THE SEPTEMBER 1937

# **25**°

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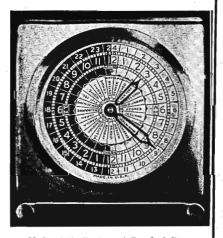
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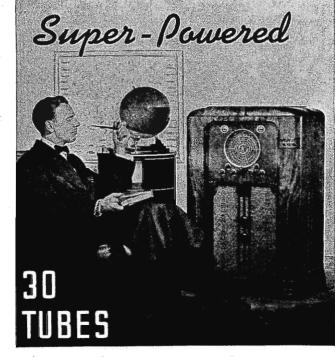
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## SEPTEMBER 1, 1937



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## CHOOSING a Radio Receiver

• • • By CARLETON LORD

OINCIDENTAL with the appearance of a new radio season comes the introduction by manufacturers of their 1938 lines of receivers. And once again Mr. Average Listener attempts to decide whether the old model will do for another year.

If the verdict sends him to the nearest radio dealer, the prospective purchaser may well be in for a rather difficult time. More than ever before, the choice of a receiver will tax the wits of the shrewdest buyer. If he walks out of the store with the one model best suited for his own needs, the customer will have cause to congratulate himself.

Early inspections of the 1938 lines indicate that manufacturers placing little stress upon the performance of their products. ability of a receiver to provide satisfactory reception of local and distant stations apparently is taken for granted. In place of guarantees of foreign reception and high fidelitv reproduction, the featured points include an impressive display of handsome cabinets, a wide variety of tricky new dials, and an incomprehensible assortment of gadgets made alluring by euphonic trade names.

After reading the advertisements and absorbing the output of glib salesmen, the customer will indeed be fortunate if he is able to remember the fundamental purpose of a good receiver.

#### Preliminary Steps

Before venturing into the market, the prospective purchaser would do well to analyze his own particular requirements and decide just what he will expect the new model to do for him. If he is a lover of fine music and insists on a high quality of reproduction, the customer should establish that fact in advance and keep it ever in mind. If he is afflicted with DX-ophobia, demanding extreme sensitivity and a high degree of selectivity, he will have something else to consider. If he merely wants a small set for occasional use in bedroom, den or office, he should remember that point.

Obviously, the "communications" type receiver, with accent on the r.f. and i.f. stages and with sufficient power to span the DX world, can hardly be expected to reproduce a symphony orchestra to the entire satisfaction of a skilled musician.



Alec Templeton, blind English pianist of the "Universal Rhythm" programs, is shown here presenting one of his amusing vocal impressions, that of a tenor singing Schubert's "Ave Maria" as heard by shortwave broadcast from Vienna. The Universal Rhythm programs are heard Sundays over the CBS from 8 to 9 pm EST.

Conversely, the broad-tuning set which will soothe the ear of the music lover, is seldom suitable for the demon DXer.

Frequently listeners insist on receivers which have potential DX-getting ability as well as high quality of reproduction. Many modern models will fulfill the expectations of the average customer in this respect, although the ideal combination is usually found in receivers in the higher price brackets.

But regardless of which quality or combination of qualities the purchaser desires, he should have a definite idea of what he is going to . expect from his new set.

#### Price Considerations

The old adage that "you get just what you pay for" was never more true than in the radio industry today. Mass producers of receivers plan and design every model to retail in a certain price class. Since costs of manufacture and distribution run more or less constant for a product of given quality, it follows that the customer can expect just so much from a model in any price bracket.

Of course, some manufacturer may be able to make a better coil, condenser or resister than his competitors, while another may do a more careful job of assembling and aligning. The receivers so affected may show to advantage, and that is what the customer will be checking when he compares models selling at around the same price.

But for any purchaser to believe that, say, a fifty-dollar Whoozit is a better receiver than a seventy-dollar Whatzit, is simply placing too much faith in the line of the salesman. The Whoozit people designed their particular set to sell in the most popular of all price brackets and they may have done a very good job. It may be far superior

to the comparable Whatzit model which sells at the same price and it may entirely suit the needs of the customer, but it can hardly be expected to compete with a set retailing at twenty dollars more.

Unless the Whatzit people are looking for an early demise, they gave the purchaser something tangible for that extra twenty dollars. It may be another tube or two, a larger speaker, a better grade of component parts, or a finer cabinet. In nine cases out of ten, that extra money would be spent for something additional in the way of performance, fredom from service troubles,

Consequently, before going to the nearest radio dealer, Mr. Average Listener should establish in his mind what price he can afford to pay for a receiver which will most nearly meet his requirements. He may find that it will be necessary to go a little higher to get just what he wants, but he should never drop to a lower price bracket without realizing that the set will be cheapened in some way.

or long life.

#### Automatic Tuning

In every store exhibiting the 1938 lines, the customer will first be impressed by novel dials and tuning devices. Designers and engineers have gone to great ends to ease the strenuous task of tuning a handful of favorite stations, and listeners undoubtedly will be attracted by a multiplicity of gadgets.

A large number of receivers are featuring some version of the "automatic telephone" type of dial which was introduced last year. Basically, this is a most convenient aid to tuning. To bring in any one of a number of pre-selected stations, the listener merely places a finger in the slot indicated by the desired call letters and spins the dial to a designated position.

nated positio

When this arangement is properly designed, the dial will catch at a stop position. The gang condenser, which has been turned by a direct drive, will then be in a nearly-corect position for the wanted station. In a split-second, the automatic frequency control circuit brings the station into resonance and the tuning will have been completed, except for a posible adjustment of volume.

Unfortunately, many of the cheaper sets brazenly advertise automatic tuning, when actually they have no such thing. They have no stops to catch the dial at the proper position for each station and the swing is merely approximate. In some cases, it may vary ten kilocycles in either direction. Also there is no AFC circuit to bring the station into resonance, so the listener must then tune the station by hand in the usual manner. Customers should be on the look-out for this type of the so-called automatic dials.

#### **Push Button Tuning**

For listeners with feeble forefingers, engineers have relieved the strain of manual dialing through the installation in some models of small electric motors. When one of a number of buttons is pushed, the motor turns the dial and the receiver is automatically tuned to a desired station.

While this type of tuning may prove very popular, listeners should remember that every added gadget is a potential source of future The more motors, gears and devices that are added to an already-complicated mechanism, the more there is to get out of order and the greater the possibility of service work at a later date.

In one of the first receivers inspected, several little "bugs" were noticed. For example, should an inquisitive child inadvertently push more than one of the station buttons.

the dial would turn crazily from one end to the other and back again. This would last indefinitely unless the motor was shut off. meantime, the regular tuning knob would be spining at a great rate. Seeing this and desiring to stop the movement, the youngster would be tempted to grab the control and hold on. In such a case, the fate of the entire mechanism would depend on whether the child let go before the motor gave out or the gears were stripped.

In the same receiver, the motor had a one-track mind. Suppose the set had been tuned to, say, 600 kcys and then moved to 650. Then push a button for a station on 550. The motor would continue in the same direction, turning the dial all the way up to the high frequency end before it reversed and travelled all the way back to 550.

Of all the receivers inspected which had push-button tuning, the Silvertone model 4788 had the most sensible mechanism. For any button pushed, the dial took the shortest path to the desired station and did not have to travel to either end before reversing. Should more than one button be pushed, the dial turns to the nearest station and then stops. During any of the automatic tuning operations, the regular tuning knob remains motionless.

#### Try Before You Buy

There should be no need to remind listeners that the display of a radio store is no place to demonstrate any receiver, yet thousands of customers sign on the dotted line solely as the result of what they have heard in an unfavorable location.

Few reputable dealers will refuse a request for a home demonstration. Consequently, the purchaser who ignores an opportunity to see how a set performs in his own home, can have no legitimate cause for complaint should it develop that the receiver was bought because of a smooth sales talk instead of on its own merits.

So when Mr. Average Listener has determined what he expects from a set and has decided what he can afford to pay for the receiver which most nearly meets his requirements, he should insist on an opportunity to try out the most logical selection in his own home for a few days. There he should give it a good workout, perhaps compare it with other models, and then decide whether it will be a good investment.

In this connection, it is interesting to note the points which are checked in the field by the engineers who develop the Silvertone models. Every receiver is operated under normal conditions in homes throughout the country and each model must pass a rigid examination before it goes into actual production.

When a set is unboxed and connected, the engineer first checks its mechanical features. whether the dial operates smoothly and if there are any rough spots. If the dial is gear-driven, he checks to see if there is any backlash; if it is cable-driven, he looks for slipping. The other controls are also checked for rough spots. He notes whether the dial has sufficient illumination for easy reading and if the various knobs are well identified. Knowing that small children may have access to the receiver, he looks for possible troubles which may be caused by inquisitive fingers.

#### Tune Favorite Stations

When the power is turned on, the listener should first tune across the broadcast band, taking notice of how his favorite stations are received. On each identified station, he should check to see if the dial is accurately calibrated. If the receiver is equipped with automatic volume control, he should note whether the more powerful stations are heard at

an even level. Using maximum sensitivity, he should observe the "hiss and swish" level and see if it is objectionable,

While going over the broadcast band, the purchaser should notice if any stations appear at more than one point on the dial. Eliminating any slight inaccuracies in calibration, it should be determined whether there are any repeat points due to image frequency.

Selectivity should also be noted during the early tuning. Any receiver worthy of the name should be able to bring in favorite local and semi-distant stations without a trace of interference from other stations. If the purchaser goes in for an occasional bit of DXing, an even greater degree of selectivity will be necessary and then he should expect 10-kcy separation. If he is able to pull in a medium-power, semi-distant station on a channel adjacent to a 50-KW local, he really has something.

Next in line are tests for hum and internal noise level. By tuning to a point where no station is audible and turning the volume control all the way down, the purchaser can observe the degree of hum, if any. Then by disconnecting aerial and ground, and advancing the volume control, it is easy to note the amount of noise created in the receiver. Obviously, an excessive amount of hum or internal noise will be difficult for DX work

Turning next to a favorite local station, the purchaser should observe the quality of reproduction. If the receiver has a tone control, it should be set at various points and the quality observed. Turn the volume control all the way off and see if the station is still audible. If so, decide whether that is objectionable to you. Then increase the volume and note whether there is any overloading or distortion before adequate room volume is reached.

These observations should be re-

peated on other stations which are regularly dialed. If at any time there is a tendency for the set to develop any "motorboating" or if any microphonism is noticed, the dealer should be given an opportunity to correct the trouble.

As far as possible, the tuning operations should be repeated on the short wave bands. Calibration is particularly important here, where many stations are crowded into a relatively small section of the dial. A receiver which offers band spread or second hand tuning enjoys a decided advantage when it comes to separating and logging stations.

A balky dial will stand out like a sore thumb when dialing the high frequency transmitters. Two-speed tuning is a real help and, if this is not available, the single ratio should at least be high.

Listeners will have little difficulty in working out additional tests and observations for the receiver on trial. It isn't a bad idea to try out two or more receivers at the same time and under the same conditions, make notes on the particular phases in which each excels, and then choose the set which has the best all-around rating.

#### How Many Tubes?

The average listener has little or no conception of the functions of the tubes in his receiver. He has a vague idea that reception improves in direct proportion to the number of tubes in the set, so he really goes out to buy a box of tubes.

On the receiving end of an advertisement or a sales talk, the customer may be impressed by the claim that this seven-tube job, with three multi-purpose tubes, actually gives ten-tube performance. It is a little difficult to understand the basis for such a claim, since there is no scale by which tube performance can be measured.

Another frequently-used argument



Comedian Ken Murray and blonde Marlyn Stuart, the girl who made radio fame with two speaking lines . . . "Mama, oh Mama, here's that funny man again." Ken Murray, Shirley Ross and Lud Gluskin are heard on the Campbell's program over the CBS on Wednesdays.

is that a particular twelve-tube set is a rare bargain at the price, merely because it has so many tubes. And here again the number of tubes does not necessarily mean that the receiver is to be recommended.

If the customer is going to base his decision on the number of tubes, he should consider their functions in the receiver. If he is looking for a sensitive and selective model, the tubes should be concentrated in the r.f. and i.f. stages. One of the most powerful superheterodynes made today has two tubes in the r.f., three in the i.f., two detectors, one oscillator, one rectifier, and two stages of a.f. amplification. That makes a total of eleven tubes, most of which are used for sensitivity

(Please turn to Page 43)

## Call Letter Jamboree

A fellow named WILL said to KOY little KATE, "Poor KRIS, bashful swain, wishes me to relate WHAT trouble he's had in expressing his love For you, pretty WREN, and WOOD like you to shove Aside all the others, and tell him you'll be His friend, good and true; you'll like none but he."

"No, sir!" said the KID, "but I'm KEEN for a whirl Around the old town; let's get WARD and his girl. He's got lots of KOIN and WEED KAST cares away While dancing together and seeing Broadway. I don't care for KRIS, but I want you to KNOW "Tis you WHOM I like best and not that old KROW."

This turn in affairs took our WILL by surprise. He felt the dire need of some good alibis. For WORK he had none, and the clothes that he WOR Were tattered and shabby, and his little store Of KALE had diminished to practically nil And he couldn't pay his own share of the bill.

Now WRUF to the KORE was this tramp from the WEST, But KAWM and quick thinking when put to the test. "WELL, KIDO, I'm willing, but I never thought That I was the one whose favor you sought," He said to the KUTA, but to himself KUSD, "This girl is a WOW, but to leave her I must."

"I look like a WREC," to the lady he spoke.
"Excuse me a while; here's a cig you can CMOK.
WAAT I need to do is get clean clothes to WAIR,
Some WATR to WASH in and a KOAM for my hair.
Just wait here and I WIL return right away."
A WAVE of his hand and he left for the day.

"Oh WEAU is my lot," cried the girl so chagrined On learning her lover had gone with the WIND.
"Now WHO WOOD have thought he'd do such a WRAW trick? I'd WHIP him—I'd brain him with a WROK or a brick. If I had him I'd KOIL him with high tension WIRE And turn on the juice and just let him expire."

Our hero is headed for the land of *KOTN*Not thinking at all about his trick so rotten.
He WRAX his poor brain with thoughts of KRIS, his old pal,
WHO told him that KATE was such a KOY little gal!

## The Frequency Checks

In order to include many of the new stations which have recently come on the air, the engineers of the Federal Communications Commission have revised their list of monthly frequency check broadcasts. The latest schedule, with times given in Eastern Standard, follows:

The	Second	Monday

The Second Monday					
2:00-2:20	WLNH	1310	Laconia, N. H.		
	WJBO	1420	Baton Rouge, La.		
2:10-2:30	WBRB	1210	Red Bank, N. J.		
	WHBB	1500	Selma, Ala.		
2:20-2:40	WMAS	1420	Springfield, Mass.		
	WIOD	1300	Miami, Fla.		
2:30-2:50	WWRL	1500	Woodside, N. Y.		
	WJBW	1200	New Orleans, La.		
2:40-3:00	WOKO	1430	Albany, N. Y.		
0.50 0.10	WMBR	1370 1200	Albany, N. Y. Jacksonville, Fla. Burlington, Vt.		
2:50-3:10	WCAX WOPI	1500	Burnington, Vt.		
3:00-3:20	WMBO	1310	Bristol, Tenn.		
3.00-3.20	WMSD	1420	Auburn, N. Y. Sheffield, Ala.		
3:10-3:30	WOC -	1370	Dagennort, In		
0.10 0.00	WCAD	1220	Canton, N. Y.		
	WMFN	1210	Grenada, Miss.		
3:20-3:40	KWLC	1270	Decorah, Ia.		
	WMBQ	1500	Brooklyn, N. Y.		
	WNBR	1430	Brooklyn, N. Y. Memphis, Tenn.		
3:30-3:50	KFPW	1210	Fort Smith, Ark.		
	WMFF	1310	Plattsburg, N. Y.		
	WDBO	580	Orlando, Fla.		
3:40-4:00	KABC	1420	San Antonio, Tex.		
	WQDM	1390	St. Albans, Vt.		
2.50 4.10	WSMB	$\frac{1320}{1210}$	New Orleans, La. White Plains, N. Y.		
3:50-4:10	WFAS	1500			
4:00-4:20	KFDM	560	Kosciusko, Miss. Beaumont, Tex.		
4.00-1.20	KLS	1280	Oakland, Calif.		
	WCAP	1280	Asbury Park, N. J.		
	WAGF	1370	Dothan, Ala.		
4:10-4:30	KCRJ	1310	Jerome, Ariz.		
	KMLB	1200	Monroe, La.		
	KYOS	1040	Merced, Calif.		
4:20-4:40	KLUF	1370	Galveston, Tex.		
	KGDM	1100	Stockton, Callf.		
	WDEV	550	Waterbury, Vt.		
4-00 4-50	WDNC	1500	Durham, N. C.		
4:30-4:50	KROC	1310	Rochester, Minn.		
	KGAR	1370 1210	Tucson, Ariz. Alexandria, La.		
4:40-5:00	KALB	1500	Valley City, N. D.		
4.40-0.00	KROY	1210	Valley City, N. D. Sacramento, Cailf.		
	WBNO	1200	New Orleans, La.		
4:50-5:10	KEUB	1420	Price, Utah		
	$_{ m KRE}$	1370	Berkeley, Calif.		
	WLAK	1310	Lakeland, Fia.		
5:00-5:20	KBST	1500	Big Spring, Tex.		
	KIEM	1450	Eureka, Calif.		
	WFOY	1210	St. Augustine, Fla.		
5:10-5:30	KDON	1210	Del Monte, Calif.		
	WMIN	1370 1310	St. Paul, Minn.		
5:20-5:40	WTAL KTRH		Tallahassee, Fla. Houston, Texas		
0.20-0.40	KUMA	1420	Yuma, Ariz.		
	WAIR	1250	Winston-Salem, N. C.		
5:30-5:50	KFGQ	1370	Boone, Is.		
	KWG	1200	Stockton, Calif. Gulfport, Miss. Honolulu, T. H.		
	WGCM		Gulfport, Miss.		
5:40-6:00	KGMB	1320	Honolulu, T. H.		
5:50-6:10	KGLO	1210	Mason City, Ia.		
	KVCV	1200	Redding, Calli,		
6:00-6:20	KHUB	1310	Watsonville, Calif.		

		_	
0.00 0.00			d Tuesday
2:00-2:20 2:10-2:20	WBAX WDAS	$\frac{1210}{1370}$	Wilkes Barre, Pa. Philadelphia, Pa.
2:10-2:20	WBBL	1210	Richmond, Va.
2:30-2:50	WFBG	1310	Altoona, Pa.
2:40-3:00	WMBG	1210	Richmond, Va.
2:50-3:10	WEBR	1310	Buffalo, N. Y.
3:00-3:20	KDAL	1500	Dututh, Minn.
	WLVA	1200	Lynchburg, Va.
3:10-3:30	KPAC	1260	Port Arthur, Tex.
	WBTM	1370	Danville, Va.
3:20-3:40	WKRC	550	Cincinnati, Ohlo Rochester, N. Y.
	WHEC	1430	Rochester, N. Y.
3:30-3:50	WNAD	1010	Norman, Okla. Detroit, Mich.
	WMBC WRAK	1420 1370	Williamsport Pe
3:40-4:00	KFVS	1210	Williamsport, Pa. Cape Girardeau, Mo.
3.40-1.00	WJAC	1310	Johnstown, Pa.
3:50-4:10	WTAW	1120	College Station, Tex.
	WBNS	1430	Columbus, Ohio
	WBNY	1370	Buffalo, N. Y.
4:00-4:20	WCOL	1210	Columbus, Ohio
	WBRE	1310	Wilkes Barre, Pa.
4:10-4:30	KLPM	1240	Minot, N. Dak.
	WPAR	1420	Parkersburg, W. Va. Portsmouth, Ohlo
4.00 4.40	WPAY	1370	Portsmouth, Onio
4:20-4:40	KRMD WOMT	1310	Shreveport, La. Manitowoc, Wis.
	WSYR	1210 570	Suracuse N V
4:30-4:50	KGCA	1270	Syracuse, N. Y. Decorah, Ia.
2.00-2.00	WJAY	610	Cleveland, Ohio
	WNBF	1500	Binghamton, N. Y.
4:40-5:00	KTEM	1370	Temple, Tex.
	KGBU	900	Ketchikan, Alaska
	WGH	1310	Ketchikan, Alaska Newport News, Va.
4:50-5:10	KGVO	1260	Missoula, Mont.
	KRLH	1420	Midland, Tex. Cleveland, Ohlo
	WHK WWSW	1390 1500	Cleveland, Unio
5:00-5:20	KGCX	1450	Pittsburgh, Pa. Wolf Point, Mont.
0.00-5.20	KRMC	1370	Jamestown, N. D.
	WSPD	1340	Toledo, Ohio
5:10-5:30	KAST	1370	Astoria ()re
	KNET	1420	Palestine, Tex. Louisville, Ky.
	WAVE	940	Louisville, Ky.
5:20-5:40	KCMO,	1370	Kansas City, Mo. Klamath Falls, Ore. Detroit, Mich. Lamar, Colo. Wenatchee, Wash.
	KFJI	1210	Klamath Falls, Ore.
F-00 F-F0	WXYZ	1240	Detroit, Mich.
5:30-5:50	KIDW KPQ	1420 1500	Haustahas Wash
	WGAR	1450	Cleveland Ohio
5:40-6:00	KFIO	1120	Wenatchee, Wash. Clevcland, Ohio Spokane, Wash.
0.10	KQV	1380	Pittsburgh, Pa.
	WCAT	1200	Rapid City, S. Dak. Carlsbad, N. Mex.
5:50-6:10	KLAH	1210	Carlsbad, N. Mex.
	KORE	1420	Eugene, Ore.
6:00-6:20	Koos	1200	Marshfield, Ore.
	WLBL	900	Stevens Point, Wis.
	The	Second	Wednesday
2:00-2:20	WMFJ	1420	Daytona Beach, Fla.
2:10-2:30	WAIM	1200	Anderson, S. C.
2:20-2:40	KVOL	1310	Lafayette, La.
2:30-2:50	WHBQ	1370	Lafayette, La. Memphis, Tenn. San Juan, P. R.
2:40-3:00	WKAQ WSJS	1240 1310	Winston-Salem, N. C.
2:50-3:10 3:00-3:20	WCPO	1200	Cincinnati, Ohio
0.00-0.20	WMFD	1370	Wilmington, N. C.
3:10-3:30	KFIZ	1420	Fond du Lac, Wis.
	WPAX	1210	Thomasville, Ga.
3:20-3:40	WCLO	1200	Janesville, Wis.
	WRDW	1500	Augusta, Ga.
3:30-3:50	WQBC	1360	Vicksburg, Miss. Corsicana, Texas
3:40-4:00	KAND KPLC	1310 1500	Corsicana, Texas
	WHBC	1200	Lake Charles, La.
	WILDO	1200	Canton, Ohio

890

1420

Little Rock, Ark.

Albany, Ga.

3:50-4:10

4:00-4:20	KFJZ WHBU	1370 1210	Fort Worth, Tex. Anderson, Ind.		KGU W1BU	750 1210	Honolulu, T. H. Poynette, Wis.
4:10-4:30	WJNO WBEO	1200 1310	W. Palm Beach, Fla. Marquette, Mich.	6:10-6:30	KG1W KHBC	1420 1400	Hilo, T. H.
	WCOC WLB	880 1250	Meridian, Miss. Minneapolis, Minn.	6:20-6:40	$_{ ext{WGL}}^{ ext{KVEC}}$	$\frac{1200}{1370}$	San Luis Obispo, Calif. Fort Wayne, Ind.
4:20-4:40	KSO	1430	Des Molnes, Ia.		The	Seco	nd Friday
	WOSU	570	Columbus, Ohio	2:00-2:20	WGNY	1210	Newburgh N V
	WKEU	1500	Griffin, Ga.	2:10-2:30	WCNW	1500	Newburgh, N. Y. Brooklyn, N. Y. Freeport, N. Y.
4:30-4:50	wexl	1310	Royal Oak, Mich.	2:10-2:30	WCRW		Brooklyn, N 1.
	WHLB	1370	Virginia, Minn.	2:20-2:40	WGBB	1210	Freeport, N. 1.
4:40-5:00	KPLT	1500	Paris, Tex.	2:30-2:50	WABY	1370	Albany, N. Y.
	WJMS	1420	Ironwood, Mich.	2:50-3:10	WSYB	1500	Rutland, Vt.
	WJRD	1200	Tuscaloosa, Ala.	3:00-3:20	WABI	1200	Bangor, Me.
4:50-5:10	KFXR	1310	Oklahoma City, Okla.	3:20-3:40	W1BX	1200	Utica, N. Y.
	WTAX	1210	Springfield, Ill.	3:30-3:50	KASA	1210	Elk City, Okla.
	WBIG	1440	Greensboro, N. C.	0.10.1.00	WAGM	1420	Presque Isle, Me.
5:00-5:20	KFJB	1200	Marshalltown, Ia.	3:40-4:00	KWOS	1310	Jefferson City, Mo.
	WEOA	1370	Evansville, Ind.		WNBZ	1290	Saranac Lake, N. Y.
5:10-5:30	KPDN	1310	Pampa, Tex.	3:50-4:10	WJBK	1500	Detroit, Mich.
	wdz	1020	Tuscoia, Ill.		WMBH	1420	Joplin, Mo.
5:20-5:40	KELD	1370	Eldorado, Ark. Wayeross, Ga.	4:00-4:20	WRDO	1370	Augusta, Me.
	WAYX	1200	Waycross, Ga.	4:00-4:20	KIUL	1210	Garden City, Kans
	WKBN	570	Youngstown, Ohio		WTHT	1200	Hartford, Conn.
5:30-5:50	KDLR	1210	Devils Lake, N. D.	4:10-4:30	KICA	1370	Clovis, N. M.
	WADC	1320	Akron, Ohio		WCAZ	1070	Carthage, Ill.
5:40-6:00	KRBC	1420	Abilene, Tex. Wausau, Wis. Dublin, Texas	*	WNLC	1500	New London, Conn.
	WSAU	1370	Wausau, Wis.	4:20-4:40	WMFG	1210	Hibbing, Minn.
5:50-6:10	KFPL	1310	Dublin, Texas	4:30-4:50	KIUP	1370	Durango, Colo.
0,00 0,00	WFAM	1200	South Bend, Ind.		WPAD	1420	Paducah, Ky.
6:00-6:20	KLCN	1290	Blytheville, Ark.	4:40-5:00	KNOW	1500	Austin, Tex.
0.00 020	WELL	1420	Battle Creek, Mich.		WEMP	1310	Milwaukee, Wis.
6:10-6:30	KGBX	1230	Springfield, Mo.	4:50-5:10	WEW	760	St. Louis, Mo.
0120 0100	WMPC	1200	Lapeer, Mich.		WGRC	1370	New Albany, Ind.
6:20-6:40	KABR	1420	Aberdeen, S. D.	5:00-5:20	KIUN	1420	Pecos, Tex.
6:30-6:50	KFXJ	1200	Grand Junction, Colo.		WEBQ	1210	Harrisburg, Ill.
0100 0100				5:10-5:30	KGEK	1200	Sterling, Colo.
			Thursday		WCMI	1310	Sterling, Colo. Ashland, Ky.
2:00-2:20	wsvs	1370	Buffalo, N. Y.	5:20-5:40	KMAC	1370	San Antonio, Tex.
2:10-2:30	WKOK	1210	Sunbury, Pa. Reading, Pa.		wjw :	1210	Akron, Ohio
2:20-2:40	WRAW	1310	Reading, Pa.	5:30-5:50	WIL	1200	St. Louis, Mo.
2:30-2:50	WJTN	1210	Jamestown, N. Y.		WLBC	1310	Muncle, Ind.
2:40-3:00	WTEL	1310	Philadelphia, Pa.	5:40-6:00	KTOK	1370	Oklahoma City, Okla.
2:50-3:10	WHIS	1410	Bluefield, W. Va. Scranton, Pa.		WKBB	1500	E. Dubuque, Ill.
3:00-3:20	WQAN	880	Scranton, Pa.	5:50-6:10	KANS	1210	Wichita, Kans.
3:10-3:30	WLEU	1420	Erie. Pa.		WHBY	1200	Green Bay, Wis.
3:20-3:40	WBLK	1370	Clarksburg, W. Va.	6:00-6:20	WACO	1420	Waco, Tex.
3:30-3:50	WSAJ	1310	Grove City, Pa.	6:10-6:30	$w_{JBL}$	1200	Decatur, Ill.
3:40-4:00	WJBC	1200	Bloomington, Ill. Rochester, N. Y.	6:20-6:40	KRQA	1310	Santa Fe, N. M.
	WSAY	1210	Rochester, N. Y.		WHDF	1370	Calumet, Mich.
3:50-4:10	WHAT	1310	Philadelphia, Pa.	6:30-6:50	KGDE	1200	Fergus Fails, Minn.
	WLAP	1420	Lexington, Ky. Olean, N. Y.		~		4.6-4
4:00-4:20	WHDL	1400	Olean, N. Y.				d Saturday
	WSMK	1380	Dayton, Ohlo Gallup, N. M.	2:00-2:20	WMFR	1200	High Point, N. C.
4:10-4:30	KAWM	1500	Gallup, N. M.	2:10-2:30	WMFO	1370	Decatur, Ala.
	WJIM	1210	Lansing, Mich.	2:20-2:40	WSOC	1210	Charlotte, N. C.
4:20-4:40	WBBZ	1200		2:30-2:50	WTJS	1310	Jackson, Tenn.
	WBOW	1310	Terre Haute, Ind.	2:40-3:00	WSIX	1210	Nashville, Tenn. Knoxville, Tenn.
4:30-4:50	KGKL	1370	San Angelo, Tex.	2:50-3:10	WROL	1310	Knoxville, Tenn.
4:40-5:00	WCBS	1420	Springfield, III.	3:00-3:20	KOTN	1500	Pine Bluff, Ark.
	WCBS	1420 1310	Terre Haute, Ind. San Angelo, Tex. Springfield, Ill. Sherman, Tex.	3:00-3:20	KOTN WBLY	$\frac{1500}{1210}$	Lima, Ohio
2120 0100	KRRV	1310	Sherman, Tex.	3:00-3:20	KOTN WBLY	1500	Lima, Ohio Miami, Fla.
	KRRV WTMV	1310 1500	East St. Louis, Ill.		KOTN WBLY WQAM KWYO	$\frac{1500}{1210}$	Lima, Ohio Miami, Fla. Sheridan, Wyo.
4:50-5:10	KRRV WTMV KGGM	1310 1500 1230	East St. Louis, Ill. Albuquerque, N. M.	3:10-3:20	KOTN WBLY WQAM	1500 1210 560	Lima, Ohio Miami, Fia. Sheridan, Wyo. Ponce, P. R.
4:50-5:10	KRRV WTMV KGGM WHBF	1310 1500 1230 1210	East St. Louis, Ill. Albuquerque, N. M. Rock Island, Ill.	3:10-3:30	KOTN WBLY WQAM KWYO WPRP	1500 1210 560 1370 1420 1240	Lima, Ohio Miami, Fla. Sheridan, Wyo. Ponce, P. R. Mandan, N. Dak.
	KRRV WTMV KGGM WHBF KERN	1310 1500 1230 1210 1370	Sherman, Tex. East St. Louis, Ill. Albuquerque, N. M. Rock Island, Ill. Bakersfield, Calif. Wichita Falls, Tex.		KOTN WBLY WQAM KWYO	1500 1210 560 1370 1420 1240 1290	Lima, Ohio Miami, Fla. Sheridan, Wyo. Ponce, P. R. Mandan, N. Dak.
4:50-5:10	KRRV WTMV KGGM WHBF KERN KGKO	1310 1500 1230 1210	Sherman, Tex. East St. Louis, Ill. Albuquerque, N. M. Rock Island, Ill. Bakersfield, Calif. Wichita Falls, Tex.	3:10-3:30	KOTN WBLY WQAM KWYO WPRP KGCU WNEL KXYZ	1500 1210 560 1370 1420 1240 1290 1440	Lima, Ohlo Miami, Fla. Sheridan, Wyo. Ponce, P. R. Mandan, N. Dak. San Juan, P. R. Houston, Tex.
4:50-5:10 5:00-5:20	KRRV WTMV KGGM WHBF KERN KGKO WTRC	1310 1500 1230 1210 1370 570 1310	Sherman, Tex.  East St. Louis, Ill.  Albuquerque, N. M.  Rock Island, Ill.  Bakersfield, Calif.  Wichita Falls, Tex.	3:10-3:30 3:20-3:40	KOTN WBLY WQAM KWYO WPRP KGCU WNEL	1500 1210 560 1370 1420 1240 1290	Lima, Oblo Miami, Fla. Sheridan, Wyo. Ponce, P. R. Mandan, N. Dak. San Juan, P. R. Houston, Tex. Laurel, Miss.
4:50-5:10	KRRV WTMV KGGM WHBF KERN KGKO	1310 1500 1230 1210 1370 570	Sherman, Tex. East St. Louis, Ill. Albuquerque, N. M. Rock Island, Ill. Bakersfield, Calif. Wichita Falls, Tex. Eikhart, Ind. Corpus Christl, Tex. Modesto, Calif.	3:10-3:30 3:20-3:40	KOTN WBLY WQAM KWYO WPRP KGCU WNEL KXYZ WAML WKBV	1500 1210 560 1370 1420 1240 1290 1440 1310 1500	Lima, Ohlo Miami, Fia. Sheridan, Wyo. Ponce, P. R. Mandan, N. Dak. San Juan, P. R. Houston, Tex. Laurel, Miss. Richmond, Ind.
4:50-5:10 5:00-5:20	KRRV WTMV KGGM WHBF KERN KGKO WTRC KGFI KTRB	1310 1500 1230 1210 1370 570 1310 1500 740	Sherman, Tex. East St. Louis, Ill. Albuquerque, N. M. Rock Island, Ill. Bakersfield, Calif. Wichita Falls, Tex. Eikhart, Ind. Corpus Christl, Tex. Modesto, Calif.	3:10-3:30 3:20-3:40 3:30-3:50	KOTN WBLY WQAM KWYO WPRP KGCU WNEL KXYZ WAML	1500 1210 560 1370 1420 1240 1290 1440 1310	Lima, Ohlo Miami, Fla. Sheridan, Wyo. Ponce, P. R. Mandan, N. Dak. San Juan, P. R. Houston, Tex. Laurel, Miss. Richmond, Ind. Weslaco, Tex.
4:50-5:10 5:00-5:20 5:10-5:30	KRRV WTMV KGGM WHBF KERN KGKO WTRC KGFI KTRB WWAE	1310 1500 1230 1210 1370 570 1310 1500	Sherman, Tex. East St. Louis, Ill. Albuquerque, N. M. Rock Island, Ill. Bakersfield, Calif. Wichita Falls, Tex. Eikhart, Ind. Corpus Christl, Tex. Modesto, Calif.	3:10-3:30 3:20-3:40	WOTN WBLY WQAM KWYO WPRP KGCU WNEL KXYZ WAML WKBV KRGV WFOR	1500 1210 560 1370 1420 1240 1290 1440 1310 1500 1260 1370	Lima, Ohlo Miami, Fla. Sheridan, Wyo. Ponce, P. R. Mandan, N. Dak. San Juan, P. R. Houston, Tex. Laurei, Miss. Richmond, Ind. Weslaco, Tex. Hattlesburg, Miss.
4:50-5:10 5:00-5:20	KRRV WTMV KGGM WHBF KERN KGKO WTRC KGFI KTRB WWAE KFYO	1310 1500 1230 1210 1370 570 1310 1500 740 1200 1310	Sherman, 1ex. East St. Louis, III. Albuquerque, N. M. Rock Island, III. Bakerstield, Calif. Wichita Falls, Tex. Eikhart, Ind. Corpus Christi, Tex. Modesto, Calif. Hammond, Ind. Lubbock, Tex.	3:10-3:30 3:20-3:40 3:30-3:50 3:40-4:00	WOTN WBLY WQAM KWYO WPRP KGCU WNEL KXYZ WAML WKBV KRGV WFOR	1500 1210 560 1370 1420 1240 1290 1440 1310 1500 1260	Lima, Ohlo Miami, Fla. Sheridan, Wyo. Ponce, P. R. Mandan, N. Dak. San Juan, P. R. Houston, Tex. Laurei, Miss. Richmond, Ind. Weslaco, Tex. Hattlesburg, Miss.
4:50-5:10 5:00-5:20 5:10-5:30	KRRV WTMV KGGM WHBF KERN KGKO WTRC KGFI KTRB WWAE KFYO KJBS	1310 1500 1230 1210 1370 570 1310 1500 740 1200 1310 1070	Sherman, 1ex. East St. Louis, III. Albuquerque, N. M. Rock Island, III. Bakersfleid, Calif. Wichita Falls, Tex. Eikhart, Ind. Corpus Christi, Tex. Modesto, Calif. Hammond, Ind. Lubbock, Tex. San Francisco, Calif.	3:10-3:30 3:20-3:40 3:30-3:50	WOTN WBLY WQAM KWYO WPRP KGCU WNEL KXYZ WAML WKBV KRGV	1500 1210 560 1370 1420 1240 1290 1440 1310 1500 1260 1370	Lima, Ohlo Miami, Fla. Sheridan, Wyo. Ponce, P. R. Mandan, N. Dak. San Juan, P. R. Houston, Tex. Laurei, Miss. Richmond, Ind. Weslaco, Tex. Hattlesburg, Miss.
4:50-5:10 5:00-5:20 5:10-5:30 5:20-5:40	KRRV WTMV KGGM WHBF KERN KGKO WTRC KGFI KTRB WWAE KFYO KJBS WIBM	1310 1500 1230 1210 1370 570 1310 1500 740 1200 1310 1070 1370	Sherman, 1ex. East St. Louis, III. Albuquerque, N. M. Rock Island, III. Bakersfield, Calif. Wichita Falls, Tex. Elkhart, Ind. Corpus Christi, Tex. Modesto, Calif. Hammond, Ind. Lubbock, Tex. San Francisco, Calif. Jackson, Mich.	3:10-3:30 3:20-3:40 3:30-3:50 3:40-4:00	KOTN WBLY WQAM KWYO WPRP KGCU WNEL KXYZ WAML WKBV KRGV WFOR KNEL	1500 1210 560 1370 1420 1240 1290 1440 1310 1500 1260 1370 1500	Lima, Ohlo Miami, Fla. Sheridan, Wyo. Ponce, P. R. Mandan, N. Dak. San Juan, P. R. Houston, Tex. Laurel, Miss. Richmond, Ind. Weslaco, Tex. Hattiesburg, Miss. Brady, Tex. Rocky Mount, N. C. Evansville, Ind.
4:50-5:10 5:00-5:20 5:10-5:30	KRRV WTMV KGGM WHBF KERN KGKO WTRC KGFI KTRB WWAE KFYO KJBS WIBM KGHI	1310 1500 1230 1210 1370 570 1310 1500 740 1200 1310 1070	Sherman, 1ex. East St. Louis, III. Albuquerque, N. M. Rock Island, III. Bakersfield, Calit. Wichita Falls, Tex. Eikhart, Ind. Corpus Christi, Tex. Modesto, Calif. Hammond, Ind. Lubbock, Tex. San Francisco, Calif. Jackson, Mich. Little Rock, Ark.	3:10-3:30 3:20-3:40 3:30-3:50 3:40-4:00	WOTN WBLY WQAM KWYO WPRP KGCU WNEL KXYZ WAML WKBV KRGV WFOR KNEL WEED WGBF KVSO	1500 1210 560 1370 1420 1240 1290 1440 1310 1500 1260 1370 1500 1420 630 1210	Lima, Ohlo Miami, Fla. Sheridan, Wyo. Ponce, P. R. Mandan, N. Dak. San Juan, P. R. Houston, Tex. Laurel, Miss. Richmond, Ind. Wesiaco, Tex. Hatticsburg, Miss. Brady, Tex. Rocky Mount, N. C. Evansville, Ind. Ardmore, Okla.
4:50-5:10 5:00-5:20 5:10-5:30 5:20-5:40	KRRV WTMV KGGM WHBF KERN KGKO WTRC KGFI KTRB WWAE KFYO KJBS WIBM KGHI KXO	1310 1500 1230 1210 1370 570 1310 1500 740 1200 1310 1070 1370 1200 1500	Snerman, 1ex. East St. Louis, III. Albuquerque, N. M. Rock Island, III. Bakersfield, Calif. Wichita Falis, Tex. Elkhart, Ind. Corpus Christi, Tex. Modesto, Calif. Hammond, Ind. Lubbock, Tex. San Francisco, Calif. Jackson, Mich. Little Rock, Ark. El Centro, Calif.	3:10-3:30 3:20-3:40 3:30-3:50 3:40-4:00 3:50-4:10	KOTN WBLY WQAM KWYO WPRP KGCU WNEL KXYZ WAML WKBV WFOR KNEL WEED WGBF	1500 1210 560 1370 1420 1240 1290 1440 1310 1500 1260 1370 1500 1420 630	Lima, Ohlo Miami, Fla. Sheridan, Wyo. Ponce, P. R. Mandan, N. Dak. San Juan, P. R. Houston, Tex. Laurel, Miss. Richmond, Ind. Weslaco, Tex. Hatticsburg, Miss. Brady, Tex. Rocky Mount, N. C. Evansville, Ind. Ardmore, Okla. Flint, Mich.
4:50-5:10 5:00-5:20 5:10-5:30 5:20-5:40	KRRV WTMV KGGM WHBF KERN KGKO WTRC KGFI KTRB WWAE KFYO KJBS WIBM KGHI KXO WALR	1310 1500 1230 1210 1370 570 1310 1500 740 1200 1310 1070 1370 1200 1500 1500	Sherman, 1ex. East St. Louis, III. Albuquerque, N. M. Rock Island, III. Bakersfield, Calif. Wichita Falls, Tex. Eikhart, Ind. Corpus Christi, Tex. Modesto, Calif. Hammond, Ind. Lubbock, Tex. San Francisco, Calif. Jackson, Mich. Little Rock, Ark. El Centro, Calif. Zanesville, Ohio	3:10-3:30 3:20-3:40 3:30-3:50 3:40-4:00 3:50-4:10 4:00-4:20	KOTN WBLY WQAM KWYO WPRP KGCU WNEL KXYZ WAML WKBV KRGV WFOR KNEL WEED WGBF KVSO WFDF	1500 1210 560 1370 1420 1240 1240 1310 1500 1260 1370 1420 630 1210 1310 1200	Lima, Ohlo Miami, Fla. Sheridan, Wyo. Ponce, P. R. Mandan, N. Dak. San Juan, P. R. Houston, Tex. Laurel, Miss. Richmond, Ind. Weslaco, Tex. Hattiesburg, Miss. Brady, Tex. Rocky Mount, N. C. Evansville, Ind. Ardmore, Okla. Filnt, Mich. Kinston, N. C.
4:50-5:10 5:00-5:20 5:10-5:30 5:20-5:40	KRRV WTMV KGGM WHBF KERN KGKO WTRC KGFI KTRB WWAE KFYO KJBS WIBM KGHI KXO WALR KGHF	1310 1500 1230 1210 1370 570 1310 740 1200 1310 1070 1370 1200 1500 1210 1320	Snerman, 1ex. East St. Louis, III. Albuquerque, N. M. Rook Island, III. Bakersfield, Calif. Wichita Falis, Tex. Elkhart, Ind. Corpus Christi, Tex. Modesto, Calif. Hammond, Ind. Lubbock, Tex. San Francisco, Calif. Jackson, Mich. Little Rock, Ark. El Contro, Calif. Zanesville, Ohio Pueblo, Collo.	3:10-3:30 3:20-3:40 3:30-3:50 3:40-4:00 3:50-4:10 4:00-4:20	KOTN WBLY WQAM KWYO WPRP KGCU WNEL KXYZ WAML WKBV KRGV WFOR KNEL WEED WGBF KVSO WFDF	1500 1210 560 1370 1420 1240 1290 1440 1310 1500 1260 1370 1500 1420 630 1210 1310	Lima, Ohlo Miami, Fla. Sheridan, Wyo. Ponce, P. R. Mandan, N. Dak. San Juan, P. R. Houston, Tex. Laurel, Miss. Richmond, Ind. Weslaco, Tex. Hattlesburg, Miss. Brady, Tex. Rocky Mount, N. C. Evansville, Ind. Ardmore, Okla. Fiint, Mich. Kinston, N. C. Anchorage, Alaska
4:50-5:10 5:00-5:20 5:10-5:30 5:20-5:40	KRRV WTMV KGGM WHBF KERN KGKO WTRC KGFI KTRB WWAE KFYO KJBS WIBM KGHI KXO WALR	1310 1500 1230 1210 1370 570 1310 1500 740 1200 1310 1070 1370 1200 1500 1500	Snerman, 1ex. East St. Louis, III. Albuquerque, N. M. Rook Island, III. Bakersfield, Calif. Wichita Falis, Tex. Elkhart, Ind. Corpus Christi, Tex. Modesto, Calif. Hammond, Ind. Lubbock, Tex. San Francisco, Calif. Jackson, Mich. Little Rock, Ark. El Contro, Calif. Zanesville, Ohio Pueblo, Colo. Chico, Calif. Champaign, III.	3:10-3:30 3:20-3:40 3:30-3:50 3:40-4:00 3:50-4:10	KOTN WBLY WQAM KWYO WPRP KGCU WNEL KXYZ WAML WKBV KRGV WFOR KNEL WEED WGBF KVSO WFDF WFTC KFQO KONO	1500 1210 560 1370 1420 1240 1240 1310 1500 1260 1370 1500 1420 630 1210 1310 1200 1310 1200 1310	Lima, Ohio Miami, Fla. Sheridan, Wyo. Ponce, P. R. Mandan, N. Dak. San Juan, P. R. Houston, Tex. Laurel, Miss. Richmond, Ind. Weslaco, Tex. Hattiesburg, Miss. Brady, Tex. Rocky Mount, N. C. Evansville, Ind. Ardmore, Okla. Filnt, Mich. Kinston, N. C. Anchorage, Alaska San Antonio, Tex.
4:50-5:10 5:00-5:20 5:10-5:30 5:20-5:40 5:30-5:50 5:40-6:00	KRRV WTMV KGGM WHBF KERN KGKO WTRC KGFI KTRB WWAE KFYO KJBS WIBM KGHI KGHI KGHF KHSL WOWS	1310 1500 1230 1210 1370 570 1310 1500 740 1200 1310 1070 1370 1200 1210 1320 1260 1370	Snerman, 1ex. East St. Louis, III. Albuquerque, N. M. Rook Island, III. Bakersfield, Calif. Wichita Falis, Tex. Elkhart, Ind. Corpus Christi, Tex. Modesto, Calif. Hammond, Ind. Lubbock, Tex. San Francisco, Calif. Jackson, Mich. Little Rock, Ark. El Contro, Calif. Zanesville, Ohio Pueblo, Colo. Chico, Calif. Champaign, III.	3:10-3:30 3:20-3:40 3:30-3:50 3:40-4:00 3:50-4:10 4:00-4:20	KOTN WBLY WQAM KWYO WPRP KGOU WNEL KXYZ WAML WKBV KRGV WFOR KNEL WEED WGBF KVSO WFDF WFDF KVSO WFDF WOND KFQD KONO WKBZ	1500 1210 560 1370 1420 1240 1290 1440 1310 1500 1260 1370 1500 1420 630 1210 780 1370 1500	Lima, Ohlo Miami, Fla. Sheridan, Wyo. Ponce, P. R. Mandan, N. Dak. San Juan, P. R. Houston, Tex. Laurel, Miss. Richmond, Ind. Weslaco, Tex. Hattlesburg, Miss. Brady, Tex. Rocky Mount, N. C. Evansville, Ind. Ardmore, Okla. Fiint, Mich. Kinston, N. C. Anchorage, Alaska San Antonlo, Tex. Muskegon, Mich.
4:50-5:10 5:00-5:20 5:10-5:30 5:20-5:40	KRRV WTMV KGGM WHBF KERN KGKO WTRC KGFI KTRB WWAE KFYO KJBS WIBM KGHI KXO WALR KGHF	1310 1500 1230 1210 1370 570 1310 1500 740 1200 1310 1070 1370 1200 1500 1210 1320 1250	Snerman, 1ex. East St. Louis, III. Albuquerque, N. M. Rook Island, III. Bakersfield, Calif. Wichita Falis, Tex. Elkhart, Ind. Corpus Christi, Tex. Modesto, Calif. Hammond, Ind. Lubbock, Tex. San Francisco, Calif. Jackson, Mich. Little Rock, Ark. El Contro, Calif. Zanesville, Ohio Pueblo, Colo. Chico, Calif. Champaign, III.	3:10-3:30 3:20-3:40 3:30-3:50 3:40-4:00 3:50-4:10 4:00-4:20	KOTN WBLY WQAM KWYO WPRP KGCU WNEL KXYZ WAML WKBV KRGV WFOR KNEL WEED WGBF KVSO WFDF WFTC KFQD KONO WKBZ	1500 1210 560 1370 1420 1290 1440 1310 1500 1260 1370 1500 1420 630 1210 1310 780 1370 1500 1390	Lima, Ohlo Miami, Fla. Sheridan, Wyo. Ponce, P. R. Mandan, N. Dak. San Juan, P. R. Houston, Tex. Laurel, Miss. Richmond, Ind. Weslaco, Tex. Hattlesburg, Miss. Brady, Tex. Rocky Mount, N. C. Evansville, Ind. Ardmore, Okla. Fiint, Mich. Kinston, N. C. Anchorage, Alaska San Antonlo, Tex. Muskegon, Mich.
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4:50-5:10 5:00-5:20 5:10-5:30 5:20-5:40 5:30-5:50 5:40-6:00	KRRV WTMV KGGM WHBF KERN KGKO WTRC KGFI WAE KTRB WWAE KFYO KJBS WIBM KGHI KXO WALR KGHF KHSL WDWS KGKB	1310 1500 1230 1210 1370 570 1310 1500 740 1200 1310 1070 1370 1200 1500 1210 1320 1320 1360 1370 1500 1320	Snerman, 1ex. East St. Louis, III. Albuquerque, N. M. Rook Island, III. Bakersfield, Calif. Wichita Falis, Tex. Elkhart, Ind. Corpus Christi, Tex. Modesto, Calif. Hammond, Ind. Lubbock, Tex. San Francisco, Calif. Jackson, Mich. Little Rock, Ark. El Contro, Calif. Zanesville, Ohio Pueblo, Colo. Chico, Calif. Champaign, III.	3:10-3:30 3:20-3:40 3:30-3:50 3:40-4:00 3:50-4:10 4:00-4:20	KOTN WBLY WQAM KWYO WPRP KGCU WNEL KXYZ WAML WKBV KRGV WFOR KNEL WEED WGBF KVSO WFDF WFTC KFQD KONO WKBZ	1500 1210 560 1370 1420 1290 1440 1310 1500 1260 1370 1500 1420 630 1210 1310 780 1370 1500 1390	Lima, Ohlo Miami, Fla. Sheridan, Wyo. Ponce, P. R. Mandan, N. Dak. San Juan, P. R. Houston, Tex. Laurel, Miss. Richmond, Ind. Weslaco, Tex. Hattlesburg, Miss. Brady, Tex. Rocky Mount, N. C. Evansville, Ind. Ardmore, Okla. Fiint, Mich. Kinston, N. C. Anchorage, Alaska San Antonlo, Tex. Muskegon, Mich.

4:30-4:50	KOCA	1210	Kilgore, Tex.
	KUJ	1370	Walla Walla, Wash.
4:40-5:00	KCMC	1420	Texarkana, Texas
	KRNR	1500	Roseburg, Ore.
4:50-5:10	KEEN	1370	Seattle, Wash.
	KWTN	1210	Watertown, S. Dak.
5:00-5:20	KGFF	1420	Shawnee, Okla.
	KIT	1310	Yakima, Wash.
5:10-5:30	KBTM	1200	Paragould, Ark.
	KRKO	1370	Everett, Wash.
5:20-5:40	KFRO	1370	Longview, Tex.
	KGEZ	1310	Kalispel, Mont.
5:30-5:50	$_{ m KBIX}$	1500	Muskogee, Okla.
	KFXD	1200	Nampa, ldaho
5:40-6:00	KFJM	. 1410	Grand Forks, N. D
	KXRO	1310	Aberdeen, Wash.
5:50-6:10	KGY	1210	Olympia, Wash.
6:00-6:20	KINY	1310	Juneau, Alaska
6:10-6:30	$_{ m KMED}$	1410	Medford, Ore.

### Postage Rates

The rate of postage on letters is 3c for each ounce and for post cards, 2c each, to the following countries:

Annobon Island, Argentina, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Fernando Po, Guatemala, Haiti, Honduras, Mexico, Newfoundland, Nicaragua, Paraguay, Peru, Spain, Spanish Guinea, Spanish Morocco, Uruguay and Venezuela.

Alaska, Canal Zone, Hawaii, Puerto Rico and the Virgin Islands, being parts of the United States, take the same rates as letters in the USA, 3c for each ounce for letters, and 1c for post cards.

The postal rate to all the other countries in the world is 5c for each ounce and 3c for each additional ounce for letters, and 3c each for postcards.

The new Greenville, Texas station on 1200 kcs. replaces KFPM, the famous little 50 watter that left the air several years ago. KFPM recently tried a comeback and their request for reinstatement has been pending before the District of Columbia Court of Appeals. With the CP going to the Hunt Broadcasting Co., the application of KFPM was denied.

#### Universal DX

#### Club Corner

• • By "Pooky"



REMEMBER last season's RADEX Mystery DX Contest? Remember RADEX offered a special prize to DX Clubs? To the DX Club with the highest percentage of members entered in the contest they'd give space in RADEX each month for ten months, said space to be used pretty much as the club saw fit.

Well, here we are, and we'll be here for nine months more. It's not a very comfortable feeling this first time. We feel rather naked, coming out in the open, on the newstands with such magazines as Film Fun and Coronet. We do not know quite how to act.

The obvious thing to do would be to use this space every month to publicize UDXC activities, to tell the world what the UDXC is doing and how much better the UDXC is doing it. Probably no one but UDXC members would read the column if we did that, and we have already received and spent their dues. No, we are either too altruistic or too clever to use this space to talk about ourselves.

We (and by "We" you must always understand "Pooky," the Club mascot who cannot be sued) have evolved a contest. A mysterious contest. It seems fair to pay RADEX back.

A contest which is open to everyone, regardless of club affiliation. It requires no expert knowledge of DX. A child of four can win. And we do not want you to send in a single bottle cap unless it's attached to the bottle.

For the best eight articles on any phase of DXing sent to us during the next eight months, we (still "Pooky") will give the following eight prizes:

- Graf Zeppelin cover, first U. S. flight, 1929, perfect condition, German Zep stamp.
- 2. One desk pad, 1938, deluxe model (you furnish the desk).
- One typist's kit: Star type cleaner, micrometer carbon paper, patent stamp moistener, old tooth brush.
- Twelve white Rose of Sharon, rare shrub, sturdy two-year-old stock.
- Shhh! One large color photograph, guaranteed highly desirable, No Details.
- One trial membership in the UDXC, six months, all privileges.
- Twenty-five Indian Head pennies, assorted years, superb, guaranteed by the U. S. government.
- 8. One Philco doublet aerial, used, perfect condition, complete.

#### Selection of Prizes

One winning article will be published in this space each month with the name of the writer and his club affiliation. The prize he has selected will be sent him postpaid. When submitting entries it will be necessary to name your first three choices for prizes, and to name those which you especially do not want.

What can you write about? Anything! How you became a DXer. A visit to a broadcasting station. The technical side of aerials. Grounds. The sunspot theory. What you think of all-nighters. What's wrong with DX Clubs. Shortwave reception in Omsk.

The articles we select will be seri-

ous, informative, interesting DX articles. We mean that. Remember, Baron "Pooky" makes all the jokes. In length they may run anywhere from 200 to 1000 words. We specifically reserve the right to abbreviate them. None will be returned. No correspondence will be entered into.

Come on, DXers! We are willing to share our publicity with you. It's all in fun, and that photograph is—ah! Address us, "Pooky," Universal DX Club Headquarters, 345 Maple Ave., Oradell, N. J. We really mean to give away those prizes because it is worth that much to Pooky to have someone write his column for him every month.

Speaking of publicity, why don't you join the club? Dues, you know, are only a dollar a year. And you get a mascot free.



A candid camera shot of lovely Jane Froman as she sings a love sonnet over the NBC-Red Network. She is the star of the program replacing the Jack Benny Show for the summer.

WTFI Athens, Ga., on 1450 kcs. will move into the city of Atlanta at about the time this issue of RADEX reaches its readers., It is expected the call letters will be changed to WAGA when the transfer is made.

## DX NOTES From The Broadcast Band

• • By the BROADCAST EDITOR

AFTER several months of inactivity, the calendar once more shows the approach of another radio season. For many a listener, this will mean dusting off the old receiver, removing the headphones from the proverbial moth balls, and generally getting ready for a winter of old-fashioned DXing.

It won't be long before many of our readers will be shutting off alarm clocks and crawling out of warm beds for an hour or two of early-morning dialing. As ever they will be on the look-out for new stations to verify, and judging from the way the FCC has been handing out construction permits, there are going to be a lot of swell catches waiting for a chance to be logged.

Radio clubs are already preparing for another season of activity and service to their members. In another section of this issue, which is dedicated to the Universal DX Club, an anonymous writer takes us behind the scenes of the UDXC headquarters at Oradell, N. J. Many of us who have never seen a club bulletin "put to bed," will be interested in the typical scene in the basement of 345 Maple Street. Those who have commented on the excellent typographical work done on that bulletin, will be glad to know how it is done.

#### Veri Cards vs. Letters

In many a past issue, readers have complained about stations which ask for three cents postage and then verify with a penny post card. While it has always been admitted that a neatly-typed, personal letter on a station letterhead is a most welcome addition to a file of verifications, readers may not have realized what it costs to verify in



Clem McCarthy, veteran NBC turf authority and commentator, and expert sports announcer, is shown in this interesting study.

that manner. Paul Sampson, 1820 College Ave., Regina, Sask., submits some revealing figures in this connection:

"Why do some DXers go up in the air because a station may send them a typewritten veri on a postal card?" he queries. "We really ought to thank our lucky stars that they do us this service. There are few stations which won't verify for return postage, but that is no reason to frown on them and put them down as robbers.

"After all, a radio station is a business enterprise just the same as the average office. They have to pay for their overhead and count the cost of operating their office. According to 'Office Practice,' the leading text of Canadian business high schools and colleges, here is what it costs the average office to send a

letter: Executive's service, 15.4 cents; Stenographer's service, 7.3 cents; office overhead, 7.5 cents; Postage, 3.0 cents; and Stationary, 1.8 cents. Add that up and you find that the average letter costs exactly 35 cents to mail.

"It can be seen that the mere item of return postage doesn't begin to pay for the actual cost of issuing a veri. DXers should think twice before attacking the station which sends a post card or refuses to verify at all."

#### Contest Winners Report

It has been some time since the Mystery DX Contest was concluded and the various prizes distributed, but the intervening summer months have prevented the publication of letters from some of the winners.

"The Scott 23-tube receiver arrived the other day," advises Floyd L. Biss, Brittmount, Minn., who placed first. "I bought a Warrington console to go with the set and it certainly a beautiful Haven't had a chance to operate it yet, since there is no AC current out this way. We have had an AC generating plant on order since last fall. but have suspended the order temporarily as we expect a power line to go through here. If the line doesn't come through pretty soon, however, we are going to get the other outfit. I'll be sure to have something figured out before the next DX season begins.

"Perhaps the most enjoyment a person can get out of a contest is coming in first, but I can honestly say that no other contest has ever held the interest for me that this one did. I thoroughly enjoyed the three nights of competition, and though I was sure that I had placed way down the line, I looked forward eagerly for the next competition. To learn that I placed first was a shock beyond measure."

"Just received the pair of head-

phones," writes Arthur E. Foerster, 1213 Bosart Ave., Indianapolis, Ind., "and want to thank you for giving me the opportunity to win them. Believe me, I wouldn't have minded so much the noise and static during the contest if the old set of phones hadn't been so heavy and made my ears so sore. The new Trimm Featherweights are swell and they sure make DXing more of a pleasure."

"The Perfect Phone Adapter was received OK," informs T. J. Sanders, P. O. Box 32, Bly, Ore., "and I want to thank you very much. Also, I want to join in with the many DXers in thanking you for putting on the contest, and I hope that you can repeat it each year."

"Just a line to thank you for the subscription to RADEX," notes P. M. Dillingham, Box 76, Luseland, Sask. "I really didn't think I had a chance to win one of the prizes, so the announcement in the May issue was a great surprise. The contest certainly was a thriller and you may be sure that I'll take a crack at any more you decide to conduct."

#### And A Non-Winner

"While I didn't get to first base in the contest," admits S. Raymond Lewis, 1733 Kensington Rd., Toledo, Ohio, grand prize winner in the 1936 competition, "I do want to congratulate Floyd Biss on the swell bit of dialing which he did over that memorable week-end. Knowing how reception was here in Toledo, and how it must have been all over the country, my hat is off to him and the rest of the winners. They certainly had what it takes!

"Outside of drawing a blank in the contest, the past season was unusually kind to me. The Scott really went to town and brought in the following trans-Atlantic catches: Belfast, Northern Ireland; Paris (on 695), Nice and Toulouse (on 776), France; Bologna (which makes Italy

completely verified on the BCB); Vienna, Austria; Praha and Morayska, Czechoslovakia; Brussels No. 1, Belgium; Monte Ceneri and Beromunster, Switzerland; Breslau, Berlin, Leipzig and Konigsberg, Germany; and Madona, Latvia. PRA9 and PRE8 are two nice SA's which have come in recently. By adding a few Cubans, Canadians and Mexicans, and close to 40 U. S. stations, the total of veris has reached 1135. Some chaps say it was a bum season, but I don't see how it could have been much better for me."

#### Reception Reports

In one of Count De Veries' "Scrapbook" articles a couple of issues back, there was noted the case of five listeners in a mid-western city whose reports on KVI's contest program did not agree on the type of reception which was experienced. One listener reported static as being "heavy," while another said there was "none." Signal strength varied from R3 to R7. Other discrepancies were noted and it was pointed out that such a variance might look rather odd to the station engineers. "I'll have to differ with you on the matter." informs Arthur E.

Foerster, 1213 Bosart Ave., Indianapolis, Ind. "Can you imagine a situation something like this: a fine sensitive receiver, with an antenna directed toward KVI, on one side of the room; a cheap, noisy receiver, with antenna pointed away from KVI, on the other side of the room. I'd like to bet that the reception reports of the two DXers would be quite different. If the receiver, type of antenna and direction didn't make considerable difference in quality of reception, why would DXers be asked to give this information with their reports?"

"Put me down as disagreeing on the KVI matter," requests R. B. Oxrieder, 122 E. Hamilton Ave., State College, Pa. "Heaven only knows that DXers do plenty of things for which they deserve a 'cussing' but in this instance I am going to arise to the defense of the five mid-Western listeners.

"Not so long ago I was testing three receivers in a side-by-side test. On one particular station, receiver A was very selective and separated the desired station from interfering broadcasters on the two adjacent channels. I was able to hear about 90% of what was said, and gave the station QSA5-minus on readability. Receiver B failed to get rid of the interfering stations, so the wanted transmitter rated GSAO through no fault of its own. Receiver C was sufficiently selective to give about 70 to 80 per cent readability, so its reception of the station was rated QSA4.

"I have three aerials and a switching system, so I can use any one of them at will. Taking one receiver and tuning to a given station, I have found that antenna X will give satisfactory reception with the volume one-third on. Switching to antenna Y. I must turn the volume onehalf on before I get the same output. Finally, still tuned to the same station, use of antenna Z necessitates turning the volume two-thirds on to maintain the same level. Therefore, if I had been three different people, each one of whom had used one of these combinations, I couldn't have given the same R report in any case.

"At the time I made the threereceiver test, I found that on weaker signals: A gave very little noise; B gave some; C gave a lot. I have also found that the antenna used will make quite a difference in the case of the amount of noise picked up. Thus, a very honest report based on various combinations of aerials and receivers could easily show a wide variation on noise level and static.

"Consequently, if I can get so (Please turn to Page 48)

## Tuning The AMATEURS

#### a a Du D. T. Aleman, T.

• • By B. L. Ahman, Jr.

GREETINGS, readers old and new. A fresh piece of news of interest to all of you is the Guatemalan amateur on 20 meters. He is TG1AX, and according to Julius Orosz he is on the low end of the band. The address hasn't been established as yet, but we'll try to have it for you next month. Frequency, 14100 kcs.

The frequencies of some new stations are given herewith: YI2BA, Iraq, Asia, on 14170 kcs. OZ7KE, Denmark, 14100 kcs. LU9KA, Ricardo Frias (h), 9 de Julio 197, Tucuman, Argentina, 14400 kcs. CP1AA, H. E. J. Smith, Casilla 669, La Paz, Bolivia, 14000 kcs. J2LU, Japan, 14265 kcs.

A nice card arrived from HC1JB, the portable call of HCJB, Quito, Ecuador. This was our first Ecuadorean ham, and the card is the same as the one used by the brother broadcasting station with the number "1" inserted.

Julius Orosz, 12205 Parkhill, Cleveland, Ohio, devotes his time entirely to tuning the 20-meter amateur band. He says he had tried all the other forms of DXing, but decided to concentrate on the amateurs because he feels that broadcast listening is too "cut and dried."

"For instance, on the broadcast band," he explains, "the frequencies and time on the air of practically all stations are available. Therefore, in order to tune in a certain station which you may be desirous of hearing, it is only necessary to tune at a predetermined time to a predetermined frequency, which can be very accurately accomplished on most receivers, and then turn up the volume control. The result will be

that you will either hear the station or you wont and that's all there is to it.

"Thrills galore are available on the 20-meter band. Nothing is probable and yet anything is possible. This is a band of uncertainties and unlimited possibilities. Practically every country in the world has amateur stations. Stations are often heard from some country which we didn't know existed before, and many times flea-powered stations completely dominate the band. On this band one can fish to his heart's content.

"The beauty of amateur DXing is, regardless if the station is in Greece, Austria, Switzerland, Bolivia, Egypt or any other country, the calls are announced in English, with the use of proper nouns to facilitate identification of call letters. Some of these identifying signals themselves have become famous, such W4DLH (Four dark lean horses). TI2KP (Kiss papa), W8TY (Thank you), W9PGC (Pretty Good City); W4EJA (Educated Jumping Alligators); or W9ODQ (Old Doctor Quack).

"It is possible to build an impressive log even though time is limited as it takes only a few minutes to identify a new station. Many times within a period of five minutes several valuable additions can be made to one's log, while fifteen or thirty minutes or even more is required to identify a broadcasting station.

"I clearly recall the thrill I received one morning when I tuned in an Alaskan, K7PQ, with an R5 carrier squeezing between two powerful W6's. What was more grand than the thrill of hearing ZE1JR and ZU6P calling CQ, located in Southern Rhodesia and the Union of South Africa respectively? Most thrilling was the first reception of E12J in Dublin in the Irish Free

State when the operator announced he was using only 7 watts. Nothing can equal the fun of tuning in 10 and 15 watt Australians, and nothing was more astonishing than the reception of VQ1AB in the Fanning Islands, when he announced that he had just reduced his power from 10 watts to ONE WATT."

Mr. Orosz has what we consider a very good system of keeping his amateur log. Space limitation forbids publication of this part of his letter this month, but month's column we will give the plan in detail.

"Twenty meter DX is still holding up well here," reports H. Wilcox, 623 W. 40th Place, Los Angeles, Calif. "The 1's, 2's, 3's and 4's are more active than usual and the 5's and 9's have let down somewhat. Canadians are always good here. Some of the best heard here last month are TI2KP ("Kiss Papa"), San Jose, Costa Rica: VE4KZ: VE3NF; TI2PG; XE1GK and K7FBE.

"One of the nicest cards received recently is the one from HH2B, Port-au-Prince, Haiti, showing photo of the rig, which happens to be a 100 watt Collins. Other nice cards are from XE2FC, Tampico, Tams, and VE4KZ at Calgary."

September should bring a new crop of Australian hams to the fore, as DX on 20 has been pretty good throughout the year. Other countries, however, are beginning to make appearances and many new countries are being represented by amateurs. Modern receivers are going after and digging out those elusive far-away signals so easily now that one can sit at ease and travel around the world. The whole world is at our finger tips; all we have to do is listen in on what the other half is doing.

Readers are again cautioned to

send the longest reports possible to amateurs, with as accurate a description of the signals as is possible. The hams would rather have a poor report if correct than a glowing one which sounds too much like a bribe.

Do not be backward in sending in reports. They are all very much appreciated, and all will be used. Just let us know what you want and we shall do our best to please.

#### Amateur

#### CALLS HEARD

CO: 2EG(ag); 2GA(g); 2JG(g); 2KC (dg); 2KY (gh); 2LY (g); 2MH(dg); 2RW(g); 2WW(gi); 2WZ (dg); 6OM (d); 7CX (i); 7HF (d); 8AG (g); 8AK (g); 8BC (d); 8OG (g); 8YB (gi); CT1AY (g); CY1FR (c); EA8AE (c); EA9AH (g); EI2J (b); EI2L (g); F3GR (g); F8DL (c).

**G:** G2HQ (g); 2MF (g); 5BJ (c); 5JO (a); 5KH (g); 5LV (g); 5ML(g); 5MU(g); 5NI(g); 5NW (c); 5SA (g); 6BW (g); 6JQ(g); 6OS(g); 6TZ(g); 6WX(g); 6XR (g).

 $\mathbf{H}$ 

**HB:** 9A (g); 9B (g); 9J HC1ETC (c); HC1FG (q): HH2B (cg); H15X (ag); H17G(agi); HK1GK (a); HK1JN (gi); HK3JA (g); HK3OC (i); HK4AG(g); HP1A(g); HR2A(e).

ĸ **K:** 4DFD (d); 4ENY (g); 4SA (gi); 6AJA (h); 6BNR (g); 6CMC(cg); 6JLV (a); 6LTV (d); 6MV (i); 6MYM (h); 6NTV (a); 6NZQ (cgh); 6OQE (dg); 7FST

> LU1CA (g); LU1JE (g); LU5CZ (g); LU7AC (g); NY2AE (di); OA4AL(g): OA4C(h): OA4N(cg); OA4R (g); ON4PA (g);

ON4VK (g); OQ5AA (g); PK1MX (e); PY1CK (c); PY2ET (c); PY1FR (g); PY2AK (g); PY2ET (g); SM7YA (g).

TG1AX (e); TI1AF (g); TI2DC (a); TI2FG (i); TI2KP (ghi); TI2LR (g); TI2PG (g); TI2RC (gi); TI3AV (a).

VE: VE1LR (hi); 2DC (i); 2ED
(a) 2EV (a); 2FO (a); 2GG (a);
2HG (a); 2HY (a); 2LQ (i); 2NI
(i); 2OQ (i); 3ADO (i); 3ADI
(i); 3AKT (a); 3DF (d); 3FA
(i); 3HB (i); 3QZ (i); 3TC (i);
4AC (c); 4ACR (i); 4BD (ci);
4FW (d); 4HU (d); 4IW (d);
4PM (c); 4TW (i); 5DK (a);
5EF (ci); 5OO (c); 5PE (d);
5PZ (d).

VK: 2GU (d); 2HF (ch); 3KR (fg);

VK: 2GU (d); 2HF (ch); 3KR (fg); 7CL (e); VO1I (ag); VO2N (ag); VP3GB (g); VP4TH (c); VP5AF (g); VP5GM (g); VP5PZ (h); VP6YB (cg); VP7NA (g); VP9F (c); VP9R (ag).

W: 5CHU, 5CTC, 5FDE, 6BPM, 6EJC, 6LR, 6LMS, 6DZX, 6BUQ, 6KSO (all heard by i).

XE1AK (i); XE1BC (g) XE1GK (g); XE1Y (g); XE2AH (g); VE2FC XE2FF (h);(gh);XE2JK (gh);XE2XE (g);XE3AG (g); XE3AH (g); XE3BH (g); YV1AA (gi);YV1AP(a); YV5AE(c); YV5AG(g).

Names and Addresses.

(a). A. E. Blick, 125 Lappin Ave., Toronto, Ont.

(b). Raphael Geller, 1652 Radcliff Ave., Bronx, N. Y.

(c). George Nahas, 147 Seeley St., Brooklyn, N. Y.

(d). Martin J. Olthoff, 212 N. 16th St., Independence, Kans.

(e). Julius Orosz, 12205 Parkhill Ave., Cleveland, Ohio.

(f). C. Schafranek, 61-47 69th St., Maspeth, N. Y.

### New DAVENTRY Transmitters

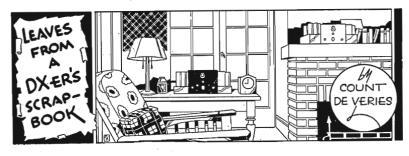
Details of the three new highpowered transmitters at Daventry and the reorganization of the aerial system have been announced by Sir Noel Ashbridge, the BBC's Controller of Engineering.

Sir Noel said that each of the new transmitters will have a power of 50 kw in the aerial. They are additional to the two 10 kw. transmitters which, with that of the first British shortwave station, G5SW, comprise the existing transmitters at Daven-The power of the ex-G5SW transmitter is to be increased to 25 kw. and it is possible that, at a later date, the other two will be combined to form a single unit of greater Ultimately, therefore, the BBC will have five transmitters in use exclusively for the Empire Service. In ordinary circumstances four of these will be used simultaneously.

The Chief Engineer said that eleven aerial masts have been added, bringing the total to 15 masts, ranging in height from 80 feet to 500 feet. Twenty-three aerial arrays will be provided by the system, to any one of which any of the transmitters may be connected. A complicated framework has been constructed to facilitate change-overs. To eliminate echo effects, all the aerials for wavelengths of 20 meters and below and some of the 25 and 31-meter aerials are equipped with reflectors.

To connect the twenty-three aerials to the "transmitter-to-aerial" exchange, six miles of open-wire feeder lines carried on 550 poles are required.

- (g.) Jack Siringer, 1451 Lincoln Ave., Lakewood, Ohio.
- (h). H. Wilcox, 623 W. 40th Place, Los Angeles, Calif.
- (i). Wm. J. Wood, 817½ Lake St., Oak Park, Ill.



PRETTY nearly every time someone writes in to report reception of a couple of foreign stations, a score or more of readers get out pen and paper to ask how it's done. Let a chap report a few hundred-watters from across the continent or even break down and admit that he's verified all the stations in a given group of states, and in come the letters to inquire about the secret of his success.

As close as I can judge, and I've been in the racket a few years, there isn't any hokus-pokus to DXing. I've never heard of any trick formula that will make an aerial break down under a load of Aussies or Europeans. And I'm sure that there isn't any magic ear which will enable one fellow to hear something that is inaudible to the other chap.

After spinning dials on many a long morning trick, DXing appears to boil down to the simple fact that "you either hear 'em or you don't." If you have a fairly good receiver connected to a decent aerial and if you listen at the right place at the proper time, you've got a pretty good chance to hear as much as the next fellow. Fall down on any one of these points, and DXing will be a rather unprofitable pastime.

#### Look At The Receiver

It goes without saying, of course, that a fairly efficient receiver is a most necessary factor for successful DXing. A listener doesn't have to own a large fifteen or twenty tube

set, because some mighty fine results may be obtained on a seven to ten tube job of fairly recent vintage.

If a listener is planning to use his present set during the coming season, it would be a good idea to let a reputable serviceman go over it thoroughly. Lining up the various tuning circuits is an easy job when good service equipment is used, and the improved sensitivity and selectivity will be well worth the modest cost. A receiver is no better than its weakest tube, so a check-up here may bring in a fine dividend of distant stations.

If the budget will allow the purchase of a new model, an article in another section of this issue gives some pointers on selecting a good receiver. From time to time during the coming months, performance reports on various models will give tips on what each set will do in a DX way.

#### Aerials Are Important

Too little attention has been paid in recent years to the antenna. The high sensitivity of modern receivers has made it possible to obtain adequate signal strength from a great many stations even with a poor aerial installation. As a result, many listeners are content to string a wire to the nearest pole and let it go at that.

If DXers would take a page from the early history of radio, they would enjoy far better results than many now experience. In the old days, the limited range of crystal sets and single-tubers forced the erection of efficient aerials. Consequently, listeners put up lots of wire as high as possible.

It was no more difficult for the early receivers to pull in stations a few hundred miles distant than it is for present-day sets to log a hundred-watter across the continent or to span an ocean for a foreign station. Therefore, listeners who are anxious to better their DX records can't go wrong by reading the article on aerials in the September, 1936, issue of RADEX.

#### What Is DXing?

After the DXer has made certain that his receiving equipment is as efficient as circumstances will permit, he can turn to the consideration of what he wants to get out of the hobby.

Some DXers are primarily interested in building up the largest possible log of stations, whether they be local, semi-distant or foreign. Others are satisfied only when they hear stations at a very great distance, and to them anything within 1500 to 2000 miles is "purely local stuff." But regardless of how he looks at the hobby, the average DXer can determine what type of activity is best suited to his own taste.

He may be ambitious and decide to concentrate on foreign reception. If so, he will have plenty of company among the Radexers. may consider the general conditions which existed during the past two seasons, and which will probably be repeated during the coming year, and set out to improve his log of OfNorth American stations. course, he won't pass up any foreigners which may trickle down his lead-in, but he won't neglect the stations which he has a reasonable chance to hear.

In the opinion of many listeners, DXing among our own stations can be highly enjoyable pastime. It requires no inconsiderable skill and returns very satisfactory dividends. It does not necessitate spending an excessive amount of time and therefore attracts what is perhaps the largest group of DXers.

Fix Reception Goals

Probably the most interesting way to log stations on this continent is to establish definite goals for reception. You can pick crowded channels and attempt to verify every station listed. You might try to log all stations with more than 250 watts power, or see how many hundredwatters you can catch. You could set a mark of a hundred or so stations for the coming season and see how close you can come. Or you



Bottle and his boss, Phil Baker, caught by a candid camera man as Phil delivers a gag line. Bottle always comes to the studio in evening clothes, and changes into a butler's outfit for the broadcast. Harry von Zell, their announcer, took charge of their program as master-ofceremonies during the summer.

can shoot the works and attempt the creditable task of verifying all of the stations in the United States.

This latter goal would be a real achievement for any DXer and, conrary to the opinion of some listeners, it is by no means an impossible or even improbable ambition. If the matter is considered in a sane light and if the problem is approached in a methodical manner, the chances of success are not at all remote.

To achieve this goal, the listener would probably turn to the list of stations by frequency in this issue and check off those which are already verified. He might be starting from scratch and have no veries to check off, or he might have several hundred, but the main idea would be to identify the stations which he needed. Taking this group as a whole, he would attempt to classify the stations by the manner in which they could be heard.

Into one sub-group would fall the stations which broadcast monthly frequency checks. For the most part, these broadcasters are pretty easy to hear and all but a few should be logged within three or four months. The low-power stations at a great distance may require several attempts before a verifiable report has been logged, but even these stations should be heard at least once during a season.

The next group includes the stations which can be heard at some time on their regularly daily schedule. Some of these can be logged during the daytime when interference from other broadcasters is at a minimum. Others can be heard during the evening when they override the interfering stations on their channel or pop out unexpectedly when the dominant broadcasters does Early-evening hours, a fade-out. when darkness is just falling, is an excellent time to pick up stations not too far away. Late at night other stations can be heard prior to their sign-off, while the hour after 6 am finds many broadcasters just signing on for the day.

To receive the stations in this group, consult the schedules in RADEX and determine the best time to hear them. It may be noted that a needed station remains on the air at night after the others on its channel have signed off, or it may commence broadcasting a few minutees earlier in the morning. Even

when two stations are supposed to sign off at the same time, one of them may have a final announcement which will give a DXer a few minutes in which to take down a summary.

After the listener has checked off the stations which he might hear on their regular daily schedules and has noted those which transmit monthly frequency checks, he will have left over a third and final group. These are the stations which will be heard only during special broadcasts, and the DXer will have to depend upon hearing a chance equipment test or a program dedicated to one of the radio clubs.

#### A Practical Example

All this sounds very well in theory, some readers will say, but how are we going to put this classification idea into practice? How are we going to know when to tune for the stations we need?

In answer to this rather typical question, let's take a practical example. Let's look at the 1210 kcys channel, where 53 U.S. stations are assigned. Of this total, no less than 43 can be found in the current frequency check schedule. Therefore, very DXer is going to have a monthly crack at all but ten of the stations on this channel. Of the ten remaining stations, KFPA, WLMU and WSNJ have not as yet commenced regular transmissions and cannot be classified as active stations. When they do come on the air, they probably will be assigned to the frequency check schedule. That leaves but seven stations unaccounted for-KFOR, KFXM, KPPC, WCRW, WEDC, WJEJ and WSBC.

Looking at the time on the air for these broadcasters, it is noted that KFXM is on until 3am EST daily except Saturday and Sunday. With a reasonable bit of luck, a DXer in any part of the country should be able to hear that station some morning this winter. Of the

three time-sharing Chicago stations, WSBC signs off at midnight EST and is usually followed by WEDC for an hour or two. Thus, the latter shouldn't be a difficult catch for Eastern and Central WCRW's schedule is unfavorable for distant reception, so this station as well as WSBC will have to wait for a special program. The same is true of KPPC, KFOR and WJEJ. Thus, out of a total of fifty active stations on a crowded channel, only five cannot be heard at any distance on their regular programs. And of these five, the chances are excellent that at least two or three will broadcast one or more special programs during a winter season.

Any other channel in the entire broadcast spectrum can be analyzed in the same manner. DXers can easily determine if a station has a chance of being heard either on a regular program or on a frequency check transmission. If this is not possible, the desired station falls into the third classification and must wait for a special.

Fortunately for listeners, the courtesy programs committees of the various radio clubs are usually very active in arranging specials from stations in this latter group. All wise DXers should make a point of joining one of the clubs and take advantage of CPC work.

#### Dialing The Foreigners

Reception of a foreign station on the broadcast band is a happy occasion which occurs too seldom in the life of the average DXer. Yet there is no reason in the world why most listeners shouldn't experience this supreme DX thrill a few times in any season.

Here, as in the case of domestic DXing, the primary requisites are a good receiver and a knowledge of when and where to tune. Perhaps the only other important factor is a certain degree of tuning skill, which, after all, is largely a matter of pa-

tience and perseverance.

Too often a DXer will give up when a nice trans-oceanic catch is within his reach. He forgets that signals from Europe and Australia are necessarily very weak, and when he fails to log the station immediately, he is inclined to turn away in search of a more powerful signal. Until he conquers this tendency, he cannot hope for success.

Also, many listeners complain that they have heard many foreign stations, but were unable to get a report. Actually, they could not understand the announcements and were not able to identify the selections heard. If a DXer hears a station and cannot jot down the fact that he heard a man talking, an orchestra playing a waltz, a woman singing, a violin solo or a choral number at a definite hour—if he is unable to make a report out of such items, he certainly does not deserve to receive a verification.

But even assuming that a listener knows what to do with a station when he hears its faint signal, he still has to tune the carrier in the first place. And that involves a certain knowledge of when and where to tune.

#### When To Tune

Foreign reception on the broadcast band is a very seasonal matter, and unless the months and hours are taken into consideration, there is little chance of success.

First to arrive this season will be the stations in Australia and New Zealand. They will be at their best in October and November, and then they will drop out of hearing until the peak months of March and April next spring. This is true simply because while we are having our fall, they are having spring—and vice versa. Thus, the seasons at both ends of the path of the signal are similar.

The New Zealand signals generally become audible just after 4 am EST,



An interesting subject, interesting mood and interesting pose completed the composition of the photograph of Irving Berlin, made by Ray Lee Jackson, NBC staff photographer. This was judged the "Most Interesting Portrait" in the NBC Photographic Exhibit.

when it is 10:30 pm down there. A little later, the Aussies begin to push through, and from then until daylight, the stations increase in strength. As there is practically no interference from other stations with which to contend, the Aussies and Zedders are perhaps the easiest to tune.

Also during the fall months, South American stations make their appearance. However, since they are on the air while our own locals are broadcasting, they provide rather a difficult test for the aver-With the exception of age DXer. occasional early morning special DX and test programs such as the Bureau of Standards conducted the past two years, the best time to tune the SA's is in the early evening hours before the dominant locals have reached their peaks. By tuning to the frequencies of the more powerful stations, it is often possible to pick up a station in Brazil or Argentina.

The months of November, December and January find trans-Atlantic reception at its best. The European stations are generally considered as being divided into two district classes—those which are heard between 6 and 7 pm EST, and those which must be tuned between 1 and 3 am EST.

In the first class we find the stations which are just concluding their day of broadcasting and sign off at 11 pm or midnight GMT. Operating on split-frequencies which necessitate extremely selective receivers and bucking a barrage of our own domestic transmitters, these Europeans are very difficult to hear. However, shortly after dark and before the locals reach a signal peak, listeners along the Atlantic Coast have had any number of good catches in this class.

The second group of European covers the German, French, and Italian stations which are iust signing on for the day. Many of them are broadcasting as early as midnight EST, but are not heard until after 1 am when our own locals have gone to bed. By 2 am they are in full swing, only to fade out shortly before 3 am. As possible interference on these transmitters is limited to our late broadcasters, many of whom are sufficiently distant to allow close tuning, this group of Europeans offers the best chance of spanning the Atlantic.

Occasionally it is possible to dial the other two continents—Asia and Africa. West Coast listeners report Japanese and Chinese stations regularly between 3 am PST and daylight during the middle of the winter, but their signals are seldom heard East of the Rockies. A few Atlantic Seaboard DXers have been successful in logging and verifying an occasional African station, but this is decidedly freak reception and hardly worth the time spent in fishing.

(Please turn to Page 48)

## The MONTH'S CHANGES in STATION DATA

Corpus Christi, Texas, new Blue

680		Lawrence, Mass.	1340	WFEA	Manaharian N. H. Blue
1120	• • • • • •	Austin, Texas	1350	KIDO	Manchester, N. H., new Blue Bolse, Idaho, new Blue
1200	KVGL	Greenville Toyng	1330	KWK	St. Louis, Mo., new Blue
1200		Greenville, Texas Salisbury, Md.	1380	WKBH	La Crosse, Wis., new CBS
		Toledo, Ohlo	1400	KHBC	Hilo, Hawali, new CBS
1210	KHGB	Okmulgee, Okla.	1410	KGNC	Amarillo, Texas, new Blue
1240	XEAY	Mexico City, D. F.	1420	WJBO	Baton Rouge, La., new Blue
		Wilson, N. C.	1430	WNBR	Memphis, Tenn., new Blue
		Fresno, Calif.	1440	KXYZ	Memphis, Tenn., new Blue Houston, Texas, new Blue
		Fresno, Calif. Lufkin, Texas		WSAN	Allentown, Pa., new Blue
		Pittsfield, Mass.			CALLS
1340		Pittsfield, Mass. Dubuque, Iowa	950	WHAL	Saginaw, Mich., from WJOY Mexico City, D. F., from XEXM New York, N. Y., from WLWL
1370		Lawrence, Mass.	1080	XEDP	Mexico City, D. F., from XEXM
1420		La Grande, Ore.	1100	WBIL	New York, N. Y., from WLWL
		St. Cloud, Minn.			REINSTATED
		Sloux City, Iowa Centralia, Wash.	1210	WLMU	
1440		Centralla, Wash.			DELETED
1500	WKAT	Miami Beach, Fla.	1200	WNRI	Newport, R. I.
	WOMI	Owensboro, Ky.	1400	WARD	Brooklyn, N. Y.
		FREQUENCY		WLTH	Newport, R. I. Brooklyn, N. Y. Brooklyn, N. Y.
580	WILL	Urbana, Ill., from 890	1500	KYCA	Prescott, Ariz.
850	CMCN	Havana, Cuba, from 1500		NO TONE	OWNERS
1080	XEDP	Mexico City, D. F., from 610	1010	WNOX	Scripps-Howard Radio, Inc.,
1010	TEATT	(XEXM)	1050	TETATA	Knoxville.
1210	KALB CMOK	Alexandria, La., from 1420 Havana, Cuba, from 1470	1050	KFBI	Farmers & Bankers Brdcstg. Corp., Abilene
1260	KHSL	Chica Calif from 950	1000	VEDD	Departemento de Bublicidad y
1370	KRMC	Chico, Calif., from 950	1080	XEDP	Propaganda Mayleo City
1390	KRLC	Loudston Idoho from 1420	1100	WBIL	Departamento de Publicidad y Propaganda, Mexico City Arde Bulova, New York
1410	KMED	Jamestown, N. Dak., from 1310 Lewiston, Idaho, from 1420 Medford, Ore., from 1310	1140	WAPI	Ala. Polytechnic Institute, Uni-
1420	KATE	Albert Len, Minn., from 1200	1140	" " " "	versity of Ala. State College,
1420	MAIL	LOCATION			Birmingham
1450	WTFI	Atlanta, Ga., from Athens	1200	WCPO	Scripps-Howard Radio, Inc.,
1400	*****	POWER	1200	., 01 0	Cincinnati
580	KMJ	Fresno, Calif., 1000 from 500 Omaha, Nebr., 1000 from 5000 Scranton, Pa., 1000 from 250	1210	WSIX	WSIX, Inc., Nashville
590	WOW	Omaha, Nebr., 1000 from 5000	1310	KHUB	Anna Atkinson, Watsonville
880	WQAN	Scranton, Pa., 1000 from 250	1370	KIUP	San Juan Brdcastg, Co., 2800
920	WPEN	Philadelphia, Pa., 1000 from 250 Philadelphia, Pa., 1000 from 250			Main St., Durango
	WRAX	Philadelphia, Pa., 1000 from 250	CON	STRUCT	ION PERMIT TO CHANGE
	WWJ	Detroit, Mich., 5000 from 1000			FREQUENCY
1000	KFVD	Los Angeles, Calif., 1000 from	1190	WATR	Waterbury, Conn., to 1290 Richmond, Va., to 1350
		250	1210	WMBG	Richmond, Va., to 1350
1200	KOOS	Marshfield, Orc., 100 from 250	1310	KIT	Yakima, Wash., to 1250
1210	WJTN	Marshfield, Ore., 100 from 250 Jamestown, N. Y., 100 from 50 Weslaco, Texas, 1000 from 500 Copus Christi, Texas, 500 from		WOL	Washington, D. C., to 1230
1260	KRGV	Weslaco, Texas, 1000 from 500	1420	WJBO_	Baton Rouge, La., to 1120 ION PERMIT TO CHANGE
1330	KRIS	Corpus Christi, Texas, 500 from	CON	STRUCT	ION PERMIT TO CHANGE
4000	75007777	250		*******	POWER
1370	KTEM	Temple, Texas, 250 from 100	560	KSFO	San Francisco, to 5000
1390	KRLC	Lewiston, Idaho, 250 from 100	590	WKZO	Kalamazoo, to 250 Norfolk, to 1000
1500	KNEL	Brady, Texas, 250 from 100 Paris, Texas, 250 from 100	780	WTAR	Meridian, to 1000
	KPLT	NETWORK	880 900	WCOC KGBU	Ketchikan, to 1000
560	KFDM	Resument Toyon new Blue	900	WLBL	Stevens Point, to 5000
630	WGBF	Beaumont, Texas, new Blue Evansville, Ind., new Blue Scranton, Pa., new CBS	950	WRC	Washington, D. C., to 1000
880	WGBI	Scranton Pa new CRS	1010	CKCK	Washington, D. C., to 1000 Regina, to 1000
890	KARK	Little Rock Ark new Blue	1200	WJRD	Tuscaloosa, to 250
1110	KSOO	Little Rock, Ark., new Blue Sioux Falls, S. Dak., new Blue	1210	WMBG	Tuscaloosa, to 250 Richmond, to 500
1180	KOB	Albuquerque, N. Mex., new Blue	1340	WCOA	Pensacola, to 1000
1200	WAIM	Anderson, S. C., new CBS	1420	WJBO	Baton Rouge, to 500
	KANS	Anderson, S. C., new CBS Wichita, Kans., new Blue	1440	WMBD	Peorla, to 1000
	KGLO	Mason City, Iowa, new CBS Jamestown, N. Y., new Blue Richmond, Va., Red from CBS	1490	WCKY	Covington, to 10000
	WJTN	Jamestown, N. Y., new Blue	CONS	STRUCT	ION PERMIT TO CHANGE
	WMBG	Richmond, Va., Red from CBS			LOCATION
1250	WDSU	New Orleans, La., new Blue	560	KSFO	San Francisco, to Oakland,
1260	KRGV	Weslaco, Texas, new Blue			Calif.
1310	WBOW	Terre Haute, Ind., new Blue Washington, D. C., new MBS	570	KGKO	Wichita Falls to Ft. Worth,
		Washington D C new MRS			Texas
	WOL	Washington, D. C., new MDS	200	*****	
	WROL	Knoxville, Tenn., new Blue	880	WRNL	Petersburg to Richmond, Va.
1320	WROL WSGN	Knoxville, Tenn., new Blue Birmingham, Ala., new Blue York, Pa., new Blue	880 1500	WRNL WGFI	

## What Is a DX CLUB?

● ● By "POOKY"

There aren't many members of any DX club who know how the darn thing runs. To most members, headquarters is a postal address and the officers of the club are names. They know that the thing does run, because they receive their bulletins on time. But only the men who put out those bulletins, and answer letters and run contests and keep ledgers and cut mimeograph stencils and arrange specials and buy stamps, know what a DX club really is.

This issue of RADEX is dedicated to the Universal DX Club, whose chief officer is Alfred J. Stansfield, whose headquarters are at 345 Maple Ave., Oradell, N. J. It's not the oldest DX club in the country, nor quite the largest, nor, perhaps, the best, but DX'ers should be proud to call it representative.

And if you'd like to know what a DX club really is, accept our invitation and travel in your imagination to the headquarters of this club and see with your own eyes how the thing runs. You may be disillusioned, but that's all right. The true background of a club is more interesting than any false front.

Suppose you turn back the clock and time your visit to a night last winter, in the height of the DX season. Make it a night near the middle or the end of the month, just before the club's twice-monthly bulletin comes out. And make it some ungodly hour of the morning.

Oradell is a village of only 3000 souls, and you won't have much trouble finding Maple Avenue. All the houses along the street are dark—it's a respectable village!—but you know that there must be DX'ers somewhere about. And at last you see the light in 345, a light stream-

ing out over the snow, from the basement window of a modest white frame house.

You know you're welcome, so tiptoe around to the back and go down cellar. Over to the left, under a bulb suspended from the ceiling, there's a small printing press, for this club prints all its own stationery at true cost. Beside it, there's a mimeograph machine. There seems to be no one about at the moment. The lady of the house would have fits if she could see the light burning.

But there's the sound of typing at the far end of the cellar, behind that door. Go over to it. What was that that slapped you in the face? Well, that was the laundry that has been hung in front of the furnace to dry.

Open the door, and there you are! Yes, this is the center of the world for the members of the Universal DX Club, this small, crowded, smokefilled room under a bay window. The members have heard about the catches of those two radios in the Their letters to headquarters have been answered on those two typewriters. Their dollars (a complete membership in this club costs only a dollar a year) are in that box on that ledger. Their hobby is in the hands of those four tired, perspiring, worried men.

Last winter you would have found Allan Hoppenstedt there, the man of the house, aged 24, by day a member of an exporting firm in New York City, by night the Contest Editor of the bulletin. You would have found his brother Elbert there, aged 21, a clerk in a bookstore, and Managing Editor of the bulletin. You would have found Dave Owen there, aged 24, a writer and general cut-up, then BCB Edi-

tor of the bulletin. And always you would have found Al Stansfield, as the President, as Editor-in-Chief, and as guiding force and spirit of the club.

Elbert is cutting the mimeograph stencil of the first page of the bulletin, which will appear under the printed Old English "Universal News," and the blue seal of the club. This club takes more than ordinary pains with its bulletin and this first page must be perfect. Elbert is sitting hunched over the typewriter with his shoes off, his mask of concentration. а meticulously tapping out the lines with two fingers. This is the SW column he's doing, sent in to headquarters from out of town by the SW Editor, garnered by him from members all over the world, checked and classified by him and made into clear, worth-while reading. There will be three neat white pages of it-if Elbert holds out.

Dave is kneeling on the floor, rearranging his BCB column for the last time. He's typed out each item on a separate slip of paper and it's a deadly serious game with him to line up those slips on the floor to make the best reading. He has a tip on an 8-watt rig in Quebec. He has the explanation of a new Mexican that's been causing confusion. He has the complete schedule of Scandinavian stations. worked out by the Norwegian Representative. He has a list of four new Aussies, sent up from down There will be three blue under. pages of these, and FCC data, and scheduled DX programs, and puns, -if Dave can arrive at a really artistic arrangement.

"Hoppy," as Contest Editor, is sprawled on the sofa, writing furiously, muttering under his breath. There were four UDXC contests last season, designed for all kinds and stages of DX, and they were all a

trial to "Hop." He's writing up the Singleton and Eliminator Contest now, for which the prize is a year's subscription to RADEX. He's finished his work on the new Universal BCB Contest, for which the prize is nothing less than a silver He has still to comment on the Junior BCB Contest, for which the prize is a bushel basket of early tomatoes sent postpaid from the farm of a member in Texas! And then he has to look over the Universal SW Contest-another silver trophy. There will be two yellow pages of contest material-if "Hop" can win his own contest with the heat from the furnace and the smoke from Elbert's cigar and the time on the wall.

And Al-Al is doing a dozen things at once, from deciding the future policy of the club to stamping envelopes. Mostly he's watching the time on the wall and worrying. This isn't an unusual night for him. He's seen dozens of bulletins born. But he can't help feeling, each time a new one goes into print, that he's entirely responsible for it. Now he's addressing envelopes to DX'ers who want to see a sample. Now he's writing an editorial and greetings to members and comment on the doings of the DX world, that will appear on one white page, the last page-without an "if."

Elbert hits the wrong key and nearly swallows his cigar. "Hoppy" finishes the S & E Contest and wearily tosses it onto the desk. Al makes a dive for it. Dave bellows, picks up his scattered slips, and thoughtfully rearranges them again.

The "Universal News" will go out on time. Before the date changes some of the members will have it in their hands. Within a few days members from Newfoundland to Nicaragua will be reading it. With-

(Please turn to Page 47)

## Our Readers' RADIO PROBLEMS

• • By B. Francis Dashiell

**Beat Oscillator** 

I am the owner of a Crosley radio type 7H1. This set is now being used with a converter for the short waves below 160 meters. Can you tell me the intermediate frequency of this set? I am planning to use a beat oscillator with the set to help in locating weak signals, and would like to have some information on beat oscillation as a means of picking up weak and code signals.

The Crosley receiver which you have is a set with 7 tubes, one of which is a rectifier. Its intermediate frequency is 456 kilocycles.

Many receivers which will pick up modulated radio signals such as voice and music are silent when it comes to C. W. or continuous wave signals, such as much of the unmodulated code now in the air on the short waves. Therefore, a beat oscillator is always a part of any amateur or short-wave superheterodyne set. These oscillators are similar in principle to those used for the frequency conversion in the set to match the intermediate frequency circuits, or 456 kilocycles, in your case. The beat oscillator however is tuned very closely to this intermediate frequency. The output of the oscillator may be coupled to the second detector. One of the most common methods is to use a small bypass or coupling condenser—.0005 The B. O. output from its plate is connected by means of shielded wire to the output from the I. F. transformer leading to the second detector. Or the plate of a type 58 tube, for instance, in a simple oscillator circuit can be attached to the screen grid of the second detector tube by means of a short, shielded wire. There are many methods of attaching the beat oscillator

output, and your service man can easily assist you in making the arrangement. Or you may purchase a small B. O. unit at slight cost. This c. w. beat oscillator is switched on so as to provide a separate carrier wave signal in the second detector, and this heterodyning effect, if the B. O. frequency is close to that of the receiver's I. F., will break up the c. w. signals and make them audible.

#### Recording Signals.

I have a phonograph pick-up and turn table, and also have a home recording disc. Is there any way by which I can record on the disc by running the pickup over it with the turn table and operate it all from my radio set? I have tried recording with an ordinary phonograph but this does not reproduce sufficient volume from my radio loud speaker to do the work.

We are sorry but it is not practicable to make recordings using an ordinary phonograph pickup on the home recording disc. The construction of the pickup is such that it merely takes the tiny vibrations from a record played on the phonograph and converts these vibrations into weak pulsations of electric current. This current in turn is stepped up by a transformer and fed into the audio circuit of the radio set where it is greatly amplified for the loud speaker. There is no method by which strong currents from the output of a radio set can be fed back into a pickup through the transformer circuit so it will set the pickup into vibrations which in turn will cut the recording disc. The construction of the pickup is such that it will not work. It is like talking into a telephone receiver and expecting to hear sound come from the transmitter.

The only practicable method of making home recordings of radio receptions is to use a special disc cutting unit. The cutter is similar to a telephone receiver and at taches to the output of the radio set and cuts its signals into the disc so they may be reproduced at will. This device is rather expensive. No doubt many of our readers have arranged similar devices, and we shall be glad to hear from them and publish such reports as may be of interest.

#### 20-Meter Antenna

I am planning the erection of a 20-meter antenna, of the doublet type, but do not know whether the distance between the two halves of the doublet is important. Should these two halves be separated by a distance of four inches the same as the transposition leadin wires and blocks? Is it necessary that the two spaced leadins be vertical, and may they be brought directly to the set?

The distance between the ends of the two halves of the doublet antenna is not critical, but it seems to be the general opinion that approximately 4 inches is correct. A doublet receives best the signals that have wavelengths just twice the total length in meters of the two wires making up the horizontal flat top of the antenna, including the open space between the ends at the center. Therefore, it is expedient for us to make this open gap as short as practicable.

The two spaced vertical leads which should be transposed every two or three feet tend to eliminate the noise that is picked up, as well as signals, between the flat top antenna and the radio receiver. This line may be as long as desired but should hang free of the building wall or other objects by at least two

feet. It may drop down in a vertical line, or run at different angles. It should be guyed carefully where necessary to prevent swaying and twisting. Or a twisted transmission line may be run down from the doublet to the set. In any case a piece of twisted lead-in wire should be used to attach the ends of the two transposed leadins just outside the house, to the radio set indoors. A lightning arrestor must be installed outdoors at the end of the transposed leadin.

#### Phonograph Oscillator

I have purchased a crystal pickup for use with my model 60T Stromberg Carlson receiver. Would the use of a phonograph oscillator make enough difference in quality of reproduction to prove worthwhile?

The usual phonograph pickup is connected directly into the radio set. This is always more or less troublesome and usually a job for a good service man. But when the oscillator is utilized, all internal connections are eliminated to a great extent. The device is really a tiny radio receiver that obtains its power from the receiver unit, and is modulated by the phonograph pickup. Its installation requires but a few min-The modulated signal from your pickup coil is fed directly to the antenna connections of the receiver, and the set itself then handles the signal just as it would any intercepted radio signal. The volume control of the set provides all the volume control that is needed. This is a very simple arrangement and gives good tone, volume and is easily operated. The greatest objection to it is the additional expense over the older method of hookup.

Because of the high resistance of your crystal pickup it can be attached between many points in the circuit without the use of matching or setup transformers. Usually the crystal pickup is connected between the control grid of the second detector tube and the chassis or negative B side of the following audio tube. Other positions are very satisfactory and your service man can quickly make the installation, and this is always to be recommended.

#### Night Distortion ·

I have a Philco 45, and reception is very good during the day, but at night the signals seem blurred and distorted until I move the dial off about 10 kilocycles to one side of the station being received. It clears up for a short time and the trouble is again noticed, after which I return the dial to its original setting and the poor reception starts all over again. What do you think may be wrong?

At night the signals being received are much stronger than during the daytime. This additional energy or volume can be distorted in a number of ways. Frequently there is a bad tube involved. Some tubes do not show this defect, so we suggest that the type 6A7 be replaced as a test method.

This set may be aligned by ear, but the use of an oscillator is recommended. If you do the work by ear turn the volume control down so low that signals can hardly be heard. In this way you can distinguish easily between low and stronger sounds. You might also try the plate bypass condenser in the plate lead of the type 75 tube. The voltage on all tubes should be tested to see if it is at the proper working potential. Of course, proper alignment and balancing of a set, by a competent service man, should eliminate most distortion due to broad tuning of strong signals at night.

#### Short-Wave Set

I feel the need of a good communication short-wave set that will



This clock-watcher is no other than Alexander Woollcott, the famous "Town Crier" of the Columbia network. Here he is shown waiting for the last few tense moments just before his broadcast while he prepares to ring the deep-toned bell which is almost as integral a part of the program as Woollcott himself.

really do the work on the high frequencies without bothering about the longer or broadcast waves. Local static is bad, and I wonder whether reception will be better using one of this better class instruments. Can you advise me about a good set?

It is obvious for several reasons why we cannot definitely recommend one particular short waye receiver. First, there are a number that are excellent. The cost of a good short wave communications receiver is, of course, quite high when compared by the selling price of smaller all-wave receivers that cover the same wave bands. Many of these fine short-wave receivers utilize crystal control, band, spreading and other features that are considered necessary, and all of this adds to the cost.

Of the concerns making communication receivers we might mention for your information, the National Co., of Malden Mass., The Hammarlund Co., of 424 West 33rd St., New

York, N. Y., The Hallicrafters, of 2617 Indiana Ave., Chicago, Ill., the Radio Corporation of America, Camden, N. J., and there are a few others who deal with the communication and amateur market. We think, if you write to these manufacturers, mentioning RADEX, they will gladly give you much information which you can compare to your own satisfaction.

The problem of interference will remain to a certain degree regardless of the set you may own. Some of the finer sets with sharp tuning and crystal control, although such hair-line work may cut down the quality of the tone of voice broadcasts in the short waves, will, of course, cut out considerable of the static noise. This is particularly noticeable when receiving code on CW emission. The use of a good doublet antenna high on your roof, with a long twisted leadin, should help you considerably.

#### More Short Waves

Please tell me if there is an efficient radio set that will cover only the bands between 5 and 20 megacycles (5,000 to 20,000 kilocycles). I think that a set of this range will be just what I need, if it does not cost too much.

There are many sets that embrace the tuning limits you have mentioned, but they also cover other frequencies as well. If you are interested in just the short waves and desire the highest efficiency on these bands, a communications or short wave amateur or commercial receiver will give excellent results. However, these are expensive sets, and even then do not cover just the limits you have mentioned. will usually range farther down into the short waves. Some sets, such as those made by the National Company, utilize interchangeable coils and it is then possible to procure a set of coils that will take in practically the limits you have defined. See the answer to the query above.

#### On Again—Off Again

I have had my set since 1929. The tubes test nicely, but I just had two replaced as they were weak. I am using one weak tube at this time but it seems to be pretty good. set will play one day and go sitent for two, and then play again for two days and quit for another two or so. Mu service man saus the weak tube cannot cause this trouble. I can not think what causes the set to be playing well and then suddenly to drift away, but play nicely again the next morning. Can the one weak tube be the cause of this trouble?

This trouble, often called intermittent reception, can be caused by a weak tube or one that has defective elements that short circuit and render the set dead for a time until it is turned off and becomes cool. Heating or warping of some of the parts within the tube can cause this. A new tube, when one is not up to standard, is always indicated in any set, whether it works well or not.

Intermittent reception may be due to poor prong contacts between the tubes and sockets: a short circuit in the tube or its socket; a broken or burned out coil in the audio circuit or even in the loud speaker voice coil; bad connections somewheres in the circuit, or poorly soldered contacts to the chassis. It seems to us that heat causes some expansion of a part and that in turn causes the circuit to open. In this respect you can look for trouble in a resistor or coupling or bypass condenser. The only remedy is a careful check of all parts and wires of the circuit, sometimes resoldering all the contacts. However, think the trouble is due to some part of the circuit opening after the set heats up, and that this is due to

a break or short circuit. Repairs should be inexpensive. But since you did not mention the make of your set we cannot help you other than in this general way.

#### **Broad Tuning**

I have a little midget set, but there is a local radio station that comes in all over the dial between 1180 to 1500, although the station operates on 1280 kilocycles. Why is this?

Broad tuning or poor selectivity may be due to the set, which, if it is not sufficiently built with selector circuits, may allow a strong nearby station to come in over much of the Corrective measures consist of a careful alignment of the tuning parts and checking and testing of the r. f. coils and tuning units or condensers. A defective tube in a set of this kind can cause poor selectivity. A good service man should be able quickly to correct this fault if it is not inherent in the set. On the other hand, the frequency of a radio station and that used in the i. f. of the set, may be such that a certain amount of the signal will be forced through the tuning circuit over a wide portion of the dial. In this case there is little that can be done with a tiny set of this type.

Tube Action

the current How does flowthrough a radio tube? Does it flow from the filament to the plate? That seems to be the way electricity flows, yet from what I can understand the current flows from the plate to the filament, and this would be contrary to the flow of electricity from a negative electrode.

The movement of electrons-bits of negative electricity is always from the negative to the positive terminal. This drifting of electrons makes up the electric current. If the plate of the tube is attached to the positive terminal of a battery, the cloud of electrons will be attracted to the plate. But, while a circuit is completed, and electrons flow from the cathode or filament to the anode or plate, the current from the battery flows from the plate to the filament. This is because the internal flow of electricity in a battery is from the cathode to the anode, or from negative to posi-But when a circuit is completed, the current enters the external circuit from the anode, flows through the circuit, which in our case consists of the ionized space between the plate and the filament, and back to the other external battery terminal or negative cathode. The flow is continued with the cycle beginning again anew through the interior or electrolyte material of the battery. The movement of the electrons within the tube has little to do with the actual movement of current through the radio circuit. However, there is at present some debate about this flow, and some students feel that the electronic flow from the filament to the tube plate is continued out through the plate circuit and back again into the tube and its cathode. When a battery is attached to a tube, however, it is difficult to conceive of anything other than that which has been described above.

#### Vertical Antenna

Will you please explain something about the vertical antenna system and its advantages. I understand that many radio stations are using the vertical radiator antenna.

The vertical antenna is of greater transmitting station interest to operators and amateurs than the average radio listener. It has many technical virtues, of course, but is not so popular in general. It is a simple antenna. It is effective in reception when nearby signals that are vertically polarized are picked up. It is not directional, like the

## DX Notes from FOREIGN

## Representatives

• • • Of the UDXC

Broadcast Band DX in New Zealand

EW Zealand is claimed by scientists to be the country in the world for radio reception, as it is the farthest country from the magnetic pole, and this latter may have much to do with good reception.

In the winter, between May and August, one can begin DX'ing at 2:30 p. m. The first country one hears is South America. At 3:30 p. m. the Mexicans, Cubans and higher powered EST, USA stations; and then at 4:30 p. m. USA stations from east to west are heard. Several of the higher powered Australian stations can be heard also throughout the entire day during the winter. but this country is always best received at about 5:30 p. m. At 9:30 p. m. the Japanese stations are heard and these are followed by Chinese, Siamese and Indian stations. At approximately 7 a. m. Europeans appear and can be heard up to 8:30 a. m. The most prominent of these are the French stations. We can say down here that one can DX practically every hour of the day.

During the summer months the Australians are much weaker and the USA stations are at their best. Quite a few of these, including the Canadians, can be heard from 11 p. m. and on, up to 3 a. m. the following morning, broadcasting their early morning programs, with EST stations being the first heard and the PST the last. At 4:30 a.m. the Hawaiian stations open up.

October and February are the two best months for Europeans, these being heard between 3:30 and 5 a. m. Almost any country on the European continent can be heard during this period.

—By Robert Newton, New Zealand Representative, UDXC.

#### All Wave DX in England

Reception of Asiatic (except Jerusalem), Australasian, or South African medium-wave stations in England is very rare. North and South American broadcasters can be heard almost nightly during the winter and frequently in the summer.

American signals have picked us as early as 9:30 p. m. GMT, and as late as 9 a. m. but the most popular listening period is after 11:30 p. m. during the winter. In the summer North American signals do not commence to arrive until about 2:30 a. m., although the South Americans are receivable sometime • before that. WCAU, WTIC, WBZ, and WOR are about the best NA's and LR1, followed by LR3-5-6, LS2 and PRE8 are the SA headliners. SA's are more consistent. but except LR1, are less powerful signals than NA's.

All the USA shortwave stations except W4XB and W9XAA come over quite regularly, with W2XAD and W2XAF about the pick. stations regularly received include VK2ME, whichever of the Japanese stations carries the European Hour, Bandoeng and a multitude of Latin Americans. These Latins, however, are not usually receivable until late at night or early in the morning. Heard occasionally but not well are VPD, ZTJ, VQ7LO, Radio Colombo,

Ultra shortwave trans-Atlantic reception is erratic but sometimes better than might be expected. W9XAZ seems to be the most widely heard of these stations, but audible at times are W8XWJ, W3XEJ, W8XAI and others.

—By R. A. Stansfield, English Rep., UDXC.



Henny Youngman, comedian with Kate Smith, proved an instantaneous success in his first appearance on the "Bandwagon" program, and won a regular spot on this hour. He made some kind of a record when a careful check of one of his monologues revealed that he provoked mirth 38 times in five minutes and ten seconds.

#### All Wave DX in France

During the daytime England, Belgium, Luxembourg and Germany are received perfectly on the broadcast band. As soon as night comes on, all principal European stations, as well as Algiers and Rabat are heard very well. In the winter and very late at night, several of the most powerful USA stations can be heard faintly.

On the shortwaves all continents are received, although at different times and different seasons. In the mornings from October to April from 7 to 9 a. m., GMT, Australia is heard—the ultimate in DX for us. Moscow is generally well received at

all hours. Toward noon the first USA stations break through on 13 meters, then later on 16 and 19 meters, and in the evening on 25, 31 and 49 meters. During the afternoon Hong Kong, Macau and Bandoeng are sometimes heard, but this is true in the fall and winter only. In the evening, everything on the American Continent from Canada to Chile is received. Cuba is the best.

Northern Africa is heard very well, but South Africa is heard very infrequently, it being the most difficult to receive of all countries. The shorter waves of 19 meters make it possible to hear Asia very easily all during the day in the summer time.

—By Robert A. Muguet, French Rep., UDXC.

#### Shortwave DX in Algeria

As a rule, DX'ing is not particularly good in Algeria, especially in Algiers, which is located exactly in the center of French North Africa.

In Algiers there are many amateurs with powerful transmitters and receivers, and they work all of Europe very easily on 'phone; yet, real DX is very hard. Other hams located in Casablanca (Morocco) easily work America and they have no better equipment. The very same thing applies to Tunis. It is also true that there are not many USA hams who have worked Algeria—Algiers in particular.

European shortwave stations are heard equally well all during the day and at night. Outstanding are the German and British stations, on all bands—13, 19, 25, 31 and 49 meters. The only countries that are not well heard are Denmark, Sweden, Norway, Australia and Iceland.

First among real DX stations to break through are W2XE on 13 meters and YDC on 19 meters, both coming in at 12 noon, with 2XE continuing until 3 p. m. GMT, some-

times with an R9 signal, and YDC increasing to R8 at 3:30 p. m. Between 3 and 3:30 p. m. PMN on 29 meters is also heard but not well. Japanese stations JVH, JZI and JVM are heard regularly on transmissions intended for Europe (7:30 to 8:30 p. m.), and may be compared to local stations. Actually YDC (and YDB), PMN and the Japanese are the only consistent Asians, as HS8PJ in Siam produced a powerful signal only last October, November and December and has been inaudible ever since. same applies to VUB Bombay.

After 10 p. m. all of America comes in, numerous stations being heard from South, Central and North America. The best countries are the USA, Colombia, Venezuela, Cuba, Brazil, Dominican Republic and Costa Rica. The poorest are Canada, Panama, Mexico and Argentina. The writer has never heard Guatemala, Peru, Ecuador, Bolivia and Uruguay.

The best wavelengths in the winter are 31 and 49 meters, many R9 signals being the product of these bands around 2 and 3 a. m. This good reception continues until 8 a. m. in the winter season. The summer reception on these bands continues until 6 a. m. In the spring the 25 meter band is good, W8XK being outstanding between midnight and 2 a. m.

A strange fact is the bad propagation between North and South Africa. The writer has never heard a South African station except the Capetown commercial on 15 meters, and this on only one occasion. We are told, incidentally, that North Africa is seldom heard in South Africa.

—By Rene Pleiber, Algerian Rep., UDXC.

New Stamp Issues

To SEEMS that the stamp collecting and radio hobbies go hand in hand. Stamp collecting, often called the "King of hobbies and the hobby of kings," is an enjoyable and sometimes profitable pastime, and radio listeners who receive mail from overseas countries quickly form the nucleus of a good general collection by saving the stamps they get on their correspondence.

So many readers have expressed an interest in stamps that we have decided to include a few items each month in RADEX on new stamp issues. Our observations will be limited to the current issues of those countries where radio stations exist.

The UNITED STATES is fast becoming one of the most prolific of stamp-issuing countries. The most recently issued USA stamps, still available at most postoffices, are listed below:

The 3c Northwest Territory, first issued from Marietta, Ohio on July 13, bears a map of the Northwest Territory and portraits.

On August 18 the Virginia Dare 5c stamp was released at Roanoke Island, N. C., in commemoration of the first white child born in America

A miniature sheet honoring the SPA Convention was issued at Asheville, N. C. on Aug. 26th. This consists of a single copy of the 10c National Parks (Great Smoky) stamp, printed in green, in the center of the sheet.

Later this year the Territorial issue is expected. This will consist of four stamps, honoring Hawaii, Puerto Rico, the Virgin Islands and Alaska.

The DOMINICAN REPUBLIC has a new 10c Airpost stamp. Deep green and light green in color, it depicts a seaplane base.

An interesting commemorative

has been issued by FRANCE honoring the philosopher Descartes. The title page of his most famous book, "Discours de la Methode" is shown at the left of the panel, but in error the first stamps were engraved reading "Discours sur la Methode." Both varieties were issued and collectors should look for them.

Japan's General Nogi, who committed hari-kari when his emperor died in 1912, is shown on the new 2s red issue of JAPAN. Japanese collectors are displeased with this issue because the design is too Germanic or Scandinavian in type to suit them.

The 5c brown Mexican current issue showing the Tower of Los Remedios has been reissued in a smaller size.

British Coronation stamps, and new regular issues bearing the portrait of King George VI, are beginning to trickle in. Thanks to thoughtful overseas correspondents, RADEX has received mail franked with Coronations from New Zealand, Australia, Gt. Britain, Canada, Newfoundland and the Union of South Africa. All together, 45 of the Crown Colonies and 14 Dominions issued Coronation stamps.

Two dollar and \$5 values have been added to the current CHINA Airpost series for the trans-Pacific airmail service. The design shows a monoplane flying over the Great Wall.

Provisional issues from SPAIN are so numerous that the catalogers are even having difficulty keeping up with them and it is probable that a lot of these stamps will never be cataloged. Radio listeners should contact Spanish amateurs if possible, especially those in rebel territory, and try to get some of these interesting adhesives. We have a cover from Cadiz which we value very highly, despite the fact it is only

tentatively recognized by the Scott Catalog.

#### Cautions

Postage stamps are worthless if they are in damaged condition. If you intend to start a collection with the stamps you have already accumulated from your foreign mail, be careful not to damage them when removing them from the envelopes. Do not pull them off, and do not steam them off. The only correct way to remove them is to soak them in lukewarm water. A few minutes' soaking will separate the stamp from the envelope, and they will dry out quickly if laid out on a blotter. Before soaking, however, remove the part of the envelope which contains the address, as the ink may run and discolor the stamps.

Stamps should be mounted with stamp hinges (never pasted down in a book). Hinges can be purchased for 10c a thousand from most stationers or stamp dealers, but be



Ray Noble, whose suave strains captivated dancing America when he first arrived in the United States, came up from Cambridge to become one of England's smartest composers and arrangers.

sure the hinges you buy are the peelable kind. Suitable albums for your stamps are available at prices ranging from fifty cents to many dollars.

Two books are recommended to help collectors to classify their stamps. The United States government has published a booklet illustrating and describing all the United States stamps which sell for 25c a copy. Address the Superintendent of Documents, Washington, D. C.

The other book is the Scott Standard Postage Stamp Catalog, \$2.50 a copy from all book and stamp dealers. This book will cost \$3 a copy in 1938. The Scott Catalog illustrates, describes, and prices every stamp ever issued by all the countries in the world.

#### Correspondents Wanted

"I am 16 years old and go to a radio-television school in Detroit. I would like to correspond with steady pen-pals from anywhere." Raymond Skidmore, 2311 Pasadena Ave., Detroit, Mich.

Jerome Roberts, 1573 Packard Ave., Racine, Wis., wishes corries. "I would like to exchange SQL cards and post cards with anyone in the world," Austin Roquemore, 119 E. Hazel Ave., Ponca City, Okla.

"I would like to meet a few of the local amateurs if possible and will be glad to have them call in person any evening." Wm. J. Wood, 817½ Lake St., Oak Park, Ill.

"I would like to hear from anyone using a Sky Buddy receiver. I SWL 100%. Especially would like to hear from YL's." Joe F. Szabat, 120 Clarion St., Oil City, Pa.

H. Wilcox, 623 W. 40th Place, Los Angeles, Calif., wishes to exchange SWL cards with anyone interested in the amateurs.

"I will be glad to exchange SWL

cards with anyone. I have been DXing for nearly two years with a Silvertone 7-tube 3-band set." Walton Knight, Belinda P.O., Acco County, Va.

Miss Anna Uster, 2310 Pasadena Ave., Detroit, Mich., who is 19 years old and works at radio station WJR, would like to correspond with RADEXers.

Gerald R. Hobbs, 4348 8th, N.E., Seattle, Wash., who counts 1209 stations in his log, desires to correspond.



"This is the way we do it at CBS," says Bob Gibson, page boy singer, as he adjusts the mike for his sister, Freddie, vocalist on "Your Hit Parade," heard over the Columbia on Saturdays. Bob's singing ambitions have already landed him sustaining spots on the same network.

The Broadcast Division of the FCC has directed that a modification of license be issued to KALB, Alexandria, La., to change the frequency from 1420 to 1210 kcs., and the hours from daytime only to unlimited, using 100 watts power.

## For SHORTWAVE Addicts

## • • Written by Themselves

HIS section of RADEX is completely written by our readers. It is a composite tabulation of all the reports received from shortwave fans, and every station mentioned herein was actually heard by someone who reads RADEX.

It is hoped that the system of classifying shortwave news by countries will meet with favor among our readers, but whether favorable or not, we shall be glad to have opinions. As these columns are prepared exclusively from information sent in by readers it naturally follows that the amount of information given depends upon the number of reports received. All s.w. listeners are urged to contribute.

From A. I. Breen of Dunedin, New Zealand comes information concerning a number of stations on the other side of the world. VPB in Colombo, Ceylon, he says, is still working on 6060 kcs. with 300 watts power, although they continue to announce as 6160 kcs. The Secretary of the Penang Wireless Society, controlling ZHJ, writes that the government station at Rangoon, Burma, is testing on various frequencies in the 6 megacycle band, but so far no definite frequency has been decided upon. ZGD in Kuala Lampur, Malaya, was heard by Mr. Breen on a frequency near 13 megs. They were calling PLQ Bandoeng at the time. The S. S. "Awatea," ZMBJ, was heard frequently at 4 am. EST. on its 4.4 meg. frequency working with Wellington.

Broadcasts from 9MI, on the S. S. "Kanimbla" are radiated on the first Thursday of each month, and every Sunday and Wednesday, between the hours of 7 and 7:15 am.

Est. Each broadcast is sent to a different AWA station in Australia for rebroadcast. On Sept. 2 the transmission will be relayed to 2GN at Goulburn. On that day the ship will be between Mackey and Brisbane. 9MI transmits on 6.01 megs.

#### Argentina

LRU has returned to the air, operating daily from 8 to 10 am. After a silence of a half hour the broadcasting is taken over by LRX, from 10:30 a.m. until 12:30 a.m. the following morning, EST. Both these stations are operated by "Radio el Mundo," Calle Maipu 555. Verification cards bear the letters LRI, which is the broadcast band station they relay.

#### Australia

The new station, VK6ME, at Perth, is being heard more or less regularly on 9590 kcs. until 8 a.m. daily except Sundays. This station is owned by Amalgamated Wireless, (A/sia), Ltd.

VK2ME, 3ME and 3LR continue to come through on their regular schedules, as given in our indices. 3LR seems to be the best heard of the trio, with 3ME a close second.

#### Austria

The Vienna experimental station OER2 on 11800 kcs. transmits from 1 a.m. to 5 p.m. on Mondays through Fridays, and until 6 p.m. on Saturdays. This 1.5 kw. station announces as "Radio Wien."

#### Bolivia

According to a Bolivian amateur there are no s.w. broadcasting stations in Bolivia, but our South American representatives advises up that CP1, La Paz, transmits on 9800 kcs. and is frequently heard.

Bulgaria

"Radio Sofia," that elusive Bulgarian shortwaver, has been reported on frequencies between 14920 and 14940 kcs. You will have to tune for this station in the afternoons as they sign off before 5 pm.

#### Canada

CJRX, the 11 meg. transmitter of James Richardson & Sons, Winnipeg, use a vertical antenna for their 11 megacycle rig now, which probably accounts for the improved reception noticed in many parts of the country.

The Maritime Broadcasting Co., Ltd., operators of VE9HX at Halifax, announce that their 6130 kcs. station transmits from 6 to 12 p.m. daily except Saturday and Sunday.

CFRX of Rogers Batteryless, Toronto transmits on 6090 kcs. on weekdays from 7:45 a.m. to 5 p.m. on Saturdays from 11 a.m. to 5 p.m.

Ceylon

The Globe Circlers DX Club states that VPB in Colombo transmits daily from 6:30 to 10 a.m. EST. on 6:60. Mr. Breen advises us, however, that the correct frequency is located in Torrington Square, Colombo.

#### China

A Chinese station so far unreported is XGOY at Kunming, which broadcasts on 7500 kcs., using 100 watts.

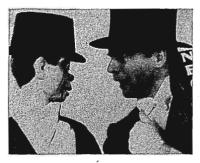
#### Colombia

Cards from HJ1ABP state that this station relays HJ1ABP on 1400 kcs. The shortwave unit, known as "Radiodifusora Cartagena" employs 1000 watts power on 9600 kcs.

#### Costa Rica

TIVL, San Jose, assigned 6700 kcs., has been heard on 6618.

Perry Girton, operating in the 20 meter amateur band, was heard to mention that he is building a broadcasting station to work in the 25-meter band. Mr. Girton is the own-



"Charlie McCarthy" is telling Edgar Bergen about the trouble he had getting away from the bar last night without paying his bill. Bergen, radio's only ventriloquist, was first introduced by Rudy Vallee to radio. Prior to that he had traveled extensively here and abroad with his famous dummy.

er-operator of TIPG on 6.410 megs. Jerome Roberts of Racine, Wis. has a verification from TILS in San Jose which gives the frequency as 5800 kcs. and the address as Apartado 3.

#### Cuba

Emisoras Grau, owned by the Grau Brothers, Apartado 137, Santiago, say that their stations carry only the programs of the manufacturers of Baccardi Rum. Their stations are COKG on 6200 kcs. and CMKG on 1160 kcs. The studios are located at Sagarra, alta 26, and the transmitters at Loma de Quintero.

COCD, "La Voz del Aire," Box 2294, Havana, broadcasts daily from 7 a. m. to 1 a.m. on 6120 kcs.

A new Cuban is reported just as we are about to go to press. It is CO9BZ, Havana, announcing the frequency as 9070 kcs. The address was given as Box 866.

#### Curação

It is reported that the name of this Dutch possession will be changed to Nederlandsche Antillen (Netherland Antilles.)

#### Czechoslovakia

The present transmitting schedule of the Prague shortwave station is

outlined herewith:

Trans. I, daily 2 to 2:15 p.m., EST., OLR5A, 15230 kcs. (news in Czech).

Trans. Ia, Monday and Thursday from 7 to 9:10 p.m., OLR4A, 11840 kcs. (news and music).

Trans. II, daily 9:25 to 11:20 a.m., OLR5A, 15230 kcs. (for the Orient).

Trans. III, daily 2:30 to 4:30 p.m., OLR4A, 11840 kcs. (for Europe and Africa).

#### Dominican Republic

HI3U, La Voz del Comercio, Santiago, according to Director Moises Franco y Franco, has three programs every day; one from 7:30 to 9:30 a.m., another from noon to 2:30 p.m. and the third from 5 to 7:30 p.m. On Monday nights from 8 to 9 p.m. a Scientific-Cultural Hour is presented. Recordings are never used, and music is always the typical music of the Dominican people. HI3U transmits on 6015 kcs.

HI2X in Trujillo City, on 11960 kcs., operates daily except Sundays from 8:10 to 10:10 p.m., EST.

HIL, Trujillo, 6500 kcs is heard between 6 and 8 p.m. HI2D, "La Voz Catolica," Trujillo, is heard on 6900 kcs. HI3C in La Romana is reported on 6730 kcs. in the early evening.

#### Federated Malay States

The Globe Circulers DX Club states that ZGE in Kuala Lampur is heard on 6130 kcs. on Sundays, Tuesday and Fridays from 6:40 to 8:40 a.m. Est.

#### Fiji Islands

VPD2 continues to transmit daily except Sundays from 5:30 to 7 a.m. on 9540 kcs. This station is owned by Amalgamated Wireless, (A/sia), Ltd.

#### Hong Kong

R. P. Morris, Secretary of the Hong Kong Broadcasting Committee, P. O. Box 200, gives the frequency of station ZBW as 9525 kcs. Other frequencies assigned to this station are 6090, 15190, and 15755 kcs. The choice of frequencies is made according to conditions prevailing. Programs are transmitted from 11:30 p.m. to 1 a.m.; 4 to 10 a.m., on weekdays, and on Saturdays from 9 p.m. to 1 a.m. Sunday. Sundays they can be heard between 3 and 9:30 a.m.

ZBW, it is understood, no longer verifies reports, but Stanley La Rue, 309 So. Bedford Drive, Beverly Hills, Calif., has arranged to monitor their transmissions and will verify reports for a small fee. Those interested are asked to get in touch with Mr. La Rue.

#### Hungary

The schedule of HAT4 is now 7 to 8 p.m. Sundays and Wednesdays, and 6 to 7 p.m. on Saturdays. HAT4, Budapest, uses the 9125 kcs. frequency.

#### Japan

Transmissions to the eastern part of the United States from the Japanese shortwave stations now commence at 4:30 p.m. EST., while the broadcast for the west coast starts at 12:30 a.m. The transmitters have also been changed. Eastern USA programs are radiated over JZK on 15160 kcs. and JZJ on 11800 kcs., while JZK is used for the west coast programs.

JVT, 6750 kcs., has been reported at 6 a.m. JVM, 10740 kcs., transmits the European programs 2:30 to 3:30 p.m. JVH on 14640 is heard between 4 and 5 pm.

#### Kenya

VQG, Nairobi, on 19620, 'phones GAD London every day from 7 to 8 a.m. EST.

#### Martinique

The schedule of the Martinque station, "Radio Fort de France," is 11 to 12 a.m. and 5:15 to 6:15 p.m., EST. daily. 9450 kcs. is the frequency.

#### Mexico

XETM, Villahermosa, Tabasco, is heard on 11525 but announces as 11730, and XEWB, Guadalajara, Jal., is heard on 11370 while announcing as 11710.

XEYU, National University of Mexico, claims to be on 9600 kcs. but it is actually a little higher in frequency. It works from 7 to 10

p.m. nightly.

Overdue verifications are now coming in from XEPW. Their correct address is Carpio 137 altos, Mexico City. They broadcast on 6110 kcs. during the late evening hours and relay the programs of XEJW.

XEXA, Mexico City, works on 11880 daily except Sundays from 8 to 11:30 a.m., 3 to 5 p.m. and 6 to

11 p.m. EST.

The operators of stations XED and XEDQ Guadalajara, have been making tests and corrections in an attempt to stabilize the frequency of their s.w. station. XEDQ has been frequently reported on 9510 but the correct freq. is 9520. This station, which commenced broadcasting on Jan. 1st of this year, transmits on 1160 kcs. (XED) with 10 kw. and on 9520 kcs. (XEDQ) with 500 watts.

#### Netherlands East Indies

Some of the shortwave broadcasting stations of the NIROM operate on frequencies which are not suitable for reception in North America A list of these stations is given here for reference, however, and dialers who are interested should preserve this list as it will not be repeated.

YDA2, Batavia-Centrum, 2385

kcs., 150 w.

YDA3, Buitenzorg, 1640 kcs., 25 w. YDA4, Soekaboemi, 1550 kcs. 25 w. YDA5, Bandoeng, 2500 kcs. 75 w. YDA6, Cheribon, 2870 kcs., 15 w. YDA7, Pekalongan, 3270 kcs., 15 w. YDB2, Semarang, 2450 kcs., 150 w.

YDB3, Djokja, 1660 kcs., 100 w. YDB4, Tjepoe, 1615 kcs., 25 w. YDB5, Solo, 1595 kcs., 25 w.

YDB6, Malang, 1570 kcs., 100 w. YDB7, Sourabaya, 111, 1530 kcs.,

\*YDD2, Bandoeng, 1630 kcs., 25 w. \*YDD3, Batavia-Centrum, 1585 kcs., 50 w.

\*YDE3, Semarang, 2710 kcs., 15 w. \*YDE4, Sourabaya, 2415 kcs., 75

\*YDE5, Djokja, 2350 kcs., 25 w. \*Broadcast native music (Javanese).

The balance of the NIROM stations are shown in our index.

The Javan station on 4.810 megs. is YDL2, owned and operated by Solosche Radio Vereeniging, Soerakarta, Solo. When the Nirom native programs are radiated the call YDE2 is used.

YDG3 on 4865, YDP3 on 4895 and YDA on 3040 kcs. are being heard consistently in New Zealand, and it is felt that, when cooler weather comes, they should be heard on this continent. These stations generally play American recordings.

A very strong Javan station has been heard near 9415 kcs. relaying PLP regularly.

#### New Zealand

The Prime Minister of New Zealand, Mr. M. J. Savage, has suggested the erection of a shortwave broadcasting station there to transmit programs in several languages for the purpose of advertising the products and attractions of that Dominion.

Plans for this station, which will be of high power, are nearing completion, and it is expected the station will be on the air within the next twelve months.

#### Panama

HP5I, "La Voz del Interior," Aguadulce, Panama, transmits on 11895 daily from 7:30 to 9:30 p.m. EST.

HP5L is heard daily from 1 to 1:30 am EST broadcasting recordings and announcing in Spanish, and HS8PJ is operating on 9350 kcs. commencing at 1:30 it contacts Latin amateur stations. HP5L transmits on 11710 kcs.

A new Panamanian is HP5A, 11700 kcs., Panama City, transmitting between 8 and 10:30 pm, EST.

Papua

A. C. Tarr of Seattle is the first to report reception of VK8XI at Port Moresby, Papua, on 6990 kcs. Peru

The correct call sign of "Radio Nacional" at Lima is OAX4T, according to information from Peru.

One new Peruvian is chronicled .his month, OAX4M, "Radio Record," on about 29 meters with 155 watts on an irregular schedule. This station relays the programs of OAX4Q, 1470 kcs., 150 watts. The owners are Cortes & Cia., Huacho, Peru.

The frequency of OAX4J, Lima, has been shifted to 9330 kcs. from 9520. With a power of 200 watts, this station relays OAX4I, "La Voz de Lima." The postal address is Apartado 1166.

OAX4J is on the air from noon to 3 p.m. and from 5 p.m. to 1 a.m.

OAX4H is owned by Radio Davila, Filipinas 554. OAX4C and OAX4D are owned by Difusora Universal. S. A. (Radio DUSA).

Portugal

The studio address of CT1AA has been changed to Av. Antonio Augusto d'Aguiar 136. Their verification card states they work on Tuesday, Thursday and Saturday from 4 to 7 p.m. EST. on 9650 kcs. The power is 2 kilowatts. The three cuckoo calls easily identify the station, as well as the slogan, "Radio Colonial."

#### Southern Rhodesia

ZEC in Salisbury operates on 5800 kcs. Sunday from 3 to 5 a.m., and on Tuesdays and Fridays from

1:15 to 3:15 p.m. EST.

exclusively now. The schedule is Mondays and Thursday from 8 to 10 a.m. EST. Reports are to be addressed to the Post and Telegraph Dept., Bangkok.

#### Spain

A number of stations have been logged which have no call letters. and in some cases even their locations are not known. We are listing them under "Spain" because their broadcasts consist of propaganda about that country, although it is believed that some of the stations are in Italy or France.

"Radio Requete" has been heard working east coast USA amateurs between the hours of 6 p.m. and midnight. This station is heard on the lo-frequency end of the 20meter band.

Another station has been heard on 7250 kcs., announcing also as "Radio Requete," and giving its location as San Sebastian, Spain.

"Italian Communistic Station," giving a Paris address, was located and destroyed by French authorities, but another has popped up to take its place. It works on 10620 kcs. at various hours during the day, but gives no call letters nor location.

"Radio Libertad," believed to be in Milan, Italy, another Communistic station, has been heard on 7380, 7400, and 9520 kcs.

The frequency of EAR (formerly EAQ2) was announced over the air as 9510 kcs., and the power as 20 kw. The slogan "The Voice of Madrid" was heard, and the address was given as Box 951. This is the old EAQ with only new call letters and new frequency.

#### Spanish Morocco

"Radio Guardia Civil" is now working on 6508 kcs. from 7 to 8 p.m. EST.

#### Switzerland

The Secretariat of the League of Nations transmits League programs on stations HBP and HBL, 7797 and 9595 kcs. respectively, on Saturday afternoons from 5:30 to 6:30 p.m. Mr. Michael Barkway requests that reports on these programs be addressed to him, Office of the Secretary-General, League of Nations, Geneva.

Programs arranged by the government of Switzerland for Swiss residents abroad are transmitted on Saturdays from 6:45 to 8 p.m. EST. on station HBJ, 14535 kcs., and HBO, 11402 kcs.

HB9BG, operating on 7294 kcs., broadcasts musical selections with announcements in German, English, French and Italian every Friday from 4 to 5 p.m.

#### USSR

The September schedule of the Moscow stations is given in our s.w. index. Three frequencies will be in use during September, RNE on 12000 kcs., RAN on 9595 and RKI on 15040 kcs. Reports on these broadcasts are to be sent to Radio Centre, Solianka 12, Moscow.

#### United States

Regular daily program service, especially designed for listeners of Europe and the British Isles, is now maintained by the CBS new high power international shortwave broadcast transmitter.

The new station, with a peak power of 40 kw., employs directional antennas pointing towards Europe, and the schedules enable European audiences to hear programs during their afternoon and evening hours. The schedule follows:

6120 kcs., for South and Central America, not used at present.

11830 kcs., for South America, 7 p.m. to midnight, EST. daily.

15270 kcs., for Europe, 1 to 4 p.m.



Airing the family's troubles is the business of Sedley Brown and Allie Lowe Miles, conductors of the NBC forum, Husbands and Wives. In their programs they question men and women on problems ranging from whether in-laws should live with young married people, to how to keep a husband from gambling away the family purse.

EST. Sunday only. for Europe, 3 to 6 p.m. EST., daily exc. Sunday

EST., daily exc. Sunday for South America, 5 to 6 p.m. EST., Sunday only. 17760 kcs., for Europe, not used at

present. 21520 kcs., for Europe, 7:30 to 10 a.m. EST., daily except

Sunday. for Europe, 8 to 10 a.m. EST., Sunday only.

The General Electric Co. short-wave station W2AXF at Schenectady, N. Y. was granted a Construction Permit to increase power to 100 kw., and to erect an aerial array directional towards South

America and Europe.

WNYF of the New York Fire Dept. is now on the air on 1630 kes., and serves as a two-way telephone communication between nine fireboats and fire department headquarters.

Ultra high frequency station W1XDT, owned by the City of Manchester, N. H. Police Dept., works on frequencies of 30100, 33100 and 40100 kcs., unlimited time. The transmitter is located at 351 Chestnut St. Two way communication is maintained with six police cars. This UHF station has been heard in England, on the west coast, and commonly in central USA.

#### Venezuela

Sr. Jose A. Higuera M., owner of "Radio Popular," Maracaibo, advises us that his shortwave rig YV1RL works on 5930 kcs. and relays the entertainment of YV1RK on 1250 kcs. The power and schedule is not given, but the address is Apartado 247.

YV5RJ works on 6250 in the late evening hours with announcements in English. The sked is approximately 7 to 10 p.m.

## Choosing a Set

(Continued from Page 7) and selectivity. A twelfth tube for automatic volume control would be an added feature. And yet such a set would hardly please the ears of a music lover, since little attention was paid to the audio stages.

Another twelve-tube set could have three or four tubes in the a.f. stages, a cathode ray "Magic Eye," a pair of rectifiers, perhaps a ballast tube, and be a fine job for the quality of its reproduction. Yet, because it had but two i.f. stages and no r.f. at all, it would have little to recommend it the DXer who wanted sensitivity and selectivity.

Only recently attention was called to a ten-tube set which sells for twenty dollars. If one considered the number of tubes, this should be a fine performer and a real bargain. However, inspection showed that there were two rectifier tubes and three ballast tubes, so the purchaser

could expect only "six-tube performance."

Therefore, the customer should investigate the functions of the tubes in the models which he is considering. If he wants real quality of reproduction, he should be sure that the audio stages have received proper attention. If he wants sensitivity and selectivity, he should see that the set has sufficient r.f. and i.f. stages. If he wants all three qualities, the receiver needs additional tubes.

#### What's In A Name?

As one final consideration, Mr. Average Listener should pay attention to the name and reputation of the manufacturer. As a general rule, it is well to stick close to familiar advertised models.

The smaller, unknown companies seldom are able to turn out sets which are as well designed and engineered as those marketed by the familiar organizations. Their production facilities probably aren't as good, while their help is less experienced. Testing and tuning-up before shipment is less exact, less careful.

Parts and receivers may look pretty much alike, but standard products usually work better and last longer. Frequently inexpert construction leads to danger of electrical shock and even fire hazard. Replacement parts for unknown brands are always difficult to find, while service charges are higher when circuit diagrams cannot be obtained.

There is a definite "pride of ownership" in a fine receiver with a famous name on the dial. This becomes more important when the time comes for a trade-in and the standard product receives an allowance greater than could be made for an unknown brand.

Prospective purchasers may be

able to use some of these points to advantage and select a better receiver. For those who like to be guided still further, it is planned to publish from time to time performance reports on prominent models.

#### A DX Competition

The Globe Radio DXer's Association of Australia has begun a series of competitions for both the shortwave and broadcast band DXers of United States and Canada. The contest is for the reception of Australian stations only.

The winning trophy is an inscribed silver map of Australia mounted on Australian polished timber, and a special trophy will be awarded to each section for the most outstand-

ing single verification.

Membership in this organization is \$1.00 for Life Membership. Further particulars can be obtained from Leo Herz, 730 Roscoe St., Chicago, Ill., Wm. Ansell, 168 Wascana St., Regina, Sask., Canada, or from the Secretary, Arthur H. Preece, 61 Lipson St., Pt. Adelaide, S. A. Australia.

## News Programs for South America

Inauguration of two new series of Press Radio News broadcasts to South America over station W3XAL, Bound Brook, N. J., was announced by the National Broadcasting Co. Both series are heard daily except Sundays.

One of the programs, directed especially to Brazil, is broadcast from 6:15 to 6:30 EST. Press Radio News reports are given in Portuguese by Pinto Tameirao, a Brazilian who was recently added to the NBC staff.

The other broadcast is heard in Spanish from 6:00 to 6:15 pm. EST, announced by Martin Viale of Argentina.

# GOSSIPING about the Stars

• • • By "Betty"



Versatile is the word for Elinor Harriot. She's that small crowd of women characters that is invading the Amos 'n' Andy program. The voices of Mrs. Amos Jones, Arbadella and Mrs. Kingish are in her repertoire on this famous program.

FERDE GROFE started his musical career by playing the piano at the age of five. At 16 he composed a march, and before he was 20 he was viola player in the Los Angeles Symphony Orchestra. In San Francisco he met Paul Whiteman, then almost unknown. Became Whiteman's pianist and arranger in 1919, continuing with him until 1933. His arrangement of Gershwin's "Rhapsody in Blue" contributed to the fame of Grofe, Whiteman and Gershwin.

ROBERT L. RIPLEY turned to drawing cartoons after a broken arm spoiled his chance to develop a career as a pitcher in big league



Bob Hope, Cleveland boy who made good, has introduced several "Honey-chiles" to radio, only to have them taken away from him by the screen or the stage. He is taking no chances with his latest "Honeychile", but has signed her for a long-term contract. The daughter of a South Carolina newspaper editor, "Honeychile" was active in college dramatics and has done modeling in New York.

baseball. He did, however, pitch his first major league game for the New York Giants.

EDDIE CANTOR made his debut as the star of his own radio show in 1931, following a guest appearance with Rudy Vallee which established him as a microphone favorite. He introduced a new informality which endeared him to the listening audience. He was the first comedian to kid the sponsors, was the first to give the orchestra leader lines to speak, and was the first to give the announcer an active part in the show.

Many prominent entertainers owe their present radio eminence to Eddie Cantor's knack for spotting talent. Through his encouragement and guidance RUBINOFF became, instead of just another orchestra leader, a definite ether personality. JIMMY WALLINGTON traces his top ranking radio position to his first meeting with Cantor in 1931. In rapid succession Gracie Allen, Parkyakarkus, Bobby Breen, Deanna Durbin and more recently, Saymore Saymore made their bigtime radio debuts on his Sunday night broadcasts.

#### Who's Who on "Watch the Fun Go By"

AL PEARCE: A big, friendly Westerner, and a jovial entertainer who has used his experience as a farmer, roofing and diamond salesman and musician as a background for the human down-to-earth type of entertainment he presents. Eight years ago he entered radio because the depression wiped out his real estate earnings. His start was modest, but sponsors took notice soon. Born in San Jose, Calif., July 25, 1908. Married. Likes to fish and hunt.

ARLENE HARRIS: The "Human Chatterbox" started her rapid fire monologues at home to amuse husband and friends. It was a diversion to the doctor-husband after a hard day at the hospital. Later she tried an audition at a Los Angeles radio station in 1932, and clicked. Guest appearance with the "Gang" led to a permanent engagement. Prior to that she had worked in vaudeville and stock. Born in Canada and educated in Canada and England. Fond of rummy, poker and bridge.

BILL COMSTOCK: "Tizzie Lish," radio's female impersonator and purveyor of impossible recipes, began his entertainment career as a drummer in vaudeville pits. Later he built comedy acts around his high-pitched voice, and the fame of "Tizzie" soon spread. Born and educated at Syracuse, N. Y., where he attended the University. He is just

past forty.

The "Singing NICK LUCAS: Troubador" is a comparative recent addition to the "Gang," but was a successful radio veteran in his own right. First went on the air from Chicago in 1922. Later on, a recording company scout heard him and he was soon known all over the country. Engagements in London's Cafe de Paris and Kit Kat Club soon were followed by Broadway musical comedy roles and prominent parts in such elaborate motion picture productions as the original "Gold Diggers of Broadway." Born in Newark, N. J., August 22, 1897.

BILL WRIGHT: The "Eb" of the "Eb and Zeb" acts, has been with Al Pearce on and off for seven years. Al plays the part of Zeb.

#### $\mathbf{IF}$

IF Robert Ripley can find time to visit about 40 more countries, he will have been in every country known to the world, since he already has visited 178.

IF Gracie Allen hadn't gone to Union Hill, N. J., to watch a girl friend try out a new act, she might never have met the front half of the song and dance act headlining there, known as "George Burns and Billy Lorraine."

IF Morton Downey, who had tried about 20 different jobs and liked none, hadn't been coaxed by a friend to sing in Brooklyn at an Elk's banquet, he says it never would have occurred to him to sing for a living—he thought singing was "just for fun."

IF business had not been too slow, as he says, Arthur Godfrey, radio announcer and commentator, might still be in Chicago selling cemetery lots.

#### Once Upon a Time

PHIL SPITALNY, aged ten, tried teaching piano lessons to two other boys with whom he had grown up in Odessa, Russia. He was studying with a grown-up teacher—and he kept just one lesson ahead of his own pupils.

AL JOLSON introduced the song which became the first outstanding hit-song of George Gershwin—"Swanee."

EDDIE CANTOR acted as foil for the Great Arthur & Bedini, whose juggling act was then a nation-wide sensation in the vaudeville circuits.

MORTON DOWNEY once sent an unkempt stage-hand as his "personal manager" to fool a backstage caller. The visitor stormed out, taking with him a bona-fide offer to sing at a banquet, with a fee of \$1200.

The Vass Family has been signed to appear with Ben Bernie for a period of thirteen weeks. The sponsor was well pleased with their trial appearance on this show and the contract was their award.

Amos 'n' Andy have signed with Campbell Soup to do their broadcast for three years, commencing Monday, Jan. 3, 1938. There will be no change in the story, the hours or the stations, except some Canadian stations will be added to the chain.

For people who want to talk on the Husbands and Wives program and don't want friend wife or husband to guess their identity, Sedley Brown has collaborated with radio engineers on a "Voice disguiser." It has already been used several times with success-nobody recognized the voice. And now Brown keeps it in reserve for use whenan embarrassing question ever like "How. can a husband cure a nagging wife?" comes up. The disguiser introduces several filters into the microphone circuit which take certain tones out of the voice and alter its quality completely.

## DX Club

(Continued from Page 26)

in a week a chap in France will be pouring over it with the aid of a dictionary. Within a month a fellow in New Zealand will be sitting down in the summer evening to enjoy it.

But not many will realize that there is, and must be, such a place as the basement of 345 Maple Ave., and such men as Stansfield and the Hoppenstedts. Not many will realize that somewhere, in some room devoted to DX, someone devoted to DX has lost his sleep and a little more of his hair, for their sake. Someone has to run a club.

Along about dawn the light in the basement will go out, and the four men will trudge off to bed, or to work. There'll be a smudge of mimeograph ink on a shirt in front of the furnace.

Yes, that's what a DX club is.

## Radio Problems

(Continued from Page 31)

horizontal or doublet antenna. The single conductor is erected vertically with its leadin taken off the bottom. The length of the lead plus that of the antenna gives the total effective length of antenna that can be used. The top should be at least 30 feet or more above the earth. It picks up signals equally as well from all directions, and when used as a radiator it transmits to all directions of the compass with uniform intensity.

#### The New Tubes

Please tell me something about the tubes having Octal bases. It seems that some are glass, some metal, and others I do not quite understand how they are constructed. The octal base means that the base is fitted with eight contacts. Two of these contacts are for the heater or filament wires, one for the cathode, one for the plate, one for the shell to be grounded, and the balance for the various grid or plate connections within the tubes. These sockets will take any of the newer metal or corresponding glass tubes.

The metal tubes have a sealed metal shell. While the tube has many good features there are some who believe that they still are experimental since metal is slightly porous and is apt to permit air to be slowly admitted through it and the welded seams, and fill the vacuum within. Then there are glass tubes that are interchangeable with the metal tubes, and these are generally designated "G" after the type number. And some of these glass tubes are similar to the older glass tubes. We find that type 6K7G, for instance, is a type 78 tube fitted with the octal base. Or a 6A8G is merely a type 6A7 with octal base. In some cases a metal shield or glove can be slipped down over the glass tube and it becomes similar to an all-metal tube, such as the 6K7 or the 6A8, respectively. The metalglass tubes, with these metallic gloves, are designated with the same type number as the metal tubes, except the letters MG are added to the type number. There are some cases where glass tubes, metal tubes, and metal-glass tubes, are all similar, and similar to the same type of old glass tube. This is noticed in the old type 75, for instance. Its interchangeable or corresponding tubes in the octal bases are: 6F5G (glass), 6F5MG (metal-glass). and 6F5 (metal). The type 42 has equivalents in types 6F6G, 6F6MG, and 6F6. Type 80 rectifier is similar to types 5Y3 (glass) and 5Z4MG (metal-glass), but there is no metal equivalent.

## Scrapbook

(Continued from Page 23)

On all foreign reception, planned tuning brings the best results. for example, the DXer gets up early some cool November morning and decided for a try at the TP's, he should study a station list and pick out a few of the more powerful sta-He will then dial the frequency of one of them and stick around awhile. If a signal is heard immediately, he is very lucky. Usually, the station will be in the middle of a fade-out, so he will have to wait for the signal to pick up strength. Thus, if he had tuned away when at first he had heard no signal, he would have missed the station entirely.

If he is able to log the first station attempted, he can go on to another powerful transmitter and follow the same procedure. If it should develop that the larger stations are coming in at all well, he can refer to the log and try a few of the less powerful broadcasters. But in every case, the wise DXer will try for a definite station on a definite frequency. And he will stay on that frequency several minutes to allow for a possible period of fading.

European South Dialing and American stations in the early evening requires the same general procedure, only this type of tuning must allow for fading on the part of the interfering station as well as the one which is being sought. Reports in RADEX and in the various club bulletins tell which of these stations are being heard in various parts of the country, so the DXer will know where to try. And again the important idea is to try for specific stations on definite fre-.quencies.

## DX Notes

(Continued from Page 15)
many different conditions in one
house and in a few minutes of time,
might it not be possible to have
DXers in different locations, using
different equipment, actually hear
what they report?"

It is admitted that Readers Foerster and Oxrieder have struck a vital point in the matter of varying reports. It is impossible to deny that receivers, aerials and locations play an important part in the manner in which any station is received. It is granted that the five listeners in question probably reported KVI exactly as they heard it.

But even when conceding that the KVI incident may have been unduly stressed, it is impossible to overlook the fact that many DXers are notoriously poor reporters. There are too many letters of protest from stations to ignore the fundamental necessity of submitting a clear and accurate report of reception. Whether the listener is careless, ignorant or is attempting to wheedle a veri by means of undeserved compliments, he should remember that the station deserves and expects an honest report.

And in passing, one cannot overlook the very nature of the arguments put forth. If different receivers, aerials and locations can make so much difference in the way a given station is received, that may be the reason why some listeners have outstanding DX records and others complain about poor reception conditions, sunspots and the like.

WMBS on 1420 kcs., Uniontown, Pa., has completed its tests and will soon be on the air, we are informed by Erick R. Johnson, Perth Amboy, N. J. This new station will verify all correct reports if a three cent stamp is enclosed, otherwise no verification can be expected.

#### 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
Canadian (CBC)	
Columbia (C)	***
Mutual (M)	
National Red (R)	
National Blue (B)	

Time: ED Eastern Daylight; E Eastern; C Central; M Mountain. For Pacific Time subtract one hour from Mountain.

Due to change to Daylight Saving Time on April 25, some of the stations will be unable to carry particular features.

MONDAY

ED-6:35 p.m., E-5:35, C-4:35, M-3:35

KFH KGKO KLRA KMBC KNOW KOMA KRLD KRNT KSCJ KTRH KTSA KTUL WABC WACO WADC WAIM WALA WBBM WBIG WBNS WBRC WBT WCAU WCHS WCOA WCOC WDAE WDBJ WDBO WDNC WDOD WDRC WEEI WFAM WFBM WFEA WGBI WGH WGST WHIO WHP WIBX WJAS WJNO WJR WJSV WKBB WKBH WKBW WKRC WLAC WMAS WMAZ WMBD WMMN WMBR WNAX WNOX WOC WORC WPAR WPRO WOAM WREC WRVA WSFA WSJS

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

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

ED-7:00 p.m., E-5:00, C-5:00, M-4:00 C — Poetic Melodies; Jack Fulton WABC WADC WBT WCAO WCAU WDRC WEAN WEEI WFBL WGR WHEC WHK WJAS WJR WJSV WKRC WOKO WSPD WTOC WWVA

R — Amos 'n' Andy KYW WBEN WCAE WCSH WEAF WEEI WFBR WGY WJAR WLW WRC WTAG WTIC

ED-7:15 p.m., E-6:15, C-5:15, M-4:15 R — Uncle Ezra's Radio Station

KARK KFYR KGBX KGNC KPRC
KSTP KTBS KTHS KVOO KYW
WBAP WBEN WCAE WCKY WCOL
WCSH WDAF WDAY WEAF WEBC
WFAA WFBR WGBF WGY WO
WIBA WIRE WJAR WKY WMAQ
WNAC WOAI WOOD WOW WRC
WTAG WTAM WTIC WTMJ

ED-7:30 p.m., E-6:30, C-5:30, M-4:30 B — Lum and Abner WBZ WBZA WENR WJZ WLW

WBZ WBZA WENR WJZ WLW WMC WSM WSYR

ED-7:45 p.m., E-6:45, C-5:45; M-4:45 C — Boake Carter KMBC KMOX KOMA KRLD WABC

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

ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C — Horace Heldt and Orchestra

KDB KERN KFAB KPBK KFH
KFPY KFRC KGB KHJ KLRA KLZ
KMBC KMJ KMOX KOIN KOL
KRLD. KRNT KSL KTRH KTSA
KTUL, KYI KWG WABC WBBM
WBRC WBT WCAO WCAU WCCO
WDRC WFBL WFBM WGR WGST
WHAS WHK WJAS WJR WJSV
WKRC WLAC WMBR WNAC WNAX
WOKO WREC WWL

R — Burns and Allen CRCT KYW WBEN WCAE WCSC WCSH WEAF WFBR WFLA WGY WHO WIOD WIRE WIS WJAR WJAX WLW WMAQ WNAC WF1F WRC WRVA WSOC WTAG WTAM WTAR WTIC WWJ

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

KFAB KMBC WABC WADC WBBM WBT WCAO WCAU WDRC WEAN WFBL WGR WGST WHEC WHK WHP WICC WJAS WJR WJSV WKRC WLBZ WMAS WNAC WOKO WORC WSFD

R Volce of Firstone
CFOF CRCT KFYR KPRC KSD
KSTP KTBS KVOO KYW WAVE
WBEN WCAE WCSC WCSH WDAF
WDAY WEAF WEBC WEEI WFAA
WFBC WFER WFLA WGY WHO
WIBA WIOD WIRE WIS WJAR
WJAX WJDX WKY WMAQ WMC
WOAI WOW WPTF WRC WRVA
WSB WSM WSMB WSOC WTAG

WTAM WTAR WTIC WTMJ WWJ

WWNC -

ED-9:00 p.m., E-8:00, C-7:00, M-6:00 R — Fibber McGee and Molly KFYR KPRC KSD KSTP KTBS KVOO KYW WAVE WBEN WCAE

KYOO KYW WAVE WBEN WCAE
WCOL WCSH WDAF WDAY WEAF
WEBC WFAA WFBR WFLA WGY
WHO WIBA WIOD WIRE WIS
WJAR WJAX WJDX WLW WMAQ
WMC WNAC WOAI WOOD WOW
WPTF WRC WSB WSM WSMB
WSOC WSUN WTAG WTAM WTAR
WTIC WTMJ WWJ WWNC

ED-9:30 p.m., E-8:30, C-7:30, M-6:30 R-Phil Spitalny's Girl Orchestra CFCF CRCT KDYL KFI KGHL

KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KVOO KYW WAVE WBEN WCAE WCSH WDAF WEAF WFAA WFBR WHO WIBA WID WIRE WIS WJAR WJAX WKY WLW WMAQ WMC WNAC WOAL WOW WFT WRC WRVA WSB WSM WSMB WTAG WTAM WTAR WTIC WTMJ WWJ

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

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

C— Wayne King and Orchestra KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRNT KSL KVI KWG WAAB WABC WADC WBBM WBNS WBT WCAO WCAU WCCO WDRC WEAN WFBL WFBM WHAS WHK WIBW WJAS WJR WJSV WKBW WKRC WKOO WSPD WWL

ED-10:30 p.m., E:9:30, C-8:30, M-7:30 R — Burns and Allen KARK KDYL KFBK KFI KFYR KFBX KGHL KGIR KGNC KGO KGW KHQ KMJ KOA KOMO KPO KPRC KSD KSTP KTAR KTBS KVOO KWG WAVE WDAF WDAY WEBC WFAA WIBA WJDX WKY

WMC

WTMJ

WOAI WOW WSB WSMB

ED-11:00 p.m., E-10:00, C-9:00, M-8:00 C — Poetic Melodies; Jack Fulton KERN KFAB KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMOX KOIN KOL KOMA KRLD KRNT KSL KTRH KTSA KVI WBBM WBRC WCCO WFBM WGST WLAC WREC WWL

R — Amos 'n' Andy
KDYL KFI KGW KHQ KOA KOMO
KPO KPRC KSD WBAP WDAF
WHO WKY WLW WMC WOAI WOW
WSB WSM WSMB WTAM WWJ

MONDAY (Continued) ED-11:15 p.m., E-10:15, C-9:15, M-8:15

C — Boake Carter KFPY KLZ KNX KOIN KOL KSFO KSL KVI

ED-11:30 p.m., E-10:30, C-9:30, M-8:30 C -- Pick and Pat

C — Pick and Pat
KFPY KGKO KLRA KLZ KMOX
KNX KOIN KOL KOMA KRLD
KRNT KSCJ KSFO KSL KTUL
KVI KWKH WACO WBRC WCCO
WFBM WHAS WLAC WREC

#### TUESDAY

ED-6:35 p.m., E-5:35, C-4:35, M-3:35
 C — Basebali Resume, See Monday

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

ED-7:00 p.m., E-6:00, C-5:00, M-4:00 C — Poetic Melodies, See Monday R — Amos 'n' Andy, See Monday B — Easy Aces

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

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

ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C — Mark Warnow Orchestra

CFRB KFAB KFH KFPY KGVO KLRA KLZ KMBC KMOX KNOW KNX KOIN KOL KOMA KRLD KRNT KSCJ KSFO KSL KTRH KTSA KTUL KVI WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WDAE WBBJ WDNC WDRC WEEI WFBL WFBM WGR WGST WHAS WHEC WHK WIBX WJAS WJR WJSV WKRC WLPZ WNAX WOKO WORC WPRO WQAM WREC WWI.

R — Johnny with Russ Morgan

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

B — Husbands and Wives

KDKA KECA KEX KFSD KGA KGO KJR KLO KOIL KSO KVOD KWK WABY WBAL WBZ WBZA WCKY WEAN WEBR WFIL WGAR WHAM WICC WJZ WLS WMAL WMT WREN WSYR WXYZ

ED-8:30 p.m., E-7:30, C-6:30, M-5:30 R — Wayne King and Orchestra

KFYR KPRC KSD KSTP KTBS
KVOO KYW WAVE WBAP WBEN
WCAE WCKY WCSH WDAF WDAY
WEAF WEBC WEEI WFBR WGY
WHO WIIIO WIBA WIRE WJAR
WJDX WKY WMAQ WMC WOAI
WOW WRC WSB WSM WSMB
WTAG WTAM WTIC WTMJ WWJ

B -- Edgar Guest, It Can Be Done KDKA KOIL KSO KWK WBAL WBZ WBZA WFIL WGAR WHAM WJZ WLS WLW WMAL WMT WREN WSYR WXYZ ED-9:00 p.m., E-8:00, C-7:00, M-6:00 C — Al Pearce and Gang

CFRB CKAC KFAB KFH KGKO KLRA KMBC KMOX KOMA KRLD KRNT KSCJ KTRH KTSA KTUL KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WIBX WICC WISN WJAS WJR WJSV WKBH WKBN WKBW WKRC WLAC WLBZ WMAS WMBD WMBG WMBR. WMMN WNAC WNAX WNBF WNOX WOC WOKO WORC WOWO WPG WOAM WREC WSBT WSFA WSJS WSPD WTOC WWL

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

B — Ben Bernie and Orchestra
KDKA KDYL KFI KFSD KFYR
KGW KHQ KOA KOIL KOMO KPO
KPRC KSO KSTP KTAR KTBS
KVOO KWK WAVE WBAL WBAP
WBZ WBZA WDAY WEBC WFIL
WFLA WGAR WHAM WIBA WIOD
WIS WJAX WJDX WJZ WKY WLS
WLW WMAL WMC WMT WOAI
WPTF WREN WRVA WSB WSM
WSMB WSOC WSYR WTAR WTMJ
WWNC WXXZ

ED-9:30 p.m., E-8:30, C-7:30, M-6:30 C — Benny Goodman Orchestra

KFAB KFH KFPY KGRO KLRA
KLZ KMBC KMOX KNX KOIN KOL
KOMA KRLD KRNT KSCJ KSFO
KSL KTRH KTSA KTUL KVI KVOR
KWKH WABC WACO WADC WALA
WBBM WBIG WBNS WBRC WBT
WCAO WCAU WCCO WDAE WDBJ
WDBO WDNC WDOD WDRC WEEL
WHIO WHK WDOD WDRC WEEL
WHIO WHK WHP WIBW WIBX
WISN WIJAS WJR WJSV WKBN
WKBW WKRC WLAC WLDZ WMAS
WMBD WMBG WMBR WNAS
WMBD WMBG WMBR WNAS
WNBF WNOX WOC WOKO WORC
WOWO WPG WPRO WQAM WREC
WSBT WSFA WSJS WTOC WWL

R — Packard Program

CRCT KDYL KFI KFYR KGW
KIQ KOA KOMO KPO KPRC KSD
KSTP KTBS KTBS KVOO KYW
WAYE WBAP WBEN WCAE WCKYW
WCSH WDAF WDAY WEAF WEBC
WEEI WFBR WFLA WGY WO
WIBA WIOD WIRE WIS WIAR
WJAX WJDY WKY WMAQ WMC
WOAI WOW WPTF WIC WRVA
WSM WSMB WSOC WTAG WTAM
WTAR WTIC WTMJ WW

ED-10:30 p.m., E-9:30, C-8:30, M-7:30 R — Jimmy Fidel Hollywood Gossip KDYL KFF KOW KHO KOA KOMO KPO KSD KTAR KYW WBEN WCAE WCSH WDAF WEAF WFBR WGY WHO WJAR WLW WMAQ WNAC WOOD WOW WRC WTAG WTAM WTIC WWJ

ED-10:45 p.m., E-9:45, C-8:45, M-7:45 R — Vic and Sade KDYL KFI KGW KHO KOA KOMO KPO KSD KSTP KYW WCAE WCSH WDAF WEAF WFBR WGY WHO WIRE WLW WMAQ WNAC WOW WRC WTAG WTAM WTIC WWJ

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

#### WEDNESDAY

ED-6:35 p.m., E-5:35, C-4:35, M-3:35 C — Baseball Resume, See Monday

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

ED-7:00 p.m., E-6:00, C-5:00, M-4:00 C — Poetic Melodies, See Monday R — Amos 'n' Andy, See Monday B — Easy Aces, See Tuesday

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

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

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

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

KDB KERN KFAB KFBK KFPK KFPK KFPK KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRLD KRNT KSL KVI KWG WABC WBBM WBNS WCAU WCCO WDRC WEAN WFBL WFBM WGR WHAS WHEC WHAK WJAS WKRC WLAC WMBG WNAC WOKO WTOC WUL

R — One Man's Family

K— ONe Man's Paniny
K— One Man's Paniny
KDYL KFI KFYR KGW KHQ KOA
KOMO KPO KPRC KSD KSTP
KTAR KTBS KTHS KVOO KYW
WAPI WAVE WBAP WBEN WCAE
WCSH WDAF WDAY WEAF WEBC
WEEI WFAA WFBR WFLA WGY
WHO WIBA WIOD WIS WJAR
WJAX WJDX WKY WLW WMAQ
WMC WOAI WOW WPTF WRC
WRVA WSB WSM WSMB WSOC
WSUN WTAG WTAM WTAR WTIC
WTMI WUJI WWNC

ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C — Ken Murray: Shirley Ross

OFRB CKAC KFAB KFH KLRA
KMBC KMOX KOMA KRLD KRNT
RSCJ KTRH KTSA KTUL KWKB
WABC WADC WBBM WBNS WBRC
WBT WCAO WCAU WCCO WDAE
WDBJ WDBO WDRC WEEI WFBL
WFBM WGR WGST WIAS WHEC
WHIO WHK WHP WIBW WIBX
WJAS WJAS WJAS WMAD
WMBR WNAX WNOX WKCO WCA
WWBR WNAX WNOX WOKO WORC
WOWO WPG WPRO WQAM WREC
WWL

R — Wayne King, See Tuesday

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

KDB KERN KFAB KFBK KFH
KFPY KFRC KOB KGKO KGMB
KIIJ KLKA KLZ KMBC KNJ KMOX
KOH KOIN KOL KOMA KRLD
KRNT KSCJ KSL KTRIL KTSA
KTUL KVI KVOR KWG KWKH
WABC WACO WADC WALA WBBM
WBIG WINS WBRC WBT WCAO
WCAU WCCO WCOA WDAE WDBO
WCAU WONO WDOD WDRC WEAN

#### Wednesday (Continued)

WFBL WFBM WFEA WGST WHAS WHK WHP WIBW WIBX WHEC WJAS WJR WJSV WICC WISN WKBH WKBW WKRC WLAC WLBZ WMBD WMBG WMBR WMAS WNAC WNAX WNBF WNOX WOC WOKO WORC WOWO WPG WQAM WREC WSFA WSJS WSPD WTOC WWT.

R - Town Hall Tonight

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

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

KDB KERN KFAB KFBK KFH KFPY KFRC KGB KGMB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KRNT KSL KTRH KTSA KTUL KVI KWG KWKH WABC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDRC WEAN WFBL WFBM WGST WHAS WHEC WHK WICC WISN WJAS WJR WJSA WKBW WKRC WLAC WLBZ WMBG WMBR WNAC WOKO WORC WOWO WQAM WREC WTOC WWL

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

C - Crime Crusade: Phil Lord KDB KERN KFAB KFBK KFH KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KRNT KSL KTRH KTUL KVI KWG KWKH KTSA WABC WACO WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDRC WEAN WFBL WFBM WGST WHAS WHEC WILK WICC WISN WJAS WJR WJSV WKBW WKRC WLAC WLBZ WMBG WMBR WNAC WOKO WORC WOWO WOAM WREC WTOC WWL

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KDYL KEX KFI KFYR KGHL KGIR KGU KGW KHO KOA KOMO KPO KPRC KSD KSTP KTAR KTBS KTHS KVOO KYW WAVE WCAE WCSC WCSH WDAF WDAY WEAF WEBC WFAA WFBR WFLA WGY WIBA WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ wow WMC WNAC WOAI WPTF WRC WRVA W'SB WSM WSMB WSOC WSUN WSYR WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

ED-11:00 p.m., E-10:00, C-9:00, M-8:00 C - Poetic Melodies, See Monday

R - Amos 'n' Andy, See Monday

ED-11:15 p.m., E-10:15, C-9:15, M-8:15 C - Boake Carter, See Monday

#### THURSDAY

ED-\$:35 p.m., E-5:35, C-4:35, M-3:35 C - Baseball Resume, See Monday

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

ED-7:00 p.m., E-6:00, C-5:00, M-4:00 C - Poetic Melodies, See Monday

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

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

ED-8:00 p.m., E-7:00, C-6:00, M-5:00 R - Rudy Vallee's Variety Hour CFCF CRCT KDYL KFI KFYR KGW KHQ KOA KOMO KPO KSD KSTP KTAR KYW WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEET WFBR WGY WHO WJAR WLW WMAQ WOW WRC WTAM WTIC WTMJ WWJ

ED-8:30 p.m., E-7:30, C-6:30, M-5:30 - Guy Lombardo Orchestra

CKLW KDB KDON KFEL KFRC KFXM KGB KGDM KHJ KPMC KSO KVOE KWK KXO WABY WBAL WFIL WGAR WKBW WMT WOL WOR WSAI WSYR WWSW

Also on Canadian Network

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

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

Maxwell House Show Boat

KDYL KFI KFSD KFYR KGHL KGIR KWK KHQ KOA KOMO KPO KPRC KSD KSTP KTAR KTBS KYW WAPI WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFLA WGY WHO WIBA WIOD WIRE WIS WJAR WJAX WJDX WKY WMAO WMC WOAT WOW WPTF WRC WSM WSMB WRVA WSAI WSB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

ED-10:00 p.m., E-9:00, C-8:00, M-7:00 C - Your True Adventures

KFAB KFH KFPY KLRA KLZ KMBC KMOX KNX KOIN KOL KOMA KRLD KRNT KSFO KSL KTRH KTSA KTUL KVI KWKH WABC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDRC WEEI WFBL WFBM WGST WHAS WHEC WILLO WHK WISN WJAS WJR WJSV WKBW WKRC WLAC WLBZ WMBG WMBR

WOKO WORC WPRO WQAM WREC WTOC WWL

R - Bob Burns

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

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

KFAB KFPY KLZ KMBC KMOX KNX KOIN KOL KOMA KRNT KSFO KSL KVI WABC WBBM  $_{\rm KSFO}$ WRRM WBNS WCAO WCAU WCCO WDRC WEEI WFBL WFBM WGST WHAS WHEC WHK WJAS WJR WJSV WKBW WKRC WOKO WPRO WWL

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

#### FRIDAY

ED-6:35 p.m., E-5:35, C-4:35, M-3:35 C — Baseball Resume, See Monday

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

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

C - Poetic Melodies, See Monday R - Amos 'n' Andy, See Monday

ED-7:15 p.m., E-6:15, C-5:15, M-4:15 R-Uncle Ezra, See Monday

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

ED-6:45 p.m., E-5:45, C-4:45, M-3:45 C - Boake Carter, See Monday

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

C — Hammerstein Music Hall KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRNT KSL KVI KWG WABC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDRC WEAN WFBL WFBM WFBR WGST WHAS WILK WJAS WJR WJSV WKRC WMAS WMBG WNAC WOKO WWL

R — Cities Service Concert

CRCT CFYR KOA KPRC KSD KSTP KTBS KTIIS KVOO KYW WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFAA WHO WIBA WIOD WERR WGY WJAR WKY WMAQ WOAI WOW WRC WRVA WSAI WTAG WTAM WTIC WTMJ WWJ

B - Irene Rich; Drama KDKA KDYL KFI KGW KHQ KOIL

#### FRIDAY (Continued)

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

#### ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C — Hal Kemp

KFAB KFH KGKO KLRA KMBC KMOX KOMA KRLD KRNT KSCJ KTRH KTSA KTUL KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WEEI WFBL WFBM WFEA WGR WGST WHAS WHEC WHIO WHK WHP WIBW WIBX WISN WJAS WJR WJSV WKBN WKRC WLAC WLBZ WMAS WMBG WMBR WMMN WMRD WNAX WNBF WNOX WOC WOKO WORC WOWO WPG WPRO WQAM WREC WSFA WSJS WSPD WTOC

#### B - Death Valley Days

KDKA KDYL KFI KĞW KHQ KOIL KOMO KPO KSO KWK WBAL WBZ WBZA WFIL WGAR WHAM WJZ WLS WLW WMAL WMT WREN WSYR WXYZ

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

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

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

#### B - "Believe It or Not" Ripley

KANS KDKA KFYR KGNO KLO
KOILKPRCKSOJVOD KWK WAPI
WAVE WBAL WBAP WBZ WBZA
WDAY WEAN WEBC WEBR WFAA
WFBC WFIL WGAR WHAM WIBA
WICC WJZ WKY WLS WLW WMAL
WMC WMT WOAI WOOD WPTF
WIEN WRTD WSB WSM WSMB
WSOC WSPD WSYR WTAR WTCN
WTMJ WXYZ

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

KSD KYW WBEN WCAE WCSH WEAF WEEI WFBR WGY WHO WHIO WJAR WMAQ WOW WRC WTAG WTAM WTIC WWJ

#### ED-10:00 p.m., E-9:00, C-8:00, M-7:00 C — Ferde Grofe Orchestra

KLRA KLZ KMBC KMOX KOL

KRLD KRNT KSL KTRH KTUL KVI WABC WBBM WCAU WDBJ WDOD WEEI WFBL WFBM WGST WHAS WHEC WHIO WHK WISN WJAS WJR WKBW WKRC WMBD WMBR WNBF WOKO WPRO WSBT WTOC WWL

#### R — First Nighter: Drama

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

#### 3 — Morton Bowe

KDKA KECA KFSD KGA KGO KJR KLO KOIL KSO KWK WABY WBAL WBZ WBZA WCKY WCOL WEAN WEBR WENR WFIL WFLA WGAR WHAM WICC WIOD WIS WJAX WJZ WMAL WMT WOOD WPTF WREN WRVA WSOC WSUN WSYR WTAR WWNC WXYZ

#### ED-10:30 p.m., E-9:30, C-8:30, M-7:30 R — Jimmy Fidler

KDYL KFI KGW KHQ KOA KOMO KPO KSD KSTP KYW WBEN WCAE WCSH WDAF WDEL WEAF WFBR WGY WIBA WIRE WJAR WLW WMAQ WNAC WOW WRC WTAG WTAM WTIC WTMJ WWJ

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

ED-11:15 p.m., E-10:15, C-9:15, M-8:15 C — Boake Carter, See Monday

#### ED-11:30 p.m., E-10:30, C-9:30, M-8:30 C — Hal Kemp

KFBB KFPY KGMB KGVO KLZ KNX KOH KOIN KOL KSFO KSL KVI KVOR

#### SATURDAY

ED-6:35 p.m., E-5:35, C-4:35, M-3:35 C — Baseball Resume, See Monday

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

#### ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C — Phil Duey: Russ Morgan

KFAB KFH KMBC KMOX KRNT WABC WADC WBBM WBIG WBNS WBT WCAO WCAU WCCO WCOA WDRC WEEI WFBL WFBM WGR WGST WHAS WHEC WHIO WHK WHP WISN WJAS WJR WJSY WKRC WMBD WMBG WNBF WOC WOKO WPRO WSBT WWVA

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

#### B -- National Barn Dance

KDKA KOIL KPRC KSO KTBS
KKTHS KWK WABY WAPI WAVE
WBAL WBAP WBZ WBZA WFIL
WFLA WGAR WHAM WIOD WIRE
WIS WJAX WJDX WZ WKY WIS
WMAL WMC WMT·WOAI WOOD
WPIF WREN WRVA WSB WSMB
WSOC WSUN WSYR WTAR WWNC
WXYZ

#### ED-10:00 p.m., E-9:00, C-8:00, M-7:00 C — Your Hit Parade

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

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

CBC — The Northern Messenger
CFAC CFOH CFCO CFJC CFPL
CFQC CHWK CJAT CJCA CJCX
CJKL CJOC CJRM CJRO CJRX
CKBI CKCK CKGB CKOC CKOV
CKPR CKCO CKTB CKX CKY
CRCK CHCM CRCO CRCS CRCT
CRCV CRCW CRCX

#### B -- National Barn Dance

KDYL KFI KFSD KFYR KGHL KGIR KGU KGW KHQ KOA KOMO KPO KSTP KTAR WDAY WEBC WIBA WLW WTMJ

#### SUNDAY

#### ED-11:30 a.m., E-10:30, C-9:30, M-8:30

C — Major Bowes: "Family"
CFRB KERN KFAB KFBH KFBK
KFH KFPY KFRC KGB KGVO
KMBC KOH KOL KRLD KSL KTRH
KTSA KV1 KVOR KWG KWKH
WABC WACO WADC WALA WBNS
WBRC WCAO WCCO WDAE WDBJ
WDBO WDNC WESG WFBL WFEA
WHAS WHK WIBX WJAS WJR
WKRC WLBZ WMBD WMBR
WMMN WOC WOKO WORC WFG
WQAM WSBT WSJS WSPD WTOC

#### SUNDAY (Continued)

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

C - Sait Lake Tabernacle Choir CFRB KFAB KFBB KFBK KFH KFPY KFRC KGB KLZ KOH KOL KRLD KSL KTRH KTSA KVI KVOR KWG WABC WACO WADC WALA WBIG WBNS WBRC WCAO WCCO WDAE WDBJ WDBO WESG WFBL WFEA WGR WHAS WICC WJAS WJR WKRC WLBC WMBR WMMN WOC WOKO WORC WQAM WSBT WSJS WSPD WTOC

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

C - Church of the Air KFBK KFH KFPY KFRC KGB KHJ KMOX KOH KOL KOMA KRLD KRNT KSCJ KSL KTRH KTSA KVI KVOR KWG WABC WALA WBNS WBT WCAO WCCO WDAE WDBJ WDBO WDRC WESG WFBL WFBM WGR WHAS WHP WIBX WJAS WJSV WKBN WKRC WLAC WLBZ WMBR WNBF WOC WOKO WORC WPG WQAM WREC WSBT WSJS WSPD WTOC WWVA

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

B — Magic Key of RCA
CFCF CRCT KDKA KDYL KFI

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

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

- Thatcher Colt Mystery KDYL KFI KGW KHQ KOA KOMO KPO KSD KSTP KYW WREN WBOW WCAE WCSH WDAF WEAF WFBR WGBF WGY WHO WIRE WJAR WMAQ WNAC WORK WOW WRC WSAI WTAG WTAM WTIC

### ED-3:00 p.m., E-2:00, C-1:00, M-Noon

C -- Everybody's Music CFRB CKAC KFAB KFBB KFH KGKO KGVO KLRA KLZ KMBC KMOX KNOW KOL KRLD KSCJ KSL KTRII KTSA KWKH WABC WADC WALA WBNS WBT WCAO WCCO WCHS WDAE WDBJ WDBO WDRC WEEI WESG WFBL WFBM WHAS WHK WHP WIBW WIBX WJAS WJR WJSV WKBB WKBN WKBW WKRC WLAC WLBZ WMAS WMBD WMBG WMBR WMMN WNBF WOC WOKO WORC WPAR WPRO WQAM WSBT WSJS WTAQ WTOC WWL

ED-5:30 p.m., E-4:30, C-3:30, M-2:30 C - Guy Lombardo and Orchestra KFH KMBC KMOX KOMA KTUL WAAB WABC WBNS WCAO WCAU

WDRC WEAN WFBL WFBM WGR WHAS WHEC WHK WIBX WICC WJR WJSV WMAS WOKO WORC WSPD WWVA

ED-6:00 p.m., E-5:00, C-4:00, M-3:00 M — Ray Knight; Arnold Johnson CKLW KHJ KWK WAAB WBAL WFIL WGAR WGN WLW WOR

ED-6:30 p.m., E-5:30, C-4:30, M-3:30 R - A Tale of Today

WBEN WEAF WGY WJAR WMAQ WOW WRC WTAM

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

KFAB KFBB KFH KFPY KGKO KGVO KNOW KOH KOIN KOL KOMA KRLD KRNT KSCJ KSFO KTRH KTSA KTUL KVI KVOR KWKH WABC WACO WADC WALA WBBM WBNS WBRC WBT WCAO WCCO WCOA WDAE WDBO WDNC WFBL WFBM WGR WGST WHEC WHIO WHK WHP WIBX WISN WJAS WJNO WKRC WLBZ WMAS WMBG WMMN WNOX WOKO WORC WPG WREC WSBT WSJS WSPD WTOC

R — Jello Program KSD KYA KYW WBEN WCAE WCSH WDAF WEAF WFBR WGY WHO WJAR WLW WMAQ WNAC WOW WRC WTAG WTAM WTIC WW.J

#### ED-7:30 p.m., E-6:30, C-5:30, M-4:30 C - Oscar Bradley Orchestra

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

R — Fireside Recitals
KSD KYW WBEN WCAE WCSH
WDAF WEAF WFBR WGY WIRE
WJAR WMAQ WOW WRC WSAI WTAG WTAM WTIC WWJ

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

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

KFAB KFH KFPY KLRA KLZ KMBC KMOX KNX KOIN KOL. KOMA KRLD KRNT KSCJ KSFD KSL KTRH KTSA KTUL KVI KWKH, WABC WADC WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDRC WEEL WFBL WFBM WGR WGST WHAS WHEC WHIO WHK WHP WIBX WJAS WJR WJSV WKBN WKRC WLAC WLBZ WMAS WMBG

WMBR WNAX WNBF WNOX WOKO WORC WPRO WQAM WREC WSBT WWL WWVA

R — Don Ameche: Edgar Bergen CFCF CRCT KDYL KFI KFYR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTAR KTBS KVOO KYW WAVE WBEN WCAE WCSH WDAF WDAY WEAF WEBC WFAA WFBA WFLA WGY WHO WIBA
WFBR WFLA WGY WHO WIBA
WIOD WIRE WIS WJAR WJAX
WJDX WKY WLW WMAQ WMC
WNAC WOAI WOW WPTF WRC
WRVA WSB WSM WSMB WSOC WSUN WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

#### ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C - Texaco Program

KFAB KFH KGKO KLRA KMBC KMOX KOMA KRLD KRNT KSCJ KTRH KTSA KTUL KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGR WGST WHAS WHEC WHK WHP WIBW WIBX WICC WISN WJAS WJR WJSV WKBN WKRC WLAC WLBZ WMAS WMBR WMMN WNAX WMRD WNOX WOC WOKO WORC WQAM WREC WSBT WSFA WSJS WSMK WSPD WTOC WWL WWVA

#### ED-9:00 p.m., E-8:00, C-7:00, M-6:00 B - Frank Parker; Shep Fields

KDKA KECA KFSD KGA KGHL KGIR KGO KJR KLO KOIL KSO KTAR KWK WBAL WBZ WBZA WEBC WEBR WENR WFIL WGAR WHAM WICC WJZ WLW WMAL WMT WREN WSYR WXYZ

- Manhattan Merry-Go-Round CFCF KDYL KFI KFYR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTBS KTHS KYW WAVE WBEN WCAE WCKY WCSH WDAF WAVE WDAY WEAF WEBC WEEL WFAA WDAY WEAF WEBC WEEI WFAA WFBR WFLA WGY WHO WIBA WIOD WIRE WIS WJAR WJAX WJDX WAY WMAQ WMC WOAL WOW WPTF WRC WRVA WSB WSM WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

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

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

#### SUNDAY (Continued)

KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTBS KYW WAPI WAVE WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WMAQ WMC WOAI WOW WPTF WRC WRVA WSAI WSB WSM WSMB WSOC WTAG WTAM WTAR WTMJ WWJ WWNC

B --- Walter Winchell

KDKA KECA KEX KFSD KGA KGHL KGIR KGO KJR KLO KOIL KSO KTAR KWK WBAL WBZ WBZA WENR WFIL WGAR WHAM WJZ WLW WMAL WMT WREN WSYR WXYZ

R - James Melton

KDYL KFI KGBX KGW KHQ KOA KPO KPRC KSD KSTP KTAR KTBS WCAE WCSH WDAF WEAF WFBR
WFLA WGY WHO WIBA WIOD WIRE WIS WJAR WJAX WJDX WKY WMAQ WMC WNAC WOAI WOOD WOW WPTF WRC WRVA WSB WSM WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

ED-11:00 p.m., E-10:00, C-9:00, M-8:00 R - Sunset Dreams; Morin Sisters KDYL KFI KFSD KGW KHQ KOA

ED-10:00 p.m., E-9:00, C-8:00, M-7:00 KOMO KPO KPRC KTAR KTBS

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

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

ED-11:30 p.m., E-10:30, C-9:30, M-8:30 B - Frank Parker; Shep Fields

KPRC KTBS KTHS KVOD WAPI WAVE WBAP WJDX WKY WMC WOAI WSB WSM WSMB

## International SHORTWAVE Tests

THE Columbia Broadcasting Sys-L tem, through its new high-power international shortwave transmitter W2XE at Wayne, N. J., is collaborating with the British Broadcasting Corp. in a series of important shortwave tests which will serve as a basis for recommendations to the 1938 meeting of the International Consulting Committee on Radio at Cairo, Egypt. At this meeting, the governments of the world will draft new standards for international telecommunication.

The effectiveness of directional antennas in preventing interference between two or more countries employing the same frequency is one of the most important points on which the tests are expected to The other principal throw light. purpose of the tests is to determine the necessary frequency separation which should exist between shortwave broadcasting stations in various transmission bands. During the tests the signals transmitted by W2XE and the BBC Empire stations at Daventry will be simultaneously observed in Argentina. Signals are transmitted first on identical frequencies, then on different

quencies in close proximity. tests are conducted on frequencies of 21520, 15270 and 11830 kcs.

The technical committee of the International Broadcasting Union. under whose auspices the tests are conducted, decided on the new experimental program after consideration of a report by the engineering delegate representing the British Broadcasting Corp. For the past two years, at Columbia's request, the BBC's receiving station at Tatsfield, Surrey, has observed W2XE's signals and sent in weekly reports on them.

The ultimate purpose of these tests is to reduce overcrowding in the shortwave bands. The trans-Atlantic tests may make possible a more efficient usage of the limited number of wavelengths utilized.

Italian radio listeners breathed a long sigh of relief on July 1st, date on which the Italian Broadcasting System banned all advertising from its programs. Henceforth, the lover of operas and symphonies in Italy will no longer face the nervewracking strain of being brought suddenly face to face with toothpaste or tomatoes at the end of an act of La Traviata or Aida.

"I do my DXing for my own amusement and am quite satisfied simply to hear the stations, so do not verify. I use a seven-tube RCA with a double-doublet aerial and one hundred feet of twisted pair for lead-in," preambles Edward Burton, 106 W. Broad St., Tampa, Fla. "My reception of stations in Europe, South America and Australia has been very good. I listen to the fifteen minute news broadcasts in English from I2RO in Rome at 6 pm EST six times a week.

VK3ME in Melbourne is nicely received near 7 am, and sometimes I can hear VK2ME and VK6ME but they are generally weak.

"During electrical storms I detach the aerial from the radio and drop this wire out the window to the ground, and connect the radio to the bedsprings with a piece of insulated wire. Believe it or not, my reception on this hook-up is sometimes superior to the more conventional aerial. Australia has been heard many times on my bed-spring aerial."

#### CLASSIFIED INDEX TO CHAIN PROGRAMS

Time in Eastern Daylight

C-Columbia; R-National (Red); B-National (Blue); M-Mutual

#### CONCERTS

Everybody's Music, 3 p.m. Sun., C. Frank Black, 2 p.m. Sun., B Rosario Bourdon, 8 p.m. Frl., R G. M. "Prom" Concert, 8 p.m. Sun., B Radio City Music Hall, 12:30 p.m. Sun., B Don Voorhees, 8 p.m. Wed., C

#### DANCE BANDS

Ben Bernle, 9 p.m. Tues., B Bunny Berlgan, 8 p.m. Sat., C Oscar Bradley, 7:30 p.m. Sun., C Rex Chandler, 9 p.m. Sun., C Jimmie Dorsey, 10 p.m. Thurs., R Tommy Dorsey, 10 p.m. Fri., B Shep Fields, 9 and 11:30 p.m. Sun., B Lud Gluskin, 8:30 Wed., C Al Goodman, 9 and 11:15 p.m. Thurs., R Benny Goodman, 9:30 p.m. Tucs., C Johnny Green, 9:30 p.m. Tues., R Phil Harris, 7 and 11:30 p.m. Sun., R Horace Heldt, 8 p.m. Mon., C Arnold Johnson, 6 p.m. Sun., M Hal Kemp, 8:30 and 11:30 p.m. Fri., C Wayne King, 8:30 p.m. Tues. and Wed., R; 10 p.m. Mon., C Andre Kosteinnetz, 9 p.m. Wed., C Guy Lombardo, 5:30 p.m. Sun., C; 8:30 Thurs., M Abe Lyman, 8:30 p.m. Mon., B; 9 p.m. Fri., R:10 p.m. Wed., R Russ Morgan, 8:30 and 11:30 p.m. Sat., C; 8 p.m. Tues., R Ray Noble, 8 p.m. Mon., R Raymond Paige, 9 p.m. Frl., C Jacques Renard, 8:30 and 11 p.m. Sun., C Andy Sancila, 9 p.m. Sun., R Phil Spitalny, 9:30 Mon., R Rudy Vallec, 8 p.m. Thurs., R Peter Van Steeden, 9 p.m. Wed., R Don Voorhees, 5:30 p.m. Sun., B DIALOG

Amos 'n' Andy, 7 and 11 p.m. daily, except Sat. and Sun., R
Bob Burns, 10 p.m. Thurs., R
Burns and Allen, 8 p.m. Mon., R
Easy Aces, 7 p.m. Tues., Wed., Thurs., B
Ray Knight, 6 p.m. Sun., M
Beatrick Lillie, 8 p.m. Wed., B

Lum and Abner, 7:30 p.m. dally except Sat. and Sun., B Ken Murray, 8:30 Wed., C Plek and Pat, 8:30 and 11:30 p.m. Mon., C Unole Ezra's Radio Station, 7:15 p.m. Mon., Wed., Frl., R

Columbia Workshop, 7 p.m. Sun., C Death Valley Days, 8:30 p.m. Frl., B First Nighter, 10 p.m. Frl., R Gang Busters, 10 p.m. Wed., C Hollywood Hotel, 9 p.m. Frl., C It Can Be Done, 8:30 Tues., B Phillips Lord, 10 p.m. Wed., C One Man's Family, 8 p.m. Wed., R Irenc Rich, 8 p.m. Frl., B

Tale of Today, 6:30 p.m. Sun., R
POPULAR PROGRAMS Album of Familiar Music, 9:30 p.m. Sun., R Major Bowes, 11:30 a.m. Sun. and 9 p.m. Thurs.; C Broadway Merry-Go-Round, 8 p.m. Wed., B Cavaleade of America, 8 p.m. Wed., C Chesterfield Program, 9 p.m. Wed., C Cities Service Concert, 8 p.m. Fri., R Contented Program, 10 p.m. Mon., R Fireside Recitals, 7:30 p.m. Sun., R Fleischmann Variety Hour, 8 p.m. Thurs., R Hit Parade, 10 p.m. Wed., R; 10 p.m. Sat., C Hollywood Hotel, 9 p.m. Fri., C Husbands and Wives, 8 p.m. Tues., B Magle Key of RCA, 2 p.m. Sun., B Manhattan Merry-Go-Round, 9 p.m. Sun., R March of Time, 10:30 p.m. Thurs., C Maxwell House Show Boat, 9 p.m. Thurs., R National Barn Dance, 9 and 11:30 p.m. Sat., B Packard Hour, 9:30 p.m. Tues., R Palmolive Hour, 9:30 p.m. Wed., C Paramount on l'arade, 12 noon Sun., R Al Pearce and His Gang, 9 p.m. Tues., C Professor Quiz, 9 p.m. Sat., C Studebaker Champions, 10 p.m. Mon., B True Adventures, 10 p.m. Thurs., C Voice of Firestone, 8:30 p.m. Mon., R Vox Pop. 9 p.m. Tues., R Waltz Time, 9 p.m. Fri., R Watch The Fun Go Bv. 9 p.m. Tues., O SINGERS

Kenny Baker, 7 and 11:30 p.m. Sun., R Richard Bonelli, 7:30 and 10:45 p.m. Sat., C Morton Bowe, 10 p.m. Frl., B
Bobby Breen, 8:30 and 11 p.m. Sun., C
Rachel Caralay, 9 p.m. Sun., R
Jesslea Dragonette, 8 p.m. Frl., R: 9:30 p.m. Wed., C
Phil Duey, 8 and 11:30 p.m. Tues., R; 8:30 Sat., C
Mary Eastman, 9:30 p.m. Sat., C
Nelson Eddy, 8 p.m. Sun., R
Jack Futton, 7 and 11 p.m. Mon. thru Thurs., C
Helen Jepson, 9 and 11:15 p.m. Thurs., R
Jones and Hare, 10 p.m. Sun., C
C Frances Langford, 9 p.m. Frl., C
Shirley Lloyd, 7:30 p.m. Sun., B
Lullaby Lady, 10 p.m. Mon., R
Elizabeth Lennox, 8 p.m. Frl., C
Nick Lucas, 9 p.m. Tues., C
Lucllie Manners, 8 p.m. Frl., R
Helen Marshall, 7:30 p.m., Sun., R
Morin Sisters, 7:45 and 11 p.m. Sun., R
Frank Munn, 9:30 p.m. Sun. and 9 p.m. Frl., R; 8:30 p.m. Mon., B

Dorothy Page, 10:30 p.m. Sat., R
Frank Parker, 9 and 11:30 p.m. Sun., B
Jan Peerce, 6:30 p.m. Sun., C
Carmella Ponselle, 8 p.m. Frl., C
Virginia Rea, 6:30 p.m. Sun., C
Lanny Ross, 9 p.m. Thurs., R
Shirley Ross, 8:30 p.m. Thurs., R
Shirley Ross, 8:30 p.m. Thurs., R
Sdrivey Ross Read and 11:30 p.m. Mon., R
Gladys Swarthout, 10 p.m. Sun., R
Conrad Thibault, 9:30 p.m. Tues., R
Kay Thompson, 8:30 and 11:30 p.m. Frl., C
Trudy Woods, 9:30 p.m. Tues., R
TALKS
Boake Carter, 7:45 and 11:15 Mon., Wed., Frl., C
Jimmy Fidler, 10:30 p.m. Tues., R
Floyd Glbbons, 10 p.m. Tues., R
Floyd Glbbons, 10 p.m. Tues., B
Bob Ripley, 7:30 p.m. Sun., B
Sidewalk Interviews, 9 p.m. Tues., R
Lowell Thomas, 6:45 p.m. Mon. thru Frl., B

Walter Winchell, 9:30 and 11:15 p.m. Sun., B

#### SHORTWAVE BROADCASTING STATIONS OF THE WORLD

Frequencies are given in megacycles. Power is given in parentheses in kilowatts. Schedules are shown in Eastern Standard Time by the 24-hour clock. All schedules daily unless otherwise noted.

#### Time Conversion Table on Page 62

	to 2.000	Amateur Stations.	6.005		Montreal, P. Q. (.075). 0700-2400.
2.500	XEXP	Monterrey, N. L. (.03).			Colon, Panama. 1800-2300.
	to 4.000	Amateur Stations.			Montreal, P. Q. (6.).
3.040	YDA	Tandjong Priok, Java, N.E.I. (10.).	6.010	COCO	Havana, Cuba. (.3). Sun. 2000-2200.
4.273	RV15	Khabarovsk, USSR (Siberia). (20.). 0100-1000.	,		Weekdays 1030-1300; 1600-2000. Prague, Czechoslovakia. (35.).
4.600	HC2ET	2100-2230.			Mon., Wed., Frl., 1600-1630.
4.795	VE9BK		6.012		Bogota, Colombia. (1.2). 1800-2300.
4.810	YDE2	Solo, Java, N.E.I. (.1).	6.015	HI3U S	Santiago de los Caballeros, D. R.
5.415	PMY	Bandoeng, Java, N.E.I. (.45). 0530- 1000.		(	(.025). Mon. 2000-2100. Dally 0730- 0930; 1200-1430; 1700-1930.
5.500	ТІ5НН	San Ramon, Costa Rica. (.2). 2000- 2330.	6.020		Berlin, Germany. (8.). 1135-1630. Veracruz, Ver. (.02). 1800-2400.
5.710	TGS	Guatemala City, Guat. (.2). Wed., Thurs., Sat., 1800-2100.	6.025		Santa Marta, Colombia. (.05).
	YV2RA	San Cristobal, Venez. 1800-2330.	6.030	HJ4ABP P	Medellin, Colombia. (2.5), 1800-
5.720	RV15	Khabarovsk, USSR (Siberia). (20.).			2300.
		0100-1000.		HP5B I	Panama City, Panama. (.1). 1700-
5.725	HC1PM			2	2200.
5.758	YNOP	Managua, Nicaragua. 2000-2130.			Prague, Czecho. (35.).
5.780	OAX4D				St. John, N. B. (.05).
		Sat., 2100-2330.			Mazatlan, Sin. (.05).
5.800	YV5RC		6.035		Montevideo, Uruguay. (.5).
		2330. Weekdays 0700-2130.	6.040		Pernambuco, Brazil. (3.). 1500-
5.820	TIGPH	San Jose, Costa Rica. 1100-1300; 1800-2200.			2000. Boston, Mass. (10.). Mon., 1800-
5.850	YV1RB	Maracaibo, Venez. Sun., 1145-1245.			2000.
		Weekdays 0845-0945; 1115-1215;		W4XB	Miami, Fla. (5.).
		1645-2145.			Tandjong Priok, Java, N.E.I. (10.).
5 <b>.</b> 85 <b>5</b>	HIIJ	San Pedro de Macoris, D. R. (.04). 1200-1400; 1830-2100.	6.042	. 1	Barranquilla, Colombia. (.15).
5.875	HRN	Tegucigalpa, Honduras. (.4). Sun.,	6.050		Daventry, Gt. Britain. (20.).
		2030-2130. Weekdays 2030-2200.	6.060		Bogota, Colombia. (.05). 1930-2400.
5.880	YV3RB	Barquisimeto, Venez. 1800-2200.			Nairobi, Kenya. 1100-2430.
5.885	HI9B	Santiago, D. R. 1800-2300.			Philadelphia, Pa. (10.). 1900-2200.
5.905	TILS	San Jose, Costa Rica. 1800-2300.			Cincinnati, Ohio. (10.). 0500-1900;
5.910	HH2S YV4RH	Port-au-Prince, Haiti. 1900-2200.			300-0100.
5.925	PJC1	Valencia, Venez. 1700-0100.	6.062		Motala, Sweden. (.5). 1330-1700.
5.525	FJCI	Willemstad, Curacao, N.W.I. (.15). 1835-2035.	6.070		oronto, Ont. (1.). 1000-2300.
5.930	YV1RL	Maracaibo, Venez. (.3), 1700-2230.	6.070		logota, Colombia. (.05). 1900-2230.
5.940	TG2X	Guatemala City, Guat, (.2). Sun.,	6.075		Maracaibo, Venez. 1900-2400. Seorgetown, Brt. Guiana. 1700-
3.340	1027	1300-1400; Mon., Thurs., Sat., 1600- 1800; 2200-2400.	0.075	2:	100.
5.970	HIVARD	Medellin, Colombia, 2000-2230,	6.080		Guadalajara, Jal. (.045).
5.980		Bucaramanga, Colombia. (.67).	0.000		serlin, Germany. (8.). Solon, Panama.
3.500		1900-2300.			Ima, Peru. (.15). 1930-2230.
6.000	OAX5C	Ica, Peru. (.1).			ancouver, B. C. (.01). 1400-2400.
	XEBT	Mexico City, D. F. (1.), 1800-2400.			chicago, III. (20.). 1800-2400.
		,, (21/1 2000-24001			

6.085	HJ5ABD	Call, Colombia. 1900-2280.			Maracalbo, Venez,
6.090	CRCX	Toronto, Ont. (1.), 1100-1900.	6.508	Radlo G	uardia Civil, Tetuan, Sp. Morocco.
		Ibaque, Colombia. 2000-2200.			1900-2000.
	XECU	Guadalajara, Jal.	6.520	YV4RB	Valencia, Venezuela. 1700-2200.
	ZBW	Hong Kong. (2.5). Sat. 2100-2400.	6.534	EDR4	Palma, Majorca, Balearic Isl.
		Sun. 0000-0100; 0300-0930. Other	6.540	YN1GG	
C 007	HILLARE	days 0400-1000; 2330-0100.	6.545	YV6RB	Bollvar, Venez. 2100-2300.
6.097	HJ4ABE	Medellin, Colombia. (1.). 1800-2230.	6.555	HI4D	Trujillo, D. R. (.025). 1700-2000.
S.100	W9XF	Bound Brook, N. J. (35.). 1900-2200.	6.620	Prado	Riobamba, Ecuador. Thur. 2100-
*		Chicago, III. (10.). 2200-0100.	6.630	HIT	2300.
	• • • • • •	Belgrade, Jugoslavia. (1.). 1200- 1700.	0.030	nii	Trujillo, D. R. (.2). Weekdays, 1800-2100.
6.108	HIARR	Manizales, Colombia. 1800-2400.	6.690	TIEP	
6.110	GSL	London, Gt. Britain. (20.).	6.700	TIVL	San Jose, Costa Rica. 1600-2300.
6.115		Barranquilla, Colombia. (.3).	6.730	H13C	San Jose, Costa Rica,
0.113	OLR2C	Prague Czecho (35)	6.750	JVT	La Romana, D. R. 1745-2000. Nazaki, Japan. (50.).
6.118	XEUZ	Prague, Czecho. (35.). Mexico City, D. F. (5.). 2300-0300.	6.775	нін	San Pedro de Bassario D. D. 1981
6.120	W2XE	New York, N. Y. (10.).	0		San Pedro de Macoris, D. R. (.15). 1900-2000.
******	XEFT	Veracruz, Ver. (.012).	6.800	HI7P	Trujillo, D. R. 1930-2100.
	XEPW	Mexico City, D. F. 2100-2400.	6.820	XGOX	Nanking, China. (.5). 0530-0900.
	YDA5	Bandoeng, Java, N.E.I. (1.5).	6.850	TIOW	Puerto Limon, Costa Rica. (.4).
6.122	<b>HJ3ABX</b>	Bogota, Colombia. 1736-2230.			5un., 1600-1700. Daily 1200-1300.
	OAX4P	Huancayo, Peru. (.25).	6.990	VK8XI	Port Moresby, Papus.
		Aregulpa, Peru. (.1).		to 7.300	Amateur stations.
6.125	CXA4	Montevideo, Uruguay. (1.). 1600-	7.034	EA9AH	Tetuan Sn. Morocco 1500 4700
		2145.	7.100	FO8AA	Papeete, Tahiti. (.2). Tues., Frl.,
6.128	OAX7A	Cuzco, Peru. (.1).			2300-2400.
6.130	COCD	Havana, Cuba. (.35). 1700-0100.	7.200	YNAM	Managua, Nicaragua. 2000-2400.
	VE9HX	Halifax, N. S. (.5). 1700-2300.	7.380	XECR	Mexico City, D. F. (20.). Sun.
6.137	CR7AA	Lourenco Marques, Port. East			1800-2000.
		Africa. Sun. 0600-0900. Weekdays			Radio Liberte. 1900-2000.
		0500-0700.	7.797	HBP	Geneva, Switz. (20.). Sat., 1730-
6.138		Medellin, Colombia.			1830.
6.140	W8XK	Pittsburgh, Pa. (40.). 2000-2400.	8.400	HC2CW	Guayaquil, Ecuador.
6.145	HJ4ABU	Pereira, Colombia. 1860-2200.	8.650	YN1PR	Managua, Nicaragua.
6.150	CB615	Santiago, Chile.	8.664	COJK	Camaguey, Cuba. (2.4), 1800-0100
	CJRO	Winnipeg, Man. (2.). 1800-2400.	8.950	HCJB	Quito, Ecuador. (.15), Mon., Wed.
	HI5N	Cludad Moca, D. R. (.1). 1900-2000.			Sat., 0200-0400: 1300-1500
	OAX1A	Chiciayo, Peru. (.2). 2000-2300.	9.125	HAT4	Budapest, Hungary, (20.) Sun
	VPB	Colombo, Ceylon. (.3). 0700-1030.			Wed., 1900-2000, Sat. 1800-1900
6.158	YV5RD	Caracas, Venez. 1030-1330; 1530-	9.330	OAX4J	Lima, reru. (.2). 1200-1500: 1700-
	×=×-	2200.			0100.
6.174	XEXA	Mexico City, D. F. 1700-2100.	9.345	HBL	Geneva, Switz. (20.).
6.190	HI1A	Santiago de los Caballeros, D. R.	9.350	HS8PJ	Bangkok, Siam. Mon., 0730-1600.
6.200	COKG	(.05). Weekdays 2000-2200.	9.363	COBC	navana, cuba.
6.200	CONG	Santiago, Cuba. (.05). Daily exc. Sat. 0900-2300.	9.415	PLV	Bandoeng, Java, N.E.I. (80.). 1000-
	HISQ				1100.
6.210	YV1RI	Trujillo, D. R. 1700-1900.	9.428	COCH	Havana, Cuba. (.15). 0700-0100.
6.215	TG2	Coro, Venez. (.15). 1700-2200. Guatemala City, Guat;	9.445	HC2RA	Guayaquii, Ecuador, Sun 1600
6.230	OAX4G	Llma, Peru. (.4). 1900-2130.	9.450	1100000	2200. Daily 2100-2200.
0.230	YV1RG	Valera, Venez. 1730-1930.	9.450	TOWA	Guayaquil, Ecuador. 2100-2200.
6.235	HC2RL	Guayaquil, Ecuador.		I GWA	Guatemala City, Guat. (.2). Sun.
0,235	HRD				Daily 2000-2400.
	IIILD	La Ceiba, Honduras. (.25). 2000- 2300.			Fort de France, Martinique. 1100-
6.243	HIN	Trujillo, D. R. (.75).	9.460	XGOX	1200; 1700-1800.
6,250	YV5RI	Caracas, Venez,	9.470	PJC1	Nanking, China. (.5).
6.270	YV5RP	Caracas, Venez. Caracas, Venez. (1.2).	3.410	. 301	Willemstad, Curacao, N.W.I. (.15). Sun. 1035-1235.
6.280	СОНВ		9.480	EAR	Madrid, Spain. (20.). Mon. at 2000;
		2300.	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Tues., Fri. at 2100.
	HIG	Trujillo, D. R. (.05).		XEDQ	Guadalajara, Jal. 1900-0100.
6.300	YV4RD	Maracay, Venez. 1700-2300.	9,500	EAC	Madrid, Spain.
6.315	HIZ	Trujillo, D. R. (.1).			
6.340	HI1X	Trujillo, D. R. (.5). Tues., Fri.,			2000-2230-
		2000-2200.		VK3ME	Melbourne, Australia. (5.). Daily
6.350	HRP1	San Pedro Sula, Honduras.			exc. Sun. 0400-0700
6.360	YV1RH	Maracaibo, Venez. 1900-2400.		XEWW	Mexico City, D. F. (10.), 0800-2400
6.380	YV5RF	Caracas, Venezuela.	9.501	PRF5	Rio de Janeiro, Brazil. (60.). 1645-
6.400	YV5RH				1745.
6.410	TIPG	San Jose, Costa Rica. (1.). 1800-	9.504		Prague, Czecho. (35.).
		2230.	9.505	TILS	San Jose, Costa Rica.
6.416	YV6RC	Bolivar, Venez.		XEFT	Veracruz, Ver. (.02), 1930-2400
6.420	HIIS	Santiago, D. R. (.02). 1800-2300.	9.510	GSB	Daventry, Gt. Britain. (20.). 1215
6.425	UAX4K	Lima, Peru. (.2).			1000; 1820-2030; 2330-0145.
E 450	W3XL	Bound Brook, N. J. (100.). Irrreg.		HJU	Buenaventura, Colombia, Mon.,
6.450	HI4V	San Francisco de Macoris, D. R.	0 500		Wed. Fri 2000_2200
6.479	HISA	(.025). Trujillo, D. R.	9.520	HJ4ABH	Armenia, Colombia. (1.). 0800-1100;
6.500	HIL	Trujillo, D. R. (.05).			1000-2200.
0.550		,, D. R. (105/1		XEME	Merida, Yuc. (.015).

0.505	ZBW3	Radio Liberte. 1900-2000.			Africa. (.2). Sun. 0530-0700. Other
9.525	ZBW3	Hong Kong. (2.5). Sat. 2100-2400. Sun. 0000-0100; 0300-0930. Other	,11.720	CJRX	days 0430-0630. Winnipeg, Man. (2.). 1800-2400.
		days 0400-1000; 2330-0100.	•=	TPA4	Pontoise, France. 0615-1300.
9.530	LKJ1	Jeloy, Norway. (1.). 0500-0800.	11.730	PHI	Hilversum, Netherlands. (23.6).
	W2XAF	Schenectady, N. Y. (40.), 1600-2400.		XETM	Villahermosa, Tab.
9.535	JZI	Nazaki, Japan. (50.).	11.740		David, Panama. (.35).
9.540	NLD	Berlin, Germany. (8.). 0005-0515; 0555-1100; 1650-2245.	11.750	GSD	Daventry, Gt. Britain. (20.). 2330- 0145; 1215-1600; 1820-2030; 2100-
	VPD2	Suva, Fiji. 0530-0700.			2300.
9.550	OLR3A	Prague, Czecho. (35.).	11.760	OLR4B	Prague, Cxecho. (35.).
9.560	DJA	Berlin, Germany. (8.). 0005-0515;	11.770	DID	Berlin, Germany. (8.). 1135-1630;
	HJIARR	1650-2245. Barranquilla, Colombia. (.3).	11.780	OER2	1650-2245. Vienna, Austria. (1.5). Daily exc.
9,562	OAX4T	Lima, Poru. (10.).			Sun. 0900-1800.
9.565	VUB	Bombay, India. (4.5).	11.790	W1XAL	
9.570	YV3RB W1XK	Barquisimeto, Venex. Boston, Mass. (10.). 0630-2400.	11.795	DIO	Other days 1600-1730. , Berlin, Germany. (8.).
	W8XK	Pittsburgh, Pa. (40.). (Not used),	11.800		Matanzas, Cuba. 0700-2400.
9.575		Cucuta, Colombia. (.25).		JZJ	Nazaki, Japan. (50.). 1500-1600;
9.580	GSC	Daventry, Gt. Britain. (20.). 2100- 2300.		OAX5A	1630-1730; 0800-0900. Ica, Peru. (.1). 1600-2230.
	VK3LR	McIbourne, Australia. (.5). 0100-	11.810	12RO	Rome, Italy. (25.). Sun. 0645-1800.
		0945.			Mon., Wed., Fri. 0645-1930. Tues
9,585	VK2ME	Sydney, Australia. (20.). Sun. 0000- 0200; 0500-0900; 1130-1330.	11.820	GSN	Thurs., Sat. 0645-1945. Daventry, Gt. Britain.
9.590	PCJ	Huizen, Netherlands. (20.). Sun.	11.020	XEBR	Hermosillo, Son. (.15). 2100-2400.
		1400-1500. Mon. 1900-2000.	11.830	W2XE	New York, N. Y. (10.). 1800-2300.
	WYCME	Tues. 1330-1500. Thurs. 1900-2200.	11.840	W9XAA CSW	Chicago, III. (20.). Lisbon, Portugal. (5.).
	AKOME	Perth, Australia. (.5). Weekdays 0600-0800.	11.840	OLR4A	Prague. Czecno. (35.). Mon.
	W3XAU	Philadelphia, Pa. (10.). 1100-1900.			Prague, Cxecno. (35.). Mon., Thurs., 1900-2100. Dally 1430-1630.
	W8XAL	Cincinnati, Ohio. (10.). (Under	11.855	DJP	Berlin, Germany. (8.).
9.595	HBL	construction). Geneva, Switzerland. (18.). Sat.	11.860	GSE YDB	Daventry, Gt. Britain. (20.). Soerabaja I, Java, N.E.I. (1.).
		1730-1830.	11.870	W8XK	Pittsburgh, Pa. (40.). 1700-2000.
	RAN	Moscow, USSR. 1900-2115.	11.875	OLR4C	Prague, Czecho. (35.)
9.600	CB960 XEYU	Santlago, Chile. 1800-1930. Mexico City, D. F. 1900-2200.	11.880 11.885	XEXA TPA3	Mexico City, D. F. (.1). Pontoise, France. 0200-0500; 1215-
9.605	HP5J	Panama City, Panama. (1.). 1830-			1800.
		2300.	11.895	HP5I	Aguadulce, Panama. 1930-2130.
9.610 9.618	YDB	Soerabaja I, Java, N.E.I. (1.). Cartagena, Colombia. (.75). 1700-	11.900	OLR4D XEWI	Prague, Czecho. (35.). Mexico City, D. F. (.25). 1930-2400.
3.010	HILABE	2300.	11.955	iuc	Addis Ababa, Ethiopia.
9.635	12RO	Rome, Italy. (25.).	11.970	HI2X	Trujillo, D. R. (.5). Tues., Fri.,
9.645	HH3W	Port-au-Prince, Haiti. (.03). 1300- 1400; 1900-2000.	12.000	RNE	2000-2200. Moscow, USSR. (20.). Sun. 1000-
9.650	CT1AA	Lisbon, Portugal. (2.). Tues.,	******	*****	1100. Sun., Wed., 0600-0700. Sun.,
		Thurs., Sat., 1600-1900.			Mon., Wed., Fri., 1600-1700.
9.660	CREAA	Lobito, Angola, Port. West Africa.	12.120 12.235	TFJ	Algiers, Algeria. Reykjavik, Iceland. (7.5). Sun.,
	LRX	(.5). Wed., Sat., 1445-1645. Buenos Aires, Argentina. (5.).	12.233		1345-1430.
		1030-2430.	12.290	GBU	Rugby, Gt. Britain.
9.670	TIANRH	Heredia, Costa Rica. 2100-2200; 2330-2400.	12.295 13.635	CB615 SPW	Santiago, Chile. Warsaw, Poland. (10.). Mon.,
9.750	COCQ	Havana, Cuba. 0700-0100.			Wed., Fri., 1230-1330.
9.860	EAQ	Madrid, Spain. (20.).		to 14.400	Amateur Stations.
9.940 10.065	CSW	Lisbon, Portugal. (5.). 1900-2000. Macau, Portuguese China.	14.358 15.040	RKI	Geneva, Switz. Sat. 1845-2100. Moscow, USSR. 1900-2115.
10.000		Communistic Station.	15.116	OLR5C	Prague, Czecho. (35.).
10.260	PMN	Bandoeng, Java, N.E.I. (1.5). 0530-	15.120	HVJ	Vatican City. (10.). 1000-1030.
10 220	ORK	1100.	15.140	GSF	Daventry, Gt. Britain. (15.). 1215- 1600; 2100-2300.
10.330 10.370	EAJ43	Brussels, Belgium. (11.). 1330-1500. Santa Cruz de Tenerife, Canary Isl.	15.150	YDC	Bandoeng, Java, N.E.I. (3.).
		Sat. 1700-1800.	15.160	JZK	Nazaki, Japan. (50.). 0030-0130;
10.430	••••	Pirate station announcing "Radio Milan."	15.175	RV96	0800-0900; 1500-1600; 1630-1730. Moscow, USSR.
10.660	JVN	Nazaki, Japan. (50.).	15.180	GSO	Daventry, Gt. Britain. 2330-0145;
10.670	CEC	Santiago, Chile. (4.).			0545-0855; 0915-1200; 1215-1600;
10.740	JVM	Nazaki, Japan. (50.).	15 190	ZB4W	1820-2030.
10.955 11.000	HS8PJ PLP	Bangkok, Siam. (5.). Bandoeng, Java, N.E.I. (1.5).	15.190	ZD4W	Hong Kong. (2.5). Sat. 2100-2400. Sun. 0000-0100; 0300-0930. Other
11.040	CSW	Lisbon, Portugal. (5.). 1500-1900.			days 0400-1000; 2330-0100.
11.402	нво .	Geneva, Switz.	15.200	DJB	Berlin, Germany. (8.). Sun. 1110-
11.450	cocx	Havana, Cuba. Sun. 1800-2100. Other days 0800-2400.			1225. Daily 0005-0515; 0555-1100; 1650-2245.
11.698	SBG	Motala, Sweden. (.5). 0100-0130.	15.210	W8XK	Pittsburgh, Pa. (40.). 0700-1700.
11.710		Guadalajara, Jal.	15.220	PCJ	Huizen, Netherlands. (20.). Tues.
11.718	CR7BH	Lourenco Marques, Port. East			0430-0600.

#### SHORTWAVE BROADCASTING STATIONS OF THE WORLD

15.230 15.243	OLR5A TPA2	Prague, Czecho. (35.). 0930-1130. Pontoise, France. 0600-1100.	17 775	PHI	Hilversum, Netherlands. (23.6). Sun., 0725-1035. Mon., Tues.,
15.250	W1XAL	Boston, Mass. (10.). 1500-1600.			Thurs., Fri., 0825-1000, Wed., 0800-
15.260	GSI	Daventry, Gt. Britain, 1215-1600:		,	1100. Sat. 0825-1040.
201200	451	2100-2300.	17.780	W3XAL	
15.270	HI3X	Trujilio, D. R. (.5), Sun., 0800-1100.	21.100	W8XK	Pittsburgh, Pa. (40.).
13.1.0	W2XE	New York, N. Y. (10.). Sun. 1200-		W9XAA	
	****	1500. Daily 1400-1700.		W9XF	Chicago, III. (10.).
15.280	DIQ	Berlin, Germany. (8.). Sun. 1110-	17.790	GSG	
15.200	DJQ	1225. Daily 0005-0515; 0600-0800;	11.750	asa	Daventry, Gt. Britain. (15.). 2330-
100		0815-1100: 1650-2245.			0145; 0545-0855; 0915-1200; 1215- 1800.
12.290	1 011		10.020	Heent	
	LRU	Buenos Aires, Arg. (5.). 0800-1000.	19.020	HS8PJ	Bangkok, Slam.
15.300	XEBM	Mazatlan, Sin. 1000-2300.	21.450	OLR6A	Prague, Czecho. (35.),
15.310	GSP	Daventry, Gt. Britain. 1820-2030.	21.460	WIXAL	
15.320	OLR5B	Prague, Czecho. (35.).	21.470	GSH	Daventry, Gt. Britain. 0545-0855;
15.330	W2XAD				0915-1200.
15.340	DJR .	Berlin, Germany. (8.). 0800-0900;	21.480	W2XAD	
		1650-2245.	21.520	W2XE	New York, N. Y. (10.). Sun., 0700-
15.370	HAS3	Budapest, Hungary. (20.). Sun.			0900. Weekdays 0630-0900.
		0900-1000.	21.530	GSJ	Daventry, Gt. Britain. 0545-0855:
15.440	XEBM	Mazatlan, Sin. (.05). 1000-2300.			0915-1200.
17.310	W3XL	Bound Brook, N. J. (20.).	21,540	W8XK	Pittsburgh, Pa. (40.). 0445-0700.
17.760	DJE	Berlin, Germany. (8.). Sun. 1110-	21.550	GST	Daventry, Gt. Britain.
		1225. Daily 0005-0515; 0555-1100.	26.100	GSK	Daventry, Gt. Britain.
	W2XE	New York, N. Y. (10.).		to 30,000	Amateur Stations.

#### POLICE STATIONS OF NORTH AMERICA

The power in kilowatts is given in parentheses.

	1.610		1.666	•••••	Hartford, Md.
WQPC	Chicago, Ill. (1.)	WMP	Framingham.		(.25)
WOPD	DuQuoin, Iil. (1.)		Mass. (1.)	• • • • • • •	W. Palm Beach,
WQPF	Effingham, Ill.	WPEL	W. Bridgewater.		Fla. (.25)
11.657.1	(1.)		Mass. (1.)		Portable in Md.
WQPG	Sterling, Ill. (1.)	WPEV	Portable in Mass.		(.25)
WQPM	Macomb, Ill. (1.)		(.05)		1.706
WQPP	Pontiac, Ill. (1.)	WPEW	Northampton,	KGPC	
WQPS	Springfield, Ill.	~	Mass. (1.)	KOHZ	St. Louis, Mo. Portable in Ore.
11 421 15	(1.)		Nantucket, Mass.	LUHZ	(.01)
WQPX	Portable in III. (.5)		(.02)	WKDU	
11 422 32			Oak Bluffs, Mass.	WPET	Cincinnati, Ohio
	1.626	* "	(,02)	WELL	Lexington, Ky.
• • • • • •	Charlestown, W.		1.674		1.710
	Va. (1.)	KGHK	Palo Alto, Calif.	CZ6F	Hamilton, Ont.,
	1.630	1101111	(.02)		Canada
WEY	Boston, Mass.	KGZT	Santa Cruz, Calif.		1.712
	(Fire)	2002	(.1)	COL2	Havana, Cuba
WKDT	Detroit, Mich.	KIUK	Jefferson, Mo.	KACU	Longview, Texas
	(Fire)	111011	(2.5 kw day, 1 kw		(.25)
WNYF	New York, N. Y.		nite)	KADM	Gainesville, Texas
	(.5) (Fire)	WPSP	Harrisburg, Pa.		(.05)
	1.634		(1.)	KADT	Marshall, Texas
WPHE	Marion County,		1.682		(.05)
	Ind. (1.)	KACC		KGHY	Whittier, Calif.
WPHS	Culver, Ind. (1.)	RACC	Fairfield, Iowa		(.05)
WPHU	Jasper, Ind. (1.)	KACD	(,5)	KGJX	Pasadena, Calif.
WQFE	Seymour, Ind. (1.)	KAPI	Atlantic, Iowa (.5) Grass Valley, Cal.		(.04)
WQFW	Columbia City,	KGHO	Des Moines, Iowa	$\mathbf{KGPJ}$	Beaumont, Texas
	Ind. (1.)	KNFN	Waterloo, Iowa		(.1)
	Reno, Nev. (1.)	KHFH	(.4)	KGPL	Los Angeles, Cal.
	1.642	KNFO	Storm Lake, Iowa	$\mathbf{KGPQ}$	Honolulu, T. H.
WRDH		LINEO	(.4)		(.5)
	Mich. (5 kw day,			$\mathbf{KGPR}$	Fort Worth,
	1 kw nite)	;	1.692		Texas
WRDP	Paw Paw, Mich.	WQFT	Portable in Ohlo	KGZB	Houston, Texas
	(1.)		(.1)	KGZL	Shreveport, La.
WRDS	E. Lansing, Mich.	Traine	1.698	KGZQ	Waco, Texas
	(5 kw day, 1 kw	KNGG	Phoenix, Ariz. (.1)	KGZY	San Bernardino,
	nite)	WAKJ	Duval County,	******	Calif. (.05)
	1.658	WDSP	Fla. (,35)	KNFJ	Pomona, Calif.
KNHD	Redwood Falls.		Del.	TENION	(.05)
KMAD	Minn. (.4)	WMSC	Cumberland, Md.	KNGE	Cleburne, Texas
KSW	Berkeley, Calif.	WMSE	(.25) Easton, Md. (.25)	TONOT	(.05)
WPGC		WMSE	Frederick, Md.	KNGL	Galveston, Texas
111 00	N. Y. (5 kw day,	14 IVIOR	(,25)	KNGX	(.05)
	1 kw nite)	WMSW		ANGA	Los Angeles,
	- n	11 1110 11	maidot1, Md. (.20)		Calif. (portable)

## POLICE STATIONS OF NORTH AMERICA

KNHF	Denton, Texas	KACO	Tracy, Callf.		N. Y. (.135)
KSBC		KACS	(.015) Bakersfield, Calif.	WPDR WPDW	Washington, D.C.
	Calif. (.5)		(.5)	WPFU	Portland, Me.
KVP	Dallas, Texas (.5)	KACV	Walla Walla,	$w_{BB}$	Nashua, N. H.
$\mathbf{v}\mathbf{r}$	Montreal, P. Q.		Wash. (.05)		(.05)
	(.4)	KADL	Port Orchard,	• • • • • •	Willows, Calif.
WAKF	Everett, Mass.		Wash. (.05)		(.05)
	(.05)	KAPH	Stockton, Calif.		2.430
VAKV	Fall River, Mass.		(.5)	KGPB	Minneapolis,
	(.05)	KAPL			Minn. (.5)
NMPH	Newport, R. I.		(.05)	$\mathbf{KGZJ}$	Phoenix, Ariz.
	(.05)	KGHS	Spokane, Wash.	KNGP	Shreveport, La.
VPDB	Chicago, Ill.		(.1)		(.1)
VPDC	Chicago, Ill. Chicago, Ill.	KGHW		KNHG	Prescott, Arlz.
WPDD	Chicago, Ill.		(.05)		(.01)
VPDU	Pittsburgh, Pa. Arlington, Mass.	KGPA	Seattle, Wash.	WAKH	Bloomfield, N. J.
VPED	Arlington, Mass.	KGPF	Santa Fe, N. Mex.	W 4 3 6 77	(.05)
VPEH	Somerville, Mass.	TODO	(.025)	WAME	Baton Rouge, La.
VPEI	E. Providence, R. I.	KGPS	Bakersfield, Calif.	WBRP	(.05)
···	R. I.	77.07.1	(.05)	WBRP	Baton Rouge, La.
VPFA	Newton, Mass.	KGZA	Fresno, Calif. (.5)	WCPD	(.25) Charleston, S. C.
VPFN	Fairhaven, Mass.	KGZM KGZN	El Paso, Texas Tacoma, Wash.	WOLD	(.05)
VPGF VPGU	Providence, R. I.	KGZN	Santa Barbara,	WPDI	Columbus, Ohio
VPGV	Cohasset, Mass.	AGEO		WPDM	Dayton Ohio
VPHG	Boston, Mass. (.5) Medford, Mass.	KGZV	Callf. Aberdeen. Wash.	WPDS	Dayton, Ohio St. Paul, Minn.
VFHG	(.05)	EG24	(.125)	WPEK	New Orleans, La.
VPIA	Warren, R. I. (.04)	KGZX	Albuquerque, N.	111 1312	(.25)
VQFL	Oak Park, Ill. (.05)	AGAA	Mex.	WPFD	Highland Park.
VQFX	Waukegan, Ill.	KNFA	Clovis, N. Mex.		Ill.
QI IL	(.1)	2211212	(.05)	WPFK	Hackensack, N. J.
	Brockton, Mass.	KNFI	Mt. Vernon,	.,,	(.5)
	(.05)		Wash. (.05)	WPGI	Portsmouth,
	2.318	KNFP	Everett, Wash.		Ohio (.1)
CYQ	Toronto, Ont. (.4)		(.05)	WPHO	Zanesville, Ohlo
	2.366	KNGU	Yakima, Wash.		(.05)
Z50	Ottawa, Ont.		(.1)	WQFO	Lancaster, Ohio
VAKC	Freehold, N. J.	KNGY	Lodi, Calif. (.04) Herkimer, N. Y.	WIG LO	(.05)
	(.1)	WAKN	Herkimer, N. Y.	WSAG	Ashland, Ky. (.2)
•	2,382	WCK	(.05)	•••••	Rock Hill, S. C. (.05)
CHT	Brownsville, Tex.	WMO	Detroit, Mich. Highland Park,		2.442
_	(.025)	11 1110	Mich.	KASD	San Angelo, Tex.
KGHV	Corpus Christi,	WPDA	Tulare, Calif. (.15)		(.05)
	Tex. (.05)	WPDJ	Passaic, N. J.	KGHU	Austin, Texas (.1)
INFE	Duluth, Minn.	WPDX	Detroit, Mich.	KGPP	Portland, Ore.
NHB	Green Bay, Wis.	WPDY	Atlanta, Ga. (.4)	KGPX	Denver, Colo.
	(.1)	WPFH	Baltimore, Md.	KGZH	Klamath Falls,
VAKE	Oshkosh, Wis. (.1)	WPFI	Columbus, Ga.		Ore.
WMPE	Elkhorn, Wis. (.1)		(.05)	KGZR	Salem, Ore. (.05)
VPDN	Auburn, N. Y.	WPGH	Albany, N. Y.	KNHM	
VPEA	Syracuse, N. Y.		(.3)		(.1)
VPFM	Birmingham, Ala.	WPGJ	Utica, N. Y. (.1)	WAKO	Ft. Lauderdale, Fla. (.05)
VPGW	(.4) Mobile, Ala. (.4)	WPGM	La Grange, Ga.	W	F18. (.05)
11 0 11		THOED	(.05)	WAMB	Connersville, Ind. (.04)
	2.390	WQFB WQFJ	Macon, Ga. (.05) Oneonta, N. Y.	WAMG	Kalamazoo, Mich.
GZ	Vancouver, B. C.	WGLJ	(.05)	WANG	(.1)
JW	(.4) St. John, N. B.	WQFV	Augusta, Ga. (.25)	WMDZ	Indianapolis, Ind.
JJ 11	(.015)	WEDE	Grosse Pointe,	WPDE	Louisville, Ky.
$\mathbf{J}\mathbf{Z}$	Verdun, P. Q.	***************************************	Mich.	WPDF	Flint, Mich.
) <b>5</b> <u>1</u>	(.02)		Modesto, Calif.	WPDH	Richmond, Ind.
	2.396		(.25)	WPDL	Richmond, Ind. Lansing, Mich.
YW	Winnipeg, Man.	•••••	Wayeross, Ga.	WPEB	Grand Rapids.
	(.6)		(.05)		Mich. (.5)
	2.406		2.422	WPES	Saginaw, Mich.
GHZ	Little Rock, Ark.	KACA	Atchison, Kans.	WPFC	Muskegon, Mich.
GPW	Salt Lake City,	***	(.05)	WPFE	Reading, Pa.
	Utah	KACI	Eureka, Calif. (.1)	WPFG WPFT	Jacksonville, Fla. Lakeland, Fla.
KNHE	Fort Smith, Ark.	KADS	Marysville, Calif.	WFFI	(.05)
	(.1)	KGPE	(.05)	WPFX	Palm Beach, Fla.
7 A OTT	2.414	KGPG	Kansas City, Mo.	11112	(.05)
CACE	Olympia, Wash.	KGZC	Vallejo, Calif. Topeka, Kans.	WPFY	Yonkers, N. Y.
KACJ	(.05) Wenatchee,	KNGF	Sacramento,		(.4)
IACO	Wash. (.25)	22.101	Calif. (.5)	WPFZ	Miami, Fla. (.5)
KAĆK	Bellingham,	KNGV	Salina, Kans. (.05)	WPGL	Binghamton,
	Wash, (.05)	WMJ	Buffalo, N. Y. (.5)		N. Y. (.4)
KACN	Ventura, Calif.	WNFP	Niagara Falls,	WPGP	Muncle, Ind. (.1)

## POLICE STATIONS OF NORTH AMERICA

WPHM WQFM	Orlando, Fla. (.05) Wilkes-Barre, Pa.	WASB WPDG	Decatur, Ill. (.1) Youngstown, O.	WQFF	Monessen, Pa. (.05)
WQFQ	(.1) Lafayette, Ind.	WPDO	(.25) Akron, Ohlo (.25)	WQFU	Sharon, Pa. (.05) 2.490
	(.05) Anderson, Ind.	WPDV	Charlotte, N. C.	KACQ	Kninloch, Wash.
	(.1) Elwood, Ind.	WPFS	Asheville, N. C.	KADI	Occanside, Calif.
	(.05) Miami, Fla. (.04)	WPGD WPHD	Rockford, Ill. Steubenville, O.	KADQ KGHD	Brea, Calif. (.05) Scattle, Wash.
	York, Pa. (.04) 2.450	WQFZ	(.1) Ottawa, Ill. (.5)	KGHE	(.05) Snoqualmie Pass,
KACF	Chiekasha, Okla.	WRBH	Cleveland, Ohio	KGHQ	Wash. Chinook Pass.
KACL KACP	Altus, Okla. (.05) Ponca City, Okla.		Clinton, Ill. (.04) Urbana, Ill. (.04) 2.466	KGHX	Wash. Santa Ana, Calif.
KACR	(.05) Seminole, Okla.	KGOZ	Cedar Rapids, Iowa (.05)	KGZD	(.4) San Diego, Calif.
	(.05)	KGPD	San Francisco,	KGZU	(.05)
KADQ KAPB	Hilo, Hawaii (.1) Cushing, Okia.	KGPI	Calif.	KNFC	Lincoln, Nebr. Port Angeles.
THE D	(.05)	KGPK	Omaha, Nebr. (.4) Sloux City, Iowa	***************************************	Wash.
KAPC	Drumwright,	KGPM	San Jose, Calif.	KNFG	Olympia, Wash.
	Okla. (.05)	KGPN	Davenport, Iowa		(.05)
KAPD	Eldorado, Kans.	KGZG	Des Moines, Iowa	KNFK	Bellingham,
KAPE	(.05)	WAKB	New London,	KNFM	Wash. (.05) Compton, Calif.
KAPE	Norman, Okla. (.1) Okmuigee, Okla.	WAKG	Conn. (.05) Clearwater, Fla.		(.025)
KARD	(.05) Ardmore, Okla.	WPEC	(.05) Memphis, Tenn.	KNFX	Ellenburg, Wash.
111111	(.05)	WPEM		KNGA	Satus Pass Camp.
KGHN	Hutchinson.	WPFV	Pawtucket, R. I.		Wash.
	Kans. (.05)	WPFW	Bridgeport.	KNGB	Yakima, Wash.
KGHP	Lawton, Okla.	WPGA	Conn. (.05) Bay City, Mich.	KNGC	(.05) Vancouver,
KGPH	Oklahoma City,	WPGB WPGK	PortHuron, Mich.	KNGD	Wash. (.05) Walla Walla,
KGPO	Okla. Tulsa, Okla.		Cranston, R. I.	KNGD	Wash. (.01)
KGPZ	Wichita, Kans.	WPGX	Worcester, Mass.	KNGJ	El Centro, Calif.
KGZF	Chanute, Kans.	WPHA	Fitchburg, Mass. (.05)	KNGN	Norfolk, Nebr. (.025)
KGZP	Coffeyville, Kans.	WPHN	Tampa, Fla. (.1)	KNGQ	Wenatchee,
KNGK	Duncan, Okla.	WPHP	Jackson, Mich.	KNGR	Wash. (.05) Spokane, Wash.
KNGM	Rapid City, S. Dak. (.05)	WQFA	New Haven, Conn. (.1)	KNGZ	(.05) Ephrata, Wash.
KNGT	Muskogee, Okla.	WQFC	Gainsville, Fla.	WAKA	(.01) Huntington, Ind.
KNHC	Ada, Okla, (.05)	WQFK	Clearwater, Fla.		(.05)
KVPB	Ada, Okla. (.05) Huron, S. Dak. (.04)		(.05) Waterhury,	WAKK	Frankfort, Ind. (.05)
KWCM	Shawnee, Okla.	,	Conn. (.05) 2.474	WAMI	Bluffton, Ind.
WPDK	Milwaukee, Wis. Brooklyn, N. Y. Bronx, N. Y.	KNHG	Las Vegas, Nev.	WAMJ	Natchez, Miss.
$\begin{array}{c} \text{WPEE} \\ \text{WPEF} \end{array}$	Brooklyn, N. Y.	FORM	(.05)	WAMK	(.1)
WPEG	New York, N. Y.	KGHM KNFH		WAMA	Jackson, Miss.
WPEP	Kenosha, Wls. (.1)	AMPA	Kans. (.05)	WPDT	Kokomo, Ind.
WPHF	Richmond, Va.	KNGH	Dodge City,	WPDZ	Fort Wayne, Ind.
	(.15)		Kans. (.05)	WPFP	Clarksburg, W.
$\begin{array}{c} WQFG \\ WQFH \end{array}$	Roanoke, Va. (.1) Lynchburg, Va.	WAKI	Sandusky, Oblo (.05)	WPGN	Va. South Bend, Ind.
	(. <del>0</del> 5)	WPDP	Philadelphia, Pa.		(.1)
WQFI	Petersburg, Va. (.25)	WPFO WPFQ	Knoxville, Tenn. Swarthmore, Pa.	WPGO	Huntington, N. Y. (.025)
KACM		WPFS	Asheville, N. C.	WPGS WPHI	Mineola, N. Y. Charleston, W.
KADR	(.05) Abilene, Texas	WPGZ	Johnson City, Tenn. (.05)	WPHJ	Va. (.05) Fairmont, W. Va.
KGZI	(.04) Wichita Falls,	WPHY	Elizabethton, Tenn. (.1)	WPHQ	(.1) Parkersburg. W.
KGZW	Texas (.2) Lubbock, Texas	WQFY	Mansfield, Ohio (.05)		Va. (.05) Bluefield, W. Va.
KNFB	(.15) Idaho Falls,	WRDQ	2.482		(.05) Greenville, Miss.
KNGW	Idaho (.5) Brownwood,	KGZE WPGT		••••	(.05) Marlon, Ind. (.05)
WAMN	Texas (.05) Lorain, Ohlo (.05)	WPHZ	(.05) Oll City, Pa. (.05)	•••••	Portable in Wash. (.05)
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## Time Conversion Table

The time given in our indices is Eastern Standard by the 24-hour clock. Our chart this month shows Eastern Standard Time converted to the EST 24-hour clock, and GMT.

	EST 24-hr.	
EST	clock	GMT
Midn't	0000	0500
	0100	0600
2 a.m.	0200	0700
3 a.m.	0300	0800
4 a.m.	0400	0900
5 a.m.	0500	1000
S a.m.	0600	1100
6 a.m.	0500	1200
1 a.m. 2 a.m. 3 a.m. 4 a.m. 5 a.m. 6 a.m. 7 a.m. 8 a.m. 9 a.m.	0700	1200
8 a.m.	0800	1300
9 a.m.	0900	1400
10 a.m.	1000	1500
11 a.m.	1100 -	1600
Noon	1200	1700
1 p.m.	1300	1800
2 p.m.	1400	1900
3 p.m.	1500	2000
4 p.m.	1600	2100
5 p.m.	1700	2200
6 p.m.	1800	2300
7 p.m.	1900	2400
8 p.m.	·-2000	0100
9 p.m.	2100	0200
1 p.m. 2 p.m. 3 p.m. 4 p.m. 5 p.m. 6 p.m. 7 p.m. 8 p.m. 9 p.m.	2200	0300
11 p.m.	2300	0400
TT P.III.	2300	0-400

For times throughout the entire world consult the RADEX Time Converter

## W1XAL, Educational Broadcaster

The world at large knows that the Rockefeller interests are responsible for the largest monument to radio, namely, Radio City, but few people are aware of another radio venture of the Rockefellers.

Arthur Godfrey, announcer and commentator on the Professor Quiz Show, revealed that the shortwave station W1XAL of Boston is financed and owned by the Rockefellers. This station presents nothing but educational features and classical music on its programs. It was the first station in this country to starf a definite movement to give the American public full day courses by the country's foremost college professors. No commercial programs or announcements are carried.

One of the many features of this station is the broadcast of the various lectures on the curriculum of Harvard University, direct from the lecture hall into the homes of list-eners.

Sept. 26, 1937 has been set as the date when station WHK Cleveland will join the NBC as a member of the Basic Blue Network, replacing WGAR. WHK is owned by the Radio Air Service Corp., an affiliate of the Cleveland Plain Dealer and the Cleveland News. It operates full time on a regional channel of 1390 kcs with a daytime power of 2500 watts and 1000 watts at night.

The WRAX Broadcasting Co., operators of WRAX, and the Wm. Penn Broadcasting Co., operators of WPEN, both at Philadelphia, have been given special authority to increase their power to one kilowatt to counteract interference caused by CMX Havana, WWJ Detroit and KPRC Houston.

The Merrimac Broadcasting Co., Inc. of Lowell, Mass. has been granted special experimental authority to erect a satellite station at Lawrence, Mass. to operate on 1370 kcs. with from 10 to 100 watts power, unlimited time synchronously with WLLH at Lowell, Mass.

"Last June Ι completed DXing," submits of Buchanan, 189 Park St., Sydney, N. S. "I didn't know before that there could be so much fun in life. The first verification I received was from RNE, and since then I have verified all continents except Africa. Thirty-one countries are verified all together. I wonder if any other DXers received a verification from EAH in Spain. Latest cards received here are HJ4ABU, JZJ and PRF5."

## KEY TO SYMBOLS

Second Column Symbols Verifies reception for return

Verifies only occasionally.

postage.

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As shown in the Index by Frequencies and Dial Numbers

R

S Sy X

National "Red" network. Sunday only. Synchronized. Has permit to increas power.

to increase

Frequency is given in kilocycles; wave lengths in meters. Night power is shown in watts in third common. Daytime power is shown in parenthesis in fourth column in kilowatts, thus (.25) indicating 250 watts. Some stations outside the United States use a "split frequency." Their exact frequency is shown in fourth column.

n

z

В

Weather or time only.
No information available.
Fourth Golumn Symbols
National "Blue" network.
Columbia network.

c Does not verify. C Columbia d Verification 10c; letter 25c. h Sends own station stamp for 10c. i Sends own station stamp for 5c. j Sends own station stamp for postage.  C Columbia Dn Day tim evening f Canadiar M Mutual F N National "Blue"	"Blue" network, a network. The network is conly. The with occasional g hours. Brdestg, Corp. Streets, Systems ("Red") and networks. The works is struction permit to change frequency. Small letters show stations using same transmitter. 1-2-3. Figures denote stations sharing time No information.
CJRM ak 1000 F Regina, Sask.	—J. Richardson & Sons, Ltd.
550 keys. (545.1)	J. Richardson & Solis, Etc.
CFNB	-State Agricultural Col.
560 keys. (535.4)	· ·
KFDM ak 500 (1) B Beaumont, Texas KLZ ak 1000 C (5) Denver, Colo. KSFO ak 5000 D CXY San Francisco, Ca KWTO ak 5000 D Springfield. Mo. J WIND ak 1000 (5) Gary, Ind. Results ak 1000 N (5) WOAM ak 1000 C Miami, Fla.	-Sabine Brdcstg. Co., IncKLZ Brdcstg. Co.  -Associated Brdcsters, IncOzarks Brdcstg. CoWFIL Brdcstg. CoJohnson-Kennedy Radio CorpStation WIS, IncMiami Brdcstg. Co.
570 kcys. (526.0)	
CMCX Z 150 Havana, Cuba X 250 CY (1) Wichita Falls, Ter KMTR ak 1000 C (5) Tacoma, Wash. WKBN ak 1000 C1 Youngstown, Ohl WMCA ak 1000 C1 Youngstown, Ohl WNOX Ak 1000 C (5) Tarkton, S. Dak. WOSU ak 750 I (1) Columbus, Ohlo WSYR ak 1000 B (WSYU) Syracuse, N. Y WWNC ak 1000 N Asheville, N. C.	I. — KMIR Radio Corp. —Puget Sound Brdestg. Co. —WKBN Brdestg. Corp. —Knickerbocker Brdestg. Co. —WNAX Brdestg. Co. —Ohio State University
580 kcys. (516.9)	]
CFPR ak 50 Prince Rupert, B. ( CHRC ak 100 Quebec, P. Q CKCL ak 100 F Toronto, Ont. CKUA ak 500 Edmonton, Alta, KSAC ak 500 C (1) Manhattan, Kans WCHS ak 500 C (1) Charleston, W. Va WDBO ak 1000 C Orlando, Fla. WIBW ak 1000 2C (5) Topeka, Kans.	—CHRC, Ltd. —Dominion Battery Co., Ltd. —University of Alta. —McClatchey Brdcstg. Co. —State College of Agriculture.
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NORTH AMERICAN B. C. S	STATIONS BT FREQUENCIES
WILL ak 1000 D Urbana, Ill. WTAG ak 1000 R Worcester, Mass.	—University of III. —Telegram Pub. Co., Inc.
590 kcys. (508.2)	
KHO ak 1000 R (5) Spokane, Wash. WEEI ak 1000 C (5) Boston, Mass. WKZO ak 1000 BDX Kalamazoo, Mich. WOW ak 1000 R (5) Omaha, Nebr.	—Louis Wasmer, Inc. —Columbia Brdcstg. Sys. —WKZO, Inc. —Woodmen of the World
600 kcys. (499.7)	
CFCF	Can. Marconi Co., LtdG. C. ChandlerTroncoso y GilCan. Brdcstg. CorpAirfan Radio Corp., LtdMonumental Radio CoYankee Network, IncIowa Brdcstg. CoWREC, Inc.
610 kcys. (491.5)	
KFRC c 1000 M (5) San Francisco, Cal. WDAF ak 1000 R (5) WIP ak 1000 Philadelphia, Pa. WJAY ak 500 D Cleveland, Ohio	<ul> <li>Don Lee Brdcstg. Sys.</li> <li>Kansas City Star Co.</li> <li>Penn. Brdcstg. Co.</li> <li>Cleve. Radio Brdcstg. Corp.</li> </ul>
620 kcys. (483.6)	
KGW ak 1000 R (5) Portland, Ore. KTAR ak 1000 N Phoenix, Ariz. WFLA ak 1000 Na (5) Clearwater, Fla. WHJB ak 250 CD Greensburg, Pa. WLBZ ak 500 CM (1) Bangor, Maine WSUN ak 1000 Na (5) St. Petersburg, Fla. WTMJ ak 1000 N (5) Milwaukee, Wis.	<ul> <li>Oregonian Pub. Co.</li> <li>KTAR Brdestg. Co.</li> <li>Chamber of Commerce.</li> <li>Pitt. Radio Sup. House.</li> <li>Maine Brdestg. Co., Inc.</li> <li>Chamber of Commerce</li> <li>The Journal Co.</li> </ul>
630 kcys. (475.9)	
CFCO	—John Beardall I.—Island Radio Brdcstg. Co. —Jas. Richardson & Sons. —Okanagan Brdcsters, Ltd. —KFRU, Inc. —Mrs. Ida A. McNeil —Evans. on the Air, Inc. —NBC, Inc. —Cherry & Webb Brdcstg. Co. —Jorge L. Falomeque.
640 kcys. (468.5)	
CMCB         ak         150          Havana, Cuba           KFI         ak 50000         R         Los Angeles, Calif.           WGAN         z         500         DP         Portland, Maine           WHKC         ak         500          Columbus, Ohio           WOI         ak         500          Sabinas, Coah.           XEBX         z         250          Sabinas, Coah.	-El Progreso Cubana -Earle C. Anthony, IncPort. Brdestg. Sys., IncAssociated Brdestg. CorpState Col. of Agriculture -Benito Garza Ortegon
650 kcys. (461.3)	
WSM ak 50000 MN Nashville, Tenn.	-Nat'l, Life & Accident
660 kcys. (454.3)	Out Got Billion
WAAW ak 500 D Omaha, Nebr. WEAF ak 50000 R New York, N. Y. XEAL z 1000 Mexico City, D. F. XEAO ak 250 Mexicali, B. Cfa.	Omaha Grain Exchange     NBC, Inc.     Cla. Pan-Americana de Radio     Luis L. Castro
670 kcys. (447.5)	
WMAQ ak 50000 R Chicago, Ill.	-NBC, Inc.

680 kcys. (440.9)	
CMCG ak 1000 Havana, Cuba KFEQ ak 2500 D St. Joseph, Mo. San Francisco, Cal. VAS akn 2000 685 Glace Bay, N. S. VOWR ck 500 681 St. John's, Nfld. WPTF ak 1000 DF Lawrence, Mass.	La Onda, S. AKFEQ, IncNBC, IncCan. Marconi Co., IncWesley United ChurchWPTF Radio CoHildreth & Rogers Co.
690 kcys. (434.5)	
CFRB ak 10000 C Toronto, Ont. CJCJ ak 100 F Calgary, Alta. XET ak 5000 Monterrey, N. L.	-Rogers Radio Brdcstg. Co. -Albertan Publishers, Ltd. -El Pregonero del Norte
700 kcys. (428.3)	•
WLW ak 500000 MN (W8XO) Cincinnati, O.	-Crosley Radio Corp.
710 kcys. (422.3)	
KIRO ak 1000 Seattle, Wash. KMPC ak 500 Beverly Hills, Calif. WOR ak 50000 M Newark, N. J.	<ul> <li>Queen City Brdcstg. Co.</li> <li>B. Hills Brdcstg. Corp.</li> <li>Bamberger Brdcstg. Serv., Inc.</li> </ul>
720 keys. (416.4)	
WGN ak 50000 M Chicago, III. XEH ak 250 Monterrey, N. L.	-WGN, Inc. -Constantino de Ternava
730 kcys. (410.7)	
CFPL ak 100 F London, Ont. CJCA ak 1000 F Edmonton, Alta. CKAC ak 5000 C Montreal, P. Q. CKPR ak 100 F Fort William, Ont. CMK ak 3000 Havana, Cuba XEBC ak 5000 Agua Caliente, B. Cf	London Free PressTaylor & Pearson Brdcstg. CoLa Presse Pub. CoDougall Motor Car CoCia. Nacional de Radio aCia. Mexicana del A. C. hP. N. Brdcstg. Co.
740 keys. (405.2)	
KMMJ ak 1000 D KTRB ak 250 D Modesto, Calif. WHEB ak 250 D Portsmouth, N. H. WSB ak 50000 N Atlanta, Ga.	<ul> <li>KMMJ, Inc.</li> <li>McTammany &amp; Bates.</li> <li>Granite State Brdcstg. Corp.</li> <li>Atlanta Journal Co.</li> </ul>
750 keys. (399.8)	
CMCW dk 150 Havana, Cuba KGU aj 2500 N Honolulu, Hawaii WJR ak 50000 C Detroit, Mich. XEAM z 25 Matamoros, Tams.	<ul> <li>"Radio Pilot."</li> <li>Advertiser Pub. Co., Ltd.</li> <li>The Goodwill Station</li> <li>Manuel Salines.</li> </ul>
760 keys. (394.5)	•
CMHX         ak         200          Clenfuegos, Cuba           KXA         ak         250          Geartle, Wash.           WBAL         ak         2500         BMSy         Baltimore, Md.           WEW         ak         1000         D         St. Louis, Mo.           WJZ         ak         5000         BSy         New York, N. Y.           XEOK         ak         2500          Tijuana, B. Cfa.	-F. ChavarryAm. Radio Tel. CoWBAL Brdcstg. CoSt. Louis University -NBC, IncCarlos de la Serra
770 kcys. (389.4)	
CMBS ak 150 Havana, Cuba KFAB ak 10000 CSy Lincoln, Nebr. WBBM ak 50000 CSy Chicago, III.	<ul><li>"Radio Grunow"</li><li>KFAB Brdcstg. Co.</li><li>Columbia Brdcstg. Sys.</li></ul>
780 kcys. (384.4)	
CHWK dk 100 F Chilliwack, B. C. CKSO ak 1000 F Sudbury, Ont.	—Chil. Brdcstg. Co., Ltd. —Sudbury Star

## NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

	11011	~ ~ ~ ~ ~	12111	1111 01 01 0	THE QUENCIE
CMJK KEHE KFDY KFOD KGHL WEAN WMC WTAR XEL	ak 250 ak 1000 ak 1000 ck 250 ak 1000 ak 1000 ak 1000 ak 500 z 1000	(5) D N (5) BM N (5) NX (1)	Los Ar	guey, Cuba ngeles, Calif. Ings, S. Dak. orage, Alaska gs, Mont. ence, R. I. his, Tenn. k, Va. o City, D. F.	Cia. Nacional de RadioHearst Radio, IncS. Dak. State CollegeAnchorage Radio Club, IncN. W. Auto Supply CoYankee Network, IncM. Commercial Appeal CoWTAR Radio CorpPlaza de San Juan 15.
<i>7</i> 90 1	kcys.	(379.			1
CMGH KGO KOAM WGY	ak 500 ak 7500 z 1000 ak 50000	B DP R	San Fi Pittsb	nzas, Cuba rancisco, Cal. urg, Kans. ectady, N. Y.	<ul> <li>"Rialto."</li> <li>NBC, Inc.</li> <li>Pittsburg Brdcstg. Co.</li> <li>General Electric Co.</li> </ul>
<b>800 1</b>	cys.	(374.	8) [		
WBAP WFAA WTBO	ak 50000 ak 50000 ak 250	Na Na D	Dallas	vorth, Texas , Texas erland, Md.	<ul> <li>Ft. Worth Star-Telegram</li> <li>A. H. Belo Corp.</li> <li>Associated Brdcstg. Corp.</li> </ul>
810 1	cys. (	(370.	2) [		
CMCF WCCO WNYC XEXC	ak 600 ak 50000 ak 1000 z 350		Minne New Y	a, Cuba apolis, Minn. ork, N. Y. calientes, Ags.	<ul> <li>Oscar Gutlerrez</li> <li>Columbia Brdestg. Sys.</li> <li>City of N. Y.</li> <li>Gobierno del E. de Ags.</li> </ul>
820 1	ccys. (	(365.	6) [		
CMHW WHAS XEBG	ak 100 ak 50000 z 1000	Ċ	Cienfu Louisv Tijuan	iegos, Cuba ille, Ky. ia, B. Cfa.	<ul> <li>Ramon Gonzales</li> <li>Louisville Times Co.</li> <li>Angel B. Fernandez</li> </ul>
830 1	ccys. (	(361.	2) [		,
CMJX KOA WEEU WHDH WRUF	ak 5000 ak 50000 ak 1000 ak 1000 ak 5000	N D Dn Dn	Camag Denver Readin Boston Gainsy	guey, Cuba r, Colo. ig, Pa. i, Mass. ille, Fla.	-Teatro Principal -NBC, IncBerks Brdcstg, CoMatheson Radio Co., IncUniversity of Fla.
840 1	ccys. (	(356.9	9) [		
CFOC CRCT VOGY XERA	ak 1000 ak 5000 ak 400 ck 350000	F FN 	Toront St. Joh	oon, Sask. to, Ont. in's, Nfld. cuna, Coah.	<ul> <li>—A. A. Murphy &amp; Sons.</li> <li>—Can. Brdcstg. Corp.</li> <li>—Newfoundland Hotel</li> <li>—Brinkley Hospital</li> </ul>
850 1	ccys. (	(352.2	7) [		
CMCN KIEV WESG WKAR WWL	z ak 250 ak 1000 ak 1000 ak 10000	CD CD	Glenda Elmira E. Lans	a, Cuba ale, Calif. , N. Y. sing, Mich. rleans, La.	—Marianao —Cannon System, Ltd. —Cornell University —Mich. State College —Loyola University.
860 1	cys. (	(348.6	5) [	···	
WABC WHB XEMO XENC	ak 50000 ak 1000 ak 5000 z 50	C (WB DM	OQ) Ne Kansas Tijuan Mexico	w York, N. Y. city, Mo. a, B. Cfa. City, D. F.	<ul> <li>Columbia Brdcstg. Sys.</li> <li>WHB Brdcstg. Co.</li> <li>Box 202, San Diego, Calif.</li> <li>Ignacio Barrueta</li> </ul>
87Ó 1	cys. (	344.6	5) [		
WENR WLS XEFB	ak 50000 ak 50000 ak 200	Ba Na	Chicag	o, III. o, III. rey, N. L.	—NBC, Inc. —Agricultural Brdestg. Co. —Jesus Quintanilla.

880 kcys. (340.7)	
CFJC	—La Gasa de las Medias —Gan. Brdestg. Corp. —Mid-Western Radio Corp. —Tribune Bldc. Co. —Pillar of Fire—Miss. Brdcstg. Co., Inc. —Scranton Brdcsters, Inc. —Scranton Times —WLBG, Inc.
890 kcys. (336.9)	
KARK ak 500 B (1)	owa — KFNF, Inc. 1. — Symons Brdcstg. Co. Dak. — Univ. of S. Dak. Ind. — Purdue University — Ga. School of Technology I. — Outlet Co. v. — Monongahela Valley Brdcstg. Co.
900 kcys. (333.1)	
KGBU ak 500 X   Ketchikan, Alc KHJ ak 1000 M (5) Los Angeles, C WEELI ak 500 D   WeeLI ak 1000 N (5) Oklahoma City WKY ak 1000 N (5) Oklahoma City WLBL ak 2500 DX   WTAD ak 1000 D   Quincy, Ill.	alle Dam Loo Bedonte Suc
910 keys. (329.6)	
CJAT ak 1000 F Trail, B. C. CKY ak 15000 F Winnipeg, Mar CRCM ak 5000 F Montreal, P. C XENT ak 150000 Nuevo Laredo,	—Kootenay Brdcstg. Co. —Man. Telephone Sys. b. —Can. Brdcstg. Corp. Tams. —Box 410, Laredo, Texas
920 kcys. (325.9)	
CMX	
930 kcys. (322.4)	
CFAC   ak   100   F   Calgary, Alta.	Radio Ass'n, of Prescott

	THE PERSON OF THE PERSON
940 kcys. (319.0)	
KOIN	
950 kcys. (315.6)	
CJOC ak 100 F Lethbridge, Alta. CRCS ak 100 F Chicoutimi, P. O. KFWB ak 1000 (5) Hollywood, Calif. KMBC ak 1000 C (5) Kansas City, Mo. WHAL z 500 P Saginaw, Mich. WRC ak 500 RX (1) Washington, D. C.	<ul> <li>Lethbridge Brdcstg. Co.</li> <li>"La Voz del Aire." S. A.</li> <li>Can. Brdcstg. Corp.</li> <li>Warner Bros. Brdcstg. Corp.</li> <li>Midland Brdcstg. Co.</li> <li>Gross &amp; Shields</li> <li>NBC, Inc.</li> </ul>
960 kcys. (312.3)	
CFRN ak 100 F Edmonton, Alta. CHNC ak 1000 F New Carlisle, P. Q. XEAW c 50000 Reynosa, Tams.	—Sunwapta Brdcstg. Co. —Gaspesian Radio Co. —Cia. Int. Difusora Reynosa
970 kcys. (309.1)	
CMBY z 150 Havana, Cuba KJR ak 5000 B Seattle, Wash, WGFL ak 5000 B Chicago, Ill. WIBG ak 100 D Glenside, Pa,	<ul> <li>—Calle Infanta 132</li> <li>—Fishers Blend Sta., Inc.</li> <li>—Chi. Fed. of Labor.</li> <li>—Seaboard Radio Bc. Corp.</li> </ul>
980 kcys. (306.0)	
KDKA ak 50000 B Pittsburgh, Pa. XEAC ak 250 Tijuana, B. Cfa. XEFE z 25 Nuevo Laredo, Tame	—Westinghouse Elec. —Aurelio Mateus s. —"Voice of the Border."
990 kcys. (302.8)	
WBZ         ak 50000         BSy         Boston, Mass.           WBZA         ak 1000         BSy         Springfield, Mass.           XEAF         ak 750          Nogales, Son.           XEK         ak 100          Mexico City, D. F.           XES         ak 250          Tampico, Tams.	<ul> <li>Westinghouse Elec. Co.</li> <li>Westinghouse Elec. Co.</li> <li>Francisco G. Elias</li> <li>Arturo Martinez</li> <li>Fernando Sada</li> </ul>
1000 kcys. (299.8)	
CMBZ         ak         500         (1)         Havana, Cuba           KFVD         ak         1000         Dn         Los Angeles, Calif.           VOCM         z         200         1006         St. John's, Nfid.           WHO         ak         50000         R         Des Moines, Iowa           XEBI         ak         25          Aguascalientes, Ags.           XEBK         ak         100          Newco Laredo, Tams           XEXS         z         100          Portable in Mexico	—Manuel y G. Salas —Standard Brdestg. Co. —St. John's Eve. Telegram —Central Brdestg. Co. —Alejandro Diaz "—'Indo Latin Voice." —Dpto. de Salubridad Publica
1010 keys. (296.9)	
CHML ak 100 F Hamilton, Ont. (CKCD ak 100 I Vancouver, B. C. (CKCX ak 500 FX Regina, Sask. (CKCX ak 50 FX Regina, Sask. (CKYX ak 100 FI Vancouver, B. C. (CMYX ak 100 FI Vancouver, B. C. (CMJA ak 300 (Camaguey, Cuba KGGF ak 1000 2 Coffeyville, Kans. (CAMYX ak 1000 IIII) (CAMYX	Maple Leaf Radio Co., LtdVan. Daily ProvinceLeader-Post, LtdDr. G. M. GeldertAcadia UniversityWestern Brdcstg. CoRafael ValdezPowell & PlatzRadio Station KOWMarcus Loew Booking AgencyUniversity of Okla.

## NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

	NORT	ri Aiv	IERIC	AN D. C. S	TATIONS BY FREQUENCIES
WNOX XEU	ak 1000 ak 250	C (5)	Knoxy Verac	ville, Tenn. ruz, Ver.	-Scripps-Howard Radio, Inc. -Fernando Pazos S.
1020	kcys.	(293	.9)		
KYW WDZ XEJ	ak 10000 ak 250 ak 1000	R D 	Philae Tusco Juare	delphia, Pa. da, Ill. z, Chih.	<ul> <li>Westinghouse Elec. Co.</li> <li>WDZ Brdcstg. Co.</li> <li>Juan G. Buttner</li> </ul>
1030	kcys.	(291	.1)		
CFCN CKLW CMCY XEB	ak 10000 ak 5000 ak 5000 ak 10000	м ::::	Calga Winds Havas Mexic	ry, Alta. sor, Ont. na, Cuba co City, D. F.	-Voice of the Prairies, LtdWest. Ont. Brdestg. CoManuel D. Outran -El Buen Tono, S. A.
1040	kcys.	(288	.3)		
KRLD KWJJ KYOS WTIC	ak 10000 ak 500 z 250 ah 50000	C D R	Portla Merce	s, Texas and, Ore. ed, Calif. ord, Conn.	
1050	kcys.	(285	.5)		,
CMKD CRCK KFBI KNX WEAU WGVA	ak 250 ak 1000 ak 5000 ak 50000 z 1000 z 1000	F Dn C D DP	Los A Eau C	ago, Cuba ec, P. Q. ne, Kans. ngeles, Calif. laire, Wis. napolis, Ind.	—Radioemisora Oriental —Can. Brdestg. Corp. —Farmers & Bankers Bc. Corp. —CBS of Calif., Inc. —Central Brdestg. Co. —Glenn Van Auken
1060	kcys.	(282	.8)		
KTHS VOAC WBAL WJAG W3XJ XEAD XEMG	ak 10000 z 40 ak 10000 ak 1000 z 100 ak 125 z 100	N 1065 BM D P	Colleg	prings, Ark. ohn's, Nfld. more, Md. ik, Nebr. ge Park, Md. alajara, Jal. potzalco, D. F.	-Chamber of Commerce
1070	kcys.	(280	.2)		
CMBX CMHA KJBS WCAZ WTAM	ak 500 z 50 ak 500 ak 100 ak 50000	 D R	Sagua San F	na, Cuba nla Grande, Cub rancisco, Calif. nage, Ill. land, Ohio	—Alberto Alvarez na—Abelardo Menocal —Julius Brunton & Sons —Superior Brc. Serv., Inc. —NBC, Inc.
1080	kcys.	(277	(.6)		
WBT WCBD WMBI XEBA XEDP	ak 50000 ak 5000 ak 5000 z 20 ak 500	C Dnl Dnl	Cinci	otte, N. C. ngo, Ill. ngo, Ill. nan, Jal. co Glty, D. F.	<ul> <li>Columbia Brdcstg, Sys.</li> <li>WCBD, Inc.</li> <li>Moody Bible Institute</li> <li>Javier Velasco</li> <li>Dpto, de Publicidad</li> </ul>
1090	kcys.	(275	(.1)		•
KMOX XEAQ	ak 50000 ak 1000	C	St. Le Rosa	ouls, Mo. rito, B. Cfa.	—Columbia Brdcstg. Sys. —Radio Mexsa
1100	kcys.	(272	2.6)	_	
CMCJ CRCV KGDM KWKH WBIL WPG	ak 500 nk 5000 nk 1000 c 10000 nk 5000 nk 5000	F DM C 1 C1	Vanc	na, Cuba. ouver, B. C. cton, Calif. report, La. York, N. Y. atic City, N. J.	Radio Emisora Comercial
1110	kcys.	(270	).1)		
KSOO	ak 2500	BDn	Slour	Fulls, S. Dak.	-S. F. Brdcstg. Ass'n.

## NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

	11011.	TI AMERICAN B. C. STATIONS BT FREQUENCIES
WRVA XELO	ak 5000 ak 50000	CM Richmond, Va. —Larus & Bros. Co. Pied. Negras, Coah. —Pied. Neg. Brdcstg. Co.
1120	kcys.	(267.7)
CHLP CHSJ CKOC CKX CMGF CMKM KFIO KFSG KRKD KRKD WCOP WDEL WISN WTAW	ak 100 ak 500 ak 500 ak 100 dk 150 ak 200 ak 100 ak 500 ak 500 ak 250 ak 250 ak 250 ak 250 ak 250 ak 250	F Montreal, P. Q. F (1) St. John, N. B. F (1) Hamilton, Ont. F Brandon, Man. Matanzas, Cuba Matanzas, Cuba Maranzalillo, Cuba D Spokane, Wash. a (2.5) Los Angeles, Calif. a. (2.5) Los Angeles, Calif Seattle, Wash. D Boston, Mass. C (1) Milwaukee, Wis College Sta, Tex. DP Austin, Texas  -La Patrie Pub. Co—N. B. Brdcstg. Co—Mean. Telephone System .—Gril Betancourt No. 51 .—Merchan P. Figeredo .—Spokane Brdcstg. Corp—Echo Park Evan. Ass'n—Radio Brdcsters., Inc—Radio Brdcsters., Inc—WDEL, Inc—WDEL, Inc—Hearst Radio, Inc—Agri. & Mechanical Col—State Capitol Brdcstg. Assn.
1130	kcys.	
CMJI KSL WJJD WOV XEJP	ak 150 ak 50000 ak 20000 ak 1000 z 100	Clego de Avila, Cuba C Salt Lake City, Ut. Dn Chicago, Ill. New York, N. Y. Mexico City, D. F.  Cligo de Avila, Cuba —Radio Service Corp. —MJJD, Inc. —Internat'l, Brc. Corp. —Salvador Monterrubio
1140	kcys.	(263.0)
CMBG KVOO WAPI WSPR	z 200 ak 25000 ak 5000 ak 500	Havana, Cuba NI Tulsa, Okla. NI Birmingham, Ala. DM Springfield, Mass.  -John L. Stowers -Southwestern Sales CorpAla. Polytechnic InstConn. Valley Brdcstg. Co.
1150	kcys.	(260.7)
CMJF WHAM XEC XEDW	z 200 ak 50000 ak 100 z 20	Camaguey, Cuba B Rochester, N. Y. Tijuana, B. Cfa. Minatitlan, Ver.  —John L. Stowers —Stromberg-Carlson Co. —Luis F. Encicso —Hector Silva Canto
1160	kcys.	(258.5)
CMHJ CMKG WOWO WWVA XEAS XEBJ XEBZ XED XEP	ak 175 z ak 10000 ak 5000 ak 50 z 20 ad 100 ak 2500 ak 500	Clenfuegos, Cuba Santiago, Cuba BI Fort Wayne, Ind. Cl Wheeling, W. Va. Saltillo, Coah. Merida, Yuc. Mexico City, D. F. Guadalajara, Jal. Juarez, Chih.  —Romualdo Ugalde ——Westinghouse Radio Station —W. Va. Brdestg. Corp. —"La Voz del Comercio." —Hidalgo Franco —Refugio Esperza Vda. —Cla. Radiofonografica —Apartado 89
1170	kcys.	(256.3)
CMBD WCAU	ak 500 ak 50000	Havana, Cuba C Philadelphia, Pa. —Luiz Perez Garcia —WCAU Brdcstg. Co.
1180	kcys.	(254.1)
CMJO KEX KOB WDGY WINS WMAZ XEFA	ak 50 ak 5000 ak 10000 ak 1000 ak 1000 ak 1000 z 500	Ciego de Avila, Cuba B2 Portland, Ore. B2 Albuquerque, N. M. Dn (5) Minneapolis, Minn. New York, N. Y. C Macon, Ga. Tacuba, D. F.  B. Ildefonso Oregonian Pub. Co. —Atbuquerque Brdcstg. Co. —Dr. Geo. W. Young —Hearst Radio, Inc. —Southeastern Brdcstg. Co. —Eduardo Limon Segui
1190	kcys.	(252.0)
CMKX KTKC	z z 250	DP Santiago, Cuba —  -Tulare-Kings Counties
		70 .

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VONE
             ak
                             1195
DXZ
                     500
                                        St. John's, Nfld.
                                                                            Dominion Brdcstg, Co.
                                       Waterbury, Conn.
San Antonio, Tex.
Huntington, W. Va.
WATR
                     100
                                                                            WATR Co., Inc.
Southland Industries, Inc.
             ak
WOAI
             ak 50000
                             N
WSAZ
                   1000
                                                                            WSAZ, Inc.
1200 kcys.
                            (249.9)
CHAB
CKNX
CKTB
             ak
                     100
                                        Moose Jaw, Sask.
Wingham, Ont.
                                                                            -CHAB, Ltd.
             dk
                             ....
F
                       50
                                                                         -Wingham Radio Club
             ak
                     100
                                        St. Catharines, Ont.
                                                                            Silver Spire Brdcstg. Station
CMCO
                                                                            Enrique Lasanta
-C. C. Morris
-W. J. Beard
             ad
                     250
                                        Havana, Cuba
KADA
                             DM
             ak
                      100
                                        Ada, Okla.
KBTM
             яk
                      100
                             D
                                        Jonesboro, Ark.
                              (.25) P
KDNC
KELO
                                       Lewistown, Mont.
Sioux Falls, S. Dak.
             7.
                      100
                                                                            Democrat-News Co.
                      100
                                                                            S. F. Brdcstg. Ass'n.
Marshall Elec. Co., Inc.
                             (.25)
(.25)
(.25)
KFJB
             ak
                      100
                                        Marshalltown, Ia.
KFXD
KFXJ
                                        Nampa, Idaho
Grand Junc., Colo.
Fergus Falls, Minn.
                      100
                                                                            Frank E. Hurt
Western Slope Brdcstg. Co.
             ak
             ak
                     100
                                                                           -Charles L. Jaren
-Elmer G. Beehler
-Ben S. McGlashan
KGDE
                      100
                              (.25)
             c
KGEK
             ak
                     100
                              . . . .
                                        Sterling, Colo.
KGFJ
KGHI
KGVL
             ak
                     100
                                        Los Angeles, Calif.
                             (.25)
DP
                                        Little Rock, Ark.
Greenville, Texas
             ak
                     100
                                                                            Ark. Brdcstg. Co.
                      100
             z
                                                                            Hunt Brdcstg. Assn
                             (.25)
(.25)
(.25)
KMLB
             ak
                      100
                                        Monroe, La.
                                                                            Liner's Brdcstg. Station
Pacific Radio Corp.
KOOS
             ak
                      100
                                        Marshfield, Ore.
KSUN
                     100
             c
                                        Lowell, Ariz.
                                                                            Copper Elec. Co., Inc.
Golden Empire Brdcstg. Co.
KVCV
                            D ...
                                        Redding, Calif. — Golden Empire Br
San Luis Obispo, Calif.—Valley Elec. Co.
Bellingham, Wash. — KVOS, Inc.
                     100
             z
KVEC
                     250
                            ....
KVOS
KWG
             dk
                     100
                                        Stockton, Calif.
Winona, Minn.
Bangor, Maine
             ak
                     100
                                                                            -McClatchey Brdcstg. Co.
-Winona Radio Service.
KWNO
WABI
WAIM
                             ĎΡ
                     100
             7.
                     100
                             (.25)
C
                                                                            Community Brdcstg. Serv.
Wilton E. Hall
Waycross Brdcstg. Co.
             ak
             ak
                     100
                                        Anderson, S. C.
Waycross, Ga.
WAYX
                     100
             ak
                             M (.25) Ponca City, Okla.
P Huntsville, Ala.
WBBZ
             ak
                     100
                                                                            Adelaide L. Carrell
WBHP
                     100
                                                                           -Wilton Harvey Pollard
-Coliseum Place Bap. Church
-S. Dak. State School of Mines
-Bur. Daily News, Inc.
-Gazette Ptg. Co.
                                       New Orleans, La.
Rapid City, S. Dak.
Burlington, Vt.
Janesville, Wis.
Cincinnati, Ohio
Superior, Wis.
WBNO
WCAT
             ak
                     100
                            h
             ak
                     100
                             (.25)
(.25)
(.25)
WCAX
             ak
                     100
WCLO
             ak
                     100
WCPO
             ak
                     100
                                                                            Scripps-Howard Radio, Inc.
WDSM
                     100
             7.
                                                                            Fred A. Baxter
                                       Easton, Pa.
South Bend, Ind.
WEST
                     100
                             3 (.25)
                                                                            Associated Brdcstrs., Inc.
             ak
                                                                         —Associated Brucsurs., a
South Bend Tribune
—Jonas Weiland
—Edw. P. Graham
—WHBY, Inc.
—WIBX, Inc.
—Mo. Brdestg. Corp.
—Kaskaskla Brdestg. Co.
WFAM
             ak
                     100
                                       Kinston, N. C.
Canton, Ohio
Green Bay, Wis.
Utica, N. Y.
WFTC
             ak
                      100
                             (.25)
WHBC
             ak
                     100
                             (.25)
WHBY
                     100
                             (.25)
C (.3)
(.25)
             ak
WIBX
             ak
                     100
WIL
WJBC
WJBL
             ak
                     100
                                        St. Louis, Mo.
                             6 (.25)
                                       Bloomington, Ill.
Decatur, Ill.
             ak
                     100
             ak
                     100
                                                                           Commodore Brdcstg, Co.
WJBW
             ak
                     100
                                       New Orleans, La.
W. Palm Beach, Fla.
                                                                           Chas. C. Carlson
WJNO
WJRD
                     100
                             C (.25)
DX
                                                                           -Hazelwood, Inc.
-James R. Doss, Jr.
-Keystone Brdcstg. Corp.
             ak
                     100
                                        Tuscaloosa, Ala.
             c
WKBO
                                       Harrisburg, Pa.
Lynchburg, Va.
High Point, N. C.
                             3 (.25)
(.25)
             ak
                     100
WLVA
             ak
                     100
                                                                         -Lynchburg Brdcstg. Corp.
-Station WMFR, Inc.
WMFR
             ak
                      100
                             Ď
                            (.25)
DP
WMPC
                     100
                                                                        —Ist Methodist Church

—O. Lee Stone

—WRBL Radio Station, Inc.

—Hartford Times, Inc.
             ak
                                        Lapeer, Mich.
WOLS
                     100
             z
                                        Florence, S. C.
WRBL
             ak
                            (.25)
M
                                        Columbus, Ga.
Hartford, Conn.
                     100
WTHT
             ak
                     100
WWAE
                     100
                                        Hammond, Ind.
Salisbury, Md.
Toledo, Ohio
             яk
                                                                         -Hammond-Calumet Brdcstg, Corp.
                     250
                             ĎP
             7.
                                                                           Frank M. Stearns
                     100
                                                                           -Community Brdcstg, Co.
1210 kcys.
                            (247.8)
                                       Stratford, Ont.
Aklavik, N.W.T.
Prince Albert, Sask.
Hull, P. Q.
Cobalt, Ont.
Santa Clara, Cuba
CJCS
                                                                        -M. I. Higgens

-Dr. J. A. Urquarhart

-CKBI, Ltd.

-CKCH Hull Brdcstg. Co., Ltd.
             ak
CKBI
                      50
             nk
                     100
                            F
CKCH
CKMC
                            F
             ak
                     100
                                                                        -R. L. MacAdam
-Lavls y Paz
-Alexandria Brdcstg. Co.
             ak
                      50
                             . . . .
CMHI
             ak
                     150
                             . . . .
KALB
             ak
                     100
                                       Alexandria, La.
                            <u>.</u>...
                                       Wichita, Kans.
Elk City, Okla.
Devils Lake, N. D
KANS
             ak
                     100
                                                                        -KANS Brdcstg. Co.
-E. M. Woody
KASA
KDLR
                            M
                     100
             c
             ak
                     100
                                                                          -KDLR, Inc.
-Mont. Peninsula Brdcstg. Co.
                            й··
KDON
                                       Monterrey, Calif.
             z
                     100
```

```
-KFJI Brdcsters, Inc.
-Cornbelt Brdcstg, Corp.
KFJI
             ak
                                          Klamath Falls, Ore.
KFOR
             ak
                              CM(.25) Lincoln, Nebr.
                      100
KFPW
              ak
                      100
                                          Fort Smith, Ark
                                                                               Southwestern Hotel Co.
                              6 (.25)
KFVS
                      100
                                         Cape Girardeau, Mo. -
San Bernardino, Cal. -
                                                                               -Hirsch Battery & Radio Co.
-Lee Bros. Brdc. Co.
              ak
                              M9
C
KFXM
              ak
                      100
KGLO
                                          Mason City, Iowa
Olympia, Wash.
                      100
                                                                               Mason City Globe Gazette
              z
              ak
                                                                               KGY, Inc.
Okmulgee Brdcstg. Corp.
KGY
                      100
                              ĎΡ
KHBG
                                          Okmulgee, Okla.
                      100
              7.
                              Garden City, Kans.
Carlsbad, N. Mex.
Kilgore, Texas
P (.25) Helena, Mont.
                                                                               Garden City Brdcstg. Co.
Carlsbad Brdcstg. Co.
KIUL
              ak
                      100
KLAH
              ak
                      100
KOCA
              Z.
                      100
                                                                               -Oil Capital Brdcstg. Ass'n.
KPFA
                                                                                Peoples Forum of the Air
                       100
              7.
KPPC
                                                                               Pas, Presb. Church
Royal Miller
              ak
                      100
                                          Pasadena, Calif.
                              Ď
                                          Sacramento, Calif.
Ardmore, Okla.
KROY
                       100
              ak
KVSO
                              M
              ak
                       100
                                                                                Ardmoreite Pub. Co.
                                                                               -Ardmorette Pub. Co.
-Greater Kampeska Radio Corp.
-WALR Brdcstg. Corp.
-John H. Stenger, Jr.
-Grace Presb. Church
-Herbert Lee Bly
-Monnouth Brdcstg. Co.
KWTN
                       100
                                          Watertown, S. Dak.
Zanesville, Ohio
              ak
 WALR
              ak
                       100
                              ;...
WBAX
              ak
                       100
                                          Wilkes-Barre, Pa.
WBBL
              ak
                       100
                                          Richmond, Va.
                                          Lima, Ohio
Red Bank, N. J.
Columbus, Ohio
Chicago, Ill.
 WBLY
              ak
                       100
                               \tilde{\mathbf{D}}
 WBRB
              ak
                       100
                               3
                                                                               WCOL, Inc.
Clinton R. White
Harrisburg Brdcstg. Co.
WCOL
WCRW
              ak
                              N
                       100
              ak
                       100
                               4
                               6 (.25) Harrisburg, Ill.
4 Chicago, III.
3 White Plains, N. Y.
WEBO
WEDC
              ak
                       100
              ak
                       100
                                                                                Emil Denemark
                                                                               -Emil Denemark
-Westchester Brdcstg, Corp.
-Fountain of Youth Properties
-Harry H. Carman
-WGCM, Inc.
-Peter Goelet
-R. I. Brdcstg, Co.
 WFAS
              ak
                       100
                                          St. Augustine, Fla.
Freeport, N. Y.
 WFOY
                       100
                                          Freeport, N. Y.
Gulfport, Miss.
Newburgh, N. Y.
Rock Island, Ill.
 WGBB
                       100
                               ż
WGCM
WGNY
              ak
                       100
                               (.25)
              ak
                       100
                               (.25)
(.25)
(.25)
 WHBF
              ak
                       100
                                          Anderson, Ind.
Poynette, Wis.
Gadsden, Ala.
 WHBU
              ak
                       100
                                                                                Anderson Brdcstg. Corp.
 WIBU
              ak
                       100
                                                                                Wm. C. Forrest
 ŴĴBŸ
              ak
                       100
                              <u>.</u>....
                                                                                Gadsden Brdcstg. Co.
                                                                               Hagerstown Brdcstg. Co.
Harold G. Gross
James Brdcstg. Co., Inc.
WJW, Inc.
                                          Hagerstown, Md.
 WJEJ
                       100
              ak
                               (.25)
B (.25)
 WJIM
                       100
                                          Lansing, Mich.
                                          Jamestown, N. Y.
 WJTN
              ak
                       100
 ŴĴŴ
                               (.25)
                                          Akron, Ohio
              ak
                       100
                                                                               -WJW, Inc.
-Sunbury Brdcstg. Corp.
-Lincoln Mem. University
-Havens & Martin
WKOK
WLMU
                                          Sunbury, Pa.
                       100
              ak
                               P (.25) Middlesboro, Ky.
RXZ(.25) Richmond, Va.
                       100
 WMBG
              ak
                       100
                                                                               -Head of the Lakes Brdcstg. Co.
-P. K. Ewing
-Francis M. Kadow
 WMFG
                       100
                               (.25)
                                          Hibbing, Minn.
Grenada, Miss.
              ak
 WMFN
              ak
                       100
 WOMT
                                          Manitowoc, Wis.
              ak
                       100
                               Ď...
                                                                                H. Wimpy
WPAX
                                          Thomasville, Ga.
Rochester, N. Y.
              ak
                       100
                                                                                Brown Radio Serv.
                       100
                               \bar{\mathbf{D}}
                               A (.25) Chicago, III.
.... Nashville, Tenn.
DP Bridgeton, N. J.
N (.25) Charlotte, N. C.
                                                                               -WSBC, Inc.
-WSIX, Inc.
 WSBC
              ak
                       100
 WSIX
WSNJ
              ak
                       100
                                                                               -WSA, inc.
-Eastern States Brdcstg. Corp.
-WSOC, Inc.
-WTAX, Inc.
              z
                       100
 WSOC
                       100
                                          Springfield, Ill.
Parral, Chih.
Durango, Dgo.
Juarez, Chih.
 WTAX
              ak
                       100
                               . . . .
 XEAT
              ak
                       250
                                                                                Box 90.
                               . . . .
XEE
XEFV
                                                                               Alejandro Stevens, Jr.
              ak
                        50
              ak
                       100
                                                                                Jose Onofre Meza
                               . . . .
 XETH
              ak
                       100
                                          Puebla, Pue.
                                                                              –Ramon Huerta G.
 1220 kcys. (245.8)
                                          Camaguey, Cuba
Lawrence, Kans.
Santa Barbara, Cal.
                                                                               -Manuel Fernandez Hnos.
 CMJE
                                                                               Manuel Fernandez Ino
University of Kans.
News Press Pub. Co.
First Presb. Church
State College of Wash.
St. Lawrence University
-WCAE, Inc.
-Tampa Times Co.
-WREN Brdestg. Co.
-Jangalo L. Saiz.
 KFKU
KTMS
KTW
KWSC
                              a (5)
P
              ak
                     1000
                       500
              \mathbf{z}
                               S2
                               S2 Seattle, Wash.
2 (5) Pullman, Wash.
D Canton, N. Y.
MR (5) Pittsburgh, Pa.
C (5) Tampa, Fla.
              ak
                     1000
              ak
                     1000
 WCAD
WCAE
              ak
                       500
                     1000
              ak
 WDAE
              ak
                     1000
                               C (5)
Ba(5)
                                          Lawrence, Kans.
Mazatlan, Sin.
 WREN
              ak
                     1000
50

-- Ignacio L. Saiz
-- Augusta Garcia Diaz
-- Jose R. Lopez
 XEBL
              z
 XEDA
                                          Gra. Anaya, D. F.
Veracruz, Ver.
                       200
 XETF
              ak
                        30
 1230 kcys.
                              (243.8)

Springfield Brdcstg. Co.
N. Mex. Brdcstg. Co.
Hearst Radio, Inc.
Ind. Power & Light Co.

 KGBX
KGGM
                                          Springfield, Mo.
Albuquerque, N. M.
              ak
                       500
              ak
                     1000
                               (5)
C (5)
 KYA
              ak
                                          San Francisco, Cal.
                     1000
 WFBM
             ak
                     1000
                                          Indianapolis, Ind.
```

```
WNAC
           ak
                 1000
                                   Boston, Mass
                                                                   -Yankee Network, Inc.
-Rodolfo Junco de la Vega
                         R (5)
XEFJ
           ak
                  100
                                   Monterrey, N. L.
                         (241.8)
1240 kcys.
CJCB
CMHB
                 1000
                                   Syndey, N. S. -N. Nathanson
Sancti Spiritus, Cuba-V. E. Weiss y Cia.
            ak
                    50
            7.
                                   Sancti Spiritus, Cu
Mandan, N. Dak.
Minot, N. Dak.
Fort Worth, Texas
Twin Falls, Idaho
San Juan, P. R.
Detroit, Mich.
Mexico City, D. F.
                   250
                                                                 -Mandan Radio Ass'n.
KGCU
            ak
                                                                 —John B. Cooley
—Tarrant Brdcstg, Co.
—Radio Brdcstg, Corp.
—Radio Corp. of P. R.
—King-Trendle Brdcstg, Corp.
KLPM
            ak
                   250
KTAT
            ak
                 1000
                          M
            ak
KTFI
                 1000
WKAQ
                  1000
            ak
WX YZ
            ak
                  1000
                          В
XEAY
XEKL
XELA
                   100
                                                                   Fernando Magallanes
            7.
                                    Leon, Guan.
                                                                    Cia. Radio del Bajio
                   500
            7.
                                   Saltillo, Coah
                                                                 -Enrique Gomez
            z
                    50
1250 kcys.
                          (239.9)
                                                                   -J. A. Saco
-Nichols & Warinner, Inc.
CMCK
KFOX
            ak
                   150
                                    Santiago, Cuba
                          Ď...
            ak
                  1000
                                    Long Beach, Calif
            ak
                                    Winst,-Salem, N. C.
 WAIR
                   250
                                                                    Radio Station WAIR
 WCAL
            ah
                  1000
                          2(2.5)
                                   Northfield, Minn.
                                                                    St. Olaf College
WDSU, Inc.
                          ã
                                    New Orleans, La.
 WDSU
            ak
                  1000
 WHBI
            ak
                  1000
                          a (2.5) Newark, N. J.
                                                                    May Radio Brdcstg. Corp.
                          2 Minneapolis, Minn.
a (2.5) New York, N. Y.
2B (5) Minneapolis, Minn.
                                                                  -University of Minn.
-Wodaam Corp.
 WLB
            ak
                  1000
 WNEW
                  1000
            ak
 WTCN
                  1000
                                    Minneapolis, Minn. —Minn. Brdcstg. Corp.
San Luis Pot., S.L.P. —Ayuntamiento S.L.P.
            ak
 XEXH
                   250
            z
 1260 kcys.
                          (238.0)
                                                                    -Del Valle, Valdez y Cia.
-Mosby's, Inc.
-Golden Empire Brdcstg. Co.
 CMOK
                    150
                                    Havana, Cuba
            z
                  1000
250
 KGVO
            ak
                                    Missoula, Mont.
                          .... Chico, Caiif.
BM(2.5) Omaha, Nebr.
 KHSL
            ak
 KOIL
            ak
                  1000
                                                                    Central States Brdcstg, Co.
                                                                    -Port Arthur College
-KRGV, Inc.
-KUOA, Inc.
                                    Port Arthur, Texas
 KPAC
            ak
                    500
                          D
                                    Weslaco, Texas
Siloam Spgs., Ark.
Tucson, Ariz.
Dayton, Ohio
Springfield, Vt.
                  1000
 KRGV
            ak
                           В
 KUOA
            ak
                  2500
                          D
                                                                    -Ariz. Brdcstg. Co., Inc.
-Dayton Daily News
-WNBX Brdctsgd, Corp.
 KVOA
            ak
                  1000
                           C (5)
 WHIO
            ak
                  1000
 WNBX
            ak
                  1000
 WTOC
            ak
                  1000
                                    Sayannah, Ga.
                                                                    Savannah Brdcstg. Co.
 1270 kcys.
                          (236.1)
                                                                    -Manuel Alvarez M.
-Chas. W. Greenley
-Seattle Brdcstg. Co.
 CMHD
             dk
                    250
                                    Caibarien, Cuba
                          2D..
 KGCA
KOL
KVOR
KWLC
             ak
                    100
                                    Decorah, Iowa
Seattle, Wash.
                          C (5)
             ak
                  1000
                                    Colo. Springs, Colo.
                                                                    Out West Brdcstg. Co.
             ak
                  1000
                           2D
                                                                    -Luther College
-King-Trendle Brdcstg, Corp.
             ak
                    100
                                     Decorah, Iowa
                           DaNX Grd. Rpds., Mich.
R (1) Baltimore, Md.
N (2.5) Jackson, Miss.
  WASH
             ak
                    500
                    500
  WFBR
             ak
                                                                    Balt. Radio Show, Inc.
Lamar Life Insurance Co
  WJDX
             nk
                   1000
  WOOD
                           NaX
                                     Gd. Rapids, Mich.

    King-Trendle Brdcstg. Corp.
    Gobierno del E. de Ver.

             ak
                    500
 XEXB
             nk
                     50
                                     Jalapa, Ver.
 1280 kcys.
                          (234.2)
  CMCU
             ak
                    500
                                     Havana, Cuba
 CMKO
             z
                                     Holguin, Cuba
                           C (2.5) Great Fails, Mont.
                                                                  —Buttrey Brdcstg. Co.
—Warner Bros.
—City of Camden
—Radio Industries Brdcstg. Co.
  KFBB
             ak
                   1000
                                    Oakland, Calif.
Camden, N. J.
Asbury Park, N. J.
  KLS
             nk
                    250
  WCAM
WCAP
             nk
                    500
             nk
                    500
  WDOD
                           C (5)
N (5)
                                     Chattanooga, Tenn.
Madison, Wis.
                                                                    -WDOD Brdestg, Corp.
-Badger Brdestg, Co.
-Alf, E. Kleindienst
-City of Dallas
             nk
                   1000
  WIBA
                   1000
             nk
  WORC
                                     Worcester, Mass.
Dallas, Texas
             Ωk
                    500
                           C
                           M
  WRR
             ak
                    500
                                                                    -WOAX, Inc.
-Alfonso Traslosheros A.
             ak
                    500
                                     Trenton, N. J.
Mexico City, D. F.
  XEMX
  1290 keys. (232.4)
  KDYL ak 1000 RX
                                     Salt Lake City, Ut.
                                                                 -Intermountain Brdcstg. Corp.
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-C. L. Lintzenich
-KTRH Brdcstg. Co.
-Head of the Lakes Brdcstg. Co.
-Pitt. Radio Supply House
KLCN
                                               Blytheville, Ark.
               ak
                                 G (5)
N (5)
G (5)
                                               Houston, Texas
Duluth, Minn.
KTRH
               ak
                       1000
WEBC
               ak
                       1000
WJAS
               ak
                       1000
                                               Pittsburgh, Pa.
Saranac Lake, N. Y.
WNBZ
               ak
                         100
                                  \mathbf{p}
                                                                                          Smlth & Mace
                                  (2.5)
                      1000
                                               San Juan, P. R.
                                                                                          Juan Plza, Box 1252
WNEL
               яk
1300 kcys. (230.6)
                                                                                         -KALE, Inc.
-L. A. Brdcstg. Co., Inc.
                         500
                                  \mathbf{C}
                                               Portland, Ore
KALE
               ak
                                               Los Angeles, Calif.
Wichita, Kans.
KFAC
               Ωk
                       1000
                                  G(5)
                                                                                         -Station KFH
KFH
               ak
                       1000
                                               Brooklyn, N. Y.
New York, N. Y.
New York, N. Y.
                                                                                         -People's Pulpit Ass'n.
-Debs Memorial Radio Fund
WBBR
               ak
                       1000
WEVD
               ak
                       1000
                                                                                        -5th Ave. Brdcstg. Corp.
-Greenville News-Pledmont Co.
-Rensselaer Polytechnic Inst.
                      1000
WFAB
               ak
                                 Ñ (5)
                                               Greenville, S. C.
Troy, N. Y.
WFBC
               ak
                       1000
WHAZ
                        500
250
               ak
                                               Sheboygan, Wis.
Miami, Fla.
WHBL
               ak
ak
                                                                                         Press Pub. Co.
                                 Ñ.
                      1000
                                                                                         Isle of Dreams Brdcstg. Corp.
WIOD
1310 keys. (228.9)
                                               Charlottetown, P.E.I.—Burke & Gesner.
CHCK
               ak
                          50
CJKL
CJLS
             · ak
                         100
                                  F
                                               Kirkland Lake, Ont.
                                                                                         Northern Brdcstg. Co.
                                                                                         Laurie L. Smith
CKCV, Ltd.
                         100
                                               Yarmouth, N. S.
               ak
                                 ŕ..
                                              Quebec, P. Q.
Corsicana, Tex.
Kansas City, Kans.
CKCV
KAND
               ak
                         100
                                                                                        -Navarro Brdcstg. Ass'n.
-Navarro Brdcstg. Co.
-KCKN Brdcstg. Co.
-Chas. C. Robinson
-C. C. Baxter, Box 176
                                 D
                         100
               z
KCKN
               ak
                         100
                                 DX
(.25)
(.25)
(.25)
                                              Kansas City, Kans
Jerome, Arlz.
Dublin, Texas
Okla. City, Okla.
Lubbock, Texas
Kalispell, Mont.
Kearney, Nebr.
Watsonville, Calif.
KCRJ
                         100
               ak
                        100
KFPL
KFXR
               dk
               ak
                         100
                                                                                         Exchange Ave. Bap. Church
                                                                                        -Exchange Ave. Bap. Church
-Plains Radio Brdcstg. Co.
-Donald C. Treloar
-Cent. Nebr. Brdcstg. Corp.
KFYO
KGEZ
               ak
                         100
               ak
                         100
                                  . . . .
KĞFW
              ak
                         100
KHUB
KINY
                         250
                                                                                         Anna Atkinson
               \mathbf{z}
                                                                                        -Edwin A. Kraft

-Carl E. Haymond

-R. C. Hoiles

-KRMD, Inc.
                                 Juneau, Alaska
XZ(.25) Yakima, Wash.
D Pampa, Texas
                         100
               ak
KIT
               ak
                         100
KPDN
               ak
                         100
                                              Shreveport, La.
Rochester, Minn.
Santa Fe, N. Mex.
Sherman, Texas
                                 (.25)
                         100
KRMD
              ak
                        100
100
100
250
                                                                                         -So. Minn. Brdcstg. Co.
J. Laurance Martin
KROC
              ak
                                 Ď...
KRQA
KRRV
               ak
                                                                                        -Red River Valley Brdcstg. Corp.
-Press-Democrat Pub. Co.
                                              Santa Rosa, Calif.
Cedar City, Utah
El Paso, Texas
Lafayette, La.
Moorhead, Minn.
Jefferson City, Mo.
Aberdeen, Wash.
                                 ĎР
KSRO
KSUB
                         250
              z
                                                                                         Johnson & Perry
Tri-State Brdcstg. Co
                         100
              7.
                                 (.25)
KTSM
                         100
              яk
                                                                                        Evangeline Brdestg. Co.

-Robert K. Herbst

-Tribune Ptg. Co.

-KXRO, Inc.

-New Laurel Radio Station
KVOL
                         100
               ak
KVOX
KWOS
                         100
               z
                                 Ď
               7
                         100
KXRO
WAML
WBEO
               ak
                         100
                                  . . . .
                                              Laurel, Miss.
Marquette, Mich.
              ak
                         100
                                 Ď...
                                                                                        Lake Superior Brdcstg. Co.-
Banks of the Wabash, Inc.-
Louis G. Baltimore
-WCLS, Inc.
                         100
               ak
                                             Terre Haute, Ind.
Wilkes-Barre, Pa.
WBOW
                                 B (.25)
               ak
                         100
WBRE
               ak
                         100
WCLS
               ak
                         100
                                 ... Joliet, Ili.
(.25) Ashland, Ky.
S (.25) El Paso, Texas
B (.25) Buffalo, N. Y.
Milwaukee, Wis,
Royal Oak, Mich.
                                               Joliet, Ill.
WCMI
WDAH
                                                                                         Ashland Brdcstg, Co.
               ak
                         100
               ak
                         100
                                                                                        -Tri-State Brdcstg, Co.
                                                                                        WEBR, Inc.
-Milwaukee Brdcstg. Co.
-Royal Oak Brdcstg. Co.
-Gable Brdcstg. Co.
-Flint Brdcstg. Co.
WEBR
               ak
                         100
WEMP
               ak
                         100
WEXL
               ak
                          50
                                 <u>.</u>...
WFBG
WFDF
                         100
                                               Altoona, Pa.
               ak
                                               Flint, Mich.
               ak
                        100
                                 (.25)
DP
                                             Newport News, Va.
Wilson, N. C.
Philadelphia, Pa.
Johnstown, Pa.
Lakeland, Fla.
WGH
WGTM
WHAT
WJAC
                                                                                        -Hampton Roads Brdcstg. Corp.
-H. W. Wilson and Ben Farmer
                        100
               ak
                         100
               z
                                                                                        Independence Brdcstg. Co.-WJAC, Inc.
Lake Region Brdcstg. Co.
               ak
                         100
                                 \hat{3} (.25)
               ak
                         100
WLAK
WLBC
                         100
                                 .... Lakeland, Fla.
(,25) Muncle, Ind.
M Laconia, N. H.
Auburn, N. Y.
(,25) Plattsburg, N. Y.
M (,25) New Bedford, Mass.
MXZ Washington, D. C.
                                                                                        -Donald A. Burton
-Northern Brdcstg. Co.
               ak
                         100
WLNH
                        100
               ak
                         100
                                                                                        WMBO, Inc
WMBO
               ak
                                                                                        Plattsburg Brdcstg. Corp.
WMFF
               ak
                         100
                                                                                      -Plattsburg Brdestg, Corp.

-E. Anthony & Sons, Inc.

-American Brdestg, Co.

-Reading Brdestg, Co.

-Stuart Brdestg, Corp.

-Grove City College

-Birmingham News Co.

-W.-S, Journal Co.

-Fla, Capital Brdesters, Inc.
WNBH
               ak
                         100
WOL
WRAW
                         100
               ak
                                 Reading, Pa.

Reading, Pa.

B(.25) Knoxville, Tenn.

Grove City, Pa.
               ak
                         100
                         100
WROL
               ak
WSAJ
WSGN
WSJS
               ak
                         100
                                 B (.25) Birmingham, Ala. -
C Winston-Salem, N. C.
               ak
                         100
               ak
                         100
                                              Tallahassee, Fla.
              ak
                        100
                                 ....
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WTEL
                                                           -Foulkrod Radlo Eng. Co.
                                Philadelphia, Pa.
                       (.25)
(.25)
                               Jackson, Tenn.
Elkhart, Ind.
                                                            -Sun Pub. Co., Inc.
-Truth Pub. Co., Inc.
WTJS
          ak
                100
WTRC
          ak
                 100
XEAG
XECW
          z
                  10
                                Cordoba, Ver.
                                                            -Diodora Zuniga
                       . . . .
                               Mexico City, D. F.
Tampico, Tams.
Torreon, Coah.
          ak
                  10
                                                            -Ma. Elena Bravo de Cordero
                       . . . .
XEFW
          ak
                 250
                                                           -Jose Expedito Martinez
                       . . . .
XETB
XEX
                 125
                                                          -P. O. Box 225
-L. F. Petit Jean.
          ak
                       . . . .
                      ...
P
                               Monterrey, N. L.
Fresno, Calif.
Lufkin, Texas
          ak
                 125
                 100
                                                           -George Harm
          Z.
                       ĎР
          7
                 100
                                                            -Red Lands Brdcstg. Assn.
                100
                       P (.25) Pittsfield, Mass.
                                                          -Harold Thomas.
          7
1320 kcys.
                      (227.1)
                      ....
В
                                Havana, Cuba
Pueblo, Colo.
CMOX
          nk
                 200
KGHF
KGMB
                                                          -Curtis P. Ritchie
                 500
          am
                       čм
                                Honolulu, Hawali
          nk
               1000
                                                           —Honolulu Brdestg. Co.
KID
          nk
                 500
                       (1)
                                Idaho Falls, Idaho
Des Molnes, Iowa
                                                             -KID Brdcstg. Co.
                                                          -lown Brdcstg. Co.
-Allen T. Simmons
-York Brdcstg. Co.
KRNT
               1000
                       Č (5)
          nk
                                Akron, Ohio
York, Pa.
WADC
          nk
               1000
                       Č
WORK
               1000
                       \tilde{\mathbf{B}}
          nk
WSMB
          nk
               1000
                                New Orleans, La.
                                                           -WSMB, Inc.
1330 kcys.
                      (225.4)
CMHK
                 250
                                Cruces, Cuba
                                                             -Virgilio Villanueva
          z
                       M
KGB
          ak
               1000
                                San Diego, Calif.
Tacoma, Wash.
Corpus Christi, Tex.
                                                           -Don Lee Brdcstg. Sys.
                                                             KMO, Inc.
Gulf Coast Brdestg. Co.
кмо
               1000
          nk
                       ВP
KRIS
                 500
          Z.
                       C (5)
C (5)
KSCJ
          nk
                1000
                                Sloux City, Iown
Hartford, Conn.
                                                           -Sloux City Journal
-WDRC, Inc.
WDRC
          nk
                1000
WSAI
          πk
                1000
                       MR(2.5) Cincinnati, Ohio
                                                           -Crosley Radio Corp.
-WIIBY, Inc.
WTAO
          nk
                1000
                                Green Bay, Wis.
1340 kcys. (223.7)
CMAB
                                Pinar del Rio, Cuba
                                                          -llotel Ricardo
           z
                75
                       . . . .
                       Camaguey, Cuba
D Huron, S. Dak.
N (2.5) Butte, Mont.
Dodge City, Kans.
CX Pensacola, Fla.
                                                          -M. Caymares, Republica 181
CMJL
KGDY
                 250
                                                           -Volce of S. Dak., Inc.
           nk
                                                          -KGIR, Inc.
-Dodge City Brdestg. Co.
-Pensacola Brdestg. Co.
KGIR
KGNO
WCOA
                1000
           nk
           nk
                 250
                 500
           nk
WFEA
           nk
                 500
                       BM(1) Manchester, N. Il.
                                                             N. H. Brdcstg. Co.
WSPD
           nk
                1000
                       B (5)
                                Toledo, Ohio
Jainpa, Ver.

    The Fort Industry Co.
    Gobierno del E. de Ver.

XEXD
                 350
           Z.
                       ĎP.
                 500
                                Dubuque, Iowa
                                                            Telegraph Herald
1350 kcys.
                       (222.1)
CMCA
CMKW
                                                           —Testur y Gonzules
—Repurto Vista Alegre
—Boise Brdcstg. Station
                 450
                                Havana, Cuba
           7
                        B (2.5) Bolse, Idaho
KIDO
                1000
           nk
                                                           -Thomas Patrick, Inc.
-Pillar of Fire
-WBNX Brdcstg. Co.
KWK
                        BM(5) St. Louis, Mo.
           nk
                1000
 WAWZ
                 500
                                Zarephath, N. J.
New York, N. Y.
          nk
                        1(1)
 WBNX
                1000
           nk
 1360 kcys.
                       (220.4)
 смли
           dk
                                Ciego de Avila, Cuba - Luis Marauri II.
                       й...
 KCRC
KGLR
           nk
                 250
                                                           -Enid Radiophone Co.
                                Enid, Okia.
                1000
           пk
                                Long Beach, Callf.
                                                           -Consolidated Brdc, Corp.
                        Sii
                  500
 WCSC
                                Charleston, S. C.
Syracuse, N. Y.
Chleago, III.
                                                           -S. C. Brdestg. Co.
           nk
 WFBL.
           nk
                        C (5)
                1000
                                                           -Onondaga Radio Brdestg, Corp.
 WGES
                 500
                        1(1)

    Oak Leaves Brdestg, Sta.
    Delta Brdestg, Co., Inc.
    South Bend Tribune
           пk
 WORC
           nk
                1000
                        Ď
                                Vicksburg, Miss.
 WSBT
           nk
                 500
                        1
                                South Bend, Ind.
 1370 kcys.
                       (218.8)
 CKCW
                  100
                        r
           nk
                                 Moneton, N. B.
                                                           -Moneton Brdestg, Co.
                                                           - Genaro Sebater

- Astoria Brdestg, Co.

- KCMO Brdestg, Co.
 CMGE
           nk
                  150
                                 Cardenna, Cuba
                                Astoria, Ore.
Kansas City, Mo.
 KAST
           nk
                  100
                        D
 KCMO
           nk
                  100
                        í
 KELN
                  100
                                 Scattle, Wash.
                                                           - KVL, Inc.
           пL
 KILD
                       <u>і</u>...
           Ī
                  100
                                 El Dorado, Ark
                                                             Radio Enterprises, Inc.
 LIRN
           n1:
                  100
                                 Bakersfield, Calif.
                                                             McClatchey Brdestg, Co.
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Boone, Iowa
Fort Worth, Texas
Longview, Texas
KFGQ
                                                                               Boone Biblical College
              ak
                      100
KFJZ
                      100
                              (.25)
                                                                               Ft. Worth Brdcsters, Inc.
              ak
                                                                               Voice of Longview
Tucson Motor Service
                      250
                              Ď
KFRO
              ak
KGAR
                      100
                              (.25)
                                          Tucson, Arizona
              ak
KGFL
                                          Roswell, N. Mex.
                                                                               KGFL, Inc.
KGKL, Inc.
              ak
                      100
                              (.25)
                                         San Angelo, Texas
Clovis, N. Mex.
KGKL
              ak
                      100
                                                                               Western Brdcsters., Inc.
KICA
              ak
                      100
                              4
                                                                               -Western Brdcsters., Inc.-
San Juan Brdcstg. Co.-
Geo. R. Clough
-W. W. McAllister
-Black Hills Brdcstg. Co.-
-Southwest Brdcstg. Co.-
-Mission Brdcstg. Co.-
-Cent. Calif. Brdc., Inc.-
-Lee Mudgett
-Roberts McNab Co.-
-Oregon Radio, Inc.-
-Bell Brdcstg. Co.-
-Okla. Brdcstg. Co.
                                         Durango, Colo.
Galveston, Texas
San Antonio, Tex.
Rapid City, S. Dak.
La Junta, Colo.
KIUP
              ak
                      100
KLUF
KMAC
              ak
                      100
             ak
                              5 (.25)
                      100
ковн
              ak
                      100
                             Ė
KOKO
KONO
                      100
              z
                      100
                                          San Antonio, Tex.
              ak
                              (.25)
KRE
KRKO
                                         Berkeley, Calif.
Everett, Wash.
                      100
              ak
                       50
              ak
                              (.25)
KRMC
                      100
                                          Jamestown, N. D.
KSLM
              ak
                      100
                                          Saiem, Ore.
                                         Saiem, Ore.
Temple, Texas
Oklahoma City, Ok.
Walla Walla, Wash.
Great Bend, Kans.
Sheridan, Wyo.
Albany, N. Y.
Dethon, Alo.
KTEM
                      250
              7.
                                                                               -Okla. Brdcstg. Co.
-KUJ, Inc.
KTOK
             ьk
                              M
                      100
KUJ
              ak
                      100
KVGB
                      100
                                                                               Ernest Edward Ruehlen
              z
                              (.25)
B
KWYO
                      100
                                                                               Big Horn Brdcstg, Co.
             ak
WABY
             ak
                      100
                                                                               Adirondack Brdcstg. Co.
                                         Dothan, Ala.
                                                                               Dothan Brdcstg. Co.
Atlanta Brdcstg. Co.
WAGF
             ak
                      250
                              D
                                         Dothan, ....
Atlanta, Ga.
                                         Atlanta, Clarksburg, W
WATL
             ak
                      100
                              (.25)
                                                                               The Exponent Corp.
Roy L. Albertson
WBLK
             ak
                      100
                              2 (.25)
(.25)
(.25)
(.25)
(.25)
                      100
                                         Buffalo, N.
Danville, Va
WBNY
             ak
                                                                               Piedmont Brdcstg. Corp.
WBTM
             ak
                      100
                                                                               Baltimore, Brdestg. Co.
Baltimore, Brdestg. Co.
WDAS Brdestg. Station, Inc.
Champ. News-Gazette, Inc.
Evans. on the Alr. Inc.
Forrest Brdestg. Co.
Westinghouse Radio Sta., Inc.
North Side Brdestg. Corp.
WCBM
             ak
                      100
                                          Baltimore, Md
WDAS
                      100
                                         Philadelphia, Pa.
Champaign, Ill.
              ak
WDWS
             ak
                      100
                                         Evansville, Ind.
WEOA
                      100
                              (.25)
              z
WFOR
                      100
             ak
                                         Hattiesburg, Miss.
                              . . . .
                             D ...
WGL
              ak
                      100
                                         Fort Wayne, Ind.
                                         New Albany, Ind.
Memphis, Tenn.
Calumet, Mich.
Virginia, Minn.
WGRC
                      250
             ak
                                                                               -WHBO, Inc.
-Upper Mich. Brdcstg. Corp.
WHBO
             ak
                      100
                              (.25)
WHDF
             ak
                      100
                                                                               Head of the Lakes Brdcstg. Co.
WHLB
                      100
             ak
                              (.25) Jackson, Mich.
MSy(.25) Loweli, Mass.
C (.25) Jacksonville, Fla.
WIBM
             ak
                      100
                                                                               WIBM, Inc.
WLLH
                      100
                                                                               Merrimac Brdcstg. Co.
             ak
                                                                               Fla. Brdcstg. Co.
-Richard A. Dunlea
-James R. Doss, Jr.
-WMIN Brdcstg. Co.
WMBR
             ak
                      100
                                          Wilmington, N. C.
WMFD
              ak
                      100
                              Ď
                                         Decatur, Ala.
St. Paul, Minn.
WMFO
             ak
                      100
                              \mathbf{D}
                              (.25) St. Paul, Minn.
C (.25) Davenport, Iowa
WMIN
             ak
                      100
                             Avenport, Iowa
Portsmouth, Ohio
(.25) P Mayaguez, P. R.
Williamsport, Pa.
M. Augusto
WOC
                                                                               Tri-City Brdcstg. Co.
Veebee Corp.
             ak
                      100
             ak
                      100
                                                                               -Veebee Corp.
-P. R. Advertising Co.
-WRAK, Inc.
-WRDO, Inc.
-Racine Brdcstg, Corp.
WPRA
                      100
WRAK
             ak
                      100
                                         Augusta, Maine
Racine, Wis.
Wausau, Wis.
Buffalo, N. Y.
WRDO
             ak
                      100
WRJN
                              (.25)
D
             ak
                      100
WSAU
WSVS
                     100
                                                                               Northern Brdcstg. Co.
             7.
                                                                              -Seneca Voc. High School
-Zeferino Z. Jimenez
-Carlos Gutierrez M.
                              \tilde{2}D
             ak
                       50
XECZ
                      100
                                         San L. Pot., S.L.P.
Morelia, Mich.
              Z.
                              . . . .
             ak
XEI
                      125
                                         Mexico City, D. F.
Lawrence, Mass.
                                                                               Aureliano Mirabel
Merrimac Brdcstg. Co.
XELZ
                      100
             7.
             z 10-100
                              SyP
1380 kcys.
                             (217.3)
                                                                           -The Bee, Inc.
-KQV Brdcstg. Co.
-Pape Brdcstg. Co.
-WKBH, Inc.
-State Brdcstg. Corp.
-WSMK, Inc.
                              C
C1
                                         Reno, Nevada
кон
              ak
                      500
KOV
WALA
WKBH
WNBC
                                         Pittsburgh, Pa.
Mobile, Ala.
              ak
                      500
                              Č(1)
             ak
                      500
             ak
                      100
                                         La Crosse, Wis.
New Britain, Conn.
                      250
                              Ď
             ak
WSMK
             ak
                      200
                              C 1
                                         Dayton, Ohio
1390 keys. (215.7)
CJGX
              ak
                      100
                              F
                                          Yorkton, Sask
                                                                             —J. Richardson & Sons, Ltd.

Felix Sanchez
Ark. Brdcstg. Co.
Salt River Brdcstg. Co.

CMJC
                     150
                                         Camaguey, Cuba
Little Rock, Ark.
              z
                             C (5)
KLRA
KOY
             ak
                    1000
             ak
                    1000
                                         Phoenix, Ariz.
                                                                              -H. E. Studebaker
KRLC
             ak
                      250
                                         Lewiston, Idaho
                             C (2.5) Cleveland, Ohio
WHK
             ak
                    1000
                                                                               Radio Air Corp.
WODM dk
                    1000
                                         St. Albans, Vt.
                                                                               Regan & Bostwick
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#### 1400 keys. (214.2) CMGC ad 150 Matanzas, Cuba Oscar Mechoso matanzas, Cuba Santiago, Cuba Hilo, T. H. Ogden, Utah Tulsa, Okla. Brooklyn, N. Y. Olean, N. Y. CKKR KHBC -Jaime Nadal 100 CM —Honolulu Brdcstg. Co., Ltd. —Interstate Brdcstg. Corp. —Tulsa Brdcstg. Co., Inc. —Brooklyn Brdcstg. Corp. ak 250 500 KLO B C (1) ak KTUL ak 500 WBBC ak 500 2(1) -WHDL, Inc. 250 WHDI. ak D MR (5) Indianapolis, Ind. 2 Brooklyn, N. Y. WIRE ak 1000 -Indianapolis Brdcstg., Inc WVFW 500 -Paramount Brdcstg, Co. пk 1410 keys. (212.6) CKFC CKMO CMCQ Vancouver, B. C. -Standard Brdcstg. System, Ltd. -British Columbia Brdcstg., Ltd. ak 50 5 5F ak 100 Vancouver, B. C. Havana, Cuba Grand Forks, N. D. -Calle Vista Alegre 90 -University of N. Dak. ak 250 KFJM 500 (1) ak (2.5) B Amarilio, Texas ... Medford, Ore. M (1) Boston, Mass. KGNC ak 1000 -Plains Radlo Brdcstg. Co. 250 500 -Mrs. W. J. Virgin -Yankee Network, Inc. KMED ck WAAB WBCM ak Bay Clty, Mich. Bluefield, W. Va. Rockford, Ill. X (1) -James E. Davidson -Daily Telegraph Ptg. Co. ak 500 WHIS ak 500 WROK 500 (1) C (1) -Rockford Broadcasters, Inc ak WSFA nk Montgomery, Ala. -Montgomery Brdcstg. Co., Inc. 1420 kcys. (211.1) CKGB CRCY KABC -Northern Brdcstg. Co., Ltd. ak 100 Timmins, Ont. Toronto, Ont. San Antonio, Texas Aberdeen, S. D. ak 100 -Canadlan Brdcstg. Corp. (.25)ak 100 -Alamo Brdcstg. Co., -Aberdeen Brdeste, Co. -Albert Lea Brdeste, Corp. -Benson Polytechnic School -KCMC, Inc. -Eastern Utah Brdeste, Co. KABR ak 100 KATE KBPS 250 ĎΡ Albert Lea, Minn. Portland, Ore. 7. ak 100 KCMC KEUB (.25)100 Texarkana, Tex. Price, Utah nk ak 100 . . . . Reporter Printing Co. KGFF, Inc. Golden Gate Brdcstg. Co. Leonard E. Wilson Southwest Brdcstg. Co. Fond du Lac, Wis. KFIZ KGFF 100 (.25) M Shawnee, Okla. ak 100 WGGC KGIW KIDW San Francisco, Cal. nk 100 Alamosa, Colo. Lamar, Colo. Pecos, Texas nk 100 nk 100 1 -J. II. Hawkins & B. H. Tubbs -Harold M. Finley -Palestine Bridestg. Ass'n. KIUN nk 100 (.25) P La Grande, Ore. D Palestine, Texas KLBM 100 7. KNET 100 KORE KRBC KRLH Eugene, Ore. Abilene, Texas Midland, Texas Eugene Brdcstg. Station nk 100 100 (.25)nk —Reporter Brdcstg. Co. —Clarence Scharbaur —Dr. A. H. Schermann —W. N. Greenwald —KXL Broadcasters 100 D KUMA 100 Yuma, Arlz. Hutchnison, Kans. KWBG nk 100 KXL WACO 4 (.25) C Portland, Ore. nk 100 Waco, Texas -KTSA Brdcstg. Co. nk 100 Presque Isle, Me. WAGM 100 -Aroostook Brdcstg. Corp. -W. A. Patterson nk Ď WAPO 100 Chattanooga, Tenn. яk WAZL яk 100 2 Hazleton, Pa. Hazleton Brdestg, Serv., Inc. WCBS nk 100 Springfield, III. WCBS, Inc. -WCBS, Inc. -Community Brdestg, Corp. -Wm, Avera Wynne, Box 221 -Enguirer News Co. -Americus Brdestg, Corp. -WIIFC, Inc., 6138 Cerniuk Rd. -Delaware Brdestg, Corp. WCIIV nk 100 3 (.25) Charlottesville, Va. 3 (.25) Rocky Mount, N. C. Battle Creek, Mich. WEED 100 яk WELL nk 100 WGPC nk 100 Albany, Ga. Cicero, Ill. (.25) яk 100 WILM n j n k 100 Wilmington, Del. Baton Rouge, La. Gastonia, N. C. Ironwood, Mich. WJBO 100 BXZ Baton Rouge Brdestg. Co., Inc. WJBR 100 J. B. Roberts -J. B. Roberts -WJMS, Inc., St. James Hotel -American Brdestg, Corp. -Leo J. Omellan, Commerce Bidg, -WMAS, Inc., Hotel Stonehaven WJMS nk 100 (.25) Lexing w... (.25) B Eric, Pa. C (.25) Springfield, Mass. (.25) Detroit, Mich. (.25) Springfield, Mass. (.25) Pariott, Mich. WLAP nk 100 WLEU WMAS πk 100 nk 100 WMBC 100 -Michigan Brdestg. Co. WMBH nk 100 -Joplin Brdcatg, Co. -Fayette Brdestg, Corp. -W. W. Esch -Muscle Shoals Brdestg, Corp. WMBS 250 Uniontown, Pa z WMFJ nk 100 Daytona Bch., Fla. . . . . WMSD 100 Sheffield, Ala. яk (.25) P WNNY -Black River Valley Broadcasts, Inc. 100 Watertown, N. Y. WPAD -Paducah Brdestg, Co., Inc. яk 100 1,25) Paducalı, Ky. WPAR 100 C Parkersburg, W. V. -Ohlo Valley Brdcstg. Corp.

```
WPRP
            z
                         (.25) Ponce, Puerto Ri
(.25) P Sioux City, Iowa
                                   Ponce, Puerto Rico
                                                              -Julio M. Conesa
                   100
                                                                 Sioux City Brdcstg. Co.
            z
 1430 kcys. (209.7)
 CMJP
            Ωk
                    75
                                   Moron, Cuba
                                                              —Cesar Canall, Calleias 80
                         (5) B
                                                              --Cesar Canani, Callejas 80
--E. C. Anthony, Inc.
--Great Plains Brdcstg. Co.
--lowa Brdcstg. Co.
--WBNS, Inc., 33 N. High St.
--WHPC, Inc., 40 Franklin St.
--WHP, Inc., 216 Locust St.
--Memphis Commercial Appeal
                 1000
 KECA ·
            ak
                                   Los Angeles, Cal.
North Platte, Neb.
 KGNF
            ak
                  1000
                         BM(2.5) Des Moines, Iowa
 KSO
            ak
                   500
 WBNS
                         C (1)
C (1)
C (1)
                                  Columbus, Ohio
Rochester, N. Y.
            яk
                   500
 WHEC
            ak
                   500
                                   Harrisburg, Pa.
Memphis, Tenn.
 WHP
                   500
            ak
 WNBR
            ak
                   500
                         (1) B
C (1)
                                   Memphis, Ter
Albany, N. Y.
 WOKO
            ak
                   500
                                                                 WOKO, Inc., Hotel Ten Eyck
1440 keys. (208.2)
CMOA
KDFN
                                  Havana, Cuba
Casper, Wyo.
Houston, Texas
                   150
            z
                                                                -Juan Fernandez Duran
            ak
                   500
                         <u>.</u>...
                                                                 Donald Lewis Hathaway
 KXYZ
            ak
                 1000
                                                                Harris County Brdcstg. Co.
 WBIG
                         \bar{\mathbf{c}}
                                  Greensboro, N. C.
Allentown, Pa.
                                                               -N. C. Brdcstg. Co., Inc.
-B. B. Musselman
            ak
                 1000
 WCBA
                  500
            aj
                         я
 WMBD
                         C(1)X
                   500
                                                                -Peoria Brdcstg. Co.
-WSAN, Inc., 39 Tenth St.
            ak
                                  Peoria, Ill.
 WSAN
           aj
ak
                  500
                         Ba
                                  Allentown, Pa
XEFI
                  250
                                  Chihuahua, Chih.
                                                               -Feliciano Lopez Isles
                                  Centralia, Wash.
                  500
                                                              -Central Brdcstg. Corp.
1450 kcys.
                        (206.8)
                                  Victoria, B. C.
Summerside, P.E.I.
CFCT
           ak
                   50
50

    Victoria Brdcstg. Assn.
    R. T. Holman, Ltd.

CHGS
           ak
CMHM
                                  Cienfuegos, Cuba
Wolf Point, Mont.
                                                                -Hotel Union
           z
                  100
                         . . . .
                                                                E. E. Krebsbach
KGCX
           ak
                 1000
                         . . . .
                                                                -Redwood Brdcstg. Co., Inc.
-Tri-State Brdcstg. System, Inc.
-WGAR Brdcstg. Co.
KIEM
                  500
                                  Eureka, Calif.
           ak
KTBS
           ak
                 1000
                         N Shreveport, La.
MB (1) Cleveland, Ohio
WGAR
           ak
                  500
                                  Jersey City, N. J.
Fall River, Mass.
Atlanta, Ga.
Juarez, Chih.
                                                                New Jersey Brdcstg. Corp.
Doughty & Welch Elec. Co., Inc.
WHOM
           ak
                  250
                         ӥ́
WSAR
                 1000
           ak
WTFI
                  500
                                                                Liberty Brdcstg. Co.
           nk
XEF
                  100
                                                                Box 70
                        (205.4)
1460
           kcys.
                        Holguin, Cuba
R (25) St. Paul, Minn.
                                                                -Manuel J. DeGongora
-National Battery Brdcstg. Co.
CMKF
                  250
           ak 10000
KSTP
WJŚV
           ak 10000
                                  Washington, D. C.
                                                                Columbia Brdcstg, System
1470 kcys.
                         (204.0)
                                  Spokane, Wash.
Nashville, Tenn.
                                                                Louis Wasmer
                5000
WLAC
                        ć
           ak 5000
                                                                -WLAC, Inc.
1480 kcys.
                        (202.6)
KOMA
                5000
                                  Oklahoma City, Ok.
                                                             -Hearst Radio, Inc.
         ak
                        ĎΡ
                                 Hammond, Ind.
Buffalo, N. Y.
                                                               -Hammond-Calumet Brdcstg. Corp.
                5000
WKBW ak
               5000
                                                               Buffalo Brdcstg. Corp.
1490 kcys.
                        (201.2)
          ak 5000
ak 5000
KFBK
                                 Sacramento, Calif.
                                                               -McClatchey Brdcstg. Co.
WCKY
                        BX
                                 Covington, Ky.
                                                             -L. B. Wilson, Inc.
1500 kcys.
                        (199.9)
                                                               Hyland & Whitby
CJIC
           ak
                  100
                                 S. S. Marie, Ont.
KAWM
KBIX
                                 Gallup, N. Mex.
Muskogee, Okla.
Big Spring, Texas
Duluth, Minn.
                  100
                                                               A. W. Mille
           z
           ak
                  100
                        M
                                                               Muskogee Press
KBST
                                                               Big Spring Herald Brdcstg. Co.
Red River Brdcstg. Co., Inc.
                  100
           z
                        . . . .
KDAL
           ak
                  100
                        M(.25)
Y(.25)
                                Santa Barbara, Cal.
Corp. Christi, Tex.
Tyler, Texas
KDB
           ak
                  100
                                                               Santa Barbara Brdcsters., Ltd.
KGFI
KGKB
KGKY
                                                               Eagle Brdcstg. Co., Inc.
East Texas Brdcstg. Co.
          ak
                 100
                        (.25)
          ak
                 100
                                                               Hilliard Co., Inc.
                 100
          ak
                                 Scottsbluff, Neb.
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KNEL	ak	250	D	Brady, Texas	-G. L. Burns, Box 1077
KNOW	ak	100	C	Austin, Texas	-KUT Brdcstg. Co.
KOTN	ak	100	Ď	Pine Bluff, Ark.	-Universal Brdcstg. Corp.
KOVC	ak	100	_	Valley City, N. D.	-KOVC, Inc.
KPLC	ak	100	(.25)	Lake Charles, La.	-Calcasleu Brdcstg. Co.
KPLT	z	250	Ď	Paris, Texas	-North Texas Brdcstg. Co.
KPO	ak	100	(.25)	Wenatchee, Wash.	-Wescoast Brdcstg. Co.
KŔŇŔ	ak	100	(.25)	Roseburg, Ore.	-News-Review Co.
KROD	ak	100	P	El Paso, Texas	-Dorrence D. Roderick
KSAL	ak	100	(.25)	Salina, Kans.	-R. J. Laubengayer
KUTA	z	100	P	Salt Lake City, Ut.	Utah Broadcasting Co.
KVOE	ak	100	M	Santa Ana, Calif.	-Voice of Orange Empire, Ltd.
KXO	ak	100	***	El Centro, Calif.	-F. M. Bowles, Box 140
WCNW	ak	100	1 (.25)	Brooklyn, N. Y.	Arthur Faske
WDNC	ak	100	C	Durham, N. C.	-Durham Radio Corp.
WGAL	ak	100	(.25)	Lancaster, Pa.	-WGAL, Inc., 8 W. King St.
WHBB	ak	100	, ,	Selma, Ala.	-Selma Brdcstg. Co., Inc.
WHEF	ak	100	(.25) (.25)	Kosciusko, Miss.	-Attala Brdcstg. Corp.
WJBK	ak	100	25	Detroit, Mich.	-Jas. F. Hopkins, Inc.
WKAT	z	100	P	Miami Beach, Fla.	-A, Frank Katzentine
WKBB	ak	100	(25)	E. Dubuque, Ill.	-Sanders Bros., Hotel Julian
WKBV	ak	100	(.25) (.25)	Richmond, Ind.	-Knox Radio Corp.
WKBZ	ak	100	(.25)	Muskegon, Mich.	-Karl L. Ashbacker
WKEU	ak	100	D	Griffin, Ga.	-Station WKEU
WMBO	ak	100	ĭ	Brooklyn, N. Y.	-Metropolitan Brdcstg. Corp.
WMEX	ak	100	(.25)	Boston, Mass.	The Northern Corp.
WNBF	ak	100	C(.25)	Binghamton, N. Y.	-Howitt-Wood Radio Co.
WNLC	ak	100	D	New London, Conn.	—Thames Brdcstg, Corp.
WOMI	Z	100	P	Owensboro, Ky.	-Owensboro Brdcstg. Co.
WOPI	ak	100	-	Bristol, Tenn.	-Radiophone Station WOPI
WRDW		100		Augusta, Ga.	-Augusta Brdcstg. Co., Inc.
WRGA	ak	100	(.25)	Rome, Ga.	-Rome Brdcstg. Corp.
WRTD	z	100	BP	Richmond, Va.	-Times Dispatch Pub. Co.
WSYB	ak	100	2,	Rutland, Vt.	—Philip Weiss Music Co.
WTMV	ak	100	(.25)	E. St. Louis, Ill.	-Miss. Valley Brdcstg. Co.
WWRL	ak	100	1 (.25)	Woodside, N. Y.	-Long Isl. Brdcstg. Co.
wwsw		100	(.25)	Pittsburgh, Pa.	-Walker & Downing Radio Corp.
" "5"	44	100	(.20)	i ittobuign, i a.	warker & Downing Radio Corp.
1510	1		/100		
1510	KC	ys.	(198	).b)	
		-	-		
CFRC	ak	100	$\mathbf{F}$	Kingston, Ont.	—Queen's University
CKCR	ak	100		Waterloo, Ont.	-K. W. Brdcstg. Co.
1530	kc	VS.	(196)	(0.0)	
1000		50.	(230	,	
KXBY	ak	1000		Kansas City, Mo.	—First Natl. Television Inc.
WBRY		1000	M	Waterbury, Conn.	-American Republican, Inc.
					The state of the s
1550	1	770	(102	2.4)	
1990	KC	ys.	(193)	·・ <del>ェ</del> ノ	
		-			Disease Managettle Co
KPMC		1000	M	Bakersfield, Calif.	—Pioneer Mercantile Co.
WQXR	ак	1000		New York, N. Y.	-Interstate Brdcstg. Co.

#### 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	Montgomery WSFA 1410 500 C	Ketchikan KGBU 900 500	Yuma KUMA 1420 100
Birmingham WAPI 1140 5000 N WBRC 930 1000 C	Selma WHBB 1500 100	ARIZONA	ARKANSAS
WSGN 1310 100 B Decatur	Sheffield WMSD 1420 100	Jerome KCRJ 1310 100	Blytheville KLCN 1290 100
WMFO 1370 100 Dothan WAGF 1370 250	Tuscaloosa WJRD 1200 100	Lowell KSUN 1200 100	El Dorado KELD 1370 100
Gadsden WJBY 1210 100	ALASKA	Phoenix KOY 1390 1000 C KTAR 620 1000 N	Fort Smith KFPW 1210 100
Huntsville WBHP 1200 100 Mobile	Anchorage KFQD 780 250 Juneau	KTAR 620 1000 N Tucson KGAR 1370 100	Hot Springs KTHS 1060 10000 N Jonesboro
WALA 1380 500 C	KINY 1310 100	KVOA 1260 1000	KBTM 1200 100

# NORTH AMERICAN B. C. STATIONS BY LOCATIONS

. Little Rock	San Luis Obispo	FLORIDA	Nampa
KARK 890 500 B KGHI 1200 100	KVEC 1200 250 Santa Ana	Clearwater	KFXD 1200 100 Pocatello
KLRA 1390 1000 C	KVOE 1500 100M	WFLA 620 1000 N	KSEI 900 250
Pine Bluff KOTN 1500 100	Santa Barbara	Daytona Beach WMFJ 1420 100	Twin Falls
Siloam Springs	KDB 1500 100M KTMS 1220 500	Gainesville	KTFI 1240 1000
KUOA 1260 2500	Santa Rosa	WRUF 830 5000	ILLINOIS
CALIFORNIA	KSRO 1310 250	Jacksonville WJAX 900 1000 N	Bloomington
Bakersfield	Stockton KGDM 1100 1000M	WMBR 1370 100 C	WJBC 1200 100
KERN 1370 100 B	KWG 1200 100 N	Lakeland	Carthage
KPMC 1550 1000M Berkeley	Visalia	WLAK 1310 100	WCAZ 1070 100 Champaign
KRE 1370 100	KTKC 1190 250	Miami WIOD 1300 1000 N	WDWS 1370 100
Beverly Hills KMPC 710 500	Watsonville KHUB 1310 250	WQAM 560 1000 C	Chicago
Chico	<u> </u>	Miami Beach	WAAF 920 1000 WBBM 770 50000 C
KHSL 1260 250	COLORADO	WKAT 1500 100	WCBD 1080 5000
El Centro KXO 1500 100	Alamosa	Orlando WDBO 580 1000 C	WCFL 970 5000 B WCRW 1210 100
Eureka	KGIW 1420 100	Pensacola	WEDC 1210 100
KIEM 1450 500 Fresno	Colorado Springs KVOR 1270 1000 C	WCOA 1340 500 C	WENR 870 50000 B
KMJ 580 1000 N	Denver	St. Augustine WFOY 1210 100	WGES 1360 500 WGN 720 50000M
Glendale	KFEL 920 500M KLZ 560 1000 C	St. Petersburg	WJJD 1130 20000
KIEV 850 250	KOA 830 50000 N	WSUN 620 1000 N	WLS 870 50000 N WMAO 670 50000 R
Hollywood KFWB 950 1000	KPOF 880 500 KVOD 920 500 B	Tallahassee WTAL 1310 100	WMBI 1080 5000
Long Beach	Durango 500 B	Tampa	WSBC 1210 100
KFOX 1250 1000	KIUP 1370 100	WDAE 1220 1000 C West Palm Beach	Cicero WHFC 1420 100
KGER 1360 1000 Los Angeles	Grand Junction KFXJ 1200 100	WJNO 1200 100 C	Decatur
KECA 1430 1000 B	Greeley	CEORGIA	WJBL 1200 100
KEHE 780 1000 KFAC 1300 1000	KFKA 880 500M La Junta	GEORGIA	East Dubuque WKBB 1500 100
KFI 640 50000 R	KOKO 1370 100	Albany	East St. Louis
KFSG 1120 500 KFVD 1000 1000	Lamar KIDW 1420 100	WGPC 1420 100 Atlanta	WTMV 1500 100
KGFJ 1200 100	Pueblo	WATL 1370 100	Harrisburg
KHJ 900 1000M KMTR 570 1000	KGHF 1320 500 B Sterling	WGST 890 1000 C WSB 740 50000 N	WEBQ 1210 100 Joliet
KNX 1050 50000 C	KGEK 1200 100	WTFI 1450 500	WCLS 1310 100
KRKD 1120 500 Merced	CONNECTICUT	Augusta WRDW 1500 100	Peoria WMBD 1440 500 C
KYOS 1040 250	CONNECTICOT	Columbus	Ouincy *
Modesto KTRB 740 250	Bridgeport WICC 600 500M	WRBL 1200 100 Griffin	WTAD 900 1000 Rockford
Monterrey	Hartford	WKEU 1500 100	WROK 1410 500
KDON 1210 100M	WDRC 1330 1000 C WTIC 1040 50000 R	Macon WMAZ 1180 1000 C	Rock Island WHBF 1210 100
Oakland KLS 1280 250	WTHT 1200 100M	Rome	Springfield
KLX 880 1000	New Britain WNBC 1380 250	WRGA 1500 100 Savannah	WCBS 1420 100 WTAX 1210 100
KROW 930 1000 Pasadena	WNBC 1380 250 New Haven	WTOC 1260 1000 C	Tuscola
KPPC 1210 100	WELI 900 500	Thomasville WPAX 1210 100	WDZ 1020 250 Urbana
Redding KVCV 1200 100	New London WNLC 1500 100	Waycross	WILL 580 1000
Sacramento	Waterbury	WAYX 1200 100	INDIANA
KFBK 1490 5000 N KROY 1210 100	WATR 1190 100 WBRY 1530 1000M	HAWAII	- INDIANA
San Bernardino	DELAMADE	Hilo	Anderson WHBU 1210 100
KFXM 1210 100M San Diego	DELAWARE	KHBC 1400 250M	Elkhart
KFSD 600 1000 B	Wilmington	Honolulu KGMB 1320 1000 C	WTRC 1310 100 Evansville
KGB 1330 1000M San Francisco	WDEL 1120 250 R WILM 1420 100	KGMB 1320 1000 C KGU 750 2500 N	WEAO 1370 100
KFRC 610 1000M			WGBF 630 500 B Fort Wayne
KGGC 1420 100 KGO 790 7500 B	DISTRICT OF COLUMBIA	IDAHO	WGL 1370 100
KJBS 1070 500		Boise	WOWO 1160 10000 B
KPO 680 50000 R KSFO 560 1000 C	Washington WJSV 1460 10000 C	KIDO 1350 1000 B Idaho Falls	Gary WIND 560 1000
KYA 1230 1000	WMAL 630 250 B	KID 1320 500	Hammond
San Jose KOW 1010 1000	WOL 1310 100M WRC 950 500 R	Lewiston KRLC 1390 250	WHIP 1480 5000 WWAE 1200 100
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NORTH	AMERICAN B. C.	STATIONS BY LOC	CATIONS
Indianapolis WFBM 1230 1000 C	Wichita KANS 1210 100 B	MASSACHUSETTS	Fergus Falls KGDE 1200 100
WGVA 1050 1000 WIRE 1400 1000 R	KFH 1300 1000 C	Boston WAAB 1410 500M	Hibbing WMFG 1210 100
Muncle WLBC 1310 100	KENTUCKY	WBZ 990 50000 B WCOP 1120 500	Minneapolis WCCO 810 50000 C
New Albany WGRC 1370 250	Ashland WCMI 1310 100	WEEI 590 1000 C WHDH 830 1000	WDGY 1180 1000   WLB 1250 1000
Richmond WKBV 1500 100 South Bend	Covington WCKY 1490 5000 B	WMEX 1500 100 WNAC 1230 1000 R WORL 920 500	WTCN 1250 1000 B Moorhead
WFAM 1200 100 WSBT 1360 500	Lexington WLAP 1420 100	Fall River	KVOX 1310 100 Northfield WCAL 1250 1000
Terre Haute WBOW 1310 100 B	Louisville WAVE 940 1000 N	Lawrenceville	Rochester KROC 1310 100
West Lafayette WBAA 890 500	WHAS 820 50000 C Middlesboro	680 1000 1370 10-100	St. Cloud
IOWA	WLMU 1210 100 Owensboro	Lowell WLLH 1370 100M New Bedford	St. Paul KSTP 1460 10000 R
- Ames WOI 640 5000	WOMI 1500 100 Paducah	WNBH 1310 100M Plttsfield	WMIN 1370 100 Virginia WHLB 1370 100
Boone KFGQ 1370 100	WPAD 1420 100	Springfield	Winona KWNO 1200 100
Cedar Rapids WMT 600 1000 B Davenport	LOUISIANA Alexandria	WBZA 990 1000 B WMAS 1420 100 C WSPR 1140 500M	MISSISSIPPI
WOC 1370 100 C Decorah	KALB 1210 100 Baton Rouge	Worcester WORC 1280 500 C	Grenada ( WMFN 1210 100
KGCA 1270 100 KWLC 1270 100	WJBO 1420 100 B Lafayette	WTAG 580 1000 R	Gulfport WGCM 1210 100
Des Moines KRNT 1320 1000 C KSO 1430 500 B	KVOL 1310 100 Lake Charles KPLC 1500 100	MICHIGAN  Battle Creek	Hattlesburg WFOR 1370 100
WHO 1000 50000 R Dubuque	Monroe KMLB 1200 100	WELL 1420 100 Bay City	Jackson WJDX 1270 1000 N Kosciusko
1340 500 Iowa City	New Orleans WBNO 1200 100	WBCM 1410 500 Calumet	WHEF 1500 100 Laurel
WSUI 880 500 Marshalltown KFJB 1200 100	WDSU 1250 1000 B WJBW 1200 100 WSMB 1320 1000 N	WHDF 1370 100 Detroit WJBK 1500 100	WAML 1310 100 Meridian
Mason City KGLO 1210 100 C	WWL 850 10000 C Shreveport	WJR 750 50000 C WMBC 1420 100	WCOC 880 500 C Vicksburg WOBC 1360 1000
Shenandoah KFNF 890 500 KMA 930 1000	KRMD 1310 100 KTBS 1450 1000 N	WWJ 920 5000 R WXYZ 1240 1000 B	MISSOURI
KMA 930 1000 Sioux City KSCJ 1330 1000 C	MAINE	East Lansing WKAR 850 1000 Flint	Cape Girardeau
1420 100	Augusta	WFDF 1310 100 Grand Rapids	KFVŠ 1210 .100 Columbia KFRU 630 500
KANSAS	WRDO 1370 100M Bangor	WASH 1270 500 N WOOD 1270 500 N	Jefferson City KWOS 1310 100
Abilene KFBI 1050 5000 Coffeyville	WABI 1200 100 WLBZ 620 500 G Portland	Ironwood WJMS 1420 100 Jackson	Joplin WMBH 1420 100
KGGF 1010 1000 Dodge City	WCSH 940 1000 R WGAN 640 500	WIBM 1370 100 Kalamazoo	Kansas City   KCMO 1370 100   KMBC 950 1000 C
KGNO 1340 250 Garden City	Presque Isle WAGM 1420 100	WKZO 590 1000 B Lansing	KXBY 1530 1000 WDAF 610 1000 R
KIUL 1210 100 Great Bend KVGB 1370 100	MARYLAND	WJIM 1210 100   Lapeer   WMPC 1200 100	WHB 860 1000M St. Joseph
Hutchinson KWBG 1420 100	Baltimore WBAL 760 2500 B	Marquette WBEO 1310 100	KFEQ 680 2500 St. Louis
Kansas City KCKN 1310 100	WBAL 1060 10000 B WCAO 600 500 C	Muskegon WKBZ 1500 100	KFUO 550 500 KMOX 1090 50000 C KSD 550 1000 R
Lawrence KFKU 1220 1000 WREN 1220 1000 B	WCBM 1370 100 WFBR 1270 500 R College Park	Royal Oak WEXL 1310 50 Saginaw	KSD
Manhattan KSAC 580 500	W3XJ 1060 100 Cumberland	WHAL 950 500	WIL 1200 100 Springfield
Pittsburg KOAM 790 1000	WTBO 800 250 Frederick	MINNESOTA	KGBX 1230 500 KWTO 560 5000
Salina KSAL 1500 100	WFMD 900 500   Hagerstown   WJEJ 1210 100	Albert Lea KATE 1420 250 Duluth	MONTANA
Topeka WIBW 580 1000 C	Salisbury 1200 250	KDAL 1500 100 WEBC 1290 1000 N	Billings KGHL 780 1000 N

11011111	THURST COME TO CO.		
Butte	Carlsbad	Utica WIBX 1200 100 C	Columbus WBNS 1430 500 C
KGIR 1340 1000 N Great Falls	KLAH 1210 100 Clovis	Watertown	WCOL 1210 100 N
KFBB 1280 1000 C Helena	KICA 1370 100	WNNY 1420 100 White Plains	WHKC 640 500 WOSU 570 750
KPFA 1210 100 Kalispell	Gallup KAWM 1500 100	WFAS 1210 100 Woodside	Dayton WHIO 1260 1000 C
KGEZ 1310 100	Roswell KGFL 1370 100	WWRL 1500 100	WSMK 1380 200 C
Lewistown KDNC 1200 100	Santa Fe	NORTH CAROLINA	Lima WBLY 1210 100
Missoula KGVO 1260 1000 C	KRQA 1310 100	Asheville	Portsmouth
Wolf Point KGCX 1450 1000	NEW YORK	WWNC 570 1000 N Charlotte	WPAY 1370 100 Toledo
	Albany	WBT 1080 50000 C WSOC 1210 100 N	WSPD 1340 1000 B
NEBRASKA	WABY 1370 100 WOKO 1430 500 C	Durham	Youngstown WKBN 570 500 C
Clay Center KMMJ 740 1000	Auburn	Gastonia	Zanesville
Kearney KGFW 1310 100	WMBO 1310 100	WJBR 1420 100 Greensboro	WALR 1210 100
Lincoln	Binghamton WNBF 1500 100 C	WBIG 1440 1000 C High Point	OKLAHOMA
KFAB 770 10000 C KFOR 1210 100 C	Brooklyn WBBC 1400 500	WMFR 1200 100	Ada KADA 1200 100M
Norfolk WJAG 1060 1000	WBBR 1300 1000 WCNW 1500 100	Kinston WFTC 1200 100	Ardmore
North Platte KGNF 1430 1000	WMBQ 1500 100	Raleigh WPTF 680 1000 N	KVSO 1210 100M Elk City
Omaha	WVFW 1400 500 Buffalo	Rocky Mount WEED 1420 100	KASA 1210 100M Enid
KOIL 1260 1000 B WAAW 660 500	WBEN 900 1000 R WBNY 1370 100	Wilmington	KCRC 1360 250M
WOW 590 1000 R Scottsbluff	WEBR 1310 100 B WGR 550 1000 C	WMFD 1370 100 Wilson	Muskogee KBIX 1500 100M
KGKY 1500 100	WKBW 1480 5000 C	WGTM 1310 100 Winston-Salem	Norman WNAD 1010 1000
NEVADA	WSVS 1370 50 Canton	WAIR 1250 250	Oklahoma City KFXR 1310 100
Reno	WCAD 1220 500 Elmira	11.50	KOMA 1480 5000 C
KOH 1380 500 C	WESG 850 1000 C	NORTH DAKOTA	KTOK 1370 100M WKY 900 1000 N
NEW HAMPSHIRE	Freeport WGBB 1210 100	Bismarck KFYR 550 1000 N	Okmulgee KHBG 1210 100
Laconia	Jamestown WJTN 1210 100 B	Devils Lake KDLR 1210 100	Ponca City WBBZ 1200 100M
WLNH 1310 100M Manchester	Newburgh WGNY 1210 100	Farco	Shawnee
WFEA 1340 500 B Portsmouth	New York WABG 860 50000 C	Grand Forks	Tulsa
WHEB 740 250	WBIL 1100 5000	KFJM 1410 500 Jamestown	KTUL 1400 500 C KVOO 1140 25000 N
NEW JERSEY	WBNX 1350 1000 WBOQ 860 50000	KRMC 1370 100 Mandan	OREGON
Asbury Park	WEAF 660 50000 R WEVD 1300 1000	KGCU 1240 250	
WCAP 1280 500 Atlantic City	WFAB 1300 1000 WHN 1010 1000	Minot KLPM 1240 250	Astoria KAST 1370 100
WPG 1100 5000 C	WINS 1180 1000	Valley City KOVC 1500 100	Corvallis KOAC 550 1000
Bridgeton WSNJ 1210 100	WMCA 570 1000		Eugene KORE 1420 100
Camden WCAM 1280 500	WNEW 1250 1000 WNYC 810 1000	OHIO	Klamath Falls
Jersey City WAAT 940 500	WOV 1130 1000 WOXR 1550 1000	WADC 1320 1000 C	KFJI 1210 100 La Grande
WHOM 1450 250	Ölean WHDL 1400 250	WJW 1210 100 Ashtabula	KLBM 1420 100 Marshfield
Newark WHBI 1250 1000	Plattsburg	WICA 940 250	KOOS 1200 100 Medford
WOR 710 50000M Red Bank	WMFF 1310 100 Rochester	Canton WHBC 1200 100	KMED 1410 250
WBRB 1210 100	WHAM 1150 50000 B WHEC 1430 500 C	Cincinnati	Portland KALE 1300 500 C
Trenton WTNJ 1280 500	WSAY 1210 100 Saranac Lake	WCPO 1200 100 WKRC 550 1000 C	KBPS 1420 100 KEX 1180 5000 B
Zarephath	WNBZ 1290 100	WLW 700 500000 N WSAI 1330 1000 R	KGW 620 1000 R KOIN 940 1000 C
WAWZ 1350 500	Schenectady WGY 790 50000 R	W8XO 700 500000	KWJJ 1040 500
NEW MEXICO	Syracuse WFBL 1360 1000 C	Cleveland WGAR 1450 500 B	Roseburg
Albuquerque KGGM 1230 1000	WSYR 570 1000 B Troy	WHK 1390 1000 C WJAY 610 500	KRNR 1500 100 Salem
KOB 1180 10000 B	WHAZ 1300 500	WTAM 1070 50000 R	KSLM 1370 100

WSAN   1440   500 B   Altoons   WGSC   1360   500 N   WGSC   1360   500 N   Columbia   WGSC   1366   500 N   WGSC   1360   000 N   WGSC   136				
Alletnown   WGISA   1440   500   B   WGISA   1240   100   WGISA   12	PENNS YLVANIA	SOUTH CAROLINA	Corpus Christi	
WSAN   1440   500 B   Altonom   WGSC   1360   500 N   WGAN   1200   100   WGAN		Anderson	KRIS 1330 500 B	Salt Lake City
WFBG   1310   100   Easton   WFBG   1310   100   Easton   WFBG   1310   100   Eric   WFBG   1300   100   N   WFBC   1300   1000   N   Spartanburg   WFBG   1300   1000   N   N   Spartanburg   WFBG   1300   1000   N   N   N   N   N   N   N   N   N	WCBA 1440 500 B			KDYL 1290 1000 R
WFBC   310   100		WCSC 1360 500 N		
Easton   WEST   1200   100   Eric   WOLS   1200   100   Greenville   WOLS   1200   100   Greenville   WFBC   1300   1000   N   KFPL   1310   100   Greensburg   WFBC   1300   1000   N   KFPL   1310   100   KTSM   1320   1000   KTSM   1320   1000   KTSM   1310   100   KTS		Columbia		
Wilson   W	Easton	Florence	WFAA 800 50000 N	
WILEU   1420   100 B   Glenside   100 Greensburg   WSPA   920   1000   Greensburg   WSPA   920   1000   KTSM   1310   100		WOLS 1200 100		Burlington
Clientide   Clie		WFBC 1300 1000 N		Rutland
Creensburg	Glenside			WSYB 1500 100
South Dakota   Sout				
Aberdeen   KABR   1420   100   Harrisburg   KABR   1420   100   Harrisburg   KABR   1420   100   Harrisburg   KABR   1420   100   Harrisburg   KFDY   780   1000   KGDY   1340   250   KGAZ   1420   100   Philadelphia   KYW   1020   10000 R   KOZAL   1500   100   CMCAL   1500   100   CMCAL   1500   100   KUSD   800   500   KELO   1200   100   KUSD   800   500   KWTN   1210   100   WHAT   1310   100   WHAT   1310   100   WARAW   310   100   WRAX   570   1000   CMCAL   1220   1000   Reading   WED   200   000   WRAX   570   1000   CMCAL   1220   1000   Reading   WED   1200   WAPO   1420   1000   WRAX   1310   100   WRAW   1310	WHJB 620 250 C	SOUTH DAKOTA		Springfield
WSAJ   1310   100   Harrisburg   WHP   1430   500 C   WHO   1200   100   Huron   WHO   1200   100   Huron   WHO   1200   100   C   WIAT   1300   100   WIAT   1300   WIAT   1300   100   WIAT   1300   WIAT   1300   100   WIAT   1300   100   WIAT   1300   100   WIAT   1300   WIAT   1300   100   WIAT   1300   WIAT   1300   100   WIAT   1300   WIAT   1300   WIAT   1300   WIAT   1300   W				
WHEP   1430   500 C   WKBO   1200   100   Hazleton   WZL   1420   100   Galveston   KLUF   1370   100   Charlotresville   WGVAL   1310   100   WGAL   1500   100   Philadelphia   KVW   1020   1000 R   WGAL   1500   100   WGAT   1200   100   WGAT   1200   100   WGAT   1300   WGAT				
Hazleton   WZL   1420   100   Johnstown   WZL   1310   100   KGFX   630   200   Rapid Gity   KOBH   1370   100   KOBH   1310   100   KOBH   1310	WHP 1430 500 C	KFDY 780 1000		VIRGINIA
WAZL   1420   100   Johnstown   WJAK   1310   100   Kapid City   KOBH   1370   100   WCAT   1200   100   KTRH   1290   1000   KTRH				Charlette
Johnstown   WJAC   1310   100   Lancaster   WGAL   1500   100   Philadelphia   KCDH   1370   100   WCAT   1200   100   Sioux Falls   KCDH   1370   100   KSOO   1110   2500 B   Vermillion   KSOO   1110   2500 B   Vermillion   KSOO   1110   2500 B   Vermillion   KWTN   1210   100   WARX   1310   100   WARX   570   1000 C   WRAX   570   1000 C   WRAX	WAZL 1420 100	Pierre	Greenville	WCHV 1420 100
WGAL   1500   100   Philadelphia   KYW   1020   1000 R   KELO   1200   100   KEVO   1100   Solution   Kelo   100   Kelo			KGVL 1200 100	Danville
WGAL   1500   100   Philadelphia   KYW   1020   1000 R   KELO   1200   100   KEVO   1100   Solution   Kelo   100   Kelo	Lancaster	KOBH 1370 100	KPRC 920 1000 N	Harrisonburg
KYW   1020 10000 R   KVGA   1170 50000 C   KOO   1110   2500 B   KUSD   890   500   Vermillion   KVSD   1310   100   Vankton   Van		WCAT 1200 100	KTRH 1290 1000 C	WSVA 550 500
WGAU   179 50000   C   WDAS 1370   100   Vormillion   WHAT   1310   100   WHAT   1310   100   WHAT   1310   100   WHAT   1310   100   WHEN   290   1000   WNAX   570   1000   C   WOPI   1310   100   World   1310   100   Ward   1310   100				Lynchburg WLVA 1200 100
WFIL   560   1000 B   WHAT   1310   100   What   1310   100   Williamsport   WRAX   1320   1000 B   WRAX   1320   1000 B   WRAX   1320   1000 B   WRAX   1370   100   Wash   1310   100   Wash   1320   1000 B   WRAX   1370   100   What   1370   1	WCAU 1170 50000 C	KSOO 1110 2500 B	KOCA 1210 100	Newport News
WHAT   1310   100			Longview   KFRO 1370 250	
WPH   WPH   S80   S00   WPH	WHAT 1310 100	Watertown	Lubbock	WTAR 780 500 N
WRAX 920 1000 WTEL 1310 100 Pittsburgh         WRAX 570 1000 C	WPEN 920 1000			
Pittsburgh	WRAX 920 1000	WNAX 570 1000 C	1310 100	Richmond
ROKA   980 50000 B   ROV   1380   500 C   WGAZ   1290   1000 C   ROWN   1500   100 C   Reading   WEEU   830   1000 WWAN   1310   100 Scranton   WGBI   880   500 WOK   1210   100 Uniontown   WMBX   1210   100 WMBX   1310   100 WMBX   1310   100 WMS   1320   1000 B   ROWN   1320   1000 B   R			Midland	WBBL 1210 100
ROCAE 1220 1000 C   WORD 1500 100 C   WORD 1510 100 C   WORD 151	KDKA 980 50000 B	TENNESSEE	Palestine	
WASHINGTON   WAS	KQV 1380 500 C	Bristol	KNET 1420 100	WRVA 1110 5000 C
WAPA   1500   100   WAPO   1420   100   WAPA   1310   100   Scranton   WAPA   1310   100   Knoxville   WNOX   1010   100   Korville   Kor	WJAS 1290 1000 C		KPDN 1310 100	
WEAL   1310   100   WIJS   1310   100   Knoxville   WNOX   1010   1000 C   Scranton   WNOX   1010   1000 C   Sun burry   WKOK   1210   100   Uniontown   WMBS   1420   250   WMC   780   1000 N   WMR   780   1000 N   WMR   1370   100   WMS	WWSW 1500 100	WAPO 1420 100	Paris	
WRAW   1310   100   WIJS   1310   100   Knoxville   WNOX   1010   1000   WNOX   1010   1000   Sunbury   WROX   1210   100   Uniontown   WHBQ   1370   100   WHBX   1210   100   WBAX   1210   100   WWREX   600   1000   C   WSIX   1210   100   WSIX   1210   1000   WSIX   1200   100   WS	WEEU 830 1000			WASHINGTON
WGBI         880         500         WNOX         1010         100 C WROL         RAC         1260	WRAW 1310 100	WTJS 1310 100	KIUN 1420 100	Aberdeen
WROL 1310   100 B	WGBI 880 500	Knoxville		KXRO 1310 100
Memphis   Memphis   Memphis   Memphis   Millor   Millor			San Angelo	KVOS 1200 100
Uniontown   WMBS   1420   250   WMGK   780   1000 N   WMBS   1420   250   WWBAX   1210   100   WWBAX   1210   100   WWBAX   1370   100   WWSX   1210   100   WSX   120   100   WSX   1210   100   WSX   1	WKOK 1210 100	Memphis		Centralia
WNBR   130   100   WIRAK   1370   100   WSIX   1210   100	Uniontown		KABC 1420 100	
WBRE   1310   100   Williamsport   WLAC   1470   5000 C   WSIX   1210   100   WWAX   1370   100   WSM   650   50000 N	Wilkės-Barre	WNBR 1430 500 B		KRKO 1370 50
WILAC   1470   5000 C   WOAL   1190   50000 N   WORK   1370   100   WSM   650   50000 N   WSM   550   50000 N   WSM   5500   5000 N   Sherman   KRRV   1310   250   Seattle   WSM   5000 N   WSM   5500   5000 N   Sherman   KRRV   1310   250   Seattle   WSM   5000 N   Sherman   KRRV   1310   250   Seattle	WBAX 1210 100 /	Nashville	KTSA 550 1000 C	KGY 1210 100
WRAK   1370   100   WSM   650   50000 N	Williamsport	WLAC 1470 5000 C		Pullman
TEXAS	WRAK 1370 100	WSM 650 50000 N	KRRV 1310 250	
PUERTO RICO   Ablene   KRBC 1420 100   KRBC			Temple KTEM 1370 250	KEEN 1370 100
Abilene		LEXAS	Texarkana	
Mayaguez   WPRA   1370   100   KGNC   1410   1000 B   Waco   WACO   1420   100 C   KTW   1220   1000 B   WASAN   780   1000 M   WAAR   800   1000 M   WALAR	PUERTO RICO	Abilene	KCMC 1420 100	KOL 1270 1000 C
WPRA   1370   100   KGNC   1410   1000 B   Austin   WACO   1420   100 C   WSelaco	Mayaguez	Amarillo	KGKB 1500 100	
WPRP   1420   100   KNOW   1500   100 C   San Juan   WKAO   1240   1000   WKAO   1240   1000   WKEAO   1240   1000   Beaumont   KFDM   560   500 B   KGKO   570   250 C   KGA   1470   5000 E   KGA	WPRA 1370 100	KGNC 1410 1000 B		KTW 1220 1000
San Juan   WKAQ   1240   1000   WKAQ   1240   1000   WKAQ   1240   1000   WKAQ   1240   1000   KFDM   560   500 B   Wichita Falls   KFIO   1120   1000   KFDM   560   500 B   KGKO   1250   CKFO   1120   1000   KFDM   1250   CKFO   1250   C	WPRP 1420 100	KNOW 1500 100 C	Weslaco	
WNEL   1290   1000   KFDM   560   500 B   RHODE   ISLAND   Big Spring KBST   1500   100   ESTAND   Brady KNEL   1500   250   KSUB   1310   100   KVI   570   1000 C   KVI   570	San Juan	1120 1000	KRGV 1260 1000 B	KFIO 1120 100
RHODE ISLAND	WNEL 1290 1000		KGKO 570 250 C	KFPY 890 1000 C
Providence   KBST   1500   100     College   Station   Codar City   KMO   1330   1000   College   Station   Codar City   KMO   1330   1000   College   Station   Coder   Codar City   Coder   City   Cit		Big Spring		
Providence   WEAN 780   1000M   KNEL 1500 250   Cedar City   KMO 1330 1000   KVI 570 1000 C   WJAR 890 1000 R   College Station   Ogden   Walla Walla   Walla   Walla   College Station   Ogden   College Station   Ogden   Walla   Walla   College Station   Ogden   College Station   Ogden   Walla   Walla   College Station   Ogden	KHODE ISLAND	KBST 1500 100	UTAH	Tacoma
WJAR 890 1000 R College Station Ogden Walla Walla	Providence	Brady KNEL 1500 250		KMO 1330 1000
Wana wana				
		WTAW 1120 500	KLÖ 1400 500 B	KUJ 1370 100
		<u> </u>	<u> </u>	

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Wenatchee KPQ 1500 100	Lethbridge CJOC 950 100 F	London CFPL 730 100 F North Bay	VOCM 1006 200 VOGY 840 400 VONF 1195 500
Yakima KIT 1310 100	BRIT. COLUMBIA	CFCH 930 100 F Ottawa	VOWR 681 500
WEST VIRGINIA	Chilliwack CHWK 780 100 F	CKCO 1010 100 F CRCO 880 1000 F	MEXICO
Bluefield WHIS 1410 500	Kamloops CFJC 880 100 F	Prescott CFLC 930 100 St. Catharines	AGUASCALIENTES
Charleston	CKOV 630 100 F	CKTB 1200 100 F	Aguascalientes XEBI 1000 25
Clarksburg	Prince Rupert CFPR 580 50	Sault Ste. Marie CJIC 1500 100	XEXC 810 350
WBLK 1370 100 Fairmont	Trail CJAT 910 1000 F	Stratford CJCS 1210 50	BAJA CALIFORNIA
WMMN 890 500 C Huntington	Vancouver CJOR 600 500	CKSO 780 1000 F	Agua Callente XEBC 730 5000
WSAZ 1190 1000	CKCD 1010 100 CKFC 1410 50	Timmins CKGB 1420 100 F	Mexicali XEAA 920 200
Parkersburg WPAR 1420 100 C	CKMO 1410 100 F CKWX 1010 100 F	CFRB 690 10000 C	XEAO 660 250
Wheeling WWVA 1160 5000 C	CRCV 1100 5000 F Victoria	CKCL 580 100 F CRCT 840 5000 N	Rosarito XEAQ 1090 1000
WISCONSIN	CFCT 1450 50	CRCY 1420 100 F Waterloo	Tijuana XEAC 980 250
Eau Claire	MANITOBA	CKCR 1510 100 Windsor	XEBG 820 1000 XEC 1150 100
WEAU 1050 1000 Fond du Lac	Brandon CKX 1120 100 F	CKLW 1030 5000M CRCW 600 500 F	XEMO 860 5000 XEOK 760 2500
KFIZ 1420 100 Green Bay	Winnipeg CJRC 630 500 F	Wingham CKNX 1200 50	CHIHUAHUA
WHBY 1200 100 WTAQ 1330 1000 C	CKY 910 15000 F	PRINCE EDWARD	Chihuahua
Janesville WCLO 1200 100	NEW BRUNSWICK	ISLAND	XEFI 1440 250 Juarez
WKBH 1380 1000 C	Fredericton GFNB 550 500 F	Charlottetown CFCY 630 1000 F	XEFV 1210 100 XEF 1450 100
Madison WHA 940 5000	Moncton CKCW 1370 100 F	CHCK 1310 50 Summerside	XEJ 1020 1000 XEP 1160 500
WIBA 1280 1000 N Manitowoc	St. John CHSJ 1120 500 F	CHGS 1450 50 F	Parral
WOMT 1210 100 Milwaukee	N. W. TERRITORY	QUEBEC	XEAT 1210 250
WEMP 1310 100 WISN 1120 250 C	Aklavik	Chicoutimi CRCS 950 100 F	COAHUILA
WTMJ 620 1000 N Poynette	CJCU 1210 50	Hull CKCH 1210 100 F	Piedras Negras XELO 1110 50000
WIBU 1210 100 Racine	NOVA SCOTIA	Montreal CFCF 600 400 N	XEPN 730 100000 Sabinas
WRJN 1370 100 Sheboygan	Glace Bay VAS 685 2000	CHLP 1120 100 F CKAC 730 5000 C	XEBX 640 250 Saltillo
WHBL 1300 250 Stevens Point	Halifax CHNS 930 1000 F	CRCM 910 5000 F New Carlisle	XEAS 1160 50 XELA 1240 50
WLBL 900 2500 Superior	Sydney CJCB 1240 1000 F	CHNC 960 1000 F Quebec	XETB 1310 ·125
WDSM 1200 100 Wausau	Wolfville CKIC 1010 50	CHRC 580 100 CKCV 1310 100 F	XERA 840 350000
WSAU 1370 100	Yarmouth CJLS 1310 100	CRCK 1050 1000 F	D. F.
WYOMING	ONTARIO	SASKATCHEWAN	Atzcapotzalco XEMG 1060 100
Casper KDFN 1440 500 . Sheridan	Brantford	Moose Jaw CHAB 1200 100 F Prince Albert	Gra. Anaya XEDA 1220 200
KWYO 1370 100	CKPC 930 100 F Chatham	CKBI 1210 100 F	Mexico City XEAL 660 1000
CANADA	CFCO 630 100 F Cobalt CKMC 1210 50	Regina CJRM 540 1000 CKCK 1010 500 F	XEAY 1240 100 XEB 1030 10000
ALBERTA	Fort William	Saskatoon CFOC 840 1000 F	XEBZ 1160 100 XECW 1310 10
Calgary CFAC 930 100 F	Hamilton	Yorkton CJGX 1390 100 F	XEDP 1080 500 XEFO 940 5000
CFAC 930 100 F CFCN 1030 10000 CJCJ 690 100 F	CHML 1010 100 F CKOC 1120 500 F	NEWFOUNDLAND	XEJP 1130 100 XEK 990 100
Edmonton CFRN 960 100 F	Kingston CFRC 1510 100 F		XEL 780 1000 XELZ 1370 100
CFRN 960 100 F CJCA 730 1000 F CKUA 580 500	Kirkland Lake CJKL 1310 100 F	St. John's VOAC 1065 40 VOAS 940 100	XEMX 1280 100 XENC 860 50
OFOV 200 200	1310 100 F	,	

#### NORTH AMERICAN B. C. STATIONS BY LOCATIONS

XEW 890 50000 XEYO 940 500	SAN LUIS POTOSI	YUCATAN	CMCD 950 250 CMCF 810 600
Tacuba	San Luis Potosi	Merida	CMCG 680 1000
XEFA 1180 500	XECZ 1370 100	XEBJ 1160 20	CMCJ 1100 500
XEFA 1100 300	XEXH 1250 250	XEFC 550 100	CMCN 850
		XEZ 630 500	CMCO 1200 250
DURANGO	SINALOA		CMCQ 1410 250
		CUBA	CMCU 1280 500
Durango XEE 1210 50	Mazatlan XEBL 1220 50		CMCW 750 150
XEE 1210 50	AEBL 1220 50	Caibarien	CMCX 570 150 CMCY 1030 5000
GUANAJUATO	SONORA	CMHD 1270 250	CMC 1 1030 5000 CMK 730 3000
GUANAJUATU	SONORA	Camaguey	CMOA 1440 150
Leon	Hermosillo	CMJA 1010 300	CMOK 1260 150
XEKL 1240 500	XEBH 930 500	CMJC 1390 150	CMOX 1320 200
1212 1210 000	Nogales	CMJE 1220 50	CMO 880 500
JALISCO	XEAF 990 750	CMJF 1150 200	CMW 600 1400
JALISCO		CMJK 780 250	CMX 920 1000
Guadalajara	TAMAULIPAS	CMJL 1340 75	Holguin
XEAD 1060 125		CMJX 830 500	CMFK 1460 250
XED 1160 2500	Matamoros	Cardenas	CMKO 1280
Guzman	XEAM 750 25	CMGE 1370 150	Manzanillo
XEBA 1080 20	Nuevo Laredo	Ciego de Avila	CMKM 1120 200
AEBA 1000 20	XEBK 1000 100	CMJH 1360 50	Matanzas
2000001010	XEFE 980 25	CMJI 1130 150	CMGC 1400 150
MICHOACAN	XENT 910 150000	CMJO 1180 50	CMGF 1120 150
Morelia	Reynosa XEAW 960 50000		CMGH 790 500
XEI 1370 .125	Tampico	Cienfuegos CMHJ 1160 175	Moron CMJP 1430 75
AEI 1370 .125	XEFW 1310 250	CMHJ 1160 175 CMHM, 1450 100	CMJP 1430 75 Pinar del Rio
AMINIO I DOM	XES 990 250	CMHW 820 100	CMAB 1340
NUEVO LEON	XES 770 250	CMHX 760 200	Sagua la Grande
24	VERACRUZ		CMHA 1070 50
Monterrey XEFB 870 200		Cruces CMHK 1330 250	Sancti Spiritus
XEFJ 1230 100	Cordoba		CMHB 1240 50
XEH 720 250	XEAG 1310 10	Havana	Santa Clara
XET 690 5000	Jalapa XEXB 1270 50	CMBD 1170 500	CMHI 1210 150
XEX 1310 125	XEXB 1270 50 XEXD 1340 350	CMBG 1140 200	Santiago
. 1010 120	Minatitlan	CMBS 770 150 CMBX 1070 500	CMKC 1250 150
PUEBLA	XEDW 1150 20	CMBY 970 150	CMKD 1050 250
TODDDA	Veracruz	CMBZ 1000 500	CMKG 1160
Puebla	XETF 1220 30	CMCA 1350 450	CMKR 1400 100
XETH 1210 100	XEU 1010 250	CMCB 640 150	CMKW 1350
		340 130	CMKX 1190
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WWJ Detroit, Mich., owned by the Evening News Assn., has been granted special authorization to use 5 kw full time on 920 kcs. The license granted this station calls for 1 kw night and 5 kw days until local sunset.

When a nation-wide advertiser requested an option a few weeks ago on the first commercial television program to be broadcast by the NBC, the NBC turned down the application, pointing out that many similar requests had previously been received, and they were all considered simply as publicity stunts.

A group of Italian stations are successfully overcoming the great nuisance of fading by synchronizing their broadcasts on the same frequency. Turin in the north and Trieste in the northeast of Italy are at present both broadcasting the same programs, and will shortly be joined by Genoa in the northwest. They all transmit on 1149 kcs.

The Australian Broadcasting Co. has purchased a number of the scripts of the "Death Valley" programs for broadcasting in Australia. It is reported also that some of the Death Valley stories will be used in the movies.

	CFAC 930 100		CJKL 1310 100		CMBD 1170	500
	Calgary, Alta. CFCF 600 400		Kirkland Lake, Ont.		Havana, Cuba CMBG 1140	200
	Montreal, Que.		Yarmouth, N. S.	7.	Havana, Cuba	200
	CFCH 930 100		CJOC 950 100		CMBS 770	150
<u> </u>	North Bay, Ont. CFCN 1030 10000		Lethbridge, Alta.	-	Havana, Cuba CMBX 1070	- 500
	Calgary, Alta.		Vancouver, B. C.		Havana, Cuba	
	CFCO 630 100		CJRC 630 500		CMBY 970	150
	Chatham, Ont.		Winnipeg, Man. CJRM 540 1000		Havana, Cuba	500
	CFCT 1450 50 Victoria, B. C.		Regina, Sask.		CMBZ 1000 Havana, Cuba	, 500
	CFCY 630 1000		CKAC 730 5000	77.	CMCA 1350	450
	Charlottetown, P.E.I.		Montreal, Que. CKBI 1210 100		Havana, Cuba CMCB 640	150
	CFJC 880 100 Kamloops, B. C.		CKBI 1210 100 Prince Albert, Sask.		CMCB 640 Havana, Cuba	150
	CFLC 930 100		CKCD 1010 100		CMCD 950	250
	Prescott, Ont. CFNB 550 500		Vancouver, B. C. CKCH 1210 100		Havana, Cuba	
	Fredericton, N. B.		Hull, Que.		CMCF 810 Havana, Cuba	600
	CFPL 730 100	-	CKCK 1010 500	· .	CMCG 680	1000
	London, Ont.		Regina, Sask		Havana, Cuba	500
	CFPR 580 50 Prince Rupert, B. C.		Toronto, Ont.		Havana, Cuba	500
	CFQC 840 1000		CKCO 1010 100		CMCN 850	
	Saskatoon, Sask. CFRB 690 10000		Ottawa; Ont. CKCR 1510 100		Havana, Cuba CMCO. 1200	250
1	CFRB 690 10000 Toronto, Ont.		CKCR 1510 100 Waterloo, Ont.		Havana, Cuba	250
	CFRC 1510 100		CKCV 1310 100		CMCQ 1410	250
	Kingston, Ont.		Quebec, Que. CKCW 1370 100		Havana, Cuba CMCU 1280	500
	CFRN 960 100 Edmonton, Alta.	1	CKCW 1370 100 Moneton, N. B.		Havana, Cuba	300
	CHAB 1200 100		CKFC 1410 50		CMCW 750	150
	Moose Jaw, Sask.		Vancouver, B. C. CKGB 1420 100	,	Havana, Cuba CMCX 570	150
711	CHCK 1310 50 Charlottetown, P.E.I.		Timmins, Ont.		Havana, Cuba	130
	CHGS 1450 50		CKIC 1010 50		CMCY 1030	5000
_	Summerside, P.E.I.		Wolfville, N. S. CKLW 1030 5000	<u>-</u>	Havana, Cuba CMGC 1400	150
	CHLP 1120 100 Montreal, Que.		Windsor, Ont.		Matanzas, Cuba	130
	CHML 1010 100		CKMC 1210 50		CMGE 1370	150
	Hamiiton, Ont. CHNC 960 1000		Cobalt, Ont. CKMO 1410 100		Cardenas, Cuba CMGF 1120	150
	New Carlisle, Que.		Vancouver, B. C.		Matanzas, Cuba	250
	CHNS 930 1000		CKNX 1200 50 Wingham, Ont.		CMGH 790	500
	Halifax, N. S. CHRC 580 100		CKOC 1120 500	ļ	Matanzas, Cuba CMHA 1070	50
	Quebec, Que.		Hamilton, Ont.		Sagua la Grande,	Cuba
	CHSJ 1120 500		CKOV 630 100		CMHB 1240	50
	St. John, N. B. CHWK 780 100		Kelowna, B. C. CKPC 930 100	<del></del>	Sancti Spiritus, Cu CMHD 1270	250
	Chilliwack, B. C.		Brantford, Ont.		Calbarien, Cuba	
	CJAT 910 1000 Trail, B. C.		CKPR 730 100 Fort William, Ont.		CMHI 1210 Santa Clara, Cuba	150
	CJCA 730 1000		CKSO 780 1000	-	CMHJ 1160	175
	Edmonton, Alta.		Sudbury, Ont.		Clenfuegos, Cuba	
	CJCB 1240 1000 Sydney, N. S.		CKTB 1200 100 St. Catharines, Ont.		Cruces, Cuba	250
_	CJCJ 690 100		CKUA 580 500	<del>                                     </del>	CMHM 1450	100
	Calgary, Alta.		Edmonton, Alta.		Clenfuegos, Cuba	
	CJCS 1210 50 Stratford, Ont.		CKWX 1010 100 Vancouver, B. C.		CMHW 820 Clenfuegos, Cuba	100
	CJCU 1210 50		CKX 1120 100		CMHX 760	200
	Aklavik, N. W. T.		Brandon, Man.		Clenfuegos, Cuba	
	CJGX 1390 100 Yorkton, Sask.		CKY 910 15000 Winnipeg, Man.		CMJA 1010 Camaguey, Cuba	300
	CJIC 1500 100		CMAB . 1340		CMJC 1390	150
	S. Ste. Marie, Ont.		Pinar del Rio, Cuba		Camaguey, Cuba	
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	CMJE 1220 50 Camaguey, Cuba	•	KABR 1420 10 Aberdeen, S. Dak.	00 /	KEUB 1420 10 Price, Utah
$\neg$	CMJF 1150 200	-	KADA 1200 1	00	KEX 1180 500
_	Camaguey, Cuba CMJH 1360 50		Ada, Okla. KALB 1210 1	00	Portland, Ore. KFAB 770 1000
	Clego de Avila, Cuba		Alexandria, La.		Lincoln, Neb.
	CMJI 1130 150		KALE 1300 50 Portland, Ore.	00	KFAC 1300 100 Los Angeles, Calif.
_	Ciego de Avila, Cuba CMJK 780 250			00	KFBB 1280 100
	Camaguey, Cuba		Corsicana, Texas		Great Falls, Mont.
	CMJL 1340 75 Camaguey, Cuba		Wichita, Kans	00	KFBI 1050 500 Abilene, Kans.
$\neg$	CMJO 1180 50		KARK 890 5	00	KFBK 1490 500
$\dashv$	Clego de Avlia, Cuba CMJP 1430 75		Little Rock, Ark.	oo	Sacramento, Calif. KFDM 560 50
	Camaguey, Cuba		Elk City, Okla.		Beaumont, Texas
	CMJX 830 500 Camaguey, Cuba		KAST 1370 1 Astoria, Ore.	00	KFDY 780 100 Brookings, S. D.
$\dashv$	CMK 730 3000		•	50	KFEL 920 50
	Havana, Cuba		Albert Lea, Minn.		Denver, Colo. KFEQ 680 250
	CMKC 1250 150 Santiago, Cuba		Gallup, N. Mex.	.00	St. Joseph, Mo.
	CMKD 1050 , 250			.00	KFGQ 1370 10 Boone, Iowa
	Santlago. Cuba CMKF 1460 250		Muskogee, Okla. KBPS 1420 1	.00	KFH 1300 100
	Holguin, Cuba		Portland, Ore.		Wichita, Kans.
	CMKG 1160 Santiago, Cuba		KBST 1500 1 Big Spring, Texas	00	KFI 640 5000 Los Angeles, Calif.
	CMKM 1120 200		KBTM 1200 1	.00	KF10 1120 10
•	Manzanillo, Cuba CMKO 1280		Jonesboro, Ark. KCKN 1310 1	.00	Spokane, Wash. KFIZ 1420 10
	Holguin, Cuba		Kansas City, Kans.		Fond du Lac, Wis.
	CMKR 1400 100 Santiago, Cuba		KCMC 1420 1 Texarkana, Texas	.00	KFJB 1200 10 Marshalltown, Iowa
	CMKW 1350		KCMO 1370 1	100	KFJI 1210 10
	Santiago, Cuba CMKX 1190		Kansas City, Mo. KCRC 1360 2	250	Klamath Falls, Ore. KFJM 1410 50
	Santlago, Cuba		Enid, Okla.	.50	Grand Forks, N. D.
	CMOA 1440 150 Havana, Cuba		KCRJ 1310 1 Jerome, Ariz.	100	Fort Worth, Texas
	CMOK 1260 150		KDAL 1500 1	100	KFKA 880 50
	Havana, Cuba CMOX 1320 200		Duluth, Minn.	100	Greeley, Colo. KFKU 1220 100
	Havana, Cuba		Santa Barbara, Calif.		Lawrence, Kans.
	CMQ 880 500 Havana, Cuba		KDFN 1440 5 Casper, Wyo.	500	KFNF 890 50 Shenandoah, Iowa
	CMW 600 1400		KDKA 980 500	000	KFOR 1210 10
	Havana, Cuba CMX 920 1000		Pittsburgh, Pa.		Lincoln, Neb.
	Havana, Cuba		KDLR 1210 1 Devils Lake, N. D.	100	KFOX 1250 100 Long Beach, Calif.
	CRCK 1050 1000		KDNC 1200 1	100	KFPL 1310 10
	Quebec, Que. CRCM 910 5000		Lewistown, Mont. KDON 1210 1	100	Dublin, Texas KFPW 1210 10
	Montreal, Que.		Monterrey, Calif.	000	Fort Smith, Ark.
	Ottawa, Ont.		Sait Lake City, Utah	,,,,	Spokane, Wash.
	CRCS 950 100 Chicoutimi, Que.		KECA 1430 10 Los Angeles, Calif.		Anghorage Alegke
	CRCT 840 5000		KEEN 1370 1	100	Anchorage, Alaska KFRC 610 100
	. Toronto, Ont. CRCV 1100 5000		Seattle. Wash.		San Francisco, Calif.
	Vancouver, B. C.		KEHE 780 10 Los Angeles, Calif.	000	KFRO 1370 25 Longview, Texas
	CRCW 600 500		KELD 1370 1	100	KFRU 630 5
	Windsor, Ont. CRCY 1420 100		El Dorado, Ark. KELO 1200 1	100	Columbia, Mo. KFSD 600 100
	Toronto, Ont.		Sloux Falls, S. Dak.		San Diego, Calif.
	San Antonio, Texas		KERN 1370 1 Bakersfield, Calif.	100	KFSG 1120 5 Los Angeles, Calif.
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	KFUO 550 500 St. Louis, Mo.		KGHI 1200 10 Little Rock, Ark.	0	KIUL 1210 100 Garden City, Kans.
	KFVD 1000 1000	<u> </u>	KGHL 780 100	10	KIUN 1420 100
-	Los Angeles, Calif. KFVS 1210 100		Billings, Mont. KGIR 1340 100	. —	Pecos, Texas KIUP 1370 100
	Cape Girardeau, Mo. KFWB 950 1000		Butte, Mont. KGIW 1420 10		Durango, Colo.
	Hollywood, Calif.		Alamosa, Colo.	"	San Francisco, Calif.
	KFXD 1200 100 Nampa, Idaho		KGKB 1500 10 Tyler, Texas	10	KJR 970 5000 Seattle, Wash.
	KFXJ 1200 100		KGKL 1370 10	10	KLAH 1210 100
	Grand Junetion, Colo.		San Angelo, Texas KGKO 570 25	:0	Carlsbad, N. Mex. KLBM 1420 100
	San Bernardino, Calif. KFXR 1310 100		Wichita Falls, Texas		La Grande, Ore.
	Oklahoma City, Okla.		KGKY 1500 10 Scottsbluff, Neb.		KLCN 1290 100 Blytheville, Ark.
	KFYO 1310 100 Lubbock, Texas		KGLO 1210 10 Mason City, Iowa	10	KLO 1400 500 Ogden, Utah
	KFYR 550 1000		KGMB 1320 100	10	KLPM 1240 250
	Bismarek, N. D. KGA 1470 5000		Honolulu, T. H. KGNC 1410 100		Minot, N. D. KLRA 1390 1000
	Spokane, Wash.		Amarillo, Texas		Little Rock, Ark.
	Tucson, Ariz.		North Platte, Neb.		KLS 1280 250 Oakland, Calif.
	KGB 1330 1000 San Diego, Calif.		KGNO 1340 25 Dodge City, Kans.	0	KLUF 1370 100 Galveston, Texas
	KGBU 900 500		KGO 790 750	0.	KLX 880 1000
	Ketchikan, Alaska KGBX 1230 500		San Francisco, Calif. KGU 750 250		Oakland, Callf. KLZ 560 1000
	Springfield, Mo.		Honolulu, T. H.		Denver, Colo. KMA 930 1000
	Decorah, Iowa		Greenville, Texas	•	Shenandoah, Iowa
	KGCU 1240 250 Mandan, N. D.		KGVO 1260 100 Missoula, Mont.	0	KMAC 1370 100 San Antonio, Texas
	KGCX 1450 1000		KGW 620 100	0	KMBC 950 1000
-	Wolf Point, Mont. KGDE 1200 100		Portland, Ore. KGY 1210 10	0	Kansas City, Mo. KMED 1410 250
	Fergus Falls, Minn. KGDM 1100 1000		Olympia, Wash. KHBC 1400 25	<u> </u>	Medford, Ore. KMJ 580 1000
	Stockton, Calif.		Hilo, T. H.		Fresno, Callf.
	*KGDY 1340 250 Huron, S. D.		KHBG 1210 10 Okmulgee, Okla.	0	KMLB 1200 100 Monroe, La.
	KGEK 1200 100 Sterling, Colo.		KHJ 900 100 Los Angeles, Calif.	0	KMMJ 740 1000
	KGER 1360 1000	H	KHQ 590 100	0	Clay Center, Neb. KMO 1330 1000
	Long Beach, Calif.		Spokane, Wash. KHSL 1260 25		Tacoma, Wash. KMOX 1090 50000
	Kalispell, Mont.		Chico, Calif.		St. Louis, Mo.
	KGFF 1420 100 Shawnee, Okla.		KHUB 1310 25 Watsonville, Calif.	0	KMPC 710 500 Beverly Hills, Calif.
	KGFI 1500 100 Corpus Christi, Tex.		KICA 1370 10 Clovis, N. M.	0	KMTR 570 1000 Los Angeles, Calif.
<u> </u>	KGFJ 1200 100		KID 1320 50	0	KNEL 1500 250
-	Los Angeles, Calif. KGFL 1370 100		Idaho Falls, Idaho KIDO 1350 100	. —	Brady, Texas KNET 1420 100
	Roswell, N. M.		Bolse, Idaho		Palestine, Texas
	KGFW 1310 100 Kearney, Neb.		Lamar, Colo.	٠	KNOW 1500 100 Austin, Texas
	KGFX 638 200 Pierre, S. D.		KIEM 1450 500 Eureka, Calif.	0	KNX 1050 50000 Los Angeles, Callf.
	KGGC 1420 100		KIEV 850 25	0	KOA 830 50000
_	San Francisco, Calif. KGGF 1010 1000		Glendale, Calif. KINY 1310 100	,	Denver, Colo. KOAC 550 1000
<u></u>	Coffeyville, Kans. KGGM 1230 1000		Juneau, Alaska KIRO 710 1000		Corvailis, Ore. KOAM 790 1000
	Albuquerque, N. M.		Seattle, Wash.		Pittsburg, Kans.
	KGHF 1320 500 Pueblo, Colo.		Yakima, Wash.	•	KOB 1180 10000 Albuquerque, N. M.
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KOBH 1370 100	KRLC 1390 250	KTKC 1190 250
Rapid City, S. Dak.	Lewiston, Idaho	Visatia, Calif.
KOCA 1210 100	KRLD 1040 10000	KTMS 1220 500
Kilgore, Texas	Dallas, Texas	Santa Barbara, Calif.
KOH 1380 500 Reno, Nev.	KRLH 1420 100 Midiand, Texas	Okiahoma City, Okla.
KOIL 1260 1000	KRWC 1370 100	KTRB 740 250
Omaha, Neb.	Janiestown, N. Dak.	Modesto, Calif.
KOIN 940 1000	KRWD 1310 100	KTRH 1290 1000
Portland, Ore.	Shreveport, La.	Houston, Texas
KOKO 1370 100	KRNR 1500 100	San Antonio, Texas
La Junta, Colo.	Roseburg, Ore.	KTSM 1310 100
Scattle, Wash.	Des Moines, Iowa	El Paso, Texas
KOMA 1480 5000	KROC 1310 100	KTUL 1400 500
Oklahoma City, Okla.	Rochester, Minn.	Tulsa, Okia.
KOMO 920 1000	KROD 1500 100	KTW 1220 1000 Seattle, Wash.
Seattle, Wash.	El Paso, Texas KROW 930 1000	KUJ 1376 100
San Antonio, Texas	Oakland, Calif.	Walla Walla, Wash.
KOOS 1200 100	KROY 1210 100	KUMA 1420 100
Marshfield, Ore.	Sacramento, Calif.	Yuma, Ariz.
KORE 1420 100 Eugene, Ore.	KRQA 1310 100 Santa Fe, N. Mex.	KUOA 1260 2500 Siloam Springs, Ark.
KOTN 1500 100	KRRV 1310 250	KUSD 890 500
Pine Bluff, Ark.	Sherman, Texas	Vermillon, S. Dak.
KOVC 1500 100	KRSC 1120 250	KUTA 1500 100
Valley City, N. Dak.	Seattle, Wash.	Salt Lake City, Utah
KOY 1390 1000 Phoenix, Ariz.	KSAC 580 500 Manhattan, Kans.	Redding, Calif.
KPAC 1260 500	KSAL 1500 100	KVEC 1206 250
Port Arthur, Texas	Salina, Kans.	San Luis Obispo, Cal.
KPDN 1310 100	KSCJ 1330 1000	KVGB 1370 100
Pampa, Texas KPFA 1210 100	Sloux City, Iowa KSD 550 1000	Great Bend, Kans.
KPFA 1210 100 Helena, Mont.	St. Louis, Mo.	Tacoma, Wash,
KPLC 1500 100	KSEI 900 250	KVOA 1260 1000-
Lake Charles, La.	Pocatello, Idaho	Tucson, Arlz.
KPLT 1500 100 Paris, Texas	San Francisco, Calif.	KVOD 320 500 Denver, Cola.
KPMC 1550 1000	KSL 1130 50000	KVOE 1500 100
Bakersfield, Calif.	Salt Lake City, Utah	Santa Ana, Calif.
KPO 680 50000	KSLM 1370 100	KVOL 1310 100
San Francisco, Calif.	Salem, Ore. K50 1430 500	Lafayette, La. KVOO 1140 25000
Denver, Colo.	Des Moines, Iowa	Tulsa, Okla.
KPPC 1210 100	KSOO 1110 2500	KVOR 1276 1000
Pasadena, Calif.	Sloux Falls, S. Dak.	Colorado Springs, Colo.
KPQ 1500 100 Wenatchee, Wash.	KSRO 1310 250 Santa Rosa, Calif.	KVOS 1200 100 Bellingham, Wash.
KPRC 920 1000	KSTP 1460 10000	KVOX 1310 100
Houston, Texas	St. Paul, Minn.	Moorhead, Minn.
KQV 1380 500	KSUB 1310 100	KVSO 1210 100
Pittsburgh, Pa.	Cedar City, Utah	Ardmore, Okla. KWBG 1420 100
KQW . 1010 1000 San Jose, Calif.	KSUN 1200 100 Lowell, Ariz.	Hutchinson, Kans.
KRBC 1420 100	KTAR 620 1000	KWG 1200 100
Abliene, Texas	Phoenix, Ariz.	Stockton, Calif.
KRE 1370 100 Berkeley, Calif.	KTAT 1240 1000 Fort Worth, Texas	RWJJ 1040 500 Portland; Ore.
KRGV 1260 1000	KTBS 1450 1000	KWK 1350 1000
Westaco, Texas	Shreveport, La.	St. Louis, Mo.
KRIS 1330 590 Corpus Christi, Tex.	KTEM 1370 250	KWKH 1100 10000
KRKD 1120 500	Temple, Texas KTF1 1240 1000	Shreveport, La. KWLC 1270 106
Los Angeles, Calif.	Twin Falls, Idaho	Decorah, Iowa
KRKO 1370 50	KTHS 1060 10000	KWNO 1200 100
Everett, Wash.	Hot Springs, Ark.	Winona, Minn.
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	KWOS 1310 100 Jefferson City, Mo.		WALA 1380 500 Mobile, Ala.		WBNY 1370 100 Buffalo, N. Y.
1	KWSC 1220 1000 Pullman, Wash.		WALR 1210 100 . Zanesville, Ohio		WBOQ 860 50000 New York, N. Y.
	KWTN 1210 100	<u> </u>	WAML 1310 100	-	WBOW 1310 100
	Watertown, S. Dak.		Laurel, Miss. WAPI 1140 5000		Terre Haute, Ind.
	Springfield, Mo.		Birmingham, Ala.		Red Bank, N. J.
1	KWYO 1370 100 Sherldan, Wyo.		WAPO 1420 100 Chattanooga, Tenn.		WBRC 930 1000 Birmingham, Ala.
	KXA 760 250 Seattle, Wash.		WARD 1400 500 Brooklyn, N. Y.		WBRE 1310 100 Wilkes-Barre, Pa.
	KXBY 1530 1000		WASH 1270 500		WBRY 1530 1000
<u> </u>	Kansas City, Mo.		Grand Rapids, Mich. WATL 1370 100		Waterbury, Conn. WBT 1080 50000
	Portland, Ore. KXO 1500 100		Atlanta, Ga. WATR 1190 100		Charlotte, N. C. WBTM 1370 100
	El Centro, Calif.		Waterbury, Conn.		Danville, Va.
	KXRO 1310 100 Aberdeen, Wash.		WAVE 940 1000 Louisville, Ky.	1	WBZ 990 50000 Boston, Mass.
	KXYZ 1440 1000 Houston, Texas		WAWZ 1350 500 Zarephath, N. J.		WBZA 990 1000 Springfield, Mass.
	KYA 1230 1000		WAYX 1200 100		WCAD 1220 500
	San Francisco, Calif.  KYOS 1040 250		Wayeross, Ga. WAZL 1420 100		Canton, N. Y. WCAE 1220 1000
	Merced, Calif.		Hazleton, Pa.	<u> </u>	Pittsburgh, Pa.
	Philadelphia, Pa.		West Lafayette, Ind.		Northfield, Minn.
	VAS 685 2000 Glace Bay, N.S.		WBAL 760 2500 Baltimore, Md.		WCAM 1280 500 Camden, N. J.
	VOAC 1065 40 St. John's, Nfld.		WBAL 1060 10000		WCAO 600 500
$\vdash$	VOAS 940 100		Baltimore, Md. WBAP 800 50000		Baltimore, Md. WCAP 1280 500
$\vdash$	St. John's, Nfld. VOCM 1006 200		Fort Worth, Texas WBAX 1210 100		Asbury Park, N. J. WCAT 1200 100
	St. John's, Nfld.		Wilkes-Barre, Pa.		Rapid City, S. Dak.
	St. John's, Nild.		WBBC 1400 500 Brooklyn, N. Y.		WCAU 1170 50000 Philadelphia, Pa.
	VONF 1195 500` St. John's, Nfld.		WBBL 1210 100 Richmond, Va.		WCAX 1200 100 Burlington, Vt.
	VOWR 681 500		WBBM 770 50000		WCAZ 1070 100
	St. John's, Nfld. WAAB 1410 500		Chicago, Iil. WBBR 1300 1000		Carthage, Ill. WCBA 1440 500
$\vdash$	Boston, Mass. WAAF 920 1000	· ·	Brooklyn, N. Y. WBBZ 1200 100	-	Allentown, Pa. WCBD 1080 5000
$\vdash$	Chicago, Ili. WAAT 940 500		Ponca City, Okla. WBCM 1410 500		Chicago, Ill. WCBM 1370 100
	Jersey City, N. J.		Bay City, Mich.		Baltimore, Md.
	WAAW 660 500 Omaha, Neb.		WBEN 900 1000 Buffalo, N. Y.		WCBS 1420 100 Springfield, Ill.
	WABC 860 50000 New York, N. Y.		WBEO 1310 100		WCCO 810 50000 Minneapolis, Minn.
·	WABI 1200 100		Marquette, Mich. WBHP 1200 100		WCFL 970 5000
<b>—</b>	Bangor, Maine WABY 1370 100		Huntsville, Ala. WBIG 1440 1000		Chicago, Ill. WCHS 580 500
	WABY 1370 100 Albany, N. Y. WACO 1420 100		Greensboro, N. C. WBIL 1100 5000		Charleston, W. Va.
	Waco, Texas		New York, N. Y.		Charlottesville, Va.
	WADC 1320 1000 Akron, Ohio		WBLK 1370 100 Clarksburg, W. Va.		WCKY 1490 5000 Covington, Ky.
	WAGF 1370 250 Dothan, Ala.		WBLY 1210 100 Lima, Ohio		WCLO 1200 100 Janesville, Wis.
	WAGM 1420 100		WBNO 1200 100		WCLS 1310 100
	Presque Isle, Me. WAIM 1200 100	<u> </u>	New Orleans La. WBNS 1430 500	-	Jollet, Ill. WCMI 1310 100
	Anderson, S. C. WAIR 1250 250		Columbus, Ohio WBNX 1350 1000		Ashland, Ky. WCNW 1500 100
	Winston-Salem, N. C.	,	New York, N. Y.		Brooklyn, N. Y.
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	WCOA 1340 500 Pensacola, Fia.		WEEU 830 1000 Reading, Pa.		WGCM 1210 100 Gulfport, Miss.
	WCOC 880 500 Meridian, Miss.		WELI 900 500 New Haven, Conn.	_	WGES 1360 500 Chicago, Ill.
	WCOL 1210 100		WELL 1420 100		WGH 1310 100
	Columbus, Ohio WCOP 1120 500		Battle Creek, Mich. WEMP 1310 100		Newport News, Va. WGL 1370 100
	Boston, Mass.		Milwaukee, Wis.		Fort Wayne, Ind.
	WCPO 1200 100 Cincinnati, Ohio		WENR 870 50000 Chicago, Iil.		WGN 720 50000 Chicago, Ill.
-	WCRW 1210 100		WEOA 1370 100		WGNY 1210 100
	Chicago, Ill. WCSC 1360 500	_	Evansville, Ind. WESG 850 1000		Newburgh, N. Y. WGPC 1420 100
	Charleston, S. C.		Elmira, N. Y.		Albany, Ga.
Ì	WCSH 940 1000 Portland, Me.		WEST 1200 100 Easton, Pa.		WGR 550 1000 Buffalo, N. Y.
	WDAE 1220 1000		WEVD 1300 1000 New York, N. Y.		WGRC 1370 250
	Tampa, Fla. WDAF 610 1000		WEW 760 1000	<u>`</u>	New Albany, Ind. WGST 890 1000
	Kansas City, Mo.		St. Louis, Mo. WEXL 1310 50		Atlanta, Ga. WGTM 1310 100
	WDAH 1310 100 El Paso, Texas		Royal Oak, Mich.		WGTM 1310 100 Wilson, N. C.
	WDAS 1370 100		WFAA 800 50000 Dallas, Texas		WGVA 1050 1000
$\vdash$	Philadelphia, Pa. WDAY 940 1000		WFAB 1300 1000	_	Indianapolis, Ind. WGY 790 50000
<u> </u>	Fargo, N. Dak.		New York, N. Y.		Schenectady, N. Y.
1	WDBJ 930 1000 Roanoke, Va.		WFAM 1200 100 South Bend, Ind.		WHA 940 5000 Madison, Wis.
	WDBO 580 1000		WFAS 1210 100 White Plains, N. Y.		WHAL 950 500 Saginaw, Mich.
	Orlando, Fla. WDEL 1120 250	-	WFBC 1300 1000		WHAM 1150 50000
	Wilmington, Del.		Greenville, S. C. WFBG 1310 100		Rochester, N. Y. WHAS 820 50000
	WDEV 550 500 Waterbury, Vt.		Altoona, Pa.		Louisville, Ky.
	WDGY 1180 1000 Minneapolis, Minn.		WFBL 1360 1000 Syracuse, N. Y.		WHAT 1310 100 Philadelphia, Pa.
	WDNC 1500 100		WFBM 1230 1000		WHAZ 1300 500
-	Durham, N. C. WDOD 1280 1000		Indianapolis, Ind. WFBR 1270 500	-	Troy, N. Y. WHB 860 1000
	Chattanooga, Tenn.		Baltimore, Md. WFDF 1310 100		Kansas City, Mo.
	WDRC 1330 1000 Hartford, Conn.		WFDF 1310 100 Flint, Mich.		WHBB 1500 100 Selma, Ala.
1	WDSM 1200 100 Superior, Wis.		WFEA 1340 500 Manchester, N. H.		WHBC 1200 100 Canton, Ohio
	WDSU 1250 1000	1:	WFIL 560 1000		WHBF 1210 100
<u> </u>	New Orleans, La.  WDWS 1370 100	-	Philadelphia, Pa. WFLA 620 1000		Rock Island, Ill. WHBI 1250 1000
	Champaign, Ill.		Clearwater, Fla.		Newark, N. J.
	WDZ 1020 250 Tuscola, Ill.		WFMD 900 500 Frederick, Md.		WHBL 1300 250 Sheboygan, Wis.
	WEAF 660 50000		WFOR 1370 100 Hattlesburg, Miss.		WHBQ 1370 100
	New York, N. Y. WEAN 780 1000		WFOY 1210 100		Memphis, Tenn. WHBU 1210 100
	Providence, R. I. WEAU 1050 1000		St. Augustine, Fla. WFTC 1200 100		Anderson, Ind. WHBY 1200 100
<u> </u>	Eau Claire, Wis.		Kinston, N. C.		Green Bay, Wis.
	WEBC 1290 1000 Duluth, Minn.		WGAL 1500 100 Lancaster, Pa.	-	WHDF 1370 100 Calumet, Mich.
	WEBQ 1210 100		WGAN 640 500		WHDH 830 1000
:	Harrisburg, Ill. WEBR 1310 100		Portland, Me. WGAR 1450 500		Boston, Mass. WHDL 1400 250
	Buffalo, N. Y.		Cleveland, Ohio		Olean, N. Y.
	WEDC 1210 100 Chicago, Ill.		WGBB 1210 100 Freeport, N. Y.		WHEB 740 250 Portsmouth, N. H.
	WEED 1420 100		WGBF 630 500 Evansville, Ind.		WHEC 1430 500
	Rocky Mount, N. C. WEEL 590 1000		WGBI 880 500		Rochester, N. Y. WHEF 1500 100
-	Boston, Mass.		Scranton, Pa.		Kosciusko, Miss.
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WHRC   1420   100		1101111	THVILL	1021	11 D. C. 51711	10110	D,1 C.		
WHIO 1250   1000   WAY   10   500   Cleveland, Ohlo   Cleveland,			100			1000			
Hammond, Ind.   Sooo   WJBC   1200   100   Nashville, Tenn.   Sooo   WJBK   1500   100   Nashville, Tenn.	WHIC	1260	1000		WJAY S10	500		WKZO 590	1000
WHIS 1410	WHIP	1480	5000		WJBC 1200	100		WLAC 1470	
WHJE   620   220			500	_		100			100
Greensburg, Pa.   Decatur, III.   Lexington, Ky.   WHK 1390   1000   Baton Rouge, La.   WLB 1252   1000   Minneapoils, Minn.   WLB 1310   100   Minneapoils, Minn.   WLB 1310   100   Musele, Ind.   WLB 1320   Stevens Point, Wis.   WLB 2520   South Minneapoils, Minn.   WLB 1210   100   Musele, Ind.   WLB 1320   Musele, Ind.   Musel			250			100			100
Cleveland, Oblo   WHKC 640 500   WBKR 1420 100   Munce, Ind.   Ocloumbus, Oblo   Cloumbus, Oblo   WBKR 1420 100   Munce, Ind.   WHLE 13170   WBWR 1200 100   Munce, Ind.   WHLE 1900 2500   Stevens Point, Wis.   WHN 1010 50000   WBWY 1210 100   Bangor, Me.   WWRY 1210 100   Bangor, Me.   WWRY 1210 100   Bangor, Me.   WWW 1410 100   MWBW 1200   Bangor, Me.   WWW 1410 100   Erie, Pa,   WWW 1410 100   Middlesboro, Wis.   WWW 1510 100   Middlesboro, Wis.	Green	sburg, Pa.			Decatur, Ill.			Lexington, Ky.	
Columbus, Ohto   WHLB 1370 100   WBW 1200 100   WURLE, 390 2500   New York, N. Y.   WHO 1000 50000   Jackson, Miss.   WHLB 1370 100   Jackson, Miss.   WHLB 1370 100   Jackson, Miss.   WHLB 1370 100   Malles, Pa.   WHBM 1370   Jackson, Miss.   WHB			1000			100		Minneapolis, Min	n.
WHLE 1370			500			100			100
WHN 1010 1000   New York, N. Y.	WHL	3 1370	100		WJBW 1200	100		WLBL 900	
WHO 1000 50000   Jackson, Milss   Series, Pa;   WLH 1370 100   Lowell, Mass.   WHOM 1450   Jackson, Milss   WJJ 1210 100   Lowell, Mass.   WHOM 1280 1000   Madison, Wis.   WJJM 1210 100   Middlesboro, Ky.   WILH 1370 100   Lansing, Mich.   WJJM 1210 100   Middlesboro, Ky.   WILH 1370 100   Middlesboro, Ky.   WILH 1370 100   WJJM 1420 100   WLNH 1310 100   WLNH 1310 100   WJJM 1420 100   WLNH 1310 100   WLNH 1310 100   WJMS 1420 100   WLNH 1310 100   WLN 1370 100   WJMS 1420 100   WLN 1370 100   WJMS 1420 100   WLN 1370 100   WJR 750 50000   WLW 78 750 50000   WJR 75	WHN	1010	1000		WJBY 1210	100		WLBZ 620	
WHOM 1450   250   Hagorstown, Md.   Lowell, Mass.   WHM 1210   100   Middlesboro, Ky.   WHM 1210   100   Middlesboro, Ky.   WHM 1210   100   Middlesboro, Ky.   WIM 1210   100   Middlesboro, Mich.			50000			1000		WLEU 1420	100
Jersey City, N. J.   Hagorstown, Md.   WHP   1430   500   WJIM   1210   100   Madison, Wis.   WiBA   1280   1000   Madison, Wis.   WiBA   1280   1000   Madison, Wis.   WiBA   1280   1000   Madison, Wis.   WiBG   970   100   Ironwood, Mich.   WiBM   1370   100   Jackson, Mich.   WiBM   1370   100   WJNO   1200   100   WLVA   1200   100   Work   1200   Topeka, Kans.   WiBW   1210   100   WJRD   1200   Topeka, Kans.   WiBC   800   WJRD   1200   Topeka, Kans.   WiBC   800   WJNO   1200   Topeka, Kans.   WiBC   800   WJNO   1200   Washington, D. C.   WiGA   340   250   Ashtabula, Ohlo   WJNO   1210   100   WJNO   1210   100   Williams, Willi			250			100			100
Harrisburg, Pa.   Lansling, Mich.   Middlesboro, Ky.	Jersey	City, N. J.			Hagerstown, Md.			Lowell, Mass.	
Madison, Wis.   Chicago, Ill.   Laconia, N. H.	Harri	burg, Pa.	500		Lansing, Mich.	100		Middlesboro, Ky	
WIBG 970   100			1000			20000			100
WiBM 1370	WIBG	970	100		WJMS 1420	100		WLS 870	50000
WIBU 1210   Detroit, Mich.   WJRD 1200   Cincinnati, Oblo   Cincinnati, Oblo   Cincinnati, Oblo   Cincinnati, Oblo   Cincinnati, Oblo   WMAL 2100   Utica, N. Y.   WISY 1460   1000   WMAL 6370   50000   Chicago, Ill.   WMAC 6400   Mishington, D. C.   WMAC 670   South of the control of the	WIBN	1 1370	100		WJNO 1200			WLVA 1200	100
Poynette, Wis.   WibW   580   1000   Wird   1200   100   Tuscaloosa, Ala.   WibX   1200   100   Utlea, N. Y.   WiCA   940   250   Ashtabula, Ohio   Jamestown, N. Y.   Will   1200   100   Akron, Ohio   Mill   1200   Mill   12			100						500000
Topeka, Kans.   Tuscaloosa, Ala.   Washington, D. C.						100	<u> </u>		250
Utica, N, Y	Topel	a, Kans.			Tuscaloosa, Ala.			Washington, D.	c.
Ashtabula, Ohlo  WICC 500 500  Bridgeport, Conn.  WIL 1200 100  St. Louis, Mo.  WILL 580 1000  Urbana, Ill.  WILM 1420  WILMINGTON, Del.  WIND 550 1000  Gary, Ind.  WINS 1180 1000  Mismil Beach, Fia.  WIOD 1300 1000  Mismil Beach, Fia.  WISD 1500 1000  Mismil Beach, Fia.  WISD 1500 1000  Mismil Beach, Fia.  WISD 1500 1000  Mismil Beach, Fia.  WISD 1310 1000  Mismil Beach, Fia.  WISD 1310 1000  Mismil Beach, Fia.  WISD 1310 1000  Mismil Beach, Fia.  WISD 1300 1000  Mismil Beach, Fia.  WISD 1310 1000  Mismil Beach, Fia.  WISD 1300 1000  Mismil Beach, Fia.  WISD 1300 1000  Mismil Beach, Fia.  WISD 1310 1000  Mismil Beach, Fia.  WISD 1300 1000  Mismil Beach, Fia.  WISD 1310 1000  WISD 1310 1000  Mismil Beach, Fia.  WISD 1310 1000  WISD 1310 1000  WISD 1310 1000  Mismil Beach, Fia	Utica	N. Y.			Washington, D. C.			Chicago, Ill.	
Bridgeport, Conn.   Makron, Ohio   Makron, Ga.   Makron, Mak			250			100			
Will   1200   100   New York, N. Y.   Will   580   1000   Urbana, Ill.   Will   1420   100   San Juan, P. R.   Will   1420   100   East Lansing, Mich.   Will   1420   100   East Lansing, Mich.   Will   1420   100   Miami Beach, Fia.   Will   1500   100   Miami Beach, Fia.   Urbana, Miami Fia.   Will   1600   Will   1800   1000   Miami Fia.   Will   1800   Will   1800   1000   Miami Fia.   Will   1800   Will   1800   1000   Will   1800   1000   Miami Fia.   Will   1800   Will   1800   1000   Miami Fia.   Will   1800   1000   Will   1800   1000   Miami Fia.   Will   1800   1000   Will   1800   1000   Miami Fia.   Will   1800   1000   Will   1800   1000   Miami Fia.   Will   1800   18			500			100			1000
WILL   S80   1000	WIL	1200	180		WJZ 760	50000		WMBC 1420	100
Wilmington, Del.   Wish   S50   1000   East Lansing, Mich.   Richmond, Va.   Wish   1180   1000   Mismin Beach, Fia.   Wish   1180   1000   East Dubuque, Ill.   Wish   1300   1000   Mismin Beach, Fia.   Wish   1300   1000   Mismin Beach, Fia.   Wish   1300   1000   East Dubuque, Ill.   Wish   1300   1000   Mismin Fia.   Wish   1300   1000   Mismin Fia.   Wish   1300   1000   Mismin Fia.   Wish   1200   Mismin Fia.   Wish   1200   Mismin Fia.   Wish   1300   Mismin Fia.	WILL	580	1000		WKAQ 1240	1000		WMBD 1440	500
Wilmington, Del.   East Lansing, Mich.   Richmond, Va.   WKAT 1500   100   MKAT 1500   100   MKAT 1500   100   MKAT 1500   100   Miamil Beach, Fia.   Double, Ind.   Mismil Beach, Fia.   Mismil Bea			100			1000	_		100
Gary, Ind.   Miami Beach, Fia.   Joplin, Mo.   WKB 1500   100   WKBB 1500   100   Chicago, Ill.   WMB1 1080 5000   Chicago, Ill.   WKBH 1380 1000   Chicago, Ill.   WMB1 1380 1000   Chicago, Ill.   WMB2 1500 100   WMB2 1500 100   Chicago, Ill.   WMB2 1500   Chicago, Ill.   Chicago, I	Wilmi	ngton, Del.			East Lansing, Mic	h.			100
New York, N. Y.	Gary,	Ind.			Miami Beach, Fla.			Joplin, Mo.	
Miami, Fia.   LaCrosse, Wis.   Auburn, N, Y.   WMBQ 1500   100   WMBN 570   500   Brooklyn, N. Y.   WMBQ 1500   100   Indianapolis, Ind.   Harrisburg, Pa.   Wish 1500   100   Miswakee, Wis,   Buffalo, N, Y.   WMS 1500   100   Miswakee, Wis,   Buffalo, N, Y.   WMS 1500   100   Miswakee, Wis,   WMS 1500   100	New	York, N. Y.	1000				1		5000
WIP   610   1000   WKEN   570   500   WMEQ   1500   100			1000			1000			100
WIRE   1400   1000   Harrisburg, Pa   WMBR   1370   100   Jacksonville, Fla.   WMBS   1500   100   WMBV   1500   100   WMBS   1420   250   WMBV   1500   Milwaukee, Wis, WJAC   1310   100   Muskegon, Mich   WMSZ   1500   100   WMSZ   1500	WIP	610	1000		WKBN 570			WMBQ 1500	100
WIS   560   1000   Richmond, Ind.   WMBS   1420   25	WIRE	1400	1000		WKBO 1200			WMBR 1370	
WISN 1120 250   WKBW 1480 5000   WMC 780 1000   Memphis, Tenn. WMOA 1310 100   MWBZ 1500 100   MWMCA 570 1000   Muskegon, Mich.   WMAC 1310 100   Muskegon, Mich.   WMOA 570 1000   Norfolk, Neb.   Griffin, Ga.   Boston, Mass.   WJAR 890 1000   WKOK 1210 100   WMFD 1370 100   WMSD 1290 1000   WKRC 550 1000   WMFF 1310 100   WMFF 1310 100   WMRF 1310   WMRF	· wis	560	1000		WKBV 1500	100	$\vdash$	WMBS 1420	
Milwaukee, Wis,   Buffalo, N. Y.   Memphls, Tenn.   WMCA 1310   100   WKBZ 1500   100   WMCA 570 1000   New York, N. Y.   WMCA 1500 100   Griffin, Ga.   Boston, Mass.   WJAR 890 1000   WKOK 1210 100   WMFD 1370 100   WMFD 1370   100	WISN	1120	250			5000		WMC. 780	1000
Johnstown, Pa.   Muskegon, Mich.   New York, N. Y.	Milws	ukee, Wis,			Buffalo, N. Y.		-	Memphis, Tenn.	
Norfolk, Neb.   Griffin, Ga.   Boston, Mass.	Johns	town, Pa.			Muskegon, Mich.			New York, N. Y.	
Providence, R. I. Sunbury, Pa. Wilmington, N. C. WARC 550 1000 WMFF 1310 100			1000			100	'	Boston, Mass.	
WJAS 1290 1000 WKRC 550 1000 WMFF 1310 100			1000			100			
The state of the s	WJAS	1290	1000		WKRC 550	1000		WMFF 1310	100
	Fittst	ungu, ra.			Cincinnati, Omo		$\vdash \vdash \vdash$	- avonuis, ii. I	
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WMFG 1210 100 Hibbing, Minn.	WOPI 1500 100 Bristol, Tenn.	WRGA 1500 100
WMFJ 1420 100	WOR 710 50000	Rome, Ga. WRJN 1370 100
Daytona Beach, Fla.	Newark, N. J.	WRJN 1370 100 Racine, Wis.
WMFN 1210 100	WORC 1280 500	WROK 1410 500
Grenada, Miss.	Worcester, Mass.	Rockford, Ill.
WMFO 1370 100	WORK 1320 1000	WROL 1310 100
Decatur, Ala. WMFR 1200 100	York, Pa. 920 500	Knoxville, Tenn.
High Point, N. C.	WORL 920 500 Boston, Mass.	WRR 1280 500
WMIN 1370 100	WOSU 570 750	Dallas, Texas WRTD 1500 100
St. Paul, Minn.	Columbus, Ohio	Richmond, Va.
WMMN 890 500	WOV 1130 1000	WRUF 830 5000
Fairmont, W. Va.	New York, N. Y.	Gainesville, Fla.
WMPC 1200 100	WOW 590 1000	WRVA 1110 5000
Lapeer, Mich.	Omaha, Neb.	Richmond, Va.
WMSD 1420 100	WOWO 1160 10000	WSAI 1330 1000
Sheffield, Ala.	Fort Wayne, Ind.	Cincinnati, Ohio
Cedar Rapids, Iowa	Paducah, Ky.	WSAJ 1310 100 Grove City, Pa.
WNAC 1230 1000	WPAR 1420 100	WSAN 1440 500
Boston, Mass.	Parkersburg, W. Va.	Allentown, Pa.
WNAD 1010 1000	WPAX 1210 100	WSAR 1450 1000
Norman, Okla.	Thomasville, Ga.	Fall River, Mass.
WNAX 570 1000	WPAY 1370 100	WSAU 1370 100
Yankton, S. D. WNBC 1380 250	Portsmouth, Ohio WPEN 920 1000	Wausau, Wis.
New Britain, Conn.	Philadelphia, Pa.	WSAY 1210 100 Rochester, N. Y.
WNBF 1500 100	WPG 1100 5000	WSAZ 1190 1000
Binghamton, N. Y.	Atlantic City, N. J.	Huntington, W. Va.
WNBH 1310 100	WPHR 880 500	WSB 740 50000
New Bedford, Mass.	Petersburg, Va.	Atlanta, Ga.
WNBR 1430 500 Memphis, Tenn.	WPRA 1370 100 Mayaguez, P. R.	WSBC 1210 100
WNBX 1260 1000	WPRO 630 500	Chicago, Ill. WSBT 1360 500
Springfield, Vt.	Providence, R. I.	WSBT 1360 500 South Bend, Ind.
WNBZ 1290 100	WPRP 1420 100	WSFA 1410 500
Saranac Lake, N. Y.	Ponce, P. R.	Montgomery, Ala.
WNEL 1290 1000	WPTF 680 1000	WSGN 1310 100
San Juan, P. R. WNEW 1250 1000	Raleigh, N. C.	Birmingham, Ala.
WNEW 1250 1000 New York, N. Y.	WQAM 560 1000 Miami, Fla.	WSIX 1210 100
WNLC 1500 100	WQAN 880 1000	Nashville, Tenn. WSJS 1310 100
New London, Conn.	Scranton, Pa.	Winston-Salem, N. C.
WNNY 1420 100	WQBC 1360 1000	WSM 650 50000
Watertown, N. Y.	Vicksburg, Miss.	Nashville, Tenn.
WNOX 1010 1000 Knoxville, Tenn.	WQDM 1390 1000 St. Albans, Vt.	WSMB 1320 1000
WNYC 810 1000	WQXR 1550 1000	New Orleans, La. WSMK 1380 200
New York, N. Y.	New York, N. Y.	WSMK 1380 200 Dayton, Ohio
WOAI 1190 50000	WRAK 1370 100	WSNJ 1210 100
San Antonio, Texas	Williamsport, Pa.	Bridgeton, N. J.
WOC 1370 100	WRAW 1310 100	WSOC 1210 100
Davenport, Iowa WOI 640 5000	Reading, Pa. WRAX 920 1000	Charlotte, N. C.
Ames, Iowa	WRAX 920 1000 Philadelphia, Pa.	WSPA 920 1000 Spartanburg, S. C.
WOKO 1430 500	WRBL 1200 100	WSPD 1340 1000
Albany, N. Y.	Columbus, Ga.	Toledo, Ohio
WOL 1310 100	WRC 950 500	WSPR 1140 500
Washington, D. C. WOLS 1200 100	Washington, D. C.	Springfield, Mass.
Florence, S. C.	WRDO 1370 100 Augusta, Me.	WSUI 880 500 Iowa City, Iowa
WOMI 1500 100	WRDW 1500 100	WSUN 620 1000
Owensboro, Ky.	Augusta, Ga.	St. Petersburg, Fla.
WOMT 1210 100	WREC 600 1000	WSVA 550 500
Manitowoc, Wis.	Memphis, Tenn.	Harrisonburg, Va.
WOOD 1270 500 Grand Rapids, Mich,	WREN 1220 1000	WSVS 1370 50
Grand Rapids, Mich.	Lawrence, Kans.	Buffalo, N. Y.
		WSYB 1500 100 Rutland, Vt.

	WSYR 570 1000		XEAG 1310 10 Cordoba, Ver.		XEFV 1210 100 Juarez, Chih.
	Syracuse, N. Y. WTAD 900 1000		XEAL 660 1000		XEFW 1310 250
	Quincy, Ill.	' L	Mexico City, D. F.		Tampico, Tams.
	WTAG 580 1000	1 1	XEAM 750 25	1	XEH 720 250
	Worcester, Mass. WTAL 1310 100		Matamoros, Tams.		Monterrey, N. L. XEI 1370 125
1	WTAL 1310 100 Tallahassee, Fla.	'	Mexicall, B. C.		Morelia, Mich.
	WTAM 1070 50000		XEAQ 1090 1000		XEJ 1020 1000
	Cleveland, Ohio	. —	Rosarito, L. C.	<u> </u>	Juarez, Chih. XEJP 1130 100
	WTAQ 1330 1000 Green Bay, Wis.	'	XEAS 1160 50 Saltillo, Coah.		Mexico City, D. F.
	WTAR 780 500	·	XEAT 1210 250		XEK 990 100
	Norfolk, Va.	. —	Parral, Chih.		Mexico City, D. F. XEKL 1240 500
	WTAW 1120 500 College Station, Tex.	'	XEAW 960 50000 Reynosa, Tams.		XEKL 1240 500 Leon, Guan.
	WTAX 1210 100	,	XEAY 1240 100		XEL 780 1000
	Springfield, Ili.		Mexico City, D. F.		Mexico City, D. F. XELA 1240 50
	WTBO 800 250 Cumberland, Md.	'	XEB 1030 10000 Mexico City, D. F.		XELA 1240 50 Saltillo, Coah.
	WTCN 1250 1000	·	XEBA 1080 20	,	XELO 1110 50000
	Minneapolis, Minn.	. —	Guzman, Jal.		Piedras Negras, Coah. XELZ 1370 100
	WTEL 1310 100 Philadelphia, Pa.	'	XEBC 730 5000 Agua Callente, L. C.		Mexico City, D.F.
	WTF1 1450 500	,	XEBG 820 1000		XEMG 1060 100
	Atlanta, Ga.		Tijuana, B. Cfa.		Atzcapotzalco, D. F.
	WTHT 1200 100	)	XEBH 930 500		XEMO 860 5000 Tijuana, L. C.
	Hartford, Conn. WTIC 1040 50000	,	Hermosillo, Sonora XEBI 1000 25		XEMX 1280 100
	Hartford, Conn.		Aguascalientes, Ags.		Mexico City, D. F.
	WTJS 1310 100	)	XEBJ 1160 20		XENC 860 50 Mexico City, D. F.
	Jackson, Tenn. WTMJ 620 1000	,	Merida, Yuc.	<u> </u>	XENT 910 150000
	Milwaukee, Wis.		Neuvo Laredo, Tams.		Nuevo Laredo, Tams.
	WTMV 1500 100	)	XEBL 1220 50		XEOK 760 2500 Tijuana, L. C.
	East St. Louis, Ill. WTNJ 1280 500	). <del> </del>	Mazatlan, Sin. XEBX 640 250		XEP 1160 500
	Trenton, N. J.		Sabinas, Coah.		Juarez, Chih.
	WTOC 1260 1000	)	XEBZ 1160 100		XEPN 730 100000 Piedras Negras, Coah.
	Savannah, Ga. WTRC 1310 100	,	Mexico City, D. F. XEC 1150 100		XERA 840 350000
	Elkhart, Ind.		Tijuana, L. C.		Villa Acuna, Coah.
	WVFW 1400 500	)	XECW 1310 10		XES 990 250 Tampico, Tams.
<del></del>	Brooklyn, N. Y. WWAE 1200 100		Mexico City, D. F. XECZ 1370 100		XET 690 5000
	Hammond, Ind.	´ <u> </u>	San Luis Potosi, S.L.P.		Monterrey, N. L.
	WWJ 920 500	)	XED 1160 2500		XETB 1310 125 Torreon, Coah.
	Detroit; Mich. wwl 850 1000	, —	Guadalajara, Jal.  XEDA 1220 200		XETF 1220 30
	New Orleans, La.	´	Gra. Anaya, D. F.		Veracruz, Ver.
	WWNC 570 100	)	XEDP 1080 500		XETH 1210 100
	Asheville, N. C. WWRL 1500 10	, —	Mexico City, D. F. XEDW 1150 20		Puebla, Pue. XEU 1010 250
	Woodside, N. Y.		Minatitian, Ver.		Veracruz, Ver.
	WWSW 1500 10	)	XEE 1210 50		XEW 890 50000 Mexico City, D. F
	Pittsburgh, Pa. WWVA 1160 5000	, —	Durango, Dgo. XEF 1450 100		XEX 1310 125
	Wheeling, W. Va.		Juarez, Chih.		Monterrey, N. L.
	WXYZ 1240 1000 Detroit, Mich.	)	XEFA 1180 500 Tacuba, D. F.		XEXB 1270 50 Jalapa, Ver.
	W3XJ 1060 10	· ·	XEFB 870 200		XEXC 810 350
	College Park, Md.		Monterrey, N. L.		Aguascalientes, Ags.
	W8XO 700 500000 Cincinnati, Ohio	)	XEFC 550 100		XEXD 1340 350 Jalapa, Ver.
	XEAA 920 20	,	Merida, Yuc. XEFE 980 25		XEXH 1250 . 250
	Mexicali, B. C.		Laredo, Tams.	$\vdash$	San Luis Potosi, S.L.P. XEXS 1000 100
	XEAC 980 25	)	XEFI 1440 250 Chihuahua, Chih.		Portable in Mexico
	Tijuana, L. C. XEAD 1060 12	5	XEFJ 1230 100		XEYO 940 500
<u></u>	Guadalajara, Jal.	,	Monterrey, N. L.		Mexico City, D. F. XEZ 630 500
1	XEAF 990 75 Nogales, Son.	<b>'</b> [ .	Mexico City, D. F.		Merida, Yuc.
	Tropates, bon.		4		•

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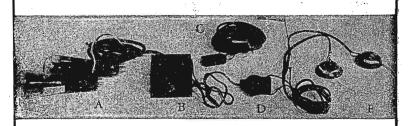
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WNBR, Memphis, will change its call letters to WMPS.

CXA8, 9505 and CXA14m 15170 kcs., Uruguay, relay the programs of LR3, "Radio Belgrano," Argentina.

ZP14, "Radio Cultura," Villarica, Paraguay, transmits from 11 am to 5 pm on 6312 kcs.

New Danish station heard on 11805 kcs. testing with directional aerials from 6:30 to 8:20 pm EST.

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dial towards corresponding station; (2) Colorful Bull's Eye darls across dial and locates itself behind station; (3) As dial flashes to

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