, 6:30 p.m. Tuesday, C
Helen Ward, 10:00 p.m. Tuesday, C

TALKS

Boake Carter, 7:45 p.m. daily except Sat. and Sun., C
Rev. Charles E. Coughlin, 4:00 p.m. Sunday
Jimmy Fidler, 10:30 p.m. Tuesday, R
Edwin C. Hill, 7:15 p.m. Tues., Thurs., Sat., R
Ted Husing, 7:15 p.m. Monday, C
H. V. Kaitenborn, 1:45 p.m. Sun., C
Public Opinion, 10:45 p.m. Monday, C
Robert L. Ripley, 7:30 p.m. Sunday, B
Sidewalk Interviews, 9:00 p.m. Tuesday, R
Lowell Thomas, 6:45 p.m. daily except Sat. and Sun., B
Trans-Atlantic Broadcast. 12:45 p.m. Sunday, C
Voice of Experience, 6:45 and 11:30 p.m. Sunday, C
Frederic William Wile, 6:00 p.m. Saturday, C
Walter Winchell, 9:30 and 11:15 p.m. Sunday, B
Your English, 3:00 p.m. Sunday, B

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LKH	.7 Hamar, Nor. (519)	CB57	5.	Santiago, Chile. Soc.			nesgrasse No. 4B. Daily 310-1900 EST
OFH RW34	10. Viipuri, Fin. (527) 10. Stalingrad, USR. (522)	RW68	10.	Nacional Agricultura Tcheliabinsk, USSR.			,
	1. Innsbruck, Aust. (519)	274	-	(577)	600	(49	99.7)
	5. Ljubljana, Yug. (527) .5 Tartu, Est. (517)	2YA	5.	Wellington, N. Z. Featherstone St. Mon. to Sat. 700-900:	CNR	`	Rabat, Mor. (601)
530	(565.7)			1000-1100; Sun. 900- 1215; 1300-1430; 1800-		20.	Radio Maroc, Office Cherifien des Postes
IIBZ	1. Bolzano, I. (536)		100.	2200. Stuttgart, G. (574)	FJP	.5	et Telegraphes Noumea, New Cale-
	16. Wilno, Pol. (536)	ĺ		Charlottenplatz No. 1 Daily 0000-2000 EST	JONG	.5	donia. Miyazaki, Japan (CP)
540	(555.2)		10.	Magnitogorsk, USR. (571)	PRH2	25.	Porto Alegre, Brz. (now building)
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HAL	120. Budapest, Hun. (546) Budapest VIII, San-	580	(51	6.9)	SBD XMHA		Sundsvall, Swe. (601) Shanghai, China.
	dor Utca No. 7. Weekdays 0045-1815;	CC58	.5	Temuco, Chile. Luis	ZTC 4QN	10. 7.	Cape Town, S. Af. Clevedon, Ausl.
	Sun. 315-1900 EST	JFCK	1.	E. Brain. Taichu, Formosa.		-	•
	(7	RW36	10.	Archangel, USR (586)	610	(49	91.5)
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RW52	20. Tchita, USSR. (556)	YLZ	15.	Riga, Lat. (583)	CX4	1.	Montevideo, Uru.
2CR	10. Cumnock, Ausl.	3WV	10. 15.	Horsham, Ausl.			Direccion de Agrono- mia, Millan, 746; 10-
112111	100. Beromunster, Sw. (556) Report to PTT.		13,	Grenoble, F. (583) Daily 300-1730 EST			12; 17-19
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	No. 6.	590	(50	8.2)			Weekdays 130-1730;
	Weekdays 600-163 Sun. 130-1630 EST	JOAK2	10.	Tokyo, Jap. M. Tomabecio, EST.	JODK2 KZRM		Sun. 310-1730 EST Secul Ko. Manila, P. I. (618.5)
560	(535.4)	LS10	6.	Daily 4 a.m7:30 a.m. Buenos Aires, Arg.	RW18	1.	Daily 600-2300 Pratigorsk, USR
I1PA	4. Palermo, I. (565)			Radio Callao, Callao (666)	RW22 RW50	10. 2.5	Oufa, USR. (617) Oust Abakansk, USR
MTCY	100. Hsinking, Mch.	RW35	10.	Astrakhan, USR (598)			(617)
RW41 RW42	1.2 Syktyvkar, USR. (563) 10. Gorki, USR. (565)	XHKB 7ZL	1.	Tengchow, China. Hobart, Ausl.	RW79 XGSS	10.	Murmansk, USR.
XGOH	10. Chengtu, China.			Elizabeth St. Mon. to	2FC	3.	Tsunshi, Chn. Sydney, Ausl.
XLHB ZUG	.045 Shanghai, China. 10. Grahamstown, S. Af.			Fri. 830-1030; 1200-			96 Market St. Mon.
6WA	10. Minding, Ausl.			1530; 1630-1800; 1900- 100; Sat. 830-1000:			to Fri. 830-930; 1100- 1300; 1330-1530; 1630-
	60. Athlone, IFS (565) Radio Atha Luain.			1230-1300; Sun. 1200-			1745; 1900-100; Sat.
	Daily 830-1800 EST			300; 1630-1830; 1915- 2400			830-930; 1100-1830; 1900-100: Sun. 1130-

,		1345; 1630-1815; 1930- 2400	<u> </u>		Relays 5CL Mon. to Fri. 9-10; 1230-1600; 17-1830; 1930-130; Sat.	111111	2.5 1.5	Belgrade, Yug. (686 Salisbury, S. Af. (681.9)
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JOTK LKT	.5 20.	Matsuye, Jap. (625) Trondelag, Nor. (629)	C X 6	10.	Estacion Oficial, Mar- tin Fierro 2603. 12-	XGOY 6WF	.25 3.5	Prov. de Mendoza. Kunming, China. Perth, Ausl.
LV3 RW31	2. 10.	Cordoba, Arg. Ivanovo, USR. (625)	Joce	.3	14; 17-23 Asahigawa, J. (655)	****	•	Hay St. Mon. to Fr 1030-1230; 1400-1730
XHHK 4ZP	.1 .5	Shanghai, China Invercargill, N. Z. R. T. Parsons, 155 Layard St. N., Mon.,			Pres. NBC, Hokkaido Asahikawa Branch, EST Daily 11 p.m 7:30 a.m.			1830-20; 21-3; Sa 1030-12; 1430-3; Su 14-17; 1830-2030; 2115 200
		Wed. 1230-1330; 1830- 2130; Tues., Thus., Fri. 1230-1330; 1900- 2200; Sat. 1830-2130; Sun. 1100-1200; 1830- 2200.	JQAK 1YA	.5 10.	Dairen, Mnch. (652) Auckland, N. Z. Karangahape Rd. Mon. to Sat. 7-9; 10- 23; Sun. 9-1215; 13- 1630; 18-22	******	7.	Paris, F. (695) FPT Ecole Superieure de Postes et Telegraphe (Testing with 120 kw Daily 300-1800 EST
No. 1	15.	Brussels, Belg. la Rue du Bastion	aun	100.	Cologne, G. (658) Dagoberlstrabe No. 38 Daily 0000-1800 EST	700	(42	28.3)
	20.	Weekdays 655-1800; Sun. 445-1900 EST Cairo, Egypt.			·	JOKK PRA7	.5 .05	Okayama, J. Sao Paulo, Brz., Ru
620			660	(45	64.3)	RW48	2.5	Tibirica 26 (706) Elista, USR. (704)
	`	75.9)	XGOA RW38	75. 2.	Nanking, Chn. Alexandrovsk USR.	SBA	55.	Stockholm, Swe. (704 Weekdays 145-1700 Sun. 3-17 EST
JODG LS3	.5 5.	Hamamatsu, Jap. (635) Buenos Aires, Arg.	11.75	20. 50.	(662) Jerusalem, Pal. (668) Manchester, G. B.	VPB XMHÇ	1.75	Colombo, Cey. (70: Shanghai, Chn.
		Radio Mayo, Callao 1526		30.	(668) North Regional Weekdays 515-1900; Sun. 730-1745 EST	ZP15 2NR	7.	Villarrica, Par. Lawrence, Ausl.
OKP	120.	Praha, Cz. (633) The Radio Journal, Praha, Cz. Daily 0030-1730	670	(1)		<i>7</i> 10	(42	22.3)
RW28	.8	EST Vladivostok, USR.	670 Jeak	•	Taihoku, For.	I1R0	50.	Rome, I. (713) Weekdays 130-173
RW32	10.	(635) Vladivostok, USR. (635)	LS4	7.	Buenos Aires, Arg. Radio Portena, Bei-	101К	3.	Sun. 335-1730 EST Kanazawa, J.
RW84	1.2	Oust-Abakansk, USR. (635)	MTFY	3.	grano 1841 Harbin, Mnch. (674)	LS1	5.	Buenos Aires, Arg. Radio Municipal,
3AR	4.5	Melbourne, Aust. 120A Russel St., Mon.	YV6RV	1. .35	Groznyi, USR. (676) Valencia, Vnz.	RW16	10.	Teatro, Colon Samara, USR. Kashing, Chn. (714.
		to Fri. 830-1100; 1300- 1900; 1930-2400; Sat. 830-1100; 1300-1900;	2C <b>O</b>	1.	Corowa, Ausl. Relays 3LO and 3AR. Mon. to Fri. 830-13;	XGOS	1	Chunking, Chn. (71
		1930-130; Sun, 1225- 1630; 1810-2230			1330-1530; 1630-1745; 19-1; Sat. 830-1030; 1130-13; 1330-1830; 19-		•	16.4)
640	(40	58.5)			100; Sun. 1130-1345; 1430-1815; 1930-2400	JFBK JORK	1. .5	Tainan, For. Kochi, J. Mr. Masuo, Mgr., EST Dai
CB64	1.	Vina del Mar, Chile. La Union, Av. Por-		100.	Sottens, Swi. (677) Report to PTT Berne, Speichergrasse No. 6.			10:15 p.m7:30 a.m Sun., 10:30 p.m7:3 a.m.
CC64	.1	tales 528 Concepcion, Chile. El Sur, Freyre 799			Weekdays 630-1630; Sun. 355-1630 EST	PRF2	.25	Rio Claro, Brz. (72 Radio Club of R Claro
JOUK RW29	.3 10.	Akita, J. (645) Petrozavodsk, USR.	680	(44	10.9)	PRG5	.75	Santos, Brz. Rad Atlantica
RW56	1.2	(648) Penza, USR. Lyons. F. (648). La	CW27	.15	Salto, Uruguay. Er- nesto Popelka	RW9	36. .05	Kiev, USR. (722) Shanghai, Chn.
YN	90. E	Lyons, F. (648). La Doua (testing). Daily 215-1800 EST	HJN JOLK	.5 .5	Bogota, Col. (681) Fukuoka, J.	3YA	.05 10.	Shanghai, Chn. Christchurch, N.
ZEK	.5	Hong Kong, Chn. GMT Mon., Thurs.,	JOVK	.5 .5	Hakodate, J. Rodo, Nor. (686)			Gloucester St. Mo to Sat. 7-9; 10-2 Sun. 9-1215; 13-163
		Sat., from 12:30. The Secretary, Hong Kong	RW17 RW27	10. 4.	Kazan, USR. (686) Makhatch, USR. (689)	6GF	2.	1730-22 Kalgoorlie, Ausl.
		Brdcstg. Com., P. O. Box 200.	RW46	1.2	Karaganda, USR. (686.5) Petropaviovsk. USR.	730		10.7)
ZTJ		Johannesburg, S. Af. (645)	RW71	1.2	(689)	CB73	1.	Santiago, Chile. U
5CK	7.5	Crystal Brook, Ausl.	RW74	1.2	Tcheboksary, USR.	CB/3	1.	Santiago, Cinie.

		timas Noticias. Com- pania 1258	XLHI		'5 Shanghai, Chn. 5 Shanghai, Chn.	XLHL 4QG	.1 2.5	Shanghai, Chn. Brisbane, Ausi. Sta
CX10	1.	Montevideo, Uru.	2YB	.1	New Plymouth, N. Z.			Insurance Bldgs.
		Internacional Brd-			Empire Bldg., King	1		Mon. to Fri. 830-103
		cstg. Industria 2840;			St. Mon. 19-22; Wed.			12-1530; 1630-18; 19-
		11-15; 16-24			1830-22; Sat. 1330-17;			Sat. 830-10; 1230-
EAJ2	3,	Madrid, Sp. (731)	1		1830-22; Sun. 18-22			Sun. 12-15; 1630-183
		Radio-Espana	78.11.1	50.	Falkirk, G. B. (767) Scottish Regional			1915-24
EAJ5	5.5	Seville, Sp. (731)			Scottish Regional		50.	Cardiff, G. B. (804
		Daily 230-1630 EST			Weekdays 515-19;			West Regional
OSK	1.	Kokura, J. (735)			Sun. 730-1730 EST			Weekdays 515-190
.V1	1.	San Juan, Arg. Radio						Sun. 730-1745 EST
		Graffingna, C. de	<b>₹770</b>	(38	39.4)	_		100
	_	Correo 44	170	(00	73. <del>1</del> /L	810	(37	70.2)
RW65	1.	Saransk, USR. (734)	CX12	1.	Montovidos II-	010	(0)	10.2)
CHGS	.05	Wuchow, Chn.	0.712		Montevideo, Ur. Radio Westinghouse,	CX14	5.	Montevideo, Uru.
CL	2.	Adelaide, Ausl.			Itacabo 2620; 10-23	CAI4	J.	E! Espectador Ltd
		Hindmarsh Square.	JOHK	10.	Sendai. J.			Lanus 5760. 10-24
		Same Schedule as	LKF	1.	Frederikstad, N. (776)	I1MI	50.	
		5CK, 640 kc.	RW26	10.	Stalino, USR. (776)		30.	Milan, I. (814) Radio Milano, Cors
	20.	Tallin, Est. (731)	VUM	.2	Madras, In.			28, Ottobre 102, M
			3LO	3.5	Melbourne, Ausl.			lano 134
7/10	(10	5.2)	320	3.3	120A Russel St. Mon.			Weekdays 130-1730
10	(30				to Fri. 830-930; 11-13;			Sun. 330-1730 EST
	_	D : F: (740)			1330-1530; 1630-1745;	JOCK1	10	Nagoya, J.
FD	1.	Pori, Fin. (749)			19-1; Sat. 830-930; 11-	PRA6	10.	Sao Paulo, Brz. (81
RE6	1.5	Uberaba, Brz.			1830; 19-1; Sun. 1130-	FRAG	10.	Radio Educadora
RW64	10.	OrdJonikidze, USSR.						
		(749)			1345; 1630-1815; 1930- 24			Paulista. Rua Jos Bonifacio 12
ННВ		Shanghai, Chn.		2.	Toulouse, F. (776)	VUC	3.	Calcutta, In.
BL	3.	Sydney, Ausl.		2.	PTT Daily 330-1730	XQKC	2	Tientsin, China
		96 Market St. Mon.			EST Daily 330-1730	Aque	-	rientsin, Cilina
		to Fri. 830-1100; 13-			ESI	020	191	CF ()
		19; 1930-2400; Sat.	=00	/00	4.4	820	(31	65.6)
		830-11; 13-19; 1930-	780	(38	34.4)	1	•	/
		130; Sun. 1225-1630;				CB82	1	Santiago, Chi. I
		18-2330	CB78	1.	Santiago, Chile. Co-	1		Diario Ilustrado
	100.	Munich, G., Funk-			operative Vitalicia,			Moneda 1158. 9-10
		haus Rundfunkplatz			Agustina 1253, 9 piso			12-14; 16-1830; 20-2
		No. 1	JOPK	.5	Shizuoka, J.	C W23	.25	Salto, Uruguay. Mo
	_	Daily 0000-1800 EST	KZEG	1.	Manila, P. I.			desto Liantada
	5.	Marseilles, F. (749) PTT			Daily 8-20	LV7	1.	Tucuman, Arg.
	-2	Daily 245-17 EST	LT1	4.	Rosario, Arg. Radio Litoral, Cordoba 1049	ļ		G. Acha Munoz y Cia
	-2	Sortavala, Fin. (749)	i		Litoral, Cordoba 1049			Mendoza 437
			PRE7	5.	Sao Paulo, Brz. (788)	PRH8	5.	Rio de Janeiro, Bra
750	739	9.8)			Radio Cosmos, Praca			Radio Ipanema
00	(00	3.0/			Marechal Deodora 52	XLKB	.055	Tientsin, Chn.
IS7PJ	15	Panakak Siam	XLHA	.05	Shanghai, Chn.	2ZH	.065	Napier, N. Z.
OBK1		Bangkok, Siam Osaka, J.		120.	Leipsig, G. (785)	Į		C. B. Hansen & Co
R7	15.	Buenos Aires, Arg.			Temporarily on low	1		59 Latham St., Mon
κ,	13.	Radio del Estado			power.			Tue., Fri., 12-14; 19
UHO	.02	T'ung Hsien, Chn.			Daily 00-18 EST			22; Wed. 12-14; 1830
AX4A		Lima, Peru. Daily 11						2230; Thu. 12-14; Sa
~~~	1.3		<b>7</b> 90	/27	(9.5)			10-17; 19-23; Sun. 12
		a.m1 p.m.; 6-7; 9-11 p.m.	,,,,,,	(01	···/			15; 1830-22
RA2	1.5	Rio de Janeiro, Brz.	EAJ1	7 6	Parcelone C- (705)	7H0	1.	Hobart, Ausl. 82 Eliz
	2.3	Rua da Carcoca 45	EAJI	1.5	Barcelona, Sp. (795) Union Radio. Daily			abeth St. Mon. t
	-	Pernambuco, Brz.			215-19 EST			Sat. 930-1030; 1330
	3.	· • · · · · · · · · · · · · · · · · · ·			Kumamoto, J.			1530; 1900-0030: Sur
	3.		INCH					2130-2330
RA8		Ave. Cruz Cabuga 394	JOGK LP10	10.	Ritanas Ai A			
RA8	3. 10.	Ave. Cruz Cabuga 394 Urdjonikidze, USR.	JOGK LR10		5 Buenos Aires, Arg.	******	12.	Bucharest, Ru. (823
RA8 W64	10.	Ave. Cruz Cabuga 394 Urdjonikidze, USR. (752)			S Buenos Aires, Arg. Radio Cultura, Bel-		12.	Weekdays 6-1730;
RA8 W64 GOK	10. 1.	Ave. Cruz Cabuga 394 UrdJonikidze, USR. (752) Canton, Chn.	LR10	10.2	5 Buenos Aires, Arg. Radio Cultura, Bel- grano 1841	11	12.	Bucharest, Ru. (823 Weekdays 6-1730; Sun. 430-1830 EST
RA8 W64 GOK	10. 1. .15	Ave. Cruz Cabuga 394 Urdjonikidze, USR. (752) Canton, Chn. Tientsin, China.	LR10 RW51	10.2	5 Buenos Aires, Arg. Radio Cultura, Bel- grano 1841 Naltchik, USR. (794)			Weekdays 6-1730; Sun. 430-1830 EST
RA8 W64 GOK QKB V4RC	10. 1. .15	Ave. Cruz Cabuga 394 Urdjonikidze, USR. (752) Canton, Chn. Tientsin, China. Caracas, Vnz.	RW51 XLIJ	10.25 1. .05	5 Buenos Aires, Arg. Radio Cultura, Bel- grano 1841 Naltchik, USR. (794) Wusih, China			Weekdays 6-1730; Sun. 430-1830 EST
RA8 W64 GOK QKB V4RC TD	10. 1. .15 .1	Ave. Cruz Cabuga 394 Urdjonikidze, USR. (752) Canton, Chn. Tientsin, China. Caracas, Vnz. Durban, S. Af.	RW51 XLIJ ZTB	10.25 1. .05	5 Buenos Aires, Arg. Radio Cultura, Bel- grano 1841 Naltchik, USR. (794) Wusih, China Bloemfontaine, S. Af.	830		Weekdays 6-1730; Sun. 430-1830 EST
RA8 W64 GOK QKB V4RC TD	10. 1. .15	Ave. Cruz Cabuga 394 UrdJonikidze, USR. (752) Canton, Chn. Tientsin, China. Caracas, Vnz. Durban, S. Af. Kelso, Ausl. Same	RW51 XLIJ	10.25 1. .05	5 Buenos Aires, Arg. Radio Cultura, Bel- grano 1841 Naltchik, USR. (794) Wusih, China Bloemfontaine, S. Af. Dunedin, N. Z. Stuart	830	(36	Weekdays 6-1730; Sun. 430-1830 EST
RA8 W64 GOK QKB V4RC TD	10. 1. .15 .1	Ave. Cruz Cabuga 394 UrdJonikidze, USR. (752) Canton, Chn. Tientsin, China. Caracas, Vnz. Durban, S. Af. Kelso, Ausl. Same schedule as 7ZL, 590	RW51 XLIJ ZTB	10.25 1. .05	5 Buenos Aires, Arg. Radio Cultura, Bel- grano 1841 Nattchik, USR. (794) Wusih, China Bloemfontaine, S. Af. Dunedin, N. Z. Stuart St. Mon. to Sat. 7-9;			Weekdays 6-1730; Sun. 430-1830 EST 51.2) Sapporo, J. T. Okada
RA8 W64 GOK QKB V4RC TD	10. 1. .15 .1 1.5 7.	Ave. Cruz Cabuga 394 Urdjonikidze, USR. (752) Canton, Chn. Tientsin, China. Caracas, Vnz. Durban, S. Af. Kelso, Ausl. Same schedule as 7ZL, 590 kc.	RW51 XLIJ ZTB	10.25 1. .05	5 Buenos Aires, Arg. Radio Cultura, Bel- grano 1841 Naltchik, USR. (794) Wusih, China Bloemfontaine, S. Af. Dunedin, N. Z. Stuart St. Mon. to Sat. 7-9; 10-23; Sun. 9-1215; 13-	830	(36	Weekdays 6-1730; Sun. 430-1830 EST 1.2) Sapporo, J. T. Okada Chf. Engr. EST Daily
RA8 W64 GOK QKB V4RC TD	10. 1. .15 .1 1.5 7.	Ave. Cruz Cabuga 394 UrdJonikidze, USR. (752) Canton, Chn. Tientsin, China. Caracas, Vnz. Durban, S. Af. Kelso, Ausl. Same schedule as 7ZL, 590 kc. Katowice, Pol. (758)	RW51 XLIJ ZTB 4YA	10.25 1. .05 .5 10.	5 Buenos Aires, Arg. Radio Cultura, Bel- grano 1841 Nattchik, USR. (794) Wusih, China Bloemfontaine, S. Af. Dunedin, N. Z. Stuart St. Mon. to Sat. 7-9; 10-23; Sun. 9-1215; 13- 1630; 1730-22	830 830	(36	Weekdays 6-1730; Sun. 430-1830 EST 51.2) Sapporo, J. T. Okada Chf. Engr. EST Daily 4 a.m7:30 a.m.
RA8 W64 GOK QKB V4RC TD	10. 1. .15 .1 1.5 7.	Ave. Cruz Cabuga 394 Urdjonikidze, USR. (752) Canton, Chn. Tientsin, China. Caracas, Vnz. Durban, S. Af. Kelso, Ausl. Same schedule as 7ZL, 590 kc.	RW51 XLIJ ZTB	10.25 1. .05	5 Buenos Aires, Arg. Radio Cultura, Bel- grano 1841 Naltchik, USR. (794) Wusih, China Bloemfontaine, S. Af. Dunedin, N. Z. Stuart St. Mon. to Sat. 7-9; 10-23; Sun. 9-1215; 13- 1630; 1730-22 Lwow, Pol. (795)	830	(36	Weekdays 6-1730; Sun. 430-1830 EST 11.2) Sapporo, J. T. Okads Chf. Engr. EST Daily 4 a.m7:30 a.m. Buenos Aires, Arg.
RA8 W64 GOK QKB V4RC TD NT	10. 1. .15 .1 1.5 7.	Ave. Cruz Cabuga 394 Urdjonikidze, USR. (752) Canton, Chn. Tientsin, China. Caracas, Vnz. Durban, S. Af. Kelso, Ausl. Same schedule as 7ZL, 590 kc. Katowice, Pol. (758) Maritzburg, S. Af.	RW51 XLIJ ZTB 4YA	10.25 1. .05 .5 10.	5 Buenos Aires, Arg. Radio Cultura, Bel- grano 1841 Nattchik, USR. (794) Wusih, China Bloemfontaine, S. Af. Dunedin, N. Z. Stuart St. Mon. to Sat. 7-9; 10-23; Sun. 9-1215; 13- 1830; 1730-22 Lwow, Pol. (795) Polskie Radjo SA,	830 830	(36	Weekdays 6-1730; Sun. 430-1830 EST 51.2)  Sapporo, J. T. Okada Chf. Engr. EST Daily 4 a.m7:30 a.m. Buenos Aires, Arg.
RA8 W64 GOK QKB V4RC TD NT	10. 1. .15 .1 1.5 7.	Ave. Cruz Cabuga 394 Urdjonikidze, USR. (752) Canton, Chn. Tientsin, China. Caracas, Vnz. Durban, S. Af. Kelso, Ausl. Same schedule as 7ZL, 590 kc. Katowice, Pol. (758) Maritzburg, S. Af.	RW51 XLIJ ZTB 4YA	10.25 1. .05 .5 10.	5 Buenos Aires, Arg. Radio Cultura, Bel- grano 1841 Naltchik, USR. (794) Wuslh, China Bloemfontaine, S. Af. Dunedin, N. Z. Stuart St. Mon. to Sat. 7-9; 10-23; Sun. 9-1215; 13- 1630; 1730-22 Lwow, Pol. (795) Polskie Radjo SA, Rozglosnia we Lwowie	830 Joik LR5	(36 10. 29.	Weekdays 6-1730; Sun. 430-1830 EST 51.2) Sapporo, J. T. Okada Chf. Engr. EST Daily 4 a.m7:30 a.m. Buenos Aires, Arg. Radio Excelsior, Mal pu 462
RA8 W64 GOK QKB V4RC TD NT	10. 1. .15 .1 1.5 7.	Ave. Cruz Cabuga 394 UrdJonikidze, USR. (752) Canton, Chn. Tientsin, China. Caracas, Vnz. Durban, S. Af. Kelso, Ausl. Same schedule as 7ZL, 590 kc. Katowice, Pol. (758)	RW51 XLIJ ZTB 4YA	10.25 1. .05 .5 10.	5 Buenos Aires, Arg. Radio Cultura, Bel- grano 1841 Nattchik, USR. (794) Wusih, China Bloemfontaine, S. Af. Dunedin, N. Z. Stuart St. Mon. to Sat. 7-9; 10-23; Sun. 9-1215; 13- 1830; 1730-22 Lwow, Pol. (795) Polskie Radjo SA,	830 830	(36 10. 29.	Weekdays 6-1730; Sun. 430-1830 EST 11.2)  Sapporo, J. T. Okada Chf. Engr. EST Daily 4 a.m7:30 a.m. Buenos Aires, Arg. Radio Excelsior, Mai pu 462 Moscow, USR. (832
RAB W64 GGOK GQKB V4RC TD NT	10. 115 .1 1.5 7. 12. 10. (39	Ave. Cruz Cabuga 394 UrdJonikidze, USR. (752) Canton, Chn. Tientsin, China. Caracas, Vnz. Durban, S. Af. Kelso, Ausl. Same schedule as 7ZL, 590 kc. Katowice, Pol. (758) Maritzburg, S. Af.	RW51 XLIJ ZTB 4YA	10.25 105 .5 10.	5 Buenos Aires, Arg. Radio Cultura, Bel- grano 1841 Naltchik, USR. (794) Wusih, China Bloemfontaine, S. Af. Dunedin, N. Z. Stuart St. Mon. to Sat. 7-9; 10-23; Sun. 9-1215; 13- 1630; 1730-22 Lwow, Pol. (795) Polskie Radjo SA, Rozglosnia we Lwowie Daily 1-18 EST	830 Joik LR5	(36 10. 29.	Weekdays 6-1730; Sun. 430-1830 EST \$1.2) Sapporo, J. T. Okada Chf. Engr. EST Daily 4 a.m7:30 a.m. Buenos Aires, Arg. Radio Excelsior, Mai pu 462 Moscow, USR. (832 Inna Marr, Esq.
RAB W64 GOK QKB V4RC TD NT	10. 115 .1 1.5 7. 12. 10. (39	Ave. Cruz Cabuga 394 Urdjonikidze, USR. (752) Canton, Chn. Tientsin, China. Caracas, Vnz. Durban, S. Af. Kelso, Ausl. Same schedule as 7ZL, 590 kc. Katowice, Pol. (758) Maritzburg, S. Af.  4.5)  Valparaiso, Chl. Co-	RW51 XLIJ ZTB 4YA	10.25 105 .5 10.	5 Buenos Aires, Arg. Radio Cultura, Bel- grano 1841 Naltchik, USR. (794) Wusih, China Bloemfontaine, S. Af. Dunedin, N. Z. Stuart St. Mon. to Sat. 7-9; 10-23; Sun. 9-1215; 13- 1630; 1730-22 Lwow, Pol. (795) Polskie Radjo SA, Rozglosnia we Lwowie Daily 1-18 EST	830 Joik LR5	(36 10. 29.	Weekdays 6-1730; Sun. 430-1830 EST \$1.2)  Sapporo, J. T. Okada Chf. Engr. EST Daily 4 a.m7:30 a.m.  Buenos Aires, Arg. Radio Excelsior, Mai pu 462  Moscow, USR. (832 Inna Marr, Esq. Moscow-Stalin Radi
RAS W64 GOK QKB V4RC TD	10. 115 .1 1.5 7. 12. 10. (39	Ave. Cruz Cabuga 394 Urdjonikidze, USR. (752) Canton, Chn. Tientsin, China. Caracas, Vnz. Durban, S. Af. Kelso, Ausl. Same schedule as 7ZL, 590 kc. Katowice, Pol. (758) Maritzburg, S. Af. 4.5) Valparaiso, Chl. Co- op. Vitalicia, Agus-	RW51 XLIJ ZTB 4YA	10.25 105 .5 10.	5 Buenos Aires, Arg. Radio Cultura, Bel- grano 1841 Naltchik, USR. (794) Wuslh, China Bloemfontaine, S. Af. Dunedin, N. Z. Stuart St. Mon. to Sat. 7-9; 10-23; Sun. 9-1215; 13- 1630; 1730-22 Lwow, Pol. (795) Polskie Radjo SA, Rozglosnia we Lwowie	830 Joik LR5	(36 10. 29.	Weekdays 6-1730; Sun. 430-1830 EST 51.2)  Sapporo, J. T. Okada Chf. Engr. EST Daily 4 a.m7:30 a.m. Buenos Aires, Arg. Radio Excelsior, Mail pu 462 Moscow, USR. (832 Inna Marr, Esq. Moscow-Stalin Radi Station.
RAS W64 GOK QKB V4RC TD NT	10. 115 .1 1.5 7. 12. 10. (39	Ave. Cruz Cabuga 394 Urdjonikidze, USR. (752) Canton, Chn. Tientsin, China. Caracas, Vnz. Durban, S. Af. Kelso, Ausl. Same schedule as 7ZL, 590 kc. Katowice, Pol. (758) Maritzburg, S. Af.  4.5)  Valparaiso, Chl. Co- op. Vitalicia, Agus- tina 1253, 9 Piso	RW51 XLIJ ZTB 4YA	105 .5 10.	5 Buenos Aires, Arg. Radio Cultura, Belgrano 1841 Nattchik, USR. (794) Wusih, China Bloemfontaine, S. Af. Dunedin, N. Z. Stuart St. Mon. to Sat. 7-9; 10-23; Sun. 9-1215; 13- 1630; 1730-22 Lwow, Pol. (795) Polskie Radjo SA, Rozglosnia we Lwowie Daily 1-18 EST	830 JOIK LR5 RW39	(36 10. 29.	Weekdays 6-1730; Sun. 430-1830 EST \$1.2)  Sapporo, J. T. Okada Chf. Engr. EST Daily 4 a.m7:30 a.m. Buenos Aires, Arg. Radio Excelsior, Mal pu 462  Moscow, USR. (832 Inna Marr, Esq. Moscow-Stalin Radi Station. Daily 9-1630 EST
RAS W64 GOK QKB V4RC TD NT	10. 115 .1 1.5 7. 12. 10. (39	Ave. Cruz Cabuga 394 Urdjonikidze, USR. (752) Canton, Chn. Tientsin, China. Caracas, Vnz. Durban, S. Af. Kelso, Ausl. Same schedule as 7ZL, 590 kc. Katowice, Pol. (758) Maritzburg, S. Af. 4.5) Valparaiso, Chl. Co- op. Vitalicia, Agus-	RW51 XLIJ ZTB 4YA  800 JOKG	10.25 105 .5 10.	5 Buenos Aires, Arg. Radio Cultura, Bel- grano 1841 Naltchik, USR. (794) Wusih, China Bloemfontaine, S. Af. Dunedin, N. Z. Stuart St. Mon. to Sat. 7-9; 10-23; Sun. 9-1215; 13- 1630; 1730-22 Lwow, Pol. (795) Polskie Radjo SA, Rozglosnia we Lwowie Daily 1-18 EST	830 Joik LR5	(36 10. 29.	Weekdays 6-1730; Sun. 430-1830 EST \$1.2)  Sapporo, J. T. Okada Chf. Engr. EST Daily 4 a.m7:30 a.m. Buenos Aires, Arg. Radio Excelsior, Mai pu 462  Moscow, USR. (832 Inna Marr, Esq. Moscow-Stalin Radio Station.

840	(35	6.9)	LR6	26.	Buenos Aires, Arg. La Nacion, Florida 347			13; 1930-0030; Sat 9-10; 1930-0030; Sun
	•		RW85	2.	Igarka, USR. (871)			1230-1530; 1945-2330
CB84	.1	Talcahuano, Chile.	XLIL	.05	Suchow, Chn.	4WK	.05	Warwick, Ausi.
		Francisco Morales.	2GB	1.				King and Albion Sts
		Aldea 96			Nation's Station".			Daily 1230-1538; 19
-31CD	12.	Saigon, Indo.			Sydney, Ausl. "The Nation's Station", Adyar House, 29 Bligh St., Mon. to			2330.
		Cie Generale de Tele-			Bligh St., Mon. to		100.	Hamburg, G. (904)
		graphie sans Fil, P.O.			Sat. 830-1; Sun. 930-	10.00		Radio Reichssender
		Box, 238			1330; 1415-24			Hamburg. Daily 00
_T8	.5	Rosario, Arg.		50.	London G B. (877)			18 EST
		Julio Blomberg, Sar-		50.	London, G. B. (877) London Regional.			-0 -0 -
		miento 958			Weekdays 515-1930;	010	/90	0 ()
PRA4	.05	Bahia, Brz. Radio			Sun. 730-1745 EST	910	(32	29.6)
		Soc. da Bahia			SUR. 730-1743 E31		`	,
XGTM	015	Chang-sha, Chn.		(0.1		LR2	12.	Buenos Aires, Arg.
XHHA		Shanghai, Chn.	880	(34	(0.7)			Radio Argentina, Bol
ZBW	2.	Hongkong, C. (845)	000	(				ivar 1356
Z D ***	4.	The Secretary, Hong	LV2	2.	Cordova, Arg. Radio	RW30	10.	Dnepropetrovsk,
		Kong Brdcstg. Com.,			Central, San Lorenzo			USR., (913)
		P. O. Box 200.			339	XLIM	.05	Hanim, Chn.
2YC	.2	Wellington, N. Z.	PRB2	.25	Curityba, Brz. (882)	4RK	2.	Rockhamton, Ausl,
. 10	• 2			•=-	Radio Club Para-			Relays 4QG. Sam
		Featherstone St.			naense			schedule as 4QG, 80
		Mon. to Sat. 17-18;	RW61	1.	techar-Ola, USR. (888)			kc.
	100	19-220; Sun. 18-22	AND	20.	Delhi, Indla. (882)		60.	Toulouse, F. (913)
	100.	Berlin, G. (841)	XHHV		Shanghal, Chn.		٠٠.	Villa Schmidt, Ru
		Radio Reichssender,			Caracas, Venz. (882)			Monie. Daily 3-193
		Berlin Brdcstg. House	YV3RC	.1	Austral N 7			EST
		Daily 0000-1800 EST	1YX	.5	Auckland, N. Z.		.5	Limoges, F. (913)
			1		Karangahape Road Mon. to Sat. 17-18;	10115	.3	Limbyes, F. (323)
ጻናስ .	.(35	2.7)	ł				100	T 0\
000 1	(33	2.1/	Í		19-22; Sun 18-22	920	-(32	25.9)
CX16	40	Montevideo, Ur.	6PR	.5	Perth, Ausl.	J <b>2</b> 0	(0-	
CXID	10.	SADREP, Av. S. Mar-			Barrack St., Mon. to Sat. 1030-12; 14-1530;	JOOK	.5	Niigata, J.
			1		Sat. 1030-12; 14-1530;	OKB	32.	Brno, Cz. (922)
		tinez 13500		2.1	21-2; Sun. 2330-130	0.1.2		Daily 0030-1730 EST
EAJ3	3.	Valencia, Sp.		7.	Graz, Aust. (886)	PRC3	,25	Pelotas, Brz.
HSPI	2.5	Bangkok, Siam (856)	ļ		Dally 310-19 EST	FROS		Soc. Radio Pelotens
JOFK	10.	Hiroshima, J.				PRF4	10.	R'de Janeiro Brz
LKA	.35	Aalesund, Nor.	890	(32	6 9 1	FRF4	10.	R'de Janeiro, Brz (923). Soc. Anonim
LKB	1.	Bergen, Nor.	090	(52	.0.3/			"Journal do Brasil"
LKP	1.	Porsgrund, Nor.	CBGG	1.	Santiago, Chile. Otto	хннх		Shanghai, Chn.
PRB3	.25	Juiz de Fora, Brz.	CB89	1.				Nelson, N. Z.
		(857)				2ZR	.013	Trafalgar St. Tem
		Radio Soc. de Juiz de			113	1		
		Fora, Parque Halfeld	CX18	1.	Montevideo, Uruguay Difusora El Especta			porarily silent.
RW73	10.	Simferopol, USR.			Difusora El Especta		100	
		(859)	ŀ		dor, Ltda., Olimar	1 930	-(32	22.4)
VQ7L0		Nairobi, Ken. (858)		_	1364	300	(0-	
VUB	3.	Bombay, In. (855)	JOLG	.5	Tottori, Japan. (CP)	CB93	3.	Santiago, Chile.
XLIQ	.05	Hangchow, China	MTBY	1.	Mukden, Minch.	CD33	٥.	Huke, Providenci
XQHB		Shanghai, Chn.	OFA	10.	Mukden, Mnch. Helsinki, Fin. (895)			1022
5RM	1.	Renmark, Ausl.	XGKA	.015	Kasking, Chn. (895) Asuncion, Par. (898)	CX20	2.	Montevideo, Uru.
		River Murray Brd-	ZP9	1.5	Asuncion, Par. (898)	CAZO	4.	Radio Monecario,
		csters, Ltd., 29 Run-		.5	Limoges, F. (895)			Humberto I No.
		dle St., Adelaide			>			11-1430; 16-24
	1.	Sofia, Bul.	900	733	3.1)	JOAG	.5	Nagasaki, J.
	35.	Strasbourg, F. (859)	1000	100	···/ [			R'de Janeiro, Brz.
		Radio Strasbourg	0000		Velopraise Chile El	PRD2	1.	(932) Soc. Radio Cru
		PTT, 30 Rue de 22	CB90	1.	Valparaiso, Chile, El			
		Nov. Weekdays 545-			Murcurio de Val.,			ceiro do Sul; Ru Mariz e Barros 270
		19; Sun. 1630-19 EST			Casino de Vina del			WIATIZ & BATTOS 2/U
					Mar.	RW55	1.	Engels, USR. (932)
060	124	10 C	JODK1		Seoul, Korea	VUG	1.	Delhi, India
ðυU	(54	(8.6)	KZIB	1.	Manlla, P. I.	XGON		Nanking, China.
	•	·	1	_	Daily 10-20	3UZ	.65	Melbourne, Ausl.
PRA3	2.5	Rio de Janeiro, Brz.	LU2	2.	Bahia Blanca, Arg.			45 Bourke St. Mor
		Radio Club de Brasil,		_	Radio Bahia Bianca.			to Thu. 830-1530
		Rua Betancourt da	PRF3	5.	Sao Paulo, Brz. (CP			1645-100; Fri. 830-16
		Silva 21			60 kw) Radio Difusora			1645-100; Sat. 830
XGOF	.5	Tsinan, China.			Sao Paulo.			1330; 1930-130; Sur
XHHD	.05	Shanghal, China.	XGOI	.5	Shanghai, China.			1130-1400; 1915-2330
		Poznan, Pol. (868)	XGTM	.1	Tengchow, Chn.	No. 2	15.	Brussels, Belg. (932
	-0.	Daily 1-18 EST	2ZP	.105	Wairoa, N. Z.			Weekdays 7-19; Sui
	.6	Paris, F. (868) AGEN	1		E. A. Perry, 128 Queen			5-19 EST
	.0	. =. 15, 1. (000) AGEN	1		St. Tue. 7-9; 18-2230;			
					Wed. to Sat. 7-9; Sun.	040	/91	10)
270	13/	(4.6)			730-930.	940	(3)	19)
U/U	(0.1	/	3MA	.05		1		
10444	10	Tokyo, J. M. Toma-	3		22 Deakin Ave. Mon-	JONK	.5	Nagano, J. K. Yana
JUAKI	10.	beclo, EST Daily 4			to Thu. 9-10; 12-13.			da, Dir. EST Dail
		a.m7:30 a.m.			1930-24; Fri. 9-10; 12;			4-1930
		m.mi.=/:30 M.Mi.						

		TOREIGN	D. C.	JIA	TIONS DI TIE	QUEN	CIL	
PRE4	.25	Rio de Janeiro, Brz. (941). Sec. Radio Cul- tura "A Voz do Es-	970	(30	9)	OKR	13.5	12-14; 16-21; Wednes- days 1130-14; 18-23 Bratislava, Cz. (1004)
		pacao''	CB97	1.	Santlago, Chile. Slam, Bolivar 1551			Dally 0030-1730 EST
SBB	10.	Goteborg, Swe. (941) Weekdays 145-17; Sun. 3-17 EST	CX22	.25	Montevideo, Uru. Fada Radio, Larranga 278. 1030-1530; 17-23	PRA9	1.	Rio de Janeiro, Brz. Radio Soc. Mayrink Veiga, Rua Mayrink
XHHE 3ZR	.4	Shanghai, Chn. Greymouth, N. Z.	JOBG	.5	Maebashi, J.	PRB8	.05	Veiga 17 Mogy das Cruzes, Brz.
	•	West Coast Radio	XHIB 3BO	.075	Wusih, Chn. Bendigo, Ausi.	XGMK	.015	Poatung, Chn. (1005)
		Soc., Bright St., Cob- den. Mon. to Fri.	350	1	Kangaroo Flat. Mon.	XGOT ZP3	.05 .3	Taiyuan, Chn. Asuncion, Par.
		730-830; 15-17; 18-19;			to Fri. 1230-1500; 19- 24; Sat. 1230-24; Sun.	4GR	.5	Toowoomba, Ausl.
		1930-22; Sat. 730-830; 1330-17; 18-21; Sun .			1130-1430; 2030-2330			Ruthven St. Mon. to Fri. 8-1530; 19-2330;
		12-1330; 1730-1830; 19-21.	1	100.	Belfast, GB (977)			Sat. 8-1130; 1930-2330; Sun. 1130-1430; 030-
	12.	Algiers Alg. (941) Radio PTT du Govt.	980	(30	(5.9)			2330
		Gen., Rue Berthe-		•		1016	/20	AC 0)
		N. Af.	CNO		Casabianca, Mor. (983)	1010	)(29	06.9)
		Daily 8-18 EST	11GE	10.	Genoa, I. (986) EIAR Stazione di Genoua.	CB101	1.	Santlago, Chile. Radio Mayo, Bander
050	/2	IE C			Weekdays 130-1730; Sun. 310-1730 EST			154
950	(3	15.6)	JOXK	.5	Tokushima, J. T.	CX24	2.5	Montevideo, Uruguay SADREP, Las Rozas
LR3	31.	Dataman Alman Ama	1		Tsutsumi, Chf. Engr. EST Daily 2205-730;			756
LKS	31.	Buenos Aires, Arg. Radio Belgrano, Bel-			Sun., 2230-730	PRB9	5.	Sao Paulo, Brz. (1017) Radio Soc. Record,
PP	60.	grano 1841 Paris, F. (959)	OAX4E	.05	Lima, Peru, Juan P. Golncochea, Jiron		_	Praca da Republica 17
• •		Poste Parisien, 4 Rue			Ocona No. 158	RW86	5.	Tchernigov, USR. (1013)
		du General-Foy. Daily 210-18 EST	PRC6	1.	R'de Janeiro, Brz. Soc. Radio Philips,	XGOW		Hangkow, Chn.
PRF8	.5	Bahia, Brz. (959) Ra-			Rua Sacadura Cabral	3HA	.3	Hamilton, Ausl. 37 Gray St., "The Age Brdesta. Service".
		dio Commercial da Bahia	хмнв	.5	Shanghai, Chn.			
RW40	1.	Gomel USR. (959)	2LV 2ZJ	.06	Invernell, Ausl. Gisborne, N. Z.			Mon. to Sat. 830-1030; 1330-1745; 1915-2400;
RW54 XGOP	1.	Gomel, USR. (959) Peiping, Chn.	22.3	.00	229 Gladstone Rd.			Sun. 1230-1800; 2015-
ZTP	.5	Pretoria, S. Af. (952)			Mon., Fri., Sat., 19- 22; Tues., Wed., 12-	4ZB	.025	0030 Dunedin, N. Z. 180
2UE	1.	Sydney, Ausl. Rex Shaw, 296 Pitt St.,			1330; 19-22; Thurs.,			Rattray St. Wed., Thu. 18-23; Sun. 10-
		Mon. to Fri. 730-15;	4AY	.1	19-20 Ayr., Ausl. Norman			12
		16-1; Sat. 730-1230; 1500-130; Sun. 930-			L. Dahl, Airdmillon	4ZM	.003	Dunedin, N. Z. McCracken & Wells,
	100	1330; 1815-0030. Bresłau, G. Schlesis-			Rd. "The Voice of the Cane Fields"			17 George St. Mon
	-00.	che Funkstunde,			Mon. to Sat. 16-1830:			Wed., Thu., Fri. 9- 1145; 13-14; Tue. 9- 1145; 13-14; 18-23;
		GMBH, Breslau 18 Daily 23-18 EST			1930-24; Sun. 2130- 2330			1145; 13-14; 18-23;
			6AM	1.	Northam, Ausi. Mon. to Sat. 10-12;			Fri. 10-12; 13-14; Sat. 9-12; 17-22; Sun. 14-22
960	(31	2.3)			1530-1730; 21-2; Sun.	4ZO	.025	Dunedin, N. Z. Mon. 12-13; 14-15; 20-
,,,,	(61	2.0/			1330-1730; 1830-2030; 2130-130			23; Tue., Wed., Thu.,
C <b>C</b> 96	.1	Curico, Chile. Mer-		24.	Torun, Pol. (986)			12-13; 14-15; 17-18; Fri. 12-13; 14-15; 17-
юок	.3	ced 11 Kyoto, J.			(Testing)			18: 19-23: Sat. 12-13
PRB4	1.	Santos, Brz. Radio	990	/30	28)		50.	Daventry, G.B. (1013) Midland Regional.
		Club de Santos, Rua de Pedro II 16.	990	(30	2.0)			Weekdays 545-1815;
RW13 RW67	10. 2.	Odessa USR. (968) Oukhta, USR. (968)	JOFG LR4	.3 16.	Fukui, J. Buenos Aires, Arg.			Sun. 1130-1745 EST
RW69	10.	Odessa, USR. (968)	LR4	10.	Radio Splendid, Cal-	1020	(29	3 0)
XHHF YV1RC	.1	Shanghai, Chn. Caracas, Venz. (961)	PFBI	60.	lao 1526. Daily 11-24 Hilversum, Hol. (995)	1020	(23	3.37
· VIKC	٠.	Brdcstg. Caracas, Apt	FFBI	· ·	Heir Radio Hilver-		3.	Barcelona, Sp. (1022)
		de Correos 2009, Sun. 9-23; Weekdays 16-			sum, Ouden, Engweg, 4. Daily 310-1810 EST	EAJ19 JBAK	.7 .5	Oviedo, Sp. (1022) Fuzan, Korea
		2230.			Chuching, Chn.	OBJ		Fuzan, Korea Lima, Peru. Escuela
ZF	.25	Palmerston, N. Z. King St., Mon., Thu.,	XGOD 2GZ	1. 2.	Hangchow, Chn. Orange, Ausl.	хннс	.1	Militor de Chorrillos. Shanghai, Ch.
		Sat., 20-22; Wed. 1815-					1.	Sydney Ausl. The Block, George St.
DN	.3	22; Fri., Sun., 19-2130 Adelaide, Ausl.	1000	(29)	9.8)			Mon., Tue., Thu.,
		29 Rundle St., Mon.		•	,			Fri. 815-1330; 1430-17;
		to Fri. 915-115; Sat. 915-15; 20-115; Sun.	НЈЗАВН	1 2.	Bogota, Col. (1005) "La Voz. de La Vic-			1745-0030; Wed. 815- 1330; 14-0030; Sat.
		845-0015.	4		tor'', Aptdo 565. Sun.,			815-1240; 14-18; 1845-

		0030; Sun. 9-0030	RW57	4.	Tiraspol, USR. (1068)			-
·····	2.	Cracow, Pol. (1022)	XHHI 3YB	.1	Shanghai, Chn. Melbourne, Ausl.	l	•	72.6)
1030	(29	91.1)			430 Little Collins St. Mon. to Sat. 20-24; Sun. 2030-2330	HJ3AB	D.05	Bogota, Col. Alford's Radio, Call 16. No. 5-40
CD103	.1	Magallanes, Chile. Ramon Verde San-	4MB	.05	Maryborough, Ausl. Wynne's Stn. Mon. to Fri. 10-1130; 1330-	IINA XHHS 7LA	1.5 .1 .3	Naples, I. (1104) Shanghai, Chn. Lanceston, Ausl.
CT1GL	5.	chez, Mexicana 936 Parede, Por. (1031) Radio Club Portu-		•	1530; 20-2330; Sat. 10- 1130; 1330-1530			67 Brisbane St. Mor to Fri. 9-1030: 1330
LR9	5.	guese. Buenos Aires, Arg. Radio Fenix, Santa	40-	2.	Paris, F. (1068) Radio-Cite		50.	1530; 19-24; Sat. 9 1030; 16-1830; 19-2- Sun. 1915-2330 Madona, Lat. (110-
PRC8	1.	Fe 1174 Rio de Janeiro, Brz. Radio Soc. Guana-	1070   LR1	•	Buenos Aires, Arg.		J	Weekdays 00-1630; Sun. 200-1700 EST
XGOL	.25	bara, Rua 1st deMayo 123 Foochow, Chn.			Radio El Mundo, Maipu 555	1110	)(27	70.1)
YV11RI 3DB	мо. .6	. Maracaibo, Venz. (1034)	PYG2 XGOX	10. .2	Sao Paulo, Brz. Ra- dio Tupy Sao Paulo Honan-fu, Chn.	CB111	1.	Vina del Mar, Chil Los Castanos, A
300	.0	Melbourne, Ausl. 36 Flinders St. Mon. to Fri. 8-1; Sat. 8-130;	XKRI	.1 30.	Canton, Chn. (1071) Bordeaux, F. (1077) Bordeaux - Lafayette	CD111	.1	Castanos 393 Magallanes, Chile. Radio Austral, Inde
	100.	Sun. 1130-1330; 1530- 24 Konigsberg, G. (1031) Daily 00-18 EST			Hotel des PTT, 220 Chemin do Tondu Daily 300-1730 EST	LS5	5.	pendencia s/n 20-2 Buenos Aires, Arg. Radio Rivadavia,
1040	1/28	88.3)	1080	)(27	77.6)	окк	11.2	Callao 1526 Moravska, Cz. (1113 Daily 0030-1730 ES
CP4	10.	La Paz, Bol.		10.	Osaka, J. (1085) Obihiro, Japan (CP)	2UW	1.	Sydney, Ausl., J. M Prentice, Box 2410 GPO. "At the Cros
CW25	.5	Carlos Lopez Vedela, Casilla 637 Durazno, Uru.	LT3	4.5	Rosario, Arg. Radio Soc. Rural de Cereal- istas, Pte. Roca 770		10.	Roads of Sydney. 24 hours daily. Normandie, F. (1113
JOJG	.5	Artola Évangelisti y Cia. 10-13; 18-23 Yamagata, Japan	OAX4F	.05	Lima, Peru F. W. Castelano &			Fecamp Daily 2-21 EST Suchow, Chn.
RW70 XHHH 5PI	10.	Leningrad, USR. Shanghai, Chn. Port Pirie, Ausl.			Hno. Opens and closes "Anchors A-weigh" Daily except	1120		57.7)
J	-	Relays 5AD. Mon. to Fri. 8-16; 19-1; Sat. 8-16; 17-1; Sun. 1930-	SCC	2. .2	Sun., 15-17 EST Falun, Swe. (1086) Shanghai, Chn.	CD112	•	Osorno, Chile. Davi
	40.	24 Rennes-Bretagne, F. Daily 3-1730 EST	ZP7 2AD 3SH	.7 .05	Asuncion, Par. (1083) Armidale, Ausl. Swan Hill, Ausl.	CW29	.05	Arriagada, Baque dano 715 Mercedes, Uru. Bautista Abbo. 1130
1050	(28				Mon. to Sat. 14-15; 2030-24; Sun. 1345- 1545; 1745-1930; 2045- 2330	HAE	6.2	13; 1830-2230
CX26	2.	Montevideo, Uru. Radio Uruguay,			Zagreb, Yu. (1086)	LV5	.5	San Juan, Arg. Radio Los Andes, G
I1BA	20	Millan 2370. 9-1430; 16-23	1090	•		OAX41		Acha 362 Lima, Peru. Radi Internacional
ILDA	20.	Bari, I. (1059) EIAR Stazione di Bari Weekdays 130-1730;		.1	Rancagua, Chile. Jorge Romero, Inde- pendencia 483	PRH3		Sao Paulo, Brz. Radio Piratininga Shanghai, Chn.
PRF6	.05	Sun. 335-1730 EST Bahia, Brazil. Radio Club da Bahia	CX28 EAJ7	3. 10.	Montevideo, Uru. Madrid, Sp. (1095) Union Radio Station	XLHN 4BC	.2 1.	Shanghai, Chn. Brisbane, Ausl., R. F Roberts, 43 Adelaid
RW33 XHKA	1. .1	Krasnodar, USR. Tien-tsin, Chn.			EAJ7, Aptdo 745. Daily 3-19 EST			St., Mon. to Fri. 8 0030; Sat. 8-11; 1330
2CA	.5	Canberra, Ausl. Mon. to Fri. 14-15; 19-2330; Sat. 1930-2330; Sun.	PRC2	3.	Porto Alegre, Brz. Radio Soc. Gaucha, Galerie Chaves		.5	0030; Sun. 830-1330 1630-24 Alexandria, Eg. (1122
•••••	50.	2130-2330 Falkirk, G. B. Scot- tish National. Week-	PRC7 RW75	.25 10.	Bello Horizonte, Brz. Soc. Radio Minheira Vinnitza, USR. (1095)	1100	1.	Newcastle, G.B. (1122
		days 545-1815; Sun. 1130-1745 EST	XGOB XLIO 1ZB	.25	Loyang, Chn. Shaohing, China Auckland, N. Z.	1130 cx30	)(26 .5	5.3)
1060	(28	2.8)		•	153 Krangahape Rd. Tue. to Fri. 9-930; 1015-1100; 1830-2130;	PRD8	1.	Radio Nacional, Por venir 2384. 9-24. Nitheroy, Brz. (1132
CB106	1.	Santiago, Chl. Sud America, Goi-			Sat. 9-930: 1015-11; 1515-1645; Sun. 9-12;			Radio Club Flumi
		colea 0122-11-13; 17-18			1830-2130	SBH	10.	Horby, Swe. (1131)

		FOREIGN	<u> </u>	317	THOMO BY THE	QUDI.	CIL	
		Weekdays 145-1700;	хнни	.1	Shanghai, Chn.	ı		77 York St., Mon. to
		Sun. 3-17 EST	2KA	.1	Katoomba, Ausl.			Fri. 830-15; 1630-0030;
	.25	Nan-chang, Chn.			80 Market St.			Sat. 830-14; 1445-0030
ZP1	1.	Asuncion, Par. (1135)	4MK	.1	Mackay, Ausi. 64 Nelson St., Mon. to		25.	Sun. 12-14; 16-2330 Frankfurt, G. (1195
6ML	.5	Perth, Ausl. Lyric House, Murray			Fri. 11-1230; 15-19; 20-		23.	Eschersheimer Lands
		St. Mon to Fri. 1030-			0030; Sat. 11-19; 20-			trabe No. 33
		1230; 1430-16; 21-2; Sat. 1030-1230; 1430-			9030; Sun. 1130-14;			Daily 00-20 EST
					1630-1830; 20-23	*****	5.	Freiburg, Ga. (1195
		16; 2130-2; Sun. 2230- 130		15.	Mte. Ceneri, Sw.		.5	Kaiserslautern (1195 Trier, G. (1195)
		130	d.		Report to PTT Berne,		.5	Cassel, G. (1195)
4 4 4 0	. /	202			Speighergrasse No. 6		2.	Coblenz, G. (1195)
1140	) (2	263)			Weekdays 6-17; Sun.			
					430-1630 EST	1200	)(24	19.9)
CB114	1.	Santiago, Chile. Chi-		. /	10.0\	1	•	
		lena Consolidada, E. Lianos 35	1170	)(Z:	(6.3)	CB120	1.	Valparaiso, Chile.
11TO	7.	Turin, I.		`	,			Chilena Consolidada Edwards 383
		Weekdays 130-1730;	CC117	.1	Conception, Chile.	НЈЗАВ	E 1.	Bogota, Clb., Uribe
		Sun. 310-1730 EST			Zenith, Rolando			y Moreno, P. O. Bo
XHHL	.1	Shanghai, Chn.			Beckdorf, Av. Argen-			317.
2HD	.5	Newcastle, Ausl. Box 123. Mon. to Fri.	CX32	.5	tina 977 Montevideo, Uru.	LT9	.5	Santa Fe, Argentina
		730-1530; 1630-1730;	77.32		Radio Marconi, Gen.	OAX4B	. 25	Radio Roca Soler Lima, Peru
		19-24: Sat. 730-1530:			Hornos 537. 10-2	PRD3	.25	Taubate, Brz. (1207
		1630-1730; 19-130;	JOCK2		Nagoya, J. (1175)			Soc. Radio Banderi
		Sun. 1030-1330; 1630-	PRB6	1.	Sao Paulo, Radio Cruceiro do Sul, Lar-			ante
4Y0	1.5	1730; 1830-130 Dunedin, N. Z.			go da Misericordia 4	XHHN		Shanghai, Chn.
	1	Mon. to Sat. 17-18:	PRC9	.25	Campinas, Brz. (1175)	YV3RC	3.	Caracas, Vnz. Bajos Pasaje Ramella
		Mon. to Sat. 17-18; 19-22; Sun. 18-22			Radio Educadora di	VUL	.1	Lahore, India
44	20.	London National,			Campinas	3YL	.5	Christchurch, N. Z.
	20.	G.B. (1149) North National, G.B.	XLIE 2NZ	.05	Wusih, Chn. Narrabri, Ausl.			Mon. to Sat. 17-18
	20.	(1149)	2ZD		Masterton, N. Z.	5KA	.3	19-22; Sun. 18-22 Adelaide, Ausl.
		Weekdays 545-1815;		.003	W. D. Ansell, 7 Rimu	SINA	.3	Richards Bldg., Mon
		Sun. 1130-1745 EST			St. Daily 20-22. Re-			to Fri. 830-1; Sat. 830-
	20.	West National, G.B.			lays 2YA Tue., Fri.,	1		2; Sun. 12-14; 17-18
		(1149) Same as North	4TO	•	Sat., Sun. Townsville, Aus.		12	1845-100
		National	410	.2	Mon. Tue. Thu.	No. 2	5.	Praha, Cz. (1204) Bangkok, Siam
					Mon., Tue., Thu., Fri. 9-1; 1330-1530; 1930-2345; Wed., Sat.,			ballykok, Slaili
1150	1/2/	60.7)			1930-2345; Wed., Sat.,	1216	1/9/	17 0
1130	7(21	00.1			9-10; 15-19; 1930-2345; Sun. 2030-2330	1210	J( 24	17.8)
		C Fo (1152)		10.	Cophgen., Den. (1176)	CD121	-1	Osorno, Chile. Radio
HC2ET		Guyaquil, Ec. (1153) Cartagena, Clb. (1154)			Strats Radio Fonien	00111		Austral, E. Ramirez
LR8	7.	Buenos Aires, Arg.			Heibergsgrade No. 7			2930
		Radio Paris, Cangallo				CX34	.5	Montevideo, Uru.
OAX4H		860 Lima, Peru, Radio	1120	1/25	4.1)			Radio Artigas, Millar 2370. 10-16; 18-23
UAA4H		Lima, Peru. Radio Davila, Aptdo. 373	1100	7(20	77.1/	LV10	.5	Mendoza, Argentina
XGOZ	.1	Chinkiang, Chn.	00110		Cambiana Chile Pa-			Mendoza, Argentina Radio de Cuyo
		Maracaibo, Venz.	CB118	1.	Santiago, Chile. Ra- dio Bayer, Portai Fer-		.025	Lima, Peru
		(1153)			nandez Co. 960	OA4D		Lima, Peru
2WG	.2	Wagga, Aus. 16 Fitzmaurice St.	LKM	.1	Tromsoe, Nor. (1186) Kharkov, USR. (1185)	XHKC	.1 .015	Tsingtao, China Pinghu, Chn.
		Mon. to Sat. 930-1030;	RW20	10.	Kharkov, USR. (1185)	XLTC		Wusih, Chn.
		1330-1530; 1930-24;	XHHZ 3KZ	.15	Shanghai, Chn. Meibourne, Ausl., S.	2GF	.05	Grafton, Ausl.
		Sun. 2130-2330	JAL		Morgan, 64 Elizabeth			47 York St., Mon. 9
2ZM	.015	Gisborne, N. Z. Mon., Tue., Wed., Fri.,			St., "The Brighton			10; 1330-1430; 1930- 2330; Tue. to Sat. 9-10
		Mon., I ue., Wed., Fri., Sat. 915-1015; Thu.			Brdc. stg. Service."			1430-1530; 1930-2330
		915-1015; 20-2230;			24 Victoria St. Mon. to Fri. 8-1530; 16-18	6KG	.085	Kalgoorlie, Ausl.
		Sun. 19-22			1830-100; Sat. 8-1215;			86 Palace Chambers
	2.6	Kosice, Poland (1158)			1345-230; Sun. 16-18;			Mon. to Fri. 1430-1630
					1930-24			22-2; Sat. 1730-2030 2230-2; Sun. 2315-0130
1160	)(2:	58.5)				in to Vil	60.	Lille, F. (1213) Radio
1100	1-1		1100	1/25	(2)			Lille, F. (1213) Radio PTT Nord (testing
CB116	.1	Valparaiso, Chile.	1190	7(43	(2)			Daily 3-1730 EST
	-	Radio Valparaiso,						
		Prat 773	LS2	30.	Buenos Aires, Arg.	1220	1(24	15.8)
CW31	.25	Salto, Uru. Salvador E Pera. 9-			Radio Prieto, Bolivar 1356	1220	/ Ca7	
		Salvador E Pera. 9- 1230: 16-23	OAX4H	١	Lima, Peru. Radio	11TR	10.	Trieste, 1. (1222)
LT5	.5	Resistencia, Arg.	1		Zenith, Casa Davile			Weekdays 130-1730;
		Radio Chaco, Av. 9		.03	Peiping, Chn. (1194)	0051	10	Sun. 310-1730 EST Rio de Janeiro, Brz.
		de Julio	2CH	1.	Sydney, Ausl.	PRE3	10.	mio de Janeiro, Brz.

PRG9	.5	Radio Transmissora Brasileira Sao Paulo, Brazil,	HC2JE MABS OAX41	.035	Guyaquil, Ec. Siangyuang, Chn. Lima, Peru. Radio	XGOE		Radio Club de Sac Paulo, Rua 7 de Abril
		Radio Excelsior.	UAX4	L .1	Miraflores, Calle	4BK	.5	Yungning, China Brisbane, Ausl. Mon.
XGOT 4AK	1.	Pei-ping, Chn, Oakey, Ausl.	PYG8	. 25	Manco Capac 347 Bauru, Brz.			to Fri. 830-0030; Sat. 830-0130; Sun. 13-1530
		Daily 19-0030	XLIF	.075	Wusih, Chn.	Ī		1830-24.
4ZL	.1	Dunedin, N. Z. 243 Macandrew Rd.	No. 3	1. 10.	Rome, I. (1258) Kuldiga, Lat. (1258)		5.	Dornbirn, Aust. (1294)
		Mon., Thu., Sat. 8-9;		10.	Kuluiga, Lat. (1256)		4.2	Klagenfurt, Aust. (1294)
		1930-23; Tue., Wed.,	1260	n/93	(8)		20.	Linz, Austria (1294)
	.3	Fri. 8-9; Sun. 830-1030 Narvik, Norway (1222)	1200	0(23	10)	198211	2.	Vorariberg, Aus. (1294)
1220	/0	40.0	CB126	1.	Santiago, Chl. (1265)	1200	. / 0.	20.0
1230	)(Z <sup>2</sup>	13.8)			Consorcio Espanol, Gran Ave. 2564. 9-10;	1300	)(Z.	30.6)
		Medellin, Clb.	LT11	.5	16-17; 21-22. Parana, Arg.	CB130	1.	Santiago, Chile. Ma-
LS8	15.	Buenos Aires, Arg. Radio Stentor, Flo-			Radio Provincia de	CPX	5.	vis, Av. J.D. Canas 565 La Paz, Bol.
		rida 8	ХННР	.1	Entre Rios.	LT10	.1	Santa Fe, Arg.
KLIR		Hangchow, China	1ZM	.05	Shanghai, Chn. Manurewa, N. Z.	l		Radio del Inst. Soc.
2NC	2.	Newcastle, Ausl. Relays 2FC and 2BL.			W. Rodgers, Massey			de la Univ. Nac. de Litoral
		Mon. to Fri. 830-1530;			Rd. Mon. to Fri. 17-	LU6	.5	Mar del Plata, Arg.
		1630-1745; 19-100;			22; Sat. 13-16; 17-24; Sun. 10-18; 19-22	i		Radio Atlantica.
		Sat. 830-1030; 1130- 1830; 19-100; Sun.	3WR	.05	Shepparton, Ausl.	OAX4C	1.0	Lima, Peru, Estaction Radiodifusora DUSA,
		1130-1815; 1930-24			High St. Mon. to Fri.			Calle de Plumeros.
	5.	Gleiwitz, G. (1231)			12-1430; 1930-0030; Sat. 12-1430; 2030-2330	PRC4	.05	Ampara, Brz. (1304)
	10	11 0)			Sun. 2130-2230	XQHC		Shanghai, Chn.
1240	<b>(24</b>	11.8)		2.	Nurnberg, Ga. (1267)	2TM	.05	Maracaibo, Vnz. Tamworth, Ausl.
CB124	.25	Valparaiso, Chile. A.	40-					Peel St. Mon. to Sat.
,,,,,	.23	Garcia y Cia., Av.	1270	)(23	6.1)			830-1030; 1330-1530;
		Brasil 212						17-18; 19-2330; Sun. 1330-1530; 1630-1830;
:W35	.25	Paysandu, Uru. Buenaventura y	LKK	.5	Khristiansand, Nor. (1276)			2030-2330.
		Mahler. 9-13; 17-22	LKS	.5	Stavanger, Nor. (1276)		,5	Danzig, Dan. (1303)
_U7	2.	Bahia Blanca, Argen-	LS9	6.	Buenos Aires, Arg.	1210	/22	000
		tina. Radio Ge. San Martin, Calle Saro-			Radio La Voz del Aire, Pozos 439.	1310	1(44	.0.9)
		mento 60	OA48	.1	Lima, Peru (1277)	LS7	10.	Buenos Aires, Arg.
-V-14	.5	La Rioja, Arg.	PRE8	7.	Rio de Janeiro, Brz.	PRE9	.5	Fortaleza, Brz. (1315)
		Radio Provincia de La Roija			Soc. Radio Nacional Rua Buenos Aires 120.	SBC	2.5	Ceara Radio Club Malmo, Swe. (1312)
KHHY	.1	Shanghai, Chn.	TUA	.5	Tunis, Tun. (1275)	SCK	.25	Karlstad, Swe. (1312)
ZL	.05	Hastings, N. Z.	XDYF ZP4	.015	Wu-hu, Chn.	SC0	.25	Norrkoping, Swe.
		John Holden, 609 Park Rd. Thurs	2SM	1.	Asuncion, Par. (1275) Sydney, Ausl., 46 Car-	scq	.25	(1312) Trollhattan, Swe.
		1830-23; Sun. 930-1200			rington St. "Double	300	.13	(1312)
TR	.5	Sale, Ausl. A Gil-			D Eucalyptus" Aus-	5AD	. 3	Adelaide, Ausl. Wey-
		christ, Raymond St., "Gippsland's Radio			tralia House. Mon. to Sat. 830-1030; 1430-			mouth St. Daily 9-100
		Station."			24; Sun. 1230-24	1320	1/22	7 1)
		Mon. to Fri. 12-15;				1020	(44	1.1/
		19-24; Sat. 12-1430; 1930-24; Sun. 20-24	1280	)(23	4.2)	CB132	1.	Valparaiso, Chile.
	1.	Cork, I. F. S.	-	(	/			David Wallace, Es- meralda 1111
IX	.5	Perth, Ausl.	PRG3	10.	Rio de Janeiro, Brz.	CD132	.1	Valdivia, Chile. Car-
		St. George's Terrace. Mon. to Fri. 1230-1430	XHHQ	.08 .1	Shanghai, Chn. Hankow, China			los Kahler, Isla Teja
		2130-230; Sat. 1230-	3AW	.6	Melbourne, Ausl.	CW39	.1	Paysandu, Uru.
		1545; 2130-230; Sun.			218 Exhibition St.			Miguel Penna. 1030- 1230; 1730-2245
	2.	17-1830; 2130-200 Juan-les-Pins, F.			Mon. to Sat. 8-1130; 1230-1; Sun. 1145-14;	HAE2	1.25	Magyarovar, Hun.
		(1249). Radio Cote d'			18-24.			(1321)
	.2	Azur.	4ZC		Cromwell, N. Z.	XLIA	.015	Bogota, Col. Ningpo, Chn.
	.4	Orebro, Swe. Saffie, Swe.			John I. Bilton, Low- burn Ferry. Daily	3BA	.05	Ballarat, Ausi.
	.2	Varberg, Swe.			19-21.			Armstrong and Dana
250	/00	0 0)		1.	Aberdeen, G. B. (1285)			Sts. Mon. to Fri. 9- 1145; 1330-1530; 2030-
250	(23	9.9)		.25 .1	Dresden, G. (1285)			24; Sat. 9-1145; 2030-
		Montevideo, Uru.	1 - 6 - 6	.1	Tientsin, Chn.			0030; Sun. 1430-1630;
		Centenario Brdcstg.	1200	1/22	2 1)			20-2330
		Ignacio Nunez 2133.	1290	7(43	2.4)	1320	/99	5.4)
		9-14; 17-24				าเออป	n ZZ	0.47
AJ8	1.	Sn. Sebastian, Sp.	CX38	.5	Montevideo, Uru.		<b>\</b>	

HJIABA	.1	Radio Fenix, Chayos 4534; 8-24 Baranquilla, Clb., E. J. Pellet B., P. O.			845-1045; 1430-1530; 19-24; Sat. 9-1045; 1930-0030; Sun. 2030-			Fri. 1345-1515; 1930- 24; Sat. 1330-1430; 1930-24; Sun. 2030- 2330
	.5	J. Pellet B., P. O. Box 751 R' de Janeiro, Brz.	No. 2	.2	2335. Turin, I. (1357)	7BU	5.	Burnie, Ausl. Radio-Lyons, F.
FRE2	.5	Soc. Radio Cajuti, Rua Conde de Bom-	1360	(22	(0.4)	1.400	\/ <b>91</b>	(1393)
FRG7	.25	fim 457 Jahu,Brz. Radio Club Jahuense	CC136	.1	Rancagua, Chile. Guillermo Espinosa,	1400 CB140	•	San Antonio, Chile.
XGSA XLIK 2BH	.001 .075	Kiangyin, Chn. (1335) Changchow, Chn. Broken Hill. Ausl., 10	CD136	.1	Milan 767 Magallanes, Chile. Santiago Aguilera,			Vina Santa Rita, Pob. Coop. Victoria, Casa 212
2011		O'Connell St., Mon. to Sat. 9-11: 20-0030:	CW41	.05	Valdivia 250 San Jose, Uru. Radio San Jose 10-14; 18-23.	CW37		Colonia, Uruguay. N. Gonzales Moreno
4RO	.05	Sun. 1230-15; 20-24 Rockhampton, Ausl. Mon., Tue., Thu.,	OA4K	.15	Lima, Peru	FFZ OA6D	.25	Shanghai, Chn. Arequipa, Peru
	•	Fri., Sat. 1930-2330;	PRC5 PRD4	.1	Belem, Brz. (1364) Radio Club do Para Araraquara, Brs.	PRD5	1.	R' de Janeiro, Brz. Dpto. de Educacio da
		Wed. 1930-2345; Sun. 2030-2330	PKD4	.25	(1364) Radio Cultura Araraguara,			Pref. Largo da Carloca 5
	5.	Montpellier, F. (1339)			Ave. Feijo 25	XLHO	.1	Shanghai, Chn.
	2. 2.	Bremen, G. Hanover, G.	PRF9	.5	Rio Grande do Sul,	2 <b>ZO</b>	.1	Palmerston, N. Z. J. V. Kyle, 50 Walde-
	2.	Madgeburg, G.			Brz. Empresa Radio- difusora Porto Ale-			J. V. Kyle, 50 Walde- grave St. Tue. 1830-
	2. 2.	Stettin, G. Flensburg, G.			grense			22; Thu. 1830-21; Sun. 10-1230
	1.7	Lodz, Pol. (1339)	XQHD 2MO	.2 .05	Shanghai, Chn. Gunnedah, Ausl. P.	11	.5	Ornskoldsvik, Swe. (1402)
1340	1/22	23.7)			O. Box 78. Mon. to Sat. 830-1030; 1330-		1.	Umea, Swe. (1402)
	.5	Santiago, Chile. Ra-			1530; 1930-2330; Sun. 930-1130; 1530-1730; 1930-2330	1410	0(2	12.6)
		dio Aliviol, Gumer- sindo 135	4PM No. 2	.1 1	Port Moresby, Ausl. Turin, I. (1366)	CC141	.1	Concepcion, Chl. Radio Phillips, Cau-
CW19	.05	Rocha, Uruguay. Juan J. Arispuru y Abel Machado	1370	0(2	18.8)	CX44	.2	polican 370. Montevideo, Uru. SADREP, Solis
LKR	.15	Rjukan, Nor. (1348)	CX42	1,	Montevideo, Uru.			Grande 912. 8-2
LT7	.5	Corrientes, Arg. Radio Provinciade Corrientas			Colonial Brdcstg. Ave. Italia 3646. 11-24	PRB5	.05	Franca, Brz. (1415) Radio Club Hertz Uberaba, Brz.
OFE	.7	Tampere, Finland. (1348)	XHHA XLID 3HS	.05 .05	Hangchow, Chn. Hangchow, China Horsham, Ausl.			Radio Soc. Triangulo Minero
XGED XHHR		Suchow, Chn. Shanghai, Chn.	3113	.03	Horsham, Ausl. 84 Wilson St. Mon.,	XHIA 2KO	.06	Chuchow, China Newcastle, Ausl.
2RN	1.	Dublin, I.F.S. (1348)			Thu. 1330-15; 20-24;	240	.3	57 Hunter St. Mon.
2XN	.05	Lismore, Aus. P.O. Box 138B. Mon. to			Tue., Wed., Fri. 1330- 15; 1930-24; Sat. 1330-			to Fri. 830-1730; 1830-
		Fri. 830-930: 1530-			15; 20-0030; Sun.			24; Sat. 1130-0030; Sun. 1030-1130; 1930-
		1630; 1930-2330; Sat. 830-930; 1930-2330		.5	1330-15; 2030-2330 Basle, Swi. (1375)			2330
4ZR	.004	Balciutha, N. Z.		.5	Berne, Swi. (1375)	Portug	.05 guese	Uddevalla, Swe. Common Wave (1411)
		Clyde St. Tue. 1930- 20; Thu. 19-20; Sun. 10-12; 1930-2130		•	17.3)	142	0(2	11.1)
No. 2	4. 2.	Milan, I. (1348) Ille de F., F. (1348)	CB138	5.	Santiago, Chile. El Murcurio, Cia. Esq. Morande		.8	Paris, F. (1424) Radio LL
	5. 2.	Salzburg, Aust. (1348)	XLHE		Shanghai, Chn.	1ZS 3XY	.05 .6	Auckland, N. Z. Melbourne, Ausi.
	1.	Konigsberg, G. (1348) Bordeaux, F. (1348)	XLHF	.05	Shanghai, Chn. Brisbane, Ausl. Par-	341	.6	Princess Theatre.
	.5	Cairo, Eg. (1348)	4BH	.6	bury House, Eagle St. Mon. to Fri. 830-1030;			Mon. to Sat. 8-1530; 1615-01; Sun. 1130-14;
1350	(22	22.4)			1230-1430; 19-0030; Sat. 830-1030; 19-0030;			Alexandria, Eg. (1429)
LKN LS6	.15 6.	Notodden, Nor. (1357) Buenos Aires, Arg.	No. 2	2.	Sun. 1330-1630; 20-24 Warsaw, Pol. (1384)	1	.6	Turku, Fin. (1429) Vaasa, Finland. O. Y.
OA6E	0.2	Radio del Pueblo, Estados Unidos 1816	139	0(2	215.7)			Suomen Yleisradio A. B.
XQKA		Arequipa, Peru ↓ Tientsin, China. Geelong, Ausl. Na-	CB139	.10	5 Valparaiso, Chile. Zenith, Atahualpa 816.	143	0(2	(09.7)
3GL	.05	tional Mutual Bidg.,	LR11	1.	La Plata, Arg. Radio Univ. Nac. de La Plata		•	Talca, Chile. Radio
		Mon. 830-1045; 1430- 1530; 19-24; Tue., Wed., Thu. 9-1045;	XLIN 2GN	.05 .1	Wusih, Chn. Goulburn, Aust.			Atlantida, Enrique Garcia, Molino San-
		1430-1530; 19-24; Fri.			Auburn St. Mon. to	1		doval

### FOREIGN B. C. STATIONS BY FREQUENCIES

C W25	.5	Durazno, Uruguay, Artola, Evangelisti y	1460	(20	5.4)	1490(20	01.2)
HAE3	1 25	Cia. Miskolc. Hung. (1438)	CB146	.1	San Felipe, Chile. II-	ON4CE .1	Chatelineau, Blg.
PRD7		Sorocaba, Brz.			ustre Municipalidad,		(1492)
		Radio Club Sorocaba			Baquedano 715	XLKS .02	Kashing, Chn.
RW10	100.	Minsk, USR. (1438)	CW33	.075	Florida, Uruguay.	No. 1 .1 2TM .05	Wallonia, Belg. (1492) Tamworth, Ausl.
WL	.05	Wollongong, Ausl.	HAE4	1 25	Omar F. Barreiro. Pecs, Hun. (1465)	4	Binche, Blg. (1492)
		Russell Yeldon, Woo-	ON4EB		Antwerp, Belg. (1465)	.1	Nimes, F. (1492)
		longong Brdcstg. Co.	XQHE		Shanghai, Chm.	.1	Courtrai, Belg.
		"Ferranti Products." Mon. to Fri. 12-1330:	ZP5	.15	Asuncion, Par. (1465)		mmon Wave (1492)
		20-2330; Sat. 20-2330;	7UV	.3	Ulverstone, Ausl.		Index by Calls
		Sun. 2030-2230			Mon. to Fri. 9-1030;		_
1GY	.05	Gympie, Ausl.			19-24; Sat. 9-1030;	1500/10	)0 0/
		Cympic, Allin			1330-0030; Sun. 1330-	1500(19	19.9 <i>)</i>
4 4 4 0	/00	vo <b>o</b> \			1530; 19-2330.		
1440	)( ZU	8.2)		1.5		CB150 1.	Santiago, Chile.
	•	,			Courtrai, Belg. (1465)	CX48 1.5	Markoff Hnos.
CB144	.1	Santiago, Chile, Se-		9.4	Bega, Ausl.	C X48 1.5	Montevideo, Urugua; Vazquez y Cia., 18 de
		guros Generales, Mo-	4 457	/00	<b>A</b>		Julio 1333
		neda 1367	1470	)(ZU	14)	HJ5ABE	
CB144A	.1	Santiago, Chile. Na-		•			Jose Calderon N, Cia
		cimento, J. Infanta	CW43	.1	Lavellaja, Uruguay.		Radiodifusora Co-
		2290	1		B. C Blanes y I. R.		Iombiana, S. A. Aptd
CB144B	.5	Santiago, Chile. Los	P		Volante.		50
		Cuatro Ases, Roman			Changchow, Chn.	PRG6 .25	
CD144C	15	Diaz 2000 Santiago, Chile, Luis	2BE 3ZM	.1 .06	Bega, Ausl. Christchurch, N. Z.		Soc. Radio Manti-
CBI44C	.13	Desmaras Los Leones,	32.141	.06	Green & Younger, 253	191	queira
		Calella 2860			Brougham St. Mon.	VUP 2.	Peshawar, India
LS11	.7	La Plata, Arg. Radio			to Thu, 730-10; 17-	XHHT .1 XOCL .007	Shanghai, Chn. 'S Tsinan, Chn.
		Proa. de Bs. Aires.			18; 19-22; Fri. 730-10;		Shanghai, China.
OA6U	.05				Sat. 730-10; 20-24;	3AK .2	Melbourne, Ausl.
PRG4	.25	Jabotical, Brz. Radio			Sun. 11-14; 17-18; 19-		116 Queen St. Mon
		Club Jabotical (1442)			22		630-830; Tue. to Fri
XLHQ		Shanghai, Chn.	4CA	.1	Cairns, Ausl.		0100-0330; 630-830;
2QN 4IP	0.5	Deniliquin, Ausl.	10000	.3	Plymouth, G. B.		Sat. 0100-0330; 630
		Ipswich, Ausl. nmon Wave (1447).		1.	(1474) Bournemouth, G. B.		830; 1430-1530; Sun
3 pariisi		illion wave (1441).		4.	(1474)		0100-430; 14-16; 2330
					(24.4)		0130 Hobart, Ausl.
1450	) <i>(2</i> (	(8.8)	1/00	1/20	2.6)	25	Pietasaari, Fin.
1100	(20	70.07	1400	/( ZU	2.0)	.23	Radio Alcala, Sp.
CX46	4 -	Monteviedo, Uru.	CW47	.1	0		s several 100 watt sta
U X 4 6	1.5	Radio America, Cam-	C W47	.1	Canelones, Uru. Rafael J. Espiga, 11-	tions on 150	
		ino Corrales 2808.			14: 16-23		
		10-24	PRH4	1.	Petropolis, Brz.	1510/10	98.6)
XLIB	.015	Suchow, Chn.	XQHF	.2	Shanghai, Chn.	1010(1	0.0/
		Peiping, Chn.	2AY	.1	Albury, Ausl. John	YDA .5	Tandjongpriok, Jav.
5MU	.1	Murray Bridge, Ausl.			Dower, 47 York St.,	. DA .3	i anajong prion, Jav
		Regional unit of 5AD.			(Sydney). Mon. to	1520/10	nc n\
	60	Daily 9-24			Fri. 1345-1515; 19-24;	1530(1	JO.U/
	5.	Paris, F. (1456) Eiffel			Sat. 14-1515; 19-0030		
		Tower.	4BU	.1	Bundaberg, Ausl.	SCJ .2	Kariskrona, Swe.

	SOUTH	4	LR7	750	15000 [	LV3	620	2000	Resist	ancia	
AMERICA		LR8	1150	7000	Corrie		500	LT5	1160	500	
			LR9 LR10	1030 790	5000 10250	L17 La Pi	1340	500	Rosar	io	
A	ARGENTINA		LS1	710	5000	LR11	1390	1000	LT1	780	4000
			LS2	1190	30000	LS11	1440	700	LT3	1080	4500
	Blanca		LS3	630	5000	La Ri			LT8	840	500
LU2	900	2000	LS4	670	7000	LV14	1240	500	San	uan	
LU7	1240	2000	LS5	1110	5000	Marc	iel Plata		LV1	730	1500
	os Aires		LS6	1350	6000	LÜ6	1300	500	LV5	1120	500
LR1	1070	50000	LS7	1310	10000				Santa	•	
LR2	910	12000	LS8	1230	15000	Mend		-00			F00
LR3	950	31000	LS9	1270	6000	LV6	690	500	LT9	1200	500
LR4	990	16000	LS10	590	6000	LV10	1210	500	LT10	1300	500
LR5	830	29000	Cordo		2000	Paran	ıa		Tucu	man	
LR6	870	26000	LV2	880	7000	LT11	1260	500	LV7	820	1000

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	BOLIVIA		PRF3	900	5000	Bogot HJN	a 681	E00	CX34 1210 CX36 1250	
1 - 0			PRG9 PRH3	1220 1120	500 10000	HJ3AB		500 50	CX38 1290	
La Paz CPX	1300	5000							CV40 1220	
CP4	1040	5000	PYG2	1070	10000	HJ3AB	E 1200	1000	CX40 1330 CX42 1370	
GP4	1040	10000	PRD7	1430	250	HJ3AB HJ3AB	H 1005	2000	CX44 1410	
	BRAZIL							50		
	BRAZIL		PRD9 Ubera	769	250	Carta HJ1AB	gena Maria	50	CX46 1450 CX48 1500	1500
A			PRE5	1410	250			30	1	1.700
Ampar PRC4	1300	50	PRE6	740	1500	Medel HJ4AB		300	Paysandu	~
Araraq		50	FREO	740	1300	ПЈ4АБ	K 1230	300	CW35 1240	
PRD4	1364	250		CHILE			CUADO	D	CW39 1320	100
Bahia	1304	230		CHILE			COADO	T.	Rocha	
PRA4	840	50	C			Comme			CW19 1340	50
PRF6	1050	50	Conce CC64	640	100	Guyac HC2ET	1153	300	Salto	
PRF8	950	500	CC117	1170	100	HC2JB	1250	300	CW23 820	250
Bauru	730	300	CC141	1410	100	IIC2JB	1230	30	CW27 680	
YG8	1250	250	Curico		100	D.	ARAGUA	~	CW31 1160	250
Belem	1230	2.00	CC96	960	100		NAGOA		San Jose	
RC5	1360	100			100	Asunc	iom		CW41 1360	50
	Horizont		Magai CD103	1030	100	ZP1	1135	1000	-	
RC7	1090	250	CDIII	1110	100	ŽP3	1000	300	VENEZU	ELA
Campi		250	CD136	1360	100	ZP4	1275	150		
RC9	1175	250	Osorne		100	ZP5	1465	150	Caracas	
Cruzei		200	CD112	1120	100	ZP7	1083	700	YV1RC 960	5000
RG6	1500	250	CD121	1210	100	ZP9	898	1500	YV3RC 1200	3000
Curity		2.70	Ranca		100	Villari		1300	YV4RC 750	100
RB2	882	250	CC109	gua 1090	100	ZP15	1ca 700		Maracaibo	
Fortale		200	CC136	1360	100	2113	700		YV5RMO 130	
RE9	1315	500	San A		100		PERU		YV7RMQ 115	3 500
Jabotic		500	CB140	1400	100		LINO		YV11RMO 10	34
RG4	1442	250	San Fe		100	Arequi	ina		Valencia	
Jahu	1772	200	CB146	1460	100	OA6D	1400	150	YV6RV 670	350
RG7	1330	250	CDI40	1400	100	OA6E	1350	30		
Juiz de		2.70	Santia CB57	90 570	5000	OA6U	1443	50	EURO	PE
RB3	857	250	CB62	620	1000	Lima	1443	30		_
	ias Cruce		CB73	730	1000	OAX4A	750	1500		
RB8	1000	50	CB78	780	1000	OAX4B	1200	250	AUSTR	A
Nither		50	CB82	820	1000	OAX4C	1300	250		
RD8	1132	1000	CB89	890	1000	OAX4C OAX4E OAX4F	980	50	Dornbirn	
Pelotas		2000	CB93	930	3000	OAX4E	1080	50	1294	500
RC3	920	250	CB 97	970	1000	OAX4H	1150		Graz	
Pernan		200	CB101	1010	1000	OAX4H	1190		886	7000
RA8	750	3000	CB106	1060	1000	OAX4I	1120		Innsbruck	
Petropo		0000	CB114	1140	1000	OAX4L	1250	100	519	1000
RH4	1480	1000	CB118	1180	1000	OA4AR	1210	25	Klangenfurt	
	Alegre		CB126	1260	1000	OA4K	1360	150	1294	4200
PRC2	1090	3000	CB130	130	1000	OA4O	1277	100	Linz	
RH2	600	25000	CB134	1340	500	OA4D	1210	25	1294	15000
Rio Cla	aro		CB138	1380	5000				Salzburg	
RF2	725	250	CB144	1440	100	υ	RUGUA	Y	1348	500
Rìo de	Janeiro	1	CB144A	1440	100				Vienna	*****
PRA2	750	1500	CB144B		500	Canelo			592	120000
PRA3	860	2500	CN144C		150	CW47	1480	100	Vorariberg	3000
RA9	1000	1000	CB150	1500	1000	Coloni	a	~-	1294	2000
RB7	800	500	Talca			CW37	1400	25	Del	
RC6	980	1000	CC143	1430	100	Durazi CWOS	1430	500	BELGIU	IVI
RC8	1030	1000	Talcah			CW25	1430	500	Ambu	
RD2	932	1000	CB84	840	100	Florida		7 =	Antwerp	100
RD5	1400	1000	Temuc			CW33	1460	75	ON4EB 1465	100
RE2	1330	500	CC58	580	500	Lavelle	1470	100	Binche	100
	1220	10000	Valdivi	а		CW43	1470	100	1492	100
RE3	0.40	250	CD132	1320	100	Merce		En	Brussels No. 1 620	15000
RE3 RE4	940	7000 l	Valpar	aiso	i	CW29	1120	50		15000
RE3 RE4 RE8	1270		va.par	760	10000	Monte		1000	No. 2 932	15000
RE3 RE4 RE8 RF4	1270 923	10000	CB76		1000	CX4	610	1000	Chatelineau	100
RE3 RE4 RE8 RF4 RG3	1270 923 1280	10000 10000	CB76 CB90	900			650	1 0000	ON4CE 1492	100
RE3 RE4 RE8 RF4 RG3 RH8	1270 923 1280 820	10000 10000 5000	CB 90	900 1160	100	CX6		EAA		
RE3 RE4 RE8 RF4 RG3 RH8 Rio Gra	1270 923 1280 820 ande do !	10000 10000 5000 Sul	CB90 CB116	1160	100	CX8	690	500	Courtrai	1.00
RE3 RE4 RE8 RF4 RG3 RH8 Rio Gra	1270 923 1280 820	10000 10000 5000	CB90 CB116 CB120	1160 120 <del>0</del>	100 1000	CX8 CX10	690	1000	1465	100
RE3 RE4 RE8 RF4 RG3 RH8 Rio Gra	1270 923 1280 820 ande do !	10000 10000 5000 Sul	CB90 CB116 CB120 CB124	1160 120 <del>0</del> 1240	100 1000 250	CX8 CX10 CX12	690 730 770	1000 1000	Liege	
RE3 RE4 RE8 RF4 RG3 RH8 Rio Gra RF9 Santos	1270 923 1280 820 ande do 9	10000 10000 5000 Sul 500	CB90 CB116 CB120 CB124 CB132	1160 1200 1240 1320	100 1000 250 1000	CX8 CX10 CX12 CX14	690 730 770 810	1000 1000 500	Liege ON4RW 1500	100 100
RE3 RE4 RE8 RF4 RG3 RH8 Rio Gra RF9 Santos RB4	1270 923 1280 820 ande do 9 1360	10000 10000 5000 5ul 500	CB90 CB116 CB120 CB124 CB132 CB139	1160 1200 1240 1320 1390	100 1000 250	CX8 CX10 CX12 CX14 CX16	690 730 770 810 850	1000 1000 500 10000	Liege ON4RW 1500 Radio Comte	100
RE3 RE4 RE8 RF4 RG3 RH8 Rio Gra RF9 Santos RB4 RG5	1270 923 1280 820 ande do 5 1360 960 720	10000 10000 5000 Sul 500	CB90 CB116 CB120 CB124 CB132 CB139 Vina d	1160 1200 1240 1320 1390 el Mar	100 1000 250 1000 105	CX8 CX10 CX12 CX14 CX16 CX18	690 730 770 810 850 890	1000 1000 500 10000 1000	Liege ON4RW 1500 Radio Comte	
RE3 RE4 RE8 RF4 RG3 RH8 Rio Gra RF9 Santos RB4 RG5	1270 923 1280 820 ande do 9 1360 960 720 aulo	10000 10000 5000 5000 500 500 1000 750	CB90 CB116 CB120 CB124 CB132 CB139 Vina de CB64	1160 1200 1240 1320 1390 el Mar 640	100 1000 250 1000 105	CX8 CX10 CX12 CX14 CX16 CX18 CX20	690 730 770 810 850 890 930	1000 1000 500 10000 1000 2000	Liege ON4RW 1500 Radio Comte 1500 Seraing	100 100
RE3 RE4 RE8 RF4 RG3 RH8 Rio Gra RF9 Santos RB4 RG5 Sao Pa	1270 923 1280 820 ande do 9 1360 960 720 aulo 1295	10000 10000 5000 5ul 500 1000 750	CB90 CB116 CB120 CB124 CB132 CB139 Vina d	1160 1200 1240 1320 1390 el Mar	100 1000 250 1000 105	CX8 CX10 CX12 CX14 CX16 CX18 CX20 CX22	690 730 770 810 850 890 930	1000 1000 500 10000 1000 2000 250	Liege ON4RW 1500 Radio Comte 1500 Seraing	100
RE3 RE4 RE8 RF9 RH8 Rio Gra RF9 Santos RB4 RG5 Sao Pa RA5 RA6	1270 923 1280 820 ande do 9 1360 960 720 aulo 1295 815	10000 10000 5000 5ul 500 1000 750 500 10000	CB90 CB116 CB120 CB124 CB132 CB139 Vina d CB64 CB111	1160 1200 1240 1320 1390 el Mar 640 1110	100 1000 250 1000 105	CX8 CX10 CX12 CX14 CX16 CX18 CX20 CX22 CX24	690 730 770 810 850 890 930 970	1000 1000 500 10000 1000 2000 250 250	Liege ON4RW 1500 Radio Comte 1500 Seraing Verviers	100 100 100
RE3 RE4 RE8 RF4 RG3 RH8 Rio Gra RF9 Santos RB4 RG5 Sao Pi RA5 RA6	1270 923 1280 820 ande do : 1360 960 720 aulo 1295 815 706	10000 10000 5000 5000 500 1000 750 10000 500	CB90 CB116 CB120 CB124 CB132 CB139 Vina d CB64 CB111	1160 1200 1240 1320 1390 el Mar 640	100 1000 250 1000 105	CX8 CX10 CX12 CX14 CX16 CX18 CX20 CX22 CX24 CX26	690 730 770 810 850 890 930 970 1010	1000 1000 500 10000 1000 2000 250 2500 2000	1465 Liege ON4RW 1500 Radio Comte 1500 Seraing 1500 Verviers No. 1 1500	100 100 100 100
RE3 RE4 RE8 RF4 RG3 RH8 Rio Gra RF9 Santos RB4 RG5 Sao Pi RA5 RA7 RB6	1270 923 1280 820 ande do 5 1360 960 720 aulo 1295 815 706 1170	10000 10000 5000 5000 500 500 1000 500 10000 500	CB90 CB116 CB120 CB124 CB132 CB139 Vina d CB64 CB111	1160 1200 1240 1320 1390 el Mar 640 1110	100 1000 250 1000 105	CX8 CX10 CX12 CX14 CX16 CX18 CX20 CX22 CX22 CX24 CX26 CX28	690 730 770 810 850 890 930 970 1010 1050	1000 1000 500 10000 10000 2000 250 2500 2000 3000	Liege ON4RW 1500 Radio Comte 1500 Seraing 1500 Verviers No. 1 1500 No. 2 1500	100 100 100
PRE3 PRE4 PRE8 PRG3 PRH8 PRF9 Santos PRG5	1270 923 1280 820 ande do : 1360 960 720 aulo 1295 815 706	10000 10000 5000 5000 500 1000 750 10000 500	CB90 CB116 CB120 CB124 CB132 CB139 Vina d CB64 CB111	1160 1200 1240 1320 1390 el Mar 640 1110 DLOMBIA	100 1000 250 1000 105	CX8 CX10 CX12 CX14 CX16 CX18 CX20 CX22 CX24 CX26	690 730 770 810 850 890 930 970 1010	1000 1000 500 10000 1000 2000 250 2500 2000	1465 Liege ON4RW 1500 Radio Comte 1500 Seraing 1500 Verviers No. 1 1500	100 100 100 100

No. 2 1500 100	ILLE 1348 800	Manchester	Hamar
BULGARIA	PP 959 60000 Eiffel 1456 20000	NN 1149 20000 NR 668 50000	LKH 519 700 Kristianssand
	Radio-Normandie	Newcastle	LKK 1276 500
Sofia 850 1000	1113 10000 Rennes	1122 1000 Plymouth	Narvik 1222 300
CZECHOSLOVAKIA	1040 40000 Strasbourg	1474 300	Notodden LKN 1357 150
	SPTT 859 35000	HOLLAND	Porsgrund
Bratislava OKR 1004 13500	Toulouse 776 2000	Hilversum	LKP 850 1000 Rjukan
Brno	913 60000	PFBI 995 60000	LKR 1348 150
OKB 922 32000 Kosice	GERMANY	HUNGARY	Stavanger LKS 1276 500
1158 2600			Tromsoe
Moravska OKK 1113 11200	Berlin 841 100000	Budapest HAL 546 120000	LKM 1186 100 Trondelag
Praha OKP 633 120000	Bremen 1330 2000	Magyarovar HAE-2 1321 1250	LKT 629 20000
No. 2 1204 5000	Breslau	Miskolc 1250	POLAND
DANZIG	950 100000 Cassel	HAE-3 1438 1250	Cracow
	1195 2000	Nyiregyhaza HAE 1122 6200	1022 2000
Danzig 1303 500	Coblenz 1195 2000	Pecs HAE-4 1465 1250	Katowice 758 12000
	Cologne		Lodz
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Copenhagen	1285 250	Athlone	795 16000
1176 10000	Flensburg 1330 2000	Cork 565 60000	Poznan 868 16000
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Tallinn	Freiburg	2RN 1348 1000	Warsaw
731 20000 Tartu	1195 5000	ITALY	No. 2 1384 2000 Wilno
517 500	1231 5000	- ITALT	536 16000
FINLAND	Hamburg 904 100000	Bari I1BA 1059 20000	PORTUGAL
	Hanover	Bolzano	
Heisinki OFA 895 10000	Kaiserslautern	IIBZ 536 1000 Firenze	CT1AA 629 20000
Pietersaari	1195 1500	I1FI 610 20000	Parede
Pori 250	Konigsberg 1031 10000	Genoa 11GE 986 10000	CT1GL 1031 5000
OFD 749 1000 Sortavala	1348 2000 Leiosia	Milan I1MI 814 50000	ROUMANIA
749 200	785 120000	No. 2 1348 4000	Bucharest
Tampere OFE 1420 700	Magdeburg 1330 2000	Naples I1NA 1104 1500	823 12000
Turku	Munich	Palermo	SPAIN
Viipuri 500	740 100000 Nurnberg	I1PA 565 4000 Rome	Alcaia
OFH 527 10000	1267 2000	I1RO 713 50000	1500 200
FRANCE	Stettin 1330 2000	No. 3 1258 1000 Trieste	Barcelona EAJ1 795 7500
Bordeaux	Stuttgart 574 100000	I1TR 1222 10000	EAJ15 1022 3000 Madrid
1077 30000	Trier	IITO 1140 7000	EAJ2 731 3000
Grenoble	1195 2000	No. 2 1357 200	EAJ7 1095 10000 Oviedo
583 15000 Lille	GREAT BRITAIN	LATVIA	EAJ19 1022 700
1213 60000	Aberdeen	Kuldiga	San Sebastian EAJ8 1258 1000
Limoges 895 500	1285 1000 Belfast	1258 10000	Seville
Lyons	977 1000	Madona 1104 50000	EAJ5 731 5500
YN 648 90000 RL 1393 25000	Bournemouth 1000	Riga YLZ 583 15000	Valencia EAJ3 850 3000
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Montpellier	WN 1149 20000	NORWAY	Spain has many sta- tions of 100 watts or
1339 5000 Nice	Daventry MR 1013 50000	Aalesund LKA 850 350	less on 1492 and 1500 kcs. For complete list
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Nimes 1492 200	SN 1050 50000   SR 767 50000	LKB 850 1000 Bodo	SWEDEN
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AGEN 868 600 FPTT 695 120000	LN 1149 20000 LR 877 50000	Fredrikstad LKF 776 1000	Falun SCC 1086 2000

Goteborg SBB 941	10000	Kazan RW17 686	10000	ASIA		XHHN 1200 XHHP 1260	100 100
Horby SBH 1131	10000	Kharkov RW20 1185	10000	CEYLON		XHHO 1280 XHHR 1340	80 50
Karlskrona	200	Kiev RW9 722	36000	Colombo		XHHS 1100 XHHT 1500	100 100
SCJ 1530 Karlstad		Krasnodar	- 1	VPB 705	1750	XHHU 1160 XHHV 880	100 100
SCK 1312 Malmo	250	RW33 1050 Leningrad	1000	CHINA		XHHX 920	1000
SBC 1312 Norrkoping	2500	RW70 1040 Magnitogorsk	10000	Canton		XHHY 1240 XHHZ 1180	100 150
SCO 1312	250	571	10000	XGOK 750 XKRI 1071	1000 100	XLHA 780 XLHB 560	50 45
Orebro 1240	200	Makhatch RW27 689	4000	Chang-Chow XGDZ 1470	10	XLHC 720	50 50
Ornskoldsvik	500	Minsk RW10 1438	100000	XLIK 1330	75	XLHE 1380	50
Saffle	400	Moscow RW39 832	100000	Chang-sha XGTM 840	15	XLHF 1380 XLHI 760	50 7.5
Stockholm		Mourmansk		Chengtu XGOH 560	10000	XLHJ 760 XLHK 800	100 7.5
SBA 704 Sundsvall	55000	RW79 610 Naltchik	10000	Chinklang	100	XLHL 800	100
SBD 601 Trollhattan	10000	RW51 794 Odessa	1000	Chuching		XLHM 1120 XLHN 1120	50 200
SCQ 1312	250	RW13 968	10000 10000	XGCK 990 Chunking	7.5	XLHO 1400 XLHO 1440	100 30
Uddevalla 1410	50	RW69 968 Ordjonikidze		XGOS 711 Foo-chow	1000	XMHA 600 XMHB 980	1000 500
Umea 1402	1000	RW64 740 Oufa	10000	XGOL 1030	250	XMHC 700	500
Varberg	200	RW22 617 Oukhta	10000	Hangchow XGOD 990	2000	XOHA 580 XOHB 850	250 100
		RW67 968	2000	XLID 1370 XLIQ 850	50   50	XOHC 1300 XOHD 1360	1000 200
SWITZERLA	ND	Oust-Abakans RW50 617	2500	XLIR 1230	50	XÒHE 1460	250
Basle 1375	500	RW84 635	1200	Hangkow XGOW 1010	5000	XOHF 1480 XOHG 1500	200 250
Berne 1375	500	RW56 640	1200	XHJA 1280 Hanim	100	640 Shaohing	100
Beremunster		Petropavlovsk RW71 689	1200	XLIM 910 Honan-fu	:50	XLIO 1090	
556 Monte Ceneri	100000	Petrozavodsk RW29 648	10000	XGOX 1070	200	Shuhing	
Sottens	15000	Pratigorsk RW18 610	1000	Hongkong ZBW 845	2000	Siangyang MABS 1250	35
677	100000	Samara	10000	Kiangyin XGSA 1335	10	Suchow XLIB 1450	15
U. S. S. F	₹.	RW16 710 Saransk		Kashing XGAK 895	15	XLIL 870	50
Alexandrovsk		RW65 734	1000	XGML 714.3	7.5	, 1110 Taiyuan	10
RW38 662 Archangel	2000	RW73 859 Stalingrad	10000	XLKS 1490 Kunming	20	XGOT 1000 Tengchow	50
RW36 586	10000	RW34 522	10000	XGOY 690 Loyang	250	XHKB 590 XTGM 900	1 <b>0</b> 0 100
Astrakhan RW35 598	10000	Stalino RW26 776	10000	XGOB 1090	250	Tientsin	
Dnepropetrovs RW3Q 913	k 10000	Syktyvkar RW41 563	1200	Nan-chang XGOC 1130	500	XLKB 825 XHKA 1050	55 100
Elista	2500	Tcheboksary RW74 680	1200	Nanking XGOA 660	75000	XOKA 1350 XOKB 750	150 150
Engels		Tcheliabinsk		XGOA 660 XGON 900 Ningpo	200	XQKC 1280	100
RW55 932 Frounze	1000	RW68 577 Tchernigov	1500	XLIA 1320	15	Tsangchow XKYY 1150	15
RW82 608	2500	RW86 1013	5000	Peiping XGOP 950	300	Tsinan XGF 833	7.5
Gomel RW40 959	1000	RW52 556	20000	XGOT 1220 XLKA 1194	500 30	XGOF 860 XOCL 1500	500 7.5
RW54 959	1000	Tiraspol RW57 1068	4000	Pinghu XLPH 1210	15	Tsingtao	100
Gorki RW42 565	10000	Vinnitza RW75 1095	10000	Poatung		Tsunshi	
Groznyl RW23 676	1000	Urdjonikidze RW64 752	10000	XGMK 1005 Shanghai	15	XGSS 610 T'ung Hsien	15
lgarka		Vladivostok	800	FFZ 1400 XHHA 840	250 1000	LUHO 750 Wuchow	20
RW85 871	2000	RW28 635 RW32 635	10000	XHHB 740 XHHD 860	50 50	XHGS 730	50
ljevsk RW78 767	3000	YUGOSLA	VIA	XHHE 940	100	Wu-hu XDYF 1270	15
lochar-Ola RW61 888	1000	Belgrade		XHHF 960 XHHG 1020	100 100	XGWH 830	30
RW61 888		686 Ljubijana	2500	XHHH 1040 XHHI 1060	100 100	Wusih XHIB 970	75
RW31 625	10000	527	5000	XHHJ 1080	200	XLIE 1170 XLIF 1250	50 75 50
Karaganda RW46 686.5	5 1200	Zagreb 1086	700	XHHK 620 XHHL 1140	100 100	XLIF 1250 XLIJ 790	50
217710 30011				1		25	

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XLIN 1390	50	Okayama	00 1348	500	Clevedon 4ON 600	7000
XLTC 1210	15		KENY	•	Corowa	7000
XLWU 1250	50	Osaka JOBK-1 750 100		A	2CO 670	1000
Yungning XGOE 1290	1000	JOBK-2 1085 100			Crystal Brook	1000
AGUE 1270	1000	Sapporo Sapporo	VQ7LO 858	600	5CK 640	7500
FORMOSA		JOIK 830 100			5PI 1040	2000
101111001		Sendal	Moroc	co	Cumnock	
Taichu		JOHK 770 100	00		2CR 550	10000
JFCK 580	1000	Shizuoka	Casblança		Denilquin	
Taihoku			00   CNO 983	3 25	2QN 1440	
JFAK 670	10000	Tokushima	Rabat		Geelong	
Tainan			00   CNR 601	25000	3GL 1350	50
JFBK 720	1000	Tokyo			Goulburn	100
		JOAK-1 870 100 JOAK-2 590 100		ODESIA	2GN 1390 Grafton	100
INDIA		JOAK-2 590 100 Tottori	Salisbury		2GF 1210	50
Bombay		JOLG 890 5	600 681	1.8 1500	Gunnedah	
VUB 855	3000	Yamagata			2MO 1360	- 50
Calcutta	0000	JOJG 1040 5	00 TUNIS	IA	Gympie	
VUC 810	3000		_		4GY 1430	50
Delhi	1	JAVA	Tunis		Hamilton	
VUG 933	1000		- TUA 1275	5 500	3HA 1010	300
Lahore	400	Tandjongprick			Hobart	100
VUL 1200	100	YDA8 1510 5	00 UNION S.	AFRICA	7HO 820 7ZL 590	1000
Madras VUM 770	200	KOREA	Bl		Horsham	1000
VUM 770	200	KOREA	Bloemfontai	ne ) 500	3HS 1370	50
INDO-CHIN	10	Fuzan	Cape Town	300	3WV 580	10000
INDO-CHI			00 ZTC 60	10000	Invernell	
Salgon		Seoul	Durban		2LV 980	6 4 6 5
F31CD 840	12000	JODK-1 900 100			Ipswich	
		JODK-2 610 100			41P 1440	50
JAPAN		MANGILLOVIIO	- ZUG 560		Kalgoorlie 6GF 720	2000
A I.IA.		MANCHUOKUO	— Johannesbu — ZTJ 64:		6KG 1210	85
Akita JOUK 645	300	Dairen	Maritzburg	, 10000	Katoomba	•
Asahigawa	000	JOAK 652 5	00 75	10000	2KB 1160	100
JOCG 655	300	Harbin	Pretoria		Kelso	
Fukui			00 ZTP 95	2 500	7NT 710	7000
JOFG 990	300	Hsinking	OCEA		Launceston	300
Fukuoka		MTCY 560 1000	OCEA		Launceston 7LA 1100	300
Fukuoka JOLK 680	300 500	MTCY 560 1000 Mukden	OCEA		Launceston	300 7000
Fukuoka		MTCY 560 1000 Mukden	00231	NIA	Launceston 7LA 1100 Lawrence 2NR 700 Lismore	7000
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu	500 500	MTCY 560 1000 Mukden	000 AUSTR	NIA	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340	
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635	500	MTCY 560 1000 Mukden MTBY 890 10  PALESTINE	AUSTR/	NIA ALIA	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford	7000 50
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima	500 500 500	MTCY 560 1000 Mukden MTBY 890 10  PALESTINE  Jerusalem	Adelaide 5AI) 131	NIA ALIA 0 300	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3G1 830	7000
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850	500 500	MTCY 560 1000 Mukden MTBY 890 10 PALESTINE Jerusalem	Adelaide 5Al) 131 5CL 73	NIA ALIA 0 300 0 2000	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay	7000 50 7000
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa	500 500 500 10000	MTCY 560 1000 Mukden MTBY 890 10  PALESTINE  Jerusalem 668 200	Adelaide 5AD 131 5CL 73 5DN 96	NIA 0 300 0 2000 0 300	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160	7000 50
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710	500 500 500	MTCY 560 1000 Mukden MTBY 890 10  PALESTINE  Jerusalem	Austra/ Adelaide 5AD 131 5CL 73 5DN 96 5KA 120	0 300 0 2000 0 300 0 300	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay	7000 50 7000
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi	500 500 500 10000	MTCY 560 1000 Mukden MTBY 890 10  PALESTINE  Jerusalem 668 200  PHILIPPINES  Manila	Adelaide 5AD 131 5DN 96 5KA 120 Albury 2AY 148	0 300 0 2000 0 300 0 300	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne	7000 50 7000 100 50
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi JORK 720 Kofu	500 500 500 10000 3000 500	MTCY 560 1000 Mukden MTBY 890 10  PALESTINE  Jerusalem 668 200  PHILIPPINES  Manila KZEG 780 10	Adelaide 5AI) 131 500 5CL 73 5DN 96 5KA 120 Albury 2AY 148 Armidale	NIA  ALIA  0 300 0 2000 0 300 0 300 0 100	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500	7000 50 7000 100 50 200
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi JORK 720 Kotu JOKG 800	500 500 500 10000 3000	MTCY 560 1000 Mukden MTBY 890 10  PALESTINE  Jerusalem 668 200  PHILIPPINES  Manila KZEG 780 10 KZIR 900 10	Adelaide 5AD 131 5CL 73 5DN 96 5KA 120 Albury 2AY 148 Armidale 1000 2AD 108	NIA  ALIA  0 300 0 2000 0 300 0 300 0 100	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580	7000 50 7000 100 50 200 4500
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi JORK 720 Kotu JOKG 800 Kokura	500 500 500 10000 3000 500	MTCY 560 1000 Mukden MTBY 890 10  PALESTINE  Jerusalem 668 200  PHILIPPINES  Manila KZEG 780 10	Adelaide 5A1) 131 500 5CL 73 5DN 96 5KA 120 Albury 2AY 148 Armidale 2AD 108 000 Augusta	0 300 0 2000 0 300 0 300 0 300 0 100	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3AW 1280	7000 50 7000 100 50 200 4500 600
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi JORK 720 Kofu JOKG 800 Kokura JOSK 735	500 500 500 10000 3000 500	MTCY 560 1000 Mukden MTBY 890 10  PALESTINE  Jerusalem668 200  PHILIPPINES  Manila KZEG 780 10 KZ1B 900 11 KZRM 618.5 500	Adelaide 5AI) 131 500 5CL 73 5DN 96 5KA 120 Albury 2AY 148 Armidale 2AD 108 Ayr 4AY 98	0 300 0 2000 0 300 0 300 0 300 0 100	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3AW 1280 3DB 1030	7000 50 7000 100 50 200 4500 600
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi JORK 720 Kofu JOKG 800 Kokura JOSK 735 Kumamoto	500 500 500 10000 3000 500 500	MTCY 560 1000 Mukden MTBY 890 10  PALESTINE  Jerusalem 668 200  PHILIPPINES  Manila KZEG 780 10 KZIR 900 10	Adelaide 5AD 131 5CL 73 5DN 96 5KA 120 Albury 2AY 148 Armidale 2AD 108 Ay 4AY 98 Ballarat	0 300 0 2000 0 300 0 300 0 300 0 100	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3AW 1280 3DB 1030 3KZ 1180	7000 50 7000 100 50 200 4500 600 600
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi JORK 720 Kofu JOKG 800 Kokura JOSK 735 Kumamoto JOGK 790	500 500 500 10000 3000 500	MTCY 560 1000 Mukden MTBY 890 10  PALESTINE  Jerusalem	Adelaide 5A1) 131 500 5CL 73 5DN 96 5KA 120 Albury 2AY 148 Ayr 4AY 98 Ballarat 3BA 133BA 133B	0 300 0 2000 0 300 0 300 0 300 0 100	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3AW 1280 3DB 1030 3KZ 1180 3LO 770	7000 50 7000 100 50 200 4500 600 600 3500 650
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi JORK 720 Kofu JOKG 800 Kokura JOSK 735 Kumamoto JOGK 790 Kyoto	500 500 500 10000 3000 500 1000	MTCY   560   1000   Mukden   MTBY   890   10   MTBY   890   10   MTBY   890   10   MTBY   800   800   MTBY   800   M	Adelaide 5AD 131 5CL 73 5DN 96 5KA 120 Albury 2AY 148 Armidale 2AD 108 Ay 4AY 98 Ballarat	0 300 0 2000 0 300 0 300 0 300 0 100 0 0 100	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3DB 1030 3KB 1180 3LO 770 3UZ 930 3XY 1420	7000 50 7000 100 50 200 4500 600 600 3500 650 600
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi JORK 720 Kotu JOKG 800 Kokura JOSK 735 Kumamoto JOGK 790 Kyoto JOOK 960	500 500 500 10000 3000 500 500	MTCY 560 1000 Mukden MTBY 890 10  PALESTINE  Jerusalem 668 200  PHILIPPINES  Manila KZEG 780 10 KZIB 900 11 KZRM 618.5 500  SIAM  Bangkok HSP-1 856 2:	Adelaide 5AI) 131 5DN 96 5KA 120 Albury 2AY 148 Armidale 1000 2AD 108 Ayr 4AY 98 Ballarat 3BA 132 Bega 2BE 147	0 300 2000 300 300 0 300 0 100 0 0 100 0 50 0 100	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3AW 1280 3DB 1030 3KZ 1180 3LO 770 3UZ 930 3XY 1420 3YB 1060	7000 50 7000 100 50 200 4500 600 600 3500 650
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi JORK 720 Kofu JOKG 800 Kokura JOSK 735 Kumamoto JOGK 790 Kyoto	500 500 500 10000 3000 500 1000	MTCY   560   1000   Mukden   MTBY   890   10   MTBY   890   MTBY   89	Adelaide 5A1) 131 5D0 5CL 73 5DN 96 5KA 120 Albury 2AY 148 Armidale 2AD 108 Ayr 4AY 98 Ballarat 3BA 132 Bega 147 Bendigo 3BO 3BO 97	0 300 2000 300 300 0 300 0 100 0 0 100 0 50 0 100	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3DB 1030 3AW 1280 3DB 1030 3KZ 1180 3LO 770 3UZ 930 3XY 1420 3YB 1060 Mildura	7000 50 7000 100 50 200 4500 600 600 600 600 600 600 25
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi JORK 720 Kofu JOKG 800 Kokura JOSK 735 Kumamoto JOGK 790 Kyoto JOGK 960 Maebashi JOBG 970 Matsuye	500 500 500 10000 3000 500 1000 10000 300 500	MTCY   560   1000   Mukden   MTBY   890   10   MTBY   810   MTBY   81	Adelaide 5AI) 131 5DN 96 5KA 120 Albury 2AY 148 Armidale 2AD 108 Ayr 4AY 98 Ballarat 33BA 132 Bega 2BE 147 Bendigo 3BO 97 Brisbane	NIA  ALIA  0 300 0 2000 0 300 0 300 0 100 0 100 0 50 0 100 0 200	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3AW 1280 3AW 1280 3AW 1280 3AW 1280 3UZ 930 3KZ 1180 3LO 770 3UZ 930 3XY 1420 Mildura 3MA 900	7000 50 7000 100 50 200 4500 600 600 3500 650 600
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi JORK 720 Kofu JOKG 800 Kokura JOSK 735 Kumamoto JOGK 790 Kyoto JOOK 960 Maebashi JOBG 970 Matsuye JOTK 625	500 500 500 10000 3000 500 500 1000 1000	MTCY 500 1000 Mukden MTBY 890 10  PALESTINE  Jerusalem	Adelaide 5AI) 131 5CL 73 5DN 96 5KA 120 Albury 2AY 148 Armidale 2AD 108 Ayr 4AY 98 Ballarat 3BA 132 Bega 2BE 147 Bendigo 3BO 97 Brisbane 4BC 112	0 300 0 2000 0 300 0 300 0 300 0 100 0 100 0 50 0 100 0 200 0 1000	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3G1 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3AW 1280 3AW 1280 3LO 770 3UZ 930 3XY 1420 3YB 1060 Mildura 3MA 900 Minding	7000 50 7000 100 50 200 4500 600 600 600 3500 650 600 25
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi JORK 720 Kotu JOKG 800 Kokura JOSK 735 Kumamoto JOGK 790 Kyoto JOGK 960 Maebashi JOBG 970 Matsuye JOTK 625 Milyazaki	500 500 500 10000 3000 500 1000 10000 300 500	MTCY   560   1000   Mukden   MTBY   890   10   MTBY   810   MTBY   81	Adelaide 5A1) 131 5D0 5CL 73 5DN 96 5KA 120 Albury 2AY 148 Armidale 2AD 108 Ayr 4AY 98 Ballarat 3BA 132 Bega 3BO 97 Brisbane 4BC 112 4BH 188	NIA  ALIA  300 0 2000 0 300 0 300 0 100 0 100 0 50 0 100 0 200 0 1000 0 600	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3DB 1030 3KZ 1180 3LO 770 3UZ 930 3XY 1420 3YB 1060 Mildura 3MA 900 Minding 6WA 560	7000 50 7000 100 50 200 4500 600 600 600 650 650 650 10000
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi JORK 720 Kofu JOKG 800 Kokura JOSK 735 Kumamoto JOGK 790 Kyoto JOGK 960 Maebashi JOBG 970 Matsuye JOTK 625 Miyazaki JONG 600	500 500 500 10000 3000 500 1000 10000 300 500	MTCY 560 1000 Mukden MTBY 890 10  PALESTINE  Jerusalem 668 200  PHILIPPINES  Manila KZEG 780 10 KZIB 900 11 KZRM 618.5 500  SIAM  Bangkok HSP-1 856 2: HS7PJ 750 150 1200  AFRICA	Adelaide 5AI) 131 5CL 73 5DN 96 5KA 120 Albury 2AY 148 Armidale 2AD 108 Ayr 4AY 98 Ballarat 3BA 132 Bega 2BE 147 Bendigo 3BO 97 Brisbane 4BC 112	0 300 2000 300 300 0 300 0 100 0 50 0 100 0 200 0 0 100 0 0 200 0 0 100 0 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 500 0 50	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3AW 1280 3AW 1280 3AW 1280 3LO 770 3UZ 930 3KZ 1180 3LO 770 3UZ 930 3XY 1420 3YB 1060 Mildura 3MA 900 Minding 6WA 560 Murray Bridg	7000 50 7000 100 50 200 4500 600 600 3500 650 600 25 50 10000
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi JORK 720 Kofu JOKG 800 Kokura JOSK 735 Kumamoto JOGK 790 Kyoto JOOK 960 Maebashi JOBG 970 Matsuye JOTK 625 Miyazaki JONG 600 Nagano	500 500 500 10000 3000 500 1000 10000 300 500 500	MTCY   560   1000   Mukden   MTBY   890   10   MTBY   810   MTBY   81	Adelaide 5A1) 131 5D0 5CL 73 5DN 96 5KA 120 Albury 2AY 148 Armidale 2AD 108 Ayr 4AY 98 Ballarat 3BA 132 Bega 1800 3BO 96 Bendigo 3BO 97 Brisbane 4BC 4BH 138 4BK 129 4QG 80	0 300 0 2000 0 300 0 300 0 100 0 100 0 50 0 100 0 200 0 1000 0 600 0 500 0 2500	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3AW 1280 3DB 1030 3KZ 1180 3LO 770 3UZ 930 3XY 1420 3YB 1060 Mildura 3MA 900 Minding 6WA 560 Murray Bridg 5MU 1450	7000 50 7000 100 50 200 4500 600 600 600 650 650 650 10000
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa' JOJK 710 Kochi JOKG 800 Kokura JOSK 735 Kumamoto JOGK 790 Kyoto JOGK 960 Maebashi JOBG 970 Matsuye JOTK 625 Miyazaki JONG 600 Nagano JONK 940	500 500 500 10000 3000 500 1000 10000 300 500	MTCY   560   1000   Mukden   MTBY   890   10   MTBY   890   10   MTBY   890   10   MTBY   800   MTBY   800   10   MTBY   800	Adelaide 5AI) 131 5CL 73 5DN 96 5KA 120 Albury 2AY 148 Ayr 4AY 98 Ballarat 3BA 132 Bega 2BE 147 Bendigo 3BO 97 Berisbane 4BC 112 4BH 138 4BK 129	NIA  ALIA  0 300 0 2000 0 300 0 300 0 100 0 100 0 50 0 100 0 200 0 600 0 500 0 2500	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3DB 1030 3KZ 1180 3LO 770 3UZ 930 3XY 1420 3YB 1060 Mildura 3MA 900 Minding 6WA 560 Murray Bridg 5MU 1450 Narrabri	7000 50 7000 100 50 200 4500 600 600 650 650 600 25 50 10000
Fukuoka JOLK 680 Hakodate JOVK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi JORK 720 Kofu JOKG 800 Kokura JOSK 735 Kumamoto JOGK 790 Kyoto JOGK 960 Maebashi JOBG 970 Matsuye JOTK 625 Miyazaki JONG 600 Nagano JONK 940 Nagasaki	500 500 500 10000 3000 500 10000 10000 300 500 500	MTCY 560 1000 Mukden MTBY 890 10  PALESTINE  Jerusalem 668 200  PHILIPPINES  Manila KZEG 780 10 KZIB 900 10 KZRM 618.5 500  SIAM  Bangkok HSP-1 856 21 HS7PJ 750 150 LT200  AFRICA  Algiers	Adelaide 5AI) 131 5DI 73 5DN 96 5KA 120 Albury 2AY 148 Armidale 2AD 108 Ayr 4AY 98 Ballarat 3BA 132 Bega 147 Bendigo 3BO 97 Brisbane 4BC 112 4BH 138 4BK 129 4QG 80 Broken Hill 2BH 133	NIA  ALIA  0 300 0 2000 0 300 0 300 0 100 0 100 0 50 0 100 0 200 0 600 0 500 0 2500	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3AW 1280 3AW 1280 3AW 1280 3AW 1280 3AW 1420 3YB 1030 Mildura 3MA 900 Mildura 3MA 900 Minding 6WA 560 Murray Bridg 5MU 1450 Narrabri 2NZ 1170	7000 50 7000 100 50 200 4500 600 600 3500 650 600 25 50 10000
Fukuoka JOLK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi JORK 720 Kofu JOKG 800 Kokura JOSK 735 Kumamoto JOGK 790 Kyoto JOOK 960 Maebashi JOBG 970 Matsuye JOTK 625 MIyazaki JONG 600 Nagano JONK 940 Nagasaki JOAG 930	500 500 500 10000 3000 500 1000 10000 300 500 500	MTCY   560   1000   Mukden   MTBY   890   10   MTBY   856   21   MTBY   750   150   MTBY   750   150   MTBY   750   1200   MTBY   750   1200   MTBY   750   1200   MTBY   750   150   MTBY   750   MTBY   750	Adelaide 5A1) 131 5D1 5CL 73 5DN 96 5KA 120 Albury 2AY 148 Armidale 2AD 108 Armidale 3BA 132 Bega 18BA 132 Bega 18BA 138 Bendigo 3BO 97 Brisbane 4BC 112 4BH 138 4BK 129 4QG 80 Broken Hil 2BH 138 Bundaberg	NIA  ALIA  0 300 0 2000 0 300 0 300 0 100 0 100 0 50 0 100 0 200 0 1000 0 600 0 2500 0 100	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3AW 1280 3AW 1280 3LO 770 3UZ 930 3XY 1420 3YB 1060 Mildura 3MA 900 Minding 6WA 560 Murray Bridg 5MU 1450 Narrabri 2NZ 1170 Newcastle	7000 50 7000 100 50 200 4500 600 600 600 25 50 10000 10000 10000 10000 10000
Fukuoka JOLK 680 Hakodate JOVK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa' JOJK 710 Kochi JORK 720 Kotu JOKG 800 Kokura JOSK 735 Kumamoto JOGK 790 Kyoto JOGK 790 Maebashi JOBG 970 Matsuye JOTK 625 MIyazaki JONG 600 Nagasaki JONG 940 Nagasaki JOAG 930 Nagoya	500 500 500 10000 3000 500 1000 10000 300 500 500 500	MTCY   560   1000   Mukden   MTBY   890   10   MTBY   890   MTBY	Adelaide 5AI) 131 5DI) 5CL 73 5DN 96 5KA 120 Albury 2AY 148 Armidale 2AD 108 Ayr 4AY 98 Ballarat 3BA 132 Bega 3BO 3BO 3BO 3BO 3BO 3BO 3BO 3BO 4BC 112 4BH 138 4BK 129 4QG 80 Broken Hil 2BH 133 000 Brundaberg 4BU 148	NIA  ALIA  0 300 0 2000 0 300 0 300 0 100 0 100 0 50 0 100 0 200 0 1000 0 600 0 2500 0 100	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3AW 1280 3AW 1280 3AW 1280 3AW 1280 3AW 1420 3YB 1030 Mildura 3MA 900 Mildura 3MA 900 Minding 6WA 560 Murray Bridg 5MU 1450 Narrabri 2NZ 1170	7000 50 7000 100 50 200 4500 600 600 650 650 600 25 50 10000
Fukuoka JOLK 680 Hakodate JOVK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi JORK 720 Kofu JOKG 800 Kokura JOSK 735 Kumamoto JOGK 790 Kyoto JOOK 960 Maebashi JOBG 970 Matsuye JOTK 625 Miyazaki JONG 600 Nagano JONK 940 Nagasaki JOAG 930 Nagoya JOCK-1 810	500 500 500 10000 3000 500 10000 300 500 500 500 500	MTCY 560 1000 Mukden 7890 10  PALESTINE  Jerusalem 668 200  PHILIPPINES  Manila KZEG 780 10 KZRM 618.5 500  SIAM  Bangkok HSP-1 856 2: HS7PJ 750 150 1200  AFRICA  Algiers 941 12  EGYPT	Adelaide 5AI) 131 5DN 96 5KA 120 Albury 2AY 148 Armidale 2AD 108 Ayr 4AY 98 Ballarat 3BA 132 Bega 147 Bendigo 3BO 97 Brisbane 4BC 112 4BH 138 4BK 129 4QG 80 Broken Hill 2BH 133 Bundaberg 4BU 148 Burnie	NIA  300 2000 300 0 300 0 300 0 100 0 100 0 50 0 100 0 200 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3AW 1280 3AW	7000 50 7000 100 50 200 4500 600 600 3500 650 600 25 10000 100 2000
Fukuoka JOLK 680 Hakodate JOVK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi JORK 720 Kofu JOKG 800 Kokura JOSK 735 Kumamoto JOGK 790 Macbashi JOBG 970 Matsuye JOTK 625 Miyazaki JONG 600 Nagano JONK 940 Nagasaki JONG 930 Nagasaki JOAG 930 Nagosa JOCK-1 810 JOCK-2 1175	500 500 500 10000 3000 500 1000 10000 300 500 500 500	MTCY 560 1000 Mukden MTBY 890 10  PALESTINE  Jerusalem 668 200  PHILIPPINES  Manila KZEG 780 11 KZIB 900 11 KZRM 618.5 500  SIAM  Bangkok HSP-1 856 2: HS7PJ 750 150 1200  AFRICA  Algiers 941 120  EGYPT  Alexandria	Adelaide 5A1) 131 5D1 5CL 73 5DN 96 5KA 120 Albury 2AY 148 Armidale 2AD 108 Ayr 4AY 98 Ballarat 3BA 132 Bega 1800 3BO 96 3BO 97 Brisbane 4BC 148 4BK 129 4QG 80 Broken Hil 2BH 133 Bundaberg 4BU 148 Burnie 7BU 135	NIA  300 2000 300 0 300 0 300 0 100 0 100 0 50 0 100 0 200 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3AW 1280 3AW 1280 3LO 770 3UZ 930 3UZ 930 3UZ 930 3UZ 930 3UZ 930 3WY 1420 3YB 1060 Mildura 3MA 900 Minding 6WA 560 Murray Bridg 5MU 1450 Narrabri 2NZ 1170 Newcastle 2HD 1140 2KO 1410 2NC 1230	7000 50 7000 100 50 200 4500 600 3500 600 25 50 10000 e
Fukuoka JOLK 680 Hakodate JOVK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa' JOJK 710 Kochi JORK 720 Kotu JOKG 800 Kokura JOSK 735 Kumamoto JOGK 790 Kyoto JOGK 790 Maebashi JOBG 970 Matsuye JOTK 625 Miyazaki JONG 600 Nagasaki JONG 600 Nagasaki JOAG 930 Nagoya JOCK-1 810 JOCK-2 1175 Niligata	500 500 500 10000 3000 500 10000 10000 500 500 500 500	MTCY 560 1000 Mukdem MTBY 890 10  PALESTINE  Jerusalem 668 200  PHILIPPINES  Manila KZEG 780 16 KZIB 900 16 KZIB 900 16 KZRM 618.5 500  SIAM  Bangkok HSP-1 856 2: HS7PJ 750 15: 1200  AFRICA  Algiers 941 12: EGYPT  Alexandria 1122	Adelaide 5A1) 131 500 5CL 73 5DN 96 5KA 120 Albury 2AY 148 Armidale 2AD 108 Ayr 4AY 98 Ballarat 3BA 132 Bega 3BO 2BE 147 Bendigo 3BO 80 Brisbane 4BC 112 4BH 138 Bundaberg 4BU 148 Burnie 7BU 135 500 Calrns	NIA  ALIA  300 0 2000 0 300 0 300 0 100 0 100 0 50 0 100 0 200 0 600 0 500 0 2500 0 100 0 100	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3AW 1280 3AW 1280 3AW 1280 3LO 770 3UZ 930 3XZ 1420 3YB 1060 Mildura 3MA 900 Minding 6WA 560 Murray Bridg 5MU 1450 Narrabri 2NZ 1170 Newcastle 2HD 1140 2KO 1410	7000 50 7000 100 50 200 4500 600 600 3500 650 600 25 50 10000 200 5000
Fukuoka JOLK 680 Hakodate JOVK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi JORK 720 Kofu JOKG 800 Kokura JOSK 735 Kumamoto JOGK 790 Kyoto JOOK 960 Maebashi JOBG 970 Matsuye JOTK 625 Miyazaki JONG 600 Nagano JONK 940 Nagasaki JOAG 930 Nagoya JOCK-1 810 JOCK-2 1175 Niligata Niligata JOOK 920	500 500 500 10000 3000 500 10000 300 500 500 500 500	MTCY   500   1000   Mukden   MTBY   890   10   MTBY   890   MTB	Adelaide 5AI) 131 5CL 73 5DN 96 5KA 120 Albury 2AY 148 Armidale 2AD 108 Ayr 4AY 98 Ballarat 33BA 132 Bega 2BE 147 Bendigo 3BO 97 Brisbane 4BC 112 4BH 138 4BK 129 4QG 80 Broken Hill 2BH 133 Bundaberg 4BU 148 Burnie 7BU 135 500 500 6Albury 6Albury 6Albury 7BU 135 500 6Albury 6Alb	NIA  ALIA  300 0 2000 0 300 0 300 0 100 0 100 0 50 0 100 0 200 0 600 0 500 0 2500 0 100 0 100	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3AW 1280 3AW 1420 3YB 1060 Mildura 3MA 900 Minding 6WA 560 Murray Bridg 5MU 1450 Narrabri 2NZ 1170 Newcastle 2HD 1140 2NC 1230 Northam 6AM 980	7000 50 7000 100 50 200 4500 600 3500 600 25 50 10000 e
Fukuoka JOLK 680 Hakodate JOVK 680 Hakodate JOVK 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi JORK 720 Kofu JOKG 800 Kokura JOSK 735 Kumamoto JOGK 790 Kyoto JOOK 960 Maebashi JOBG 970 Matsuye JOTK 625 Mlyazaki JONG 600 Nagano JONK 940 Nagasaki JONG 930 Nagoya JOCK-1 810 JOCK-2 1175 Niligata JOCK 920 Obihiro	500 500 500 10000 3000 500 10000 10000 500 500 500 10000 10000 10000	MTCY 560 1000 Mukden MTBY 890 10  PALESTINE  Jerusalem 668 200  PHILIPPINES  Manila KZEG 780 10 KZIB 900 10 KZRM 618.5 500  SIAM  Bangkok HSP-1 750 150 HS7PJ 750 150 1200  AFRICA  Algiers 1220  LEGYPT  Alexandria 1122 1429 Cairo (20 20 20 20 20 20 20 20 20 20 20 20 20 2	Adelaide 5A1) 131 500 5CL 73 5DN 96 5KA 120 Albury 2AY 148 Armidale 2AD 108 Ayr 4AY 98 Ballarat 3BA 132 Bega 3BO 2BE 147 Bendigo 3BO 80 Brisbane 4BC 112 4BH 138 Bundaberg 4BU 148 Burnie 7BU 135 500 Calrns	NIA  ALIA  0 300 0 2000 0 300 0 300 0 100 0 100 0 50 0 100 0 200 0 100 0 250 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3AW 1280 3AW 1280 3AW 1280 3AW 1280 3AW 1280 3AW 1280 Mildura 3MA 900 Mildura 3MA 900 Mildura 3MA 900 Minding 6WA 560 Murray Bridg 5MU 1450 Narrabri 2NZ 1170 Newcastle 2HD 1140 2KO 1410 2NC 1230 Northam	7000 50 7000 100 50 200 4500 600 3500 600 25 50 10000 e
Fukuoka JOLK 680 Hakodate JOVK 680 Hakodate JOVK 680 Hamamatsu JODG 635 Hiroshima JOFK 850 Kanazawa JOJK 710 Kochi JORK 720 Kofu JOKG 800 Kokura JOSK 735 Kumamoto JOGK 790 Kyoto JOOK 960 Maebashi JOBG 970 Matsuye JOTK 625 Miyazaki JONG 600 Nagano JONK 940 Nagasaki JOAG 930 Nagoya JOCK-1 810 JOCK-2 1175 Niligata Niligata JOOK 920	500 500 500 10000 3000 500 10000 10000 500 500 500 500	MTCY 560 1000 Mukdem MTBY 890 10  PALESTINE  Jerusalem 668 200  PHILIPPINES  Manila KZEG 780 11 KZIB 900 11 KZRM 618.5 500  SIAM  Bangkok HSP-1 856 2: HS7PJ 750 150 1200  AFRICA  Algiers 941 120  EGYPT  Alexandria 1122 1429 Cairo	Adelaide 5A1) 131 5D1 5CL 73 5DN 96 5KA 120 Albury 2AY 148 Armidale 2AD 108 Armidale 3BA 132 Bega 3BA 132 Bega 3BO 97 Brisbane 4BC 112 4BH 138 4BK 129 4QG 80 Broken Hil 2BH 138 Bundaberg 4BC 112 Bundaberg 4BC 112 Bundaberg 4BC 116 Burnie 7BU 135 Calrns 4CA 147 Canberra	NIA  ALIA  0 300 0 2000 0 300 0 300 0 100 0 100 0 50 0 100 0 200 0 100 0 250 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100 0 100	Launceston 7LA 1100 Lawrence 2NR 700 Lismore 2XN 1340 Longford 3GI 830 Mackay 4MK 1160 Maryborough 4MB 1060 Melbourne 3AK 1500 3AR 580 3DB 1030 3KZ 1180 3LO 770 3UZ 930 3XY 1420 3YB 1060 Mildura 3MA 900 Minding 6WA 560 Murray Bridg 5MU 1450 Narrabri 2NZ 1170 Newcastle 2HD 1140 2KO 1410 2NC 1230 Northam 6AM 980 Oakey	7000 50 7000 100 50 200 4500 600 600 600 650 650 10000 e 100 2000 1000

Orang 2GZ	ge 990	2000	2FC 2GB	610 870	3000 1000	NEV	N ZEAL	ND	2ZM	1150 nouth	15
Perth		2000	2K Y	1020	1000	Auck	land		3ŽR	940	400
61X	1240	500	2SM	1270	1000	IYA	650	10000	Hasti		400
6ML	1130	500	2UE	950	1000	iŸX	880	150	2ZL	1240	50
											50
6PR	880	500	2UW	1110	1000	1ZB	1090	100		cargill	
6WF	690	3500	Tamy			1ZS	1420	50	4ZP	620	500
Port	Moresby		2TM	1300	50	Balch	utha		Manu	irewa	
4PM	1360	100	Toow	oomba		4ZR	1340	4	1ZM	1260	50
Renm			2GR	1000	500 l	Chris	tchurch	1.7	Maste	rton	
		1000	Town	sville		3YA	720	10000	2ZD	1170	5
5RM	850	1000	4TO	1170	200	3ŶĹ	1200	500	Napie		
Rock	nampton		Ulver		200	3ZM	1470	60	2ZII	820	65
4RK	910	2000	U7V		300	32.WI	14/0	00			03
4RO	1330	50		1460	300	Crom	well		Nelso		
	1000	30	Wagg			4ZC	1280	7	2ZR	920	15
Sale			2WG	1150	200	-				Plymouth	
3TR	1240	500	Warw	rick		Dune			2YB	760	100
Shepp			4WK	900	50	4YA	790	500	Palm	erston N.	
			Wells	ngong		4YO	1140	150	2ZF	960	250
3WR	1260	50	2WL	1430	50	4ZB	1010	25	2 <b>Z</b> O	1400	100
Swan	Hill		2 ** 1	1430	30	4ZL	1220	100	Waire		100
3SH	1080	50				4ZM	1010	30			
			NEW	CALEDO	DNIA	4ZO	1010	25	2ZP	900	105
Sydne		2						2.5		ngton	
2BL	740	3000	Noun			Gisbo			2YA	570	5000
2CH	1190	1000	FJP	600	500	2ZJ	980	60	2YC	840	200

### FOREIGN B. C. STATIONS BY CALLS

C B57	570	CT1AA	629	EAJ14	1500	HJ3ABE	1200	JOTK	625	LT11	1260 PRA8	750
CB62	620	CT1GL	1031	EAJ15	1022	HJ3ABH	1005	JOUK	645	LUHO	750 PRA9	1000
CB64	640	CW19	1340	EAJ16	1492	HJ4ABJ	1000	JOVK	680	LU2	900 PRB2	882
CB73	730	CW23	820	EAJ17	1492	HJ4ABK		JOXK	980	LU6	1300 PRB3	857
CB76	760	CW25	1430	EAJ19	1022	HSP1	856	JQAK	652	LU7	1240 PRB4	960
CB78	780	CW27	680	EAJ20	1492	HS7PJ	750	KZEG	780	LV1	730 PRB5	1415
CB82	820	CW29	1120	EAJ21	1492	I1BA	1059	KZIB	900	LV2	880 PRB6	1170
CB84	840	CW31	1160	EAJ23	1492	I1BZ	536	KZRM	618.5	LV3	620 PRB7	800
CB89	890	CW33	1460	EAJ24	1492	I1FI	610	LKA	850	LV5	1120 PRB8	1000
CB90	900	CW35	1240	EAJ25	1502	11GE	986	LKB	850	LV6	690 PRB9	1017
CB93	930	CW37	1400	EAJ26	1502	IIMI	814	LKD	686	LV7	820 PRC2	1090
CB97	970	CW39	1320	EAJ27	1492	I1NA	1104	LKF	776	LV10	1210 PRC3	920
CB101	1010	CW41	1360	EAJ29	1500	I1PA	565	LKH	519	LV14	1240 PRC4	1304
CB106	1060	CW43	1470	EAJ30	1500	I1RO	713	LKI	845	MABS	1250 PRC5	1364
CB111	1110	CW47	1480	EAJ31	1492	I1TO	1140	LKK	1276	MTBY	890 PRC6	980
CB114	1140	CX4	610	EAJ32	1500	I1TR	1222	LKM	1186	MTCY	560 PRC7	1090
CB116	1160	CX6	650	EAJ33	1492	JBAK	1020	LKN	1357	MTFY	675 PRC8	1030
CB118	1180	CX8	690	EAJ34	1492	JFAK	670	LKO	1181	OAX4A	750 PRC9	1175
CB120	1200	CX10	730	EAJ35	1500	JFBK	720	LKP	850	OAX4B	1200 PRD2	932
CB124	1240	CX12	770	EAJ36	1500	JFCK	580	LKR	1348	OAX4C	1300 PRD3	1207
CB126	1260	CX14	810	EAJ37	1500	JOAG	930	LKS	1276	OAX4E	980 PRD4	1364
CB130	1300	CX16	850	EAJ38	1500	JOAK-1	870	LKT	629	OAX4F	1080 PRD5	1400
CB132	1320	CX18	890	EAJ39	1492	JOAK-2	590	LR1	1070	OAX4H	1150 PRD7	1430
CB134	1340	CX20	930	EAJ40	1500	JOBG	970	LR2	910	OAX4I	1120 PRD8	1132
CB138	1380	CX22	970	EAJ41	1492	JOBK-1	750	LR3	950	OAX4L	1250 PRD9	769
CB139	1390	CX24	1010	EAJ42	1492	JOBK-2	1085	LR4	990	OA4AR	1210 PRE2	1330
CB140	1400	CX26	1050	EAJ43	1492	JOCG	655	LRS	830	OA4K	1360 PRE3	1220
CB144	1440	CX28	1090	EAJ44	1492	JOCK-1	810	LR6	870	0A40	1277 PRE4	941
CB144A	1440	CX30	1130	EAJ45	1500	JOCK-2	1175	LR7	750	OA6D	1400 PRE5	1410
CB144B	1440	CX32	1170	EAJ46	1492	JODG	635	LR8	1150	OAGE	1350 PRE6	740
CB144C	1440	CX34	1210	EAJ47	1492	JODK-1	900	LR9	1030	OAGU	1443 PRE7	788
CB146	1460	CX36	1250	EAJ48	1492	JODK-2	610	LR10	790	OFA	895 PRE8	1270
CB150 CC58	1500	CX38	1290	EAJ49	1500	JOFG	990	LR11	1390	OFD	749 PRE9	1315
CC64	580	CX40 CX42	1330	EAJ51	1492	JOFK	850	LS1	710	OFE	1340 PRF2	725
CC96	640	CX44	1370	EAJ52	1492	JOGK	790	LS2	1190	OFH	527 PRF3	900
CC109	960 1090	CX46	1410 1450	EAJ53 EAJ55	1492	JOHK	770 830	LS3 LS4	630	OKB	922 PRF4	923
CC117	1170	CX48	1500	FFZ	1492	JOIR	1040	LS5	670 1110	OKK OKP	1113 PRF6	1050
CC136	1360	EAJ1	790	FJP	600	TOTE	710	LS6	1350	OKP	633 PRF7	1380
CC141	1410	EAJ2	735	F31CD	840	JOKG	800	LS7	1310	ON4CE	1004 PRF8	950 1360
CC143	1430	EAJ3	850	HAE	1122	JOKK	700	LS8	1230	ON4CE	1492 PRF9 1500 PRG3	
CD103	1030	EAJ4	1492	HAE2	1321	JOLG	890	LS9	1270	ON4CE ON4EB		1280
CD111	1110	EAJ5	731	HAE3	1438	JOLK	680	LS10	590	ON4EB	1492 PRG4 1500 PRG5	1442 720
CD111	1120	EAJ6	1492	HAE4	1465	JONG	600	LS11	1440	PFBI	995 PRG6	1500
CD121	1210	EAJ7	1095	HAL	546	JONK	940	LT1	780	PP	959 PRG7	1330
CD132	1320	EAJ8	1258	HC2ET	1153	JOOG	1080	LT3	1080	PRA2	750 PRG9	1200
CD132	1360	EAJ9	1492	HC2JB	1250	JOOK	960	LT5	1160	PRA2	860 PRH2	600
CNO	983	EAJ10	1492	HJN	681	JOPK	780	LT7	1340	PRA4	840 PRH3	1120
CNR	601	EAJ11	1500	HJ1ABA	1330	JOOK	920	LT8	840	PRAS	1295 PRH4	1480
CPX	1300	EAJ12	1492	HJ1ABM	1154	JORK	720	LT9	1200	PRA6	815 PRH8	820
CP4	1040	EAJ13	1492	HJ3ABD		JOSK	735	LT10	1300	PRA7	706 PYG2	1078
	2040		1471		-100	- J- J- J- N			1300	· MAI	100 F T GIZ	1010

PYG8	1250	RW82	608	XGML	714.3	XHJA.	1280	XQKB	750	2NZ	1170 4BK	1290
RW9	722	RW84	635	XGOA	660	XHKA	1050	XQKC	810	2QN	1440 4BU	1480
RW10	1438	RW85	871	XGOB	1090	XHKB	590	YDA	1510	2RN	1340 4CA	1470
RW13	960	RW86	1013	XGOC	1130	XHKC	1210	YLZ	583	2SM	1270 4GR	1000
RW16	710	SBA	704	XGOD	990	XKRI	1071	YN	648	2TM	1300 4GY	1430
RW17	686	SBB	941	XGOE	1290	XLHA	780	YVIRC	960	2UE	950 4IP	1440
RW18	610	SBC	1312	XGOF	860	XLHB	560	YV3RC	1200	2UW	1110 4MB	1060
RW20	1185	SBD	601	XGOH	560	XLHC	720	YV4RC	750	2WG	1150 4M K	1160
RW22	617	SBH	1131	XGOI	900	XLHD	720	YV5RM	O 1300	2WL	1430 4PM	1360
RW23	676	SCA	1402	XGOK	750	XLHE	1380	YV11RN	<b>101</b> 034	2XN	1340 4QG	800
RW26	776	SCB	1402	XGOL	1030	XLHF	1380	YV6RV	670	2YA	570 4QN	600
RW27	689	scc	1086	XGON	930	XLHI	760	ZBW	845	2YB	760 4RK	910
RW28	635	SCD	1402	XGOP	950	XLHJ	760	ZEK	640	2YC	840 4RO	1330
RW28	725	SCE	1402	XGOS	711	XLHK	800	ZP1	1135	2ZD	1170 4TO	1170
RW29	648	SCF	1402	XGOT	1000	XLHL	800	ZP4	1275	2ZF	960 4WK	900
RW30	913	SCG	1402	XGOT	1220	XLHM	1120	ZP5	1465	2ZH	820 4YA	790
RW31	625	SCH	1402	XGOW	1010	XLHN	1120	ZP9	898	2ZJ	980 4YO	1140
RW32	635	SCI	1402	XGOX	1070	XLHO	1400	ZTB	790	2ZL	1240 4ZB	1010
RW33	1050	SCJ	1530	XGOY	690	XLHQ	1440	ZTC	600	2ZM	1150 4ZC	1280
RW34	522	SCK	1312	XGOZ	1150	XLIA	1320	ZTD	750	2ZO	1400 4ZL	1220
RW35	598	SCL	1402	XGSA	1335	XLIB	1450	ZTJ	645	2ZP	900 4ZM	1010
RW36	586	SCM	1402	XGSS	610	XLID	1370	ZTP	952	2ZR	920 4ZO	1010
RW38	662	SCN	1402	XGTM	840	XLIE	1170	ZUG	560	3AK	1500 4ZP	620
RW39	832	SCO	1312	XGTM	900	XLIF	1250	1YA	650	3AR	630 4ZR	1340
RW40	959	SCP	1402	XGYY	1150	XLII	830	1YX	880	3AW	1280 5AD	1310
RW41	563	SCQ	1312	XHGS	730	XLIJ	790	1ZB	1090	3BA	1320 5CK	640
RW42	565	SCR	1402	XHHA	840	XLIK	1330	1ZM	1260	3 <b>BO</b>	970 5CL	730
RW46	686.5	SCS	1402	ХННВ	740	XLIL	870	1ZS	1420	3DB	1030 SDN	960
RW48	704	SCT	1402	XHHD	860	XLIM	910	2AD	1080	3GI	830 5KA	1200
RW50	617	SCU	1240	XHHE	940	XLIN	1390	2AY	1480	3GL	1350 5MU	1450
RW51	794	scv	1402	XHHF	960	XLIO	1090	2BE	1470	3HA	1010 5PI	1040
RW52	556	scw	1402	XHHG	1020	XLIQ	850	2BH	1330	3HS	1370 5RM	850
RW54	580	SPTT	859	хннн	1040	XLIR	1230	2BL	740	3KZ	1180 6AM	980
RW 54	950	TUA	1275	XHHI	1060	XLKA	1194	2CA	1050	3LO	770 6CK	1240
RW55	932	VPB	705	XHHJ	1080	XLKB	825	2CH	1190	3MA	900 6GF	720
RW56	640	VQ7L0	858	ХННК	620	XLKS	1490	2CO	670	3 <b>SH</b>	1080 61 X	1240
RW57	1068	VUB	855	XHHL	1140	XLPH	1210	2CR	550	3TR	1240 6KG	1210
RW61	888	VUC	810	XHHN	1200	XLTC	1210	2FC	610	3 <b>UZ</b>	930 6ML	1130
RW64	740	VUD	880	XHHP	1260	XMHA	600	2GB	870	3WR	1260 6PR	880
RW65	734	VUG	933	XHHQ	1280	XMHB	980	2GF	1210	3WV	580	560
RW67	968	VUL	1200	XHHR	1340	XMHC	700	2GN	1390	3XY	1420 6WA	
RW68	577	VUM	770	XHHS	1100	XOCL	1500	2GZ	990	3YA	720 6WF	690
RW69	968	VUP	1500	XHHT	1500	XOMO	1450	2HD	1140	3 <b>Y B</b>	1060 7BU	1390
RW70	1040	XDYF	1270	XHHU	1160	XQHA	580	2KA	1160	3YL	1200	820
RW71	689	XGCK	990	XHHV	880	XQHB	850	2KO	1410	3ZM	1470 7HO	
RW73	859	XGDZ	1470	XHHX	920	XQHC	1300	2KY	1020	3ZR	940 7LA	1100
RW74	680	XGED	1340	XHHY	1240	XQHD	1360	2LV	980	4AK	1220 7NT	750
RW75	1095	XGF	833	XHHZ	1180	XQHE	1460	2MO	1360	4AY	980 7UV	1460
RW78	767	XGKA	895	XHIA	1410	XQHF	1480	2NC	1230	4BC	1120	
RW79	610	XGMK	1005	XHIB	970	XQKA	1350	2NR	700	4BH	1380 7ZL	590

540 kcys. (555.2)	
CJRM ak 1000 F Moose Jaw, Sask.	-J. Richardsons & Sons, 311 Main St.
550 keys. (545.1)	
CFNB         ak         500         F (1)         Fredericton, N. B.           KFVO         ae         500         2 (1)         St. Louis, Mo.           KFYR         ae         1000         N (5)         Bismarck, N. D.           KOAC         ak         1000         Corvallis, Ore.           KSD         ak         1000         C(5)         St. Louis, Mo.           KTSA         ak         1000         C(5)         San Antonio, Tex.           WBEV         ae         500         D         Waterbury, Vt.           WKRC         ak         1000         C         Gincinnati, Ohio           WSVA         ak         500         D         Harrisonburg, Va.	J. S. Neill & Sons, York StEvangelical Lutheran Synod, 801 DeMun StMeyer Brdcstg. Co., 320 BroadwayState Agricultural CollegeSt. Louis Post-DispatchSouthwest Brdcstg. Co., Plaza HotelMary M. Whitehill, Stowe StBuffalo Brdcstg. Corp., Rand BldgWKRC, Inc., Hotel AlmsMarion Gilliam. Main & Market Sts.
560 keys. (535.4)	
KFDM ak 500 (1) Beaumont, Tex. KLZ ae 1000 C Denver, Colo. KSFO ak 1000 San Francisco, Cal.	Sabine Brdcstg. Co., Box 2950 Shirley-Savoy Hotel. Russ Building.

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570 kcys. (526.0)	
KGKO ak 250 C (1) Wichita Falls, Tex. KMTR ak 1000 Hollywood, Calif. KWT ak 1000 C Tacoma, Wash. WKBN ac 500 IC Youngstown, Ohio WMCA ak 500 New York, N. Y. WOSU ak 750 I (1) Columbus, Ohio WSYR ak 250 BX Syracuse, N. Y. WSYR ak 250 BX Syracuse, N. Y. WSYR ak 1000 N Asheville, N. C Citizen Brdcstg. Co., Inc., Flatiron Bld.	St. adway ol
580 kcys. (516.9)	
CFPR z 50 Prince Rupert, B.C. Quebec, Que CIJGX ae 100 F Yorkton, Sask, CKCL ae 100 F Toronto, Ont. CKUA ak 500 Edmonton, Alta. KMJ ak 1000 C Fresno, Calif. —State College of Agriculture WDBO ae 1000 C Orlando, Fla. WIBW ak 1000 C2 (5) Topeka, Kans. WTAG ae 500 R Worcester, Mass. —Worcester Telegram, 18 Franklin St.	
590 kcys. (508.2)	
KHO ak 1000 R (2.5) Spokane, Wash. WEEI ak 1000 R Boston, Mass. WKZO ae 1000 DX Kalamazoo, Mich. WOW ae 5000 R(5) Omaha, Nebr. XEPN ak 50000 Piedras Negras, Coah.	n
600 kcys. (499.7)	
CFCF ae 400 FN Montreal, Que. CJOR ak 500 Vancouver, B. C. CMW ak 500 F (1) Windsor, Ont. FQN z 250 609 St. Pierre, Miq. KFSD ae 1000 B San Diego, Calif. WCAC ak 500 2 C(1) Baltimore, Md. WICC ae 500 2 C(1) Bridgeport, Conn. WMT ak 1000 B (2.5) Cedar Rapids, Ia. WREC ak 1000 C (2.5) Memphis, Tenn.  —Canadian Marconi Co., Royal Hotel —G. C. Chandler, Hotel Grosvenor —Paseo de Marti 105 —C. R. B. C., Guaranty Trust Bidg —Airfan Radio Corp., U. S. Grant Hotel —Connecticut State Collège —Monumental Radio Co., 811 W. Lanvale —So. Conn. Brdcstg. Corp., Stratfield Ho —Iowa Brdcstg. Co., Hotel Montrose —WREC, Inc., Hotel Peabody	: tel
610 kcys. (491.5)	
KFRC ck 1000 C (5) San Francisco, Cal. WDAF ak 1000 R (5) Kansas City, Mo. WIP ae 1000 Philadelphia, Pa. WJAY ae 500 D Cleveland, Ohio XFX ak 1000 Mexico City, D. F.	Ave. oad
620 kcys. (483.6)	
KGW ak 1000 R (5) Portland, Ore. KTAR ae 1000 N Phoenix, Ariz. WFLA ae 1000 Na (5) Clearwater, Fla. WHJB ak 250 D Greensburg, Pa. WLBZ ak 500 C (1) Bangor, Maine WSUN ae 1000 Na (5) St. Petersburg, Fla. WTMJ ae 1000 N (5) Milwaukee, Wis.  -Oregonian Pub. Co., 325 Adler St.  -KTAR Brdcstg. Corp., Heard Bldg.  -Chamber of Commerce, Box 119  -Pittsburgh Radio Supply Co., 128 Penna  -Maine Brdcstg. Co., 100 Main St.  -Chamber of Commerce, Recreation Pic.  -The Journal Co., 333 W. State St.	. Ava.

630 kcys. (475.9)	
CFCO	- John Beardall, Wm. Pitt Hotel - Island Radio Co., 143 Great George St 155 Royal Alexandra Hotel - Okanagan Brdcsters., Box 243 - KFRU, Inc., Ninth and Elm Sts Dana McNeil, Box 573 - Evansville on the Air, 519 Vine St NBC, Inc., 712 - 11th St., N. W State Highway Control, Capitol Bidg Cherry & Webb Brdcstg. Co., 15 Chestnut - Jorge L. Falomeque
640 kcys. (468.5)	
CMBC         dj         150          Havana, Cuba.           KFI         ah         50000         R         Los Angeles, Calif.           WAIU         ae         500          Columbus, Ohio           WOI         ae         5000         D         Ames, Iowa           XEOX         ak         500          Saltillo, Coah.	Maximo Gomez 139 Earle C. Anthony, Inc., 1000 S. Hope St Deshler-Wallick Hotel Iowa State College Antonio Garza C., Victoria 4 (altos)
650 kcys. (461.3)	
WSM ae 50000 N Nashville, Tenn.	-National Life and Accident, 301 Seventh St.
660 keys. (454.3)	
WAAW ak 500 D Omaha, Neb. WEAF ak 50000 R New York, N. Y.	—Omaha Grain Exchange —NBC, Inc., 30 Rockefellar Plaza
670 kcys. (447.5)	
WMAQ ak 50000 N Chicago, III.	—NBC, Inc., Merchandise Mart
680 kcys. (440.9)	
CMCG         ak         150          Havana, Cuba.           KFEQ         ak         2500         D         St. Joseph, Mo.           KPO         ak         50000         R         San Francisco, Cal.           RDN         z         500          San Salvador, E.S.           VAS         akn         2000         685         Glace Bay, N. S.           VOWR         ck         500         681         St. John's, Mfd.           WPTF         ae         5000         DnN         Raleigb, N. C.	-La Onda, S. A., Calle Malecon 340KFEO, Inc., Schneider BldgNBC, Inc., 111 Sutter StRepublic of El SalvadorCanadian Marconi Co., LtdWesley United Church, Box 157WPTF Radio Co., 324 Fayetteville St.
690 kcys. (434.5)	
CFRB ak 10000 C Toronto, Ont. CJCJ aj 100 F Calgary, Alta. NAA akn 1000 Arlington, Va. XET ak 500 Monterrey, N. L.	<ul> <li>Rogers-Majestic Corp., 37 Bloor St.</li> <li>Albertan Pub. Co., New Albertan Bldg.</li> <li>United States Navy</li> <li>P. O. Box 203, Hidalgo.</li> </ul>
700 kcys. (428.3)	
WLW ak 500000 N Cincinnati, Ohio	—Crosley Radio Corp., 1329 Arlington St.
710 kcys. (422.3)	
KIRO         ae         500         Seattle, Wash.           KMPC         ak         500         Beverly Hills, Cal.           WOR         ak         50000         Newark, N. J.           XEN         ak         1000         Mexico City, D. F.	—Tower Bidg.  —Bev. Hills Brdcstg. Corp., 9631 Wiltshire  —Bamberger Brdcstg. Sys., 147 Market St.  —G. de la Conde, Dolores No. 1
720 kcys. (416.4)	
WGN ak 50000 Chicago, III.	-WGN, Inc., 435 N. Michigan Ave.
730 kcys. (410.7)	
CFPL ak 100 F London, Ont. CJCA ah 1000 F Edmonton, Alta. CKAC ck 5000 C Montreal, Que. CMK ae 3000 Havana, Cuba	—London Free Press, Richmond St. —Edmonton Journal, 10122 - 100 A St. —La Presse Pub. Co., 980 St. Catherine St. —Cia. Nacional de Radio, Hotel Plaza

TORTH MAERICAN B. C. C	STATIONS BT TREQUENCIES			
740 kcys. (405.2)	1			
KMMJ         ae         1000         D         Clay Center, Neb.           KTRB         ak         250         D         Modesto, Calif.           WHEB         ak         250         D         Portsmouth, N. H.           WSB         ah         50000         N         Atlanta, Ga.	—The M. M. Johnson Co. —McTammany & Bates, Box 405 —Granite State Brdcstg Corp., Box 522 —Atlanta Journal, 7 N. Forsyth St.			
750 kcys. (399.8)				
CMCW         dk         150          Havana, Cuba           KGU         aj         2500         N         Honolulu, T. H.           WJR         ak         50000         C         Detroit, Mich.           XEAM         z         7.5          Matamoros, Tams.	Radio Pilot, San Lazaro 113 -Advertiser Pub. Co., Kapiolani & South Sts., -WJR, Inc., Fisher BldgEdificio Banco Longoria			
760 kcys. (394.5)	6.			
CMHX         ak         200          Clenfuegos, Cuba           KXA         ae         250         (.5)         Seattle, Wash.           WBAL         ae         2500         BSy         Baltimore, Md.           WEW         ae         1000         D         St. Louis, Mo.           WJZ         ak         50000         BSy         New York, N. Y.           XEOK         z         250          Tijuana, L. C.	F. Chavarry, P. O. Box 205  American Radio Tel. Co., 312 Bigelow Bldg.  American Radio News Corp., Lexington Bldg.  St. Louis University, 221 N. Grand Blvd.  NBC, Inc., 30 Rockefeller Plaza  Carlos de la Sierra, Calle 5a, 312			
770 kcys. (389.4)				
CMBS ak 150 Havana, Cuba KFAB ae 10000 CSy Lincoln, Neb. WBBM ae 50000 CSy Chicago, III.	—Calzada y "H" St., Vedado, Havana —KFAB Brdcstg. Co., Cornhusker Hotel —WBBM Brdcstg. Corp., 410 N. Michigan Ave.			
780 kcys. (384.4)				
CHWK OK         dk         1000         F         Chilliwack, B. C.           CKSO         ak         1000         F         Sudbury, Ont.           CMJK         ak         250	-Chilliwack Brdcstg. Co., Box 452 -W. E. Mason, Grand Theatre Bldg, -Cia Nacional de Radio, Finlay No. 3 -Magnolia Park Ltd., 3702 Magnolia Park BlvdSouth Dakota State College, Box LAnchorage Radio Club, 411 Fourth AveNorthwestern Auto Supply, 5th and Broadway214 So. Vermont StShepard Brdcstg. Serv., New Crown Hotel -WMC, Inc., Hotel Gayoso -WTAR Radio Corp., Bank of Commerce BldgAngel M. Diez, Avenida Juarez 48			
790 kcys. (379.5)	•			
CMGH z 250 Matanzas, Cuba KGO ak 7500 B San Francisco, Cal. WGY ak 50000 R Schenectady, N. Y.	—"Rialto," E. Blanchet 25 —NBC, Inc., 111 Sutter St. —General Electric Co., 1 River Road			
800 kcys. (374.8)				
HIX ak 700 Trujillo, D. R. WBAP ak 50000 Na Fort Worth, Tex. WFAA ak 50000 Na Dallas, Tex. WTBO ak 250 D Cumberland, Md.	—J. R. Saladin, Director General —Ft. Worth Star-Telegram —A. H. Belo Corp., Baker Hotel —Associated Brdcstg. Corp., Box 794			
810 kcys. (370.2)				
CMCF ak 600 Havana, Cuba WCCO ae 50000 C Minneapolis, Minn WNYC ak 1000 D New York, N. Y. XFC z 350 Aguascalientes, Ags.	—Oscar Gutierrez, Paseo de Marti 9     —Northwestern Brdcstg. Co., Nicollet Hotel     —City of N. Y., Centre & Duane Sts.     —Gobierno del Estado de Aguascalientes			
820 kcys. (365.6)				
CMHW ak 100 Cienfuegos, Cuba. WHAS aj 50000 C Louisville, Ky. XEMZ z Coronado Isle, L. C.	Ramon Gonzales, Box 226 Courier-Journal, 300 W. Liberty St.			
830 kcys. (361.2)				
KOA ak 50000 N Denver, Colo. WEEU ak 1000 D Reading, Pa,	NBC, Inc. Berks Brdcstg. Co., 533 Pennsylvania			
5	2.0			

NORTH AMERICAN B. C.	STATIONS BY FREQUENCIES
WHDH ae 1000 Dn Boston, Mass. WRUF ae 5000 Dn Gainesville, Fla.	—Metheson Radio Co., 62 Boylston —University of Florida
840 kcys. (356.9)	
CFOC ak 1000 F Saskatoon, Sask. CRCT ak 5000 FN Toronto, Ont. VOGY ak 400 St. John's, Nfld. XERA ck 250000 Villa Acuna, Coah.	—Electric Shop, Ltd., 216 First Ave., No. —C. R. B. C., 895 Davenport Road —Newfoundland Hotel —Brinkley Hospital (Del Rio, Texas),
850 keys. (352.7)	
CMBN z         150 ms	Calle Pozos Dulces 3, Rpt. Ensanche Cannon System, Ltd., Glendale. Eduardo Pinto H., Apartado 257 Cornell University, Mark Twain Hotel Michigan State College Loyola University, Roosevelt Hotel R. T. Carranza, Km. 4 Carretera Laredo Mt.
860 kcys. (348.6)	
WABC ak 50000 C New York, N. Y. WHB ak 1000 D Kansas City, Mo. XEMO ak 5000 Tijuana, L. C.	—Atlantic Brdcstg. Corp., 485 Madison Ave. —WHB Brdcstg. Co., Scarritt Bldg. —Box 202, San Diego, Calif.
870 kcys. (344.6)	,
WENR ak 50000 Na Chicago, III. WLS ae 50000 Na Chicago, III.	-NBC, Inc., Merchandise Mart -Agricultural Brdcstg. Co., 1230 Wash. Blvd.
880 kcys. (340.7)	
CFJC         ak         100         F         Kamloops, B. C.           CMO         ak         500          Havana, Cuba           CRCO         ak         1000         F         Ottawa, Ont.           KFKA         ak         500         2 (1)         Greeley, Colo.           KLX         ae         1000          Oakland, Calif.           KPOF         ae         500         2         Denver, Colo.           WCOC         ae         500         (1)         Meridian, Miss.           WGBI         ae         500         1         Scranton, Pa.           WPHR         ak         500         D         Petersburg, Va.           WQAN         ae         250         1         Scranton, Pa.           WSUI         ae         500         (1)         Iowa City, lowa	Review Publishing Co., Wilcox-Hall Bldg.  —25 Numero 445, Vedado, Havana  —C. R. B. C., Chateau Laurier Hotel  —Mid-Western Radio Corp., Box 735  —Tribune Tower  —Pillar of Fire, 1845 Champa St.  —Mississippi Brdcstg. Co., Box 603  —Scranton Brdcsters, Inc., 1000 Wyoming Ave,  —WLBG, Inc., Medical Arts Bldg.  —Scranton Times, 149 Penn Ave.  —State University of Iowa
890 kcys. (336.9)	
KARK         ak         250         (.5) X         Little Rock, Ark.           KFNF         ak         500         2 (1)         Shenandoah, Iowa           KFPY         ak         1000         C X         Spokane, Wash.           KUSD         ae         500         2         Vermillion, S. D.           WGST         ak         1000         C         Atlanta, Ga.           WILL         ak         250         2 (1)         Urbana, III.           WJAR         ae         500         C (1)         Fairmount, W. Va           XEW         ak         5000         C (1)         Fairmount, W. Va           Mexico City, D. F.         Akare         Akare         Akare	<ul> <li>N. S. L. Building</li> <li>Henry Field, 407 Sycamore St.</li> <li>Symons Brdcstg, Co., Symons Bldg.</li> <li>University of South Dakota</li> <li>Purdue University</li> <li>Ga. School of Technology, Ansley Hotel</li> <li>University of Illinois</li> <li>Outlet Co., Weybossett St.</li> <li>W. Va. Brdcstg Corp., 208 Main St.</li> <li>Cadena Radiodifusora Mexicana, Box 2516</li> </ul>
900 kcys. (333.1)	
KGBU         ak         500          Ketchikan. Alaska           KHJ         ae         1000         C (5)         Los Angeles, Calif.           KSEI         ck         250         (5)         Pocatello, Idaho           WBEN         ak         1000         R (5)         Buffalo, N. Y.           WFMD         ah         500         D         New Haven, Conn.           WFMD         ah         500         D         Frederick, Md.           WJAX         aeh         1000         N (5)         Jacksonville, Fla.           WKY         ae         1000         N Oklahoma City, Ok	<ul> <li>—Alaska Radio &amp; Serv. Co., Mile 5, Wards Cove</li> <li>—Don Lee System, 7th and Bixel Sts.</li> <li>—Radio Service Corp., 141 So. 6th St.</li> <li>—WBEN, Inc., Hotel Statler</li> <li>—Patrick J. Goode</li> <li>—Francis Scott Key Hotel</li> <li>—City of Jacksonville</li> <li>—WKY Radiophone Co., Plaza Court Bldg.</li> <li>—State of Wisc., Fox Theater Bldg.</li> <li>—Illinois Brdcstg. Corp., State and 6th</li> </ul>
910 kcys. (329.6)  CJAT ak 1000 F Trail, B. C.	-Kootenay Brdcstg. Co., Box 1959
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NORTH AMERICAN B. C.	STATIONS BY FREQUENCIES
CRCM ak 5000 F Montreal, Que. XENT ak 150000Nuevo Laredo, Tams.	—C. R. B. C., 1231 St. Catherines St., W. —P. O. Box 410, Laredo, Texas
920 keys. (325.9)	
CMX ae 1000	<ul> <li>Eugene O'Fallon, Inc., Albany Hotel</li> <li>Fishers Blend Station, Inc., Skinner Bldg.</li> <li>Houston Printing Co., Lamar Hotel</li> <li>Colorado Radio Corp., Continental Oil Bldg.</li> <li>Drovers Journal Pub. Co., Palmer House</li> <li>Wm. Penn Brdcstg. Co., 22nd and Walnut St.</li> <li>WRAX Brdcstg. Co., 217 So. Broad St.</li> </ul>
930 keys. (322.4)	
CFAC	T. P. & C. Brdcstg. Co., Southam Bldg. Roy H. Thompson, Capitol Theater Bldg. Radio Assn. of Prescott, 307 George St. Maritime Brdcstg. Co., Lord Nelson Hotel Telephone City Brdcstg. Ltd., Arcade Bldg. Dougall Motor Co., Royal Edward Hotel KGBZ Brdcstg. Co., 719 Grant Ave. Earl E. May Seed and Nursery Co. Educational Brdcstg. Corp., 1803 Franklin St. Birmingham Brdcstg. Co., Bankhead Hotel Times World Corp., P. O. Box 150
XEBH z 500 Hermosillo, Sonora	-Carlos Halderamma, Obregon 10
940 kcys. (319.0)	
KOIN         ak         1000         C (5)         Portland, Ore.           VOAS         ak         100          St. John's, Nfd.           WAYE         bk         100          Jersey City, N. J.           WCSH         ae         1000         N. Louisville, Ky.           WCSH         ae         1000         R (2.5)         Portland, Maine           WHA         ak         2500         D         Madison, Wis.           XEFO         ak         5000         (XFO)         Mexico City, D. F.	- KOIN, Inc., New Heathman Hotel - Ayre and Sons. Ltd., Water St Brenner Brdcstg. Corp., 50 Journal Sq WAVE, Inc., 1525 Brown Hotel - Congress Square Hotel Co WDAY, Inc., Black Bldg., 118 Broadway - University of Wisconsin, Radio Hall - Av. 5 de Mayo 19
950 kcys. (315.6)	10 mg 45°
CJOC         ak         100         F         Lethbridge Alta.           CMCD         ak         250          Havana. Cuba           CRCS         ak         100         F         Chicoutimi, Que.           KFWB         ak         1000         (5)         Hollywood. Calif.           KHSL         ak         250         D         Chico, Calif.           KWRC         ak         500         R (1)         Washington. D. C.           YNVA         z         30          Managua, Nic.	-H. R. Carson, Ltd., Marquis Hotel -Calle "G" y 25, Vedado, Havana -C. R. B. C., 4 Rue Larouche Warner Bros. Motion Pictures. Inc. Golden Empire Brdestg. Co. Midland Brdcstg. Co., Pickwick Hotel -NBC, Inc., National Press Bldg.
960 kcys. (312.3)	
CKY ak 15000 F Winnipeg, Man. XEAW ck 50000 Reynosa, Tams.	— Manitoba Telephone System, Sherbrooke St. —Cia. Int. Difurosa Reynosa, Aptdo. 6
970 kcys. (309.1)	
CMBY z         150          Havana, Cuba.           KJR ak         5000 B         Seattle, Wash.           WGFL ae         5000 B         Chicago, III.           WIBG ak         100 D         Glenside, Pa.	—Calle Infanta 132 —Fishers Blend Station, Skinner Bldg, —Chi, Fed, of Lahor, 666 Lake Shore Drive —Seaboard Radio Brdcstg, Corp.
980 kcys. (306.0)  KDKA ae 50000 B Pittsburgh, Pa. XEF z 100 Juarez, Chih.	-Westinghouse Elec. & Mfg. Co., Grant Bldg.
990 kcys. (302.8) WBZ ak 50000 BSy Boston, Mass.	-Westinghouse El. & Mfg. Co., Hotel Bradford

	NOR	IH A	MERICAN B. C.	STATIONS BY FREQUENCIES
WBZA XEAF XEK XES	ak S	000 BS 500 100 250	Madalaa Camono	<ul> <li>Westinghouse El. &amp; Mfg. Co., Hotel Kimball</li> <li>Fransisco G. Elias, Hotel Central</li> <li>Arturo Martinez, Jalapa No. 51</li> <li>Fernando Sada, Box 309</li> </ul>
1000	kcys	s. (29	99.8)	
CMBZ KFVD TIGH WHO XEBK XEY	ak 2 z 5 ak 500	250 Dn 500	Havana, Cuba Los Angeles, Calif. San Jose, C. R. Des Moines, Iowa Nuevo Laredo, Tams. Merida, Yuc.	<ul> <li>M. y G. Salas. San Rafael No. 14</li> <li>E. L. Cord, 645 Mariposa</li> <li>Central Brdcstg. Co., 914 Walnut St.</li> <li>Ramon Rubio, Calle 64, No. 568</li> </ul>
1010	kcys	s. (29	96.9)	
CHML CHWC CKCB CKCB CKCC CKWX CMJA KGGF KGGF TIGA WHN WNOX XEU	ak 5 ak 5 ak 16	100 F 500 3F 100 F 500 3F 100 F 50 100 F 50 100 (5) 000 (5) 000 (5)	New York, N. Y. Norman, Okla.	Maple Leaf Radio Co., Pigott Bldg. R. H. Williams & Sons, Kitchener Hotel  -Van. Daily Province, 142 Hastings St., W.  -Leader-Post. Ltd., 1853 Hamilton St.  -Dr. Geldert, 272 Somerset St., W.  -Acadia University  -Western Brdcstg. Co., Hotel Georgia  -Rafael Valdez, P. O. Box 64  -Powell & Platz. Coffeyville Journal Bldg.  -87 E. San Antonio St.  -Marcus Loew Agency, 1540 Broadway  -University of Oklahoma  -Continental Brdcstg. Corp., Hotel Johnson  -Fernando Pazos S., Independencia 98
1020	kevs	s. (29	93.9)	
KYW WDZ XEJ	ak 100 ak	•	Philadelphia, Pa. Tuscola, Ill.	Westinghouse Elec. Co., 1622 Chestnut St. —WDZ Brdcstg. Co., Inc. —Juan G, Buttner, P. O. Box 111
1030	kevs	s. (2	91.1)	
CFCN CKLW CMCY XEB	ak 100 ag 50 ak 10	000 000 000	Calgary, Alta. Windsor, Ont.	—Grant & Love, Toronto Gen. Trust Bldg. —Guaranty Trust Building —Manuel Outran, Calle "G" 215, Vedado —El Buen Tono, S. O., Aptdo. 79-44
1040	kevs	s. (2	88.3)	
KRLD KWJJ WTIC	ae 100 ak	000 G 500	Dallas, Texas Portland, Ore. Hartford, Conn.	—KRLD Radio Corp., Adolphus Hotel —KWJJ Brdestg. Co., 622 Salmon St. —Travelers Brdestg. Co., 26 Grove St.
1050	kcys	s. (2	85.5)	
CMKD CRCK KFBI KNX TIFA	ak ak 1 ak 5	250 000 F 000 Dr 000 75	Santiago, Cuba Quebec, Que. Abilene, Kans.	-Radioemisora Oriental, Box 23 -C. R. B. C., Chateau Frontenac Hotel -Farmers and Bankers Life, Box 345 -West, Brdcstg, Co., 1558 N. Vine St.
1060	kev	s. (2	82.8)	Thin and the second
CMBX KTHS VOAC WBAL WJAG XEA	ak ae 10 z ak 10 ak 1	200 000 N 40 10 000 B 000 D 500	Havana, Cuba. Hot Springs, Ark.	—Alberto Alvarez, San Miguel 194 —Chamber of Commerce, Box 86 —American Radio News Corp., Lexington Bldg. —Norfolk Daily News —Alberto Palos Sauza
1070	kcy	s. (2	80.2)	
CMHA KJBS WCAZ WTAM	z ak ak	50 500 Di 100 D 000 R	Sagua la Grande, C.	

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1080	kcys.	(277.6)	
WBT WCBD WMBI	ak 50000 ak 5000 ak 5000	C Charlotte, N. C. 1Dn Waukegan, III. 1Dn Chicago, III.	—Station WBT, Inc., Wilder Bldg. —WCBD, Inc., Karcher Hotel —Moody Bible Institute, 153 Institute Place
1090	kcys.	(275.1)	The state of the s
K MOX XEAQ	ak 50000 ak 1000	C St. Louis, Mo. Rosarito, L. C.	Voice of St. Louis, 401 S. 12th St. P. O. Box 32, Tijuana
1100	kcys.	(272.6)	
CRCV KGDM KWKH WLWL WPG XEL	ak 1000 ak 10000 ae 10000 ae 5000 ak 5000 z 250	F Vancouver, B. C. D Stockton, Callf. C Shreveport, La. 1 New York, N. Y. 1C Atlantic City, N. J Mexico City, D. F.	-C. R. B. C., 1150 Main StE. F. Peffer, 42 S. California StTimes Pub. Co., Spring & Fannin Sts415 W. 59th StCity of Atlantic City, Convention Hall -Plaza de San Juan 15
1110	kcys.	(270.1)	
CMCJ KSOO WRVA XELO	ak 500 ak 2500 ae 5000 z 10000	Dn Sioux Falls, S. D. N Richmond, Va. Piedras Negras, Co.	—Rafael Rodriguez, Estevez No. 4 —Sioux Falls Brdcstg. Co., Carpenter Hotel —Larus & Bros. Co., 22nd and Gary Sts. —Piedras Negras Brdcstg. Co., Madero 53
1120	kcys.	(267.7)	
CHLP CHSJ CKOC CKX CMGF CMKM KFIO KFSG KRKD KRSC WCOP WDEL WISN WTAW	ak 100 ae 500 ak 100 ak 150 ak 200 ae 100 ag 500 aj 500 ak 100 ak 500 ak 500 ak 500 ak 500 ak 500	F Montreal, Que. F (1) St. John, N. B. F (1) Hamilton, Ont. F Brandon, Man. Matanzas, Cuba Manzanillo, Cuba D Spokane, Wash.	La Patrie Pub. Co., Sun Life Bldg.  N. B. Brdcstg. Co., Admiral Beatty Hotel  Westworth Brdcstg. Co., Wentworth Bldg.  Manitoba Telephone System, City Hall Sq.  Calle Gnrl. Betancourt 51  Merchan Figeredo, P. O. Box 4  Spokane Brdcstg. Corp., Zieglar Bldg.  Echo Park Assn., 1100 Glendale Blvd.  Radio Brdcsters. Inc., 815 Spring Arcade  Radio Sales Corp., Wash. Athletic Club  Joseph M. Kirby, Hotel Copley-Plaza  WDEL, Inc., 10th and King Sts.  Hearst Radio, Inc., 123 W. Michigan St.  Agricultural & Mechanical College
1130	kcys.	(265.3)	
CMJI KSL WJJD WOV	ak 50 ae 50000 ak 20000 ag 1000	Ciego de Avila, Cuba C Salt Lake City, Utah Dn Chicago, III. New York, N. Y.	—Gilberto Gesse Lopez, Independencia 95 —Radio Service Corp., Vermont Bldg. —WJJD, Inc., 201 N. Wells St. —International Brdcstg. Co., 132 W. 43rd St.
1140	kcys.	(263.0)	
CMBG KVOO WAPI WSPR	z 200 ak 25000 ae 5000 z 500	Havana, Cuba 1N Tulsa, Okla. 1N Birmingham, Ala. P Springfield, Mass.	<ul> <li>John L. Stowers, Hospital No. 100</li> <li>Southwestern Sales Corp., Wright Blug.</li> <li>WAPI Brdestg, Corp., Protective Life Bldg.</li> <li>Connecticut Valley Brdestg, Co.</li> </ul>
1150	kcys.	(260.7)	The state of the s
CMJF WHAM XED XEFL XEH XEWZ	z 200 ae 50000 ak 2500 z 250 ak 250 ak 100	Camaguey, Cuba B Rochester, N. Y. 1155 Guadalajara, Jal. Tijuana, L. C. Monterrey, N. L. Mexico City, D. F.	—John L. Stowers, Republica No. 88 —Stromberg-Carlson Mfg. Co., 100 Carlson Rd., —Cia. Radiofonografica, Aptdo. 197 —P. O. Box 6, San Diego, Calif. —Tarnava y Cia., P. O. Box 147 —Jesus Valezzi E., P. O. Box 291
1160	kcys.	(258.5)	
CMHJ WOWO WWVA XEAS	z 100 ae 10000	Cienfuegos, Cuba IC Fort Wayne, Ind. IC Wheeling, W. Va. Saltillo, Coah.	Romualdo Ugalde, Sta. Elena 104 Main Auto Supply Co., 213 W. Main St. —W. Va. Brdcstg. Corp., Hawley Bldg. "La Voz del Comercio en Saltillo."

XEC XESL	z 3 z	0	Tijuana, L. C. Tijuana, L. C.	—Luis F. Encisco, Teatro Zaragoza
1170	kcys.	(256	5.3)	
CMBD WCAU	z 15 ae 5000	0	Havana, Cuba Philadelphia, Pa.	—Luis Perez G., Calle 17, 3, Vedado —WCAU Brdcstg. Corp., 1622 Chestnut St.
1180	kcys.	(254	4.1)	
CMJO KEX KOB VE9EK WDGY WINS WMAZ XEFA	ak 500 ak 1000 ak 1	0 2 0 1185 0 Dn (5) 0	Ciego de Avila, Cuba Portland. Ore. Albuquerque, NM. Montmagny, Que. Minneapolis, Minn. New York, N. Y. Macon, Ga. Mexico City, D. F.	-B. Ildefonso, Calle Maceo y C. Central -Oregonian Pub. Co., Oregonian BldgAlbuquerque Journal, Box 1319 -J. A. Marquis, Box 52 -Dr. Geo, W. Young, 909 W. Broadway -Hearst Radio, Inc., 114 E. 58th StSoutheastern Brdcstg. Co., 211 Cotton AveEduardo Limon S., Meditarraneo 236
1190	kcys.	(252	2.0)	
HIJ VONF WATR WOAI WSAZ	z 1 ak 50 ak 10 ak 5000 ak 100	0 1195 0 D 0 N	Trujillo, D.R. St. John's, Nfld. Waterbury, Conn. San Antonio, Tex. Huntington, W. Va.	— Tuto Baez, Hostos 34 — Dominion Brdestg, Co., Ltd., Box 135 — WATR, Inc., 47 Grand St. — Southland Industries, Inc., 1038 Navarro — WSAZ, Inc., P. O. Box 729
1200	kcys	(249	9.9)	
CHAB CKNX CKNS CKTB CMGO KADA KBTM KFJB KFXD KFXD KGDE KGEK KGEJ KGHI KMLB KSUN KWG WAIM WBNO WCAT WEAM WHBY WILL WJBC WJBC WJBC WJBC WJBC WJBC WJBC WJBC	ae 10 ak 15 ak 16 ak 10	0	Fergus Falls, Minn. Sterling, Colo. Los Angeles, Calif. Little Rock, Ark. Monroe, La. Lowell, Ariz. Bellingham, Wash. Stockton, Calif. Bangor, Maine Anderson, S. C. Ponca City, Okla. New Orleans, La. Rapid City, S. D. Burlington, Yt. Janesville, Wis. Cincinnati, Ohio 5) Easton, Pa. South Bend, Ind. Canton, Ohio Green Bay, Wis. C Utica, N. Y. St. Louis, Mo. 5) Bloomington, Ill. New Orleans, La. W. Palm Beach, Flash Harrisburg, Pa. Lynchburg, Va. High Point, N. C. Lapeer, Mich.	-Enrique Lasanta, Calle Oficios 116 -C. C. Morris -Jay P. Beard -Marshall Elec. Co., Inc., 1603 W. Main StFrank E. Hurt, 1024 Twelfth Ave., SWestern Slope Brdcstg. Co., Hillerest Manor -C. L. Jaren -Elmer G. Beehler, 109 W. 2nd StRen S. McGlashan, 1417 S. Figueroa -Arkansas Brdcstg. Co., Marion Hotel -Liners Brdcstg. Station, Francis Hotel -Copper Electrical Co., Drawer C -KVOS, Inc., 115 W. Magnolia StMedico-Dental Building -Community Brdcstg. Service -Anderson College -C. L. Carrell, 407 W. South AveColiseum Baptist Church, Hotel New Orleans -South Dakota State School of Mines -Burlington Daily News, 203 College StGazette Prtg. Co., 200 E. Milwaukee StContinental Radio Co., Hotel Sinton -Lancaster Broadcasting Service -South Bend Tribune, 225 W. Colfax AveEdw. P. Graham, 319 Tuscola St., WWHBY, Inc., Bellin BldgWissouri Brdcstg. Corp., Melbourne Hotel -Kaskaskia Brdcstg. Co., Gushard BldgC. C. Carlson, Godchaux Bldg.
1210	kcys	(24)	7.8)	
CICS		io	Stratford, Ont.	-M. I. Higgens, 151 Ontario St.

				THE QUELTERE
CJCU	z	50	Aklavik, N. W. T.	-Dr. J. A. Urquarhart, Dept. of Interior
CKBI	ak	100	F Prince Albert, Sask	-Prince Albert Radio Club, Canada Bldg.
CKCH	ak	100	F Hull, Que.	-CKCH Brdcstg. Co., Standish Hall Hotel
CKMC	ak	50		-R. L. MacAdam
CMHI	ak	150		Lavis y Paz, Independencia No. 34E. M. Woody, Casa Grande Hotel
KASA	ck	100		-E. M. Woody, Casa Grande Hotel
KDLR	ak	100	Devils Lake, N. D.	-KDLR, Inc., 1025 Third StRichard F. Lewis, 498 Washington St.
KDON	z	100		-Richard F. Lewis, 498 Washington St.
KFJI KFOR	ak ae	100 100	Klamath Falls, Ore.	KFJI Bracsters, Inc., Willard Hotel
KFPW	ak	100	(.25) C Lincoln, Neb. Fort Smith, Ark.	-Howard Shuman, Hotel Lincoln
KFVS	ak	100	6(.25) Cape Girardeau, Mo.	—Southwestern llotel Co., Goldman Hotel —Oscar C. Hirsch, Box 275
KFXM	ak	100	9 San Bernardino, Calif.	-Lee Bros. Brdcsto. Co. California Hotal
KGY	ak	100		-Lee Bros. Brdcstg. Co., California Hotel -KGY, Inc., 11th and Capitol Way
KIUL	ak	100	Garden City, Kans.	-Garden City Brdcstg. Co.
KPPC	ak	50	9 Pasadena, Calif.	—Pasadena Presb. Church, 585 E. Colorado
KVSO	ak	100	D Ardmore, Okla.	-Ardmoreite Publishing Co., Inc.
KWTN	ak	100	Watertown, S. D.	Midland Life Insurance Bido.
TGW WALR	ak ak	10000	Guatemala City	Ministerio de Fomento
WBAX	ae	100 100	Zanesville, Ohio	-WALR Brdcstg. Corp., 1st Trust & Bank Bldg. -John A. Stenger, Jr., 70 S. Main St.
WBBL	ak	100	Wilkes Barre, Pa. S Richmond, Va.	Cross Proph Church 1627 Main St.
WBRB	ak	100	S Richmond, Va. 3 Red Bank, N. J.	-Grace Presb. Church, 1627 Monument Ave.
WCOL	ak	100	Columbus, Ohio	-WCOL. Inc., 33 N. High St
WCRW		100		Monmouth Brdestg, Corp., 63 Broad StWCOL, Inc., 33 N. High StClinton R. White, 2756 Pine Grove Ave.
WEBO	ae	100	6(.25) Harrisburg, 111.	-Harrisburg Brdcstg. Co., 100 E. Poplar
WEDC	ae	100	4 Chicago III.	-Emil Denemark, 3850 Ogden Ave.
WFAS	ak	100	3 White Plains, N. Y.	-Westchester Bdcstg.Corp., Hotel Roger Smith
WGBB	ae	100	White Plains, N. Y. Freeport, N. Y.	n. n. Carman, 64 S. Grove St.
WGCM	ae	100	(.25) Guilport, Miss.	-wGCM, Inc.
WGNY	ak	100	3 Chester, N. Y.	-Peter Goelet (Orange County)
WHBF WHBU	ak	100	(.25) Rock Island, 111.	-Rock Island Brdcstg. Co., Hotel Harms
WIBU	ak ak	100 100	(.25) Anderson, Ind. (.25) Poynette, Wis.	Anderson Brdcstg. Corp., Box 816 Wm. C. Forrest, R. F. D. No. 3 Gadsen Brdcstg. Co., 112 N. 8th St.
WJBY	ak	100	Cadadaa Ala	-Wm. C. Forrest, K. F. D. No. 3
WJEJ	ae	100	D Hagerstown, Md.	-Hagerstown Brdcstg. Co., Lovely Dame Bldg
WJIM	z	100		—Canital City Reducto Co
WJW	ae	100	(.25) Lansing, Mich. (.25) Akron, Ohio	-WJW. Inc., 41 S. High St
WKOK	ak	100	Sunbury, Pa.	WJW. Inc., 41 S. High StSunbury Brdcstg. Co., 1150 N. Front StIlave ns & Martin, Inc., 914 W. Broad St.
WMBG	ak	100	C(.25) Richmond, Va.	-llave ns & Martin, Inc., 914 W. Broad St.
WMFG	z.	100	Hibbing, Minn.	- Head of the Lakes blucsty, Co.
WMFN	ak	100	Clarksdale, Miss.	—Attala Brdcstg, Corp., Box 180 —A. E. Newton, 840 N. Main St.
WOCL	ak	50	Jamestown, N. Y. Manitowoc, Wis.	-A. E. Newton, 840 N. Main St.
WOMT	ak	100	Manitowoc, Wis.	—Francis M. Kadow, Box 326 —H. Wimpy, 135 E. Jackson St.
WPAX WSAY	ak	250	D Thomasville, Ga. DP Rochester, N. Y.	-H. Wimpy, 135 E. Jackson St.
WSBC	z ae	100 100	DP Rochester, N. Y.	-Brown Radio Service, 192 S. Goodman St.
WSIX	ak	100	4 Chicago, Ill. Y Springfield, Tenn. N(.25) Charlotte, N. C.	-Gene T. Dyer, 1258 S. Michigan Ave.
WSOC	ak	100	N(.25) Charlotte, N. C.	-638 Tire and Vulcanizing Co.
WTAX	ak	100	Springfield, 111.	-WSOC, Inc., 516 W. Trade St. -WTAX, Inc., 416 E. Capitol Ave.
XEAT	z	50	Hidalgo, Chih.	
XEE	Z	50	Durango, Dgo.	-Alejandro Stevenson, Jr., Aptdo. 148
XEFV	ak	100	Juarez, Chih.	—J. Onofre M., Tlaxcala 1013
XETH	ak	100	Puebla, Pue.	-Ramon Huerta G., Calle 17, Oriente 11
1220	1		(245.8)	
1220	KC	ys.	(245.8)	
CMJE	z	50	Camaguey, Cuba	-Manuel Fernabdez, Ilnos, Aguero No. 2
KFKU	ae	1000	a(5) Lawrence, Kans.	-University of Kansas
KTW	ak	1000	S2 Seattle, Wash.	—lst Presb. Church, 7th and Spring Sts.
KWSC	ae	1000	2(2) Pullman, Wash.	-State College of Washington
WCAD	ak	500	D Canton, N. Y.	-St. Lawrence University
WCAE	ak	1000	R(5) Pittsburgh, Pa.	-Pitt Publishing Co.
WDAE	ae	1000	C(2.5) Tampa, Fla.	- Tampa Times Co., Tampa Terrace
WREN	ak	1000	Ba(5) Lawrence, Kas.	-WREN Brdcstg. Co., 7th and Vermont Sts.
XETF	ak	12	Veracruz, Ver.	—Jose R. Lopez, Independencia 28
1230	kc	376	(243.8)	
1200	IC	yo.	(240.0)	
CMCB	ak	150	Havana, Cuba	-Antonio Capablanca, Metropolitan Bldg.
KGBX	ak	500	Springfield, Mo.	-Springfield B'cst Co., St. Louis & Kimbrough -New Mexico Brdcstg. Co., KiMo Bldg.
KGGM	ak	250	(.5) Albuquerque, N.M. N San Francisco, Calif.	-New Mexico Brdcstg. Co., KiMo Bldg.
K Y A WFBM	ak ae	1000 1000	N San Francisco, Calif.	-Pacific Brdcstg. Corp., 988 Market St.
WNAC	ak	1000	C(5) Indianapolis, Ind. C(2.5) Boston, Mass.	—307 N. Pennsylvania St.
XEFJ	ak	100	Monterrey N I	—Sheppard Brdcstg. Serv., 21 Brookline Ave. —Junco de la Vega, P. O. Box 186
YNOP	z	100	Monterrey, N. L. Managua, Nic.	

1240	kcys.	(241.8)	
CJCB CMHB KGCU KLPM KTAT KTFI WKAQ WXYZ XEAC XEAI XEKL XELA XEME	ak 1000 z 50 ak 250 ak 250 ak 1000 ae 1000 ae 1000 z 250 z 100 z 500 z 500 z 150		N. Nathanson, 318 Charlotte StV. E. Welss y Cia., Independencia 33Mandan Radio Assn., 404 W. Main StJohn P. Cooley, Box 707Fort Worth National Bank BldgRadio Brdcstg. Corp., Box 521Radio Corp. of Puerto Rico, Box 1414Kunsky-Trendle Brdcstg. Corp
1250	kcys.	(239.9)	
CMKC KFOX WCAL WDSU WHBI WLB WNEW WTCN	ak 150 ae 1000 ah 1000 ak 1000 ak 1000 ak 1000 ae 1000 ak 1000	Santiago, Cuba Long Beach, Calif. 2(2.5) Northfield, Minn. New Orleans, La. a(2.5) Newark, N. J. Minneapolis, Minn. a(2.5) Newark, N. J.	-I. A. Saco, P. O. Box 466 -Nichols & Warinner, 220 E. Anaheim StSt. Olaf College -WDSU, Inc., Hotel Monteleone -May Brdcstg. Corp., 100 Shipman StUniversity of Minnesota -Wodaam Corp., 100 Shipman StMinn. Brdcstg. Corp., Wesley Temple Bldg.
1260	kcys.	(238.0)	
CFRN KGVO KOIL KPAC KRGV KUOA KVOA WHIO WNBX WTOC	ak 100 ak 1000 ak 500 ak 500 ak 500 ak 1000 ak 500 ae 1000 ae 1000	F Edmonton, Alta. Missoula, Mont. B(2.5) Council Bluffs, Ia. D Port Arthur, Texas Weslaco, Texas D Fayetteville, Ark. Tucson, Ariz. R Dayton, Ohio Springfield, Vt. C Savannah, Ga.	-G. R. A. Rice, 109 C. P. R. BldgMosby's, Inc., 240 N. Higgins -Central States Brdcstg. CoPort Arthur College -KRGV, IncKUOA, Inc., Washington Hotel -Ariz. Brdcstg. Co., Cons. Natl. Bank BldgMiami Valley Corp., 39 S. Ludlow StWNBX Brdcstg. Corp., 39 Main StSavannah Brdcstg. Co., DeSoto Hotel
1270	kcys.	(236.1)	
CMHD KGCA KOL KVOR KWLC WASH WFBR WJDX WOOD XEG XFB YNLF	dk 250 ak 100 ae 1000 ak 100 ak 500 ae 500 ae 1000 ak 500 ae 2 200 ak 250 z 20	Caibarien, Cuba Decorah, Iowa C(2.5) Seattle, Wash. C Colorado Sp'gs, Colo. D Decorah, Iowa aN Grand Rapids, Mich. R Baltimore, Md. N(2.5) Jackson, Miss. aN Grand Rapids, Mich. Ensenada, L. C. Jalapa, Ver. 1275 Managua, Nic.	Manuel Alvarez M., Escobar 17 Chas. W. Greenley, 201 Water St Seattle Brdestg. Co., Northern Life Tower S. H. Patterson, Antiers Hotel Luther College Kunsky-Trendle Brdestg. Corp Baltimore Radio Show, 7 St. Paul St Lamar Life Insurance Co Kunsky-Trendle Brdestg. Corp Juan C. Chavez, Av. Obregon 958 Gobiero del Estado de Veracruz
1280	kcys.	(234.2)	
KFBB WCAM WCAP WDOD WIBA WORC WRR WTNJ XEMX	ae 1000 ae 500 ae 500 ak 1000 ae 1000 ak 500 ak 500 ak 500	(2.5) Great Falls, Mont. Camden, N. J. Asbury Park, N. J. Gis Chattanooga, Tenn. N(5) Madison, Wis. Worcester, Mass. Dallas, Texas Trenton, N. J. Mexico City, D. F.	-Buttrey Brdcstg. Co., P. O. Box 1817 -City of Camden, City Hall -Radio Industries, Inc., Convention Hall -WDOD Brdcstg. Corp., Hotel Patten -Badger Brdcstg. Co., 111 King StAlf. E. Kleindienst, 60 Franklin StCity of Dallas, Southland BldgTrenton Brdcstg. Co., Stacy Trent Hotel -Alfonso T. Avales, Salamanca 87
1290	kcys.	(232.4)	
KDYL KLCN KTRH WEBC WJAS WNBZ WNEL	ak 1000 ak 1000 ak 1000 ae 1000 ak 1000 z 100 ak 1000	NX Salt Lake City, Utah D Blytheville, Ark. C(5) Houston, Texas N(5) Superior, Wis. C(2.5) Pittsburgh, Pa. D Saranac Lake, N. Y. (2.5) San Juan, P. R.	<ul> <li>Intermountain Brdcstg. Corp.</li> <li>C. L. Lintzenich, Main &amp; Division Sts.</li> <li>KTRH Brdcstg. Co., Rice Hotel</li> <li>Spaulding Hotel, Duluth, Minn.</li> <li>Chamber of Commerce Bldg.</li> <li>Smith and Mace, 70 Broadway</li> <li>Juan Piza, Box 1252</li> </ul>

1300	kc	ys.	(230.6)		
KALE KFAC KFH KFJR WBBR	ak ak ak ag ae	500 1000 1000 500 1000	C Wic	tland, Ore. Angeles, Calif. hita, Kans. tland, Ore. oklyn, N. Y.	
WEVD WFAB WFBC	ak ae ak	1000 1000 1000	1 New 1 New (5)N Gre	v York, N. Y. v York, N. Y. enville, S. C.	—Jewish Daily Forward, Hotel Charidge —5th Ave. Brdcstg. Corp., 154 W. 57th St. —Greenville News-Piedmont Co., Imperial Hot.
WHAZ WHBL WIOD	ae ae ak	500 500 1000	Z She N Mia	y, N. Y. boygan, Wis. mi, Fla.	<ul> <li>Rensselaer Polytechnic Institute, 8th Ave.</li> <li>Press Publishing Co Press Bldg.</li> <li>Isle of Dreams Brdcstg. Corp., Biscayne Blvd.</li> </ul>
1310	kc	ys.	(228.9)		
CHCK CJKL CJLS	ak ak ak	50 1000 100	F Kirk	ottetown, P.E.l. land Lake, Ont.	-Burke & Gesner, 36 Upper Hillsboro StNorthern Brdestg. Co., Ltd.
CKCV	ak	100	F Que	mouth, N. S. bec, Que.	-Laurie L. Smith, Grand Hotel -CKCV, Ltd., 142 St. John St.
KCRJ KFPL	ak dk	100 100	D Jero (.25) Dub	ome, Ariz. olin, Texas	-CKCV, Ltd., 142 St. John St. -Chas. C. Robinson, Drawer D. -C. C. Baxter, Box 176
KFXR	ak	100	(.25) Oklai	homa City, Okl.	—541 Hightower Bldg.
KFYO KGCX	dk ak	100 100	(.25) Lub (.25) Wol	bock, Texas f Point, Mont.	-Kirksey Bros., Hotel Lubbock -E. E. Krebsbach
KGEZ KGFW	aj ak	100 100	Kali	f Point, Mont. ispell, Mont.	—Donald C. Treloar, Box 1
KINY	ak	100	Jun	rney, Neb. eau, Alaska	—Cent. Nebr. Brdcstg. Corp., 919 W. 27th —Edwin A. Kraft
KIT KIUJ	ak ak	100 100	(.25) Yak	ima, Wash.	-Carl E. Haymond, 1091/6 F. Vakima Ave
KMED	ck	100	(.25) Med	ta Fe, N. Mex. lford, Ore.	W. C. Ervin Mrs. W. J. Virgin, Sparta Bldg.
KPDN KRMD	z ak	100 100	DP Pan	npa, Texas eveport, La.	—Pampa Daily News —KRMD, Inc., Jefferson Hotel
KROC	Z	100	Roc	hester, Minn.	-Southern Minnesota Brdcstg. Co.
KTSM KVOL	ak ak	100 100	El P	aso, Texas ayatte, La	Tri-State Brdcstg. Co., Box 1976 Evangeline Hotel
KXRO	ak	100	Abe	rdeen, Wash.	KXRO, Inc., Hotel Morck
WAML WBEO	ak ae	100 100		rel, Miss. quette, Mich.	-New Laurel Radio Co., Box 26
WBOW	ak	100	(.25) Terr	re Haute, Ind.	-Lake Superior B'estg. Co., 146 W. Washington Banks of the Wabash, Inc., 19 Beach Block
WBRE WCLS	ak ak	100 100		kes Вагге, Ра. et, Ill.	-Louis G. Baltimore, 16 N. Main St. -WCLS, Inc., 301 E. Jefferson St.
WCMI	z	100	Ash	land, Ky.	-Ashland Brdcstg. Co., Box 106
WDAH WEBR	ak aeh	100 100	S E1 P (.25) Buff	aso, Texas falo, N. Y.	Howell Brdesta Co., Box 1976
WEMP	Z	100	D Mil	waukee, Wis. al Oak, Mich.	Howell Brdcstg. Co., Inc., 23 North StMilwaukee Brdcstg. CoRoyal Oak Brdcstg. Co., 212 W. 6th StGable Brdcstg. Co., 12th Ave. & 13th StFlint Brdcstg. Co. Union Industrial Plate
WEXL WFBG	ak ae	50 100	Roy	al Oak, Mich. ona, Pa.	-Royal Oak Brdestg. Co., 212 W. 6th St.
WFDF	mk	100	Flin	t, Mich.	Time Brucatg. Co., Union Industrial Bidg.
WGH WHAT	aj ak	100 100	(.25) New	port, News, Va. adelphia, Pa.	-Hampton Rds. Brdcstg. Co., 2813 Washington
WJAC	ae	100	3 John	nstown, Pa.	—Independent B'cstg. Co., Public Ledger Bldg. —WJAC, Inc., Locust St.
WLAK WLBC	z ak	100 100	P Lake 6(.25) Mui	eland, Fla. ncie Ind	—Lake Region Brdcstg. Co. —D. A. Burton, Anthony Bldg.
WLNH	ak	100	Lace	onia, N. H. ourn, N. Y.	-Northern Brdcstg, Co., 523 Main St.
WMBO WMFF	ak ak	100 250	D Plat	tsburg, N. Y.	-WMBO, Inc., Metcalf Bldg.
WNBH	ak	100	(.25) New	Bedford, Mass.	Plattsburg Brdcstg, Corp., Hotel Cumberland E. Anthony & Sons, 251 Union St.
WOL WRAW	ak ak	100 100	Was	hington, D. C.	American Brdcsto, Co., Annapolis Hotel
WROL	ak	100	(.25) Kno	xville, Tenn.	—Reading Brdcstg. Co., 533 Penn St. —Stuart Brdcstg. Corp., 524 S. Gay St. —Grove City College, 418 Poplar St.
WSAJ WSGN	ae ak	100 100		ve City, Pa. mingham, Ala.	-R. R. Broyles, Tutwiler Hotel
WSJS	ak	100	C Winst	on-Salem, N.C.	-Winston-Salem Journal Co., 416 N. Marshall
WTAL WTEL	ak ce	100 100	4 Phil	ahassee, Fla. adelphia, Pa.	-Florida Capitol Brdcsters., Inc. -Foulkrod Radio Eng. Co., 3701 N. Broad
WIJS	ak	100	(.25) Jack	cson, Tenn.	<ul> <li>Foulkrod Radio Eng. Co., 3701 N. Broad</li> <li>Sun Publishing Co., Sun Bldg.</li> <li>Truth Publishing Co., Hotel Elkhart</li> </ul>
WTRC XEAG	ak z	100 10	6(.25) Elkl	doba, Ver.	- Iruin Publishing Co., Hotel Elkhart
XECW	z	10	Mex	ico City, D. F.	-M. E. Bravo de Cordero, Av. Juarez 104
XEFW XETB	ak ak	250 125	Tan	ipico, Tams. reon, Coah.	—J. E. Martinez, Salvador Diaz Miron 6 —P. O. Box 225
XEX XFA	ak z	125	Mor	iterrey, N. L.	-L. F. Petit Jean, P. O. Box 10
AFA	L	5	Aguas	calientes, Ags.	Apartado Postale 92
1320	kcy	/S.	(227.1)		
CMOX	ak	250	Hav	ana, Cuba	—10 entre 17 y 19, Vedado

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KGHF
KGMB
KID
                                       Pueblo, Colo.
             ak
                      500
                                                                         C. P. Ritchie, 113 Broadway
                                       Honolulu, T. H.
Idaho Falls, Idaho
                                                                         -Honolulu Brdcstg. Co., Box 2663
-KID Brdcstg. Co., Box 487
             ak
                     1000
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                      500
                              (i)
             80
KRNT
WADC
WORK
             ak
                      500
                              C(1) Des Moines,
C(2.5) Akron, Ohio
                                       Des Moines, Iowa
                                                                         715 Locust St.
                                                                         Allen T. Simmons, P. O. Box 29
-York Brdcstg. Co., 15 S. Beaver St.
WSMB, Inc., Maison Blanche Bldg.
             ae
                     1000
                                       York, Pa.
             ak
                     1000
WSMB
             ak
                      500
                                       New Orleans, La.
1330 keys. (225.4)
CMHK
                      250
                                                                         Virgilio Villanueva, Calle Heredia 61
                                       Crucas, Cuba
                                                                         Don Lee System, 1012 First Ave.
KMO, Inc., Hotel Winthrop
                             C(2.5) San Diego, Calif.
Tacoma, Wash.
1C(2.5) Sioux City, Iowa
                    1000
            ag
ak
KGB
KMO
                      250
                                                                         Perkins Bros Co., 415 Douglas St.
KSCJ
             ai
                    1000
                                                                         -WDRC, Inc., Corning Bldg., 11 Asylum St.
Crosley Radio Corp., 1329 Arlington St.
-WHBY, Inc., Bellin Bldg.
WDRC
            ae
                     1000
                              C(5) Hartford, Conn.
                              R(2.5) Cincinnati, Ohio
                     1000
            ak
WTAO
                     1000
                                      Green Bay, Wis.
            26
1340 kcys. (223.7)
CMJL
                       75
                                                                         M. Caymares, Republica 181
            z
                                       Camaguey, Cuba
                       50
HRN
                                       Tegucigalpa, Hond.
                                                                         -Voice of S. Dak., Inc., 347 Dakota St.
-KGIR, Inc., 121 W. Broadway
KGDY
            ak
                      250
                              D Huron, S. D. N(2.5) Butte, Mont
KGIR
KGNO
            ak
                    1000
            ak
                      250
                                      Dodge City, Kans.
Pensacola, Fla.
                                                                         First National Bank Bldg.
                              Ċ
WCOA
                      500
                                                                         Pensacola Brdcstg. Co., San Carlos Hotel
            ak
                                                                         -New Hamp. Brdcstg. Co., Carpenter Hotel
-Toledo Brdcstg. Co., 505 Jefferson
-Gobierno Estado de Veracruz
WFEA
WSPD
                             Č(1)
C(5)
                      500
                                       Manchester, N. H.
            ae
                                      Toledo, Ohio
Jalapa, Ver.
                    1000
            ae
YED
                      350
1350 kcys. (222.1)
                                                                         Testar y Gonzales, Av. de Italia
CMCA
                      250
                                       Havana, Cuba
KIDO
            ak
                     1000
                              (.25)
                                       Boise, Idaho
                                                                         Boise Brdcstg. Station, Hotel Boise
                                                                         Thomas Patrick, Inc., Hotel Chase
KWK
            ak
                     1000
                              B(5)
                                       St. Louis, Mo.
                                       Zarephath, N. J.
New York, N. Y.
WAWZ
                      500
                              1(1)
                                                                         Pillar of Fire
            ae
WBNX
                      250
                                                                         Standard Cahill Co., 260 E. 161st St.
1360 keys. (220.4)
                                                                         Luis Marauri H., Castilla 37
CMJH
             dk
                       50
                                     Ciego de Avila, Cuba
                                                                         Enid Radiophone Co., Oxford Hotel
Consolidated Brdcstg. Co., 435 Pine St.
S. C. Brdcstg. Corp., Francis Marion Hotel
Onondaga Brdcstg. Co., Onondaga Hotel
                                      Enid, Okla.
Long Beach, Calif.
Charleston, S. C.
Syracuse, N. Y.
Chicago, Ill.
KCRC
KGER
            ak
                      250
            ak
                    1000
                             (1)N
C(5)
WCSC
                      500
            ak
WFBL
            ak
                    1000
                                                                         Oak Leaves Brdcstg. Co., 4000 Washington
WGES
                      500
            ae
                                                                         Delta Brdcstg. Corp., Hotel Vicksburg
South Bend Tribune, 225 W. Colfax Ave.
                                       Vicksburg, Miss.
South Bend, Ind.
WOBC
            ak
                    1000
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WŠBT
                      500
            ak
1370 kcys. (218.8)
                                                                         Moncton Brdcstg, Co., K. of P. Hall
Genaro Sebater, Av. Cespedes 180
Abbes y Garcia, Calle Duarte 68
                      100
                              F
                                       Moncton, N. B.
CMGE
                      150
                                       Cardenas, Cuba
            ak
                                       Trujillo, D. R. Astoria, Ore.
HIZ
                       10
KAST
KELD
                              \dot{\mathbf{D}}
                                                                          Abraham Shapiro, 611 Commercial St.
             ak
                      100
                                       El Dorado, Ark
                      100
                                                                         T. H. Barton
Station KERN, Elk's Club
KERN
                      100
                                       Bakersfield, Calif.
             ak
                                       Boone, Iowa
Grand Forks, N. D.
Fort Worth, Texas
                                                                          Boone Biblical College, 924 W. 2nd St.
KFGQ
KFJM
KFJZ
             ak
                      100
                              (.25)
                                                                          University of North Dakota
Ft. Worth Brdcsters., 502 Trinity Life
                      100
             ak
             ae
                      100
                                                                          Voice of Longview, Box 86
KFRO
                      100
                              D
                                       Longview, Texas
             ak
                                                                          Tucson Motor Service, 142 S. 6th Ave.
KGAR
KGFG
KGFL
KGKL
                              (.25)
                      100
                                 25) Tucson, Ariz.
Oklahoma City, Okla.
Roswell, N. M.
             ae
                                                                         - LUCSON MOTOR SERVICE, 142 S. OTH AVE.
-OKJAHOMA Brdcstg. Co., 1113 N. Broadway
-KGFL, Inc., 507 N. Main St.
-KGKL, Inc., St. Angelus Hotel
-Southwest Bracestg. Co.
-C. Guy Shepard, 2800 Main St.
             bk
                      100
             ak
                      100
                              (.25)
                                       San Angelo, Texas
Clovis, N. M.
             ak
                      100
KICA
KIUP
KLUF
                      100
                              À
             ak
                      100
                                       Durango, Colo.
             ak
                                       Galveston, Texas
San Antonio, Tex.
                              (.25)
                                                                         Goo. R. Clough, Buccaneer Hotel
W. W. McAllister, Smith-Young Tower
Mission Brdestg. Co., Milam Bldg.
First Cong. Church, 2337 Shattuck Ave.
                      100
                      100
KMAC
             ak
                                       San Antonio, Tex.
San Antonio, Tex.
Berkeley, Calif.
Everett, Wash.
Salem, Ore.
Walla Walla, Wash.
KONO
             ak
                      100
                              (.25)
KRE
             ak
                      100
50
                                                                         Lee Mudgett, 2814 Rucker Ave.
Oregon Radio, Inc.
-KUI, Inc., Marcus Whitman Hotel
KVL, Inc., 2101 Smith Tower
KRKO
             ak
                      100
KSLM
             ak
KUJ
             ak
                      100
                                       Seattle, Wash.
Kansas City, Mo.
KVL
                      100
                              1
             ak
                                                                          W. Duncan Brdestg. Co., 3915 Main St.
KWKC
            ak
                      100
```

```
KWYO
WABY
WAGF
                                               Sheridan, Wyo.
Albany, N. Y.
                                                                                        Big Horn Brdcstg. Co.
               ak
                           100
                                   Ď...
                                                                                     —Big norn Bidesig. Co.,
—Adirondack Brdesig. Co., Hotel Ten Eyck
—Dothan Brdesig. Co., Box 25
—Atlanta Brdesig. Co., Volunteer Life Bldg.
               aj
ak
                           100
                           250
                                               Dothan, Ala.
WATL
               ak
                          100
                                               Atlanta, Ga.
                                   2P(.25) Buffalo, N. Y.
(.25) Danville, Va.
(.25) Baltimore, Md.
WBNY
                                                                                        Roy L. Albertson
                          100
               7.
                                                                                        Piedmont Brdcstg. Co., Miller Bldg.
Balto. Brdcstg. Co., Keith Theater Bldg.
-WDAS Brdcstg. Co., 1211 Chestnut St.
WBTM
               āk
                           100
WCBM
               ae
                          100
                                   (.25)
P
WDAS
                                              Philadelphia, Pa.
               ae
                          100
                                                                                        -WIDAS Brdestg, Co., 1211 Chestnut
-Evansville on the Air, Inc.
-F. C. Zieg, 213 W. Main St.
-WHBO, Inc., Hotel Claridge
-Upper Mich. Brdestg, Co., Box 643
-Head of the Lakes Brdestg, Co.
-WIBM, Inc., 306 W. Michigan Ave.
WEOA
                          100
                                               Evansville, Ind.
                                              Fort Wayne, Ind.
Memphis, Tenn.
Calumet, Mich.
Virginia, Minn.
Jackson, Mich.
WGL
                          100
                                   C
WHBQ
               ak
                           100
                                    (.25)
WHDF
               ak
                           100
WHLB
                           100
                                    (.25)
WIBM
               ak
                          100
                                   (.25) Lowell, Mass.
C(.25) Jacksonville, Fla.
D Wilmington, N. C.
                                                                                        Merrimac Brdcstg. Co., Box D
Florida Brdcstg. Co.
WLLH
               ak
                           100
WMBR
WMFD
WMFO
               ak
                           100
                                                                                        Richard A. Dunlea, Hotel Wilmington
                           100
               ak
                                                                                         James R. Doss, Jr.
                                               Decatur, Ala.
               ak
                           100
                                                                                        Tri-City Broadcasting Co.
WOC
WPAY
WPFB
               ak
                           100
                                    C(.25) Davenport, Iowa
                                                                                        Veebee Corp.
               ak
                           100
                                               Portsmouth, Ohio
                                                                                        -veenee Corp.
Forest Brdcstg. Co., 512 Main St.
-Regan & Bostwick, 42 N. Main St.
-WRAK, Inc., 244 W. 4th St.
-WRDO, Inc., Augusta House
-Racine Brdcstg. Corp., Hotel Racine
-Seneca High School, 666 E. Delevan Ave.
                                              Hattiesburg, Miss.
St. Albans, Vt.
                          100
WQDM
                           100
               ae
WRAK
                                   (.25)
                                               Williamsport, Pa.
               ak
                          100
                                              Augusta, Maine
Racine, Wis.
Buffalo, N. Y.
Mexico City, D. F.
WRDO
                          100
               ae
WRJN
               ak
                          100
                                    (.25)
WSVS
               ak
                            50
                                   Ď2
XEFZ
                                                                                         Manuel Zetina, Calle de la Rosa 92
                          100
               ak
                                          Morelia, Mich.
San Luis Potosi, SLP.
                                                                                        Carlos Gutierrez M., F. I. Madero 545
Zeferino Jiminez, Zaragoza 32
XEI
                          125
               яk
XEZZ
                          100
               z
                                                                                         North Side Brdcstg. Corp.
                                   DP
                                              New Albany, Ind.
St. Paul, Minn.
                           250
                           100
                                    P
                                                                                         Edward Hoffman
1380 keys. (217.3)
                                                                                      --Aurelio Hernandez, Infanta 115

--The Bee. Inc., 440 N. Virginia St.

--KQV Brdcstg. Co., 1406 C. of C. Bldg.

--Pape Brdcstg. Co., P. O. Box 288

--WKBH, Inc., 409 Main St.

--Wm. J. Sanders, 147 Main St.

--WSMK, Inc., 121 N. Main St.
CMCR
                           150
                                               Havana, Cuba.
KOH
KQV
                                   Ċ
               ak
                          500
                                               Reno, Nev.
                          500
                                               Pittsburgh, Pa.
               ae
WALA
               af
                          500
                                   C(1)
                                               Mobile, Ala
                                               LaCrosse, Wis.
New Britain, Conn.
WKBH
WNBC
                         1000
               ae
               mk
                          250
                          200
WSMK
                                               Dayton, Ohio
1390 keys. (215.7)
CMJC
                                   .... Camaguey, Cuba
1395 San Ped.de Macoris
                          150
               z
                                                                                        -Felix Sanchez, Calle Cisneros y Gnrl. Gomez
HIH
               ak
                            15
                                                                                        Domingo Dominguez
                                   C(2.5) Little Rock, Ark.
D Marshfield, Ore.
KLRA
                        1000
               ae
                                                                                        Arkansas Brdcstg. Co., Box 550
                                                                                        -Pacific Radio Corp., Hall Bldg.
-Nielson Co., P. O. Box 1323
-Radio Air Corp., 1311 Terminal Tower
KOOS
KOY
               ae
                          250
                                   (1) Phoenix, Ariz. C(2.5) Cleveland, Ohio
               ae
                          500
WHK
                         1000
1400 keys. (214.2)
                                                                                    Oscar Mechoso, Independencia 56
—Jaime Nadal, Calle "B," Maso alta 71
—Interstate Brdcstg. Corp., 405 - 25th St.
—Tulsa Brdcstg. Co., National Bank Bidg.
—Ministerio de Fomento
                                              Matanzas, Cuba
Santiago, Cuba
Ogden, Utah
Tulsa, Okla.
CMGC
                          100
               z
CMKR
               z
                          100
KLO
               ak
                          500
KTUL
               ak
                          500
                                   C(1)
                                    Guatemala City, Gt.
Brooklyn, N. Y.
2(1) Brooklyn, N. Y.
TGX
                          250
               ak
                                                                                       -U. S. Brdestg. Corp., 427 Fulton St.
-Brooklyn Brdestg. Corp., 552-54 Atlantic
-Brooklyn Daily Eagle
-540 N. Meridian St.
WARD
               ak
                          500
WBBC
                          500
                                   \bar{2}(1)
               ae
WEGL
                                   Ē
                                               Brooklyn, N. Y.
                          500
               7.
WIRE
               ak
ak
                                              Indianapolis, Ind.
Brooklyn, N. Y.
Brooklyn, N. Y.
                          500
                                   \bar{R}(1)
                                                                                        Voice of Brooklyn, 105 - 2nd Ave., N. Y. C.
WLTH
WVFW
                          500
                          500
               ak
                                                                                        Paramount Brdcstg. Co., 4 & 5 Court Sq.
1410 kcys. (212.6)

--Gaspesian Radio Brdcstg. Co.
--United Church of Canada, Hemlock & 12th
--Sprott-Shaw Co., 1604 Bekins Bldg.
--Plains Radio Brdcstg. Co.
--Bay State Brdcstg. Co., 21 Brookline Ave.
--James E. Davidson, Hotel Wenonah
--Daily Telegraph, Bland St.
--Rockford Brdcsters, Inc., 109 S. Water
                                              New Carlisle, Que.
Vancouver, B. C.
Vancouver, B. C.
CHNC
                          500
                                   \mathbf{F}(1)
ČKFČ
CKMO
               ak
                            50
                                              Vancouver, B. C.
Vancouver, B. C.
Amarillo, Texas
Boston, Mass.
Bay City, Mich.
Bluefield, W. Va.
Rockford, Ill.
                           100
                                   5F
               яø
KGNC
WAAB
WBCM
                                   (2.5)
C
                         1000
               ae
                          500
               аk
                          500
               ae
                                    (.5)
WHIS
                           250
               ak
WROK
               ak
                           500
                                   C(1)
                                                                                        Mont. Brdcstg. Co., Jefferson Davis Hotel
WSFA
                          500
                                               Montgomery, Ala.
```

1420 kcys.	(211.1)	
CKGB ak 100 CMCQ z 250 KABC ak 100 KABR ak 100 KALB z 100 KALB z 100 KCMC ak 100 KCMC ak 100 KCMC ak 100 KGMC ak 100 KGFZ ak 100 KGFZ ak 100 KGFS ak 100 KGFT ak 100 KORE ac 100 KNET z 100 KNET z 100 KNET z 100 KNET ak 100 WNAC ak 100 WAC ak 100 WCBS ak 100 WCBD ak 100 WEED ak 100 WEED ak 100 WEED ak 100 WEED ak 100 WILD ak 100	F Timmins, Ont. Havana, Cuba. (25) San Antonio, Texas Aberdeen, S. Dak. D Alexandria, La. 4 Portland, Ore. Texarkana, Ark. P Price, Utah. Fond du Lac, Wis. (25) Shawnee, Okla. San Francisco, Cal. 1 Alamosa, Colo. XZ Hilo, T. H. 1 Lamar, Colo. Pecos, Texas D Palestine, Texas Eugene, Ore. Lewiston, Idaho D Midland, Tex. Yuma, Ariz. Hutchinson, Kans. 4(.25) Portland, Ore. C Waco, Texas Presque isle, Maine Hazleton, Pa. Springfield, Ill. 3(.25) Charlottesville, Va. 3 Rocky Mount, N. C. a Cicero, Ill. Battle Creek, Mich. Albany, Ga. D Olean, N. Y. a Cicero, Ill. Wilmington, Del. Baton Rouge, La. P Gastonia, N. C. Ironwood, Mich. Cicero, Ill.	-R. H. Thompson, Press BldgCalle Vista Alegre 90, Vibora -Alamo Brdcstg. Co., Texas Theater BldgAberdeen Brdcstg. CoAlexandria Brdcstg. CoAlexandria Brdcstg. CoBenson School, 546 N. E. 12th AveNo. Mississippi Brdcstg. Co., Box 865 -Eastern Utah Brdcstg. Co., Bw. First StKGFF, Inc., 9th and Bell StsGolden Gate Brdcstg. Co., 230 Eddy StLeonard E. Wilson, 326 N. Commercial -Honolulu Brdcstg. Co., Box 688 -J. H. Hawkins and B. H. Tubbs -Palestine Brdcstg. Co., Box 688 -J. H. Hawkins and B. H. Tubbs -Palestine Brdcstg. Association -Eugene Brdcstg. Sta., 733 Willamette StH. E. Studebaker, Lewis-Clarke Hotel -Clarence Scharbaur -Dr. A. H. Schermann, Box 267 -W. N. Greenwald -KXL Brdcsters., Multnomah Hotel -Cent. Texas Brdcstg. Co., Amicable BldgAroostook Brdcstg. Service, IncWCBS, Inc., 208½ S. Sth StCommunity Brdcstg. Corp., Box 221 -WEHS, Inc., 6138 Cermak Road -Enquirer News, 38 W. State StAmericus Brdcstg. Corp., Rylander Theater -Tupper Lake Brdcstg. Corp., Rylander Theater -Tupper Lake Brdcstg. Corp., 920 King StBaton Rouge Brdcstg. Corp., 920 King StBaton Rouge Brdcstg. Corp., 85 Feelanade -WHFC, Inc., 6138 Cermak Road -Delaware Brdcstg. Corp., 920 King StJ. B. Roberts -WJMS, Inc., 6138 Cermak Road
WLAP ak 100 WLBF ak 100 WLEU ak 100 WMAS ak 100 WMBC ae 100 WMBH ak 100 WMSD ak 100 WMSD ak 100 WPAP ak 100 WPAP z 100 WPAP z 100 WPAP z 100 WPAP ak 100 WPAP ak 100 WPAP ak 100	(.25) Lexington, Ky. Kansas City, Kan. (.25) Erie, Pa. C(.25) Springfield, Mass. (.25) Detroit, Mich. (.25) Joplin, Mo. Daytona Beach, Fla Sheffield, Ala. (.25) Paducah, Ky. Parkersburg, W.Va. Guanajuato, Gto.	—American Brdestg, Corp., Main & Esplanade —WLBF Co., 901 N. 8th St. —Leo J. Omelian, Commerce Bldg. —WMAS, Inc., 70 Chestnut St. —Mich. Brdestg, Co., 7310 Woodward Ave. —Joplin Brdestg, Co., 1334 Roosevelt St. —W. W. Esch, 126 ½ Magnolia Ave. —Muscle Shoals Brdestg, Corp., Box 486 —Paducah Brdestg, Co., 2201 Broadway —Chancellor Hotel —Julio M. Conesa —Antonio Zavala, Paseo de la Presa 85 —Jesus Quintanilla, Box 317
1430 kcys.  CMJP ak 75 KECA ah 1000 KSO ak 500 WHSO ak 500 WHEC ae 500 WNBR ae 500 WNBR ae 500 WOKO aj 500	Camaguey, Cuba (5) B Los Angeles, Calif. D North Platte, Neb. B (1) Des Moines, Iowa C (1) Columbus, Ohio C (1) Rochester, N. Y. C (1) Harrisburg, Pa. (1) Memphis, Tenn.	Cesar Canall, Gallejas No. 28 E. C. Anthony, Inc., 1000 S. Hope St Great Plains Brdcstg. Co., W. 12th St Iowa Brdcstg. Co., 715 Locust St WBNS, Inc., 33 N. High St WHEC, Inc., 40 Franklin St WHP, Inc., 216 Locust St Memphis Brdcstg. Co., Hotel DeVoy WOKO, Inc., Hotel Ten Eyck
1440 kcys.  CMOA z 156 HP50 z 2: KDFN ak 506 KLS ag 256 KXYZ ak 1000 TIFS z 7.: WBIG ae 500 WCBA aj 500 WMBD ak 500	(208.2)  Havana, Cuba Colon, Panama Casper, Wyo. Doakland, Calif. Houston, Texas (1441) Cartago, C. R. C (1) Greensboro, N. C. Allentown, Pa.	—Juan Fernandez Duran, Aguilar 126, altos —Donald L. Hatthaway, Box 930 —Warner Bros., 2201 Telegraph Ave. —Harris County Brdcstg. Co., Gulf Bldg. —N. C. Brdcstg. Co., The O. Henry Hotel —B, B. Musselman, 39-41 Tenth St. —Peoria Brdcstg. Co., 11 N. Madison

NONTI	I AMERICAN B. C. S	TATIONS BT PREQUENCIES 1 4 4
aj 500 ae 250	a Allentown, Pa. Chihuahua, Chih.	-WSAN, Inc., 39 Tenth St. -Feliciano Lopez Isles, Aptdo. 157
kcys.	(206.8)	
ae 75 ae 50 ak 500 ak 1000 ak 500 ae 250 ae 1000 ak 500	Victoria, B. C. F. Summerside, P.E.I. Eureka, Calif, N. Shreveport, La. B (1) Cleveland, Ohio Jersey City, N. J. Fall River, Mass. Athens, Ga.	
kcys.	(205.4)	
z 150 z 50 ak 25000 ak 10000	Havana, Cuba. Holguin, Cuba N St. Paul, Minn. C Washington, D. C.	—San Fransisco 13, Vibora.  —M. J. de Gongora. Libertad esq. Arias —Natl. Bartery Brdcstg. Co., St. Paul Hotel —Old Dominion Brdcstg. Co., Earle Bldg.
kcys.	(204.0)	
z 150 ak 5000 ak 5000	B Spokane, Wash, C Nashville, Tenn.	—Rafael Valdez, Estrella 121 —Louis Wasmer, 1023 W. Riverside Ave. —WLAC, Inc., 2421 West End Ave.
kcys.	(202.6)	
ak 5000 ck 5000	C Oklahoma City, Okla C Buffalo, N. Y.	-Natl. Radio Mfg. Co., Biltmore Hotel -Buffalo Brdcstg. Corp., Rand Bldg.
kcys.	(201.2)	
ak 5000 ae 5000	C Sacramento, Calif- B Covington, Ky.	—Sacramento Bee, 7th and I Sts. —L. B. Wilson, Inc., 6th and Madison
kcys.	(199.9)	
ak 100 z 150 ak 100 ae 100 ak 100 ae 100 ak 100 ae 100 ak	Santa Ana, Calif.  El Centro, Calif.  1 (.25) Brooklyn, N. Y. C. Durham, N. C. (.25) Lancaster, Pa. D. Selma, Ala. (.25) Kosciusko, Miss. (.25) Detroit, Mich. (.25) E. Dubuque, Ill. Richmond, Ind. (.25) Muskegon, Mich. D. Griffin, Ga. 1 Brooklyn, N. Y. (.25) Boston, Mass. C. Binghamton, N. Y. Bristol, Tenn. Augusta, Ga. (.25) Rome, Ga. Rutland, Vt. East St. Louis, Ill. 1 (.25) Woodside, N. Y.	-Hyland & Whitby, 678 Queen St., E.  Calle Macco 7, Guanabacoa, Ilabana  Muskogee Press  Sta. Barbara Brdcsters., Ltd., 15-17 E. Haley  Eagle Brdcstg. Co., Box 1508  Red River Brdcstg. Co., Comstock Hotel  East Texas Brdcstg. Co., Comstock Hotel  East Texas Brdcstg. Co., 115 S. College  Hilliard Co., 1517 ½ Broadway  C. L. Burns  KUT Brdcstg. Co., Norwood Bldg.  -Universal Brdcstg. Corp., Hotel Pines  Calcasieu Brdcstg. Co., Majestic Hotel  Westcoast Brdcstg. Co., Majestic Hotel  Westcoast Brdcstg. Co., KPQ Bldg. 20—2nd St.  Oregon Publishing Co.  Dorrence D. Roderick  -The Voice of the Orange Empire, Ltd.  F. M. Bowles, Box 140  Arthur Faske, 864-868 Flatbush Ave.  Durham Radio Corp., Wash'ton Duke Hotel  WGAL, Inc., 8 W. King St.  -YMCA Building  Attala Brdcstg. Corp., Box 631  Jas. F. Hopkins, Inc., 6559 Hamilton Ave.  Sanders Bros., Hotel Julian  Knox Radio Corp., Box 308  Karl L. Ashbacker, Occidental Hotel  Station WKEU, 906 Hill St.  Metropolitan Brdcstg. Corp., 95 Leonard  -The Northern Corp., Hotel Manager  Howitt-Wood Co., Arlington Hotel  Radiophone Station WOPI, 22nd and State  Augusta Brdcstg. Corp., 309 Eighth St.  Rome Brdcstg. Corp., 309 Eighth St.  Rome Brdcstg. Corp., 10 Third Ave.  Phillip Weiss Music Co., Box 328  Mississippi Valley Brdcstg. Corp., 41-30—58th St.  Walker & Downing Corp., 11otel Keystone
	aj 500 ae 250 kCyS. ae 75 ae 500 ak 1000 ak 1000 ae 1000 ak 5000 ak 10000 ak 1000	ai 500 a Allentown, Pa. ae 250 Chilhuahua, Chih.    kcys. (206.8) Chilhuahua, Chih.    kcys. (206.8) Chilhuahua, Chih.    ae 75

1510	kcys	s. (198	.6)	
CFRC CKCR			Kingston, Ont. Waterloo, Ont.	—Queen's University, Fleming Hall —Mitchell & Liddle, 24 King St., So.
1530	kcys	s. (196	.0)	
W1XBS W9XBY			Waterbury, Conn. Kansas City, Mo.	—American Republican, Inc., 136 Grand St. —106 W. 14th St.
1550	kcys	s. (193	.4)	
W2XR W6XAI		900 900	Long Isl. City, N.Y. Bakersfield, Calif.	—Scientific Brdcstg. Serv., 41 Park Row, N. Y. —Pioneer Mercantile Co.

### KEY TO SYMBOLS

Sends own station stamp for 5c.

Sends own station stamp for

postage.

As Shown in the Index by Frequencies and Dial Numbers

Frequency is given in kilocycles; wavelengths 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.

	Second Column Symbols	k	Has no stamps.	
a	Verifies reception for return	m	Verifies for 5c.	F
	postage.	$\mathbf{n}$	Weather or time only.	F
Ъ	Verifies only occasionally.	z	No information available.	S
c	Does not verify.			S
d	Verification 10c: letter 25c.		Fourth Column Symbols	
ē	Sends Ekko stamp for 10c.	В	National "Blue" network.	3
Ĭ	Sends Ekko stamp for 5c.	C	Columbia network.	2
g	Sends Ekko stamp for postage.	D	Day time only.	
h	Sends own station stamp for	Dn	Day time with occasional even-	a
	10c.		ing hours.	

- Has construction permit only.
  National "Red" network.
- S Sunday only. Sy Synchronized.

networks.

- X Has permit to increase power.
  Y Has permit to change location.
  Z Has permit to change fre-
- Z 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.

### NORTH AMERICAN B. C. STATIONS BY LOCATIONS

Canadian Radio Brdestg, Commission. National "Red" and "Blue"

Frequency in kilocycles in second column. Night power in watts in third column. Net work affiliations in fourth column: C Columbia, R National Red, B National Blue, N National Red and Blue. F Canadian.

Al	LABAM	A	Al	RIZON	A [	KGHI KLRA	1200 1390	100 C	KMTR KNX	570 1050	1000 50000 C
						Pine B		1000 0	Long B		30000
Birmin		5000 N	Jerome	1310	100		1500	100	KFOX	1250	1000
WAPI	1140	5000 N	KCRJ	1310	100	Texark		100	KGER	1360	1000
WBRC	930	1000 C	Lowell	4200	400			100	Los An		1000
WSGN	1310	100	KSUN	1200	100	KCMC	1420	100	KECA	1430	1000 B
Decatu	ır		Phoenia								1000 1
WMFO	1370	100	KOY	1390	500	CAI	-IFORM	IIA	KFAC	1300	
			KTAR	620	1000 N				KFI	640	50000 R
Dothai		250	Tucson			Bakers			KFSG	1120	500
WAGF	1370	250	KGAR	1370	100	KERN	1370	100 C	KFVD	1000	250
Gadsde	en		KVOA	1260	500	W6XAI	1550	1000	KGFJ	1200	100
WJBY	1210	100	Yuma			Berkele			KHJ	900	1000 C
Mobile			KUMA	1420	100	KRE	1370	100	KRKD	1120	500
WALA	1380	500 C				Beverly	Hills		KTM	780	500
WALA	1380	300 C	AR	KANS	as I	KMPC	710	500	Modes	to	
Montg	omery					Burbar	ık		KTRB	740	250
WSFA	1410	500 C	Bivthe	ville		KELW	780	500	Oaklar	d	
Selma				1290	100	Chico			KLS	1440	250
WHBB	1500	100	El Dora		100	KHSL	950	250	KLX	880	1000
		100	KELD	1370	100	Del Mo	2 40 10		KROW	930	1000
Sheffie			Favette		100	KDON	1210	100	Pasade		_000
WMSD	1420	100	KUOA		1000	El Cen		100	KPPC	1210	50
					1000	KXO	1500	100	Reddir		30
	LASK	١.	Fort Sr		100	Eureka		100		1 200	100
			KFPW	1210	100			500	*****		100
Ancho	race		Hot Sp	rings	1	KIEM	1450	200	Sacran		
KFOD	780	250	KTHS	1060	10000 N	Fresno		40000	KFBK	1490	5000 C
						KMJ	580	1000 C	San Bo	rnardi	
Juneau		100	Jonesb		100	Glenda			KFXM		100
KINY	1310	100	KBTM	1200	100	KIEV	850	250			100
Ketchi	kan		Little F	Rock		Hollyw			San Di		
KGBU	900	500	KARK	890	250	KFWB	950	1000	KFSD	600	1000 B

KGB 1330 1000 C San Francisco	Daytona Beach WMFJ 1420 100	Carthage WCAZ 1070 100	West Lafayette WBAA 890 1000
KFRC 610 100 C KGGC 1420 100	Gainesville WRUF 830 5000	Chicago WAAF 920 1000	IOWA
KGO 790 7500 B	Jacksonville	WBBM 770 50000 C	
KJBS 1070 500	WJAX 900 1000 N	WCFL 970 5000 B	Ames
KPO 680 50000 R	WMBR 1370 100 C	WCRW 1210 100	WOI 640 5000
KSFO 560 1000	Lakeland	WEDC 1210 100	Boone
KYA 1230 1000 N	WLAK 1310 100	WENR 870 50000 N	KFGQ 1370 100
San Jose	Miami	WGES 1360 500	Cedar Rapids
KQW 1010 1000	WIOD 1300 1000 N	WGN 720 50000	WMT 600 1000 F
Santa Ana KVOE 1500 100	WQAM 560 1000 C	WJJD 1130 20000	Council Bluffs
	Orlando WDBO 580 1000 C	WLS 870 50000 N	KOIL 1260 1000 F
Santa Barbara KDB 1500 100 C	Pensacola	WMAQ 670 50000 N WMBI 1080 5000	Davenport WOC 1370 100 (
Stockton	WCOA 1340 500 C	WSBC 1210 100	Decorah
KGDM 1100 1000	St. Petersburg	Cicero	KGCA 1270 100
KWG 1200 100 C	WSUN 620 1000 N	WEHS 1420 100	KWLC 1270 100
	Tallahassee	WHFC 1420 100	Des Moines
COLORADO	WTAL 1310 100	WKBI 1420 100	KRNT 1320 500 C
	Tampa	Decatur	KSO 1430 500 I
Alamosa	WDAE 1220 1000 C	WJBL 1200 100	WHO 1000 50000 F
KGIW 1420 100	West Palm Beach	East Dubuque	Iowa City
Colorado Springs	WJNO 1200 100	WKBB 1500 100	WSU1 880 500
KVOR 1270 1000 C	1	East St. Louis	Marshalltown
Denver	GEORGIA	WTMV 1500 100	KFJB 1200 100
KFEL 920 500		Harrisburg	Shenandoah
KLZ 560 1000 C	Aibany	WEBQ 1210 100	KFNF 890 500
KOA 830 50000 N	WGPC 1420 100	Joliet	KMA 930 1000
KPOF 880 500	Athens	WCLS 1310 100	Sioux City
KVOD 920 500	WTFI 1450 500	Peoria	KSCJ 1330 1000 (
Durango KIUP 1370 100	Atlanta	WMBD 1440 500 C	*******
KIUP 1370 100 Grand Junction	WATL 1370 100 WGST 890 500 C	Quincy	KANSAS
KFXJ 1200 100	WGST 890 500 C WSB 740 50000 N	WTAD 900 500	Abilene
Greeley		Rockford WROK 1410 500	KFBJ 1050 5000
KFKA 880 500	Augusta WRDW 1500 100	Rock Island	Coffeyville
Lamar	Columbus	WHBF 1210 100	KGGF 1010 1000
KIDW 1420 100	WRBL 1200 100	Springfield	Dodge City
Pueblo	Griffin	WCBS 1420 100	KGNO 1340 250
KGHF 1320 500	WKEU 1500 100	WTAX 1210 100	Garden City
Sterling	Macon	Tuscola	KIUL 1210 100
KGEK 1200 100	WMAZ 1180 1000	WDZ 1020 250	Hutchinson
	Rome	Urbana	KWBG 1420 100
CONNECTICUT	WRGA 1500 100	WILL 890 250	Kansas City
	Savannah	Waukegan	WLBF 1420 100
Bridgeport	WTOC 1260 1000 C	WCBD 1080 5000	Lawrence
WICC 600 500 C	Thomasville		KFKU 1220 1000
Hartford	WPAX 1210 250	INDIANA	WREN 1220 100 B
WDRC 1330 100 C WTIC 1040 50000 R	VVI AIR 1210 250		Manhattan
	HAWAII	Anderson	KSAC 580 500
WTHT 1200 100 New Britain		WHBU 1210 100	Topeka WIBW 580 1000 C
WNBC 1380 250	Hilo	Elkhart WTRC 1310 100	Wichita
New Haven	KHBC 1420 100	Evansville	KFH 1390 1000 C
WELI 900 500	Honolulu	WEOA 1370 100	1330 1000 C
Storrs	KGMB 1320 1000 C	WGBF 630 500	KENTUCKY
WCAC 600 500	KGU 750 2500 N	Fort Wayne	
Waterbury		WGL 1370 100 C	Ashland
WATR 1190 100	IDAHO	WOWO 1160 10000 C	WCMI 1310 100
W1XBS 1530 1000		Gary	Covington
	Boise	WIND 560 1000	WCKY 1490 5000 B
DELAWARE	KIDO 1350 1000	Hammond	Lexington
	Idaho Falls	WWAE 1200 100	WLAP 1420 100
Wilmington	KID 1320 500	Indianapolis	Louisville
WDEL 1120 250	Lewiston	WFBM 1230 1000 C	WAVE 940 1000 N
WILM 1420 100	KRLC 1420 100	WIRE 1400 500 R	WHAS 820 50000 C
DISTRICT OF		Muncie	
DISTRICT OF Columbia	Nampa KFXD 1200 100	WLBC 1310 100	Paducah WPAD 1420 100
		New Albany	WFAD 1420 100
Washington	Pocatello	1370 250	LOUISIANA
WJSV 1400 10000 C	KSEI 900 250	Richmond	LUUISIANA
WMAL 630 250 B WOL 1310 100	Twin Falls	WKBV 1500 100	Alexandria
WOL 1310 100 WRC 950 500 R	KTFI 1240 1000	South Bend	KALB 1420 100
750 500 K		WFAM 1200 100	Baton Rouge
FLORIDA	ILLINOIS	WSBT 1360 500 C	WJBO 1420 100
	D1		
Clearwater WFLA 620 1000 N	Bloomington	Terre Haute	Lafayette
WFLA 620 1000 N	WJBC 1200 100	WBOW 1310 100	KVOL 1310 100

1	NORTH	AMERICAN	В. С.	STATIONS E	BY LOC	ATTONS		
Lake Charles		WMBC 1420	100	Kansas City		WHOM	1450	250
KPLC 1500	100	WWJ 920	1000 R	KMBC 950	1000 C	Newark		
Monroe	100	WXYZ 1240	1000 B	KWKC 1370	100	WHBI	1250	1000
KMLB 1200	100	East Lansing		WDAF 610	1000 R		1250	1000
New Orleans		WKAR 850	1000	WHB 860	1000	WOR		50000
WBNO 1200	100	Flint		W9XBY 1530	1000	Red Ban		
WDSU 1250	1000	WFDF 1310	100	St. Joseph			1210	100
WJBW 1200	100	Grand Rapids	·	KFEQ 680	2500	Trenton	1 200	500
WSMB 1320	500 N	WASH 1270	500 N	St. Louis	500		1280	500
WWL 850	10000 C	WOOD 1270	500 N	KFUO 550	500	Zarepha WAWZ	tn 1350	500
Shreveport	100	WJMS 1420	1 00	KMOX 1090 KSD 550	50000 C 1000 R	WAWZ	1330	300
KRMD 1310	100 1000 N	Jackson 1420	1 00	KWK 1350	1000 K	NEW	MEY	ICO
KTBS 1450 KWKH 1100	1000 N	WIBM 1370	100	WEW 760	1000 B		WEA	
KWKH 1100	1000 C	Kalamazoo	100	WIL 1200	100	Albuque	raue	
MAINE		WKZO 590	1000	Springfield	100	KGGM		250
WATNE		Lansing	2000	KGBX 1230	500	КОВ	1180	10000
Augusta		WJIM 1210	100	KWTO 560	5000	Clovis		
WRDO 1370	100	Lapeer				KIGA	1370	100
Bangor		WMPC 1200	100	MONTAN	A	Roswell		
WABI 1200	100	Marquette					1370	100
WLBZ 620	500 C	WBEO 1310	100	Billings		Santa Fo		
Portland		Muskegon		KGHL 780	1000 N	KIUJ	1310	100
WCSH 940	1000 R	WKBZ 1500	100	Butte				
Presque Isle		Royal Oak		KGIR 1340	1000 N	NEW	V YO	RK .
WAGM 1420	100	WEXL 1310	50	Great Falls	1000	4.11		
				KFBB 1280	1000	Albany WABY	1370	100
MARYLA	ND	MINNESO	IA	Kalispell	100	WOKO	1430	500 (
		Farana Calla		KGEZ 1310	100	Auburn	1430	300 (
Baltimore WBAL 760	2500 B	Fergus Falls KGDE 1200	100	KGVO 1260	1000	WMBO	1310	100
	10000 B	Hibbing	100	Wolf Point	1000	Binghan		
WBAL 1060 WCAO 600	500 C	WMFG 1210	100	KGCX 1310	100		1500	100
WCBM 1370	100	Minneapolls	100	1010		Brookly	1	
WFBR 1270	500 R	WCCO 810	50000 C	NEBRASH	(A	WARD	1400	500
Cumberland		WDGY 1180	1000				1400	500
WTBO 800	250	WLB 1250	1000	Clay Center			1300	1000
Frederick		WTCN 1250	1000	KMMJ 740	1000		1500	100
WFMD 900	500	Moorhead		Kearney			1400	500
Hagerstown		KGFK 1500	100	KGFW 1310	100		1400	500
WJEJ 1210	100	Northfield	1000	Lincoln KFAB 770	10000 C		1500 1400	100 500
		WCAL 1250	1000		1000 C	Buffalo	1400	300
MASSACHUS	ETTS	Rochester KROC 1310	100	KFOR 1210	100 C	WBEN	900	1000 F
		St. Paul	100	WJAG 1060	1000		1310	100
Boston WAAB 1410	500 C	KSTP 1460	25000 N	North Platte	1000	WGR	550	1000 (
WAAB 1410 WBZ 990	50000 B	1370	100	KGNF 1430	1000		1480	5000 C
WCOP 1120	500 D	Virginia	100	Omaha	1000	WSVS	1370	50
WEEI 590	1000 R	WHLB 1370	100	WAAW 660	500	WBNY	1370	100
WHDH 830	1000			WOW 590	5000 R	Canton		
WMEX 1500	100	MISSISSI	PPI	Scottsbluff			1220	500
WNAC 1230	1000 C			KGKY 1500	100	Chester		
Fall River		Clarksdale		York			1210	100
WSAR 1450	1000	WMFN 1210	100	KGBZ 930	1000	Elmira	0-0	
Loweil		Gulfport				WESG	850	1000 C
WLLH 1370	100	WGCM 1210	100	NEVADA	١	Freeport WGBB	1210	100
Needham	500	Hattiesburg WPFB 1370	100	Reno		Jamesto		100
WORL 920	500		100	KOH 1380	500 C		1210	50
New Bedford WNBH 1310	100	Jackson WJDX 1270	1000 N	KOII 1300	500 0	Long Isl		
Springfield	100	Kosciusko	100011	NEW HAMPS	HIRE	W2XR	1550	1000
WBZA 990	1000 B	WHEF 1500	100			New Yor	rk	
WMAS 1420	100 C	Laurel		Laconia		WABC	860	50000 C
WSPR 1140	500	WAML 1310	100	WLNH 1310	100		1350	250
Worcester		Meridian		Manchester		WBOQ	860	50000
WORC 1280	500 C	WCOC 880	500	WFEA 1340	500 C	WEAF	660	50000 F
WTAG 580	500 R	Vicksburg		Portsmouth	2-0		1300	1000
		WQBC 1360	1000	WHEB 740	250		1300	1000 1000
MICHIGA	N.			ALEXA 4550		WHN	1010 1180	1000
		MISSOU	K1	NEW JERS	E. T	WINS	760	50000 E
Battle Creek	100	0		Ashum Bast.			1100	5000
WELL 1420	100	Cape Girardea KFVS 1210	100	WCAP 1280	500	WMCA	570	50 <b>0</b>
Bay City WBCM 1410	500	Columbia	100	Atlantic City	500	WNYC	810	1000
	200	KFRU 630	500	WPG 1100	5000 C		1130	1000
Calumet	100				2000			
WHDF 1370	100	Jefferson City	500	Camden WCAM 1280	500	Olean WHDL	1420	100
		WOS 630	500		500			100
Detroit								
WJBK 1500	100 50000 C	Joplin WMBH 1420	100	Jersey City WAAT 940	500	Plattsbu WMFF	ırg 1310	250

# NORTH AMERICAN B. C. STATIONS BY LOCATIONS

Rochester	WBNS 1430 500 C	Erie WLEU 1420 100	SOUTH DAKOTA
WHAM 1150 50000 B	WCOL 1210 100	Glenside	Aberdeen
WHEC 1430 500 C	WOSU 570 750		KABR 1420 100
WSAY 1210 100 Saranac Lake	Dayton WHIO 1260 1000 R	Greensburg	Brookings
WNBZ 1290 100	WSMK 1380 200 C Portsmouth	WHJB 620 250	KFDY 780 1000
Schenectady		Grove City	Huron
WGY 790 50000 R	WPAY 1370 100	WSAJ 1310 100	KGDY 1340 250
Syracuse	Toledo	Harrisburg	
WFBL 1360 1000 C	WSPD 1340 1000 C	WHP 1430 500 C	KGFX 630 200
WSYR 570 250 B	Youngstown	WKBO 1200 100	Rapid City
Troy	WKBN 570 500 C	Hazleton	WCAT 1200 100
WHAZ 1300 500	Zanesville	Johnstown	Sloux Falls
Utica	WALR 1210 100		KSOO 1110 2500
WIBX 1200 100 C	OKLAHOMA	WJAC 1310 100	Vermillion
White Plains		Lancaster	KUSD 890 500
WFAS 1210 100	Ada	WGAL 1500 100	Watertown
Woodside		Philadelphia	KWTN 1210 100
WWRL 1500 100	KADA 1210 100	KYW 1020 10000 R	Yankton
	Ardmore	WCAU 1170 50000 C	WNAX 570 1000 C
NORTH CAROLINA	KVSO 1200 100 Elk City	WDAS 1370 100 WFIL 560 1000 B	TENNESSEE
Asheville	KASA 1210 100	WHAT 1310 100 WIP 610 1000	Bristol
WWNC 570 1000 N Charlotte	Enid KCRC 1360 250	WPEN 920 250	WOPI 1500 100
WBT 1080 50000 C	Muskogee	WRAX 920 250	Chattanooga
WSOC 1210 100 N	KBIX 1500 100	WTEL 1310 100	WDOD 1280 1000 C
Durham	Norman	Pittsburgh	Jackson
WDNC 1500 100 C	WNAD 1010 1000	KDKA 980 50000 B	WTJS 1310 100
Gastonia	Okiahoma	KOV 1380 500	Knoxville
WJBR 1420 100	KFXR 1310 100	WCAE 1220 1000 R	WNOX 1010 1000 C
Greensboro	KGFG 1370 100	WJAS 1290 1000 C	WROL 1310 100
WBIG 1440 500 C	KOMA 1480 5000 C	WWSW 1500 100	Memphis
High Point	WKY 900 1000 N	Reading WEEU 830 1000	WHBO 1370 100 WMC 780 1000 N
WMFR 1200 100 Raleigh	Ponca City WBBZ 1200 100	WRAW 1310 100	WNBR 1430 500
WPTF 680 5000 N	Shawnee	Scranton	Nashville
Rocky Mount	KGFF 1420 100	WGBI 880 500	
WEED 1420 100 Wilmington	Tulsa	WQAN 880 250	WLAC 1470 5000 C
	KTUL 1400 500 C	Sunbury	WSM 650 50000 N
WMFD 1370 100	KVOO 1140 25000 N	WKOK 1210 100	Springfield
Winston-Salem		Wilkes-Barre	WSIX 1210 100
WSJS 1310 100 C	OREGON	WBAX 1210 100 WBRE 1310 100	TEXAS
NORTH DAKOTA	Astoria KAST 1370 100	Williamsport WRAK 1370 100	Amarillo
Bismarck	Corvailis	York	KGNC 1410 1000
KFYR 550 1000 N	KOAC 550 1000	WORK 1320 1000	
Devils Lake	Eugene	PUERTO RICO	KNOW 1500 100
KDLR 1210 100	KORE 1420 100		Beaumont
Fargo	Klamath Falls	Ponce	KFDM 560 500
WDAY 940 1000 N	KFJI 1210 100		Brady
Grand Forks	Marshfield	WPRP 1420 100	KNEL 1500 100
KFJM 1370 100	KOOS 1390 250	San Juan	College Station
Mandan	Medford	WKAQ 1240 1000	WTAW 1120 500
KGCU 1240 250	KMED 1310 100	WNEL 1290 1000	Corpus Christi
Minot	Portland		KGFI 1500 100
KLPM 1240 250	KALE 1300 500 C KBPS 1420 100	RHODE ISLAND	Dallas   KRLD   1040 10000 C
ОН1О	KEX 1180 5000 N	Newport	WFAA 800 50000 N
	KFJR 1300 500	WNRI 1200 100	WRR 1280 500
Akron	KGW 620 1000 R KOIN 940 1000 C	Providence	Dubiin KFPL 1310 100
WADC 1320 1000 C	KWJJ 1040 500	WEAN 780 500 C	El Paso
WJW 1210 100	KXL 1420 100	WJAR 890 500 R	KTEP 1420 100
Canton WHBC 1200 100	Roseburg	WPRO 630 250	KTSM 1310 100
Cincinnati	KRNR 1500 100 Salem	SOUTH CAROLINA	Fort Worth
WCPO 1200 100 WKRC 550 1000 C	KSLM 1370 100	Anderson WAIM 1200 100	KTAT 1240 1000
WLW 700 500000 N WSAI 1330 1000 R	PENNSYLVANIA	Charleston	WBAP 800 50000 N Galveston
Cleveland	Allentown WCBA 1440 500	WCSC 1360 500 N Columbia	KLUF 1370 100
WGAR 1450 500 B WHK 1390 1000 C	WSAN 1440 500	WIS 560 1000 N	Houston KPRC 920 1000 N
WJAY 610 500	Altoona	Greenville	KTRH 1290 1000 C
WTAM 1070 50000 R	WFBG 1310 100	WFBC 1300 1000 N	KXYZ 1440 1000
Columbus	Easton	Spartanburg	Longview
WAIU 640 500	WEST 1200 100	WSPA 920 1000	KFRO 1370 100
WAIC 040 300	WEST 1200 100	11.51.A. 720 1000	1570 100

Lubbock KFYO 1310 100	Belfingham KVOS 1200 10	WYOMING	Yarmouth CJLS 1310 100
Midfand KRLH 1420 100	Everett KRKO 1370	Casper 50 KDFN 1440 500	ONTARIO
Palestine KNET 1420 100	Olympia KGY 1210 1	Sheridan 00 KWYO 1370 100	Brantford
Pampa	Pullman	00	CKPC 930 100 Chatham
KPDN 1310 100 Pecos	Seattle	CANADA	CFCO 630 100
KIUN 1420 100 Port Arthur		00 B ALBERTA	CKMC 12:10 50
KPAC 1260 500	KOL 1270 100	00 C	Fort William CKPR 930 100
San Angelo KGKL 1370 100		00 R   Calgary 00   CFAC 930 100 I	F Hamilton
San Antonio KABC 1420 100	KTW 1220 100 KVL 1370 10		CHML 1010 100 CKOC 1120 500
KMAC 1370 100	KXA 760 2	50 Edmonton	Kingston
KONO 1370 100 KTSA 550 1000 C	Spokane   KFIO 1120 10	OFRN 1260 100 I OFRN 1260 1000 I OFRN 1260 1000 I	Kirkland Lake
WOAI 1190 50000 N		00 C   CKUA 580 500	CJKL 1310 100 :
Tyler KGKB 1500 100	KHQ 590 100	00 B   Lethridge 00 R   CJOC   950   100 I	F CFPL 730 100
Waco WACO 1420 100 C	Tacoma KMO 1330 2	50 BRITISH COLUMBIA	North Bay CFCH 930 100
Weslaco	KVI 570 100	00 C	- Ottawa CKCO 1010 100
KRGV 1260 500 Wichita Fails	Walla Walla   KUJ 1370 10	Chilliwack CHWK 780 100 I	(100 to 000 to 000
KGKO 570 250 C	Wematchee KPQ 1500 10	Kamloops 00 CFJC 880 100 I	Prescott F CFLC 930 100
UTAH	Yakima	Kelowna	St. Catherines
Ogden	KIT 1310 1	00 CKOV 630 100 I	Sault Ste. Marie
KLO 1400 500 N Price	WEST VIRGINIA	A   CFPR 580 50	GJ1C 1500 100 Stratford
KEUB 1420 100	Bluefield	—   Trail   CJAT   910   1000	R CJCS 1210 50
Salt Lake City KDYL 1290 1000 N	WHIS 1410 2: Charleston	Vancouver	Sudbury CKSO 780 1000
KSL 1130 50000 C	WCHS 580 50	00 CJOR 600 500 CKCD 1010 100	Timmins CKGB 1420 100
VERMONT	Fairmont WMMN 890 50	00 C   CKFC 1410 50 CKMO 1410 100 1	Toronto
Burlington	Huntington WSAZ 1190 100	CKWX 1010 100 I	CKCL 580 1000
WCAX 1200 100	Parkersburg	CKGV 1100 500 1	CRCT 840 50001
Rutland WSYB 1500 100	Wheeling	OO CFCT 1450 75	Waterloo CKCR 1510 100
St. Albans WODM 1370 100	WWVA 1160 500	00 C MANITOBA	- Windsor CKLW 1030 5000
Springfield	WISCONSIN	Brandon	- CRCW 600 500
WNBX 1260 100 Waterbury	Fond du Lac	CKX 1120 100 I	Wingham CKNX 1200 50
WDEV 550 500		00 Winnipeg CJRC 630 500 1	PRINCE EDWARD
VIRGINIA		00   CKY 960 15000 I	
Arlington NAA 690 1000	WTAQ 1330 100 Janesville	NEW BRUNSWICK	Charlottetown
Charlottesville		)0 Fredericton	_   CFCY 630 1000 1   CHCK 1310 50
WCHV 1420 100 Danville	LaCrosse WKBH 1380 100		Summerside
WBTM 1370 100 Harrisonburg	Madison WHA 940 250	Moncton CKCW 1370 100 l	CHGS 1450 50
WSVA 550 500	WIBA 1280 100	00 N St. John	QUEBEC
Lynchburg WLVA 1200 100	Mamitowoc WOMT 1210 10	CHSJ 1120 500 I	
Newport News WGH 1310 100	Milwaukee	N. W. TERRITORY	- CRCS 950 100 I
Norfolk	WEMP 1310 10		CKCH 1210 100 1
WTAR 780 500 N Petersburg		50 C GJCU 1210 50	VE9EK 1185 10
WPHR 880 500	Poynette	NOVA SCOTIA	Montreal CFCF 600 400 P
Richmond WBBL 1210 100	WIBU 1210 10 Racine	Giace Bay	CHLP 1120 100 I CKAC 730 5000 C
WMBG 1210 100 C WRVA 1110 5000 N	WRJN 1370 10	00 VAS 685 2000	CRCM 910 5000 1
Roanoke WDBJ 930 1000 C	Sheboygan WHBL 1300 50	00 Halifax CHNS 930 1000 I	New Carlisle CHNC 1410 500
WASHINGTON	Stevens Point WLBL 900 250	Sydney 00 CJCB 1240 1000 I	Quebec
Aberdeen KXRO 1310 100	Superior	Wolfville	CKCV 1310 100 1
	WEBC 1290 100	00 N   CKIC 1010 50	CRCK 1050 1000 I

SASKATCHEWAN	• • • • • • • • • • • • • • • • • • • •	<u> </u>	·	D. C.	0111110	110 2	1 200	21110110		
Mile	SASKATCHE	VAN	XFC 810	350						250
CHAM	Moose Jaw		CHIHUAH	UA	A ESL	1100				100 75
Prince Albert CKB   1210   100 F Regin					MIC	CHOACA	N.	Carden	85	
CKCK   1010   500 F   CKCK   1010   500 F		1000 F		250						150
Regina   CHWC   1010   500 F   CKCK   1010	CKRI 1210	100 F		250			125			100
CKCK   1010   500   F   Seskatation   CFOC   840   1000   F   SEF   120   1000   CFOC   Set   1020   Set   1000   CFOC   Set   1000   Set   1000   CFOC   Set   1000	Regina	100 1	XEAT 1210	50		1370				50
SaskAstoon	HWC 1010		Juarez		NUE	VO LEC	ON	CMJO	1180	50
CFQC   S40   1000   F   Vorktorn   CJGX   580   100   F   COAMUILA   XEFI   1230   100   CMHW   820   CMHK   760   CMKK   760   CMKK		500 F						Cienfue	gos	100
Vertical Color	CEOC 840	1000 F					100			100 100
Color	•	10001	1020	1000	l XEFJ			CMHX		200
NEWFOUNDLAND   St. John's   XELO   1110   1000   XEDN   590 50000   Saltillio   VASC   1160   1000   XEDN   590 50000   Saltillio   VASC   VASC   1160   1000   XEDN   590 50000   Saltillio   VASC   VASC	JGX 580	100 F	COAHUIL	.А	XEH	1150				
St. John's   VOAC   1065   40   VOGY   840   100   VOGY   840   VOGY			Di des Nesses							250
St. John's	NEWFOUNDL	AND			AEA	1310	123	CMBC	640	150
VOAC         106.5 vOAS         40 vOAS         VOWN         400 vOAS         VOWN         400 vOAS         VOWN         400 vOAS         40 vOAS	St. John's		XEPN 590	50000	P	UEBLA		CMBD	1170	150
VOGY         840         400         XEOX         640         500         XETH         1210         100         CMBS         770         CMBS         100         CMBS         170         CMBS         17	OAC 1065			100		-		CMBG		200
VÖNF         1195         500         VERA         As do 250000         SAN LUIS POTOSI         CMBX         106M         YORZ         CMBY         970         C	OAS 940		XEAS 1160			1210	100			150 150
VOWR   081   500				.,00	ABIH	1210	100			200
MIQUELON   XERA	OWR 681		XETB 1310	125	SAN L	UIS PO	TOSI	CMBY	970	150
D. F.										150
D. F.   SONORA   CMCD   950   CMCF   810   CMCG   680	MIQUELO	N	AEKA 840 2	20000						250 150
CENTRAL AMERICA	St Pierre		D. F.		ADLL	1.770	100			250 250
Mexico City		250			S	ONORA		CMCF	810	600
XEB   1030 10000	•		Mexico City	100				CMCG		150
COSTA RICA			XEAL 1240		Hermo		500			500 150
COSTA RICA	AMERIC	A	XECW 1310		Nogale		.,,,,	LCMCO		250
XEFZ   1370   100   XEK   990   100   XEK   990   100   XEK   990   100   XEL   1100   250   XEM   2						990	500	CMCR	1380	150
TIFS	COSTA RIC	A	XEFO 940		7.1			CMCU		150
TIFS	0		XEFZ 1370 XEK 990		IA	MAULIP	AS	CMCX		150 150
TIGA   1014   30		7.5	XEL 1100		Matan	ioros		CMCY		1000
XEW   890 50000							7.5	CMK	730	3000
TIEP	San Jose		XEN 710				100			150
TIGH	TIEP 850		XEWZ 1150							150 200
TIRH   930   50	CIFA 1050		XEYZ 780		XENT			CMO		500
DURANGO			XFX 610	1000	Reynos	ia		CMW		1400
Durango   XEE   1210   50   XES   990   250   Manzanillo   CMKK   1120   Matanzas   CMGC   1400   CMGH   7120   CMGH   1210	750		DUDANO	_	XEAW	960	50000			1000
Color   Panama   Panama   Color   Panama   Color   Panama   Color   Panama   P	GUATEMAI	LA	DURANG	0	Tampi	Co				250
TGW   1210 10000   TGX   1400   250     GUANAJUATO   GUANAJUATO   Cordoba   XEAZ   1420   7   Leon   XEAZ   1420   7   Leon   XEKL   1240   500   XFD   1340   350   XFB   1270   250   XET   1220   12   XEU   1010   250   XET   1240   Santa Clara   CMH   1210   Santiago   CMKC   1250   CMKC   1	0		Durango					Manza	nillo	
TGX	Guatemaia Cit FGW 1210-1	y 10000	XEE 1210	50	AES	990	250	CMKM	1120	200
Cordoba	GX 1400		CHANALIIA	170	VE	RACRU	z	Matan	Zas 1400	100
Tegucigalpa			GOARAJOA					CMGF	1120	150
Tegucigalpa	HONDURA	S	Guanajuato				10			250
HRN	Tegucigalna		XEAZ 1420	7		1310	10		la Gran	de
NICARAGUA		100			YER X	1270	250	CMHA	1070	50
Managua			XEKL 1240	500						
Namasagua	NICARAGE	JA	JALISCO	)	Veracr	uz		1		50
YNLF   1275   20	Managua								Clara	150
NVA   950   30   XED   1155   2500   YUCATAN   CMKC   1250   CMKD   1050   CMKD   10				500	XEU	1010	250			1.00
Colon					Y	UCATAR	<u> </u>	CMKC	90 1250	150
Colon	1117A 750	<b>a</b> U						CMKD	1050	250
Coronado Island XEMZ 820	PANAMA		LOWER CALIF	ORNIA			100			100
RED   RED	Colon		Coronado Isla	nd				CMKX	1190	75
EL SALVADOR   XEG   1270   200   WEST INDIES   San Pedro de HIH   1395   Trujillo   NEAO   500   XEAO   560   250   CUBA   Trujillo   HIJ   1195   HIX   800   HIZ   1370   MEXICO   Tijuana   XEAC   1240   250   CMJO   1390   150   Tijuana   XEC   1160   30   CMJO   1390   150   MAITI		25	XEMZ 820							
XEG   1270   200   WEST INDIES   San Pedro de HIH   1395   XEAA   920   250   XEAO   560   250   XEAO   1090   1000   Caibarien   Caibarien   Camaguey   CMJA   1010   50   Tolyina   XEC   1100   30   CMJC   1390   150   MAITI			Ensenada					RI	EPUBLI	C
Mexical   XEAA   920   200   XEAA   920   250   X	EL SALVAD	OR	XEG 1270	200	WES	T INC	DIES	Sam D.	dra da	Macoria
XEAA   920   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200   200	San Calvadas			'An "					1395	15
MEXICO   Rosarito   XEAO   1090   1000   CMHD   1270   250   HIZ   800   HIZ   1370		500				CUBA		Trutill	D	
XEAC   1090   1000   CMHD   1270   250   HIZ   1370		•	1	250	Caibin			HIJ	1195	15
Tijuana   Camaguey   H1Z   1370	MEXIC	0	XEAO 1000	1000		1270	250			700
AGUASCALIENTES XEAC 1240 250 CMJA 1010 50 HAFTI				-000				HIZ	1370	10
XEC 1160 30 CMJC 1390 150	AGUASCALIE	NTES	XEAC 1240	250	CMJA	1010			HAITI	
Aguascalientes   XEFL 1150 Z50   UMJE 1220 50   Port-au-Prince					CMJC		150	1		
XFA 1310 5 XEMO 860 5000 CMJF 1150 200 HIIK 920									u-Prince	e 1000
APA 1510 5 APMO 600 5000 J GMJF 1150 200 HIIK 920	APA ISIU	э	LYEMO 800	5000	CMSF	1100	200	Lunk	920	1000

	CFAC 930 100 Calgary, Alta.		CJLS 1310 Yarmouth, N. S.	100		CMBS 770 Havana, Cuba	<b>150</b>
	CFCF 600 400		CJOC 950	100	-	CMBX 1060	200
-	Montreal, Que. CFCH 930 100		Lethbridge, Alta.	500		Havana, Cuba CMBY 970	150
	North Bay, Ont.		Vancouver, B. C.			Havana, Cuba	
	CFCN 1030 10000 Calgary, Alta.		CJRC 630 Winnipeg, Man.	500		CMBZ 1000 Havana, Cuba	150
	CFCO 630 100		CJRM 540	1000		CMCA 1350	250
-	Chatham, Ont. CFCT 1450 75		Moose Jaw, Sask.	5000		Havana, Cuba CMCB 1230	150
	Victoria, B. C.		Montreal, Que.			Havana, Cuba	
	CFCY 630 1000 Charlottetown, P.E.I.		CKBI 1210 Prince Albert, Sask	100		CMCD 950 Havana, Cuba	250
	CFJC 880 100		CKCD 1010	100		CMCF 810	600
	Kamloops, B. C. CFLC 930 100		Vancouver, B. C.	100	-	Havana, Cuba	150
	Prescott, Out.		Hull, Que.			Havana, Cuba	500
	CFNB 550 500 Fredericton, N. B.		Regina, Sask.	500		CMCJ 1110 Havana, Cuba	500
	CFPL 730 100 London, Ont.		CKCL 580 Toronto, Ont.	100		CMCO 1200 Havana, Cuba	150
	CFPR 580 50		CKCO 1010	100		CMCQ 1420	250
	Prince Rupert B. C. CFQC 840 1000		Ottawa, Ont. CKCR 1510	100		Havana, Cuba CMCR 1380	150
	Saskatoon, Sask		Waterloo, Ont.			Havana, Cuba	
	CFRB 690 10000 Toronto, Ont.		Quebec, Que.	100		CMCU 1460 Havana, Cuba	150
	CFRC 1510 100		CKCW 1370	100		CMCW 750	150
	Kingston, Ont. CFRN 1260 100		Moneton, N. B.	50		Havana, Cuba CMCX 1500	150
	Edmonton, Alta.		Vancouver, B. C.	100		Havana, Cuba CMCY 1030	1000
	Moose Jaw, Sask.		Timmins, Ont.			Havana, Cuba	
	CHCK 1310 50 Charlottetown, P.E.I.		CKIC 1010 Wolfville, N. S.	50		CMGC 1400 Matanzas, Cuba	100
	CHGS 1450 50 Summerside, P.E.I.		CKLW 1030 Windsor, Ont.	5000		CMGE 1370 Cardenas, Cuba	150
	CHLP 1120 100		CKMC 1210	50		CMGF 1120	250
	Montreal, Que. CHML 1010 100		Cobalt, Ont.	100		Matanzas, Cuba CMGH 790	250
	Hamilton, Ont.		Vancouver, B. C.			Matanzas, Cuba	
	CHNC 1410 500 New Carlisle, Que.		CKNX 1200 Wingham, Ont.	50		CMHA 1070 Sagua la Grande, C	50 u.
	CHNS 930 1000 Halifax, N. S.		CKOC 1120 Hamilton, Ont.	500		CMHB 1240 Sancti Spiritus, Cul	50 ha
	CHRC 580 108		CKOV 630	100		CMHD 1270	250
	Quebec, Que. CHSJ 1120 500		Kelowna, B. C.	100	-	Caibarien, Cuba CMHI 1210	150
-	St. John, N. B. CHWC 1010 500		Brantford, Ont.	100		Santa Clara, Cuba CMHJ 1160	100
	Regina, Sask.		Fort William, Ont.			Cienfuegos, Cuba	
	CHWK 780 100 Chilliwack, B. C.		CKSO 780 Sudbury, Ont.	1000		CMHK 1330 Cruces, Cuba	250
	CJAT 910 1000 Trail, B. C.		CKTB 1200 St. Catherines, Ont	100		CMHW 820 Cienfuegos, Cuba	100
	CJCA 730 1000		CKUA 580	500		CMHX 760	200
	Edmonton, Alta.	-	Edmonton, Alta.	100	-	Cienfuegos, Cuba CMJA 1010	50
	Sydney, N. S.	<u> </u>	Vancouver, B. C.			Camaguey, Cuba	
	Calgary, Alta.		Brandon, Man.	100		CMJC 1390 Camaguey, Cuba	150
	CJCS 1210 50 Stratford, Ont.		CKY 960 Winnipeg, Man.	15000		CMJE 1220 Camaguey, Cuba	50
	CJCU 1210 50		CMBC 640	150		CMJF 1150	208
	Aklavik, N. W. T. CJGX 580 100		Havana, Cuba	150		Camaguey, Cuba CMJH 1360	100
-	Yorkton, Sask.		Havana, Cuba CMBG 1140	200		Ciego de Avila, Cul CMJI 1130	ba
	S. Ste. Marie, Ont.		Havana, Cuba		<b></b>	Ciego de Avila, Cul	
	CJKL 1310 100 Kirkland Lake, Ont.		CMBN 850 Hayana, Cuba	150		CMJK 780 Camaguey, Cuba <sup>1</sup> 3	250

CMJL 13 Camaguey,	340 100 Cuba	KARK 890 Little Rock, Ark.	250	KFJI 1210 100 Klamath Falls, Ore.
<del></del>	180 50	KASA 1210 Elk City, Okla.	100	KFJM 1370 100 Grand Forks, N. D.
	430 75	KAST 1370 Astoria, Ore.	100	KFJR 1300 500 Portland, Ore.
	730 3000	KBIX 1500 Muskogee, Okla.	100	KFJZ 1370 100 Fort Worth, Texas
CMKC 12	250 150	KBPS 1420	100	KFKA 880 500 Greeley, Colo.
	050 250	Portland, Ore.  KBTM 1200	100	KFKU 1220 1000
	460 250	Jonesboro, Ark. KCMC 1420	100	Lawrence, Kans. KFNF 890 500
	120 200	Texarkana, Ark.	250	Shenandoah, Iowa KFOR 1210 100
	100 100	Enid, Okla. KCRJ 1310	100	Lincoln, Neb. KFOX 1250 1000
	190 75	Jerome, Ariz. KDB 1500	100	Long Beach, Calif. KFPL 1310 100
Santiago, Cu CMOA 14	uba 140 150	Santa Barbara, Calif KDFN 1440	500	Dublin, Texas KFPW 1210 100
Havana, Cu CMOK 14	ba 470 150	Casper, Wyo.  KDKA 980 5	0000	Fort Smith, Ark. KFPY 890 1000
Havana, Cu		Pittsburgh, Pa. KDLR 1210	100	Spokane, Wash. KFQD 780 250
Havana, Cu	ba 880 500	Devils Lake, N. D.	100	Anchorage, Alaska KFRC 610 1000
Havana, Cu		Del Monte, Calif.	1000	San Francisco, Calif. KFRO 1370 100
Havana, Cu	ba	Sait Lake City, Utah		Longview, Texas
Havana, Cu		Los Angeles, Calif.	1000	Columbia, Mo.
Quebec, Que		KELD 1370 El Dorado, Ark.	100	KFSD 600 1000 San Diego, Calif.
Montreal, Q		KELW 780 Burbank, Calif.	500	KFSD 1120 500 Los Angeles, Calif.
Ottawa, Ont	880 <b>1000</b> t.	KERN 1370 Bakersfield, Calif.	100	<b>KFUO</b> 550 500 St. Louis, Mo.
CRCS S	950 100 Que.	KEUB 1420 Price, Utah	100	KFVD 1000 250 Los Angeles, Calif.
CRCT 8	840 5000 it.	Portland, Ore.	5000	KFVS 1210 100 Cape Girardeau, Mo.
Vancouver,	100 500 B. C.	KFAB 770 1 Lincoln, Neb.	0000	KFWB 950 1000 Hollywood, Calif.
	500 500	KFAC 1300 Los Angeles, Calif.	1000	KFXD 1200 100 Nampa, Idaho
	609 250		1000	KFXJ 1200 100 Grand Junction, Colo.
	920 1000		5000	KFXM 1210 100 San Bernardino, Calif.
	395 15		5000	KFXR 1310 100 Oklahoma City, Okla
	195 15	KFDM 560 Beaumont, Texas	500	KFYO 1310 100 Lubbock, Texas
HIX 8	B00 700		1000	KFYR 550 1000 Bismarck, N. D.
	370 10	KFEL 920 Denver, Colo.	500	KGA 1470 5000 Spokane, Wash.
	440 25	KFEQ 680	2500	KGAR 1370 100
	340 100	St. Joseph, Mo. KFGQ 1370	100	Tucson, Ariz KGB 1330 1000
	420 100		1000	San Diego, Calif. KGBU 900 500
	420 100		0000	Ketchikan, Alaska KGBX 1230 500
	3, Dak. 200 100	Los Angeles, Calif. KFIO 1120	100	Springfield, Mo. KGBZ 930 1000
Ada, Okla. KALB 14	420 <b>100</b>	Spokane, Wash. KFIZ 1420	100	York, Neb. KGCA 1270 100
Alexandria,		Fond du Lac, Wis. KFJB 1200	100	Decorah, Iowa KGCU 1240 250
Portland, O		Marshalltown, Iowa		Mandan, N. D.

	1000 100 100 100 50000 50000 10000
Control   Cont	100 100 100 50000 50000 10000
RGDM 1100 1000   Stockton, Calif.   Spokane, Wash.   Sp	100 100 50000 50000 1000
KGDY 1340   250   KHSL 950   250   ENET 1420   Palestine, Texas   KGEK 1200   100   KICA 1370   100   KICA 1370   100   Austin, Texas   KGEK 1360   1000   KID 1320   500   Hollywood, Calif.   KGEZ 1310   100   KID 1350   1000   KOA 830   ENET 1350   KOA 830   ENET 1350   ENET 135	100 50000 50000 1000 10000
Huron, S. D.   Chico, Calif.   Palestine, Texas	50000 50000 1000 10000
Sterling, Colo.   Clovis, N. M.   Austin, Texas   KGER 1360 1000   KID 1320 500   Hollywood, Calif.   Hollywood, Calif.   KGEZ 1310 100   KIDO 1350 1000   KOA 830   Denver, Colo.   KGF 1420 100   KIDW 1420 100   KOAC 550   Corvallis, Ore.   KGFG 1370 100   KIEM 1450 500   Corvallis, Ore.   KGFI 1500 100   KIEM 1450 500   Albuquerque, N. 2   KGFI 1500 100   KIEW 850 250   KOH 1380   KOH 1380	50000 50000 1000 10000
KGER 1360   1000   KID 1320   500   Hollywood, Calif. KGEZ 1310   100   KID 1350   1000   KOA 830   Enwired, Okla.   Corvallis, Okla.   Corvalli	50000 1000 10000
KGEZ 1310 100   KIDO 1350 1000   KOA 830   Denver, Colo.	1000 10000 1.
Nalispeil, Mont.   Boise, Idaho   Denver, Colo.	10000
Shawnee, Okla.   Lamar, Colo.   Corvallis, Ore.   KGFG 1370 100   KIEM 1450 500   KOB 1180   Albuquerque, N. 2   KGFi 1500 100   KIEV 850 250   KOH 1380	10000
KGFG         1370         100         KIEM         1450         500         KOB         1180           Oklahoma City, Okla.         Eureka, Calif.         Albuquerque, N. Y.           KGFI         1500         100         KIEV         850         250         KOH         1380	1.
KGFI 1500 100 KIEV 850 250 KOH 1380	
	500
Corpus Caristi, Texas	1000
Los Angeles, Calif. Juneau, Alaska Council Bluffs, Io	va
KGFK 1500 100 KIRO 710 500 KOIN 940 Portland, Ore.	1000
KGFL 1370 100 KIT 1310 100 KOL 1270	1000
Roswell, N. M.   Yakima, Wash.   Seattle, Wash.   KGFW 1310 100   KIUJ 1310 100   KOMA 1480	5000
Kearney, Neb. Santa Fe, N. Mex. Oklahoma City, Ol	
KGFX 630 200 KIUL 1210 100 KOMO 920 Seattle, Wash.	1000
KGGC 1420 100 KIUN 1420 100 KONO 1370	100
San Francisco, Calif.	250
Coffeyville, Kans. Durango, Colo. Marshfield, Ore.	100
KGGM 1230 250 KJBS 1070 500 KORE 1420 Eugene, Ore.	
KGHF 1320 500 KJR 970 5000 KOTN 1500	100
KGHI 1200 100 KLCN 1290 100 KOY 1390	500
Little Rock, Ark.   Blytheville, Ark.   Phoenix, Ariz.   KGHL 780 1000   KLO 1400 500   KPAC 1260	500
Billings, Mont. Ogden, Utah Port Arthur, Texa	
KGIR 1340 1000   KLPM 1240 250   KPDN 1310   Butte, Mont.   Minot, N. D.   Pampa, Texas	100
KGIW 1420 100 KLRA 1390 1000 KPLC 1500	100
KGKB 1500 100 KLS 1440 250 KPO 680	50000
Tyler, Texas Oakland, Calif. San Francisco, Ca	iif. 500
San Angelo, Texas Galveston, Texas Denver, Colo.	
KGKO 570 250   KLX 880 1000   KPPC 1210   Wichita Falls, Texas   Oakland, Calif.   Pasadena, Calif.	50
KGKY 1500 100 KLZ 560 1000 KPQ 1500	100
KGMR 1320 1000 KMA 930 1000 KPRC 920	1000
Honolulu, T. H. Shenandoah, Iowa Houston, Texas	500
Amarillo, Texas San Antonio, Texas Pittsburgh, Pa.	
KGNF 1430 1000   KMBC 950 1000   KQW 1010   San Jose, Calif.	1000
KGNO 1340 250 KMED 1310 100 KRE 1370	100
Dodge City, Kans.   Medford, Ore.   Berkeley, Calif.   KGO 790 7500   KMJ 580 1000   KRGV 1260	500
San Francisco, Calif. Fresno, Calif. Weslaco, Texas	
KGU 750 2500 KMLB 1200 100 KRKD 1120 Honolulu, T. H. Monroe, La. Los Angeles, Calli	500
KGVO 1260 1000 KMMJ 740 1000 KRKO 1370	50
KGW 620 1000 KMO 1330 250 KRLC 1420	100
Portland, Ore. Tucoma, Wash. Lewiston, Idaho	10000
KGY 1210 100   KMOX 1090 50000   KRLD 1040	20000

	KRLH 1420 100 Midland, Texas		KVL 1370 Seattle, Wash.	100		TIRH 930	50
						San Jose, C. R.	
	KRMD 1310 100		KVOA 1260	500		VAS 685	2000
	Shreveport, La. KRNR 1500 100		Tucson, Ariz.	500		Glace Bay, N. S. VE9EK 1185	10
	Roseburg, Ore.		Denver, Colo.			Montmagny, Que	٠.
	KRNT 1320 500 Des Moines, Iowa		Santa Ana, Calif.	100		VOAC 1065 St. John's, Nfld.	40
	KROC 1310 100 Rdchester, Minn.		KVOL 1310 Lafayette, La.	100		VOAS 940 St. John's, Nfld.	100
	KROW 930 1000		KV00 1140	25000		VOGY 840	400
	Oakland, Calif. KRSC 1120 100		Tulsa, Okla. KVOR 1270	1000	<u></u>	St. John's, Nfld.	500
	Seattle, Wash. KSAC 580 500		Colorado Spgs., C	Colo. 100	-	St. John s, Nfld.	500
<u> </u>	Manhattan, Kans,		Bellingham, Wash	١.	<u> </u>	St. John's, Nfld.	
	KSCJ 1330 1000 Sioux City, Iowa		KVSO 1210 Ardmore, Okla.	100		WAAB 1410 Boston, Mass.	500
	KSD 550 1000 St. Louis, Mo.		KWBG 1420 Hutchinson, Kans	100		WAAF 920 Chicago, Ill.	1000
	KSEI 900 250		KWG 1200	100		WAAT 940	500
	Pocatello, Idaho KSFO 560 1000		Stockton, Calif.	500	<u> </u>	Jersey City, N. J WAAW 660	500
	San Francisco, Calif.  KSL 1130 50000		Portland, Ore.	1000	1	Omaha, Neb. WABC 860	50000
	Salt Lake City, Utah		St. Louis, Mo.	1000		New York, N. Y.	50000
	KSLM 1370 100 Salem, Ore.		KWKC 1370 Kansas City, Mo.	100		WABI 1200 Bangor, Maine	100
	KSO 1430 500 Des Moines, Iowa		KWKH 1100 Shreveport, La.	10000		WABY 1370 Albany, N. Y.	100
	KSOO 1110 2500		KWLC 1270	100		WACO 1420	100
	Sioux Falis, S. D. KSTP 1460 25000		Decorah, Iowa KWSC 1220	1000	-	Waco, Texas WADC 1320	1000
	St. Paul, Minn. KSUN 1200 100		Pullman, Wash.			Akron, Ohio WAGF 1370	
	Lowell, Ariz.		Watertown, S. D.			Dothan, Ala.	250
	KTAR 620 1000 Phoenix, Ariz.		KWTO 560 Springfield, Mo.	5000		WAGM 1420 Presque Isle, Me.	100
	KTAT 1240 1000 Fort Worth, Texas		KWYO 1370 Sheridan, Wyo.	100		WAIM 1200 Anderson, S. C.	100
	KTBS 1450 1000		KXA 760	250		WAIU 640	500
	Shreveport, La. KTEP 1500 100		Seattle, Wash.	100		Columbus, Ohio WALA 1380	500
	El Paso, Texas KTFI 1240 1000	_	Portland, Ore.	100		Mobile, Ala. WALR 1210	100
	Twin Falls, Idaho		El Centro, Calif.			Zanesville, Ohio	
	KTHS 1060 10000 Hot Springs, Ark.		KXRO 1310 Aberdeen, Wash.	100		WAML 1310 Laurel, Miss.	100
	KTM 780 500 Los Angeles, Calif.		KXYZ 1440 Houston, Texas	1000		WAPI 1140 Birmingham, Ala.	5000
	KTRB 740 250		KYA 1230	1000		WARD 1480	500
	Modesto, Calif. KTRH 1290 1000		San Francisco, Ca KYW 1020	10000		Brooklyn, N. Y. WASH 1270	500
	Houston, Texas KTSA 550 1000		Philadelphia, Pa.	1000		Grand Rapids, Mi	ich. 100
	San Antonio, Texas		Arlington, Va.			Atlanta, Ga.	
	KTSM 1310 100 El Paso, Texas		RDN 680 San Salvador, E. S	<b>500</b> S.		WATR 1190 Waterbury, Conn.	100
	KTUL 1400 500 Tulsa, Okla.	l	TGW 1210 Guatemala, Gua.	10000		WAVE 940 Louisville, Ky.	1000
	KTW 1220 1000		TGX 1400	250		WAWZ 1350	500
	Seattle, Wash. KUJ 1370 100		Guatemala City TIEP 850	500		Zarephath, N. J. WAZL 1420	100
	Walla Walla, Wash. KUMA 1420 100		San Jose, C. R. TIFA 1050	75		Hazleton, Pa. WBAA 890	1000
	Yuma, Ariz.		San Jose, C. R.			West Lafayette, I	nd.
	Fayetteville, Ark.		TIFS 1441 Cartago, C. R.	7.5		WBAL 760 Baltimore, Md.	2500
	KUSD 890 500 Vermillion, S. D.		TIGA 1014 Cartago, C. R.	30		WBAL 1060 Baltimore, Md.	10000
	KVI 570 1000 Tacoma, Wash.		TIGH 1000 San Jose, C. R.	500		WBAP 800 Fort Worth Texas	50000

	WBAX 1210	100	WCBM 1370	100	WEBC 1290 1	1000
	Wilkes-Barre, Pa.		Baltimore, Md.		Superior, Wis.	
	WBBC 1400 Brooklyn, N. Y.	500	WCBS 1420 Springfield, Ill.	100	WEBQ 1210 Harrisburg, Ill.	100
	WBBL 1210	100		0000	WEBR 1310	100
	Richmond, Va.		Minneapolis, Minn.		Buffalo, N. Y.	
	WBBM 770 5 Chicago, Ill.	0000	WCFL 970 Chicago, Ill.	5000	WEDC 1210 Chicago, Ill.	100
		1000	WCHS 580	500	WEED 1420	100
	Brooklyn, N. Y.		Charleston, W. Va.		Rocky Mount, N. C.	
	WBBZ 1200 Ponca City, Okla.	100	WCHV 1420 Charlottesville, Va.	100	WEEL 590 1 Boston, Mass.	1000
n n	WBCM 1410	500	WCKY 1490	5000	WEEU 830 1	1000
	Bay City, Mich.	1000	Covington, Ky. WCLO 1200	100	Reading, Pa. WEGL 1400	500
	Buffalo, N. Y.		Janesville, Wis.		Brooklyn, N. Y.	
	WBEO 1310 Marquette, Mich.	100	WCLS 1310 Joliet, Ill.	100	WEHS 1420 Cicero, Ill.	100
<del> </del>	WBIG 1440	500	WCMI 1310	100	WELI 900	500
	Greensboro, N. C.		Ashland, Ky.		New Haven, Conn.	
	New Orleans, La.	100	WCNW 1500 Brooklyn, N. Y.	100	WELL 1420 Battle Creek, Mich.	100
	WBNS 1430	500	WCOA 1340	500	WEMP 1310	100
	Columbus, Ohio	252	Pensacola, Fla.		Milwaukee, Wis. WENR 870 56	0000
	WBNX 1350 New York, N. Y.	250	WCOC 880 Meridian, Miss.	500	WENR 870 50 Chicago, Ill.	0000
	WBNY 1370	100	WCOL 1210	100	WEOA 1370	100
	Buffalo, N. Y. WBOQ 860 5	0000	Columbus, Ohio WCOP 1120	500	Evansville, Ind. WESG 850	1000
	New York, N. Y.		Boston, Mass.		Elmira, N. Y.	
	WBOW 1310 Terre Haute, Ind.	100	WCPO 1200 Cincinnati, Ohio	100	WEST 1200 Easton, Pa.	100
	WBRB 1210	100	WCRW 1210	100		1000
	Red Bank, N. J.		Chicago, Ill.		New York, N. Y.	
	WBRC 930 Birmingham, Ala.	1000	WCSC 1360 Charleston, S. C.	500,	WEW 760 St. Louis, Mo.	1000
	WBRE 1310	100	WCSH 940	1000	WEXL 1310	50
	Wilkes-Barre, Pa. WBT 1080 5	50000	Portland, Me.	1000	Royal Oak, Mich. WFAA 800 5	0000
	Charlotte, N. C.		Tampa, Fla.	1000	Dallas, Texas	
	WBTM 1370 Danville, Va.	100	WDAF 610 Kansas City, Mo.	1000	WFAB 1300 New York, N. Y.	1000
		0000	WDAH 1310	100	WFAM 1200	100
L	Boston, Mass. WBZA 990	1000	El Paso, Texas	100	South Bend, Ind. WFAS 1210	100
	Springfield, Mass.	1000	WDAS 1370 Philadelphia, Pa.	100	White Plains, N. Y.	100
	WCAC 600	500	WDAY 940	1000		1000
	Storrs, Conn. WCAD 1220	500	Fargo, N. D. WDBJ 930	1000	Greenville, S. C. WFBG 1310	100
	Canton, N. Y.		Roanoke, Va.		Aitoona, Pa.	
	WCAE 1220 Pittsburgh, Pa.	1000	WDBO 580 Orlando, Fla.	1000	Syracuse, N. Y.	1000
	WCAL 1250	1000	WDEL 1120	250	WFBM 1230	1000
	Northfield, Minn. WCAM 1280	500	Wilmington, Del.	500	Indianapolis, Ind. WFBR 1270	500
	Camden, N. J.	500	Waterbury, Vt.	500	Baltimore, Md.	300
	WCAO 600	500	WDGY 1180	1000	WFDF 1310	100
_	Baltimore, Md. WCAP 1280	500	Minneapolis, Minn.	100	Flint, Mich. WFEA 1340	500
	Asbury Park, N. J.		Durham, N. C.		Manchester, N. II.	
	Rapid City, S. D.	100	WDOD 1280 Chattanooga, Tenn	1000	WFIL 560 Philadelphia, Pa.	1000
		50000	WDRC 1330	1000	WFLA 620	1000
	Philadelphia, Pa.	400	Hartford, Conn.	1000	Clearwater, Fla.	500
	WCAX 1200 Burlington, Vt.	100	New Orleans, La.	1000	Frederick, Md.	300
	WCAZ 1070	100	WDZ 1020	250	WGAL 1500	100
	Carthage, III.	500	Tuscola, III. WEAF 660	50000	Lancaster, Pa. WGAR 1450	500
	Allentown, Pa.		New York, N. Y.		Cleveland, Ohio	
	WCBD 1080 Waukegan, Ill.	5000	WEAN 780 Providence, R. I.	500	WGBB 1210 Freeport, N. Y.	100
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	WGBF 630	500	Г	WHK 1390	1000		WJDX 1270	1000
-	Evansville, Ind.	500		Cleveland, Ohio	100	-	Jackson, Miss. WJEJ 1210	100
	Scranton, Pa. WGCM 1210			Virginia, Minn.			Hagerstown, Md.	
	Gulfport, Miss.	100		New York, N. Y.	1000		WJIM 1210 Lansing, Mich.	100
	WGES 1360 Chicago, Ill.	500		WHO 1000 Des Moines, Iowa	50000		WJJD 1130 Chicago, Ill.	20000
	WGH 1310 Newport News, V	100		WHOM 1450 Jersey City, N. J.	250		WJMS 1420 Ironwood, Mich.	100
	WGL 1370	100		WHP 1430	500		WJNO 1200	100
	Fort Wayne, Ind. WGN 720	50000		Harrisburg, Pa. WIBA 1280	1000		W. Palm Beach, F WJR 750	ta. 50000
	Chicago, Ill. WGNY 1210	100	-	Madison, Wis.	100	_	Detroit, Mich.	10000
	Chester, N. Y. WGPC 1420	100	-	Glenside, Pa. WIBM 1370	100	-	Washington, D. C WJW 1210	
	Albany, N. Y.			Jackson, Mich.			Akron, Ohio	
	WGR 550 Buffalo, N. Y.	1000		Poynette, Wis.	100		New York, N. Y.	50000
	WG5T 890 Atlanta, Ga.	1000		WIBW 580 Topeka, Kans.	1000		WKAQ 1240 San Juan, P. R.	1000
	WGY 790	50000		WIBX 1200	100		WKAR 850	1000
	Schenectady, N. 1	2500		Utica, N. Y. WICC 600	500		East Lansing, Mic WKBB 1500	100
	Madison, Wis.	50000		Bridgeport, Conn.	100		East Dubuque, Ill.	1000
	Rochester, N. Y. WHAS 820	50000		St. Louis, Mo.			LaCrosse, Wis.	100
	Louisville, Ky			Urbana, Ill.	250		Cicero, Ill.	
	WHAT 1310 Philadelphia, Pa.	100		Wilmington, Del.	100		WKBN 570 Youngstown, Ohio	500
	WHAZ 1300 Troy, N. Y.	500		WIND 560 Gary, Ind.	1000		WKBO 1200 ifarrisburg, Pa.	100
	WHB 860	1000		WINS 1180	1000		WKBV 1500	100
	Kansas City, Mo. WHBB 1500	100		New York, N. Y. WIOD 1300	1000		Richmond, Ind. WKBW 1480	5000
	Selma, Alabama WHBC 1200	100	-	Miami, Fla. WIP 610	1000		Buffalo, N. Y. WKBZ 1500	100
	Canton, Ohio	100		Philadelphia, Pa.			Muskegon, Mich.	100
	Rock Island, Ill.			Indianapolis, Ind.	500		Griffin, Ga.	
	WHB! 1250 Newark, N. J.	1000		WIS 560 Columbia, S. C.	1000		WKOK 1210 Sunbury, Pa.	100
	WHBL 1300 Sheboygan, Wis.	500		WISN 1120 Milwaukee, Wis.	250		WKRC 550 Cincinnati, Ohio	1000
	WHBQ 1370	100		WJAC 1310	100		WKY 900	1000
	Memphis, Tenn. WHBU 1210	100		Johnstown, Pa. WJAG 1060	1000		Oklahoma City, Ok WKZO 590	1000
	Anderson, Ind. WHBY 1200	100	-	Norfolk, Neb. WJAR 890	500		Kalamazoo, Mich. WLAC 1470	5000
	Green Bay, Wis.	100		Providence, R. I. WJAS 1290			Nashville, Tenn. WLAK 1310	100
	Calumet, Mich.			Pittsburgh, Pa.	1000		Lakeland, Fla.	
	WHDH 830 Boston, Mass.	1000		WJAX 900 Jacksonville, Fla.	1000	(%)	WLAP 1420 Lexington, Ky.	100
	WHDL 1420 Olean, N. Y.	100		WJAY 610 Cieveland, Ohio	500		WLB 1250 Minneapolis, Minn.	1000
	WHEB 740 Portsmouth, N. H.	250		WJBC 1200	100		WLBC 1310 Muncie, Ind.	100
	WHEC 1430	500		Bloomington, Ill.  WJBK 1500	100		WLBF 1420	100
	Rochester, N. Y. WHEF 1500	100		Detroit, Mich. WJBL 1200	100		Kansas City, Kans. WLBL 900	2500
	Kosciusko, Miss. WHFC 1420	100		Decatur, Ill.			Stevens Point, Wis. WLBZ 620	
	Cicero, Ill.			WJBO 1420 Baton Rouge, La.	100		Bangor, Me.	
	WHIO 1260 Dayton, Ohio	1000		WJBR 1420 Gastonia, N. C.	100		WLEU 1420 Erie, Pa.	100
	WHIS 1410 Bluefield, W. Va.	250		WJBW 1200 New Orleans, La.	100		WLLH 1370 Lowell, Mass.	100
	WHJB 620	250		WJBY 1210	100		WLNH 1310	100
	Greensburg, Pa.			Gadsden, Ala.		6	Laconia, N. H.	

			WNBH 1310 100		WPRP 1420	100
1	WLS 870 50000 Chicago, Ill.	] [	New Bedford, Mass.		Ponce, P. R.	100
	WLTH 1400 500		WNBR 1430 500		WPTF 680 Raleigh, N. C.	5000
<b>├</b> ──	Brooklyn, N. Y. WLVA 1200 100	┝──┤	Memphis, Tenn. WNBX 1260 1000		WQAM 560	1000
<u> </u>	Lynchburg, Va.		Springfield, Vt.		Miami, Fla.	
	WLW 700 500000 Cincinnati, Ohio		WNBZ 1290 100 Saranac Lake, N. Y.		WQAN 880 Scranton, Pa.	250
	WLWL 1100 5000		WNEL 1290 1000		WQBC 1360	1000
	New York, N. Y.		San Juan, P. R.		Vicksburg, Miss. WQDM 1370	100
	WMAL 630 250 Washington, D. C.		WNEW 1250 1000 Newark, N. J.		St. Albans, Vt.	100
	WMAQ 670 50000		WNOX 1010 1000		WRAK 1370	100
<u> </u>	Chicago, Ill. WMAS 1420 100	<del>-</del>	Knoxville, Tenn. WNRI 1200 100		Williamsport, Pa. WRAW 1310	100
	Springfield, Mass.		Newport, R. I.		Reading, Pa.	
	WMAZ 1180 1000		WNYC 810 1000 New York, N. Y.		WRAX 920 Philadelphia, Pa.	250
	Macon, Ga. WMBC 1420 100	-	WOAL 1190 50000		WRBL 1200	100
	Detroit, Mich.		San Antonio, Texas	-	Columbus, Ga. WRC 950	500
	WMBD 1440 500 Peoria, Ill.		WOC 1370 100 Davenport, Iowa		Washington, D. C.	
	WMBG 1210 100		WOCL 1210 50		WRDO 1370	100,
	Richmond, Va. WMBH 1420 100		Jamestown, N. Y. WOI 640 5000		Augusta, Me. WRDW 1500	100
	Joplin, Mo.		Ames, Iowa		Augusta, Ga.	1000
	WMBI 1080 5000		WOKO 1430 500 Albany, N. Y.	1 1	WREC 600 Memphis, Tenn.	1000
	Chicago, Ill.   WMBQ 1310 100		WOL 1310 100		WREN 1220	1000
	Auburn, N. Y. WMBO 1500 100		Washington, D. C. WOMT 1210 100		Lawrence, Kans. WRGA 1500	100
	WMBQ 1500 100 Brooklyn, N. Y.		Manitowoc, Wis.		Rome, Ga.	
	WMBR 1370 100 Jacksonville, Fla.		WOOD 1270 500 Grand Rapids, Mich.		WRJN 1370 Ragine, Wis.	100
	WMC 780 1000		WOPI 1500 100		WROK 1410	500
	Memphis, Tenn.		Bristol, Tenn. WOR 710 50000	-	Rockford, III. WROL 1310	100
1	WMCA 570 500 New York, N. Y.	l	Newark, N. J.		Knoxville, Tenn.	
	WMEX 1500 100		WORC 1280 500 Worcester, Mass.		WRR 1280 Dallas, Texas	500
	Boston, Mass. WMFD 1370 100		WORK 1320 1000		WRUF 830	5000
	Wilmington, N. C.		York, Pa. WORL 920 500		Gainesville, Fla. WRVA 1110	5000
	WMFF 1310 250 Plattsburg, N. Y.	l	Needham, Mass.		Richmond, Va.	
	WMFG 1210 100		WOS 630 500 Jefferson City, Mo.		WSAI 1330 Cincinnati, Ohio	1000
-	Hibbing, Minn. WMFJ 1420 100	<u> </u>	WOSU 570 750		WSAJ 1310	100
	Daytona Beach, Fla.		Columbus, Ohio	-	Grove City, Pa. WSAN 1440	500
	WMFN 1210 100 Clarksdale, Miss.	1	WOV 1130 1000 New York, N. Y.		Allentown, Pa.	
	WMFO 1370 100		WOW 590 5000		WSAR 1350 Fall River, Mass.	1000
	Decatur, Ala. WMFR 1200 100	<b>—</b>	Omaha, Neb. <b>WOWO 1160 10000</b>		WSAY 1210	100
	High Point, N. C.		Fort Wayne, Ind.		Rochester, N. Y. WSAZ 1190	1000
1	WMMN 890 500 Fairmount, W. Va.		Paducah, Ky		Huntington, W. Va	<b>1</b> .
	WMPC 1200 100		WPAR 1420 100		WSB 740 Atlanta, Ga.	50000
	Lapeer, Mich. WMSD 1420 100		Parkersburg, W. Va. WPAX 1210 250		WSBC 1210	100
	Sheffield, Ala.	ļ	Thomasville, Ga.	-	Chicago, Ill. WSBT 1360	5 <b>00</b>
}	WMT 600 1000 Cedar Rapids, lowa		WPAY 1370 100 Portsmouth, Ohio		South Bend, Ind.	
	WNAC 1230 1000		WPEN 920 250		WSFA 1410 Montgomery, Ala.	500
-	Boston, Mass. WNAD 1010 1000	-	Philadelphia, Pa. WPFB 1370 100		WSGN 1310	100
	Norman, Okla.	L	Hattiesburg, Miss.		Birmingham, Ala. WSIX 1210	100
	WNAX 570 1000 Yankton, S. D.		WPG 1100 5000 Atlantic City, N. J.		Springfield, Tenn.	
	WNBC 1380 250		WPHR 880 500		WSJS 1310 Winston-Salem, N.	100 C
	New Britain, Conn. WNBF 1500 100		Petersburg, Va. WPRO 630 250		WSM 650	50000
	Binghamton, N. Y.		Providence, R. I.		Nashville, Tenn.	

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	WSMB 1320 500 New Orleans, La.		WWNC 570 Asheville, N. C.	1000		XEFL 1150 250 Tijuana, L. C.
	WSMK 1380 200		WWRL 1500	100	<del> </del>	XEFO 940 5000
	Dayton, Ohlo WSOC 1210 100		Woodside, N. Y.	100		Mexico City, D. F. XEFV 1210 100
	Charlotte, N. C.		Pittsburgh, Pa.			Juarez, Chih.
	WSPA 920 1000 Spartanburg, S. C.		WWVA 1160 Wheeling, W. Va.	5000		XEFW 1310 250 Tampico, Tams.
	WSPD 1340 1000 Toledo, Ohio		WXYZ 1240 Detroit, Mich.	1000		XEFZ 1370 100
	WSPR 1140 500		W1XBS 1530	1000		Mexico City, D. F. XEG 1270 200
	Springfield, Mass. WSUI 880 500		Waterbury, Conn. W2XR 1550	1000	<del></del>	Ensenada, B. C. XEH 1150 250
	Iowa City, Iowa WSUN 620 1000		Long Island City, N W6XAI 1550	N. Y. 1000	-	Monterrey, N. L. XEI 1370 125
	St. Petersburg, Fla.		Bakersfield, Calif.		L	Morelia, Mich.
	WSVA 550 500 Harrisonburg, Va.		W9XBY 1530 Kansas City, Mo.	1000	.	XEJ 1020 1000 Juarez, Chih.
	WSVS 1370 50 Buffalo, N. Y.	!	XEA 1060 Guadalajara, Jal.	500		XEK 990 100 Mexico City, D. F.
	WSYB 1500 100 Rutland, Vt.		XEAA 920	200	-	XEKL 1240 500
	WSYR 570 250		Mexicali, B. C. XEAC 1240	250	<u> </u>	Leon, Guan. XEL 1100 250
	Syracuse, N. Y. WTAD 900 500		Tijuana, L. C.	500		Mexico City, D. F. XELO 1110 10000
	Quincy, Ill.	-	Nogales, Son.			Piedras Negras, Coah.
	Worcester, Mass.		XEAG 1310 Cordoba, Ver.	10		<b>XEMO</b> 860 5000 Tijuana, L. C.
8	WTAL 1310 100 Tallahassee, Fla.	İ	Mexico City, D. F.	100		XEMX 1280 12 Mexico City, D. F.
	WTAM 1070 50000 Cleveland, Ohio		XEAM 750 Matamoros, Tams.	7.5		XEMZ 820
	WTAQ 1330 1000		XEAO 560	250	<del>  </del>	Coronado Isl., L. C. XEN 710 1000
	Green Bay, Wis. WTAR 780 500	ļ	Mexicali, B. C. XEAQ 1090	1000		Mexico City, D. F. XENT 910 150000
	Norfolk, Va. WTAW 1120 500	-	Rosarito, L. C. XEAS 1160		<u>  </u>	Nuevo Laredo, Tams.
-	College Station, Tex.	<u> </u>	Saltillo, Coah.	100		<b>XEOK</b> 760 250 Tijuana, L. C.
i	WTAX 1210 100 Springfield, III.		XEAT 1210 Hidalgo, Chih.	50		XEOX 640 500 Saltillo, Coah.
	WTBO 800 250 Cumberland, Md.	1	XEAW 960 Reynosa, Tams.	50000		XEPN 590 50000
	WTCN 1250 1000 Minneapolis, Minn.		XEAZ 1420	7		Piedras Negras, Coah. XERA 840 250000
	WTEL 1310 100	-	Guanajuato, Gto.	10000	<del></del>	Villa Acuna, Coah.: XES 990 250
	Philadelphia, Pa. WTFI 1450 500	<u> </u>	Mexico City, D. F.	500		Tampico, Tams.
	Athens, Ga.	<u> </u>	Hermosillo, Sonora			XESL 1160 Tijuana, L. C.
	Hartford, Conn.	<u> </u>	XEBK 1000 Nuevo Laredo, Tam	100 is.		XET 690 500 Monterrey, N. L.
	WTIC 1040 50000 Hartford, Conn.		XEC 1160 Tijuana, L. C.	30		XETB 1310 125 Torreon, Coah
	WTJS 1310 100 Jockson, Tenn.		XECW 1310	10		XETF 1220 12
	WTMJ 620 1000	1	Mexico City, D. F.	2500		Veracruz, Ver. XETH 1210 100
	Milwaukee, Wis.		Guadalajara, Jal. XEE 1210	50		Puebla, Pue. XEU 1010 250
	East St. Louis, Iil.		Durango, Dgo.			Veracruz, Ver.
	Trenton, N. J.	<u></u>	Juarez, Chih.	100		XEW 890 50000 Mexico City, D. F.
	WTOC 1260 1000 Savannah, Ga.		XEFA 1180 Mexico City, D. F.	500		XEWZ 1150 100 Mexico City, D. F.
	WTRC 1310 100 Elkhart, Ind.		XEFB 1420 Monterrey, N. L.	100		XEX 1310 125
	WVFW 1400 500		XEFC 560	100		Monterrey, N. L. XEY 1000 10
	Brooklyn, N. Y. WWAE 1200 100		Merida, Yuc. XEFE 850	250		Merida, Yuc. XEYZ 780 10000
	Hammond, Ind. WWJ 920 1000	<u> </u>	Laredo, Tams.			Mexico City, D. F.
	Detroit, Mich.		Chihuahua, Chih.	250		XEZ 630 500 Merida, Yuc.
	WWL 850 10000 New Orleans, La.		XEFJ 1230 Monterrey, N. L.	100		Continued on Page 112
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rontoise, 11.420	Dontain 11 790	YV10RSC, S. Crsbl, 5.720	YV6RV, Valencia, 6.520	YV5RMO, Marc'bo, 5.850	YV4RC, Caracas, 6.375	YV3RC, Caracas, 6.150	YV2RC, Caracas, 5.800	YVQ, Maracay, 6.672	XEVI, Mexico Cy., 5.980	XEDQ, Guadija., 9.520	XECR, Mexico Cy., 7.380	XEBT, Mexico Cy., 6.000	W9XF, Chicago, 6.100	W8XK, Pittsbgh., 15.210	W8XK, Pittsbgh., 11.870	W8XK, Pittsbrugh, 6.140	W8XAL, Cincin'tl., 6.060	W4XB, Miami, 6.040	W4XB, Miami, 6.040	W3XAU, Phila., 9.590	W3XAU, Phila., 6.060	W2XE, Wayne, 17.760	W2XE, Wayne, 15.270	W2XE, Wayne, 11.830	W2XE, Wayne, 6.120	W2XAF, Sch'tdy, 9.530	P. M. 12:00
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# Hints on Tuning the Short Waves

It has been noted that shortwave reception follows certain definite trends. Stations between 5 and 7 megacycles favor darkness between the transmitter and the receiver. Transmitters working between about 8 and 10 megacycles are best when the station is in a night-time area and the receiver in daylight, so tuners should try for Europeans in this band in the early evening and for Australians near dawn. Below 10 megacycles the difficulty in tuning increases; here the path of the transmission should be as nearly as possible completely in daylight.

At night tune for South America between 5 and 10 megs. Europeans are good in the early evening and some of the higher powered Europeans are good all night. In the early morning tune for Australia and Asia between 6 and 10 megs. During the daytime tune for Europe, Africa and South America below 10 megacycles.

																				Sunday	Sunday	Daily	Eastern Time P. M.  #JIABG, Bar'q'lla, 6 042  #JIABG, Bar'q'lla, 6 066  #JIABG, Bar'q'lla, 6 066  #JIABG, Bar'q'lla, 6 066  #JIABJ, S'ta M'ta, 6 006  #JIABD, Bucar'gs, 5 980  #JIABBH, Bogota, 6 012  #JIABBH, Bogota, 6 012  #JIABBH, Bogota, 6 002  #JIABBH, Bogota, 6 002  #JIABBH, Bogota, 6 000  #JIABB, Medellin, 1, 1700  #JIABB, Medellin, 1, 5 900  #JIABBC, Call, 6, 1, 500  #JIABBC, Call, 6, 1, 500  #JIABBC, Call, 6, 1, 100  #JIABC
Workdown	Tr Con usy o	Truncayo	The contract of the contract o	M. Tu., W. F.	M. Tu., W., Sa., Su.	M. Tu., W.,	M. Tu., W.		M. Tu. W. Sa., Su.							M. Tu. W.  Th. Sa. Su.  I Th. Sa. Su.  I I I I I I I I I I I I I I I I I I I	M. Tu., W.	M. Tu., W.,  Th., Sa., Su.,  I I I I I I I I I I I I I I I I I I I	M. Tu. W. Th. Sa. Su. Th. Sa. Su. Th. Monday. Wednesday. Friday   Th., Sa., Su.  Th., S		M. Tu. W.	12:3 12:4 13:0 13:1 13:4 14:0 14:1 14:3 14:4 15:0 15:10	

Eastern Time P. M. 12:15   30   15   15   15   15   15   15   15   1	Thurst a series of the series
DJD, Berlin, 11.770   DJN, Berlin, 9.540	Daily
	Sunday
GSB, Daventry, 9.510   GSC, Daventry, 9.580	
GSF. Daventry, 15.200	
GSL, Daventry, 6.110	
P, Geneva, 7.797	S S S S S S S S S S S S S S S S S S S
P. Geneva, 7.797  B. Quito, 8.900  ET. Guyaguil, 4.600	
IP, Geneva,7.797  JB, Quito, 8.900  2ET, Guyaquii, 4.600  2RL, Guyaquii, 6.635	Sa. Sa. Sunday
IBP, Geneva,7.797  HCJB, Quito, 8.900  HCZET, Guyaquii, 4.600  HCZEL, Guyaquii, 6.635  HLIH, San Pedro, 6.800	
HBP, Geneva,7.797  HCJB, Quito, 8.900  HCZBT, Guyaquil, 6.605  HCZBT, Guyaquil, 6.635  HIH, San Pedro, 6.800  HIX, Trujilo, 6.315	Wkds.
HBP, Geneva,7.797  HCJB, Quito, 8.900  HCZET, Guyaquil, 4.600  HCZEL, Guyaquil, 6.635  HIH, San Pedro, 6.800  HIX, Trujillo, 6.315  HJIABB, Bar'q'lla, 6.447	Wkds.

CHNX. Halifax. 6.110  COHN. Halifax. 6.110  COCH, Havana, 9.428  COGCC, Santiago, 6.500  DJA, Berlin, 9.560  DJB, Berlin, 15.200  DJE, Berlin, 15.200  DJE, Berlin, 15.200  DJE, Berlin, 15.200  DJV, Berlin, 15.200
HVJ. Vatican City, 5.970   HVJ. Vatican City, 5.970   HVJ. VaticanCy, 15.120   HVJ. Nazaki, 10.740   HVJ. Naza
JVT, Nazaki, 6.750 LCL, Jeloy, 6.130 PCJ, Hilversum 15.220
RNE, Moscow, 12.000
VK2ME, Sydney, 9.585 Sunday
VK3LR, Melb'rne, 9.580 Friday VK3LR. Melb'rne, 9.580
VK3ME, Melb'rne, 9.490
W1XK, Mills, 9.570
W2XAD, Sch'tdy, 15.330 W2XE, Wayne, 21.520
W8XAL, Cincin'ti, 6.060
W8XK, Pittsbgh., 15.210
W8XK, Pittsbgh., 21.540
W9XF, Chicago, 6.100 YDA5. Bandeeng, 6.120
YDB, Sourabaya, 4.470
Pontoise, 11.720
Pontoise 15.950

Central Time P. M.	Central Time P. M.	Central Time P. M.	Central Time A. M.	1 p.m. hours. Thus, 18:00 is 6 p.m. and the lines below and paste them over the 09:00 and 21:00.
11:00	11:00	11:00	23:00	d b
11:15	11:15	11:15	23:15	8 :C
11:30	11:30	11:30	23:30	<u> </u>
11:45	11:45	11:45	23:45	18:00 is 6 p.m. and paste them over the
12:00	12:00	12:00	00:00	0.5
12:15	12:15	12:15	00:15	Yer m
12:30	12:30	12:30	00:30	an S
12:45	12:45	12:45	00:45	6 2.
13:00	13:00	13:00	01:00	ES:
13:15	13:15	13:15	01:15	70
13:30	13:30	13:30	01:30	ne:
13:45	13:45	13:45	01:45	F 1
14:00	14:00	14:00	02:00	7,5
14:15	14:15	14:15	02:15	
14:30	14:30	14:30	02:30	olle
14:45	14:45	14:45	02:45	(E.J.)
15:00	15:00	15:00	03:00	200
15:15	15:15	15:15	03:15	Str.
15:30	15:30	15:30	03:30	Ps II
15:45	15:45	15:45	03:45	are
16:00	16:00	16:00	04:00	10 p.m. The time lines used in charts are for l The following strips are for Central Standard
16:15	16:15	16:15	04:15	7 2.5
16:30	16:30	16:30	04:30	g = 5
16:45	16:45	16:45	04:45	cha
17:00	17:00	17:00	05:00	1 S
17:15	17:15	17:15	05:15	ar
17:30	17:30	17:30	05:30	da da
17:45	17:45	17:45	05:45	for
18:00	18:00	18:00	06:00	HE.
18:15	18:15	18:15	06:15	ste
18:30	18:30	18:30	06:30	H 3 .
18:45	18:45	18:45	06:45	Star
19:00	19:00	19:00	07:00	Eastern Standar Time. For MS
19:15	19:15	19:15	07:15	ST,
19:30	19:30	19:30	07:30	e .
19:45	19:45	19:45	07:45	The
20:00	20:00	20:00	08:00	₹.8
20:15	20:15	20:15	08:15	: ± ± €
20:30	20:30	20:30	08:30	10
20:45	20:45	20:45	08:45	8:.
21:00	21:00	21:00	09:00	200
21:15	21:15	21:15	09:15	de
21:30	21:30	21:30	09:30	22:
21:45	21:45	21:45	09:45	800
22:00	22:00	22:00	10:00	H-1 C
22:15	22:15	22:15	10:15	nay
22:30	22:30	22:30	10:30	Pos
2:45	22:45	22:45	10:45	Har.

# Bill Smith Ought to be Ashamed of his Ignorance

Bill has been tuning a radio set for years and yet he knows almost nothing about what happens in his set when he turns the dials.

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I T IS so easy to forget to tune in a favorite program that we have prepared what we call the RADEX Radio "Slate." It consists of four pages of heavy Bristol board on which pencil entries may easily be made and erased. The eight columns are ruled into fifteen-minute periods with space for the program, the station and the dial number. All of the evening hours and those of Sunday afternoon are provided for. You merely enter the names of the programs you wish to hear, the station over which you receive it best and the dial number. The "Slate" then reminds you in the most convenient way possible, when and where to tune for the programs you do not want to miss.

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THE RADEX PRESS INC.



Sometimes I think there ought to be a law to make everyone do a little studying every week. I didn't think that a year ago because it looked like all the cards were stacked against me. But I am surely making good money now. Maybe my story will show you the way to larger earnings also.

### I THOUGHT RADIO WAS A PLAYTHING

But Now My Eyes Are Opened, and I'm Making Over \$40.00 a Week!

\$40 a week! Man alive, a year ago I thought anyone making so much was just plain lucky.

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

If you had told me that twelve months later I would be making \$40 a week in my own Radio business—I'd thought you were crazy.

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

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

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

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

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

That business has since grown to the point where I am clearing an average of \$40 a week. All this took place under the watchful guidance of my friends at the National Radio Institute. They also offered to train me for other lines. Broadcasting Stations, Radio Manufacturers, Operating on Board Ship, Servicing Sets, Aviation Radio, Television, Short Wave, Automobile and Police Radio, Loud Speaker Systems are other fields their training covers. And to think, until the day I wrote for that book, I'd been wailing, "I never had a chance and will never have one because I have no pull or a good education!"

Friend-you may not be as bad off as I was-

but think it over—are you satisfied? Are you making as much money as you need? Would you sign a contract to stay where you are for the next ten years at the same salary? Those are the things you have to think about—because no one is going to make it his business to push you ahead—you must make it your own business.

Take my tip—write for their book, "Rich Rewards in Radio." It won't cost you anything except a postage stamp. It shows you a lot of things which I don't believe you know now about Radio—a lot of facts and figures on the opportunities in this new, fast-growing field. Where the jobs are, what they pay, how to get ready for them. Beginners as well as experienced men are making as much as \$500 to \$1,500 a year more as a result of N.R.I. training. And at the same time they send the book "Rich Rewards in Radio" they'll send you, without any cost or obligation, a Free Lesson to prove that their training is easy, practical, fascinating. The lesson they send "Radio Receiving Troubles—the Cause and Remedy" is valuable. And when you see how simple this lesson is to understand you'll know why many fellows with less than a grammar school education have mastered N.R.I. training and are now making good money as Radio Experts.

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