

FEBRUARY 1939

# RADIO IN DEX

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25¢

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The Amateur Stations  
Frequency Check Schedule  
High Frequency Globe Trotting

No. 126

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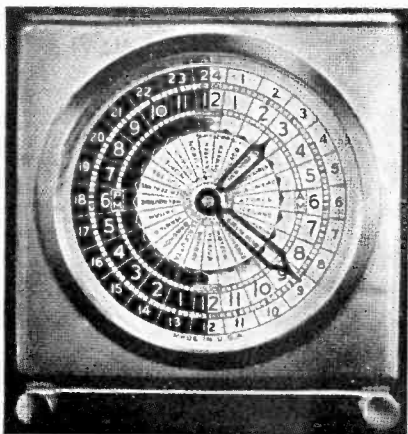
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TIME CLOCK**

**RADEX, 362 Cedar Lane, Teaneck, N. J.**

FEBRUARY 1, 1939



# RAD IN DIO EX

Reg. U. S. Patent Office



FIFTEENTH YEAR

NUMBER 126

PAGE TAYLOR

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**FOR SALE AT YOUR NEWSSTAND**

# CLASSIFIED INDEX TO CHAIN PROGRAMS

WC indicates West Coast programs. Time is given in Eastern Standard, all P.M. unless otherwise stated.

## Comedy

- Sun, 5:30 pm, Lew Lehr, CBS  
6:30 pm, Billy House, CBS  
7:00, Jack Benny, Red  
11 pm, Lew Lehr, CBS (WC)
- Mon, 7:30, Eddie Cantor, CBS  
8:00, Henry Youngman, CBS  
10:30, Eddie Cantor, CBS (WC)
- Tues, 8:30, Parkyakarus, CBS  
10:00, Bob Hope, Red  
10:00, Jerry Colonna, Red  
12:00, Parkyakarkus, CBS (WC)
- Wed, 9:00, Fred Allen, Red
- Thur, 7:30, Joe Penner, CBS  
8:30, Joe Penner, CBS  
9:00, Frank Morgan, Fannie Brice, Red  
10:00, Bob Burns, Red
- Fri, 7:30, Jack Haley, CBS
- Sat, 7:30, Joe E. Brown, CBS  
8:00, Col. Stoopnagle, Red  
11:00, Joe E. Brown, CBS (WC)
- Thur, 7:30, Ben Pollack, CBS  
8:00, Jack Miller, CBS  
8:00, Rudy Vallee, Red  
8:30, Ben Pollack, CBS  
9:00, Meredith Willson, Red  
10:00, Johnny Trotter, Red  
11:30, Jack Miller, CBS (WC)
- Fri, 7:30, Ted Fio Rito, CBS  
8:30, Ray Noble, CBS  
9:00, Victor Young, CBS  
9:00, Abe Lyman, Red  
10:00, Guy Lombardo, Red  
11:30, Ray Noble, CBS (WC)
- Sat, 7:00, Saturday Night Swing Club, CBS  
7:30, Harry Sosnik, CBS  
8:00, Russ Morgan, CBS  
8:30, Fred Waring, Red  
9:00, America Dances, Red  
9:30, Gus Haenschen, CBS  
10:00, Hit Parade, CBS  
11:00, Harry Sosnik, CBS (WC)

## Dialog

- ### Concerts
- Sun, 12:30 pm, Radio City Music Hall, Blue  
3:00, N. Y. Philharmonic, CBS  
5:00, Metropolitan Opera Auditions, Blue.  
9:00, Ford Sunday Evening Hour, CBS
- Mon, 8:30, Alfred Wallenstein, Red
- Wed, 9:00, Everybody's Music, CBS
- Fri, 8:00, Frank Black, Red
- Sun, 5:30 pm, Ben Bernie, CBS  
6:30, Carl Hobengarten, CBS  
7:00, Harry Salter, Red  
7:00, Phil Harris, Red  
7:30, Oscar Bradley, CBS  
8:00, Robert Armbruster, Red  
9:00, Don Donie, Red  
9:30, Gus Haenschen, Red  
10:00, Horace Heidt, Red  
11:00, Ben Bernie, CBS (WC)  
11:30, Harry Salter, Red (WC)
- Mon, 8:00, Richard Himber, CBS  
8:00, Carl Hoff, Red  
8:30, Benny Kreuger, CBS  
9:00, Phil Spitalny, Red  
9:30, Eddie Duchin, Red  
10:00, Guy Lombardo, CBS  
10:30, Carl Hoff, Red (WC)  
11:30, Benny Kreuger, CBS (WC)
- Tues, 8:00, Russ Morgan, Red  
8:30, Lud Gluskin, CBS  
8:30, Peter Van Steeden, Red  
9:30, Benny Goodman, CBS  
10:00, Skinnay Ennis, Red  
12:00, Lud Gluskin, CBS (WC)
- Wed, 8:30, Paul Whiteman, CBS  
8:30, Tommy Dorsey, Red  
8:30, Harvey Salter, Blue  
9:00, Peter Van Steeden, Red  
9:30, David Brockman, CBS  
10:00, Kay Kyser, Red  
10:30, Frankie Masters, CBS
- Sun, 8:00 pm, Edgar Bergen, Charlie McCarthy, Red
- Mon, 7:00, Amos 'n' Andy, Red  
7:15, Lum and Abner, CBS  
8:30, Pick and Pat, CBS  
11:00, Amos 'n' Andy, Red (WC)  
11:15, Lum and Abner, CBS (WC)  
11:30, Pick and Pat, CBS (WC)
- Tues, 7:00, Easy Aces, Blue  
7:00, Amos 'n' Andy, Red  
9:30, Fibber McGee and Molly, Red  
11:00, Amos 'n' Andy, Red (WC)
- Wed, 7:00, Amos 'n' Andy, Red  
7:00, Easy Aces, Blue  
7:15, Lum and Abner, CBS  
11:00, Amos 'n' Andy, Red (WC)  
11:15, Lum and Abner, CBS (WC)
- Thur, 7:00, Amos 'n' Andy, Red  
7:00, Easy Aces, Blue  
11:00, Amos 'n' Andy, Red (WC)
- Fri, 7:00, Amos 'n' Andy, Red  
7:15, Lum and Abner, CBS  
8:30, Burns and Allen, CBS  
11:00, Amos 'n' Andy, Red (WC)  
11:15, Lum and Abner, CBS (WC)  
11:30, Burns and Allen, CBS (WC)
- Sat, 8:00, Tommy Riggs and Betty Lou, Red

## Drama

- Sun, 6:00 pm, Silver Theater, CBS  
6:30, Tale of Today, Red  
8:00, Orson Welles, CBS  
9:45, Irene Rich, Blue  
11:15, Irene Rich, Blue (WC)
- Mon, 9:00, Lux Radio Theater, CBS
- Tues, 7:30, Helen Menken, Red  
8:00, Edward Robinson, Claire Trevor, CBS  
10:00, Jean Hersholt, CBS  
11:30, Edward Robinson, Claire Trevor, CBS (WC)

Wed, 8:00, Gang Buster (Phil Lord), CBS  
 8:00, One Man's Family, Red  
 Thur, 10:00, Columbia Workshop, CBS  
 Fri, 8:00, First Nighter, CBS  
 9:00, Hollywood Hotel, CBS  
 9:30, Death Valley Days, Red  
 10:00, Grand Central Station, CBS  
 12:00, First Nighter, CBS (WC)  
 8:00, Warden Lawes, Blue

News

Sun, 11:00 pm, Press Radio, Red and Blue  
 Fri, 9:30, March of Time, Blue  
 Daily except Sunday, 6:00, Press Radio, CBS  
 6:25, Press Radio, Red

Daily except Saturday and Sunday, 6:45, Lowell  
 Thomas, Blue

Popular Programs

Sun, 11:30 am, Major Bowes Family, CBS  
 12:30 pm, Salt Lake Tabernacle, CBS  
 1:00, Church of the Air, CBS  
 2:00, RCA Magic Key, Blue  
 4:30, Court of Human Relations, MBS  
 5:00, Spelling Bee, Red  
 6:30, The Laugh Liner, CBS  
 7:30, Passing Parade, CBS  
 8:00, Chase and Sanborn Program, Rec  
 9:00, Manhattan Merry-Go-Round, Red  
 9:30, Album of Familiar Music, Red  
 10:00, Horace Heidt's Brigadiers, Red  
 Mon, 6:45, Sophie Tucker Show, CBS  
 8:00, Monday Night Show, CBS  
 8:00, Al Pearce and Gang, Red  
 8:30, Voice of Firestone, Red  
 9:00, Hour of Charm, Red  
 9:30, Pall Mall Program, Red  
 10:00, Contented Program, Red  
 10:00, True or False, Blue  
 10:30, Al Pearce and Gang, Red (WC)  
 11:30, Voice of Firestone, Red (WC)  
 12:30, Vox Pop, Red (WC)  
 Tues, 8:00, Johnny Presents, Red  
 8:30, For Men Only, Red  
 9:00, We, The People, CBS  
 9:00, Vox Pop, Red (WC)  
 10:45, Uncle Ezra, Red  
 Wed, 6:45, Sophie Tucker Show, CBS  
 7:30, Ask-It Basket, CBS  
 8:00, Town Hall Tonight, Red  
 8:30, Hobby Lobby, Blue  
 9:30, For Men Only, Red  
 10:30, It Can Be Done, CBS  
 10:30, NBC Minstrel Show, Blue  
 Thur, 9:00, Major Bowes' Amateurs, CBS

9:00, Major Bowes' Amateurs, CBS  
 9:00, Good News of 1939, Red  
 10:00, Kraft Music Hall, Red  
 Fri, 6:45, Sophie Tucker Show, CBS  
 8:00, Cities Sincer Concert, Red  
 8:00, Warden Lawes, Blue  
 9:00, Waltz Time, Red  
 9:00, Hollywood Hotel, CBS  
 9:30, Death Valley Days, Red  
 9:30, March of Time, Blue  
 8:00, Johnny Presents, CBS  
 8:30, Professor Quiz, CBS  
 9:00, National Barn Dance, Blue  
 10:45, Uncle Ezra, Red  
 11:00, National Barn Dance, Blue (WC)

Singers

Sun, 4:00 pm, Benay Venuta, MBS  
 5:30, Manny Prager, CBS  
 6:30, Jack Fulton, CBS  
 7:00, Kenny Baker, Red  
 8:00, Nelson Eddy, Red  
 8:00, Dorothy Lamour, Red  
 9:00, Rachel Carlay, Red  
 9:00, Pierre Le Krecun, Red  
 9:30, Frank Munn, Red  
 9:30, Jean Dickenson, Red  
 9:30, Elizabeth Lennox, Red  
 Mon, 8:30, Edward Roecker, CBS  
 8:30, Margaret Speaks, Red  
 10:00, The Lullaby Ladj, Red  
 Tues, 8:30, Al Jolson, CBS  
 8:30, Martha Raye, CBS  
 9:30, Donald Novis, Red  
 12:00, Al Jolson, CBS (WC)  
 12:00, Martha Raye, CBS (WC)  
 Wed, 9:30, Jane Froman, CBS  
 9:30, Kenny Baker, CBS  
 10:00, Virginia Sims, Red  
 10:30, Marion Francis, CBS  
 Thur, 8:00, Kate Smith, CBS  
 10:00, Bing Crosby, Red  
 11:30, Kate Smith, CBS (WC)  
 Fri, 7:30, Jack Haley, CBS  
 7:30, Virginia Verrill, CBS  
 8:00, Lucille Manners, Red  
 8:30, Tony Martin, CBS  
 9:00, Frances Langford, CBS  
 9:00, Jean Sablon, CBS  
 9:00, Frank Munn, Red  
 11:30, Tony Martin, CBS (WC)  
 Sat, 9:00, Henry Burr, Blue  
 9:30, Mary Eastman, CBS  
 10:00, Freda Gibson, Buddy Clark, CBS  
 11:00, Henry Burr, Blue (WC)

Talks

Sun, 9:30, Walter Winchell, Blue  
 11:00, Walter Winchell, Blue (WC)  
 Mon, 7:15, Edwin C. Hill, Red  
 11:15, Edwin C. Hill, Red  
 Tues, 9:00, Gabriel Heatter, CBS  
 10:30, Jimmy Fidler, Red  
 Wed, 10:30, Edgar A. Guest, CBS  
 Fri, 7:15, Jimmy Fidler, Red  
 10:30, Jimmy Fidler, Red (WC)

# Dxers' Picture Gallery



Many of the country's best known DXers are shown in this group photo, taken at a gathering of the National Radio Club at Kittanning, Pa. From left to right are Bob Botzum, Reading; an unidentified DXer; Dan Yapp, Kit-

tanning; Warren Rontzahn, York; Dick Cooper, Kittanning; Mr. Button, Kittanning; Frank Schmidt, Pittsburgh; Max Demuling, Erie; Ed Feichtner, Erie; Bill Stone, Toronto, Ont.; Harold Wagner, Erie; Harry Gordon, Erie.



**NICOLA CANNATA**

## NICOLA CANNATA

A DXer who should enjoy remarkable success in the identification of foreign stations, is Nicola Cannata, whose favorite pursuit is copying press in Morse, in English, French, Spanish and Italian. Nicola was a telegraph operator in Italy, but is now a full-fledged American DXer. Using two receivers, an RCA Victor 816-K, and a Scott 30 Philharmonic, he has enjoyed good DX, especially from Europe. He is a member of The Radex Club (R486), the WWDC, IDA, QRC, RSSL, SWL, NRC, and NNRC.



Radio "El Mundo" operates on shortwaves (10050 kcs) and the broadcast band (1400 kcs). This card is printed in black, and the call letters and illustration are in gold. (Courtesy of J. E. Gardner).

## NOTICE TO RADEX READERS

Should your newsdealer at any time be unable to supply you with a copy of RADEX you may obtain the issue you want by using the order form on page 96 of your last copy.

# DX Is Where You Find It

. . . by Carleton Lord

As listeners build up logs of stations on the broadcast band, invariably they find that the process grows more complex with the passing months. During the early days of their DX careers, a helter-skelter, hit-or-miss brand of dialing usually sufficed, and the listener was able to log practically everything he heard. But when the log continued to grow, the DXer found that eventually he must systematize his tuning.

With three or four hundred stations on the credit side of his log, a casual session at the dials no longer brought in many new catches. In fact, nights might pass without a single new station being heard, and the listener would begin to wonder how long this would go on.

Gradually he would begin to realize that the days of stations on a silver platter were over, and that he would have to work for any future additions to his log. And then would begin the process of installing a little system in his tuning activities.

If he was smart, he would probably classify the stations still to be heard into groups. One group undoubtedly would include all stations scheduled during the monthly frequency checks and, during the second week of every month, he would concentrate on these broadcasters. A second group would include early-bird transmitters, which sign on in the morning before their channels get crowded and while distant reception is still possible. A third group would cover the late signers-off, the stations which are still on the air after their frequencies have cleared up after midnight. A fourth

group consists of an indeterminate number of broadcasters who are best heard at dusk. And a fifth and final group would include all stations which didn't fall into one of the first four classifications.

The average DXer should really strike pay dirt in the first group, for conditions during the monitoring tests are nearly perfect. Each month a total of 360 of the smaller stations broadcast for a 15-minute period, and in most of the cases, they enjoy a clear channel for at least a part of their transmission.

A better conception of the importance of these broadcasts may be had when it is realized that 268 of the 360 stations involved are concentrated on the six graveyard channels. At latest count, there are 322 active stations on these six frequencies, and 268 of these—better than 83 per cent—are on the monthly monitoring schedule. Truly this is a gold mine for the DX fraternity.

Stations in the second and third groups may be classified and segregated by considering their operating schedule. Those which sign on before 7 a. m., local time, may be placed in the second group, while those which sign off after midnight or 1 a. m., local time, will fall in the third group.

Determination of these stations is possible by consulting the schedules shown in the January and February issues of RADEX. When available, the listing of the hours of operation will show whether the individual stations may best be heard early in the morning or late at night—and thus

desired broadcasters may be divided into the second or third groups. On many frequencies, the schedules will show when stations likely to cause interference will be silent.

When schedules are not complete and the actual hours of operation are unknown, the listener can try his hand at before-breakfast and after-midnight listening. It is comparatively easy to identify the stations within range which can be heard at most any hour of the day or night on regular schedules.

Occasionally listeners compile lists of stations which sign on early and are well heard in their vicinity. Such lists have appeared in previous issues of RADEX, and at hand there is a new list submitted recently by Peter A. Clarius of Port Richmond, N. Y. According to his information, CHSJ signs on every morning at 4:55 a.m., EST, while WHIS follows at 5 o'clock. At 5:30 WJR signs on. At 6 o'clock, WNAC, WEAN, WICC, WBLK, WAWZ, WTAM, KWTO, KMA, WQDM, WSAZ, WTIC, WBZ, WRC, WMAL, WELI, WHAI and WSNJ take the air. At 6:15 WSYR comes on, with WOR following at 6:25, and WEAJ, WJZ, WABC, WINS, WBBR, WGR and WBAL starting up at 6:30. WAAT opens its day at 6:45.

Add to this the information submitted by other listeners and taken from the RADEX schedules, and it will be possible to distribute quite a number of stations in the second and third groups.

The fourth group consists of stations best heard at dusk and is a fertile field for many DXers. Best results are usually obtained by dialing

stations to the East of the listener, since interference from stations to the West has not as yet begun. Many daytime stations, signing off at local sunset, can be logged during the last fifteen minutes of their programs, so it is simply a case of picking a station and tuning for it at the right time.

Frequently it is amazing how many stations can be heard between 4:30 and 6 p.m., local time. Signals from transmitters of relatively low power have little difficulty in covering a thousand miles or more. Reception at this time is occasionally a trifle spotty, but the vagaries of fading often leave a desired station in the clear when, by all rights, it should be swamped by nearby transmitters.

Too many listeners have paid too little attention to the hour before supper, and many of them will be surprised by the number of stations in group 4 which can be logged at that time.

Group 5, of necessity, must include all of the stations which cannot be heard under the conditions specified for the first four groups. In it will be found the broadcasters which do not have monthly frequency checks, those which sign on too late or off too early to be heard in the early morning or late at night, and those which can't quite make the grade at dusk. In it, too, are the stations which do have a monthly monitoring period, but whose signals are lost behind an interfering station or are too weak to reach the listener. This group is admittedly a tough nut for DXers to crack, but most listeners will agree its very toughness adds much to DX interest. Veries from stations in this group are indeed prizes worth having.

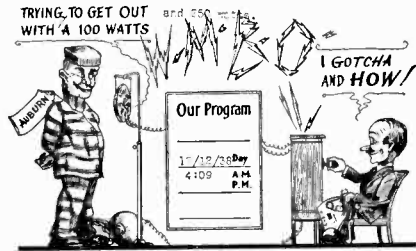


For the most part, listeners must rely on special, after-midnight programs for stations in group 5. Courtesy Programs Committees of the various radio clubs usually concentrate on these hard-to-get broadcasters, and generally are able to line up an attractive array of DX programs during a winter season. Occasionally, stations in this group broadcast short test programs for commercial monitors. Whenever available, information regarding these broadcasts appears in RADEX, and individual listeners may get additional details by writing direct to a desired station.

### Hide and Seek

Regardless of where a listener resides, there will always be a few elusive stations in group 5 which manage to escape his straining ears. Frequently he will have reason to decide that these stations deliberately arrange their schedules so they will *not* be heard in his particular locality.

Such is the case of Rud Anderson, Ambrose, N. Dak., who is gunning for 20 stations Down East. "I have heard 705 active U.S. stations," he writes, "and am short on 89. Most of these are little birds that no one gets except by accident. Near as I know, with the exception of KOAC, all Western stations go on in the clear sometime, but you have 20 stations over East who do not go on in the morning until after a Midwest station goes on first. I am sure they hide from listeners. From pictures, WMCA is an up-to-date station, but they must be queer, for why build a station that spreads its stuff only to Boston or New York? I guess they must be old fogies.



*While those who reside in the Auburn Prison may have difficulty getting out, station WMBO in that city has no difficulty whatsoever. WMBO's signals have been captured in every part of the country, and successful captors receive this card as a reward. (Courtesy of Carl Horton).*

"I can show you 20 Midwest stations that come on before their time. Guess they do that to keep others from being heard in their territory. For example, WEEI is supposed to come on at 6:45 in the morning, so what does WOW do? It comes on at 6:45 or earlier! Never at seven! Then WTAG comes on five minutes too late to be heard, and WMCA hides behind WNAX. WCAO and WLBZ could come through, only they don't get up early enough. Maybe Cornell will win a football game sometime and stir up WESG, I'm sure I can't. And the others are just the same.

"I am sure I can take any station in the United States, if they would only come out of hiding. But as far as I am concerned, they can hide—if it doesn't hurt them, it doesn't hurt me."

### Sectional Problems

Listeners have found that the section of the country in which they live plays an important part in their DX

activities. Disregarding apparent physical advantages insofar as actual reception of signals is concerned, it is evident that the various time belts are a vital factor in DXing.

When it comes to hearing the greatest number of stations, listeners in the Eastern time belt undoubtedly have a very real advantage over their contemporaries to the West. They are able to hear as high a percentage of stations in their own time zone as the average DXer in any other belt, but they also have the added advantage of being able to hear stations to the West under the most favorable circumstances. Between midnight and 1 a.m., for example, most of their nearby stations have signed off and they are free to tune in the Midwestern stations with a minimum of interference. And as sign-off time travels West to stations in the Central and Mountain time belts, they are able to reach out for the far Western stations. By 3 a.m., EST, they have an almost unobstructed path to stations on the Pacific Coast.

West Coast DXers, on the other hand, find local channels full until midnight their time. When interference from nearby stations clears up, it is then after 3 a.m., EST, and most of the Eastern and Midwestern stations have gone to bed. They do have a shot at the early signers-on back East, but by the time most of the desired stations have come on the air, daylight has hit the Atlantic Seaboard and reception stops—just like that!

Between these two extremes—Eastern and Pacific—DXers in the Central and Mountain time belts listen under varying conditions. Their listening activities may be considered average

for the whole country—not as good as the Eastern DXers and not as bad as the Pacific listeners.

But wherever the night owl resides, he is always beset by local problems. While the West Coast DXer would like to have a crack at the Eastern stations, the listener along the Atlantic Seaboard would give a lot for a shot at the Aussies, Zedders and Japs which grace the logs of the Pacific Coast lads.

Perhaps the best way for all DXers is to make the most of his own particular problems, systematize his dialing to fit his own needs, and see how many stations he can hear from his own locality.

#### **News of DX World**

For those who go dialing on frosty winter mornings, there are many stations waiting to be heard. New transmitters have come on the air and are conducting test programs. Old and still-to-be-heard stations are putting on special broadcasts. Foreign stations to the South are coming through in better shape than ever before. TA's and TP's are being heard during their proper seasons. There are catches for all DXers, no matter where they live, and all they have to do is tune them in.

From the United States, many recently-authorized stations have completed their transmitters, started equipments tests, and even gone on the air with regular programs. On December 5th, for example, WJHL, the new 100-watter on 1200, at Johnson City, Tenn., came on the air for the first time. December 10th found two other newbies opening up—WMRO, 1250 kcys, 250 watts, Aurora, Ill., and KSAM, 1500 kcys,

100 watts, Huntsville, Tex. KOME, 1310 kcys, 100 watts, Tulsa, Okla., aired its first broadcast on December 16th, while on the same date KBND, Bend, Ore., a 100-watter on 1310. was scheduled to commence transmissions. WSTP, 1500 kcys, 100 watts, Salisbury, N.C., was due to open on January 1st, but beat the gun and came on some time earlier. WFMJ, 1420 kcys, 100 watts, Youngstown, Ohio, is on the books for a mid-January opening. Additional power is on tap for a couple of older stations—WCHS, Charleston, W. Va., testing its new 1-KW rig early in December, and WHBF, Rock Island, Ill., due to move from 1210 to 1240 with a power jump to 1000 watts around the first of January.

Up in Canada, the new CKRN at Rouyn, Que., a 100-watter on 1370, was due to open around Christmas, but is as yet unreported by Radexers. According to word from the manager, CKCA, Kenora, Ont., 1420 kcys, 100 watts, was scheduled to open early in December, but it, too, is still unreported. A clean-up of congestion on 960 kcys is brought about by CHNC, the 1000-watter at New Carlisle, Que., moving to 610, and CBY, the old CRCY at Toronto, boosting its power from 100 to 500 watts. CJRC, 630 kcys, Winnipeg, Man., is now using its new 1-KW transmitter and is reporting much better coverage.

#### Dope on Stations

"Here are some more Canadian notes," offers William Cunningham, Pasadena, Calif. "CHGB, Ste. Anne de la Pocatiere, P.Q., operates on 1200 kcys with 100 watts, and is a member of the CBC French Net.

CBK, the Corporation Prairie Station at Watrous, Sask. (about 40 miles East of Saskatoon), will use 50 KW on 540 kcys. CBA, the CBC's Maritimes station at Sackville, N.B., will use 1050 kcys with 50 KW power. CBM, Montreal, is supposed to use 960 temporarily (now listed on 1050—Ed.) until the Havana Agreement goes into effect, when a new frequency will be assigned to it. CKOV is now installing its new 1000 watt transmitter."

"WGAR in Cleveland has been using its new transmitter with 5000 watts daytime and 1000 watts night," reminds Herbert Patterson, Durham N. C. "KXOK, St. Louis, is now on the air and has been heard here."

"WCOU, the 100-watt station at Lewiston, Me., officially went on the air at 4 p. m. August 21st," reports George W. Haskell, So. Paris, Me.

They operate from 6 a.m. to midnight, EST, and carry CBS and MBC programs."

"WHLS, Port Huron, Mich., came on the air August 7th with 250 watts on 1370 kcys," advises Carl Sylvester, Columbiaville, Mich. "They operate from 6 a.m. to 7:30 p.m. weekdays and 8 a.m. to 7:30 p.m. on Sundays. They are using RCA equipment and an antenna tower 204 feet high. The station manager is Angus Pfaff, formerly of WWJ, WLW and others."

"TIXD and its short wave sister station, TI2XD, broadcast simultaneously from 11 a.m. to 1:30 p.m. and from 5 to 11 p.m., EST," writes Joseph Lippincott, Tufts College, Mass. "TIXD uses 1000 watts on 800 kcys, while TI2XD is on 11.92 megs. They are very good about verifying reports, which can be ad-

dressed to the manager, Carlos E. Rodriguez M., at Box 1729, San Jose, C. R. Other Costa Rican stations heard in these parts are TIGH, 725 kcys, 600 watts; TILJ, 775 kcys, 500 watts; TILS, 880 kcys, 1000 watts; TIRS, 915 kcys, 250 watts; TIRH, 950 kcys, 1000 watts; and TIGPH2, 1225 kcys, 2000 watts."

"A new medium wave transmitter is on tap for Iceland," notes D. H. Dussek, Alton, Hants., England. "It will be located at Eidar. So far, Iceland has no medium-wave transmitter, although there is a long-wave station on 208 kcys and a short-wave transmitter on 12.23 megs."

#### Tips on Specials

Reception during the past month has found many new stations coming through for American DXers. Conditions seem to have been exceptionally good and many worthwhile catches have been logged.

Broadcasters in South America have been particularly active and listeners have had little trouble in getting their quota of SA's. LRA, the 10-KW Buenos Aires station on 750 kcys, was heard several times during December, broadcasting test programs for the International Broadcasters Union between 2:30 and 5 a.m., EST, on Wednesday and Saturdays. Another Buenos Aires station, LS6, 6KW on 1350, tested between 3:30 and 4:30 a.m. on several Tuesday mornings. LS11, La Plata, Arg., 1310 kcys, 10 KW, was scheduled for a number of January tests between 2:30 and 3:30 a.m., EST. LR3, Buenos Aires, 950 kcys, 31 KW, is frequently heard around 1 a.m., EST, Sundays.

Several Colombian stations have been reported during the early eve-

ning hours. HJ3ABD at Bogota, 1104, is a cinch most nights, and its signal belies its reported 50 watts of power. HJ1ABN is a new Colombian on 1190 kcys, heard several times, but as yet not located definitely. HJ7ABD, Bucaramanga, Colombia, has been active on 1130, although its power is unknown.

OAX4A, 954 kcys, Lima, Peru, has been showing good strength during the evening hours. A new Venezuelan on 1317 is also reported by listeners, but its call and location have not been ascertained.

Among the Costa Ricans, two San Jose stations, TIX on 605 and TIPG on 625, have been regular visitors. TIPG usually signs off around 9 p.m., EST, and shows very good strength until that time, while TIX boasts of a strong signal until its sign-off between 9 and 10:30 p.m.

The recent Cuban shake-up has caused a lot of confusion among DXers, but there has been no apparent effect on the strength with which the stations come through. Most frequently reported are CMBF on 1560, CMRT (without the "9") on 1580, CMQ on 1010 and CMCY on 590.

Mexico continues to provide its share of signals on the broadcast spectrum. XEQ, Tijuana, B. Cfa., 710 kcys, shows a potent wallop until 3 a.m., EST, daily. XEAF, Nogales, Son., 985 kcys, offers one of the strongest signals on the band. XERB, Rosarito Beach, B. Cfa., seems to be settled on 1090 and is well heard after KMOX signs off. Two other Tijuana stations, XELO on 670 and XEAC on 980, are among those most frequently reported. XEDA, Gral. Anaya, D.F., 1220 kcys, is heard

every Sunday until 2:30 or 3 a.m., EST.

In the United States, a number of commercial monitoring broadcasts are affording added opportunities for DXers to hear many a desired station. Among these are: WCOU, Lewiston, Me., 1210 kcys, 1:30 to 1:45 a.m., EST, on the 7th of each month; KWOS, Jefferson City, Mo., 1310 kcys, 2 to 2:30 a.m., EST, on the first Wednesday; KVGB, Great Bend, Kans., 1370 kcys, 3 to 3:30 a.m., EST, also on the first Wednesday; WPAY, Portsmouth, Ohio, 1370 kcys, 4 to 4:30 a.m., EST, on the 1st of each month; WGRC, New Albany, Ind., 1370 kcys, 3:30 to 4 a.m., EST, on the 1st of each month; KTRI, Sioux City, Ia., 1420 kcys, 2 to 2:30 a.m., EST, on the first Thursday; KDFN, Casper, Wyo., 1440 kcys, 3 to 3:15 a.m., EST, the first Friday; and WPEN, Philadelphia, 920 kcys, 2:10 to 2:30 a.m., EST, the first Wednesday.

As the latest additions to the monthly FCC frequency checks have been included in the schedule included elsewhere in this issue, no comment on these broadcasts is necessary.

Additional notes on reception of United States stations include a few tips on when a few good catches may be heard. KVOE, Santa Ana, Calif., 1500 kcys, has been heard on a clear channel just prior to its 3 a.m., EST, sign-off during the week of the frequency checks. This station is also reported to have a commercial monitoring broadcast from 3:00 to 3:30 a.m., EST, on the first Thursday.

KSAN, San Francisco, Calif., 1420 kcys, is another station reported in

the clear during the second week monitoring tests. In this case, the station was heard on December 8th at 3 a.m., EST, just after WBNO signed off. So that hour on the second Thursday of February may enable DXers to add KSAN to their list.

A number of readers report that KOAM, Pittsburg, Kans., 790 kcys, may be heard when it signs on at 8:30 a.m., EST, daily. WGAU, Athens, Ga., 1310 kcys, is reported to be in the clear at its 7 a.m., EST, sign-on Sundays. Dawn and dusk DXers may have a crack at WPIC, Sharon, Pa., 780 kcys, and WKST, New Castle, Pa., 1250 kcys, as both stations sign on at 6:30 a.m., EST, and off at 5 p.m., daily.

Of particular interest to all DXers is the news that the new WHMA, Anniston, Ala., 1420 kcys, has been assigned the 5:20-5:35 a.m., EST, period on the second Saturday of each month. According to Engineer J. G. Cobble, long opposed to DXers and veries, the station will verify reports only for the first three frequency checks—December, January and February. After that, WHMA will revert to a non-verifying policy.

Station CHWK, Chilliwack, B.C., 780 kcys, broadcasts a regular test program from 3:45 to 4:15 a.m., EST, the second Wednesday of every month.

Two special programs of note are scheduled for February from XEFV, Juarez, Chih., 1210 kcys, and XEBO, Irapuato, Guan., 1310 kcys. Arranged for the NNRC, XEFV will be on from 4 to 5 a.m., EST, on February 8th, while XEBO will broadcast from 3 to 4 a.m., EST, on February 11th. XEBO will be on again

at the same time on March 11th, and as noted in the last issue, YSS, San Salvador, 638 kcys, will DX for the IDA from 1 to 2 a.m., EST, on March 22nd.

Other Notes (all time is EST): Bordeaux on 1366 and Radio Normandie on 1411 have been particularly good between 1:30 and 2:30 a.m.

. . . WIL now signs off at 4:30 a.m. on 1200, while 3 a.m. ends the day for KORE on 1420, KERN on 1370 and XEAC on 980 . . . Sunday morning Costa Ricans are TGQ, 1450 kcys, and TGI, 1310 kcys, both heard until 2 a.m. . . . KTFI reported on 1240 until 2 a.m. Saturdays after WXYZ closes . . . 560 channel well occupied by WIND, with KWTO coming on at 6 a.m. . . . WIBW opens on 580 at 5 a.m. . . . WIP, 610, now 24 hours a day, except for 1 to 7 a.m. silent Monday . . . 710 used by KIRO until 5 a.m. . . . XEPN signs on at 5:30 a.m. on 730

. . . WJR starts up at 5:30 a.m. on 750 . . . XERA on 840 and XEAW on 960 open up at 5 a.m. . . . XENT, 910, on all night . . . Ditto KFVD on 1000 . . . KWJJ uses 1040 until 6 a.m. . . . KJBS on all night on 1070 . . . 1120 occupied by KRSC and KFSG until 5 a.m., when KRSC signs off . . . KGFJ still going strong all night on 1200 . . . Likewise WNEW on 1250 . . . KLS on 1280 and KFAC on 1300 open all night . . . KRE on 1370 off at 3 a.m. now . . . CKMO on 1410 open most nights . . . KXL on 1420 now off at 3:15 a.m., except Saturday night . . . KORE strong on 1420 until 3 a.m., after which KSAN is heard . . . WJBK still blocking 1500 all night.

### The Stations Report

On page 26 of the November RADEX, J. W. Brauner reported that he had not received a verification from KPAB, Laredo, Texas. Fred Hammond, Chief Engineer of KPAB, read this item and then wrote the following letter to Mr. Brauner, forwarding a copy to RADEX:

We note in the November 1938 issue of RADEX your statement to the effect that you reported reception of KPAB in July, but to date had received no reply. This does not tally with our file on DX reports and verifications, since we have a letter of report from you dated October 10th, covering our October 10th frequency check program, to which we replied with our usual full page letter of verification under date of October 14th.

We are wondering if you did not receive our verification. We are anxious to receive reports on checks, and have made a special effort to verify all reports as soon as received, in order to keep the reports coming in.

We shall be glad to hear from you again, and would like to consider you among our regular listeners.

Commenting further on the incident, Mr. Brauner writes: "A new report to KPAB brought a reply in six days—a four page letter signed by Chief Engineer Fred Hammond. This letter is one of the finest verifications in my collection of over 1200. Any DXer who hasn't this verie should tune in KPAB and report, for the beautiful front page of this verie makes an outstanding addition to any DXer's collection."

It is felt that a salute to Engineer Fred Hammond and KPAB is in order from the entire DX fraternity, not only for its evident desire to cooperate with the army of night owls, but for its policy of verifying all reports promptly. It is hoped that

DXers will reciprocate this friendly feeling by reporting regularly to KPAB on its various test programs.

"We wish to acquaint you with the new KGFV here at Kearney, Neb.," informs William E. Baker, Manager. "On August 2nd we went on the air with increased power, new equipment throughout, and new, modern studios in Grand Island and in Kearney. New Collins and RCA equipment was installed, together with a 187½ foot vertical antenna, the only one of its kind now in use. The antenna is triangular, 12 inches on a side from the bottom to within five feet of the top, where it turns to a point. The three legs are of one-half inch steel, 1½ inches wide, bound together with one-half inch bars. It is floated into a concrete base and guyed with 18 wires. The antenna is grounded with 90 radions, each 185 feet long, buried six inches under ground. The 90 laterals connect with an open ground of 650 feet of steel mesh blanket, tied into the concrete base with 18 wires. The power line is shunted in at 42 feet."

Thomas Carberry, Jr., Buffalo, N. Y., forwards a copy of a letter from A. F. Schultz, Chief Engineer of KHBG, Okmulgee, Okla., which describes its transmitting equipment. The station uses a high fidelity RCA 100G transmitter, a 204-foot shunt excited vertical radiator, Western Electric speech input with Western Electric Salt Shaker and RCA Velocity microphones.

#### Daytime Reception

The recent attention to daytime DXing appears to have caught the fancy of not a few listeners. First reference to its possibilities appeared

in the November issue, and this was followed by a more lengthy discourse in January.

"I see where some of the boys have tried out the broadcast band during the daytime and had some good results," observes Ray B. Edge, Buffalo, N. Y., "so I decided to give it a whirl. Using a 19-tube Scott Phantom receiver, I started to listen at 12:15 p.m. and by 3:45 I had logged 61 different stations—WGR, WSYR, CKCL, WMT, WCLE, WHJB, CFCO, WHKC, WSM, WEAJ, WMAQ, CFRB, WLW, WOR, WGN, CFPL, WSB, WJR, WJZ,



*The vertical aerial used by KWYO in Sheridan, Wyo. is a striking photograph of their vertical aerial, with their call letters written in the clouds. (Courtesy of Peter Clarius.)*

WBBM, WPIC, WGY, WCCO, WHAS, CBL, WESG, WABC, WENR, WQAN, WBEN, WWJ, CKPC, WICA, CRCY, KDKA, CHML, WKY, CKLW, WTIC, WTAM, WBT, CKOC, WJJD, WHAM, WWVA, WCAU, CKTB, WJTN, WCAE, WKST, WHIO, WJAS, WEBR, WSPD, WFBL, WBNY, WHDL, WLEU, WHEC, WGAR and WKBW. The only station heard which could not be copied was WKST on 1250, which was marred by some interference from WBNY. Best catch of the lot, I think, was WMT, for its 1000 watts covered some distance before it reached Buffalo."

Another Buffalo listener, George Burnett, was able to log 63 stations, exclusive of locals, between 9 a. m. and noon, EST. They were WSYR, WCLE, WHJB, WAAF, WLW, WOR, WGN, WJR, WJZ, WPIC, WESG, WABC, WENR, WHDL, WWJ, WICA, WTAM, WHAM, WHAM, WWVA, WCAU, WKBN, WINS, WCAE, WHEC, WRVA, WTIC, WBAL, WBT, WLEU, WHAS, WBBM, WSM, WGY, WMAQ, WSB, WOW, WCFL, WMT, WCCO, WJJD, WBZ, WHKC, CKCL, CFCO, CBM, CFRB, CFPL, CBL, CHML, CKLW, CKOC, CKTB, CFCF, CKPC, CRCY, KYW, KDKA, KMOX, KMBC, KVOO and KWTO.

Walter V. Scholz, 2nd, Webster Groves, Mo., offers a list of 61 stations which he compiled during the daytime: KSD, KFUO, KWTO, WIND, WNAX, KSAC, WIBW, WILL, WOW, WMT, WREC, WDAF, WTMJ, KFRU, WGBF, WOI, WSM, WAAW, WMAQ,

KFEQ, WLW, WGN, WJR, WEW, WBBM, WMC, KOAM, WHAS, KOA, WHB, WENR-WLS, WSUI, KFNF, WTAD, WAAF, KMA, WAVE, KMBC, WCFL, WHO, WDZ, KTHS, WCAZ, KMOX, WJJD, KVOO, WIL, WTAX, KXOK, KWOS, KWK, WDWS, WCBS, WMBD, WTMV and KITE. "During the winter months," he adds, "I can hear WOR, CBL, XERA, WFAA and WBAP. The others can be heard day after day, throughout the entire year, and not under extraordinary conditions."

#### Question Department

Morton Raff, Highland Park, Ill., would like information as to the identity of Spanish-speaking stations on 1060, 1080, 1190 and 1470 kcys.

"I would like to ask the aid of Radexers in identifying a Japanese station on 870 kcys," queries Arthur Child, San Francisco, Calif. "It is heard every morning lately, broadcasting news in English and Japanese, from 5 to 5:45 a. m., PST. It has a pretty good signal, but fades out around 6 a. m."

It is believed that this is JOAK-2, which has been reported on 870 by many Pacific Coast Radexers.

"At about 4 a. m. this morning (December 8th)," postcards Leon Grossman, Rochester, N. Y., "a station on approximately 1340 kcys announced . . . in Grand Island, Neb., operating on the assigned frequency of 13— (static and fading made it impossible to get the rest of the frequency) kilocycles, authorized by the Federal Communications Commission. Good morning.' I can find no trace



of any station operating in Grand Island. Can you help me?"

Earlier in this section, Manager William E. Baker of KGFV, advised that his station maintained studios in Grand Island as well as Kearney, Neb. While KGFV is on 1370, not 1340, it is possible that an error was made in noting the frequency and that KGFV was the unknown station.

In a recent NNRC bulletin, a member reported hearing what may be a new outlaw station. The station was operating on 1510 kcys, announced its call as WJN, and gave a Passaic, N. J., telephone number. Calling that number, the NNRCer was informed that the station was located in Brooklyn, that it had been granted a license some time before, but was not yet on a regular schedule. Have any other Radexers heard WJN? And are there any more outlaws operating today?

#### **That Cricket Game**

Certainly the most important sporting event in the history of DXing was the series of cricket matches played between the British and Australian teams during December, 1932 and January, 1933. Broadcast around the world for the benefit of cricket enthusiasts, it made the globe just a little smaller for the DX fraternity.

As recalled on page 4 of the November RADEX, an account of the matches, broadcast by an unknown station on or near 910 kcys, caused considerable commotion among the midnight marauders of the day. A few listeners were sure that the play-by-play description was coming from the familiar 4RK at Rockhampton,

Australia. Because of commercial announcement for an English firm of importers, other listeners claimed that the station was Poste Parisien. The time of the broadcast—1 to 3 a.m., EST—lent credence to the latter theory, the while discounting 4RK.

Finally, when countless DXers began to receive verifications from Poste Parisien, listeners began to agree that the broadcast had indeed come from the French station. Even the skeptics, who had previously insisted that some American or Canadian station had rebroadcast the matches, conceded that this was the first instance of mass listening to a European station. And such was the reference in the November, 1938 issue of RADEX, serving as it did as an introduction to a treatise on trans-Atlantic reception.

"I notice that the famous cricket matches of 1932-33 are up again for discussion," observes Whitney Smith, Walled Lake, Mich., "and after these years of silence, I am finally going to take part. On January 13, 1933, my wife and I heard, early in the morning, on 910 kcys, a play-by-play account of a cricket match, broadcast by a station which we identified as 4RK, Rockhampton, Australia. I wrote to the station, giving necessary particulars. Under date of March 1, 1933, they wrote as follows: 'We are in receipt of your letter reporting reception from Station 4RK. Reference to our log confirms your reception and we congratulate you.'"

"Make of that what you will," challenges Mr. Smith, and we hardly know what to say. A verification is a verification, and this seems to indicate that (1 the cricket match was broad-

cast by 4RK and 2) that 4RK was heard by Mr. Smith.

However, to count out Poste Parisien would be impossible. In the first place, the French station wrote Reader Earl Roberts as follows: "We have the honor to notify you of the reception of your letter of December 6th, for which we thank you very much. These are our broadcasts which you have heard. The game to which you make allusion is the cricket matches played in Australia."

Secondly, the sponsor of the broadcast from Poste Parisien, Fleming & Whitelaw of London, wrote: "The station to which you were listening was not 4RK, Rockhampton, Australia, but Poste Parisien, Paris. Cables were dispatched every minute by a commentator in Australia, and these in turn were read by Mr. Alan Fairfax from the Poste Parisien Studio. The broadcast was sponsored by Mr. A. E. Whitelaw, the well-known Australian importer of Preservene Soap into Great Britain."

And so it would seem that the matches were broadcast by both 4RK and Poste Parisien. However, these stations could not have been heard in this country at the same time. Poste Parisien undoubtedly was the station heard between 1 and 3 a.m., EST, at which time it would have been impossible to hear 4RK. The latter station probably was heard just before dawn, carrying the later account of the match, and at a time when Poste Parisien could not have been heard in this country.

And so it seems logical to conclude that American DXers heard both of these stations during the course of the matches, but under no circumstances

could they have heard more than one of them at a time.

#### Mass TA Reception

Another reference to the cricket matches comes from Carl Forestieri, 2224 Adams Place, Bronx, N.Y., who writes:

"In your November article, you state that on December 2, 1932, DX history was made when scores of listeners heard the station on 914 kcys which later proved to be Poste Parisien. I have the great pleasure to possess a verification from Trieste, Italy, for a program heard by me here in New York City on November 28, 1932.

"I reported my logging of Trieste to several radio clubs, but all were of the opinion that I was crazy. One club put my report in the waste basket, because it was absurd that I should hear a station in Italy at 2 a.m. here, when it was 8 a.m. over there. Well, time proved that I was right."

Many other DXers who reported foreign stations, have been looked on with suspicion by their fellow listeners. Usually, it was a case of "I haven't heard them, so it can't be done." At least, that was the situation until the mass reception of Poste Parisien proved that little was impossible in DXing.

The first instance of trans-Atlantic reception on the broadcast band has not been recorded in any history of DXing that we have seen. It probably took place during the middle 20's, for in 1926-27, the famous international tests took place and there must have been some precedent to make the sponsors believe that such a project would be worthwhile.

*(Please turn to page 75)*

# COIL PROBLEMS Solved by Turner DIAL

●●● by B. FRANCIS DASHIELL

**T**URNER DIAL, returning from an errand to the newspaper office with an advertisement, entered Hi-grade Radio Sales and Service. A light snow was falling, and the cold January afternoon was dark and gloomy. But Turner could see there was warmth indoors, more than normally came from the over-worked oil burner in the basement. It was a customer who was radiating heat. At least that was what Dial judged from the man's actions and words. Bill Wood was listening, but Turner had a suspicion that Bill's usual impetuous statements had got him in trouble.

"I don't care what you say," shouted the customer. "That trouble can't be in the tubes. I had 'em tested!"

Turner, after shaking the snow from his shoes and throwing down his overcoat, walked toward the counter where the two were conversing. "What's up, Bill?" he asked of his young assistant in the store and shop.

"This gentleman is having trouble with his radio set," answered Wood with a subdued look. "You talk to him!"

The man looked at Dial. "Are you the service manager?" he asked. Turner nodded. "I have a fine big radio with 12 tubes, and I know they are all good. But this young fellow says my trouble must be one of the tubes. He's way off!"

Turner was used to meeting this sort of customer most every day. He had talked to many people who felt they knew just what was wrong, yet they came in looking for help. They were like those patients, coming to



their doctor for aid, who always give the physician a diagnosis and tell what kind of medicine they need. "Maybe you are wrong," Turner remarked to Wood. Then, turning toward his customer, he asked: "What's your idea of the trouble in the set?"

"My name is Jones," said the customer. "My radio is like the one you sold the Whites. His daughter Mary said you were the best radio expert in town!"

Turner reddened slightly. "Thanks," he said. "It's nice to be so well recommended. Now, about the radio?"

"This set," began Jones, "has always worked nicely. It brings in foreign stations almost like locals. Last night it stopped playing without warning."

"I see," said Turner. "And what did you do then?"

"I walked over quickly from where I was reading," answered Jones. "The dial lights were on, but the tuning eye was faint and did not have a wide ring of green illumination as it should. The

speaker was dead, but when I set it to the 'distance' switch, music was heard although it was weak and badly distorted."

"Well," commented Turner, "it's reasonable on first thought to think it might be a tube, but I've known other things to happen that are not so simple or inexpensive."

"That's what I told him," ventured Bill Wood. "But he says the tubes all lighted and seemed alive. That's what happened, too, in Mr. White's set, but it was a tube after all."

"I remember," said Turner. "When can I see the set? I think we better bring it in and save a trip."

"Any time," answered Jones. He gave Turner his address, and left the store.

Bill Wood grinned at his boss. "People get stirred up everytime I say the trouble is a bad tube. You came in at the right time."

"Perhaps you say it too confidently, for, as long as a tube lights up, most people will think it's all right." Another customer had entered the store. "Bill," added Dial, "run out and get that set and the speaker. Handle it carefully!" He walked toward the customer but immediately recognized him as an old DX fan around town. "Hello!" greeted Turner. "Come back and sit a while 'till Bill gets back from his errand."

The young man, a radio listener with an enviable DX record, sat down. "I've got a problem that's been worrying me," he began. "Maybe you can help me out."

"Shoot!" grinned Turner Dial. "Let's have it. Hope it's not too big."

"It's about my receiver," said the young man. "You know I do a great

deal of DXing every winter, but so far it seems there is a lot of congestion on the short waves. I'd like to sharpen up the tuning and get more selectivity. How about it?"

Turner frowned thoughtfully as he gazed at the floor. "Well, that's a good set you have. Nine tubes. The good tone on all bands makes it a bit broad. Can't help that. Everybody cries for high fidelity and perfect reproduction of tone throughout the audio range. 'Course a communications receiver would be sharper, but you don't want to buy another receiver. Maybe a little careful aligning might help."

"You adjusted and cleaned it last Fall. Remember?" replied the visitor. "Tell you what! I've been reading about these band-expanding coils or 'Say!" exclaimed Turner with sudden interest. "Now you've started something! You know those band-expanding intermediate transformers really go places when used in the right sets. The transformer can tune razor sharp for code or CW and crowded amateur bands where tone quality is not essential to you. Then the selectivity can be made medium sharp for average short-wave reception, and broad enough so you can sit down and enjoy a good broadcast program like you do now."

"But how can the three degrees of sharpness or tuning selectivity be controlled?" asked the young DX fan.

"Easy," commented Turner Dial. "All you need is a three-position switch."

The young man showed great interest. "Gee!" he said excitedly "That would help things a lot. Sounds as if I might get more DX stations on all bands. If I could only get enough

selectivity so as to separate the crowded bands to single-signal reception it would be fine! Do you really think it would work and that you could fix up my set?"

"Any receiver could be made more selective if the public did not demand the best reproduction possible. That's why good 'communications' receivers pull in more stations than standard all-wave sets. The amateur and professional radio operator needs selectivity to cut through interference, and high-fidelity tone does not matter so much." And Turner stopped talking and swung around toward his book shelf in search of a certain bulletin. "You see," he continued, "it's not possible to use these transformers in a set that has too many i-f transformers. Let's take a look at your circuit." Dial was silent for a few minutes as he glanced through the loose-leaf binder of circuit bulletins. "Here it is," he announced.

The radio fan glanced over Turner's shoulder. "Seems o. k!" said Turner. He, too, was getting somewhat excited over the idea of making an experiment. "Band-expanding transformers may be substituted only for the usual *input* i-f transformer in any receiver that has normal qualifications. That means a single i-f stage or tube, and an intermediate frequency between 440 and 470 kilocycles. This should cover many of the average all-wave receivers now in use. I believe that when a set has two i-f tubes or stages it is possible for the manufacturer to design a second special interstage transformer for this service. It's more expensive."

"But my set has only one i-f tube and stage," said the young man. "Does that mean you can fix it up?"

"I think so," deliberated Turner.

"All of the models made by your manufacturer last year had intermediate-frequencies of 456 kilocycles. That's good, for the makers of the band-expanding transformers also peak them at the factory at 456 kilocycles. The installation should be very simple by replacing your present first i-f transformer." Turner leaned back in his chair and gazed out at the steadily falling snow. "Things will be slow tonight," he added. "Want to bring your set in? It's a table model and easy to move. Then we'll look it over."

The young customer rose to his feet. "Sure thing!" he exclaimed. "That alteration might give me a lot more stations this winter!" And Turner nodded agreement.

A stamping of feet at the door announced the return of Bill Wod. He deposited the chassis and speaker on the service bench with a thud, and pulled off his snow-covered overcoat. "Hey!" shouted Turner. "Never jar a good radio like that. Handle it with the respect that is due a hundred fragile parts in each of its 12 tubes! And when you carry an exposed chassis around in the damp or wet or snowy weather see that it is covered or wrapped up well!" Bill Wood, silently letting the rebuke sink in, shook off more snow and leaned against the warm radiator.

"Might as well take a look at this set right now," said Turner. "I think we'll have still another set to experiment with tonight while this snow keeps the customers home."

The two men connected the set, but no sound came forth. Bill Wood tested the tubes, and to his amazement every one was perfect. Turner Dial

looked on. "Say," he ventured. "You know, I'm a little surprised too, for this trouble sounded like a tube. I guess its something real, after all."

Checking through the circuits for open connections and defective condensers and resistors Turner soon discovered that trouble existed between the first and second detector stages of the circuit. That would mean a defect somewhere in the intermediate-frequency stage. Since all the other units were good, it would be necessary to test the first and second intermediate-frequency transformers or coils. Taking the shop ohmmeter, which was used for testing the resistance of circuits, he applied a pair of test probes to one pair of terminals. The meter showed low resistance. This was right, for the resistance of i-f coils is low. However, they are higher than those of radio-frequency coils or transformers; but much less than the resistances found in audio transformers which are wound with thousands of turns of very fine wire. But, as soon as Turner touched the probes to the secondary terminals of the second transformer, the meter did not register. This was a high resistance due to an open-circuit or broken wire. "There's your trouble," said Turner to Bill Wood. "There you are; take it out!"

Bill quickly removed the offending transformer. Turner picked it up and peered into the open end of the shield can. He saw a tiny greenish spot inside. "Humph!" he muttered. "Moisture collected on this coil and the copper wire turned green from corrosion. I wonder if it could have been due to using acid solder instead of rosin. But, then, no good radio maker will use acid in his soldering work." With that comment Dial began to tear away the

shield can so as to see better within.

"Don't do that!" yelled Bill. "You'll ruin it. Can't we cut off a bit of wire and make the connection again, or how about rewinding the coil?"

"Oh, I guess we could," answered Turner as he continued his destruction of the transformer. "But we won't! These transformers usually aren't very critical in the length of wire, for the trimmer condenser will take care of any small irregularities of inductance. Certainly, rewinding is too difficult. Its universal-wound anyway. We can't do that. When either an r-f or a-f transformer goes bad, throw it away and get a new one! They don't cost so much. So, Bill, put in a new one!"

Later, when Bill Wood had made the replacement, he called Turner to make the inspection. "Seems all right now," said Dial. "We'll have to give this set a tuning up tomorrow morning, then you can take it back. I'm going to dinner now, but I'll be back soon."

Turner Dial reached for his overcoat and hat. "Now you can see, Bill" he remarked, "why I got after you for not covering up the chassis when you carried it through the snow. Dampness often gives a lot of trouble. Sometimes it throws a set off its tuning by changing the values of the radio and intermediate-frequency transformers. The only remedy, if the coils are good, is to remove them and dry 'em out in a warm oven for a long period of time. Then a good coat of some high grade coil 'dope' will prevent the loss of efficiency, and give the coils a high 'Q' rating."

"Sorry!" repented Bill, as he put his feet upon the chair Turner had just vacated, and opened the evening paper to his favorite comics.

# HAM HOUNDING . . .

●●● By HUGH HUNTEM

## All Time Mentioned is EST

● GREETINGS again, Brother Ham Hounders, and many thanks for all your cards and letters requesting that this column continue to put in its monthly appearance in RADEX. The very least that we can say is that we sincerely trust that we may aid each and every one of you to fatten your logs of countries heard.

### QRA Bureau

We are sorry that it is impossible to list the address of every amateur mentioned in this column, but two of our readers have volunteered to furnish QRA's from the Call Book. Anyone desiring the QRA of a ham station can drop a double postal card to either address given below, and the station's address will be sent promptly on the return part of the card.

Elmer Wokaty, West 217th St., Fairview Village, Ohio.

Robert Blanchard, 206 Prospect Park West, Brooklyn, N. Y.

### Forecast

February should offer some very choice DX on 14 megs. Asiatic stations should continue to come through in the early mornings; South Americans will be heard throughout the evenings; and North Americans should be heard during the entire 24 hours of the day. South African signals, we are sorry to say, will gradually become more scarce. They will rarely be heard during the afternoons but a few fair signals will occasionally be logged at around 11:00 pm.

We are happy to say, however, that Australian, European and North African signals will show a great improvement. The Australians will be best received between 1:00 and 4:00 am and between 6:00 and 8:00 am. The European and North Africans should be best during the afternoons and early evenings, with many signals also coming through between 1:00 and 3:30 am.


### Europeans

As in last month's column, we shall concentrate on countries which have no shortwave broadcast stations. We shall also list a few stations in countries such

as Denmark and Sweden whose broadcasters do not issue positive verifications of reception, and from others, such as Norway, whose stations do not "get out" any too well.

European stations are numerous and it will be noticed that English, French, Dutch and Belgian phones far outnumber the rest. As a tip, we advise those desirous of securing cards from any of these countries to report to those stations which have the weakest signals, as those who "get out" in good style receive more reports than they can possibly find time to answer. G5ML is a glaring example of this. We wonder if anyone has his card!

W  
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ESTONIA, June 8, TAPA.

# ES5D

Radio Waba Date 19 58 RST  
 Frequency mc. TX CO-PD-PA, 50 WATTS  
 P. O. QSL Tax 24 73' K. KALLEMAA.  
 much for the card de QSL! To all!

*From Tapa, Estonia, comes this black and red amateur station verification. (Courtesy of Jack Siring).*

**ALBANIA**—Several readers have reported a ZA1CC operating on various frequencies but as amateurs are not permitted to operate in Albania, we suspect this of being a pirate call. As no QRA is known, we advise our readers to save their logs on this station, in hopes that the true identity of the station may someday be known.

**AZORES**—Although several stations are reported as operating, only one, CT2AB, is well received in the States. He normally operates on a frequency of 14.32 megs.

**CHANNEL ISLANDS**—G8MF is the only station received consistently. However, he receives so many reports that he answers only the better ones, so we advise our readers to send him a long

and very complete report. His QRA is Tom de Putron, Isle of Guernsey.

**DANZIG**—Again we call to your attention the station mentioned last month, YM4AA, who is operating on the low frequency side of the band. Very few DXers in North America have this country verified.

**DENMARK**—There are many amateurs in this country and they all QSL, according to reports. We recently received a card from OZ5CN who states that his XYL is also licensed to operate. She uses the call OZ1YL. Both Ops use the same xmitter and their frequency is 14.27 megs. OZ1YL, incidently, was the first lady in Denmark to obtain a license.

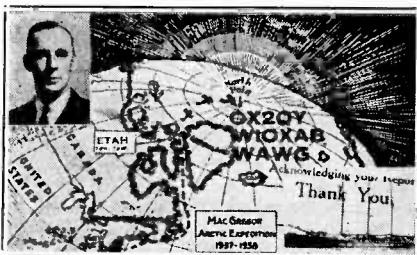
**ESTONIA**—Two stations ES5C and ES5D were frequently received last year at this time. The latter QSL'd in less than a month. His QRA is K. Kallemaa, Jaama, 8, Tapa. We deem it advisable, at this point, to inform you that these stations are heard best around 1:00 am before the Western Europeans have started to come in. This, of course, applies to all central European signals.

**FINLAND**—Elmer Wokaty reports a new station operating around 14:18 with the call OH2OI. His signal is very good but the U.S. stations cause him a great deal of QRM.

**FRIDTJOF NANSEN LAND (USSR)**—According to reports, the Soviet Government Expedition has a rig employing the calls UX1CN-UX1CP at the base camp. This station has been heard on 14.14 megs with fair signals in Eastern Nova Scotia.

**GREECE**—To our knowledge, there are but three stations in this country, SV1CA, SV1KE, and SV1NK. All are in the habit of operating on various frequencies. SV1KE is the best received and is most frequently heard on 14 megs. He QSL's only the very best reports, using a beautiful card. All SV reports should be sent to 17A Bucharest St., Athens.

**IRELAND**—Ireland has many stations and they are heard with good signal



*One of the most interesting and widely-heard of all expedition radio stations was OX2QY, later W10XAB, stationed at Etah, in Greenland. While this station is now off the air and this QSL card is no longer obtainable, the picture is reproduced here for the benefit of those who may have failed to request a verification. (Courtesy of Carl Horton).*

strength in this country. A few of the many who QSL are E13J, E14L, E18J and E19J. We hope that none of you make the mistake of reporting E12L, as he rarely verifies.

**ISLE OF MAN**—G6IA is the only phone reported that we know of on the isle. He operates on the low side of the band and QSL's all correct reports. His QRA is T. H. Colebourn, Ardchalligan, Selborne Drive, Douglas.

**LATVIA**—20 meter phones are rarely heard from this country. The best bet is YL2CD who operates on 14.04 megs.

**LITHUANIA**—This is another rarely heard country. The standout stations are LY1AA, and LY1KK. The latter has QSL'd for many listeners. Look for him on the low end of the band.

**LUXEMBOURG**—LX1SI and LX1TW are the most frequently reported from the Principality. Both have several crystals and both are known to QSL. The latter usually operates close to 14.40 megs.

**MALTA**—Several stations have been reported in the States. ZB1L is heard most frequently on 14.14. Others are ZB1R and ZB1E.



**NORTHERN IRELAND**—The three best signals are those of G12CC, G15QX and G18UW. All have QSL'd our reports. We understand, however, that G12CC will not QSL unless two Reply Coupons, or the equivalent, are sent.

**NORWAY**—This nation has quite a few stations which are widely heard. LA1G gets out well but do not report his signals as he does not QSL. Two stations which do QSL are LA1F, 14.27 and LA8C, 14.08, operated by father and son, respectively.

**POLAND**—The government shortwave broadcasters do OK, but one might try tuning for SP1DC and SP2HH who operates all over the amateur band. The former QSL's but SP2HH does not.

**RUMANIA**—Numerous stations were heard last season; of those heard, YR5AA was the best but very few received his QSL. YR5CF and YR5PB have many reports. Although the QRA's are listed in the Call Book, do not mention the word "RADIO" on an envelope sent to a station.

**SCOTLAND**—This is an easily heard country. Stations which have QSL'd for us are GM2UU, GM5ST, GM6SR, GM8MN, and GM8RJ. Two stations to which reports should not be sent are GM6RG and GM8CN.

**SWEDEN**—This country, likewise, is easily heard. We have received QSL's from SM2VP, SM5SD, SM5SV and SM6WL. SM7YA was reported but he never sent his card. As many complain about this station, we advise not reporting him.

**WALES**—Although easily heard, Welsh stations are few in number. A few of the outstanding stations are GW3KY, GW5TJ, GW5KJ, GW6JW and GW8HI. All of these stations have QSL'd and all operate on the low end of the band.

**YUGOSLAVIA**—YU7AY, 14.30 and YU7KP, 14.01 are the best stations in this country. All reports should be sent under cover and, as in the case of the Rumanians, the word "Radio" should not be mentioned.

### North Africans

Fortunately there are numerous stations in this part of the continent and one can easily add to his VAC by a little comprehensive tuning.

**ALGERIA**—The best stations are FA3HC, 14.12 and 14.27 megs., and FA3QV, 14.30 megs. Both QSL rapidly for an IRC. Rene Plieber, op of FA3HC, an ex-SWL, is always anxious to receive reports. FA8BG, who operates on the high end of the band also QSL's but requires more time than do the other two.

**CANARY ISLANDS**—Stations reported include EA8AE, EA8AF and EA8AS. The first two QSL according to reports, but EA8AS does not. We picked him up on 7 megs. once and if he won't verify on this harder-to-hear frequency, it is doubtful whether he will confirm a 14 meg. report.

**EGYPT**—Although rather difficult to hear, Egyptian phones are numerous, so one has a pretty fair chance to hear this country. Do not report SU1CH or SU1GP as these stations do not QSL. SU1SG, 14:30 and SU1RD, 14.08 both QSL'd our reports in good time. Other SU's who are often heard include SU1MW, SU1KG, SU1RK and SU1RO.

**FRENCH MOROCCO**—20 meter phones are numerous in this country but many of the ops refuse to QSL, such as CN8MA. Two reliable stations are CN8AJ and CN8AM, as both confirmed for us in a month's time. They operate around 14.09 megs.

**SPANISH MOROCCO**—EA9AH is still very active on the very low edge of the band. From recent reports, we gather that he is a bit reluctant about confirming reports. We suggest that all who need this country had better get him verified while the possibility of the getting is still good.

**TANGIERS**—This station is still verifying all reports of reception and again we say, get him verified before it's too late. He may either change his policy or leave the band, as was stated in last month's column.

**TUNIS**—This is, indeed, a rarely heard country as amateur stations are very

scarce. The most frequently reported stations are FT4AN, 14.01; FT4AR, 14.18; FT4AU, 14.35.

### Australians

Regarding the VK's, we don't consider them DX, because they are certainly numerous and downright easy to hear. The VK 2nd, 3rd, 4th, and 5th districts are often heard with R9 plus signals. VK6, on the other hand, is not nearly as consistently received. When they do come in, they are quite good. VK6MW has often been heard with an R8 signal.

One must be on the lookout for VK4HN as he is not just as ordinary VK. He is located in Papua which is considered a separate country. VK9's also are counted as being in a country all of their own. The 9th district is British New Guinea which shares the same island along with Papua and Dutch New Guinea.

Speaking of New Guinea, brings to mind, PK6XX. We're still trying to figure a way to get him verified. A reply card didn't help, and ideas from our readers would be appreciated.

Tasmania, the VK7 district, has been claimed by many as a separate country. Actually it is not a country as it is a state of the Commonwealth of Australia with the same government set up as New South Wales, Victoria, etc. However, for DX purposes, we could consider it a country, because of its geographic position. If all listeners count it a country we will, at least, all have a basis on which to compare logs of countries heard or verified.

The two most frequently reported VK's are VK7CL and VK7YL, who actually is a YL. Both have been heard on the low end of the band and both are quite generous with their QSL cards.

New Zealand stations should also start to break through. These are difficult to log because they are compelled to operate in the American 'phone band (14.15 to 14.25 megs.) The most often reported stations include ZL2BE, ZL2BI, ZL2JQ and ZL3KZ. All have confirmed our reports, but we understand that ZL2BI does not intend to continue issuing his card. If you chance to log him, be sure and send him a most accurate report.

### Bouquets

To Gerry Sayre of OX2QY, Andrew Young of VR6AY and Bill Hungerford of VP3THE, we present three large bouquets. Certainly each and every one of our readers agree with us when we say that these gentlemen have earned the undying gratitude of the DX fraternity. To Tommy Cunningham of VO6D and Stan Gunston of VO6J, the boys from the Frozen North, go similar bouquets. It certainly was kind and unselfish of all of them to so splendidly cooperate with us. We sincerely hope that some of our readers dropped them a few words of thanks.

### Adios

Once again, we are sorry to say, it is time to say goodbye. We would like to continue indefinitely but ye Editor says that there isn't enough space so we'll have to take his word for it. So until next month vy 73 and may all of you harvest a bumper DX crop in the meantime.

## NEW PREFIXES

New Prefixes for the territorial and insular possessions of the United States have been announced.

- K4 Puerto Rico
- KB4 Virgin Islands
- K5 Canal Zone
- K6 Hawaii
- KB6 Guam
- KC6 Wake
- KD6 Midway
- KE6 Johnston Island
- KF6 Baker, Howland and Phenix Islands
- KG6 Jarvis and Palmyra Islands
- KH6 Samoa
- K7 Alaska, and Pribilof Island

—C. J. Fern, Jr.

## Amateur Calls Heard

The names and addresses of persons reporting stations shown in this list are indicated by small letters following the call signs. Key to the small letters is given at the end of the column.

### Ten Meters

CN1AF (heard by f). All other ten meter stations reported by f).

F8DW GM6RG GW5KJ G2IS G2NM G2VG  
G5HK G5SA G6BW G6CU G6GS. G6LK

# RADIO AMATEUR CALL BOOK

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Lists over 40,000 amateurs in every country in the world, and complete lists of all the high frequency commercial stations. Every listener interested in amateur stations should have one. 292 pages.

We pay the postage.

**RADEX**

362 Cedar Lane,

TEANECK, N. J.



**\$1.25**

G6WT G8MX G8SA G8TA G8TD H17G LU4BH  
ON4ZA TG9BA VK2GU VO1Y VP3AA ZS2AF  
ZS2BZ ZS6DW.

### Twenty Meters

CE1AG (b); CE1BC (b); CE2BX (b);  
CE3AC (g); CE3AH (b); CE3BK (gb);  
CE3DW (dk); CN1AF (gikl); CN8AV (a);  
CN8BA (i); CN8MU (ii); CO2EG (b); CO2GL  
(e); CO2GO (b); CO2GY (i); CO2HS (b);  
CO2HY (i); CO2HY (bi); CO2IK (b); CO2JJ  
(bbi); CO2JZ (b); CO2MA (gr); CO2RA (b);  
CO2RG (a); CO2RH (g); CO2RO (gr);  
CO2RQ (g); CO2RR (egbi); CO2RX (g);  
CO2RZ (g); CO2SV (gb); CO2VD (b);  
CO2WM (b); CO2WW (bb); CO2WZ (b);  
CO7AB (e); CO7AS (g); CO7CX (gbi); CO7VP  
(g); CO8RQ (g); CR7AK (b); CR7AU (b);  
CT1AY (l); CT1OX (l); CX1AA (b); CX2AK  
(d); CX2AW (i); CX2CO (b).

EA8TD (a); EA9AH (b); FI6G (l); FI8AC  
(bg); F3CP (il); F300 (e); F8LY (l); G15QX  
(e); G18UW (e); GM6WD (l); G2AK (k);  
G2AV (il); G2DV (il); G2PU (g); G2TR  
(e); G2UT (e); G3BM (iel); G3CP (e);  
G3DO (b); G5BJ (ebijkl); G5JO (k); G5ML  
(aikl); G5NI (hl); G5OI (l); G5ZG (i);  
G6GA (l); G6JO (e); G6ML (l); G6OS (e);  
G6PY (l); G6UX (e); G6VX (l); G6WT (l);  
G6WY (e); G8CL (e); G8NY (a); G8OG (l);  
G8SB (b); G8VI (l); HC1PZ (b); HC2BO  
(b); HC2CC (bbk); HC2HP (k); HH2B  
(abgghkl); HH2PB (l); HH4AF (g); HH4AS  
(hkl); HH5PA (gbiikl); H13N (dgl); H15X  
(ghkl); H17G (hl); H17I (bk); HK1AA (g);  
HK1AB (e); HK1AG (k); HK3AX (g);  
HK3BG (g); HK3CG (kl); HK3CL (bk);  
HK3CO (k); HK3CP (b); HK3JA (e); HK3LC  
(b); HK3VP (b); HK4DF (l); HK5EE (gk);  
HP1A (l); HR5C (kl); I2MI (b); KA1BH  
(b); KA1IM (b); KA1ME (g); KA2OV (b);  
KA7EF (bb); K4ENT (dgbk); K4EVC (b);  
K4EZ (g); K4FAY (bgkl); K4FKC (k);  
K4FKP (b); K4UG (l); K5AF (adl); K5AH  
(ghkl); K5AS (g); K6BAO (b); K6BNR (k);  
K6CMC (k); K6DTT (g); K6FKN (g); K6GAS  
(b); K6ILW (b); K6KMB (k); K6LKN (b);  
K6MTC (b); K6MTH (b); K6MZK (b);

K6OJI (bk); K6OQC (b); K7AOC (gk); K7LZ  
(bb); LA4U (g); LU1DA (k); LU1DJ (k);  
LU1HI (b); LU1JC (b); LU2DR (b); LU2FC  
(b); LU4AM (g); LU4AW (k); LU4BC (bek);  
LU4CO (g); LU4CZ (k); LU5AN (gk); LU5CO  
(g); LU5CZ (bl); LU6AI (g); LU6AM (g);  
LU7BK (b); LU8AB (gkl); LU8AC (gk);  
LU8AE (g); LU8AW (b); NY2AE (b).

OA4AF (g); OA4AW (g); ON4DG (eg);  
ON4MW (l); ON4PJ (e); ON4VK (a);  
ON4ZA (a); PAOMZ (i); PK2WL (b);  
PK3WI (b); PK4KX (g); PK6XX (bg);  
PY1FR (b); PY2AK (bk); PY4CT (j); PY7AI  
(l); SU1RD (l); TG9AA (gkl); TG9BA  
(bgkl); TG9FN (k); TI2AV (gbk); TI2EV  
(g); TI2FG (bgk); TI2LR (b); TI2RC (ghjkl);  
TI3AV (g); VK2ABD (b); VK2ACL (b);  
VK2ADE (b); VK2AEZ (b); VK2AGU (b);  
VK2CP (b); VK2NS (g); VK2NY (g);  
VK2OQ (b); VK2PO (b); VK2TI (b); VK2TO  
(b); VK2UF (b); VK2YL (b); VK3AM (b);  
VK3AO (b); VK3BZ (bb); VK3EH (b);  
VK3ES (b); VK3HB (g); VK3HW (b);  
VK3IG (b); VK3IW (b); VK3KX (b);  
VK3OA (b); VK3XP (b); VK3ZL (b);  
VK4AB (b); VK4AG (b); VK4JP (b); VK4JU  
(b); VK4PF (b); VK4RJ (b); VK4SA (b);  
VK4TY (b); VK4VB (b); VK4VD (b);  
VK4WS (b); VK4WH (b); VK5BF (g);  
VK5FW (b); VK5TR (b); VK7AB (d);  
VK7CL (b); VK7LG (b); VK9XX (bg);  
VO1Y (gik); VO6J (ek).

VP1BA (bgkl); VP1JP (b); VP3AA (dhh);  
VP5BR (kl); VP6FO (bbik); VP6MR (l);  
VP6TR (l); VP7NC (gik); VP7NS (agihk);  
VP7NW (k); VP9L (gk); VP9R (g); VQ2HC  
(b); VQ4KTB (b); VR6AY (b); XE1AK (b);  
XE1BL (b); XE1C (b); XE1CQ (bghl);  
XE1CR (g); XE1FF (b); XE1GF (bg); XE1LK  
(gb); XE1Q (hgb); XE2FC (b); XE2GM  
(b); XE2IK (bb); XE2IY (ehl); XE2LK (g);  
XF3AR (b); XE3AX (bl); XZ2DY (b);  
YV1AA (k); YV1AK (b); YV1AQ (l);  
YV4AB (k); YV4AE (begbi); YV4AF (gkl);  
YV4AN (ki); YV4AX (kl); YV5ABA (k);  
YV5ABF (gbk); YV5ABQ (gikl); YV5ABY  
(kl); YV5AF (i); YV5AG (i); ZE1JK (b);  
ZS1AH (g); ZS1AX (dl); ZS2AZ (b); ZS2I



A Maori tent and a map of New Zealand are shown on this pretty card from ZL2BI, a Wellington, New Zealand amateur station. The colors are black and yellow.

(g); ZS2N (g); ZS2X (l); ZS3F (bgl); ZS3W (g); ZS4H (c); ZS4S (b); ZS5AB (b); ZS5AD (b); ZS5AW (b); ZS5BA (g); ZS5BE (b); ZS5BK (b); ZS5BZ (b); ZS5CL (b); ZS5CO (b); ZS5DW (c); ZS5EL (g); ZS5J (bc); ZS5M (b); ZS5T (b); ZS5TA (g); ZS6A (cg); ZS6AJ (b); ZS6CZ (b); ZS6DG (b); ZS6DG (b); ZS6DJ (b); ZS6DW (bgl); ZS6DY (gl); ZS6EY (bg).

### The Reporters

- (a) Robert L. Blanchard, Brooklyn, N. Y.
- (b) C. J. Fern, Jr., Lihue, Hawaii.
- (c) Ralph B. Hanford, Jr., Chicago, Ill.
- (d) Arthur Hankins, Latrobe, Pa.
- (e) Lewis R. Hill, Maywood, Ill.
- (f) Carl L. Horton, Athol, Mass.
- (g) E. A. Knoff, Canton, Ohio.
- (h) John Macrae, Winnipeg, Man., Canada
- (i) S. Schmuch, E. Cambridge, Mass.
- (j) Carl Sylvester, Columbiaville, Mich.
- (k) Winship Taylor, Baltimore, Md.
- (l) Walter E. Welch, Lynn, Mass.

### Reallocation in Europe

The preparation of a plan for the redistribution of wavelengths among Europe's broadcasting organizations was among the technical matters that provided the main items of a conference of the International Broadcasting Union (U.I.R.) held recently in Brussels.

The preparation of the wave plan—which was initiated at the International Radio Communications Conference at Cairo last spring—was undertaken by the Union's Technical Commission. The plan, after submission to the Council of the U.I.R., will be passed to the various European Governments for consideration, and will finally be discussed and adopted at the European Broadcasting Conference to be held in Switzerland early in 1939.

### New Stations

A construction permit has been issued for a new station in Williamson, W. Va. It will use 1370 kcs. with 100 watts, daytime.

Two new Canadians have been licensed. They are CJHC in Halifax and CHNB in North Battleford, Sask. CJHC will be on 1290 kcs. with 1000 watts power. CHNB will be a 100 watter.

THE WEST INDIAN BROADCASTING COMPANY  
STATION **HH2S** SAIS RC

To **RADEX** Date 11-11-38

We received your \_\_\_\_\_ of \_\_\_\_\_ and highly appreciate your comments.

We Beg to inform you the verification of our programme of \_\_\_\_\_ is \_\_\_\_\_

We Hope to receive further communications from you.

Thanking you,

GERARD BOURKE-DENIS  
THE WEST INDIAN BROADCASTING CO.  
PORT-AU-PRINCE, HAITI.

GENERAL MANAGER.

## HH2S Calls Jamaica

THE West Indian Broadcasting Company was founded by Gerard Bourke-Denis for the purpose of presenting a nightly program in English intended for the Island of Jamaica, which does not possess a commercial station. Offices are maintained, in Haiti, at Station HH2S, Port-au-Prince, and in Jamaica, at 71 Harbour St., Kingston. Mrs. Esther Chapman, Editor of the West Indian Review, is the representative for the British West Indies.

Station HH2S has been on the air since 1934, but not until this year when the West Indian Broadcasting Company was formed were its programs available to all English speaking listeners in the West Indies. Musical programs from this station consist mostly of light classical number.

On Mondays and Saturdays at 9 pm, local time, and on Wednesdays at 9:30 pm, special "Dance Time" programs are radiated. On Tuesdays and Thursdays at 9 pm, and on Sundays at 7, the programs consist of classical music, comprising entire symphonies, sonatas, quintets, or selections from opera.

The regular broadcasting schedule of HH2S starts at 8:30 pm on weekdays, and at 7 pm on Sundays, EST. The frequency is 5915 kilocycles.

A verification card from HH2S is illustrated. Either cards or letters of verification are sent in response to all correct reports. The postal address is P. O. Box 146-B, Port-au-Prince, Haiti.

# LIVING-ROOM TELEVISION

As simple in operation as any radio set, fully capable of entertaining a dozen or more persons at a time with a combined sight-and-sound program, costing little more than a high-quality broadcast set and asking for just a small space on a table or stand, the latest television receiver now available marks the advent of video broadcasting in the living room. Television thus leaves the laboratory and haywire days behind for good, and emerges as a genuine entertainment means.

For months past, the Allen B. DuMont Labs., Inc., Passaic, N. J., have been in production on huge cathode-ray tubes and television receivers for home use. Over a hundred such sets have already been sold in the New York metropolitan area alone. Leading radio, department and other stores are displaying these sets now. And with the promise of regular sight-and-sound programs early this coming year, production is now being geared up to take care of a heavy and growing demand.

The foundation for any television receiver is obviously the cathode-ray tube. Likewise, the size of this tube determines the entertainment capacity of the set. While a small-diameter tube, can show pictures, such pictures are too small to be enjoyed by the average household. Accordingly, the DuMont organization months ago completed its development of a practical 14-inch diameter cathode-ray tube or telatron which is now in regular production.

The present popular DuMont sight-and-sound receiver is a table model not much larger than a really good table model radio. Pictures are viewed on the rounded end of the cathode-ray tube, while the synchronized sound of the program issues from the loud-speaker grille below. A dozen persons can comfortably follow the visual program, and another dozen sitters can be squeezed in. The black-and-white screen image measures a full 8 x 10 inches, and is quite comparable in brilliancy, detail and absence of flicker with typical home movies.

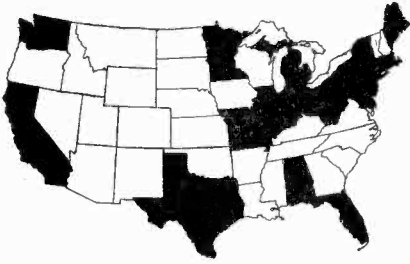


The set includes 21 tubes in all, counting the huge electro-statically-controlled cathode-ray tube.

The DuMont set is built to handle television reception in accordance with present R.M.A. standards. It handles either single side band or double side band modulation. There are six operating controls in all, arranged in two rows on either side of the speaker grille. Four of these controls have to do primarily with the video functions, including the *tuning control* which is actually tuned to the synchronized sound and thereby automatically tunes in the video signal to maximum degree; the *intensity control*, which increases or decreases total brilliancy of the image; the *contrast control*, which accentuates or reduces the black to white range; and the *focusing control*, which insures sharpest pictorial detail. The remaining two controls provide a *power switch* and a *volume control* for sound.

## NEWSSTAND BUYERS

If your newsdealer is unable to supply you with your copy of RADEX you may obtain the issue you want by using the order form on page 96 of your last copy.



The Radex Club map has grown a little in the last thirty days. The map which heads this column shows, in solid black, the states in which we have at least five members enrolled, and since last month we have blanketed the states of Delaware, Rhode Island, Alabama, West Virginia and the District of Columbia. We now have members in all the states except Nevada, all the territories and possessions, all of Canada's provinces except Prince Edward Island, and the following countries: Cuba, Mexico, England, Guatemala, Honduras, Haiti, New Zealand, Bahrain, South Africa and Venezuela.

Membership in The Radex Club is available to anyone who is interested in DXing. There is no charge and no obligation. Whether you are a subscriber or a newsstand reader, you can become a member of this club simply by making application on a postal card.

### VAC Awards

In the October issue of RADEX we announced our Verified All Continents Club, and described the conditions under which such awards would be made, but since the conditions seemed to many of our members to be too strict, we have made several revisions.

The new awards are different from any VAC citations we have ever seen. We have avoided the usual "diploma" which is generally employed, and designed a series of six different "plaques," suitable to hang on the wall of the radio den. There is a different plaque for each of the six continents. Each award is printed in two colors, but no

two plaques of the series are alike in color or design. Just to be different, the designs do not pertain to radio at all, but are illustrations of animals peculiar to each of the several continents. They are well printed, on heavy pasteboard, and while any one award makes an attractive ornament, the six lined up together produce a colorful and interesting effect.

It is not hard to get these awards. Any DXer who has average success in tuning can qualify. They are available whether one tunes the broadcast band, the amateur bands, or the shortwave broadcast bands. And the nominal charge of ten cents each covers the cost of producing the plaques, mailing them to members, and returning the verifications which are submitted as required.

Before sending verifications or applying for the Verified All Continents plaques, please read very carefully the instructions which follow.

### The Three Classes

There are three classes, and members may obtain their awards in any class they choose. They are the Broadcast Band (540 to 1600 kcs), the Amateur Bands, or the Shortwave Broadcasting Bands.

#### I. The Broadcast Band.

To get the award for the continent on which you reside, send THREE verifications, each one from a different country on your continent.

To get the award for any continent other than the one on which you reside, send ONE verification from that continent.

#### II. The Amateur Band.

The Amateur Band requirements are the same as for the Broadcast Band.

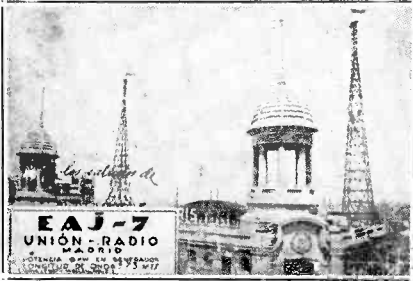
#### III. The Shortwave Bands.

The Shortwave requirements are the same as for the Broadcast Band.

### The Continents

The NORTH AMERICAN Continent includes the countries of Canada, Newfoundland, Greenland, The United States, the Territory of Alaska and all the Aleutian Islands, the countries of Central America, Bermuda, all the countries of the West

## TWELVE YEARS AGO



Many of our old-timers will recall that back in 1926 our local stations closed down at 10 o'clock on certain nights to allow the European stations to come through, and that the tests were successful is attested by this card from EAJ7, Madrid, Spain, dated June 15, 1926. It was heard by Jerry Hahn, with headphones, at about 4 o'clock one morning, on a 4-tube, battery operated, "unpedigreed" receiver.

If any of our readers have cards which are older than this one, we shall be glad to print them in this section.

Indies, i. e., the Bahamas, the Greater Antilles, the Lesser Antilles, the French West Indies, the British West Indies, *but not the Netherland Antilles*. In the Pacific Ocean, the Cocos and Clipperton Islands are included in the continent. Through the Bering Sea to the North Pole the continental boundary follows the International Date Line.

The Continent of SOUTH AMERICA includes the entire mainland, of course, and the Netherland Antilles to the north. In the Atlantic Ocean, the several islands belonging to Brazil are included, as are the Falkland Islands. In the Pacific Ocean, the Galapagos, and the several islands belonging to Chile are included.

The Continent of EUROPE includes, to the north, Novaya Zembla, Spitzbergen and Iceland. In the Atlantic Ocean, the Azores are included with Europe. In the Mediterranean Sea, the following islands are considered as European: Sardinia, Balearics, Corsica, Malta, and Crete. The eastern boundary of Europe starts in Kara Bay, continues southward through the Obdorsk Mountains, the Ural Mountains and the Ural River, to the Caspian Sea, then through the Caucasus Mountains to the Black Sea.

The AFRICAN Continent includes none

of the Mediterranean islands. In the Atlantic Ocean, it includes the Madeias, the Canaries, the Cape Verdes, Ascension, and St. Helena. In the Indian Ocean, Madagascar, the Seychelles, Reunion, Mauritius, and Rodriguez. Africa's western boundary goes through the Suez Canal, the Red Sea and the Gulf of Aden.

The western boundary of ASIA is the same as the eastern boundaries of Europe and Africa. All the islands in the Arabian Sea are included with Asia, as well as those in the Bay of Bengal. Asia's eastern frontier includes all of Japan, the island of Taiwan, and Hong Kong island. From Taiwan, the boundary passes through the South China Sea to Singapore, then through the Malacca Straits to the Bay of Bengal.

The sixth Continent, OCEANIA, includes Australia and New Zealand, and the so-called Islands of the Pacific, extending as far north as the Hawaiian Islands, which are included. The Philippine Islands, and all the Netherland East Indies, are considered as part of Oceania.

Members may apply for their awards one at a time, if they wish, or they may procure all six at one time. A record will be kept of all the plaques issued, and mem-

*(Continued on page 75)*

# HIGH FREQUENCY GLOBE TROTTING

●●● By RAY LA ROCQUE

It is no secret that the European nations in general and Germany in particular realized the importance of directing signals to the Spanish speaking people to the south of these United States of ours much sooner than we did. Only in recent months did the U. S. shortwave broadcasters begin to announce in Spanish and still more recently they began transmitting entire programs in the language of our southern neighbors.

Now, with the National Broadcasting Company leading the way, we (the United States) are about to make an even greater step forward in broadcasting to Latin America. The latest release by NBC reveals the news that W3XAL and W3XL will soon have new shortwave antennas that will swing radio beams over South America like rays of a powerful searchlight, at the mere touch of a button. When completed, the antennas will enable the NBC International Division to extend its service to Latin America to sixteen hours without diminishing the service to Europe. Heretofore NBC's daytime programs in French, German, Italian, and English designed for European listeners and broadcast on a frequency of 17780 kcs. have not been available on a South American beam. Beginning in January or February, these programs will be heard in South America on a frequency of 21630 kcs. at the same time they are broadcast to Europe. Two of the new antennas are being built at Boundbrook, New Jersey for use with the new frequencies recently assigned to the NBC by the FCC.



## Report-O-Meter

Robert Skyten	100 %
Anton Jansen	52
Jack Wells	52
Robert Parks	43
D. H. Dussek	34
George Jacobs	34



As will be noted, our young friend Bob Skyten of East Brookfield, Mass. hit the 100 mark again this month, but the others in the select group this month are all new-comers save Jack Wells, who hit second place this month to tie with Anton Jansen.

Each month the "Report-o-Meter" records the first five highest scores among the RADEX shortwave reporters. The top scorer receives a rating on 100%, and the percentages of the others is computed on his score.

We're especially appreciative for the wealth of information supplied by the six (there was a tie for last place) gentlemen occupying a berth in the select group, but we want to thank everyone else who didn't make the meter register for them. To them we say better luck next month. See last month's RADEX for information on how to crash into the select group. You'll be glad to know that we are counting reports for ULTRA HIGH as well as reports for SHORTWAVES IN REVIEW.



### MEGACYCLE BREVITIES

Bob Parks wants us to hand orchids to COCQ. "They are," says Bob, "one of the few Latin American stations who take time out to pronounce each letter of the call and who do not string it together so that it sounds like some crazy word! . . . The Republic of Haiti, a French-speaking country in the West Indies has been on the air via HH2S since 1934 and now the newly formed West Indian Broadcasting Co. has widened the facilities of the station so that they now include a nightly program in English for Jamaica. . . . Our "Brevities" would not be complete without a few mystery stations. We'd like some help in identifying two stations. One on 9525 kcs. and the other on 6140 kcs., both heard from 3-5:30 p.m. . . . Anton Jansen pens from Holland that since Germany's annexation of Austria he has been hearing OER-3 on the 49 meter band. They announce now as "Reichssender Wien" the new name for the station. They relay the medium wave (broadcast band) station at Vienna. . . . While browsing through a copy of the "Radio Engineer" a little publication of the Commercial Radio Equipment Company of Kansas City (owners of W9XA) we learned a few of the reasons for W9XA's existence and a few facts about ultra-high frequency broadcasting. . . . W9XA is operating mainly to determine the future possibilities of using the 25-27 megacycle band for general broadcast and entertainment service both to local and possibly even long distance listeners. Experiments at W9XA will be centered around radiation problems for the first months of operation. The station

does not have its antenna located several feet above ground as do the majority of ultra high frequency stations. The reason for the low antenna height is to investigate and determine just what service can be expected of the ultra high frequency station using a modest antenna system and intended to serve smaller communities where tall buildings and high hills are not available for antenna erection. From this investigation may grow a new class of "local" station similar in service to our present day 100 watters on the standard broadcast band. . . . Data is also being compiled on the possibility of using these channels for long distance reception. Much thought will have to be given to this feature before any permanent distribution of channels can be effected. As it is now, some station in a distant city operating on the same channel as a local may have its sky wave descending directly upon the local and ruin its programs, or vice-versa. It is evident that much experimenting is necessary before any definite arrangements can be made on these bands and we are sure that the experiments conducted by W9XA will have much bearing on the future of ultra high frequency broadcasting—or broadcasting on the bands of tomorrow!

### QUOTE AND UNQUOTE

*W. C. Post, Saint Paul, Minnesota:*  
 "I'd like to know if some of the emergency stations verify. I hear these stations on 2726 kcs. Some of

### NOTICE TO RADEX READERS

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*Joseph T. Lippincott, Vassalboro, Maine:* "Who is the station on about 12100 kcs. early mornings? France seems to be pounding through on 11880 kcs. so loudly that I cannot make out the station on 12100 kcs. I'd like to know who is on with Oriental music on 15290 kcs. at 7 a.m."

#### ULTRA HIGH

W1XOJ on 43000 kcs. of the Yankee Network will operate with 100 watts from atop Asnebumskit Hill in Paxton, Mass. (RX)

W1XPW on 43400 kcs. now for test purposes. The station, owned by WDRC, will use a power output of 1000 watts.

W2XQO on 26550 kcs. at Flushing, New York, is a new construction permit granted the Knickerbocker Broadcasting Co. for a high frequency broadcast station using 100 watts on experimental basis.

W3XIR on 41000 kcs. has no definite schedule but is heard relaying WCAU. Their address: 1622 Chestnut St., Philadelphia, Pa. They are usually heard after 10 p.m. (Jordan-Penna.)

W4XA on either 31600, 35600, or 38600 kcs. in Nashville, Tenn. are the call letters assigned to the new station of the National Life and Accident Insurance Co.

W8XNU on 25950 kcs. in Cincinnati, Ohio is operating with a power of 1000 watts and verifies by letter. The schedule of the station is from 7 a.m. weekdays and from 8 a.m. to 1 a.m. on Sunday. Reports should be addressed to the Crosley Corp., Cincinnati. (R174, Mont. 1)

W8XWJ on 41000 kcs. with 500 watts in Detroit, broadcasts a program of short wave information for the

Auto City Chapter of the IDA every Wednesday night at 10:30 p.m. Thus far the audience for the program was entirely local, but they are interested in whether the signals are reaching out any distance after darkness. Reports will be appreciated and address is: "IDA program, W8XWJ, 45th floor, Penobscot Bldg., Detroit. (Sekach-Michigan)

W9XA on 26450 kcs. at Kansas City, Mo. operates daily from 10:30 a.m. to 1 p.m. and from 4-7:30 p.m. Other programs are conducted irregularly, especially after dark, for test purposes. W9XA has been reported well heard on both coasts of this little country and on ships in the Pacific and off Salvador as well as in England, Holland, Dominican Republic, Kirkland Lake, Ont., Mexico. and many other points. (RX) W9XA relays the programs of KITE in Kansas City and requests reports along with a stamp for return postage. They are heard as early as 7:30 a.m. on the west coast. (R592-Calif.) W9XA on 26450 kcs. broadcasts a DX tips program Saturdays at 1:30 p.m. They request reports. (Barker-Me.)

W9XJL on 25100 using a power of 250 watts now. Reports should be sent c/o WEBC, Telegram Bldg., Superior, Wis. (R174, Mont. 1)

W9XTC on 26050 kcs. with 150 watts, verified by card. They are on the air from 9 a.m. to 9 p.m. Reports should be sent to W9XTC, c/o WTCN Minneapolis, Minn. (R174, Mont. 1)

W9XUP on 26150 kcs. has been granted a modification of their license, authorizing use of the frequency 26150 kcs. instead of 25950 kcs.

**VERIE NEWS AND NEW VERIES**

W4XB in Miami verifies by card now. (C. D. Jordan-Penna.)

W9XJL sent their card to Anton Jansen in Boskoop, Netherlands, but it took a lot of patience (We're still waiting for ours—RL)

NIROM writes from Batavia to Anton Jansen in Holland that they cannot begin to attempt to verify any reports that do not include an IRC for reply.

PCJ and Philips Radio, according to Jansen, have to reply to a great amount of letters so that sometimes it is months before a reply is received. Even in Holland, the fans have to wait quite a long time for their veries. Their new card shows a picture of the new wheel antenna system used by the station.

JZK's new card shows a picture of Old Japan and one of a new building. Verifies on reverse side. (R453-N. Y.)

VK9MI verified with a nice black and gray card picturing the ship on which the transmitter is located. (Wells-Ala.)

PMH on 6720 kcs. has a good signal starting at 5 a.m. and lasting till about 8 a.m. Their schedule is 4:30-11 a.m. The program is invariably recent popular American recordings. Announcements are in Dutch. They relay the NIROM network of stations that includes PLP, PMN, YDB, YDC, etc. Peak reception is at 7 a.m. (Wells-Ala.)

Radio Centre refused to verify the report of Jack Wells on RV96 on 15180 kcs. They contend that transmissions in languages other than English are not verified. The possibility, they say, of incorrect verification is

too high on bands where many foreign stations are heard. They add that Radio Centre desires its listeners to know what is being said on broadcasts, and therefore has especially designed English transmissions. Jack says that, "While their letter was very gracious and courteous, I'm afraid that I do not agree with them. My report contained enumerated musical selections, etc. and was complete. But I'll just have to skip the incident, I suppose."

**SHORTWAVES IN REVIEW****Angola**

CR6AA on 1300 kcs. on now Wednesday and Saturday 2:45-4:30 p.m. and on 7177 kcs. at the same time. QRA is P. O. Box 103, Lobito, Angola, Portuguese West Africa. (Barker-Me.)

**Argentina**

LSY on 18115 kcs. has been heard relaying the Pan-American conference from Lima, Peru to the U.S.A. networks.

**Australia**

VK9MI on 6010 kcs. is heard from 6:45-7:30 a.m. with a surprisingly good signal for its 50 watts. Announcements are by Eileen Foley, Announceress-in-charge. 9MI, you know, is on the M. V. Kanimbla sailing between New Zealand and Australia. Lately VK9MI is being QRM'd badly at 7 a.m. when CJCX comes on the air for the day. (Wells-Ala.)

VLR-3 on 11880 kcs. is heard after 2 a.m. with an R4 signal almost daily. (Scholz-Mo.) VLR on 11880 kcs. is heard till 3 a.m. and on 9580 kcs. after midnight. Reception for a mere kilowatt of VLR on 9580 kcs. is excellent—the signal being superior even to W8XK! (Parks-B. C.)

VK3ME on 9510 kcs. is also very well received from 1 a.m. onward. (Parks-B. C.)

#### Belgium

ORK on 10330 kcs. is being heard around 2:15 p.m. with an R7 signal and a rapid fade. It is occasionally QRM'd by cw signals. (R453-N. Y.) ORK reports should not be addressed to the National Radio Institute (NIR) at Belgium, though the institute is responsible for the programs via ORK. Reports should be sent to: Belgrado, Ruysselede, Belgium. (Jansen-Holland)

#### Bulgaria

LZA on 14970 kcs. informs by letter that "Radio Sofia" has discontinued operations on shortwaves. The shortwaves, in the future, will be used only for radiotelegraphy. The reason is believed to be that the broadcast station now has 100 kilowatts and they no longer need a shortwave station to cover the country. (Jansen-Holland)

#### Canada

CFVP on 6030 kcs. heard at 12:30 a.m. with a variable signal. (Scholz-Mo.) CFVP is the new call for VE9CA of the "Voice of the Prairies, Ltd." The station relays broadcast CFCN. (R592-Calif.)

CKFX on 6080 kcs., the peanut station at Vancouver has changed its call from VE9CS. The station is on the air in the evenings and daily 'till 11 a.m. (Parks-B. C.)

CZ2P on 4500 kcs. in contact with CZ9U of St. Felicien, Quebec on 4500 kcs. CZ5B or P of Lac Du Bonnet, Manitoba on 4825 kcs. (R451-III.)

#### Canary Islands

EAJ-43 on 7490 kcs. is heard daily

from 8-9 p.m. and on 11010 kcs. Saturday afternoons about 4 o'clock. (R9-Mo. 1)

#### China

XGRV on 11540 kcs., according to a letter veri from Hollington K. Tong, Chairman of the China Information Committee, is the new Chinese broadcaster at Chungking (the wartime capital of China). Previously, many listeners reported the station as XTJ. "XTP", Mr. Tong informs, "is not on the air and is now being moved into the interior of China." XGRV is replacing XTJ and carries the "Voice of China" transmission formerly heard over XTJ. Schedule of XGRV is 1-1:35 a.m. with news in Japanese and Chinese, and 8-8:35 a.m. with news in French and English. (RX via Wells-Ala.)

XGSA on 7000 kcs. at Kwiyang, Kweichow Province, is heard daily with a very strong signal from 5 a.m. to 8:15 a.m. The station may be identified by lady announcer in Chinese and English at intervals and news in English at 8 a.m. by lady announcer. Also most of the music is of Chinese with occasional American numbers. (R592-Calif.)

#### Cuba

COBZ on 9030 kcs. "Radio Salas" at Havana broadcasts daily from 7:45 a.m. to 1 a.m. Their interval signal is four chimes. The opening and closing theme: Popular melodies by nightingales and canaries. Letters to them should be addressed to P.O. Box 866, Havana. (RX)

COCQ on 8810 kcs. (approximately) now relaying CMQ (Skyten-Mass.)

COCQ on 8820 kcs. now from 7

a.m. to 1 a.m. and on Sundays from 6:55 a.m. to 12:30 a.m. (Barker-Me.)

#### **Denmark**

OZF on 9520 kcs. in Copenhagen is to be addressed as follows: Heiber-gsgade 7, Kobenhavn K., Denmark. They also broadcast on 15165 kcs. They have been heard on Sundays from noon to 1 p.m. and on 9520 kcs. they broadcast for USA and Canada from 9:30-11 p.m. Announcements are in English and they ask for reports from listeners. The afternoon programs from 5-6 p.m. are broadcast for Greenland and Iceland. (R256-Alta. 4)

#### **Dominican Republic**

HI-1L on 6485 kcs. at Santiago de los Caballeros has been heard signing off at 9:45 p.m. nightly. (Schmuck-Mass.)

#### **Finland**

OII on 21550 kcs. is the new call and frequency assigned to Lahti, Finland. (Jacobs-Ohio)

OFD on 9500 kcs. has the following official schedule: 12:15-5 p.m.

OFE on 11780 kcs. operates from 1:05 a.m. to 12:05 p.m.

OIE on 15190 kcs. (not OFB) from 1:05 a.m. to 4 a.m. and from 9 a.m. to 5 p.m.

OIH on 17800 kcs. from 4 a.m. to 9 a.m.

OII on 21550 kcs. (no schedule given—probably not operating yet). (RX via Skyten-Mass.)

The following German stations have been logged here: OFD, OFE, OIE, and OIH. (Skyten-Mass.)

#### **France**

TPA-3 on 11885 kcs. and TPB-11 on 9550 kcs. are both received very well at 2:15 p.m. when they sign on simultaneously with the Marseillaise, although TPB-11 fades rather soon

afterwards. (Parks-B. C.)

#### **Germany**

DJB on 15200 kcs. has replaced DJR on 15340 kcs. on Germany's morning transmission (8-9 a.m.) to North America. (Skyten-Mass.)

DJG on 17185 kcs. is a new German station signing off daily at 11:15 a. m. with announcements in English and German. (Jacobs-Ohio)

DJH on 17845 kcs. was logged at noon broadcasting the German program to Africa. (Skyten-Mass.)

DJM on 6079 kcs. is being used at present on the evening transmission to North America. (Skyten-Mass.) There is a special program for English listeners at 10:30 p.m. (Long-Ga.)

#### **Guadeloupe**

Station with unknown call on 7500 kcs. at Puerto de Pitre, in this French West Indies island heard near 6:30 p.m. with French records. No English is spoken. (Caribbean Radio Listening Post-P. R.)

#### **Guatemala**

TG-2 on 6190 kcs. and TG-1 on 1310 kcs. are transmitting daily from 7:30 until 10 a.m. and from 6 until 11 p.m. Saturdays they broadcast from 6 to Sunday morning at 3 a.m. Another transmission on Sundays is from 3-8 p.m. A special DX program on Sunday morning from 1-2 a.m. with English announcements. It is not necessary to include return postage on any report to these stations. (RX via Parfitt-Ohio)

TG2X on 5945 kcs. at Guatemala city using the slogan "Voice of the Police National" operates 9-11:30 p.m. daily and Saturday 10 p.m. to 1 a.m., and Sunday 1-5 p.m.

TGS on 5713 kcs. "Radioemisora

de la Casa Presidencial" operates on an irregular schedule.

TG-25A and TG-25B on 5790 kcs., portables at Presidential House, Guatemala City operate irregularly.

TGB on 5732 kcs. is the Aviation National station at Guatemala City. (R150-Guatemala 1)

#### Haiti

HH2S on 5915 kcs. at Port-au-Prince starts broadcasting every evening at 8:30 and on Sundays at 7 p.m. On Mondays and Saturdays at 9 p.m. and on Wednesdays at 9:30 p.m. the station presents a special "Dance Time" program. On Tuesday and Thursday at 9 p.m., and on Sunday at 7 p.m. a program of Classical music is presented. The music used comprises entire symphonies, sonatas, concertos, quintets, or selections from well known operas. The general run of programs are of light classical music. Letters or verification cards will be mailed to listeners who send comments on reception of these programs. All letters should be addressed to the West Indian Broadcasting Co., Station HH2S, P. O. Box 146-B, Port-au-Prince, Haiti. (RX)

#### Hungary

HAT-4 on 9125 kcs. is heard late Sunday afternoons with a rather weak signal. (Parks-B. C.)

#### India

VUC-2 on 4880 kcs. at Calcutta heard coming on at 7:30 a.m. with R8-9 signal. (Skyten-Mass.)

VUD-2 on 4995 kcs. and VUD-3 on 9590 kcs. comes on at 7:30 a.m. Programs opens with chimes and the clock striking the hour followed by opening announcement and news bulletins in English which lasts for about five minutes when programs in Hindustani are heard. Lately a lady an-

nouncer has been heard during the opening announcement and news. (Skyten-Mass.)

VUD-3 on 9590 kcs. is heard excellently in the mornings with reception reaching its peak between 10 a.m. to 12:30 p.m. The English news given from 11-11:20 a.m. is so loud and clear, it could easily be mistaken for Daventry. Talks are often heard after the news broadcast. The station announces as "All India Radio, Delhi." VUD-3 on 15160 kcs. is heard daily in the early evenings from 8:30 to around 11 p.m., but not nearly as well as in the mornings on 9590 kcs. with English news at the end of the transmission. (Parks-B. C.)

VUD-2 on 9590 kcs. is used for transmissions I and II and 5995 kcs. is used by the same station for transmission III. VUC-2 on 9530 kcs. is used on I and II and 5905 kcs. is used for III. VUM-2 on 5880 kcs. is used for one transmission daily corresponding to III. VUD-3 on 15160 kcs. is used for transmissions I and II and 9590 kcs. for III. All but VUD-3 use 10 kw. The latter uses but 5 kw. All these stations are heard very well in New Zealand. (RA-New Zealand)

VUD-2 on 9590 kcs. is heard well as they come on the air at 7:30 a.m. also heard at 8:30 p.m. (Barker-Me.)

#### Japan

JDY on 9920 kcs. is heard 7-8 a.m. with an R7 signal that compares with the powerful transmitters of Nazaki, Japan. Location of JDY is Dairen, Manchoukuo. They broadcast news in Japanese and Chinese and transmit Japanese music till 7:45 a.m. when the carrier is silent for a few minutes.

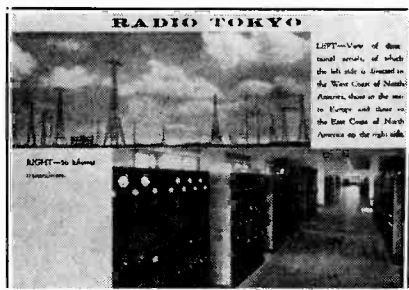
Then after a series of beat notes are sounded the news is read in English. JDY, however, does not adhere carefully to its schedule and often fails to have an English period. (Wells-Ala.)

JFAK on 9636 kcs. at Taihoku and JIB on approximately 10500 kcs. are still heard fairly well on the north-west coast in the mornings. The evening transmission for the west coast of North America has now been shifted to the winter frequency of JZJ—11800 kcs. from 12:30-1:30 a.m. (Parks-B. C.)

JIB on 10535 kcs. at Taihoku, Taiwan operates from 9:05-10 a.m. (Jacobs-Ohio, and Bartholomew, N. Y.)

#### Lithuania

A shortwave station is planned for this country, but plans will not be advanced till later in the year. (R118-Eng. 1)



*The new verification card used by the Japanese shortwave station is shown above. At the top are shown the aerials which direct the signals in the direction of Europe and North America. Below is shown the 50 kilowatt transmitter. (Courtesy of Berttram Podall).*

#### Martinique

"Radio Martinique" on 9700 kcs. at Fort-de-France broadcasts daily from 11:15 a.m. to 12:45 p.m. and from 5:30-8:30 p.m. The station has no call letters but merely announces as "Radio Martinique—La Voix de la France aux Antilles." Address is P. O. Box 138, Fort de France, Martinique, and they send verification cards to everyone sending a correct report. (Seidler-La.)

#### Netherlands

PHI in Huizen heard occasionally with a good signal. PCJ on 9590 kcs. heard very well but badly QRM'd by a South American and VUD occasionally, as well as from GSC next door! (Parks-B. C.)

#### New Caledonia

FK8AA at Noumea, on 6122 kcs. is being heard in New Zealand from Tuesday through Saturday from 2:30-3:30 a.m. Programs open and close with the Marseillaise and the station is announced as "Ici Noumea." (RA-New Zealand)

#### Panama

HOA on 2340 kcs. at Panama City is a new station heard broadcasting nightly simultaneously with HP5G, "Ron Dalley" on 11780 kcs. (Skyten-Mass.)

#### Poland

SP-48 on 6140 kcs. and SP-31 on 9520 kcs. are two new stations at Warsaw. The stations carry the same programs as the Warsaw local stations and sign off at 5:30 p.m. During the program announcements are made in Polish only, but at the end of the transmission, they make a station announcement in French mentioning SP-48 and SP-31 with the frequencies as mentioned above. No mention is made of the other shortwave channels



used. A report to SP-48 was verified by a personal postcard which stated that QSL card would be sent in the near future. None has been received yet. The volume of SP48 is not as good as it was about a month ago. Both stations use 5 kilowatts. (Janzen-Holland, and R118-Eng. 1)

#### **Salvador**

YSD on 7894 kcs. is back on the air again. It is heard with an R7 signal. (R453-N. Y.)

#### **Spain**

"Radio Nacional" on 10370 kcs. has been heard lately from about 7:30 p.m. to sign off at approximately 9 p.m. The same program can occasionally be heard on the 20 meter band.

EAQ on 9860 kcs. is heard fairly well from 7-9 p.m. although it is usually quite badly QRM'd by CW. Spanish rebel stations have not been heard on the northwest coast for some time. (Parks-B. C.)

FET-5 on 7350 kcs. at Burgos, Spain is often heard as late as 7:30 p.m. (Jacobs-Ohio)

#### **St. Kitts**

ZIZ on 6380 kcs. at Basseterre on this island of the Leeward group is heard nightly at 4 p.m. (Caribbean Radio Listening Post-P. R.)

#### **Strait Settlements**

ZHP on 9690 kcs. now is announced as "P for Province" at 10:10 a.m. and judging from the signal (in New Zealand) it has increased its power. (RA-New Zealand)

#### **Switzerland**

Overseas transmissions of the Swiss Broadcasting Society through the Pranguians transmitters began in November. Details are as follows:

HBJ on 14530 kcs. for the Orient on the first Saturday of each month at 7:45 a.m. and for Africa on the first Saturday of each month at 11:45 a.m.

HBL on 9340 kcs. for North America every Monday at 6:45 p.m.

HBP on 7790 kcs. for South America every Monday at 6:45 p.m.

#### **Turkey**

TAP on 9465 kcs. is heard quite well on the transmission lasting from 11:30 a.m. to 5 p.m. Power is 20 kilowatts. Announcements are made in various languages, including French and English. The station's programs are delightfully varied with all types of American music intermingled with a few Turkish or Mohammedan selections. This station is reported heard on the 19 meter band immediately preceding that mentioned above. (Parks-B. C.)

TAQ is on 15200 kcs. now. The station did use 15180 kcs. for a short time, but has now settled on 15200 kcs. (R118-Eng. 1)

#### **Union of South Africa**

ZRK on 9606 kcs. is heard very well about 11:45 p.m. daily with news and setting up exercises. Their address is South African Broadcasting Corp., P. O. Box 4559, Johannesburg, South Africa. (R453-N. Y., and R37-Ont. 1)

#### **U.S.A.**

KIPQ on 2786 kcs. at Beatrice, Nebr. heard along with KIPR of Red Oak and KIPT of Truro, Iowa. Army station MT5 on 4475 kcs. heard calling Army plane 6307 heard on the same frequency.

The U.S. Immigration Border Patrol now operates on the following radio stations on the Northern Border:

WWMD Derby Line, Vt. on 2770, 4617, and 8790 kcs.

WWMH Highgate Springs, Vt. on 2775 kcs.

WWMR Richford, Vermont on 2770 kcs.

WWMB Buffalo, N. Y. on 2822, 4617, and 8790 kcs.

WWME Chateaugay, N. Y. on 2770 kcs.

WWMO Ogdenburg, N. Y. on 2770 and 4617 kcs.

WWMP Rouses Point, N. Y. on 2770 kcs. and 4617 kcs.

WWMA Detroit, Mich. on 2710, 4617, and 8790 kcs.

WWMC Marine City, Mich. on 2710 kcs.

KYZM Lynden, Washington on 2710 and 4617 kcs.

(U.S. Dept. of Labor, via R451-III.)

### U.S.S.R.

RNE on 12000 kcs. is heard till 11 a.m. daily and comes on again at 10:15 p.m. until (?). RAN is heard from 7 p.m. to 9:15 p.m. with English programs and from then till (?) with French programs. A new Soviet station is heard on 9520 kcs. (on west coast) with an excellent signal all day until 7 p.m. with various broadcasts in foreign languages. The Kremlin chimes and clock striking the hour of midnight are heard clearly at 4 p.m. ending one transmission. (Parks-B. C.)

RV-56 at Moscow is heard in the afternoon until 4 p.m. when they sign off with the Internationale. (Skyten-Mass.)

### Vatican City

HVJ is heard on 6185 kcs. if not on 6030 kcs. at 3 p.m. (RL—Mass.)

### Yugo Slavia

YUA on 6100 kcs. is heard quite well of late around 1 a.m. They come on the air about 12:45 a.m. with a man announcing. Then, shortly after one o'clock, a program of recorded classical music is played. English announcements come just prior to the beginning of the musical program. "Radio Beograd," is the name of the station used in announcements. (Wells, Ala.)

### The Reporters

RA: A. I. Breen, Dunedin, New Zealand.

RG: Harry Gordon, Erie, Pa.

RX: Official.

R7, Pa. 1: A. M. Hanins, Latrobe, Pa.

R9, Mo. 1: Walter V. Scholz, Webster Groves, Mo.

R21, Pa. 3: Edward Lang, Philadelphia, Pa.

R23, Ill. 4: Richard Wright, Chicago, Ill.

R24, Ill. 5: William J. Wood, Oak Park, Ill.

R36: Carl Sylvester, Columbiaville, Mich.

R37, Ont. 1: J. F. Moris, Toronto, Ont., Canada.

R118, England 1: D. H. Dussek, Alton, Hants.

R149: Chester Brown, Bradford, Pa.

R150, Guatemala 1: Luis Diez A., Retalhaleu.

R168: J. T. Lippincott, E. Vassalboro, Maine.

R174, Mont. 1: John Picard, Butte, Mont.

R184: Carl Eder, Willmar, Minn.

R185: Anne Eder, Willmar, Minn.

R211, Hawaii 1: C. J. Fern, Jr., Lihue, T. H.

R220: Albert Pickering, W. Medway, Mass.

R256, Alta. 4: Dick Anderson, Calgary, Alta.

R274: A. C. Tarr, Seattle, Wash.

R281: Edward Hirsch, Jamaica, N. Y.

R450: Howard W. Seiger, Pittsburgh, Pa.

R451: Chester Roman, Chicago, Ill.

R453: Jack Kennealley, St. Albans, N. Y.

R580, Neb. 3: Al Bettinger, Omaha, Nebr.

R592: Bob Sawada, Isleton, Calif.

R622, La. 3: A. V. Deterly, Baton Rouge, La.

Elvyn Barker, Portland, Maine.

Al Bartholomew, Bradford, N. Y.

Isaac T. Davis, Elkhart, Texas

Enrique Hidalgo, Cienfuegos, Cuba

Carl Horton, Athol, Mass.

R. E. Lee Hunt, Danville, Ill.

C. D. Jordan, Philadelphia, Pa.

John D. Long, Dalton, Ga.

Arthur Parfitt, Cleveland, Ohio

Joseph A. Picchuta, Meriden, Conn.

S. Schmuck, Cambridge, Mass.

Herbert H. Seidler, New Orleans, La.

Frank Sekatch, Detroit, Mich.

Jack Wells, Phoenix City, Ala.

NOTE: Please be sure always to sign your Radex Club indicia to every letter or report you write.

For Scoop-Box Reports, see page 51

# Twenty Stentors

Listed below are the twenty shortwave stations which possessed the loudest voices in each of the Time Zones last month. Arranged according to the number of reports received, this chart can be used by new listeners as a guide to the stations which they are most apt to receive in their own localities. Beginners should not attempt to tune for difficult catches until they become familiar enough with their receivers to bring in these easy-to-get stations regularly.

Best in EST	Best in CST	Best in MST	Best in PST	Best in World *
Tokyo	Paris	London	London	London
VUD2	Rome	Praha	Berlin	Berlin
Paris	Praha	COCM	Tokyo	W3XAL
Praha	VUD3	Paris	ZRK	HBO
London	London	Berlin	VUD3	RV96
TAP	Tokyo	Rome	VLR	VUD2
Rome	Berlin	CSW3	VK2BE	TAQ
Berlin	Huizen	Martinique	JFAK	W2XAF
VUD3	HP5G	HBO	PMH	Rome
VLR	SPW	CD1190	PLP	SPW
RK1	RK1	VLR	CFVP	TGWA
HH2S	VUD2	HH2S	PMN	Martinique
VK3ME	TG2X	VUD3	TAQ	SP48
SPW	HP5A	YDB	EAR	SP31
RV96	ZRK	XEWW	VK3ME	TAP
ORK	RV96	HCJB	HCJB	ZRK
HVJ	CSW3	TGWA	JJB	Tokyo
HCJB	TGWA	COCQ	TAP	Paris
HAT4	HJ3ABD	VK3ME	Paris	Huizen
RAN	HJIABP	TAP	Huizen	Praha

\*Exclusive of the USA and Canada.

**Time is Eastern Standard. Subtract 1 hour for Central, 2 hours for Mountain and 3 hours for Pacific.**

**Belgrade:** Emetteur a Ondes Courtes, Beograd, Yugoslavia. Announces in Serbian, Italian, English, German, Turkish, Hungarian, Albanian, Greek.

YUA, 6100 kcs, 1 kw, 12:45 am-5:30 pm.

**Berlin.** Deutscher Kurzwellemsender, Haus des Rundfunks, Berlin, Charlottenburg 9. Transmitters are at Zeesen. Can be identified by a tune on a music box which precedes each transmission. These stations verify by card for an IRC.

The directions in which the programs are radiated are shown in parentheses: A, Asia; Af, Africa; CA, Central America; NA, North America; SA, South America.

DJA, 9560, 12:05-11 am (A); 4:50-10:50 pm (CA).

DJB, 15200 kcs, 8-9 am (CA); 4:50-10:50 pm (NA); Sunday only 11:10 am-12:25 pm (NA).

DJC, 6020, 1-4:25 pm (Af).

DJD, 11770, 11:30 am-4:25 pm (Af); 4:50-10:50 pm (NA).

DJE, 17760, 12:05-5:50 am (A); 6-7:50 am (SA).

DJL, 15110, 12:05-2 am (Af); 8-9 am (NA); 10:35 am-4:25 pm (Af).

DJN, 9540, 12:05-11 am (A); 4:50-10:50 pm (SA).

DJQ, 15280, 12:05-11 am (A); 4:50-10:50 pm (SA). Sunday only, 11:10 am-12:25 pm (SA).

DJR, 15340, 12:05-11 am.

DJX, 9675, 11:30 am-4:25 pm (Af).

DJZ, 11801, 4:50-10:50 pm (NA).

**Eindhoven:** N. V. Philips' Radio, Eindhoven, Netherlands. Philips' Holland-India Broadcasting Station (PHOII).

PCJ, 9590, Sun, 2-3 pm; 7:15-8:15 pm; 8:25-10:25 pm; Tues, 1:45-3:40 pm; 7:15-10:30 pm; Wed, 7:15-8:50 pm; Fri, 8-9 pm.

PCJ2, 15220, Tues, 2:-3:30 am;  
Wed, 9:30-11:30 am.

PHI, 11730, Mon through Fri, 6:15-6:45 pm; Sat, 7:15-7:45 pm.

PHI2, 17770, Mon through Fri  
7:40-8:55 am; Sun, 6:25-9:40 am.

**London:** British Broadcasting Corp., London, W1, England. Big Ben strikes the hours. Reports are acknowledged but not positively verified. Transmitters are at Daventry.

GSA, 6050, 12:20-4 pm; 4:15-6 pm.

GSB, 9510, 1:30-4 pm; 4:15-8:30 pm; 9:20-11:20 pm.

GSC, 9580, 4:15-8:30 pm; 9:20-11:25 pm.

GSD, 11750, 3-5:15 am; 10:45 am-noon; 12:20-4 pm; 4:15-8:30 pm; 9:20-11:25 pm.

GSE, 11860, 3:5:15 am; 5:45-8:30 am; 9 am-noon.

GSF, 15140, 3-5 am; 5:45-8:50 am; 9 am-noon.

GSG, 17790, 5:45-8:50 am; 9 am-noon; 12:20-4 pm.

GSH, 21470, 5:45-8:50 am; 9 am-noon.

GSI, 15260, 3-5:15 am; 1:30-4 pm.  
GSJ, 21530, 5:45-8:50 am; 9-10:30 am.

GSL, 6110, 6-8:30 pm; 9:20-11:25 pm.

GSO, 15180, 3-5:30 am; 9-11 am; 4:15-8:30 pm.

GSP, 15310, 1:45-4 pm.

**Martinique:** "Radio Martinique," Fort de France, Martinique, 9700 kcs. Sign off with Marseillaise. Address, Poste Serit, Boite 136, 1:15-2:45 pm; 7:30-10:30 pm.

**Paris:** "Paris Mondial," Ministry of Posts, Telegraphs & Telephones, 107 rue de Grenelle, Paris VII, France. Programs open and close with the Marseillaise."

TPA2, 15243, 6-11 pm.

TPA3, 11885, 2-5 am; 11:15 am-6 pm.

TPA4, 11718, 7-9:15 pm; 9:30 pm-midnight.

TPB3, 17810, 9:30-11 am.

TPB6, 11718, 7-9:15 pm.

TPB7, 11885, 9:30 pm-midn't.

TPB11, 9550, 11:15 am-6 pm.

TPB11, 15130, 2-5 am.

**Praha:** The Czechoslovak Shortwave Station, Fochova Tr. 16.

OLR2A, 6010, 1:55-4:50 pm.

OLR4A, 11840, 4:50-6:30 pm; 7:55-10:50 pm; Sundays, 8:25-10:20 am.

OLR4B, 11760, daily except Sunday 8:25-10:20 am.

OLR5A, 15230, Sunday, 5:55-8:10 am; daily except Sunday, 4:50-8 am.

**Rome:** E.I.A.R., 5 Via Montello, Rome, Italy.

ICC, 6355, 3-3:30 pm.

IQY, 11676, 12:10-1 pm; 1-19-1:36 pm; 3-3:30 pm; 4:15-4:55 pm; 6-9 pm.

IRF, 9830, 12:40-1 pm; 3-4:55 pm.

ZRO, 11810, 4:40-8:45 am; 10 am-2:55 pm; 3:50-4:05 pm; 5:30-5:55 pm; 7-9 pm.

**Tokyo:** Broadcasting Corp. of Japan, Hibiya Park, Tokyo.

JVP, 7510, 8-9:30 am.

JZI, 9535, 2:30-4 pm; 4:30-5:30 pm.

JZJ, 11800, 7-7:30 am; 8-9:30 am; 2:30-4 pm; 4:30-5:30 pm; 8-8:30 pm.

**CFVP,** Calgary, Alta., "The Voice of the Prairies," 6030 kcs.

**COBC,** Havana, Cuba, "El Progreso Cubano," Apartado 132. 9960 kcs (reported on 9990). Daily, 6:55 am-midn't.

**COCM,** 9833, Havana, Cuba. Transradio Columbia, 23 No. 1113, Vedado. 8 am to 10:30 pm.

**COCO,** 6010, Havana, Cuba. Relays CMCK. Luis Casas R., Aptdo 98. 8 am-10 pm.

**COCQ,** 9670, Havana, Cuba, "de la RCA Victor," Calle 25 No. 225. Noon-10 pm.

**CSW,** 9940, Lisbon, Portugal, 1-8 pm.

**EAR,** Madrid, Spain, "The Voice of Republican Spain." Apartado 951. 9860 kcs. At 5:30, 8:30 and 9:40 pm.

**HAT4,** 9125, Budapest, Hungary, Sun, Wed, 7-8 pm; Sat, 6-7 pm.

**HBO,** Geneva, Switzerland, "Radio Nations," 11402 kcs. Sun, 1:45-2:30 pm.

- HCJB**, 4107, Quito, Ecuador, 7-8:15 am; 11:30 am-2:30 pm; 4:45-10:15 pm.
- HCJB**, 12450, Quito, Ecuador, 4:30-7:15 pm.
- HJ1ABP**, 9618, Cartagena, Colombia, Aptdo. 37, 6-10 pm.
- HJ3ABD**, 4840, Bogota, Colombia, Aptdo. 509, 9 am-2 pm; 6 pm-midn't.
- HP5A**, 11700, Panama City, Panama. Radio-Tatro Estrella de Panama, Aptdo. 054. Weekdays 6-10 pm.
- HP5G**, 11780, Janana City, Panama. "Ron Dalley," Box 1121. Daily 6-10 pm.
- JDY**, 9925, Dairen, Kwangtung. Relays JQAK. Daily 7-8 am.
- JFAK** or **JFO**, Itabushi, Taiwan. 9636 kcs. 6-8:30 am.
- JIB**, Taihoku, Taiwan, Relays JFAK. 10535 kcs. 9-10:30 am.
- LRX**, 9660, Buenos Aires, Argentina. "Radio El Mundo" Calle Maipu 555. Daily 10:30 am-12:30 am.
- OFB**, 15190, Lahti, Finland. Weekdays, 5-6:30 am; 10 am-5 pm.
- OFC**, 11780, Lahti, Finland, see OFB.
- OFD**, 9500, Lahti, Finland, see OFB.
- ORK**, Brussels, Belgium. 10330 kcs. 1:30-3 pm.
- OZF**, 9520, Copenhagen, Denmark, 2-6 pm; 10-11 pm.
- PLP**, 11000, Bandoeng, Java, N.E.I. Weekdays, 4:30-10 am.
- PMH**, Bandoeng, Java, N.E.I. 6710 kcs.
- PMN**, Bandoeng, Java, N.E.I. 10260 kcs. 5:30-11 am.
- RAN**, 9595, Moscow, U.S.S.R. Radio Centre, Soliakka 12. Daily 7-9:15 pm.
- RKI**, 7520, Moscow, U.S.S.R. Radio Centre, Soliakka 12. Daily 7-9:15 pm.
- RNE**, Moscow, U.S.S.R. 12000 kcs. Signs off with the "Internationale." Daily 7-9:15 pm.
- RW96** or **RV96**, Moscow, U.S.S.R. 15180 kcs.
- SPD**, 11535, Warsaw, Poland, 6-9 pm.
- SPW**, 13635, Warsaw, Poland, 6-9 pm.
- SP31**, Warsaw, Poland. 9520 kcs. 3-5:30 pm.
- SP48**, Warsaw, Poland. 6140 kcs. 3-5:30 pm.
- TAP**, Ankara, Turkey. 9460 kcs. Tests
- TAQ**, Ankara, Turkey. 15180 kcs. Tests.
- TGQA**, 6420, Quezaltenango, Guatemala. Sat, 10 pm-1 am Sun; Sun, 1-3 pm; other days, 9-11 pm.
- TGWA**, 9685, Guatemala City, Guat. Radiodifusora Nacional. Verifies free Sun, 7-10:45 pm. Weekdays, 10-11:30 pm.
- TGWA**, 15170, Guatemala City, Guat. Same as above.
- TG2X**, Guatemala City, Guat. Same as above.
- TI4NRH**, 9694, Heredia, Costa Rica. Aptdo. 40. Tues, Thur, Sat, 9-10 pm.
- VK2ME**, 9690, Sydney, Australia. Am? amalgated Wireless, 47 York St. Sun, 1-3 am; 5-11 am.
- VK3ME**, 9510, Melbourne, Australia. Amalgated Wireless, 167 King St. Weekdays 4-7 am.
- VK6ME**, 9590, Perth, Australia. Amalgated Wireless. Weekdays 4-6 am.
- VLR**, 9580, Melbourne, Australia. 3-9:45 am.
- VLR**, Melbourne, Vic., Australia. 11880 kcs. 1-3 am.
- VPD2**, 9530, Suva, Fiji, 5:30-7 am.
- VP3BG**, Georgetown, Brit. Guiana. Crystal Broadcasting Co. 6130 kcs.
- VUB2**, 5905, Bombay, India, 7 am-12:30 pm.
- VUB2**, 9550, Bombay, India, 1-3:30 am; 9:30-11:30 pm.
- VUC2**, 5880, Calcutta, India, 6:30 am-noon.
- VUC2**, 9530, Calcutta, India, 2-4 am.
- VUD2**, 5995, Delhi, India, 7:30 am-12:30 pm.
- VUD2**, 9590, Delhi, India, 1:30-3:30 am; 8:30-11:30 pm.
- VUD3**, 15160, Delhi, India, 7:30 am-12:30 pm.
- VUM2**, 5880, Madras, India, 7 am-12:30 pm.
- W2XE**, New York, N. Y. Columbia Broadcasting Sys., 485 Madison Ave. 6120 kcs: 11:30 pm to 12:30 am. 11830 kcs: Sat and Sun, 6:30-11 pm; Mon through Fri, 6-11 pm. 6120 kcs: Sat and Sun, 8 am to 1 pm; Mon through Fri 7:30 am.
- W3XAL**, New York, N. Y. (Bound Brook, N. J.). National Broadcasting Co., Rockefeller Plaza.

6100 kcs: 9 pm to 1 am.

17780 kcs: 9 am to 9 pm.

**W3XAU**, Philadelphia, Pa. 1622 Chestnut St.

6060 kcs: Tues, Fri, Sun, 1 pm to midnight; Wed, 1-10 pm.

9590 kcs: Mon, Thur, Sat, 1 pm to 1 am.; Tues, Fri, Sun, midnight to 1 am.; Wed, 10 pm to 1 am.

**XETA**, 11760, Monterrey, N. J., Mexico. Aptdo. 203. Daily 1:30-3:30 pm.

**XEWI**, 11900, Mexico City, D. F. 9 pm to midnight.

**XEWV**, 15160, Mexico City, D. F. Aptdo. 2516. 8 pm to 12:30 am.

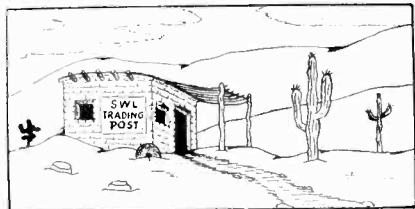
**XGSA**, Kweiyang, China. 7000 kcs. 8-11:15 am.

**ZBW3**, 9525, Hong Kong, Box 200. Sun midnight to 1 am.; 3-9:30 am. Weekdays 4-10 am.

**ZGE**, 6200, Kuala Lumpur, Fed. Malay States. Sun, Tues, Fri, 6:40-8:40 am.

**ZIZ**, Basseterre, St. Kitts. 6380 kcs.

**ZRK**, 9606, Cape Town, U. of South Africa. P. O. Box 4559, Johannesburg. Sun, 3:30-4:30 am.; 8-11:40 am. Weekdays, 11:45 pm to 12:45 am.



James W. Newman, 45 Sixth St., New Toronto, Ont. (SWL Cards).

James Arp, Williamsport, Pa. (SWL Cards).

William Anderman, Jr., 5913 N. Camac St., Philadelphia, Pa. (SWL Cards).

G. M. Kosolapoff, 461 Allwen Drive, Dayton, Ohio (Correspond with DXers in Dayton).

David C. Hill, 1516 Varnum St., N. W., Washington, D. C. (SWL Cards).

Bob Sawada, Isleton, Calif. (SWL Cards).

Walton Knight, Belinda, Acco County, Va. (SWL Cards).

O. Ingmar Oleson, Ambrose, N. Dak. (Correspond with Scott, Masterpiece and Midwest users).

John L. Tate, 612 Halifax St., Petersburg, Va. (Cards).

Jack Kenneally, St. Albans, L.I., N. Y. (SWL Cards).

Charles E. Baxa, 2678 N. Halsted St., Chicago, Ill. (SWL cards).

Merton M. Hiatt, Dryden, Wash. (SWL cards).

Vincent C. Stasen, 5347 Priscilla St., Philadelphia, Pa. (SWL cards).

Peter A. Clarius, 11 Marianne St., Port Richmond, S.I., N. Y. (Correspondence).

Caribbean, Listening Post, General Delivery, San Juan, Puerto Rico (SWL Cards).

Richard A. Craig, 8 Rod Road, Waterville, Maine (Correspondence with DXers 2000 miles away).

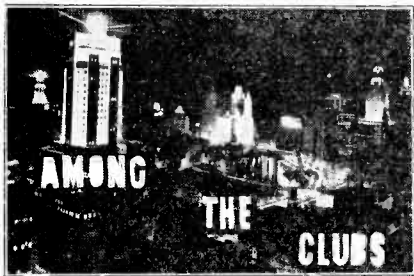
Elmer Wokaty, W. 217th St., Fairview Village, Ohio (Swap foreign SWL cards, and correspondence with YL's).

G. R., *East St. Louis, Ill.* Can you tell me how to change my electric "Scott" receiver over for batteries?

*Answer.* This is a difficult task, and only one for a good service man. The details are too long to be given here, for it will be necessary to remove much of the power unit and filter parts. It will be necessary to supply the same voltage to the power circuit, including the voltage divider, as is now given by the secondary of the power transformer and the rectifier tube. All this means that the battery drain will be considerable. Switching over to 2-volt battery tubes will call for many other changes in circuit impedances, and we do not feel that the change is practicable.

#### NEWSSTAND BUYERS

If your newsdealer is unable to supply you with your copy of RADEX you may obtain the issue you want by using the order form on page 96 of your last copy.



The Universal DX Club, formerly of Oradell, N. J., has been combined with the Newark News Radio Club. Members of the former club will receive the bulletins of the NNRC until expiration of their regular subscription term.

A new club, known as the World DX Alliance, has been formed at Perth Amboy, N. J. The officers are announced as follows: Nick Woytan, president; Leon Grossman, broadcast band editor; George Eder, amateur editor; Lewis Hill, assistant amateur editor; Ralph R. Olsen, CPC chairman; Erick R. Johnson, secretary and treasurer. Further information can be obtained from Mr. Johnson at Box 422, Perth Amboy, N. J.

Vincent Stasen of Philadelphia informs this column that the Jackson Short Wave League now numbers over one hundred members. The president is Roy E. Chisholm, 616 Fourth St., Jackson, Mich.

The International Listeners Association of Dryden, Wash., advises us that the first prize to be awarded in their recently announced contest will be the Chandler Code Course.

#### NNRC Absorbs UDXC

At a meeting in Brooklyn, N. Y., on November 23rd, the Executive Committee of the Universal DX Club, composed of Alfred J. Stansfield, Arthur B. Johnson, William Wheatley and John DeRosa, and a committee from the Newark News Radio Club, composed of Irving R.

Potts, Peter J. McKenna and Harry J. Varrelman, it was voted that the NNRC absorb and take over the membership and affairs of the UDXC.

Believing that various radio and DX clubs, with many of their activities overlapping, have been finding the going increasingly difficult, Messrs. Stansfield, Johnson, Wheatley and DeRosa believed that the best solution could be reached through a merger of the UDXC with another club. After due deliberation of what the various other clubs could offer the UDXC membership, the committee approached the NNRC, with the result being the aforementioned action.

This action was ratified by the Board of Directors of the Newark News Radio Club at its December 10th meeting, with the result that all members of the UDXC were admitted to membership in the NNRC for the duration of their membership.

With the ranks of radio clubs thus reduced, a check-up was made on some of the other clubs which appeared to have been more or less inactive during recent months. The GCDXC is reported to have issued but one bulletin so far this season. It was dated in September, but not mailed out until the last week in October.

More of a mystery is the Canadian DX Relay, which has not issued a bulletin since August 5th. A personal letter to Charles Hesterman, inquiring about the status of the CDXR, failed to bring a reply.

Charles C. Norton advises that the URDXC is enjoying its best season in the five years of its existence, that its

*(Please turn to page 75)*

# Stations 'Round the World

FOLLOWING is a selected list of the powerful radio stations of the world. Every station shown in this list has actually been heard in the United States. The power is given in the third column, in kilowatts. For complete lists of broadcasting stations, readers are referred to the following issues of RADEX: Asia, February, 1938; Oceania, September, 1938; South America, October, 1938.

519	50.	Baranowicz, Poland. Testing.	780	JOPK	5	Shizuoka, Japan.
540	RW 54	10. Khabarovsh, U.S.S.R.	780	LT1	5.	Rosario, Argentina.
546	120.	Budapest, Hungary	785	120.	Leipzig, Germany.	
550	2CR	10. Cumnook, NSW, Australia.	790	JOGK	10.	Kumamoto, Japan.
556	100.	Beromunster, Switzerland.	790	LR10	11.	Buenos Aires, Argentina
560	MTCY	10. Shinkyo, Manchuria.	790	4YA	10.	Dunedin, New Zealand.
560	6WA	10. Minding, W.A., Australia.	795	50.	Lwow, Poland.	
565	100.	Athlone, Eire.	800	4QG	2.5	Brisbane, Qsld., Australia.
570	CB57	5. Santiago, Chile.	804	70.	Cardiff, Gt. Britain (Wales Regional).	
570	2YA	60. Wellington, New Zealand.	810	JOIK	10.	Sapporo, Japan.
574	100.	Stuttgart, Germany.	830	LR5	29.	Buenos Aires, Argentina.
580	3WA	10. Horsham, Vic., Australia.	830	3GI	7.	Longfield, Vic., Australia
583	20.	Alpes-Grenoble, France.	840	PRH9	5.	Sao Paulo, Brazil.
583	50.	Madona, Latvia.	840	2YC	5.	Wellington, New Zealand
590	JOAK1	150. Tokyo, Japan.	841	100.	Berlin, Germany.	
590	LS10	6. Buenos Aires, Argentina	850	JBCK	10.	Seishin, Korea.
582	120.	Vienna, Germany.	850	OAX4A	10.	Lima, Peru.
600	PRH2	25. Porto Alegre, Brazil.	850	859	100.	Sofia, Bulgaria.
601	25.	Rabat, Morocco.	860	PR43	2.5	Strasbourg, France.
610	CX4	1. Montevideo, Uruguay.	870	JOBK2	20.	Rio de Janeiro, Brazil.
610	TFC	3.5 Sydney, NSW, Australia.	870	LR6	10.	Tokyo, Japan.
610	20.	Florence, Italy.	870	2GB	26.	Buenos Aires, Argentina.
620	3AR	4.5 Melbourne, Vic., Australia.	877	70.	Sydney, NSW, Australia.	
620	15.	Brussels I, Belgium.	880	PRJ3	22.	London, Gt. Britain (London Regional).
620	20.	Cairo No. 1, 7gypt.	882	YV5RQ	5.	Bello Horizonte, Brazil.
625	TIPG	2. San Jose, Costa Rica.	900	PRB7	5.	Caracas, Venezuela.
630	LS3	5. Buenos Aires, Argentina.	904	100.	Rio de Janeiro, Brazil.	
630	4QN	7. Clevedon, Qsld., Australia.	904	Hamburg, Germany.		
638	120.	Praha No. 1, Czechoslovakia.	910	JOLK	5.	Hamburg, Germany.
640	5CK	7.5 Crystal Brook, S.A., Australia	910	LR2	12.	Fukuoka, Japan.
648	100.	Lyons la Doua, France.	910	4RK	12.	Buenos Aires, Argentina.
650	1YA	10. Auckland, New Zealand.	913	60.	Rockhampton, Qsld. Australia	
658	100.	Cologne, Germany.	920	JOQK	2.	Toulouse, France.
668	70.	Manchester, England (North Regional).	922	32.	Brno, Czechoslovakia.	
670	LS4	7. Buenos Aires, Argentina.	932	15.	Brussels, Belgium.	
670	PRC5	2. Belem, Brazil.	940	JOBK2	10.	Osaka, Japan.
670	2CO	7.5 Sorowa, NSW, Australia.	940	PRF4	10.	Rio de Janeiro, Brazil.
677	100.	Cotten, Switzerland.	941	12.	Algiers, Algeria.	
680	HJN	1. Bogota, Colombia.	950	LR3	31.	Buenos Aires, Argentina.
80	PRC2	5. Porto Alegre, Brazil.	950	2UE	1.	Sydney, NSW, Australia.
686	20.	Belgrade, Jugoslavia.	959	60.	Paris, France, "Poste Parisien".	
690	JOBK1	10. Osaka, Japan.	960	PRF3	5.	Sao Paulo, Brazil.
695	120.	Paris, France.	960	YV5RA	5.	Caracas, Venezuela.
700	2NR	7. Grafton, NSW, Australia	977	100.	Belfast, Gt. Britain.	
704	55.	Stockholm, Sweden.	980	PRE8	20.	Rio de Janeiro, Brazil.
710	IS1	5. Buenos Aires, Argentina.	980	YV1RB	1.	San Cristobal, Venezuela.
710	7NT	7. Kelso, Tas., Australia.	986	50.	Bologna, Italy.	
713	120.	Rome No. 1, Italy.	990	JOCK2	10.	Nagoya, Japan.
720	PRA8	25. Pernambuco, Brazil.	990	LR4	16.	Buenos Aires, Argentina.
720	3YA	10. Christchurch, New Zealand.	990	2ZG	2.	Orange, NSW, Australia.
730	JOCK1	10. Nagoya, Japan.	995	60.	Hilversum II, Netherlands	
730	5CL	4. Adelaide, S.O., Australia.	1000	HJ3ABH	2.	Bogota, Colombia.
731	38.	Turi, Estonia.	1000	PRB9	10.	Sao Paulo, Brazil.
740	PRA4	10. San Salvador, Brazil.	1004	13.5	Bratislava, Czechoslovakia.	
740	2BL	3. Sydney, NSW, Australia.	1005	YV5RG	...	Caracas, Venezuela.
740	100.	Munich, Germany.	1013	70.	Daventry, Gt. Britain (Midland Regional).	
749	100.	Marseille, France.	1020	2KY	1.	Sydney, NSW, Australia.
750	LRA	10. Buenos Aires, Argentina.	1030	LR9	5.	Buenos Aires, Argentina.
758	12.	Katowice, Poland.	1031	100.	Konigsberg, Germany.	
760	CB76	10. Valparaiso, Chile.	1040	CP4	10.	La Paz, Bolivia.
760	PRA6	10. Sao Paulo, Brazil.	1040	PRG2	10.	Sao Paulo, Brazil.
767	70.	Falkirk, Gt. Britain (Scottish Regional).	1040	5PI	2.	Crystal Brook, S.A., Australia
770	JOHK	10. Sendai, Japan.	1040	120.	Rennes-Bretagne, France.	
770	3LO	3.5 Melbourne, Vic., Australia.				
776	120.	Toulouse, France.				



1050 JOJG	.5	Kagoshima, Japan.	1190 2CH	1.	Sydney, NSW, Australia.
1050	50.	Falkirk, Gt. Britain. (Scottish National).	1195	25.	Frankfort-am-Main, Germany.
1059	20.	Bari, Italy.	1213	60.	Lille, France.
1060 CB106	5.	Santiago, Chile.	1220 PRA9	25.	Rio de Janeiro, Brazil.
1060 JOJG	.5	Toyama, Japan.	1220 4AK	2.	Oakey Qsld., Australia.
1060 PRD2	5.	Rio de Janeiro, Brazil.	1222	60.	Rome, Italy.
1070 LRI	50.	Buenos Aires, Argentina.	1230 LS8	15.	Buenos Aires, Argentina.
1077	60.	Bordeaux, France.	1230 2NC	2.	Newcastle, NSW, Australia.
1080 LT3	4.5	Rosario, Argentina.	1260 URA5	5.	Sao Paulo, Brazil.
1100 PRG9	20.	Sao Paulo, Brazil.	1260 3SR	2.	Shepparton, Vic., Australia.
1104	50.	Kuldiga, Latvia.	1270 LS9	6.	Buenos Aires, Argentina.
1110 LS5	5.	Buenos Aires, Argentina.	1270 2SM	1.	Sydney, NSW, Australia.
1113	100.	Praha II, Czechoslovakia.	1280 URG3	25.	Rio de Janeiro, Brazil.
1120 LV5	5.	San Juan, Argentina.	1300 2TM	2.	Tamworth, NSW, Australia.
1120 PRH8	5.	Rio de Janeiro, Brazil.	1310 LS11	10.	La Plata, Argentina.
1120 YV1RF	1.	Maracaibo, Venezuela.	1340 PRE4	5.	Sao Paulo, Brazil.
1120 4BC	1.	Brisbane, Qsld., Australia.	1350 LS6	6.	Buenos Aires, Argentina.
1131	100.	Horby, Sweden.	1360 PRC8	5.	Rio de Janeiro, Brazil.
1150 LR8	7.	Buenos Aires, Argentina.	1393	25.	Lyons, France.
1158	10.	Kosice, Czechoslovakia.	1400 PRD5	5.	Rio de Janeiro, Brazil.
1160 PRH3	5.	Sao Paulo, Brazil.	1410 2KO	5.3	Newcastle, NSW, Australia.
1167	15.	Monte Ceneri, Switzerland.	1411	15.	Fecamp, France (Radio ..or-mandie).
1170 2NZ	2.	Inverell, NSW, Australia.	1430 PRE2	4.	Rio de Janeiro, Brazil.
1185	60.	Nice-Cote d'Azur, France.	1440 LS7	10.	Buenos Aires, Argentina.
1190 LS2	30.	Buenos Aires, Argentina.	1500 CB150	10.	Santiago, Chile.

**KANS Special**

A special program from KANS, Wichita, Kans., has been tentatively arranged for the morning of February 4, from 3 to 4, or from 4 to 5 am, EST. This program, arranged by T. R. Grosvenor of Wichita, will also be announced and verified by him. Reports must be in letter form (no postal cards, except double cards) and return postage must be furnished.

Prizes will be offered to distant listeners, and Radex Club members will be given an opportunity to win one of the prizes. Members are urged to give their membership number when reporting. The program will consist of some "live talent," and the few recordings to be used will be pipe organ or Hawaiian music.

KANS transmits on 1210 kcs, with 100 watts power.

**JOHN B. VASSALLO**

A consistent DXer for seventeen years, is John B. Vassallo of San Francisco, California. Back in 1921 he started his long tuning record, using crystal receivers at first, and later building his own sets, up until the time that "all-electric" sets were offered for sale.



JOHN B. VASSALLO

## Special After-Midnight Frequency Monitoring Schedules

(OTHER THAN F.C.C. FREQUENCY CHECKS)

<i>Station</i>	<i>Frequency</i>	<i>City and State</i>	<i>Date</i>	<i>Time (E.S.T.)</i>
KTSA	550 K.C.	San Antonio, Texas	1st Monday of Month	1:00 to 1:15 AM
KFGQ	1370 K.C.	Boone, Iowa	1st Monday of Month	2:30 to 3:00 AM
WBBZ	1200 K.C.	Ponca City, Okla.	1st Monday of Month	6:00 to 6:30 AM
KLAH	1210 K.C.	Carlsbad, New Mexico	1st Tuesday of Month	5:00 to 5:30 AM
KAND	1310 K.C.	Corsicana, Texas	1st Tuesday of Month	5:15 to 5:45 AM
KWOS	1310 K.C.	Jefferson City, Mo.	1st Wednesday of Month	2:00 to 2:30 AM
WSAU	1370 K.C.	Wausau, Wisconsin	1st Wednesday of Month	2:30 to 2:45 AM
KPAB	1500 K.C.	Laredo, Texas.	1st Wednesday of Month	2:30 to 3:00 AM
WAVE	940 K.C.	Louisville, Ky.	1st Thursday of Month	1:30 to 1:45 AM
KNOW	1500 K.C.	Austin, Texas.	1st Thursday of Month	1:45 to 2:15 AM
KTRI	1420 K.C.	Sioux City, Iowa.	1st Thursday of Month	2:00 to 2:30 AM
WGRC	1370 K.C.	New Albany, Indiana.	1st Thursday of Month	2:30 to 3:00 AM
WACO	1420 K.C.	Waco, Texas.	1st Friday of Month	1:45 to 2:15 AM
KGFI	1500 K.C.	Brownsville, Texas	1st Friday of Month	2:00 to 2:30 AM
KIUN	1420 K.C.	Pecos, Texas.	1st Friday of Month	2:30 to 3:00 AM
KEUB	1420 K.C.	Price, Utah.	1st Saturday of Month	2:00 to 2:30 AM
KSAL	1500 K.C.	Salina, Kansas.	1st Saturday of Month	2:30 to 3:00 AM
KWOC	1310 K.C.	Poplar Bluff, Mo.	On Sunday Morning pre- ceding 2nd Tuesday of every Month.	2:00 to 2:30 AM
WPAY	1370 K.C.	Portsmouth, Ohio	On 1st Day of Month	4:00 to 4:30 AM
KTEM	1370 K.C.	Temple, Texas.	On 5th Day of Month	3:00 to 3:30 AM
KVGB	1370 K.C.	Great Bend, Kansas	On 7th Day of Month	3:00 to 3:20 AM
WPAD	1420 K.C.	Paducah, Kentucky.	On 7th Day of Month.	3:00 to 3:30 AM
WTAQ	1330 K.C.	Green Bay, Wis.	2nd Tuesday of Month	4:15 to 4:30 AM
WCAZ	1070 K.C.	Carthage, Illinois.	2nd Saturday of Month	3:30 to 4:00 AM
KWBG	1420 K.C.	Hutchinson, Kansas.	1st and 3rd Wednesday	6:30 to 7:00 AM
KGFW	1310 K.C.	Kearney, Nebraska.	On 15th and 29th of Mo.	2:00 to 2:30 AM
KBIX	1500 K.C.	Muskogee, Oklahoma.	4th Saturday of Month.	5:00 to 5:15 AM
WLAP	1420 K.C.	Lexington, Kentucky.	On last Friday of Month.	2:00 to 2:30 AM
WSUI	880 K.C.	Iowa City, Iowa.	On Wed. Morning pre- ceding 1st Saturday of every Month.	

## The Monthly Frequency Checks

FOR the purpose of checking the frequencies of small stations which cannot be heard satisfactorily on their regular daily transmissions, the Federal Communications Commission requires monthly monitoring broadcasts from a selected group of stations. Following is the latest available schedule of the test transmissions. All time is am., Eastern Standard.

### The Second Monday

3:00-3:15	WABY	1370	Albany, N. Y.	3:25-3:40	WJNC	1200	West Palm Beach, Fla.
3:05-3:20	WBRK	1310	Pittsfield, Mass.	3:30-3:45	WRDW	1500	Augusta, Ga.
3:10-3:25	WMAS	1420	Springfield, Mass.	3:35-3:50	WICA	940	Ashtabula, Ohio
3:15-3:30	WCAX	1200	Burlington, Vt.		WIOD	610	Miami, Fla.
3:20-3:35	WRDO	1370	Augusta, Maine	3:40-3:55	WAYX	1200	Waycross, Ga.
3:25-3:40	WAGM	1420	Presque Isle, Maine		WBLY	1210	Lima, Ohio
3:30-3:45	WHAI	1210	Greenfield, Mass.	3:45-4:00	WDNC	1500	Durham, N. C.
3:35-3:50	WQDM	1390	St. Albans, Vt.		WPAY	1370	Portsmouth, Ohio
3:40-4:00	WMFF	1310	Plattsburg, N. Y.	3:50-4:05	WAIR	1250	Winston-Salem, N. C.
3:45-4:00	WCAD	1220	Canton, Ohio		WMCB	1420	Detroit, Mich.
3:50-4:05	WLNH	1310	Laconia, N. H.	3:55-4:10	KWOC	1310	Poplar Bluff, Mo.
3:55-4:10	WIBX	1200	Utica, N. Y.		WALR	1210	Zanesville, Ohio
4:00-4:15	WWRL	1500	Woodside, N. Y.		WMFR	1200	High Point, N. C.
4:05-4:20	KVRS	1370	Rock Springs, Wyo.	4:00-4:15	WHBB	1500	Selma, Ala.
4:10-4:25	WMBO	1310	Auburn, N. Y.		WKRC	550	Cincinnati, Ohio
	KDNT	1420	Denton, Texas	4:05-4:20	KFAM	1420	St. Cloud, Minn.
	WBRB	1210	Red Bank, N. J.		WCLE	610	Cleveland, Ohio
4:15-4:30	KPAB	1500	Laredo, Texas	4:10-4:25	KALB	1210	Alexandria, La.
4:20-4:35	KVOX	1310	Moorhead, Minn.		WLBC	1310	Muncie, Ind.
4:25-4:40	KFPW	1210	Fort Smith, Ark.	4:15-4:30	KFLD	1370	El Dorado, Ark.
4:30-4:45	WMIN	1370	St. Paul, Minn.		WOPI	1500	Bristol, Tenn.
4:35-4:50	KNET	1420	Palestine, Tex.		WTAQ	1330	Green Bay, Wis.
4:40-4:55	WBBZ	1200	Ponca City, Okla.	4:20-4:35	WVAE	1200	Hammond, Ind.
4:45-5:00	KFGQ	1370	Boone, Iowa		WACO	1420	Waco, Tex.
4:50-5:05	KRBC	1420	Abilene, Tex.	4:25-4:40	WBCM	1410	Bay City, Mich.
4:55-5:10	KGHI	1200	Little Rock, Ark.		KXYZ	1440	Houston, Tex.
5:00-5:15	KTEM	1370	Temple, Tex.	4:30-4:45	WCMI	1310	Ashland, Ky.
5:05-5:20	KABR	1390	Aberdeen, S. Dak.		WSIX	1210	Nashville, Tenn.
5:10-5:25	KGEC	1200	Sterling, Colo.		KGKL	1370	San Angelo, Tex.
5:15-5:30	KFJZ	1370	Fort Worth, Tex.		WHBY	1200	Green Bay, Wisc.
5:20-5:35	WMBH	1420	Joplin, Mo.	4:35-4:50	WHEF	1500	Kosciusko, Miss.
5:25-5:40	WIL	1200	St. Louis, Mo.		KCMC	1420	Texarkana, Tex.
5:30-5:45	WOC	1370	Davenport, Iowa		WHK	1390	Cleveland, Ohio
5:35-5:50	KABC	1420	San Antonio, Tex.		WSGN	1310	Birmingham, Ala.
5:40-5:55	KADA	1200	Ada, Okla.	4:40-4:55	KRGV	1260	Weslaco, Tex.
5:45-6:00	KLUF	1370	Galveston, Tex.		WADC	1320	Akron, Ohio
5:55-6:10	KHBC	1400	Hilo, T. H.	4:45-5:00	KTOK	1370	Oklahoma City, Okla.
6:00-6:15	KRE	1370	Berkeley, Calif.		WJBK	1500	Detroit, Mich.
6:05-6:20	KXO	1350	El Centre, Calif.	4:50-5:05	KGFF	1420	Shawnee, Okla.
6:10-6:25	KWG	1200	Stockton, Calif.	4:55-5:10	KFVS	1210	Cape Girardeau, Mo.
6:15-6:30	KERN	1370	Bakersfield, Calif.	5:00-5:15	KMAC	1370	San Antonio, Tex.
6:20-6:35	KUMA	1420	Yuma, Ariz.		WDAN	1500	Danville, Ill.
6:25-6:40	KVCV	1200	Redding, Calif.	5:05-5:20	KAND	1310	Corsicana, Tex.
6:30-6:45	KLS	1280	Oakland, Calif.	5:10-5:25	KLAH	1210	Carlsbad, N. Mex.
6:35-6:50	KYOS	1040	Merced, Calif.	5:15-5:30	KJUP	1370	Durango, Colo.
6:40-6:55	KSUN	1200	Lowell, Ariz.	5:20-5:35	KOCY	1310	Oklahoma City, Okla.
6:45-7:00	KGDM	1100	Stockton, Calif.	5:25-5:40	KDLR	1210	Devils Lake, N. Dak.
6:50-7:05	KIEM	1450	Eureka, Calif.	5:30-5:45	KICA	1370	Clovis, N. Mex.
6:55-7:10	KVEC	1200	San Luis Obispo, Cal.	5:35-5:50	KGMB	1320	Honolulu, T. H.
7:00-7:15	KARM	1310	Fresno, Calif.	5:40-5:55	KBTM	1200	Jonesboro, Ark.
7:05-7:20	KGLU	1420	Safford, Ariz.	5:45-6:00	KRMC	1370	Jamestown, N. Dak.

### The Second Tuesday

5:00-3:15	WSJS	1310	Winston-Salem, N. C.
3:05-3:20	WMFJ	1420	Daytona Beach, Fla.
3:10-3:25	WAIM	1200	Anderson, S. C.
3:15-3:30	WMFD	1370	Wilmingon, N. C.
3:20-3:35	WEED	1420	Rocky Mt., N. C.

### The Second Wednesday

3:00-3:15	WTEL	1310	Philadelphia, Pa.
3:05-3:20	WNBF	1500	Binghamton, N. Y.
3:10-3:25	WLVA	1200	Lynchburg, Va.
3:15-3:30	WSAJ	1310	Grove City, Pa.
3:20-3:35	WVSW	1500	Pittsburgh, Pa.
3:25-3:40	WBAX	1210	Wilkes-Barre, Pa.
3:30-3:45	WHAT	1310	Philadelphia, Pa.
3:35-3:50	WRTD	1500	Richmond, Va.
3:40-3:55	WBBL	1210	Richmond, Va.

3:45-4:00	WBNY	1370	Buffalo, N. Y.	WMPS	1430	Memphis, Tenn.	
3:50-4:05	KWEW	1500	Hubbs, N. Mex.	WTMV	1500	E. St. Louis, Ills.	
	WHIS	1410	Bluefield, W. Va.	KGCU	1240	Mandan, N. Dak.	
3:55-4:10	WKOK	1210	Sunbury, Pa.	KQV	1380	Pittsburgh, Pa.	
4:00-4:15	WFBG	1310	Altoona, Pa.	WBHP	1200	Huntsville, Ala.	
4:05-4:20	KRIC	1420	Beaumont, Tex.	4:45-5:00	KWOS	1310	Jefferson City, Mo.
	WGII	1500	Greensburg, Ill.	WCOC	880	Meridan, Miss.	
	WQAN	880	Scranton, Pa.	WGRC	1370	New Albany, Ind.	
4:10-4:25	KWNO	1200	Winona, Minn.	4:50-5:05	KOTN	1500	Pine Bluff, Ark.
	WHDL	1400	Olean, N. Y.	4:55-5:10	WEW	760	St. Louis, Mo.
4:15-4:30	KRIS	1330	Corpus Christi, Tex.	WJMS	1420	Ironwood, Mich.	
	WEBR	1310	Buffalo, N. Y.	5:00-5:15	KGHF	1320	Pueblo, Colo.
	WIBM	1370	Jackson, Mich.	WHDF	1370	Calumet, Mich.	
4:20-4:35	KBST	1500	Big Spring, Tex.	5:05-5:20	KGFI	1500	Brownsville, Tex.
	WPAR	1420	Parkersburg, W. Va.	WTRC	1310	Elkhart, Ind.	
4:25-4:40	KSO	1430	Des Moines, Iowa	5:10-5:25	KHBG	1210	Okmulgee, Okla.
	WCLO	1200	Janesville, Wis.	5:15-5:30	KONO	1370	San Antonio, Tex.
4:30-4:45	KROC	1310	Rochester, Minn.	5:20-5:35	KGKB	1500	Tyler, Tex.
	WEOA	1370	Evansville, Ind.	5:25-5:40	KASA	1210	Elk City, Okla.
4:35-4:50	KDAL	1500	Duluth, Minn.	5:30-5:45	KFRO	1370	Longview, Tex.
	WELL	1420	Battle Creek, Mich.	5:35-5:50	KNOW	1500	Austin, Tex.
4:40-4:55	WHBC	1200	Canton, Ohio	5:40-5:55	WMFG	1210	Hibbing, Minn.
	WTAW	1120	College Sta., Tex.	5:45-6:00	KRLH	1420	Midland, Tex.
4:45-5:00	KRMD	1310	Shreveport, La.	5:50-6:06	KCRJ	1310	Jerome, Ariz.
	WSAU	1370	Wausau, Wis.	5:55-6:10	KIUL	1210	Garden City, Kans.
4:50-5:05	KNEL	1500	Brady, Tex.		KVOA	1260	Tucson, Ariz.
	WLPAP	1420	Lexington, Ky.	6:06-6:20	KHUB	1310	Watsonville, Calif.
4:55-5:10	KFDM	1560	Beaumont, Tex.	6:10-6:25	KSAN	1420	San Francisco, Calif.
	WFAM	1200	South Bend, Ind.	6:15-6:30	KGAR	1370	Tucson, Ariz.
5:00-5:15	KPDN	1310	Pampa, Tex.	6:20-6:35	KSRO	1310	Santa Rosa, Calif.
	WHLS	1370	Port Huron, Mich.	6:25-6:40	KTRB	740	Modesto, Calif.
5:05-5:20	KPLT	1500	Paris, Tex.	6:30-6:45	KJBS	1070	San Francisco, Calif.
5:05-5:20	WCBS	1420	Springfield, Ill.	6:35-6:50	KSUB	1310	Cedar City, Utah
5:10-5:25	KGKO	570	Forth Worth, Tex.	6:40-6:55	KDON	1210	Monterey, Calif.
5:15-5:30	KFPL	1310	Dublin, Tex.	6:45-7:00	KGU	750	Honolulu, T. H.
	WDWS	1370	Champaign, Ill.	6:50-7:05	KHSL	1260	Chico, Calif.
5:20-5:35	KAWM	1500	Gallup, New Mex.	6:55-7:10	KROY	1210	Sacramento, Calif.
	WPAD	1420	Paducah, Ky.				
5:25-5:40	KGLO	1210	Mason City, Iowa				
	WJBC	1200	Bloomington, Ills.				
5:30-5:45	KRRV	1310	Sherman, Tex.	3:00-3:15	WSVS	1370	Buffalo, N. Y.
	WGL	1370	Fort Wayne, Ind.	3:05-3:20	WJAC	1310	Johnstown, Pa.
5:35-5:50	KGKY	1500	Scottsbluff, Neb.	3:10-3:25	WJTN	1210	Jamestown, N. Y.
5:40-5:55	WIBU	1210	Poynette, Wis.	3:15:3-30	WBLK	1370	Clarksburg, W. Va.
5:45-6:00	KRBA	1310	Lufkin, Tex.	3:20-3:35	WLEU	1420	Erie, Pa.
				3:25-3:40	WCAP	1280	Asbury Park, N. J.
					WSAY	1210	Rochester, N. Y.
				3:30-3:45	WDEV	550	Waterbury, Vt.
					WGH	1310	Newport News, Va.
				3:35-3:50	WCNW	1500	Brooklyn, N. Y.
					WMBS	1420	Uniontown, Pa.
				3:40-3:55	WFAS	1210	White Plains, N. Y.
					WMBG	1350	Richmond, Va.
				3:45-4:00	WOKO	1430	Albany, N. Y.
					WRAW	1310	Reading, Pa.
				3:50-4:05	WDAS	1370	Philadelphia, Pa.
					WSYB	1500	Rutland, Vt.
				3:55-4:10	KWJB	1210	Globe, Ariz.
				3:55-4:10	WNBZ	1290	Saranac Lake, N. Y.
					WSYR	570	Syracuse, N. Y.
				4:00-4:15	WBRE	1310	Wilkes-Barre, Pa.
				4:05-4:20	WBTM	1370	Danville, Va.
					WNLC	1500	New London, Conn.
				4:10-4:25	WGBB	1210	Freeport, N. Y.
					WHCC	1450	Rochester, N. Y.
				4:15-4:30	WAZL	1420	Hazleton, Pa.
					WHT	1200	Hartford, Conn.
				4:20-4:35	WRAK	1370	Williamsport, Pa.
				4:25-4:40	WBOW	1310	Terre Haute, Ind.
					WGNV	1210	Newburgh, N. Y.
				4:30-4:45	WJBL	1200	Decatur, Ills.
				4:35-4:50	KATE	1420	Albert Lea, Minn.
					WKBB	1500	Dubuque, Iowa
				4:40-4:55	KARK	890	Little Rock, Ark.

### The Second Friday

### The Second Thursday

3:00-3:15	WKAT	1500	Miami Beach, Fla.
3:05-5:20	WJRD	1200	Tuscaloosa, Ala.
3:10-3:25	WSOC	1210	Charlotte, N. C.
3:15-3:30	WAML	1310	Laurel, Miss.
3:20-3:35	WPRA	1370	Mayaguez, P. R.
3:25-3:40	WPAX	1210	Thomasville, Ga.
3:30-3:45	WQAM	560	Miami, Fla.
3:35-3:50	WPRP	1420	Ponce, P. R.
3:40-3:55	WFTC	1200	Kinston, N. C.
3:45-4:00	WKAQ	1240	San Juan, P. R.
3:50-4:05	WBIG	1440	Greensboro, N. C.
3:55-4:10	WFOY	1210	St. Augustine, Fla.
4:00-4:15	WAGF	1370	Dothan, Ala.
4:05-4:20	KPLC	1500	Lake Charles, La.
	WFDF	1310	Flint, Mich.
4:10-4:25	WGRM	1210	Grenada, Miss.
	WSPD	1340	Toledo, Ohio
4:15-4:30	WCPO	1200	Cincinnati, Ohio
	WMFO	1370	Decatur, Ala.
4:20-4:35	KFIZ	1420	Fond du Lac, Wis.
	WKEU	1500	Griffin, Ga.
4:25-4:40	WGBF	630	Evansville, Ind.
	WGCM	1210	Miss. City, Miss.
4:30-4:45	KFYO	1310	Lubbock, Tex.
	WAVE	940	Louisville, Ky.
	WFOR	1370	Hattiesburg, Miss.
4:35-4:50	KFJM	1410	Grand Forks, N. Dak.

4:45-5:00	WJIM	1210	Lansing, Mich.
	WEXL	1310	Royal Oak, Mich.
	WHLB	1370	Virginia, Minn.
4:50-5:05	KJUN	1420	Pecos, Tex.
	WOMI	1500	Owensboro, Ky.
4:55-5:10	KFJB	1200	Marshalltown, Iowa
5:00-5:15	KGGM	1740	Albuquerque, N. Mex
	WBFO	1310	Marquette, Mich.
5:05-5:20	KGIW	1420	Alamosa, Colo.
	WKBV	1500	Richmond, Ind.
5:10-5:25	KGDE	1200	Fergus Falls, Minn.
	WHBF	1210	Rock Island, Ills.
5:15-5:30	KGFL	1370	Roswell, N. Mex.
	WEMP	1310	Milwaukee, Wis.
5:20-5:35	KEUB	1420	Price, Utah
5:25-5:40	WCAT	1200	Rapid City, S. Dak.
	WEBQ	1210	Harrisburg, Ills.
5:30-5:45	KWYO	1370	Sheridan, Wyo.
5:35-5:50	KIDW	1420	Lamar, Colo.
5:40-5:55	KFXJ	1200	Grand Junction, Colo.
5:45-6:00	KGBX	1230	Springfield, Mo.
5:50-6:05	KRQA	1310	Santa Fe, N. Mex.
5:55-6:10	KTSM	1310	El Paso, Texas
	KOKO	1370	La Junta, Colo.

5:25-5:40	WHMA	1420	Anniston, Ala.
5:30-5:45	KVSO	1210	Ardmore, Okla.
5:35-5:50	KWLC	1270	Decorah, Iowa
5:45-6:00	KTSM	1310	El Paso, Texas
	WLB	760	Minneapolis, Minn.
5:55-6:10	KPFA	1210	Helena, Mont.
6:00-6:15	KIT	1250	Yakima, Wash.
6:05-6:20	KGBU	900	Ketchikan, Alaska
6:10-6:25	KFJI	1210	Klamath Falls, Ore.
6:15-6:30	KGEZ	1310	Kalispell, Mont.
6:25-6:40	KGY	1210	Olympia, Wash.
6:30-6:45	KXRO	1310	Aberdeen, Wash.
6:35-6:50	KGCX	1450	Wolf Point, Mont.
6:40-6:55	KFIO	1120	Spokane, Wash.
6:45-7:00	KINY	1430	Juneau, Alaska
6:50-7:05	KFQD	780	Anchorage, Alaska
6:55-7:10	KRLC	1390	Lewistown, Idaho

**SHORTWAVE SCOOP BOX**

SPW on 13635 kcs. will have a special program dedicated to the members of the RSSL on February 11, 1939 from 7-7:30 p.m. Reports are requested from all RADEX readers and will be QSL'd 100%. (R519—George Jacobs, Ohio)

W2XQO on 26550 kcs. located at College Point, Long Island is now broadcasting! They were heard in the evening asking for reports. They relay programs of WMCA! (M. F. Williams, Newark, N. J.)

W9XTA on 26500 kcs. broadcasts on the following schedule irregularly and are desirous of obtaining reports from RADEX readers: 2-4 p.m. daily. Reports are particularly desirable showing signal strength, fading, tone quality, interference and noise levels at your particular location. (RX)

W5XD on 31600 kcs. at Dallas, Texas is another new ultra-high frequency station. They operate from Monday to Friday from 11:30 a.m. to 1:30 p.m. They relay the programs of WFAA and are heard with good signal. (Gilbert Harris—Northampton, Mass.)

F8EAA on 7450 kcs. at Pointe a Pitre, Guadeloupe, French West Indies operates daily from 6-7 p.m.

**The Second Saturday**

3:30-3:45	WTOL	1200	Toledo, Ohio
3:35-3:50	WKBZ	1500	Muskegon, Mich.
3:40-3:55	WJW	1210	Akron, Ohio
3:45-4:00	WBNS	1430	Columbus, Ohio
3:50-4:05	WGAR	1450	Cleveland, Ohio
	WOLS	1200	Florence, S. C.
3:55-4:10	WCOL	1210	Columbus, Ohio
	WLAK	1310	Lakeland, Fla.
4:00-4:15	WCAZ	1070	Carthage, Ills.
	WQBC	1360	Vicksburg, Miss.
4:05-4:20	WJBO	1120	Baton Rouge, La.
	WSMK	1380	Dayton, Ohio
4:10-4:25	KUTA	1500	Salt Lake City, U.
	WOMT	1210	Manitowoc, Wis.
	WTAL	1310	Tallahassee, Fla.
4:15-4:33	WNEL	1290	Sun Juan, P. R.
	WOSU	570	Columbus, Ohio
4:20-4:35	WDZ	1020	Tuscola, Ills.
	WMSD	1420	Muscle Shoals, Ala.
4:25-4:40	KYSM	1500	Mankato, Minn.
4:30-4:45	KCMO	1370	Kansas City, Mo.
	WJBW	1200	New Orleans, La.
	WKBN	570	Youngstown, Ohio
5:35-4:50	WGPC	1420	Albany, Ga.
	WHBU	1210	Anderson, Ind.
	WGTM	1310	Wilson, N.C.
	WNAD	1010	Norman, Okla.
	WXYZ	1240	Detroit, Mich.
4:40-4:55	KOVC	1500	Valley City, N. Dak.
	WTAX	1210	Springfield, Ills.
	WTJS	1310	Jackson, Tenn.
4:45-5:00	KLCN	1290	Blytheville, Ark.
	WMBR	1370	Jacksonville, Fla.
	WMPC	1200	Lapeer, Mich.
4:50-5:05	KGCA	1270	Decorah, Iowa.
	WSLI	1420	Jackson, Miss.
4:55-5:10	KOCA	1210	Kilgore, Tex.
	KVOL	1310	Lafayette, La.
5:00-5:15	KBIY	1500	Muskogee, Okla.
	WBNO	1200	New Orleans, La.
5:05-5:20	KPAC	1260	Port Arthur, Texas
	WHBQ	1370	Memphis, Tenn.
5:10-5:25	KANS	1210	Wichita, Kans.
	WROL	1310	Knoxville, Tenn.
5:15-5:30	KMLB	1200	Montoe, La.
	KTRH	1290	Houston, Texas
5:20-5:35	KLPM	1360	Minot, N. D.

Schedules and frequency vary greatly. Address is "Radio Guadeloupe" P. O. Box 125, Pointe a Pitre, Guadeloupe. Call is seldom used. (Bartholomew, N. Y., and Harris, Mass.)

### Summer Reception

"I'd like to know who said you couldn't DX in the summer," challenges Geo. B. Holland, Jr., of Schenectady, New York. "The August frequency checks brought me 51 new catches, with the best ones being KDAL and KFIZ. September brought 21 new stations, including KWOS, KOTN, KONO and KATE. In October, there were 27 new catches, of which the best were KAND, KOCY, KICA, KBTM, KWNO, KROC, KPLT, KPDN, KFPL, KRRV, LGFL, KWYO and KGLO. In between, I managed to log KQRS, KJBS, KWJJ and KIRO. I haven't been active in DXing for about four years, but am going full force again. Verified log now stands at 455, with about 50 still on the fire. As far as I know, I'm the only DX bug in our capital district. Can anybody from Albany, Troy or Schenectady change that?"

"I started DXing the first part of October," admits John Martin, Springfield, Ohio, "and I enjoy it very much. I have a 1933 five-tube Grunow, Model 500, and to date I have logged 140 stations, including KFI, KNX, KFBK, KPO, KOA, WIOD, WJBO, WBRK, KRDL, WBAP, WOAI, CMCD, CMCF, CMCK, TGW, XEW, XEAW, XEPN, KTAT and KTBS.

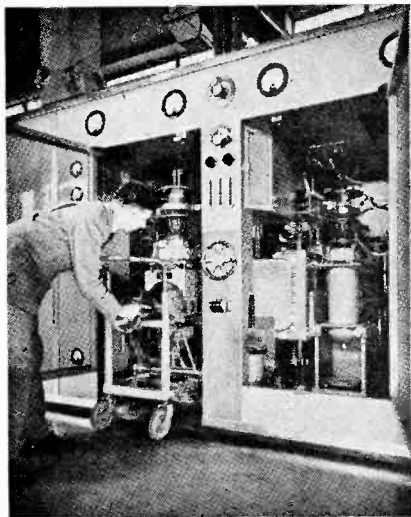
I have verified only seven of these, but when my ship comes in, I can promise you that I will verify all I can."

### Applications to the FCC

(Only applications which are set for hearing are shown in this list)

- KAND, Corsicana, CP 100 (.25) unlt. (Com).
- KCMC, Texarkana, CP 1340 kcs, 500 (1) unlt. (C).
- KECA, Los Angeles, CP move to San Diego (E).
- KEEN, Seattle, CP 1420 kcs, 100 (.25) unlt (E).
- KERN, Bakersfield, CP 1380 kcs, 1 kw. (C).
- KEX, Portland, CP 1160 kcs, unlt. (E).
- KFEL, Denver, CP 1 kw. (C).
- KFEQ, St. Joseph, CP 500 w. nights, 2500 w. to ss at San Francisco (C).
- KFJZ, Fort Worth, CP 930 kcs, 500 w. unlt, D9 night (E).
- KFSD, San Diego, CP 5 kw. (C).
- KGCI, Coeur d'Alene, mod. of CP for 1200 kcs, 100 w. days (C).
- KG EK, Sterling, CP move to Denver. (C).
- KGNO, Dodge City, CP 500 w. unlt. (C).
- KLS, Oakland, CP 1280 kcs, 500 w. unlt (C).
- KMED, Medford, CP 1 kw unlt. (C).
- KMJ, Fresno, CP 1000 (5). (C).
- KOY, Phoenix, mod. of lic. for 550 kcs. (C).
- KPAC, Pt. Arthur, CP, 1220 kcs, 500 w. unlt DA night (E).
- KRKO, Everett, CP 100 (.25) unlt. (E).
- KRRV, Sherman, CP 880 kcs, 1 kw unlt, DA. (E).
- KRSC, Seattle, CP 1 kw. (E).
- KTAT, Ft. Worth, CP 1000 (5), and move to Wichita Falls. (E).
- KTEM, Temple, mod. of lic. 100 (.25) unlt. (E).
- KTKC, Visalia, CP 890 kcs, 1 kw unlt, DA nite (C).
- KVOD, Denver, CP 630 kcs, 1 kw. (C).
- WALA, Mobile, CP 1 kw unlt. (C).
- WAZL, Hazelton, mod. lic. 1320 kcs, 100 w. unlt. (E).
- WBAX, Wilkes Barre, renewal of lic. set for hearing (C).
- WBNX, New York, CP 5 kw, move trans. to Carlstadt, N. J. (C).
- WCBS, Springfield, Ill., CP 1290 kcs, 1 kw. (C).
- WDEL, Wilmington, mod. of CP for 1 kw. (E).
- WDGY, Minneapolis, mod. of lic. for unlt. (C).
- WEDC, Chicago, CP 100 (.25) specified hrs. (C).
- WFIL, Philadelphia, CP 1000 (5) unlt. (E).
- WFMD, Frederick, CP 500 w. unlt, DA nite (C).
- WGRC, New Albany, CP 880 kcs, 250 w. unlt, DA nite (E).
- WGTM, Wilson, CP 1240 kcs, 500 w. (E).
- WHAI, Greenfield, mod. of lic. 100 (.25) unlt. (E).

(E) indicates the application is set for hearing before an Examiner. (C) indicates it is set for hearing before the Commission. freq (frequency); mod (modification); lic (license); pwr (power); ltd (limited time); unlt (unlimited time); CP (construction permit); hrs (hours); trans (transmitter); exp (experimental); ss (sunset); LS (local sunset); DA (directional aerial).



*Changing tubes in a big transmitter is no easy task. Here we see an engineer at Daventry (England) wheeling a 112 pound water-cooled tube into place. Owing to their enormous size, these tubes are always moved on the small trolley, which has a special device for fitting them into position in the transmitter. (Courtesy of the British Broadcasting Corp.).*

WHLS, Port Huron, mod. of lic. 100 (.25) unlt. (C).  
 WIP, Philadelphia, CP 5 kw, move trans. to Brooklawn, N. J., DA (E).  
 WIRE, Indianapolis, mod. of CP for 5 kw. (E).  
 WIS, Columbia, spec. exp. authority for new satellite station at Sumter, S. C., 560 kcs, 10 to 100 w. from LS to sunrise (E).  
 WJAC, Johnstown, mod of lic. 1370 kcs, 100 (.25) unlt. (E).  
 WJBW, New Orleans, mod. of lic. unlt. (C).  
 WJRD, Tuscaloosa, mod. of lic. for 100 (.25) unlt. (C).  
 WKOK, Sunbury, mod. of lic. unlt. (C).  
 WLAC, Nashville, CP 50kw. (E).  
 WLAW, CP DA nite, 1 kw to ss at San Francisco (C).  
 WMBC, Detroit, CP 600 kcs, 250 w. unlt. (E).  
 WMBR, Jacksonville, CP 1120 kcs, 500 (1). (E).  
 WMFF, Plattsburg, CP 1240 kcs, DA, 1 kw. (E).  
 WPG, Atlantic City, CP unlt. move studio to New York, trans. to Kearney, N. J., requesting facilities of WBIL and w'OV. CP change owner to Greater N. Y. Brdcastg. Corp. (E).  
 WPRA, Mayaguez, CP 780 kcs, 1000 (2.5) unlt. (C).

WRAW, Reading, CP250 w. (C).  
 WRBL, Columbus, CP 1330 kcs, 1 kw. (C).  
 WRR, Dallas, CP 1 kw (E).  
 WSFA, Montgomery, CP 1410 kcs, 1 kw unlt. (E).  
 WSJS, Winston Salem, CP 100 (.25) (E).  
 WSNJ, Bridgeton, CP 100 (.25) unlt. (C).  
 WTAQ, Green Bay, Wis. CP 1000 (5). (C).  
 WTEL, Philadelphia, mod. of lic. to share with WHAT (E).  
 WTHT, Hartford, CP 100 (.5). (C).  
 WTMV, E. St. Louis, mod. of lic. 250 w. (E).  
 WTOLO, Toledo, mod. of lic. unlt. (E).

**Applications For New Stations**

Akron, Ohio, Summit Radio Corp., 1530 kcs, 1 kw unlt. (E).  
 Ashland, Wis., WJMS, Inc., 1370 kcs, 100 w. unlt. (C).  
 Asheville, N. C., Asheville Daily News, 1370 kcs, 100 w. unlt. (C).  
 Asheville, N. C., Publix Bamford Theaters, 1430 kcs, 500 (1). (E).  
 Birmingham, Ala., Birm. News Co., 590 kcs, 1 kw. (C).  
 Bowling Green, Ky., B. G. Brdcastg. Co., 1310 kcs, 100 (.25). (C).  
 Cleveland, Ohio, Cuyahoga Valley Brdcastg. Co., 1500 kcs, 100 w. days. (E).  
 Dalhart, Texas, Dalhart Brdcastg. Co., 1500 kcs, 100 (.25) (C).  
 Elgin, Ill., Elgin Brdcastg. Ass'n., 1170 kcs, 100 w. days (E).  
 Elizabeth City, N. C., 1370 kcs, 100 (.25) (E).  
 Ely, Wyo., Eastern Nev. Brdcastg. Co., 1500 kcs, 100 w. days (E).  
 Erie, Pa., Presque Isle Brdcastg. Co., 1500 kcs, 100 (.25) (E).  
 Evanston, Ill., Northwestern Brdcastg. Assn., 1310 kcs, 100w. (E).  
 Everett, Wash., Cascade Brdcastg. Co., 1420 kcs, 100 (.25) (E).  
 Florence, S. C., Pee Dee Brdcastg. Co., 1200 kcs, 100 (.25) (requests facilities of WOLS) (E).  
 Fremont, Nebr., Nebr. Brdcastg. Corp., 1370 kcs, 100 (.25) (E).  
 Goldsboro, N. C., 1370 kcs., 100 w. (C).  
 Hastings, Nebr., South Nebr. Brdcastg. Co., 920 kcs, 1000 (5) (E).  
 Kingston, N. Y., Kingston Brdcastg. Corp., 1500 kcs, 100 w. days.  
 Louisville, Ky., Gateway Brdcastg. Co., 880 kcs, 500 w. (C).  
 Louisville, Ky., Ky. Brdcastg. Corp., 1210 kcs, 100 (.25) (C).  
 Mansfield, Ohio, Richland, Inc., 1370 kcs, 250 w. days (E).  
 Marinette, Wis., M & M Brdcastg. Co., 570 kcs, 250 w. days (C).  
 Martinsville, Va., Mart'ile Brdcastg. Co., 1420 kcs, 100 (.25) (C).  
 Marysville, Calif., Yuba-Sutter Broadcasters, 1320 kcs, 250 w. (C).  
 McComb, Miss., McComb Brdcastg. Corp., 1200 kcs, 100 w. days (E).  
 Metuchen, N. J., Bernard Goldsmith, 1420 kcs, 100 w. days (E).  
 Modesto, Calif., Thomas McTammany, 1340 kcs, 500 w. (C).  
 Modesto, Calif., Wm. H. Bates, 740 kcs, 250 w. days (facilities of KTRB) (E).

Montebello, Calif., Bureau of Education, 1420 kcs, 100 w. days (contingent upon KECA's move to San Diego). (C).

Niagara Falls, N. Y., 1260 kcs, 1 kw. (C).

Norfolk, Va., Colonial Brdctg. Corp., 1370 kcs, 100 (.25) (C).

North Sacramento, Calif., 1420 kcs, 100 w. days (C).

Ocala, Fla., John Alsop, 1500 kcs., 100 w. (E).

Ogdensburg, N. Y., St. Lawrence Br. Corp., 1310 kcs, 100 (.25) (C).

Olney, Ill., Olney Br. Co., 1210 kcs, 100 (.25) (E).

Phoenix, Ariz., M. C. Reese, 1200 kcs, 100 (.25) (E).

Pontiac, Mich., King-Trendle Brdc. Corp., 1440 kcs, 250 w. (C).

Pontiac, Mich., Pontiac Br. Co., 1100 kcs, 1 kw days. (C).

Pontiac, Mich., Geo. B. Storer, 600 kcs, 500 (1). (C).

Rockville, Md., Monocacy Br. Co., 1140 kcs, 250 w. days (C).

Saginaw, Mich., Saginaw Br. Co. Co., 950 kcs. (C).

Sandusky, Mich., Thumb Br. Co., 880 kcs, 1 kw days. (E).

San Francisco, Calif., Larry Rhine, 1420 kcs, 100 w. (facilities of KSAN) (E).

San Juan, P. R., United Theaters, Inc., 580 kcs, 1000 w. (C).

San Juan, P. R., E. R. Sanfeliz, 580 kcs., 1 kw. (C).

Sedalia, Mo., Drohlich Bros., 1500 kcs, 100 (.25) (E).

Springfield, Ohio, S. Br. Corp., 1310 kcs, 100 w. (E).

Suffolk, Va., S. Br. Corp., 1420 kcs, 100 (.25). (C).

Sumter, S. C., J. Samuel Brody, 1310 kcs, 100 Sweetwater, Tex., 1210 kcs, 250 w. days (E). (.25) (E).

Tacoma, Tacoma Br. Co., 1420 kcs, 100 (.25) (E).

Tacoma, Michael J. Mingo, 1400 kcs, 250 w. (E).

Tupelo, Miss., Julius H. Dixon, 1500 kcs, 100 (.25) Facilities of WHEF. (C).

Vincennes, Ind., Vin. Newspapers, Inc., 1420 kcs., 100 w. (C).

Washington, D. C., Lawrence J. Heller, 1310 kcs, 100 (.25) (Facilities of WOL) (C).

Washington, D. C., Lawrence J. Heller, synchronous station on 1310 kcs, 10 to 100 w. unltid, to be used with above station if application is granted (C).

Worcester, Mass., Central Br. Corp., 1500 kcs, 100 (.25) (C).

## The Month's Changes in Station Data

### New

880 KVAN Vancouver, Wash.  
1370 CKRN Rouyn, P. Q., Canada  
1370 KTSW Emporia, Kans.  
1420 KWAL Wallace, Idaho  
1500 KFDA Amarillo, Texas

### Frequency

1370 KIUN Pecos, Texas, from 1420

### Power

600 WCAO Baltimore, Md., 500 from 1000 (Termination of Special Authorization).

920 WWJ Detroit, Mich., 1000 from 5000 (Termination of Special Authorization).

1260 WNBX Springfield, Vt., 1000 from 500

1380 KQV Pittsburgh, Pa., 500 (1) from 1000.

1420 KATE Albert Lea, Minn., 100 (.25) from 250.

### Network

1010 CMQ Havana, Cuba, new NBC

### Owner

560 KFDM Beaumont Brdctg. Corp.  
700 WLW Crosley Corp.  
900 WLBE Board of Regents, Univ. of Wis.  
1200 WAYX Jack Williams  
1210 WBLY Fort Industry Co.  
2110 WJIM WJIM, Inc.  
1330 WSAI Crosley Corp.  
1420 WLEU WLEU Brdctg. Corp.

### Delete

950 WHAL Saginaw, Mich.  
1300 WFAB New York, N. Y.

### Permit to Change Frequency

770 KFAB Lincoln, Nebr., to 1080  
1190 WATR Waterbury, Conn., to 1290  
1370 KAST Astoria, Ore., to 1200  
1370 KSLM Salem, Ore., to 1360

### Permit to Change Power

580 WILL Urbana, Ill., to 5000  
590 WKZO Kalamazoo, Mich., to 250 (1)  
760 KXA Seattle, Wash., to 1000  
770 KFAB Lincoln, Nebr., to 50,000  
850 WKAR E. Lansing, Mich., to 5000  
850 WWL New Orleans, La. to 50000  
880 CMW Havana, Cuba, to 5000  
880 WRNL Richmond, Va., to 1000  
890 KFNF Shenandoah, Va., to 1000 (5)  
890 WMMN Fairmont, W. Va., to 1000 (5)  
900 KGBU Ketchikan, Alaska, to 1000  
1040 KRLD Dallas, Texas, to 50,000  
1110 WRVA Richmond, Va., to 50,000  
1190 WATR Waterbury, Conn., to 250  
1250 KIT Yakima, Wash., to 500 (1)  
1550 KWK St. Louis, Mo., to 5000  
1370 KAST Astoria, Ore., to 100 (.25)  
1370 KSLM Salem, Ore., to 500.  
1400 KLO Ogden, Utah, to 1000 (5)  
1430 WHP Harrisburg, Pa., to 1000 (5)  
1490 WCKY Covington, Ky., to 50,000

THE IMPROVED RADEX  
WILL HELP YOUR FRIENDS TOO!

WILL YOU PLEASE HELP BY  
TELLING THEM ABOUT IT?—*The Editor*



NORTH AMERICAN B. C. STATIONS BY FREQUENCIES  
WITH SATURDAY'S TIME ON THE AIR

KEY TO SYMBOLS

As shown in the Index by Frequencies

Frequencies are given in kilocycles per second, and wavelengths in meters. Night power is shown in watts in third column. Daytime power is shown in parentheses in fourth column, in kilowatts. Thus: (.25) indicates 250 watts. Exact frequencies, when not multiples of ten, are shown in the fourth column.

Second Column Symbols

- a Verifies for return postage.
- b Verifies only occasionally.
- c Does not verify.
- d Verifies—no postage required.
- e Verifies for International Reply Coupon
- f Verifies for 10 cents.
- g Card for postage; veri stamp for 10c.
- z No information available.

Fourth Column Symbols

- A Status in doubt—in Court.
- B National "Blue" Network.
- C Columbia Network.
- D Daytime only.
- F Canadian Network.

- G Assigned this frequency but using another under Special Authorization.
- H Assigned another frequency—using this one under Special Authorization.
- J Assigned lower power but using this power under Special Authorization.
- K Licensed for facsimile.
- L Limited time.
- M Mutual Network.
- N National "Red" and "Blue" Networks.
- P Has Construction Permit only.

- Q Station not in use.
  - R National "Red" Network.
  - S Sundays only.
  - Sy Synchronized.
  - X Has Permit to change power.
  - Y Has Permit to change location.
  - Z Has Permit to change frequency.
- a-b-c Small letters show stations using same transmitter  
1-2-3 Figures denote station sharing time.  
... No information.

LS means Local Sunset, and always refers to sunset at the transmitter.

540 kcs. (555.2 m.)

CBK	z	50000	P	Saskatoon, Sask.		
CJRM	a	1000	F	Regina, Sask.	9:30-1 am.	(6:30 am-10 pm)
ZNS	d	400	....	Nassau, Bahamas		

550 kcs. (545.1 m.)

CFNB	a	500	F(1)	Fredericton, N. B.		
CMBD	z	200	....	Havana, Cuba		
KFUO	a	500	2(1)	St. Louis, Mo.	8-9 am;	10:30-10:45 (5-6 am; 7:30-7:45 am; 1:15-1:45 pm; am; 10:15-10:45 am; 4-4:45 pm; 1-1:45 pm)
KFYR	a	1000	N(5)	Bismarck, N. Dak.	8 am-1 pm.	(5 am-10 pm)
KOAC	a	1000	....	Corvallis, Ore.	noon-midnight.	(9 am-9 pm)
KSD	a	1000	2R(5)	St. Louis, Mo.		
KTSA	a	1000	C(5)	San Antonio, Tex.		
WDEV	a	500	D	Waterbury, Vt.	7 am-LS.	(4 am-LS)
WGR	a	1000	C(5)	Buffalo, N. Y.		
WKRC	a	1000	C(5)	Cincinnati, Ohio	6:30 am-2 am.	(3:30 am-11 pm)
WSVA	a	500	D	Harrisonburg, Va.	6:30 am-5 pm.	(3:30 am-2 pm)

560 kcs. (535.4 m.)

KFDM	a	500	N(1)	Beaumont, Texas		
KLZ	a	1000	C(5)	Denver, Colo.	8 am-2 am.	(5 am-11 pm)
KSFO	a	1000	C(5)	San Francisco, Calif.	9:10 am-3 am.	(6:10 am-midnight)
KWTO	a	5000	D	Springfield, Mo.		
WFIL	a	1000	BMJ	Philadelphia, Pa.	7 am-12:30 am.	(4 am-9:30 pm)
WIND	a	1000	(5)	Gary, Ind.	7 am-5 am.	(4 am-2 am)
WIS	a	1000	N(5)	Columbia, S. C.	6:45 am-midnight.	(3:45 am-9 pm)
WQAM	a	1000	C	Miami, Fla.	6:30 am-midnight.	(3:30 am-9 pm)

570 kcs. (526 m.)

CMCY	a	15000	....	Havana, Cuba		
KGKO	a	1000	B(5)	Ft. Worth, Texas		
KMTR	a	1000	....	Los Angeles, Calif.	8 am-2 am.	(5 am-11 pm)
KVI	a	1000	C(5)	Tacoma, Wash.	9 am-3 am.	(6 am-midnight)
WKBN	a	500	1C	Youngstown, Ohio		
WMCA	a	1000	....	New York, N. Y.		
WNAX	a	1000	C(5)	Yankton, S. Dak.		
WOSU	a	750	1(1)	Columbus, Ohio	1 pm-midnight.	(10 am-9 pm)
WSYR	a	1000	Ba	Syracuse, N. Y.	6 am-1 am.	(3 am-10 pm)
WSYU	a	1000	Qa	Syracuse, N. Y.		
WWNC	a	1000	N	Asheville, N. C.		

## SATURDAY TIME

## Eastern Standard (Pacific Standard)

## 580 kcs. (516.9 m.)

CFPR	a	50	...	Prince Rupert, B. C.		
CHRC	a	100	...	Quebec, P. Q.	7:30 am-midnight.	(4:30 am-9 pm)
CKCL	a	100	F	Toronto, Ont.	7:30 am-12:30 am.	(4:30 am-9:30 pm)
CKPR	a	1000	...	Fort William, Ont.	8 am-11:30 pm.	(5 am-8:30 pm)
CKUA	c	500	...	Edmonton, Alta.	Silent.	(Silent)
KMJ	a	1000	KN	Fresno, Calif.	9:30 am-3 am.	(6:30 am-midnight)
KSAC	a	500	2(1)	Manhattan, Kans.	10:30-11:30 am;	(7:30-8:30am; 10:30
					1:30-3:30 pm.	am-12:30 pm)
WCHS	a	500	C(1)	Charleston, W. Va.	6 am-1 am.	(3 am-10 pm)
WDBO	a	1000	C(5)	Orlando, Fla.	7 am-12:05 am.	(4 am-9:05 pm)
WIBW	a	1000	C2(5)	Topeka, Kans.	5:30-10:30am; 11:30	(2:30-7:30 am; 8:30-
					am-1:30 pm; 3:30	10:30 am; 12:30-10
					pm-1 am.	pm)
WILL	a	1000	DX	Urbana, Ill.	8:30 am-LS.	(5:30 am-LS)
WTAG	a	1000	R	Worcester, Mass.	7:30 am-midnight.	(4:30 am-9 pm)
XEMU	z	250	....	Piedras Negras, Coah.		

## 590 kcs. (508.2 m.)

KHQ	a	1000	R(5)	Spokane, Wash.	9:45 am-3 am.	(6:45 am-midnight)
WEEL	a	1000	C(5)	Boston, Mass.	6:30 am-1 am.	(3:30 am-10 pm)
WKZO	a	1000	BDX	Kalamazoo, Mich.	7 am-5:15 pm.	(4 am-2:15 pm)
WOW	a	1000	R(5)	Omaha, Nebr.	6:45 am-2 am.	(3:45 am-11 pm)

## 600 kcs. (499.7 m.)

CFCF	a	500	BF	Montreal, P. Q.	7:45 am-1 am.	(4:45 am-11 pm)
CJOR	a	500	....	Vancouver, B. C.	10 am-3 am.	(7 am-midnight)
FQN	a	250	609	St. Pierre, Miquelon		
KFSD	a	1000	B	San Diego, Calif.	10 am-3 am.	(7 am-midnight)
WCAO	a	500	C(1)	Baltimore, Md.	7 am-1:30 pm.	(4 am-10:30 pm)
WICC	f	500	BM(1)	Bridgeport, Conn.	6 am-2 am.	(3 am-11 pm)
WMT	a	1000	BM(5)	Cedar Rapids, Iowa		
WREC	a	1000	C(5)	Memphis, Tenn.		

## 610 kcs. (491.5 m.)

CHNC	a	1000	F	New Carlisle, P. Q.	7 am-midnight.	(4 am-9 pm)
KFAR	z	1000	P	Fairbanks, Alaska		
KFRG	b	1000	M(5)	San Francisco, Calif.		
WCLE	a	500	DM	Cleveland, Ohio	6:45 am-LS.	(3:45 am-LS)
WDAF	a	1000	R(5)	Kansas City, Mo.	7 am-1 am.	(4 am-10 pm)
WIOD	a	1000	Na	Miami, Fla.	6:45 am-midnight.	(3:45 am-9 pm)
WIP	a	1000	....	Philadelphia, Pa.		
WMBF	a	1000	Qa	Miami, Fla.		

## 620 kcs. (483.6 m.)

KGW	a	1000	R(5)	Portland, Ore.		
KTAR	a	1000	N	Phoenix, Ariz.		
KWFT	z	250	(1)P	Wichita Falls, Tex.		
ITPG	z	2000	625	San Jose, Costa Rica		
WFLA	a	1000	Na(5)	Tampa, Fla.	Silent.	(Silent)
WHJB	a	250	CD	Greensburg, Pa.		
WLBZ	a	500	MN(1)	Bangor, Maine		
WSUN	a	1000	Na(5)	St. Petersburg, Fla.	7:55 am-1 am.	(4:55 am-10 pm)
WTMJ	a	1000	N(5)	Milwaukee, Wis.		

## 630 kcs. (475.9 m.)

CFCO	a	100	F	Chatham, Ont.	7:30 am-1:30 pm;	(4:30-10:30 am;
					4:30-10:30 pm.	1:30-7:30 pm)
CFCY	a	1000	F	Charlottetown, P.E.I.		
CJRC	a	1000	F	Winnipeg, Man.	8:30 am-3 am.	(5:30 am-midnight)
CKOV	a	100	F	Kelowna, B. C.	10 am-2 am.	(7 am-11 pm)
CMCD	a	15000	....	Havana, Cuba		
KFRU	a	500	1(1)	Columbia, Mo.	7 am-9 pm.	(4 am-6 pm)
KGFX	a	200	D	Pierre, S. Dak.		

**SATURDAY TIME**

WGBF	a	500	N(1)	Evansville, Ind.
WMAL	a	250	B(5)	Washington, D. C.
WPRO	a	500	C(1)	Providence, R. I.
XEZ	a	500	....	Merida, Yuc.

**Eastern Standard (Pacific Standard)**

7:30 am-8 pm; 9 pm-11 am.	(4:30 am-5 pm; 6-10 pm)
6 am-1 am.	(3 am-10 pm)
11 am-2:30 pm; 7:15-11 pm.	(8-11:30 am; 4:15-8 pm)

**640 kcs. (468.5 m.)**

KFI	f	50000	R	Los Angeles, Calif.
WGAN	a	500	D	Portland, Me.
WHKC	a	500	ML	Columbus, Ohio
WOJ	a	5000	D	Ames, Iowa
XEBX	z	250	....	Sabinas, Coah.
YSS	a	500	....	San Salvador, E. S.

10 am-3 am.	(7 am-midnight)
7 am-3 hrs after LS.	(4 am-3 hrs after LS)
6:30 am-8:30 pm.	(3:30 am-5:30 pm)
7:30 am-LS.	(4:30 am-LS)

**650 kcs. (461.3 m.)**

TIX	z	1000	....	San Jose, Costa Rica
WSM	a	50000	KMN	Nashville, Tenn.

**660 kcs. (454.3 m.)**

CMCR	z	150	....	Havana, Cuba
WAAW	a	500	D	Omaha, Nebr.
WEAF	a	50000	R	New York, N. Y.
XEAL	z	1000	....	Mexico City, D. F.
XEAO	a	250	....	Mexicali, B. Cfa.

7 am-6 pm.	(4 am-3 pm)
6:30 am-1 am.	(3:30 am-10 pm)

**670 kcs. (447.5 m.)**

WMAQ	c	50000	R	Chicago, Ill.
XELO	a	10000	....	Tijuana, B. Cfa.

8 am-2 am.	(5 am-11 pm)
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**680 kcs. (440.9 m.)**

CMHW	f	200	....	Santa Clara, Cuba
KFEQ	a	2500	D	St. Joseph, Mo.
KPO	a	50000	R	San Francisco, Calif.
VAS	f	2000	685	Glace Bay, N. S.
VOWR	c	500	681	St. John's, Nfld.
WLAW	a	1000	D	Lawrence, Mass.
WPPTF	a	5000	N	Raleigh, N. C.

8 am-noon; 3-11 pm.	(5-9 am; noon-8pm)
noon and 11 pm.	(9 am and 8 pm)
7 am-LS.	(4 am-LS)
6:30 am-11 pm.	(3:30 am-8 pm)

**690 kcs. (434.5 m.)**

CMBG	a	200	....	Havana, Cuba
CFRB	a	10000	C	Toronto, Ont.
CJ CJ	a	100	F	Calgary, Alta.
XET	a	5000	....	Monterrey, N. L.

7:30 am-midnight.	(4:30 am-9 pm)
9 am-1 am.	(6 am-10 pm)

**700 kcs. (428.3 m.)**

WLW	a	500000	JKMN	Cincinnati, Ohio
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5:45 am-2 am.	(2:45 am-11 pm)
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**710 kcs. (422.3 m.)**

CMKS	a	200	....	Guantanamo, Cuba.
KIRO	a	1000	CHJ	Seattle, Wash.
KMPC	a	500	L	Beverly Hills, Calif.
WOR	a	50000	KM	Newark, N. J.
XEQ	a	50000	....	Mexico City, D. F.

9 am-11 pm.	(6 am-8 pm)
6:25 am-1:30 am.	(3:25 am-10:30 pm)

**720 kcs. (416.4 m.)**

CMK	a	250	....	Havana, Cuba
TIGH	z	600	725	San Jose, Costa Rica
WGN	a	50000	KM	Chicago, Ill.
XEH	a	250	....	Monterrey, N. L.

**730 kcs. (410.7 m.)**

CFPL	a	100	F	London, Ont.
CJCA	a	1000	F	Edmonton, Alta.

8:30 am-4 am.	(5:30 am-1 am)
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## SATURDAY TIME

## Eastern Standard (Pacific Standard)

CKAC	a	5000	C	Montreal, P. Q.
CKPR	a	100	F	Fort William, Ont.
XEPN	a	100000	....	Piedras Negras, Coah.

## 740 kcs. (405.2 m.)

CMJX	z	200	....	Camaguey, Cuba	
KMMJ	a	1000	D	Clay Center, Nebr.	
KTRB	a	250	D	Modesto, Calif.	
WHEB	a	250	D	Portsmouth, N. H.	7 am-LS at Atlanta (4 am-LS at Atlanta)
WSB	a	50000	R	Atlanta, Ga.	

## 750 kcs. (399.8 m.)

CMBL	a	500	....	Havana, Cuba	
CMKW	z	200	....	Santiago, Cuba.	
KGU	a	2500	LN	Honolulu, Hawaii	11:30 am-4:30 am. (8:30 am-1:30 am)
WJR	a	50000	C	Detroit, Mich.	
XEAA	a	200	....	Mexicali, B. Cfa.	
XEAM	z	25	....	Matamoros, Tams.	

## 760 kcs. (394.5 m.)

KXA	a	250	(.5)X	Seattle, Wash.	
WBAL	a	2500	BMSy	Baltimore, Md.	
WCAL	a	1000	2(5)	Northfield, Minn.	7:30-11:30 am; 1:30-2:30 pm. (4:30-8:30 am; 10:30-11:30 am)
WEW	a	1000	D	St. Louis, Mo.	7 am-LS. (4 am-LS)
WJZ	a	50000	BSy	New York, N. Y.	6:30 am-1 am. (3:30 am-10 pm)
WLB	a	1000	2(5)	Minneapolis, Minn.	11:30 am-1:30 pm; 2:30-5 pm. (8:30-10:30 am; 11:30 am-3 pm)

## 770 kcs. (389.4 m.)

KFAB	a	10000	CSyXZ	Lincoln, Nbr.
TILJ	z	500	775	San Jose, Costa Rica
WBBM	a	50000	CSy	Chicago, Ill.

## 780 kcs. (384.4 m.)

CHWK	f	100	F	Chilliwack, B. C.	11 am-midnight. (8 am-9 pm)
CKSO	a	1000	F	Sudbury, Ont.	7:45 am-1:30 pm; 4:30 pm-midnight. (4:45-10:30 am; 1:30-9 pm)
CMCU	a	150	....	Havana, Cuba	
KEHE	a	1000	(5)	Los Angeles, Calif.	
KFDY	a	1000	D	Brookings, S. Dak.	
KFQD	c	250	....	Anchorage, Alaska	
KGHL	a	1000	N(5)	Billings, Mont.	
KWLK	a	250	D	Longview, Wash.	10 am-LS. (7 am-LS)
WEAN	a	1000	BM(5)	Providence, R. I.	
WMC	a	1000	R(5)	Memphis, Tenn.	7 am-2 am. (4 am-11 pm)
WPIC	a	250	D	Sharon, Pa.	6:30 am-LS. (3:30 am-LS)
WTAR	g	1000	N	Norfolk, Va.	6:30 am-1 am. (3:30 am-10 pm)
XEN	a	1000	....	Mexico City, D. F.	

## 790 kcs. (379.5 m.)

CMGH	a	200	....	Matanzas, Cuba	
KGO	a	7500	B	San Francisco, Calif.	
KOAM	a	1000	DN	Pittsburg, Kans.	7 am-LS. (4 am-LS)
WGY	a	50000	R	Schenectady, N. Y.	6:45 am-1 am. (3:45 am-10 pm)

## 800 kcs. (374.8 m.)

HIX	a	800	....	Ciudad Trujillo, D. R.	
TIXD	z	1000	....	San Jose, Costa Rica	
WBAP	a	50000	Na	Fort Worth, Tex.	6:45-8 am; 9:30 - (3:45-5 am! 6:30-11:30 am; 1:30-4:30 am; 8:30 am; 10:30 am-1 pm; 6:30-7:30 pm; 8-11 pm. (3:30-4:30 pm; 5-8 pm)

**SATURDAY TIME**

**Eastern Standard (Pacific Standard)**

WFAA	a	50000	Na	Dallas, Texas	8-9:30 am; 11:30 am-1:30 pm; 7:30-8 pm.	5-6:30 am; 8:30-10:30 am; 1-3:30 pm; 4:30-5 pm)
WTBO	a	250	D	Cumberland, Md.	7:30 am-6:30 pm.	(4:30 am-3:30 pm)
<b>310 kcs. (370.2 m.)</b>						
CMCF	a	5000		Havana, Cuba	8 am-midnight.	(5 am-9 pm)
WCCO	g	50000	C	Minneapolis, Minn.	7 am-2 am.	(4 am-11 pm)
WNYC	a	1000	D	New York, N. Y.		
XEBZ	a	100	....	Mexico City, D. F.		
XEDF	a	100	....	Nuevo Laredo, Tams.		
<b>320 kcs. (365.6 m.)</b>						
WHAS	a	50000	C	Louisville, Ky.		
XEBG	z	1000	....	Tijuana, B. Cfa.		
<b>330 kcs. (361.2 m.)</b>						
KOA	a	50000	R	Denver, Colo.		
WEFU	a	1000	DR	Reading, Pa.		
WHDH	a	1000	L	Boston, Mass.		
WRUF	a	5000	L	Gainesville, Fla.		
<b>340 kcs. (356.9 m.)</b>						
CBL	a	50000	F	Toronto, Ont.	7:45 am-12:30 am.	(4:45 am-9:30 pm)
CFQC	a	1000	F	Saskatoon, Sask.		
VOGY	a	400	....	St. Johns, Nfld.		
XERA	a	250000	....	Villa Acuna, Coah.		
<b>350 kcs. (352.7 m.)</b>						
CMCM	a	250	....	Havana, Cuba		
KIEV	a	250	D	Glendale, Calif.		
WESG	a	1000	CDH	Elmira, N. Y.	7:30 am-LS at New Orleans.	(4:30 am-LS at New Orleans)
WKAR	a	1000	DX	E. Lansing, Mich.	7 am-5 pm.	(4 am-2 pm)
WWL	a	10000	CX	New Orleans, La.		
<b>360 kcs. (348.6 m.)</b>						
CMJA	a	250	....	Camaguay, Cuba.		
WABC	a	50000	Ca	New York, N. Y.		
WBQO	a	50000	Qa	New York, N. Y.		
WHB	a	1000	DM	Kansas City, Mo.		
XEMO	a	5000	....	Tijuana, B. Cfa.		
<b>370 kcs. (344.6 m.)</b>						
WFNR	c	50000	Ba	Chicago, Ill.		(1-4:30 pm)
WLS	a	50000	Ba	Chicago, Ill.		
XFFB	a	200	....	Monterrev, N. L.		
XERC	z	500	....	Mexico City, D. F.		
<b>380 kcs. (340.7 m.)</b>						
CRO	a	1000	F	Ottawa, Ont.		
CFIC	a	1000	F	Kamloops, B. C.		
CMW	e	1400	X	Havana, Cuba	7 am-midnight.	(4 am-9 pm)
KFKA	a	500	2M(1)	Greeley, Colo.	7:30-9:15 am; 11 am-4:30 pm; 6:30-8:30 pm; 10:30 pm-2 am.	(4:30-6:15 am; 8 am-1:30 pm; 3:30-5:30 pm; 7:30-11 pm)
KLX	a	1000	....	Oakland, Calif.		
KPOF	a	1000	2	Denver, Colo.	9:15-10:45 am; 4:30-6:30 pm; 8:30-10:30 pm.	(6:15-7:45 am; 1:30-3:30 pm; 5:30-7:30 pm)
KVAN	z	250	DP	Vancouver, Wash.		
TILS	z	1000	....	San Jose, Costa Rica		

## SATURDAY TIME

WCOC	a	1000	C	Meridian, Miss.
WGBI	f	500	C1(1)	Scranton, Pa.
WQAN	a	500	1(1)	Scranton, Pa.
WRNL	a	500	DX	Richmond, Va.
WSUI	a	500	(1)	Iowa City, Iowa

## Eastern Standard (Pacific Standard)

7 am-1 am.	(4 am-10 pm)
6 am-LS.	(3 am-LS)
9 am-1:30 pm; 6:45-8 pm.	(6-10:30 am; 3:45-5 pm)

## 990 kcs. (336.9 m.)

KARK	a	500	N(1)	Little Rock, Ark.
KFNF	a	500	2X(1)	Shenandoah, Iowa
KFPY	a	1000	C(5)	Spokane, Wash.
KUSD	a	500	2	Vermillion, S. Dak.
WBAA	a	500	(1)	W. Lafayette, Ind.
WGST	a	1000	C(5)	Atlanta, Ga.
WJAR	a	1000	R(5)	Providence, R. I.
WMMN	a	500	CX(1)	Fairmont, W. Va.
XEW	a	100000	.....	Mexico City, D. F.

6:30 am-11 pm.	(3:30 am-8 pm)
Silent.	(Silent)
Noon-5 pm.	(9 am-2 pm)
6:30 am-1:00 am.	(3:30 am-10 pm)

## 900 kcs. (333.1 m.)

KGBU	a	500	X	Ketchikan, Alaska
KHJ	a	1000	M(5)	Los Angeles, Calif.
KSEI	a	250	N(1)	Pocatello, Idaho
WBEN	a	1000	R(5)	Buffalo, N. Y.
WELI	a	500	D	New Haven, Conn.
WFMD	a	500	D	Frederick, Md.
WJAX	a	1000	N(5)	Jacksonville, Fla.
WKY	a	1000	N(5)	Oklahoma City, Okla.
WLBL	a	5000	D	Stevens Point, Wis.
WTAD	a	1000	D	Quincy, Ill.

9 am-4 am.	(6 am-1 am)
(6:30 am-LS.	(3:30 am-LS)
6:45 am-1 am.	(3:45 am-10 pm)
9 am-5:15 pm.	(6 am-2:15 pm)

## 910 kcs. (329.6 m.)

CBF	a	50000	FN	Montreal, P. Q.
CIAT	a	1000	F	Trail, B. C.
CKY	a	15000	F	Winnipeg, Man.
CMKD	a	1000	.....	Havana, Cuba
CMOA	z	250	.....	Havana, Cuba
XENT	a	150000	.....	Nuevo Laredo, Tams.

8:30 am-1:30 am.	(5:30 am-10:30 pm)
7 pm-8:15 am.	(4 pm-5:15 am)

## 920 kcs. (325.9.)

CMHT	z	200	.....	Trinidad, Cuba.
KFEL	a	500	Ma	Denver, Colo.
KOMO	a	1000	R(5)	Seattle, Wash.
KPRC	a	1000	R(5)	Houston, Texas
KVOD	a	500	Ba	Denver, Colo.

10 am-3 am.	(7 am-midnight)
7 am-1 am.	(4 am-10 pm)
10:30 am-12:30 pm; 2:30-5 pm; 9:30 pm-2:30 pm; 6:30-11:30 pm.	(7:30-9:30 am; 11:30 am-11:30 pm)

WAAF	a	1000	D	Chicago, Ill.
WORL	a	500	D	Boston, Mass.
WPEN	a	1000	.....	Philadelphia, Pa.
WRAX	a	1000	O	Philadelphia, Pa.
WSPA	a	1000	D	Spartanburg, S. C.
WWJ	a	1000	R(5)	Detroit, Mich.

7 am-LS.	(4 am-LS)
6 am-LS.	(3 am-LS)

## 930 kcs. (322.4 m.)

CFAC	a	1000	F	Calgary, Alta.
CFCH	a	100	F	North Bay, Ont.
CFCL	a	100	.....	Prescott, Ont.
CHNS	a	1000	F	Halifax, N. S.
CKPC	a	100	F	Brantford, Ont.
CMJF	z	200	.....	Camaguey, Cuba
KMA	a	1000	B(5)	Shenandoah, Iowa
KROW	a	1000	.....	Oakland, Calif.
WBRC	a	1000	R(5)	Birmingham, Ala.
WDBJ	a	1000	C(5)	Roanoke, Va.
XEBH	a	500	.....	Hermosillo, Son.

9 am-11 pm.	(6 am-8 pm)
10 am-4 am.	(7 am-1 am)
7:15 am-1 am.	(4:15 am-10 pm)
7 am-midnight.	(4 am-9 pm)

940 kcs. (319 m.)

CMBZ	a	200	.....	Havana, Cuba		
KOIN	a	1000	C(5)	Portland, Ore.		
WAAT	a	500	D	Jersey City, N. J.		
WAVE	a	1000	N	Louisville, Ky.	7 am-2 am.	(4 am-11 pm)
WCSH	a	1000	R(2.5)	Portland, Me.	8 am-midnight.	(5 am-9 pm)
WDAY	a	1000	N(5)	Fargo, N. Dak.		
WHA	a	5000	D	Madison, Wis.	9 am-LS.	(6 am-LS)
WICA	a	250	D	Ashtabula, Ohio	7 am-LS.	(4 am-LS)
XEFO	a	5000	.....	Mexico City, D. F.		

950 kcs. (315.6 m.)

CBV	a	1000	F	Quebec, P. Q.	Noon-midnight.	(9 am-9 pm)
CJOC	a	100	F	Lethbridge, Alta.	8 am-1 am.	(5 am-10 pm)
CMKL	z	200	.....	Bayamo, Cuba		
KFWB	a	1000	(5)	Los Angeles, Calif.	9 am-3 am.	(6 am-midnight)
KMBC	a	1000	C(5)	Kansas City, Mo.		
WRC	a	1000	R(5)	Washington, D. C.		
WTRY	z	1000	DP	Troy, N. Y.		

960 kcs. (312.3 m.)

CBY	a	500	F	Toronto, Ont.	Noon-midnight.	(9 am-9 pm)
CFRN	a	100	F	Edmonton, Alta.	8:30 am-midnight.	(5:30 am-9 pm)
CRCY	a	100	F	Toronto, Ont.		
XEAW	a	100000	.....	Reynosa, Tams.	5-7:15 am; 7 pm-	(2-4:15 am; 4-9:30 pm)
XECL	z	1000	.....	Mexicali, B. Cfa.	12:30 am.	

970 kcs. (309.1 m.)

CMCK	a	5000	.....	Havana, Cuba		
KJR	a	5000	B	Seattle, Wash.	10 am-3 am.	(7 am-midnight)
WCFL	a	5000	N	Chicago, Ill.		
WIBG	a	100	D	Glenside, Pa.	7:30 am-LS.	(4:30 am-LS)

980 kcs. (306 m.)

KDKA	b	5000	B	Pittsburgh, Pa.		
XEAC	a	1000	.....	Tijuana, B. Cfa	8 am-1 am.	(5 am-10 pm)
XEFE	z	250	.....	Nuevo Laredo, Tams.		

990 kcs. (302.8 m.)

WBZ	a	50000	BSy	Boston, Mass.	6 am-1 am.	(3 am-10 pm)
WBZA	a	1000	BSy	Springfield, Mass.	6 am-1 am.	(3 am-10 pm)
XEFE	z	250	.....	Nogales, Son.		
XEK	a	100	.....	Mexico City, D. F.		
XES	a	250	.....	Tampico, Tams.		

1000 kcs. (299.8 m.)

KFVD	a	1000	L	Los Angeles, Calif.		
VOCM	z	200	1006	St. John's Nfld.		
WHO	a	50000	KR	Des Moines, Iowa	7 am-1 am.	(4 am-10 pm)
XEBI	a	25	.....	Aguascalientes, Ags.		

1010 kcs. (296.9 m.)

CHML	a	100	F	Hamilton, Ont.	7 am-11:30 pm.	(4 am-8:30 pm)
CKCD	a	100	I	Vancouver, B. C.	10:30 am-2:30 am.	(7:30 am-11:30 pm)
CKCK	a	1000	F	Regina, Sask.	9 am-2 am.	(6 am-11 pm)
CKCO	a	100	F	Ottawa, Ont.		
CKIC	a	50	.....	Wolfville, N. S.		
CKWX	a	100	I	Vancouver, B. C.	9:30 am-10:30 pm;	(6:30 am-7:30 pm;
					2:30-4:30 am.	11:30 pm-1:30 am)
CMQ	a	25000	N	Havana, Cuba		
KGGF	a	1000	2M	Coffeyville, Kans.	8 am-11:30 pm.	(5 am-8:30 pm)
KQW	a	1000	M	San Jose, Calif.	9:15 am-3 am.	(6:15 am-midnight)

## SATURDAY TIME

WHN a 1000 (5)  
 WNAD a 1000 2  
 WNOX a 1000 C(5)  
 XEFQ a 50  
 XEU a 250

New York, N. Y.  
 Norman, Okla.  
 Knoxville, Tenn.  
 Cananea, Son.  
 Veracruz, Ver.

## Eastern Standard (Pacific Standard)

7 am-1 am. (4 am-10 pm)  
 Silent. (Silent)  
 6:30 am-2 am. (3:30 am-11 pm)

## 1020 kcs. (293.9 m.)

KYW c 10000 R  
 WDZ a 250 D  
 XEJ a 1000

Philadelphia, Pa.  
 Tuscola, Ill.  
 Juarez, Chih.

6 am-1:15 am. (3 am-10:15 pm)

## 1030 kcs. (291.1 m.)

CFCN a 10000  
 CJBR z 1000 F  
 CKIW a 5000 FM  
 XEB a 10000

Calgary, Alta.  
 Rimouski, P. Q.  
 Windsor, Ont.  
 Mexico City, D. F.

## 1040 kcs. (288.3 m.)

KRLD a 10000 CX  
 KWJJ a 500 H  
 KYOS a 250 D  
 WTIC a 50000 R

Dallas, Texas  
 Portland, Ore.

9 am-LS; midnight- (6 am-LS; 9 pm-3  
 6 am. am)  
 9 am-LS. (6 am-LS)  
 6 am-1 am. (3 am-10 pm)

## 1050 kcs. (285.5 m.)

CBA z 50000 P  
 CBM a 5000 FR  
 CMCP z 200  
 HIT z 50  
 KFBI a 5000 L  
 KNX c 50000 C  
 WEAU a 1000 D  
 WIBC a 1000 D

Sackville, N. B.  
 Montreal, P. Q.  
 Havana, Cuba  
 Ciudad Trujillo, D. R.  
 Abilene, Kans.  
 Los Angeles, Calif.  
 Eau Claire, Wis.  
 Indianapolis, Ind.

7 am-LS. (4 am-LS)  
 9 am-4 am. (6 am-1 am)  
 7 am-LS. (4 am-LS)

## 1060 kcs. (282.8 m.)

CMHI z 250  
 KTHS a 10000 HN  
 VOAC z 40 1065  
 WBAL a 10000 BHM  
 WIAG a 1000 DH  
 W3XJ z 100 P

Santa Clara, Cuba  
 Hot Springs, Ark.  
 St. John's, Nfld.  
 Baltimore, Md.  
 Norfolk, Nebr.  
 College Park, Md.

7 am-LS; 9 pm-1 am. (4 am-LS; 6-10 pm)  
 7:15 am-LS. (4:15 am-LS)

## 1070 kcs. (280.2 m.)

CMJW z 200  
 KIBS a 500 L  
 WCAZ a 100 D  
 WTAM a 50000 R

Camaguey, Cuba  
 San Francisco, Calif.  
 Carthage, Ill.  
 Cleveland, Ohio

1:30 am-LS. (10:30 pm-LS)  
 8 am-5 pm. (5 am-2 pm)

## 1080 kcs. (277.6 m.)

CMBX a 150  
 CMKM a 100  
 WBT a 50000 C  
 WCBD a 5000 1L  
 WMBI g 5000 1L

Havana, Cuba  
 Manzanillo, Cuba  
 Charlotte, N. C.  
 Chicago, Ill.  
 Chicago, Ill.

8-8:30 am; 11:30 am (5-5:30 am; 8:30-11  
 -2 pm; 4-5:30 pm. am; 1-2:30 pm)

XEBA z 20  
 XEBK a 100  
 XEDP a 500

Guzman, Jal.  
 Nuevo Laredo, Tams.  
 Mexico City, D. F.

## 1090 kcs. (275.1 m.)

CMHA z 200  
 HIN a 740  
 KMOX z 50000 C  
 XERB a 100000

Sagua la Grande, Cuba  
 Ciudad Trujillo, D. R.  
 St. Louis, Mo.  
 Rosarito Beach, B. Cfa.



**SUNDAY TIME**

**Eastern Standard**

**(Pacific Standard)**

**1100 kcs. (272.6 m.)**

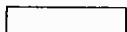


CBR a 5000 F  
 CMHP z 200 ....  
 KGD M f 1000 DM  
 KWKH a 10000 CH  
 WBIL a 5000 1  
 WPG a 5000 CI

Vancouver, B. C.  
 Placetas, Cuba  
 Stockton, Calif.  
 Shreveport, La.  
 New York, N. Y.  
 Atlantic City, N. J.

9 am-LS. (6 am-LS)  
 8 am-6 pm; 8 pm- midnight. (5 am-3 pm! 5-9 pm)

**1110 kcs. (270.1 m.)**



CMCJ a 200 ....  
 KSOO a 5000 LN  
 WRVA a 50000 CM

Havana, Cuba  
 Sioux Falls, S. Dak.  
 Richmond, Va.

7 am-LS. (4 am-LS)  
 7 am-midnight. (4 am-9 pm)

**1120 kcs. (267.7 m.)**



CBJ a 100 F  
 CHLP a 100 F  
 CHSJ a 100 F

Chicoutimi, P. Q.  
 Montreal, P. Q.  
 St. John, N. B.

3:15-11:15 pm. (12:15-8:15 pm)  
 8 am-11 pm. (5 am-8 pm)  
 7 am, and 8:30 am-10:15 am. (4 am, and 5:30 am-10:15 pm)

CKOC a 500 F(1)  
 CKX a 1000 F  
 CMGF a 200 ....  
 KFIO a 100 D  
 KFSG a 500 a(2.5)  
 KRKD a 500 a(2.5)  
 KRSC a 250 ....  
 KTBC z 1000 DP  
 WCOP a 500 D  
 WDEL a 250 R(.5)  
 WISN a 250 C(1)  
 WJBO a 500 B  
 WTAW a 500 L

Hamilton, Ont.  
 Brandon, Man.  
 Matanzas, Cuba  
 Spokane, Wash.  
 Los Angeles, Calif.  
 Los Angeles, Calif.  
 Seattle, Wash.  
 Austin, Texas  
 Boston, Mass.  
 Wilmington, Del.  
 Milwaukee, Wis.  
 Baton Rouge, La.  
 College Station, Tex.

9 am-12:30 am. (6 am-9:30 pm)

9 am-4:30 am. (6 am-1:30 am)

7 am-LS. (4 am-LS)

7 am-2 am. (4 am-11 pm)

**1130 kcs. (265.3 m.)**



CMJI a 200 ....  
 KSL a 5000 C  
 WJJD a 20000 L

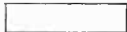
Ciego de Avila, Cuba  
 Salt Lake City, Utah  
 Chicago, Ill.

7 am-LS at Salt Lake. (4 am-LS at Salt Lake)

WOV a 1000 D  
 XEJP z 100 ....

New York, N. Y.  
 Mexico City, D. F.

**1140 kcs. (263 m.)**



CMBC a 150 ....  
 KVOO a 25000 N  
 WAPI a 5000 C  
 WSPR a 500 DM

Havana, Cuba  
 Tulsa, Okla.  
 Birmingham, Ala.  
 Springfield, Mass.

7 am-1 am. (4 am-10 pm)  
 7 am-6:30 pm. (4 am-3:30 pm)

**1150 kcs. (260.7 m.)**



CMKG z 100 ....  
 WHAM a 50000 B  
 XEBP z 250 ....  
 XEC a 100 ....  
 XEDW z 20 ....  
 XEL z 250 ....

Santiago, Cuba  
 Rochester, N. Y.  
 Durango, Dgo.  
 Tijuana, B. Cfa.  
 Minatitlan, Ver.  
 Mexico City, D. F.

6:30 am-1 am. (3:30 am-10 pm)

**1160 kcs. (258.5 m.)**



CMHJ a 100 ....  
 WOWO a 10000 1B  
 WVVVA a 5000 1C  
 XEAS a 100 ....  
 XED c 2500 ....  
 XEP a 500 ....

Cienfuegos, Cuba  
 Fort Wayne, Ind.  
 Wheeling, W. Va.  
 Saltillo Coah.  
 Guadalajara, Jal.  
 Juarez, Chih

noon-midnight. (9 am-9 pm)

**1170 kcs. (256.3 m.)**



CMBS a 150 ....  
 WCAU a 50000 C  
 XEXX z 1000 ....

Havana, Cuba  
 Philadelphia, Pa.  
 Mexico City, D. F.

6:30 am-2 am. (3:30 am-11 pm)

**SATURDAY TIME**

**Eastern Standard (Pacific Standard)**

**1180 kcs. (254.1 m.)**

KEX	a	5000	2B	Portland, Ore.	9:30 am-3 am. (6:30 am-midnight)
KOB	a	10000	2N	Albuquerque, N. Mex	9 am-1 am. (6 am-10 pm)
WDGY	a	1000	.....	Minneapolis, Min.	7:00 am-7:30 pm. (4 am-4:30 pm)
WINS	a	1000	.....	New York, N. Y.	
WMAZ	a	1000	C(5)	Macon, Ga.	

**1190 kcs. (252 m.)**

CMKX	z	75	.....	Santiago, Cuba	
KTKC	f	250	DM	Visalia, Calif.	9 am-LS. (6 am-LS)
VONF	a	500	1195	St. John's Nfld.	
WATR	a	100	DXZ	Waterbury, Conn.	
WOAI	a	50000	N	San Antonio, Tex.	7:30 am-12:30 am. (4:30 am-9:30 pm)
WSAZ	a	1000	L	Huntington, W Va	6 am-7:30 pm. (3 am-4:30 pm)

**1200 kcs. (249.9 m.)**

CFGP	a	100	.....	Grande Prairie, Alta.	9:45 am-4:30 pm; 7- (6:45 am - 1:30 pm; midnight. 4-9 pm)
CHAB	a	100	F(.25)	Moose Jaw, Sask.	9 am-1 am. (6 am-10 pm)
CHGB	z	100	FP	St. Anne de Pocatiere, P.Q.	
CKNX	b	100	.....	Wingham, Ont.	10:30 am-1:30 pm; (7:30-10:30 am; 2-30 5:30-9 pm. -6 pm)
CKTB	a	100	F	St. Catharines, Ont.	
CMCO	a	150	.....	Havana, Cuba	
KADA	a	100	M	Ada, Okla.	
KBTM	a	100	D	Jonesboro, Ark.	8:30 am-6:30 pm. (5:30 am-3:30 pm)
KDNC	z	100	(.25)P	Lewistown, Mont.	
KELO	a	100	N	Sioux Falls, S. Dak.	1 pm-1 am. (10 am-10 pm)
KFJB	a	100	(.25)	Marshalltown, Iowa	7 am-10 pm. (4 am-7 pm)
KFXD	a	100	(.25)	Nampa, Idaho	8 am-11 pm. (5 am-8 pm)
KFXJ	a	100	(.25)	Grand Junction, Colo.	
KGCI	z	100	DP	Coeur d'Alene, Idaho	
KGDE	b	100	(.25)	Fergus Falls, Minn.	
KGEK	f	100	L	Sterling, Colo.	1:30-3:30 pm. (10:30 am-12:30 pm)
KGFJ	a	100	.....	Los Angeles, Calif.	
KGHI	a	100	(.25)	Little Rock, Ark.	
KGVL	z	100	DP	Greenville, Tex.	
KMLB	a	100	(.25)	Monroe, La.	
KOOS	a	100	(.25)	Marshfield, Ore.	
KSUN	a	100	(.25)	Lowell, Ariz.	9:30 am-midnight. (6:30 am-9 pm)
KVCV	a	100	.....	Redding, Calif.	
KVEC	a	100	(.25)	San Luis Obispo, Calif.	9:30 am-3 am. (6:30 am-midnight)
KVNU	z	100	P	Logan, Utah	
KVOS	b	100	M	Bellingham, Wash.	
KWG	a	100	N	Stockton, Calif.	
KWNO	a	250	D	Winona, Minn.	
WABI	a	100	(.25)	Bangor, Maine	
WAIM	a	100	C	Anderson, S. C.	
WAYX	a	100	(.25)	Waycross, Ga.	7 am-9 pm. (4 am-6 pm)
WBBZ	a	100	M(.25)	Ponca City, Okla	
WBHP	a	100	.....	Huntsville, Alta.	
WCAT	a	100	D	Rapid City, S. Dak.	1-3 pm. (10 am-noon)
WCAX	a	100	(.25)	Burlington, Vt.	7:30 am-9 pm. (4:30 am-6 pm)
WCLO	a	100	(.25)	Janesville, Wis.	8 am-10 pm. (5 am-7 pm)
WCPO	a	100	(.25)	Cincinnati, Ohio	6:30 am-3 am. (3:30 am-midnight)
WDSM	z	100	P	Superior, Wis.	
WENY	z	250	DP	Elmira, N. Y.	
WEST	a	100	3(.25)	Easton, Pa.	
WFAM	a	100	4	South Bend, Ind.	
WFTC	a	100	(.25)	Kinston, N. C.	
WHBC	a	100	(.25)	Canton, Ohio	
WHBY	a	100	(.25)	Green Bay, Wis.	9 am-10:30 pm. (6 am-7:30 pm)
WIBX	a	100	C(.25)	Utica, N. Y.	
WIL	a	100	(.25)	St. Louis, Mo.	
WJBC	a	100	5(.25)	Bloomington, Ill.	
WJBL	a	100	5	Decatur, Ill.	7-10 am; 1:30-4 pm; (4-7 am! 10:30 am-8:30 pm-1 am. 1 pm; 5:30-10 pm)
WJBW	a	100	.....	New Orleans, La.	2 am-1 pm; 6-9 pm; (3-6 pm; 9-10 pm; midnight-1 am. 11 pm-10 am)
WJHL	z	100	(.25)	Johnson City, Tenn.	

**SATURDAY TIME**

**Eastern Standard (Pacific Standard)**

WJNO	a	100	C(.25)	W. Palm Beach, Fla.	7 am-2 am.	(4 am-11 pm)
WJRD	a	250	D	Tuscaloosa, Ala.		
WKBO	a	100	3(.25)	Harrisburg, Pa.	7 am-noon; 3-6 pm;	(4-9 am; noon-3 pm;
					8-11 pm.	5-8 pm)
WLVA	a	100	(.25)	Lynchburg, Va.		
WMFR	a	100	D	High Point, N. C.	6:30 am-10:15 pm.	(3:30 am-7:15 pm)
WMPC	a	100	(.25)	Lapeer, Mich.		
WOLS	a	100	D	Florence, S. C.	7 am-LS.	(4 am-LS)
WRBL	a	100	(.25)	Columbus, Ga.	8 am-midnight.	(5 am-9 pm)
WSAL	z	250	D	Salisbury, Md.		
WTHT	a	100	M	Hartford, Conn.		
WTOL	a	100	D	Toledo, Ohio		
WWAE	a	100	4	Hammond, Ind.		

**1210 kcs. (247.8 m.)**



CHLT	z	100	....	Sherbrooke, P. Q.		
CJCS	a	50	....	Stratford, Ont.		
CJCU	z	50	....	Aklavik, N. W. T.		
CKBI	a	100	F	Prince Albert, Sask.		
CKCH	a	100	F	Hull, P. Q.		
CKMC	a	50	....	Cobalt, Ont.		
CMHK	z	250	....	Cruces, Cuba		
KALB	a	100	(.25)	Alexandria, La.		
KANS	a	100	N	Wichita, Kans.		
KASA	b	100	M	Elk City, Okla.	7:30 am-7:45 pm.	(4:30 am-4:45 pm)
KDIR	a	100	(.25)	Devils Lake, N. Dak.		
KDON	a	100	M	Monterey, Calif.		
KFJJ	a	100	....	Klamath Falls, Ore.		
KFOR	a	100	CM(.25)	Lincoln, Nebr.		
KFPW	a	100	....	Fort Smith, Ark.	7:30 am-11 pm.	(4:30 am-8 pm)
KFVS	a	100	5(.25)	Cape Girardeau, Mo.		
KFXM	a	100	2M	San Bernardino, Calif.	9 am-3 am.	(6 am-midnight)
KGLO	a	100	C(.25)	Mason City, Iowa	7 am-3 am.	(4 am-midnight)
KGY	a	100	M	Olympia, Wash.	10 am-2 am.	(7 am-11 pm)
KHBG	a	100	D	Okmulgee, Okla.		
KIUL	a	100	....	Garden City, Kans.	8 am-9 pm.	(5 am-6 pm)
KLAH	a	100	(.25)	Carlsbad, N. Mex.	8:30 am-11 pm.	(5:30 am-8 pm)
KOCA	a	100	(.25)	Kilgore, Texas		
KPFA	a	100	N(.25)	Helena, Mont.	10:15 am-midnight.	(7:15 am-9 pm)
KPPC	a	100	2	Pasadena, Calif.		
KROY	a	100	CD	Sacramento, Calif.	9:30 am-8 pm.	(6:30 am-5 pm)
KVSO	a	100	M(.25)	Ardmore, Okla.	8 am-midnight.	(5 am-9 pm)
KWJB	a	100	(.25)	Globe, Ariz.	10 am-midnight.	(7 am-9 pm)
KWTN	z	100	A	Watertown, S. Dak.		
WALR	a	100	....	Zanesville, Ohio	7 am-midnight.	(4 am-9 pm)
WBAX	a	100	M	Wilkes-Barre, Pa.		
WBBL	a	100	S	Richmond, Va.		
WBLY	a	100	D	Lima, Ohio		
WBRB	a	100	3	Red Bank, N. J.	4-7 pm.	(1-4 pm)
WCOL	a	100	N	Columbus, Ohio	7 am-1 am.	(4 am-10 pm)
WCOU	a	100	....	Lewiston, Maine	6 am-midnight.	(3 am-9 pm)
WCOV	z	100	DP	Montgomery, Ala.		
WCRW	a	100	4	Chicago, Ill.	noon-3 pm; 6-8 pm.	(9 am-noon; 3-5 pm)
WEBQ	a	100	5(.25)	Harrisburg, Ill.	7-10 am; 1-5 pm;	(4-7 am; 10 am-1
					pm; 5:30-7 pm;	pm)
WEDC	a	100	4	Chicago, Ill.	10-11 am; 5-6 pm;	(7-8 am; 2-3 pm;
					11 pm-midnight.	8-9 pm)
WFAS	a	100	3	White Plains, N. Y.		
WFOY	a	100	(.25)	St. Augustine, Fla.	7:30 am-midnight.	(4:30 am-9 pm)
WGBB	a	100	3	Freeport, N. Y.		
WGCM	a	100	(.25)	Gulfport, Miss.		
WGNV	a	100	3	Newburgh, N. Y.		
WGRM	a	100	....	Grenada, Miss.		
WHAI	a	250	D	Greenfield, Mass.	7 am-LS.	(4 am-LS)
WHBF	a	100	(.25)	Rock Island, Ill.		
WHBU	a	100	(.25)	Anderson, Ind.		
WIBU	a	100	(.25)	Poynette, Wis.		
WJBY	a	100	(.25)	Gadsden, Ala.	7:30 am-11 pm.	(4:30 am-8 pm)
WJEJ	a	100	....	Hagerstown, Md.	7 am-11:30 pm.	(4 am-8:30 pm)

**SATURDAY TIME**

WJIM	z	100	B(.25)	Lansing, Mich.
WJLS	z	100	(.25)P	Beckley, W. Va.
WJMC	z	250	DP	Rice Lake, Wis.
WJTN	a	100	B(.25)	Jamestown, N. Y.
WJW	a	100	(.25)	Akron, Ohio
WKOK	a	100	L	Sunbury, Pa.
WMFG	a	100	(.25)	Hibbing, Minn.
WOCB	z	100	(.25)P	Barnstable, Mass.
WOMT	a	100	....	Manitowoc, Wis.
WPAX	a	100	(.25)	Thomasville, Ga.
WPIV	z	100	(.25)P	Petersburg, Va.
WRAL	z	100	(.25)P	Raleigh, N. C.
WSAY	z	100	(.25)	Rochester, N. Y.
WSBC	a	100	4(.25)	Chicago, Ill.
WSIX	a	100	(.25)	Nashville, Tenn.
WSNJ	a	100	D	Bridgeton, N. J.
WSOC	a	100	N(.25)	Charlotte, N. C.
WTAX	a	100	....	Springfield, Ill.
WTMA	z	100	(.25)P	Charleston, S. C.
XEAT	a	250	....	Parral, Chih.
XEE	a	50	....	Durango, Dgo.
XEFV	a	50	....	Juarez, Chih.
XETH	a	100	....	Puebla, Pue.

**Eastern Standard (Pacific Standard)**

8 am-10:30 pm.	(5 am-7:30 pm)
noon-6 pm.	(9 am-3 pm)
6:30 am-7:30 pm.	(3:30 am-4:30 pm)
7 am-LS.	(4 am-LS)
6:30 am-midnight.	(3:30 am-9 pm)

**1220 kcs. (245.8 m.)**

KFKU	a	1000	a(5)	Lawrence, Kans.
KTMS	z	500	B	Santa Barbara, Calif.
KTW	a	1000	2S	Seattle, Wash.
KWSC	a	1000	2(5)	Pullman, Wash.
WCAD	a	500	D	Canton, N. Y.
WCAE	a	1000	MR(5)	Pittsburgh, Pa.
WDAE	a	1000	C(5)	Tampa, Fla.
WREN	a	1000	Ba(5)	Lawrence, Kans.
XEBL	a	50	....	Mazatlan, Sin.
XEDA	z	200	....	Gral. Anaya, D. F.
XETF	a	12	....	Veracruz, Ver.

9:45-11 am; 2 pm-1	(6:45-8 am; 11 am-10 pm)
12:30-1:30 pm; 3-4	(9:30 - 10:30 am; noon-1 pm)
7 am-1:30 am.	(4 am-10:30 pm)
7 am-midnight.	(4 am-9 pm)

**1230 kcs. (243.8 m.)**

CMCB	a	150	....	Havana, Cuba
KGBX	a	500	N	Springfield, Mo.
KGGM	a	100	....	Albuquerque, N. Mex.
KYA	a	1000	(5)	San Francisco, Calif.
WFBM	a	1000	C(5)	Indianapolis, Ind.
WNAC	a	1000	R(5)	Boston, Mass.
WOL	a	1000	M	Washington, D.C.
XECA	z	250	....	Tampico, Tamps.
XEG	z	250	....	Monterrey, N. L.

9 am-1 am.	(6 am-10 pm)
9:30 am-3 am.	(6:30 am-midnight)

6 am-2 am.	(3 am-11 pm)
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**1240 kcs. (241.8 m.)**

CICB	a	1000	F	Sydney, N. S.
CMAB	z	200	....	Pinar del Rio, Cuba
CMHB	z	200	....	Sancti Spiritus, Cuba
KGCU	a	250	....	Mandan, N. Dak.
KTAT	a	1000	M	Fort Worth, Tex.
KTFI	a	1000	N	Twin Falls, Idaho
WKAQ	a	1000	....	Twin Falls, P. R.
WXYZ	a	1000	B	Detroit, Mich.
XEBU	z	50	....	Chihuahua, Chih.
XFKL	z	500	....	Leon, Gto.
XEME	z	50	....	Merida, Yuc.

7 am-1 am.	(4 am-10 pm)
11 am-midnight.	(8 am-9 pm)
7:30 am-midnight.	(4:30 am-9 pm)
8 am-1 am.	5 am-10 pm)

**1250 kcs. (239.9 m.)**

CMKC	a	150	....	Santiago, Cuba
HRN	c	50	....	Tegucigalpa, Hond.

**SATURDAY TIME**

KFOX	a	1000	....	Long Beach, Calif.
KIT	a	250	MX(5)	Yakima, Wash.
KXOK	z	1000	....	St. Louis, Mo.
WAIR	a	250	D	Winston-Salem, N. C.
WDSU	a	1000	B	New Orleans, La.
WHBI	a	1000	(2.5)	Newark, N. J.
WKST	z	250	D	New Castle, Pa.
WMRO	z	250	D	Aurora, Ill.
WNEW	a	1000	(2.5)	New York, N. Y.
WTCN	a	1000	B(5)	Minneapolis, Minn.
XEAI	z	500	....	Mexico City, D. F.

**Eastern Standard (Pacific Standard)**

				9:30 am-3 am.	(6:30 am-midnight)
				6 am-LS.	(3 am-LS)
				7 am-LS.	(4 am-LS)
				7 am-1 am.	(4 am-10 pm)

**1260 kcs. (238 m.)**

CMJO	a	200	....	Ciego de Avila, Cuba
CMX	e	200	....	Havana, Cuba
KGVO	a	1000	C(5)	Missoula, Mont.
KHSL	a	250	....	Chico, Calif.
KOIL	a	1000	BM(5)	Omaha, Nebr.
KPAC	a	500	D	Port Arthur, Tex.
KRGV	a	1000	MN	Weslaco, Texas
KUOA	a	5000	D	Siloam Springs, Ark.
KVOA	a	1000	....	Tucson, Ariz.
WHIO	a	1000	C(5)	Dayton, Ohio
WNBX	a	1000	CM	Springfield, Vt.
WTOC	a	1000	C	Savannah, Ga.

				8 am-1 am.	(5 am-10 pm)
				9 am-1 am.	(6 am-10 pm)
				7 am-LS.	(4 am-LS)
				7:30 am-midnight.	(4:30 am-9 pm)
				7 am-LS.	(4 am-LS)
				8 am-11:30 pm.	(5 am-8:30 pm)
				7 am-midnight.	(4 am-9 pm)
				6 am-midnight.	(3 am-9 pm)

**1270 kcs. (236.1 m.)**

CMHD	b	250	....	Caibarien, Cuba
KGCA	a	100	2D	Decorah, Iowa
KOL	a	1000	M(5)	Seattle, Wash.
KVOR	a	1000	C	Colorado Springs, C.
KWLC	a	100	2D	Decorah, Iowa
WASH	a	500	DNA	Grand Rapids, Mich.
WFBR	a	500	R(1)	Baltimore, Md.
WJDX	a	1000	R(5)	Jackson, Miss.
WOOD	a	500	Na	Grand Rapids, Mich.
XEXB	a	250	....	Ialapa, Ver.
XEXE	z	17	....	Texcoco, Mex.

				8:45 am-2 am.	(5:45 am-11 pm)
				7:30-9:30 am; 10:45-11:45 am; 12:30-1:30 pm.	(4:30-6:30 am; 7:45-8:45 am-9:30-11:30 am)
				6:30 am-1:30 am.	(3:30 am-10:30 pm)

**1280 kcs. (234.2 m.)**

CMKO	z	200	....	Holguin, Cuba
KFBB	a	1000	C(5)	Great Falls, Mont.
KLS	a	250	....	Oakland, Calif.
WCAM	a	500	1	Camden, N. J.
WCAP	a	500	1	Asbury Park, N. J.
WDOD	c	1000	C(5)	Chattanooga, Tenn.
WIBA	a	1000	N(5)	Madison, Wis.
WORC	a	500	C	Worcester, Mass.
WRR	a	500	M	Dallas, Texas
WTNJ	a	500	1	Trenton, N. J.
XEMX	z	100	....	Mexico City, D. F.

				10 am-1 am.	(7 am-10 pm)
				Silent.	(Silent)
				10:30 am-4 pm; 8 pm-midnight.	(7:30 am-1 pm; 5-9 pm)
				7 am-midnight.	(4 am-9 pm)
				8 am-1 am.	(5 am-10 pm)
				8 am-midnight.	(5 am-9 pm)
				8 am-1 am.	(5 am-10 pm)

**1290 kcs. (232.4 m.)**

CMCG	a	150	....	Havana, Cuba
CMJK	a	200	....	Camaguey, Cuba
KDYL	a	1000	R(5)	Salt Lake City, Utah
KLCN	a	100	D	Blutheville, Ark.
KTRH	a	1000	C(5)	Houston, Texas
WEBC	a	1000	N(5)	Duluth, Minn.
WJAS	a	1000	C(5)	Pittsburgh, Pa.
WJHP	z	250	P	Jacksonville, Fla.

				7:30 am-3:30 am.	(4:30 am-12:30 am)
				7:30 am-1 am.	(4:30 am-10 pm)

## SATURDAY TIME

## Eastern Standard (Pacific Standard)

WNBZ	a	100	D	Saranac Lake, N. Y.	8 am-LS.	(5 am-LS)
WNEL	a	1000	(2.5)	San Juan, P. R.	5:30 am-11 pm.	(2:30 am-8 pm)
<b>1300 kcs. (230.6 m.)</b>						
KALE	a	1000	M	Portland, Ore.	9:30 am-3 am.	(6:30 am-midnight)
KFAC	a	1000	....	Los Angeles, Calif.	24 hours daily.	(24 hours daily)
KFH	a	1000	C(5)	Wichita, Kans.	7 am-1 am.	(4 am-10 pm)
WBRR	a	1000	1	Brooklyn, N. Y.	Silent.	(Silent)
WEVD	a	1000	1	New York, N. Y.		
WFBC	a	1000	N(5)	Greenville, S. C.	6:45 am-midnight.	(3:45 am-9 pm)
WHAZ	a	1000	1	Troy, N. Y.		
WHBL	a	250	....	Sheboygan, Wis.	8 am-midnight.	(5 am-9 pm)
<b>1310 kcs. 228.9 m.)</b>						
CHCK	a	50	....	Charlottetown, P.E.I.		
CJKL	a	100	F	North Bay, Ont.		
CJLS	a	100	F	Yarmouth, N. S.		
CKCV	a	100	F	Quebec, P. Q.	7:45 am-11:45 pm.	(4:45 am-8:45 pm)
KAND	z	100	DM	Corsicana, Tex.		
KARM	a	100	C	Fresno, Calif.	9 am-3 am.	(6 am-midnight)
KBND	z	100	(.25)	Bend, Ore.		
KCKN	a	100	....	Kansas City, Kans.	7 am-1 am.	(4 am-10 pm)
KCRJ	a	100	(.25)	Jerome, Ariz.		
KFPL	f	100	(.25)	Dublin, Texas		
KFYO	a	100	M(.25)	Lubbock, Texas	7 am-midnight.	(4 am-9 pm)
KGEZ	a	100	....	Kalispell, Mont.		
KGFW	a	100	(.25)	Kearney, Nebr.	7 am-11:30 pm.	(4 am-8:30 pm)
KHUB	a	250	D	Watsonville, Calif.	9 am-LS.	(6 am-LS)
KOCY	a	100	D	Tulsa, Okla.		
KOME	z	250	DP	Tulsa, Okla.		
KPDN	a	100	D	Pampa, Texas		
KRBA	a	100	D	Lufkin, Texas	7 am-6:15 pm.	(4 am-3:15 pm)
KRMD	a	100	(.25)	Shreveport, La.	7:30 am-1 am.	(4:30 am-10 pm)
KROC	a	100	(.25)	Rochester, Minn.	7 am-1 am.	(4 am-10 pm)
KRQA	a	100	....	Santa Fe, N. Mex.	9 am-4 pm; 6:30-11:30 pm.	(6 am-1 pm; 3:30-8:30 pm)
KRRV	a	250	DM	Sherman, Texas		
KRSO	a	100	(.25)	Santa Rosa, Calif.	10 am-2 am.	(7 am-11 pm)
KSUB	a	100	....	Cedar City, Utah		
KTSM	a	100	N(.25)	El Paso, Texas	8:30 am-2 am.	(5:30 am-11 pm)
KVOL	a	100	(.25)	Lafayette, La.	8 am-2 pm; 5-11 pm.	(5-11 am; 2-8 pm)
KVOX	a	100	(.25)	Moorhead, Minn.	7 am-10 pm.	(4 am-7 pm)
KWOC	a	100	D	Poplar Bluff, Mo.	7:30 am-LS.	(4:30 am-LS)
KWOS	a	100	(.25)	Jefferson City, Mo.	7 am-11 pm.	(4 am-8 pm)
KXRO	a	100	M(.25)	Aberdeen, Wash.		
TG1	d	....	....	Guatemala C., Guat.		
WAML	a	100	(.25)	Laurel, Miss.		
WBEO	a	100	DX	Marquette, Mich.		
WBOW	a	100	N(.25)	Terre Haute, Ind.		
WBRE	a	100	N(.25)	Wilkes-Barre, Pa.		
WBRK	z	100	C(.25)	Pittsfield, Mass.		
WCLS	a	100	L	Joliet, Ill.		
WCMI	a	100	(.25)	Ashland, Ky.		
WDAH	a	100	S(.25)	El Paso, Tex.		
WEBR	a	100	B(.25)	Buffalo, N. Y.	7 am-midnight.	(4 am-9 pm)
WEMP	a	100	....	Milwaukee, Wis.		
WEXL	a	50	....	Royal Oak, Mich.	8 am-4 am.	(5 am-1 am)
WFBG	a	100	3	Altoona, Pa.		
WFDF	a	100	B	Flint, Mich.	6 am-midnight.	(3 am-9 pm)
WGAA	a	100	(.25)	Athens, Ga.	7 am-midnight.	(4 am-9 pm)
WGH	a	100	(.25)	Newport News, Va.		
WGTM	a	100	D	Wilson, N. C.		
WHAT	a	100	4	Philadelphia, Pa.		
WJAC	a	100	3(.25)	Johnstown, Pa.	8:30-10:30 am; 4:30-6:30 pm; 9:30 pm-midnight.	(5:30-7:30 am; 1:30-3:30 pm; 6:30-9 pm)
WLAK	z	100	N	Lakeland, Fla.		
WLBC	a	100	(.25)	Muncie, Ind.	6:30 am-12:30 am.	(3:30 am-9:30 pm)
WLNH	a	100	M	Laconia, N. H.	7 am-midnight.	(4 am-9 pm)
WMBO	a	100	....	Auburn, N. Y.		

**SATURDAY TIME**

WMFF	a	100	B(.25)	Plattsburgh, N. Y.
WNBH	a	100	M(.25)	New Bedford, Mass.
WRAW	a	100	....	Reading, Pa.
WROL	a	100	N(.25)	Knoxville, Tenn.
WSAJ	a	100	....	Grove City, Pa.
WSAV	z	100	P	Savannah, Ga.
WSGN	a	100	B(.25)	Birmingham, Ala.
WSJS	a	100	C	Winston-Salem, N. C.
WTAL	a	100	(.25)	Tallahassee, Fla.
WTEL	a	100	4	Philadelphia, Pa.
WTJS	a	100	(.25)	Jackson, Tenn.
WTRC	a	100	(.25)	Elkhart, Ind.
XEAG	z	10	....	Cordoba, Ver.
XEBO	z	25	....	Irapuato, Gto.
XEFW	a	300	....	Tampico, Tams
XETB	a	500	....	Torreón, Coah.
XEX	a	125	....	Monterrey, N. L.

**Eastern Standard (Pacific Standard)**

7:45 am-midnight.	(4:45 am-9 pm)
Silent.	(Silent)
7 am-midnight.	(4 am-9 pm)
6:30 am-midnight.	(3:30 am-9 pm)
7 am-11 pm.	(4 am-8 pm)
7:30 am-10:30 pm.	(4:30 am-7:30 pm)

**1320 kcs. (227.1 m.)**

CMBQ	z	5000		Havana, Cuba
KGHF	a	500	B	Pueblo, Colo.
KGMB	a	1000	CM	Honolulu, Hawaii
KID	a	500	(1)	Idaho Falls, Idaho
KRNT	a	1000	C(5)	Des Moines, Iowa
WADC	a	1000	C(5)	Akron, Ohio
WORK	a	1000	N	York, Pa.
WSMB	a	1000	R(5)	New Orleans, La.

9 am-1 am.	(6 am-10 pm)
11:25 am-5:30 am.	(8:25 am-2:30 am)
6:30 am-1 am.	(3:30 am-10 pm)
8 am-midnight.	(5 am-9 pm)

**1330 kcs. (225.4 m.)**

KGB	a	1000	M	San Diego, Calif.
KMO	a	1000	M	Tacoma, Wash.
KRIS	a	500	NM	Corpus Christi, Tex.
KSCJ	a	1000	C(5)	Sioux City, Iowa
WDRG	g	1000	C(5)	Hartford, Conn.
WSAI	a	1000	MN(5)	Cincinnati, Ohio
WTAQ	a	1000	C	Green Bay, Wis.

9 am-3 am.	(6 am-midnight)
7:30 am-midnight.	(4:30 am-9 pm)
7 am-2 am.	(4 am-11 pm)
7 am-1 am.	(4 am-10 pm)
8 am-1 am.	(5 am-10 pm)

**1340 kcs. (223.7 m.)**

KDTH	z	500	ADP	Dubuque, Iowa
KGIR	a	1000	N(5)	Butte, Mont.
KGNO	c	250	....	Dodge City, Kans.
WCOA	a	500	C(1)	Pensacola, Fla.
WFEE	a	500	MN(1)	Manchester, N. H.
WFNC	z	250	DP	Fayetteville, N. C.
WSPD	a	1000	B(5)	Toledo, Ohio
XEAP	z	50	....	Obregon, Son.
XEBS	z	200	....	Mexico City, D. F.
XEDH	z	200	....	Villa Acuna, Coah.
XEFC	a	100	....	Merida, Yuc.
XEXD	z	350	....	Jalapa, Ver.

7:30 am-10 pm.	(4:30 am-7 pm)
6:30 am-1 am.	(3:30 am-10 pm)

**1350 kcs. (222.1 m.)**

CMCA	a	200	....	Havana, Cuba
CMKW	z	....	....	Santiago, Cuba
KIDO	a	1000	N(2.5)	Boise, Idaho
KWK	a	1000	XBM(5)	St. Louis, Mo.
WAWZ	a	500	1(1)	Zarephath, N. J.
WBNX	a	1000	1	New York, N. Y.
WMBG	a	500	R	Richmond, Va.

9 am-2 am.	(6 am-11 pm)
7:45-8:45 am: 6-7:30 pm.	(4:45-5:45 am; 3-4:30 pm)
7 am-midnight.	(4 am-9 pm)

**1360 kcs. (220.4 m.)**

CMJH	b	200	....	Ciego de Avila, Cuba
KCRC	a	250	M	Enid, Okla.

## SATURDAY TIME

KGER	a	1000	....	Long Beach, Calif.
KLPM	a	500	(1)	Minot, N. Dak.
WCSC	a	506	N(11)	Charleston, S. C.
WFBL	a	1000	C(5)	Syracuse, N. Y.
WGES	a	500	1(1)	Chicago, Ill.
WQBC	a	1000	D	Vicksburg, Miss.
WSBT	a	500	1	South Bend, Ind.

## Eastern Standard (Pacific Standard)

9 am-3 am.	(6 am-midnight)
7 am-midnight.	(4 am-9 pm)

## 1370 kcs. (218.8 m.)

CFAR	a	100	....	Flin Flou, Okla.	8 am-2:15 pm; 6-10 pm.	(5-11:15pm; 3-7pm)
CFOS	z	100	....	Owen Sound, Ont.		
CKCW	a	100	F	Moncton, N. B.		
CKRN	z	100	P	Rouyn, P. Q.		
CMGE	a	200	....	Cardenas, Cuba		
KAST	a	100	DXZ	Astoria, Ore.	10 am-LS.	(7 am-LS)
KCMO	a	100	....	Kansas City, Mo.		
KEEN	a	100	3	Seattle, Wash.		
KELD	z	100	....	El Dorado, Ark.		
KERN	a	100	N	Bakersfield, Calif.	10 am-3 am.	(7 am-midnight)
KFGQ	a	100	D	Boone, Iowa	7-8:30 am; 10:30-11 am; 1-2 pm.	(4-5:30 am; 7:30-8 am; 10-11 am)
KFJZ	a	100	M(.25)	Fort Worth, Texas	8 am-midnight.	(5 am-9 pm)
KFRO	a	250	DM	Longview, Texas		
KGAR	a	100	C(.25)	Tucson, Ariz.	9 am-1 am.	(6 am-10 pm)
KGFL	a	100	4	Roswell, N. Mex.		
KGKL	a	100	(.25)	San Angelo, Texas		
KICA	a	100	4	Clovis, N. Mex.		
KIUN	a	100	....	Pecos, Texas	8 am-10 pm.	(5 am-7 pm)
KIUP	a	100	....	Durango, Colo.		
KLUF	a	100	M(.25)	Galveston, Tex.	8 am-1 am.	(5 am-10 pm)
KMAC	a	100	5(.25)	San Antonio, Tex.		
KOHB	a	100	(.25)	Rapid City, S. Dak.		
KOKO	a	100	....	La Junta, Colo.	8:30 am-11:30 pm.	(5:30 am-8:30 pm)
KONO	a	100	5	San Antonio, Tex.	7-8 am; 9:30-11 am; noon-1 pm; 2:30-5 pm; 7-8 pm; 9-11 pm.	(4-5 am; 6:30-8 am; 9-10 am; 11:30 am-2 pm; 4-5 pm; 6-8 pm)
KRE	a	100	(.25)	Berkeley, Calif.		
KRKO	a	50	3	Everett, Wash.	10 am-3 pm; 7-10 pm.	(7 am-noon; 4-7 pm)
KRMC	a	100	(.25)	Jamestown, N. Dak.		
KSLM	a	100	MXZ	Salem, Ore.	10:30 am-2:30 am.	(7:30 am-11:30 pm)
KTEM	a	250	DM	Temple, Texas		
KTOK	a	100	MN	Oklahoma City, Okla.	7 am-1 am.	(4 am-10 pm)
KTSW	z	100	DP	Emporia, Kans.		
KUJ	a	100	....	Walla Walla, Wash.	9:30 am-1 am.	(6:30 am-10 pm)
KVGB	z	100	....	Great Bend, Kans.		
KVRS	z	100	(.25)	Rock Springs, Wyo.		
KWYO	a	100	(.25)	Sheridan, Wyo.		
WABY	a	100	N(.25)	Albany, N. Y.	7 am-1 am.	(4 am-10 pm)
WAGF	a	250	D	Dothan, Ala.	9 am-LS.	(6 am-LS)
WATL	a	100	(.25)	Atlanta, Ga.	7 am-2 am.	(4 am-11 pm)
WBLK	a	100	....	Clarksburg, W. Va.	6 am-11:30 pm.	(3 am-8:30 pm)
WBNY	a	100	2(.25)	Buffalo, N. Y.	7-8:30 am; 10 am-2 am.	(4-5:30 am; 7 am-11 pm)
WBTM	a	100	(.25)	Danville, Va.		
WCBM	a	100	(.25)	Baltimore, Md.		
WCOS	z	100	P	Columbia, S. C.		
WDAS	a	100	(.25)	Philadelphia, Pa.	7:30 am-midnight.	(4:30 am-9 pm)
WDWS	a	100	(.25)	Champaign, Ill.	7 am-midnight.	(4 am-9 pm)
WEOA	a	100	C(.25)	Evansville, Ind.	8 am-1 am.	(5 am-10 pm)
WFOR	a	100	....	Hattiesburg, Miss.	8 am-9:30 pm.	(5 am-6:30 pm)
WGL	a	100	N(.25)	Fort Wayne, Ind.		
WGRC	a	250	D	New Albany, Ind.		
WHBQ	a	100	....	Memphis, Tenn.	7 am-T.S.	(4 am-LS)
WHDF	a	100	(.25)	Calumet, Mich.		
WHLB	a	100	C(.25)	Virginia, Minn.		
WHLS	a	250	D	Port Huron, Mich.	6 am-7:30 pm.	(3 am-4:30 pm)
WIBM	a	100	(.25)B	Jackson, Mich.		



**SUNDAY TIME**

**Eastern Standard**

**(Pacific Standard)**

WLLH	a	100	Sy	Lawrence, Mass.		
WLLH	a	100	MSy(.25)	Lowell, Mass.	7:30 am-midnight.	(4:30 am-9 pm)
WMBR	a	100	C(.25)	Jacksonville, Fla.	7 am-midnight.	(4 am-9 pm)
WMFD	a	100	D	Wilmington, N. C.	7:30 am-7 pm.	(4:30 am-4 pm)
WMFO	a	100	D	Decatur, Ala.	7 am-LS.	(4 am-LS)
WMIN	a	100	(.25)	St. Paul, Minn.	7 am-3 am.	(4 am-midnight)
WOC	a	100	C(.25)	Davenport, Iowa		
WPAY	a	100	.....	Portsmouth, Ohio	7 am-8 pm.	(4 am-5 pm)
WPRA	a	100	(.25)	Mayaguez, P. R.		
WRAK	a	100	(.25)	Williamsport, Pa.	7:30 am-9 pm.	(4:30 am-6 pm)
WRDO	a	100	MN	Augusta, Maine	8 am-midnight.	(5 am-9 pm)
WRJN	a	500	(.25)	Racine, Wis.		
WSAU	a	100	(.25)	Wausau, Wis.	7:30 am-1 am.	(4:30 am-10 pm)
WSVS	a	50	2D	Buffalo, N. Y.	8:30 am-10 pm.	(5:30 am-7 pm)
XECZ	z	100	.....	San Luis Potosi, S.L.P.		
XEL	a	125	.....	Morelia, Mich.		
XFLZ	z	100	.....	Mexico City, D. F.		

**1380 kcs. (217.3 m.)**

CMCW	b	150	.....	Havana, Cuba		
KOH	a	500	C	Reno, Nev.		
KQV	c	500	C(1)	Pittsburgh, Pa.	7 am-12:30 am.	(4 am-9:30 pm)
WALA	a	500	C(1)	Mobile, Ala.	8 am-midnight	(5 am-9 pm)
WKBH	a	1000	C	La Crosse, Wis.	7 am-midnight.	(4 am-9 pm)
WNBC	a	250	R(1)	New Britain, Conn.	7 am-midnight.	(4 am-9 pm)
WSMK	a	250	C(.5)	Dayton, Ohio	6 am-7:30 pm; 10 pm-1 am.	(3 am-4:30 pm; 7-10 pm)

**1390 kcs. (215.7 m.)**

CJGX	a	100	F	Yorkton, Sask.	8:30 am-1:45 am.	(5:30 am-10:45 pm)
CMJC	z	150	.....	Camaguey, Cuba		
KABR	a	500	(1)	Aberdeen, S. Dak.	8 am-11 pm.	(5 am-8 pm)
KLRA	a	1000	C(.5)	Little Rock, Ark.		
KOY	g	1000	C	Phoenix, Ariz.	8:30 am-2 am.	(5:30 am-11 pm)
KRCL	a	250	.....	Lewiston, Idaho	9:30 am-12:30 am.	(6:30 am-9:30 pm)
WHK	a	1000	BM(.25)	Cleveland, Ohio	7 am-2 am.	(4 am-11 pm)
WQDM	f	1000	D	St. Albans, Vt.	6 am-LS.	(3 am-LS)

**1400 kcs. (214.2 m.)**

CMGC	a	150	.....	Matanzas, Cuba		
CMKR	z	100	.....	Santiago, Cuba		
KHBC	a	250	CM	Hilo, Hawaii	Noon-4 am.	(9 am-1 am)
KLO	a	500	BX	Ogden, Utah	9:30 aam-1:30 am.	(6:30 am-10:30 pm)
KTUL	a	1000	C(.5)	Tulsa, Okla.	7:30 am-1:30 am.	(4:30 am-10:30 pm)
TGX	d	.....	.....	Guatemala City, Guat.		
WARD	a	500	2	Brooklyn, N. Y.		
WBBC	a	500	2	Brooklyn, N. Y.	7-11 am; 7:30-9 pm.	4-8 am; 4:30-6 pm)
WEGL	z	500	7(1)	Brooklyn, N. Y.		
WHDL	a	250	.....	Olean, N. Y.		
WIRE	a	1000	MR(.5)	Indianapolis, Ind.		
WLTH	a	500	2	New York, N. Y.	11 am-1:30 pm; 6-7:30 pm.	(8-10:30 am; 3-4:30 pm)
WVFW	a	500	2	Brooklyn, N. Y.	1:30-3:45 pm; 9-10:30 pm.	(10:30 am-12:45 pm; 6-7:30 pm)

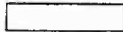
**1410 kcs. (212.6 m.)**

CKFC	a	50	5	Vancouver, B. C.		
CKMO	a	100	5	Vancouver, B. C.		
CMCQ	a	5000	.....	Havana, Cuba		
KFJM	a	500	(1)	Grand Forks, N. Dak	8 am-10 pm.	(5 am-7 pm)
KGNC	a	1000	MN(.2.5)	Amarillo, Texas		
KMED	b	250	N	Medford, Ore.		
WAAB	a	500	M(1)	Boston, Mass.		
WRCM	a	500	(1)	Bay City, Mich.		
WHIS	a	500	(1)	Bluefield, W. Va.	5 am-10 pm.	(3 am-7 pm)
WROK	a	500	(1)	Rockford, Ill.	7:30 am-11 pm.	(4:30 am-8 pm)
WSFA	a	500	C(1)	Montgomery, Ala.		

**SATURDAY TIME**

**Eastern Standard (Pacific Standard)**

1420 kcs. (211.1 m.)



CHLN	z	100	....	Three Rivers, P. Q		
CKCA	a	100	....	Kenora, Ont.		
CKGB	a	100	P	North Bay, Ont.	7:45 am-midnight.	(4:45 am-9 pm)
CMJP	a	200	....	Moron, Cuba		
KABC	a	100	M(.25)	San Antonio, Tex.	7:30 am-12:30 am.	(4:30 am-9:30 pm)
KATE	a	100	(.25)	Albert Lea, Minn.		
KBPS	a	100	4	Portland, Ore.	2-3:30 pm; 6-8 pm.	(11 am-12:30 pm; 3-5 pm)
KCMC	a	100	M(.25)	Texarkana, Tex.	8 am-midnight.	(5 am-9 pm)
KDNT	a	100	D	Denton, Texas	8 am-LS.	(5 am-LS)
KEUB	a	100	....	Price, Utah	10 am-10 pm.	(7 am-7 pm)
KFAM	a	100	(.25)	St. Cloud, Minn.	8 am-10 pm.	(5 am-7 pm)
KFIZ	a	100	....	Fond du Lac, Wis.		
KGFP	a	100	M(.25)	Shawnee, Okla.	8 am-1 am.	(5 am-10 pm)
KGIW	a	100	1	Alamosa, Colo.	9:50 am-9:30 pm.	(6:30 am-6:30 pm)
KGLU	z	100	(.25)	Safford, Ariz.		
KIDW	a	100	1	Lamar, Colo.		
KLBM	z	100	(.25)	La Grande, Ore.		
KNET	a	100	D	Palestine, Texas		
KORE	a	100	M	Eugene, Ore.		
KRBC	a	100	M(.25)	Abilene, Tex.		
KRBM	z	100	P(.25)	Bozeman, Mont.		
KRIC	z	100	M(.25)	Beaumont, Texas		
KRLH	a	100	D	Midland, Texas		
KSAN	a	100	(.25)	San Francisco, Calif.	24 hrs. daily.	(24 hrs. daily)
KTRI	f	100	(.25)	Sioux City, Iowa	7 am-midnight.	(4 am-9 pm)
KUMA	a	100	D	Yuma, Ariz.		
KVAK	z	100	DP	Atchison, Kans.		
KWAL	z	100	(.25)P	Wallace, Idaho		
KWBG	a	100	....	Hutchinson, Kans.	8 am-10 pm.	(5 am-7 pm)
KXL	c	100	(.25)	Portland, Ore.	9 am-3 am.	(6 am-midnight)
WACO	c	100	CM(.25)	Waco, Texas	9 am-1 am.	(5 am-10 pm)
WAGM	a	100	....	Presque Isle, Me.		
WAPQ	a	100	(.25)N	Chattanooga, Tenn.	7 am-midnight.	(4 am-9 pm)
WAZL	a	100	2	Hazleton, Pa.		
WBNO	a	100	(.25)	New Orleans, La.		
WCBS	a	100	(.25)	Springfield, Ill.	7 am-1 am.	(4 am-10 pm)
WCHV	a	100	(.25)	Charlottesville, Va.	7 am-10:05 pm.	(4 am-7:05 pm)
WEED	a	100	(.25)	Rocky Mount, N. C.	7 am-8 pm.	(4 am-5 pm)
WELL	a	100	B	Battle Creek, Mich.	7 am-midnight.	(4 am-9 pm)
WFMJ	z	100	DP	Youngstown, Ohio		
WGNC	z	100	(.25)P	Gastonia, N. C.		
WGPC	a	100	....	Albany, Ga.		
WHFC	a	100	(.25)	Cicero, Ill.	8 am-2 am.	(5 am-11 pm)
WHMA	z	100	D	Anniston, Ala.		
WILM	a	100	2	Wilmington, Del.		
WJMS	a	100	....	Ironwood, Mich.	8 am-8:30 pm.	(5 am-5:30 pm)
WJLAP	a	100	(.25)	Lexington, Ky.	8 am-11 pm.	(5 am-8 pm)
WLEU	a	100	B(.25)	Erie, Pa.		
WMAS	a	100	C(.25)	Springfield, Mass.		
WMBG	a	100	(.25)	Detroit, Mich.	7 am-midnight.	(4 am-9 pm)
WMBH	a	100	(.25)	Joplin, Mo.	7 am-midnight.	(4 am-9 pm)
WMB5	a	100	(.25)	Uniontown, Pa.	7 am-8 pm.	(4 am-5 pm)
WMFJ	a	100	....	Daytona Beach, Fla.	8 am-11 pm.	(5 am-8 pm)
WMSD	a	100	....	Muscle Shoals City, Ala.		
WPAD	a	100	(.25)	Paducah, Ky.		
WPAR	a	100	C	Parkersburg, W. Va.		
WPRP	z	100	(.25)	Ponce, P. R.		
WSLI	a	100	(.25)	Jackson, Miss.	8 am-11 pm.	(5 am-8 pm)

1430 kcs. (209.7 m.)



CMKZ	z	125	....	Palm Soriano, Cuba		
KECA	a	1000	B(5)	Los Angeles, Calif.		
KGNF	a	1000	D	North Platte, Nebr.	8 am-LS.	(5 am-LS)
KINY	a	250	....	Juneau, Alaska		
KSO	a	500	BM(.25)	Des Moines, Iowa	7:30 am-2 am.	(4:30 am-11 pm)
WBNS	a	1000	C(5)	Columbus, Ohio		

**SATURDAY TIME**

**Eastern Standard (Pacific Standard)**

WHEC a 500 C(1) Rochester, N. Y.  
 WHP a 500 C(1) Harrisburg, Pa.  
 WMP5 a 500 B(1) Memphis, Tenn.  
 WOKO a 500 C(1) Albany, N. Y.

7:30 am-1 am. (4:30 am-10 pm)  
 8 am-12:30 am. (5 am-9:30 pm)  
 7 am-1 am. (4 am-10 pm)

**1440 kcs. (208.2 m.)**

CMBY z 200 Havana, Cuba  
 HP50 z Colon, Panama  
 KDFN a 500 Casper, Wyo.  
 KFLA a 500 M Centralia, Wash.  
 KXYZ a 1000 BM Houston, Texas  
 WBIG a 1000 C Greensboro, N. C.  
 WCBA a 500 a Allentown, Pa.  
 WMBD a 1000 C(5) Peoria, Ill.  
 WSAN a 500 Na Allentown, Pa.  
 XEFI a 250 Chihuahua, Chih.

9:45 am-3 am. (6:45 am-midnight)  
 6:30 am-midnight. (3:30 am-9 pm)  
 7 am-2 am. (4 am-11 pm)

**1450 kcs. (206.8 m.)**

CFCT a 500 Victoria, B. C.  
 CHGS f 50 F Summerside, P. E. I.

11 am-4:30 pm; 7:30 pm-5 am. (8 am-1:30 pm; 4:30 pm-2 am)  
 6:30-8:30 am; 9:30 am-1:30 pm; 3-8 pm. (3:30-5:30 am; 6:30-10:30 am; noon-5 pm)

CMHM z 150 Cienfuegos, Cuba  
 KG CX a 1000 Wolf Point, Mont.  
 KIEM a 500 M(1) Eureka, Calif.  
 KTBS a 1000 N Shreveport, La.  
 TGQ d 200 Quezaltenango, Guat.  
 WAGA a 500 B(1) Atlanta, Ga.  
 WGAR a 1000 C(5) Cleveland, Ohio  
 WHOM a 250 Jersey City, N. J.  
 WSRAN f 1000 M Fall River, Mass.  
 XEF a 100 Juarez, Chih.

7:15 am-2 am. (4:15 am-11 pm)  
 7:30 am-midnight. (4:30 am-9 pm)

**1460 kcs. (205.4 m.)**

CMKF z 250 Holguin, Cuba  
 KSTP a 10000 R(25) St. Paul, Minn.  
 KJSV a 10000 C Washington, D. C.

7 am-2 am. (4 am-11 pm)  
 7 am-1 am. (4 am-10 pm)

**1470 kcs. (204 m.)**

CMCX z 150 Havana, Cuba  
 KGA a 5000 BM Spokane, Wash.  
 WLAC a 5000 C Nashville, Tenn.

**1480 kcs. (202.6 m.)**

CMHX z 120 Cienfuegos, Cuba  
 KOMA a 5000 C Oklahoma City, Okla.  
 WHIP z 5000 D Hammond, Ind.  
 WKBW a 5000 C Buffalo, N. Y.

7:30 am-1 am. (4:30 am-10 pm)  
 6 am-LS. (3 am-LS)  
 7 am-1 am. (4 am-10 pm)

**1490 kcs. (201.2 m.)**

CMKQ z 200 Santiago, Cuba  
 KFBK a 10000 N Sacramento, Calif.  
 WCKY a 10000 NX Covington, Ky.  
 XEDR z 100 Guaymas, Son.

10 am-3 am. (7 am-midnight)  
 6:30 am-1 am. (3:30 am-10 pm)

**1500 kcs. (199.9 m.)**

CJIC a 100 F Sault Ste. Marie, Ont.  
 CMOX a 200 Havana, Cuba  
 KAWM a 100 Gallup, N. Mex.

10 am-midnight. (7 am-9 pm)  
 10 am-10 pm. (7 am-7 pm)

## SATURDAY TIME

SATURDAY TIME			Eastern Standard (Pacific Standard)			
<BIX	a	100	M	Muskogee, Okla.	8 am-1 am.	(5 am-10 pm)
KBKR	z	100	(.25)P	Baker, Ore.		
KBST	a	100	M	Big Spring, Tex.		
KDAL	a	100	C	Duluth, Minn.	7:30 am-midnight.	(4:30 am-9 pm)
KDB	a	100	M(.25)	Santa Barbara, Calif.	10 am-3 am.	(7 am-midnight)
KFDA	z	100	P	Amarillo, Texas		
KGFI	a	100	(.25)	Brownsville, Tex.	8 am-midnight.	(5 am-9 pm)
KGKB	a	100	M(.25)	Tyler, Texas	8 am-1 am.	(5 am-10 pm)
KGKY	a	100	(.25)	Scottsbluff, Nebr.		
KNEL	a	250	D	Brady, Texas		
KNOW	a	100	CM	Austin, Texas		
KOTN	a	100	D	Pine Bluff, Ark.		
KOVC	a	100	(.25)	Valley City, N. Dak.		
KPAB	a	100	(.25)	Laredo, Tex.	7:30 am-11 am.	(4:30-8 am)
KPLC	a	100	(.25)	Lake Charles, La.		
KPLT	a	250	DM	Paris, Texas		
KPQ	a	100	M(.25)	Wenatchee, Wash.		
KRRR	a	100	M(.25)	Roseburg, Ore.		
KROD	z	100	AP	El Paso, Texas		
KSAL	a	100	(.25)	Salina, Kans.		
KSAM	z	100	D	Huntsville, Texas		
KTOH	z	100	(.25)P	Lihue, Hawaii		
KUTA	a	100	N	Salt Lake City, Utah	9 am-2 am.	(6 am-11 pm)
KVNU	z	100	P	Logan, Utah		
KVOE	a	100	M	Santa Ana, Calif.	10 am-3 am.	(7 am-midnight)
KVWC	z	100	P	Vernon, Texas		
KWEW	z	100	D	Hobbs, N. Mex.		
KXO	a	100	....	El Centro, Calif.		
KYCA	z	100	A(.25)P	Prescott, Ariz.		
KYSM	z	100	(.25)	Mankato, Minn.	7 am-3 am.	(4 am-midnight)
WCNW	a	100	1(.25)	Brooklyn, N. Y.	3-9 pm.	(noon-6 pm)
WDAN	a	250	D	Danville, Ill.	7:30 am-LS.	(4:30 am-LS)
WDNC	a	100	C	Durham, N. C.	7 am-11 pm.	(4 am-8 pm)
WGAL	a	100	(.25)	Lancaster, Pa.		
WGIL	z	250	DP	Galesburg, Ill.		
WGKV	z	100	P	Charleston, W. Pa.		
WHBB	a	100	....	Selma, Ala.	8 am-10 pm.	(5 am-7 pm)
WJBK	a	100	(.25)	Detroit, Mich.		
WKAT	a	100	(.25)	Miami Beach, Fla.		
WKBB	a	100	YC(.25)	E. Dubuque, Ill.	7:30 am-noon.	(4:30 am-9 am)
WKBV	a	100	(.25)	Richmond, Ind.	9:30 am-9:30 pm.	(6:30 am-6:30 pm)
WKRZ	a	100	(.25)	Muskegon, Mich.	7 am-10 pm.	(4 am-7 pm)
WKEU	a	100	D	Griffin, Ga.		
WMEX	a	100	(.25)	Boston, Mass.		
WNBK	a	100	C(.25)	Binghamton, N. Y.		
WNLC	a	100	DM	New London, Conn.	7:30 am-LS.	(4:30 am-LS)
WOMI	a	100	(.25)	Owensboro, Ky.	8 am-midnight.	(5 am-9 pm)
WOPI	a	100	....	Bristol, Tenn.	6 am-11 pm.	(3 am-8 pm)
WRDW	a	100	C(.25)	Augusta, Ga.		
WRGA	a	100	(.25)	Rome, Ga.	7:30 am-11 pm.	(4:30 am-8 pm)
WRTO	a	100	B	Richmond, Va.	7 am-1 am.	(4 am-10 pm)
WSTP	z	100	(.25)	Salisbury, N. C.		
WSYB	a	100	....	Rutland, Vt.	8:30-9 pm.	(5:30-6 pm)
WTMV	a	100	(.25)	E. St. Louis, Ill.		
WWRL	a	100	1(.25)	Woodside, N. Y.		
WWSW	a	100	(.25)	Pittsburgh, Pa.		

## 1510 kcs. (198.6 m.)

CFRC	a	100	F	Kingston, Ont.	8 am-11:15 pm.	(5 am-8:15 pm)
CKCR	a	100	....	Waterloo, Ont.		

## 1520 kcs. (197.3 m.)

TGW	d	1000	....	Guatemala City, Guat.		
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## 1530 kcs. (196 m.)

CMC	z	150	....	Havana, Cuba		
KITE	a	1000	....	Kansas City, Mo.	6 am-3 am.	(3 am-midnight)
WBRV	a	1000	M	Waterbury, Conn.	8 am-midnight.	(5 am-9 pm)

**SATURDAY TIME**

**Eastern Standard (Pacific Standard)**

**1550 kcs. (193.4 m.)**

KPMC a 1000 M  Bakersfield, Calif.

9:45 am-3 am. (6:45 am-midnight)  
7:30-11 am; 4 pm- midnight. (4:35-8 am; 1-9 pm)

WQXR a 1000 .... New York, N. Y.

**1560 kcs. (192.2 m.)**

CMBF z 5000 ....  Havana, Cuba

**1580 kcs. (189.8 m.)**

CM9RT z 200 ....  Guines, Cuba

**1600 kcs. (187.4 m.)**

CMBH z 5000 ....  Havana, Cuba

**DX**

*(Continued from page 16)*

The international tests proved beyond a shadow of doubt that medium wave signals could cross the Atlantic, although it is granted that conditions were ideal. Then followed isolated reports of TA reception under normal conditions. By the beginning of this decade, scattered reports of European reception were coming in to RADEX, but it was not until the cricket matches of 1932-33 that TA reception was accepted by the lay DXer as an actuality.

Events since then have proved that these matches brought the dawn of a new era in DXing—and so well may they be classed as the greatest sporting event in DX history.

**THE IMPROVED RADEX**

**WILL HELP YOUR FRIENDS TOO!**

WILL YOU PLEASE HELP BY

TELLING THEM ABOUT IT?—*The Editor*

**RADEX CLUB**

*(Continued from page 29)*

Members who receive all six plaques in any one class will be listed in our Verified All Continents Roster. Verifications must bear the name of the person submitting them. If they are cards, they must bear the original postage stamp, or if letters, the envelope with stamp affixed must also be submitted. We realize, however that many of our members are stamp collectors, and if postage stamps have been removed for that purpose, the cards or envelopes will be acceptable if the postmark is still legible.

**AMONG THE CLUBS**

*(Continued from page 45)*

bulletins are bigger and better than ever, and that it is adding new members every month.

The re-organized National Radio Club is getting out newsworthy bulletins weekly, its CPC has been getting its share of special DX programs for the club, and the membership appears to be on the increase.

Information about other clubs is lacking, although it is understood that many of them are active in their own localities.

### NORTH AMERICAN B. C. STATIONS BY LOCATIONS

*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, M Mutual.*

ALABAMA		Hot Springs		San Diego		New Haven	
Anniston		KTIS	1060 1000 N	KFSD	600 1000 B	WELI	900 500
WVMA	1420 100	Jonesboro		KGB	1330 1000 M	New London	
Birmingham		KPTM	1200 100	San Francisco		WNLC	1500 100 M
WAPI	1140 5000 C	Little Rock		KFRC	610 1000 M	Waterbury	
WBRC	930 1000 R	KARK	890 500 N	KGO	790 7500 B	WATR	1190 100
WVGN	1310 100 B	KGHI	1200 100	KJBS	1070 500	WBRY	1530 1000 M
Decatur		KLRA	1390 1000 C	KPO	680 50000 R	DELAWARE	
WMFO	1370 100	Pine Bluff		KSAN	1420 100	Wilmington	
Dothan		KOPN	1500 100	KSFO	560 1000 C	WDEL	1120 250 R
WAGF	1370 250	Siloam Springs		KYA	1230 1000	WILM	1420 100
Gadsden		KUOA	1260 5000	San Jose		DISTRICT OF COLUMBIA	
WJBY	1210 100	CALIFORNIA		KQW	1010 1000 M	Washington	
Huntsville		Bakersfield		San Luls Obispo	1200 100	WJSV	1450 10000 C
WBJP	1200 100	KERN	1370 100 N	KVEC	1500 100	WMAL	630 250 B
Mobile		KPMC	1550 1000 M	Santa Ana	1500 100 M	WOL	1230 1000 M
WALA	1380 500 C	Berkeley		KDB	1500 100 M	WRC	950 1000 R
Montgomery		KRE	1370 100	KTMS	1220 500 B	FLORIDA	
WCOV	1210 100	Beverly Hills		Santa Rosa	1310 100	Daytona Beach	
WSFA	1410 500 C	KMPC	710 500	KSRO	1310 100	WMFJ	1420 100
Selma		Chico		Stockton		Gainesville	
WTHR	1500 100	KHSL	1260 250	KGDM	1100 1000 M	WRUF	830 5000
Muscle Shoals City		El Centro		KWG	1200 100 N	Jacksonville	
WMSD	1420 100	KKO	1500 100	Visalia		WJAX	900 1000 N
Tuscaloosa		Eureka		KTKC	1190 250 M	WJTP	1290 250
WJRD	1200 250	KIEM	1450 500 M	Watsonville		WMBR	1370 100 C
ALASKA		Fresno		KIUB	1310 250	Lakeland	
Anchorage		KARM	1310 100 C	COLORADO			
KPQD	780 250	KMJ	580 1000 N	Alamosa		WLAK	1310 100 N
Fairbanks		Glendale		KGIW	1420 100	Miami	
KFAR	610 1000	KIEV	850 250	Colorado Springs		WIOD	610 1000 N
Juneau		Long Beach		KVOR	1270 1000 C	WMBF	610 1000
KINY	1430 250	KFOX	1250 1000	Denver		WQAM	560 1000 C
Ketehikan		KGER	1360 1000	KPEL	920 500 M	Miami Beach	
KGBU	900 500	Los Angeles		KLZ	560 1000 C	WKAT	1500 100
ARIZONA		KECA	1430 1000 B	KOA	830 50000 R	Orlando	
Globe		KEHE	780 1000	KPOF	880 1000	WDBO	580 1000 C
KWJB	1210 100	KFAC	1300 1000	KVOD	920 500 B	Pensacola	
Jerome		KFI	640 50000 R	Durango		WCOA	1340 500 C
KCRJ	1310 100	KFSG	1120 500	KIUP	1370 100	St. Augustine	
Lowell		KFYD	1000 1000	Grand Junction		WFOY	1210 100
KSNJ	1200 100	KFWB	950 1000	KFXJ	1200 100	St. Petersburg	
Phoenix		KGFI	1200 100	Greeley		WSUN	620 1000 N
KOY	1390 1000 C	KHJ	900 1000 M	KPKA	880 500 M	Tallahassee	
KTAR	620 1000 N	KMTR	570 1000	La Junta		WTAL	1310 100
Prescott		KNX	1050 50000 C	KIDW	1420 100	Tampa	
KYCA	1500 100	KRKR	1120 500	KIDW	1420 100	WDAF	1220 1000 C
Safford		Merced		Pueblo		WFLA	620 1000 N
KGLU	1420 100	KYOS	1040 250	KGHF	1320 500 B	West Palm Beach	
Tucson		Modesto		Sterling		WJNO	1200 100 C
KGAR	1370 100 C	KTRB	740 250	KGEK	1200 100	GEORGIA	
KVOA	1260 1000	Monterey		CONNECTICUT			
Yuma		KDON	1210 100 M	Bridgeport		Albany	
KUMA	1420 100	Oakland		WICC	600 500 M	WGPC	1420 100
ARKANSAS		KLS	1280 250	Hartford		Athens	
Blytheville		KLX	880 1000	WDR	1330 1000 C	WGAU	1310 100
KLCN	1290 100	KROW	930 1000	WTRC	1330 1000 C	Atlanta	
El Dorado		Pasadena		WTRC	1040 50000 R	WAGA	1450 500 B
KELD	1370 100	KPPC	1210 100	WTHF	1200 100 M	WATL	1370 100
Fort Smith		Redding		WTHF	1200 100 M	WGST	890 1000 C
KFPW	1210 100	KVCV	1200 100	New Britain		WSB	740 50000 R
		Sacramento		WNBC	1380 250 R	Augusta	
		KFBK	1490 10000 N			WRDW	1500 100 C
		KROY	1210 100 C				
		San Bernardino					
		KFXM	1210 100 M				

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

<b>Columbus</b> WRBL 1200 100 Griffin WKEU 1500 100 Macon WMAZ 1180 1000 C Rome WRGA 1500 100 Savannah WSAV 1310 100 WTOG 1260 1000 C Thomasville WPAX 1210 100 Waycross WAYX 1200 100	<b>Cicero</b> WHFC 1420 100 Danville WDAN 1500 250 Decatur WJBL 1200 100 East Dubuque WKBB 1500 100 C East St. Louis WTMV 1500 100 Galesburg WGIL 1500 250 Harrisburg WEBQ 1210 100 Joliet WCLS 1310 100 Peoria WMBD 1440 1000 C Quincy WTAD 900 1000 Rockford WRCK 1410 500 Rock Island WBBF 1210 100 Springfield WCBS 1420 100 WTAX 1210 100 Tuscola WDZ 1020 250 Urbana WILL 580 1000	<b>Boone</b> KFGQ 1370 100 Cedar Rapids WMT 600 1000 B Davenport WOC 1370 100 C Decorah KGCA 1270 100 KWLC 1270 100 Des Moines KRNT 1320 1000 C KSO 1430 500 B WIo 1000 50000 R Dubuque KDTH 1340 500 Iowa City WSU1 880 500 Marshalltown KFJB 1200 100 Mason City KGLO 1210 100 C Shenandoah KFNF 890 500 KMA 930 1000 B Sioux City KSCJ 1330 1000 C KTRI 1420 100	<b>Lexington</b> WLAP 1420 100 Louisville WAVE 940 1000 N WHAS 820 50000 C Owensboro WOMI 1500 100 Paducah WPAD 1420 100
<hr/> <b>HAWAII</b>		<hr/> <b>LOUISIANA</b>	
Hilo KHBC 1400 250 M Honolulu KGMB 1320 1000 C KGU 750 2500 N Lihue KTOH 1500 100	<hr/> <b>INDIANA</b>		Alexandria KALB 1210 100 Baton Rouge WJBO 1120 500 B Lafayette KVOL 1310 100 Lake Charles KPLC 1500 100 Monroe KMFB 1200 100 New Orleans WBNO 1420 100 WDSU 1250 1000 B WJBW 1200 100 WSMB 1320 1900 R WWL 850 10000 C Shreveport KRMD 1310 100 KTBS 1450 1000 N KWKH 1100 10000 C
<hr/> <b>IDAHO</b>		<hr/> <b>KANSAS</b>	
Boise KIDO 1350 1000 N Coeur d'Alene KGCI 1200 100 Idaho Falls KID 1320 500 Lewiston KRLC 1390 250 Nampa KFND 1200 100 Pocatello KSEI 900 250 N Twin Falls KTPI 1240 1000 N Wallace KWAL 1420 100	Abilene KFBI 1050 5000 Atchison KVAK 1420 100 Coffeyville KGGF 1010 1000 M Dodge City KGNO 1340 250 Emporia KTSW 1370 100 Garden City KIUL 1210 100 Great Bend KVGB 1370 100 Hutchinson KWWB 1420 100 Kansas City KCKN 1310 100 Lawrence KFBU 1220 1000 WREN 1220 1000 B Manhattan KSAC 580 500 Pittsburg KOAM 790 1000 N Salina KSAL 1500 100 Topeka WIBW 580 1000 C Wichita KANS 1210 100 B KFHI 1300 1000 C		August WRDQ 1370 100 M Bangor WABI 1200 100 WLBZ 620 500 N Lewiston WCOV 1210 100 Portland WCSH 940 1000 R WGAN 640 500 Presque Isle WAGM 1420 100
<hr/> <b>ILLINOIS</b>		<hr/> <b>MARYLAND</b>	
Aurora WMRO 1250 250 Bloomington WJBC 1200 100 Carthage WCAZ 1070 100 Champaign WDSW 1370 100 Chicago WAAF 920 1000 WBBM 770 50000 C WCBD 1080 5000 WCFL 970 5000 N WCRW 1210 100 WEDC 1210 100 WENR 870 50000 B WGES 1360 500 WGN 720 50000 M WIJD 1130 20000 WLS 870 50000 B WMAQ 670 50000 R WMBI 1080 5000 WSBC 1210 100	Baltimore WBAL 760 2500 B WBAL 1060 10000 B WCAO 600 500 C WCBM 1370 100 WFBR 1270 500 R College Park W3XJ 1060 100 Cumberland WTBO 800 250 Frederick WFMJ 900 500 Hagerstown WJEF 1210 100 Salisbury WSAL 1200 250		Ashland WCMJ 1310 100 Covington WCKY 1490 10000 N
<hr/> <b>IOWA</b>		<hr/> <b>MASSACHUSETTS</b>	
Ames WOI 640 5000	Barnstable WOCB 1210 100		

**NORTH AMERICAN B. C. STATIONS BY LOCATIONS**

<b>Boston</b>		<b>MINNESOTA</b>		<b>St. Joseph</b>		<b>NEW JERSEY</b>	
WAAB	1410 500M	Albert Lea		KPEQ	680 2500	Asbury Park	
WBZ	990 50000 B	KATE	1420 100	St. Louis		WCAP	1280 500
WCOP	1120 500	Duluth		KMOX	1090 50000 C	Atlantic City	
WEEL	590 1000 C	KDAL	1500 100 C	KSD	550 1000 R	WPG	1100 5000 C
WHDH	830 1000	WBBC	1290 1000 N	KWK	1350 1000 B	Bridgeton	
WMEX	1500 100	Fergus Falls		KXOK	1250 1000	WSNJ	1210 100
WNAC	1230 1000 R	KGDE	1200 100	WEW	780 1000	Camden	
WORL	920 500	Hibbing		WIL	1200 100	WCAM	1280 500
Fall River		WMFG	1210 100	Springfield		Jersey City	
WSAR	1450 1000M	Mankato		KGBX	1280 500 N	WAAT	940 500
Greenfield		KYSM	1500 100	KWTO	560 5000	WHOM	1450 250
WHAT	1210 250	Minneapolis		<b>MONTANA</b>			
Lawrence		WCCO	810 50000 C	Billings		WHBH	1250 1000
WLAW	680 1000	WDGY	1180 1000 C	KGHL	780 1000 N	WOR	710 50000M
WLEH	1370 100M	WTB	760 1000	Bozeman		Red Bank	
WLH	1370 100	WTCN	1250 1000 B	KRBM	1420 100	WBRB	1210 100
New Bedford		Moorehead		Butte		Trenton	
WNLI	1310 100M	KVOX	1310 100	KGIR	1340 1000 N	WTNJ	1280 500
Pittsfield		Northfield		Great Falls		Whippany	
WBRK	1310 100 C	WCAL	760 1000	KFBF	1280 1000 C	WXXDD	50000
Springfield		Rochester		Helena		Zarephath	
WBZA	990 1000 B	KROC	1310 100	KPFA	1210 100 N	WAWZ	1350 500
WMAS	1420 100 C	St. Cloud		<b>NEW MEXICO</b>			
WSPR	1140 500M	KPAM	1420 100	Albuquerque		Albuquerque	1230 1000
Worcester		St. Paul		KGEZ	1310 100	KOB	1180 10000 N
WORC	1280 500 C	KSTP	1460 10000 R	Lewistown		Carlsbad	
WTAG	580 1000 R	WMIN	1370 100	KDNC	1200 100	KLAH	1210 100
		Virginia		Missoula		Clovis	
		WHLB	1370 100 C	KGVO	1260 1000 C	KJCA	1370 100
		Winona		Wolf Point		Gallup	
		KWNO	1200 250	KGCC	1450 1000	KAWM	1500 100
		<b>MISSISSIPPI</b>				Hobbs	
		Grenada		<b>NEBRASKA</b>			
		WRBM	1210 100	Clay Center		KWEW	1500 100
		Gulfport		KMMJ	740 1000	Roswell	
		WGCM	1210 100	Kearney		KGFL	1370 100
		WFOR	1370 100	KGFV	1310 100	Santa Fe	
		Jackson		Lincoln		KRQA	1310 100
		WJDX	1270 1000 R	KFAB	770 10000 C	<b>NEW YORK</b>	
		WSLI	1420 100	KFOR	1210 100 C	Albany	
		Laurel		Norfolk		WABY	1370 100 N
		WAML	1310 100	WJAG	1060 1000	WOKO	1430 500 C
		Meridian		North Platte		Auburn	
		WCOC	880 1000 C	KGNE	1430 1000	WMOB	1310 100
		Vioksburg		Omaha		Binghamton	
		WQBC	1360 1000	KOIL	1280 1000 B	WNEF	1500 100 C
		<b>MISSOURI</b>				WOW	590 1000 R
		Cane Girardeau		Scottsbluff		Brooklyn	
		KFVS	1210 100	KGKY	1500 100	WARD	1400 500
		Columbia		<b>NEVADA</b>			
		KFRU	630 500	Reno		WBBC	1400 500
		Jefferson City		KOH	1380 500 C	WBRB	1300 1000
		KWOS	1310 100	<b>NEW HAMPSHIRE</b>			
		Joplin		Laconia		WCNW	1500 100
		WMBH	1420 100	WLNH	1310 100M	WVFW	1400 500
		Kansas City		Manchester		Buffalo	
		KCMT	1370 100	WFEA	1340 500 N	WBEN	900 1000 B
		KITE	1530 1000	Portsmouth		WBNY	1370 100
		KMBC	950 1000 C	<b>NEW HAMPSHIRE</b>			
		WDAF	610 1000 R	Laconia		WBR	1310 100 B
		WTB	860 1000M	WLNH	1310 100M	WGR	550 1000 C
		Poplar Bluff		WFEA	1340 500 N	WKPV	1480 5000 C
		KWOC	1310 100	WHEB	740 250	WBSV	1370 50
				<b>NEW YORK</b>			
						Canton	
						WCAD	1220 500
						Elmira	
						WENY	1200 250
						WESG	880 1000 C

<b>MICHIGAN</b>	
Battle Creek	
WEFL	1420 100 B
Bay City	
WBCM	1410 500
Calumet	
WDFD	1370 100
Detroit	
WBRK	1500 100
WTR	750 50000 C
WMBE	1420 100 C
WWJ	920 1000 R
WXYZ	1240 1000 B
East Lansing	
WKAR	850 1000
Flint	
WDFD	1310 100 B
Grand Rapids	
WASH	1270 500 N
WOOD	1270 500 N
Ironwood	
WJMS	1420 100
Jackson	
WJBM	1370 100 B
Kalamazoo	
WKZO	590 1000 B
Lansing	
WJIM	1210 100 B
Lapeer	
WMPG	1200 100
Marquette	
WBEO	1310 100
Muskegon	
WKBZ	1500 100
Port Huron	
WHLB	1370 250
Royal Oak	
WEXL	1310 50



NORTH AMERICAN B. C. STATIONS BY LOCATIONS

<b>Freeport</b>		<b>Rocky Mount</b>		<b>OKLAHOMA</b>		<b>Easton</b>	
WGBC 1210 100		WEED 1420 100		Ada		WEST 1200 100	
Jamestown		Salisbury		KADA 1200 100 M		Erie	
WJTN 1210 100 B		WSTP 1500 100		Ardmore		WLFU 1420 100 B	
Newburgh		Wilmington		KVSO 1210 100 M		Glenside	
WGNV 1210 100		WMFD 1370 100		Elk City		WIBG 970 100	
New York		Wilson		KASA 1210 100 M		Greensburg	
WABC 860 50000 C		WGTM 1310 100		Enid		WIIJB 620 250 C	
WBLL 1100 5000		Winston-Salem		KCRG 1360 250 M		Grove City	
WBXN 1350 1000		WAIR 1250 250		Muskogee		WSAJ 1310 100	
WBOQ 860 50000		WSJS 1310 100 C		KBIX 1500 100 M		Harrisburg	
WEAF 660 50000 R				Norman		WHP 1430 500 C	
WEVD 1300 1000		<b>NORTH DAKOTA</b>		WNAD 1010 1000		WKBO 1200 100	
WDH 1010 1000		<b>Bismarck</b>		Oklahoma City		Hazelton	
WINS 1180 1000		KFYR 550 1000 N		KOCY 1310 100		WAZL 1420 100	
WJZ 760 50000 B		Devils Lake		KOMA 1480 5000 C		Johnstown	
WLTH 1400 500		KDLR 1210 100		KTKO 1370 100 M		WJAC 1310 100	
WMCA 570 1000		Ferge		WKY 900 1000 N		Lancaster	
WNEW 1250 1000		WDAY 940 1000 N		Okmulgee		WGAL 1500 100 N	
WNYC 810 1000		Grand Forks		KHBG 1210 100		New Castle	
WOV 1130 1000		KFJM 1410 500		Ponca City		WKST 1250 250	
WQXI 1550 1000		Jamestown		WBBZ 1200 100 M		Philadelphia	
Olean		KRMK 1370 100		Shawnee		KYV 1020 10000 R	
WHDL 1400 250		Mandan		KGFF 1420 100 M		WCAU 1170 50000 C	
Patitsburg		KGCU 1240 250		Tulsa		WDAS 1370 100	
WMFF 1310 100 B		Minot		KOME 1310 250		WFIL 560 1000 B	
Rochester		KLPM 1360 500		KTUL 1400 1000 C		WHAT 1310 100	
WHAM 1150 50000 B		Valley City		KVOO 1140 25000 N		WTP 610 1000	
WHBC 1430 500 C		KOVC 1500 100		<b>OREGON</b>		WPEN 920 1000	
WSAY 1210 100				Astoria		WRAX 920 1000	
Saranac Lake				KAST 1370 100		WTEL 1310 100	
WNBZ 1290 100				Baker		Pittsburg	
Schenectady				KBKR 1500 100		KDKA 980 50000 B	
WGY 790 50000 R				Bend		KQV 1380 500 C	
Syracuse				KBND 1310 100		WCAE 1220 1000 R	
WFBL 1360 1000 C				Corvallis		WJAS 1290 1000 C	
WSYR 570 1000 B				KOAC 550 1000		WWSW 1500 100	
WSYU 570 1000				Eugene		Reading	
Troy				KORE 1420 100 M		WEU 830 1000 R	
WHAZ 1300 1000				Klamath Falls		WRAW 1310 100	
WTRY 950 1000				KFJI 1210 100		Seranton	
Utica				La Grande		WGBI 880 500 C	
WIRX 1200 100 C				KLBM 1420 100		WQAN 880 500	
White Plains				Marshfield		Sharon	
WFAS 1210 100				KOOS 1200 100		WPIC 780 250	
Woodside				Medford		Sunbury	
WWRL 1500 100				KMED 1410 250 N		WKOK 1210 100	
<b>NORTH CAROLINA</b>				Portland		Uniontown	
Asheville				KALE 1300 1000 M		WMBS 1420 100	
WWNC 570 1000 N				KBPS 1420 100		Wilkes-Barre	
Charlotte				KEX 1180 5000 R		WBAX 1210 100 M	
WBT 1080 50000 C				KGW 620 1000 R		WBRE 1310 100 N	
WSOC 1210 100 N				KOIN 940 1000 C		Williamsport	
Durham				KWJJ 1040 500		WRAK 1370 100	
WDNC 1500 100 C				KXL 1420 100		York	
Fayetteville				Roseburg		WORK 1320 1000 N	
WFNC 1340 250				KRNR 1500 100 M		<b>PUERTO RICO</b>	
Gastonia				Salem		Mayaguez	
WGNC 1420 100				KSLM 1370 100 M		WPRA 1370 100	
Greensboro				<b>PENNSYLVANIA</b>		Ponce	
WBIG 1440 1000 C				Allentown		WPRP 1420 100	
High Point				WCBA 1440 500		San Juan	
WMFR 1200 100				WSAN 1440 500 N		WKAQ 1240 1000	
Kinston				Altoona		WNEL 1290 1000	
WPTC 1200 100				WFRG 1310 100			
Raleigh							
WPTF 680 5000 N							
WRAL 1210 100							

## NORTH AMERICAN B. C. STATIONS BY LOCATIONS

RHODE ISLAND		Amarillo		San Angelo		Richmond	
Providence		KFDA 1500 100	100	KGKL 1370	100	WBBL 1210 100	
WEAN 780	1000 M	KGNC 1410	1000 N	San Antonio		WABG 1350	500 R
WJAR 890	1000 R	Austin		KABC 1420	100 M	WBNTL 880	500
WPRO 630	500 C	KNOV 1500	100 C	KMAC 1370	100	WTTD 1500	100 F
		KTEC 1120	1000	KONA 1370	100	WHVA 1110	5000 C
		Beaumont		KTSA 550	1000 C	Roanoke	
SOUTH CAROLINA		KFDM 560	500 N	WOLA 1190	50000 N	WDBJ 930	1000 C
Anderson		KRIC 1410	100 M	Sherman		WASHINGTON	
WAIM 1200	100 C	Big Spring		KRRV 1310	250 M	Aberdeen	
Charleston		KBST 1500	100 M	Temple		KKRO 1310	100 M
WCSC 1360	500 N	Brady		KTEM 1370	250 M	Bellingham	
WTMA 1210	100	KNEL 1500	250	Texarkana		KVOS 1200	100 M
Columbia		College Station		KTYL 1500	100 M	Centralia	
WCOS 1370	100	WTAV 1120	500	Vernon		KELA 1440	500 M
WIS 560	1000 N	Corpus Christi		KVVC 1500	100	Everett	
Florence		KRIS 1330	500 N	Waco		KRKO 1370	50
WOLS 1200	100	Corsicana		WACO 1420	100 C	Longview	
Greenville		KAND 1310	100 M	Weslaco		KWLK 780	250
WFBC 1300	1000 N	Dallas		KRGV 1260	1000 N	Olympia	
Spartanburg		KRLD 1040	10000 C	Wichita Falls		KGY 1210	100 M
WSPA 920	1000	WFAA 800	50000 N	KWTF 620	250	Pullman	
		WRR 1280	500 M	UTAH		KWSC 1220	1000
SOUTH DAKOTA		Denton		Cedar City		Seattle	
Aberdeen		KDNF 1420	100	KNUE 1310	100	KEEN 1370	100
KABR 1390	500	Dublin		Logan		KIRO 710	1000 C
Brookings		KFPL 1310	100	KVNU 1200	100	KJR 970	5000 B
KFDY 780	1000	El Paso		Ogden		KOL 1270	1000 M
Pierre		KROD 1500	100	KLO 1400	500 B	KOMO 920	1000 R
KGFX 630	200	KTNM 1310	100 N	Price		KRRC 1120	250
Rapid City		WDAH 1310	100	KREUR 1420	100	KTW 1220	1000
KOBH 1370	100	Fort Worth		Salt Lake City		KXA 760	250
WCAT 1200	100	KFJZ 1370	100 M	KSLT 1290	1000 R	Spokane	
Sioux Falls		KGKO 570	1000 B	KTVL 1290	1000 R	KFO 1120	100
KELO 1200	100 N	KTAT 1240	1000 M	KSL 1130	50000 C	KFPY 890	1000 C
KSOO 1110	5000 N	WRAP 800	50000 N	KUTA 1500	100 N	KGA 1470	5000 B
Vermillion		Galveston		VERMONT		KHQ 590	1000 R
KUSD 890	500	KLUF 1370	100 M	Burlington		Tacoma	
Yankton		Greenville		WCAX 1200	100	KMO 1330	1000 M
WNAX 570	1000 C	KGYL 1200	100	Rutland		KVT 570	1000 C
TENNESSEE		Houston		WVSYB 1500	100	Vancouver	
Bristol		KPRC 920	1000 R	St. Albans		KVAN 880	250
WOPI 1500	100	KTRH 1290	1000 C	WQDM 1390	1000	Walla Walla	
Chattanooga		KXYZ 1440	1000 B	Springfield		KUJ 1370	100
WAPO 1420	100 N	Huntsville		WNETX 1260	1000 C	Wenatchee	
WDOD 1280	1000 C	KSAM 1500	100	Waterbury		KIT 1250	250 M
Jackson		Kilgore		WDEV 550	500	Yakima	
WTJS 1310	100	KOCA 1210	100	VIRGINIA		KPQ 1500	100
Johnson City		Laredo		Charlottesville		WEST VIRGINIA	
WJHL 1200	100	KIAB 1500	100	WCHV 1420	100	Beckley	
Knoxville		Longview		Danville		WBLS 1210	100
WNOX 1010	1000 C	KPRO 1370	250 M	WBTM 1370	100	Bluefield	
WROL 1310	100 N	Lubbock		Harrisonburg		WHIS 1410	500
Memphis		KPYO 1310	100 M	WSPA 550	500	Charleston	
WHBQ 1370	100	Lufkin		Lynchburg		WCHS 580	500 C
WMC 780	1000 R	KREB 1310	100	WLVA 1200	100	WGKY 1500	100
WMPS 1430	500 B	Midland		Newport News		WHSV 1500	100
WREC 600	1000 C	KRLH 1420	100	WGH 1310	100	Clarksburg	
Nashville		Palestine		Norfolk		WBLK 1370	100
WLAC 1470	5000 C	KNET 1420	100	Petersburg		Fairmont	
WSIX 1210	100	Pampa		WPIV 1210	100	WMMN 890	500 C
WSM 650	50000 N	KPDN 1310	100			Huntington	
TEXAS		Paris				WSAZ 1190	1000
Abilene		KPIT 1500	250 M			Parkersburg	
KRBC 1420	100 M	Pecos				WPAR 1420	100 C
		KIUN 1370	100			Wheeling	
		Port Arthur				WVVA 1160	5000 C
		KPAC 1260	500				

**NORTH AMERICAN B. C. STATIONS BY LOCATIONS**

WISCONSIN	BRIT. COLUMBIA	Hamilton	St. Anne de la Pocatiere
Eau Claire WEAU 1050 1000 Fond du Lac KFIZ 1420 100 Green Bay WHBY 1200 100 WTAQ 1330 1000 C Janesville WCLO 1200 100 LaCrosse WKBH 1380 1000 C Madison WHB 940 5000 WIBA 1280 1000 N Manitowoc WOMT 1210 100 Milwaukee WEMP 1310 100 WISN 1120 250 C WTMJ 620 1000 N Poynette WIBU 1210 100 Racine WTRN 1370 100 Rice Lake WJMC 1210 250 Sheboygan WHBL 1300 250 Stevens Point WLBL 900 5000 Superior WDSM 1200 100 Wausau WNSAU 1370 100	Chilliwack CHWK 780 100 F Kamloops CFJK 880 1000 F Kelowna CKOV 630 100 F Prince Rupert CFPR 580 50 Trail CJAT 910 1000 F Vancouver CBR 1100 5000 F COR 600 500 CKCD 1010 100 CKFC 1410 50 CKMO 1410 100 CKWX 1010 100 Victoria CFCT 1450 500	Chicomilco CHML 1010 100 F CKOC 1120 500 F Kenora CKKA 1420 100 Kingston CFRC 1510 100 F London CFPL 730 100 F North Bay CFCH 930 100 F CKL 1310 100 F CKGB 1420 100 F Ottawa CBO 880 1000 F CKCO 1010 100 F Owen Sound CFOS 1370 100 Prescott CFPC 930 100 St. Catharines CKTB 1200 100 F Sault Ste. Marie CJIC 1500 100 F Stratford CJCS 1210 50 Sudbury CKSO 780 1000 F Toronto CBL 840 5000 F CBY 960 500 F CFRB 690 10000 C CKCL 580 100 F Waterloo CKCR 1510 100 Windsor CKLW 1030 5000 F Wingham CKNX 1200 100	CHGB 1200 100 Sherbrooke CHBT 1210 100 Three Rivers CHLN 1420 100
SASKATCHEWAN			
			Moose Jaw CHAB 1200 100 F Prince Albert CKBI 1210 100 F Regina CRM 540 1000 F CKCK 1010 1000 F Saskatoon CBK 540 5000 CFQC 840 1000 F Yorkton CJGX 1390 100 F
COSTA RICA			
			San Jose TIGH 725 600 TILJ 775 500 TILS 880 1000 TIPG 625 2000 TIX 650 1000 TIXD 800 1000
CUBA			
			Bayamo CMKL 950 200 Caibarien CMHD 1270 250 Camaguey CMJA 860 250 CMJC 1390 200 CMJE 1230 200 CMJF 930 200 CMJK 1290 300 CMJW 1070 200 CMJX 740 200 Cardenas CMGE 1370 200 Ciego de Avila CMJI 1360 200 CMJJ 1130 200 CMJO 1260 200 Cienfuegos CMHJ 1160 100 CMHM 1450 150 CMHX 1480 120 Cruces CMHK 1210 250 Guantanamo CMKS 710 200 Guines CM9RT 1580 200 Havana CMBC 1140 150 CMBD 550 200 CMBF 1560 5000 CMBG 690 200 CMBH 1600 5000 CMBL 750 500
MANITOBA			
	Brandon CKX 1120 1000 F Flin Flon CFAR 1370 100 Winnipeg CJRC 630 1000 F CKY 910 15000 F		
NEW BRUNSWICK			
	Fredericton CFNB 550 500 F Moncton CKCW 1370 100 F Sackville CBA 1050 50000 St. John CHSJ 1120 100 F		
N. W. TERRITORY			
	Aklavik CJCU 1210 50		
NOVA SCOTIA			
	Glace Bay VAS 685 2000 Halifax CHNS 930 1000 F Sydney CJCB 1240 1000 F Wolfville CKIC 1010 50 Yarmouth CJLS 1310 100 F		
ONTARIO			
	Brantford CKPC 930 100 F Chatham CFCO 630 100 F Cobalt CKMC 1210 50 Fort William CKPR 580 1000 F		
		PRINCE EDWARD ISLAND Charlottetown CFCY 630 1000 F CKCK 1310 50 Summerside CHGS 1450 50 F	
		QUEBEC Chicoutimi CBJ 1120 100 F Hull CKCH 1210 100 F Montreal CBF 910 50000 N CBM 1050 5000 F CFCF 600 500 B CHLP 1120 100 F CKAC 730 5000 C New Carlisle CHNC 610 1000 F Quebec CHRC 580 100 CKCV 1310 100 F CBV 950 1000 F Rimouski CBRR 1030 1000 F	
			Wyoming Casper KDFN 1440 500 Rock Springs KVRS 1370 100 Sheridan KWYO 1370 100
BAHAMAS			
			Nassau ZNS 540 400
CANADA ALBERTA			
			Calgary CFAC 930 1000 F CFCN 1030 10000 CJCI 690 100 F Edmonton CFRN 960 100 F CICA 730 1000 F CKUA 580 500 Grande Prairie CFGP 1200 100 Lethbridge CJOC 950 100 F

NORTH AMERICAN B. C. STATIONS BY CALLS

CMBQ	1320	5000
CMBS	1170	150
CMBX	1080	150
CMBY	1440	200
CMBZ	940	200
CMC	1530	150
CMCA	1350	200
CMCB	1230	150
CMCD	630	15000
CMCF	810	5000
CMCG	1290	150
CMCJ	1110	200
CMCK	970	5000
CMCL	730	10000
CMCO	1200	150
CMCP	1050	200
CMCR	660	150
CMCU	780	150
CMCW	1380	150
CMCX	1470	150
CMCY	570	15000
CMK	720	250
CMOA	910	250
CMOX	1500	200
CMQ	1010	25000 N
CMW	880	1400
CMX	1260	200
Holguin		
CMKF	1460	250
CMKO	1280	200
Manzanillo		
CMKM	1080	100
Matanzas		
CMGC	1400	200
CMGF	1120	200
CMGH	790	200
Moron		
CMJP	1420	200
Palma Soriano		
CMKZ	1430	125
Pinar del Rio		
CMAB	1240	200
Placetas		
CMHP	1100	200
Sagua la Grande		
CMHA	1090	200
Sancti Spiritus		
CMHB	1240	200
Santa Clara		
CMHJ	1060	250
CMHW	680	200
Santiago		
CMKC	1250	150
CMKD	910	1000
CMKG	1150	100
CMKQ	1490	200
CMKR	1400	250
CMKW	750	200
CMKX	1190	75
Trinidad		
CMHT	920	200
<b>DOMINICAN REPUBLIC</b>		
Ciudad Trujillo		
HIN	1090	740
HIT	1050	50
HIX	800	800

<b>EL SALVADOR</b>		
San Salvador		
YSS	640	500
<b>GUATEMALA</b>		
Guatemala City		
TGW	1520	1000
TGX	1400	...
TGI	1310	...
Quezaltenango		
TGQ	1450	200
<b>HONDURAS</b>		
Tegucigalpa		
HRN	1250	50
<b>MEXICO</b>		
AGUASCALIENTES		
Aguascalientes		
XEBI	1000	25
<b>BAJACALIFORNIA</b>		
Mexicali		
XEAA	750	200
XEAO	660	250
XECL	960	1000
Rosarito Beach		
XERB	1090	100000
Tijuana		
XEAC	980	1000
XEBG	820	1000
XEC	1150	100
XELO	670	10000
XEMO	860	5000
<b>CHIHUAHUA</b>		
Chihuahua		
XEBU	1240	50
XEFI	1440	250
Juarez		
XEF	1450	100
XEFV	1210	50
XEJ	1020	1000
XEP	1160	500
Parral		
XEAT	1210	250
<b>COAHUILA</b>		
Piedras Negras		
XEMU	580	250
XEPN	730	100000
Sabinas		
XEBX	640	250
Saltillo		
XEAS	1160	100
Torreon		
XETB	1310	500
Villa Acuna		
XEDH	1340	200
XERA	840	250000

<b>DISTRITO FEDERAL</b>		
Gral. Anaya		
XEDA	1220	200
Mexico City		
XFAI	1250	500
XEAL	660	1000
XEB	1030	10000
XEBS	1340	200
XEBZ	810	100
XEDP	1080	500
XEFO	940	5000
XEJP	1130	100
XEK	990	100
XEL	1150	250
XELZ	1370	100
XEN	780	1000
XEQ	710	50000
XERO	870	500
XEW	800	100000
XENX	1170	1000
<b>DURANGO</b>		
Durango		
XERP	1150	250
XEE	1210	50
<b>GUANAJUATO</b>		
Irapuato		
XEFO	1310	25
Leon		
XEKL	1340	500
<b>JALISCO</b>		
Guadalajara		
XED	1160	2500
Guzman		
XERA	1080	20
<b>MEXICO</b>		
Texcoco		
XEXE	1270	17
<b>MICHOACAN</b>		
Morelia		
XEI	1370	125
<b>NUEVO LEON</b>		
Monterrey		
XEFB	870	200
XEG	1230	250
XEII	720	250
XET	690	5000
XEX	1310	125
<b>PUEBLA</b>		
Puebla		
XETH	1210	100
<b>SAN LUIS POTOSI</b>		
San Luis Potosi		
XECZ	1370	100

<b>SINALOA</b>		
Mazatlan		
XEHL	1220	50
<b>SONORA</b>		
Cananea		
XEFL	1010	50
Guaymas		
XEDR	1490	100
Hermosillo		
XEBH	930	500
Nogales		
XEAF	990	750
Obregon		
XEAP	1340	50
<b>TAMAULIPAS</b>		
Matamoros		
XEAM	750	25
Nuevo Laredo		
XEBK	1080	100
XEDP	810	100
XEFE	980	250
XENT	910	150000
Reynosa		
XEAV	960	100000
Tampico		
XEFA	1230	250
XEFW	1310	300
XES	990	250
<b>VERACRUZ</b>		
Cordoba		
XEAG	1310	10
Jalapa		
XENB	1270	250
XEND	1340	350
Minatitlan		
XEDW	1150	20
Veracruz		
XETF	1220	12
XEU	1010	250
<b>YUCATAN</b>		
Merida		
XETC	1340	100
XEME	1240	50
XEZ	630	500
<b>MIQUELON</b>		
St. Pierre		
PQN	609	250
<b>NEWFOUNDLAND</b>		
St. John's		
VOAC	1065	40
VOCM	1006	200
VOGY	840	400
VONP	1195	500
VOWR	681	500

NORTH AMERICAN B. C. STATIONS BY CALLS

CBA	1050	5000	Sackville, N. B.	CHLT	1210	100	Sherbrooke, P. Q.	CKIC	1010	50
CBF	910	50000	Montreal, P. Q.	CHML	1010	100	Hamilton, Ont.	CKLW	1030	5000
CBJ	1120	100	Chicoutimi, P. Q.	CHNC	610	1000	New Carlisle, P. Q.	CKMC	1210	50
CBK	540	5000	Saskatoon, Sask.	CHNS	930	1000	Halifax, N. S.	CKMO	1410	100
CBL	840	50000	Toronto, Ont.	CHRC	580	100	Quebec, P. Q.	CKNX	1200	100
CBM	1050	5000	Montreal, P. Q.	CHSJ	1120	100	St. John, N. B.	CKOC	1120	500
CBO	880	1000	Ottawa, Ont.	CHWK	780	100	Chilliwack, B. C.	CKOV	630	100
CBR	1100	5000	Vancouver, B. C.	CJAT	910	1000	Trail, B. C.	CKPC	930	100
CBV	950	1000	Quebec, P. Q.	CJBR	1030	1000	Rimouski, P. Q.	CKPR	580	1000
CBY	960	500	Toronto, Ont.	CJCA	730	1000	Edmonton, Alta.	CKSO	780	1000
CFAC	930	1000	Calgary, Alta.	CJCB	1240	1000	Sydney, N. S.	CKTB	1200	100
CFAR	1370	100	Flin Flon, Man.	CJCY	690	100	Calgary, Alta.	CKUA	580	500
CFCF	600	500	Montreal, P. Q.	CJCS	1210	50	Stratford, Ont.	CKWX	1010	100
CFCH	930	100	North Bay, Ont.	CJCU	1210	50	Akiavik, N. W. T.	CKX	1120	1000
CFCN	1030	10000	Calgary, Alta.	CJGX	1390	100	Yorkton, Sask.	CKY	910	15000
CFCO	630	100	Chatham, Ont.	CJIC	1500	100	S. Ste. Marie, Ont.	CMAB	1240	200
CFCT	1450	500	Victoria, B. C.	CJJK	1310	100	North Bay, Ont.	CMBC	1140	150
CFCY	630	1000	Charlottetown, P.E.I.	CJLS	1310	100	Yarmouth, N. S.	CMBD	550	500
CFGP	1200	100	Grande Prairie, Alta.	CJOC	950	100	Lethbridge, Alta.	CMBF	1560	5000
CFJC	880	1000	Kamloops, B. C.	CJOR	600	500	Vancouver, B. C.	CMBG	690	200
CFLC	930	100	Prescott, Ont.	CJRC	630	1000	Winnipeg, Man.	CMBH	1600	5000
CFNB	550	500	Fredericton, N. B.	CJRM	540	1000	Regina, Sask.	CMBL	750	500
CFOS	1370	100	Owen Sound, Ont.	CKAC	730	5000	Montreal, P. Q.	CMBQ	1320	5000
CFPL	730	100	London, Ont.	CKBI	1210	100	Prince Albert, Sask.	CMBS	1170	150
CFPR	580	50	Prince Rupert, B. C.	CKCA	1420	100	Kenora, Ont.	CMBX	1080	150
CFQC	840	1000	Saskatoon, Sask.	CKCD	1010	100	Vancouver, B. C.	CMBY	1440	200
CFRB	690	10000	Toronto, Ont.	CKCH	1210	100	Hull, P. Q.	CMCZ	940	200
CFRC	1510	100	Kingston, Ont.	CKCK	1010	1000	Regina, Sask.	CMC	1530	150
CFRN	960	100	Edmonton, Alta.	CKCL	580	100	Toronto, Ont.	CMCA	1350	200
CHAB	1200	100	Moose Jaw, Sask.	CKCO	1010	100	Ottawa, Ont.	CMCB	1230	150
CHCK	1310	50	Charlottetown, P.E.I.	CKCR	1510	100	Waterloo, Ont.	CMCD	630	15000
CHGB	1200	100	St. Ann, P. Q.	CKCV	1310	100	Quebec, P. Q.	CMCF	810	5000
CHGS	1450	50	Summerside, P.E.I.	CKCW	1370	100	Moncton, N. B.	CMCG	1290	150
CHLN	1420	100	Three Rivers, P. Q.	CKFC	1410	50	Vancouver, B. C.	CMCJ	1110	200
CHLP	1120	100	Montreal, P. Q.	CKGB	1420	100	North Bay, Ont.	CMCK	970	5000
								Havana, Cuba		

## NORTH AMERICAN B. C. STATIONS BY CALLS

CMCL	730	10000	CMJX	740	200	KARM	1310	100
Havana, Cuba			Camaguey, Cuba			Fresno, Calif.		
CMCM	850	250	CMK	720	250	KASA	1210	100
Havana, Cuba			Havana, Cuba			Elk Ciy, Okla.		
CMCO	1200	150	CMKC	1250	150	KAST	1370	100
Havana, Cuba			Santiago, Cuba			Astoria, Ore.		
CMCP	1050	100	CMKD	910	1000	KATE	1420	250
Havana, Cuba			Santiago, Cuba			Albert Lea, Minn.		
CMCQ	1410	5000	CMKF	1460	250	KAWM	1500	100
Havana, Cuba			Holguin, Cuba			Gallup, N. Mex.		
CMCR	660	150	CMKG	1150	100	KBIX	1500	100
Havana, Cuba			Santiago, Cuba			Muskogee, Okla.		
CMCU	780	150	CMKL	950	200	KBKR	1500	100
Havana, Cuba			Bayamo, Cuba			Baker, Ore.		
CMCW	1380	150	CMKM	1080	100	KBND	1310	100
Havana, Cuba			Manzanillo, Cuba			Bend, Ore.		
CMCX	1470	150	CMKO	1280	200	KBPS	1420	100
Havana, Cuba			Holguin, Cuba			Portland, Ore.		
CMCY	570	15000	CMKQ	1490	200	KBST	1500	100
Havana, Cuba			Santiago, Cuba			Big Spring, Texas		
CMGC	1400	200	CMKR	1400	250	KBTM	1200	100
Matanzas, Cuba			Santiago, Cuba			Jonesboro, Ark.		
CMGE	1370	200	CMKS	710	200	KCKN	1310	100
Cardenas, Cuba			Guantanamo, Cuba			Kansas City, Kans.		
CMGF	1120	200	CMKW	750	200	KCMC	1420	100
Matanzas, Cuba			Santiago, Cuba			Texarkana, Texas		
CMGH	790	200	CMKX	1190	75	KCMO	1370	100
Matanzas, Cuba			Santiago, Cuba			Kansas City, Mo.		
CMHA	1090	200	CMKZ	1430	125	KCRC	1360	250
Sagua la Grande, Cuba			Palma Soriano, Cuba			Enid, Okla.		
CMHB	1240	200	CMOA	910	259	KCRJ	1310	100
Sancti Spiritus, Cuba			Havana, Cuba			Jerome, Ariz.		
CMHD	1270	250	CMOX	1500	200	KDAL	1500	100
Caibarien, Cuba			Havana, Cuba			Duluth, Minn.		
CMHI	1060	250	CMQ	1010	25000	KDB	1500	100
Santa Clara, Cuba			Havana, Cuba			Santa Barbara, Calif.		
CMHJ	1160	100	CMW	880	1400	KDFN	1440	500
Cienfuegos, Cuba			Havana, Cuba			Casper, Wyo.		
CMHK	1210	250	CMX	1260	200	KDKA	980	50000
Crucos, Cuba			Havana, Cuba			Pittsburgh, Pa.		
CMHM	1450	500	CM9RT	1580	200	KDLR	1210	100
Cienfuegos, Cuba			Guines, Cuba			Devils Lake, N. D.		
CMHP	1100	200	FQN	609	250	KDNC	1200	100
Placetas, Cuba			St. Pierre, Miquelon			Lewistown, Mont.		
CMHT	920	200	HIN	1090	740	KDNT	1420	100
Trinidad, Cuba			Ciudad Trujillo, D. R.			Denton, Texas		
CMHW	680	200	HIT	1050	50	KDON	1210	100
Santa Clara, Cuba			Ciudad Trujillo, D. R.			Monterey, Calif.		
CMHX	1480	120	HIX	800	800	KDTH	1340	500
Cienfuegos, Cuba			Ciudad Trujillo, D. R.			Dubuque, Iowa		
CMJA	860	250	HP50	1440	....	KDYL	1290	1000
Camaguey, Cuba			Panama City, Panama			Salt Lake City, Utah		
CMJC	1390	200	HRN	1250	50	KECA	1430	1000
Camaguey, Cuba			Tegucigalpa, Hon.			Los Angeles, Calif.		
CMJE	1230	200	KABC	1420	100	KEEN	1370	100
Camaguey, Cuba			San Antonio, Texas			Seattle, Wash.		
CMJF	930	200	KABR	1390	500	KEHE	780	1000
Camaguey, Cuba			Aberdeen, S. Dak.			Los Angeles, Calif.		
CMJH	1360	200	KADA	1200	100	KELA	1440	500
Ciego de Avila, Cuba			Ada, Okla.			Centralia, Wash.		
CMJI	1130	200	KALB	1210	100	KELD	1370	100
Ciego de Avila, Cuba			Alexandria, La.			El Dorado, Ark.		
CMJK	1290	200	KALE	1300	1000	KELO	1200	100
Camaguey, Cuba			Portland, Ore.			Stouxs Falls, S. Dak.		
CMJO	1260	200	KAND	1310	100	KERN	1370	100
Ciego de Avila, Cuba			Corsicana, Texas			Bakersfield, Calif.		
CMJP	1420	200	KANS	1210	100	KEUB	1420	100
Camaguey, Cuba			Wichita, Kans.			Price, Utah		
CMJW	1070	200	KARK	890	500	KEX	1180	5000
Camaguey, Cuba			Little Rock, Ark.			Portland, Ore.		

NORTH AMERICAN B. C. STATIONS BY CALLS

KFAB 770 10000	Lincoln, Neb.	KFUO 550 500	St. Louis, Mo.	KGIW 1420 100	Alamosa, Colo.
KFAC 1300 1000	Los Angeles, Calif.	KFVD 1000 1000	Los Angeles, Calif.	KGKB 1500 100	Tyler, Texas
KFAM 1420 100	St. Cloud, Minn.	KFVS 1210 100	Cape Girardeau, Mo.	KGKL 1370 100	San Angelo, Texas
KFAR 610 1000	Fairbanks, Alaska	KFWB 950 1000	Los Angeles, Calif.	KGKO 570 1000	Fort Worth, Texas
KFBB 1280 1000	Great Falls, Mont.	KFXD 1200 100	Nampa, Idaho	KGKY 1500 100	Scottsbluff, Neb.
KFBI 1050 5000	Abilene, Kans.	KFXJ 1200 100	Grand Junction, Colo.	KGLO 1210 100	Mason City, Iowa
KFBK 1490 10000	Sacramento, Calif.	KFXM 1210 100	San Bernardino, Calif.	KGLU 1420 100	Safford, Ariz.
KFDA 1500 100	Amarillo, Texas	KFYO 1310 100	Lubbock, Texas	KGMB 1320 1000	Honolulu, T. H.
KFDM 560 500	Beaumont, Texas	KFYR 550 1000	Bismarck, N. D.	KGNC 1410 1000	Amarillo, Texas
KFDY 780 1000	Brookings, S. D.	KGA 1470 5000	Spokane, Wash.	KGNF 1430 1000	North Platte, Neb.
KFEL 920 500	Denver, Colo.	KGAR 1370 100	Tucson, Ariz.	KGNO 1340 250	Dodge City, Kans.
KFEQ 680 2500	St. Joseph, Mo.	KGB 1330 1000	San Diego, Calif.	KGO 790 7500	San Francisco, Calif.
KFGQ 1370 100	Boone, Iowa	KGBU 900 500	Ketchikan, Alaska	KGU 750 2500	Honolulu, T. H.
KFH 1300 1000	Wichita, Kans.	KG BX 1230 500	Springfield, Mo.	KGVL 1200 100	Greenville, Texas
KFI 640 50000	Los Angeles, Calif.	KGCA 1270 100	Decorah, Iowa	KGVO 1260 1000	Missoula, Mont.
KFID 1120 100	Spokane, Wash.	KGCI 1200 100	Coeur d'Alene, Idaho	KGW 620 1000	Portland, Ore.
KFIZ 1420 100	Fond du Lac, Wis.	KGCU 1240 250	Mandan, N. D.	KGY 1210 100	Olympia, Wash.
KFJB 1200 100	Marshalltown, Iowa	KG CX 1450 1000	Wolf Point, Mont.	KHBC 1400 250	Hilo, T. H.
KFJI 1210 100	Klamath Falls, Ore.	KGDE 1200 100	Forjus Falls, Minn.	KHBG 1210 100	Okmulgee, Okla.
KFJM 1410 500	Grand Forks, N. D.	KGDM 1100 1000	Stockton, Calif.	KHJ 900 1000	Los Angeles, Calif.
KFJZ 1370 100	Fort Worth, Texas	KG EK 1200 100	Sterling, Colo.	KHQ 590 1000	Spokane, Wash.
KFKA 880 500	Greeley, Colo.	KG ER 1360 1000	Long Beach, Calif.	KHSL 1260 250	Chico, Calif.
KFKU 1220 1000	Lawrence, Kans.	KG EZ 1310 100	Kalispell, Mont.	KHUB 1310 250	Watsonville, Calif.
KFNF 890 500	Shenandoah, Iowa	KG FF 1420 100	Shawnee, Okla.	KICA 1370 100	Clovis, N. M.
KFOR 1210 100	Lincoln, Neb.	KG FI 1500 100	Brownsville, Tex.	KID 1320 500	Idaho Falls, Idaho
KFOX 1250 1000	Long Beach, Calif.	KG FJ 1200 100	Los Angeles, Calif.	KIDD 1350 1000	Boise, Idaho
KFPL 1310 100	Dublin, Texas	KG FL 1370 100	Roswell, N. Mex.	KIDW 1420 100	Lamar, Colo.
KFPW 1210 100	Fort Smith, Ark.	KG FW 1310 100	Kearney, Neb.	KIEM 1450 500	Eureka, Calif.
KFPY 890 1000	Spokane, Wash.	KG FX 630 200	Pierre, S. D.	KIEV 850 250	Glendale, Calif.
KFQD 780 250	Anchorage, Alaska	KG GF 1010 1000	Coffeyville, Kans.	KINY 1430 250	Juneau, Alaska
KFRC 610 1000	San Francisco, Calif.	KG GM 1230 1000	Albuquerque, N. M.	KIRO 710 1000	Seattle, Wash.
KFRO 1370 250	Longview, Texas	KG H F 1320 500	Pueblo, Colo.	KIT 1250 250	Yakima, Wash.
KFRU 630 500	Columbia, Mo.	KG HI 1200 100	Little Rock, Ark.	KITE 1530 1000	Kansas City, Mo.
KFSD 600 1000	San Diego, Calif.	KG HL 780 1000	Billings, Mont.	KIUL 1210 100	Garden City, Kans.
KFSG 1120 500	Los Angeles, Calif.	KG IR 1340 1000	Butte, Mont.	KIUN 1370 100	Pecos, Texas

## NORTH AMERICAN B. C. STATIONS BY CALLS

KIUP	1370	100	KOH	1380	500	KRRK	1120	500
Durango Colo.			Reno, Nev.			Los Angeles, Calif.		
KJBS	1070	500	KOIL	1260	1000	KRKO	1370	50
San Francisco, Calif.			Omaha, Neb.			Everett, Wash.		
KJR	970	5000	KOIN	940	1000	KRLC	1390	250
Seattle, Wash.			Portland, Ore.			Lewislat, Idaho		
KLAH	1210	109	KOKO	1370	100	KRLD	1040	10000
Carlsbad, N. Mex.			La Junta, Colo.			Dallas, Texas		
KLBN	1420	100	KOL	1270	1009	KRLH	1420	100
La Grande, Ore.			Seattle, Wash.			Midland, Texas		
KLCN	1290	100	KOMA	1480	5000	KRMC	1370	100
Blytheville, Ark.			Oklahoma City, Okla.			Jamestown, N. Dak.		
KLO	1400	500	KOME	1310	250	KRMD	1310	100
Ogden, Utah			Tulsa, Okla.			Shreveport, La.		
KLPM	1360	500	KOMO	920	1000	KRNR	1500	100
Minot, N. D.			Seattle, Wash.			Rosburg, Ore.		
KLRA	1390	1000	KONO	1370	100	KRN	1320	1000
Little Rock, Ark.			San Antonio, Texas			Des Moines, Iowa		
KLS	1280	250	KOOS	1200	100	KROC	1310	100
Oakland, Calif.			Marshfield, Ore.			Rochester, Minn.		
KLUF	1370	100	KORE	1420	100	KROD	1500	100
Galveston, Texas			Eugene, Ore.			El Paso, Texas		
KLX	880	1000	KOTN	1500	100	KROW	930	1000
Oakland, Calif.			Pine Bluff, Ark.			Oakland, Calif.		
KLZ	560	1000	KOVC	1500	100	KROY	1210	100
Denver, Colo.			Valley City, N. Dak.			Sacramento, Calif.		
KMA	930	1000	KOY	1390	1000	KRQA	1310	100
Shenandoah, Iowa			Phoenix, Ariz.			Santa Fe, N. Mex.		
KMAC	1370	100	KPAB	1500	100	KRRV	1310	250
San Antonio, Texas			Laredo, Texas			Sherman, Texas		
KMBC	950	1000	KPAC	1260	500	KRSC	1120	250
Kansas City, Mo.			Port Arthur, Texas			Seattle, Wash.		
KMED	1410	250	KPDN	1310	100	KSAC	580	500
Medford, Ore.			Pampa, Texas			Manhattan, Kans.		
KMJ	580	1009	KPFA	1210	100	KSAL	1500	100
Fresno, Calif.			Helena, Mont.			Salina, Kans.		
KMLB	1200	100	KPLC	1500	100	KSAM	1500	100
Monroe, La.			Lake Charles, La.			Huntsville, Texas		
KMMJ	740	1009	KFLT	1500	250	KSAN	1420	100
Clay Center, Neb.			Paris, Texas			San Francisco, Calif.		
KMO	1330	1000	KPMC	1550	1000	KSCJ	1330	1000
Tacoma, Wash.			Bakerfield, Calif.			Sioux City, Iowa		
KMOX	1090	50000	KPO	680	50000	KSD	550	1000
St. Louis, Mo.			San Francisco, Calif.			St. Louis, Mo.		
KMPC	710	500	KPOF	880	1000	KSEI	900	250
Beverly Hills, Calif.			Denver, Colo.			Pocatello, Idaho		
KMTR	570	1000	KPPC	1210	100	KSFO	560	1000
Los Angeles, Calif.			Pasadena, Calif.			San Francisco, Calif.		
KNEL	1500	250	KPQ	1500	100	KSL	1130	50000
Brady, Texas			Wenatchee, Wash.			Salt Lake City, Utah		
KNET	1420	100	KPRC	920	1000	KSLM	1370	100
Palestine, Texas			Houston, Texas			Salem, Ore.		
KNOW	1500	100	KQV	1380	500	KSO	1430	500
Austin, Texas			Pittsburgh, Pa.			Des Moines, Iowa		
KNX	1050	59030	KQW	1010	1000	KS00	1110	5000
Los Angeles, Calif.			San Jose, Calif.			Sioux Falls, S. Dak.		
KOA	830	50000	KRBA	1310	100	KRSO	1310	100
Denver, Colo.			Lufkin, Texas			Santa Rosa, Calif.		
KOAC	550	1000	KRBC	1420	100	KSTP	1460	10000
Corvallis, Ore.			Abilene, Texas			St. Paul, Minn.		
KOAM	790	1000	KRBM	1420	100	KSUB	1310	100
Pittsburg, Kans.			Bozeman, Mont.			Cedar City, Utah		
KOB	1180	10000	KRE	1370	109	KSUN	1200	100
Albuquerque, N. M.			Berkeley, Calif.			Lowell, Ariz.		
KOBH	1370	100	KRGV	1260	1000	KTAR	620	1000
Rapid City, S. Dak.			Weslaco, Texas			Phoenix, Ariz.		
KOCA	1210	100	KRIC	1420	100	KTAT	1240	1000
Kilgore, Texas			Beaumont, Texas			Fort Worth, Texas		
KOCY	1310	100	KRIS	1330	500	KTBC	1120	1000
Oklahoma City, Okla.			Corpus Christi, Tex.			Austin, Texas		



NORTH AMERICAN B. C. STATIONS BY CALLS

KTBS 1450 1000	Shreveport, La.	KVOX 1310 100	Moorhead, Minn.	TGI 1310 ....	Guatemala City, Guat.
KTEM 1370 250	Temple, Texas	KVRS 1370 100	Rock Springs, Wyo.	TIGH 725 600	San Jose, Costa Rica
KTFI 1240 1000	Twin Falls, Idaho	KVSO 1210 100	Ardmore, Okla.	TILJ 775 500	San Jose, Costa Rica
KTHS 1060 10000	Hot Springs, Ark.	KVWC 1500 100	Vernon, Texas	TILS 880 1000	San Jose, Costa Rica
KTKC 1190 250	Visalia, Calif.	KWAL 1420 100	Wallace, Idaho	TIPG 625 2000	San Jose, Costa Rica
KTMS 1220 500	Santa Barbara, Calif.	KWBG 1420 100	Hutchinson, Kans.	TIX 650 1000	San Jose, Costa Rica
KTOH 1500 100	Libue, Hawaii	KWEW 1500 100	Hobbs, N. Mex.	TIXD 800 1000	San Jose, Costa Rica
KTOK 1370 100	Oklahoma City, Okla.	KWFT 620 250	Wichita Falls, Texas	VAS 685 2000	Glace Bay, N. S.
KTRB 740 250	Modesto, Calif.	KWG 1200 100	Stockton, Calif.	VOAC 1065 40	St. John's Nfld.
KTRH 1290 1000	Houston, Texas	KWJB 1210 100	Globe, Ariz.	VOCM 1006 200	St. John's Nfld.
KTRI 1420 100	Sioux City, Iowa	KWJJ 1040 500	Portland, Ore.	VOGY 840 400	St. John's Nfld.
KTSA 550 1000	San Antonio, Texas	KWK 1350 1000	St. Louis, Mo.	VONF 1195 500	St. John's Nfld.
KTSM 1310 100	El Paso, Texas	KWKH 1100 10000	Shreveport, La.	VOWR 681 500	St. John's Nfld.
KTSW 1370 100	Emporia, Kans.	KWLC 1270 100	Decorah, Iowa	WAAB 1410 500	Boston, Mass.
KTUL 1400 1000	Tulsa, Okla.	KWLK 780 250	Longview, Wash.	WAAP 920 1000	Chicago, Ill.
KTW 1220 1000	Seattle, Wash.	KWNO 1200 250	Winona, Minn.	WAAT 940 500	Jersey City, N. J.
KUJ 1370 100	Walla Walla, Wash.	KWOC 1310 100	Poplar Bluff, Mo.	WAAW 660 500	Omaha, Neb.
KUMA 1420 100	Yuma, Ariz.	KWOS 1310 100	Jefferson City, Mo.	WABC 860 50000	New York, N. Y.
KUGA 1260 5000	Siloam Springs, Ark.	KWSC 1220 1000	Pullman, Wash.	WABI 1200 100	Bangor, Maine
KUSD 890 500	Vermillion, S. Dak.	KWTO 560 5000	Springfield, Mo.	WABY 1370 100	Albany, N. Y.
KUTA 1500 100	Salt Lake City, Utah	KWYO 1370 100	Sheridan, Wyo.	WACO 1420 100	Waco, Texas
KVAK 1420 100	Atchison, Kans.	KXA 760 250	Seattle, Wash.	WADC 1320 1000	Akron, Ohio
KVAN 880 250	Vancouver, Wash.	KXL 1420 100	Portland, Ore.	WAGA 1450 500	Atlanta, Ga.
KVCV 1200 100	Redding, Calif.	KXO 1500 100	El Centro, Calif.	WAGF 1370 250	Dothan, Ala.
KVEC 1200 100	San Luis Obispo, Cal.	KXOK 1250 1000	St. Louis, Mo.	WAGM 1420 100	Presque Isle, Me.
KVGB 1370 100	Great Bend, Kans.	KXRO 1310 100	Aberdeen, Wash.	WAIM 1200 100	Anderston, S. C.
KVI 570 1000	Tacoma, Wash.	KXYZ 1440 1000	Houston, Texas	WAIR 1250 250	Winston-Salem, N. C.
KVNU 1200 100	Logan, Utah	KYA 1230 1000	San Francisco, Calif.	WALA 1380 500	Mobile, Ala.
KVOA 1260 1000	Tucson, Ariz.	KYCA 1500 100	Prescott, Ariz.	WALR 1210 100	Zanesville, Ohio
KVOD 920 500	Denver, Colo.	KYOS 1040 250	Merced, Calif.	WAML 1310 100	Laurel, Miss.
KVOE 1500 100	Santa Ana, Calif.	KYSM 1500 100	Mankato, Minn.	WAPI 1140 5000	Birmingham, Ala.
KVOL 1310 100	Lafayette, La.	KYW 1020 10000	Philadelphia, Pa.	WAPQ 1420 100	Chattanooga, Tenn.
KVVO 1140 25000	Tulsa, Okla.	TGQ 1450 200	Quezaltenango, Guat.	WARD 1400 500	Brooklyn, N. Y.
KVOR 1270 1000	Colo. Springs, Colo.	TGW 1520 1000	Guatemala City, Guat.	WASH 1270 500	Grand Rapids, Mich.
KVOS 1200 100	Bellingham, Wash.	TGX 1400 ....	Guatemala City, Guat.	WATL 1370 100	Atlanta, Ga.

## NORTH AMERICAN B. C. STATIONS BY CALLS

WATR 1190 100	Waterbury, Conn.	WBTM 1370 100	Danville, Va.	WCRW 1210 100	Chicago, Ill.
WAVE 940 1000	Louisville, Ky.	WBEZ 990 50000	Boston, Mass.	WCSC 1360 500	Charleston, S. C.
WAWZ 1350 500	Zarephath, N. J.	WBZA 990 1000	Springfield, Mass.	WCSH 940 1000	Portland, Me.
WAYX 1200 100	Waycross, Ga.	WCAD 1220 500	Canton, N. Y.	WDAE 1220 1000	Tampa, Fla.
WAZL 1420 100	Hazleton, Pa.	WCAE 1220 1000	Pittsburgh, Pa.	WDAF 610 1000	Kansas City, Mo.
WBAA 890 500	West Lafayette, Ind.	WCAI 760 1000	Northfield, Minn.	WDAB 1310 100	El Paso, Texas
WBAL 760 2500	Baltimore, Md.	WCAM 1280 500	Camden, N. J.	WDAN 1500 250	Danville, Ill.
WBAL 1060 10000	Baltimore, Md.	WCAO 600 500	Baltimore, Md.	WDAS 1370 100	Philadelphia, Pa.
WBAP 800 50000	Fort Worth, Texas	WCAP 1280 500	Asbury Park, N. J.	WDAY 940 1000	Fargo, N. Dak.
WBAX 1210 100	Wilkes-Barre, Pa.	WCAT 1200 100	Rapid City, S. Dak.	WDBJ 930 1000	Roanoke, Va.
WBBC 1400 500	Brooklyn, N. Y.	WCAU 1170 50000	Philadelphia, Pa.	WDBO 580 1000	Orlando, Fla.
WBBL 1210 100	Richmond, Va.	WCAX 1200 100	Burlington, Vt.	WDEL 1120 250	Wilmington, Del.
WBBM 770 50000	Chicago, Ill.	WCAZ 1070 100	Carthage, Ill.	WDEV 550 500	Waterbury, Vt.
WBBR 1300 1000	Brooklyn, N. Y.	WCBA 1440 500	Allentown, Pa.	WDGY 1180 1000	Minneapolis, Minn.
WBBZ 1200 100	Ponca City, Okla.	WCBD 1080 5000	Chicago, Ill.	WDNC 1500 100	Durham, N. C.
WBCM 1410 500	Bay City, Mich.	WCBM 1370 100	Baltimore, Md.	WDDO 1280 1000	Chattanooga, Tenn.
WBEN 900 1000	Buffalo, N. Y.	WCBS 1420 100	Springfield, Ill.	WDRG 1330 1000	Hartford, Conn.
WBEO 1310 100	Marquette, Mich.	WCCO 810 50000	Minneapolis, Minn.	WDWM 1200 100	Superior, Wis.
WBHP 1200 100	Huntsville, Ala.	WCFL 970 5000	Chicago, Ill.	WDSU 1250 1000	New Orleans, La.
WBIG 1440 1000	Greensboro, N. C.	WCHS 580 500	Charleston, W. Va.	WDWS 1370 100	Champaign, Ill.
WBIL 1100 5000	New York, N. Y.	WCHV 1420 100	Charlottesville, Va.	WZPZ 1020 250	Tuscola, Ill.
WBLK 1370 100	Clarksburg, W. Va.	WCKY 1490 10000	Covington, Ky.	WEAF 660 50000	New York, N. Y.
WBLY 1210 100	Lima, Ohio	WCLE 610 500	Cleveland, Ohio	WEAN 780 1000	Providence, R. I.
WBNO 1420 100	New Orleans, La.	WCLO 1200 100	Janesville, Wis.	WEAU 1050 1000	Eau Claire, Wis.
WBNS 1430 1000	Columbus, Ohio	WCLS 1310 100	Joliet, Ill.	WEBC 1290 1000	Duluth, Minn.
WBNX 1350 1000	New York, N. Y.	WCMI 1310 100	Ashland, Ky.	WEBQ 1210 100	Harrisburg, Ill.
WBNY 1370 100	Buffalo, N. Y.	WCNW 1500 100	Brooklyn, N. Y.	WEBR 1310 100	Buffalo, N. Y.
WBOQ 860 50000	New York, N. Y.	WCOA 1340 500	Pensacola, Fla.	WEDC 1210 100	Chicago, Ill.
WBOW 1310 100	Terre Haute, Ind.	WCOC 880 1000	Meridan, Miss.	WEED 1420 100	Rocky Mount, N. C.
WBRB 1210 100	Red Bank, N. J.	WCOL 1210 100	Columbus, Ohio	WEEL 590 1000	Boston, Mass.
WBRC 930 1000	Birmingham, Ala.	WCOP 1120 500	Boston, Mass.	WEUU 830 1000	Reading, Pa.
WBRE 1310 100	Wilkes-Barre, Pa.	WCOS 1370 100	Columbus, S. C.	WELI 900 500	New Haven, Conn.
WBRK 1310 100	Pittsfield, Mass.	WCOU 1210 100	Lewiston, Maine	WELL 1420 100	Battle Creek, Mich.
WBRV 1530 1000	Waterbury, Conn.	WCOV 1210 100	Montgomery, Ala.	WEMP 1310 100	Milwaukee, Wis.
WBT 1080 50000	Charlotte, N. C.	WCPO 1200 100	Cincinnati, Ohio	WENR 870 50000	Chicago, Ill.

**NORTH AMERICAN B. C. STATIONS BY CALLS**

WENY 1200 250	Elmira, N. Y.	WGIL 1500 250	Galesburg, Ill.	WHIP 1480 5000	Hammond, Ind.
WEOA 1370 100	Evansville, Ind.	WGL 1370 100	Fort Wayne, Ind.	WHIS 1410 500	Bluefield, W. Va.
WESG 850 1000	Elmira, N. Y.	WGKV 1500 100	Charleston, W. Va.	WHJB 620 250	Greensburg, Pa.
WEST 1200 100	Easton, Pa.	WGN 720 50000	Chicago, Ill.	WHK 1390 1000	Cleveland, Ohio
WEVD 1300 1000	New York, N. Y.	WGNC 1420 100	Gastonia, N. C.	WHKC 640 500	Columbus, Ohio
WEW 760 1000	St. Louis, Mo.	WGNV 1210 100	Newburgh, N. Y.	WHLB 1370 100	Virginia, Minn.
WEXL 1310 50	Royal Oak, Mich.	WGPC 1420 100	Albany, Ga.	WHLS 1370 250	Port Huron, Mich.
WFAA 800 50000	Dallas, Texas	WGR 550 1000	Buffalo, N. Y.	WHMA 1420 100	Anniston, Ala.
WFAM 1200 100	South Bend, Ind.	WGRC 1370 250	New Albany, Ind.	WHN 1010 1000	New York, N. Y.
WFAS 1210 100	White Plains, N. Y.	WGRM 1210 100	Grenada, Miss.	WHO 1000 50000	Des Moines, Iowa
WFBC 1300 1000	Greenville, S. C.	WGST 890 1000	Atlanta, Ga.	WHOM 1450 250	Jersey City, N. J.
WFBG 1310 100	Altoona, Pa.	WGTM 1310 100	Wilson, N. C.	WHP 1430 500	Harrisburg, Pa.
WFBL 1360 1000	Syracuse, N. Y.	WGY 790 50000	Schenectady, N. Y.	WIBA 1280 1000	Madison, Wis.
WFBM 1230 1000	Indianapolis, Ind.	WHA 940 5000	Madison, Wis.	WIBC 1050 1000	Indianapolis, Ind.
WFRB 1270 500	Baltimore, Md.	WHAT 1210 250	Greenfield, Mass.	WIBG 970 100	Glenside, Pa.
WFDL 1310 100	Flint, Mich.	WHAM 1150 50000	Rochester, N. Y.	WIBM 1370 100	Jackson, Mich.
WFEA 1340 500	Manchester, N. H.	WHAS 820 50000	Louisville, Ky.	WIBU 1210 100	Foxnet, Wis.
WFIL 560 1000	Philadelphia, Pa.	WHAT 1310 100	Philadelphia, Pa.	WIBW 580 1000	Topeka, Kans.
WFLA 620 1000	Tampa, Fla.	WHAZ 1300 1000	Troy, N. Y.	WIBX 1200 100	Utica, N. Y.
WFMD 900 500	Frederick, Md.	WHB 860 1000	Kansas City, Mo.	WICA 940 250	Ashtabula, Ohio
WFMJ 1420 100	Youngstown, Ohio	WHBB 1500 100	Selma, Ala.	WICC 600 500	Bridgeport, Conn.
WFNC 1340 250	Fayetteville, N. C.	WHBC 1200 100	Canton, Ohio	WIL 1200 100	St. Louis, Mo.
WFOR 1370 100	Hattiesburg, Miss.	WHBF 1210 100	Rock Island, Ill.	WILL 580 1000	Urbana, Ill.
WFOY 1210 100	St. Augustine, Fla.	WHBI 1250 1000	Newark, N. J.	WILM 1420 100	Wilmington, Del.
WFTC 1200 100	Kinston, N. C.	WHBL 1300 250	Sheboygan, Wis.	WIND 560 1000	Gary, Ind.
WGAL 1500 100	Lancaster, Pa.	WHBQ 1370 100	Memphis, Tenn.	WINS 1180 1000	New York, N. Y.
WGAN 640 500	Portland, Me.	WHBU 1210 100	Anderson, Ind.	WIOD 610 1000	Miami, Fla.
WGAR 1450 1000	Cleveland, Ohio	WHBY 1200 100	Green Bay, Wis.	WIP 610 1000	Philadelphia, Pa.
WGAU 1310 100	Athens, Ga.	WHDF 1370 100	Calumet, Mich.	WIRE 1400 1000	Indianapolis, Ind.
WGBB 1210 100	Freeport, N. Y.	WHDH 830 1000	Boston, Mass.	WIS 560 1000	Columbia, S. C.
WGBF 630 500	Evansville, Ind.	WHDL 1400 250	Olean, N. Y.	WISN 1120 250	Wisnau, Wis.
WGBI 880 500	Seranton, Pa.	WHEB 740 250	Portsmouth, N. H.	WJAC 1310 100	Johnstown, Pa.
WGCM 1210 100	Gulfport, Miss.	WHEC 1430 500	Rochester, N. Y.	WJAG 1060 1000	Norfolk, Neb.
WGES 1360 500	Chicago, Ill.	WHFC 1420 100	Cicero, Ill.	WJAR 890 1000	Providence, R. I.
WGH 1310 100	Newport News, Va.	WHIO 1260 1000	Dayton, Ohio	WJAS 1290 1000	Pittsburgh, Pa.

NORTH AMERICAN B. C. STATIONS BY CALLS

WJAX	900	1000	WKRK	550	1000	WMEX	1500	100
Jacksonville, Fla.			Cincinnati, Ohio			Boston, Mass.		
WJBC	1200	100	WKST	1250	250	WMFD	1370	100
Bloomington, Ill.			New Castle, Pa.			Wilmington, N. C.		
WJBK	1500	100	WKY	900	1000	WMFF	1310	100
Detroit, Mich.			Oklahoma City, Okla.			Plattsburg, N. Y.		
WJBL	1200	100	WKZO	590	1000	WMFG	1210	100
Decatur, Ill.			Kalamazoo, Mich.			Hibbing, Minn.		
WJBO	1120	500	WLAC	1470	5000	WMFJ	1420	100
Raton Rouge, La.			Nashville, Tenn.			Daytona Beach, Fla.		
WJBW	1200	100	WLAK	1310	100	WMFO	1370	100
New Orleans, La.			Lakeland, Fla.			Decatur, Ala.		
WJBY	1210	100	WLAP	1420	100	WMFR	1200	100
Gadsden, Ala.			Lexington, Ky.			High Point, N. C.		
WJDX	1270	1000	WLAW	680	1000	WMIN	1370	100
Jackson, Miss.			Lawrence, Mass.			St. Paul, Minn.		
WJEF	1210	100	WLB	760	1000	WMNN	890	500
Hagerstown, Md.			Minneapolis, Minn.			Fairmont, W. Va.		
WJHL	1200	100	WLBC	1310	100	WMPC	1200	100
Johnson City, Tenn.			Muncie, Ind.			Lapeer, Mich.		
WJHP	1290	250	WLBL	900	5000	WMPS	1430	500
Jacksonville, Fla.			Stevens Point, Wis.			Memphis, Tenn.		
WJIM	1210	100	WLBZ	620	500	WMRO	1250	250
Lansing, Mich.			Bangor, Me.			Aurora, Ill.		
WJJD	1130	20000	WLEU	1420	100	WMSD	1420	100
Chicago, Ill.			Erie, Pa.			Muscle Shoals Co., Ala.		
WJLS	1210	100	WLLH	1370	100	WMT	600	1000
Beckler, W. Va.			Lawrence, Mass.			Cedar Rapids, Iowa		
WJMC	1210	250	WLLH	1370	100	WNAC	1230	1000
Rice Lake, Wis.			Lowell, Mass.			Boston, Mass.		
WJMS	1420	100	WLNH	1310	100	WNAD	1010	1000
Ironwood, Mich.			Laconia, N. H.			Norman, Okla.		
WJNO	1200	100	WLS	870	50000	WNAX	570	1000
W. Palm Beach, Fla.			Chicago, Ill.			Yankton, S. D.		
WJR	750	50009	WLTH	1400	500	WNBC	1380	250
Detroit, Mich.			New York, N. Y.			New Britain, Conn.		
WJRD	1200	250	WLVA	1200	100	WNBF	1500	100
Tuscaloosa, Ala.			Lynchburg, Va.			Binghamton, N. Y.		
WJSV	1460	10000	WLW	700	500000	WNBH	1310	100
Washington, D. C.			Cincinnati, Ohio			New Bedford, Mass.		
WJTN	1210	100	WMAL	630	250	WNBX	1260	1000
Jamestown, N. Y.			Washington, D. C.			Springfield, Vt.		
WJW	1210	100	WMAQ	670	50000	WNBZ	1290	100
Akron, Ohio			Chicago, Ill.			Saranac Lake, N. Y.		
WJZ	760	50000	WMAS	1420	100	WNEL	1290	1000
New York, N. Y.			Springfield, Mass.			San Juan, P. R.		
WKAQ	1240	1000	WMAZ	1180	1000	WNEW	1250	1000
San Juan, P. R.			Macon, Ga.			New York, N. Y.		
WKR	850	1000	WMBC	1420	100	WNLC	1500	100
East Lansing, Mich.			Detroit, Mich.			New London, Conn.		
WKAT	1500	100	WMBD	1440	1000	WNMX	1010	1000
Miami Beach, Fla.			Peoria, Ill.			Knoxville, Tenn.		
WKBB	1500	100	WMBF	610	1000	WNYC	810	1000
East Dubuque, Ill.			Miami, Fla.			New York, N. Y.		
WKBH	1380	1000	WMBG	1350	500	WOAI	1190	50000
LaCrosse, Wis.			Richmond, Va.			San Antonio, Texas		
WKBN	570	500	WMBH	1420	100	WOC	1370	100
Youngstown, Ohio			Joplin, Mo.			Davenport, Iowa		
WKBO	1200	100	WMBI	1080	5000	WOCB	1210	100
Harrisburg, Pa.			Chicago, Ill.			Barnstable, Mass.		
WKBV	1500	100	WMBO	1310	100	WOI	640	5000
Richmond, Ind.			Auburn, N. Y.			Ames, Iowa		
WKBW	1480	5000	WMBR	1370	100	WOKO	1430	500
Buffalo, N. Y.			Jacksonville, Fla.			Albany, N. Y.		
WKBZ	1500	100	WMBS	1420	100	WOL	1230	1000
Muskegon, Mich.			Uniontown, Pa.			Washington, D. C.		
WKEU	1500	100	WMC	780	1000	WOLS	1200	100
Griffin, Ga.			Memphis, Tenn.			Florence, S. C.		
WKOK	1210	100	WMCA	570	1000	WOMI	1500	100
Sunbury, Pa.			New York, N. Y.			Owensboro, Ky.		

**NORTH AMERICAN B. C. STATIONS BY CALLS**

WOMT 1210	100	WRDW 1500	100	WSPD 1340	1000
Manitowoc, Wis.		Augusta, Ga.		Toledo, Ohio	
WOOD 1270	500	WREC 600	1000	WSPR 1140	500
Grand Rapids, Mich.		Memphis, Tenn.		Springfield, Mass.	
WOPI 1500	100	WREN 1220	1000	WSTP 1500	100
Bristol, Tenn.		Lawrence, Kans.		Salisbury, N.C.	
WOR 710	50000	WRGA 1500	100	WSUI 880	500
Newark, N. J.		Rome, Ga.		Iowa City, Iowa	
WORC 1280	500	WRJN 1370	100	WSUN 620	1000
Worcester, Mass.		Racine, Wis.		St. Petersburg, Fla.	
WORK 1320	1000	WRNL 880	500	WSVA 550	500
York, Pa.		Richmond, Va.		Harrisonburg, Va.	
WORLD 920	500	WROK 1410	500	WSVS 1370	50
Boston, Mass.		Rockford, Ill.		Ruffalo, N. Y.	
WOSU 570	750	WROL 1310	100	WSYB 1500	100
Columbus, Ohio		Knoxville, Tenn.		Rufland, Vt.	
WOV 1130	1000	WRR 1280	500	WSYR 570	1000
New York, N. Y.		Dallas, Texas		Syracuse, N. Y.	
WOW 590	1000	WRTD 1500	100	WSYU 570	1000
Omaha, Neb.		Richmond, Va.		Syracuse, N. Y.	
WOWO 1160	10000	WRUF 830	5000	WTAD 900	1000
Fort Wayne, Ind.		Gainesville, Fla.		Quinev, Ill.	
WPAD 1420	100	WRVA 1110	5000	WTAG 580	1000
Paducah, Ky.		Richmond, Va.		Worcester, Mass.	
WPAR 1420	100	WSAI 1330	1000	WTAL 1310	100
Parkersburg, W. Va.		Cincinnati, Ohio		Tallahassee, Fla.	
WPAX 1210	100	WSAJ 1310	100	WTAM 1070	50000
Thomasville, Ga.		Grove City, Pa.		Cleveland, Ohio	
WPAY 1370	100	WSAL 1200	250	WTAQ 1330	1000
Portsmouth, Ohio		Salisbury, Md.		Green Bay, Wis.	
WPEN 920	1000	WSAN 1440	500	WTAR 780	1000
Philadelphia, Pa.		Allentown, Pa.		Norfolk, Va.	
WPG 1100	5000	WSAR 1450	1000	WTAW 1120	500
Atlantic City, N. J.		Fall River, Mass.		College Station, Tex.	
WPIC 780	250	WSAU 1370	100	WTAX 1210	100
Sharon, Pa.		Wausau, Wis.		Springfield, Ill.	
WPIV 1210	100	WSAV 1310	100	WTBO 800	250
Petersburg, Va.		Savannah, Ga.		Lumberland, Md.	
WPRA 1370	100	WSAY 1210	100	WTCN 1250	1000
Maryaguez, P. R.		Rochester, N. Y.		Minneapolis, Minn.	
WPRO 630	500	WSAZ 1190	1000	WTEL 1310	100
Providence, R. I.		Huntington, W. Va.		Philadelphia, Pa.	
WPRP 1420	100	WSB 740	50000	WTHT 1200	100
Ponce, P. R.		Atlanta, Ga.		Hartford, Conn.	
WPTF 680	5000	WSBC 1210	100	WTIC 1040	50000
Raleigh, N. C.		Chicago, Ill.		Hartford, Conn.	
WQAM 560	1000	WSBT 1360	500	WTJS 1310	100
Miami, Fla.		South Bend, Ind.		Jackson, Tenn.	
WQAN 880	500	WSFA 1410	500	WTMA 1210	100
Seranton, Pa.		Montgomery, Ala.		Charleston, S. C.	
WQBC 1360	1000	WSGN 1310	100	WTMJ 620	1000
Violsburg, Miss.		Birmingham, Ala.		Milwaukee, Wis.	
WQDM 1390	1000	WSIX 1210	100	WTMW 1500	100
St. Albans, Vt.		Nashville, Tenn.		East St. Louis, Ill.	
WQXR 1550	1000	WSJS 1310	100	WTNJ 1280	500
New York, N. Y.		Winston-Salem, N. C.		Trenton, N. J.	
WRAK 1370	100	WSLI 1420	100	WTOC 1260	1000
Williamsport, Pa.		Jackson, Miss.		Savannah, Ga.	
WRAL 1210	100	WSM 650	50000	WTOL 1200	100
Raleigh, N. C.		Nashville, Tenn.		Toledo, Ohio	
WRAW 1310	100	WSMB 1320	1000	WTRC 1310	100
Reading, Pa.		New Orleans, La.		Elkhart, Ind.	
WRAX 920	1000	WSMK 1380	250	WTRY 950	1000
Philadelphia, Pa.		Dayton, Ohio		Troy, N. Y.	
WRBL 1200	100	WSNJ 1210	100	WVFW 1400	500
Columbus, Ga.		Bridgeton, N. J.		Brooklyn, N. Y.	
WRC 950	1000	WSOC 1210	100	WWAE 1200	100
Washington, D. C.		Charlotte, N. C.		Hammond, Ind.	
WRDO 1370	100	WSPA 920	1000	WWJ 920	1000
Augusta, Me.		Spartanburg, S. C.		Detroit, Mich.	

WWL	850	10000	XEBU	1240	50	XEKL	1240	500
New Orleans, La.			Chihuahua, Chih.			Leon, Guan.		
WWNC	570	1000	XEBX	640	250	XEL	1150	250
Asheville, N. C.			Sabinas, Coah.			Mexico City, D. F.		
WRRL	1500	100	XEBZ	810	100	ELO	670	100000
Woodside, N. Y.			Mexico City, D. F.			Tijuana, B. Cfa.		
WWSW	1500	100	XEC	1150	100	XELZ	1370	100
Pittsburgh, Pa.			Tijuana, L. C.			Mexico City, D. F.		
WWVA	1160	5000	XECA	1230	250	XEME	1240	50
Wheeling, W. Va.			Tampico, Tam.			Merida, Yuc.		
WXYZ	1240	1000	XECL	960	1000	XEMO	860	5000
Detroit, Mich.			Mexicali, B. Cfa.			Tijuana, L. C.		
W3XDD	....	50000	XECZ	1370	100	XEMU	580	250
Whippany, N. J.			San Luis Potosi, S.L.P.			Piedras Negras, Coah.		
W3XJ	1060	100	XED	1160	2500	XEMX	1280	100
College Park, Md.			Guadalajara, Jal.			Mexico City, D. F.		
XEAA	750	200	XEDA	1220	200	XEN	780	1000
Mexicali, B. C.			Gral. Anaya, D. F.			Mexico City, D. F.		
XEAC	980	1000	XEDF	810	100	XENT	910	150000
Tijuana, L. C.			Nuevo Laredo, Tams.			Nuevo Laredo, Tams.		
XEAF	990	750	XEDH	1340	200	XEP	1160	500
Nogales, Son.			Villa Acuna, Coah.			Juarez, Chih.		
XEAG	1310	10	XEDP	1080	500	XEPN	730	100000
Cordoba, Ver.			Mexico City, D. F.			Piedras Negras, Coah.		
XEAI	1250	500	XEDR	1490	100	XEQ	710	50000
Mexico City, D. F.			Guaymas, Son.			Mexico City, D. F.		
XEAL	660	1000	XEDW	1150	20	XERA	840	250000
Mexico City, D. F.			Minatitlan, Ver.			Villa Acuna, Coah.		
XEAM	750	25	XEE	1210	50	XERB	1090	100000
Matamoros, Tams.			Durango, Dgo.			RosaritoBeach, B. Cfa.		
XEAO	660	250	XEF	1450	100	XERC	870	500
Mexicali, B. C.			Juarez, Chih.			Mexico City, D. F.		
XEAP	1340	50	XEFB	870	200	XES	990	250
Obregon, Son.			Monterrey, N. L.			Tampico, Tams.		
XEAS	1160	100	XEFC	1340	100	XET	690	5000
Saltillo, Coah.			Merida, Yuc.			Monterrey, N. L.		
XEAT	1210	250	XEFE	980	250	XETB	1310	500
Parral, Chih.			Nuevo Laredo, Tams.			Torreon, Coah.		
XEAW	960	100000	XEFI	1440	250	XETH	1210	100
Reynosa, Tams.			Chihuahua, Chih.			Puebla, Pue.		
XEB	1030	10000	XEFO	940	5000	XEU	1010	250
Mexico City, D. F.			Mexico City, D. F.			Veracruz, Ver.		
XEBA	1080	20	XEFQ	1010	50	XEW	890	100000
Guzman, Jal.			Cananea, Son.			Mexico City, D. F.		
XEBG	820	1000	XEFV	1210	50	XEX	1310	125
Tijuana, B. Cfa.			Juarez, Chih.			Monterrey, N. L.		
XEBH	930	500	XEFW	1310	300	XEXB	1270	250
Hermosillo, Sonora			Tampico, Tams.			Jalapa, Ver.		
XEBI	1000	25	XEG	1230	250	XEXD	1340	350
Aguascalientes, Ags.			Monterrey, N. L.			Jalapa, Ver.		
XEBK	1080	100	XEH	720	250	XEXE	1270	17
Neuvo Laredo, Tams.			Monterrey, N. L.			Texcoco, Mex.		
XEBL	1220	50	XEI	1370	125	XEXX	1170	1000
Mazatlan, Sin.			Morelia, Mich.			Mexico City, D. F.		
XEBQ	1310	25	XEJ	1020	1000	XEZ	630	500
Irapuato, Guan.			Juarez, Chih.			Merida, Yuc.		
XEBP	1150	250	XEJP	1130	100	YSS	640	500
Durango, Dgo.			Mexico City, D. F.			San Salvador, E. S.		
XEBS	1340	200	XEK	990	100	ZNS	540	400
Mexico City, D. F.			Mexico City, D. F.			Nassau, Bahamas		

### TIME CONVERTER

The RADEX Map of the World with Time Converting Dial is the most useful accessory any radio fan could have around. Just a twirl of the dial shows the correct time at any location in the world. No calculation is necessary; the dial does all the work. The price is only

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The Radex Publishing Co., 362 Cedar Lane, Teaneck, N. J.

# BROADCASTING STATIONS OF NORTH AMERICA

Compiled from RADEX records, with the assistance of Ed. M. Vickers.

This supplementary call letter index began in the September, 1938 issue of RADEX, and will appear in these pages every month until completed.

The abbreviations used throughout this list are familiar to all our readers, except perhaps "CP" or Construction Permit, "LS" for Local Sunset, and "ss" for sunset.

- KPO, San Francisco, Calif., 680 kcs., 50,000 watts unlt. *Network:* NBC Red. *Trans:* near Belmont. *Aerial:* 2 towers, 300 ft. *Time:* PST. *Veries:* for postage. *Manager:* Lloyd E. Yoder. *Licensee:* National Broadcasting Co., Inc., 111 Sutter St.
- KPOF, Denver, Colo., 880 kcs., 1000 watts, shares time with KFKA. *Trans:* Belleview Junior College, Westminster. *Aerial:* vertical, 260 ft. *Time:* MST. *Veries:* for postage. *Manager:* Dr. Ray B. White. *Licensee:* Pillar of Fire, 1845 Champa St.
- KPPC, Pasadena, Calif., 1210 kcs., 100 w. shared with KFXM. *Aerial:* 2 towers, 129½ ft. *Time:* PST. *Veries:* for postage. *Manager:* David Black. *Licensee:* Pasadena Presbyterian Church, 585 E. Colorado St.
- KPQ, Wenatchee, Wash., 1500 kcs., 100 w. nights, 250 w. days to LS, unlt. *Network:* Mutual. *Trans:* Miller St. *Aerial:* vertical, 188 ft. *Time:* PST. *Veries:* for postage. *Manager:* Cole E. Wylie. *Licensee:* Westcoast Broadcasting Co., KPQ Bldg., 20 Second St.
- KPRC, Houston, Texas, 920 kcs., 1000 w. nights, 5 kw. to LS, unlt. Has Special Authorization to use 5 kilowatts days and nights. *Network:* NBC Red. *Trans:* Deepwater. *Aerial:* vertical, 376 ft. *Time:* CST. *Veries:* for postage. *Manager:* Kern Tips. *Licensee:* Houston Printing Corp., Lamar Hotel.
- KQV, Pittsburgh, Pa., 1380 kcs., 1000 w. unlt. *Network:* CBS. *Transmitter:* 1475 Crane Rd., Greentree. *Aerial:* Directional at night, vertical, 175 ft. *Veries:* not issued. *Manager:* J. J. Laux. *Licensee:* KQV Broadcasting Co., 1405 Chamber of Commerce Bldg.
- KQW, San Jose, Calif., 1010 kcs., 1000 w. unlt. *Network:* MBS. *Aerial:* 2 towers, 125 and 150 ft. *Permit:* Has CP for 5 kw days. *Veries:* for postage. *Manager:* C. S. Harper. *Licensee:* Pacific Agricultural Foundation, Ltd., 87 E. San Antonio St.
- KRBA, Lufkin, Texas, 1310 kcs., 100 watts days. *Veries:* for postage. *Manager:* Darrell E. Yates. *Licensee:* Red Lands Broadcasting Ass'n., Angelina Hotel.
- KRRC, Abilene, Texas, 1420 kcs., 100 w. nights, 250 w. to LS. *Network:* MBS. *Trans:* 341 Ambler St. *Aerial:* vertical, 179 ft. *Veries:* for postage. *Manager:* Max Bentley. *Licensee:* Reporter Broadcasting Co., Box 263.
- KRBM, Bozeman, Mont., 1420 kcs., 100 w. nights, 250 w. to LS. **UNDER CONSTRUCTION.**
- KRE, Berkeley, Calif., 1370 kcs., 100 w. nights, 250 w. to LS, unlt. *Trans:* Ashby Ave. and East Shore Highway. *Aerial:* vertical, 190 ft. *Veries:* for postage. *Manager:* Arthur Westlund. *Licensee:* Central Calif. Broadcasters, Inc., 2337 Shattuck Ave.
- KRGV, Weslaco, Texas, 1260 kcs., 1000 w. unlt. *Network:* NBC and MBS. *Aerial:* vertical, 210 ft. *Veries:* for postage. *Manager:* Ken L. Sibson. *Licensee:* KRGV, Inc., 201 Border St.
- KRIC, Beaumont, Texas, 1420 kcs., 100 w. nights, 250 w. unlt. *Network:* MBS. *Licensee:* Beaumont Broadcasting Ass'n.
- KRIS, Corpus Christi, Texas, 1330 kcs., 500 w. unlt. *Network:* NBC and MBS. *Aerial:* vertical, 185 ft. *Veries:* for postage. *Manager:* T. Frank Smith. *Licensee:* Gulf Coast Broadcasting Co., Medical & Professional Bldg.
- KRKD, Los Angeles, Calif., 1120 kcs., 500 w. nights, 2500 watts to LS, sharing time with KFSG. *Trans:* 1100 Glendale Blvd. KRKD and KFSG employ same transmitter. *Aerial:* vertical, 250 ft. *Veries:* for postage. *Manager:* John A. Driscoll. *Licensee:* Radio Broadcasters, Inc., 312 Spring Arcade.
- KRKO, Everett, Wash., 1370 kcs., 50 watts, sharing time with KEEN. *Aerial:* 2 towers, 80 ft. *Veries:* for postage. *Licensee:* Lee Mudgett, 2814 Rucker Ave.
- KRLC, Lewiston, Idaho, 1390 kcs., 250 w. unlt. *Trans:* Lewiston Orchards. *Aerial:* vertical. *Veries:* for postage. *Manager:* Donald H. Wike. *Licensee:* H. E. Studebaker, Lewis-Clarke Hotel.
- KRLD, Dallas, Texas, 1040 kcs., 10 kw unlt. *Network:* CBS. *Trans:* 1½ miles south of Garland. *Aerial:* 2 towers, 200 ft. *Permits:* Has CP for 50 kw, unlt. time, with directional aerial. *Veries:* for postage. *Manager:* John W. Runyon. *Licensee:* KRLD Radio Corp., Adolphus Hotel.
- KRLH, Midland, Texas, 1420 kcs., 100 w. days. *Aerial:* vertical, 154 ft. *Veries:* for postage. *Manager:* Thomas K. Betzel. *Licensee:* Clarence Scharbaur.
- KRMC, Jamestown, N. Dak., 1370 kcs., 100 w. nights, 250 w. to LS, unlt. *Trans:* U. S. Highway 10. *Aerial:* vertical, 200 ft. *Veries:* for postage. *Manager:* Roy H. Brant. *Licensee:* Roberts McNab Hotel Co., Gladstone Hotel.
- KRMD, Shreveport, La., 1310 kcs., 100 w. nights, 250 w. days, unlt. *Trans:* 901 Louisiana Ave. *Aerial:* vertical, 176 ft. *Veries:* for postage. *Manager:* G. V. Wilson. *Licensee:* KRMD, Inc., Jefferson Hotel Bldg., (P. O. Box 1712).
- KRNR, Roseburg, Ore., 1500 kcs., 100 w. nights, 250 w. to LS, unlt. *Network:* Mutual. *Aerial:* vertical, 140 ft. *Veries:* for postage. *Manager:* Justin B. Toles. *Licensee:* News-Review Publishing Co., Umpqua Hotel Bldg.
- KRNT, Des Moines, Iowa, 1320 kcs., 1000 w. nights, 5 kw. to LS, Unlt. *Networks:* CBS and Iowa. *Trans:* N. 12th Road. *Aerial:* 3 towers, 1 of 370 ft, 2 of 190 ft. Directional at night. *Veries:* for postage. *Manager:* Luther L. Hill. *Licensee:* Iowa Brdcastg. Co., 715 Locust St.
- KROC, Rochester, Minn., 1310 kcs., 100 w. nights, 250 w. to LS, unlt. *Aerial:* 2 towers, 177 ft. *Veries:* for postage. *Manager:* Gregory Gentling. *Licensee:* Southern Minn. Brdcastg. Co., Martin Hotel.

(To be continued next month)

# QUESTIONS and ANSWERS

By B. FRANCIS DASHIELL

*J. S., Coldwater, N. Y.* I have been thinking about procuring an electric pickup for my Victrola and run into my "Air Castle" radio set for reproduction through the loud speaker. What do you advise?

*Answer.* A good service man can alter your set with a jack for plugging in the pickup current. Also, there is a grid-cap adapter which is used on the grid cap of the second detector or first audio tube. Then there is a much better arrangement called a phonograph oscillator. It is more costly. This device acts as a small broadcast set and sends the pickup energy into the entire radio set as a radio signal. Considerable power may be obtained from records using very soft needles. No alterations to the receiver are necessary with this unit. Oscillators may be purchased at any radio supply house, and most mail-order concerns.

*J. H., London, Can.* I have noticed mention made of pre-selectors from time to time in RAdEX. I would like to try one, but do not know where to procure it. Can you tell me? Will it work with my Philco 1937 receiver?

*Answer.* Pre-selectors will work with any receiver, but in some cases where the set is large and already designed with sufficient radio-frequency circuits its use would be unnecessary. Any large radio supply concern handles these units. But, since the demand for this information has been rather insistent, we mention a few with which we are familiar. They are: Meissner Mfg. Co., Mt. Carmel, Ill. J. H. Miller Co., 5917 So. Main St., Los Angeles, Calif.; Allied Radio, 833 W. Jackson, Chicago, Ill.; Wholesale Radio, 100 Sixth Ave., New York, N. Y.; Radolek Co., 601 W. Randolph, Chicago, Ill.

*C. W., Oakland, Calif.* Please tell me how to realign the tuning of my Grunow all-wave set No. 760. Two service men already have worked on it, and now it does not tune on the dial as it did.

*Answer.* It is very difficult to tell you in

these pages how to align a receiver. To do such a job properly one must have precision oscillators so that the padding condensers can be adjusted correctly. This will bring in all stations on all bands at their proper positions on the dials. You will find that this is a job for a good service man. If you have had trouble we fear that the men you engaged did not do satisfactory work, for, after all, aligning is not so difficult for an experienced man. To be certain you get a recommended serviceman make inquiry of your local Grunow distributor, or write General Household Utilities, 2638 No. Crawford Ave., Chicago, Ill.

*C. S. W., Washington, D. C.* We have an oil burner. Each time it starts I hear the motor run. The makers put on two condensers. I use an R. C. A. noiseless antenna. But the burner still is noisy.

*Answer.* Oil burners are a source of much annoyance. However, the motors, in most cases, are for alternating current and should be noiseless. Unless you live downtown in an old direct-current district it is not necessary to use a d.c. motor with its brushes and commutator. However, the burner usually has a spark-plug arrangement that runs for a minute or so when first turned on. This ignites the oil. No filter or other device will eliminate the noise of this spark. It is possible to reduce the interference, if due to the motor, by filtering with condensers and choke coils. The Tobe Deutschmann Corp., of Canton, Mass., should be able to aid you with their products if you write them.

*E. L., Columbus, O.* Where can I obtain a circuit of my Le Wal 4-tube a.c.-d.c. receiver, or information about it?

*Answer.* We have no information about the Lewol Manufacturing Co.'s. radio receivers. We think there were only four or five models made. You might arrange with a radio service man to trace out this small circuit and prepare a diagram. Or perhaps one of our readers can help?



*H. W. S., Pittsburgh, Pa.* I erected a Zenith antenna to go with my new Zenith radio, but had to cut 5 feet off each end of the doublet and add 15 feet of twisted wire to the leadin. Will this change my reception?

*Answer.* The Zenith doublet antenna is made with 30 feet in each half section. Cutting off 5 feet reduces each half to 25 feet. This length is not resonant to the antenna coil of the set, nor is it in tune with the greatest number of wave bands of importance in the receiver. Changing an antenna that has been designed for the greatest efficiency does no good. But, on the other hand, it might not harm reception to a serious degree. If 50 feet is all the space you have you will have to make the best of it, but we do not recommend taking liberties with well-designed resonant antennas. Adding 15 feet of leadin does no harm, but take care to see that the two wires are of the same kind with similar twists.

*T. R., Kansas City, Kans.* What is the best antenna for 20-meter and similar short-wave reception?

*Answer.* If you are in a noisy section the noise-reducing types of doublet antennas are best. Otherwise, for short-wave reception, a short piece of antenna wire, well insulated and running as vertical as practicable, is satisfactory. Often only 10 or 15 feet of wire is sufficient. A ground may or may not be used, according to the results and noise obtained.

*B. L. C., Meadows-of-Dan, Va.* I want to catch and use the waves from broadcasting stations to light the room in my house. Give a list of parts and the circuit necessary.

*Answer.* The broadcast waves cannot be used to light a room or electric bulbs. They

are too weak and are of a high frequency. However, it is practicable to build a radio receiver which, when tuned to the signals or wave of one station, will close a relay and switch on a light that is powered from a separate source of electricity.

*E. H. C., Loveland, Colo.* I am building an all-wave set from a circuit I have. It calls for a variometer for providing regeneration, but I can not locate one at any radio store. What can you suggest?

*Answer.* The variometer is seldom used these days. We doubt whether you can find one. Regeneration that can be controlled steadily may be provided from a "three-circuit tuner" which has a "tickler" coil that rotates. Place this coil in the plate circuit of the detector, and the large fixed coil in the grid circuit which is tuned with a variable condenser. Three-circuit tuners may be purchased at any radio supply concern such as those listed under the third question, and they sell for approximately 75 cents each.

*R. M., Union City, N. J.:* My 7-tube receiver picks up wireless code all over the broadcast band. I can only hear the local stations. Also, can an extra band for more short waves be added to the set?

*Answer:* Code stations are not so far from you. They probably set up harmonics in the circuits of your set, and will be difficult to prevent. You might try a wave trap, they often help in such cases. Try a short aerial. It will be impracticable to add another short-wave band to this set.

FOR MORE QUESTIONS AND  
ANSWERS SEE PAGE 44.

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**WCSC Special**

Station WCSC in Charleston, S. C. will broadcast a special program on February 4, 1939, from 4 to 5 am E.S.T. on 1360 kcs. This program will be dedicated to the URDXC, and all correct reports will be verified.

**THE IMPROVED RADEX**

**WILL HELP YOUR FRIENDS TOO!**

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# THE DX CALENDAR

Time Is Eastern Standard  
Special Programs

From Jan. 15 through Feb. 7, station KPAB at Laredo, Texas, on 1500 kcs, will broadcast each morning from 3 to 4 am or later, EST. Verifications and a worthwhile Mexican souvenir will be sent to all who report correctly.

- Jan. 22, 2-6 am, CMHJ, 1160, Cienfuegos, Cuba (E. Hidalgo—10c for veri)  
 Jan. 22, 2-3 am, PRF3, 960, Sao Paulo, Brazil (NRC-NNRC)  
 Jan. 22, 3-4 am, TG1, 1310, Guatemala City, Guat. (All clubs)  
 Jan. 22, 3-4 am, TG2, 6190, Guatemala City, Guat. (All clubs)  
 Jan. 28, 2-5 am, CMHM, 1450, Cienfuegos, Cuba (E. Hidalgo—10c for veri)  
 Jan. 29, 1-2 am, WGAR, 1450, Cleveland, Ohio (IDA)  
 Feb. 2, 1-2:30 am, CMKW, 770 kcs, Santiago, Cuba (NRC)  
 Feb. 5, 3-4 am, KFDY, 780 kcs, Brookings, S. Dak., (URDXC).  
 Feb. 8, 4-5 am, XEFV, 1210 kcs, Juarez, Chih. (NNRC).  
 Feb. 9, 3:15-3:30 am, KGAR, Tucson, Ariz., 1370 kcs. (NRC)  
 Feb. 11, 7-7:30 pm, SPW, 13635, Warsaw Poland (RSSL)  
 Feb. 18, 4-5 am, KSUB, 1310 kcs, Cedar City, Utah. (NNRC).  
 Mar. 20, 1-2 am, YSS, 638 kcs, San Salvador, E.S. (IDA)

## Regular DX Programs

- Sundays: 12:01-2 am, XEAC, 980 kcs, Agua Caliente, B. Cfa.  
 2:30-2:45 am, KLS, 1280 kcs, Oakland, Calif.  
 2-4 am (First and Third Sunday only), WJBO, 1120 kcs., Baton Rouge, La. (NRC)  
 10:15-10:45 am, CFCO, 630 kcs, Chatham, Ont.  
 Mondays: 9:15-9:30 pm, CJCJ, 690 kcs, Calgary, Alta. (NRC)  
 Tuesday: 5:30-6 pm, W2XAD, 15330 kcs, Schenectady, N. Y. (IDA). at 8 pm, W2XJI, 26300 kcs, New York, N. Y. (NNRC).  
 Wednesday: at 12:30 am, KOY, 1390 kcs. Phoenix, Ariz  
 1:45-2 pm, WTAR, 780 kcs, Norfolk, Va.  
 10:30-11 pm, W8XWJ, 41000 kcs, Detroit Mich. (IDA).  
 First and Third Thursday: 2:45-3 am, KSL, 1130 kcs, Salt Lake City, Utah. (NRC).  
 Friday: 2-2:15 am, KLS, 1280 kcs, Oakland, Calif. (URDXC).  
 Friday: at midnight, W2XJI, 26300 kcs, New York, N.Y. (NNRC).  
 Saturday: at 10:30 am, WEEU, 830 kcs, Reading, Pa.  
 First day of the month, 4-4:30 am, WPAY, 1370 kcs, Portsmouth, Ohio (NRC).

## GET MORE

# DX WITH HEADPHONES

WE recommend the famous Trimm line of headphones for DX success. They are precision-built, and combine ultra-sensitivity with rugged construction.



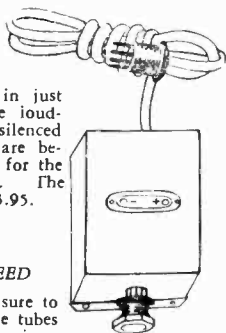
The Trimm "Featherweights" weigh but 4 1/4 ounces complete. 24,000 ohms. .... \$8.50

Trimm "Professional." 4000 ohms. .... 4.00

Trimm "Dependable." 2000 ohms. .... 3.25

## THE PERFECT PHONE ADAPTER

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I want to prove my Training is just what you need to master Radio. My sample lesson text, "Radio Receiver Troubles—Their Cause and Remedy" covers a long list of Radio receiver troubles in A.C., D.C. battery, universal, auto, T.R.F., super-heterodyne, all-wave, and other types of sets, cross-indexed for quick reference. Special section on receiver checkup, alignment, balancing, neutralizing, testing. Get this lesson Free. Mail the Coupon.

The world-wide use of Radio has made many opportunities for you to have a spare time or full time Radio service business of your own. Four out of every five homes in the United States have Radio sets which regularly need repairs, new tubes, etc. Servicemen can earn good commissions selling new sets to owners of old models. Even if you have no knowledge of Radio or electricity, I will train you at home in your spare time to sell, install, fix, all types of Radio sets to start your own Radio business and build it up on money you make in your spare time while learning. Mail coupon for my 64-page book. It's Free—it shows what I have done for others—what I am ready to do for you.

Many Make \$5, \$10, \$15 a Week Extra  
in Spare Time While Learning

The day you enroll I start sending Extra Money Job Sheets; show you how to do Radio repair jobs. Throughout your training I send plans and directions that made good spare time money—\$200 to \$500—for hundreds, while learning. I send you special Radio equipment to conduct experiments and build circuits. This 50-50 method of training makes learning at home interesting, fascinating, practical. I ALSO GIVE YOU A MODERN PROFESSIONAL, ALL-WAVE, ALL-PURPOSE RADIO SET SERVICING INSTRUMENT to help you make good money fixing Radios while learning and equip you for full time jobs after graduation.

Get Ready Now for Your Own Radio  
Business and for Jobs Like These

Radio broadcasting stations employ engineers, operators, station managers and

pay up to \$5,000 a year. Fixing Radio sets in spare time pays many \$200 to \$500 a year—full time jobs with Radio jobbers, manufacturers and dealers as much as \$30, \$50, \$75 a week. Many Radio Experts open full or part time Radio sales and repair businesses. Radio manufacturers and jobbers employ testers, inspectors, foremen, engineers, servicemen, and pay up to \$6,000 a year. Automobile, police, aviation, commercial Radio, loud speaker systems are newer fields offering good opportunities now and for the future. Television promises to open many good jobs soon. Men I trained have good jobs in these branches of Radio. Read how they got their jobs. Mail Coupon.

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Address.....

City..... State.....

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