

NSE

JANUARY 1939

RADIO INDEX

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Broadcasting Stations Around The World
All North American Stations With
Sunday Time on the Air
How to Dial Foreign Stations
Aerial Troubles Solved

No. 125



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Applications to the FCC

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

KAND, Corsicana, Tex., CP 250 w. days (E).
KEX, Portland, Ore., CP change freq. to 1160, unlt'd. (E).
KEEL, Denver, Colo., CP day pwr. of 1 kw. (E).
KFJZ, Ft. Worth, Tex., CP change freq. to 930, pwr. to 500 w. unlt'd. (E).
KGNO, Dodge City, Kans., CP 500 w. (E).
KRKO, Everett, Wash., CP 100 (.25) unlt'd. (E).
KRSC, Seattle, Wash., CP change pwr. to 500 w. Amended for 1 kw. (E).
KVOB, Denver, Colo., CP 630 kcs., 1 kw. (C).
WBNX, New York, N. Y., CP 5 kw. (C).
WDEL, Wilmington, Del., CP 1000 w. (E).
WGRC, New Albany, Ind., CP 800 kcs., 250 w. unlt'd. (E).
WIP, Philadelphia, Pa., CP 5 kw, and move xmitter to Brooklawn, N. J. (E).
WIRE, Indianapolis, Ind., CP 5 kw. (E).
WIS, Columbia, S. C., special exp. authority for new satellite station at Sumter, S. C., 560 kcs., 10 to 100 w. from LS to sunrise. (E)

WJRD, Tuscaloosa, Ala., mod. of lic. for 100 (.25) unlt'd. (E).
WLAC, Nashville, Tenn., CP for 50 kw. (E).
WMBC, Detroit, Mich., CP 1420 kcs., 250 w. unlt'd. (E).
WMBR, Jacksonville, Fla., CP 1120 kcs., 500 (1). (E).
WRAW, Reading, Pa., CP 250 w. (E).
WSFA, Montgomery, Ala., CP 1410 kcs., 1 kw. unlt'd. (E).
WSJS, Winston Salem, N. C., CP 100 (.25) (E).
WTEL, Philadelphia, Pa., mod. of lic. to share with WHAT (E).
WTMV, E. St. Louis, Ill., mod. of lic. for 250 w. (E).
WTOL, Toledo, Ohio, mod. of lic. to work unlt'd. hours. (E).
NEW, Akron, Ohio, Summit Radio Corp., 1530 kcs., 1 kw. unlt'd. (E).
NEW, Ashland, Wis., CP 1310 kcs., 100 (.25) (E).
NEW, Brunswick, Ga., CP 1420 kcs., 100 (.25) (E).
NEW, Cleveland, Ohio, Cuyahoga Valley Brdcastg. Co., CP 1500 kcs., 100 w. days (E).
NEW, Ely, Wyo., Eastern Nev. Brdcastg. Co., CP 1500 kcs., 100 w. days. (E).
NEW, Everett, Wash., Cascade Brdcastg. Co.,
(Continued on page 54)

(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); unlt'd. (unlimited time); ltd. (limited time); CP (construction permit); hrs. (hours); xmitter (transmitter); exp. (experimental); LS (local sunset).

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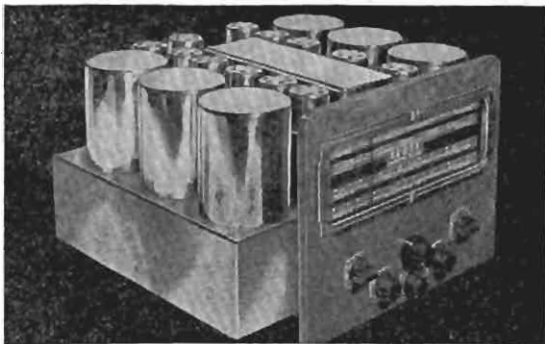


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JANUARY 1, 1939



FIFTEENTH YEAR

RADIO INDEX

Reg. U. S. Patent Office



NUMBER 125

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Published monthly except July and August by

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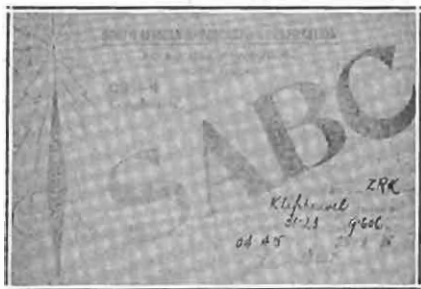
City State.....

(Mail in envelope or paste coupon on penny postcard)

Some Hard Ones . . .



This is the old-type QSL card used by the Indian shortwave stations, on which the famous "Gateway of India" is illustrated. Present veries are generally in letter-form, bu new QSL cards are being prepared. Several of the Indian stations are now being heard, but perhaps the best of them are VUD3, Delhi, 15160 kcs., and VUD2 on 9590. These stations are operated by All India Radio of the Government of India. (Courtesy of D. H. Dussek).



From Rome comes this red, lilac and black QSL cards, acknowledging reception of 2RO, the easily heard Italian station. ÈAIR are the initials of the company operating the station, Ente Italiano Audizioni Radiofoniche. No shortwave listener should have difficulty in verifying this station. (Courtesy of J. R. Hahn).

A rare verification is this one ZNB, a shortwave station located in Mafeking, in the Bechuanaland Protectorate of South Africa. The background is red, the printing black, and the border is red, white and blue. The frequency is 5900 kcs., and it is sometimes heard in the afternoons. (Courtesy of J. E. Gardner).



. . . and Some Easy Ones

The letters SABC are the initials for the South African Broadcasting Corporation, the operators of some very fine, regularly-heard shortwave stations in Johannesburg, Capetown and Pretoria. This card verifies reception of ZRK, Capetown, on 9606 kcs. All these stations announce as Johannesburg, which is the point of origin of most of the programs. (Courtesy of Capt. E. N. Massey)



This Hobby Called DXing

An outline of The Art of Tuning and The Art of Hearing, wherein the new tuner for distance will find many facts which will aid him in the enjoyment of the full possibilities of his radio receiver. In short, we present herewith "The Art of Tuning in a Nutshell".

"THE world is full of people and things," says Colonel Stoopnagle. And with your radio set you can reach out to listen to those people, regardless of where they are, and hear about the things that they are doing. Your radio receiver is your first row seat at the Italian opera or a London concert; it will take you to the Spanish war front, or to a cricket match in Australia. In the comfort of your own living room you can follow explorers from Greenland to darkest Africa; set your clock by Big Ben; get your news from Delhi; samisen songs from Tokyo, and setting up exercises from Johannesburg.

DXing, like many other hobbies, has many subdivisions. There are some who tune only the broadcast band, others who tune the shortwaves, some who prefer the amateurs, and many who tune on all the bands, but regardless of whatever part of the vast radio spectrum has aroused your interest, there are thrills galore awaiting you. Let us learn how to cash in on this fun.

The modern radio receiver is designed so that no previous experience or special skill is required to operate it successfully, but its full possibilities can be enjoyed only if one is reasonably familiar with the general characteristics of transmission on the high frequencies.

Shortwave transmission and reception is not governed by fixed laws of nature, but by many flexible conditions over which man has no control.

The sun and sun spots, as well as layers of ionized particles in the earth's outer atmosphere have their effects, as well as the differences in seasons and the times of day.

Operators of broadcasting stations are familiar with most of the vagaries of reception, and broadcasts are planned on frequencies and with directional aerials which assure dependable reception regardless of the season. A study of the schedules of the British Broadcasting Corporation stations, for example, will show that their higher frequencies are used in the summer time, and as winter comes the higher frequencies are discontinued and lower ones substituted. This is because it has been found that reception near six megacycles (a comparatively low frequency) is best in the winter time, when darkness covers the entire path between transmitter and receiver. Fifteen megacycles, on the other hand, being a high frequency, is exceptionally good in the summer and comparatively poor in the winter.

It has also been found that the higher frequencies are better in the day time, and that lower frequencies have to be employed at night for good reception.

Skip Distance

Transmitted signals of any frequency are known to divide into two components, the "ground" wave and the "sky" wave. The former remains close to the earth's surface and provides reliable service only over short distances from the station. The sky

wave, however, travels into the higher layers of the atmosphere and is reflected back to the earth's surface at a considerable distance from the station. The sky wave does not return within the the area covered by the ground wave, and the region between the area covered by the ground wave and that covered by the sky wave is known as the "skip distance," a dead-spot region within which reception is impossible or unsatisfactory.

The length of the skip distance varies with the frequency of the broadcasting station. Thus it has been learned that reception on six megacycles is most reliable when the station is at least 300 miles or more away, and good reception is enjoyed on this band from great distances when a large part or all of the path of the transmission lies in darkness.

Stations near nine to ten megacycles in frequency are most reliable when heard over distances greater than 800 miles. Good reception in this band, from distant stations, is possible both in the daytime and at night.

For favorable reception on eleven megacycles the stations should be at least a thousand miles away. This band is best during the daytime but distant stations can be heard until midnight, especially in the summer time.

A distance of 1500 miles between transmitter and receiver is most satisfactory for reception on fifteen megacycles. Daytime is most favorable for their transmission.

The Units

The units of measurement of frequencies, wavelengths, and power are frequently used in RADEX, and a

knowledge of these units is indispensable.

Radio waves travel with the speed of light, which is 186,000 miles per second, or 299,820,000 meters per second. By the "frequency" of a station we mean the number of pulsations which that station produces within one second. The speed of radio is so great, however, that "cycles" are produced by the millions and it is more convenient for us to use terms which are multiples of a cycle. These terms are the "kilocycle," which is equal to 1000 cycles, and the "megacycle," which is equal to 1,000,000 cycles, or 1000 kilocycles. A frequency of 1,000,000 cycles can therefore be expressed as 1000 kilocycles or 1 megacycle.

The correct abbreviation for the kilocycle is kc-s., which really means "kilocycles per second." A unit called the Hertz is sometimes used (usually in Europe) which includes the time element; a kilohertz (abbreviated kHz) is a kilocycle per second.

The abbreviation for megacycles is megs. When megacycles are shown, they can be converted into kilocycles by changing the decimal point to a comma. Ex: 5.900 megs. — 5,900 kcs.

The wavelength of a station is the length, in meters, of each cycle. The use of the term "wavelength" and its measurement, "meters," is nearly obsolete, especially in this country, and is avoided in RADEX.

The amount of power that a station uses is expressed in watts, and 1000 watts is a kilowatt.

Call Letters

All the countries in the world use call letters which consist of certain groups of letters which have been allotted to them by international agree-

ments. Thus the country in which a radio station is located can always be known by the initial letters of the call sign.

The International Prefixes

Afghanistan	YAA-YAZ	Dominican Republic	Netherlands	PAA-PIZ
Alaska	K7		Netherland East Indies	
Albania	ZAA-ZAZ	Ecuador	HCA-HCZ	PKA-POZ; YBA-YHZ
Algeria	F	Egypt	STA-SUZ	Newfoundland
Andorra	PX	Ethiopia	I	VOA-VOZ
Angola	CR6	Fiji Islands	VPA-VSZ	New Hebrides
Antigua	VP2	Finland	OFA-OHZ	YJA-YJZ
Argentina	LOA-LWZ	France	F; TKA-TZZ	New Zealand
Ascension	ZD8	French Indo-China	F	ZKA-ZMZ
Australia	VHA-VMZ	Germany	D	YNA-YNZ
Azores	CT2	Great Britain	G; M	Norway
Bahamas	VPA-VSZ	Greece	SVZ-SZZ	LAA-LNZ
Bahrain Island	VS8	Guatemala	TGA-TGZ	HPA-HPZ
Belgium	ONA-OTZ	Haiti	HHA-HHZ	ZPA-ZPZ
Bolivia	CPA-CPZ	Hawaii	K6	EPA-EQZ
Brazil	PPA-PYZ	Honduras	HRA-HRZ	Peru
British Guiana	VPA-VSZ	Hedjaz	HZA-HZZ	OAA-OCZ
British India		Hong Kong	VPA-VSZ; ZBA-ZJZ	Philippines
	VTa-VWZ; XYA-XZZ			Poland
British Malaya		Hungary	HAA-HAZ	Puerto Rico
	VPA-VSZ; ZBA-ZJZ	Iceland	TFA-TFZ	W
Bulgaria	LZA-LZZ	India	VTA-VWZ	Portugal
Canada	CFA-CKZ; CYA-CZZ; VAA-VGZ; VXA-VYZ	Iraq	YIA-YIZ	Roumania
		Irish Free State	EIA-EIZ	Salvador
		Italy	I	Siam
Ceylon	VTA-VWZ	Japan	J	Spain
Chile	CAA-CEZ	Kenya	VPA-VSZ	EAA-EHZ
China	XGA-XUZ	Latvia	YLA-YLZ	Surinam
Colombia	HJA-HKZ	Liberia	ELA-ELZ	PZA-PZZ
Costa Rica	TIA-TIZ	Lithuania	LYA-LYZ	Sweden
Cuba	CLA-CMZ; COA-COZ	Luxembourg	LXA-LXZ	SAA-SMZ
Curacao	PJA-PJZ	Madagascar	F	Switzerland
Czechoslovakia	OKA-OLZ	Mexico	XAA-XFZ	HBA-HBZ
Danzig	YMA-YMZ	Morocco	CNA-CNZ	Turkey
Denmark	OUA-OZZ			TAA-TCZ
				Union of South Africa
				ZSA-ZUZ
				U. S. S. R.
				R; U
				United States
				K; N; W
				Uruguay
				CVA-CXZ
				Vatican State
				HVA-HVZ
				Venezuela
				YVA-YWZ
				Yugoslavia
				YTA-YUZ

The Spanish Alphabet

A knowledge of the Spanish alphabet is very helpful in identifying the many Spanish-speaking stations which are heard. It may look difficult, to read it as printed on the next page, but

it is really very easy to understand the letters when pronounced in Spanish, and many shortwave listeners agree that, manytimes, the call letters are more easy to understand accurately in Spanish than in English.

A—ah	H—ah-chay	O—oh	U—oo
B—bay	I—ee	P—pay	V—vay
C—say	J—ho-tah	Q—koo	W—doo-ble-vay
D—day	K—kah	R—air-ray	X—ek-key
E—ay	L—el-lay	S—ess-say	Y—yay
F—ef-fay	M—em-may	T—tay	Z—zed
G—hay	N—en-nay		

The Spanish numerals, also very important, are:

1—oo-no	4—koo-ah-tro	7—say-tay	10—dee-ayth
2—dose	5—theeng-ko	8—oh-cho	
3—trace	6—sase	9—noo-ay-ve	

Requesting Verifications

Nearly all radio stations welcome reports of reception from their listeners, and usually acknowledge these reports with verifications, which may be letters or cards. This practice started years ago when listeners had to have something tangible from a radio station in order to prove to their skeptical friends that the broadcaster had actually been heard. Now-a-days one's friends are not as skeptical as they used to be, because the possibilities of long distance reception are fairly well known to most persons, but the practice of collecting cards has continued, and this hobby in itself is considered by many to be as interesting as the actual logging of the stations.

Among radio fans verifications are known by many names, such as "veries," "confirmations," or "QSL's." Amateurs frequently call them "wall-paper" because they are used to decorate the walls of the radio den.

It should not be necessary to state that DXers should never request a verification from a station until the station has been positively identified.

When writing to radio stations, it is necessary to give two different kinds of information. First, the re-

port should include enough information about the program heard to enable the station to recognize its program, and second, as much technical information as possible should be submitted so that the report will be of some value to the station operators. Data on weather conditions, signal strength and interference, to mention only a few things, are important to engineers, as through such information they are able to study their transmission effects. Many times such information has been very helpful in pointing out how transmission may be improved.

In fulfilling the first requirement (program details) listeners are cautioned to be as accurate as possible in reporting time. The time should be correct to the half minute, or even the quarter minute, if possible. When reporting to stations in the United States, it is always a good idea to convert the time to the standard time used at the stations. When reporting to stations in South America, Eastern Standard Time, is generally understood. Regardless of what time is used in the report, however, the reporter should be sure to mention it.

When sending reports to countries overseas, the listener should convert

his time to the time used at the transmitter, or if that is not possible, he should convert to Greenwich Mean Time.

Greenwich Mean Time is the time system in which noon occurs at the time the sun passes over the meridian of Greenwich, England, and the standard times of nearly every locality in the world are calculated to agree with Greenwich in minutes and seconds, and to differ in hours only by whole hours. While the true sun time of New York City, for example, is 4 hours and 56 minutes slower than Greenwich, the standard time (EST) is exactly five hours slower

than GMT. Since Greenwich has been adopted as the standard international time, it is universally understood, and your report expressed in GMT will be comprehended, regardless of the country to which it might be sent.

The table printed below shows the differences in time between the various zones in use in North America, and GMT.

The names of all musical numbers recognized should be given, and unfamiliar musical items can be described, as "fox trot," "tenor solo," "stringed instruments," etc. Whenever possible the names of advertisers

Time Conversion Table

EST 24-hr. Clock	EST	CST	MST	PST	GMT
0000.....	Midn't	11 pm	10 pm	9 pm	0500
0100.....	1 am	Midn't	11 pm	10 pm	0600
0200.....	2 am	1 am	Midn't	11 pm	0700
0300.....	3 am	2 am	1 am	Midn't	0800
0400.....	4 am	3 am	2 am	1 am	0900
0500.....	5 am	4 am	3 am	2 am	1000
0600.....	6 am	5 am	4 am	3 am	1100
0700.....	7 am	6 am	5 am	4 am	1200
0800.....	8 am	7 am	6 am	5 am	1300
0900.....	9 am	8 am	7 am	6 am	1400
1000.....	10 am	9 am	8 am	7 am	1500
1100.....	11 am	10 am	9 am	8 am	1600
1200.....	Noon	11 am	10 am	9 am	1700
1300.....	1 pm	Noon	11 am	10 am	1800
1400.....	2 pm	1 pm	Noon	11 am	1900
1500.....	3 pm	2 pm	1 pm	Noon	2000
1600.....	4 pm	3 pm	2 pm	1 pm	2100
1700.....	5 pm	4 pm	3 pm	2 pm	2200
1800.....	6 pm	5 pm	4 pm	3 pm	2300
1900.....	7 pm	6 pm	5 pm	4 pm	2400
2000.....	8 pm	7 pm	6 pm	5 pm	0100
2100.....	9 pm	8 pm	7 pm	6 pm	0200
2200.....	10 pm	9 pm	8 pm	7 pm	0300
2300.....	11 pm	10 pm	9 pm	8 pm	0400
2400.....	Midn't	11 pm	10 pm	9 pm	0500

For times throughout the entire world consult the RADEX Time Converter.

QSA and R Codes

The R code describes the volume with which a signal is heard.

- R1 is a signal that is barely perceptible.
- R2 is a very weak signal.
- R3 is a weak signal.
- R4 are signals of fair volume.
- R5 are fairly good signals.
- R6 are good signals.
- R7 are moderately strong signals.
- R8 are strong signals.
- R9 are extremely strong signals.

The QSA Code is used to describe the understandability of a station's signal.

- QSA1 is a signal that is unreadable.
- QSA2 is one that is barely perceptible. A word can be understood now and then.
- QSA3 is understandable with difficulty.
- QSA4 is a signal that can be understood with practically no difficulty.
- QSA5 is perfectly understandable.

Some persons describe radio signals further by employing the S and X symbols, S to indicate fading and X to indicate static, in this manner:

- S is slight fading.
- SS is deep fading.
- SSS is a complete fadeout.
- R is rapid fading (fluttering).
- X is slight static.
- XX is bad static.
- XXX is very heavy static.

The letter N indicates that either fading or static was not present.

These symbols are written like this:

- (a) QSA5, R7/S/XX
- (b) QSA4, R7/N/N

Example (a) means that the station had a perfectly understandable signal at moderately strong volume, with slight fading and bad static. Example (b) means the station was easily understandable at quite strong volume, no fading and no static being present.

sponsoring programs should be mentioned, and all announcements should be transcribed, as nearly verbatim as possible.

The Signal Data

That the report may be of some value to the station it is necessary that the writer mention, truthfully, how well the station is heard, describing volume by the R Code, quality by the QSA Code, and hazards, such as interference, static or fading, by the S, X and N symbols. These codes are shown in the next column.

Prepaid Postage

When writing to overseas stations it is customary to enclose return postage in the form of International Reply Coupons. These can be procured for nine cents each from any post office, and can be exchanged in any country which is a member of the International Postal Union for postage stamps sufficient to mail a first class letter to this country.

When buying Reply Coupons, be sure that they are correctly postmarked in the circle on the left side of the coupon.

For the convenience of DXers, there has recently been inaugurated a return postage bureau, from which unused postage stamps of many foreign countries may be purchased. Those who are interested can obtain more information by writing to the Return Postage Bureau, 85 Francisco Ave., Rutherford, N. J.

PART TWO

The Broadcast Band

The reception of a foreign station on the standard broadcast band is undoubtedly the greatest of all radio thrills. It is an achievement comparable to a hole in one on the golf

course or a homer with the bases loaded, on the diamond. While foreign reception is admittedly difficult, it IS possible, and nearly all listeners have a few potential South Americans, trans-Pacifcs or trans-Atlantics playing on their aerials during the course of a winter season.

It goes without saying that highly efficient equipment is a primary requisite for foreign reception. The average set of eight, ten or twelve tubes can do wonders if it is properly aligned, if its tubes are in perfect condition and if it is fed by a good aerial. Of course, if the best possible results are expected and the expense is of no moment, the highly sensitive laboratory-built receivers offer the best possibilities for real DX reception.

A signal from a foreign station is very insignificant and unobtrusive after it has travelled a few thousand miles. As a rule the DXer has to fight quite a battle before capturing his station. He has to be the personification of patience and perseverance. He must know how, where and when to tune.

Undoubtedly the best method of tuning is that which is described as "spot tuning." Here the DXer makes out a list of five or six powerful stations which he wants to hear. Considering the season of the year and the time of day, he picks the broadcasters which are known to be on the air and which should be heard in his location. Then he dials the frequency of the first station and listens. If nothing is heard after waiting a few minutes, he goes on to the second station, and so on down the list. A station may be heard the first time, but if not, the skilled DXer will return time after time to the selected frequencies. Sev-

eral nights, or even several weeks of this kind of tuning may pass before the first foreign station is heard, but the real test of a DXer's ability is his willingness to continue under even the most discouraging circumstances.

For a more complete discussion on the Art of Tuning and the Art of Hearing, readers are referred to the October, 1938, issue of this magazine.

The Right Seasons

In general, listeners find reception of South Americans best during October, November, February and March. Most frequently heard are stations in Argentina, Brazil, Colombia and Venezuela.

During these months, DXers can usually start dialing for South Americans at sundown, and for the next couple hours reception is at its peak. From the list of the world's stations, printed in this issue, listeners can select a few of the most powerful South



A very up-to-date looking building houses the transmitting equipment of JQAK, in Dairen, on the Kwantung Peninsula in Manchukuo. This photograph was received with a verification of reception of JDY, the shortwave station in Dairen. 9925 kcs. It is owned by the Manchuria Telephone & Telegraph Co., Sohtokugai 3, Dairen. (Courtesy of Jim Walker).

American stations for their initial attempt. As soon as night falls they might turn to 1190 for the 30 kilowatt LS2 in Buenos Aires. Listeners at a distance from Cleveland should not have much difficulty in hearing the 50 kilowatt LR1 on 1070 between nightfall and the time that WTAM begins to come through. Many tuners report that 7 kw LS4 on 670 is easy to hear before WMAQ comes through, and LR5 on 830 is often heard between the time that WRUF signs off and KOA starts to come through.

Down Under

The Australian and New Zealand stations are heard during the same months as the South Americans—namely, October, November, February and March. On the west coast they are heard during the mid-winter months as well.

The New Zealand stations usually begin to come in at about 4 o'clock in the morning, Eastern Standard Time, and the Australians start about an hour later. On a morning when conditions are favorable it is a relatively easy matter to log a few of the more powerful "Aussies" and "Zedders." Stations which have actually been heard in this country are shown in the world list in this issue of RADEX. By picking a few high powered ones, such as the 60 kw 2YA on 570, and ten kilowatters 2CR on 550, 1YA on 650, 3YA on 720, and 4YA on 790, the DXer will be able to "size up" reception conditions for the morning. If he finds that the New Zealand "big boys" are coming through, he can then try for some of the big Aussies.

The best Australian stations to start with are 4QN on 630, 5CK on 640,

2CO on 670, 7NT on 710, 5CL on 730, 4QG on 800, and several others.

Trans-Atlantics

The European station start to come through during November and continue through December and January. These signals are not as strong as South Americans, but they do make a good showing along the Atlantic seaboard, particularly in the Middle Atlantic and New England states, and in the Maritime Provinces. Further west the signals ebb out gradually, although DXers in Ohio, Indiana and Illinois frequently report good results.

During the season some Europeans may be heard as early as 4:30 pm EST, along the eastern seaboard. Between 5 and 6 their signals reach a peak, which is maintained until their sign-off, which is usually about 7 o'clock. As the signal strength of our own stations is gaining during this time, there is but a relatively short period during the evening when Europeans may be heard. The best time to log the Europeans, however, is during the morning, after about 1:30 am. The Italian stations generally start between 1:30 and 2:30 am, as well as the big French stations.

Some of the best stations to try for in the morning are the Germans, such as Stuttgart on 574, Vienna on 592, Cologne on 658, Berlin on 841 and Breslau on 950. The best time to commence would be about 1 o'clock, and if European reception is good that morning, at least one of the Germans should be heard. Along towards two o'clock try the French stations. Strasbourg on 859, Toulouse on 913, Rennes on 1040 and Bordeaux on 1077 are especially recommended.

TURNER DIAL DISCUSSES GOOD ANTENNAS

••• By B. Francis Dashiell

TUNER DIAL was thoughtful as he drove into the garage after a spin through the country. This Sunday afternoon had been restful to him, for the Christmas rush at Higrade Radio demanded long busy hours every day. The ride in the bright December sun and sharp air gave him opportunity to relax. But, like a true radio man, he glanced up and around at the roofs of the homes he passed, looking for the tell-tale antenna that would indicate the ownership of a radio receiver.

The aerials he saw, however, helped to renew his belief that anything must be satisfactory to most radio listeners, when it came to antennas. He had long since learned that people usually gave little thought to the antenna to which their radio was attached. And he imagined that, in very many cases, expensive radio sets were poorly connected to a piece of wire that was thrown out of a window and strung up to some convenient tree or part of the house.

Of course, he knew that any good radio would bring in signals from afar with amazing energy merely by using a short length of loose wire for an aerial. But such was not good practice if the best reception was desired, and very

often it was the cause for a fine radio being blamed for inefficiency. Turner Dial resolved that, after Christmas, he would make a drive for new antennas. He would feature a window display of modern antenna kits with the advice: "Treat That New Christmas Radio To A Good Antenna!"

Both Turner Dial and his young assistant, Bill Wood, arrived together at the shop the next morning. The charwoman had opened up as usual, and now was busy dusting and polishing the new 1939 receivers that stood in a long row down one side of the store. "Good morning, Maggie," greeted Turner, as he cast a quick glance around the place to see that everything was in order.

"Mist Turner," grinned Maggie, as her white teeth flashed into view. "Somelady bin a-trying to git you-all. She gonna call back agin."

"Starting early!" commented Bill Wood under his breath, as he looked over the service department and the jobs to be done in the few days remaining before Christmas. Although people were buying new sets for the holiday, a goodly number were having theirs fixed up so Christmas programs and winter radio reception would be at



their best. "Sensible people," added Bill to himself.

The telephone rang sharply. Turner, who was up front looking over the mail which had just arrived, gave it no heed. Bill Wood answered. "This is Mrs. Snappe," advised a sharp and provoked feminine voice. "I have all kinds of trouble with my radio. Can you fix it?"

Bill was full of breakfast and youthful ego. "Yes'm!" he replied. "We can fix anything about a radio on a minute's notice!" But, seeing Turner give him a severe look, he hedged. "That is," Wood added, "if the radio is not too far gone and is worth repairing."

"Young man!" snapped Mrs. Snappe, "I want you to know this is a new radio! It worked terribly on Saturday night. One moment it was weak and the next it was loud, and it made awful scratching noises. I haven't dared to use it since."

"Yes Mrs. Snappe," said Bill. "We are busy just now, but some one will try to get out today and look at the set. I think it can be fixed without much work."

Turner Dial approached his desk. "What's it all about?" he asked. Bill repeated the conversation. "Humph!" grunted Turner. "I know her, so I'll go out there today. She'll be right on my heels if I don't."

The morning passed with the usual routine and the sale of one new receiver. After lunch, Turner came back to the service bench. "Say, Bill!" he called. "I'll deliver this set, and then

drop in and look at Mrs. Snappe's radio." In a short time Turner drove up to the house. "I'd like to examine the radio," he said, when Mrs. Snappe opened the door. "Well, it seems to work fine just now," she remarked. "I turned it on a moment ago. I can't understand it!"

The radio was still working and Turner thought it sounded about perfect. He knew it to be a good reliable receiver. "Seems o.k." declared Turner, and by now he felt certain the trouble was not in the set. It usually did not take long for him to make a quick examination in order to diagnose radio symptoms. His suspicions were elsewhere. Checking the ground and lead-in wires he saw they were good. The clamp to the radiator was tight, and the window strip lead-in was making good contact with the wires indoors and out.

"May I go to the roof? I would like to see the antenna." Turner followed as Mrs. Snappe led the way. The house was a semi-detached type with a flat tin roof over the rear. As Dial climbed out through the small hatchway only a glance was needed to see that the aerial, which was loosely attached to the chimney, sagged perilously close to the tin of the roof beneath. The lead-in dropped over the side of the brick wall, and helped to pull down the antenna wire. "What a mess!" growled Turner. "But just what I expected." He returned downstairs. "Where did you get that antenna you have on the roof?" he asked Mrs. Snappe.

"Well," answered the lady, "its been up there several years. I used it with the old set I had. A man who works around the neighborhood put it

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up for me. He said he knew all about such things, and I paid him plenty, too."

"Here's what is wrong," began Turner. "That aerial isn't any good. I could patch it up a bit, but its not wise. In the first place it was stuck up there without any idea of mechanical or electrical efficiency. I've seen hundreds just like it; the country's full of 'em. But its a shame to hook a good new radio, like yours, up to such a system."

"But it has always worked, and I know it works right now," protested Mrs. Snappe with some heat. "I don't see why you are trying to make me take another so as to be under more expense."

"That antenna," insisted Turner Dial, "is loose and weak. It sags and is not insulated. The wire is thin and badly joined. Lots of people believe that any kind of an aerial will do. Of course, they work, but can't be depended upon. The reception from a good scientific antenna will surprise you, and give you results that you haven't believed possible up to now. And it will cut down noise from automobiles and other sources."

"I'll take your word for it, Mr. Dial," agreed Mrs. Snappe. "Go ahead, if the cost is not too much. I thought that man had given me a good job. Wait until I see him!"

"Thank you," replied Dial. "We'll come out tomorrow and put it up. I guarantee you won't know this radio after we do the job."

It was some time before Bill Wood had opportunity to ask about Mrs. Snappe's radio. "It was the antenna," explained Turner. "It's a mess. It swayed in the wind and caused sharp

fading, and when it touched the tin roof and the loose lead-in flapped back and forth against the wall, she heard those loud cutting-on-and-off noises. There are none worse, as you know! Remember how the wind blew on Saturday night when it cleared up and turned colder after that rain. Any bad aerial would be a mess of junk after that! We'll put up a new one tomorrow."

Bill Wood knew that aerials must be kept as far as possible from tin roofs and brick walls, and that the wires must be tight so that abnormal swaying in the strong winter winds will be prevented. On apartments, where numbers of antennas are erected, they must not swing toward each other or touch together. That would cause severe fading, noise, or even the pick-up from what is being tuned in on a neighbor's radio.

Early the next morning the two men were on their way to Mrs. Snappe's. Two fir poles, each 10 feet long and 1½ inches square, were carried along. Two 1-inch pieces 5 feet long and 6 inches wide were placed across each other at right angles and nailed to one end of the pole. Then four thin braces, about 5 feet long, were nailed from the ends of the cross pieces to the four sides of the pole. The pole then would stand alone and erect upon its base. The bracing held the upright firmly. The two poles then were set upon the flat roof with the two wires of a doublet stretched between. Two brace wires held back against the pull of the antenna, and were tied to hooks screwed into the edge of the roof. The lead-in from the center of the antenna hung gracefully, and was tied to an insulator on the end of a short support

that projected over the edge of the roof. The lead-in dropped down, and was carried around to the window by long stand-off insulators screwed into small blocks which were nailed to the mortar between the bricks of the wall. "There!" remarked Bill Wood. "All up in an hour! We're getting good at this sort of thing!" And, knowing that his part of the work was done, Bill returned to the store to open it.

Turner connected the lead-in to the receiver, and switched on the power. "That sounds just fine!" exclaimed Mrs. Snappe excitedly. Station after station came in as Turner swung the dial. On the short-wave bands a number of stations came in fine, and although automobile traffic was steady, only occasionally was the static of a motor heard. "Can't get rid of all of 'em," commented Turner.

Back in the store a loud bumping noise at the door attracted Bill Wood's attention. Customers had been coming and going, but none had announced themselves with such authority. Wood hastily stepped in that direction where a portly man was trying to squeeze his stomach and a radio cabinet through the door at the same time. "Let me help," volunteered Bill Wood.

"I'm in now," puffed the stout customer. "What shall I do with this?" And he placed the cabinet on the floor with a loud thud.

"What is it you wish?" asked Bill. "Want to trade it in on a new set, or is it a repair job?"

"I want it fixed!" growled the man. "Noise, noise, noise! That's all I hear!" The man glared at Wood, and added: "My name's Miller. I was told to look up Turner Dial. Mr. White sent me."

"He's out just now," said Bill. "Let me help you." And taking the set up Wood led the way back to the service bench. He plugged the set in and soon had it operating. As far as he could tell it sounded as good as could be expected. The stout owner dropped in to a nearby chair.

"Why, it works fine now!" he said, as his face grew red. "It has made nothing but noise all the time, and now it's perfect. I give up!"

Bill Wood began to tune in stations. The volume was turned up all the way. He shook the cabinet. Tubes were pushed this way and that. The speaker cone underwent a vigorous probing. There simply was not any noise. But Wood remembered what had happened at Mrs. Snappe's. "Where do you live?" he asked of Mr. Miller.

"Oh, I live in the Chile Apartments," answered that portly individual. "On the fourth floor, and I have a good noiseless antenna, too. But it doesn't do any good!"

Wood turned off the set. "This seems to be good," he said. "The noise must come from your antenna or the locality. Those apartments sometimes play havoc with radios. We'll be glad to come up and help you out."

Just then Turner Dial came in, and Bill Wood explained what happened. "I think you're right, Bill," said Turner. "I'll be in and see you this afternoon," he added. Mr. Miller picked up his radio and struggled out.

When Turner arrived at the Chile Apartment Building he found plenty of noise in Miller's radio. A whining sound—one that commenced with a knock or click and ended the same way—kept coming in at irregular intervals. "That," commented Dial, "is

the noise of the elevator motor and switches up on the roof. But that grating and grinding noise is something else."

Turner went on to explain that electrical devices all had characteristic noises. Motors, as a rule, give whining, buzzing, humming, or whirring sounds which reach a steady pitch very quickly. Many a.c. motors, however, are silent in the radio receiver. Sounds which crack, pop, snap and sputter, come from nearby power lines, street cars, bad connections within or without the radio itself, and elevator controls as they are turned on or off. Electric switches in the house and different devices always pop sharply in the radio. But here also was another noise which sputtered and crackled at irregular intervals. "That must be a bad connection in the antenna," said Turner. "Let's go up on the roof."

The two men took the elevator and then climbed a short stairway up through the elevator pent house on the roof. "Here is my aerial," said Mr. Miller proudly. "I put it up myself!"

"It looks good," declared Turner Dial, as he checked it over. "It's too close to the motor house. Look inside! See how those motors are sparking, and watch the switches flash! Those sparks are radio waves, and every antenna picks up some of the energy. That commutator should be cleaned up and new brushes installed. If you stop the sparking you can stop the radio energy that is being broadcast. A system of filters connected to these switches and motors will do the work. Of course, you can't do it, for it's the owner's job. But its not so expensive."

Turner reached up and loosened one end of the horizontal doublet wire.

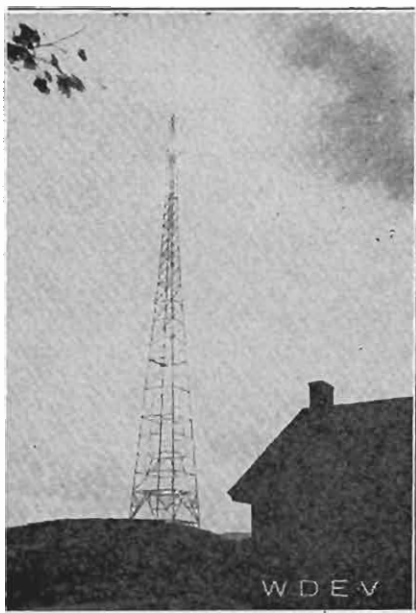
Walking over to the mid point where the lead-in was attached, he probed up into the strain insulator that joined the doublet and held the lead-in. "Just what I thought," he called to Miller. "One of the twisted pair of wires is broken from constant swaying and twisting. Your antenna was not supported as snugly as it should be. This often happens, but because the trouble is concealed so well, it is puzzling to many radio listeners. I guess the same gale that gave trouble to another of my customers the other night finished this wire and its connection." Turner made a new contact, raised the antenna and made it fast. "There, that should do," he said.

Downstairs the radio worked much better, since the cutting off and grinding noises had ceased entirely. "That clears up one kind of noise, but does not help the elevator interference," Turner said. "You might try a filter unit between your radio and the wall socket. That holds back any noise surges that try to come to the radio through the house wiring." Just then a violent roaring sound burst forth from the speaker. It lasted a few seconds, but was repeated a few times. "What on earth is that?" asked Dial. "Have you heard it before?"

"It's a new one on me," said Mr. Miller excitedly.

"Sounds like an X-ray, or some similar medical instrument," commented Turner. "Have you a dentist or doctor nearby?"

"I don't know of any," said Miller, as he picked up the telephone. "Hello!", he called to the building operator. "Do we have a doctor's or dentist's office in the apartment?" Miller listened, and his face grew red.



The aerial tower of WDEV, in Waterbury, Vermont. This is the tallest tower in New England, being 435 feet in height. The transmitter is in the building to the right, which is on Blush Hill, near Waterbury. (Courtesy of Francis Coradetti).

Then he gulped, and hung up. "Now what do you think?" he stammered toward Turner. "A dentist just moved in, and he is opening for business today!"

Turner looked at Mr. Miller with great pity. "Brother, you are having hard luck," he said. "But that X-ray won't be running so much; only when he is taking pictures. Your worst trouble is in that elevator setup. Your antenna takes care of other interference. Unfortunately, there are thousands of people like you living under these same conditions. But many modern apartments now take care of

their electrical interference, and if your owner is broadminded, he'll get a competent electrician to put an end to this nuisance. Certainly it must be annoying everybody in the building!"

Back at Higrade Radio Sales and Service Bill Wood was lecturing learnedly to several prospects. One man, however, raised the question of static and noise. "Everywhere I go," he complained, "my friends have all-wave sets and also a nice lot of noise. What about that?"

Turner Dial entered just in time to hear Bill optimistically dismiss the speaker's objection. "Just put up a noise-reducing antenna system, and you won't have any noise!" Turner stopped in his tracks.

"Mister," he declared. "There isn't any true noise-eliminating antenna. I've found that out. But there are a great many that stop practically all noise, as far as we are concerned. You can't take out one hundred percent of all the man-made static interference that a big, sensitive radio is bound to pick up. It's wise to use a good antenna with a good radio, for then you'll get a lot of pleasure and entertainment, as well as DX reception, and the noise won't bother very much unless you live in a hot-bed of electrical machines. Static noise is just a part of our civilization, unless we live way off in the open country and use battery radios. Even then, atmospheric static will get us. You can't get away from it! But we are doing something about it!"

Turner Dial then and there was settling down to business, and getting his prospect in shape for the signing on the dotted line! The telephone rang, and Bill Wood answered.

"Boss!" he called. "It was Mrs.

Snappe. She said to tell you that the new antenna is a wow! Said all the noise has gone and it's working fine. She never knew a radio could be so quiet and powerful on distant stations!"

Dial turned to his customers. "There you are, Sir," he announced with pride. "It just goes to prove, since you've picked out that fine radio in front of you, that you'll need one of our special noiseless antennas to go with it!

Next month Turner Dial will explain why some stations come in at two places on the dial. Everyone who has been bothered by stations which have been heard off their proper dial setting should read this story in the February issue.

New Honors For Scott Radios

Mr. E.H. Scott, of the E. H. Scott Radio Laboratories, Inc. announces receipt of cabled advice from the Paris International Exposition that Scott Receivers won the Diplome D'Honneur at the Exposition in competition with the leading radio receivers of Europe and America.

At the Centennial Celebration of the American Parent System held in the Auditorium of the National Academy of Science, Washington, D.C. recently, over 1,500 of the leading scientists and business leaders in the nation gathered to see a demonstration of the latest developments in science. A Scott Radio Receiver was chosen to demonstrate, before this distinguished assemblage,

the perfection that has been attained in High Fidelity reproduction.

Mr. Scott informs us that Scott Radio Receivers, because of their high degree of efficiency and precision, have been purchased by the U.S. Bureau of Standards at Washington, D.C., the Royal Canadian Mounted Police, Ottawa, the African Broadcasting Company at Durban, South Africa; the Belgium Broadcasting Company at Antwerp, Belgium; the Icelandic State Broadcasting Service at Reykjavic, Iceland; the Norwegian Broadcasting Company at Oslo, Norway; the Director of Radio Communications at Montevideo, Uruguay; the Radio Communication office at Buenos Aires, Argentine; the Government of Australia; the Government of Bolivia; and the Government of Porto Rico.

J. L. M., Estelline, Tex.: I have a Silvertone battery set using 9 tubes. It stays normal for a few minutes and then drops to low volume, but it has been gradually falling off in power and now is weaker than it used to be.

Answer: In a battery set this trouble should bring suspicion on the batteries. Failing batteries always bring weaker signals. A rest over night, for instance, gives the batteries a chance to recuperate, and the set will be strong for a few minutes after it is turned on, then it will quickly grow weaker. This action is seldom noticed in the volume control unit, or the resistors and condensers. However, if the batteries are good and strong, have the units of the set tested, one by one, and check the tubes.

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HIGH FREQUENCY GLOBE TROTTING

●●● By RAY LA ROCQUE

MAY we pause, now, as we enter our first Christmas season with RADEX to extend a few wishes for good cheer, good fortune, and, of course, good DX to our friends old and new. Our "old mill" could not pound out any more sincere wordage than our hope that the joy and gladness of the Yuletide Season will endure throughout the coming year and the many years that will succeed it.

Inaugurating, as we promised last month, our "Report-o-meter" we will precede it with a few explanatory remarks on how the meter operates and the purpose it is to serve. The meter will register one point for the first report from a reader on a change in frequency, location, call letters, or schedule. One extra point will be given for the interval signal used by the station and another if the report includes various peculiarities of the programs which may tend to help identify the station. On reports of new stations one point will be awarded for each of the particulars mentioned in the preceding sentence. Points are awarded only for the first report on any change or new station.

This month's "Report-o-meter" represents all the reports used in compiling the current edition of SHORTWAVES IN REVIEW as well as the SCOOP BOX reports of last month's RADEX. Reports which reach us in time for the SCOOP BOX count double!

Each month the "Report-o-meter" will record the first five highest scorers among the RADEX reporters. The top scorer will receive a rating of 100% and the percentages of the others will be computed on his score. Here they

are! This month's "Report-o-meter" reporters:

REPORT-O-METER

Robert Skyten, E. Brookfield, Mass.	100%
Anthong C. Tarr, (R274), Seattle, Wash.	46%
Jack Wells, Phenix City, Ala.	26%
Elvyn Barker, Portland, Me.	19%
Carl & Anne Eder (R184-5), Willmar, Minn.	15%

MEGACYCLE BREVITIES

Carlos Ramirez G., shortwave editor of Radio Guia, besides owning and operating GM2AR, is one of Cuba's most prominent and active shortwave DXers. He has won several DX contests in Latin American countries, one which got him the position he now holds with Cuba's most popular radio magazine. . . A suggestion from Paul Russnak, Jr. deserves the "cake" this month. He suggests for those who have difficulty in keeping awake late evenings, that they tune to ZRH from 11:45 p.m. to 12:15 a.m. for the setting up exercises, and that they do likewise. . . The H.M.S. Milford, a naval vessel that cooperated in installing and testing a receiving set on Tristan da Cunha, has reported excellent reception of Daventry and of other broadcast programmes in the island. As a result, the loneliness of Tristan da Cunha has been considerably relieved. The Rev. H. Wilde, chaplain of the "World's Loneliest Island", took the set back with him when he returned after his leave last year. . . If W9XAA's application is a success they will receive a grant which will allow the removal of the station from Chicago to Salt Lake City and an increase in power from 500 to 10000 watts. . .

QUOTE AND UNQUOTE

Victor J. Balt, Aurora, Illinois: "I'd

like to know what station was on about 41500 kcs. on November 1 at 10:39 a.m. When I tuned them they had a program similar to the Movietone News that we hear at the movies and they continued with descriptions and habits of geese, American ducks, and penguins. Program was concluded at 11:20. All talking was in English. Voice sounded like a GS announcer. I would appreciate it if anyone could tell me what station it was."

Chester Roman, Chicago, Illinois: "Numerous stations have been heard on 3420 kcs. giving locations only, being heard at 8:45, 9:00, 10:00, 10:15, and 10:45 p.m. CST. The names are: Gallenburg, Brighton City, Bunker Hill, Cape Cove, Rich Mountain, Canterbury, Spruce Mountain, Pointree, Shuckstag, Hazeltree, Mt. Sterling, Twenty Mile, and Irox."

Capt. E. N. Massey, Sweetwater, Tennessee: "Last night around 10:15 p.m. I picked up a very weak station between GSB and W2XAF. By just turning the dial the slightest hair mark, interference from one or the other appeared. Two selections distinguished were a part of 'Merry Widow Waltz', and a French song that was sung by Anna Held in 'The Great Zigfield.' The song was 'It is Thrilling to be Married'. TPB-13 is listed on 9520 kcs., but I don't think it transmits at that time and besides is powerful enough to hold its own against GSB which is lower power!"

Edward Hirsch (R281), St. Albans, New York: "On October 10, 12:50 p.m. I heard a station on 12700 kcs. broadcasting facsimile. Can anyone identify it?"

C. J. Fern, Jr., Lihue, Kauai, T. H.: "Here's how I go about hooking a

station: "Looking through September RADEX I find notes from Alan Breen to the effect that Radio Hanoi II is on from midnight to 2:30 a.m. EST. I turn to 11890 kcs., find the station active. A French lady announcer. Then I look through June RADEX and find TPB7 the only other French station near that frequency. However, I have never gunned for him so I stick till next time signal to find out who he is. But, doggonnit, I never find out that particular night due to CQ from OM's Schick which he uses to give me time signals near bedtime. However, I resolve to try again next night hoping for the best. Next night I hook him, and copy about 1/2 hour of program—never less. If I get his call I scribble something like this on a piece of paper 4 1/2 by 30 that runs down the wall of ye inner sanctum: (This one for CXA-8) CXA-8 9640/122 1330-1830. The 122 after the frequency is the reading on the band spread dial. The time is based on the 24 hour clock—Hawaiian Standard Time."

Philip L. Craig, Waterville, Maine: "Can anyone identify these stations: CZ7J, CZ2T, CZ2S, CZ2R, CZ9U in Canada; and CMTC, WYD, and VP5TV?"

Robert Skyten, East Brookfield, Massachusetts: "What station is heard after VK3ME signs off on 9510 kcs? In fact they begin to QRM the Australian long before the station closes down."

Isaac T. Davis, Elkhart, Texas: "What shortwave station is causing much QRM to ZBW on the 9 megacycle band in the hours between 6 a.m. and 8 a.m.?"

ULTRA HIGH

W1XOJ on 43000 kcs. in Boston,

Mass, is the Yankee Network's newest representative on these bands and will soon be heard testing with 100 watts pending final erection of the 400 watt equipment. (RX).

W4—on 31600, 35600, 38600, or 41000 kcs. in Nashville, Tenn. This is a new construction permit for ultra high frequency broadcast station issued to the owners of WSM. For assignment of call letters and definite information as to the channel that ultimately will be used, read our ultra high items each month.

W8XNU on 25950 kcs. is being heard with a good signal. They work in the daytime and from 6-11 p.m. They relay the programs of WSAI and solicit reports from listeners. (Bonnell-Ohio, and Barker-Maine).

W9XA on 26500 kcs. in Kansas City, Mo. is heard from 2-4 p.m. with R3-5 signal. They promise to QSL all reports that are received. The station is unique in that, among the ultra high frequency broadcasters, it is perhaps the only one that is not in any way connected with a standard broadcast station. The station is privately owned by the Commercial Radio Equipment Company of that city, has many of its own programs and picks up non-commercial programs from KSL, WLW, or the local KITE! W9XA's channel is a clear one at present and DXers within range of its signal should have no difficulty in finding W9XA! (Gilbert Harris., and RL-Mass.)

W9XUP on 25950 kcs. in Minneapolis, Minnesota is plenty tired of being hashed up by QRM from other stations on that over-crowded channel and is seeking permission to change to 26150 kcs. (RL-Mass.)



Five different colors adorn this QSL card from W9XJL, the ultra high frequency station of The Head of the Lakes Broadcasting Company. W9XJL transmits on 26100 kcs. with a power of 250 watts. (Courtesy of Merton M. Hiatt).

France is operating a television station atop the Eiffel Tower—1000 feet above ground. The power is 32 kilowatts for video transmission and 17 kilowatts on audio or voice transmission. The station operates visually on 7.5 meters and vocally on 8.75 meters. (Jack Wells-Ala.)

VERI NEWS AND NEW VERIES

ZBW-3 at Hong Kong is now verifying reports of reception. I received three verification cards in one mail dated on a February transmission. (Satterthwaite-Calif.)

JVN verified report of Jack Wells, Phenix City, Alabama with one of the new JZ station cards. The card shows the Nazaki transmitters and the antenna arrays. The card is brown with black print. Veri message is on the reverse side.

YCP on 9120 kcs. at Bandoeng, Java verifies with black on buff card. Verification is signed by Ir. L. F. J. Verboeket, Java Wireless Stations, Bandoeng, Java, N. E. I. (Wells-Ala.)

SHORTWAVES IN REVIEW

Australia

VLR-3 on 11880 kcs. in Melbourne, Australia signed off at 3 a.m. and an-

nounced that he would be on the air again in fifteen minutes on 9580 kcs. (Skyten-Mass.)

Azores

CT2AJ on 4002 kcs. at Ponta Delgada was heard on a Wednesday evening with a good signal (R7) at 6:30 p.m. signing off at 7 p.m. with the Portuguese National Anthem. (Skyten-Mass.)

Canada

Kenora, Ontario: "Our public phone circuit operates transmitters for use from Kenora and Sioux Lookout on 5815, 4880, and 3300 kcs., while Red Lake and Pickle Lake use 5715, 4580 and 3015 kcs. By this system we can connect anyone on the telephone systems of these northern communities with the local telephone system in either Kenora or Sioux Lookout and, of course, thence by ordinary means to any part of the world. We also have an aircraft circuit and this transmitter is left on 5420 kcs. all the time and is remotely controlled from the aircraft company offices downtown by means of which they can speak to their planes in flight from their own desks. Lastly, there is our local phone circuit and this transmitter operates on 2898 and 3430 kcs. and communicates with small stations used in camps, lumber camps, and mines, etc., and can also connect them into the telephone system the same as the public phone circuit. A speech scrambler is on hand in case any strictly private conversation is being transmitted!" (Dept. of Lands and Forests of Ontario via C. Roman-III.)

Chile

CB970 on 9730 kcs. at Valparaiso is being heard evenings. They use a bugle call and chimes for identification. (Keirstand-Mass.)

Colombia

A complete shuffling of call letters and frequencies among the Colombians a great deal of confusion. We've been diving into the mixup almost nightly and straining our favorite ear to gather the following which may be a little incorrect in spots but it will serve 'till a more official list is available:

HJ1ABB on 4785 kcs. from 6-11 p.m.

HJ1ABE on 4830 kcs. from 6-10:30 p.m.

HJ2BAC on 4815 kcs. from 5-10 p.m. was formerly HJ2ABC.

HJ2BAJ on 4865 kcs. from 10:30 a.m. to 2 p.m., and 5-11 p.m. was formerly HJ3ABD.

HJ3CAF on 4855 kcs. from 6-11 p.m. except Sun. was formerly HJ3ABF

HJ3CAH on 4895 kcs. from 11:30 a.m. to 2 p.m., 6-11 p.m. was formerly HJ3ABH.

HJ3CAX on 5990 kcs. from 10:30 a.m. to 2 p.m. and 5:30-11:30 p.m. was formerly HJ3ABX.

HJ6ABH on 4875 kcs. now having shifted from 4760.

HJ7GAB on 4775 kcs. from 6-10:45 p.m. was formerly HJ7ABB.

Czechoslovakia

OFFICIAL PRAGUE SCHEDULE

For North America:

OLR5A on 15230 kcs. and OLR4A on 11840 kcs. daily except Sun. and Mon. from 7:50 p.m. to 10:55 p.m. and news in Czech on Sat., and Sun., at 5 p.m.

For South America:

OLR5A on 15230 kcs. and OLR4A 11840 kcs. daily from 5:55 p.m. to 8:55 p.m.

For Europe:

OLR4A on 11840 kcs. from 1:55 p.m. to 4:30 p.m. daily and on OLR3A 9550 kcs. Monday; OLR5A on 15230 kcs. Tuesday; OLR2A on 6010 kcs. Wednesday and Thursday; and OK1MPT on 5145 kcs. Friday—all from 4:40 to 5:10 p.m. (RX)

Denmark

OZF on 9520 kcs. broadcasts from 8 p.m. to 9:30 p.m. directed to South America and East Asia; and from 9:30-11 p.m. directed to North America. (Satterthwaite-Calif.)

Ecuador

HCJB at Quito (frequency not given) broadcasts a special program in English directed to the listeners of all English speaking nations which is very interesting. The program is slated to start at ten o'clock and DXers are advised to listen for an interesting broadcast. (Craig-Maine)

Finland

OFE on 11780 kcs. has been heard in the mornings, coming in with a good signal, until 12:05 p.m. when they sign off. (Skyten-Mass.)

France

TPB-3 on 17810 kcs. now operates from 9:30-11 p.m. for the East and Far-East.

TPB-6 on 11718 kcs. operates from 7 p.m. to 9:15 p.m. for South America.

TPB-7 on 11885 kcs. operates from 9:30 p.m. to midnight for North and Central America.

TPB-11 on 15130 kcs. operates from 2 a.m. to 5 a.m. and on 9550 kcs. from 11:15 p.m. to 6 p.m. for Africa and Eastern Mediterranean.

TPA-2 on 15243 kcs. operates from 6 a.m. to 11 a.m. for the East and Far East.

TPA-3 on --885 kcs. operates from

2-10 a.m., 11:15 p.m. to 6 p.m. for Africa.

TPA-4 on 11718 kcs. operates from 7 p.m. to 9:15 p.m. and from 9:30 p.m. to midnight for America.

Germany

DJE on 17760 kcs. has a new schedule from 12:05-5:50 a.m., 6-7:30 a.m.

DJR on 15340 kcs. now operates 12:05-11 a.m., 11:10 a.m. to 12:25 p.m., 4:50-10:50 p.m.

DJZ on 11810 kcs. at Vienna, Germany replacing OER operates 7:15-10:50 p.m.

DJX on 9675 kcs. at Vienna, Germany—another OER replacement operates from 11:30 a.m. to 4:25 p.m.

DJN on 9450 kcs. now operates from 12:05-11 a.m., 4:50-10:50 p.m. Other DJ's remain on the same schedule as last month. (RX)

DZB on 10042 kcs. is heard with a musical program at 4:50 p.m. on Sundays with CW interference. (R281-N.Y.)

Guatemala

TG-1 on 1310 kcs. and TG-2 on 6190 kcs. (Also TG-3 on 2140 kcs.) are transmitting daily from 5:30 to 8 a.m. and from 4 till 9 p.m. A Special DX program is transmitted for all DXers throughout the world each Sunday morning from 1-3 a.m.

Announcements are in English between each musical number. On this program letters from listeners are answered via the airwaves. In reporting any of these stations, it is not necessary to include any return postage as the stations verify gratis! (Parfit-Ohio and RL-Mass.)

Holland

PCJ on 15220 kcs. is heard on Tuesdays. The schedule is actually

from 3-4:30 a.m. and the program is easily heard as well as easily identified as all announcements are in English. (Barker-Maine)

PHI on 11730 kcs. has been heard at 6:15 p.m. with R9 signal broadcasting simultaneously with PCJ on 9590 kcs. (This on Wednesday.) (Skyten-Mass.)

India

VUD-3 on 15160 kcs. at Delhi comes on the air an hour later now. Broadcasts start at 9:30 p.m. each evening. At 10:10 p.m. the English news broadcast is heard. Station usually has a good signal, but fades very rapidly. Before the news comes on the air native songs and music are featured. (Skyten-Mass. and Wells-Ala.)

VUD-2 on 4995 kcs. and the other on 9590 kcs. come on the air at 7:30 a.m. with chimes and the clock striking the hour which is followed by news in English. The 60 meter station is R6 and the other R9! Numerous other India stations have been heard on the 60 meter band, but as yet none of them have been definitely identified. (Skyten-Mass.) A tip for those who wish to copy veri material from these stations. There is a half hour English program from 7-7:30 a.m. each Thursday. The program consists of greetings to children having Birthdays, musical selections dedicated to them. You'll find this more dependable than the news at 10:10 p.m. as the stations usually have faded greatly by that time. (R184/5-Minn.)

Italy

12RO-4 on 11810 kcs. replaces 12RO-3 on the programs in the afternoon and evening. The American Hour program to North American is still heard on 12RO-3 on 9635 kcs. (Skyten-Mass.)

Japan

JVH on 14600 kcs. is heard often late in the evenings. No English programs have been heard. (Skyten-Mass.)

Java

PMN on 10260 kcs. and YDC on 15150 kcs. are heard daily. They come on the air at 6 p.m. A music box tune is played before opening programs. The signal is fairly good. (Skyten-Mass.)

Nicaragua

YNRF on 8580 kcs. in Managua, Nicaragua is reported operating on this channel as well as on 6760 kcs. as of last month. (NNRC Bulletin)

Norway

LKC on 9530 kcs. was heard on a Sunday morning from 2:36 to 2:56 a.m. when they disappeared, the program consisting of setting up exercises conducted by a man and a lady. Musical accompaniment furnished background for the program. (R184/5-Minn.)

Philipine Islands

KZIB on 9510 kcs. relaying the 900 kcs. station in Manila is heard every morning after VK3ME signs off. It reaches an easy R8 at 8 a.m. and is one of the easiest stations to hear. (Davis-Texas)

Portugal

CSW on 9940 kcs. in Lisbon can be heard from 6 p.m. to 9 p.m. when they sign off. They are almost always R9! No announcements are made in English, but they play some classical music that everyone can identify and if you listen closely you can hear them announce: "Emisora Nacional." (R7-Pa. 1)

Sweden

SM5SX on 15155 kcs. is consistantly heard well in the afternoons. They sign off around 5 p.m. (Skyten-Mass.)

Switzerland

HBL on 9345 kcs. at Geneva, Switzerland is now heard Sunday evenings on the program to North America from 7-7:45. The signal is perfect. This program was previously heard over HBO on 11402 kcs. (Skyten-Mass.)

Tangier International Zone

CN1AF on 14130 kcs. and 14278 kcs. is said to be broadcasting irregularly for the Spanish Nationalists. CN1AF ordinarily is a ham, but F8UE says he is BC and handles extensive rebel traffic. This station (CN1AF) is located in Tangier International Zone, North Africa: QRA is Sources No. 19, Tangier. It is usually heard at 5 p.m. with good signal. (Wells-Ala.)

Turkey

TAP on 0465 kcs., "Radio Ankara" is heard every afternoon with good signals. Announcements are in English. The station signs off a few minutes before 5 p.m. (Skyten-Mass., Trubee-N.J.) Actual schedule is from 3-5 p.m. as announced over the air. (RL-Mass.)

Union of South Africa

ZRK on 9610 kcs. broadcasts physical exercises nightly except Saturday from 11:45 p.m. to midnight. At this time cathedral bells are heard and the time is given via 'pips' as "5 a.m. GMT." Then follows the news until 12:05 a.m. From then the physical exercises are resumed. The remainder of the program consists of march selections till sign-off at 12:45 a.m. (Wells-Ala.)

ZRK on 6097.5 kcs. at Klipheval is heard when reception is good during the afternoon until 4 p.m. when they sign off. (Skyten-Mass.)

Uruguay

CXA-8 on 9640 kcs. in Colonia,

announces their schedule as 7 p.m. to midnight. (R211-Hawaii 2)

U. S. A.

The U. S. Immigration Border Patrol now operates on the following radio stations on the southern border. All stations operate on 4617 kcs. as well as the frequency following the call: KYZA (2630) El Paso, Texas; KYZC (2118) Chula Vista, Calif.; KYZD (2182) Del Rio, Texas; KYZE (2118) El Centro, Calif.; KYZF (2630) Alpine, Texas; KYZG (2630) Tucson, Ariz.; KYZK (2182) McAllen, Texas; KYZL (2182) Laredo, Texas. (RX via C. Roman-III.)

WMI, Lorain County Radio Corp., Lorain, Ohio gives weather reports on 2550, 6470, and 11370 kcs. at 11 a.m. and 10 p.m. (Danielson-Nebr.)

WWTK "Bullion Depository" on 2442 kcs. called WPDE at Louisville, and Fort Knox Exchange at 9:45 p.m. (CST) regarding a message they received and asked them to report by phone. (Roman-III.)

W2XE on 21515 kcs. has been granted another extension of its permission to operate on this off channel frequency pending definite arrangements for elimination of sideboard interference on European transmissions. (RX)

W2XE on 6120, 11830, and 15270 kcs. at present has been granted the additional frequencies of 6170 kcs., 9650, 7830 kcs., and 21570 kcs. Along with this grant the frequencies 9590, 17760, and 21520 kcs. have been deleted! (RX)

W2XE on 9650 kcs. is now broadcasting from 6:30-11 p.m. (Wells-Ala. and Skyten-Mass.)

W8XAL on 6060, 9580, 11870, and 15270 kcs., has been granted a

couple of new channels: 17760 kcs., Elvyn Barker, Portland, Maine.
and 21650 kcs. (RX) Walter R. Bonnell, Cincinnati, Ohio.

W9XDXH on 12862 kcs. of the Press Wireless, Inc. at Elgin, Illinois was heard with musical program from 12:15-12:30 p.m. Very strong signal. (R281-N.Y.)

U. S. S. R.

RKI on 7540 kcs. is broadcasting along with RAN from 7-9:15 p.m. (Danielson-Nebr. and Skyten-Mass.)

Another Soviet station heard in the afternoon on 14760 kcs. is as yet unidentified. (Skyten-Mass.)

RKG on 14270 kcs. location unknown appears to be a regularly operating Soviet station. A power of 15 kilowatts is used. (R118-Eng. 1)

RV-96 on 6812 kcs. at Khabarovsk, U.S.S.R. appears to have taken the place of old RV-15. They are heard from 2:30-10:30 a.m. (RL-Mass.)

Another Russian station at same location as RV-96 seems to be on 6055 kcs. and call may be RFN. (RL-Mass.)

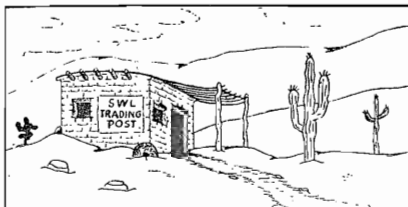
Vatican City

HVJ on 6030 kcs. has been heard in the afternoon at 3:17 p.m. when the station signed off. Signal was very good. (Skyten-Mass.)

The Reporters

- R7, Pa. 1—A. M. Hankins, Latrobe, Pa.
R9, Mo. 1—Walter V. Scholz, Webster Groves, Mo.
R23, Ill. 4—Richard Wright, Chicago, Ill.
R24, Ill. 5—Wm. J. Wood, Jr., Oak Park, Ill.
R118, England 1—D. H. Dussek, Alton, England.
R133—Carl Forestieri, Bronx, New York, N. Y.
R184—Carl Eder, Willmar, Minn.
R185—Anne Eder, Willmar, Minn.
R211, Hawaii 2—C. J. Fern, Jr., Lihue, Kauai, T. H.
R220.—Albert Pickering, West Medway, Mass.
R281—Ed Hirsch, St. Albans, N. Y.
Victor J. Balt, Aurora, Ill.

- Philip L. Craig, Waterville, Maine.
Edward Danielson, Pawnee, Nebr.
Isaac T. Davis, Elkhart, Texas.
A. V. Deterly, Baton Rouge, La.
Gilbert Harris, Easthampton, Mass.
Enrique Hidalgo, Cienfuegos, Cuba.
Richard Holland, Gonic, N. H.
Curtis F. Keirstead, Framingham, Mass.
Capt. E. N. Massey, Sweetwater, Tenn.
Carlos Ramirez, Havana, Cuba.
Chester Roman, Chicago, Ill.
Harold Satterthwaite, Los Angeles, Calif.



M. A. Adkins, 19 Nanticoke Ave., Union, N. Y. (Correspondence).

Richard J. Winne, 10 Elmhurst Ave., Stop 39 Schenectady Road, Albany, N. Y. (correspondence and SWL cards).

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

John Raposa, Jr., 161 Pearl St., Fall River, Mass. (SWL cards).

Merlin N. Steen, Route 6, Decorah, Iowa (SWL cards).

Vince & Marie Stasen, 5347 Priscilla St., Philadelphia, Pa. (SWL cards).

Roger Mais, 132 E. 8th St., Mishawaka, Ind. (SWL Cards).

Alfred E. Arnold, 159 Oakland St., Springfield, Mass. (SWL Cards).

Edward Hirsch, St. Albans, L.I., N. Y. (SWL cards).

S. Schmuch, 73 Thorndike, E. Cambridge, Mass. (Correspondence with near-by short-wave listeners).

Jack Kenneally, 112-86 Mayville St., St. Albans, N. Y. (SWL cards).

Dxers' Picture Gallery

O. INGMAR OLESON



O. INGMAR OLESON

STARTING his DXing activities back in 1922, and experimenting with radio since the days of the coherer, is the record of O. Ingmar Oleson of Ambrose, North Dakota. The receiver in use now is a 1932 Scott De Luxe receiver with 140 feet of antenna. He considers a long, inverted "L" antenna superior to a duplex, even for shortwave work, but he insists the antenna should be tuned for best results.

This night owl tunes the broadcast band and the shortwaves. On the broadcast band he is the possessor of verifications from Australia, New Zealand and South America, but so far has not been able to log any European or Asiatic stations. His verification from LR5, "Radio Excelsior" in Buenos Aires, is shown in the photo.

Mr. Oleson says he is a member of "most clubs," but mentions only The Radex Club (R89, N. Dak. 1), and the Quixote Radio Club. He does not exchange SWL cards, but would appreciate correspondence from users of Scott, Masterpiece or Midwest receivers. He would especially appreciate reports of reception of Norwegian stations.

ARTHUR B. JOHNSON

A DXer since 1929, Arthur B. Johnson of Fort Hamilton, N. Y. has been tuning on all bands years after year since then. He has been reading RADEX since April of 1932, and has every copy published since then, all neatly bound in permanent volumes.

This DXer does not keep a log of the stations heard, but has a record only of those verified. His verified log now stands at 769 stations on the standard broadcast band, 573 stations on the shortwaves, and 1394 amateur stations. He has verified 91 countries, and has verified all continents 21 times.

The receivers used in the Johnson shack are a Midwest 18 tube receiver with a 2-stage preselector, a Cosman Communications type receiver, and a 7-tube Philco. He is a member of the Universal DX Club, being an Executive Secretary in that organization.



ARTHUR B. JOHNSON

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.

QUESTIONS and ANSWERS

A. P., East Liverpool, Ohio: I have a 10-tube all-wave radio which has no automatic control. Can I add such a control? The tubes are 56's, 57's and 58's, in all but the final power stage, which is a 2A5.

Answer: It is not practicable to add automatic volume control to your set. If your set used a twin-diode second detector, such as a 6H6G, or if one could easily be used in the place of the type 57, we believe an a.v.c. system might be installed. But when circuit changes are serious, we cannot recommend such action.

S. S., E. Cambridge, Mass.: How can I use headphones on my Zenith 6S330?

Answer: By using the phone adapter advertised in these columns. Or by attaching the phones to the two flexible wires coming from the voice coil on the apex of the speaker cone to the output terminals of the output transformer. If the volume is turned down, the speaker will be nearly silenced, or a small snap-switch can be placed in one of the flexible voice-coil leads between the headphone contact and the coil on the cone.

H. L.; Washington, D. C.: On an old set I once increased the signal strength and got many extra stations by connecting the antenna to grip-cap of the detector tube. Why was that?

Answer: Something was wrong with your set. A break existed between the antenna circuit and the first detector, or otherwise the full signal energy would have been transmitted to the grid of the first detector without the need for a direct contact to its grid-cap on top. The antenna and r.f. coils were likely at fault, and a careful test of all parts of the r.f. circuit will disclose an open circuit, or lack of voltage to one of the elements of the r.f. tube.

P. L. C., Waterville, Me.: My Fairbanks-Morse 1937 radio has worked nicely until a new volume control was installed. Now it has a scratchy noise which can not be eli-

minated until the volume is turned down to bass position.

Answer: Do you mean volume control or tone control? In either case a bad control will be noisy. But the noise might be in the speaker if the cone is not properly centered, and high notes cause it to vibrate faster and move farther toward the field magnet, where it strikes. Other sources may be in some of the resistor or condenser units, but it is unlikely.

A. J. S., San Pedro, Calif.: I am using a 78-foot antenna (including leadin) for all-wave reception on my Philco 116. Is there any other aerial you recommend?

Answer: Your aerial might be better if the 78 feet were in the flat top, and the leadin additional. However, a 60-foot doublet, insulated in the middle, and attached to two twisted down leads 50-feet long, is about as satisfactory as any, and also has the advantage of cutting out many electrical noises.

J. R. W., Washington, D.C.: My Bosch 620 radio was broad on the broadcast band, and I hauled it around to 8 different servicemen. A new oscillator coil improved the broadcast reception but threw the short waves off their dial settings, and caused double-spot tuning in many places. What shall I do?

Answer: There is a saying that too many cooks spoil the soup. Now that all these servicemen have worked on your set, replacing coils and this and that, it is likely that its own mother would not know it. So, why not ship it back to the factory, where they know all about it and have the proper parts to put back in again? Write to the United American Bosch Corp., 3664 Main St., Springfield, Mass., and get their advice about shipping the set to them. But, you must remember, all high-fidelity sets tune broadly. They have to, so that all the audio frequencies can pass through. With the congested wave bands this condition is not at all satisfactory on the broadcast band. If you sharpen reception too much the tone will be impaired somewhat.

HAM HOUNDING . . .

●●● By HUGH HUNTEM

GREETINGS brother ham-hounders. Because of your numerous cards and letters, requesting an amateur column, we of RADEX present "Ham-Hounding", which will henceforth be a monthly feature of this magazine.

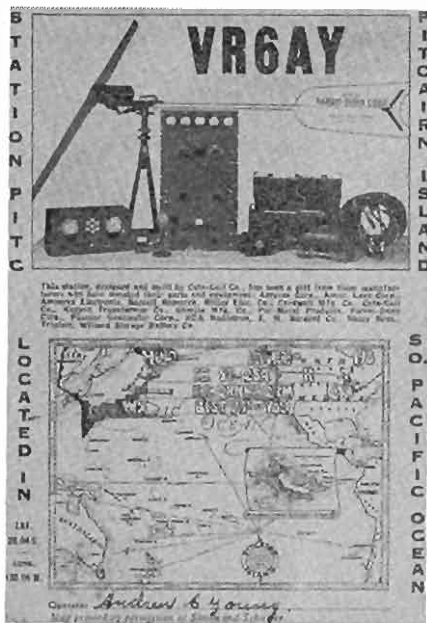
For the benefit of those who are interested in reporting what they are accomplishing on the amateur bands, we will answer the question of Dick Winnie, Albany, N. Y., who states, "Could you please give me full particulars on how to go about sending in a report on the amateurs heard during the month?" In our opinion, the most important things regarding a novel amateur "catch" are the station's call letters, location of the station, frequency on which the station was heard and the time of day the station was received. In addition one might also include whether or not the station is known to verify, the language spoken by the operator or, briefly, anything which might interest the reader.

FORECAST

During the month of January we advise our readers to concentrate on South African and Asiatic stations. The South Africans are best heard in the afternoons from 2:00 to 4:30 pm (EST) and from 10:30 pm to 1:00 am. The Asians may be logged between 5:00 and 9:30 am.

European, North African and Australian reception, on the whole, is very poor during January but the South Americans are quite good between 6:00 pm and midnight and the North Americans, of course, may be heard most any hour of the day.

As our space is limited it is impossible for us to list, individually, every



From Pitcairn Island, a tiny dot in the South Pacific, comes this interesting card. Pitcairn is two miles long and a mile wide, with lofty cliffs rising a thousand feet from the water's edge. There are about 200 inhabitants, most of whom can trace their lineage to the nine original English settlers from the famous ship "Bounty." The station is VR6AY, operated by Andrew Young. (Courtesy of Capt. E. N. Massey).

amateur who has been or may be heard. We feel that information pertaining to stations in seldom heard countries is of the greatest value to the reader. Therefore, we are giving special attention to stations which might possibly enable our readers to log new countries. This month the emphasis is on South Africa and Asia.

South Africa.

KENYA—VQ4KTB, 14.02 megs. This station is known to verify. Send re-

ports to A. F. Moy, Box 928, Nairobi.
MADAGASCAR—FB8AH, 14.38 megs. Has been putting out a very nice signal according to Elmer Wokaty of Fairview Village, Ohio. This station is usually heard before the ZS stations become strong at around 10:00 pm. For confirmation, address reports to Dr. Estrade Fils, 1 Av. Grandidier, Tananarive.

NORTHERN RHODESIA—The two most consistent signals from this seldom-heard country are those of VQ2HC, 14.31 megs. (QRA is W. H. Christie, Box 27, N'Kana) and VQ2PL, 14.14 and 14.35 megs. The latter is anxious to receive reports on his signals. Report to Peter L. Lowth, Rhodesian Railways Telegraph Office, Livingstone.

MOZAMBIQUE—CR7AK is reported operating on the high frequency side of the 20 meter band. Whether or not this station will QSL is a mystery but if you're willing to take a chance, send your reports to Leopoldo Feuillerade, Incomati Estates, Xinavane, Lourenco Marques.

REUNION ISLAND—If you desire a card from the "Vanilla Islands" look for FR8VX on the high frequency side of the 20 meter band. He has several crystals and most frequently operates on either 14.35 megs. or 14.46 megs. The station's operator is none other than Prince Vin-San whose QRA is 67 rue Sainte-Anne, Saint Denis.

SOUTHERN RHODESIA—Three consistent signals are being heard from this country. They are ZE1JB, 14.11 megs., operated by R. A. Hill, Red House, Fife Av., Salisbury; ZE1JR, 14.09 megs., J. M. Davidson, Box 870, Salisbury; and ZE1JX, 14.03

megs., G. E. F. Dicks, Shangani. Of these, ZE1JR has the best signal but, unfortunately, he is a bit stingy with his QSL card. We suggest that those needing S. Rhodesia, send ZE1JR a self-addressed, stamped international reply card along with your reports, so that he need merely sign it and drop it in the mail.

SOUTHWEST AFRICA—ZS3F who operates on 14:08 megs. is the only amateur on 'phone in this country. He also is well known for not QSLing reception reports. As in the case of ZE1JR, we advise the use of a return card. This station's QRA is Gerald W. de Haas, Box 358, Windhoek.

Asia

BALUCHISTAN—Several have reported VU2AU owned by F. J. Towell, The Arsenal, Quetta, as operating on the high frequency side of 20. We know nothing of this station's verification policy but urge anyone hearing VU2AU to report as this certainly is an unusual country.

BURMA—This country has two stations which have been heard in almost every section of the United States. They are XZ2DY, 14.25 and 14.36 megs., owned by F. J. Mustill, Minto Lodge, Maymyo; and XZ2EZ, 14.35 megs., operated by Khin Maung Bo, 82 Inya Rd., University P. O., Rangoon. Both stations confirm reports of reception.

CEYLON—VS7GL, 14.11 megs., puts a very consistent signal into North America with his 25 watts input power. The owner is always pleased to receive reports from listeners and QSLs rapidly. His QRA is G. H.

FEDERATED MALAY STATES—The best bet is VS2AE who operates on 14.11 megs. Several listeners have reported

receiving his card. Reports should be sent to R. O. Williams, Southern Kinta Consolidated Ltd., Kampar, Perak.

FRENCH INDO CHINA—If you want a card from this country look for FI8AC around 14.05 megs. The congenial operator, Rene Lebon, is always glad to receive reports and always send his QSL card! His QRA is Box 13, Hanoi (Tonkin).

SIAM—HS1BJ, to our knowledge, is the only 20 meter phone in this rarely heard country. The operator has several frequencies but is usually on 14.07 megs. Fortunately HS1BJ confirms all reception reports. The QRA is Sangiem Powtongsook, Radio Technical Section, Post and Telegraphs, Bangkok.

STRAITS SETTLEMENTS—We elect VS1AI, 14.11 megs., as the outstanding station in this locality and again we are glad to state that several listeners have reported receiving cards from VS1AI. The QRA is Archibald Maxwell, 38 Cairnhill Rd., Singapore. SUMATRA—PJ4JD, 14.09 and PK4KS, LF, are our nominations as the best Sumatra 'phones. The QRAs are J. A. den Duytsen, Klappa, Kampit, Billiton and; Tan Koon San, Pangkal Pinang, respectively. The former has QSLd for many listeners but we have no available information concerning the latter's policy.

While we are on the subject of Asiatic stations, we deem it a good idea to insert a list of stations which have QSLd, for an International Reply Coupon, to Don Martinez of San Francisco, Calif. during 1937-38. This list will undoubtedly cause many of our eastern readers to turn a bit green with envy.

BURMA—XZ2EZ.

CHINA—XU6TL, XU8RB, XU8RJ.
 FEDERATED MALAY STATES—VS2AE, VS2AK.
 FRENCH INDO CHINA—FI8AC.
 HONG KONG—VS6AG.
 JAPAN—J2MI, J2NF, J2KG, J2KJ, J3FI, J6DP, J7CR.
 JAVA—PK1JR, PK1R1, PK1VM, PK1ZZ, PK2AY, PK3CD, PK3WI.
 MOLUCCAS—PK6CI.
 PHILIPPINES—KA1DT, TA1FH, KA1HS, KAIME (Rarely QSL1), KA1YL, KA1ZL, KA2OV.
 SIAM—HS1BJ.
 SUMATRA—PK4JD.

HERE AND THERE

Saint Lucia in the British West Indies is a new country for most of us at which to shoot. Listen around 6:30 am in the vicinity of 14.10 megs. and quite likely you will hear either VP2LB or VP2LC. Contrary to what has appeared in many publications, these are actually different stations. Miss Marie L. Devaux, operator of VP2LC writes that she and VP2LB, Louis Devaux, are cousins, and that each own and operate their own stations. Miss Devaux QSLd in one month's time.

Those of you who have not already reported CN1AF had better do so in a hurry for we understand that the Transmitter is soon going to operate on a different frequency as a sw broadcast station for Tangiers and will not likely return to the amateur bands.

Danzig, another rarely heard country, is reported to have several stations operating on 20 meters. A British listener reports that YM4AA has been heard on the low frequency side of the band. The QRA of this station is Gerhard Bussler, Rimrottstr. 12, Danzig.

Robert Hatches of Richmond, Va. reports an unusual station on cw which might interest a few of our

readers. The call is AH2BU and is located on the Annobon Islands (Spanish) which are located in The Gulf of Guinea off of the west coast of Africa. We certainly hope that this station decides to go on 'phone.

D. H. Dussek of England sends the following: The Oxford Expedition to Greenland is operating a transmitter on wavelengths of 20 and 80 meters under the call sign OX7OU. Reports should be sent to Mr. Andrew Croft, Leckhampton House, Cambridge, England. Tnx for the tip OM.

ODDS 'N ENDS

OZ5CN writes that the Danish Shortwave Society has 1500 members and that 400 are licensed to transmit.

Argentine amateur stations have very high power. LU4BC runs 2800 watts and LU4CZ has a trifle more than two kilowatts.

Amateur Radio stations are prohibited in Bulgaria.

Cuba is said to have about 300 amateur stations. Their principal or-

ganization is the Radio Club de Cuba, Lealtad 136, Habana.

The amateur in Guatemala pays a yearly fee of 15 quetzals for the privilege of operating a station. One quetzal equals one U. S. dollar.

Amateur radio activities are prohibited in Palestine, according to the American Consulate General in Jerusalem.

LUSAB states that all aliens have had their amateur licenses taken away. From now on only citizens of the Argentine may operate stations.

FINIS

Well, brother Ham Hounders, we trust that this article has been of interest to you. Let us know what you want and we will do our best to oblige. So until next month-happy hunting!

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. Stations are listed only if reported by more than one listener.

10 Meters

CN8AV (*hk*); CO2WM (*bo*); CT1ZZ (*k*); EI8L (*k*); EI9J (*p*); FA8CF (*kp*); G8AG (*k*); F8RR (*k*); GM5KJ (*b*); GM6RG (*hk*); GM8RJ (*k*); GW5KJ (*k*); GW8HI (*k*); G2CC (*b*); G2HK (*k*); G2IS (*hk*); G2PU (*k*); G2VG (*k*); G2WD (*k*); G5BJ (*hk*); G5BM (*p*); G5LI (*p*); G5LJ (*hk*); G5LU (*k*); G5NI (*hk*); G5QI (*k*); G5SA (*k*); G5VM (*k*); G5ZN (*k*); G5ZT (*b*); G6BW (*p*); G6CL (*hk*); G6CU (*k*); G6CW (*k*); G6DH (*p*); G6DT (*hk*); G6JL (*k*); G6LK (*k*); G6PC (*o*); G6PW (*b*); G6PY (*b*); G6PY (*b*); G6TL (*k*); G6VK (*k*); G6WT (*hk*); G6WU (*k*); G6WV (*k*); G6WX (*hk*); G8BM (*b*); G8DM (*k*); G8GX (*k*); G8MU (*k*); G8MX (*hk*); G9QK (*k*); G8QX (*k*); G8SA (*k*); G2TD (*hk*); G8TX (*k*); HI7G (*p*); HR4AF (*p*); K4FAB (*p*); K5AN (*k*); K6MVX (*a*); K6OJI (*ao*); K6OQM (*a*); K6PCF (*o*); LA4K (*k*); LU1DJ (*kp*); LU4BC (*k*).

ON4IW (*k*); PAOFB (*k*); PY1AZ (*k*); TG9AA (*akp*); TG9BA (*k*); TI2RC (*p*); TI3AV (*k*); VE2IN (*o*); VE2KX (*o*); VE3AIN

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(o); VE3KD (o); VE4BQ (o); VE4LO (o); VK2GU (a); VK2HF (a); VK4JP (a); VP3AA (p); YV2AQ (o); YV5AA (p); YV5ABF (k); YV5AE (k); ZE1JR (k); ZE1JZ (p); ZL2BE (k); ZS6DW (k); ZS6DY (k).

20 Meters

CE3BK (ai); CN1AF (bn); CN8AV (gi); CN8BA (bm); CN8MA (cjm); CN8MU (jmb); CO2GO (cm); CO2JJ (jm); CO2LY (gm); CO2OK (im); CO2RG (im); CO2RR (glm); CO2SV (cm); CO2WL (lm); CO2WM (cgm); CO6OM (cgilm); CO7AS (lmq); CO7CX (ci); CO7VP (cgim); CR7AU (d); CT1AY (cijmp); EA9AH (il); EI6G (ij); GA3HC (n); F3CP (bm); F3MN (bi); F3OX (ij); F8KI (bj); F8SC (bi); GM8MN (jmb).

G2TR (jm); G3BM (ej); G5BJ (jm); G5JO (ej); G5ML (ijm); G5NI (ij); G6WB (jm); G6IA (cj); G8CL (gj); HC1PZ (ai); HH2B (acdgbimp); HH4AS (cgbimp); HH5PA (acgimq); H13N (acgilp); H15X (egbm); H17G (agip); HK1AH (lm); HK3CG (gmp); HK3CL (ci); HK3CO (il); HK3PL (gl); HK4AG (bi); HR5C (ag); KA1ME (bn); KA7EF (ai); K4FAY (agim); K4FKC (gb); K5AF (cgb); K5AH (acip); K6GAS (fl); K60II (bijl); LA8C (n); LU4BC (ai); LU4CZ (af); LU7BK (cl); LU8AB (agi); LU8AC (gi); NY2AE (ci).

OA4AI (ai); ON4VK (jm); OQ5AA (j); OZ9Q (n); PK6XX (adj); PY2AK (ci); PY3AW (ci); SU1RD (bn); TG9AA (cp); TG9BA (acdelip); TG9FN (gb); T11AF (am); T12AV (gblip); T12EV (acb); T12LR (im); T12RC (acgip); T13AV (abo); VK2NS (ij); VK2UC (aip); VK3BZ (ip); VK3EH (ij); VK4JP (ilp); VO2N (fl); VP1BA (acfbilm); VP3AA (acbegimp); VP5BR (gb); VP6FO (acdgbi); VP6LN (bl); VP7NH (im); VP7NS (acgilim); VP9G (ebi); VP9L (efgi); XE1G (ip); XE1GF (fp); XE1HR (cb); XE1Q (fgip); XE2IK (efgbimp); XE2IY (cfm); XE3AR (fghq); XE3AX (cip); XU6TL (n); YV1AA (gi); YV4AE (acefgilmp); YV4AF (ip); YV4AN (acmp); YV5ABF (cgilmp); YV1AA (gi); YV4AE (acefgilmp); YV4AF (ip); YV4AN (acmp); YV5ABF (cgilmp); YV5ABQ (acmp); YV5ABY (afgi); YV5AE (bg); YV5AK (mp); ZS1AX (ail); ZS2N (abi); ZS2X (ail); ZS3F (o); ZS4H (cb); ZS6BR (bi); ZS6DG (d); ZS6DW (abil); ZS6DY (bi).

The Reporters

- (a) Al Bettinger, Omaha, Nebr.
- (b) Eric Butcher, San Juan, Puerto Rico.
- (c) Robert Davidson, Newark, N. J.
- (d) C. J. Fern, Jr., Lihue, Hawaii.
- (e) A. M. Hankins, Latrobe, Pa.
- (f) Lewis R. Hill, Maywood, Ill.
- (g) Edward Hirsch, St. Albans, N. Y.
- (h) Jack Kenneally, St. Albans, N. Y.
- (i) E. A. Knoff, Canton, Ohio.
- (j) J. F. Morris, Toronto, Ont., Canada.
- (k) James W. Newman, New Toronto, Ont., Canada.
- (l) Martin J. Olthoff, Independence, Kans.
- (m) S. Schmuck, E. Cambridge, Mass.
- (n) Jack Siringier, Lakewood, Ohio.
- (o) Stanley Troth, Phillips, Texas.
- (p) Walter E. Welch, Lynn, Mass.
- (q) Wm. J. Wood, Jr., Oak Park, Ill.

With the

WITH the approach of the New Year, listeners on the North American continent turn into the stretch of the current DX season. The erratic reception of the fall months has been replaced by sturdier signals carried through cold, mid-winter nights. The DX horizon has receded before the straining ears of the mid-night marauders, while new and distant stations gladden the hearts of DXers.

At a time when listeners begin to pass judgment on reception in general and the current season in particular, it appears that conditions have been generally favorable. The pre-season forecast of better things for DXers seems to have been accurate. Probably due to a decline in sunspot activity, static has been lighter than in recent years and signals have shown greater carrying power.

Reports from readers, augmented by personal observations, indicate that trans-continental reception of low-powered stations once more is possible for most listeners. Trans-oceanic stations appear to be coming through with strength comparable to the banner years of 1933-34. In short, it looks as though we are in the middle of a bang-up season.

"Reception has been fine of late," asserts J. T. Lippincott, East Vassalboro, Mass. "Late-afternoon TA's heard during the past week include Rome on 713, Spain on 731, Toulouse on 776 and 913, Scotland on 767, Leipzig on 785, Lyons on 648 and Nice on 1185. The two Toulouse stations were easily logged at 6 p.m.

Station Hunters

● ● ● By CARLETON LORD

EST. The TP's have been coming through very well, with the most recent catches including 2YA, 4QN, 5CK, 2 NR, 3YA, 2BL, 4YA, 4QG, 2YC (must be heard prior to 5 a.m. due to XERA), 2GB, 2GZ, 2KY, 2CA, 3LK, 2ZB, 2HD, 2NC, 2SM, 2LF, 2KO, 3ZB, 2MG (a new station), 7UV, 3CV, 2AY and 2 BE. I believe many others could have been heard, as they were all over the dial, but I could not take time to hear them all and get material for veries at the same time.

"South Americans heard include LR5, LR6, LS2 and possibly LS8 on 1150; PRE8 on 980 logged through KDKA; HJ3ABD very good on 1104, OAX4A on 854, YV5RS on 1317, YV1RK on 1250 and CX28 on 1090. Out in Hawaii, KGMB an KGU have been heard quite easily, with KGU R4 as early as 2:30.

"Long wave reception has been very regular. Only once in my last 18 tries have I missed Reykjavik on 208 kcys. Signals are often heard R5-6 as early as 5 p.m., and I can really enjoy the music for its own sake when the signal gets up to R8-9. Hilversum is next best, being heard as early as 4:30 or so. Paris on 182 is quite good. On October 22nd, reception was particularly good, with Moscow on 172 coming in with exceptional strength. They opened with the Internationale at four o'clock and then broadcast their English program for an hour. Droitwich on 200 is quite good at times. Others heard include Lahti on 166, Berlin on 191, Motala, Sweden, on 216, Warsaw on 224, Luxembourg on 232 and Kalundborg on 240."

How many other Radexers have tried their hand at European reception on the long waves?

"DX is picking up," proclaims John J. Oskay, R.F.D. 1, Box 179, New Brunswick, N. J., "and the nights are now swell for listening. During one recent early-evening session, I heard ZNS, CMCY, CMQ, TIPG, CMCD, CMCG, CMGH, CMCF, CMW, CMX, CMBC, CMBY, LR4, CMBZ, CMBX, CMJI, CMHJ, LS2, CMCO, WKAQ, CMHD, CMCU, WNEL, CMOX, CMGE, CMCX, CMKR, CMCQ, CMOA and CMKF. From across the Pacific, I have heard 2YA, 1YA, 2NR, 3YA, 2BL, 3GI, 4YA, 2YC, 2GB, 2GX, 4BC, 6ML and 2KY. Many South American and West Indian stations are over-riding the locals. Latest among the new catches are WTOL, WBRK, KDNT, KPAB, WGIL, WOMI, LS2, CMCY, CMCG, CMHD, CMKR, KRSC, WDAN,



The laughing notes of the kookaburra, illustrated on this card, identify the transmissions of Australia's station VK2ME in Sydney. The Australian stations are not difficult to hear, and every DXer should have one of these pretty, three-color cards in his collection. (Courtesy of D. H. Dussek).

WPIC, 2NR, YV5RQ, CMJA, CX26 and PRG2."

"Since my last report, I have received a veri from WABI," advises Richard Wright, 5762 Harper Ave., Chicago, "so now Nevada is the only state not verified. The log now stands at 582, with KGMB and CBR the latest catches. Some of the better stations heard on my six-tube Silvertone are ZNS, TGW, KGU, WPRP, WPRA, WKAQ, WNEL, CHSK, XEP and CRCV. Reception so far hasn't been bad, although we haven't had enough cold weather for real DX. Incidentally, when I reported to XEAW with a U.S. card, all filled in for them to sign and return, the president of the station, Sr. Rodriguez, sent me a personal letter."

News of the Stations

The recent switch in frequencies by the Cuban stations caught many DXers behind the proverbial eight-ball. Spanish-speaking stations are usually hard enough to identify with a correct listing, so a general re-allocation had a lot of listeners guessing for a time. Latest reports indicate that most of the stations have settled on or near the frequencies listed in this issue.

Most frequently reported are CMCY on 590, CMCD on 630, CMCU on 780, CMGH on 790, CMCF on 810, CMW on 880, CMOA on 910, CMBZ on 940, CMCK on 970, CMQ on 1010, CMJI on 1130, CMBC on 1140, CMHJ on 1160, CMCO on 1200, CMHD on 1270, CMCG on 1290, CMBQ on 1320, CMGE on 1370, CMKR on 1400, CMCQ on 1410, CMBY on 1440, CMKF on 1460, CMCX on 1470, CMOX on 1500 and CMBF on 1560.

Keeping pace with the Cubans, stations in Mexico have undergone not a few changes. Latest additions to the roster are XERC, Mexico City, 870 kcys, 500 watts; XECA, Tampico, Tamps., 1230 kcys, 250 watts; and XEDR, Guaymas, Son., 1490 kcys, 100 watts. A number of power boosts have been granted, including XETB from 125 to 500 watts and XEW from 50 to 100 KW, while several stations have reduced wattage.

A Mexican mystery which has a lot of DXers guessing concerns the identity of the station, or stations, on 1150 kcys. According to reports, listeners have heard the calls XEC, XECL and XEL, all announced on this frequency. Bill Cunningham, Pasadena, Calif., advises that XEL has moved to that frequency from 1100, and that XECL has switched from 1230 to 960, while the latest report from Mexico indicates that XEC remains on 1150. This will be an interesting problems for DXers, and perhaps we'll have the answer next issue.

Bill Cunningham also relays a few Canadian changes. CRCY at Toronto has changed call to CBY, remaining on 960 with 100 watts power. CKPR, Fort William, Ont., has boosted its power to 1000 watts on 580 kcys., while CHNC, New Carlisle, Que., is due to change from 960 to 610 kcys.

From Australia, we are advised that 3LO, Melbourne, 770 kcys, is planning to open its new 10-KW transmitter in the very near future. According to the N.Z.DX R.A., 3LO and 3AR (620 kcys) will be moved to the same location and will transmit simultaneously on one antenna on their present frequencies.

Two new Aussies to go on the air soon are 4AT, Atherton, on 680 kcys, and 2CY (location unknown) on 850 kcys. When 2CY opens, 5RM, the 1000-wattter at Renmark, S.A., will move to 810 kcys. 7ZR, Hobart, Tas., power unknown, is now on the air with regular schedule.

From New Zealand, it is reported that 2YB, 760 kcys, 100 watts, at New Plymouth will move shortly to 860 kcys, while 2ZH at Napier, now on 820 kcys with 65 watts power, will change to 760 kcys.

In the United States, the FCC continues to grant construction permits. Latest stations to come on the air with regular daily schedules include WHMA, Anniston, Ala., 1420 kcys, 100 watts; WDAN, Danville, Ill., 1500 kcys, 250 watts; WPIC, Sharon, Pa., 780 kcys, 250 watts; WKST, New Castle, Pa., 1250 kcys, 250 watts; and WIBC, Indianapolis, Ind., 1050 kcys, 1000 watts. Due around December 1st, but as yet unreported, is KRBM, Bozeman, Mont., 1420 kcys, 100 watts.

Schedules of a few of these newbies are known. WPIC operates from 6:30 a.m. to 5:45 p.m., EST; WKST from 7 a.m. to 5:45 p.m., EST; and WIBC from 7 a.m. to 6 p.m., EST, weekdays, and 9 a.m. to 6 p.m., Sundays. Reports indicate that requests for veries from WIBC, when addressed to Bob Longwell, receive prompt attention.

Tips and Specials

A number of Latin American stations have been heard during early morning hours. On several Tuesday mornings, LR6, the 26-KW Buenos Aires station on 870 kcys, has been heard with excellent strength. Sunday morning dialers report reception of PRG2, Sao Paulo, Brazil, 10 KW, 1040 kcys; YV1RF, Maracaibo, Vene-

zuela, 1 KW, 1120 kcys; and HJ1ABR, Cartagena, Colombia, 1400 kcys, power unknown. Two Central Americans—TIPG at San Jose, Costa Rica, 625 kcys, 2000 watts, and TGQ at Quezaltenango, Guatamala, 1450 kcys, 200 watts—have also been heard on Sunday mornings.

Early evening DXers have found occasional nights when a number of prominent South American stations break through the barrier of domestic broadcasters and offer targets for the listener who wants to bolster his log of SA's. Most prominent of these are LS10, Buenos Aires, 590 kcys; PRH2, Porto Alegre, Brazil, 600 kcys; LS4, Buenos Aires, 670 kcys, frequently heard in back of WMAQ; PRA8, Pernambuco, Brazil, 720 kcys; LR10, Buenos Aires, often breaking through WGY on 790; LR5, Buenos Aires, heard before KOA gets too strong on 830 kcys; OAX4A, Lima, Peru, with a swell signal on 850; LR6, Buenos Aires, pushing WENR-WLS into the background on 870; LR2, Buenos Aires, 910; LR3, Buenos Aires, with 31 kilowatts doing things to the jumble on 950; LR4, Buenos Aires, overriding WBZ on 990; PRB9, Sao Paulo, Brazil, blasting through WHO on 1000 kcys; CP4, La Paz, Bolivia, and PRG2, Sao Paulo, Brazil, ganging up on WTIC and KRLD on 1040; LR1, Buenos Aires, using its 50-KW to shame WTAM on 1070; PRG9, Sao Paulo, Brazil, on 1100; LS2, Buenos Aires, with 30-KW of dynamite on 1190; PRA9, Rio de Janeiro, with 25-KW on 1220; and PRG3, Rio de Janeiro, with 25-KW on 1280.

Other South Americans available the careful dialist include HJN, Bogota, Colombia, 680 kcys; YV5RQ,

Caracas, Venezuela, on 882; YV5RA, Caracas, on 960; YV1RB, San Cristobal, Venezuela, on 980; HJ3ABE, Bogota, Colombia, on 1200; and HJ1ABR, Cartagena, Colombia, on 1400.

A grand opportunity to log the 5000-watt PRF3, Sao Paulo, Brazil, 960 kcys, will be offered on January 22nd, when the station will broadcast from 3 to 4 am, EST, for the NRC and NNRC. Officials of these two clubs have undertaken to clear the channel for this program, and it's an odds-on bet that PRF3 will be entered in many logs.

Other DX programs of note for January include CKBI, Prince Albert, Sask., 1210 kcys, January 7th from 2 to 3 a.m., EST; XET, Monterrey, N.L., 690 kcys, January 1st, midnight to 1 a.m., EST; CFJC, Kamloops, B.C., 880 kcys, January 8th, 3 to 4 a.m., EST; CKCV, Quebec, P.Q., 1310 kcys, January 12th, 3 to 4 a.m., EST; CHLT, Sherbrooke, Que., 1210 kcys, January 14th, 3 to 4 a.m., EST; CFAC, Calgary, Alta., 930 kcys, January 15th, 4 to 5 a.m., EST; CHRC, Quebec, P.Q., 580 kcys, January 15th, 2 to 3 a.m., EST; and TG1, Guatemala City, 1310 cys, January 22nd, 3 to 4 a.m., EST. Of these, the XET, CFAC and TG1 programs were arranged by the IDA, while the balance are the work of the CPC of the NRC.

A little early, but the IDA advises of a program from YSS at San Salvador, 638 kcys, for 1 to 2 a.m., EST, on March 20th. That's one worth remembering!

Director Harry E. Varrelman calls attention to the twice-weekly NNRC broadcasts over WOR's experimental station W2XJI on 26.3 megacycles.

The 15-minute broadcasts take place at 8 p.m., EST, Tuesday evenings and midnight Friday to 12:15 a.m., EST, Saturday morning.

Latest DX from tips will be featured and the programs should be of interest to all midnight marauders.

Frequency Check Changes

The December RADEX included a list of the monthly FCC frequency check broadcasts. Following are additions to this schedule:

Second Monday: 3:00-3:15 a.m., EST, WBRK, Pittsfield, Mass., 1310 kcys; 3:25-3:40 a.m., EST, WHAI, Greenfield, Mass, 1210 kcys; 4:00-4:15 a.m., EST, KQRS, Rock Springs, Wyo., 1370 kcys; and 7:05-5:20 a.m., EST, KGLU, Safford, Ariz., 1420 kcys.

Second Tuesday: 4:15-4:30, WTAQ, Green Bay, Wis., 1330 kcys.

Second Friday: 3:55-4:10, KWJB, Globe, Ariz., 1210 kcys.

Second Saturday: 4:10-4:25, KUTA, Salt Lake City, 1500 kcys; 4:25-4:40, KYSM, Mankato, Minn., 1500 kcys; and 4:50-5:05, WSLI, Jackson, Miss., 1420 kcys.

A complete schedule of the frequency checks, including these and subsequent changes, will appear in the February issue.

Daytime Reception

Judging from recent reports, a lot of Radexers are becoming quite interested in daytime DXing. Fully realizing that such reception is definitely limited, many listeners nevertheless are starting out to see how many stations can be logged in a few hours while the sun is shining.

"I read with real interest in the November RADEX," remarks Kenneth R. Leu, of Rockford, Ill., "what

some of the boys are doing in the line of daylight DX. So yesterday morning I decided to give it a whirl. Starting at 9:30 a.m., I went right through the broadcast band, from 550 to 1500 kcys, and tuned in 106 stations on 93 out of 96 channels. The only three bands failing to produce a station were 730, 960 and 990. Of the 106 stations heard, 91 could be identified, and WOAI and CBL were the most distant. I think that is a pretty fair record for a warm and sunny October morning (October 28th)."

"Tried my luck in daytime DXing," recalls Edward Hirsch, St. Albans, L.I., N.Y., "using a 3-year-old six-tube Monarch. Between 2 and 4:25 p.m., EST, I had excellent signals from WEEU, WGY, WMCA, WIP, WEAJ, WICC, WFIL, WOR, WJZ, WNYC, WABC, WGAI, WJAR, WELI, WPEN, WAAT, WIMG, KDKA, WBZ, WHN, WTIC, WTAM, WBT, WBAL, WPG, WOV, WWVA, WINS, WCAU, WGBB, WNEW, WFBR, WEVD, WDRC, WBNX, WAWZ, WBBC, WBRY and WQXR. The temperature was 72° and I was able to take down a full report on all of the stations. I wouldn't say that it was an excellent record, but at least it satisfied my curiosity as to what could be heard. Let's hear from other Radexers on this angle of DXing!"

"The other day I tried to see how many stations I could hear between 9 and 10 a.m., EST," declares Hank Hendrickson, Jr., McGregor, Iowa. "Using a six-tube Air Castle battery receiver, with an inverted-L antenna, I logged 66 stations between 550 and 1530 kcys. They were.

KATE, KDKA, KFAB, KFEQ, KFJB, KFKU, KFNF, KFRU, KITE, KMA, KMBC, KMMJ, KMOX, KRNT, KROC, KSCJ, KSO, KSOO, KSTP, KWK, WAAW, WBBM, WCAL, WCBD, WCCO, WCFL, WDAF, WDGJ, WEAU, WEBC, WENR, WFBM, WGN, WHA, WHIO, WHIP, WHO, WIBA, WIBW, WIND, WIRE, WISN, WJAG, WJJD, WJR, WKBB, WKBH, WLBI, WLS, WLW, WMAQ, WMBD, WMBI, WMT, WNAX, WOJ, WOW, WOWO, WREN, WROK, WSM, WSUI, WTAM, WTCN, WTMJ and WWJ. The weather was cloudy and the temperature was about 35 degrees."

"Noticing that several Radexers reported on daytime DXing in the November issue, I want to throw in my bit," exclaims D. S. Barnes, Chicago, Illinois. "Besides the local stations, the following were heard this afternoon (October 23rd) between 3 p.m. and 3:30 p.m., CST: WKRC, KSD, WIBW, WKZO, WMT, WDAF, WCLE, WTMJ, WGBF, WHKC, WLW, WJR, WEW, WCCO, WTAD, WHA, WHO, WDZ, KYW, CKLW, WTAM, WCAZ, KMOX, WISN, WOWO, WFBM, WHIO, WASH, WIBA, WHBL, WCLS, WTAQ, WSPD, WRJN, WIRE, WROK, WBNS, WKBZ and KITE. A little later, about 5 p.m., such stations as WPG, WBAP, KTHS, WSB, KDKA, WTIC, KVOO, WHAM, KOB and others could be heard."

Because of the freakish behavior of signals during daytime hours, it is probably impossible to say just what can and cannot be heard. However, overlooking the case of the Kansas City "DXer" who reported Moscow at high noon one Christmas day some years ago, there is no doubt but what exceptional records can be made in daylight.

Purely out of curiosity, the writer turned on his Scott 23-tuber at 11 a.m., EST, on December 1st. The location was just a block from one of Philadelphia's busiest thoroughfares, the day was clear, the temperature was around 30°, and the ground was covered with six inches of snow.

Three hours later, a total of 94 stations on as many channels had been logged, and for each station there was sufficient program data to merit a verification. For the most part, the results were about as expected, although a few decent catches were recorded.

For purposes of comparison, the stations were classed according to distance, and the results are interesting:

Local stations: WFIL, WIP, WPEN, WIBG, KYW, WCAU, WCAM, WTEL and W DAS.

Less than 50 miles distant: WEEU, WDEL, WEST, WSNJ, WILM, WCBA and WGAL.

50 to 100 miles (including Metropolitan New York and Baltimore): WMCA, WCAO, W EAF, WOR, WJZ, WNYC, WABC, WAAT, WHN, WBAL, WPG, WOV, WINS, WNEW, WFBR, WBBR, WORK, WAWZ, WLTH, WHP, WHOM and WQXR.

(Please turn to page 94)

NRI Observes Anniversary

TWENTY-FIVE years ago the National Radio School came into existence. In an upstairs back room a young Electrical Engineer, James E. Smith, began teaching "wireless" to a class of four men.

In those days, the public, (and prominent scientists too), thought of Radio as a plaything—a passing fad—saw no possible future for it. So when Mr. Smith formed a school to give radio instructions by mail to men who could not attend resident classes—well, folks said they were plain crazy. But time has answered these skeptics and critics.

Today we know radio as a \$912,000,000 industry employing 345,000 people. An industry which daily reaches into the lives of 72,520,000 listeners. And today, upon the occasion of its Twenty-fifth Anniversary, the National Radio Institute holds its position as the pioneer and largest radio home study school in the world. It has trained hundreds of men to enter the various branches of radio, and has successful graduates in every state of the U. S., the provinces of Canada and in many foreign countries.

N. R. I. has developed a course of training which is authoritative, efficient and up-to-date. The staff of over 120 persons carries out its work in a modern three story, air-conditioned building. Over 20,000 letters from students and graduates requesting technical information are answered every year. Over 225,000 lessons are graded every year. In the files are diagrams and technical data on over 13,000 radio receivers, all available for use by N. R. I. students and graduates.

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.

WHAT'S ON THE AIR TONIGHT

Fill in the calls and frequencies of the stations through which you best receive the network programs. You can then turn quickly to the one that has the feature you want.

Network	Stations
Columbia (C)	
Mutual (M)	
National Blue (B)	
National Red (R)	

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

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

To learn which stations broadcast the various network programs in your locality, look up your own, or neighboring, city, in the Index by Locations, commencing on page 76.

SUNDAY

E-11:30 am, C-10:30, M-9:30, P-8:30
E-10:30 am, C-9:30, M-8:30, P-7:30
C—Major Bowes' Family
 Entire Network except Pacific Network first half hour; full network last half hour.

E-noon, C-11:00, M-10:00, P-9:00
B—Radio City Music Hall
 To Blue network and Canadian National network
E-12:30, C-11:30, M-10:30, P-9:30

C—Salt Lake City Choir
 Available to full network.

E-2:00, C-1:00, M-noon, P-11:00
B—RCA Magic Key
 CBF CBL CFCF CMQ KANS
 KARK KARK KDKA KDYL KECA
 KERN KEX KFBK KPDM KPFD
 KFPR KGA KJR KLO KMA KMFD
 KMF KOA KOAM KOB KOIL
 KPFA KRIS KSEI KSO KSOO
 KPAB KTBS KTFI KTHS KTMS
 KTSM KVOO KWG KWK KXTZ
 WABY WAGA WALA WAVE
 WBAL WBOW WBRE WBZ WBEA
 WCOL WCSC WCHS WDAY WDSU
 WEAN WEBC WEBR WENR
 WFAA WFBC WFPA WFIL WFLA
 WGAL WGBF WHAM WHK WIBA
 WICC WIOD WIRE WIS WJAX
 WBO WJDX WJTN WJZ WKY
 WLEU WLW WMAL WMPF WMP5
 WMT WOAI WOOD WORK WOWO
 WPTF WREN WROL WRFD WSAN
 WSGN WSM WSOC WSPD WSUN
 WSTR WTAR WTCN WTMJ WWNC
 WXYZ

E-3:00, C-2:00, M-1:00, P-noon
C—Philharmonic Symphony
 To entire network, and 6 Canadian National and French networks

E-4:00 pm, C-3:00, M-2:00, P-1:00
M—Benay Venuta's Program
 WOR to Full Network

E-4:30 pm, C-3:30, M-2:30, P-1:30
M—Court of Human Relations
 WCAE, WGN, WOR, WSAI, WSTR

E-5:00 pm, C-4:00, M-3:00, P-2:00

B—Metropolitan Opera Auditions
 WJZ WBZ WBZA WEAN WICC
 WFIL WBAL WMAL WSYR
 WHAM WEBR KDKA WHK WSPD
 WXYZ WOWO WENR KWK WTAR
 WJAX WIOD WWNC WSB WBRC
 WJDX WMT WTCN KSO KOIL
 WCKY WRFD WJTN WSMB WAVE
 WSM KVOO WKY KTBS KTHS
 KPAC WVAI KPFL WFLA WSUN
 KLO KGO KECA KJR KEX WPAB
 KGA

E-5:30 pm, C-4:30, M-3:30, P-2:30
R—Spelling Bee
 WFAF WNAC WTIC WJAR WTAG
 WKCH KYW WDEL WFSB WRC
 WGY WBNB WCAE WTAM WLW
 WIRE WMAQ KSD WWJ KSTP
 WHO WOW WDAF

C—Ben Bernie; Lew Lehr
 WABC WADC WOKO WCAO WEEI
 WGR WBBM WKRC WGAR KRNT
 WJR WDRC WFDM KMBC WHAS
 KPAB WCAU WJAS WPRO KMOX
 WPBL WJSV WHEC WISN WCOO
 KRLL KTRH KOMA WJNO KTSB
 KWKH KTUL WGST WAPI WREX
 WLAC WWL WBT WRVA WTOG
 WMBR WQAM WDBO WDAE

E-6:00 pm, C-5:00, M-4:00, P-3:00
C—Silver Theater; Helen Hayes
 WABC WOKO WCAO WEEI
 WKBW WBBM WKRC WGAR
 KRNT WJR WDRC WFDM KMBC
 WHAS KPAB WCAU WJAS WPRO
 KMOX WJSV WADC WBNS WHIO
 WHEC WISN WBT WJNO WGST
 WREX WWL KVI KRLL KTRH
 KOMA KTSB KTUL WMBR WQAM
 WDBO WDAE CKAC CFRB WCCO
 KLZ KSL KNX KOIN KSFO KIRO
 KPYY and Canadian Broadcasting Corporation.

E-6:30 pm, C-5:30, W-4:30, P-3:30
C—Billy House; Jack Fulton
 WABC WOKO WCAO WEEI
 WKBW WBBM WKRC WGAR
 KRNT WJR WDRC WFDM KMBC
 WHAS KPAB WCAU WJAS WPRO
 KMOX WPBL WJSV WADC WBNS
 WHIO WHEC WORC WLZ WMNN
 WHP WMBD WGBI WMAS WIBW
 WIBX WWVA KFH WAIM WCHS
 WBT WBIG WMAZ WPAB WRVA

WDBJ WTOG WJNO WGST WAPI
 WDOD WNOX KLRA WREX WCOO
 WSFA WLAC WWL KGGM KRLL
 KTRH KOMA KTSB KTUL WMBR
 WQAM WDBO WDAE WOC KDAL
 WMPG KGLO WCCO KSCJ WHLB
 WNAX KVOR KLZ KSL KARM
 KPBB KOY KROY KGAR KNX
 KOIN KSFO KIRO KEPY KVI
 KHBC KGMB WPG WBNF WESG
 WBOA WBRK WSBT WNBX
 WKBN WRDW WDNC WSJS
 WCOA WACO WKBB WTQA
 WKBH KGVO KOH KWKH

R—A Tale of Today
 KDKA WFAF WGY WLW WMAQ
 WRC WTAM

R—Jack Benny; Kenny Baker
 WFAF WRC WGY KPAC WVAI
 WSPD WORK WMBG WNAC WTIC
 WJAR WTAG WCHS KYW WFSB
 WBNB WCAE WTAM WMAQ WWJ
 WTPR WCOL WDEL KSD WLW
 WPTF WSOC KSTP WIS WJAX
 WWNC KTBS KARK KVOO CBL
 CBM WBEK WGBF WIOD WSAN
 WFLA WGAL WIRE WHO WOW
 WDAF KANS WTAM WIBA WDAY
 KFPR WAVE WSM WMC WBRC
 WSB WJDX WSMB KGXB WKY
 WSYR WHAM WGL WFEA KELO
 WBOW WCSC WFBC KGNC KRIS
 WFAA

E-7:30 pm, C-6:30, M-5:30, P-4:30
C—"Passing Parade"; Oscar Bradley
 WABC WOKO WCAO WEEI WGR
 WKRC WGAR WJR WDRC WFDM
 WHAS WCAU WJAS WPRO WFBL
 WJSV WADC WBNS WHIO WHEC
 WORC WPG WLZ WBNF WHP
 WSBT WMAS WIBX WWVA
 WKBN WBT WDNC WBIG WRVA
 WDBJ WTOG WSJS WGST WDOD
 WNOX KLRA WREX WAPI WSFA
 WLAC WWL WCOA WJNO KRLL
 KTRH KTSB KWKH KTUL WACO
 WMBR WQAM WDBO WDAE KLZ
 WCHS

E-8:00 pm, C-7:00, M-6:00, P-5:00
C—Orson Welles—Drama
 Available to full network
R—Charlie McCarthy; Nelson Eddy
 CFCF CRCT KDYL KFI KFYP
 KGW KHQ KOA KOMO KPO KPBC

KSD KSTP KTAR KTBS KVOO
 KYW WAVE WBEN WCAE WCSH
 WDAF WDAY WEAJ WEEB WFAA
 WFBR WFLA WGY WHO WIBA
 WIOD WIRE WIS WJAR WJAX
 WJDX WKY WLW WMAQ WMC
 WNAC WQAI WOW WPTF WRC
 WRVA WSB WSM WSMB WSOC
 WSTN WTAG WTAM WTAR WVIC
 WTMJ WWJ WWNC

E-9:00 pm, C-8:00, M-7:00, P-6:00

C—Ford Symphony Concert
 CFRB CKAC KFAB KFBB KFH
 KFPY KGAR KGLO KGOV KIRO
 KLRA KLZ KMBC KMOX KNX
 KOH KOIN KOMA KOY KRLL
 KRNT KSCJ KSFO KSL KTRH
 KTSa KTUL KVI KVOR KWKH
 WABC WBBM WBIG WBNS WBRK
 WBT WCAO WCAU WCCO WCHS
 WCOA WCOG WDAE WDBJ WDBO
 WDOD WDRC WEEI WFBL WFBM
 WGAR WGBI WGR WGST WHAS
 WHCQ WHIO WHIP WIBW WISN
 WJAS WJNO WJR WJSV WKBH
 WKBN WKBW WKRC WLAC WLBY
 WMBD WMBR WMMN WNAX
 WNBX WNOX WOKO WORC WPRO
 WQAM WREC WRVA WSBT WFSa
 WTAQ WTOG WWL WWVA

R—Manhattan Merry Go-Round

CFCH KDYL KFI KFYR KGW
 KHQ KOA KOMO KPO KPRC KSD
 KSTP KTBS KTHS KYW WAVE
 WBEN WCAE WCKY WCHS WDAF
 WDAY WEAJ WEEB WEIF WFAA
 WFBR WFLA WGY WHO WIBA
 WIOD WIRE WIS WJAR WJAX
 WJDX WKY WLW WMAQ WMC
 WQAI WPTF WRC WRVA WSB
 WSM WSMB WSOC WTAG WTAM
 WTAR WVIC WTMJ WWJ WWNC

E-8:30 pm, C-8:30, M-7:30, P-6:30

B—Walter Winchell
 WJZ WBZ WBZA WBAL WMAL
 WHLH WREN WICC KDKA WHK
 WSYR WTCN WLW WEAN WENR
 WHT WXYZ KSO KWK WOOD
 KOIL WEBR WHAM WSPD WJTN

R—Album of Familiar Music

CFCH CRCT KDYL KFI KFYR
 KGW KHQ KOA KOMO KPO KPRC
 KSD KSTP KTBS KYW WAPI
 WAVE WBEN WCAE WCHS WDAF
 WDAY WEAJ WEEB WEIF WFAA
 WFBR WFLA WGY WHO WIBA
 WIOD WIS WJAR WJAX WJDX
 WKY WMAQ WMC WQAI WOW
 WPTF WRC WRVA WSAI WSB
 WSM WSMB WSOC WTAG WTAM
 WTAR WTMJ WWJ WWNC

E-9:45 pm, C-8:45, M-7:45, P-6:45

B—Irene Rich—Drama
 WJZ WBZ WBZA WBAL WMAL
 WEAN WICC WFLA WEBR WXYZ
 WENR KWK WMT WTCN WHK
 KSO KOIL WSYR WHAM WREN
 KDKA WLW WSPD WJTN

E-10:00 pm, C-9:00, M-8:00, P-7:00

R—Horace Heidt's Brigadiers
 KDYL KECA KEX KFSB KGA
 WEEB WFBR WGY WHO WIBA
 WIRE JAR WMAQ WNAC WOOD
 WOW WRC WSAI WTAG WTAM
 WVIC WTMJ WWJ

E-11:00 pm, C-10:00, M-9:00, P-8:00

R—Walter Winchell
 WBAP KARK WSM WMC WSB
 WKY WAVE WBRC WJDX WMB
 KTBS KPBO WJAX WFLA, WSUN
 WIOD KOA KDYL KPO KIDO
 KGW KOMO KHQ KFI KGIR
 KGHK KTAR KFBK KWG KMJ
 KSEI KERN KPFA KVOO KTFI

MONDAY

E-6:45 pm, C-5:45, M-4:45, P-3:45

C—Sophie Tucker and Her Show
 WCAO WBBM WKRC KRNT
 WFBR KMBC WHAS KFAB KMOX
 WJSV WCHS WMMN WISN WMBD
 WIBW KFPH WBT WDNC WBIG
 WMAZ WRVA WDBJ WGST WAPI
 WDOD WNOX KLRA WREC WCOG
 WFSa WLAC WWL KRLL KTRH
 KOMA KWKH KTUL WDC WKBB
 KDAL WMFG WCCO KSCJ WHLH

B—Lowell Thomas

WJZ WBZ WBZA WBAL WMAL
 WLW KDKA WXYZ WIOD CBL
 WJAX WFLA WSUN WTAM WOOD
 WSYR WHAM WEBR WEAN
 WSPD WRTD

E-7:00 pm, C-6:00, M-5:00, P-4:00

R—Amos 'n' Andy
 WEAJ WNAC WVIC WJAR WTAG
 WCHS WDEL WMBG KYW WFBR
 WRC WGY WBEN WCAE WTAM
 WJZ KSD KSTP WLW CBL CM
 E-7:15 pm, C-6:15, M-5:15, P-4:15

C—"Lum and Abner"

WABC WOKO WEEI WGR WBBM
 WKRC WJR WDRC KFAB WCAU
 WJAS WPRO WFBL WJSV WBNS
 WHIO WHEC WBT WRVA WGST
 WMBR WQAM WDBO WDAE
 WJNO WGAR KRNT WFBM WHAS
 KMOX KLRA WREC WLAC WAPI
 KRLL KTRH KOMA KTSa KTUL
 WCCO

R—Edwin C. Hill

WEAF WNAC WVIC WJAR WTAG
 WCHS KYW WDEL WFBR WGY
 WBEN WCAE WTAM WWJ KSD
 KSTP WSAI WIRE WHO WOW
 WMBG

E-7:30 pm, C-6:30, M-5:30, P-4:30

C—Eddie Cantor's Camel Caravan
 WABC WADC WCAO WEEI WGR
 WKRC WGAR WJR WDRC KMBC
 WCAU WJAS WPRO WFBL WJSV
 WBNS WHIO WHEC WORC WLBY
 WNBZ WCHS WMMN WHP WGBI
 WMAS WNBX WIBX WKBW WBT
 WDNC WBG WIVA WDBJ WTOG
 WSSS WMBR WQAM WDBO
 WDAE WJNO

E-8:00 pm, 7-7:00, M-6:00, P-5:00

C—The Monday Night Show
 WCAO WKRC WHAS WCAU
 KMOX WJSV WCHS WAJM WRDW
 WBT WDNC WBG WMAZ WDBJ
 WTOG WGST KLRA KRLL KTRH
 KTSa WACO KDAL WMFG WCCO
 WHLH

R—Al Pearcee and His Gang

WEAF WNAC WVIC WJAR WTAG
 WCHS KYW WDEL WFBR WRC
 WGY WBEN WCAE WTAM WWJ
 WLW WSPD WMBG WORK WTAR
 WPTF WSOC WQAI KPRC WFBZ
 WGAL WIRE WMAQ KSD KSTP
 WHO WOW WDAF WGBF WEEB
 KELO KANS WJAX WFLA WIOD

WMC WSB WBRC WSMB WAVE
 WSM WROL KFDM KGBX KVOO
 WKY KGNC WFAA KTBS KARK
 WTMJ WIDA WDAY KFYR KSOO

E-8:30 pm, C-7:30, M-6:30, P-5:30

C—"Dick and Pat"
 WABC WOKO WCAO WEEI WGR
 WBBM WKRC WGAR WJB WDRC
 KMBC KFAB WCAU WJAS WPRO
 WFBL WJSV WADC WHEC WORC
 WLBY WHP WMAS WBT WRVA
 WGST KRNT WFBM WHAS KMOX
 WAPI WREC WLAC KRLL KOMA
 KTSa KWKH KTUL WCCO WNAX
 WIBW

R—The Voice of Firestone

WEAF WNAC WVIC WJAR WTAG
 WCHS KYW WFBR WRC WGY
 WBEN WCAE WTAM WWJ WCOL
 WIOD WIRE WMAQ KPRC WGL
 CBM CBL WTMJ WEEB WHIO
 WOW WDAF WFLA WFBM WFAA
 WPTF WSOB WTAR WMC WSB
 WJZ WJNO WJR WJSV WKBH
 WKBN WKBW WKRC WLAC WLBY
 WSM KANS WJAX WFEA WFBZ
 WMBG WDEL WLW KRIS KARK
 KGNC KGBX KSTP WDAY KFYR
 WBRV WJDX KRGV KELO KTHS
 KSOO

E-9:00 pm, C-8:00, M-7:00, P-6:00

C—Lux Radio Theater
 WABC WADC WOKO WCAO WEEI
 WKBW WBBM WKRC WGAR
 KRNT WJR WDRC WFBM KMBC
 WHAS KFAB WCAU WJAS WPRO
 KMOX WFBL WJSV WBNS WHIO
 WHEC WORC WISN WMBD WMAS
 WIBX KFPH WBT WRVA WDBJ
 WGST KLRA WREC WLAC WWL
 QAM WDAE WJNO CKAC CFRB
 KVI KRLL KTRH KOMA KTSa
 KTUL WCCO WNAX KLZ KSL
 KNX KOIN KSFO KIRO KFPY
 and Canadian Broadcasting Corp.

R—Hour of Charm

WEAF WNAC WVIC WJAR WTAG
 WCHS KYW WDEL WBEN WCAE
 WTAM WWJ WLW WIRE WMAQ
 KSD KSTP WHO WOW WDAF
 WTAR WPTF WSOC WNNC WIS
 WJAX WFLA-WSUN WIOD WAVE
 WSM WMC WBRC WSB WSMB
 WJDX KVOO WKY WFAA KTBS
 KARK KPRC WQAI WTMJ KOA
 KEX KDYL KIDO KGIR KPFA
 KGO KECA KJR WFBR WRC WGY
 KGA

E-9:30 pm, C-8:30, M-7:30, P-6:30

R—The Pall Mall
 WEAF WNAC WVIC WJAR WTAG
 WCHS KYW WDEL WFBR WRC
 WGY WBEN WCAE WTAM WWJ
 WCKY WIRE WMAQ KSD KSTP
 WHO WOW WDAF WMBG WGL
 WOOD WSTR WHAM WEBR
 WTAR WPTF WSOC WNNC WCSB
 WJAX WFLA-WSUN WIOD WTMJ
 WIBA KOA KDYL KPO KFI KGW
 KOMO WGBF KHQ KFBK KFSB
 KWG KMJ KERN

E-10:00 pm, C-9:00, M-8:00, P-7:00

B—"True or False"
 WJZ WBZ WBZA WEAN WICC
 WFLA WBAL WMAL WSTR
 WHAM WEBR DKA WHK WSPD
 WXYZ WOW WENR KWK WMT
 WTCN KSO KOIL WREN WLW
 WJTN KVOD KLO KGO KECA
 KFSB KEX KJR KGA CFCH

C—Guy Lombardo's Orchestra
 WABC WOKO WCAO WEEI
 WKBW WBMM WKRC WGAR
 KRNT WJR WDRC WFBR KMBC
 WHAS KFAB WCAU WJAS WPRO
 KMOX WFBL WJSV WADC WBSN
 WHIO WIBW WBT WWL KSL
 KNX KOIN KSFO KIRO KFPY
 KVI WOCO KLZ

R—Contented Program
 WEAJ WNAJ WTIC WJAR WTAG
 WCHS KYW WRC WGY WBEW
 WCAE WTAM WWJ WMAQ WFBR
 KOA KDYL KPO KOMO KHQ
 KSD WHO WOV WDAF CBL CBM
 WTAR WPTF WSOB WIS WNBC
 WJAX WFLA-WSUN WIOD WAWE
 WSM WMC KARK WSMB WKY
 WFAA KTEB WCOT WCKY KPRC
 WOAI KFI KGW WSB WIRE
 WOOD WMBG KSTP WTMJ WIBA
 WDEL WFBC WBRC KVOO

E-10:30 pm, C-9:30, M-8:30, P-7:30
 C—Eddie Cantor's Camel Caravan
 WBMM KRNT WFBM WHAS
 KFAB KMOX WEOA WISN WMBD
 WSBT WIBW KFH WAPT WDDO
 WNOX KLRA WBEC WSPA WLAC
 WWL KRLL KTRH KOMA KTSA
 KWKH KTUL WGO KDAL WTAQ
 WMFG WKBH KGLO WCCO KSCJ
 WHLB WNAJ KLZ KSL KOY
 KGAR KNX KOIN KSFO KIRO
 KFPY KVI KGGM WGST

R—Al Pearce and His Gang
 KOA KDYL KPO KFI KGW
 KOMO KHQ KTAR KFBK KWG
 KMJ KOB KERN KGIR KGHJ
 KPFA

E-11:00 pm, C-10:00, M-9:00, P-8:00
 R—Amos 'n' Andy
 WHO WOV WDAF WMC WSB
 WOAI WKY WSMB WIRE WMAQ
 KDYL KPO KFI KGW KOMO KHQ
 KPBC KOA KWG WSM KFBK
 KMJ KERN WBRC KVOO WBAP

E-11:15 pm, C-10:45, M-9:15, P-8:15
 R—Edwin C. Hill
 WDAF WMAQ WMC WSB WBRC
 WSMB WSM WJY WBAP KPRC
 WOAI KWOO WJAX WFLA-WSUN
 WIOD KOA KDYL KPO KFI KGW
 KOMO KHQ KFBK KWG KMJ
 KERN

TUESDAY

E-6:45 pm, C-5:45, M-4:45, P-3:45
 B—Lowell Thomas
 See Monday.

E-7:00 pm, C-6:00, M-5:00, P-4:00
 B—Easy Aces
 WJL WBZ WBZ WBAL WMAL
 WFLB WSYR WHEM KDKA WTK
 WXYZ WCKY WEBB WMT KSO
 KOIL KWK WENR WICC WEAN
 WIRE WTCN WSPD KOA KPO
 KDYL KFI KGW KOMO KHQ
 WJTN

R—Amos 'n' Andy
 E-7:30 pm, C-6:30, M-5:30, P-4:30
 C—Helen Menken Drama
 WABC WOKO WCAO WEEI WGR
 WBMM WKRC WGAR KRNT WJR
 KMBC WHAS KFAB WCAU WJAS
 WPRO KMOX WFBL WJSV WHIO
 WHEC WORC KLZ KSL KNX
 KOIN KSFO KIRO KFPY KVI
 WADC WFBM

E-8:00 pm, C-7:00, M-6:00, P-5:00
 C—Ed. G. Robinson; Claire Trevor
 WABC WADC WOKO WCAO

WEEI WGR WBMM WKRC WGAR
 KRNT WJR WDRC WFBR KMBC
 WHAS KFAB WCAU WJAS WPRO
 KMOX WFBL WJSV WBSN WHIO
 WHEC WORC WISN WMBD
 WMAS WIBW WIBX KFH WBT
 WRVA WDBJ WGST KLRA WREC
 WLAC WWL WQAM WDAE WJNO
 CRAC CFRB KRLL KTRH KOMA
 KTSA KTUL WCCO WNAJ KLZ
 KSL WAPI and Canadian Broad-
 casting Corp.

R—Johnny Presents Russ Morgan
 WEAJ WNAJ WTIC WJAR WTAG
 WCHS KYW WFBR WRC WGY
 WBEW WCAE WTAM WMAQ KSD
 WHO WOV WDAF WWJ WDEL
 KSTP WPTF WWNC WIS WJAX
 WIOD WSMB WOAI WIRE WSB
 WTMJ WFLA-WSUN KPRC WLW
 WMBG WY WBAP WTAR KVOO
 WSB WIBA WDAY KFTB WAWE
 WSM WMC WBRC WJDX KGBX
 KTBS

E-8:30 pm, C-7:30, M-6:30, P-5:30
 C—Al Jolson Show
 WABC WADC WOKO WCAO WEEI
 WGR WBMM WKRC WGAR KRNT
 WJR WDRC WFBR KMBC WHAS
 KFAB WCAU WJAS WPRO KMOX
 WFBL WJSV WBSN WHIO WHEC
 WORC WISN WMBD WMAS
 WIBW WIBX KFH WBT WRVA
 WDBJ WGST KLRA WREC WLAC
 WWL WQAM WDAE WJNO CRAC
 CFRB KRLL KTRH KOMA KTSA
 KTUL WCCO WNAJ KLZ KSL
 WAPI and Canadian Broadcasting
 Corp.

R—For Men Only
 WEAJ WTAG WCHS KYW WDEL
 WFBR WRC WGY WBEW WCAE
 WTAM WWJ WLW WIRE WMAQ
 KSD KSTP WHO WOV WDAF
 WTAR WJAX WFLA-WSUN WIOD
 WAWE WSM WMC WBRC WSB
 WSMB WJDX KVOO WKY WBAP
 KTBS KARK KPRC WOAI WTMJ
 WIBA WLAK

E-9:00 pm, C-8:00, M-7:00, P-6:00
 C—"We, The People"
 WABC WADC WOKO WCAO WEEI
 WKBW WBMM WKRC WGAR
 KRNT WJR WDRC WFBR KMBC
 WHAS KFAB WCAU WJAS WPRO
 KMOX WFBL WJSV WADC WBSN
 WHIO WHEC WORC WPG WLBZ
 WNBZ WHP WISN WMBD WSBT
 WMAS WIBW WIBX KFH WKBN
 WBT WDNC WBIG WRVA WDBJ
 WTOP WSJS WGST KGAR WJDO
 WNOX KLRA WREC WMNN
 WSPA WLAC WWL KGGM KRLL
 KTRH KOMA KTSA KWKH KTUL
 WJNO WMBR WQAM WDBO
 WDAE WOC WCCO KSCJ WJAX
 KLZ KSL KOY KGAR KARM KNX
 KOIN KSFO KIRO KFPY KVI

E-9:30 pm, C-8:30, M-7:30, P-6:30
 C—Benny Goodman's Orchestra
 WABC WOKO WCAO WEEI
 WKBW WBMM WKRC WGAR
 KRNT WJR WDRC WFBR KMBC
 WHAS KFAB WCAU WJAS WPRO
 KMOX WFBL WJSV WADC WBSN
 WHIO WHEC WORC WPG WLBZ
 WNBZ WHP WISN WMBD WSBT
 WMAS WIBW WIBX KFH WKBN
 WBT WDNC WBIG WRVA WDBJ
 WTOP WSJS WGST KGAR WJDO
 WNOX KLRA WREC WMNN
 WSPA WLAC WWL KGGM KRLL
 KTRH KOMA KTSA KWKH KTUL
 WJNO WMBR WQAM WDBO
 WDAE WOC WCCO KSCJ WJAX
 KLZ KSL KNX KOIN KSFO KIRO
 KFPY KVI WCHS KOY WMFG

WHLB WGBI KDAL KGLO WKBH
 WTAQ WNBX WEOA WAPI
 R—Fibber McGee and Company
 WEAJ WNAJ WTIC WJAR WTAG
 WCHS KYW WFBR WRC WGY
 WBEW WCAE WTAM WWJ WIRE
 WMAQ KSD KSTP WHO WOV
 WDAF WIS WMBG WOOD WBEC
 WTAR WPTF WSMC WJAX WFLA-
 WSUN WIOD WTMJ WIBA WDAY
 KFTB WAWE WSM WMC WBRC
 WSB WSMB WKY KVOO WBAP
 KTBS KARK KPRC WOAI KOA
 KDYL KPO KFI KGW KOMO KHQ
 KTAR KFBK KWG KMJ KERN
 WLW CFCF WDEL KANS

E-10:00 pm, C-9:00, M-8:00, P-7:00
 C—"Dr. Christian," Jean Hersholt
 WABC WOKO WCAO WEEI WKBW
 WBMM WKRC WGAR KRNT WJR
 WDRC WFBM KMBC WHAS
 KFAB WCAU WJAS WPRO KMOX
 WFBL WJSV WBSN WHEC WORC
 WBT WRVA WJNO WGST WMBE
 WQAM WDBO WDAE WCCO
 WADI WHO WHP WJAS WJW
 WAPI KLRA WREC WLAC WWL
 KVI KRLL KTRH KOMA KPSA
 KWKH KSCJ KLZ KSL KARM
 KNX KOIN KSFO KIRO KFPY

R—Pensodent Program
 WEAJ WNAJ WTIC WJAR WTAG
 WCHS KYW WDEL WGY WBEW
 WCAE WTAM WWJ WLW WIRE
 WMAQ KSD. KSTP WHO WOV
 WDAF WMBG WOOD WJAX WSUN
 WIOD WAWE WSM WMC WBRC
 WSB WSMB WJDX KVOO WKY
 WBAP WFBR WRC KANS WFLA
 KTBS KTHS KPRC WOAI KGNV
 WTMJ WIBA KOA KDYL KPO
 KFI KGW KOMO KHQ WHEAM

E-10:30 pm, C-9:30, M-8:30, P-7:30
 R—Jimmie Fidler's Gossip
 WEAJ WNAJ WTIC WJAR WTAG
 WCHS KYW WFBR WRC WGY
 WBEW WCAE WTAM WWJ WIRE
 WMAQ KSD WHO WOV WDAF
 WLW WOOD WTMJ WIBA WIOD
 WAWE WSM WMC WSB WKY
 WSMB WBAP KPRC WOAI KOA
 KDYL KPO KFI KGW KOMO
 KHQ WBRC KSTP KVOO WDEL

E-10:45 pm, C-9:45, M-8:45, P-7:45
 R—Uncle Ezra
 WEAJ WNAJ WTIC WJAR WTAG
 WCHS KYW WDEL WFBR WRC
 WGY WBEW WCAE WTAM WLW
 WIRE WMAQ KSD KSTP WHO
 WOV WDAF KVOO WKY WBAP
 KTBS KARK KPRC WOAI WTMJ
 KOA KDYL KPO KFI KGW KHQ

E-11:00 pm, C-10:00, M-9:00, P-8:00
 R—Amos 'n' Andy
 See Monday.

WEDNESDAY

E-6:45 pm, S-5:45, M-4:45, P-3:45
 B—Lowell Thomas
 See Monday.
 C—Sophie Tucker
 See Monday.

E-7:00 pm, C-6:00, M-5:00, P-4:00
 B—Easy Aces
 See Tuesday.

R—Amos 'n' Andy
 See Monday.

E-7:15 pm, C-6:15, M-5:15, P-4:15
 C—"Lum and Abner"
 See Monday.
 C—Edwin C. Hill
 See Monday.

C—"Ask-It Basket"
 E-7:30 pm, C-6:30, M-5:00, P-4:30
 WABC WOKO WCAO WBEI WGR
 WBBM WKRC WGAR KRNT WJR
 WDRC WFBM KMBC WHAS KFAB
 WCAU WJAS WPRO KMOX WFBL
 WJSV WADC WBNS WHIO WHEC
 WORC WLWZ WHP WISN WMBD
 WIBW WJVA KFH WKBN WBT
 WRVA WJNO WGST WAPI WREB
 WWL WNAK KRLD KTRH KOMA
 K TSA KWKH WMBR WQAM
 WDAE WCCO

E-8:00 pm, C-7:00, M-6:00, P-5:00
 C—"Gang Busters"
 WABC WOKO WCAO WEEI WGR
 WBBM WKRC WGAR KRNT WJR
 WDRC WFBM KMBC WHAS KFAB
 WCAU WJAS WPRO KMOX WFBL
 WJSV WBNS WHIO WHEC WORC
 WBLZ WISN KFH WBT WRVA
 WGST WAPI WREB WWL WCCO
 KRLD KTRH K TSA KOMA

R—One Man's Family
 WFAF WNAC WTIC WJAR WTAG
 WCHS KYW WFBR WRC WGY
 WBNB WCAE WHAM WSYR WWJ
 WTAM KSD WHO WOV WDAF
 WNNC WLW WMAQ WBA WBBB
 WKY WMC WSMB WBRB WAVE
 KV00 WQAI KOA KDYL WIS
 WIOD WMBG WSOB WTAR WSB
 KPRC WJAX KSTP WTMJ WFLA-
 WSUN CBL WIRE WDEL WSAW
 WCOL WSM CBM WFAA

E-8:30 pm, C-7:30, M-6:30, P-5:30
 B—Hobby Lobby
 WJZ WBZ WRZA WEAN WICC
 WFIL WBAI WMAZ WSPY
 WJAM WBER KDKA WHK WSDR
 WXYZ WSAJ WTN WMPF WABY
 KOA WLEW WCOP KDYL BWOW
 WELW WIBM WJIM KPO KFI
 KGW KOMO KHQ WFDF

C—Paul Whiteman's Orchestra
 WABC WOKO WCAO WBEI WBBM
 WKRC WGAR WJR WDRC KFAB
 WCAU WJAS WPRO WFBL WJSV
 WBNS WHIO WHEC WORC WLWZ
 WBNF WHP WGBI WMAS WIBX
 WCHS WBT WBIG WRVA WDBJ
 WJNO WJSV WGST WMBR WQAM
 WDAE WTOG WDBO WMMN WGR
 WALDC WRC WNSD WGH WAIM
 WDNB KRNT WFBM WHAS
 KMOX WISN WMBD WIBW KEF
 WAPI WDOO WNOX KIRA WREB
 WCOB WSPA WLAC WWL KMBC
 KRLD KTRH KOMA K TSA KWKH
 KTUL WACO WOC KDAL WTAG
 WMPG WKBH WCCO KSCJ WHLB
 WNAK

R—Tommy Dorsey Orchestra
 WFAF WNAC WTIC WJAR WTAG
 WCHS KYW WDEL WSOB WTMJ
 WFBM WRC WGY WBNB WJAM
 WWJ WMAQ KSD KSTP WHO
 WOV WDAF WMBG WOOD WTAR
 WPTF WNNC WIS WJAX WFLA-
 WSUN WIOD WAVE WSM WMC
 WBRB WSB WLW WIRE WSMB
 WKY WFAA KTBS KPRC KARK
 E-9:00 pm, C-8:00, M-7:00, P-6:00

C—"Everybody's Music"
 Available to full network
 R—Town Hall; Fred Allen
 WFAF WNAC WTIC WJAR WTAG
 WCHS KYW WFBR WRC WGY
 BEN WTAM WWJ WMAQ WHO
 WOV WDAF WLW WCAE KSD

KARK WIRE WTMJ WSMB WFAA
 KPRC WOAI WIBA KSTP WAVE
 WJAX WFLA-WSUN WIOD WSM
 WMC WSB WJDX WKY WDEL
 KOA WIS WTAR WSOB WPTF
 WLAK

E-9:30 pm, C-8:30, M-7:30, P-6:30
 C—Texaco Star Theater
 WABC WOKO WCAO WEEI WGR
 WBBM WKRC WGAR KRNT WJR
 WDRC WFBM KMBC WHAS KFAB
 WCAU WJAS WPRO KMOX WFBL
 WJSV WADC WBNS WHIO WHEC
 WORC WLWZ WEOA WHP WISN
 WMBD WJAX WJNO WGST WAPI
 WDDO WNOX KIRA WREB
 WWSA WLAC WWL WTAX KRLD
 KTRH KOMA K TSA KWKH KTUL
 WDAE WOC KDAL WTAG WKBH
 WCCO KSCJ

E-10:00 pm, C-9:00, M-8:00, P-7:00
 R—Kay Kyser's Klass
 WFAF WBN WNAC WJAR WTAG
 WCHS KYW WFBR WRC WGY
 WBRB WBNB WCAE WTAM WFEA
 KTHS KGBX KDYL KSEI KTSM
 WMPG KOB KOA WWJ WLW
 WMAQ KSD WHO WOV WDAF
 KSTP WTMJ WBA WBBB WDAY
 KFYY WPTF WOOD WNNC WIS
 WJAX WIOD WAVE WSM WMC
 KGU WSB WJDX WSMB WKY
 WFAA KTBS KPRC WOAI KGIR
 KPO KGHL KFI KTAR WSOB
 WFLA-WSUN WOSC KHQ WGL
 WDEL WORK KFBK KWG WFBC
 WTAR WIRE KGW KOMO KMJ
 KERN KPFA KIDO WTIC WSYR
 WALA KARK KVOO KANS WGAL
 KTFI

E-10:30 pm, C-9:30, M-8:30, P-7:30
 C—"It Can Be Done"
 WABC WOKO WEEI WBBM
 WBBM KRNT WJR WDRC WFBM
 KMBC WHAS KFAB WCAU WJAS
 WPRO KMOX WFBL WBNS WHIO
 WHEC WORC WBNF WMAS WIBX
 WCHS WOC WKRC WCAO

E-11:00 pm, C-10:00, M-9:00, P-8:00
 R—Amos 'n' Andy
 See Monday.
 E-11:15 pm, C-10:15, M-9:15, P-8:15
 R—Edwin C. Hill
 See Monday.

THURSDAY

E-6:45 pm, C-5:45, M-4:45, P-3:45
 B—Lowell Thomas
 See Monday.
 E-7:00 pm, C-6:00, M-5:00, P-4:00
 B—Easy Aces
 See Monday.
 R—Amos 'n' Andy
 See Tuesday.

E-7:30 pm, C-6:30, M-5:30, P-4:30
 C—Joe Penner
 WABC WOKO WCAO WEEI WGR
 WBBM WKRC WGAR KRNT WJR
 WDRC WFBM KMBC WHAS
 KFAB WCAU WJAS WPRO KMOX
 WFBL WJSV WADC WBNS WHIO
 WHEC WORC WHP WISN WMBD

WIBW KFH WKBN WCHS WBT
 WRVA WJNO WGST WAPI WNOX
 WREB WLAC WWL WMAS KRLD
 KTRH KOMA K TSA KTUL WMBR
 WQAM WDBO WDAE WOC WCCO
 KSCJ WNAK WGBI

E-8:00 pm, C-7:00, M-6:00, P-5:00
 C—Kate Smith Hour
 WABC WOKO WCAO WEEI WGR
 WBBM WKRC WGAR KRNT WJR
 WDRC WFBM KMBC WHAS KFAB
 WCAU WJAS WPRO KMOX WFBL
 WJSV WADC WBNS WHIO WHEC
 WORC WLWZ WEOA WHP WISN
 WMBD WJAX WJNO WKBK WBT
 WRVA WDBJ WJNO WGST WAPI
 WDDO WNOX KIRA WREB
 WWSA WLAC WWL WTAX KRLD
 KTRH KOMA K TSA KWKH KTUL
 WACO WMBR WQAM WDBO
 WDAE WOC KDAL WTAG WKBH
 WCCO KSCJ

R—Rudy Vallee Hour
 WFAF WNAC WTIC WJAR WBNB
 WREB WCHS WTAG WRC WGY
 WKY WFBR KDYL KSTP WTMJ
 KOA KFI KPO KGW KOMO WLW
 KHQ KYW KPRC WOAI KSD
 WFO WOV WDAF WMC WIBA
 WMAQ WTAX WFLA WIOD WAVE
 WIRE WSB WSMB WTAM WWJ
 KV00 WBP WSM WMBG WCAE
 WDEL WBRB

E-8:30 pm, C-7:30, M-6:30, P-5:30
 C—Joe Penner; Ben Pollack
 KLZ KSL KARM KNX KOIN
 KSFO KIRO KFPY KVI

E-9:00 pm, C-8:00, M-7:00, P-6:00
 C—Major Bowes' Amateur Hour
 WABC WOKO WCAO WEEI WGR
 WBBM WKRC WGAR KRNT WJR
 WDRC WFBM KMBC WHAS KFAB
 WCAU WJAS WPRO KMOX WFBL
 WJSV WADC WBNS WHIO WHEC
 WORC WLWZ WBNF WHP WISN
 WMBD WGBI WMAS WIBW WIBX
 KFH WKBN WCHS WBT WBIG
 WRVA WDBJ WGST WAPI WDOO
 WNOX KIRA WREB KGAR WLAC
 WTOG KRLD KTRH KOMA K TSA
 KWKH KTUL WJNO WMBR WQAM
 WDAE WDAE CRAC CFBR WOC
 WTAG WKBH KIRO KNX KOIN
 KSTP KFPY KVI WWL WOV
 WCAO WCCO KSCJ WNAK KLZ
 KSL KFBF

R—Good News of 1939
 WFAF WBN WNAC WTIC WJAR
 WTAG WCHS KYW WFBR WRC
 WGY WBNB WCAE WTAM WWJ
 WIRE WMAQ KSD KSTP WHO
 WOV WDAF WLW WSPD WMBB
 WSYR WHAM WFEA WBRB
 WOOD WDEL WERC WTAR WPTF
 WSOB WFBC KPFA WNNC WIS
 WJAX WFLA-WSUN WIOD WMC
 WSB WBRB WJDX WSMB WAVE
 WSM KVOO WKY WBP KTBS
 KARK KPRC WOAI WTMJ WIBA
 WDAY KFPR KOA KDYL KPO
 KFI KGW KOMO KHQ KTAR
 KFBK KWG KMJ KERN KGIR
 KGHL KGNC KTHS CBM CBL

E-10:00 pm, C-9:00, M-8:00, P-7:00
 C—"Columbia Workshop"
 Available to full network
 R—Kraft Music Hall
 WFAF WNAC WTIC WJAR WTAG
 WCHS WBNB WRC WGY KYW
 WHO WOV WDAF WCAE WTAM
 WWJ WLW KSD KFYY WREB

WKY KTBS KARK WTMJ WSB
 BAP KPRC WOAI KOMO KOA
 KPO DYAL KFI KGW KHQ WIBA
 KSTP KTRR WJDX WPTF WIS
 WIOD WAVE WTAR WFLA WDAY
 WSM WMC WIRE WMAQ WBRC
 WFBR WJAX WDEL WRFL WSMB
 WMBG CBL CBM CBF WSOE
 WSYR WHAM WFBC KGIR KGHL
 KPFA KTBS WOOD

E-11:00 pm, C-10:00, M-9:00, P-8:00
 R—Amos 'n' Andy
 See Monday.

E-11:30 pm, C-10:30, M-9:30, P-8:30
 R—Kate Smith Hour
 KFOR KLZ KSL KFBB KGVO
 KOY KGAR KARM KNX KOIN
 KSFO KIRO KFPY KVI

FRIDAY

E-6:45 pm, C-5:45, M-4:45, P-3:45

B—Lowell Thomas

See Monday.

C—Sophie Tucker

See Monday.

E-7:00 pm, C-6:00, M-5:00, P-4:00

R—Amos 'n' Andy

See Monday.

E-7:15 pm, C-6:15, M-5:15, P-4:15

C—'Lum and Abner'

See Monday.

R—Jimmie Fidler

WEAF WNAC WTIC WJAR WTAG
 WCSH KYW WFBR WDEL WRC
 WGY WWJ WBN WCAE WTAM
 E-7:30 pm, C-6:30, M-5:30, P-4:30

C—"Wonder Show"; Jack Haley

WABC WADC WEEI WGR WBMM
 WKRC WGAR WKRC WJR WDRC
 WFBM KMBC KFAB KMOX WJSV
 WBNS WHIO WHEC WISN WMAS
 WBX WWVA WHF WRVA KLRA
 WREC KRLL KOMA KWKH KTUL
 WOC KGLO WCCO KSCJ

E-8:00 pm, C-7:00, M-6:00, P-5:00

B—Criminal Histories; Warden Lawes

WJZ WBZ WBZA WEAN WIC
 WFIL WBAL WMAL WSTR WHAM
 WEBR KDKA WHK WXPZ WXYZ
 WLS KWK WMT WTCN KSO
 KOIL WREN WSAI WTRD WGL
 WGBF WMC WJTN WSB WBRC
 WJDX WSMB WAVE WSM KXPZ
 KGKO KTHS KPO KFI KGW
 KOMO KHQ KVOD

C—"Campana's First Nighter"

WABC WADC WOKO WCAO WEEI
 WGR WBMM WKRC WGAR KRNT
 WJR WDRC WFBM KMBC WHAS
 KFAB WCAU WJAS WPRO KMOX
 WFBL WJSV WBNS WHIO WHEC
 WLZ WBW WWVA KRLL KTRH
 KOMA KTSa KWKH KDAL WCCO
 WNAX KLZ KSL KOY KGAR
 WREC WLAC WWL KNOW WAPI
 WGST WRVA

R—Cities Service Concert

WEAF WNAC WTIC WJAR WTAG
 WCSH WTAM WWJ KSD WIC
 WCKY WEBC KSTP KYW WFBR
 WGY WIOD WIBA WDAY KFYR
 WJAX WCAE WBN WTMJ WQAI
 KPRC WMAQ WTAR WPTF WSOE
 WWNC WFLA WFSN WJBG WFBC
 WIRE KTBS WDEL KYOO WFAA
 WHO WOW WDAF KOA WKY CBL

E-8:30 pm, C-7:30, M-6:30, P-5:30
 C—Burns and Allen

WABC WOKO WCAO WEEI WGR
 WBMM WKRC WGAR KRNT WJR
 WDRC WFBM KMBC WHAS KFAB
 WCAU WJAS WPRO KMOX WFBL
 WJSV WADC WBNS WHIO WHEC
 WORC WPG WLZ WNEF WDMN
 WHP WISN WMBD WGBI WMAS
 WNBX WBW WIBX KFH WAIM
 WCHS WBT WDNC WBIG WRVA
 WDBJ WTOT WJNO WJSJ WGST
 WAPI WDDO WNOX KLRA WREC
 WCOE WSPA WLAC WWL WGH
 KRLL KTRH KOMA KTSa KWKH
 KTUL WMBR WQAM WDBO
 WDAE WOC KDAL WTAQ WMFG
 WKHB WCCO KSCJ WHLE WNAX
 E-9:00 pm, C-8:00, M-7:00, P-6:00

C—"Hollywood Hotel"

WABC WOKO WEEI WKBW
 WBMM WKRC WGAR KRNT WJR
 WDRC WFBM KMBC WHAS KFAB
 WCAU WJAS WPRO KMOX WFBL
 WJSV WCAO WBNS WHIO WHEC
 KFH WBT WRVA WGST WNOX
 KLRA WREC WLAC WWL KVI
 KRLL KTRH KOMA KTSa KWKH
 WMBR CKAC CFRB WCCO KLZ
 KSL KNX KOIN KSPQ KIRO
 KEYP and Canadian Broadcasting Corp.

R—Waltz Time

WEAF WNAC WTIC WJAR WTAG
 WCSH WFBR KYW WRC WGY
 WBNB WSAE WWJ WMAQ WHO
 WOW WDAF KSD WTAM KSTP
 WCKY WIRE WDEL CBM CBF
 WCKY

E-9:30 pm, C-8:30, M-7:30, P-6:30

R—Death Valley Days

WEAF WNAC WTIC WJAR WTAG
 WCSH KYW WRC WGY WBNB
 WCAE WTAM WWJ WIRE WMAQ
 KSD WHO WOW WDAF WDEL
 WDEL WFBR KSTP WLW
 E-10:00 pm, C-9:00, M-8:00, P-7:00

R—Guy Lombardo Orchestra

WEAF WNAC WTIC WJAR WTAG
 WCSH KYW WDEL WFBR WRC
 WGY WBNB WCAE WTAM WWJ
 WSAI WIRE WDAF KSD KSTP
 WHO WOW WDAF WREC KANS
 WAVE WSM WMC WBTC WSMB
 WJDX KVOO WKY WFAA KTBS
 KPRC WOAI WTMJ WIDA KTYL
 KFYR KOA KDYL KPO KPI KGW
 KOMO KHQ WSB

E-10:30 pm, C-9:30, M-8:30, P-7:30

R—Jimmie Fidler

See Tuesday

E-10:45 pm, C-9:45, M-8:45, P-7:45

R—Uncle Ezra

WEAF WNAC WTIC WJAR WTAG
 WCSH KYW WDEL WFBR WRC
 WGY WBNB WCAE WTAM WLW
 WIRE WMAQ KSD KSTP WO
 WDAF KVOO WKY WFAA KTBS
 KARK KPRC WOAI WTMJ KO
 KDYL KPO KPI KGW KOMO
 KHQ

E-11:00 pm, C-10:00, M-9:00, P-8:00

R—Amos 'n' Andy

See Monday.

E-11:30 pm, C-10:30, M-9:30, P-8:30

C—Burns and Allen

KFOR KLZ KSL KFBB KGVO
 KOY KGAR KNX KOIN KSFO
 KIRO KFPY KGMH KHBC

SATURDAY

E-6:00 pm, C-5:00, M-4:00, P-3:00

R—Kaltenmeyer's Kindergarten

Available to network

E-7:00 pm, C-6:00, M-5:00, P-4:00

C—Saturday Night Swing Club

Available to full network

R—Avalon Time

WEAF WNAC WTIC WJAR WPTF
 WSOE WFBC WJAR WTAG WCSH
 KYW WDEL WFBR WRC WGY
 WBNB WCAE WTAM WWJ WIRE
 WMAQ WWNC WIS WOSC KSD
 KSTP WHO WOW WDAF WFLA-
 WFSN WIOD WAVE WSM WMC
 WBC WSB WSMB WJDX KVOO
 WKY WBAP KTBS WLW WJAX
 E-7:30 pm, C-6:30, M-5:30, P-4:30

B—Uncle Jim's Question Bee

WJZ WBZ WBZA WGY KDKA
 WTAM WMAQ

C—Joe E. Brown

WABC WOKO WCAO WEEI WGR
 WFBM WKRC WGAR KRNT WJR
 WDRC WFBM KMBC WHAS
 KFAB WCAU WJAS WPRO KMOX
 WFBL WJSV WADC WBNS WHIO
 WHEC WWVA WEOA WHF WISN
 WMBD WIBW KFH WCHS WBT
 WRVA WJNO WGST WAPI WDDO
 WNOX KLRA WREC WLAC WWL
 WDBJ KRLL KTRH KOMA KTSa
 KWKH KTUL WMBR WQAM
 WDBO WDAE WOC KGLO WCCO
 KSCJ WNAX

E-8:00 pm, C-7:00, M-6:00, P-5:00

C—Johnny Presents

WABC WGAR WJR WDRC KMBC
 KFAB WCAU WJAS WPRO WJSV
 WDAE WBNS WHIO WHEC
 WNEF WFB WGBI WWVA WCHS
 WBT WBIG WRVA WGST WOKO
 WCAO WEEI WGR WBMM WKRC
 KLRA WCOA WHAS KRNT WFBM
 KMOX WISN KFH WAPI KRLL
 KTRH KTSa WOC WCCO

R—Quaker Party

WEAF WNAC WTIC WJAR WTAG
 WCSH KYW WDEL WFBR WRC
 WGY WBNB WCAE WTAM WWJ
 WIRE WMAQ KSD KSTP WHO
 WOW WDAF WLW WMBG KANS
 WTAR WPTF WSOE WFBC WIS
 WJAX WFLA WFSN WIOD WMC
 WERC WJDX WSMB WAVE WSM
 KVOO WKY WBAP KTBS KARK
 KPRC WOAI WTMJ WDAY KFYR
 KOA KDYL KPO KFI KGW WSB
 E-8:30 pm, C-7:30, M-6:30, P-5:30

C—"Professor Quiz"

WABC WADC WOKO WCAO WEEI
 WGR WBMM WKRC WGAR WJR
 WDRC KMBC KFAB WCAU WJAS
 WPRO KMOX WJSV WBNS WHEC
 WBT WRVA WGST WWL KRNT
 WFBM WHAS WFLB WGBI WTOT
 WAPI KRLL KTRH KTSa WCCO

R—Fred Waring

WEAF WNAC WTIC WJAR WTAG
 WCSH KYW WDEL WFBR WRC
 WGY WBNB WCAE WTAM WWJ
 WIRE WMAQ KSD KSTP WHO
 WOW WDAF WSAI CBM CBF
 WTAR WPTF WSOE WFBC
 WWNC WIS WOSC WJAX WTMJ
 WFSN WIOD WAVE WMC WBRC
 WSB WSMB WJDX KVOO WKY
 WBAP KTBS KPRC WOAI

E-9:00 pm, C-8:00, M-7:00, P-6:00
 B—National Barn Dance

WJZ WBZ WBZA WBAL WMAL
 WSYR WHEAM WFMJ WIBA
 KDKA WXYZ WFTL WMCB WSB
 RTBS WSPD WEAN WHK WSMB
 WOOD WRTD WLW KARK WBRB
 WKY WBAP KPRC WOAI WLS
 WJCC WFTN KVOO WEWR WDAY
 WTAR WAVE WECB KFTR KTHS
 WTCN KWK WMT KSO KOIL
 WREN WJDX

R—Vox Pop
 WEAJ WNAC WTIC WJAR WTAG
 WCHS KYW WDEL WFBR WRC
 WGY WBEN WCAE WTAM WWJ
 WIRE WMAQ KSD KSTP WOW
 WDAF WCKY WBRE
 E-9:30 pm, C18:30, M-7:30, P-6:30

C—Saturday Night Serenade
 WCAO WEEL WKBW WBBM

WGAR WJR KVI WPBM WHAS
 KPAB WCAU WJAS KMOX WFBL
 WJSV WBNS WHEC WMBD
 WWVA KFII WBT WBIG WRVA
 WTOC WJNO WGST WAPI WDOD
 WNOX KLRA WREC WSFA WLAC
 WWL WCOA KFPY KRLL KTRH
 KOMA K TSA KWKH KTUL
 WMBR WQAM WDBO WDAE WOC
 KLZ KSL KARM KNX KOIN
 KSFO KIRO

R—America Dances
 To Red network

E-10:00 pm, C-9:00, M-8:00, P-7:00

C—"Your Hit Parade"

WABC WOKO WCAO WEEL
 WKBW WBBM WKRC WGAR
 KRNT WJR WDRC WFPM KMBC
 WHAS KFAB WCAU WJAS WPRO
 KMOX WFBL WADC WBNS

WHIO WHEC WORC WPG WLBZ
 WBNF WMMN WHP WISN WMBD
 WGBI WSBT WMAS WIBW WIBX
 WWVA KFH WCHS WBT WDNC
 WBIG WRVA WDBJ WTOC WSJS
 WBSZ KGAR WDOD WNOX KLRA
 WREC WJNO WSFA WLAC WWL
 WCOA KGLO KRLL KTRH KOMA
 K TSA KWKH KTUL WACO WAPI
 WMBR WQAM WDBO WDAE WOC
 WKBB WTAQ WKBH WCCO KSCJ
 WNAX KVOR KLZ KSL KFBB
 KOY KOH KNX KOIN KSFO
 KFPY KVI KGMB WJSV WEOA
 WNBX WCOE

E-11:00 pm, C-10:00, M-9:00, P-8:00

B—National Barn Dance

KTAR KGHL KPFA KGIR KOA
 KFI KDYL KGW KOMO KPO
 KHQ WBOW KTFI KOB KSEI
 WBOW

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, GBS (WC)
 Wed, 9:00, Fred Allen, Red
 Thur, 7:30, Joe Penner, CBS
 8:30, Joe Penner, CBS
 9:00, Frank oMrgan, 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)

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

Dance Bands

Sun, 5:30 pm, Ben Bernie, CBS
 6:30, Carl Hohengarten, 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 Krueger, 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 Krueger, 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 Broekman, CBS
 10:00, Kay Kyser, Red
 10:30, Frankie Masters, CBS
 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

- 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
- 8:00, Chase and Sanborn Program, Red
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

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
- 10:30, NBC Minstrel Show, Blue
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 Serice 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)

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

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 Kreun, Red
9:30, Frank Munn, Red
9:30, Jean Dickenson, Red
9:30, Elizabeth Lennox, Red

(Please turn to page 49)

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.	Baranowicze, Poland. Testing.	780 JOPK	5	Shizuoka, Japan.
540 RW54	10.	Khabarovsh, U.S.S.R.	780 LT1	5.	Rosario, Argentina.
546	120.	Budapest, Hungary	785	120.	Leipzig, Germany.
550 2CR	10.	Cumnock, NSW, Australia.	790 JOGK	10.	Kumamoto, Japan.
556	100.	Beromunster, Switzerland.	790 LR10	11.	Buenos Aires, Argentina.
560 MTCY	10.	Shinkyō, Manchuria.	790 4YA	10.	Dunedin, New Zealand.
560 6WA	10.	Minding, W.A., Australia.	795	50.	Lwów, 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	100.	Sofia, Bulgaria.
601	25.	Rabat, Morocco.	859	100.	Strasbourg, France.
610 CX4	1.	Montevideo, Uruguay.	860 PRA3	2.5	Rio de Janeiro, Brazil.
610 TFC	3.5	Sydney, NSW, Australia.	870 JOBK2	10.	Tokyo, Japan.
610	20.	Florence, Italy.	870 LR6	26.	Buenos Aires, Argentina.
620 3AR	4.5	Melbourne, Vic., Australia.	870 2GB	1.	Sydney, NSW, Australia.
620	15.	Brussels I, Belgium.	877	70.	London, Gt. Britain (London Regional).
620	20.	Cairo No. 1, Egypt.	880 PR13	22.	Bello Horizonte, Brazil.
625 TIPG	2.	San Jose, Costa Rica.	882 YV5RQ	...	Caracas, Venezuela.
630 LS3	5.	Buenos Aires, Argentina.	900 PRB7	5.	Rio de Janeiro, Brazil.
630 4QN	7.	Clevedon, Qsld., Australia.	904	100.	Hamburg, Germany.
638	120.	Praha No. 1, Czechoslovakia.	910 JOLK	5	Fukuoka, Japan.
640 5CK	7.5	Crystal Brook, S.A., Australia	910 LR2	12.	Buenos Aires, Argentina.
648	100.	Lyon la Doua, France.	910 4RK	2.	Rockhampton, Qsld. Australia
650 1YA	10.	Auckland, New Zealand.	913	60.	Toulouse, France.
658	100.	Cologne, Germany.	920 JOQK	5	Niigata, Japan.
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	Corowa, NSW, Australia.	940 PRF4	10.	Rio de Janeiro, Brazil.
677	100.	Sotten, 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 LS1	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 2GZ	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 (Mid-land 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 JOIG	.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.

(Continued from page 47)

Mon,	8:30,	Edward Roecker, CBS
	8:30,	Edward Roecker, CBS
	8:30,	Margaret Speaks, Red
	10:00,	The Lullaby Lady, 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
	9:30,	Bill Perry, CBS
	10:00,	Fredda 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)

M. B., North Lawrence, O.: My Philco 38 has been hooked up to use "A" and "B" batteries instead of the power pack. The tuning is broad, selectivity is poor and there is a lot of noise. Short waves do not work. What can I do?

Answer: It is likely that changing the set over might have had some slight influence, but it should not matter whether the current is obtained from batteries or the separate battery-eliminator or power pack. Have you made sure that you are using exactly the same battery power as is furnished by the pack if that were used? If the set is properly adjusted, it should work nicely and tune sharply. A poor oscillator tube (type 1A6) or failure in the "A" and "B" battery will prevent the set from oscillating as it should and put the short-wave band out of commission. The set will need a careful aligning of its tuning units. It has been noted, too, that defective i-f transformer leads give trouble in this set. You might take this up with the Philco factory (Service Department) in Philadelphia, Pa., if you think you cannot obtain first-class service in your vicinity. This is a good set with a high intermediate frequency (470 kcs.) to hold down outside interference to a minimum, but its 5 tubes never can provide the selectivity of a larger set.

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 *
Paris	Praha	London	London	London
ZRK	VUD3	Paris	Berlin	Berlin
Rome	London	Berlin	VUD3	Malaga
Berlin	Paris	Rome	ZRK	ZIZ
London	Berlin	CSW3	Tokyo	W3XAL
TAP	HP5G	LRX	CFVP	TGWA
Tokyo	RK1	RAN	JFAK	VP3BC
VUD3	SPW	VUD3	PMH	SP48
VUD2	VUD2	XEWW	TAQ	HBO
VLR	TG2X	HCJB	VLR	SP31
VK3ME	Rome	TGWB	XGSA	EAJ43
SPW	ZRK	VLR	PLP	RW96
RW96	Tokyo	COBC	PMN	VUD2
RK1	HP5A	COCQ	RNE	Martinique
RAN	RW96	JIB	EAR	TAP
Praha	HJ3ABD	TAP	VK3ME	TAQ
ORK	TGWA	VK3ME	TAP	ZRK
HH2S	Huizen	EAR	JIB	Rome
HJ2ABJ	HJ1ABP	RNE	VLR	W2XAF
HJ1ABB	CSW3	YDB	RAN	HJ1ABP

*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 Kurzwellensender, 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 (PHOHI).

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, WI, 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.

Malaga, Spain: 7220 and 14440 kcs, near 6:30 pm.

Martinique: "Radio Martinique," Fort de France, Martinique, 9700 kcs. Sign off with Marseillaise. Address, Poste Seri, 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.

2RO, 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.

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

COCM, 9833, Havana, Cuba. Trans-radio 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.
- HJIABP**, 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.
- HP5C**, 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" Calls 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.
- TCQA**, 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.
- TCWA**, 15170, Guatemala City, Guat. Same as above.
- TC2X**, Guatemala City, Guat. Same as above.
- TI4NRH**, 9694, Heredia, Costa Rica. Aptdo. 40. Tues, Thur, Sat, 9-10 pm.
- VK2ME**, 9690, Sydney, Australia. Am? amalgamated Wireless, 47 York St. Sun, 1-3 am; 5-11 am.
- VK3ME**, 9510, Melbourne, Australia. Amalgamated Wireless, 167 King St. Weekdays 4-7 am.
- VK6ME**, 9590, Perth, Australia. Amalgamated 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.

ZCE, 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.



The map of the United States which will head this column every month will show RADEX readers and Radex Club Members the extent of the growth of their club each month. In the states which are shown in solid black, there are at least five members of the Club enrolled. Let us see how quickly we can fill in the entire map.

Membership in the RADEX Club is now 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.

Mr. John Beardall, Manager and Owner of CFCO in Chatham, Ontario, and long a good friend of RADEX, is now an Honorary Member of The Radex Club, and has offered the assistance of his radio station to our Club. Station CFCO, operating on 630 kcs., broadcasts a Radio Club Program every Sunday morning from 10:15 to 10:45 am, EST. This program, an informal chatter period, is dedicated to the interest of better radio, and to the comfort of radio fans. All readers who are within reach of CFCO are urged to tune in this splendid program.

Miss Margaret Bossett (R167) and Catherine Bossett (R452) of 870 Sanford Ave., Irvington, N. J., have announced their wish to launch a local chapter of The Radex Club, and desire DXers in their vicinity to get in touch with them and aid them in the inauguration of this group. There are many reader-members in the Newark-Elizabeth-Irvington section of

Applications to F. C. C.

(Continued from inside front cover)

CP 1420 kcs., 100 (.25) unlt. (E).

NEW, Hastings, Nebr., South Nebr. Brdctg. Co., CP 920 kcs., 1000 (5) unlt. (E).

NEW, Louisville, Ky., Ky. Brdctg. Corp., CP 1210 kcs., 100 (.25) (E).

NEW, Mansfield, Ohio, CP 1370 kcs., 250 w. days (E).

NEW, Metuchen, N. J., Bernard Goldsmith. CP 1420 kcs., 100 w. days (E).

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

NEW, Ocala, Fla., John T. Alsop, Jr., CP 1500 kcs., 100 w. unlt. (E).

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

NEW, Rockville, Md., Monocacy Brdctg. Co., CP 1140 kcs., 250 w. days (E).

NEW, San Juan, P. R., Enrique Abarca San feliz, CP 580 kcs., 1000 (5) (E).

NEW, Sedalia, Mo., CP 1500 kcs., 100 (.25) unlt. (E).

Jersey and we believe they will welcome this opportunity to gather together and discuss their catches and problems. We believe the idea is a splendid one, and hope that the Misse Bosett will enjoy a hearty response to their plan.

Recommendations to FCC Examiners

KATE, Albert Lea, Minn., rec. grant of appl. for mod. of lic. for 100 (.25) (C).

KEEN, Seattle, Wash., rec. grant of CP for 1420 kcs., 100 (.25).

KOY, Phoenix, Ariz., rec. grant of app. for mod. of lic. for 550 kcs.

WGNY, Newburgh, N. Y., rec. grant of CP for 1220 kcs., 250 w. days.

WHP, Harrisburg, Pa., rec. grant of CP for 1000 (5).

WPRA, Mayaguez, P. R., rec. grant of CP for 780 kcs., 1000 (2.5) (C).

WRBL, Columbus, Ga., rec. mod. of CP for 1330 kcs., 1 kw. (C).

WTAQ, Green Bay, Wis., rec. grant of CP for 1000 (5).

NEW, Atlantic City, N. J., Press Union Pub. Co., rec. grant of CP for 1200 kcs., 100 (.25) unlt.

NEW, Denver, Colo., F. W. Meyer, rec. grant of CP 1310 kcs., 100 (.25).

NEW, Emporia, Kans., Emporia Brdcastg. Co., Inc., rec. grant of CP 1370 kcs., 100 w. days.

NEW, Goldsboro, N. C., rec. grant of CP 1370 kcs., 100 w. unlt. (C).

NEW, New Bern, N. C., Nathan Frank, rec. grant CP 1500 kcs., 100 w.

NEW, Rock Hill, S. C., rec. grant CP 1500 kcs., 100 w. days.

NEW, St. Petersburg, Fla., Pinellas Brdcastg. Co., rec. grant CP 1370 kcs., 100 (.25) unlt.

NEW, Vancouver, Wash., Vancouver Radio Corp., rec. grant CP 880 kcs., 250 w. days.

NEW, Washington, D. C., Lawrence J. Hellar, rec. denial CP 1310 kcs., 100 (.25).

The Month's Changes in Station Data

New

540 CBK Saskatoon, Sask.
920 CMHT Trinidad, Cuba
1050 CBA Saskville, N. B.

1100 CMHP Placeas, Cuba
1210 WJLS Bckly, W. Va.
1290 WJHP Jacksonville, Fla.
1370 CFOS Owen Sound, Ont.
1500 KTOH Lihue, Hawaii

Frequency

550 CMBD Havana, Cuba, from 1260
610 CHNC New Carlisle, P. Q., from 960
660 CMCR Havana, Cuba, from 1380
710 CMKS Guantanamo, Cuba, from 960
740 CMJX Camaguey, Cuba, from 830
750 CMKW Santiago, Cuba, from 1350
860 CMJA Camaguey, Cuba, from 1010
910 CMKD Saniago, Cuba, from 1050
930 CMJF Camaguty, Cuba, from 1010
950 CMKL Bayamo, Cuba, from 990
1060 CMHI Santa Clara, Cuba, from 1310
1070 CMJW Camaguey, Cuba, from 1340
1080 CMBX Havana, Cuba, from 1070
1090 CMHA Sagua la Grande, Cuba, from 1070
1210 CMHK Cruces, Cuba, from 1330
1230 CMJE Camaguey, Cuba, from 1220
1240 CMAB Pinar del Rio, Cuba, from 1340
1260 CMJO Havana, Cuba, from 1180
1360 KLPK Minot, N. Dak., from 1240
1420 CMJP Moron, Cuba, from 1430
1420 WBNO New Orleans, La., from 1200
1430 KINY Juneau, Alaska, from 1310
1480 CMHX Cienfuegos, Cuba, from 1300
1500 WHEF Guines, Cuba, from 1540

Power

570 CMCY Havana, Cuba, 15000 from 10000
790 CMGH Matanzas, Cuba, 200 from 250
910 CMOA Havana, Cuba, 250 from 150
1110 CMCJ Havana, Cuba, 200 from 500
1120 CMGF Matanzas, Cuba, 200 from 75
1130 CMJI Ciego de Avila, Cuba, 200 from 150
1380 KQV Pittsburgh, Pa., 1000 from 500
1380 WSMK Dayton, Ohio, 250 from 200

Location

1400 WLTH New York, N. Y., from Brooklyn, N. Y.

Network

620 WLBZ Bangor, Maine, NBC from CBS
830 WEEU Rading, Pa., new Red
1190 KTKC Visalia, Calif., new MBS
1200 CHGB St. Anne de la Pocatiere, P. Q., new CBS
1310 KRRV Sherman, Texas, new MBS
1370 WRDO Augusta, Maine, new NBC
1380 WNBC New Britain, Conn., new Red

Delete

1580 CM9RT Kosiusko, Miss.

**NORTH AMERICAN B. C. STATIONS BY FREQUENCIES
WITH SUNDAY'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 stations sharing time.
 ... No information.

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

540 kcs. (555.2 m.)



EASTERN STANDARD PACIFIC STANDARD

CBK	z	5000	P	Saskatoon, Sask.		
CJRM	a	1000	F	Regina, Sask.	Noon-12:30 am.	(9 am-9:30 pm)
ZNS	d	400	....	Nassau, Bahamas	1:30-1:45 pm; 8:30-9:30 pm.	(10:30 - 10:45 am; 5:30-6:30 pm)

550 kcs. (545.1 m.)



CFNB	a	500	F(1)	Fredericton, N. B.	7 am-11 pm.	(4 am-8 pm)
CMBD	z	200	....	Havana, Cuba		
KFUO	a	500	2(1)	St. Louis, Mo.	9:30 am-1:30 pm; 4-5:30 pm; 10:15-11:15 pm.	(6:30-10:30 am; 1-2:30 pm; 7:15-8:15 pm.)
KFYR	a	1000	N(5)	Bismarck, N. Dak.	9 am-1 am.	(6 am-10 pm)
KOAC	a	1000	....	Corvallis, Ore.	Silent	(Silent)
KSD	a	1000	2R(5)	St. Louis, Mo.		
KTSA	a	1000	C(5)	San Antonio, Tex.		
WDEV	a	500	D	Waterbury, Vt.	10 am-12:30 pm.	(6:30(7-9:30 am)
WGR	a	1000	C(5)	Buffalo, N. Y.	7 am-midnight.	(4 am-9 pm)
WKRC	a	1000	C(5)	Cincinnati, Ohio	8 am-2 am.	(5' am-11 pm)
WSVA	a	500	D	Harrisonburg, Va.	9:30 am-5 pm.	(6:30 am-2 pm)

560 kcs. (535.4 m.)



KFDM	a	500	N(1)	Beaumont, Texas		
KLZ	a	1000	C(5)	Denver, Colo.	8:55 am-2 am.	(5:55 am-11 pm)
KSFO	a	1000	C(5)	San Francisco, Calif.	9:10 am-3 am.	(6:10 am-midnight)
KWTO	a	500	D	Springfield, Mo.		
WFIL	a	1000	BMX	Philadelphia, Pa.	8 am-12:30 am.	(5 am-9:30 pm)
WIND	a	1000	(5)	Gary, Ind.	9-5 am.	(6-2 am)
WIS	a	1000	N(5)	Columbia, S. C.	8 am.-midnight.	(5 am-9 pm)
WQAM	a	1000	C	Miami, Fla.	7:45 am-midnight	(4:45 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.	11-3 am.	(8 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	Silent	(Silent)
WSYR	a	1000	Ba	Syracuse, N. Y.	8 am-midnight	(5 am-9 pm)
WSYU	a	1000	Qa	Syracuse, N. Y.		
WWNC	a	1000	N	Asheville, N. C.	7:30 am-1 am.	(4:30 am-10 pm)

SUNDAY TIME

Eastern Standard

(Pacific Standard)

580 kcs. (516.9 m.)

CFPR	a	50	....	Prince Rupert, B. C.	Silent.	(Silent)
CHRC	a	100	....	Quebec, P. Q.	11:30 am-midnight	(8:30 am-9 pm)
CKCL	a	100	F	Toronto, Ont.	10 am-11:30 pm.	(7 am-7:30 pm)
CKPR	a	1000	....	Fort William, Ont.	1:30 pm-11:30 pm;	(10:30 am-8:30 pm)
CKUA	c	500	....	Edmonton, Alta.	11:15 pm-12:45 am.	(8:15 pm-9:45 pm)
KMJ	a	1000	KN	Fresno, Calif.	11 am-3 am.	(8 am-midnight)
KSAC	a	500	2(1)	Manhattan, Kans.	Silent.	(Silent)
WCHS	a	500	C(1)	Charleston, W. Va.	8:45-1 am.	(5:45 am-10 pm)
WDBO	a	1000	C(5)	Orlando, Fla.	7:30-12:05 am.	(4:30 am-9:05 pm)
WIBW	a	1000	C2(5)	Topeka, Kans.	9 am-1 am.	(6 am-10 pm)
WILL	a	1000	DX	Urbana, Ill.	Silent.	(Silent)
WTAG	a	1000	R	Worcester, Mass.	9 am-midnight.	(6 am-9 pm)
XEMU	z	250	....	Piedras Negras, Coah.		

590 kcs. (508.2 m.)

KHQ	a	1000	R(5)	Spokane, Wash.	11 am-3 am.	(8 am-midnight)
WBEI	a	1000	C(5)	Boston, Mass.	8-1 am.	(5 am-10 pm)
WKZO	a	1000	BDX	Kalamazoo, Mich.	8:15 am-5:15 pm.	(5:15 am-2:15 pm)
WOW	a	1000	R(5)	Omaha, Nebr.	8 am-2 am.	(5 am-11 pm)

600 kcs. (499.7 m.)

CFCF	a	500	BF	Montreal, P. Q.	9 am-11:15 pm.	(6 am-8:15 pm)
CJOR	a	500	....	Vancouver, B. C.	Noon-12:45 am.	(9 am-9:45 pm)
FON	a	250	609	St. Pierre, Miquelon		
KFSD	a	1000	B	San Diego, Calif.	11 am-3 am.	(8 am-midnight)
WCAO	a	1000	CJ	Baltimore, Md.	8:45 am-midnight.	(5:45 am-9 pm)
WICC	f	500	BM(1)	Bridgeport, Conn.	8-1:30 am.	(5 am-10:30 pm)
WMT	a	1000	BM(5)	Cedar Rapids, Iowa	6:30 am-1 am.	(3:30 am-10 pm)
WREC	a	1000	C(5)	Memphis, Tenn.	7:30 am-1 am.	(4:30 am-10 pm)

610 kcs. (491.5 m.)

CHNC	a	1000	F	New Carlisle, P. Q.	10 am-1:15 am.	(7 am-10:15 pm)
KFAR	z	1000	P	Fairbanks, Alaska		
KFRC	c	1000	M(5)	San Francisco, Calif.		
WCLE	a	500	DM	Cleveland, Ohio	7:45 am to Cleveland SS.	(4:45 am to Cleveland SS)
WDAF	a	1000	R(5)	Kansas City, Mo.	8-1 am.	(5 am-9 pm)
WIOD	a	1000	Na	Miami, Fla.	8 am-midnight.	(5 am-9 pm)
WIP	a	1000	....	Philadelphia, Pa.	7 am-1 am.	(4 am-10 pm)
WMBF	a	1000	Qa	Miami, Fla.		

620 kcs. (483.6 m.)

KGW	a	1000	R(5)	Portland, Ore.	9 am-2 am.	(6 am-11 pm)
KTRAR	a	1000	N	Phoenix, Ariz.	9 am-1:15 am.	(6 am-10:15 pm)
KWFT	z	250	(1)P	Wichita Falls, Tex.		
TIPG	z	2000	625	San Jose, Costa Rica		
WFLA	a	1000	Na(5)	Tampa, Fla.	8 am-1 am.	(5 am-10 pm)
WHJB	a	250	CD	Greensburg, Pa.	8 am-5 pm.	(5 am-3 pm)
WLBZ	a	500	MN(1)	Bangor, Maine		
WSUN	a	1000	Na(5)	St. Petersburg, Fla.	11 am-1 am.	(8 am-10 pm)
WTMJ	a	1000	N(5)	Milwaukee, Wis.	7:15 am-1:30 am.	(4:15 am-10:30 pm)

630 kcs. (475.9 m.)

CFCO	a	100	F	Chatham, Ont.	10:15 am-10:30 pm.	(7:15 am-7:30 pm)
CFCY	a	1000	F	Charlottetown, P.E.I.	9 am-11 pm.	(6 am-8 pm)
CJRC	z	1000	F	Winnipeg, Man.	Noon-11:30 pm.	(9 am-8:30 pm)
CKOV	a	100	F	Kelowna, B. C.	Noon-2 am.	(9 am-11 pm)
CMCD	a	15000	....	Havana, Cuba		
KFRU	a	500	1(1)	Columbia, Mo.	8:30 am-6 pm.	(5:30 am-3 pm)
KGFX	a	200	D	Pierre, S. Dak.		
WGBF	a	500	N(1)	Evansville, Ind.	8-1 am.	(5 am-10 pm)
WMAL	a	250	B(.5)	Washington, D. C.	7 am-2 am.	(4 am-11 pm)
WPRO	a	500	C(1)	Providence, R. I.	8 am-midnight	(5 am-9 pm)
XEZ	a	500	....	Merida, Yuc.	10:30 am-4:30 pm.	(7:30 am-1:30 pm)

SUNDAY TIME

Eastern Standard

(Pacific Standard)

640 kcs. (468.5 m.)

KFI	f	50000	R	Los Angeles, Calif.	11-3 am. (8 am-midnight)
WGAN	a	500	D	Portland, Me.	8 am-8 pm. (5 am-5 pm)
WHKC	a	500	ML	Columbus, Ohio	8:30 am-8:30 pm. (5:30 am-5:30 pm)
WOI	a	5000	D	Ames, Iowa	Usually silent. (Usually silent)
XEBX	z	250	....	Sabinas, Coah.	
YSS	a	500	....	San Salvador, E. S.	

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.	9 am-5 pm. (6 am-2 pm)
WEAF	a	50000	R	New York, N. Y.	8 am-1 am. (5 am-10 pm)
XEAL	z	1000	....	Mexico City, D. F.	
XEAO	a	250	....	Mexicali, B. Cfa.	

670 kcs. (447.5 m.)

WMAQ	c	50000	R	Chicago, Ill.	9 am-2 am. (6 am-11 pm)
XELO	a	10000	....	Tijuana, B. Cfa.	

680 kcs. (440.9 m.)

CMHW	f	200	....	Santa Clara, Cuba	8 am-noon; 3 pm-11 pm. (5-9 am; noon-8 pm)
KFEQ	a	2500	D	St. Joseph, Mo.	7 am-LS. (4 am-LS)
KPO	a	50000	R	San Francisco, Calif.	
VAS	f	2000	685	Glace Bay, N. S.	Reports at noon and 11 pm. (Reports at 9 am and 8 pm)
VOWR	c	500	681	St. John's, Nfld.	
WLAW	a	1000	D	Lawrence, Mass.	8 am to local sunset. (5 am to sunset at Lawrence, Mass.)
WPTF	a	5000	N	Raleigh, N. C.	9 am-11 pm. (6 am-8 pm)

690 kcs. (434.5 m.)

CMBG	a	200	....	Havana, Cuba	
CFRB	a	10000	C	Toronto, Ont.	10:30 am-midnight 7:30 am-9 pm
CJCJ	a	100	F	Calgary, Alta.	11 am-1 am. (8 am-10 pm)
XET	a	5000	....	Monterrey, N. L.	

700 kcs. (428.3 m.)

WLW	a	500000	JKMN	Cincinnati, Ohio	8 am-2 am. (5 am-11 pm)

710 kcs. (422.3 m.)

CMKS	a	200	....	Guantanamo, Cuba.	9 am-7 pm. (6 am-4 pm)
KIRO	a	1000	CHJ	Seattle, Wash.	
KMPC	a	500	L	Beverly Hills, Calif.	9 am-4 am. (6 am-1 am)
WOR	a	50000	KM	Newark, N. J.	8 am-1:30 am. (5 am-10:30 pm)
XEQ	a	50000	....	Mexico City, D. F.	

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.	9 am-3 am. (6 am-midnight)
CJCA	a	1000	F	Edmonton, Alta.	11 am-2 am. (8 am-11 pm)

SUNDAY TIME

Eastern Standard

(Pacific Standard)

CKAC	a	5000	C	Montreal, P. Q.	7:30 am-1 am.	(4:30 am-10 pm)
CKPR	a	100	F	Fort William, Ont.	9 am-11 pm.	(6 am-8 pm)
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.	9 am-10:30 pm.	(6 am-7:30 pm)
WHEB	a	250	D	Portsmouth, N. H.	8 am to sunset at At-	(5 am to Atlanta
					lanta, Ga.	sunset)
WSB	a	50000	R	Atlanta, Ga.	5:55 am-1 am.	(3:55 am-10 pm)

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.	7 am-2 am.	(4 am-11 pm)
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.	9 pm-1 am.	(6 pm-10 pm)
WCAL	a	1000	2(5)	Northfield, Minn.	Sunrise-LS.	(Sunrise-LS)
WEW	a	1000	D	St. Louis, Mo.	7 am-LS.	(4 am-LS)
WJZ	a	50000	BSy	New York, N. Y.	8 am-1 am.	(5 am-10 pm)
WLB	a	1000	2(5)	Minneapolis, Minn.		

770 kcs. (389.4 m.)

KFAB	a	10000	CSyXZ	Lincoln, Nebr.		
WBBM	a	50000	CSy	Chicago, Ill.		

780 kcs. (384.4 m.)

CHWK	f	100	F	Chilliwack, B. C.	Noon to midnight	(9 am-9 pm)
CKSO	a	1000	F	Sudbury, Ont.	Noon to midnight	(9 am-9 pm)
CMCU	a	150	....	Havana, Cuba	6:55 am-1 am.	(3:55 am-10 pm)
KEHE	a	1000	(5)	Los Angeles, Calif.		
KFDY	a	1000	D	Brookings, S. Dak.	1:30 pm-3 pm.	(10:30 am-noon)
KFQD	c	250	....	Anchorage, Alaska	11 pm-.5 am.	(8 pm-2 am)
KGHL	a	1000	N(5)	Billings, Mont.		
KWLK	a	250	D	Langview, Wash.	11 am to sunset at	(8 am to L. S.)
					Longview, Wash.	
WEAN	a	1000	BM(5)	Providence, R. I.		
WMC	a	1000	R(5)	Memphis, Tenn.	8 am-1 am.	(5 am-10 pm)
WPC	a	250	D	Sharon, Pa.	8 am to L. S.	(5 am to sunset at
						Sharon)
WTAR	a	1000	N	Norfolk, Va.	8:30 am-midnight	(5:30 am-9 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.	7 am-1 am.	(3 am-10 pm)
KOAM	a	1000	DN	Pittsburg, Kans.	8:30 am to L. S.	(5:30 am to sunset
						at Pittsburg)
WGY	a	50000	R	Schenectady, N. Y.	9 am-1 am.	(6 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.	9:30-10:15 am; 11	(6:30-7:15 am; 8-10
					am-1 pm; 4:30-6:30	am; 1:30-3:30 pm; 7
					pm; 10 pm-1 am.	pm-10 pm)

SUNDAY TIME

Eastern Standard

(Pacific Standard)

WFAA	a	5000	Na	Dallas, Texas	3:30-9:30 am; 10:15-11 am; 1-4:30 pm, 6:30-10 pm.	(5:30-6:30 am; 7:15-8 am; 10 am-1:30 pm; 3:30-7 pm)
WTBO	a	250	D	Cumberland, Md.	7:30 am-6 pm.	(4:30 am-3 pm)
310 kcs. (370.2 m.)				[]		
CMCF	a	5000		Havana, Cuba	8 am-midnight.	(6 am-10 pm)
WCCO	g	5000	C	Minneapolis, Minn.	9 am-1 am.	(5 am-9 pm)
WNYC	a	1000	D	New York, N. Y.		
XEBZ	a	100	....	Mexico City, D. F.		
XEDF	a	100	....	Nuevo Laredo, Tams.		
820 kcs. (365.6 m.)				[]		
WHAS	a	5000	C	Louisville, Ky.		
XEBG	z	1000	....	Tijuana, B. Cfa.		
830 kcs. (361.2 m.)				[]		
KOAA	a	5000	R	Denver, Colo.	9 am-2 am.	(6 am-11 pm)
WEEU	a	1000	DR	Reading, Pa.	8 am-5 pm.	(5 am-2 pm)
WHDH	a	1000	L	Boston, Mass.		
WRUF	a	5000	L	Gainesville, Fla.	7 am-6:30 pm.	(4 am-3:30 pm)
840 kcs. (356.9 m.)				[]		
CBL	a	5000	F	Toronto, Ont.	10:30 am-midnight	(7:30 am-9 pm)
CFQC	a	1000	F	Saskatoon, Sask.		
VOGY	a	400	....	St. Johns, Nfld.		
XERA	a	25000	....	Villa Acuna, Coah.		
850 kcs. (352.7 m.)				[]		
CMCM	a	250	....	Havana, Cuba		
KIEV	a	250	D	Glendale, Calif.		
WESG	a	1000	CDH	Elmira, N. Y.	9 am to sunset at New Orleans	(6 am to sunset 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.		
860 kcs. (348.6 m.)				[]		
CMJA	a	250	....	Camaguay, Cuba.		
WABC	a	5000	Ca	New York, N. Y.	7:30 am-1 am.	(4:30 am-10 pm)
WBOQ	a	5000	Qa	New York, N. Y.		
WHB	a	1000	DM	Kansas City, Mo.		
XEMO	a	5000	....	Tijuana, B. Cfa.	9:45 am-3 am.	(6:45 am-midnight)
870 kcs. (344.6 m.)				[]		
WENR	c	5000	Ba	Chicago, Ill.	1 pm-8 pm; 9 pm-2 pm.	(10 am-5 pm; 6 pm-11 pm)
WLS	a	5000	Ba	Chicago, Ill.	8 am-1 pm; 8-9 pm.	(5 am-10 am; 5-6 pm)
XEFB	a	200	....	Monterrey, N. L.		
XERC	z	500	....	Mexico City, D. F.		
880 kcs. (340.7 m.)				[]		
CBO	a	1000	F	Ottawa, Ont.	10:30 am-midnight.	(7:30 am-9 pm)
CFJC	a	1000	F	Kamloops, B. C.		
CMW	e	1400	X	Havana, Cuba	10 am-midnight	(7 am-9 pm.)
KFKA	a	500	2M(1)	Greeley, Colo.	11 am-1 pm; 2:30-5 pm; 6:30-8:45 pm	8-10 am; 11:30 am-2 pm; 3:30-5:45 pm)
KLX	a	1000	....	Oakland, Calif.	10:30 am-2:30 am.	(7:30 am-11:30 pm)
KPOF	a	1000	2	Denver, Colo.	9:30-11 am; 1-2:30 pm; 5-6 pm; 9:30-11 pm.	(6:30-8 am; 10-11:30 am; 3-4 pm; 6:30-8 pm)

SUNDAY TIME**Eastern Standard****(Pacific Standard)**

WCOC	a	1000	C	Meridian, Miss.		
WGBI	f	500	C1(1)	Scranton, Pa.	9 am-1 am.	(6 am-10 pm)
WQAN	a	500	1(1)	Scranton, Pa.		
WRNL	a	500	DX	Richmond, Va.	8 am to L. S.	(5 am to sunset at Richmond, Va.)
WSUI	a	500	(1)	Iowa City, Iowa	5-6 pm; 9-10 pm.	(2-3 pm; 6-7 pm)

890 kcs. (336.9 m.)

KARK	a	500	N(1)	Little Rock, Ark.	7 am-1 am.	(4 am-10 pm)
KFNF	a	500	2X(1)	Shenandoah, Iowa	9 am-7:45 pm.	(6:50 am-midnight)
KFPY	a	1000	C(5)	Spokane, Wash.	9:50 am-3 am.	(2-3 pm)
KUSD	a	500	2	Vermillion, S. Dak.	5-6 pm.	(2-3 pm)
WBAA	a	500	(1)	W. Lafayette, Ind.	(Silent)	Silent
WGST	a	1000	C(5)	Atlanta, Ga.		
WJAR	a	1000	R(5)	Providence, R. I.		
WMMN	a	500	CX(1)	Fairmount, W. Va.	9 am-1 am.	(6 am-10 pm)
XEW	z	100000	....	Mexico City, D. F.		

900 kcs. (333.1 m.)

KGBU	a	500	X	Ketchikan, Alaska		
KHJ	a	1000	M(5)	Los Angeles, Calif.	11 am-3 am.	(8 am-midnight)
KSEI	a	250	N(1)	Pocatello, Idaho	9:30 am-1 am.	(6:30 am-10 pm)
WBEN	a	1000	R(5)	Buffalo, N. Y.	7 am-1 am.	(4 am-10 pm)
WELI	a	500	D	New Haven, Conn.		
WFMD	a	500	D	Frederick, Md.	8:45 am to L. S.	(5:45 am to Sunset at Frederick, Md.)
WJAX	a	1000	N(5)	Jacksonville, Fla.	8 am-midnight	(5 am-9 pm)
WKY	a	1000	N(5)	Oklahoma City, Okla.	7:45 am-1 am.	(4:45 am-10 pm)
WLBL	a	5000	D	Stevens Point, Wis.	Usually silent.	(Usually silent)
WTAD	a	1000	D	Quincy, Ill.	8 am-5:44 pm.	(5 am-2:45 pm)

910 kcs. (329.6 m.)

CBF	a	50000	FN	Montreal, P. Q.		
CJAT	a	1000	F	Trail, B. C.	10 am-2 am.	(7 am-11 pm)
CKY	a	15000	F	Winnipeg, Man.	Noon-1:30 am.	(9 am-10:30 pm)
CMKD	a	1000	....	Havana, Cuba		
CMOA	z	250	....	Havana, Cuba		
XENT	a	150000	....	Nuevo Laredo, Tams.	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.	8 am-2:30 am.	(5 am-11:30 pm)
KOMO	a	1000	R(5)	Seattle, Wash.	11 am-2 am.	(8 am-11 pm)
KPRC	a	1000	R(5)	Houston, Texas	8:30 am-1 am.	(5:30 am-10 pm)
KVOD	a	500	Ba	Denver, Colo.	9 am-12:30 pm; 9:30 pm-2:30 am.	(6-9:30 am; 6:30-11:30 pm)
WAAF	a	1000	D	Chicago, Ill.	6 am-LS.	(3 am-LS)
WORL	a	500	D	Boston, Mass.	8 am to L. S.	(5 am to Sunset at Worcester, Mass.)
WPEN	a	1000	....	Philadelphia, Pa.		
WRAX	a	1000	Q	Philadelphia, Pa.		
WSPA	a	1000	D	Spartanburg, S. C.	8 am to L. S.	(5 am to LS)
WWJ	a	5000	R	Detroit, Mich.		

930 kcs. (322.4 m.)

CFAC	a	1000	F	Calgary, Alta.	9 am-2 am.	(6 am-11 pm)
CFCH	a	100	F	North Bay, Ont.		
CFLC	a	100	....	Prescott, Ont.	7 am-10 pm.	(4 am-7 pm)
CHNS	a	1000	F	Halifax, N. S.	Noon-11:15 pm.	(9 am-8:15 pm)
CKPC	a	100	F	Brantford, Ont.		
CMJF	z	200	....	Camaguey, Cuba		
KMA	a	1000	B(5)	Shenandoah, Iowa		
KROW	a	1000	....	Oakland, Calif.	11 am-4 am.	(8 am-1 am)
WBRC	a	1000	R(5)	Birmingham, Ala.	8 am-1 am.	(5 am-10 pm)
WDBJ	a	1000	C(5)	Roanoke, Va.	8 am-midnight	(5 am-9 pm)
XEBH	a	500	....	Hermosillo, Son.	1-3 pm; 9 pm-midnt.	(10am-noon; 6-9pm)

940 kcs. (319 m.)

CMBZ	a	200	....	Havana, Cuba	7:45 am-1 am.	(4:45 am-10 pm)
KOIN	a	1000	C(5)	Portland, Ore.	11 am-3 am.	(8 am-midnight)
WAAT	a	500	D	Jersey City, N. J.		
WAVE	a	1000	N	Louisville, Ky.	9 am-2 am.	(6 am-11 pm)
WCSSH	a	1000	R(2.5)	Portland, Me.	8 am to midnight.	(5 am-9 pm)
WDAY	a	1000	N(5)	Fargo, N. Dak.	7 am-1 am.	(4 am-10 pm)
WHA	a	5000	D	Madison, Wis.	Silent.	(Silent)
WICA	a	250	D	Ashtabula, Ohio	8 am.-L. S.	(5 am to Sunset at Ashtabule, Ohio)
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.	10 am-1:30 am.	(7 am-10:30 pm)
CMKL	z	200	....	Bayamo, Cuba		
KFWB	a	1000	(5)	Los Angeles, Calif.	11 am-3 am.	(8 am-midnight)
KMBC	a	1000	C(5)	Kansas City, Mo.	6:55 am-1 am.	(3:55 am-10 pm)
WHAL	z	500	DP	Saginaw, Mich.		
WRC	a	1000	R(5)	Washington, D. C.		
WTRY	z	1000	DP	Troy, N. Y.		

960 kcs. (312.3 m.)

CBY	c	100	F	Toronto, Ont.	11 am-midnight	(8 am-9 pm)
CFRN	a	100	F	Edmonton, Alta.	11:30 am-12:30 am.	(8:30 am-9:30 pm)
CRCY	a	100	F	Toronto, Ont.		
XEAW	a	100000	....	Reynosa, Tams.	5-7:15 am; 7-11 pm.	(2-5:15 am; 4-8 pm)
XECL	z	1000	.....	Mexicali, B. Cfa.		

970 kcs. (309.1 m.)

CMCK	a	5000	....	Havana, Cuba		
KJR	a	5000	B	Seattle, Wash.	11 am-2 am.	(8 am-11 pm)
WCFL	a	5000	N	Chicago, Ill.		
WIBG	a	100	D	Glenside, Pa.	8:30 am-5 pm.	(5:30 am-2 pm)

980 kcs. (306 m.)

KDKA	b	50000	B	Pittsburgh, Pa.		
XEAC	a	1000	....	Tijuana, B. Cfa.	1 pm-1 am.	(10 am-10 pm)
XEFE	z	250	....	Nuevo Laredo, Tams.		

990 kcs. (302.8 m.)

WBZ	a	50000	BSy	Boston, Mass.	8 am-1 am.	(5 am-10 pm)
WBZA	a	1000	BSy	Springfield, Mass.	8 am-1 am.	(5 am-10 pm)
XEFE	z	250	....	Nogales, Son.	11 am-3 pm; 7 pm-	(8am-noon; 4-9 pm)
XEK	a	100	....	Mexico City, D. F.	midnight.	
XES	a	250	....	Tampico, Tams.		

1000 kcs. (299.8 m.)

KFVD	a	1000	L	Los Angeles, Calif.	9 am-8:15 pm.	(6 am-5:15 pm)
VOCM	z	200	1006	St. John's Nfld.		
WHO	a	50000	KR	Des Moines, Iowa	9 am-1 am.	(6 am-10 pm)
XEBI	a	25	....	Aguascalientes, Ags.		

1010 kcs. (296.9 m.)

CHML	a	100	F	Hamilton, Ont.	9:30 am-11:30 pm.	(6:30 am-8:30 pm)
CKCD	a	100	1	Vancouver, B. C.	Silent	(Silent)
CKCK	a	1000	F	Regina, Sask.	10:45 am-2 am.	(7:45 am-11 pm)
CKCO	a	100	F	Ottawa, Ont.	Noon-11:30 pm.	(9 am-8:30 pm)
CKIC	a	50	....	Wolfville, N. S.		
CKWX	a	100	1	Vancouver, B. C.	Noon-1:45 am.	(9 am-10:45 pm)
CMQ	a	25000	....	Havana, Cuba		
KGGF	a	1000	2M	Coffeyville, Kans.	11:30 am-10 pm.	(8:30 am-7 pm)
KOW	a	1000	M	San Jose, Calif.	11 am-3 am.	(8 am-midnight)
CBV	a	1000	F	Quebec, P. Q.	Noon-midnight.	(9 am-9 pm)
CJOC	a	100	F	Lethbridge, Alta.	10 am-1:30 am.	(7 am-10:30 pm)
CMKL	z	200	....	Bayamo, Cuba.		

SUNDAY TIME

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

Eastern Standard

New York, N. Y. 8 am-1 am.
 Norman, Okla. Silent.
 Knoxville, Tenn. 8:30 am-1 am.
 Cananea, Son.
 Veracruz, Ver. 8 am-1 am.

(Pacific Standard)

(5 am-10 pm)
 (Silent)
 (5:30 am-10 pm)
 (5 am-10 pm)

1020 kcs. (293.9 m.)

KYW c 10000 R
 WDZ a 250 D
 XEJ a 1000

Philadelphia, Pa. 7 am-1:15 am. (4 am-10:15 pm)
 Tuscola, Ill. 7 am-6 pm. (4 am-3 pm)
 Juarez, Chih.

1030 kcs. (291.1 m.)

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

Calgary, Alta. 9 am-1:30 pm. (6 am-10:30 pm)
 Rimouski, P. Q.
 Windsor, Ont.
 Mexico City, D. F. 10 am-12:15 am. (7 am-9:15 pm)

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. 10 am-LS. midnight- (7 am-LS., 9 pm-3
 6 am.)
 Merced, Calif. 11 am-LS. (8 am-LS)
 Hartford, Conn. 8:45 am-1 am. (5:45 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. 9 am-L. S. (6 am-10 pm)
 Los Angeles, Calif. 10 am-4 am. (7 am-1 am)
 Eau Claire, Wis.
 Indianapolis, Ind. 9 am-LS. (6 am-LS)

1060 kcs. (282.8 m.)

CMHI z 250
 KTHS a 10000 HN
 VOAC z 40 1065
 WBAL a 10000 BHM
 WJAG a 1000 DH
 W5XJ z 100 P

Santa Clara, Cuba
 Hot Springs, Ark. 9 am-L.S.; 9 pm-1 (6 am-L. S.; 6-10
 am.)
 St. John's, Nfld.
 Baltimore, Md. 6 am-9 pm. (3 am-6 pm)
 Norfolk, Nebr. 11 am-6:15 pm. (8 am-3:15 pm)
 College Park, Md.

1070 kcs. (280.2 m.)

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

Camaguey, Cuba
 San Francisco, Calif. 1 am-L. S. (10 pm-L. S.)
 Carthage, Ill. 11 am-5 pm. (8 am-2 pm)
 Cleveland, Ohio

1080 kcs. (277.6 m.)

CMBX a 150
 CMKM a 100
 WBT a 50000 C
 WCBD a 5000 1L
 WMBI g 5000 1L
 XEBA z 20
 XEBK a 100
 XEDP a 500

Havana, Cuba
 Manzanillo, Cuba 6:45 am-midnt. (3:45 am-9 pm)
 Charlotte, N. C.
 Chicago, Ill.
 Chicago, Ill. Noon-3:30 pm. (9 am-12:30 pm)
 Guzman, Jal.
 Nuevo Laredo, Tams.
 Mexico City, D. F.

1090 kcs. (275.1 m.)

CMHA z 200
 HIN a 740
 KMOX a 50000 C

Sagua la Grande, Cuba
 Ciudad Trujillo, D. R.
 St. Louis, Mo.

SUNDAY TIME

Eastern Standard

(Pacific Standard)

1100 kcs. (272.6 m.)

			[]		
CBR	a	5000	F	Vancouver, B. C.	
CMHP	z	200	....	Placetas, Cuba	
KGDM	f	1000	DM	Stockton, Calif.	9 am-LS.
KWKH	a	10000	CH	Shreveport, La.	(6 am-LS)
WBIL	a	5000	1	New York, N. Y.	
WPG	a	5000	C1	Atlantic City, N. J.	9 am-8 pm; 9:15 pm.
					(6 am-5 pm; 6:15-9 pm)

1110 kcs. (270.1 m.)

			[]		
CMCJ	a	200	....	Havana, Cuba	
KSCO	a	5000	LN	Sioux Falls, S. Dak.	9 am-L. S.
WRVA	a	50000	CM	Richmond, Va.	8:30 am-midnight.
					(6 am-L.S.)
					(5:30 am-9 pm)

1120 kcs. (267.7 m.)

			[]		
CBJ	a	100	F	Chicoutimi, P. Q.	
CHLP	a	100	F	Montreal, P. Q.	8 am-11 pm.
CHSJ	a	100	F	St. John, N. B.	10 am-11:15 pm.
CKOC	a	500	F(1)	Hamilton, Ont.	(7 am-8:15 pm)
CKX	a	1000	F	Brandon, Man.	1 pm-12:30 am.
CMGF	a	200	...	Matanzas, Cuba	(10 am-19:30 pm)
KFIO	a	100	D	Spokane, Wash.	
KFSG	a	500	a(2.5)	Los Angeles, Calif.	9 am-3 am.
KRKD	a	500	a(2.5)	Los Angeles, Calif.	9 am-4:30 am.
KRSC	a	250	....	Seattle, Wash.	
KTBC	z	1000	DP	Austin, Texas	
WCOP	a	500	D	Boston, Mass.	8 am-L. S.
WDEL	a	250	R(.5)	Wilmington, Del.	9 am-11 pm.
WISN	a	250	C(1)	Milwaukee, Wis.	8:30 am-4 am.
WJBO	a	500	B	Baton Rouge, La.	9 am-LS at Salt Lake
WTAW	a	500	L	College Station, Tex.	7:45 am-1 am.
					(5 am-LS)
					(6 am-8 pm)
					(5:30 am-10 pm)
					(4:45 am-10 pm)

1130 kcs. (265.3 m.)

			[]		
CMJI	a	200	....	Ciego de Avila, Cuba	Noon-10 pm.
KSL	a	50000	C	Salt Lake City, Utah	9 am to Sunset at
					Salt Lake City.
WJJD	a	20000	L	Chicago, Ill.	9 am-LS at Salt Lake
					C.
WOV	a	1000	D	New York, N. Y.	(9 am-7 pm)
XEJP	z	100	....	Mexico City, D. F.	9 am to Sunset at
					Salt Lake City)
					(6 am-LS at Salt Lake)

1140 kcs. (263 m.)

			[]		
CMBC	a	150	....	Havana, Cuba	
KVOO	a	25000	N	Tulsa, Okla.	
WAPI	a	5000	C	Birmingham, Ala.	9 am-1 am.
WSPR	a	500	DM	Springfield, Mass.	8 am to Sunset at
					Birmingham, Ala.)

1150 kcs. (260.7 m.)

			[]		
CMKG	z	100	....	Santiago, Cuba	
WHAM	a	50000	B	Rochester, N. Y.	7 am-midnight
XEBP	z	250	....	Durango, Dgo.	(4 am-9 pm)
XEC	a	100	....	Tijuana, B. Cfa.	
XEDW	z	20	....	Minatitlan, Ver.	
XEL	z	250	....	Mexico City, D. F.	

1160 kcs. (258.5 m.)

			[]		
CMHJ	a	100	....	Cienfuegos, Cuba	
WOWO	a	10000	1B	Fort Wayne, Ind.	
WWVA	a	5000	1C	Wheeling, W. Va.	
XEAS	a	100	....	Saltillo Coah.	
XED	e	2500	....	Guadalajara, Jal.	1 pm-1 am.
XEP	a	500	....	Juarez, Chih.	9 am-2 am.
					(10 am-10 pm)
					(6 am-11 pm)

1170 kcs. (256.3 m.)

			[]		
CMBS	a	150	....	Havana, Cuba	10 am-7 pm.
WCAU	a	50000	C	Philadelphia, Pa.	9 am-1 am.
KEXX	z	1000	Mexico City, D. F.	(7 am-4 pm)
					(6 am-10 pm)

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1180 kcs. (254.1 m.)

KEX	a	5000	2B	Portland, Ore.	11 am-3 am.	(8 am-midnight)
KOB	a	10000	2N	Albuquerque, N. Mex.	11 am-1 am.	(8 am-10 pm)
WDGY	a	1000	....	Minneapolis, Min.	7 am-7 pm.	(4 am-4 pm)
WINS	a	1000	....	New York, N. Y.		
WMAZ	a	1000	C(5)	Macon, Ga.	7 am-7 pm.	(4 am-4 pm)

1190 kcs. (252 m.)

CMKX	z	75	....	Santiago, Cuba		
KTKC	f	250	DM	Visalia, Calif.	10 am-L. S.	(7 am-L. S.)
VONF	a	500	1195	St. John's Nfld.		
WATR	a	100	DXZ	Waterbury, Conn.		
WOAI	a	50000	N	San Antonio, Tex.	8:30 am-1230 am.	(5:30 am-9:30 pm)
WSAZ	a	1000	L	Huntington, W. Va.	9 am-7 pm.	(6 am-4 pm)

1200 kcs. (249.9 m.)

CFGP	a	100	....	Grande Prairie, Alta.	Noon-8:15 pm.	(9 am-5:15 pm)
CHAB	a	100	F(.25)	Moose Jaw, Sask.	10:15 am-1 am.	(7:17 am-10 pm)
CHGB	z	100	FP	St. Anne de Pocatiere, P.Q.		
CKNX	b	100	....	Wingham, Ont.	10:30 am-1:30 pm; 7-7:30 pm.	(7:30-10:30 am; 4-5:30 pm)
CKTB	a	100	F	St. Catharines, Ont.	9:30 am-11:30 pm.	(6:30 am-8:30 pm)
CMCO	a	150	....	Havana, Cuba		
KADA	a	100	M	Ada, Okla.		
KBTM	a	100	D	Jonesboro, Ark.	9 am-6:30 pm.	(6 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	Noon-8 pm.	(9 am-5 pm)
KFXD	a	100	(.25)	Nampa, Idaho	11 am-11 pm.	(8 am-8 pm)
KFXJ	a	100	(.25)	Grand Junction, Colo.		
KGCI	z	100	DP	Coeur d'Alene, Idaho		
KGDE	c	100	(.25)	Fergus Falls, Minn.	8 am-10 pm.	(5 am-7 pm)
KGEK	f	100	L	Sterling, Colo.	1-2:15 pm.	(10-11:15 am)
KGFI	a	100	....	Los Angeles, Calif.		
KGHI	a	100	(.25)	Little Rock, Ark.	8:30 am-11 pm.	(5:30 am-8 pm)
KGVL	z	100	DP	Greenville, Tex.		
KMLB	a	100	(.25)	Monroe, La.		
KOOS	a	100	(.25)	Marshfield, Ore.	10 am-7:45 pm.	(7 am-4:45 pm)
KSUN	a	100	(.25)	Lowell, Ariz.	11 am-midnight.	(8 am-9 pm)
KVCV	a	100	....	Redding, Calif.		
KVEC	a	100	(.25)	San Luis Obispo, Calif.	11:30 am-3 am.	(8:30 am-midnight)
KVNU	z	100	P	Logan, Utah		
KVOS	b	100	M	Bellingham, Wash.		
KWVG	a	100	N	Stockton, Calif.	10 am-3 am.	(7 am-midnight)
KWNO	a	250	D	Winona, Minn.		
WABI	a	100	(.25)	Bangor, Maine		
WAIM	a	100	C	Anderson, S. C.	6 am-10 pm.	(3 am-7 pm)
WAYX	a	100	(.25)	Waycross, Ga.	8 am-3 pm.	(5 am-noon)
WBBZ	a	100	M(.25)	Ponca City, Okla	8 am-10 pm.	(5 am-7 pm)
WBHP	a	100	....	Huntsville, Alta.		
WCAT	a	100	D	Rapid City, S. Dak.	Silent.	(Silent)
WCAX	a	100	(.25)	Burlington, Vt.	Silent.	(Silent)
WCLO	a	100	(.25)	Janesville, Wis.	10 am-3 pm.	(7 am-Noon.)
WCPO	a	100	(.25)	Cincinnati, Ohio	8 am-11 pm.	(5 am-8 pm)
WDSM	z	100	P	Superior, Wis.		
WENY	z	250	DP	Elmira, N. Y.		
WEST	a	100	3(.25)	Easton, Pa.	7:30 am-9 pm.	(4:30 am-6 pm)
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.	10 am-11 pm.	(7 am-8pm)
WIBX	a	100	C(.25)	Utica, N. Y.	5:30 am-1 am.	(2:30 am-10 pm)
WIL	a	100	(.25)	St. Louis, Mo.		
WJBC	a	100	5(.25)	Bloomington, Ill.	4-10:30 pm.	(1-7:30 pm)
WJBL	a	100	5	Decatur, Ill.	8-10 am; 1:30-4 pm;	(5-7 am; 10:30 am-1 pm)
WJBW	a	100	New Orleans, La.	8:30 pm-1 am.	(5:30-10 pm)
WJHL	z	100	(.25)P	Johnson City, Tenn.		

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WJNO	a	100	C(.25)	W. Palm Beach, Fla.	2-11 am; 1-6 pm; 10 pm-1 am.	11 pm-8 am; 10 am-3 pm; 7-10 pm)
WJRD	a	250	D	Tuscaloosa, Ala.		
WKBO	a	100	3(.25)	Harrisburg, Pa.	8:30 am-midnight.	(5:30 am-9 pm)
WLVA	a	100	(.25)	Lynchburg, Va.	Noon-6 pm.	(9 am-3 pm)
WMFR	a	100	D	High Point, N. C.	7:45 am-7 pm.	(4:45 am-4 pm)
WMPC	a	100	(.25)	Lapeer, Mich.	7:45 am-7 pm.	(4:45 am-4 pm)
WOLS	a	100	D	Florence, S. C.	9 am-L. S.	8 am-11 pm.
WRBL	a	100	(.25)	Columbus, Ga.	10 am-7 pm.	(7 am-4 pm)
WSAL	z	250	D	Salisbury, Md.		
WTHT	a	100	M	Hartford, Conn.	7 am-4:15 pm.	(4 am-1:15 pm)
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.	8 am-9 pm.	(5 am-6 pm)
CJCU	z	50	....	Aklavik, N. W. T.		
CKBI	a	100	F	Prince Albert, Sask.	9:45 am-1 am.	(5 am-8 pm)
CKCH	a	100	F	Hull, P. Q.	8 am-11 pm.	(6:45 am-10 pm)
CKMC	a	50	....	Cobalt, Ont.		
CMHK	z	250	....	Cruces, Cuba	10 am-1 pm; 4-10 pm..	(7-10 am; 1-7 pm)
KALB	a	100	(.25)	Alexandria, La.		
KANS	a	100	N	Wichita, Kans.	7:30 am-midnight.	(4:30 am-9 pm)
KASA	c	100	....	Elk City, Okla.	8 am-7 pm.	(5 am-3 pm)
KDLR	a	100	(.25)	Devils Lake, N. Dak.	7:30 am-9:30 pm.	(4:30 am-6:30 pm)
KDON	a	100	M	Monterey, Calif.		
KFJI	a	100	....	Klamath Falls, Ore.		
KFOR	a	100	CM(.25)	Lincoln, Nebr.	8 am-11:15 pm.	(5 am-8:15 pm)
KFPW	a	100	....	Fort Smith, Ark.	10 am-3 pm; 6-9:35 pm.	(7 am-noon; 3-6:35 pm)
KFVS	a	100	5(.25)	Cape Girardeau, Mo.	10 am-3 pm; 6-9:35 pm.	(7 am-noon; 3-6:35 pm)
KFXM	a	100	2M	San Bernardino, Calif.	4-9:45 pm; midnight -3 am.	(1-6:45 pm; 9 pm-midnight)
KGLO	a	100	C(.25)	Mason City, Iowa	8 am-1 am.	(5 am-10 pm)
KGY	a	100	M	Olympia, Wash.	Silent.	(Silent)
KHBG	a	100	D	Okmulgee, Okla.		
KIUL	a	100	....	Garden City, Kans.	Noon-8 pm.	(9 am-5 pm)
KLAH	a	100	(.25)	Carlsbad, N. Mex.	11 am-9 pm..	(8 am-6 pm)
KOCA	a	100	(.25)	Kilgore, Texas		
KPFA	a	100	N(.25)	Helena, Mont.	1 pm—midnight.	(10 am-9 pm)
KPPC	a	100	2	Pasadena, Calif.	10 am-12:30 am.	(7 am-9:30 pm)
KROY	a	100	CD	Sacramento, Calif.	11 am-8 pm.	(8 am-5 pm)
KVSO	a	100	M(.25)	Ardmore, Okla.		
KWJB	a	100	(.25)	Globe, Ariz.		
WALR	a	100	....	Zanesville, Ohio	8 am-midnight.	(5 am-9 pm)
WBAX	a	100	M	Wilkes-Barre, Pa.		
WBBL	a	100	S	Richmond, Va.	11 am-9:15 pm.	(8 am-6:15 pm)
WBLY	a	100	D	Lima, Ohio	6 am-5:15 pm.	(3 am-2:15 pm)
WBRB	a	100	3	Red Bank, N. J.	Silent.	(Silent)
WCOL	a	100	N	Columbus, Ohio	8 am-1 am.	(5 am-10 pm)
WCOU	a	100	....	Lewiston, Maine	6 am-9 pm.	(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; 5 - 10:30 pm.	(4-7 am; 2-7:30 pm)
WEDC	a	100	4	Chicago, Ill.	9:30-11 am; 4:30-6 pm.	(6:30-8 am; 1:30-3 pm)
					8-9 pm; 11 pm-midnight.	(5-6 pm; 8-9 pm)
WFAS	a	100	3	White Plains, N. Y.		
WFOY	a	100	(.25)	St. Augustine, Fla.	8 am-8:45 pm.	(5 am-5:45 pm)
WGBB	a	100	3	Freeport, N. Y.		
WGCM	a	100	(.25)	Gulfport, Miss.		
WGNV	a	100	3	Newburgh, N. Y.	7:30 am-midnight.	(4:30 am-9 pm)
WGRM	a	100	Grenada, Miss..	8 am-L. S.	(5 am-L. S.)
WHAI	a	250	D	Greenfield, Mass.	8 am-L.S.	8 am-L. S.

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WHBF	a	100	(.25)	Rock Island, Ill.	7 am-1:05 am.	(4 am-10:05 pm)
WHBU	a	100	(.25)	Anderson, Ind.		
WIBU	a	100	(.25)	Poynette, Wis.		
WJBY	a	100	(.25)	Gadsden, Ala.	7 am-11 pm.	(4 am-8 pm)
WJEJ	a	100	....	Hagerstown, Md.	9 am-10 pm.	(6 am-7 pm)
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.	8 am-midnight.	(5 am-9 pm)
WJW	a	100	(.25)	Akron, Ohio	9 am-midnight.	(6 am-9 pm)
WKOK	a	100	L	Sunbury, Pa.	6 am-1 pm.	(3 am-10 am)
WMFG	a	100	(.25)	Hibbing, Minn.		
WOCB	z	100	(.25)P	Cape Cod, Mass.		
WOMT	a	100	....	Manitowoc, Wis.		
WPAX	a	100	(.25)	Thomasville, Ga.	9 am-3 pm.	(6 am-noon)
WPIV	z	100	(.25)P	Petersburg, Va.		
WRAL	z	100	(.25)P	Raleigh, N. C.		
WSAY	z	100	(.25)	Rochester, N. Y.	7 am-4:30 pm.	(4 am-1:30 pm)
WSBC	a	100	4(.25)	Chicago, Ill.	6 am-midnight.	(3 am-9 pm)
WSIX	a	100	(.25)	Nashville, Tenn.	7 am-1 am.	(4 am-10 pm)
WSNJ	a	100	D	Bridgeton, N. J.	9 am-LS.	(6 am-LS)
WSOC	a	100	N(.25)	Charlotte, N. C.	9 am-midnight.	(6 am-9 pm)
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.		

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.	Silent.	(Silent)
WCAD	a	500	D	Canton, N. Y.	Silent.	(Silent)
WCAE	a	1000	MR(5)	Pittsburgh, Pa.	8 am-1 am.	(5 am-10 pm)
WDAE	a	1000	C(5)	Tampa, Fla.	8 am-midnight.	(5 am-9 pm)
WREN	a	1000	Ba(5)	Lawrence, Kans.	8 am-7 pm.	(5 am-4 pm)
XEBL	a	50	....	Mazatlan, Sin.		
XEDA	z	200	....	Gral. Anaya, D. F.		
XETF	a	12	....	Veracruz, Ver.		

1230 kcs. (243.8 m.)

CMCB	a	150	....	Havana, Cuba	8 am-11 pm.	(5 am-8 pm)
KGBX	a	500	N	Springfield, Mo.		
KGGM	a	1000	....	Albuquerque, N. Mex.	10 am-1 am.	(7 am-10 pm)
KYA	a	1000	(5)	San Francisco, Calif.	11 am-3 am.	(8 am-midnight)
WFBM	a	1000	C(5)	Indianapolis, Ind.	7:30 am-1 am.	(4:30 am-10 pm)
WNAC	a	1000	R(5)	Boston, Mass.	5 am-1 am.	(2 am-10 pm)
WOL	a	1000	M	Washington, D.C.	7 am-2 am.	(4 am-11 pm)
XBCA	z	250	....	Tampico, Tamps		
XEG	z	250	....	Monterrey, N. L.		

1240 kcs. (241.8 m.)

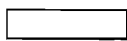
CJCB	a	1000	F	Sydney, N. S.	10-11:30 am; 2:30-11 pm.	(7-8:30 am; 11:30 am-8 pm)
CMAB	z	200	....	Pinar del Rio, Cuba		
CMHB	z	200	....	Sancti Spiritus, Cuba		
KGCU	a	250	....	Mandan, N. Dak.	1-8 pm.	(10 am-5 pm)
KTAT	a	1000	M	Fort Worth, Tex.	8 am-12:30 am.	(5 am-9:30 pm)
KTFI	a	1000	N	Twin Falls, Idaho	9 am-1 am.	(6 am-10 pm)
WKAQ	a	1000	....	San Juan, P. R.		
WXYZ	a	1000	B	Detroit, Mich.		
XEBU	z	50	....	Chihuahua, Chih.		
XEKL	z	500	....	Leon, Gto.		
XEMB	z	50	....	Merida, Yuc.		

SUNDAY TIME

Eastern Standard

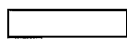
(Pacific Standard)

1250 kcs. (239.9 m.)



CMKC	a	150	....	Santiago, Cuba		
HRN	c	50	....	Tegucigalpa, Hond.		
KFOX	a	1000	....	Long Beach, Calif.		
KIT	a	250	....	Yakima, Wash.	11 am-3 am.	(8 am-midnight)
KXOK	z	1000	....	St. Louis, Mo.		
WAIR	a	250	D	Winston-Salem, N. C.	8 am-L. S.	(5 am-L.S.)
WDSU	a	1000	B	New Orleans, La.	7 am-midnight.	(4 am-9 pm)
WHBI	a	1000	(2.5)	Newark, N. J.		
WKST	z	250	D	New Castle, Pa.	9 am-LS.	(6 am-LS)
WMRO	z	250	DP	Aurora, Ill.		
WNEW	a	1000	(2.5)	New York, N. Y.		
WTCN	a	1000	B(5)	Minneapolis, Minn.	9 am-1 am.	(6 am-10 pm)
XEAI	z	500	....	Mexico City, D. F.		

1260 kcs. (238 m.)



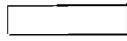
CMJO	a	200	....	Ciego de Avila, Cuba		
CMX	a	200	....	Havana, Cuba	8 am-1 am.	(5 am-10 pm)
KGVO	a	1000	C(5)	Missoula, Mont.	11 am-1 am.	(8 am-10 pm)
KHSL	a	250	....	Chico, Calif.		
KOIL	a	1000	BM(5)	Omaha, Nebr.		
KPAC	a	500	D	Port Arthur, Tex.	8 am-LS.	(5 am-LS)
KRGV	a	1000	MN	Weslaco, Texas	8 am-midnight.	(5 am-9 pm)
KUOA	a	500	D	Siloam Springs, Ark.	7 am-L. S.	(3 am-L. S.)
KVOA	a	1000	....	Tucson, Ariz.	9 am-11:30 pm.	(6 am-8:30 pm)
WHIO	a	1000	C(5)	Dayton, Ohio		
WNBX	a	500	CMJX(1)	Springfield, Vt.	9 am-midnight	(6 am-9 pm)
WTOC	a	1000	C	Savannah, Ga.	8 am-midnight.	(5 am-9 pm)

1270 kcs. (236.1 m.)



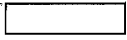
CMHD	b	250	....	Caibarien, Cuba		
KGCA	a	100	2D	Decorah, Iowa	8:45 am-3:30 pm.	(5:45 am-12:30 pm)
KOL	a	1000	M(5)	Seattle, Wash.		
KVOR	a	1000	C	Colorado Springs, C.	10 am-1:45 am.	(7 am-10:45 pm)
KWLC	a	100	2D	Decorah, Iowa	Silent.	(Silent)
WASH	a	500	DNA	Grand Rapids, Mich.	7 am-midnight.	(4 am-9 pm)
WFBR	a	500	R(1)	Baltimore, Md.	9 am-midnight.	(6 am-9 pm)
WJDX	a	1000	R(5)	Jackson, Miss.		
WOOD	a	500	Na	Grand Rapids, Mich.	7 am-midnight.	(4 am-9 pm)
XEXB	a	250	....	Jalapa, Ver.		
XEXE	z	17	....	Texcoco, Mex.		

1280 kcs. (234.2 m.)



CMKO	z	200	....	Holguin, Cuba		
KFBB	a	1000	C(5)	Great Falls, Mont.	11 am-midnight.	(8 am- 9 pm)
KLS	a	250	....	Oakland, Calif.		
WCAM	a	500	1	Camden, N. J.	10:15 am-12:30 pm; 3-5 pm.	(7:15-9:30 am; noon -2 pm)
WCAP	a	500	1	Asbury Park, N. J.	6-10:15 am; 12:30-3 pm; 8 pm-midnight.	(3-7:15 am; 9:30 am -noon; 5-9 pm)
WDOD	c	1000	C(5)	Chattanooga, Tenn.	7:30 am-1 am.	(4:30 am-10 pm)
WIBA	a	1000	N(5)	Madison, Wis.	8 am-1 am.	(5 am-10 pm)
WORC	a	500	C	Worcester, Mass.	8:45 am-11:15 pm.	(5:45 am-8:15 pm)
WRR	a	500	M	Dallas, Texas	8 am-1 am.	(5 am-10 pm)
WTNJ	a	500	1	Trenton, N. J.		
XEMX	z	100	....	Mexico City, D. F.		

1290 kcs. (232.4 m.)



CMCG	a	150	....	Havana, Cuba		
CMJK	a	200	....	Camaguey, Cuba		
KDYL	a	1000	R(5)	Salt Lake City, Utah	8 am-3 am.	(5 am-midnight)
KLCN	a	100	D	Blytheville, Ark.		

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KTRH	a	1000	C(5)	Houston, Texas	9 am-1 am.	(6 am-10 pm)
WEBC	a	1000	N(5)	Duluth, Minn.	9 am-1 am.	(6 am-10 pm)
WJAS	a	1000	C(5)	Pittsburgh, Pa.		
WJHP	z	250	P	Jacksonville, Fla.		
WNBZ	a	100	D	Saranac Lake, N. Y.	9:30 am-2 pm.	(6:30-11 am)
WNEL	a	1000	(2.5)	San Juan, P. R.	7 am-10 pm.	(3 am-7 pm)

1300 kcs. (230.6 m.)

KALE	a	1000	M	Portland, Ore.	11 am-3 am.	(8 am-midnight)
KFAC	a	1000	....	Los Angeles, Calif.		
KFH	a	1000	C(5)	Wichita, Kans.	9 am-1 am.	(6 am-10 pm)
WBRR	a	1000	1	Brooklyn, N. Y.	8-11 am; 3-8 pm.	(5-8 am; noon-5 pm)
WEVD	a	1000	1	New York, N. Y.		
WFAB	a	1000	....	New York, N. Y.		
WFBC	a	1000	N(5)	Greenville, S. C.	6:30 am-midnight.	(3:30 am-9 pm)
WHAZ	a	1000	1	Troy, N. Y.	6 pm-midnight.	(3 pm-9 pm)
WHBL	a	250	....	Sheboygan, Wis.	9 am-midnight.	(6 am-9 pm)

1310 kcs. 228.9 m.)

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.	11:15 am-11:30 pm.	(8:15 am-8:30 pm)
KAND	z	100	DM	Corsicana, Tex.		
KARM	a	100	C	Fresno, Calif.	11 am-3 am.	(8 am-midnight)
KBND	z	100	(.25)P	Bend, Ore.		
<CKN	a	100		Kansas City, Kans.	9:45 am-1 am.	(6:45 am-10 pm)
KGRJ	a	100	(.25)	Jerome, Ariz.		
KFPL	b	100	(.25)	Dublin, Texas	7 am-10:45 pm.	(4 am-7:45 pm)
KFYO	a	100	M(.25)	Lubbock, Texas	9 am-11 pm.	(6 am-8 pm)
KGEZ	a	100	....	Kalispell, Mont.	9 am-11 pm.	(6 am-8 pm)
KGFV	a	100	(.25)	Kearney, Nebs.	9 am-11:30 pm.	(6 am-8:30 pm)
KHUB	a	250	D	Watsonville, Calif.	10 am-LS.	(7 am-LS)
KOCY	a	100	(.25)	Oklahoma City, Okla.		
KOME	z	250	DP	Tulsa, Okla.		
KPDN	a	100	D	Pampa, Texas		
KRBA	a	100	D	Lufkin, Texas	9 am-6:15 pm.	(6 am-3:15 pm)
KRMD	a	100	(.25)	Shreveport, La.	10 am-10 pm.	(7 am-7 pm)
KROC	a	100	(.25)	Rochester, Minn.	9:45 am-1 am.	(6:45 am-10 pm)
KROA	a	100	....	Santa Fe, N. Mex.	Noon-5 pm.	(9 am-2 pm)
KRRV	a	250	DM	Sherman, Texas		
KSRO	a	100	(.25)	Santa Rosa, Calif.	11 am-2 am.	(8 am-11 pm)
KSUB	a	100	....	Cedar City, Utah		
KTSM	a	100	N(.25)	El Paso, Texas	9-11:30 am; 2-9:30 pm; 11 pm-1 am.	(6-8:30 am; 11 am-6:30 pm; 8-10 pm)
KVOL	a	100	(.25)	Lafayette, La.	Noon-7 pm.	(9 am-4 pm)
KVOX	a	100	(.25)	Moorhead, Minn.	8 am-10 pm.	(5 am-7 pm)
KWOC	a	100	D	Poplar Bluff, Mo.	9 am-6 pm.	(6 am-3 pm)
KWOS	a	100	(.25)	Jefferson City, Mo.	9 am-9 pm.	(6 am 7 pm)
KXRO	a	100	M(.25)	Aberdeen, Wash.	10 am-2 am.	(7 am-11 pm)
TGI	d	....	....	Guatemala C., Guat.		
WAML	a	100	(.25)	Laurel, Miss.	8 am-8 pm.	(5 am-5 pm)
WBEO	a	100	DX	Marquette, Mich.		
WBOW	a	100	N(.25)	Terre Haute, Ind.	7 am-midnight.	(4 am-9 pm)
WBRE	a	100	N(.25)	Wilkes-Barre, Pa.		
WBRK	z	100	C(.25)	Pittsfield, Mass.	7 am-1 am.	(4 am-10 pm)
WCLS	a	100	L	Joliet, Ill.	8 am-9:30 pm.	(5 am-6:30 pm)
WCMI	a	100	(.25)	Ashland, Ky.	6 am-11:30 pm.	(3 am-8:30 pm)
WDAH	a	100	S(.25)	El Paso, Tex.	11:30 am-10:30 pm.	(8:30 am-7:30 pm)
WEBR	a	100	B(.25)	Buffalo, N. Y.	8:30 am-midnight.	(5:30 am-9 pm)
WEMP	a	100	....	Milwaukee, Wis.	7:30 am-LS.	(4:30 am-LS)
WEXL	a	50	....	Royal Oak, Mich.	8 am-noon.	(5am-9 am)
WFBG	a	100	3	Altoona, Pa.		
WFDL	a	100	B	Flint, Mich.	8 am-midnight.	(5 am-9 pm)
WGAU	a	100	(.25)	Athens, Ga.	7am-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.	(5:30-7:30 am; 1:30-3:30 pm)

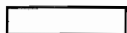
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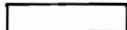
WLAK	z	100	N	Lakeland, Fla.		
WLBC	a	100	(.25)	Muncie, Ind.	7:45-12:05 am.	(3:45 am-9:05 pm)
WLNH	a	100	M	Laconia, N. H.	8 am-midnight.	(5 am-9 pm)
WMBO	a	100	....	Auburn, N. Y.		
WMFF	a	100	B(.25)	Plattsburgh, N. Y.	9 am-9 pm.	(6 am-6 pm)
WNBH	a	100	M(.25)	New Bedford, Mass.	7:30 am-11:15 pm.	(4:30 am-8:15 pm)
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.	8 am-midnight.	(5 am-9 pm)
WSJS	a	100	C	Winston-Salem, N. C.	8 am-midnight.	(5 am-9 pm)
WTAL	a	100	(.25)	Tallahassee, Fla.	8 am-midnight.	(5 am-9 pm)
WTEL	a	100	4	Philadelphia, Pa.		
WTJS	a	100	(.25)	Jackson, Tenn.	8 am-midnight.	(5 am-9 pm)
WTRC	a	100	(.25)	Elkhart, Ind.	Noon-10 pm.	(9 am-7 pm)
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.		

1320 kcs. (227.1 m.)



CMBQ	z	5000		Havana, Cuba		
KGHP	a	500	B	Pueblo, Colo.	11 am-1 am.	(8 am-10 pm)
KGMB	a	1000	CM	Honolulu, Hawaii		
KID	a	500	(1)	Idaho Falls, Idaho		
KRNT	a	1000	C(5)	Des Moines, Iowa	8:30 am-1 am.	(5:30 am-10 pm)
WADC	a	1000	C(5)	Akron, Ohio		
WORK	a	1000	N	York, Pa.	10 am-midnight.	(7 am-9 pm)
WSMB	a	1000	R(5)	New Orleans, La.		

1330 kcs. (225.4 m.)



KGB	a	1000	M	San Diego, Calif.		
KMO	a	1000	M	Tacoma, Wash.	11 am-2 am.	(8 am-11 pm)
KRIS	a	500	NM	Corpus Christi, Tex.	8:30 am-midnight.	(5:30 am-9 pm)
KSCJ	a	1000	C(5)	Sioux City, Iowa	9 am-1 am.	(6 am-10 pm)
WDRG	g	1000	C(5)	Hartford, Conn.	9 am-1 am.	(6 am-10 pm)
WSAI	a	1000	MN(5)	Cincinnati, Ohio		
WTAQ	a	1000	C	Green Bay, Wis.	11 am-1 am.	(8 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.	7:30 am-10 pm.	(4:30 am-7 pm)
WCOA	a	500	C(1)	Pensacola, Fla.		
WFEA	a	500	MN(1)	Manchester, N. H.		
WFNC	z	250	DP	Fayetteville, N. C.		
WSPD	a	1000	B(5)	Toledo, Ohio	8:30 am-1 am.	(5:30 am-10 pm)
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.		

1350 kcs. (222.1 m.)



CMCA	a	200	....	Havana, Cuba		
CMKW	z	....	....	Santiago, Cuba		
KIDO	a	1000	N(2.5)	Boise, Idaho	11 am-1 am.	(8 am-10 pm)
KWK	a	1000	XBM(5)	St. Louis, Mo.		
WAWZ	a	500	1(1)	Zarephath, N. J.	6-9 am; 11 am-12:30 pm; 3-4:30 pm; 7-8:30 pm.	(3-6 am; 8-9:30 am; noon-1:30 pm; 4-5 pm)
WBNX	a	1000	1	New York, N. Y.		
WMBG	a	500	R	Richmond, Va.	8 am-midnight.	(5 am-9 pm)

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1360 kcs. (220.4 m.)

Call Letters	Band	Power	Frequency	City	Eastern Standard	Pacific Standard
CMJH	b	200	....	Ciego de Avila, Cuba		
KCRC	a	250	M	Enid, Okla.		
KGEM	a	1000	....	Long Beach, Calif.	10 am-2 pm.	(7 am-11 pm)
KLPM	a	500	(1)	Minot, N. Dak.		
WCSC	a	50E	N(1)	Charleston, S. C.	8 am-midnight.	(5 am-9 pm)
WFBL	a	1000	C(5)	Syracuse, N. Y.		
WGEZ	a	500	1(1)	Chicago, Ill.	Midnight-2 am.	(9-11 pm)
WQBC	a	1000	D	Vicksburg, Miss.		
WSBT	a	500	1	South Bend, Ind.		

1370 kcs. (218.8 m.)

Call Letters	Band	Power	Frequency	City	Eastern Standard	Pacific Standard
CFAR	a	100	....	Flin Flon, Man.	3-8 pm.	(noon-5 pm)
CFOS	z	100	....	Owen Sound, Ont.		
CKCW	a	100	F	Moncton, N. B.	3-8 pm.	(Noon-5 pm)
CMGE	a	200	....	Cardenas, Cuba		
KAST	a	100	DXZ	Astoria, Ore.	Silent.	(Silent)
KCMO	a	100	....	Kansas City, Mo.		
KEEN	a	100	3	Seattle, Wash.		
KELD	z	100	....	El Dorado, Ark.		
KERN	a	100	N	Bakersfield, Calif.	11 am-3 am.	(8 am-midnight)
KFGQ	a	100	D	Boone, Iowa	8:30-10 am; 11:30 am-12:30 pm; 3:30- 5 pm.	(5:30-7 am; 8:30- 9:30 am; 12:30-2 pm)
KFJZ	a	100	M(.25)	Fort Worth, Texas	7:30 am-midnight.	
KFRO	a	250	DM	Longview, Texas		
KGAR	a	100	C(.25)	Tucson, Ariz.	11 am-1 am.	(8 am-10 pm)
KGFL	a	100	4	Roswell, N. Mex.		
KGKL	a	100	(.25)	San Angelo, Texas		
KICA	a	100	4	Clovis, N. Mex.		
KIUP	a	100	....	Durango, Colo.		
KLUF	a	100	M(.25)	Galveston, Tex.	9 am-11:30 pm.	(6 am-8:30 pm)
KMAC	a	100	5(.25)	San Antonio, Tex.		
KOHB	a	100	(.25)	Rapid City, S. Dak.		
KOKO	a	100	....	La Junta, Colo.	1-6 pm.	(10 am-3 pm)
KONO	a	100	5	San Antonio, Tex.	10 am-noon; 1:30-3 pm; 5-7 pm; 9-11 pm.	(7-9 am; 10:30 am- noon; 2-4 pm; 6-8 pm)
KRE	a	100	(.25)	Berkeley, Calif.		
KRKO	a	50	3	Everett, Wash.	Noon-7 pm.	(9 am-4 pm)
KRMC	a	100	(.25)	Jamestown, N. Dak.	10 am-7 pm.	(7 am-4 pm)
KSLM	a	100	MXZ	Salem, Ore.	Noon-2 am.	(9 am-11 pm)
KTEM	a	250	DM	Temple, Texas		
KTOK	a	100	MN	Oklahoma City, Okla.	8 am-1 am.	(5 am-10 pm)
KUJ	a	100	....	Walla Walla, Wash.	1:45-11:15 pm.	(10:45 am-8:15 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.	9 am-1 am.	(6 am-10 pm)
WAGF	a	250	D	Dothan, Ala.	9 am-L. S.	(6 am-L. S.)
WATL	a	100	(.25)	Atlanta, Ga.	1 am Sun. - 2 am Mon.	(10 pm Sat.-11 pm Sun.)
WBLK	a	100	....	Clarksburg, W. Va.	9 am-11 pm.	(6 am-8 pm)
WBNY	a	100	2(.25)	Buffalo, N. Y.	10 am-midnight.	(7 am-9 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.	9 am-midnight.	(6 am-9 pm)
WDWS	a	100	(.25)	Champaign, Ill.	9 am-midnight.	(6 am-9 pm)
WEOA	a	100	C(.25)	Evansville, Ind.	9 am-1 am.	(6 am-10 pm)
WFOR	a	100	....	Hattiesburg, Miss.	1-8 pm.	(10 am-5 pm)
WGL	a	100	N(.25)	Fort Wayne, Ind.		
WGRC	a	250	D	New Albany, Ind.	9 am-L. S.	(6 am-L. S.)
WHBQ	z	100	....	Memphis, Tenn.		
WHDF	a	100	(.25)	Calumet, Mich.		
WHLB	a	100	C(.25)	Virginia, Minn.		
WHLS	a	250	D	Port Huron, Mich.	8 am-7:30 pm.	(5 am-4:30 pm)
WIBM	a	100	(.25)B	Jackson, Mich.		

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WLLH	a	100	Sy	Lawrence, Mass.	8 am-midnight.	(5 am-9 pm)
WLLH	a	100	MSy(.25)	Lowell, Mass.		
WMBR	a	100	C(.25)	Jacksonville, Fla.	8 am-midnight.	(5 am-9 pm)
WMFD	a	100	D	Wilmington, N. C.	10:30 am-6:15 pm.	(7:30 am-3:15 pm)
WMFO	a	100	D	Decatur, Ala.	10 am-L. S.	(7 am-L. S.)
WMIN	a	100	(.25)	St. Paul, Minn.	9 am-1 am.	(6 am-10 pm)
WOC	a	100	C(.25)	Davenport, Iowa		
WPAY	a	100	...	Portsmouth, Ohio	9:30 am.-8:30 pm.	(6:30 am-5:30 pm)
WPRA	a	100	(.25)	Mayaguez, P. R.		
WRAC	a	100	(.25)	Williamsport, Pa.	10 am-12:30 pm.; 5-7 pm.	(7-9:30 am; 2-4 pm)
WRDO	a	100	MN	Augusta, Maine	8:45 am-midnight.	(5:45 am-9 pm)
WRJN	a	90	(.25)	Racine, Wis.		
WSAU	a	100	(.25)	Wausau, Wis.	8:30 am-11:15 pm.	(5:30 am-8:15 pm)
WSVS	a	50	2D	Buffalo, N. Y.	Silent.	(Silent)
XECZ	z	100	....	San Luis Potosi, S.L.P.		
XEI	a	125	....	Morelia, Mich.		
XELZ	z	100	....	Mexico City, D. F.		

1380 kcs. (217.3 m.)

CMCW	b	150	....	Havana, Cuba		
KOH	a	500	C	Reno, Nev.	9 am-midnight.	(6 am-9 pm)
KQV	c	1000	C	Pittsburgh, Pa.	9 am-midnight.	(6 am-9 pm)
WALA	a	500	C(1)	Mobile, Ala.	9 am-midnight.	(6 am-9 pm)
WKBH	a	1000	C	La Crosse, Wis.	10 am-midnight.	(7 am-9 pm)
WNBC	a	250	R(1)	New Britain, Conn.	8 am-midnight.	(5 am-9 pm)
WSMK	a	250	C(.5)	Dayton, Ohio	7 am-5:30 pm; 7:30 pm-1 am.	(4 am - 2:30 pm; 4:30-10 pm)

1390 kcs. (215.7 m.)

CJGX	a	100	F	Yorkton, Sask.	Noon-11:30 pm.	(9 am-8:30 pm)
CMJC	z	150	....	Camaguey, Cuba		
KABR	a	500	(1)	Aberdeen, S. Dak.	10 am-6:15 pm.	(7 am-3:15 pm)
KLRA	a	1000	C(5)	Little Rock, Ark.		
KOY	g	1000	C	Phoenix, Ariz.	10 am-2 am.	(7 am-11 pm)
KRLC	a	250	....	Lewiston, Idaho	3-10:30 pm.	(Noon-7:30 pm)
WHK	a	1000	BM(.25)	Cleveland, Ohio	8 am-1 am.	(5 am-10 pm)
WQDM	f	1000	D	St. Albans, Vt.	8:30 am-L. S.	(5:30 am-L. S.)

1400 kcs. (214.2 m.)

GMGC	a	150	....	Matanzas, Cuba		
CMKR	z	100	....	Santiago, Cuba		
KHBC	a	250	CM	Hilo, Hawaii		
KLO	a	500	BX	Ogden, Utah	11 am-1:30 am.	(8 am-10:30 pm)
KTUL	a	1000	C(5)	Tulsa, Okla.	8 am-1:15 am.	(5 am-10:15 pm)
TGX	d	....	....	Guatemala City, Guat.		
WARD	a	500	2	Brooklyn, N. Y.		
WBBC	a	500	2	Brooklyn, N. Y.	7-10:30 am; 3-4:30 pm; 9-10:30 pm.	(4-7:30 am; noon-1:30 pm)
WEGL	z	500	2(1)	Brooklyn, N. Y.		(6-7:30 pm)
WHDL	a	250	....	Olean, N. Y.		
WIRE	a	1000	MR(5)	Indianapolis, Ind.		
WLTH	a	500	2	New York, N. Y.	10:30 am-noon; 1:30-3 pm; 10:30 pm-midnight.	(7:30-9 am; 10:30 am-noon; 7:30-9 pm)
WVFW	a	500	2	Brooklyn, N. Y.	Noon-1:30 pm; 4:30-7 pm.	(9-10:30 am; 1:30-4 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.	10 am-10 pm.	(7 am-7 pm)
KGNC	a	1000	MN(2.5)	Amarillo, Texas		
KMED	c	250	N	Medford, Ore.		
WAAB	a	500	M(1)	Boston, Mass.		
WBCM	a	500	(1)	Bay City, Mich.		

SUNDAY TIME

Eastern Standard

(Pacific Standard)

WHIS	a	500	(1)	Bluefield, W. Va.	9 am-9 pm.	(6 am-6 pm)
WROK	a	500	(1)	Rockford, Ill.	9:30 am-11 pm.	(6:30 am-8 pm)
WSFA	a	500	C(1)	Montgomery, Ala.		

1420 kcs. (211.1 m.)

CHLN	z	100	....	Three Rivers, P. Q.		
CKCA	a	100	....	Kenora, Ont.		
CKGB	a	100	F	North Bay, Ont.		
CMJP	a	200	....	Moron, Cuba	11 am-midnight.	(8 am-9 pm)
KABC	a	100	M(.25)	San Antonio, Tex.	9 am-11:30 pm.	(6 am-8:30 pm)
KATE	a	250	D	Albert Lea, Minn.		
KBPS	a	100	4	Portland, Ore.	Silent.	(Silent)
KCMC	a	100	M(.25)	Texarkana, Tex.	8 am-midnight.	(5 am-9 pm)
KDNT	a	100	D	Denton, Texas	8:30 am-L. S.	(5:30 am-L. S.)
KEUB	a	100	....	Price, Utah	1:45-7 pm.	(10:45 am-4 pm)
KFAM	a	100	(.25)	St. Cloud, Minn.	10 am-7 pm.	(7 am-4 pm)
KFIZ	a	100	....	Fond du Lac, Wis.		
KGFF	a	100	M(.25)	Shawnee, Okla.	10 am- 1 am.	(7 am-10 pm)
KGIW	a	100	1	Alamosa, Colo.	Noon-3 pm.	(9 am-noon)
KGLU	z	100	(.25)	Safford, Ariz.		
KIDW	a	100	1	Lamar, Colo.		
KIUN	a	100	....	Pecos, Texas	10 am-8 pm.	(7 am-5 pm)
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	....	San Francisco, Calif.		
KTRI	f	100	(.25)	Sioux City, Iowa	10 am-midnight.	(7 am-9 pm)
KUMA	a	100	D	Yuma, Ariz.		
KVAK	z	100	DP	Atchison, Kans.		
KWBG	a	100	....	Hutchinson, Kans.	9 am-10 pm.	(6 am-7 pm)
KXL	c	100	(.25)	Portland, Ore.	3 am-10 pm.	(midnight-10 pm)
WACO	c	100	CM(.25)	Waco, Texas	8 am-1 am.	
WAGM	a	100	....	Presque Isle, Me.		
WAPQ	a	100	(.25)N	Chattanooga, Tenn.	7:30 am-midnight.	(4:30 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.	10 am-5 pm.	(7 am-2 pm)
WEED	a	100	(.25)	Rocky Mount, N. C.	8 am-8 pm.	(5 am-5 pm)
WELL	a	100	B	Battle Creek, Mich.	9 am-midnight.	(6 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.	11 am-7 pm.	(8 am-4 pm)
WLAB	a	100	(.25)	Lexington, Ky.	9 am-11 pm.	(6 am-8 pm)
WLEU	a	100	B(.25)	Eric, Pa.		
WMAS	a	100	C(.25)	Springfield, Mass.		
WMBC	a	100	(.25)	Detroit, Mich.	8:45 am-midnight.	(5:45 am-9 pm)
WMBH	a	100	(.25)	Joplin, Mo.	9 am-midnight.	(6 am-9 pm)
WMBS	a	100	(.25)	Uniontown, Pa.	7 am-5 pm.	(4 am-2 pm)
WMPJ	a	100	....	Daytona Beach, Fla.	8 am-9 pm.	(5 am-6 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.	9 am-10 pm.	(6 am-7 pm)

1430 kcs. (209.7 m.)

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

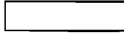
SUNDAY TIME

Eastern Standard

(Pacific Standard)

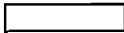
WHCC	a	500	C(1)	Rochester, N. Y.		
WHP	a	500	C(1)	Harrisburg, Pa.	9 am-1 am.	(6 am-10 pm)
WMPS	a	500	B(1)	Memphis, Tenn.	10 am-10 pm.	(7 am-7 pm)
WOKO	a	500	C(1)	Albany, N. Y.	9 am-1 am.	

1440 kcs. (203.2 m.)



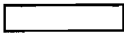
CMBY	z	200	....	Havana, Cuba		
HPSO	z	....	....	Colon, Panama		
KDFN	a	500	....	Casper, Wyo.		
KELA	a	500	M	Centralia, Wash.	11 am-3 am.	(8 am-midnight)
KXYZ	a	1000	BM	Houston, Texas		
WBIG	a	1000	C	Greensboro, N. C.	8 am-midnight.	(5 am-9 pm)
WCBA	a	500	a	Allentown, Pa.	9 am-1 am.	(6 am-10 pm)
WMBD	a	1000	C(5)	Peoria, Ill.		
WSAN	a	500	Na	Allentown, Pa.		
XEF	a	250	....	Chihuahua, Chih.		

1450 kcs. (206.8 m.)



CFCT	a	500	....	Victoria, B. C.	2-4:30 pm; 8-11:45 pm.	(11 am-1:30 pm; 5-8:45 pm)
CHGS	f	50	F	Summerside, P. E. I.	10 am-noon; 2:30-7:30 pm.	(7-9 am; 11:30 am-4:30 pm)
CMHM	z	150	....	Cienfuegos, Cuba		
KGCX	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.	9 am-2 am.	(6 am-11 pm)
WGAR	a	500	CX(1)	Cleveland, Ohio		
WHOM	a	250	....	Jersey City, N. J.		
WSAR	f	1000	M	Fall River, Mass.	8 am-midnight.	(5 am-9 pm)
XEF	a	100	....	Juarez, Chih.		

1460 kcs. (205.4 m.)



CMKF	z	250	....	Holguin, Cuba		
KSTP	a	10000	R(25)	St. Paul, Minn.	8 am-2 am.	(5 am-11 pm)
WJSV	a	10000	C	Washington, D. C.	8 am-1 am.	(5 am-10 pm)

1470 kcs. (204 m.)



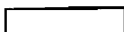
CMCX	z	150	....	Havana, Cuba		
KGA	a	5000	BM	Spokane, Wash.		
WLAC	a	5000	C	Nashville, Tenn.		

1480 kcs. (202.6 m.)



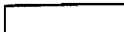
CMHX	z	120	....	Cienfuegos, Cuba		
KOMA	a	5000	C	Oklahoma City, Okla.	9 am-1 am.	(6 am-10 pm)
WHIP	z	5000	D	Hammond, Ind.	6 am-L. S.	(a am-L.S.)
WKBW	a	5000	C	Buffalo, N. Y.	7 am-1 am.	(4 am-10 pm)

1490 kcs. (201.2 m.)



CMKQ	z	200	....	Santiago, Cuba		
KFBK	a	10000	N	Sacramento, Calif.	11 am-3 am.	(8 am-midnight)
WCKY	a	10000	N	Covington, Ky.	8 am-1 am.	(5 am-10 pm)
XEDR	z	100	....	Guaymas, Son.		

1500 kcs. (199.9 m.)



CJIC	a	100	F	Sault Ste. Marie, Ont.	11 am-midnight.	(8 am-9 pm)
CMOX	a	200	Havana, Cuba		
KAWM	a	100	Gallup, N. Mex.	1:45-6 pm.	(10:45 am-3 pm)

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KBIX	a	100	M	Muskogee, Okla.	10 am-1 am.	(7 am-10 pm)
KBKR	z	100	(.25)P	Baker, Ore.		
KBST	a	100	M	Big Spring, Tex.		
KDAL	a	100	C	Duluth, Minn.	10 am-midnight.	(7 am-9 pm)
KDB	a	100	M(.25)	Santa Barbara, Calif.	11 am-3 am.	(8 am-midnight)
KGFI	a	100	(.25)	Brownsville, Tex.	9 am-10:30 pm.	(6 am-7:30 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.	10 am-10 pm.	(7 am-7 pm)
KPLC	a	100	(.25)	Lake Charles, La.		
KPLT	a	250	DM	Paris, Texas		
KPQ	a	100	M(.25)	Wenatchee, Wash.		
KRNR	a	100	M(.25)	Roseburg, Ore.		
KROD	z	100	P	El Paso, Texas		
KSAL	a	100	(.25)	Salina, Kans.		
KSAM	z	100	DP	Huntsville, Texas		
KTOH	z	100	(.25)P	Lihue, Hawaii		
KUTA	a	100	N	Salt Lake City, Utah	11 am-2 am.	(8 am-11 pm)
KVNU	z	100	P	Logan, Utah		
KVOE	a	100	M	Santa Ana, Calif.	11 am-3 am.	(8 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)	Manhato, Minn.		
WCNW	a	100	1(.25)	Brooklyn, N. Y.	9-11 am; 11 pm-mid-	(6-8 am; 8-9 pm.
					night.	
WDAN	a	250	D	Danville, Ill.	9 am-L. S.	(6 am-L. S.)
WDNC	a	100	C	Durham, N. C.	9 am-11 pm.	(6 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.	10 am-10 pm.	(7 am-7 pm)
WJBK	a	100	(.25)	Detroit, Mich.		
WKAT	a	100	(.25)	Miami Beach, Fla.		
WKBB	a	100	YC(.25)	E. Dubuque, Ill.	9 am-1 am.	(6 am-10 pm)
WKBV	a	100	(.25)	Richmond, Ind.	Silent	(Silent)
WKBZ	a	100	(.25)	Muskegon, Mich.	7 am-10 pm.	(4 am-7 pm)
WKU	a	100	D	Griffin, Ga.		
WMEX	a	100	(.25)	Boston, Mass.		
WBNF	a	100	C(.25)	Binghamton, N. Y.		
WNLC	a	100	DM	New London, Conn.	8:30 am-L. S.	(5:30 am-L. S.)
WOMI	a	100	(.25)	Owensboro, Ky.	9 am-midnight.	(6 am-9 pm)
WOPI	a	100	....	Bristol, Tenn.	8 am-10 pm.	(5 am-7 pm)
WRDW	a	100	C(.25)	Augusta, Ga.		
WRGA	a	100	(.25)	Rome, Ga.	10 am-11 pm.	(7 am-8 pm)
WRTD	a	100	B	Richmond, Va.	8 am-midnight.	(5 am-9 pm)
WSTP	z	100	(.25)P	Salisbury, N. C.		
WSYB	a	100	....	Rutland, Vt.	Silent.	(Silent)
WSMV	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.	Noon-11:15 pm.	(9 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.	9 am-1 am.	(6 am-10 pm)
WBRY	a	1000	M	Waterbury, Conn.	9 am-midnight.	(6 am-9 pm)

SUNDAY TIME

Eastern Standard

(Pacific Standard)

1550 kcs. (193.4 m.)

KPMC a 1000 M
WQXR a 1000

	Bakersfield, Calif.	11 am-3 am.	(8 am-midnight)
	New York, N. Y.	9 am-midnight.	(6 am-9 pm)

1560 kcs. (192.2 m.)

CMBF z 5000

	Havana, Cuba
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1580 kcs. (189.8 m.)

CM9RT z 200

	Guines, Cuba
--	--------------

1600 kcs. (187.4 m.)

CMBH z 5000

	Havana, Cuba
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Across the EDITOR'S Desk



Studio "A" of The Nation's Station, WLW, in Cincinnati.

THE DX Correspondent, Lee Chadwick, of WTAR in Norfolk, Va. informs us that WTAR is always happy to receive reports of reception and that verifications are always issued when proper proof is received. Mr. Chadwick explains that "proper proof" means the compliance with their set policy which requires a listing of at least three programs, announcements or selections broadcast over WTAR at the identified times as shown by their station log, *two of which must be local presentations*. He explains further that this procedure has been adopted in order to protect the legitimate DXer from the "card collectors" who attempt to verify stations with poor reports.

WTAR refuses perhaps as many as thirty per cent. of verification requests, but by carefully scrutinizing every report they render the DXing hobby a service by

making certain that WTAR verifications *really verify reception*.

NO doubt our readers have seen the reports in the daily press of the FCC investigation into the "chain broadcasting monopoly." The purpose of this investigation is to provide the Commission and the public with information concerning thirteen different matters, including the extent of program duplication by stations serving the same area; program policies with respect to character of programs; the nature of service rendered by the networks, and the effect of chain broadcasting upon stations not affiliated with a network.

The National Broadcasting Company was the first to appear, and was followed by the CBS and the MBS. These three companies alone are expected to take six weeks to present their testimony. With

(Please turn to page 95)

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	Little Rock	KJBS	5070	500	WDEL	1120	250 R	
Anniston	KARK 890 500 N	KPO	680	500000 R	WILM	1420	100	
WHMA 1420 100	KGHI 1200 100	KSAN	1420	100	DISTRICT OF COLUMBIA			
Birmingham	KLRA 1390 1000 C	KSFO	560	1000 C	Washington			
WAPI 1140 5000 C	Pine Bluff	KYA	1230	1000	WJSV	1460	10000 C	
WBRC 930 1000 R	KOTN 1500 100	San Jose			WMAL	630	250 B	
WSGN 1310 100 B	Siloam Springs	KQW	1010	1000M	WOL	1230	1000M	
Decatur	KUOA 1260 5000	San Luis Obispo			WRC	950	1000 R	
WMFO 1370 100	CALIFORNIA				FLORIDA			
Dothan	Bakersfield	KVEE	1200	100	Daytona Beach			
WAGF 1370 250	KERN 1370 100 N	Santa Barbara			WMFJ	1420	100	
Gadsden	KPMC 1550 1000M	KDB	1500	100M	Gainesville			
WTBY 1210 100	Berkeley	KTMS	1220	500 B	WRUF	830	5000	
Huntsville	KRE 1370 100	Santa Rosa			WJAX	900	1000 N	
WBHP 1200 100	KRE 1370 100	Stockton			WTHP	1290	250	
Mobile	Beverly Hills	KSRO	1310	100	WMBR	1370	100 C	
WALA 1380 500 C	KMPC 710 500	Stockton			Lakeland			
Montgomery	Chico	KGDM	1100	1000M	WLAK	1310	100 N	
WCOV 1210 100	KHSL 1260 250	KWG	1200	100 N	Miami			
WSFA 1410 500 C	El Centro	KTKC	1190	250M	WIOD	610	1000 N	
Selma	KXO 1500 100	Watsonville			WMBF	610	1000	
WHBB 1500 100	Eureka	KHUB	1310	250	WOAM	560	1000 C	
Muscle Shoals City	KIEM 1450 500M	COLORADO				WKAT	1500	100
WMSD 1420 100	Fresno	Alamosa			Orlando			
Tuscaloosa	KARM 1310 100 C	KGIW	1420	100	WDBO	580	1000 C	
WJRD 1200 250	KMJ 580 1000 N	Colorado Springs			Pensacola			
ALASKA					WCOA	1340	500 C	
Anchorage	KIEV 850 250	KVOR	1270	1000 C	St. Augustine			
KFOD 780 250	Long Beach	Denver			WFOY	1210	100	
Fairbanks	KFOX 1250 1000	KFEL	920	500M	St. Petersburg			
KFAR 610 1000	KGER 1360 1000	KLZ	560	1000 C	WSUN	620	1000 N	
Juneau	Los Angeles	KOA	830	50000 R	Tallahassee			
KINY 1430 250	KECA 1430 1000 B	KPOF	880	1000	WTAL	1310	100	
Ketchikan	KEHE 780 1000	KVOD	920	500 B	Tampa			
KGBU 900 500	KFCF 1300 1000	Durango			WDAE	1220	1000 C	
ARIZONA					WFLA	620	1000 N	
Globe	KFI 640 50000 R	KIUP	1370	100	West Palm Beach			
KWJB 1210 100	KFSG 1120 500	Grand Junction			WJNO	1200	100 C	
Jerome	KFVD 1000 1000	KFXJ	1200	100	GEORGIA			
KCRJ 1310 100	KFWB 950 1000	Greeley			Albany			
Lowell	KGFJ 1200 100	KFKA	880	500M	WGPC	1420	100	
KSUN 1200 100	KHJ 900 1000M	La Junta			Athens			
Phoenix	KMTR 570 1000	KOKO	1370	100	WGAU	1310	100	
KOY 1390 1000 C	KNX 1050 50000 C	Lamar			Atlanta			
KTAR 620 1000 N	KRKD 1120 500	KIDW	1420	100	WAGA	1450	500 B	
Prescott	Merced	Pueblo			WATL	1370	100	
KYCA 1500 100	KYOS 1040 250	KGHF	1320	500 B	WGST	890	1000 C	
Safford	Modesto	Sterling			WSB	740	50000 R	
KGLU 1420 100	KTRB 740 250	KGEK	1200	100	Augusta			
Tucson	Monterey	CONNECTICUT				WRDW	1500	100 C
KGAR 1370 100 C	KDON 1210 100M	Bridgeport			Columbus			
KVOA 1260 1000	Oakland	WICC	600	500M	WRBL	1200	100	
Yuma	KLS 1280 250	Hartford			Griffin			
KUMA 1420 100	KLX 880 1000	WDRG	1330	1000 C	WKEU	1500	100	
ARKANSAS					WTIC	1040	50000 R	
Blytheville	KKROW 930 1000	WTHT	1200	100M	WVGB	740	50000 R	
KLCN 1290 100	Pasadena	New Britain			Augusta			
El Dorado	KPPC 1210 100	WNBC	1380	250 R	WRDW	1500	100 C	
KELD 1370 100	Redding	New Haven			Columbus			
Fort Smith	KVCV 1200 100	WELI	900	500	WRBL	1200	100	
KFPW 1210 100	Sacramento	New London			WKEU	1500	100	
Hot Springs	KFBK 1490 10000 N	WNLC	1500	100M	Macon			
KTHS 1060 10000 N	KROY 1210 100 C	Waterbury			WMAZ	1180	1000 C	
Jonesboro	San Bernardino	WATR	1190	100	Rome			
KBTM 1200 100	KFXM 1210 100M	WBRY	1530	1000M	WRGA	1500	100	
	San Diego	DELAWARE				Savannah		
	KFSD 600 1000 B	Wilmington			WSAV	1310	100	
	KGB 1330 1000M				WTOC	1260	1000 C	
	San Francisco							
	KFRC 610 1000M							
	KGO 790 7500 B							

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

Thomasville
WPAX 1210 100
Waycross
WAYX 1200 100

HAWAII

Hilo
KHBC 1400 250M
Honolulu
KGMB 1320 1000 C
KGU 750 2500 N
Lihue
WTOH 1500 100

IDAHO

Boise
KIDO 1350 1000 N
Coeur d'Alene
KGCI 1200 100
Idaho Falls
KID 1320 500
Lewiston
KRLC 1390 250
Nampa
KFXD 1200 100
Pocatello
KSEI 900 250 N
Twin Falls
KTFI 1240 1000 N

ILLINOIS

Aurora
WMRO 1250 250
Bloomington
WJBC 1200 100
Carthage
WCAZ 1070 100
Champaign
WDWS 1370 100
Chicago
WAAF 920 1000
WBBM 770 50000 C
WCBF 1080 5000
WCFL 970 5000 N
WCRW 1210 100
WEDC 1210 100
WENR 870 50000 B
WGES 1360 500
WGN 720 50000M
WJJD 1130 20000
WLS 870 50000 B
WMAQ 670 50000 R
WMBI 1080 5000
WSBC 1210 100
Cicero
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
WROK 1410 500
Rock Island
WHBF 1210 100
Springfield
WCBS 1420 100
WTAX 1210 100
Tuscola
WDZ 1020 250
Urbana
WILL 580 1000

INDIANA

Anderson
WHBU 1210 100
Elkhart
WTRC 1310 100
Evansville
WEOA 1370 100 C
WGBF 630 500 N
Fort Wayne
WGL 1370 100 N
WOWO 1160 10000 B
Gary
WIND 560 1000
Hammond
WHIP 1480 5000
WWAE 1200 100
Indianapolis
WFBM 1230 1000 C
WIBC 1050 1000
WIRE 1400 1000 R
Muncie
WLBC 1310 100
New Albany
WGRC 1370 250
Richmond
WKBV 1500 100
South Bend
WFAM 1200 100
WSBT 1360 500
Terre Haute
WBOW 1310 100 N
West Lafayette
WBAA 890 500

IOWA

Ames
WOI 640 5000
Boone
KFGQ 1370 100
Cedar Rapids
WMT 600 1000 B
Davenport
WOC 1370 100 C
Decorah
KCCA 1270 100
KWLC 1270 100
Des Moines
KRNT 1320 1000 C
KSO 1430 500 B
WHO 1000 50000 R
Dubuque
KDTH 1340 500
Iowa City
WSUI 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

KANSAS

Abilene
KFBI 1050 5000
Atchison
KVAK 1420 100
Coffeyville
KGGF 1010 1000M
Dodge City
KGNO 1340 250
Garden City
KIUL 1210 100
Great Bend
KVGB 1370 100
Hutchinson
KWBG 1420 100
Kansas City
KCKN 1310 100
Lawrence
KFKU 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
KFH 1300 1000 C

KENTUCKY

Ashland
WCMI 1310 100
Covington
WCKY 1490 10000 N
Lexington
WLAP 1420 100
Louisville
WAVE 940 1000 N
WHAS 820 50000 C
Owensboro
WOMI 1500 100
Paducah
WPAD 1420 100

LOUISIANA

Alexandria
KALB 1210 100
Baton Rouge
WJBO 1120 500 B
Lafayette
KVOL 1310 100
Lake Charles
KPLC 1500 100

Monroe
KMLB 1200 100
New Orleans
WBNO 1420 100
WDSU 1250 1000 B
WJBW 1200 100
WSMB 1320 1000 R
WWL 850 10000 C
Shreveport
KRMD 1310 100
KTBS 1450 1000 N
KWKH 1100 10000 C

MAINE

Augusta
WRDO 1370 100M
Bangor
WABI 1200 100
WLBZ 620 500 N
Lewister
WCOV 1210 100
Portland
WCSH 940 1000 R
WGAN 640 500
Presque Isle
WAGM 1420 100

MARYLAND

Baltimore
WBAL 760 2500 B
WBAL 1060 10000 B
WCAO 600 1000 C
WCBM 1370 100
WFBF 1270 500 R
College Park
W3XJ 1060 100
Cumberland
WTBO 800 250
Frederick
WFMD 900 500
Hagerstown
WJFJ 1210 100
Salisbury
WSAL 1200 250

MASSACHUSETTS

Boston
WAAB 1410 500M
WBZ 990 50000 B
WCOP 1120 500
WEEL 590 1000 C
WHDH 830 1000
WMEX 1500 100
WNAC 1230 1000 R
WORL 920 500
Cape Cod
WOCB 1210 100
Fall River
WSAR 1450 1000M
Greenfield
WHAI 1210 250
Lawrence
WLAW 680 1000
WLLH 1370 100M
Lowell
WLLH 1370 100
New Bedford
WNLH 1310 100M

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

Pittsfield		
WBRK 1310	100	C
Springfield		
WBZA 990	1000	B
WMAS 1420	100	C
WSPR 1140	500	M
Worcester		
WORC 1280	500	C
WTAG 580	1000	R

MICHIGAN

Battle Creek		
WELL 1420	100	B
Bay City		
WBCM 1410	500	
Calumet		
WHDF 1370	100	
Detroit		
WJBK 1500	100	
WJR 750	50000	C
WMBC 1420	100	
WWJ 920	5000	R
WXYZ 1240	1000	B
East Lansing		
WKAR 850	1000	
Flint		
WFDF 1310	100	B
Grand Rapids		
WASH 1270	500	N
WOOD 1270	500	N
Ironwood		
WJMS 1420	100	
Jackson		
WIBM 1370	100	B
Kalamazoo		
WKZO 590	1000	B
Lansing		
WJIM 1210	100	B
Lapeer		
WMPK 1200	100	
Marquette		
WBEO 1310	100	
Muskegon		
WKBZ 1500	100	
Port Huron		
WHLS 1370	250	
Royal Oak		
WEXL 1310	50	
Saginaw		
WHAL 950	500	

MINNESOTA

Albert Lea		
KATE 1420	250	
Duluth		
KDAL 1500	100	C
WEBC 1290	1000	N
Fergus Falls		
KGDE 1200	100	
Hibbing		
WMFG 1210	100	
Mankato		
KYSM 1500	100	
Minneapolis		
WCCO 810	50000	C
WDGY 1180	1000	C
WLB 760	1000	
WTCN 1250	1000	B
Moorhead		
KVOX 1310	100	

Northfield		
WCAL 760	1000	
Rochester		
KROC 1310	100	
St. Cloud		
KFAM 1420	100	
St. Paul		
KSTP 1460	10000	R
WMIN 1370	100	
Virginia		
WHLB 1370	100	C
Winona		
KWNO 1200	250	

MISSISSIPPI

Grenada		
WGRM 1210	100	
Gulfport		
WGCM 1210	100	
Hattiesburg		
WFOR 1370	100	
Jackson		
WJDX 1270	1000	R
WSL 1420	100	
Laurel		
WAML 1310	100	
Meridian		
WCOC 880	1000	C
Vicksburg		
WQBC 1360	1000	

MISSOURI

Cape Girardeau		
KFVS 1210	100	
Columbia		
KFRU 630	500	
Jefferson City		
KWOS 1310	100	
Joplin		
WMBH 1420	100	
Kansas City		
KCMO 1370	100	
KITE 1530	1000	
KMBC 950	1000	C
WDAF 610	1000	R
WHB 860	1000	M
Poplar Bluff		
KWOC 1310	100	
St. Joseph		
KFEQ 680	2500	
St. Louis		
KFUO 550	500	
KMOX 1090	50000	C
KSD 550	1000	R
KWK 1350	1000	B
KXOK 1250	1000	
WEW 760	1000	
WIL 1200	100	
Springfield		
KGBX 1230	500	N
KWTO 560	5000	

MONTANA

Billings		
KGHL 780	1000	N

Bozeman		
KRBM 1420	100	
Butte		
KGR 1340	1000	N
Great Falls		
KFBB 1280	1000	C
Helena		
KPFA 1210	100	N
Kalispell		
KGEZ 1310	100	
Lewistown		
KDNC 1200	100	
Missoula		
KGVO 1260	1000	C
Wolf Point		
KGCZ 1450	1000	

NEBRASKA

Clay Center		
KMMJ 740	1000	
Kearney		
KGFV 1310	100	
Lincoln		
KFAB 770	10000	C
KFOR 1210	100	C
Norfolk		
WJAG 1060	1000	
North Platte		
KGNF 1430	1000	
Omaha		
KOIL 1260	1000	B
WAAW 660	500	
WOW 590	1000	R
Scottsbluff		
KGKY 1500	100	

NEVADA

Reno		
KOH 1380	500	C

NEW HAMPSHIRE

Laconia		
WLNH 1310	100	M
Manchester		
WFEA 1340	500	N
Portsmouth		
WHEB 740	250	

NEW JERSEY

Asbury Park		
WCAP 1280	500	
Atlantic City		
WPG 1100	5000	C
Bridgeton		
WSNJ 1210	100	
Camden		
WCAM 1280	500	
Jersey City		
WAAT 940	500	
WHOM 1450	250	
Newark		
WHBI 1250	1000	
WOR 710	50000	M
Red Bank		
WBRB 1210	100	
Trenton		
WTNJ 1280	500	

Whippany		
WXDD ...	50000	
Zarephath		
WAWZ 1350	500	

NEW MEXICO

Albuquerque		
KGGM 1230	1000	
KOB 1180	10000	N
Carlsbad		
KLAH 1210	100	
Clovis		
KICA 1370	100	
Gallup		
KAWM 1500	100	
Hobbs		
KWEW 1500	100	
Roswell		
KGFL 1370	100	
Santa Fe		
KRQA 1310	100	

NEW YORK

Albany		
WABY 1370	100	N
WOKO 1430	500	C
Auburn		
WMOB 1310	100	
Binghamton		
WNBF 1500	100	C
Brooklyn		
WARD 1400	500	
WBBC 1400	500	
WBBR 1300	1000	
WCNW 1500	100	
WVFW 1400	500	
Buffalo		
WBEN 900	1000	B
WBNY 1370	100	
WEBR 1310	100	B
WGR 550	1000	C
WKBW 1480	5000	C
WSVS 1370	50	
Canton		
WCAD 1220	500	
Elmira		
WENY 1200	250	
WESG 850	1000	C
Freeport		
WGBB 1210	100	
Jamestown		
WJTN 1210	100	B
Newburgh		
WGNV 1210	100	
New York		
WABC 860	50000	C
WBIL 1100	5000	
WBNX 1350	1000	
WBOQ 860	50000	
WEAF 660	50000	R
WEVD 1300	1000	
WFAB 1300	1000	
WHN 1010	1000	
WINS 1180	1000	
WJZ 760	50000	B
WLTH 1400	500	
WMCA 570	1000	
WNEW 1250	1000	
WNYC 810	1000	

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

WVOV 1130 1000
 WQXR 1550 1000
 Olean
 WHDL 1400 250
 Plattsburg
 WMFF 1310 100 B
 Rochester
 WHAM 1150 50000 B
 WHEC 1430 500 C
 WSAY 1210 100
 Saranac Lake
 WNBZ 1290 100
 Schenectady
 WGY 790 50000 R
 Syracuse
 WFBL 1360 1000 C
 WSYR 570 1000 B
 WSYU 570 1000
 Troy
 WHAZ 1300 1000
 WTRY 950 1000
 Utica
 WIBX 1200 100 C
 White Plains
 WFAS 1210 100
 Woodside
 WWRL 1500 100

NORTH CAROLINA

Asheville
 WWNC 570 1000 N
 Charlotte
 WBT 1080 50000 C
 WSOC 1210 100 N
 Durham
 WDNC 1500 100 C
 Fayetteville
 WFNC 1340 250
 Gastonia
 WGNC 1420 100
 Greensboro
 WBIG 1440 1000 C
 High Point
 WMFR 1200 100
 Kinston
 WFTC 1200 100
 Raleigh
 WPTF 680 5000 N
 WRAL 1210 100
 Rocky Mount
 WEED 1420 100
 Salisbury
 WSTP 1500 100
 Wilmington
 WMFD 1370 100
 Wilson
 WGTM 1310 100
 Winston-Salem
 WAIR 1250 250
 WSJS 1310 100 C

NORTH DAKOTA

Bismarck
 KFJR 550 1000 N
 Devils Lake
 KDLR 1210 100
 Fargo
 WDAY 940 1000 N
 Grand Forks
 KFJM 1410 500
 Jamestown
 KRMC 1370 100

Mandan
 KGCV 1240 250
Minot
 KLPM 1360 500
 Valley City
 KOVC 1500 100

OHIO

Akron
 WADC 1320 1000 C
 WJW 1210 100
 Ashtabula
 WICA 940 250
 Canton
 WHBC 1200 100
 Cincinnati
 WCPO 1200 100
 WKRC 550 1000 C
 WLW 700 500000N
 WSAI 1330 1000 N
 Cleveland
 WCLE 610 500M
 WGAR 1450 500 C
 WHK 1390 1000 B
 WTAM 1070 50000 R
 Columbus
 WBNS 1430 1000 C
 WCOL 1210 100 N
 WHKC 640 500M
 WOSU 570 750
 Dayton
 WHIO 1260 1000 C
 WSMK 1380 250 C
 Lima
 WBLY 1210 100
 Portsmouth
 WPAV 1370 100
 Toledo
 WSPD 1340 1000 B
 WTOL 1200 100
 Youngstown
 WFMJ 1420 100
 WKBN 570 500 C
 Zanesville
 WALR 1210 100

OKLAHOMA

Ada
 KADA 1200 100M
 Ardmore
 KVSO 1210 100M
 Elk City
 KASA 1210 100
 Enid
 KCRK 1360 250M
 Muskogee
 KBIX 1500 100M
 Norman
 WNAD 1010 1000
 Oklahoma City
 KOCY 1310 100
 KOMA 1480 5000 C
 KTOK 1370 100M
 WKY 900 1000 N
 Okmulgee
 KHBG 1210 100
 Ponca City
 WBBZ 1200 100M
 Shawnee
 KGFF 1420 100M
 Tulsa
 KOME 1310 250

KTUL 1400 1000 C
 KVOO 1140 25000 N

OREGON

Astoria
 KAST 1370 100
 Baker
 KBKR 1500 100
 Bend
 KBND 1310 100
 Corvallis
 KOAC 550 1000
 Eugene
 KORE 1420 100M
 Klamath Falls
 KFJI 1210 100
 La Grande
 KLBM 1420 100
 Marshfield
 KOOS 1200 100
 Medford
 KMED 1410 250 N
 Portland
 KALE 1300 1000M
 KBPS 1420 100
 KEX 1180 5000 B
 KGW 620 1000 R
 KOIN 940 1000 C
 KWJJ 1040 500
 KXL 1420 100
 Roseburg
 KRNR 1500 100M
 Salem
 KSLM 1370 100M

PENNSYLVANIA

Allentown
 WCBA 1440 500
 WSAN 1440 500 N
 Altoona
 WFBG 1310 100
 Easton
 WEST 1200 100
 Erie
 WLEU 1420 100 B
 Glenside
 WIBG 970 100
 Greensburg
 WHJB 620 250 C
 Grove City
 WSAJ 1310 100
 Harrisburg
 WHP 1430 500 C
 WKBO 1200 100
 Hazelton
 WAZL 1420 100
 Johnstown
 WJAC 1310 100
 Lancaster
 WGAL 1500 100 N
 New Castle
 WKST 1250 250
 Philadelphia
 KYW 1020 10000 R
 WCAU 1170 50000 C
 WDAS 1370 100
 WFIL 560 1000 B
 WHAT 1310 100
 WTP 610 1000
 WPEN 920 1000
 WRAX 920 1000

WTEL 1310 100
 Pittsburgh
 KDKA 980 50000B
 KQV 1380 1000 C
 WCAE 1220 1000 R
 WJAS 1290 1000 C
 WWSW 1500 100
 Reading
 WEEU 830 1000 R
 WRAW 1310 100
 Scranton
 WGBI 880 500 C
 WQAN 880 500
 Sharon
 WPIC 780 250
 Sunbury
 WKOK 1210 100
 Uniontown
 WMBS 1420 100
 Wilkes-Barre
 WBAX 1210 100M
 WBRE 1310 100 N
 Williamsport
 WRAK 1370 100
 York
 WORK 1320 1000 N

PUERTO RICO

Mayaguez
 WPRA 1370 100
 Ponce
 WPRP 1420 100
 San Juan
 WKAQ 1240 1000
 WNEL 1290 1000

RHODE ISLAND

Providence
 WEAN 780 1000M
 WJAR 890 1000 R
 WPRO 630 500 C

SOUTH CAROLINA

Anderson
 WAIM 1200 100 C
 Charleston
 WCSC 1360 500 N
 WTMA 1210 100
 Columbia
 WCOS 1370 100
 WIS 560 1000 N
 Florence
 WOLS 1200 100
 Greenville
 WFBC 1300 1000 N
 Spartanburg
 WSPA 920 1000

SOUTH DAKOTA

Aberdeen
 KABR 1390 500
 Brookings
 KFDY 780 1000
 Pierre
 KGFX 630 200
 Rapid City
 KOBH 1370 100
 WCAT 1200 100
 Sioux Falls
 KELO 1200 100 N
 KSOO 1110 5000 N

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

Vermillion
KUSD 890 500
Yankton
WNAX 570 1000 C

TENNESSEE

Bristol
WOPJ 1500 100
Chattanooga
WAPO 1420 100 N
WDOD 1280 1000 C
Jackson
WTJS 1310 100
Johnson City
WJHL 1200 100
Knoxville
WNOX 1010 1000 C
WROL 1310 100 N
Memphis
WHBQ 1370 100
WMC 780 1000 R
WMPS 1430 500 B
WREC 600 1000 C
Nashville
WLAC 1470 5000 C
WSIX 1210 100
WSM 650 50000 N

TEXAS

Abilene
KRBC 1420 100M
Amarillo
KGNC 1410 1000 N
Austin
KNOW 1500 100 C
KTBC 1120 1000
Beaumont
KFDM 560 500 N
KRIC 1410 100M
Big Spring
KBST 1500 100M
Brady
KNEL 1500 250
Brownsville
KGFI 1500 100
College Station
WTAW 1120 500
Corpus Christi
KRIS 1330 500 N
Corsicana
KAND 1310 100M
Dallas
KRLD 1040 10000 C
WFAA 800 50000 N
WRR 1280 500M
Denton
KDNT 1420 100
Dublin
KFPL 1310 100
El Paso
KR0D 1500 100
RTSM 1310 100 N
WDAH 1310 100
Fort Worth
KFJZ 1370 100M
KGKO 570 1000 B
KTAT 1240 1000M
WBAP 800 50000 N
Galveston
KLUF 1370 100M
Greenville
KGVJ 1200 100
Houston

KPRC 920 1000 R
KTRH 1290 1000 C
KXYZ 1440 1000 B
Huntsville
KSAM 1500 100
Kilgore
KOCA 1210 100
Laredo
KPAB 1500 100
Longview
KFRO 1370 250M
Lubbock
KFYO 1310 100M
Lufkin
KRBA 1310 100
Midland
KRLH 1420 100
Palestine
KNET 1420 100
Pampa
KPDN 1310 100
Paris
KPLT 1500 250M
Pecos
KIUN 1420 100
Port Arthur
KPCAC 1260 500
San Angelo
KGKL 1370 100
San Antonio
KABC 1420 100M
KMAC 1370 100
KONO 1370 100
KRTSA 550 1000 C
WAOAI 1190 50000 N
Sherman
KRRV 1310 250M
Temple
KTEM 1370 250M
Texarkana
KCMC 1420 100M
Tyler
KGKB 1500 100M
Vernon
KVWC 1500 100
Waco
WACO 1420 100 C
Weslaco
KRGV 1260 1000 N
Wichita Falls
KWFT 620 250

UTAH

Cedar City
KSUB 1310 100
Logan
KVNU 1200 100
Ogden
KLO 1400 500 B
Price
KEUB 1420 100
Salt Lake City
KDYJ 1290 1000 R
KSL 1130 50000 C
KUTA 1500 100 N

VERMONT

Burlington
WCAX 1200 100
Rutland
WSYB 1500 100

St. Albans
WQDM 1390 1000
Springfield
WNBX 1260 500 C
Waterbury
WDEV 550 500

VIRGINIA

Charlottesville
WCHV 1420 100
Danville
WBTM 1370 100
Harrisonburg
WSVA 550 500
Lynchburg
WLVA 1200 100
Newport News
WGH 1310 100
Norfolk
WTAR 780 1000 N
Petersburg
WPIV 1210 100
Richmond
WBBL 1210 100
WMBG 1350 500 R
WRNL 880 500
WRDT 1500 100 B
WRVA 1110 5000 C
Roanoke
WDBJ 930 1000 C

WASHINGTON

Aberdeen
KXRO 1310 100M
Bellingham
KVOS 1200 100M
Centralia
KELA 1440 500M
Everett
KRKO 1370 50
Longview
KWLK 780 250
Olympia
KGY 1210 100M
Pullman
KWSC 1220 1000
Seattle
KEEN 1370 100
KIRO 710 1000 C
KJR 970 5000 B
KOL 1270 1000 M
KOMO 920 1000 R
KRSC 1120 250
KTW 1220 1000
KXA 760 250

Spokane
KFIO 1120 100
KFPY 890 1000 C
KGA 1470 5000 B
KHQ 590 1000 R
Tacoma
KMO 1330 1000M
KVI 570 1000 C
Walla Walla
KUJ 1370 100
Wenatchee
KJT 1250 250M
Yakima
KPQ 1500 100

WEST VIRGINIA

Beckley
WJLS 1210 100

Bluefield
WHIS 1410 500
Charleston
WCBS 580 500 C
WGVV 1500 100
Clarksburg
WBLK 1370 100
Fairmont
WMMN 890 500 C
Huntington
WSAZ 1190 1000
Parkersburg
WPAR 1420 100 C
Wheeling
WWVA 1160 5000 C

WISCONSIN

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
WHA 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
WRJN 1370 100
Rice Lake
WTMC 1210 250
Sheboygan
WHBL 1300 250
Stevens Point
WLBL 900 5000
Superior
WDSM 1200 100
Wausau
WSAU 1370 100

WYOMING

Casper
KDFN 1440 500
Rock Springs
KVRN 1370 100
Sheridan
KWYO 1370 100

BAHAMAS

Nassau
ZNS 540 400

CANADA

ALBERTA

Calgary
CFAC 930 1000 F
CFCN 1030 10000
CFJC 690 100 F
Edmonton
CFRN 960 100 F
CJCA 730 1000 F
CKUA 580 500

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

Grande Prairie
 CFGP 1200 100
 Lethbridge
 CJOC 950 100 F

BRIT. COLUMBIA

Chilliwack
 CHWK 780 100 F
 Kamloops
 CFJC 880 1000 F
 Kelowna
 CKOV 630 100 F
 Prince Rupert
 CFPK 580 50
 Trail
 CJAT 910 1000 F
 Vancouver
 CBR 1100 5000 F
 CJOR 600 500
 CKCD 1010 100
 CKFK 1410 50
 CKMO 1410 100
 CKWX 1010 100
 Victoria
 CFCT 1450 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
 Port William
 CKPR 580 1000 F
 Hamilton
 CHML 1010 100 F
 CKOC 1120 500 F
 Kenora
 CKCA 1420 100
 Kingston
 CFRC 1510 100 F
 London
 CFPL 730 100 F
 North Bay
 CFCH 930 100 F
 CJKL 1310 100 F
 CKGB 1420 100 F

Ottawa
 CBO 88C 1000 F
 CKCO 1010 100 F
 Owen Sound
 CFOS 1370 100
 Prescott
 CFLE 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 50000 F
 CFRB 690 10000 C
 CKCL 580 100 F
 CRCY 960 100 F
 Waterloo
 CKCR 1510 100
 Windsor
 CKLW 1030 5000 F
 Wingham
 CKNX 1200 100

PRINCE EDWARD ISLAND

Charlottetown
 CFCY 630 1000 F
 CHCK 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
 CJBR 1030 1000 F
 St. Anne de la
 Pocatiere
 CHGB 1200 100
 Sherbrooke
 CHLT 1210 100
 Three Rivers
 CHLN 1420 100

SASKATCHEWAN

Moose Jaw
 CHAB 1200 100 F
 Prince Albert
 CKBI 1210 100 F
 Regina
 CJRM 540 1000 F
 CKCK 1010 1000 F
 Saskatoon
 CBK 540 50000
 CFQC 840 1000 F
 Yorkton
 CJGX 1390 100 F

COSTA RICA

San Jose
 TIPG 625 2000
 TIX 650 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 200
 CMJW 1070 200
 CMJX 740 200
 Cardenas
 CMGE 1370 200
 Ciego de Avila
 CMJH 1360 200
 CMJI 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
 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
 CMCI 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
 CMW 880 1400
 CMX 1260 200

Holguin
 CMKF 1460 250
 CMKO 1280 200
 Manzanillo
 CMKM 1080 100
 Matanzas
 CMGC 1400 200
 CMGF 1120 200
 CMHG 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

DOMINICAN REPUBLIC

Ciudad Trujillo
 HIN 1090 740
 HIT 1050 50
 HIX 800 800

EL SALVADOR

San Salvador
 YSS 640 500

GUATEMALA

Guatemala City
 TGW 1520 1000

NORTH AMERICAN B. C. STATIONS BY CALLS

KTBS 1450 1000	KVSO 1210 100	VOAC 1065 40
Shreveport, La.	Ardmore, Okla.	St. John's Nfld.
KTEM 1370 250	KVWC 1500 100	VOCM 1006 200
Temple, Texas	Vernon, Texas	St. John's Nfld.
KTFI 1240 1000	KWBG 1420 100	VOGY 840 400
Twin Falls, Idaho	Hutchinson, Kans.	St. John's Nfld.
KTHS 1060 10000	KWEW 1500 100	VONF 1195 500
Hot Springs, Ark.	Hobbs, N. Mex.	St. John's Nfld.
KTKC 1190 250	KWPT 620 250	VOWR 681 500
Visalia, Calif.	Wichita Falls, Texas	St. John's Nfld.
KTMS 1220 500	KWG 1200 100	WAAB 1410 500
Santa Barbara, Calif.	Stockton, Calif.	Boston, Mass.
KTOH 1500 100	KWJB 1210 100	WAAF 920 1000
Lihue, Hawaii	Globe, Ariz.	Chicago, Ill.
KTOK 1370 100	KWJJ 1040 500	WAAT 940 500
Oklahoma City, Okla.	Portland, Ore.	Jersey City, N. J.
KTRB 740 250	KWK 1350 1000	WAAW 660 500
Modesto, Calif.	St. Louis, Mo.	Omaha, Neb.
KTRH 1290 1000	KWKH 1100 10000	WABC 860 50000
Houston, Texas	Shreveport, La.	New York, N. Y.
KTRI 1420 100	KWLC 1270 100	WABI 1200 100
Sioux City, Iowa	Decorah, Iowa	Bangor, Maine
KTSA 550 1000	KWLK 780 250	WABY 1370 100
San Antonio, Texas	Longview, Wash.	Albany, N. Y.
KTSM 1310 100	KWNO 1200 250	WACO 1420 100
El Paso, Texas	Winona, Minn.	Waco, Texas
KTUL 1400 1000	KWOC 1310 100	WADC 1320 1000
Tulsa, Okla.	Poplar Bluff, Mo.	Akron, Ohio
KTW 1220 1000	KWOS 1310 100	WAGA 1450 500
Seattle, Wash.	Jefferson City, Mo.	Atlanta, Ga.
KUJ 1370 100	KWSC 1220 1000	WAGF 1370 250
Walla Walla, Wash.	Pullman, Wash.	Dothan, Ala.
KUMA 1420 100	KWTO 560 5000	WAGM 1420 100
Yuma, Ariz.	Springfield, Mo.	Presque Isle, Me.
KUOA 1260 5000	KWYO 1370 100	WAIM 1200 100
Siloam Springs, Ark.	Sheridan, Wyo.	Anderson, S. C.
KUSD 890 500	KXA 760 250	WAIR 1250 250
Vermillion, S. Dak.	Seattle, Wash.	Winston-Salem, N. C.
KUTA 1500 100	KXL 1420 100	WALA 1380 500
Salt Lake City, Utah	Portland, Ore.	Mobile, Ala.
KVAK 1420 100	KXO 1500 100	WALR 1210 100
Atchison, Kans.	El Centro, Calif.	Zanesville, Ohio
KVCV 1200 100	KXOK 1250 1000	WAML 1310 100
Redding, Calif.	St. Louis, Mo.	Laurel, Miss.
KVEC 1200 100	KXRO 1310 100	WAPI 1140 5000
San Luis Obispo, Cal.	Aberdeen, Wash.	Birmingham, Ala.
KVGB 1370 100	KXYZ 1440 1000	WAPQ 1420 100
Great Bend, Kans.	Houston, Texas	Chatanooga, Tenn.
KVI 570 1000	KYA 1230 1000	WARD 1400 500
Tacoma, Wash.	San Francisco, Calif.	Brooklyn, N. Y.
KVNU 1200 100	KYCA 1500 100	WASH 1270 500
Logan, Utah	Prescott, Ariz.	Grand Rapids, Mich.
KVOA 1260 1000	KYOS 1040 250	WATL 1370 100
Tucson, Ariz.	Merced, Calif.	Atlanta, Ga.
KVOD 920 500	KYSM 1500 100	WATR 1190 100
Denver, Colo.	Mankato, Minn.	Waterbury, Conn.
KVOE 1500 100	KYW 1020 10000	WAVE 940 1000
Santa Ana, Calif.	Philadelphia, Pa.	Louisville, Ky.
KVOL 1310 100	TGQ 1450 200	WAWZ 1350 500
Lafayette, La.	Quezaltenango, Guat.	Zarephath, N. J.
KVOO 1140 25000	TGW 1520 1000	WAYX 1200 100
Tulsa, Okla.	Guatemala City, Guat.	Waycross, Ga.
KVOR 1270 1000	TGX 1400	WAZL 1420 100
Colo. Springs, Colo.	Guatemala City, Guat.	Hazleton, Pa.
KVOS 1200 100	TG1 1310	WBAA 890 500
Bellingham, Wash.	Guatemala City, Guat.	West Lafayette, Ind.
KVOX 1310 100	TIX 650 1000	WBAL 760 2500
Moorhead, Minn.	San Jose, Costa Rica	Baltimore, Md.
KVRS 1370 100	VAS 685 2000	WBAL 1060 10000
Rock Springs, Wyo.	Glance Bay, N.S.	Baltimore, Md.

NORTH AMERICAN B. C. STATIONS BY CALLS

CBA 1050 50000	Sackville, N. B.	CHLT 1210 100	Sherbrooke, P. Q.	CKIC 1010 50	Wolfville, N. S.
CBF 910 50000	Montreal, P. Q.	CHML 1010 100	Hamilton, Ont.	CKLW 1030 5000	Windsor, Ont.
CBJ 1120 100	Chicoutimi, P. Q.	CHNC 610 1000	New Carlisle, Que.	CKMC 1210 50	Cobalt, Ont.
CBK 540 50000	Saskatoon, Sask.	CHNS 930 1000	Halifax, N. S.	CMMO 1410 100	Vancouver, B. C.
CBL 840 50000	Toronto, Ont.	CHRC 580 100	Quebec, P. Q.	CKNX 1200 100	Wingham, Ont.
CBM 1050 5000	Montreal, P. Q.	CHSJ 1120 100	St. John, N. B.	CKOC 1120 500	Hamilton, Ont.
CBO 880 1000	Ottawa, Ont.	CHWK 780 100	Chilliwack, B. C.	CROV 630 100	Kelowna, B. C.
CBR 1100 5000	Vancouver, B. C.	CJAT 910 1000	Trail, B. C.	CKPC 930 100	Brantford, Ont.
CBV 950 1000	Quebec, P. Q.	CJBR 1030 1000	Rimouski, P. Q.	CKPR 580 1000	Fort William, Ont.
CFAC 930 1000	Calgary, Alta.	CJCA 730 1000	Edmonton, Alta.	CKSO 780 1000	Sudbury, Ont.
CFAR 1370 100	Flin Flon, Man.	CJCB 1240 1000	Sydney, N. S.	CKTB 1200 100	St. Catharines, Ont.
CFCF 600 500	Montreal, Que.	CJCJ 690 100	Calgary, Alta.	CKUA 580 500	Edmonton, Alta.
CFCH 930 100	North Bay, Ont.	CJCS 1210 50	Stratford, Ont.	CKWX 1010 100	Vancouver, B. C.
CFCN 1030 10000	Calgary, Alta.	CJCU 1210 50	Aklavik, N. W. T.	CKX 1120 1000	Brandon, Man.
CFCO 630 100	Chatham, Ont.	CJGX 1390 100	Yorkton, Sask.	CKY 910 15000	Winnipeg, Man.
CFCT 1450 500	Victoria, B. C.	CJIC 1500 100	S. Ste. Marie, Ont.	CMAB 1240 200	Pinar del Rio, Cuba
CFCY 630 1000	Charlottetown, P.E.I.	CJKL 1310 100	North Bay, Ont.	CMBC 1140 150	Havana, Cuba
CFGP 1200 100	Grande Prairie, Alta.	CJLS 1310 100	Yarmouth, N. S.	CMBD 550 500	Havana, Cuba
CFJC 880 1000	Kamloops, B. C.	CJOC 950 100	Lethbridge, Alta.	CMBF 1560 5000	Havana, Cuba
CFLC 930 100	Prescott, Ont.	CJOR 600 500	Vancouver, B. C.	CMBG 690 200	Havana, Cuba
CFNB 550 500	Fredericton, N. B.	CJRC 630 1000	Winnipeg, Man.	CMBH 1600 5000	Havana, Cuba
CFOS 1370 100	Owen Sound, Ont.	CJRM 540 1000	Regina, Sask.	CMBL 750 500	Havana, Cuba
CFPL 730 100	London, Ont.	CKAC 730 5000	Montreal, Que.	CMBQ 1320 5000	Havana, Cuba
CFPR 580 50	Prince Rupert, B. C.	CKBI 1210 100	Prince Albert, Sask.	CMBS 1170 150	Havana, Cuba
CFQC 840 1000	Saskatoon, Sask.	CKCA 1420 100	Kenora, Ont.	CMBX 1080 150	Havana, Cuba
CFRB 690 10000	Toronto, Ont.	CKCD 1010 100	Vancouver, B. C.	CMBY 1440 200	Havana, Cuba
CFRC 1510 100	Kingston, Ont.	CKCH 1210 100	Hull, Que.	CMBZ 940 200	Havana, Cuba
CFRN 960 100	Edmonton, Alta.	CKCK 1010 1000	Regina, Sask.	CMC 1530 150	Havana, Cuba
CHAB 1200 100	Moose Jaw, Sask.	CKCL 580 100	Toronto, Ont.	CMCA 1350 200	Havana, Cuba
CHCK 1310 50	Charlottetown, P.E.I.	CKCO 1010 100	Ottawa, Ont.	CMCB 1230 150	Havana, Cuba
CHGB 1200 100	St. Anne, P. Q.	CKCR 1510 100	Waterloo, Ont.	CMCD 630 15000	Havana, Cuba
CHGS 1450 50	Summerside, P.E.I.	CKCV 1310 100	Quebec, Que.	CMCF 810 5000	Havana, Cuba
CHLN 1420 100	Three Rivers, P. Q.	CKCW 1370 100	Moncton, N. B.	CMCG 1290 150	Havana, Cuba
CHLP 1120 100	Montreal, Que.	CKFC 1410 50	Vancouver, B. C.	CMCJ 1110 200	Havana, Cuba
		CKGB 1420 100	North Bay, Ont.	CMCK 970 5000	Havana, Cuba

NORTH AMERICAN B. C. STATIONS BY CALLS

	CMCL 730	10000		CMJX 740	200		KARK 890	500
	Havana, Cuba			Camaguey, Cuba			Little Rock, Ark.	
	CMCM 850	250		CMK 720	250		KARM 1310	100
	Havana, Cuba			Havana, Cuba			Fresno, Calif.	
	CMCO 1200	150		CMKC 1250	150		KASA 1210	100
	Havana, Cuba			Santiago, Cuba			Elk City, Okla.	
	CMCP 1050	100		CMKD 910	1000		KAST 1370	100
	Havana, Cuba			Santiago, Cuba			Astoria, Ore.	
	CMCQ 1410	5000		CMKF 1460	250		KATE 1420	250
	Havana, Cuba			Holguin, Cuba			Albert Lea, Minn.	
	CMCR 660	150		CMKG 1150	100		KAWM 1500	100
	Havana, Cuba			Santiago, Cuba			Gallup, N. Mex.	
	CMCU 780	150		CMKL 950	200		KBX 1500	100
	Havana, Cuba			Havamo, Cuba			Muskogee, Okla.	
	CMCW 1380	150		CMKM 1080	100		KBKR 1500	100
	Havana, Cuba			Manzanillo, Cuba			Baker, Ore.	
	CMCX 1470	150		CMKO 1280	200		KBND 1310	100
	Havana, Cuba			Holguin, Cuba			Bend, Ore.	
	CMCY 570	15000		CMKQ 1490	200		KBPS 1420	100
	Havana, Cuba			Santiago, Cuba			Portland, Ore.	
	CMGC 1400	200		CMKR 1400	250		KBST 1500	100
	Matanzas, Cuba			Santiago, Cuba			Big Spring, Texas	
	CMGE 1370	200		CMKS 710	200		KBTM 1200	100
	Cardenas, Cuba			Guantanamo, Cuba			Jonesboro, Ark.	
	CMGF 1120	200		CMKW 750	200		KCKN 1310	100
	Matanzas, Cuba			Santiago, Cuba			Kansas City, Kans.	
	CMGH 790	200		CMKX 1190	75		KCMC 1420	100
	Matanzas, Cuba			Santiago, Cuba			Texarkana, Texas	
	CMHA 1090	200		CMKZ 1430	125		KCMO 1370	100
	Sagua la Grande, Cuba			Palma Soriano, Cuba			Kansas City, Mo.	
	CMHB 1240	200		CMOA 910	250		KCRC 1360	250
	Sancti Spiritus, Cuba			Havana, Cuba			Enid, Okla.	
	CMHD 1270	250		CMOX 1500	200		KCRJ 1310	100
	Caibarien, Cuba			Havana, Cuba			Jerome, Ariz.	
	CMHI 1060	250		CMQ 1010	25000		KDAL 1500	100
	Santa Clara, Cuba			Havana, Cuba			Duluth, Minn.	
	CMHJ 1160	100		CMW 880	1400		KDB 1500	100
	Cienfuegos, Cuba			Havana, Cuba			Santa Barbara, Calif.	
	CMHK 1210	250		CMX 1260	200		KDFN 1440	500
	Cruces, Cuba			Havana, Cuba			Casper, Wyo.	
	CMHM 1450	500		CM9RT 1580	200		KDKA 980	50000
	Cienfuegos, Cuba			Guines, Cuba			Pittsburgh, Pa.	
	CMHP 1100	200		CRCY 960	100		KDLR 1210	100
	Placetes, Cuba			Toronto, Ont.			Devils Lake, N. D.	
	CMHT 920	200		FQN 609	250		KDNC 1200	100
	Trinidad, Cuba			St. Pierre, Miquelon			Lewistown, Mont.	
	CMHW 680	200		HIN 1090	740		KDNT 1420	100
	Santa Clara, Cuba			Ciudad Trujillo, D.R.			Denton, Texas	
	CMHX 1480	120		HIT 1050	50		KDON 1210	100
	Cienfuegos, Cuba			Ciudad Trujillo, D.R.			Monterey, Calif.	
	CMJA 860	250		HIX 800	800		KDTH 1340	500
	Camaguey, Cuba			Ciudad Trujillo, D.R.			Dubuque, Iowa	
	CMJC 1390	200		HP50 1440	....		KDYL 1290	1000
	Camaguey, Cuba			Panama City, Panama			Salt Lake City, Utah	
	CMJE 1230	200		HRN 1250	50		KECA 1430	1000
	Camaguey, Cuba			Tegucigalpa, Hon.			Los Angeles, Calif.	
	CMJF 930	200		KABC 1420	100		KEEN 1370	100
	Camaguey, Cuba			San Antonio, Texas			Seattle, Wash.	
	CMJH 1360	200		KABR 1390	500		KEHE 780	1000
	Ciego de Avila, Cuba			Aberdeen, S. Dak.			Los Angeles, Calif.	
	CMJI 1130	200		KADA 1200	100		KELA 1440	500
	Ciego de Avila, Cuba			Ada, Okla.			Centralia, Wash.	
	CMJK 1290	200		KALB 1210	100		KELD 1370	100
	Camaguey, Cuba			Alexandria, La.			El Dorado, Ark.	
	CMJO 1260	200		KALE 1300	1000		KELO 1200	100
	Ciego de Avila, Cuba			Portland, Ore			Sioux Falls, S. Dak.	
	CMJP 1420	200		KAND 1310	100		KERN 1370	100
	Camaguey, Cuba			Corsicana, Texas			Bakersfield, Calif.	
	CMJW 1070	200		KANS 1210	100		KEUB 1420	100
	Camaguey, Cuba			Wichita, Kans			Price, Utah	

NORTH AMERICAN B. C. STATIONS BY CALLS

KEX 1180 5000 Portland, Ore.	KFUV 550 500 St. Louis, Mo.	KGIW 1420 100 Alamosa, Colo.
KFAB 770 10000 Lincoln, Neb.	KFVD 1000 1000 Los Angeles, Calif.	KGKB 1500 100 Tyler, Texas
KFAC 1300 1000 Los Angeles, Calif.	KFVS 1210 100 Cape Girardeau, Mo.	KGKL 1370 100 San Angelo, Texas
KFAM 1420 100 St. Cloud, Minn.	KFWB 950 1000 Los Angeles, Calif.	KGKO 570 1000 Fort Worth, Texas
KFAR 610 1000 Fairbanks, Alaska	KFXD 1200 100 Nampa, Idaho	KGKY 1500 100 Scottsbluff, Neb.
KFBB 1280 1000 Great Falls, Mont.	KFXJ 1200 100 Grand Junction, Colo.	KGLO 1210 100 Mason City, Iowa
KFBI 1050 5000 Abilene, Kans.	KFXM 1210 100 San Bernardino, Calif.	KGLU 1420 100 Safford, Ariz.
KFBK 1490 10000 Sacramento, Calif.	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.	KGBX 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.
KFIO 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.	KGX 1210 100 Olympia, Wash.
KFJB 1200 100 Marshalltown, Iowa	KGCC 1450 1000 Wolf Point, Mont.	KHBC 1400 250 Filo, T. H.
KFJJ 1210 100 Klamath Falls, Ore.	KGDE 1200 100 Fergus Falls, Minn.	KHBB 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	KGEK 1200 100 Sterling, Colo.	KHO 590 1000 Spokane, Wash.
KFKA 880 500 Greeley, Colo.	KGER 1360 1000 Long Beach, Calif.	KHSL 1260 250 Chico, Calif.
KFKU 1220 1000 Lawrence, Kans.	KGEZ 1310 100 Kalispell, Mont.	KHUB 1310 250 Watsonville, Calif.
KFNF 890 500 Shenandoah, Iowa	KGFF 1420 100 Shawnee, Okla.	KICA 1370 100 Clovis, N. M.
KFOR 1210 100 Lincoln, Neb.	KGFI 1500 100 Brownsville, Tex.	KID 1320 500 Idaho Falls, Idaho
KFOX 1250 1000 Long Beach, Calif.	KGFJ 1200 100 Los Angeles, Calif.	KIDO 1350 1000 Boise, Idaho
KFPL 1310 100 Dublin, Texas	KGFL 1370 100 Roswell, N. Mex.	KIDW 1420 100 Lamar, Colo.
KFPW 1210 100 Fort Smith, Ark.	KGFW 1310 100 Kearney, Neb.	KIEM 1450 500 Eureka, Calif.
KFPY 890 1000 Spokane, Wash.	KGFX 630 200 Pierre, S. D.	KIEV 850 250 Glendale, Calif.
KFQD 780 250 Anchorage, Alaska	KGGF 1010 1000 Coffeyville, Kans.	KINY 1430 250 Juneau, Alaska
KFRC 610 1000 San Francisco, Calif.	KGGM 1230 1000 Albuquerque, N. M.	KIRO 710 1000 Seattle, Wash.
KFRO 1370 250 Longview, Texas	KGHF 1320 500 Pueblo, Colo.	KIT 1250 250 Yakima, Wash.
KFRU 630 500 Columbia, Mo.	KGHI 1200 100 Little Rock, Ark.	KITE 1530 1000 Kansas City, Mo.
KFSD 600 1000 San Diego, Calif.	KGHL 780 1000 Billings, Mont.	KIUL 1210 100 Garden City, Kans.
KFSG 1120 500 Los Angeles, Calif.	KGIR 1340 1000 Butte, Mont.	KIUN 1420 100 Pecos, Texas

NORTH AMERICAN B. C. STATIONS BY CALLS

KIUP 1370	100	KOH 1380	500	KRKD 1120	500
Dunrago, 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.		Lewiston, Idaho	
KLAH 1210	100	KOKO 1370	100	KRLD 1040	10000
Calsbad, N. Mex.		La Junta, Colo.		Dallas, Texas	
KLBM 1420	100	KOL 1270	1000	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	KRRR 1500	100
Minot, N. D.		Seattle, Wash.		Roseburg, Ore.	
KLRA 1390	1000	KONO 1370	100	KRNT 1320	1000
Little Rock, Ark.		San Antonio, Texas		Des Moines, Iowa	
KLS 1280	250	KOOS 1200	190	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	1000	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.		Hunsville, Texas	
KMMJ 740	1000	KPLT 1500	250	KSAN 1420	100
Clay Center, Neb.		Paris, Texas		San Francisco, Calif.	
KMO 1330	1000	KPMC 1550	1000	KSCJ 1330	1000
Tacoma, Wash.		Bakersfield, 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	KPO 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	1000	KSO 1430	500
Austin, Texas		Pittsburgh, Pa.		Des Moines, Iowa	
KNX 1050	50000	KQW 1010	1000	KSOO 1110	5000
Los Angeles, Calif.		San Jose, Calif.		Sioux Falls, S. Dak.	
KOA 830	50000	KRBA 1310	100	KSRO 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	100	KSUN 1290	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 LOCATIONS

TGX 1400
 TG1 1310
 Quezaltenango
 TGO 1450 200

HONDURAS

Tegucigalpa
 HRN 1250 50

MEXICO**AGUASCALIENTES**

Aguascalientes
 XEBI 1000 25

BAJACALIFORNIA

Mexicali
 XEAA 750 200
 XEAO 660 250
 XECL 960 1000

Tijuana
 XEAC 980 1000
 XEBG 820 1000
 XEC 1150 100
 XELO 670 10000
 XEMO 860 5000

CHIHUAHUA

Chihuahua
 XEBU 1240 50
 XEFI 1440 250

Juarez
 XEF 1450 100
 XEFV 1210 50
 XEJ 1020 1000
 XEP 1160 500

Parral
 XEAT 1210 250

COAHUILA

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

D. F.

Gral. Anaya
 XEDA 1220 200

Mexico City
 XEAI 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
 XERC 870 500
 XEW 890 100000
 XEXX 1170 1000

DURANGO

Durango
 XEBP 1150 250
 XEE 1210 50

GUANAJUATO

Irapuato
 XEBO 1310 25

Leon
 XEKL 1240 500

JALISCO

Guadalajara
 XED 1160 2500

Guzman
 XEBA 1080 20

MEXICO

Texcoco
 XEXE 1270 17

MICHOACAN

Morelia
 XEI 1370 125

NUEVO LEON

Monterrey
 XEFB 870 200
 XEG 1230 250
 XEH 720 250
 XET 690 5000
 XEX 1310 125

PUEBLA

Puebla
 XETH 1210 100

SAN LUIS POTOSI

San Luis Potosi
 XECZ 1370 100

SINALOA

Mazatlan
 XEBL 1220 50

SONORA

Cananea
 XEFQ 1010 50

Guaymas
 XEDR 1490 100

Hermosillo
 XEBH 930 500

Nogales
 XEAF 990 750

Obregon
 XEAP 1340 50

Guaymas
 XEDR 1490 100

TAMAULIPAS

Matamoros
 XEAM 750 25

Nuevo Laredo

XEBK 1080 100
 XEDF 810 100
 XEFE 980 250
 XENT 910 150000

Reynosa
 XEAW 960 100000

Tampico
 XECA 1230 250
 XEFW 1310 300
 XES 990 250

VERACRUZ

Cordoba
 XEAG 1310 10

Jalapa
 XEXB 1270 250
 XEXD 1340 350

Minatitlan
 XEDW 1150 20

Veracruz
 XETF 1220 12
 XEU 1010 250

YUCATAN

Merida
 XEFC 1340 100
 XEME 1240 50
 XEZ 630 500

MIQUELON

St. Pierre
 FQN 609 250

NEWFOUNDLAND

St. John's
 VOAC 1065 40
 VOVM 1006 200
 VOGY 840 400
 VONF 1195 500
 VOWR 681 500

B. A. J., Wheelersburg, Ohio: I have a Zenith 1201A which does not separate stations very well. Would a wave trap help? The radio seems to spread out to take in several stations and none seem very clear.

Answer: Any high-fidelity set has broad tuning to permit the full range of audio vibrations to pass through. On crowded channels this means that two or more stations may be heard at the same time. However, your local-distance switch should take care of this by making the set more sen-

sitive when on "distance". If the broadness persists a good alignment job in the tuning circuit by your service man will help. Wave traps will cut out one interfering station, usually a local. They are valuable. Perhaps new i-f transformers, such as Meissner, can be installed by your serviceman, and they will help greatly toward making sharp tuning on the congested bands. But you have a good set, and a complete overhauling should be all that is necessary.

NORTH AMERICAN B. C. STATIONS BY CALLS

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 1213 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	Day City, Mich.	WCBM 1370 100	Baltimore, Md.	WDOD 1280 1000	Chattanooga, Tenn.
WBEN 900 1000	Buffalo, N. Y.	WCBS 1420 100	Springfield, Ill.	WDRS 1330 1000	Hartford, Conn.
WBEO 1310 100	Marquette, Mich.	WCCO 810 50000	Minneapolis, Minn.	WDSM 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.	WDZ 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	Meriden, Miss.	WEED 1420 100	Rocky Mount, N. C.
WBRB 1210 100	Red Bank, N. J.	WCOL 1210 100	Columbus, Ohio	WEEI 590 1000	Boston, Mass.
WBRC 930 1000	Birmingham, Ala.	WCOP 1120 500	Boston, Mass.	WEEU 830 1000	Reading, Pa.
WBRE 1310 100	Wilkes-Barre, Pa.	WCOS 1370 100	Columbia, S. C.	WELI 900 500	New Haven, Conn.
WBK 1310 100	Pittsfield, Mass.	WCOU 1210 100	Lewiston, Maine	WELL 1420 100	Battle Creek, Mich.
WBRY 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.
WBTM 1370 100	Danville, Va.	WCRW 1210 100	Chicago, Ill.	WENY 1200 250	Elmira, N. Y.
WBZ 990 50000	Boston, Mass.	WCSC 1360 500	Charleston, S. C.	WEOA 1370 100	Evansville, Ind.
WBZA 990 1000	Springfield, Mass.	WCSH 940 1000	Portland, Me.	WESG 850 1000	Elmira, N. Y.
WCAD 1220 500	Canton, N. Y.	WDAE 1220 1000	Tampa, Fla.	WEST 1200 100	Easton, Pa.
WCAE 1220 1000	Pittsburgh, Pa.	WDAF 610 1000	Kansas City, Mo.	WEVD 1300 1000	New York, N. Y.
WCAL 760 1000	Northfield, Minn.	WDAH 1310 100	El Paso, Texas	WEW 760 1000	St. Louis, Mo.
WCAM 1280 500	Camden, N. J.	WDAN 1500 250	Danville, Ill.	WEXL 1310 50	Royal Oak, Mich.
WCAO 600 1000	Baltimore, Md.	WDAS 1370 100	Philadelphia, Pa.	WFAA 800 50000	Dallas, Texas

NORTH AMERICAN B. C. STATIONS BY CALLS

WFAB 1300	1000	WGR 550	1000	WHLS 1370	250
New York, N. Y.		Buffalo, N. Y.		Port Huron, Mich.	
WFAM 1200	100	WGRC 1370	250	WHMA 1420	100
South Bend, Ind.		New Albany, Ind.		Anniston, Ala.	
WFAS 1210	100	WGRM 1210	100	WHN 1010	1000
White Plains, N. Y.		Grenada, Miss.		New York, N. Y.	
WFBC 1300	1000	WGST 890	1000	WHO 1000	50000
Greenville, S. C.		Atlanta, Ga.		Des Moines, Iowa	
WFBG 1310	100	WGTM 1310	100	WHOM 1450	250
Altoona, Pa.		Wilson, N. C.		Jersey City, N. J.	
WFBL 1360	1000	WGY 790	50000	WHP 1430	500
Syracuse, N. Y.		Schenectady, N. Y.		Harrisburg, Pa.	
WFBM 1230	1000	WHA 940	5000	WIBA 1280	1000
Indianapolis, Ind.		Madison, Wis.		Madison, Wis.	
WFBR 1270	500	WHAI 1210	250	WIBC 1050	1000
Baltimore, Md.		Greenfield, Mass.		Indianapolis, Ind.	
WFDF 1310	100	WHAL 950	500	WIBG 970	100
Flint, Mich.		Saginaw, Mich.		Glenside, Pa.	
WFEA 1340	500	WHAM 1150	50000	WIBM 1370	100
Manchester, N. H.		Rochester, N. Y.		Jackson, Mich.	
WFIL 560	1000	WHAS 820	50000	WIBU 1210	100
Philadelphia, Pa.		Louisville, Ky.		Poynette, Wis.	
WFLA 620	1000	WHAT 1310	100	WIBW 580	1000
Tampa, Fla.		Philadelphia, Pa.		Topeka, Kans.	
WFMD 900	500	WHAZ 1300	1000	WIBX 1200	100
Frederick, Md.		Troy, N. Y.		Utica, N. Y.	
WFMJ 1420	100	WHE 860	1000	WICA 940	250
Youngstown, Ohio		Kansas City, Mo.		Ashtabula, Ohio	
WFNC 1340	250	WHBB 1500	100	WICC 600	500
Fayetteville, N. C.		Selma, Ala.		Bridgeport, Conn.	
WFOR 1370	100	WHBC 1200	100	WIL 1200	100
Hattiesburg, Miss.		Canton, Ohio		St. Louis, Mo.	
WFOY 1210	100	WHBF 1210	100	WILL 580	1000
St. Augustine, Fla.		Rock Island, Ill.		Urbana, Ill.	
WFTC 1200	100	WHBI 1250	1000	WILM 1420	100
Kinston, N. C.		Newark, N. J.		Wilmington, Del.	
WGAL 1500	100	WHBL 1300	250	WIND 560	1000
Lancaster, Pa.		Sheboygan, Wis.		Gary, Ind.	
WGAN 640	500	WHBQ 1370	100	WINS 1180	1000
Portland, Me.		Memphis, Tenn.		New York, N. Y.	
WGAR 1450	500	WHBU 1210	100	WIOD 610	1000
Cleveland, Ohio		Anderson, Ind.		Miami, Fla.	
WGAU 1310	100	WHBY 1200	100	WIP 610	1000
Athens, Ga.		Green Bay, Wis.		Philadelphia, Pa.	
WGBB 1210	100	WHDF 1370	100	WIRE 1400	1000
Freeport, N. Y.		Calumet, Mich.		Indianapolis, Ind.	
WGBF 630	500	WHDH 830	1000	WIS 560	1000
Evansville, Ind.		Boston, Mass.		Columbia, S. C.	
WGBI 880	500	WHDL 1400	250	WISN 1120	250
Scranton, Pa.		Olean, N. Y.		Milwaukee, Wis.	
WGCM 1210	100	WHEB 740	250	WJAC 1310	100
Gulfport, Miss.		Portsmouth, N. H.		Johnstown, Pa.	
WGES 1360	500	WHEC 1430	500	WJAG 1060	1000
Chicago, Ill.		Rochester, N. Y.		Norfolk, Neb.	
WGH 1310	100	WHFC 1420	100	WJAR 890	1000
Newport News, Va.		Cicero, Ill.		Providence, R. I.	
WGIL 1500	250	WHIO 1260	1000	WJAS 1290	1000
Galesburg, Ill.		Dayton, Ohio		Pittsburgh, Pa.	
WGL 1370	100	WHIP 1480	5000	WJAX 900	1000
Fort Wayne, Ind.		Hammond, Ind.		Jacksonville, Fla.	
WGKV 1500	100	WHIS 1410	500	WJBC 1200	100
Charleston, W. Va.		Bluefield, W. Va.		Bloomington, Ill.	
WGN 720	50000	WHJB 620	250	WJBK 1500	100
Chicago, Ill.		Greensburg, Pa.		Detroit, Mich.	
WGNC 1420	100	WHK 1390	1000	WJBL 1200	100
Castonia, N. C.		Cleveland, Ohio		Decatur, Ill.	
WGNV 1210	100	WHKC 640	500	WJBO 1120	500
Newburgh, N. Y.		Columbus, Ohio		Baton Rouge, La.	
WGPC 1420	100	WHLB 1370	100	WJBW 1200	100
Albany, Ga.		Virginia, Minn.		New Orleans, La.	

NORTH AMERICAN B. C. STATIONS BY CALLS

WJBY 1210 100	WJDX 1270 1000	WJEJ 1210 100	WJHL 1200 100	WJHP 1290 250	WJIM 1210 100	WJLD 1130 20000	WJLS 1210 100	WJMC 1210 250	WJMS 1420 100	WJNO 1200 100	WJR 750 50000	WJRD 1200 250	WJSV 1460 10000	WJTN 1210 100	WJW 1216 100	WJZ 760 50900	WKAQ 1240 1000	WKAR 850 1000	WKAT 1500 100	WKBB 1500 100	WKBH 1380 1000	WKBN 570 500	WKBO 1200 100	WKBV 1500 100	WKBW 1480 5000	WKBZ 1500 100	WKEU 1500 100	WKOK 1210 100	WKRC 550 1000	WKST 1250 250	WKY 900 1000	WKZO 590 1000	WLAC 1470 5000	WLAK 1310 100	WLAP 1420 100	WLAW 680 1000	WLB 760 1000	WLBC 1310 100	WLBL 900 5000	WLBZ 620 500	WLEU 1420 100	WLLH 1370 100	WLLH 1370 100	WLNH 1310 100	WLS 870 50000	WLTH 1400 500	WLVA 1200 100	WLW 700 500000	WMA 630 250	WMAQ 670 50000	WMAZ 1420 100	WMAZ 1180 1000	WMBC 1420 100	WMBD 1440 1000	WMBF 610 1000	WMBG 1350 500	WMBH 1420 100	WMBI 1080 5000	WMO 1310 100	WMBR 1370 100	WMBS 1420 100	WMC 780 1000	WMCA 570 1000	WMEX 1500 100	WMFD 1370 100	WMFF 1310 100	WMFG 1210 100	WMFJ 1420 100	WMFO 1370 100	WMFR 1200 100	WMIN 1370 100	WMMN 890 500	WMPC 1200 100	WMPS 1430 500	WMRO 1250 250	WMSC 1420 100	WMT 600 1000	WMAC 1230 1000	WNAD 1010 1000	WNAX 570 1000	WNBC 1380 250	WNBF 1500 100	WNBH 1310 100	WNBX 1260 500	WNZ 1290 100	WNEL 1290 1000	WNEW 1250 1000	WNLC 1500 100	WNOX 1010 1000	WNYC 810 1000	WOAI 1190 50000	WOC 1370 100	WOI 640 5000	WOKO 1430 500	WOL 1230 1000	WOLS 1200 100	WOMI 1500 100	WOMT 1210 100	WOOD 1270 500	WOPI 1500 100	WOR 710 50000	WORC 1280 500	WORK 1320 1000	
Gadsden, Ala.	Jackson, Miss.	Hagerstown, Md.	Jacksonville, Fla.	Johnson City, Tenn.	Lansing, Mich.	Chicago, Ill.	Beckley, W. Va.	Rice Lake, Wis.	Ironwood, Mich.	W. Palm Beach, Fla.	Detroit, Mich.	Tuscaloosa, Ala.	Washington, D. C.	Jamestown, N. Y.	Akron, Ohio	New York, N. Y.	San Juan, P. R.	East Lansing, Mich.	Miami Beach, Fla.	East Dubuque, Ill.	LaCrosse, Wis.	Youngstown, Ohio	Harrisburg, Pa.	Richmond, Ind.	Buffalo, N. Y.	Muskegon, Mich.	Griffin, Ga.	Sunbury, Pa.	Cincinnati, Ohio	New Castle, Pa.	Oklahoma City, Okla.	Kalamazoo, Mich.	Nashville, Tenn.	Lakeland, Fla.	Lexington, Ky.	Lawrence, Mass.	Minneapolis, Minn.	Muncie, Ind.	Stevens Point, Wis.	Bangor, Me.	Erie, Pa.	Lawrence, Mass.	Lowell, Mass.	Laconia, N. H.	Chicago, Ill.	New York, N. Y.	Lynchburg, Va.	Cincinnati, Ohio	Washington, D. C.	Chicago, Ill.	Springfield, Mass.	Macon, Ga.	Detroit, Mich.	Peoria, Ill.	Miami, Fla.	Richmond, Va.	Joplin, Mo.	Chicago, Ill.	Auburn, N. Y.	Jacksonville, Fla.	Uniontown, Pa.	Memphis, Tenn.	New York, N. Y.	Boston, Mass.	Wilmington, N. C.	Plattsburg, N. Y.	Hibbing, Minn.	Dayton Beach, Fla.	Decatur, Ala.	High Point, N. C.	St. Paul, Minn.	Fairmont, W. Va.	Lapeer, Mich.	Memphis, Tenn.	Aurora, Ill.	Muscle Shoals C., Ala.	Cedar Rapids, Iowa	Boston, Mass.	Norman, Okla.	Yankton, S. D.	New Britain, Conn.	Binghamton, N. Y.	New Bedford, Mass.	Springfield, Vt.	Saranac Lake, N. Y.	San Juan, P. R.	New York, N. Y.	New London, Conn.	Knoxville, Tenn.	New York, N. Y.	San Antonio, Texas	Davenport, Iowa	Cape Cod, Mass.	Ames, Iowa	Albany, N. Y.	Washington, D. C.	Florence, S. C.	Owensboro, Ky.	Manitowoc, Wis.	Grand Rapids, Mich.	Bristol, Tenn.	Newark, N. J.	Worcester, Mass.	York, Pa.

NORTH AMERICAN B. C. STATIONS BY CALLS

WORL 920	500	WROK 1410	500	WWSV 1370	50
Boston, Mass.		Rockford, Ill.		Buffalo, N. Y.	
WOSU 570	750	WROL 1310	100	WSYB 1500	100
Columbus, Ohio		Knoxville, Tenn.		Rutland, 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.		Quincy, 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.		Savanah, Ga.		Cumberland, Md.	
WPRA 1370	100	WSAY 1210	100	WTM 1250	1000
Mayaguez, 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
Scranton, Pa.		Montgomery, Ala.		Charleston, S. C.	
WQBC 1360	1000	WSGN 1310	100	WTMJ 620	1000
Vicksburg, Miss.		Birmingham, Ala.		Milwaukee, Wis.	
WQDM 1390	1000	WSIX 1210	100	WTMV 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	5000
Augusta, Me.		Spartanburg, S. C.		Detroit, Mich.	
WRDW 1500	100	WSPD 1340	1000	WWL 850	10000
Augusta, Ga.		Toledo, Ohio		New Orleans, La.	
WREC 600	1000	WSPR 1140	500	WWNC 570	1000
Memphis, Tenn.		Springfield, Mass.		Asheville, N. C.	
WREN 1220	1000	WSTP 1500	100	WWRL 1500	100
Lawrence, Kans.		Salisbury, N. C.		Woodside, N. Y.	
WRGA 1500	100	WSUI 880	500	WWSW 1500	100
Rome, Ga.		Iowa City, Iowa		Pittsburgh, Pa.	
WRJN 1370	100	WSUN 620	1000	WWVA 1160	5000
Racine, Wis.		St. Petersburg, Fla.		Wheeling, W. Va.	
WRNL 880	500	WSVA 550	500	WXYZ 1240	1000
Richmond, Va.		Harrisonburg, Va.		Detroit, Mich.	

NORTH AMERICAN B. C. STATIONS BY CALLS

W3XDD ...	50000	XECA 1230	250	XELO 670	100000
Whippany, N. J.		Tampico, Tam.		Tijuana, B. Cfa.	
W3XJ 1060	100	XECL 960	1000	XELZ 1370	100
College Park, Md.		Mexicali, B. Cfa.		Mexico City, D. F.	
XEAA 750	200	XECZ 1370	100	XEME 1240	50
Mexicali, B. C.		San Luis Potosi, S.L.P.		Merida, Yuc.	
XEAC 980	1000	XED 1160	2500	XEMO 860	5000
Tijuana, L. C.		Guadalajara, Jal.		Tijuana, L. C.	
XEAF 990	750	XEDA 1220	200	XEMU 580	250
Nogales, Son.		Gral. Anaya, D. F.		Piedras Negras, Coah.	
XEAG 1310	10	XEDF 810	100	XEMX 1280	100
Cordoba, Ver.		Nuevo Laredo, Tams.		XEMX City, D. F.	
XEAI 1250	500	XEDH 1340	200	XEN 780	1000
Mexico City, D. F.		Villa Acuna, Coah.		Mexico City, D. F.	
XEAL 660	1000	XEDP 1080	500	XENT 910	150000
Mexico City, D. F.		XEDR 1490	100	Nuevo Laredo, Tams.	
XEAM 750	25	XEDW 1150	20	XEP 1160	500
Matamoros, Tams.		Minatitlan, Ver.		Juarez, Chih.	
XEAO 660	250	XEE 1210	50	XEPN 730	100000
Mexicali, B. C.		Durango, Dgo.		Piedras Negras, Coah.	
XEAP 1340	50	XEF 1450	100	XEQ 710	50000
Obregon, Son.		Juarez, Chih.		Mexico City, D. F.	
XEAS 1160	100	XEFB 870	200	XERA 840	250000
Saltillo, Coah.		Monterrey, N. L.		Villa Acuna, Coah.	
XEAT 1210	250	XEFC 1340	100	XERB 730	100000
Parral, Chih.		Merida, Yuc.		Rosarito Beach, B.Cfa.	
XEAW 960	100000	XEFE 980	250	XERIC 870	500
Reynosa, Tams.		Nuevo Laredo, Tams.		Mexico City, D. F.	
XEB 1030	10000	XEFI 1440	250	XES 990	250
Mexico City, D. F.		Chihuahua, Chih.		Tampico, Tams.	
XEBA 1080	20	XEFO 940	5000	XET 690	5000
Guzman, Jal.		Mexico City, D. F.		Monterrey, N. L.	
XEBG 820	1000	XEFQ 1010	50	XETB 1310	500
Tijuana, B. Cfa.		Cananea, Son.		Torreón, Coah.	
XEBH 930	500	XEFV 1210	50	XETH 1210	100
Hermosillo, Sonora		Juarez, Chih.		Puebla, Pue.	
XEBI 1000	25	XEFW 1310	300	XEU 1010	250
Aguascalientes, Ags.		Tampico, Tams.		Veracruz, Ver.	
XEBK 1080	100	XEG 1230	250	XEW 890	100000
Neuvo Laredo, Tams.		Monterrey, N. L.		Mexico City, D. F.	
XEBL 1220	50	XEH 720	250	XEX 1310	125
Mazatlan, Sin.		Monterrey, N. L.		Monterrey, N. L.	
XEBO 1310	25	XEI 1370	125	XEXB 1270	250
Irapuato, Guan.		Morelia, Mich.		Jalapa, Ver.	
XEBP 1150	250	XEJ 1020	1000	XEXD 1340	350
Durango, Dgo.		Juarez, Chih.		Jalapa, Ver.	
XEBS 1340	200	XEJP 1130	100	XEXE 1270	17
Mexico City, D. F.		Mexico City, D. F.		Texcoco, Mex.	
XEBU 1240	50	XEK 990	100	XEXX 1170	1000
Chihuahua, Chih.		Mexico City, D. F.		Mexico City, D. F.	
XEBX 640	250	XEKL 1240	500	XEZ 630	500
Sabinas, Coah.		Leon, Guan.		Merida, Yuc.	
XEBZ 810	100	XEL 1150	250	YSS 640	500
Mexico City, D. F.		Mexico City, D. F.		San Salvador, E. S.	
XEC 1150	100			ZNS 540	400
Tijuana, L. C.				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

25c

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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 on these pages every month until completed.

The abbreviations used throughout this list are familiar to all our readers, except perhaps "CP" for Construction Permit, "LS" for Local Sunset, and "ss" for sunset.

- KOAC, Corvallis, Ore., 550 kcs., 1000 w. unlt. Non-commercial station. *Aerial*: 2 towers, 120 ft. *Manager*: Luke L. Roberts. *Licensee*: State Agricultural College.
- KOAM, Pittsburg, Kans., 790 kcs., 100 w. days. *Network*: NBC. *Aerial*: vertical, 275 ft. *Manager*: Ed Cunniff. *Licensee*: Pittsburg Broadcasting Co., Inc., 404 Commerce Bldg.
- KOB, Albuquerque, N. Mex., 1180 kcs., 10,000 watts; shares time at night with KEX. Has special authorization to work unlt. hours, with directional aerial at night. *Network*: NBC. *Manager*: T. M. Pepperday. *Licensee*: Albuquerque Broadcasting Co., 424 W. Gold Ave.
- KOBH, Rapid City, S. Dak., 1370 kcs., 100 w. nights, 250 w. to LS., unlt. *Aerial*: vertical, 168 ft. *Manager*: Robert J. Dean. *Licensee*: Black Hills Broadcast Co., Alex Johnson Hotel.
- KOCA, Kilgore, Texas, 1210 kcs., 100 w. nights, 250 w. to LS, unlt. *Aerial*: vertical, 186 ft. *Manager*: H. A. Degner. *Licensee*: Oil Capital Broadcasting Ass'n., Kilgore Hotel.
- KOCY, Oklahoma City, Okla., 1310 kcs., 100 w. nights, 250 w. to LS, unlt. *Licensee*: Plaza Court Broadcasting Co.
- KOH, Reno, Nevada, 1380kcs., 500 w. unlt. *Network*: CBS. *Aerial*: 2 towers, 125 ft. *Managers* Wallie D. Warren. *Licensee*: The Bee, Inc., 440 N. Virginia St.
- KOIL, Omaha, Nebr., 1260 kcs., 1000 w. nights, 5 kw to LS, unlt. *Networks*: NBC Blue and MBS. *Transmitter*: near Council Bluffs, Iowa. *Aerial*: vertical, 310 ft. *Manager*: Don Searle, *Licensee*: Central States Broadcasting Co., Omaha National Bank Bldg.
- KOIN, Portland, Ore., 940 kcs., 1000 w. nights, 5 kw to LS, unlt. *Network*: CBS. *Transmitter*: Sylvan. *Aerial*: vertical, 540 ft. *Manager*: C. Roy Hunt. *Licensee*: KOIN, Inc., New Heathman Hotel.
- KOKO, La Junta, Colo., 1370 kcs., 100 w. unlt. *Aerial*: vertical, 203 ft. *Owner*: Leonard E. Wilson. *Licensee*: Southwest Broadcasting Co.
- KOL, Seattle, Wash., 1270 kcs., 1000 w. nights, 5 kw. to LS, unlt. *Network*: MBS. *Trans*: 1110 W. Florida St. *Aerial*: vertical, 370 ft. *Time*: PST. *Verifies*: for postage. *Manager*: Elmer D. Pederson. *Licensee*: Seattle Broadcasting Co., Inc., Northern Life Tower.
- KOMA, Oklahoma City, Okla., 1480 kcs., 5000 w. unlt. *Network*: CBS. *Trans*: Postal Route 66. *Aerial*: vertical, 196 ft. *Time*: CST. *Verifies*: for postage. *Manager*: Neal Barrett. *Licensee*: Hearst Radio, Inc., Biltmore Hotel.
- KOME, Tulsa, Okla, 1310 kcs., 250 w. days. (UNDER CONSTRUCTION). *Licensee*: Harry Schwartz.
- KOMO, Seattle, Wash., 920 kcs., 1000 w. nights, 5 kw. to LS, unlt. *Networks*: NBC Red and North West Triangle. *Trans*: 2600 - 26th Ave., S. W. *Aerial*: vertical, 570 ft. *Time*: PST. *Veries*: for postage. *Manager*: Birt F. Fisher. *Licensee*: Fishers Blend Station, Inc., Skinner Bldg.
- KONO, San Antonio, Texas, 1370 kcs., 100 w., shared time with KMAC. *Trans*: 317 Arden Grove. *Aerial*: vertical, 154 ft. *Permits*: CP for 250 w. to LS. *Time*: CST. *Veries*: for postage. *Manager*: Eugene J. Roth. *Licensee*: Mission Broadcasting Co., Milam Bldg.
- KOOS, Marshfield, Ore., 1200 kcs., 100 w. nights, 250 w. to LS, unlt. *Aerial*: Vertical, 160 ft. *Time*: PST. *Veries*: for postage. *Manager*: Walter L. Reed. *Licensee*: KOOS, Inc., Hall Bldg.
- KORE, Eugene, Ore., 1420 kcs., 100 w. unlt. *Network*: MBS. *Trans*: Route 3. *Aerial*: vertical, 179 ft. *Time*: PST. *Veries*: for postage. *Manager*: Glenn McCormick. *Licensee*: Eugene Broadcasting Station, 733 Willamette St.
- KOTN, Pine Bluff, Ark., 1500 kcs., 100 w. days. *Time*: CST. *Veries*: for postage. *Manager*: B. J. Parrish. *Licensee*: Universal Broadcasting Corp., Hotel Pines.
- KOVC, Valley City, N. Dak., 1500 kcs., 100 w. nights, 250 w. to LS, unlt. *Aerial*: vertical, 164 ft. *Time*: CST. *Veries*: for postage. *Manager*: Mark C. Crandall. *Licensee*: KOVC, Inc.
- KOY, Phoenix, Ariz., 1390 kcs., 1000 w. unlt. *Networks*: CBS and Arizona. *Trans*: 12th St. and Camelback Road. *Aerial*: vertical, 285 ft. *Application*: FCC Examiner has recommended grant of appl. for mod. of lic. to change freq. to 550. *Time*: MST. *Veries*: no charge for veries except when Ekko stamps are requested; 10c for stamps. *Manager*: Fred A. Palmer. *Licensee*: Salt River Valley Broadcasting Co.
- KPAB, Laredo, Texas, 1500 kcs., 100 w. nights, 250 w. to LS, unlt. *Time*: CST. *Veries*: for postage. *Owner*: Mervel M. Valentine, Hamilton Hotel.
- KPAC, Port Arthur, Texas, 1260 kcs., 500 w. days. *Aerial*: 2 towers, 118 and 149 ft. *Time*: CST. *Veries*: for postage. *Licensee*: Port Arthur College, 1500 Proctor St.
- KPDN, Pampa, Texas, 1310 kcs., 100 w. days. *Aerial*, vertical, 180 ft. *Time*: CST. *Veries*: for postage. *Manager*: S. L. Patterson. *Licensee*: R. C. Hoiles, 212 N. Ballard St.
- KPFA, Helena, Mont., 1210kcs., 100 w. nights, 250 w. to LS, unlt. *Networks*: Z-Bar and Pacific North West. *Aerial*: vertical, 164 ft. *Time*: MST. *Veries*: for postage. *Manager*: E. B. Craney. *Licensee*: Peoples Forum of the Air.
- KPLC, Lake Charles, La., 1500 kcs., 100 w. nights, 250 w. to LS, unlt. *Trans*: La Grange St. *Aerial*: vertical, 164 ft. *Veries*: for postage. *Manager*: C. R. Porter. *Licensee*: Calcasieu Broadcasting Co., Majestic Hotel.
- KPLT, Paris, Texas, 1500 kcs., 250 w. days. *Network*: MBS. *Aerial*: vertical, 169 ft. *Time*: CST. *Veries*: for postage. *Manager*: J. Bert Mitchell, Jr. *Licensee*: North Texas Broadcasting Co., Gibraltar Hotel.

(To be continued next month)

(Continued from page 40)

100 to 150 miles: WMAL, WTBO, WGBI, WRC and WJSV.

150 to 200 miles: WESG, WELL, WTIC, WATR, WDRC, WNBC and WBRY.

200 to 250 miles: WSVA, WTAG, WHJB, WTAR, WGY, WJAR, KDKA, WRVA, WSPR, WCAE, WCAE, WJAS and WFBL.

250 to 300 miles: WEEL, WBZ, WHAM, WWVA, WNAC, WAAB and WFEA.

300 to 350 miles: WPTF, CFRB, CBL, CBF, WDBJ, WTAM and WHK.

400 to 450 miles: CHNC, CBM, WBT, CKAC, WJR and CKLW.

450 to 500 miles: WLW, WCKY and WHIO.

550 to 600 miles: WHAS.

650 to 700 miles: WSM, WMAQ, WGN, WSB, WBBM and WENR.

800 to 850 miles: KMOX.

950 to 1000 miles: WHO.

Each of these stations showed the dominant signal on its particular frequency. On some channels, "second-best" signals could be heard in the background, but no attention was paid to them. Checking through the index by frequencies, it was found that 13 additional broadcasters shared time with eight of the stations listed, so it might be possible to hear a total of 107 stations from this location.

When comparing daytime records, it should be necessary to consider the location of the listener. Obviously, if he is located in some metropolitan area, he is going to start out with at least 30 local and semi-local stations, while the listener in the country must

immediately jump into the semi-distant group of stations.

For any comparison, however, it is necessary that approximately the same time of day be taken for the dialing. Before nine o'clock in the morning, stations to the West of the listener still show to advantage because of dawn at the transmitter site. After four in the afternoon, dusk is fast approaching and stations to the East of the DXer show better strength than at mid-day. Consequently, perhaps it would be well to restrict reports of daytime DXing to stations which are heard between 10 a. m. and 3 p. m. local time, during which hours reception appears to be fairly constant.

Question Department

"Perhaps you can help me identify a station which I have been hearing on the broadcast band, but which is not listed in the November RADEX," asks James Kauffman, Philadelphia, Pa. "For the last three nights, between 7 and 9:23 p.m., EST, I have been hearing this station on 782 to 785 kcys. The announcer has a British accent and broadcasts London news, British markets reports, as well as approximately thirty minutes of jazz and classical music. Tonight (November 14th) they announced La Boheme would be played in three parts—one tonight, one part tomorrow, and the third part the next day. At the conclusion of their musical program on November 12th, they announced 'We will now return you to Daventry.' The difficulty is that they announce the time in Eastern Standard. They have been signing off anywhere between 9:10 and 9:25 p.m., EST. Can you or any of your readers help me with this?"

Recent reports indicate that ZNS, Nassau, has switched frequency from 540 to 784 kcys, and it is likely that this may be the station in question. Many stations in the British Dominions re-broadcast programs from the Daventry short wave stations, which would account for the reference to Daventry in their announcement.

"For the questions and answers department," indicates George B. Holland, Jr., 1059 Parkwood Blvd., Schenectady, N.Y., "what station is on 1150 kcys most all night, every night, with lots of static. Also, who is on 670 after WMAQ signs off?"

Earlier in this section, the 1150 mystery was mentioned, so it may be XEC, XEL or XECL. The unknown on 670 is referred to the Radexers.

"This morning, November 10th, from about 6:05 to 6:15 a.m., EST, I listened to a French-speaking station on 1210 kcys," relates Capt. E. N. Massey, c-o T.M.I., Sweetwater, Tenn. "Every announcement was in French. They faded completely out at intervals, but I heard the 'National Emblem March' twice as well as 'Alexander's Ragtime Band.' I notice that you have Lille PTT listed on 1213 kcys, but I can't believe that I picked up a European on the broadcast band—especially with the musical selections mentioned."

It is not likely that this station was Lille PTT, since trans-Atlantic stations fade out completely shortly after 3 a.m., EST. It is our guess that the unknown station was a French Canadian in the Province of Quebec, possibly CKCH at Hull. Most announcements from Quebec stations are in French, at least alternated with English.

(Continued from Page 75)

the regional networks, and many transcription companies, the entire hearings will take nearly three months.

ONE of our faithful reporters, C. J. Fern, Jr., of Lihue, Hawaii, now presents us with official information concerning a new station. His father is Managing Editor of the Garden Island Publishing Company, licensee of the new KTOH in that city. Mr. Fern says his father wanted the call letters KOWY, "which is the only way we could squeeze KAUAI into four letters". Kauai is the name of the island on which Lihue is situated.

If plans do not go awry, we can expect to hear a three hour DX Jamboree from this station, probably once a month, when it goes on the air, which is expected to be sometime in April or May. Reports will be verified for a self-addressed stamped envelope. The transmitter site has not yet been chosen.

WITH the virtual completion of the reallocation of Cuban stations, comes news that the Mexican Senate has refused to ratify the Havana Agreement. This treaty had already been ratified by the United States and Cuba, and needs only the approval of Canada and Mexico. Mexico's refusal to sign comes as a surprise, and is definitely a set-back since it will doubtless affect the reallocation plans of this country.

Mexico feels that she would derive no benefit from the treaty. RADEX feels that Dr. Brinkley and Norman Baker, both former operators of stations in the United States, and now owners of high powered Mexican border stations, opposed the ratification strongly, since it would mean deletion or a reduction in power of their stations.

WE are sketching herewith a few of the recent developments in the television field.

The RCA is now offering a 1000 watt television transmitter for sale, and one of the first purchasers of this new equipment was the Columbia Broadcasting System. This station is now being installed in the Chrysler Building in New York City.

The DuMont Laboratories of Passaic, N. J. announce a new 21-tube television and sound receiver, using a 14-inch cathode, available in either table model or console. There are only six operating controls and its operation is said to be as easy as tuning an ordinary radio.

The Paramount Pictures, of Hollywood,

have announced their plan to broadcast television programs on a large scale.

A British television company, Scophony, Ltd., may enter the American field. The Scophony home type receiver produces a picture 20 by 24 inches in size, much larger than any of the American receivers.

The NBC television studios in the RCA Building, as well as their transmitter, are undergoing alterations, and a new aerial is being erected on the Empire State Building. Broadcasts will not be resumed until next April or later.

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Street and Number

City and State

THE DX CALENDAR

Time Is Eastern Standard

- Jan. 1, 12:01-1 am, XET, 690, Monterey, N. L. (IDA)
- Jan. 7, 2-3 am, CKBI, 1210, Prince Albert, Sask. (NRC)
- Jan. 7, 3-4 am, CFJC, 880, Kamloops, B. C. (NRC)
- Jan. 8, 1-2 am, "Radio Strasbourg," 859, Strasbourg, France (IDA)
- Jan. 8, 1-1:30 am, or later, WTAM, 1070, Cleveland, Ohio (IDA)
- Jan. 8, 3-4 am, CFJC, 880, Kamloops, B. C. (NRC)
- Jan. 10, 3-4 am, XEFV, 1210, Juarez, Chih. (NNRC)
- Jan. 10, 3-4 am, XEBO, 1310, Irapuato, Gto. (NNRC)
- Jan. 10, 3-4 am, XEAP, 1340, Obregon, Son. (NNRC)
- Jan. 11, 3:45-4:15 am, CHWK, 780, Chilliwack, B. C. (NRC)
- Jan. 12, 2-4 am, CKCV, 1310, Quebec, P. Q. (NRC)
- Jan. 13, 1:30-2 am, WJAG, 1060, Norfolk, Nebr.
- Jan. 13, 3-4 am, CHAB, 1200, Moose Jaw, Sask. (NRC)
- Jan. 14, 3-4 am, CHLT, 1210, Sherbrooke, P. Q. (NRC)
- Jan. 15, 2-3 am, CHRC, 580, Quebec, P. Q. (NRC—5c for veri)
- Jan. 15, 2:30-3:30 am, XETB, 1310, Torreon, Coah. (NNRC)
- Jan. 15, 4-5 am, CFAC, 930, Calgary, Alta. (IDA)
- Jan. 15, 9-10 pm, OAX4I, 1100, Lima, Peru. (IDA)
- Jan. 15, 9-10 pm, OAX4J, 9330, Lima, Peru. (IDA)
- 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. 8, 4-5 am, XEFV, 1210, Juarez, Chih. (NNRC)

GET MORE DX WITH HEADPHONES

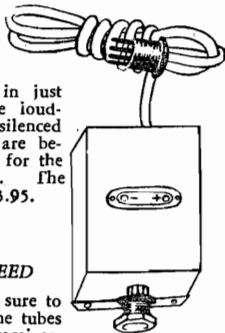


WE recommend the famous Trimm line of headphones for DX success. They are precision-built, and combine ultra-sensitivity with rugged construction.

The Trimm "Featherweights" weigh but 4¼ ounces complete. 24,000 ohms.	\$8.50
Trimm "Professional." 4000 ohms.	4.00
Trimm "Dependable." 2000 ohms.	3.25

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MAKES it easy to attach headphones to any radio set. Easily installed, without tools, in just a minute. The loudspeaker can be silenced while 'phones are being used. Ideal for the hard-of-hearing. The price is only \$3.95.



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Pays \$300 a
Month



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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.

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in Spare Time While Learning

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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.

Find Out What Radio Offers You

Act Today. Mail the coupon now for Sample Lesson and 64 page book. They're free to any fellow over 16 years old. They point out Radio's spare time and full time opportunities and those coming in Television; tell about my training in Radio and Television; show you letters from men I trained, telling what they are doing and earning. Find out what Radio offers YOU! MAIL COUPON in an envelope, or paste on a postcard—NOW!

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President
Dept. 9A0
National Radio
Institute,
Washington,
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National Radio Institute, Washington, D. C.

Dear Mr. Smith: Without obligating me, send your sample lesson and the book which tells about spare time and full time Radio opportunities, and now I can train for them at home in spare time.
(Please write plainly.)

Name..... Age.....

Address

City..... State.....