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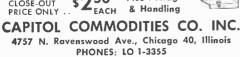
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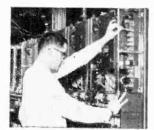
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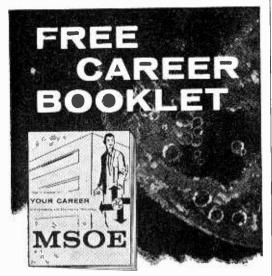
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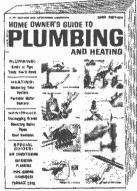
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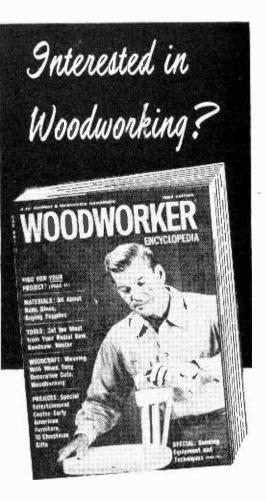
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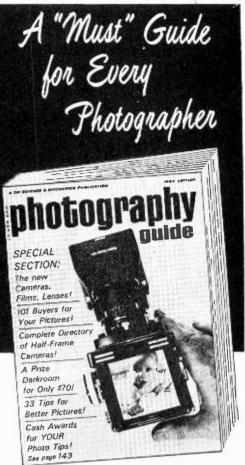
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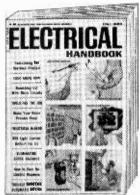
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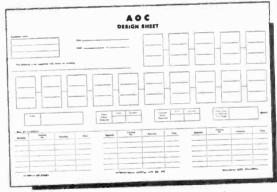
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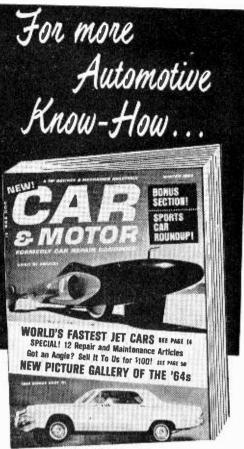
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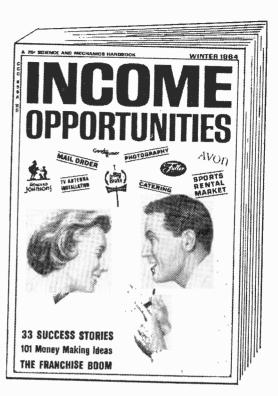
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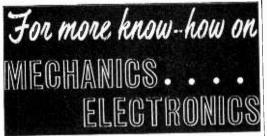
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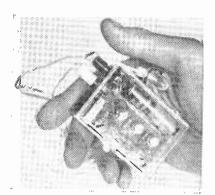
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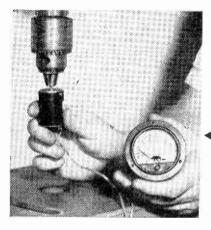


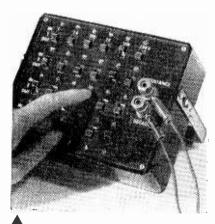
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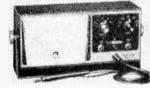
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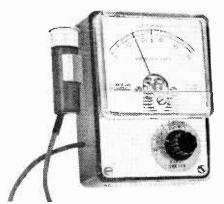
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EDITORIAL



Fun and Games

BACK in the days when your editor wielded a soldering iron as a lab technician, there was always something doing that curled the hair of management. Like take the time, for instance, we rigged up a "Handy-Dandy Fuse-Popper." This little black box device consisted only of a pilot lamp, a push button switch and a line cord. The instructions were neatly typed and pasted on the front panel. "Plug line cord into socket. Pilot lamp should light." Of course the pilot lamp would light. . . . It was an NE-51 and a dropping resistor, wired across the line! ". . . Press button—Light will go out." Yup! The switch was also wired across the line, in parallel with the lamp. Not only would the lamp go out, so would all the lights in the building, for this hellish instrument would blow the fuses! The worst part of it was that every engineer that "bit" on this gag would immediately place the box on someone else's desk, and it drove the maintenance department nuts!

Another time, we had an engineer working and worrying over a new high-voltage power supply. The fateful day came soon, however, and this chap was ready to test the supply. Gingerly, he plugged the line cord in. Nothing happened. He exhaled slowly, took another breath, and threw the switch. He was rewarded by a huge puff of white smoke that issued from beneath the chassis. Quickly, he pulled the line cord, and spent the entire morning rechecking the schematic. All was in order, so again he threw the switch, and once again was greeted by the puff of smoke. This time, however, he sniffed it while pulling out the line cord, and caught wise to the fact that there was a length of clear plastic tubing extended from the chassis to a point at the other end of the lab. At that end we had stationed one of the technicians who had a cigar and a healthy pair of lungs!

There were other ways to drive people nuts. The first technician to show up at work in the morning could be depended on to insert 10 ohm, $\frac{1}{2}$ watt resistors in all the ac outlets before the gang got to work. The next man in would sleepily throw the master power switch, and the din of exploding resistors would wake everybody up!

The other stinking trick (!) that was always used on newcomers to the lab, was to roll up a small pellet of rubber tape, remove the soldering iron tip from the iron on his bench, drop the ball of tape into the tip-well, and replace the tip. When the poor boob came to work, he'd plug in his soldering iron, and in a short time, he'd be sniffing in panic for the source of the "burning transformer."

Now we aren't advocating these gags as common procedures in YOUR shop . . . It was just for fun and games!

Byron G. Merg

Prizes for Projects!



The Editor's Hi-Fi system occupies an entire wall in his living room. Equipment line-up consists of Scott Tuner and amplifier, Knight reverb unit (used for input echo effects), Home-made patch-panel and mixer, Fidelitone recording amplifier for the Knight Tape Deck. An Eico RP-100K recorder is housed with the Knight Deck.

Two Jensen 3-P/3 Speakers are used on either side of the Utah Reverberating speaker which is used for centerchannel fill and output echo. On top of the center speaker is a StereoSonics phase and balance indicator.

Under the tape deck is the Rek-O-Kut N-33H turntable. The device next to it is an electric clock designed by the editor. Tape storage and accessory storage (Robins Bulk Eraser, professional splicer, etc.) and on the far end is a record storage cabinet. Above the records is the Hallicafters S-118 which is used as a short-wave tuner. The Scott FM set is fed by a built-in Gallo FMS antenna.

On either side of the system are a pair of Atlas boom stands surmounted by American Microphone Co. Dynamic mikes.

The system is easy to work with, the insides of the pull-down doors are Formica covered to provide marproof work surfaces, and full studio facilities are incorporated for mixing of all sound sources, dubbing and duping tapes. AVE you an interesting or unique setup? It doesn't matter whether it's hi-fi, Ham, SWL, or an electronic workshop, we'd like to see it, and possibly show it to our readers.

Maybe you have a hi-fi system that's really unusual. Perhaps your Ham or SWL station reflects ingenuity and design factors that make operating easier. Your electronic lab may be organized to take the most advantage of the least space. If so, let us know about it.

HOW TO ENTER: Send in photos of your set-up, preferably glossy black and white, at least five by seven inches. Please include the negative. Snapshots or contact prints will also be eligible, provided the negative is included.

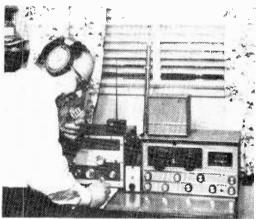
Along with the photos, send your descriptive material typed double-spaced on an $8\frac{1}{2} \times 11$ white paper. Be sure to include your name and address. No material can be returned.

PRIZES: Three prizes will be awarded in each issue. The best received will take first place and win \$100. Second place will bring \$75 and third place \$50. All winners will receive a special Letter of Merit from RADIO-TV EXPERIMENTER.

So get those pictures in. Winners will be notified by mail and the best installations will be published in an upcoming issue.

HERE'S A TIP: Make sure you get a person into your pictures. In addition to making a picture more acceptable, it helps indicate the relative size of the equipment!

Send entries to Contest Editor, RADIO-TV EXPERIMENTER, 505 Park Ave., New York 22, N. Y.



The Editor's Ham-shack is scaled down to fit an apartment. The Heath Seneca transmitter covers six and two, the Johnson converter works into the Knight-Kit receiver. The Lafayette power meter sits atop the transmitter for tune-up purposes, and the whole thing runs into an Antenna Specialists mobile antenna, mounted on a wall outside the window. A pair of Telex stereo phones wired for mono keep down the QRM during late-night QSOs.



By JOE MARSHALL

RADIO-TV EXPERIMENTER brings the know-how of an electronics expert to its readers. If you have any questions for Joe, send them on in. All queries will be answered, the most generally interesting will be printed

QUESTION: I noticed a reference in RADIO TV EXPERIMENTER to certain station lists available from the government. What lists can you get and at what price and where? BC, Kansas City, Mo.

ANSWER: You can obtain from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. the book "Broadcasting Stations of the World." It is in four parts available individually, as follows:

- Part 1. According to country and city, 411p, \$2.
- Part 2. According to frequency, 404p, \$2.
- Part 3. According to call letters and station name or slogan, 312p, \$1.50.
- Part 4. FM and TV stations, 235p, \$1.25.

The catalog number for all parts is 34.662 followed by the part number as for example 34.662 Pt. 1. The listings are corrected each year and the last two digits of the catalog number will change from year to year. These are very fine books—but you can see what a bargain you get in White's Radio Log, which gives you a large part of the same information as a bonus with every issue of this magazine.

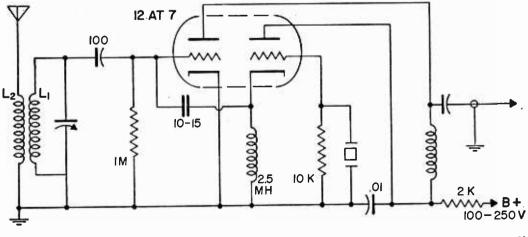
Incidentally, every experimenter should

write to the above address for Price List 82, available free, which lists the hundreds of publications covering radio and electricity available from the Government Printing Office. These include the technical manuals put out by the armed forces, some of which are very fine basic texts. An excellent basic radio and electronics library can be purchased for very little money from this catalog.

QUESTION: I have a ham band only receiver. How can I get it to cover 5 or 10mc so I can get WWV for calibration purposes? EF, Galesburg, Ill.

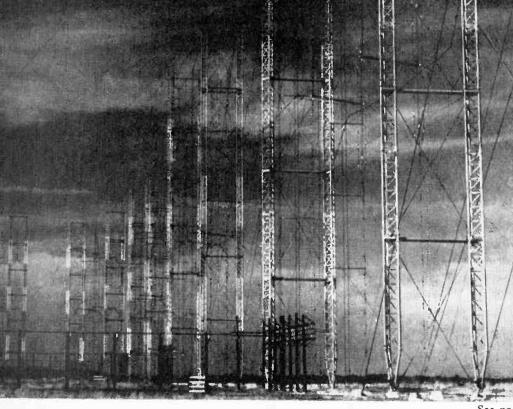
ANSWER: The simplest way, and cheapest too, probably, is to build a simple converter. Below are two diagrams, one for a transistor version and the other for a tube version. In both cases the coil L_1 and C_1 should tune the frequency you want to receive. L_2 can be 5 or 10 turns, depending on frequency, wound over L_1 or adjacent to the ground end. Choose a crystal whose frequency when added to, or subtracted from, the frequency of the station you want to hear, will put you in one of the ham bands. For example, any 75m phone band crystal from 3820 to 4000kc will put 3183 into the 40m band on your receiver;

(Continued on page 124)



The Voice Speaks Louder

By GERRY L. DEXTER



See page 35

(Continued from page 32)

C ARLY this year the Voice of America took a deep breath, added a few million watts of lung power, and spoke louder to its millions of listeners around the world, adding a good many more listeners in the process.

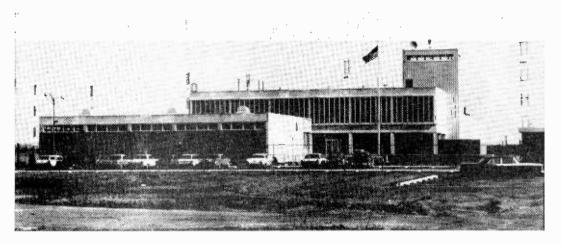
The main reason for this increased strength of voice is the new 23 million dollar VOA transmitting station at Greenville, N.C. which was officially dedicated on February 8.

The new transmitting complex, billed as the largest and most powerful in the world, includes six 500 kilowatt transmitters by Continental Electronics, six 250 kilowatt General Electric transmitters, six 50 kilowatt transmitters manufactured by Gates and four five use in VOA programs broadcast.

Lastly, the new installation provides an emergency communications system between Washington and U.S. posts overseas.

VOA-Greenville is but one of a number of VOA improvement projects which are already, or will be completely by the end of the year.

Already in use are the "transportables," mobile transmitters which can be put into service at almost a moment's notice virtually anywhere. The "transportables" include shortwave and broadcast band transmitters, receiving equipment, studio, workshop and control center all built into $14 \times 8 \times 20$ -ft. trailers which can be moved by train, plane,



kilowatt transmitters by the Technical Material Corp., making a total of 4.8 million watts of power.

The Greenville site has 96 directional and rhombic antennas and switching from one system to another is accomplished during the few seconds of dead air in station breaks.

VOA-Greenville comprises three sites totaling 6000 acres. The two transmitting sites are located 15 miles northeast of Greenville near Pactolus, N.C., and 15 miles southeast of Greenville near Shelmerdine. The third site, a receiving base, is located 6.5 miles west of Greenville. The VOA studios remain in Washington.

Greenville has four main purposes. First, to put a stronger signal into such formerly weak signal areas as Central America, West Africa, and Scandinavia. As VOA director Henry Loomis put it after returning from a trip to Latin America, the signal down there is now "strong enough to lean on."

The Greenville transmitters serve to replace the older VOA outlets at Wayne, N.J., Schenectady and Brentwood, N.Y.

An extensive receiving station at Greenville allows overseas VOA correspondents to feed reports to Washington via Greenville for ship or tractor truck.

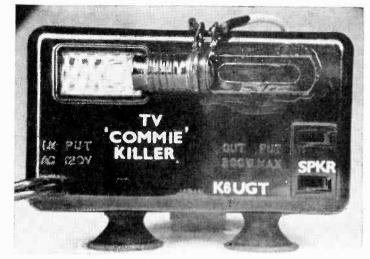
"Transportables" are in use now in Florida, beaming programs to Castro's Cuba and in Liberia where they are providing interim service until a third VOA improvement is ready . . . a new VOA relay station near Monrovia. The new Liberian station will include six 250 KW and two 50 KW transmitters and is scheduled for completion in August.

Still another change is taking place at the Island of Rhodes where the famous shipboard transmitter is being land based. This installation should be completed by the time you read this.

Completing the VOA's multi-step improvement program is a six-fold boost in power for the transmitter at Wooferton, England and modernization of transmitters at Bethany, Ohio, Dixon and Delano, Calif.

These extensive improvements in the Voice of America add up to some 47 million dollars in cost, but that price tag buys a much stronger signal, many more listeners, a more efficient operation and a better punch through Communist jamming, all aimed at getting the Voice of America's story of freedom and truth to the world.

ONE PART of the double unit is "locked-on" by the small lamp. When the flashlight is again played across the "off" control, the lamp goes out and the television sound comes on again. Most people prefer to play rather than watch the TV set!



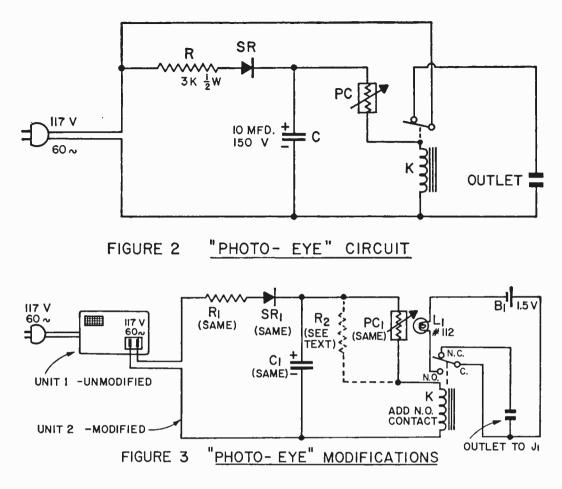
By FRED BLECHMAN, K6UGT

"Commie" Killer

.... A remote wireless TV commercial squelcher



YOU NEEDN'T let the television commercials join you in your living room. Just shine your light at the TV set, and the vidiots will mouth empty words that you will never even hear! Here's to more quietude.



R IGHT at the crucial moment, the TV show you're watching is interrupted with a commercial. Not only is that annoying but, to add insult to injury, the volume of the "pitchman's" voice is up 3/db! Somehow, however, it's too much trouble to get up from that comfortable chair to shut down the sound until the commercial is over—so you grimace and bear it.

That is, you used to! Now, with the "Commie" Killer, you nonchalantly aim a flashlight at your TV and revel in delight when the sound goes dead. After a short period of renewing acquaintances with your family and discussing the show—without the blaring background intruders—you cagily wave your magic torch toward the TV and the sound returns. Best of all, this luxury can be yours for less than \$8 and very little effort!

The heart of the "Commie" Killer is the Olson Photo-Eye, which sells for the very low price of \$3.66 plus postage. The intended use of the Photo-Eye is to turn on lights automatically at night and turn them off automatically in the morning. Understanding how the Photo-Eye works will help you understand the Commie Killer system.

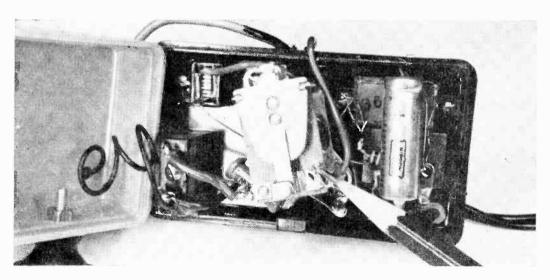
How It Works: Figure 1 shows the circuit of the Photo-Eye. Resistor R, selenium rectifier SR and capacitor C rectify and filter the 117 volt 60 cycle line power, applying about 135 volts dc across the series combination of photoconductor PC and the sensitive high resistance relay K. The photoconductor, mounted on the front of the unit behind a honeycomb window, has the useful characteristic of increasing conductivity (lower resist-ance) as it "sees" more light. In the dark, or in subdued light, the current through the high resistance of the photoconductor and relay is not enough to close the relay. Hit the eye with enough light and its resistance drops, current increases, and the relay is energized. As wired, the unit supplies power line voltage through the normally-closed relay contacts to a socket on the front panel. With a lamp plugged into this socket, and the unit mounted at a window "looking" outside, daylight will close the relay (contacts open) and the lamp goes out. When nighttime approaches, the photocell resistance increases, the relay drops out (contacts close) and the

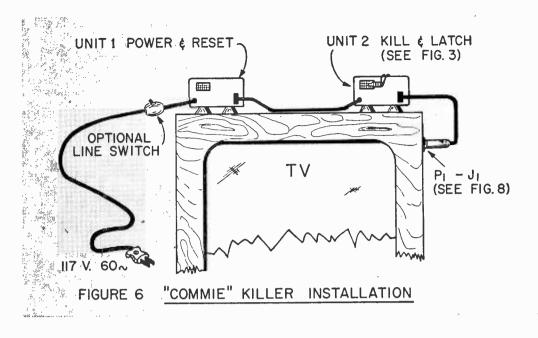


BATTERY, in its bracket is mounted behind one of the control units. When the relay closes, it applies this battery power to the small lamp, lighting the lamp and holding the relay closed. This takes the place and saves the cost of a latching relay.

lamp goes on. This is a very useful device for window displays, signs, to discourage prowlers and to return home in the evenings to a lighted home.

Okay, you say, why don't we just use one of these Photo-Eyes to open a TV speaker circuit instead of shutting off a lamp, using a flashlight as an actuator? We can, but it would mean holding the flashlight beam right "on target" continually during commercials to keep the speaker circuit open. Not so good. How about making the unit self-latching? Great! Now, how do we unlatch? Hmmm... problems begin to rear their ugly heads! Modifications: Figure 2 shows a very practical solution to this dilemma. Two Photo-Eyes are used. Unit 1 is used unmodified. Unit 2 is modified by adding a relay contact, moving a few wires, and adding a simple light-latch circuit. When Unit 2 is actuated by shining a flashlight at the "eye", the added relay contact closes a local battery-bulb circuit, lighting the bulb (L1) which is placed right in front of the photoconductor. This light "latches" the photoconductor into a lowresistance state, holding the relay closed after





the flashlight is removed! At the same time, the relay contacts have opened the speaker circuit, "killing" the commercial. Now, to return the sound and "reset" the photoconductor, Unit 1 is triggered by the flashlight. This kills all power to Unit 2, which is plugged into the Unit 1 output socket. Unit 2 relay resets, the light-latch bulb goes out, and the sound comes back on normally.

Physically, the arrangement is as shown in Figure 3. While this all may seem Rube Goldberg-ish, it works faultlessly from more than 25 feet away with a good 3-cell flashlight like the Ray-O-Vac *Sportsman*, over 10 feet with a regular 2-cell flashlight.

If you are with us this far, you will be interested in the details of the modifications to Unit 2. As is often the case, the changes are easier to perform than to describe, but here goes, step by step:

(1) Remove the back from Unit 2. This is held on by a small screw at the bottom of the unit.

(2) Using Fig. 4A as a guide to the shape, fashion a thin piece of brass or copper

into a form which can be cemented to the relay insulator to act as a lower contact. The relays in the Photo-Eye units have different contact arrangements, but there is plenty of room to add this contact. Make sure the relay armature makes contact with this new strip when it closes. This is the only really tricky part to the whole "Commie" Killer.

(3) A 2½ x 2½-in. flat piece of aluminum sheet is used to mount the battery holder to the unit. Fig. 4B shows what it should look like. The bent-down flange keeps the

MATERIALS LIST-TV COMMIE KILLER					
Desig.	Size and Description				
Unit 1, Unit 2	SW-203 Photo-Eye Olson				
R2 R3	33K ¼ w resistor (optional—see text) 47 ohm 2 w resistor (optional—see text)				
B1	1.5 volt "D" cell				
L1	#112 penlight bulb GE (Lafayette PL-49)				
Pilot light socket	miniature screw type (Lafayette PB-85) (Dialco #507)				
IL	closed-circuit phone jack (Lafayette MS-454) 19¢				
P1	standard phone plug (Lafayette MS-453) 25¢				
ac line cord	(Latayette EL-13) 19¢				
Battery holder for "D" cell, 2½x2½ aluminum sheet, small piece of brass or copper sheet, line switch (optional), wire, cement, screws, nuts.					
Parts available from: Olson Electronics, 260 S. Forge Street, Akron 8, Ohio, Lafayette Radio Electronics Corporation, 111 Jericho Turnpike, Syosset, L. I., New York.					

unit level when the battery is added.

(4) Cement or tape a miniature screw base pilot light socket to the front of the unit so that the *glass* part of the penlight bulb extends in front of the cye window area.

(5) Unsolder the 3K resistor and line cord

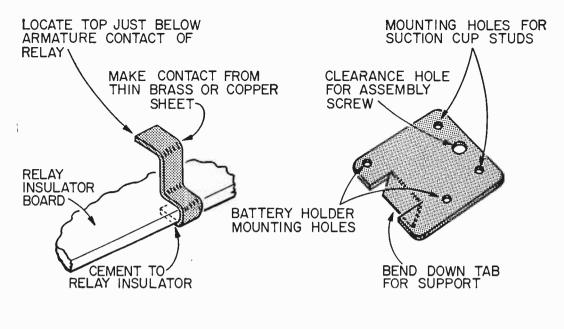
wire from the relay mounting screw solder lug. Solder the resistor and line cord wire together, making sure the connection doesn't touch any other parts.

(6) A wire will be found connected from the

bottom lug on the "outlet" socket to a small terminal strip lug, where it joins the relay coil and line cord. Disconnect this wire from the terminal strip, and solder it instead to the lug just freed in step 5.

(7) Solder a $2\frac{1}{2}$ -in. long insulated wire from

the added relay contact (step 2) to either lug of the pilot light socket you added on the front of the unit in step 4. File a notch in the case to allow clearance for this wire when



A ADDED RELAY CONTACT

B BATTERY MOUNTING BRACKET

FIGURE 7 CONTACT AND MOUNTING BRACKET

the back cover is put back on.

(8) Solder an insulated wire to the bottom lug of the "outlet" socket. Drill a small hole in the rear cover, pass the wire through the hole, and solder it to one of the battery holder lugs. (The battery holder was attached to the back cover in step 3).

(9) (Optional) For greater sensitivity (to allow operating from a greater distance)

solder a 33K $\frac{1}{2}$ watt resistor across the photoconductor leads.

(10) Reassemble the back cover and battery to the unit with the small screw removed in step 1.

(11) Solder a wire from the remaining bulb socket lug to the remaining battery holder lug. Battery and bulb polarity have no significance.

This completes the modifications to the Photo-Eye unit, but we still must modify the TV speaker circuit. Follow these steps:

(12) Two wires from the output transformer connect to the speaker lugs, either with push-on clips, or by soldering. Remove either of these wires from its speaker terminal ("A" in Fig. 5).

(13) Obtain a closed-circuit phone jack Jl

(standard $\frac{1}{4}$ -in. size) and determine, by ohmmeter or visual inspection, the lugs corresponding to Fig. 5. Solder a plain wire jumper from lug 2 to lug 3.

(14) Install Jl at any convenient spot on the side or back of the TV cabinet. It will take a %-in. hole, and the mounting panel must be no more than ¼-in. thick.

(15) Connect the wire removed in step 12 to lug 1 of Jl.

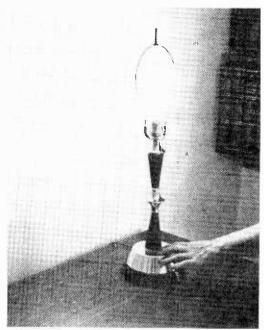
(16) Add a wire from Jl-3 to the speaker terminal from which the wire was removed in step 12 ("A").

(17) Using a regular line cord with a plug on the end, connect the free end to a standard phone plug as shown in Fig. 5. The phone plug goes to Jl and the other end plugs into the Unit 2 outlet.

These units vary in light sensitivity, and work on a large differential between light and dark. The sensitivity (and hence, usable operating distance) can be increased by putting a resistor in parallel with the photoconductor, as mentioned in step 9. This increases the idling current through the relay, so that it only takes a relatively small increase in light

(Continued on page 118)

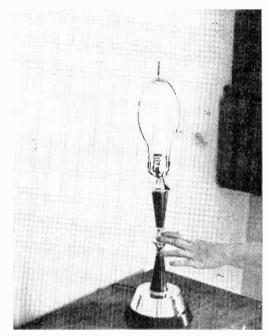
Touch It's On



ALLED the Dynaquad Touch Control Lamp, this attractive brass and walnut table lamp is operated by the capacity of your body. The heart of the unit is a capacity switch made by the Tung-Sol Electric Co., Inc. The capacity switch is cleverly hidden in the base of the lamp.

The lamp is furnished in kit form and you put it together yourself. The instructions are more than adequate, and no soldering is required. All wire connections are made with wire-nut fasteners. When fully assembled, the lamp still needs a shade, but as tastes vary, the manufacturers leave the shade to your own discretion. A harp support for the shade and a finial are supplied.

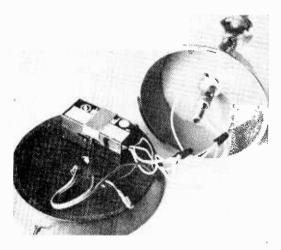
To operate the unit, install a lamp of no more than 100 watts, and plug into any 110volt ac outlet. Touch the base and the lamp lights. Touch the center brass ferrule, and the lamp goes out. While this certainly demonstrates an interesting electronic principle, there is practical value here too. When you enter a darkened room, there is no need to grope for a switch. As soon as you find the base of the lamp, it lights! There are a few problems however. One of these is the matter of finger prints which must constantly be wiped off, for the lamp is a great novelty and guests can't keep their hands off it. The complete kit is \$19.50 from Tung-Sol Electric Co., 1 Summer Ave., Newark 4, N. J.



Touch It's Off!

There's electrical capacity in your

body. Here's how to put it to work



SECRET IS IN BASE. The electronic capacity switch is contained in the plastic box clamped in the lamp base. Wire leads from sensors are conducted through center pipe to base, are then wired to capacity switch with screw-on wire nuts. No soldering at all is needed here.

How often can a magazine such as this report on something drastically new? After all, how often can the electric light be invented? Here's a report on a new concept in home entertainment that will revolutionize television and other industries as well.



THE British, long recognized as pioneers in the electronics field, have done it again. This time, it's a tape recorder that mounts right into your TV set and provides you with some pretty radically new blessings. Here's a sample of some of the things you can expect:

- As you watch a TV show, you can tape it and see it again as often as you like.
- You can take the tape you made and splice out the commercials.
- You can erase and reuse a tape at any time.
- Used with a clock-timer device, you can record TV shows while you sleep or are out of the house, and see them at your convenience.
- You will be able to purchase unusual or exotic shows in stores, and play them on your television set.
- Perhaps most important, you will be able to use a small vidicon camera connected to the TV set and shoot your home movies on video tape. There is no waiting for processing, the movies can be seen over and over on the TV screen, and tapes can not only be edited easily, they can be erased and reused.

The tape used is standard magnetic $\frac{1}{4}$ -in. tape. With a spool of 11-in. diameter, you get up to 20 minutes on a side, or a total of 40 minutes on a reel. The tape flies through the head gap at a speed of 120 ips, to give you a resolution of 300 lines peak white!

The Telcan system taps into the set's detector, and records the composite video signal, which is played back into the circuit normally connected to the detector output. In essence, the Telcan unit is inserted after the TV detector when in use.

The equipment measures $8 \times 9 \times 17$ inches with an additional four inch protrusion for the motor housing. It weighs 15 pounds. Speaking of pounds, we asked the manufacturer about the price, and he informed us that the cost for a unit by itself, not installed in a TV set would be 75 Guineas, which works out to about \$260. If the unit were incorporated into a television set at the time of manufacture, it would raise the basic cost of the television set by about 25%.

In the past, we have had videotape recorders that were impractical for use on domestic TV equipment, due to the prohibitive cost and bulk. The Telcan system appears to be much lighter and far more compact, making home TV recording a reality at last. In the commercial video recorders, the only way that proper resolution could be obtained was to hurl the tape through the head area and at the same time, rotate several heads to operate laterally across the tape. As the manufacturer claims there are no moving parts in his special transducer mechanism, we can only surmise the manner of operation:

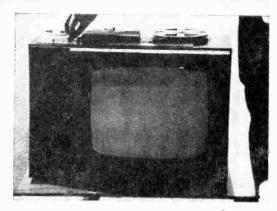
Notice the head-gap configuration. This wavy line through which the tape is laced can be used only for one reason, and that is to insure proper tape-to-head contact when more than one head is used. From the photographs, we would assume that several heads are being employed, with an electronic switching system of time-sharing that is synchronized. This, it would appear, is a more than adequate substitute for rotating heads.

The Telcan units should be available in this country before the end of the year, and considering the low cost and increased flexibility, we look for some fascinating changes to be brought about in tele-viewing and programming in this country.

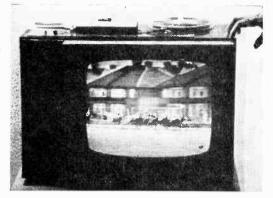
Changes? Lots of 'em! For one thing, Pay-TV can now go by the boards! If you want special programs, you will pay for them over



JUST THREAD the tape, push the start button, and you can record directly, any signal on your TV screen, or play recorded programs.



WITH TELCAN ON YOUR SET operation is as simple as any home audio recorder. Tune set to an unused channel.



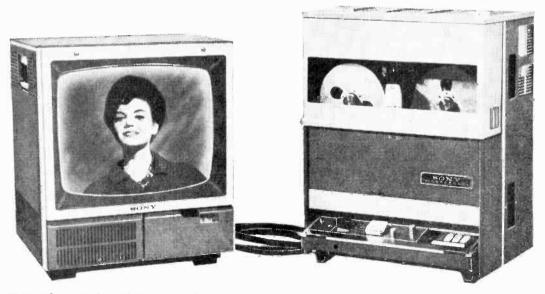
... AND USE IT FOR watching and listening to the show of your choice. Quality is almost excellent.

the counter, just as you buy records today. You can also bet that if a great show is put on at three O'Clock in the morning, many TV fans will record the show while they sleep and view it the following night instead of whatever pap is being served up! The biggest boon, however, will be that using a small vidicon camera and your own set, in a closedcircuit TV fashion, you will be able to make, edit and show your own home-brew TV program. Your own family will be the stars!

The British manufacturers are currently negotiating with several American manufacturers for the production rights in this country. We have been informed that the negotiations are going well, and that Americans can expect to see TELCAN available for sale late this year or early next year. Our guesstimate is that the manufacturers won't miss out on the Christmas sales, and we feel that you will be seeing more on this late this year.

Shortly after the introduction of TELCAN in this country, prices will begin to drop, and we also look for increased consumer sales in closed-circuit television cameras, ideally suited to home video recording. You will also be happy to learn that you can easily make modifications to your own television set to adapt it for TELCAN, and in an early issue of RADIO-TV EXPERIMENTER, we expect to show you how.

Frankly, the effects of this new medium, for that's what it is, will be far-reaching and we sincerely hope that television fare will improve as a direct result.



UNTIL NOW, VIDEO RECORDERS were for studio use. SONY (above) is new compact model, is priced at \$10,900.

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ELECTRONIC CROSS-NUMBER PUZZLE

By JOHN COMSTOCK

Are you good at electronic computations and historical dates? Here's a cross-aumber puzzle which is a challenge to your trusty **mem**ory and slide rule. If you can work this puzzle correctly in 30 minutes or so,

ACROSS

- Year Edison announced his invention, the phonograph.
- Total voltage of eight 1½-volt cells connected in series.
- Value of resistor when applied voltage equals 20 volts and current flow through the component is 1 ampere.
- 7. Ripple frequency output of full-wave three-phase rectifier when input frequency is 60-cycles.
- 9. Year radie boadcasting started in the U.S.
- 1x10⁻⁸ farads expressed as a decimal.
- 14. One-kilowatt in watts.
- 15. Second harmonic of 135 kc.
- Impedance of an ac circuit when applied voltage is 96 volts and current flow in the circuit ene-ampere.
- 19. Voltage across an ac circuit when impedance is

236 ohms and current flow 4 amperes.

- Number of TV scanning lines from top to bottom on a black and white TV screen. Only 475 are actually visible.
- 23. Peak ac voltage of 336 volts.
- 24. Number of degrees current lags voltage in purely inductive as circuit.
- Inductance in millihenries of two 25 millihenry choke coils connected in series, with ne mutual coupling.
- 27. The conductance of a sircuit when voltage is 2 volts, current flow .086 ampere.
- Power expended when a current of 7 amperes flows through a resistence of 1 ohm.
- Applied voltage of an ac circuit when total impedance equals 80 ohms and current flow is 10 amperes.
- 30. Ripple' frequency output

you can pride yourself on being able to do electronic computations fast and efficiently. It shows you know electronic history, too. Turn to page 57 for the solution.

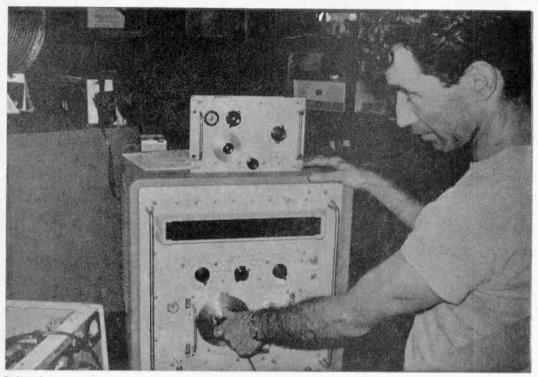
of a half-wave rectifier (single phase) when input is 60 cycles.

DOW/N

- Total watt-hours drawn by radie rated at 40 watts end operated for 24 hours.
- Number of watts dissipated when a current of 4 amps flows through a resistance of 5 ohms.
- 3. Fast tape recording speed in inches per second.
- 4. Peak ac voltage of 141 volts.
- 5. Frequency in kilocycles of a 500-meter signal.
- Frame frequency rate of U. S. black and white TV.
- Signal frequency of received station when local oscillator of a superhet receiver is 1066 kc. and the set has an IF of 456 kc.
- Distance in electrical degrees between two current nodes in a station-

ary wave system (½ cycle).

- Amount of voltage which will send a current of 1 ampere through a resistance of 25 ohms.
- 12. Amount of current leaving a circuit when the input current equals .01 ampere.
- Frequency in kcs of that portion of the Citizens Band devoted exclusively to radio control.
- 16. Year FM broadcasting began in the U.S.
- Current in amperes which flows in a circuit having an applied voltage of 650 volts and total impedance of 10 ohms.
- 20. .450 megacycles exexpressed in kilocycles.
- 21. Year TV broadcasts began in New York.
- 26. 20-cycles per second expressed in kilocycles.
- Total resistance of two 80-ohm resistors consected in parallel.



TECHNICIAN IN LABORATORY checks frequency with Hewlett-Packard counter. Accuracy is to gnatt's eyelash!

How the Pro's Repair Kits

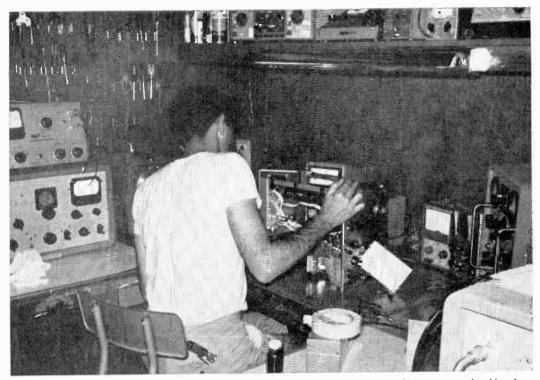
"D^{O-IT-YOURSELF} electronics" has become a fascinating hobby for hundreds of thousands of men, women and children most of whom had never held a soldering iron or knew a resistor from a grommet until they began the fascinating process of assembling a kit. With several companies offering over 300 different items from a two manual electronic organ to a simple test meter, the "build it yourself" enthusiast has a wide range of interesting projects to assemble and enjoy. Starting with relatively simple devices the average kit builder develops his skill at taking various small pieces and putting them together with the aid of step by step instruction manuals and soon progresses to more difficult projects. The design of each kit is well thought out and



MANY CUSTOMERS walk their sets into the shop for repairs, others send in by other means. All get top service.



FINISHED REPAIRS stand by waiting for owners who will call for equipment. Other equipment is shipped out.



A SICK OSCILLOSCOPE is happily in the hands of a capable technician. Variety in work is common in this place.

Every kit doesn't work first time 'round! What happens to a kit that's sent back for service? Here's how it works

each company guarantees that the finished products are equal to factory wired units if properly constructed.

The large number of kits built each year has given rise to a new type of service organization which specializes in assisting builders who run into assembly problems or require technical help in completing their projects. Such an agency is the Electronic Servicecenter, 65-37 Queens Boulevard, Woodside, N. Y. Here technicians trained to diagnose and correct assembling errors make use of specialized test instruments to service kits sold by such organizations as the Heath Co. (Heathkits), Electronic Instrument Co. (Eico) and others. Organizations such as this are scattered throughout the country to provide technical assistance and replacement



TECHNICIAN SHOW5 customer his repaired set and discusses proper operating techniques. Set won't return.



WORK IS NO SECRET and customer is shown what was actually done and why. Takes time but is worth it.

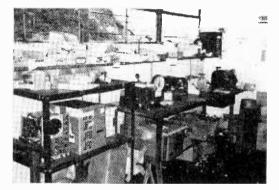
parts for the kit builder and beginner and expert alike are welcome to bring their problems to their shops.

Since human error is a factor in everything involving people, so too does a kit builder occasionally require assistance in making his project perform correctly. Every kit received for service presents a challenge to the technician since the malfunction is usually due to assembly error which must be located and rectified. The technician must be a skilled kit wireman himself and know intimately the kit he is working on.

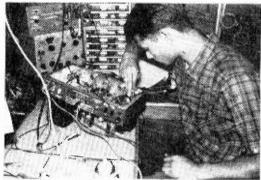
When a kit is brought in for service, it must first be determined what the malfunction consists of and the customer is encouraged to discuss what he feels are the reasons for the trouble. Careful note is made of the complaints for the servicing technicians to study before he begins his work. Technicians are assigned to units on the basis of their specialty; no one technician could possibly be proficient in every type of kit. With work sheet before them, the technicians begin servicing their assigned units.

If the set is a "fuse popper," checks are

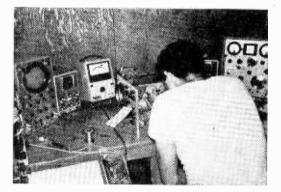
made for shorts to eliminate the reasons for fuse troubles; other wise voltage checks are begun to determine if proper voltages are applied to the tubes. Wiring errors in these circuits are corrected. All connections are checked for "cold solder" joints-those in which the solder and the wires have not been adequately heated to permit the solder to melt and properly bond the connections electrically. Suspect connections are re-heated to assure proper conductivity. Then, with the use of signal generators, VTVM's and oscilloscopes each part of the unit is checked for proper operation. In the case of FM tuners or short wave receivers, a signal generator is used to check from the antenna input through to the speaker output and each stage is tuned and adjusted according to factory specifications for the particular unit under test. With all wiring errors corrected and with a complete alignment, the receiver will now perform as intended. Not all the problems are easy to localize and correct; miswired switches, misplaced components and shorted wiring can sometimes provide a headache for the technician but patience and an



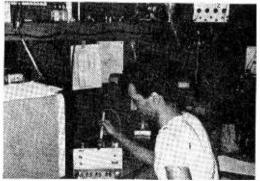
WHAT LOOKS LIKE a disorderly array of boxes is really inventory of kits. Personal attention is given each.



NO PROBLEM TOO LARGE, a technician restores the wiring of an amplifier. It will then be tested and shipped.



A 'SCOPE gets a thorough going-over. Some customers pinpoint the trouble, but sets are checked anyway.



USING VERY BEST equipment, technician can easily isolate traubles, and then very simply, effect repairs.

intimate knowledge of each unit yield remarkable results and the smiling face of a satisfied customer provides a bonus of satisfaction for a job well done.

Stereo amplifiers and FM multiplex tuners are given further tests to assure correct channel balance and output. Special test setups called "jigs" are used to determine "hum level" and individual channel power output. Oscilloscopes with special signal generating equipment are used to determine correct frequency response and each amplifier is given a complete function check. Amplifier service benches are equipped with a test FM multiplex tuner, stereo record player and 4 track stereo tape machine. The amplifier must perform satisfactorily with each of these test units before it can be returned to the customer.

A wide range of test equipment for the ham and the experimenter is offered in kit form in fact many of the completed kits find their way into factory and lab for use in testing and production. Each item goes through the voltage, soldering and tune up tests. In addition each test instrument must be calibrated against standards traceable to the National



WHEN A PIECE OF TEST EQUIPMENT gets sick, other test equipment is used to cure it. Here a VTVM gets work.



FINDING THE TROUBLE is only half the battle. Often, more than one problem compounds the difficulties.

RADIO-TV EXPERIMENTER

Bureau of Standards. Our standards bench has Hewlett-Packard generators, meters and a frequency counter accurate to 1 part in 1 million.

Numerous items of "ham" and C. B. equipment are available in kit form and when properly constructed and adjusted perform quite well. Ham and C. B. transmitter and receiver kits are given the same preliminary checks, corrections and adjustments as are other kits. Special attention must be paid to frequency accuracy and sensitivity of receiving equipment and accurate test instruments are used to establish both. Transmitters must also be checked carefully for frequency accuracy and power output as measured with the manufacturers specifications. Each set gets an "on the air" test using roof top antennas before it leaves the shop.

The kit builder now and again runs up against the problem of not understanding some part of the construction manual and/or having to replace a component part. Service agencies for the kit suppliers usually stock a great many kit parts and maintain a library of construction manuals to provide a consultation service.—By IRV STRAUBER.



STORAGE SPACE is always a problem, and bin-type racks provide ample storage for work in process or completed.

THE COMBOMIXER



THE GAS-HOUSE FIVE MINUS three plus four . . . Oh well, there's lots of fun with music at home anyway!

LECTRONIC organs of various types are very popular on the domestic scene these days, and along with these instruments comes a penchant to play together. This little device just simplifies matters.

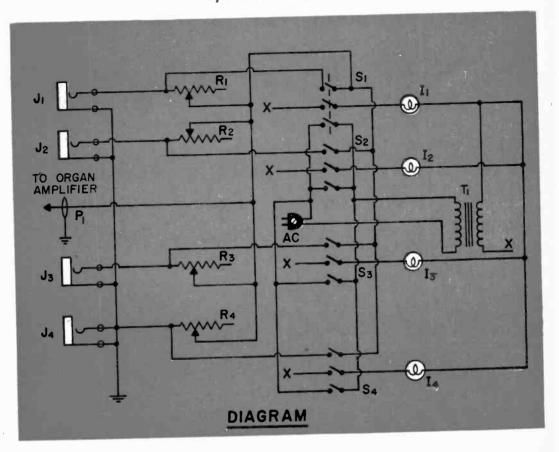
How it Works: Installation is simply a matter of disconnecting the organ "guts" from the organ amplifier. Plug the organ mechanism into cne of the jacks on the back of the unit, and then plug the unit into the organ amplifier. Now you can connect three additional instruments into the remaining jacks on the back. These can be electric guitar, electric bass, or even a mike!

The ComboMixer sits atop the organ console and the organist controls the unit. First set the desired accompaniment volume level for each instrument by adjusting the control

knob associated with that instrument on the front panel of the unit. The combo proceeds to play. When the organist desires to give a solo to any one instrument, he merely fligs the appropriate switch for that instrument. This does two things. First, it short circuits the volume potentiometer for that instrument. thus permitting full volume from that soloist to enter the amplifier. Secondly, a small bulb, above the switch lights. This indicates to all concerned who has the solo. The bulbs are colored differently, so a quick glance is all that is needed! The ComboMixer can be left connected and plugged in at all times, as the current is only used when the switches are activated.

Assembling the Unit: As the Combo Mixer will presumably be left on the organ and in Maybe you can make your organ sound like a number of instruments, but here's how to really play 'em all at once

By BARNEY GERALDS



constant view, it is important that it look neat. Less expensive cabinets are available than the one we used, but the more attractive appearance warrants the extra cost.

Begin by laying out the back panel in accordance with the diagram. After marking the locations of the holes, center punch them and drill #28 pilot holes. Enlarge these with drills and hand reamer to the required %-in. Use a 1-in. twist drill to deburr the holes, and mount the two rubber grommets in the center holes. Mount the four phone jacks in the other holes, and set the rear panel aside.

Remove the front panel from the cabinet and mark out the locations of the front holes. Center punch and drill all holes #28. The mounting holes for the switches will remain #28, to pass the 6-32 screws. These can be

RADIO-TV EXPERIMENTER

MATERIALS LIST-COMBOMIXER

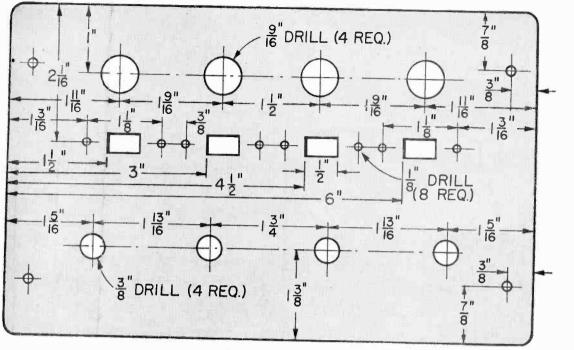
Size and Description

- 1 53/4x57/8x87/32" utility cabinet (Allied #88 P 694)
 - 6.3 v filament transformer (Lafayette #TR·11)
- 1 ac line cord

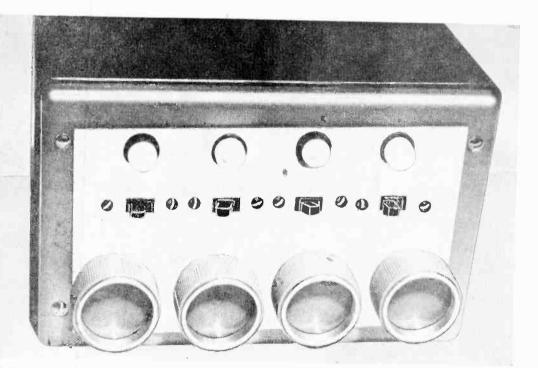
Amt, Req.

1

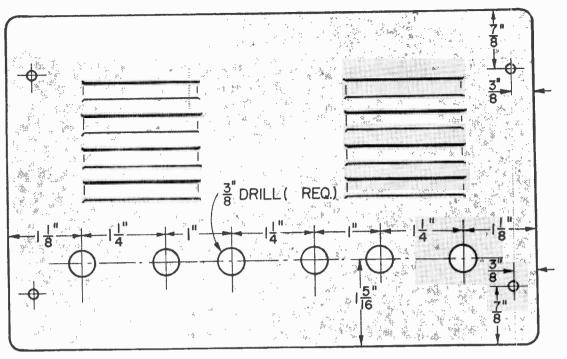
- 4 500 ohm, linear taper potentiometers (Lafayette #VC-931)
- 4 phone jacks (Lafayette #MS-441)
- 1 phone plug (Lafayette #MS-453)
- 4 pilot lamps (Lafayette nos. PB-150-151-152-153)
- 4 knobs (Lafayette #KI-56)
- 4 3PDT slide switches (Lafayette #SW-82)



FRONT PANEL



DO A NEAT JOB LAYING OUT YOUR PANEL and the result will be an eye-pleasing accessory for your electric organ.



REAR PANEL

deburred now. Drill the remaining holes to $\frac{1}{16}$ -in. diameter and then use a $\frac{9}{16}$ -in. round chassis punch to make the holes for the lamps.

Now you will have to go to work with the reamer again and enlarge the holes for the potentiometers to %-in. diameter. Deburr these holes as before, using the 1-in. drill.

Making the slotted cutouts for the slide switches is a tough job. At first glance, the answer to our prayers seemed to be a hand nibbler. (Oh, we could have asked a friendly manufacturer to punch these for us, but it wouldn't be cricket!) After thoroughly brutalizing the panel with that infernal tool, we had a quick conference with our art staff, and they jury-rigged the panel shown. Next time around, we'd forego the fancy slides and stick to the easier-to-install toggles!

Drill the required holes in the bottom of the box for the transformer and the terminal strip. Location isn't important here.

Wiring the Unit: You'll find it lots easier to complete the wiring if you leave the back and front panels off. Allow sufficient slack in the wires and you'll have no problems.

Starting with the signal wiring, follow the diagram closely. Just remember that each jack must be wired to the correct potentiometer, and switch. Use shielded phono wire throughout. Tie a healthy knot in the output cable, and then snake the cable through the grommet. The knot will serve as ε strain relief. Allow sufficient length to reach from where you will place the unit to the organ amplifier input.

The ac wiring is equally simple. Run the line cord through the other grommet and tie an underwriter's knot. Connect the two exposed wires from the line cord to the terminal strip. Using the schematic diagram as a guide, complete the ac wiring.

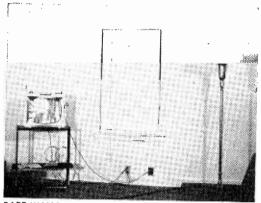
Finishing Off: Button the works up, by mounting the front and back panels. You can use press-on letters or decals to give the unit a professional appearance. You may prefer to label your unit with the names of the instruments you will regularly use instead of the anonymous "Instrument #1" that we used.

There's one other point . . . Maybe you haven't got an electronic organ! If you have an electric instrument of ANY sort, the device will stand you in good stead, for only one instrumentalist need bring his amplifier to rehearsals. The entire group of instruments can use the one amplifier and save the cost and hauling!

So don't spend your evenings "taking turns" with the amplifier! Get going on the ComboMixer and let the whole family in on the fun. You'll probably turn up a few talented neighbors too. Besides, it's better than tele-viewing, isn't it?

Build A Modern Entertainment Center

By L. M. DEZETTEL ALLIED RADIO CORP.



BARE WALLS and open spaces scream to be filled. So we called our Genie, and with a wave of his wand, presto!



THE ROOM LOOKS FINISHED! This arrangement is not just tasteful, it is functional as well. Note window effect.

F YOU happen to be refurnishing your living room, it becomes a golden opportunity to bring your entertainment center up to date. If you are not refurnishing but want to replace your old fashioned cabinet, or your spread out mess of components with something really modern and convenient, all you need is a spare wall, two hands and some time.

The circumstances were right for us. All of the situations mentioned above occurred at one time. We had what was once a good looking blonde cabinet that housed all the hi-fi equipment and one speaker. When we went stereo it meant matching with a single speaker enclosure, which we did pretty well. An old console TV was in one corner. (The TV set in the picture with the bare wall was temporary; we had already gotten rid of the console TV.) And our rug and furniture were wearing out at about the same time. Here was our chance to make a clean start.

Our decision was to refurnish in Swedish modern. The entertainment center design we decided on fitted the decor, would place our sight and sound equipment together and give us liquor storage space (the lower center cabinet).

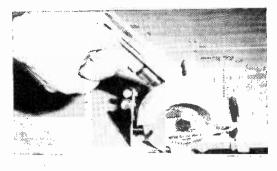
You could have something like this custom built for you, if you don't mind spending a barrel of money. If you enjoy pride of accomplishment, and don't mind a little work, you can do it yourself. A modular design was decided on as it provided the greatest amount of flexibility to cover the needs of a hi-fi center, plus a chance to expand later with tape equipment. The modules are supported between 1 x 1-in. square poles. These are aluminum gold, anodized. This goes well with the predominantly walnut wood finishes used throughout the room. The two speaker enclosures at the top were purchased ready-made from Allied Radio. This is easier and just as inexpensive as building your own. The rest of the cabinetry was made at home. The lower cabinet on the right is the hi-fi equipment cabinet and has a drop-leaf front door. The one in the center has sliding front doors. All horizontal pieces of the cabinets and the TV shelf are $\frac{3}{4}$ -in. plywood, as is the drop leaf. Cabinet end pieces are ¼-in. Duolux tempered Masonite. The backboards in the two cabinets are ¹/₈-in. Masonite pegboard. This adds to the ventilation for the equipment cabinet.

The best plywood to buy for finishing both sides in walnut is birch. The amount needed would have cost me \$42, so I chose to use fir plywood, which is finished on one side only. I gave the good side an imitation walnut grain finish using a walnut graining kit. Walnut grain Formica was used on the poor side, and this tough and good-looking finish made the tops and front of the cabinets. The width of the two side upright sections is established by the width of the speaker enclosures, if you decide to buy them. Start by making paper cutouts of the sections on the ratio of about 1-in to 1-ft. Move these around until you get the combination that is most functional and that looks best. The center cabinet in our case was dictated by the window behind it and the distance from the floor by the height of our vacuum cleaner. All cabinets in this unit are 36-in. wide and 17-in. deep, except the center cabinet which is 45-in. wide. The equipment cabinet on the right is 15-in, high.

Unless you are a man with plenty of muscle power, use power tools for doing everything. My hand saw consisted of a saw attachment to a $\frac{1}{4}$ -in. electrical drill. Cut the plywood boards to within $\frac{1}{8}$ -in. of the measured edge and edge-finish with a sanding disc on a bench saw. This assures that the edges will be square. Cut the bottom and top pieces of the cabinets together, and the end pieces of Masonite together so that the assembled cabinet comes out symmetrical.

Cutting the Formica is a tough job. It, too, is done with a power hand saw. But don't push the saw through the material in the usual forward direction as you would with wood. Pull it back, otherwise the saw will cut chunks out of the material. Cut the Formica a fraction of an inch larger than the wood on which it is to be applied. After the Formica is glued to the wood the edges are hand filed, even with the wood edges. Cementing the Formica to the wood is a bit tricky if you have never done it before, but not really hard to do. A special contact adhesive is used. Swab the back of the piece of Formica and top of the board with adhesive. Allow to dry for about 20 minutes. Place a large piece of Kraft paper on the board. Place the Formica on the Kraft paper, and line up on edge perfectly. While you hold the Formica in place, have someone else gently pull the paper out from between the sandwich. Use care. Remember that once down and the two cemented surfaces come in contact you can't do it over. After the edges are smoothed down, small strips of Formica are cemented to them, and these edges filed smooth.

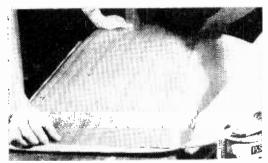
The center cabinet has sliding doors of ¹/sin. Masonite sprayed, one door white, one door orange. They run on aluminum tracks that have been sprayed gold to match the uprights. A 36-in. piano hinge is used on the drop door. A snap latch holds it in the upright position, and small size link chains keep them horizontal when down. The cabinet is plenty big enough to hold more than a turntable, and the Knight-Kit transistor amplifier and tuner down. Scheduled to be added to a shelf just below this cabinet is a Knight KN-4000 tape transport. This is plenty of room.



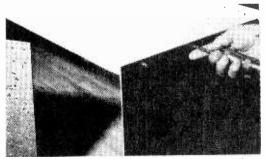
WHEN CUTTING PLASTIC LAMINATE, do not push saw or it will chip. Draw toward yourself, go slowly.



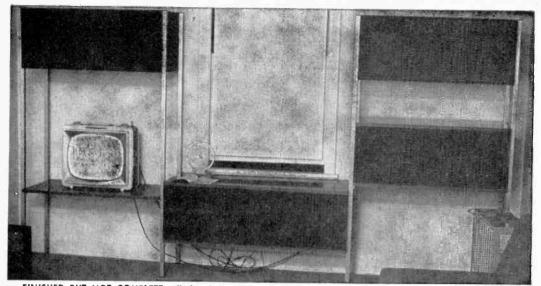




SET LAMINATE IN PLACE by using a sheet of heavy Kraft paper until plastic, wood are aligned, remove.



FASTEN CABINETS together with wood screws. These should be counter sunk and later filled with wood putty.



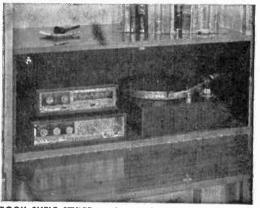
FINISHED BUT NOT COMPLETE, all that is needed now is the equipment installation and a woman's touch.

Interconnecting equipment cables are out of sight because they are brought through the hollow core of the aluminum uprights. Dime store corner braces, fastened to the uprights support the cabinets and the TV shelf. They are fastened to the uprights with machine screws and to the wood with wood screws. The corner braces and machine screws are sprayed gold. Number $8x1\frac{1}{4}$ -in. wood screws are used to secure the Masonite ends to the wood pieces as shown in the photo. The assembly is strong and glue is not necessary. Although the hi-fi wall is self-supporting, it is fastened to the wall at three points. This prevents pickup bounce on the turntable in case you want to dance.

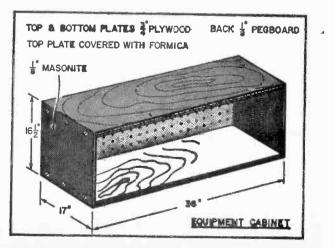
The aluminum sliders for the center cabinet doors are available at all lumber dealers in sets of two, one for the upper slider and one for the lower. Be sure to select the right groove width for the thickness of the material you decide to use for sliding doors. The aluminum uprights are made by Midland Metal Products, Vicksburg, Mich. The plywood, Masonite and Formica can be bought at any lumber dealer. The hi-fi equipment is from Allied Radio.

Finish your unit off by asking your wife to lend a hand. Women, it seems, have an exceptionally good feel for color harmonies and design balance. Of course, you'll want to have her more as a consultant than a final authority, for if she has the last word, you just might wind up with your tape recorder up on top of the highest shelf, well out of reach!

The installation, when finally completed, is a tasteful design that not only shows off your equipment to best effect, but provides protection for it as well

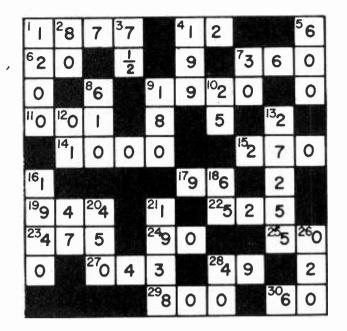


BOOK SHELF STYLED equipment fits meetly in an installation as this, provides proper ventilation, access.



SOLUTION TO ELECTRONIC CROSSNUMBERS PUZZLE

from page 45





"Oh, that's you singing. I thought I was getting feedback."



(Comments in italics by R. H. Dorf, Schober Organ Corp.)

BUILT an electronic organ. This simple, concise sentence really deserves a page for itself, because the job is a big one. Don't get me wrong ... It isn't a "tough job," but it isn't a weekend project either.

Exactly what we tell our customers!

The part kits can be purchased from the manufacturer on a one-at-a-time basis, which makes things much easier on the pocket book. This also results in a rather unusual method of instruction manual preparation! You see, each instruction book is packed with the kit of parts to which it applies!

We began the project by reading the letter that goes out to each customer. It warmly welcomed us to the growing ranks of organ builders, and assuaged our fears of the enormity of this project by telling us that we were not alone, that expert guidance and counseling was there to help us, should we require it . . . (We did, and it was.)

We feel a strong sense of responsibility to our customers. We aren't satisfied until your organ works—and we'll do almost anything necessary to get that result.

Taking a deep breath, we unpacked the first of the kits, each of which bears a code number. It turned out to be a printed circuit buss amplifier, and your author proceeded to blow his top. The manufacturer had forgotten to drill the holes in the circuit board for the lead wires to pass through!

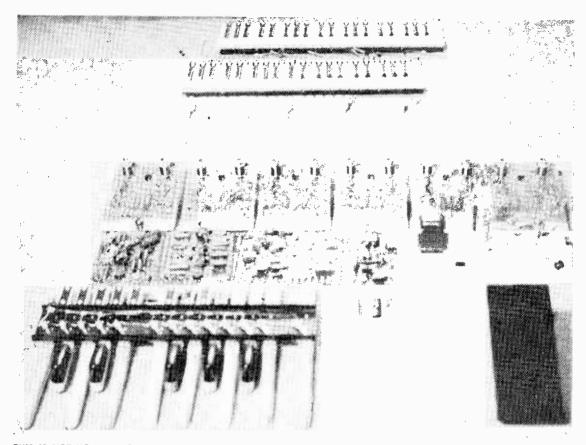
Also the author had forgotten to read the instructions!

Well, put that board aside for later, and try another. Same thing. Before reaching for the drill however, we decided on another course of action . . . Consult the instruction book on how to solder.

This unusual system requires no holes! You

KIT PARADE: By Barney Geralds The Schober Electronic Spinet Organ

Schober sells lots of organs, mostly consoles and consolettes to various Church groups. The Men's Clubs put them together as a project, and afterward, individual members order their own!



THIS IS NOT HOW THE ORGAN COMES! It would take a dance floor for that photo. This is after subassemblies.

melt a solder blob over each contact point and solder to the blob! It's a bit ungainly at first, but turns out to be a real time-saver when you develop facility with it.

It also makes servicing easy because all work can be done on one side of the printed circuit.

While there's an awful lot of work concerned with building an electronic organ, it's a very satisfying kind of work, for the sense of accomplishment on completion of each kit is tremendous. Many of the parts are finished, and only require wiring into, or assembly. A good case in point is the pedal assembly. You get a chassis pan, springs, switches, wooden pedals, (finished) and black plastic pedal pieces for the short pedals, or flats and sharps. The work consists of attaching the pedals to the springs, which are attached to the chassis pan, as are the switches. By the time you get through bolting those pedals in place, you find aches in muscles that you never knew vou had.

We call this electronic calisthenics.

The obvious answer is to work slowly, and

not try to do it all at once.

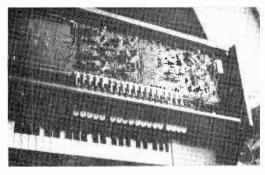
In a job as big and complex as an electronic organ we'd be telling a fib if we said it went together with no problems. There was one.

The keyboards are completely assembled, and must be wired to terminals on the underside. These terminals are numbered for your convenience, but unfortunately, the numbers were not centered well on the plastic board, and we started soldering to the wrong terminals. We corrected this, as the mistake soon became obvious.

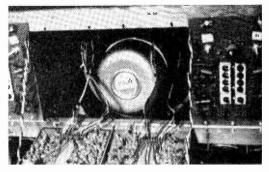
The only troubles we have are with people who know something about electronics. The others read the instructions, which tell you which side of each terminal the number is on.

Finally, when the work was finished, we connected the organ output to our hi-fi system. You see, the amplifier and speaker are considered as separate items, and we couldn't wait.

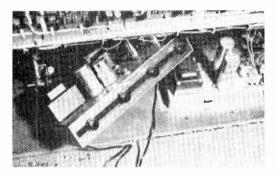
Turn on the switch, and the pilot light goes on. So far, so good. Press a key. Result? A horrible buzz. Looking into the power supply, we found that one of the two voltage regulator



LOOKING INTO THE TOP of the organ, we see the switch actuators for the stop tablets and p/c boards.



THE SOUNDING BOARD is cut out for a 12-in. speaker and we installed the UTAH. Note how panels drop.

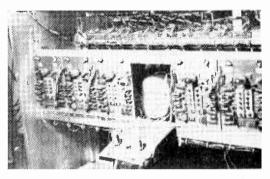


AMPLIFIER INSTALLS next to power supply. We put in the BOULEVARD by Olson Electronics. Works well.

tubes wasn't glowing as it should. Simple. The instructions say the tubes are interchangeable in their sockets, so we interchanged them. Now the good one was bad, and the bad one was good. O.K., so we had a wiring fault. Lift the power chasis, and sure enough, we had connected to the wrong pin! Easy, just run a jumper wire to the RIGHT one. Not so easy. Still didn't work, so we had to do it the hard way, and reconnect to the socket. The buzz stopped, and was replaced by a clean, pure tone. The next step was to tune the organ.

Writing plain, understandable instructions does no good if you read them through rosecolored glasses.

Now that the organ is working like an organ should, we've had a chance to evaluate it. The wife is familiar with keyboard instruments, she plays piano. Unfortunately, the organ will sustain a note as long as you hold the key down. There isn't the rapid sound decay you expect with a piano. It took a little while to get used to, but now she plays each night, and seems to enjoy it. My own tentative experiments consisted of tapping out some Morse Code, but I've graduated to three-finger chords.



TO SERVICE ORGAN, simply remove two wing πuts from each generator, it then swings down easily on hinges.

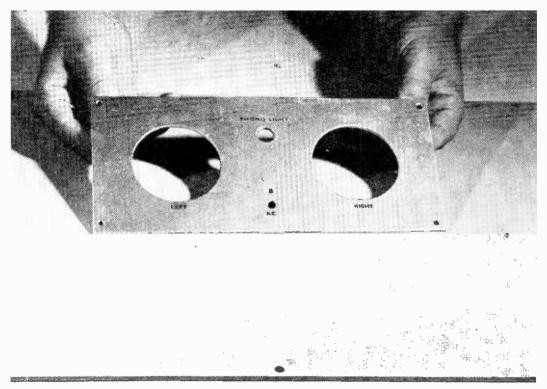
We made one change in the design. There are two knock-out holes provided for the addition of the percussion kit, should you desire to add this. Instead of percussion, we added something else . . . A closed circuit phone jack was mounted in one of these holes, and wired in series with the loudspeaker. Now, when we want to play the organ late at night, we plug the earphones in, and the speaker is cut out. The neighbors appreciate it.

Chicken!

Speaking of chords, this isn't a chord organ that automatically plays chords when you press one note. If you are looking for that sort of device, get an accordion. This instrument is an actual electrical counterpart of a full pipe organ. The tab stops are placed and named in exactly the same fashion.

Actually, the organ doesn't play at all. You have to play it, which is very good for the soul.

Many people who have finished their own organs, write to the manufacturer asking if there aren't people who would like completed organs. These are not furnished except in kit form, and once you've built one, you miss the building.



HERE'S THE FINISHED JOB. It's cut out, painted, lettered, and ready to have its equipment installed in place.

GIVE YOUR SYSTEM A PROFESSIONAL LOOK

BY MORTON J. SCHULTZ

P TO NOW, hi-fi fanatics who build their own systems and other electronic enthusiasts who dabble in construction work have had to settle for equipment that looks make-shift. No matter how well the system performs, its builder is less than proud when showing it off to friends and relatives, who often arch a critical eyebrow at its appearance.

The main reason for this none-too-polite stare is the absence of attractive and functional paneling arrangements. The only way most of us can get panels that look halfway decent is to pay a professional a fairly stiff price to make them for us.

Despair and pay no more! With the raw materials now available on the market and with a little care and patience, you can make panels that are as attractive as any built in a factory. In short, if you have the ability to build a complex, built-in stereo, for example, there is no reason you shouldn't be capable of dolling up that set so its appearance at least equals its output.

Fashioning panels for your equipment is done in five major steps: (1) layout; (2)

it out with home-brew gear that looks home-brew? Make panels doll up your work

blanking, drilling, and cutting; (3) cleaning; (4) masking and spraying; and (5) lettering. Each step must be done carefully and in sequence to get the professional looking product that can be achieved.

The panels built to illustrate this article are now peering at onlookers from in front of a built-in stereo. But no matter what type of equipment you wish to panel, the same techniques outlined here can be used.

Here, then, is how to go about making panels for your system.

Layout: First, make a full-scale exact-size drawing of the panel you need. On this drawing, called the *original*, draw in hole centers for each electronic component that will project through the panel. If an electrical device has an anti-rotation tab, make sure you draw in the hole center for that as well.

Sketch in all legends exactly where you want them to appear on the final panel and to the approximate size of the final lettering you wish to use. Don't crowd letters and be certain that legends are outside knob skirts so the knob's pointer doesn't cover the legend.

When the original drawing is completed, you should have an exact reproduction of how the panel is going to look. Now, make two overlays using the original as a guide.

The first overlay contains just the hole centers. Lay a piece of tracing paper over the original and mark the corners so the overlay can later be placed over the panel in the exact position to permit accurate punching of holes. Draw in the exact position of all the hole centers to be drilled. Make sure these centers are accurately positioned.

The second overlay is used as a mask. Lay a piece of tracing paper on top of the first overlay which should still be over the original drawing. In each place that a legend appears, draw a tight box around the lettering. Remove the second overlay and cut out the boxes with a razor blade.

Blanking, Drilling and Cutting: Buy some soft aluminum. No. 50-52 alloy is used by professionals for paneling, so you might as well use it too. The preferred thickness is $\frac{1}{6}$ -in., but you can use $\frac{1}{16}$ -in. if the area is reasonably small—that is, not more than 4 inches. If any side of the panel is to be more than 4 inches wide, you should use $\frac{1}{6}$ -in. thick metal.

Order metal pre-cut to exact size from a

metal shop or a heating and air conditioning establishment; or buy the metal in sheet form from a hardware store and cut it to size yourself on a band saw. Trim the edges with a belt sander.

Put the first overlay—the one containing the exact locations of hole centers—over the blank panel and tape it to the panel to prevent slipping. With a center punch and hammer, punch hole centers into the metal right through the overlay. Drill in small pilot holes at each punched location in preparation for the enlargement of the holes to their proper diameter.

All holes that are to be ¼-in. diameter or less can be drilled with a drill press. Holes that will be from ¼ to 1-in. diameter should be bored with a counterbore or punched with a Greenlee punch which can be bought in exact size from your local hardware store, electronic supply house, or a metalworking supply shop.

Holes from 1-in. to 3-in. diameter can be punched with a Greenlee punch. If you cannot find a Greenlee of a particular size or the holes are too large, use a flycutter to make the holes.

Irregularly shaped holes, such as those that are rectangular or oblong, can be made with a metal-cutting band saw or a saber saw.

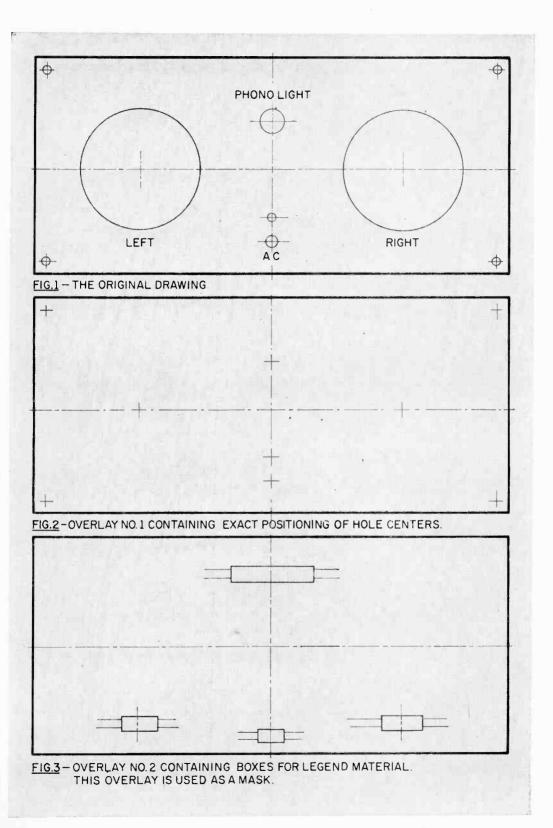
During the drilling operation be extremely careful that you do not scratch the panel. Each hole after it is drilled must be deburred with a three-corner file or a drill larger in size than the diameter of the hole. Rearn the hole out with the drill or file so metal particles are removed from the hole. Deburring is especially important if you are using a soft alloy metal that tends to burr heavily.

After drilling and deburring, wipe the panel down carefully to remove any chips left on it. These chips, if they remain, could scratch the metal and result in a less than perfect job.

Cleaning: There are two cleaning steps that must be performed to prepare the punched panel for painting. These are mechanical cleaning and etching.

To mechanically clean the panel, rub both sides and the edges down with a fine sandpaper. When the panel is smooth, wash it in carbon tetrachloride. Carbon tet should be used in a well-ventilated room or out-ofdoors, and the fumes should not be inhaled.

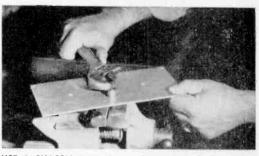
Once the panel is mechanically cleaned,



ŧ.



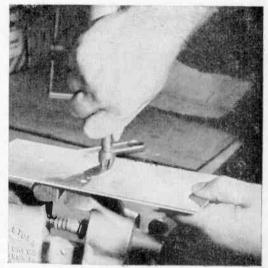
AFTER LAYING OUT the panel, center-punch all koles with tap of the hammer. Layout is taped to the panel.



USE A CHASSIS PUNCH to make the intermediante-sized holes after drilling the smaller holes. Clamp in a vise.



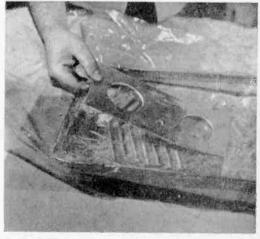
LARGER HOLES are cut in a drill press with a fly-cutter. If you aren't so equipped, drill small holes and file out.



DEBURRING is an important part of the operation especially on soft aluminum panels. Use a countersink.

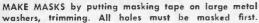


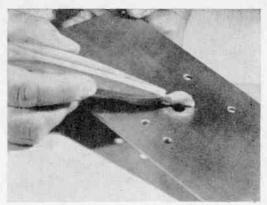
SANDING BLOCK corrects mimor imperfections in both the metal and your workmanship. Use stopping block.



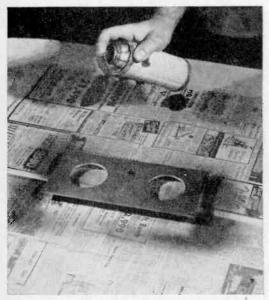
ETCH PANEL in vinegar, to thoroughly clean it of all grease. Should be raised from surface to cover bottom.







COVER HOLES with masks on back only. This insures good grounding when jacks are mounted in place.



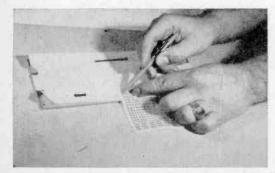
SPRAY PAINTING should be done in a well-ventilated area, with lots of paper underneath to protect work.

it has to be etched to remove all traces of oil and oxide, thus providing an absolutely clean finish for painting. Etching can be done with ordinary vinegar (five percent).

A convenient etching arrangement can be fabricated with an ordinary roller paint pan, a thin sheet of plastic fashioned to cover the bottom and sides of the pan, and several marbles. After fitting the plastic to the pan's bottom and sides, place the marbles in the pan and pour in vinegar. Now, lay the panel on top of the marbles (Figure 9). Make sure the vinegar covers the entire top of the panel. The plastic prevents the vinegar from reaching the metal pan, thus eliminating the p_{3} sibility of a chemical reaction which could discolor the panel. The marbles keep the panel in suspension to permit the vinegar to reach both sides of the board.

Keep the panel in the vinegar for at least eight hours and agitate the pan occasionally —once every two or three hours for several minutes at a time. Agitation removes any salt deposits that may form on the panel.

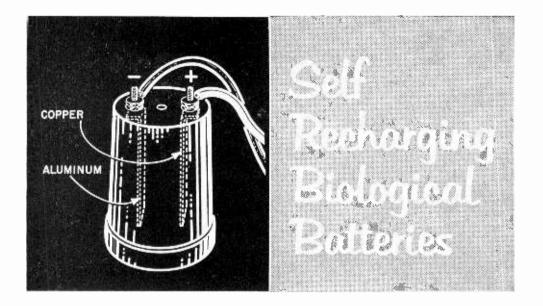
When you take the etched panel from the (Continued on page 110)



PAINTED PANEL IS MASKED and dry transfer letters are pressed in place. Masking keeps away finger marks.



AFTER THE LETTERING, use the backing sheet from the letters to burnish down word. Lettering will stay put.

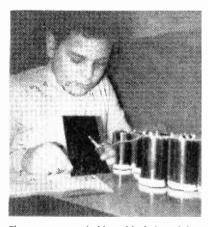


W ITH all the interest focused on fuel cells these days, nobody is quite sure about what kind of device this is, and while the professors scratch their heads and mutter things like "Fuel Cell" . . . "Voltaic Cell". . . We tested the device, and found that it works.

A plastic container is used, and after fixing the copper and aluminum electrodes in place, a brown, earthy mixture of Bacteria Carrier is poured in. Next, you dissolve the Activator powder in water, shake the mixture, and pour some into each cell.

As each cell produces something in the order of one-half volt, you must wire twelve of them in series for a six-volt output. Just as with dry cells, you can connect in parallel or series-parallel to produce less voltage and more current, should the need exist. There's just one big area of difference between the cell shown here and a dry cell as you know it. If you shut them off. or open-circuit these units, the charge will be lost To keep this from happening, keep the cells short-circuited when they aren't in use. It takes some doing to convince yourself that this action will *help* the cell.

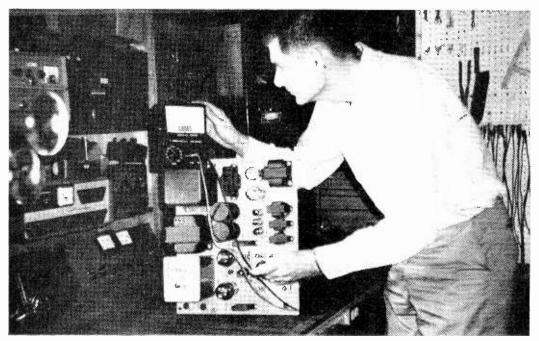
Commercial versions of these cells are already prepared and being tested. Out in California, an entire residence is wired with these cells, to supply an unending source of light. Other uses include road warning blinkers and power for emergency radio transmitters. As the units are activated only when they are wet, the dry ingredients can easily be prepared, and the power will be applied only when the cell is moistened.



The young man holds a black board behind the lamp to better show that it is lit. If he keeps it connected long enough, it will grow brighter as the battery charges.

In the future, there is much application for these units in underdeveloped primitive areas. As the cell is inexpensive, it can provide electric lighting in these countries at a very low cost. While this isn't the entire answer to such rural electrification, it is certainly a step in the right direction.

Write to Electron Molecule Research, Inc., P. O. Box 13175, Cresthaven Station, San Antonio, Texas. They'll be happy to tell you all about it.



PUSH-PULL BALANCING is often a tedious, time-consuming and very expensive proposition. Here's a way to save.

Balancing Audio Push-Pull Stages

By L. F. KINER

F YOU are contemplating constructing a high-fidelity amplifier that employs pushpull stages you will be faced with the problems of selecting matched plate, grid and cathode resistors and twin-triode tubes (such as 12AU7, 12AX7, etc.) that have matched sections.

This article describes a method used by the author, with considerable success, that will not only save you money but possibly considerable time as well. Furthermore, it will also premit you—in most instances—to use components that you already have on hand as the need for matched components is greatly reduced.

The author discovered several times that

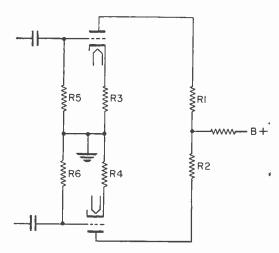


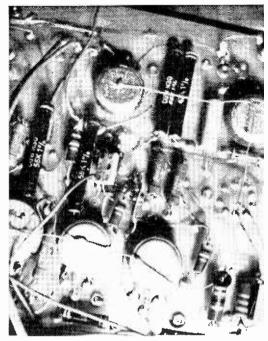
FIG.1 A TYPICAL AUDIO PUSH-PULL STAGE. RESISTORS GENERALLY SPECIFIED AS MATCHED ARE RI-2, R3-4 AND R5-6. IT IS DESIRABLE TO ALSO HAVE MATCHED TUBE SECTIONS. after spending many hours of matching resistors and tube testing to find the "matched" ones that too many times all this effort was in vain. It seems that after the unit was built and power applied and the unit "aged" for 10-20 hours of operating the tubes settle down and characteristics change. The 2% maximum I.M. distortion figure has been exceeded due to the fact that the matched condition does not exist under operating conditions.

A typical audio push-pull stage is shown in Fig. 1.

It is an established fact that the dc voltage potentials of push-pull audio stages must be identical if minimum distortion is to be realized.

With this thought in mind, and not having a dollar tree to finance the purchase of tubes and resistors on a large enough scale to find the "matched" pairs, the author found the following simple method for balancing audio push-pull stages rendered most gratifying results.

Using Fig. 1 as a guide the only components requiring changing are resistors R1 and R2. These may be replaced by a potentiometer as shown in Fig. 2 or Fig. 3. The resistance of the potentiometer should be approximately the same as the total resistance



ALL IT TAKES is a couple of potentiometers and you eliminate the problem of matching for close tolerances.

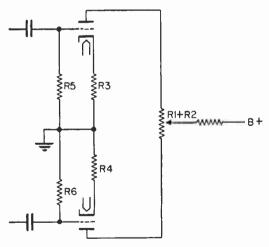


FIG.2 THE NEW CIRCUIT USED BY THE AUTHOR. NOTE THAT THE POTENTIOMETER REPLACES RESISTORS, R1 AND R2. ALL OTHER COMPONENTS REMAIN THE SAME.

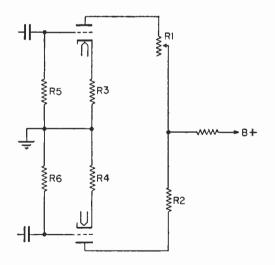


FIG.3 NOTE THAT FIXED RESISTOR R1 HAS BEEN REPLACED WITH A POTENTIO-METER TO ACCOMODATE BALANCING.

of R1 and R2. For instance, if R1 and R2 are 240K each the potentiometer to be used would be 500K.

After the potentiometer has replaced the resistors in the circuit, set the shaft to approximately center and apply power to the amplifier. If you have a distortion testing device the potentiometer is merely adujusted until minimum distortion is obtained. If not, you may adjust the plate voltages of the tubes until they are identical by the potentiometer.

The builder may replace the potentiometer with fixed resistors after adjustments have been completed by measuring the resistance in each leg of the potentiometer. The author elected to leave the control in as a permanent fixture that would make future adjustments easy and facilitate distortion adjustments easily.

If the potentiometer is to be a permanent

fixture the leads to the plate should be as short as possible. If the length exceeds $\frac{1}{2}$ -in. or so it might be well to use shielded wire. A suggestion also would be to employ a "locking-type" potentiometer so that once the adjustment has been made the setting will not be inadvertently changed.

A potentiometer may be inserted into any and all of the push-pull stages except the output stage that is fed by the output transformer.

When balancing the stage with the potentiometer you will be accomplishing what is commonly referred to as "ac balancing" or dynamic balancing. This potentiometer changes the voltages at the plates that in turn causes the grid voltages to change. When zero plate voltage difference is obtained the grids are automatically adjusted for zero voltage difference.



"The Air Force wants to know how a type '27' triode got into the guidance control system we designed, Bentley!"

RTS for home movies

You can make all your tapes and movies

more interesting with good sound effects

REPERTOIRE of simple effects will put that extra touch of polish on your home movie sound tracks. You can make them "on mike," tape them for easy dubbing, or combine "live" effects with prerecorded ones. A number of sound-effects records are now on the market, too, giving the amateur almost as much range as the studio professional.

Here are a few simple ideas for effects you can create.

Fire: Crumple cellophane; break matchsticks for a crackling effect.

Rain: Form a wax paper trough, taping the top to an upended box and resting the bottom in a deep dish. Pour sugar down the trough, with the mike spotted underneath it.

Wind: Let air out of a balloon.

Thunder: Shake an inflated balloon containing a few BB shot.

Frying: Pour salt onto aluminum foil.

Waves and water: Swirl rice in a baking tin.

Hoofbeats: Cut a rubber ball in half; pound

the halves against your chest.

Diving into water: Hold a water-filled jar upside down in a water-filled bucket; pull it sharply out of the water, with the mike spotted just above and to one side.

Steam engine: Run a stiff brush rhythmically across a vegetable grater taped to a shoe box, with the mike placed inside the box.

Steamboat whistle: Blow across the mouth of a partially-filled jug; adjust the pitch by altering the water level.

Walking in snow: Knead cornstarch-filled handkerchief in walking rhythm.

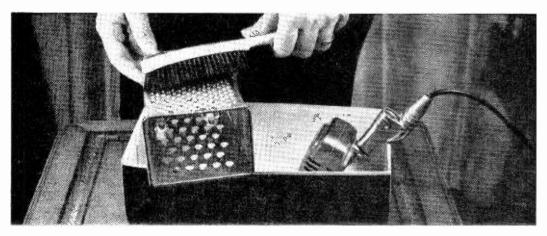
Walking in rain: Alternately press both hands against a wet newspaper in a sink; cover the microphone with a handkerchief and hold it close.

Telephone bell: Bell on a child's toy telephone.

Auto horn: Small tin horn.

Breaking glass: Strike an aluminum plate. Gunshot: Cap pistol.

Squealing brakes: Run a nail across glass.



YOU WON'T BELIEVE this effect until you really give it a try! Use a stiff brush and a grater and hear the trains!

By ART ZUCKERMAN

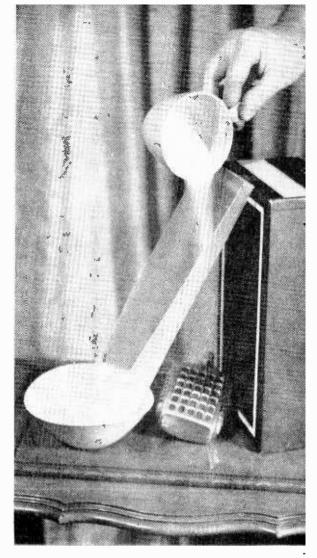
Crash: Smash aluminum plates together.

Fire engine: Battery-powered bicycle siren with mallet strokes on a bicycle bell.

If you tape effects, they should be carefully logged with the help of your recorder's indexer for easy locating. The tape can be cued either by a short stretch of spliced-in timing and leader tape or by sticking a tiny piece of splicing tape to the backing just at the beginning of the effect.

It's best to restrict taped effects to continuous types, such as rain, and record a generous serving of them in a continuous pass. In copying to the master sound track, you can then fade these effects out gradually or cut them off abruptly as the scene demands. Transient sounds that must follow the filmed action closely, such as a gunshot, are best created live on-mike. Leave ample dead tape stretches between effects to avoid inadvertent run-on sounds and to make locating a desired effect easy.

So start becoming conscious of the noises that surround you, and then, put them to work.



HERE ARE SOME SOUND-EFFECT PHONOGRAPH RECORDS CURRENTLY AVAILABLE IN RECORD SHOPS:

Vol. 1,	Schwe	artz	Folkways 6170				
Assorte	d Sou	nd Effe	Folkways 6181				
Authen	tic Sou	und Effe	Elektra 251/3; 7351/3				
"	,	, ,,	Vol. 4	Elektra 254: 7254			
"	,	, ,,	Vols. 5, 6	Elektra 255/6: 7255/6			
Basic So	ound l	Effects, V	/ol. 1	Major 1016; S-1016			
Sound B	Effects	, Vol. 1		Audio Fidelity 3006, 7006			
"	"	Vol. 2		Audio Fidelity 3010; 7010			
"	"	Vol. 3		Audio Fidelity 3011; 7011			
Sound E	ffects	Library	—Airplanes	Offbeat 5701; 95701			
"	"	"	Amusement Park	Offbeat 5702; 95702			
"	"	"	Famous Marches	Offbeat 5707: 95707			
"	"	"	Musical Backgnds	Offbeat 5708; 95708			
Sound Patterns				Folkways 6130			
Sounds of Animals				Folkways 6124			
Sounds	of Co	rnival		Folkways 6126			
Sounds	of the	Sea	Folkways 6121				

IT'S RAINING OUT! All it takes is a wax paper trough and a cup of sugar. Tape the trough to an empty box and let the sugar run into a bowl for a very realistic rain sound. (See text)



"Gibson is our top man in solar cell research $\tau_{\rm et}$."

COMING IN JANUARY!

The next big issue of RADIO-TV EXPERIMENTER

Containing lots of exciting news for the

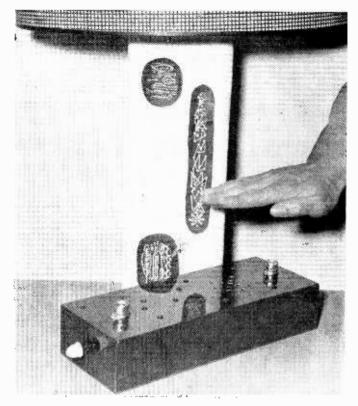
radio hobbyist ... Ham—SWL—CB'er—EXPERIMENTER & AUDIOPHILE!

PLUS a completely revised, updated WHITE'S RADIO LOG

Look for number 659-64 in January at your favorite newsstand.



The Theremin isn't new. This eerie-sounding electronic musical instrument has been around for some time.



Bring your hand closer to the photocell and you reduce the amount of light that reaches it. Moving your hand will therefore change pitch.

By JOHN POTTER SHIELDS

THE Photo-Theremin is completely transistorized and has a frequency range of from 700 cycles when the "Pitch" photocell is in total darkness, to approximately 6 kcs. when it is illuminated by a 100 watt light bulb 10 feet away. Base bias is provided Q4 by R9 and R10.

Construction Hints: The Photo-Theremin was assembled in a standard Minibox as shown in the accompanying photos. The two Lafayette photocells were mounted on 9 pin miniature tube sockets whose unused contacts are used as convenient tie points.

The unit's output volume may be either increased by decreasing the value of R5, or conversely, decreased by increasing its value. One point though—if this resistor is dropped too low, the multivibrator's frequency will be "pulled" as the gain of Q3 is varied by the "Volume" photocell.

The "Pitch" photocell may be covered with a small plastic bottle cap which has a small hole drilled in its top. This cover is useful when operating the Theremin under considerable illumination, in which case, the cell's internal resistance drops too low for proper operation of the multivibrator. The small hole in the top of the cover reduces the amount of light reaching the cell, thereby raising its internal Under the chassis, there is ample room for all of the parts. The speaker is self-contained. Photocells are kept sufficiently far apart to prevent any accidental interaction during hand control.

resistance to a more satisfactory level. This cover need not be permanently mounted as instances can arise where it is not necessary.

Operation and Use: With the unit under moderate illumination, such as a 75 or 100 watt bulb placed 8 or 10 feet away, switch S1 on. A fairly high pitched tone should come from the speaker. Now, bring your hand over the "Pitch" photocell and note that tone dips in frequency. Bringing the other hand over the "Volume" photocell should reduce the volume. A number of interesting effects can be obtained by using a small "pencil" flashlight to illuminate the "Pitch" photocell while lighting the "Volume" cell with a steady light source.

Beside its obvious use as a novelty, the Photo-Theremin has some practical applications. As an aid to the blind it could be used to indicate relative amounts of illumination, indicating for example, the position of doorways, windows, etc. The "Pitch" cell could also be attached to the end of a cable or cord and used as a light sensing probe, the tone produced being a function of illumination. The unit can be made extremely portable due to its simplicity and battery operation.

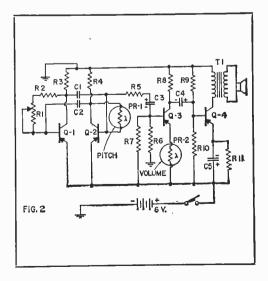
So there is the Photo-Theremin. I'm sure that if you build one you will find many interesting and useful applications for it.

All you have to do is exert a little care in the assembly of the unit, and you will have a novel, intriguing device that will serve to amuse and astound your friends the next time they visit you. With a bit of practice, you'll master the instrument.

MATERIALS LIST-PHOTO-THEREMIN

R15 Meg. Carbon Pot	t. with Switch (SPST)
R2-33K, 1/2 Watt	R11-100, 1/2 Watt
R3-10K, 1/2 Watt	C102 Mfd. 600 V
R4-10K, 1/2 Watt	C25 Mfd. 15 V Elec.
R5—47K, 1/2 Watt	C3-5 Mfd. 15 V Elec.
R6—180K, 1⁄2 Watt	C4-5 Mfd. 15 V Elec.
R7—6.8K, 1/2 Watt	
R8—4.7K, 1/2 Watt	C5-50 Mfd. 12 V Elec.
R9—4.7K, 1⁄2 Watt	Q1, Q2, Q3-2N1265
R10—1K, 1/2 Watt	Q4-2N 2N1415
*** D : 500 0hm 5	a 2.0 Ohme /Lefauette #TP.951

T1—Pri.—500 Ohms. Sec.—3.2 Ohms (Lafayette #TR-95) PR-1, PR-2—Photoresistive Photocells (Lafayette #MS-791)



2. The schematic diagram is simplicity itself. A straightforward circuit such as this doesn't allow fancy gimmicks, but is easy to build and use.



Fig. 1: Press the button and your signal level meter will read battery voltage.

Improving your portable

Make a small, inexpensive tape machine sound like a bigger, higher quality job.

VIRTUALLY all tape recorders sold for \$30 or less are portable battery-operated "rim-drive" machines. While these machines do a fine job, if used within their limitations, they lack several features of the more expensive units. However, for just a few dollars and a little effort, you can greatly improve the capabilities and operating convenience of your portable battery-operated recorder; this article will show you how to add a recording level-battery voltage meter, remote and variable-speed controls, and a "dubbing" monitor.

The Lafayette RK-125 series of battery portable recorders are typical of the "rimdrive" variety of machine, both electrically and physically. Therefore, this unit will be used as the example in this article. Even if your machine is not identical to the RK-125 (also sold under several other brand names) it is probably close enough for you to use the information presented.

All the more expensive recorders, plug-in and portable, use neon bulbs, magic-eye tubes or meters to indicate proper recording level. You can add a recording level meter to your machine quite easily, and also use this same meter to check your amplifier battery voltage!

Physically, the meter is installed on the sheet metal cover over the recording head. The meter must be insulated from the metal, since the negative meter terminal is common with the meter case, and the metal cover is at battery-plus potential. A small strip of black plastic tape around the meter case solves this problem. The meter may be mounted to the cover with a ¹/₂-in, grommet, whose inner diameter is a snug fit over the meter case; alternately, the meter may be cemented to the underside of the cover. On the RK-125, it will also be necessary to drill a clearance hole in the plastic cover, to allow the cover to close over the meter; however this has the advantage of allowing you to see the meter with the cover closed!

The meter, together with a push-button switch, and a few other parts, is connected to read either recording level or (when the button is pushed) amplifier battery voltage under load.

You may wonder just how this circuit works. Let's break it down into two parts: the level-meter circuit, and the battery-meter circuit.

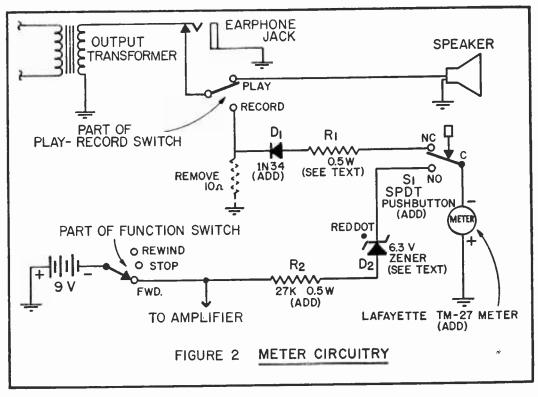
The pushbutton switch (S1) in its normal position connects the audio output of the recorder, only when in the record position, to a diode (D1) which rectifies the audio and passes the negative half-cycles to the meter. If normal recording volume (established by a few sample recordings) pins the meter, resistor R1 may be added; it will seldom require a value more than 4.7 K. Notice that a 10 ohm resistor, normally used as a dummy load during recording, must be disconnected or it will shunt the higher impedance meter circuit, and drastically reduce the meter action. The author's RK-125 required no R1, and normal recordings peak the meter needle to ½ scale. A Rossdictator RE-410 recorder, however, required a 2.2 K resistor for R1 to keep the meter at $\frac{1}{2}$ scale peaks.

The amplifier battery voltage of these machines is generally 9 volts, and when this voltage drops to 6 or 7 volts, the audio quality and strength suffer badly. Therefore, it was decided to have the small meter utilize its full scale to read the 6 to 9 volt range only! A simple meter expansion circuit accomplishes this, using a Zener diode (D2). When S1 is depressed, unless the battery voltage is sufficient to cause Zener breakdown (6.3 volts), essentially no current flows through the meter and the needle does not deflect; however, any voltage above 6.3 volts will cause meter deflection, limited by resistor R2 to read full scale at just over 9 volts! Thus, half scale is about 8 volts, a good point to begin thinking about changing the battery. Note that this circuit is only operative when the tape is moving forward (amplifier operating) to insure battery readings under load.

If Zener diodes mystify you, or you can't obtain a 6 or 7 volt unit, use the other circuit. It requires one additional resistor, but the silicon diode (D3) is only 37¢ (Sylvania IN 456, Allied Radio). However, this circuit only "compresses" the first four volts of the meter scale to zero, and ½ scale is 6.5 volts. The diode may be just about any silicon unit, since it's voltage drop during forward conduction is the cause of meter compression; it

tape recorder

BY FRED BLECHMAN



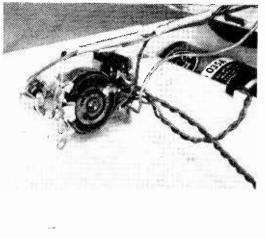
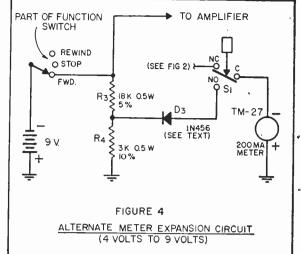


Fig. 3: Motor speed control is added by placing an additional potentiometer in the case. Twist leads for anti-hum.

doesn't conduct until approximately .6 volts appears from anode to cathode. Voltage divider R3-R4 establishes the zero point at 4 volts, as well as limiting meter current to full scale at 9 volts. The Zener diode circuit (Fig. 2) is simpler, less critical in components, furnishes better meter compression and is therefore recommended if you can get the Zener.

The severest limitation in the use of rimdrive recorders, outside of their generally limited frequency response, is the fact that the tape passes the recording head at a constantly changing speed. On capstan-drive machines, the tape speed is maintained at a particular speed, such as $1\frac{7}{8}$, $3\frac{3}{4}$ or $7\frac{1}{2}$ inches per second. Therefore, a tape made on a rimdrive machine is not compatible for playback on a capstan-drive machine, and visa-versa. Furthermore, tapes made on different rimdrive machines, even of the same brand, will not be compatible unless the machines have some method of speed control to compensate for the effect of battery voltage on motor speed. The majority of rim-drive units, including the RK-125, do not have speed controls. However, the addition of such a control is a very simple matter; see Fig. 7. A small (both in size and value) series potentiometer (R5) varies the motor voltage and, therefore, speed. Also, a small closed-circuit jack (J1) may be added to allow remote start-stop control with any external switch or relay.

To achieve really broad motor speed control, you can add the switch shown in Fig. 8 if your machine uses two 1.5 volt batteries in parallel to power the motor, as most of these machines do. The switch (S2) simply allows you to put the batteries in either parallel (1.5 volts) or series (3 volts). At three volts the

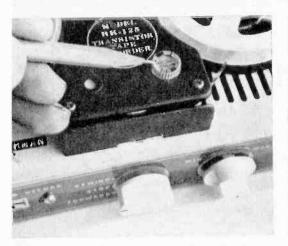


motor runs a great deal faster, for extra-fastrewind or fast-forward. In normal use, the low position is used for longer battery life and recording time. The R5 speed potentiometer (Fig. 7) gives variable control in either range, thus allowing highly versatile speed capability. A tape made at 3¾ ips on a capstan-drive machine can now be understood on your rimdrive by occasional adjustment of the speed control switch and knob as the tape is played.

Fig. 9 shows how to rewire the battery terminals to allow the addition of S2. One terminal is added (a strip of brass or copper is fine), and insulated from the adjoining terminal with tape; one battery is reversed in it's holder to provide proper polarity.

Do you dub recordings? Dubbing, or copying a tape, can be made much more practical with the addition of a SPST switch to your rim-drive machine. Fig. 10 shows you how. When dubbing from your RK-125 (or similar), you feed the signal from the RK-125 earphone jack to the radio input of the recorder making the dub. However, in so doing, you normally can't hear what is being recorded, since the RK-125 speaker is disabled by the plug in the earphone jack. (Your dubbing recorder may be able to monitor while recording but most machines do not have this capability.) So, you add a switch (S3) to put the RK-125 speaker back in the circuit! Simple! but very effective. This same idea can be used with any recorder or radio that has an earphone plug connected in the speaker circuit,

The changes described will go far toward putting your \$30 recorder in the \$70 class, as well as providing you with operating capabilities that will greatly expand the possible uses



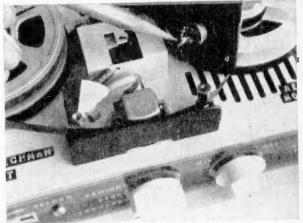
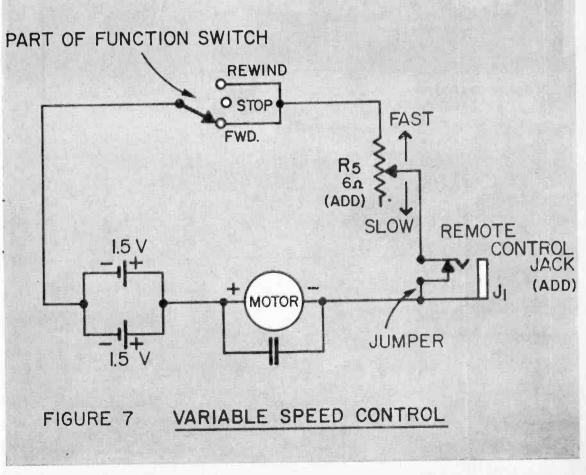
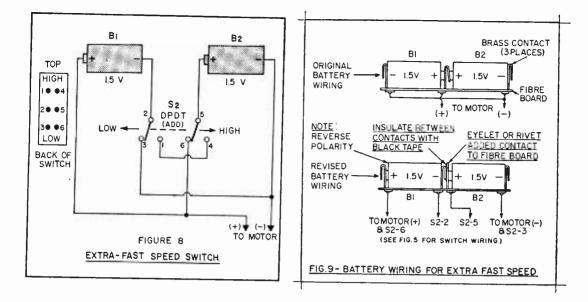
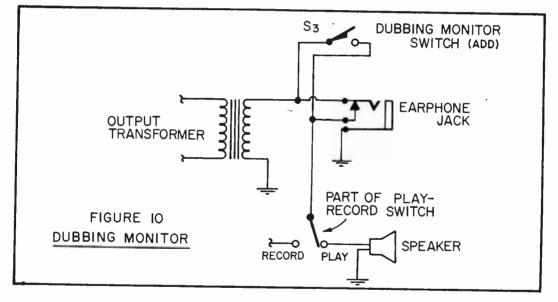


Fig. 5: The miniature meter is more than adequate and mounts conveniently on the trim panel. Insulute it.

Fig. 6: Underneath the trim panel, the meter is wired with extra-long leads to avoid stress when panel is off.







for your inexpensive tape recorder.

1.1	
Desig.	MATERIALS LIST—IMPROVING RECORDER Size and Description
R1	1/2 watt composition resistor
R2	27 K 1/2-w composition resistor
R3	18 K (2-w 5% resistor (optional, see text)
R4	3 K 1/2-w 10% resistor (optional, see text)
R5	6 ohm potentiometer (Lafayette VC-366)
S1	SPDT push-button switch (Lafayette MS-499)
\$2	DPDT slide switch (Lafayette SW-17)
S3	SPST slide switch (Lafayette SW-14)
J1	Subminiature closed-circuit jack (Lafayette MS-282)
	(Mating plug: Lafayette MS-281)
D1	Crystal diode (1N34 or equivalent)
D2	6.3 volt Zener diode (see text)
D3	Silicon diode (1N456 or equivalent) (optional, see text)
Meter:	Lafayette TM-27 Ultra-Miniature Tuning and Battery Meter,
	200 microamperes movement \$1.95 (Do not substitute)
Lafayet	te Radio Co., 111 Jericho Tpke., Syosset, N. Y.
	in these both and bellene (pres, byosser, it.).

Now let's face facts. These modifications aren't going to make a \$10.00 machine sound like a \$400.00 job, but these small improvements will certainly add to the pleasure your portable gives you by decreasing the guesswork and simplifying the operation.

Decide on which modifications you would like to incorporate, and follow the instructions carefully, to avoid a botch-job. As a result of your efforts, you will be rewarded with the satisfaction of better performance, within the limitations of what you started with. If your portable is at all good, you can make it better.



By CHARLES S. TEPFER

FOR a long time I had been trying to dren use when playing among themselves. My kids' half imitation-adult, half fantasy talk is precious and something I want to preserve. I've tried to get it on my regular tape recorder but my kids pose for it just as they do for my camera, and the fantasy is gone. One day I got the bright idea of taking home my portable office dictating machine and using it to make candid tape recordings. It worked! The recorder is so small that it didn't scare the children and

You may be using one of these new portable tape machines for dictating letters in the office. If the machine sits idle over a week-end, take it home and make it work. It's fun!

 Recording ideas or orders while in a car makes your driving time profitable.
 Also handy for recording directions as given.



2. The convenient starl-stop switches permit you to transcribe your notes easily. Accessory switches can

either be aperated by foot pedals, or by the thumbs, if attached directly to the typewriter, as you prefer.



3. Recording the kids is the modern version of the old art of picture-taking. Get voices before they change!

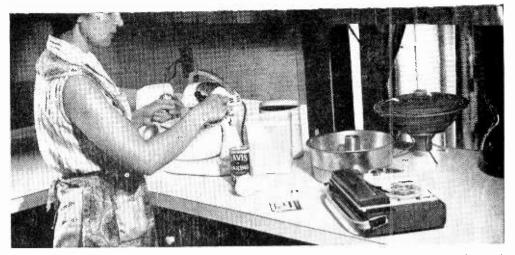


4. Out in the woods, you can capture with ease the calls of the various birds and sounds of local wildlife.



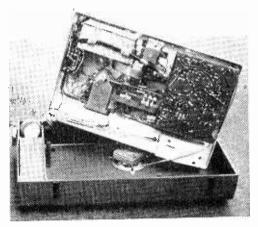
5. Here, a housewife sits at a table and slowly and calmly reads a recipe with all cooking or baking in-

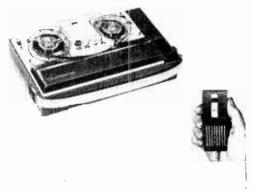
structions into the machine. She pauses, allowing herself time to perform the acts she is dictating.



6. Meanwhile, back at the range . . . With the tape recorder playing back, she is able to use both hands

to follow the recipe, doesn't mess up recip∈ cards or cook book pages. Here's efficiency in a kitchen!





7. Inside the "Conferette," the keyword is compactness. High efficiency amplifiers perform an excellent job.

8. Added convenience is provided by the switch on the microphone which completely controls the deck.

A tape recorder may be a dictating machine, but it's still a tape recorder

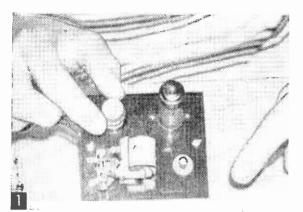
it's battery operated so that I was able to take it to the playing kids. The result is a tape that I'll always treasure.

Dictating machines were once the symbol of the big, Hollywood type business executive with beauteous secretaries and big deals. But business offices have changed and so has the dictating machine. Now, everyone can be his own dictator using any of the compact, inexpensive tape recorders on the market.

The most popular type for office use are the lightweight compacts that run at the slow speed of 3¾ or 1⅔ inches per second and have simple push button controls. They also come with a long list of accessories such as foot pedal control, stethoscope type earphones, typewriter backspacer, etc.

Most of these small recorders are all transistorized, and like the transistor radio, run off batteries. This gives them an advantage over all other types of dictating machines and most tape recorders—they are *really* portable. So much so, in fact, that they can be easily taken out of the office and used as a portable secretary or just for fun around the house or elsewhere.

I use one constantly; in fact, I dictated part of this article into my machine while on a long car trip with my wife driving. My recorder weighs seven pounds (about par for the course) and is roughly the size of a flat tackle box. It uses three-inch reels of tape and yields about ninety minutes of (Continued on page 119)



Passing one finger over cell actuates control relay in dim room. Adjustment of knob provides range of sensitivity.

CADMIUM sulphide crystal small as a transistor forms the heart of this compact photo-electric switch designed especially for light control applications requiring high output voltage or current at very low light levels.

The unit, known as the Clairex crystal photocell, needs only a fraction of a footcandle of illumination to fire the cold cathode discharge tube and, thus, operate the control relay. The cell is a plastic vial $\frac{1}{4}$ in. dia x1 $\frac{3}{4}$ in. long (Fig. 2). A transparent window in ' one end reveals the amber crystal with a sensitive surface barcly $\frac{1}{32}$ x $\frac{3}{32}$ in.

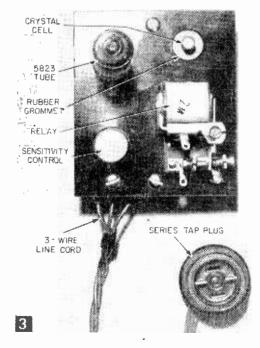
Construction. Make the chassis (Fig. 3) from a piece of non-conductive material (such as ¹10-in, linen base Bakelite or non-hydroscopic fiber) following dimensions and hole locations shown in Fig. 4. Holes for mounting the relay are expressly for the Sig-

Crystal Photo-Control Switch

By THOMAS A. BLANCHARD

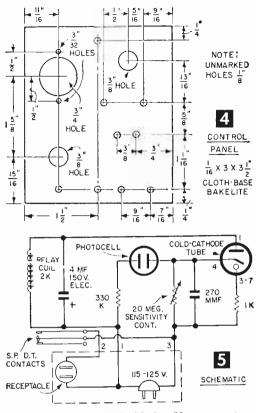
ma Type 4F. You can substitute Potter & Brumfield, Guardian or Advance relays with similar coil and sensitivity characteristics if you modify mounting arrangements.

Secure the relay with two $\frac{1}{2}$ -in. x 6-32 binding head screws, with a soldering lug under one to establish contact with the relay armature. Attach the 3-lug tie strip with a $\frac{1}{4}$ -in. x 6-32 binding head screw and nut. Mount a 7-pin wafer socket on 1-in. centers with two rh $\frac{1}{4}$ -in. x 2-56 machine screws and nuts. Fasten the $\frac{1}{4}$ x 1-in. mounting studs with $\frac{1}{4}$ -in. x 6-32 binding head screws. A sin-



Crystal photocell is about 1/50th the size of its vacuum tube counterpart, but tests indicate it to be 50 to 100% more sensitive. Compare with penny.

Crystal light switch assembled on a 3x3½-in. Bakelite panel. Plug provides operating and control voltages.

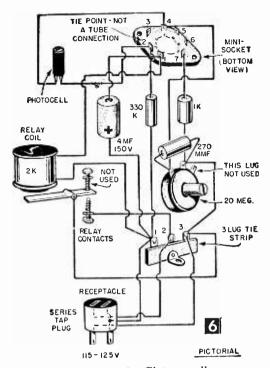


gle % hex nut will hold the 20 meg. potentiometer.

Insert **a** %-in. O.D. x ½-in. I.D. rubber grommet in the %-in. hole adjacent to the socket hole and press the crystal photocell into the grommet.

Note use of the #2 lug of the tube socket as a tie-point for one side of the photocell and its 330K series wired protective resistor. This lug is not a functional part of the #5823 tube. Only lugs 1, 4, 3 and 7 connect to tube elements, and #3 and #7 are internally connected. The nucleus of the cord arrangement is the combination line cord plug and receptacle. The third cord wire connects through the relay contacts and returns to the receptacle cap on the plug. Thus any 115-125v. device plugged into the cap will operate when light strikes the photocell.

If you want to use the control with devices operating on d-c voltages lower and isolated from the power line, substitute an ordinary 2-wire fixture cord making connections to tie lugs #1 and #3 only. Remove the relay wires from lugs #2 and #3 of tie strip and connect directly into the low voltage operating circuit. The normally open or "back contact" of the relay is not used in this design. However, both stationary contacts may be wired up to perform separate short interval functions: to start or stop any device when a



ray of light reaches the Clairex cell.

Operating Tips. Because of the exceptional sensitivity of this control, you will have difficulty adjusting the 20 megohm potentiometer for precise pick-up and drop-out of relay contacts unless the control is first mounted in a cabinet. Drill a hole not more than 1 inch in diameter in the cover directly opposite the panel location of the crystal photocell. The sensitivity rises as resistance increases between the starter and cathode of the #5823 tube. As you rotate the potentiometer knob from zero to maximum, smaller light values will be required to trigger the circuit.

MATERIALS LIST ---- PHOTO-CONTROL SWITCH

No. Req.	Size and Description
1 pc	1/16 x 3 x 31/2" Bakelite or fiber panel
	1/4 x 1" bushings threaded 6-32, for spacers
2	1/4 x 2-56 rh machine screws and nuts
2	Ve x 6-32 binding head machine screws
3	1/4 x 6-32 binding head machine screws
i	6-32 nut
ĩ	#6 soldering lug
ī	3/8 O.D. x 1/12 I.D. rubber grommet
ī	3-lug tie strip
ī	7-pin miniature wafer socket, mounting holes 1" centers
ī	RCA special purpose cold cathode discharge tube #5823
2 2 3 1 1 1 1 1 1	Type CL-2P Clairex crystal photocell (Clairex Corp.,
	19 W. 26th St., New York 10, N. Y.)
1	4 mfd., 150 WV electrolytic capacitor (Cornell-Dubilier
	#BR-415)
1	270 mmf. C-D ceramic capacitor
1	2K ohm relay (Sigma #4F)
1	1/2 watt, 330K (330,000) ohm resistor
1	1 watt 1K (1000) ohm resistor
1	10 megohm IRC Potentiometer Type RQ (screwdriver slotted
	short shaft) or Type PQ (1/4 x 3" round shaft;)
1	Woodwin plug #889

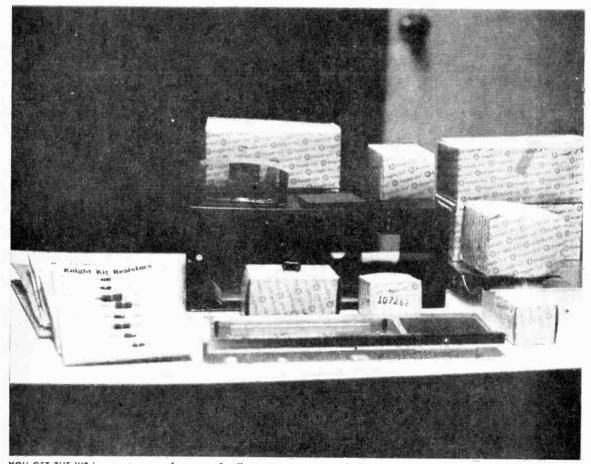
The Knight-Kit C-22 Transceiver

The manufacturer checked this story after it was done. His comments are printed in italics

By STEVEN HAHN

E ASSEMBLED the Knight C-22 transceiver in about twenty-two hours, including alignment. The Assembly Manual, with its instructions and pictures was clear and free from those annoying ambiguities which are often encountered in poor kit equipment.

The kit contains no printed circuit assembly whatsoever and the builder is even permitted to construct the transmitting oscillator and power amplifier assembly (even though he cannot adjust them without a license.) Components used in the kit are of brand manufacture and of consistent high quality.



YOU GET THE KIT in a vast group of cartons. Small components are attached to a cardboard strip, and identified.

For some odd reason, only two of all the components (two electrolytic condensers) are of Japanese manufacture. We certainly have nothing against Japanese products but they do stand out a little bit in a kit which is otherwise composed entirely of American components.

A real time saving feature which Allied might include in this kit would be to mark the tube locations on the chassis as well as the locations of the major components. This makes wiring so much easier. In building the kit, a number of metal spacers and the instructions do not make clear what size spacer should be used in a given step. Here, the

Traditionally, kits don't have marked tube sockets or major components on the chassis. Such markings will, of course, increase production costs and surveys have shown that kit builders generally mark the location of tubes and components with an indelible pencil. It is, however, an excellent suggestion, and is being seriously considered.

size of the spacer involved might be added to the instruction literature. Also, on page 16 of the instruction literature, Step 5 calls for the insertion of R1, a 470,000 ohm resistor.

Current versions of this kit include a completely redesigned front panel which utilizes only one size of spacer.

However, Fig. 11 on page 17 shows this to be a 10,000 ohm resistor (you should use the 470,000 ohm resistor as the instructions indicate). Another suggestion for Allied would

The most recent construction booklets already carry this correction with regard to resistor R1.

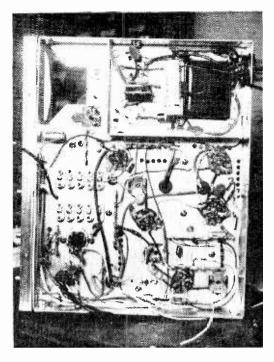
be to use a better quality shielded cable for carrying the RF power. The cable which is used in the kit has very thin polystyrene insulation. When the braid of this cable is soldered, it is very easy to have the braid melt through the insulation and short out the hot center conductor. (This happened with us in two instances). We also suggest that the portion of the instruction manual dealing

The shielded cable used here was especially selected to insure a proper impedance match. Its heat resistant characteristics were tested and no difficulties were experienced as a result of insulation breakdown. However, the point brought out here is well taken and a more heavily insulated cable is being examined for possible substitution in the kit.

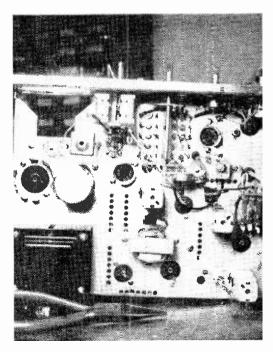
with kit alignment should be revised to indicate that the insulated alignment tools and insulated screwdrivers supplied with the kit should be used in making these adjustments.

The difficulty with the small red pointer was noticed quite early. Present production models of the kit use a pointer with a flat which fits onto a flat shaft and can never move off frequency.

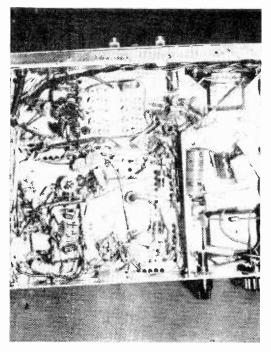
The instructions say nothing about these tools at the present time and the uninformed are RADIO-TV EXPERIMENTER



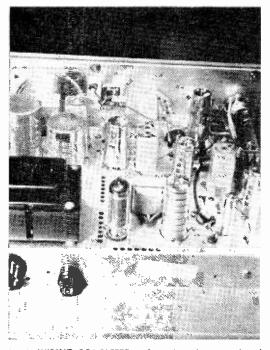
ALL MAJOR PARTS are now mounted on the chassis, which looks like this from below, before the wiring gets started. The instruction book is simplicity itself.



AT THE SAME TIME, the chassis top presents this appearance. Small holes punched in rows are used for ventilation when set is in operation. Pliers indicates size.



WIRING IS A&MOST COMPLETED, and under the chassis, we see order beginning to take shape out of the chaos that was. Note parts placement to avoid shorts.



WITH WIRING COMPLETED at last, the tubes are placed into the sockets and preliminary testing is done. Foolproof assembly system guarantees success. Note shields.

no doubt tempted to make these critical adjustments with standard metal screwdrivers.

One final query: when the kit is completely assembled it certainly makes a very handsome unit, using brushed aluminum knobs, some with red pointers, against a pale blue front panel. However, the red pointers on the channel selector and tuning knobs are press fitted on the shaft and fall off very easily. We wondered whether something could not be done about this.

The new instruction literature contains more detailed reference to the use of the insulated alignment tools.

Circuit Description and Analysis: The Transceiver utilizes six tubes, a silicon power supply, and a vibrator for battery operation. In the transmitter section, a crystal controlled triode overtone oscillator drives a power amplifier. The output of the power amplifier is fed through a pi filter-network, which attenuates harmonic output above twenty-eight megacycles. This network is followed by another trap which is tuned to fifty-four megacycles (second harmonic) to make certain interference with TV is eliminated. In our opinion, proper RF filtering is one of the most important design features of a citizens band transceiver. Regrettably, in many kits, this portion of the circuit is neglected, usually for some fancy operating feature of doubtful value. We used the Knight C-22 Transceiver under the most trying operating conditions, near TV and FM sets. At no time were we able to detect interference in our monitoring equipment.

The receiver portion of the Transceiver consists of a mixer-oscillator, two IF amplifiers, a diode detector, a noise limiter diode, a squelch diode and an audio amplifier-power amplifier. The actual circuit employed is fairly straightforward. However, there are some very unusual features incorporated in this system. For example, the Knight C-22 Transceiver does not employ a stage of RF amplification and at first glance the kit builder might be concerned about the system's overall sensitivity. Actually, we feel that this approach represents a very sound design move on the part of Knight. The citizens band is very crowded and has a considerable amount of QRM. In addition, FCC regulations, as well as the very nature of the propagated waves, do not permit communication over long distances. Consequently, a lot of sensitivity in a transceiver will be of no help whatsoever when you are trying to pull a signal out of a noise level which is almost as high as the signal itself. Of course, a lot of sensitivity comes in very handy when you are working over fairly long distances, in an open terrain, and are not plagued by extreme noise and crowded band conditions. The Knight C-22, in our tests, has remarkable sensitivity

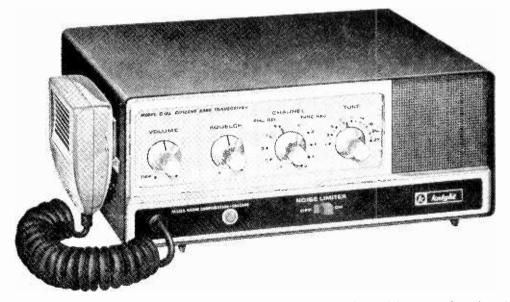
Experiments also indicated that the measured sensitivity of the C-22 was one microvolt. We have achieved this sensitivity, which we consider more than adequate, without the use of an RF stage and by employing a 1650 Kc. IF which achieves better image rejection than an RF stage at these frequencies.

in view of the fact that it does not employ RF amplification. As a matter of fact, it represents, in our opinion, the almost ideal design center between very high sensitivity, which is often encountered in the cheap, underdesigned, transistorized, hand-held transceivers.

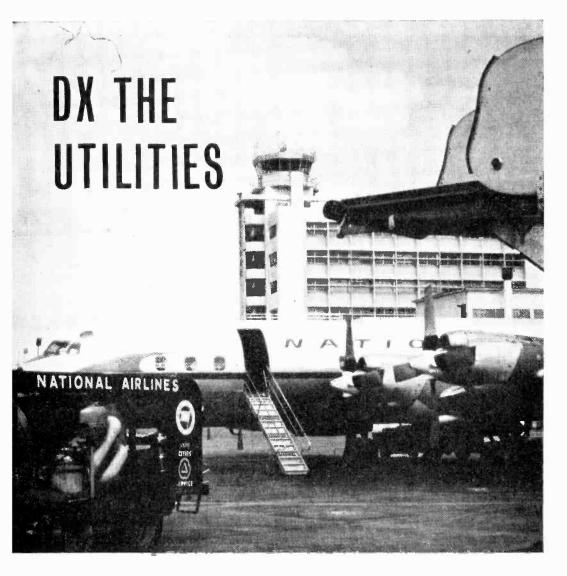
After alignment, we checked our unit with our Measurements 80 Signal Generator and found the sensitivity to be 1 microvolt for 10 db (signal/noise ratio). The receiver portion offers crystal controlled reception as well as tuned reception. The switching offers a very high degree of flexibility. One can set the controls so that the Transceiver operates Fixed Crystal Transmit and Fixed Crystal Receive. The controls can also be set so that you can operate Fixed Crystal Transmit (on any one of five channels) and continuously tune on receiving. This feature is extremely useful and is often left out of even much more expensive equipment. It permits you to listen to any one of the available channels while transmitting on any one of five channels. Of course, in the all crystal position, the transmission and reception channel is fixed by the crystals involved and here five combinations are offered on the front panel.

The Knight C-22 is very easy to operate and offers a high degree of flexibility. The transmit-receive function is relay controlled by means of a pushbutton switch on the ceramic microphone. The ceramic microphone uses a sturdy coiled cord which fe directly into the transceiver without the use of a plug. We feel that this technique is in some ways an advantage over the microphone which can be connected with a plug, Plugs and connectors often are the source of trouble and there always is the temptation to change microphones which might result in a poor match as well as difficulties with the relay control operation. An incandescent pilot light goes on when the transmit pushbutton on the mi-crophone is depressed. This light is in series with the plate return of the power amplifier. Thus, the light serves for a number of functions. When it is very bright, chances are that you have selected a transmitting channel where you have forgotten to place a crystal into the transmit crystal socket. A dim light is an indication that you are transmitting and the degree of dimming (with respect to other transmitting channels) is a rough indication of tuning effectiveness (the dimmer the light gets, the better the degree of tuning). In addition, the light will also flicker with modulation.

As a final point, we were very happy to see that heavy gauge sheet metal, with sturdy bracing, was used throughout. To assure dependable operation in mobile use, for example, the receiving and transmitting crystals are held in their sockets by a plate with foam rubber cushion. Certainly, the unit will give stable, dependable operation, either as a base station or as a mobile rig operating from a 12-volt battery.



The finished kit presents a handsome appearance, tastetully and efficiently designed for years of good service.



You are missing a vast source of SWL-DX if you aren't logging in any of the so-called utility stations. A big part of this is the knowing how.

By C. M. STANBURY II

HAT ARE UTILITIES? Any station that is neither broadcast nor amateur. Tiny shrimp trawlers, police, or space capsules. Not only a *realistic* listening bonanza but also an excellent way to boost that total of countries logged and verified. All this provided you know how to go about it.

To find Utilities in general is certainly not difficult. A majority of short wave frequencies are assigned to them as are all those medium wave channels above 2000 kc, all of long wave, VHF channels up to 50 mc and of course many even higher frequencies.

If the SWL is following a sea search, he doesn't want police transmitters. And DX'ers tracking an aircraft until it passes over a rare country won't be interested in marine frequencies—not at that moment anyway. There is a right band for each purpose. The most important are listed in Chart A.

Aeronautical stations use upper short wave frequencies during daylight hours, moving down at night. Most marine activity (including Coast Guard) takes place between 2000 and 2850 kc. Thus distant reception is best at night. Police operate only below 2500 kc and above 30 mc (VHF) while telephone and military stations can be found on a variety of frequencies.

Frequency Markers. After finding the right band, you'll probably want to work a specific frequency, something like 9018 kc, the Cuban Air Force channel. If just fishing around and pick up a piece of DX, the frequency should be determined. Some receivers are equipped with a 100 kc crystal calibrator which places marker signals every 100 kc, or such a device can be added to your set at any time. But if you don't have one, marker frequencies can be found on the dial—those channels which are used nearly all the time, at least when the band is open, and whose exact frequencies are known.

Chart B lists such markers. Time and standard frequency stations WWV/WWVH are the most easily spotted and often when their signals do skip over your area, similar stations in other parts of the world will be heard such as MSF England or JJY Japan. This is particularly true of 10 and 15 MC. The aeronautical markers are almost as good,



CRUISE SHIPS and cargo vessels all provide the SWL hound with many opportunities for adding to the log.

RADIO-TV EXPERIMENTER

except there are no backup stations and more caution must be used in identifying them. For example, if you use a North Atlant.c weather frequency, be sure you have not tuned instead one of those frequencies used for two way contact with aircraft along these same routes. SWBC markers (see WHITE'S RA-DIO LOG) must be used with even more caution since they switch frequencies from time to time. As you can see, reliable markers above 15 mc are scarce but WWV can often be heard in the middle of the 19990-20010 kc space band.

Follow the Action: Okay, once the right spot is found, the SWL will want to know exactly what is going on as he listens. Let's take it service by service.

First, aeronautical (often abbreviated AERO by SWLs) is the most obvious source of DX. Usually aircraft and aeradios (the ground stations) transmit on the same frequency. Aircraft advise when they pass over certain pre-set reporting points, for example Swan and San Andres islands are reporting points between New Orleans and Panama (the F or Foxtrot route). During such transmissions the aircraft also estimates time at which it will arrive at its next reporting point. Often the aircraft will then repeat this back for possible correction and the benefit of other nearby aeradios. Be careful not to mistake aeradio for aircraft. Each station will own identificaton last. give his Thus "KLM766, this is Panama" may be shortened to "KLM766, Panama." Incidentally Panama is actually WHZ Balboa, Canal Zone operated by the Federal Aviation Agency.

All time in international aeronautics is GMT, 5 hours ahead of EST and abbreviated Z or Zulu. Other subjects discussed in these contacts are weather, estimated time of arrival at destination and company messages.

Marine operations are not so easily pinned down as they include everything from the Coast Guard and U. S. Navy to Coastal Harbor telephone stations (ship to shore). CHT is the only major radio telephone service not using scrambled speech. Shore stations ID as "Marine operator" and the ships (fishing boats, pleasure yachts, giant aircraft carriers or you name it) by name with call and position given at least once. Two channels are normally used, one for the CHT station and another for the ship. While the latter is transmitting, CHT usually gives out with a busy signal but occasionally relays the vessel. However a ship will never relay the shore station.

Other marine contacts are normally carried on via just one channel, similar to AERO. Coast Guard messages normally concern emergencies, warning lights and beacons, or personnel. On intership channels—2003, 2638, 2738, 2752 and 2832 kc—almost every con-



AERADIO AND AIRCRAFT are another good source of SWL-DX and they will even verify on many occasions.

ceivable topic is discussed ranging from the latest hurricane to the folks back home to the shore merits of various ports to how the fish are biting or aren't. On the other hand, 2182 is the international calling and distress frequency with no routine messages transmitted here, *supposedly*.

Those police transmitters not operating on VHF use either 1605-1750 or 2350-2500 kc with very few mobile units operating on either of these bands. Approximately 50% of all messages are at least partially coded. Complete identification is given on the hour and dispatchers who are not too busy announce it after each message.

Except for *tests* international telephone stations use scrambled speech and there isn't much SWLs can do with this. Military stations often identify and transmit via coded messages. If coded, there's little chance of cracking them. If the message and/or ID isn't coded, they don't care how many SWLs listen in.

A warning. Except for identification, location, civil aeronautics or distress messages, do not ever REPEAT Utility messages. This is illegal. You are free to listen to any station you wish but listeners are not permitted to



CARGO VESSELS travel to all corners of the earth. You can pin-point them on the dial and spot them with maps.

EVEN FISHING BOATS have radiotelephones on board and if you know where to find them, they're yours!



reveal the contents of communications.

DX Treat. Many Utility stations are rare DX simply because few SWLs even know they exist. For example if you were to log and report the 2330 EST weather transmission from ALF 2784 kc Juneau, Alaska, you would probably be the first DXer to receive a QSL. However from an overall standpoint, the stations that are most important are those operating from countries without SW Broadcast services. Cable & WIRELESS (W.I.) Ltd. at Bridgetown, Barbados uses a multitude of frequencies and therefore is not especially difficult to hear. But it will put another country in your verified column and most Short Wave DXers are judged by this figure.

For the latter purpose, telephone and aeronautical services are about on a par. International telephone stations often have those long test periods during which the identification is repeated continuously. These can be readily spotted by any SWL no matter how ignorant he is of utility DX techniques. To address a report to the station, all you need is name of company or operating agency (sometimes the ministry of post, telephone and telegraph) plus the location. All of this information is transmitted on the test tape. Be sure to include in your report an exact description of the test tape to authenticate.

On the other hand, once you fird a good AERO channel, there will be an abundance of DX on that one frequency and you merely have to sit there and listen for it. Also you'll be able to hear the aircraft themselves as they pass over those many rare targets. Reports to Aeradios may be addressed to the officer in charge, c/o the appropriate airport. Reports to aircraft should be addressed to the communications supervisor of the airline at one of the major terminals along the flight's route.

More details on verifying utility stations were revealed in "Get That QSL" in the RADIO-TV EXPERIMENTER No. 644 published last July.

Although the "general" DX'er favors telephone and AERO, marine stations are preferred by utility fanatics like your seribe. Because most of the action does take place on lower frequencies, considerably more DX skill is required. And because you are likely to hear almost "anything" on these channels (as demonstrated in DISTRESS CALL) marine monitoring can be a real experience that "realistic listening bonanza."

KC/S 2500	FIGURE II—FREQUENCY STATION WWV (time)	· · · · · · · · · · · · · · · · · · ·	KC/S	PRIMARY USE	SECOMDARY USE CHT (2500-2600)
2980	Pacific Aeronautical weat	has been devete	2850-3155	AERO	(
3001	Atlantic weather	mer broducasis	4368-4438	Marine	
3330	CHU (time)		4750-5480	International Telephor	ne
3500	Bottom 80M Amateur (cw	in IIS) hand	5480-5730	AERO	
4000	Top 75M Amateur phone		5730-5930	International Telephor	1e
5000	WWV	bana	6357-6525	Marine	
5559	Atlantic weather		6525-6765	AERO	
5574	Pacific weather		6765-7000	International Telephor	10
7000	Bottom 40M Amateur bai	a d	7300-8195	International Telephor	
7300	Top 40M	10	8195-8815	Marine	
7335	сни		8815-9040	AERO	USSR Space
88281/2	Atlantic weather				(\$019)
8905	Pacific weather		9040-9500	International Telephor	10
10000	wwv		9775-9995	International Telephor	10
132241/2	Atlantic weather		10005-10100	AERO	
14000	Bottom 20M Amateur bar	h	10100-11175	International Telephor	10
14350	Top 20M		11175-11400	AERO	
14670	СНО		11400-11700	International Telephor	10
15000	wwv		11970-12330	International Telephor	1e
20000	wwv		12330-13200	Marine	
(For SWBC stations which will serve as markers		13200-13360	AERO		
see WHITE'S RADIO LOG)		13360-14000	International Telephor	1e	
		,	14350-14990	International Telepho	
	GURE IV-THE MAJOR UT	ILITY BANDS	15005-15100	AERO	U.S. Space
KC/S	PRIMARY USE	SECONDARY USE			(15016)
1605-17	50 Police	AERO Beacons	15450-15640	International Telephor	1e
2000-28	50 Marine	(Latin Am.)	16460-17360	Marine	
		Coast Guard	17360-17700	International Telephor	16
		(2650-2705)	17900-18030	AERO	
		Police (2350-2500)	18030-21000	International Telephon	ne Space (19990-20010)

High Intensity Stroboscope

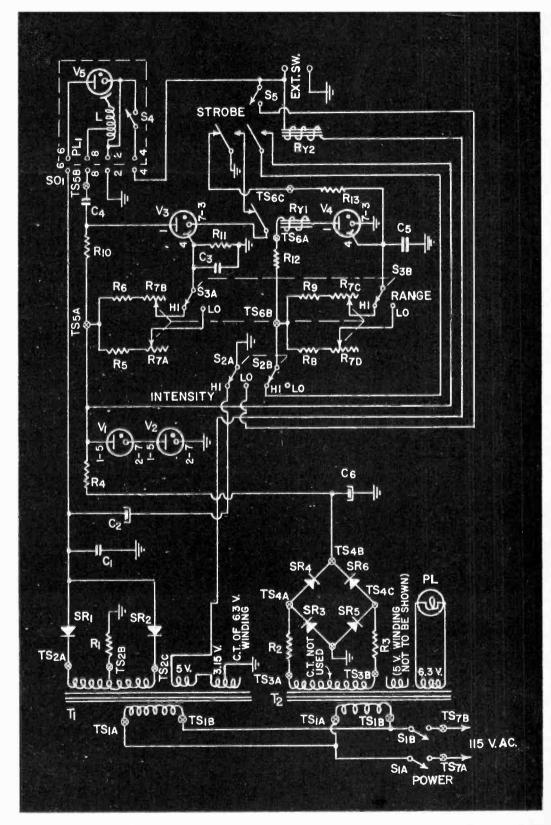
A brilliant flashing light permits taking Multiple interval stroboscopic pictures By W. F. GEPHART

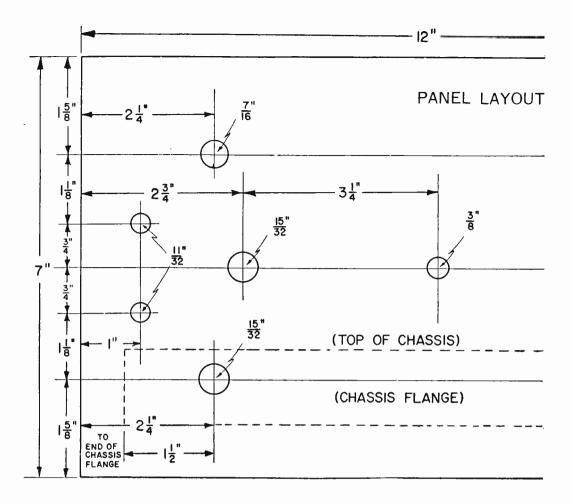
NE objection to many stroboscopes is that the light is somewhat dim. This unit uses a photographic strobotron tube, which gives a brilliant, blue-white light. On the "high intensity" setting, the light is bright enough to take stroboscopic pictures. On "high intensity," flashing duration is limited to short periods (approximately 20 flashes) by a built-in timer, to prevent overloading the tube.

The circuit includes two power supplies. One $(T_1 \text{ with } SR_1 \text{ and } SR_2)$ supplies the high voltage for the flash tube, and the other $(T_2,$ with SR_3 thru SR_6) supplies regulated voltage for the trigger tube (V_3) that determines the flash rate, and for the timer (V_4) . The high voltage will vary somewhat, depending on flash rate, but the low voltage is constant, due to the regulator tubes $(V_1 \text{ and } V_2)$.

A constant low voltage supply is required to get consistent flashing rates and time intervals. Both functions depend on charging a capacitor through a resistance, and if the charging voltage varied, accuracy of flashing rate and time intervals would be unsatisfactory.

The flashing rate is covered on two ranges to make adjustment less critical. The low range, covering 0-30 flashes per second $(0-1800 \ rpm$ in rotary motion) involves





charging C_3 through R_5 and R_{7a} . The high range, 30-90 flashes/second, (or 1800-5400 rpm) charges C_3 through R_6 and R_{7b} . In both cases, when C_3 reaches a certain charge, trigger tube V_3 fires (flashing strobe tube V_5), discharging C_3 , which immediately starts recharging.

On high intensity (when C_2 is switched in by S_{2a}), operation time must be limited, which is done by the timing circuit (V₄ and Ry₁). Here, C₅ is charged through R₈ & R_{7d} (or R₉ and R_{7c}) until V₄ fires, which closes Ry₁. This removes ground from the cathode of V₃, which stops firing, and stops the tube flashing.

Since R_7 is a quadruple potentiometer, the timer is automatically set to the proper interval (.22 to 15 seconds) to permit about 20 flashes at the flashing rate set by R_7 .

The unit may be fired by pressing S_4 (on the flash head) or by an external switch connected to panel terminals. On low intensity,

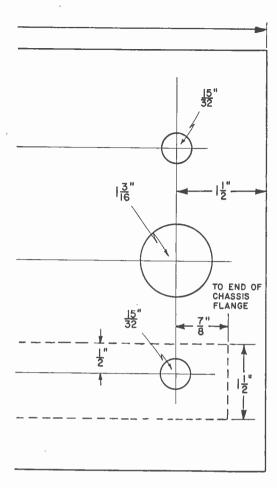
it may also be operated continuously by S_5 (strobe) on the panel. When operated on high intensity (by S_4 or External Switch), the button should be held down until the tube stops firing, so the timing cycle will be completed.

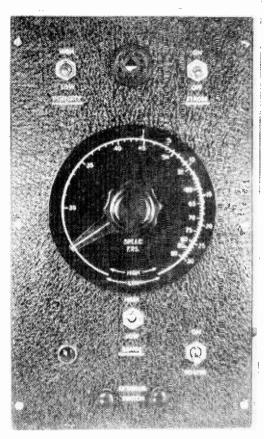
Pressing any of these switches closes Ry_2 , which grounds the cathode of V_3 and starts the flashing, and (on high intensity) supplies B-plus to the timer, starting the timing cycle. When Ry_2 opens, one set of contacts discharges C_5 , so all timing cycles will be consistent.

The flash head for the unit shown was made with an old photoflash reflector and aluminum box. Special reflectors, with a back cover for the trigger coil, can be purchased if desired (See Parts List). The chassis was made from a piece of aluminum with a flange on one side, and is fastened to the panel by switches S_1 (power) and S_3 (strobe). The switch nuts hold it.

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www.americanradiohistory.com





FRONT PANEL of control unit is businesslike, efficient.

MATERIALS LIST-HIGH INTENSITY STROBOSCOPE

Desig.	Size and Description
R1 R2, R3 R4	25-ohm, 20-w (Ohmite) #1MM720 27-ohm ½-w (IRC) #1MM000 7500-ohm 5-w (Ohmite) #1MM732
R5	.68-meg. 1/2-w (IRC) #1MM000
R6 R7	.27-meg. 1/2-w (IRC) #1MM000
n /	2-meg5 meg25 meg-5 meg, quadruple po- tentiometer (CTS-IRC) #28M899 type 45 D205-MD504-MD254-MD505-16
R8	$.33 \text{-meg}$, $\frac{1}{2} \text{-w}$ (IRC) #1MM000
R9	.33-meg. 1/2-w (IRC) #1MM000 .15-meg. 1/2-w (IRC) #1MM000 22K 1/2-w (IRC) #1MM000
R10 R11	22K 1/2-w (IRC) #1M000 3.3 meg. 5% 1/2-w (IRC) #1MM005
R12	10K 1-w (IRC) #1MM020
R13	5.6-ohm 1-w (IRC) #1MM020
C1	1 mfd. 600 v (Sprague 6TM-M1) #16L261
C2	90 mfd. 500-v (Sprague TVL-1960) #70L1905
C3	.05 mfd. 200-v (Sprague 2TM-S50) #15L121
C4	-25 mfd, 200-v (Sprague 2TM-P25) #15L147
C5	2 mfd. 200-v (Sprague 155P) #10L219
SR1, SR2	600 PIV silicon rect. (Sarkes-Tarzian 1N2484/F6)
SR3, SR4, SR5, SR6 T1	400 PIV silicon rect. (Sarkes-Tarzian 2F4) 700 VCT, 120 mt. power trans. (Knight)
-	#62G044
T2	250 VCT, 25 ma. power trans. (Knight) #62G008
L	Amglo MT-555 trigger coil (see notes)
PL S1	6 volt pilot light (No. 40) #52E305 SPDT toggle (Carling 112-73) #34B177
S2, S3	DPDT toggle (Carling 316-73) #34B177

NIENSIIT SIKU	BUSCUPE			
Desig.	Size and Description			
S4	SPST push butten (Ar⊬ow-Hart B0E11-E) #34B843			
S5 Ryl	SPST toggle +Carling 11D-73) #34B175 SPDT relay, 5000-ofm mil (P & B LM-5) #75P674			
Ry2	DPDT relay, 5 VAC coil (Guardian 200-6A coil) #75P709, with (Guardian 200-M2 contacts) #75P719			
V1	OB2 tube			
V2	OC2 tube			
V3, V4	V4 5823 tube			
V5	Amglo HD-2 strobe tube (See Notes below)			
S01	octal socket (Cinch-Jones 8R1) #22H584			
PL1	octal plug (Cinch-Jones 87PB) #40H846			
	Parts Not Shown on Schematic			
4	min. 7-pin sockets (Cinch-Jones 7EB) #22H567			
2	binding posts (G-C 35-265R) #41H359			
2 1 1 1	knob (Davis 4103-W) #55H087			
1	p.l. holder (Dialco E1D) #52E475			
ī	7" x 12" x 6" steel sabinet (Bud CC-1096)			
	#80PX808			
1	21/4" x 21/4" x 5" Minibox (Bud CU-2104A) #80P346			
NOTES				
All items followe	d by numbers (or without numbers) can be ordered.			

All items followed by numbers (or without numbers) can be ordered from Allied Radio, 100 N. Western Are, Dhicayo 80, UL, using these catalogue numbers and/or manufacturer's number when cata-logue number not shown. Amglo parts should be ordered from Amgla C+rp., 4325-33 N. Ravenswood Ave., Chicayo 13, UL A reflet br +AR-365) for the tube, and back cover (R-65C) for the coil, are also available from this firm. [continued on page 111] [continued on page 111]

"Seeing" **Ohm's Law**

BY ROBERT E. KELLAND

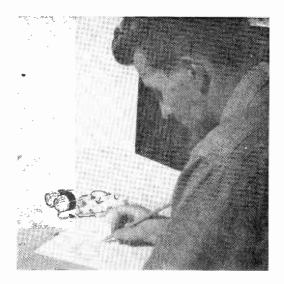
HE current flowing in any electrical circuit is directly proportional to the force or voltage and inversely proportional to the resistance." That, in a nutshell is Ohm's Law. The beginner who is trying to grasp a good understanding of this basic (and most important) law by means of various explanations and formulas often runs into trouble; not so much with the formulas, as it is basic algebra, but truly understanding the practical end using text books alone often proves difficult.

The simple experiments described in this article will not only cost little money to setup, but will demonstrate by actually "seeing" what happens when a voltage is applied across various series and parallel and combinations of series-parallel resistive circuits. There is no requirement for measuring meters or other instruments for the experiments.

Instead of carbon or wirewound resistors

EXPERIMENT # 1. SERIES R_3 Rı

WITH THE LAMPS connected in series, the resistance is three times of single bulb. Bulbs burn at 1/3 brightness.



we use three inexpensive flashlight bulbs as "resistors" and the source of voltage is two standard size D flashlight batteries connected in series to give us the necessary voltage for the experiemnts.

Cut your experiment board from a piece of wood to measure ³/₄ x 4 x 7-in. Carefully solder two short lengths (about 1¹/₂-in.) of solid hookup wire to each of the three bulbs, one wire to the center contact and the other to the outer or ground contact. Now solder a piece of wire from the positive end of one battery to the negative end of the other battery, and also a short length of wire to each of the two remaining ends. When soldering the bulbs and the batteries, you should first "shine" the soldering areas with fine emery cloth or fine sandpaper to make the job easier and also make better solder joints.

Mount the six Fahnestock clips as shown with ¹/₂-in. No. 4 RH wood screws, the wires previously soldered to the bulbs are tied between the clips and the wood base. The batteries may now be hooked in position, the stiffness of the wire will hold them in place for normal table top useage, however, you could improvise a battery clamp from a thin strip of metal for a more permanent hold.

Before starting our practical experiments, let us visualize what takes place in the simple series resistive circuit, such as in a common flashlight. Here we have a bulb (resistor) connected across (in series with) a battery, however, three important things are involved when the flashlight is turned on, these are, Voltage, Resistance and Current. Putting aside formula and definition, we already know the battery is the voltage or force, the bulb is the resistor and the relative brightness of the bulb will serve to indicate the amount of current flowing. In a flashlight (Continued on page 117)

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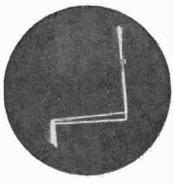
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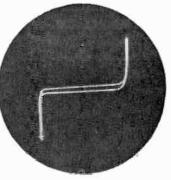
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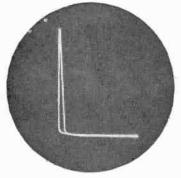




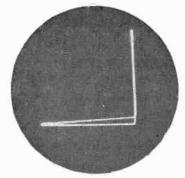


Zener with a high voltage effect.

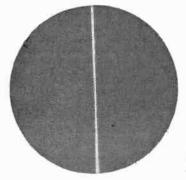
By FRED BLECHMAN KOUGT



Connect it backwards, you see this.

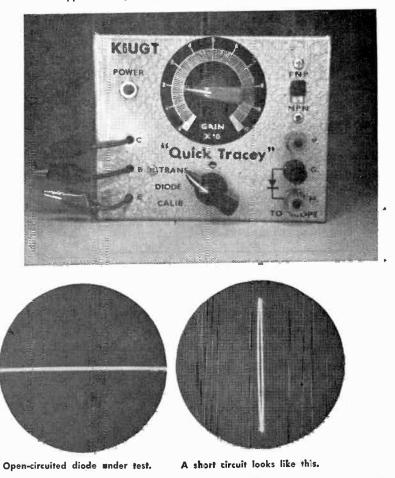


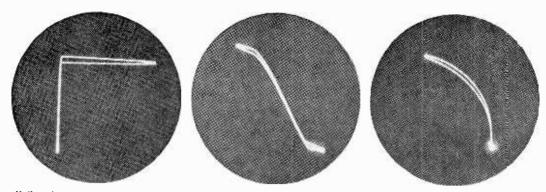
Finally, a good diode is tested.



Here's what leakage will look like.

FRONT PANEL of Quick Tracey is near, efficient. You can complete the appearance by the judicious use of press-on or decal letters.





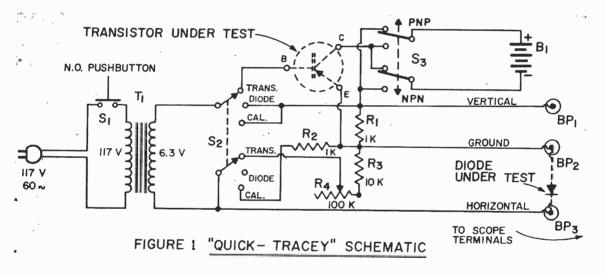
Unijunction transistor under test.

Selenium rectifier looks like this.

Here's a non linear PNP transistor.

Test semiconductors with your scope and ...

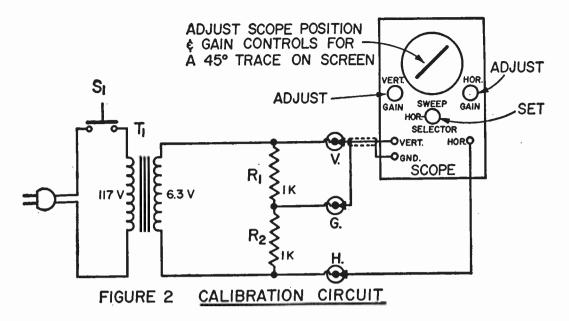
"Quick Tracey"



N THE "lineup" were Danny Diode, Zachary Zener, Sammy Selenium, "Silly" Con Rectifier, Tommy Transistor, Uriah Unijunction and Phineas Photoconductor. The problem: which one was the bad guy? Clearly a case for that surreptitious-semiconductor sleuth, Quick Tracey....

Using your oscilloscope and Quick Tracey, it's a simple, quick job to wade through bargain semiconductors and sort out the bad ones by interpreting a trace on the scope screen. For transistors, approximate gain and linearity, as well as PNP or NPN determination, is part of Quick Tracey's regular report. When testing diodes, shorts or opens show up like the proverbial sore thumb; so does reverse polarity. On low-voltage Zeners, not only will you be able to tell if they are good or bad, but you'll also be able to estimate their breakdown voltage. Even the oddball semiconductors, such as unijunction transistors and silicon-controlled-rectifiers, are cases easily handled by Quick Tracey. Costing just over five dollars to build from all new parts, Quick Tracey even has its own built-in calibration circuit.

Modus Operandi: Figure 1 shows the complete Quick Tracey. Since this actually



contains three circuits (calibrate, diode test and transistor test) each circuit is shown separately in Figs. 2, 3, and 4 to simplify the explanation of circuit operation. Although Quick Tracey can be used without any understanding of the circuit theory, you'll find other uses for the unit if you are familiar with its modus operandi (that's Latin for "how da' t'ing woiks").

Figure 2 shows the power and calibration circuit. When pushbutton switch S1 is depressed, equal voltages appear across R1 and R2 (since they have the same resistance value), thus giving equal deflection voltages across the scope vertical and horizontal inputs. (The scope sweep selector must be set to horizontal input or external sweep). By proper adjustment of the scope vertical and horizontal gain controls, you will get a sloping 45 degree line on the screen. This, in effect, sets the scope controls for equal gain on the vertical and horizontal channels.

Figure 3 shows the diode test circuit. Think of the diode under test as a switch; when it's conducting (forward biased) it's like a closed switch, and when it's reverse biased, it's like an open switch. Now, when we apply 6.3 volts ac, we are alternately opening and closing this switch (the positive half-cycle forward biases the diode, the negative half-cycle reverse biases the diode). When the diode is conducting, it's the same as if we had shorted the horizontal scope terminal to the ground terminal, and the full voltage appears across R1. The scope shows only a vertical line under this condition. However, on the other hand, when the diode is *not* conducting, there is no current flowing through R1, therefore no vertical deflection, but full horizontal deflection. (The scope, remember, draws only infinitesimal current at 60 cycles, 6.3 volts). When the recurrent half-cycles are combined in the scope trace, the pattern is half vertical and half horizontal for a perfect diode. The poorer the diode, the less perfect the pattern.

When testing a low-voltage Zener diode, the horizontal leg will break down at some distance out from the junction, if the Zener is rated at less than ten volts. Higher voltage Zeners can only be checked on Quick Tracey for diode action, but not Zener effect.

Poor diode back resistance shows up on the trace as a downward slanting of the horizontal leg; with poor forward conduction, the vertical leg slants to the right. Selenium rectifiers, for example, usually show a relatively high forward resistance, high voltage drop (short vertical leg) and poor recovery characteristics (rounded junction of horizontal and vertical trace). All testing done with the Quick Tracey is done at a very low power level; there is no danger in harming the unit under test. Even the touchy 1N23 microwave crystal diodes are undisturbed by Quick Tracey's investigation, although they do yield a peculiar trace (see Figure 3 microwave diode pattern). The 1N23 is a low-voltage low-current diode, and the lower curved leg shows breakdown (though controlled, therefore not damaging) at the test voltage.

Later on we'll show you how to use the diode test circuit for other tests.

Figure 3 shows the transistor test circuit, by far the most difficult to understand. Tighten your seat belts—here we go! With a PNP transistor under test the emitter has positive battery voltage applied through R1, and the collector is at negative battery po-

tential. However, unless there is current flow in the base-emitter circuit, only a very small leakage current flows in the collector-emitter circuit; that's what transistors are all about. Notice that the base is directly connected to one side of the 6.3 volt ac supply, and the emitter is connected to the other side through R3 and R4. Therefore, whenever the alternate half-cycles make the emitter positive with respect to the base, emitter-base current flows through R3 and R4 (R3 is used for currentlimiting when R4 is set at zero). This current flow is measured as a voltage across R3 and R4 at the horizontal scope terminals, and is a measure of the transistor input current. Since we are applying ac this voltage is constantly varying. Now, since the collector-emitter circuit is forward biased by B1, when base current flows it follows that collector current will flow simultaneously through R1. This is the *output* current, which is read as a voltage at the vertical scope terminals. This is exactly synchronous (in step) with the input current, which controls the output current.

What does all this mean? Well, remember we calibrated the scope for equal vertical and horizontal deflection back in Fig. 2, and now we use this fact to set our scope trace slope to 45 degrees, using the R4 gain control. When the slope is 45 degrees, it means that the "in-put" and "output" voltages are equal. However, the voltages are dependent on the current flow through resistors R1, R3 and R4, Remember Ohm's Law? If R4 is set at zero to get a 45 degree slope, then there is ten times the current flowing through 1K output resistor R1 than flowing through 10K input resistor R3 to make their voltage drops equal. Plainly and simply, the output current is ten times the input current, so the transistor has a "beta" (current gain) of 10. As the value of R4 is increased to set the trace slope to 45 degrees the ratio of output current to input current goes up-in other words, the transistor gain is higher. Using a numbered dialplate under the R4 control knob, you can read the approximate gain directly.

For NPN transistors, the theory of operation is identical, except that all polarities are reversed. This results in a reversed (inverted) scope pattern as compared with a PNP trace. This allows easy identification of an unknown, unmarked transistor, such as are currently selling for 15 for a dollar.

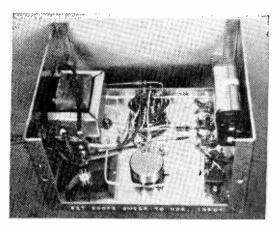
Construction: None of the wiring is critical, so the builder can decide for himself which features of the unit he wants to incorporate. Certainly, placing the gain control, polarity switch and function switch on the front panel are a must. However, the power switch could be a toggle or slide switch instead of the push-button specified in the parts list; the author preferred a pushbutton to insure that the unit was off except when actually viewing a trace.

Various transistor sockets could be wired in parallel instead of the three alligator clip leads. A screw-type terminal strip could replace the five-way binding posts. Any 6.3 volt transformer will do; the author used the least expensive one available. The same applies to function switch S2. The battery, a standard transistor radio nine volt type, is held to the case with a home-made bracket made from a 1½ x 2-in. scrap of aluminum. The battery connector was salvaged from a dead battery of the same type. A terminal strip was used to anchor the alligator clip leads, and another terminal strip to anchor the power cord and transformer input leads. With the push-to-test power switch, a pilot light is not necessary. Dry transfer labels or decals complete the job.

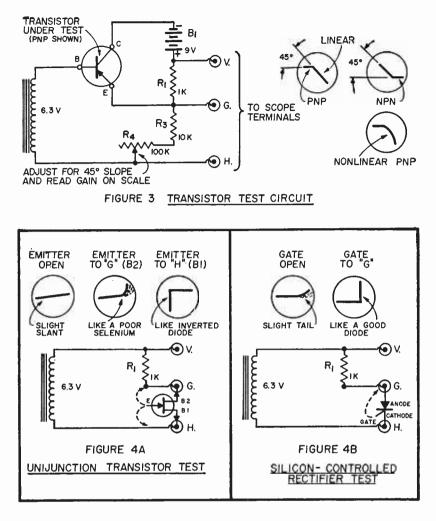
Sleuthing With Quick Tracey

Calibration: Regardless of whether you're investigating diodes, transistors or whatever. you must first calibrate the unit. Plug the line cord into a 117v 60 cycle source and connect the scope as shown in Fig. 2. Be sure to set the scope sweep selector to the horizontal input. Put S2 in the Calibrate position and depress power switch S1. A slanted line will appear on the scope screen; adjust the vertical and horizontal gain and position controls until this line is in the center of the screen, at a 45 degree angle, and filling about two-thirds of the screen diameter. You are now calibrated for equal vertical and horizontal voltages at the Quick Tracey output terminals.

Diodes: To test a diode or rectifier connect it between terminals G and H, with the cathode connected to H. (Alternately, you can connect to E instead of G, since they are wired together inside the unit.) Put S2 in the Diode position. The trace tells the story when S1 is depressed. Connecting the diode back-



ALL COMPONENTS MOUNT on inside of cover, with wires dressed neatly to permit easy servicing when required.



wards will give you an inverted trace, which allows you to determine the cathode of unmarked diodes. Zener breakdown voltage can be estimated as a proportion of 10 volts by measuring the distance of the breakdown point from the junction, as compared to a regular diode. Shorted or open diodes are instantly spotted by the straight vertical or horizontal line. Selenium rectifiers usually have a rounded junction and a slanted, short vertical leg.

Transistors: Connect the collector, base and emitter transistor leads to the C, B and E of Quick Tracey. Put the polarity switch S3 in the PNP position, unless you know for sure that you are testing an NPN transistor. Put function switch S2 in the Transistor position. When S1 is depressed you should get a sloping pattern with a flat top section. The gain control (R4) will change the slope. Don't touch the scope controls, which you calibrated for equal gain previously; If you get no significant pattern, or the gain control has no effect, you may have an NPN transistor under test, so flick S3 to the NPN position. Still nothing? Throw the transistor away—it's no good.

On a good transistor, you will get a trace like the patterns shown in Fig. 3. Using the gain control, set the slope to about 45 degrees, and read off the approximate gain on the R4 scale. Even with the gain control set to minimum, you still have a gain of 10, because of the series current-limiting resistor R3.

Of course, all this assumes that the transistor is properly connected. Transistor basing is pretty well standardized these days, and there are many sources of basing diagrams. If you are not sure, try various combinations; the unit is very forgiving of goofs and the author has yet to hurt a transistor or diode by hooking it up wrong. You will get some mighty weird patterns with some mis-connections, and that should tip you off.

Minor variations in the trace can be significant. For instance, if the sloped line is perfectly straight, the transistor has linear response (at least in the low-current range). A curved sloping line is characteristic of RF transistors, which need not be linear in most applications. A short tail at the bottom of the PNP slope (or top of the NPN slope) is leakage, which is probably not going to bother you unless you have a critical application. No tail is preferable.

Incidentally, on all testing, don't be upset if the traces show dual lines. This is due to sine wave distortion by the Quick Tracey transformer during alternate half-waves of conduction, and is not significant.

Defective transistors will either exhibit no trace at all, or one which is obviously not right. Finding defective transistors in bargain packs is a cinch. You can sort them out by approximate gain, linearity and type (PNP or NPN) and use colored dots of paint for coding.

Odd Jobs: Using the principles outlined in the circuit description, the astute reader will realize that the tester can be used for other tasks, some of which follow:

(1) Relative resistance measurement: Set for diode test. Connect unknown as for diode, except there is no polarity consideration. A horizontal trace means a high resistance; as resistance decreases, the trace slants more and more vertical. Vertical, as you recall, means a short circuit. This is a good way to test potentiometers for open spots or noise (noise will make the trace fuzzy as you rotate the shaft). Obviously, this also is a means of performing a continuity test.

(2) Capacitance testing: You can not only tell if the capacitor is good (at low voltage), but you can estimate the value of capacitance for all units from .05 microfarads to several hundred microfarads, including those difficult to test low voltage transistor electrolytics! Even more surprising, you don't have to worry about polarity when testing the electrolytics. Just use Quick Tracey as for diodes. The pattern will be a horizontal long and thin ellipse for .05mf, growing to a circle at about 2mf, and becoming a vertical ellipse beyond that value, slowly closing to a vertical line at several hundred microfarads (which is a short circuit to 60 cycles). You can make a calibration chart from known values, plctting value against ellipse proportions.

(3) Testing Photoconductors: These devices have a very high dark resistance, and a relatively low resistance when exposed to light. Connect the leads of a photoconductor as described for diode testing, except there is no polarity to worry about. Cover the face of the cell with your hand. When S1 is depressed you should get an almost horizontal line (depending on the normal dark resistance of the type of cell you are using). When you remove your hand and expose the cell to light, the line will tilt toward vertical if the cell is good. The more light, the more vertical. The angle could be plotted against light intensity for use as a light measurement device. Some types of cells show relatively little change; others will go from straight horizontal to straight vertical!

(4) Unijunction transistor testing: Connect Base 2 to the G terminal Base 1 to the H terminal. Leave the emitter unconnected. Set S2 to "Diode" and depress S1. You should get a slightly slanted horizontal line, since the unijunction has a high resistance with an open emitter. Now touch the emitter to G and then to H and you should get the traces shown in Fig. 4A.

(5) Silicon-controlled-rectifier (SCR) testing: Connect the anode and cathode as shown in Fig. 4B. Leave the gate unconnected. Set Tracey for diode test. When S1 is depressed, you'll get a horizontal line, perhaps with a curved tail. When the gate is connected to G (use a clip lead) you'll get a trace that lcoks like a normal diode. The vertical leg shows that the SCR is properly conducting during the half-cycle when the anode is positive.

		-			
Desig.	Size and Description		Desig.	Size and Description	
T1	6.3v filament transformer (Olson T-76 or Lafayette TR-11)	89¢	R4	100K linear potentiometer (Lafayette VC- 442, Mallory U-41)	91c
\$1	SPST normally open pushbutton switch (Lafayette SW-70)	20c	Dialplate	Mallory #380 (Lafayette 3SW-315)	12c
S2	2 pole 3 position miniature rotary switch (Lafayette SW-30)	39c	ac line cord pointer knob	(Lafayette EL-13) (Lafayette KN-42)	19c 12c
S3	DPDT slide switch (Lafayette SW-17)	22¢	alligator clips	3 Mueller Mini-gator (Lafayette CN250)	6c ea.
Cabinet	3 x 4 x 5" Minibox (Lafayette MC-380 Premier PMC-1005)	\$1.20	Wire, solder, sc	Dry Transfer lettering (Lafayette P-478) rews, nuts. 1½x2″ aluminum sheet, (battery i	4.95 mount-
BPI, BP2, BP	P3 5-way binding posts (Lafayette MS-566)	10/79c	ing bracket), terminal strips.		
B1	9v battery, Burgess 206 or equivalent	16c		1	
R1, R2	1K 1/2W composition resistor (Lafayette RS-10)	7c ea.	Olson Electronic		а.
R3	10K ½W composition resistor (Lafayette RS-10)	7¢	260 S. Forge St Akron 8, Ohio		ι, orβ.

MATERIALS LIST-QUICK-TRACY

GIVE YOUR SYSTEM A PROFESSIONAL LOOK

(Continued from page 66)

vinegar it should be absolutely clean. To make sure, perform a clean test. Dip the panel in a tray of clean water for a few seconds, take it out, and examine it closely. A film of water should cover the panel evenly over its entire surface without any dry spots or ripples. This is the clue that tells you the panel is perfectly clean.

If there are dry spots or ripples on the panel, it is not clean and should be put back into the etch bath. Keep in mind that a panel must be absolutely clean or you will have trouble during the painting step, so if you cannot get a clean panel by etching it a couple of times, you will have to mechanically clean it again—and then etch.

Masking and Spraying: Before spraying the primer and finish coats, it is important to insure that all electrical components which will come in contact with the panel and have to be grounded are grounded properly. Any paint or primer between a component and the panel prevents proper grounding and could cause poor response by your system.

Many components, for example, are sensitive to the touch. If they are not properly grounded, they could pick up a 60 cycle hum from your hand which would be audible in the audio output.

To prevent this, cut out masks for each of the holes with ordinary plumbing washers. Place the washer on the sticky side of a piece of masking tape, making sure the washer is larger than the diameter of the hole in the panel. For example, if the hole has a diameter of $\frac{1}{2}$ -in., use a washer with an outer diameter of at least $\frac{3}{4}$ -in.

Now cut around the washer with a razor blade. Strip off the tape from the washer and put the round mask right over the hole in the panel. Make sure all masks go on the rear of the panel. Masks prevent paint from covering the entire area around the hole. After paint is dry, the mask is stripped off, leaving an unpainted area that will serve as a ground for the component.

Lay the panel horizontally, with its rear facing up, and prime the panel with a good grade of primer. We used Sapolin Anti-Corrosive Metal Primer No. 122, which comes in a spray can. Paint the edges and the rear surface first, and let them dry.

Quick-drying primer usually dries in about two hours. While the drying process is going on, cover the panel with a cardboard box to prevent dust from settling on its surface.

When the rear of the panel is dry, turn the panel over and carefully spray the front. An even primer coat is essential for a good finish coat, so do the priming operation carefully. Be particularly careful that no paint ripples are left on the panel. Ripples will show through the finish coat, marring the attractiveness of the finished product.

When the primer is dry, spray on the finish coat. This is a critical step and must be done slowly and carefully. You can make the panel any color you desire. We made ours gold. As for paint, any spray type such as Testor's Spray Pla Enamel or Krylon Spray Enamel will do.

Spray the edges and the rear of the panel before doing the front. It is much easier to get an even coat if you spray in from all four corners and then spray the center of the panel. Make each coat a light one since a better looking job is obtained with two or three light coatings instead of one heavy coat.

Let the paint dry at least overnight. While it is drying, cover the panel with a cardboard box to prevent dust from settling on it. When the rear surface is dry, flip the panel and spray paint its front.

Lettering: Applying legends is easily done with transfer letters. You can buy a preprinted set of electronic transfer titles which contain any word you would need to use on any electrical panel. These come in an assortment of sizes and are made by Arthur Brown and Brothers, Inc., 2 West 46th Street, New York 36, New York. You can buy them in an electronic parts supply store or order them directly from the company.

The first step in applying the legends is to tape the second overlay—the one containing cut-out boxes for lettering—over the panel. This mask prevents you from marring the painted panel during the lettering operation.

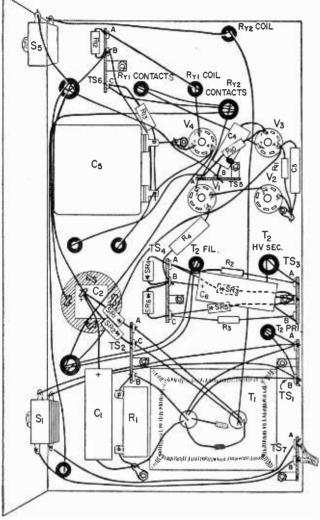
Lay the suitable word or letter in the correct cut-out and burnish the word or letter off on to the panel with a smooth round instrument, such as the edge of a ball-point pen with the pen retracted. If you make a mistake in your lettering, the erroneous legend can be removed by covering it with masking tape and then pulling the tape off.

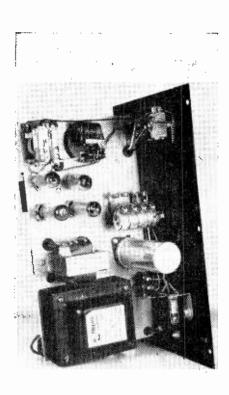
After the word or letter is transferred to the panel, take the backing sheet of the instant lettering and lay it over the legend. Then, apply pressure to the legend through the backing sheet. This sets the legend more firmly to the panel.

If you like, you can keep the mask in place after all the legends are applied and spray each one gently with varnish to harden the lettering to the panel.

Now all you have to do is mount the proper equipment in the appropriate cut-outs of the panel, and wire the equipment into place. Take care not to handle the panel while wiring, as the paint may mar easily. It might even be a good idea to keep the mask in place.

When properly wired, mount the panel on your cabinet, and test it. If everything works right, sit back and enjoy it! Stroboscope (from page 99)



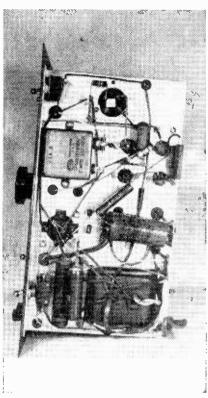


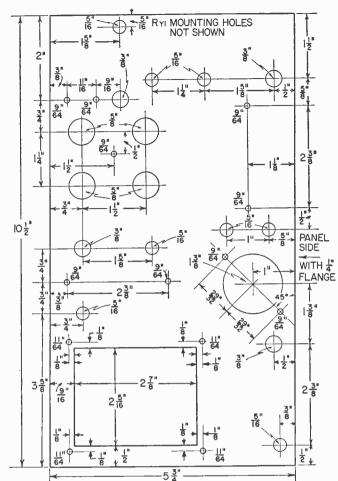
CHASSIS TOP gives easy access •o tubes, should replacement be required. Also note parts in this photograph, try to duplicate.

The power supplies should be wired first, with the larger one furnishing about 530 volts dc, with the 1 mfd. capacitor in the circuit and no load (C_2 should not be wired in until final testing). The smaller supply should furnish 183 volts dc at Pins 1 and 5 of V₁.

To check the timing circuit without risk of damaging the strobe tube, remove the lead going to the side terminal of the trigger coil from the strobe tube. Then set R_7 to midpoint with S_3 on low range, and S_2 on high intensity. Press S_4 and watch both V_3 and V_4 . V_3 should fire (indicated by a blue glow in the tube) as soon as S_4 is pressed. After several seconds, V_4 should fire and V_3 stop firing. On the low flashing rate range, this time interval should vary from several seconds to less than a second. On the high flashing rate range, it should be less than a second for all settings of R_7 . Leave the trigger coil connection open for calibration. Draw a circle on a piece of paper, with radius slightly larger than the length of the pointer on the R_7 knob, and paste on the panel around R_7 control. Using an audio oscillator and oscilloscope, connect the unit as shown.

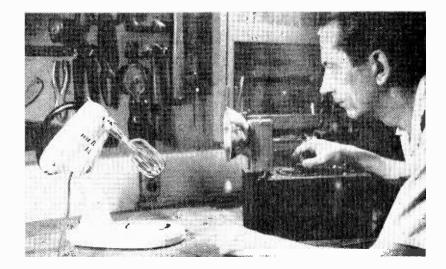
Start calibration with R_7 fully counterclockwise and S_3 on low range, with the oscillator at 20 cps. Gradually turn R_7 until a dual pattern is seen on the 'scope, indicating that the unit is firing at half the oscillator frequency, or 10 times per second. Mark this point on the *outside* of the circle, and turn the oscillator to 22 cps. Again adjust R_7 for a dual pattern, and mark that point for 11 flashes per second. Continue using a cual pattern until you have calibrated 20 flashes per second; then turn the oscillator back to 21 cps, and finish calibration, using a single



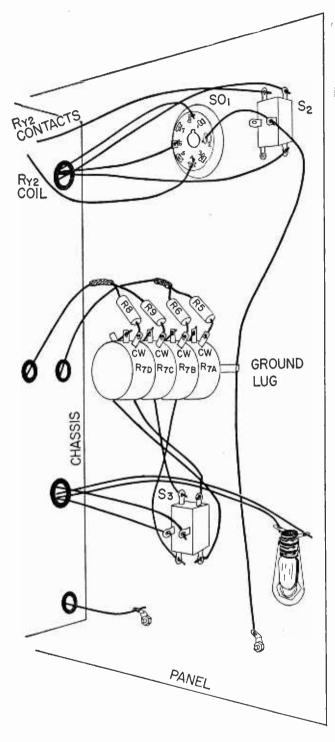


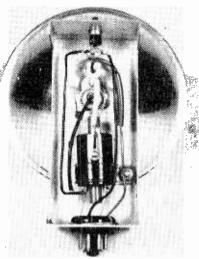
UNDERNEATH THE CHASSIS care is taken to wire in point-to-point fashion. While wiring is not critical, neatness always counts in use.

CHASSIS LAYOUT (FROM TOP SIDE) (SEE PANEL LAYOUT FOR FLANGE DETAIL)

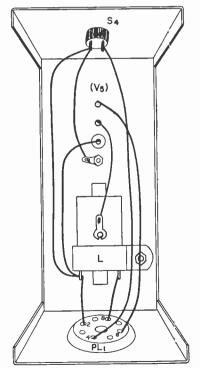


YOU CAN STOP any rotating high speed abject with this hot strobe light and inspect it as though it were standing still at high speeds.





STROBE HOUSING with back cover removed shows simplicity of construction. Plug-in facility can be used with an extension cable if extra length is needed.



FLASH HEAD WIRING

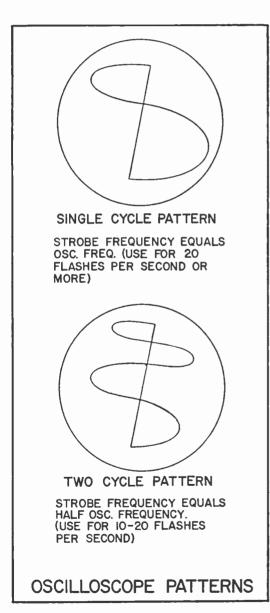
RADIO-TV EXPERIMENTER

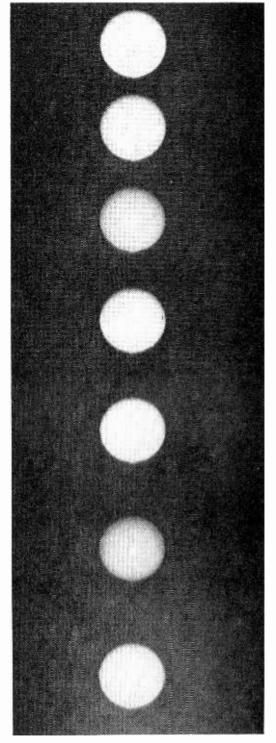
pattern on the 'scope.

Rates of less than 10 flashes per second can be calibrated, with care, by using three and four cycle patterns on the 'scope. The final dial may be made by carefully transcribing the marks to a thin card to be pasted on the panel, or by using decals.

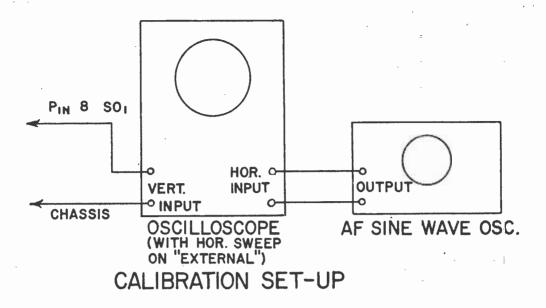
Relay Ry₂ coil has over eight volts on it at low flashing rates, but the transformer voltage drops at higher rates. Due to possible overload, however, the unit should not be run continuously for long periods. In using the unit for photography, a mod-

erately high speed film, such as ASA 500,





GOLF BALL, dropped in front of the camera while the strobe was in action. Notice that you can even see the puckered golf ball surface in same of the shots. Try several experiments like this for new camera fun.



should be used. This will allow lens openings such as f:4.5. It is best to shoot through a doorway into a darkened room, so that the background (which gets light from every flash) will not obscure the moving object being photographed (which, in each position, gets light from only one flash). Several exposures of each subject should be taken. Sometimes, when on high intensity and high flash rate, one or two flashes in the sequence are weaker than others, due to incomplete tube de-ionization.

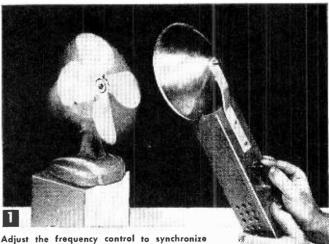
Photographs of linear or rotary motion can be made. The camera should be set up in a dark room, with the shutter on bulb. It can be opened just before the action starts, the unit fired when it starts, and the shutter closed after the unit stops firing.

Or Build This One for Only \$21

If you don't feel the need for the high intensity model just described, here's a small one

T HERE are many applications that just don't require a high intensity strobe light. Among these are the checking of phono or tape speeds, inspecting any moving parts under motion stresses, and speed calibration of rotating devices.

Before attempting to construct this unit, study the previous pages that deal with the high intensity strobe. When



Adjust the frequency control to synchronize the strobe lamp with the fan speed until the blades appear to stop.

you understand this, you will be better able to follow what is involved in the smaller unit. CONSTRUCTION: Following the schematic diagram, lay out all major parts on a suitable chassis frame. You can employ a similar one to that shown in the photos, but parts placement is not at all critical, so feel free to choose any size or shape box that suits you, and you can let your imagination run riot during layout!

Follow the schematic diagram during construction, but where two wires terminate at the same point, use a terminal strip to prevent flopping components from short-circuiting.

Make sure that all connections are mechanically sound prior to soldering, and allow sufficient heat from the soldering tool to flow the solder. Cold solder joints can easily be reflected in changing component values, and the results of this will be either a malfunction, or a failure to function entirely.

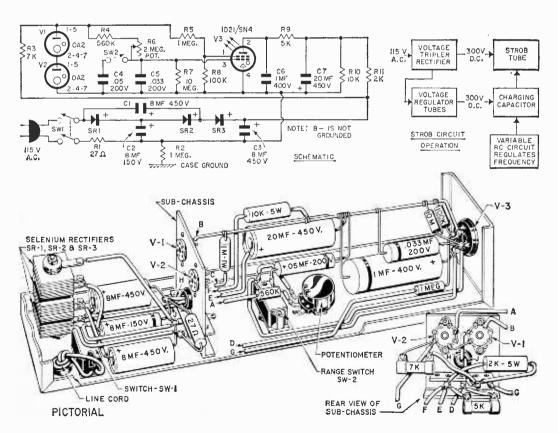
This serviceable instrument will reward you with many years of useful life, provided that you spend some time and care during the construction. Take it slow, work carefully, and reap the benefits.

МАТ	ERIALS LIST-STROBOSCOPE
Desg.	
	Description
Rl	27-ohm 1-w 10% carbon resistor
R2	1-megohim 1-w 10% carbon resistor
R3	7000-ohm 5-w wirewound resistor
R4	560K 1/2-w 10% carbon resistor
R5	1 M 1⁄2-w 10% carbon resistor
R6	2M potentiometer (linear taper)
R7	10M 1/2-w 10% carbon resistor
R8	100K 1/2-w 10% carbon resistor
R9	5K 5-w wirewound 5% resistor
R10	10K 5-w wirewound 5% resistor
R11	2K 5-w wirewound 5% resistor
C1	8 mfd 450 v electrolytic capacitor
C2	8 mfd 150 v electrolytic capacitor
C3	8 mfd 450 v electrolytic capacitor
C4	.05 mfd 200 v electrolytic capacitor
C5	.033 mfd 200 v paper capacitor
C6	1 mfd. 400 v paper (Sprague 4TM-M1)
C7	20 mfd 450 v (III. Cond, IHTE 2045)
SW1	DPST toggle switch
SW2	SPST toggle switch (for range switch)
SR1, SR2, SR3	75 ma 130 RMS selenium rectifiers (IT&T
	Federal #1003A)
V1, V2	RCA 0A2 150 voltage regulator tubes
V3	Sylvania 1D21/SN4 Strobotron tube
	Sylvalla 1021/304 Strugotron tube

Misc. Bud Minibox C-2114 (12 x 2l/2 x 2l/4'' aluminum box and cover)

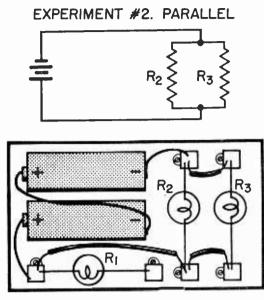
2 ea. 7 pin miniature sockets, 1 4-prong socket, 1 knob, terminal strips, line cord, reflector, decals, misc. hardware. Walsco Stroboscopic Disc ± 949

Note: See text and drawing for auxiliary trigger switch parts.



Seeing Ohm's Law

(Continued from page 100)



WITH BULBS IN PARALLEL, each lamp receives the same amount of voltage, and therefore they burn as brightly as each individual lamp would, if connected to valtage source by itself. In this experiment, anly two lamps are connected in the circuit. Lamp terminal is tie-point.

the bulb will burn brightly.

If we connected another bulb in series so that the total resistance of the circuit is doubled, Ohm's Law states "the current flowing is inversely proportional to the resistance," in other words, doubling the resistance of the circuit will cut the current in half (inversely proportional). This would be indicated by the brightness of the two bulbs being only half that in the original "flashlight circuit." Because the same amount of current flowing in the series circuit is passing through two equal resistors, both bulbs will give off the same amount of light.

We are now ready to begin. In addition to the bulbs and batteries you have already set-up on the board, you will require several short pieces of wire to hook up the bulbs and batteries in the experiments.

Experiment Number 1: In this experiment all three bulbs (R1, R2, R3) are connected in series, therefore the total resistance is three times that of a single bulb in series. Because the current flowing is only one third that of a single bulb, the bulbs burn with only one third the brightness of a single bulb.

Experiment Number 2: Here bulbs R2 and R3 are connected in parallel. The total current flow is divided between the two bulbs.

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What about the total resistance of the two bulbs? Visualize a bumper to bumper flow of traffic traveling on a single lane highway, suddenly the single lane highway becomes a two lane highway; half the traffic will travel freely on one lane and half freely on the other lane. It is evident that the two lane highway offers a total of only half the "resistance" of the single lane highway. Turning back to our bulbs in parallel, it can be seen from the above that the total resistance of the two bulbs will be half that of a single bulb and because the resistance is cut in half, the current will be doubled (two times as much traffic can flow). But, this current is divided evenly between the two bulbs, therefore they will each burn with the same brightness of a single bulb in series.

Experiment Number 3: This combination of numbers 1 and 2 produces more interesting (and often deceiving) results. Eefore connecting the bulbs, see if you can predetermine the relative light that will be given off by each bulb and explain the reason for it. The answer is up-side-down at the bottom of this page. Bear in mind, all bulbs are equal in resistance.

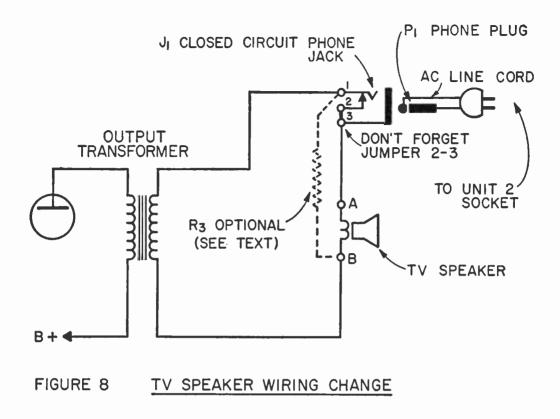
Many other experiments can be set-up and studied following the same idea used in the above experiments. For example, all three lamps may be connected in parallel or you may want to try increasing and decreasing the voltage. In all the experiments we used (for simplicity) three equal resistors, different value resistors will of course give different amounts of current flow and consequently different lamp brightnesses.

Do not leave the batteries connected to the circuits any longer than necessary as their life will be shortened, also if you plan on using more voltage for further study, remember that the lamps used in the experiments are intended to work on 3 volts maximum, but very quick hookups should not harm them.

Answer to Experiment #3 In this series/parallel circuit R2 and R3 are member from Experiment Number 2, the total resistance of R2 and R3 in parallel was only one half the resistance of either one of the bulbs in series. But now we have an additional resistance in series—R1.

MATERIALS	LIST—SEEING	OHM'S	LAW	

Amt.	Req. Size and Description
1	3⁄4x4x7" piece wood.
3	PR2 flashlight bulbs.
2	Size D flashlight batteries.
6	Fahnestock clips.
6	$\frac{1}{2}$ " #4 RH wood screws.
Misc.	electrical tape, hookup wire, solder, etc.



Commie Killer (from page 40)

to close the relay. If the added resistor is too small in value, the relay will lock-in under ambient light conditions; 33K is a good starting value to try.

You may have some qualms about opening the speaker circuit, having heard about the danger of peak voltages ruining the "unloaded" output transformer. While this is a necessary precaution in high-power amplifiers, the normal low-power single-ended output transformer of a TV audio amplifier is not likely to be hurt at all. If you are the worrying kind, connect a 47 ohm 2 watt resistor from Jl-1 to the undisturbed speaker terminal ("B" in Fig. 5).

For convenience you may want to add a power switch to Unit 1 as shown in Fig. 3; however, these units are made for continuous use and draw very little power.

A word of warning to those who would simplify this design by eliminating the latching light and using the power line rectified voltage to latch the relay through the added contact: don't try it! One side of the power line would be connected to the output socket, and if the speaker circuit is grounded you have a chance of shock hazard.



THE UNIT FITS on top of the television set and is kept in place by suction cups. These also prevent marring the fine furniture finish of your set. Note that to avoid confusion, all leads, plugs and sockets are carefully marked. This can be done with press-letters.

Tape Recorder

(Continued from page 85)

recorded material per reel, playing at 3³/₄in. per second. Although most battery tape recorders run off flashlight or pen cells, the "Conferette Electric" has two rechargeable dry cells and a built-in ac power pack that allows operation of the recorder from the ac house line. While running off ac, the power pack recharges the batteries too.

Because of their independence of the power line, and their ruggedness and light weight, these compact recorders fit into any hobby or activity. For days, a new bird, a stranger to our neighborhood, built a nest in an old cherry tree back of the house. It was a black bird with red and green markings, and it had a most intriguing call that started as a deep warble and wound up in a high-pitched, flute-like whistle. I tried to describe the call to a friend but he didn't get the picture at all, so I decided to record the bird. The "Conferette" made it a cinch.

I took the recorder out to the tree and stood silently in the same spot for about a half a hour. At last, the bird thought I was just another old tree stump and flew to the branch on which it was building its nest. Before it got there and while it was "casing the joint," it sang as beautifully as I had ever heard and the recording microphone in my hand was able to get it all.

I have since spoken with some other bird-call fanciers who also use portable tape recorders and they have sometimes left the recorder by itself, running, in among a spot where it recorded birds and other wildlife which would not approach while man was around.

Parades are great fun to watch and record, particularly the ones that include fife and drum corps and bagpipers. No amount of background noise can override the piercing martial airs of a bagpipe, but to cut down on crowd noises get as close to the front of the crowd as possible, and cup the microphone in a hand while holding it out toward the players. Though most of these machines are made for voice recording and don't have the wide frequency response needed to record music, a good quality microphone added to the machine can equip it to do a fair job with music. There are many inexpensive but high quality microphones available from electronics parts stores and mail order houses.

The manufacturer of the tape recorder will supply information on how to hook up a new microphone to his unit.

The more a compact recorder is used, the more uses are found for it. My wife now uses ours for following recipes when baking. First, she reads the recipe into the microphone, recording it slowly and leaving long silent spaces, to approximate her working speed. Then she gets all her baking tools and ingredients together at her worktable and turns the recorder to playback. In this way, she can follow the recipe without having to stop to read it and getting the paper all messed up with flour and egg drippings.

One of the troubles of using an ordinary tape recorder on foreign travels is that the power available varies from country to country. In some parts of Europe, for example, dc is still in use, while in others 220 volts ac is the norm. An American tape recorder set to operate on 110 volts ac is powerless in these places and must be used with a converter. However, the battery operated compact recorder carries its own power supply and will work anywhere. Travelers can use their recorders to take "snapshots in sound" of the strange places they visit to accompany the pictures they shoot. The sounds of the Paris flea market or of a religious ceremony in Rome would be thrilling to play back for the folks at home.

Lastly, don't overlook the value of a tape recorder as an excellent means for correspondence. It works like this: You make a recording on a three-in. reel of tape, and using one of the many mailer boxes commercially available, address it and drop the tape into the nearest letter box. The recipient of the tape gets the spoken letter, and in playing it back, has the added advantage of actually hearing the voices from your folks. He then answers the tape (lets hope he made notes) and mails it back to you. The same tape can be used over and over again, so the cost is negligible. The advantage that tape provides here, is obvious. The advantage, of course, is yours!

Whether you like to hunt and record vanishing sounds, like the chugging of a steam locomotive, or dictate sales orders in your car while driving from customer to customer, the compact portable tape recorder can help you take advantage of the age of tape.

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GENERAL PARTS DISTRIBUTORS

115. Want a colorful catalog of surplus goodies? John Meshna Jr. has one that covers everything from assemblies to Zener diodes. You can buy complex units that set the government back thousands, at a fraction of the cost!

116. This catalog is far too detailed to describe here. Circle No. 116, and Lafayette Radio Electronics Corp. will send one you can examine for yourself!

117. Here's another catalog that's bursting with goodies from *Radio Shack Corp.* Included is the exclusive line of *Realistic* equipment. If you can't find it here, you just can't find it!

118. We'll exert our influence to get you on the *Olson* mailing list. This catalog comes out regularly with lots of new and surplus items. If you find your name hidden in the pages, you win \$5 in free merchandise!

119. A 16-page catalog of new and surplus bargains from *ALCO Electronic Sales* is yours for circling No. 119. We'll get your name on the regular mailing list, too.

120. Catering to hams for many years World Radio Laboratories has a few flyers for you to look over. These include their new transmitter and an assortment of other products that deserve space in any ham shack.

121. This catalog is so widely used as a reference book, that it's regarded as a standard by people in the electronics industry. Don't you have the latest Allied Radio catalog? The surprising thing is that it's free!

122. Unusual scientific, optical and mathematical values. That's what Ed-mund Scientific has. War surplus equipment as well as many other hard-to-get items are included in this catalog.

123. Bargains galore, that's what's in store! Poly-Paks Co. will send you their latest four-page flyer listing the latest in merchandise available, including a giant \$1 special sale.

SCHOOLS AND EDUCATIONAL

124. Three new courses in marine communication, aircraft communication, tion, and guidance and mobile communications are available from National Radio Institute. The pamphlets are well-illustrated and educational.

125. Here are three pamphlets dealing with television trouble-shooting, radio trouble-shooting and high fidelity. These, from *Progressive tul-Kits* are very complete and easy to understand. 126. Interested in ETV? Adler Electronics has a booklet describing educational television and this goes into a depth study of ETV in all its ramifications. There's a good science fair project here for someone!

127. For a complete rundown on curriculum, lesson outlines, and full details from a leading electronic school, ask for this brochure from the *Indiana Home Study Institute*.

MICROPHONES, SPEAKERS, TAPEHEADS, CARTRIDGES, HEADPHONES

128. Don't miss this bulletin of professional quality microphone stands, *Atlas Sound* will send it along with a listing of accessories, including explosion-proof loudspeakers!

129. This company makes the headsets that are used as terminal communications by our astronauts. The stereo phones that *Roanwell Corp*. has for hi-fi-nicks reflect the same standards of quality.

130. Tone-arms, cartridges, hi-fi, and stereo preamps and replacement tape heads and conversions are listed in a complete *Shure Bros.* catalog.

131. Here's a beautifully presented brochure from *Altec Lansing Corp.* Studio-type mikes, two-way speaker components and other hi-fi products.

132. For the love of mikes! Astatic Corp. has lots. Studio types, ham types, recording types, etc. See its catalog sheets for the details.

133. A name well-known in audio circles is *Acoustic Research*. Here's its booklet on the famous AR speakers and the new AR turntable.

176. For hobbyists designing loudspeaker enclosures, *Electro-Voice*, Inc. offers Bulletin #10 which gives general suggestions for construction of all popular enclosures. A new high fidelity catalog is also available.

134. Speakers and enclosures from *Argus Products Co.* feature a new and novel well-mounting system. To find out more about this, circle No. 134.

135. If you know stereo, you know *Empire*. If you DON'T know Empire, you'd better ask for this four-page brochure, and get in on the news.

136. Tape recorder heads wear out. After all, the head of a tape deck is like the stylus of a phonograph, and *Robins Industries* has a booklet showing exact replacements. Lots of good info on how the things are built, too.

137. A wide variety of loudspeakers and enclosures from Utah Electronics

lists sizes, shapes, and prices. All types are covered in this 16-page heavily illustrated brochure.

138. Here's a "plus" deal. EICO will send you a complete catalog of their new electronic kits, pLUS a four-page course leading to a novice class amateur license, pLUS a chart of electronic symbols, and finally, a booklet explaining the "why" of stereo!

139. Catalog sheets describing the *Philmore* line of UHF-TV converters, CB walkie-talkies, speaker-mikes, code oscillators, can be had by circling No. 139.

114. Here's a complete catalog of high-styled speaker enclosures and loudspeaker components. University is one of the pioneers in the field that keeps things up to date. Circle 114 for more info.

KITS

140. Here's a firm that makes everything from television kits to pocket stoves. The *Conar* catalog is yours for the asking. Circle No. 140.

141. Interested in tackling a TV kit? Arkay Kits, Inc. will send you full literature (including a schematic) of this truly educational kit. It's used in many of the electronic schools.

142. Nothing to hide, that's Harmon-Kardon! They send you a batch of literature describing their products, complete with technical laboratory reports. The equipment is of course, beautiful. It sounds as good as it looks.

143. Here's a 100-page catalog of a wide assortment of kits. They're highly-styled, highly-versatile, and *Heath Co.* will happily add your name to the mailing list. Circlè 143.

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144. Do you think you should expect to save money by building kits? *National Kits* has a four-pager that will be a real eye-opener.

145. A long-time builder of ham equipment, *Halicra/ters, Inc.* will happily send you lots of info on the ham, CB and commercial radio-equipment.

146. A complete line of test equipment as well as a wide assortment of hi-fi and stereo gear from PACO Kits will come your way if you circle 146.

147. A complete booklet and price list giving you the inside data on *Schober Organs* will come your way if you circle 147. We just found out that these beauties sound even better than they look!

148. When a manufacturer of highquality high fidelity equipment produces a line of kits, you can just bet that they're going to be of the same high quality! *H. H. Scott, Inc.*, has a catalog showing you the full-color, behind the merit behind-the-panel story.

ACCESSORIES

149. Got "furniture-sag"? Hmmm? Adjustable Caster Co. thinks you'd better level the shelf your turntable sits on before you try to level the turntable itself! Lots of data here.

150. A catalog describing a complete assortment of radio and TV tube proassorment of fails and 1v troe pro-tectors, fuses, light winkers and a wide variety of switches and outlets from *Eagle Electric* will come your way if you circle No. 150.

151. Are you still paying drugstore prices for tubes? *Nationwide Tube Co.*, will send you their special bargain list of tubes. This will make you light up!

152. Here's some info on a wireless remote control for your hi-fi, or if you prefer, they have a wired version for you. There's also a sweet little phase and balance meter. *Stereosonics. Inc.* will send it all if you check 152.

153. Some of the teensy-weenies that *Chicago Miniature Lamp Works* sells make a #47 pilot lamp look like a 100 watter! They'll be happy to send you their catalog.

154. A 12-page catalog describing the audio accessories that make hi-if liv-ing a bit easier is yours from Switch-craft, Inc. The cables, mike mixers, and junctions are essentials!

155. Here's a goodly assortment of literature covering the products of the *Dow-Key Co.* They make coaxial relays, switches, and preamps for hams and CBers.

156. Got some questions regarding transistor ignition? W. F. Palmer Labs will send you a booklet which explains whit settu you a booklet which explains what transistor ignition is all about. If you decide, after reading, that this is for you, their kits will let you build your own!

157. A booklet on TV and radio servthrough-the-mail diagnosis request form entitle you to an analysis of your sick set for a buck! It's all from *Century Electronics*.

158. Delayed action switches for the home or car, something brand new in miniaturized amplifiers, a new light-

dimming switch as well as the other Saxton Products are listed in brochures.

159. Ever try to find your house number in the dark? Your visitors have the same trouble. An electro-luminiscent panel makes house num-ber easy to read and a door bell but-ton makes this *Madigan Electronic* unit same double daty. unit serve double duty.

160. Great Britain comes through with an assortment of hi-fi needs from the famous Garrard turn-tables to some fancy speakers. 5-core solder and quality hi-fi tubes. *British In-dustries* will happily send the whole package for your leisurely perusal.

161. Want to see the latest in com-munications receivers? National Ra-dio Co. puts out a line of mighty fine ones and their catalog will tell you all about them.

value per dollar." That's what Elec-tronic Measurements Corp. says. Looking through the catalogue they send out, they very well might be right! measurement 162. "Get the most value per dollar." That

TAPE RECORDERS AND TAPE

163. Want to see the latest in portable tape recorders? Curious about an intercom with a fabulous sound to-size ratio? *Mathew Stuart, Inc.* will send all the details at your request.

164. "The Care and Feeding of Tape Recorders," is the title of a booklet that Surkes-Turzian will send you. It's 16 pages jam-packed with info for the home recording enthusiast. In-cludes a valuable table of recording times for various tapes.

165. You can learn lots about tape recorders. Big tape recorders for stu-dios, little tape recorders for business men, all kinds of tape recorders from American Concertone.

166. If you are serious about home tape recording this technical bulletin and descriptive literature from Kodak (Yup! They're making recording tape) will interest you.

167. Here's a list of a complete line of tape machines. Also, SONY Super-scope will include a list of ways that you can use a tape recorder, and some of these ware new lower of these were new to us!

168. Are you getting all you can from your Citizens Band radio equipment? Cadre Industries has a booklet that answers lots of the questions you may have.

169. Antennas for CB and ham use as well as for commercial installations is the specialty of Antenna Specialists Co. They also have a generator for power in the field.

170. Convert your home or shcp from clutter to convenience with the Akro-Mills cabinets. Those see-through drawers eliminate cigar-box confusion!

171. An assortment of high fidelity components and cabinets are described in the *Sherwood* brochure. The cab-inets can almost be designed to your requirements, as they use modules.

172. Very pretty, very efficient, that's the word for the new Betacori intercom. It's ideal for stores, offices, or just for use in the home, where it doubles as a baby-sitter.

173. Here's some more data on transistor ignition systems for cars. Auto-motive Electronics Co. has the whole story here, including typical wiring diagrams.

174. One of the best ways to make a radio signal get up 'n' git is to put the antenna up high enough, and you will need a place to hang it. Take your pick from this catalog of towers by T_{ri} -Ex Tower Corp.

112. When private citizens group together for the mutual good, some-thing big happens. *Hallicrafters*, *Inc.* is backing the C-B React teams and if you're interested in C-B, circle #112.

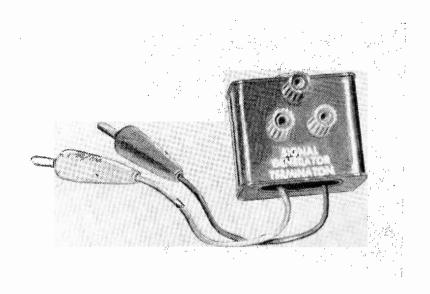
113. A catalog for C-B'ers, hams and 210. A catalog for C-B ers, fams and experimenters, with outstanding values. Terrific buys on antennas, mikes and accessories. Just circle #113 to get Grove Electronics free 1963 Catalog of Values.

TELEVISION

175. The smallest television set to date is featured in this beautiful pre-pared brochure from SONY Corp. You'll be amazed at the variety this firm offers.

New York, N. Please arrange t encircled sent to I am enclosing	o have f me as s	the litera ioon as	possible	•	mbers I	have					ate total n ooklets requ	
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RADIO-TV EXPERIMENTER



A Signal Generator Termination

You are probably familiar with the fact that transmitters are tuned up with what is called a "dummy antenna." Here's a small dummy antenna for your sig jenny...

By JAMES A. FRED

MOST radio-electronic experimenters have signal generators. Many are built from kits and perform quite satisfactorily. One thing that most users have never heard of however, is a dummy antenna. In my twenty-seven years of designing, testing, and repairing radio receivers I have learned the advantages of using a dummy antenna.

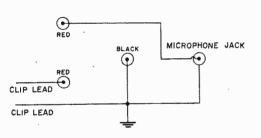
In testing a receiver intended to be used with an external antenna such as a TV set, an FM receiver, or a short wave communication receiver the signal generator is connected to the receiver through a dummy antenna. In testing a receiver using a loop antenna the signal should be fed into a loop antenna about the same size as the set loop antenna and spaced twice the loop diameter away.

Before we get into the technical details of the dummy antenna let's describe the termination box the dummy antennas plug into. From the photograph you will see the device that we are about to describe. A small size spice can is used to house the three 5 way binding posts, microphone jack, and two leads. Your wife should be able to supply you with an empty spice can for this project. My wife saves all the small metal cans that she gets for my electronic projects. The holes are carefully made in the spice can after which it is painted with a can of satin black spray paint. Decals can be applied if desired after which a clear over spray is put on for additional protection. Wiring can be done according to the schematic diagram through the oval hole in the end opposite the microphone jack.

The dummy antennas are constructed by using two banana plugs, a phenolic board and either a resistor or a capacitor. You can see them in the photo. There are four finished and one unfinished dummy antenna. By going through several Sams *Photofacts* you can get an idea of what component values to use. For aligning small broadcast band radios capacitors of .1 mfd., .05 mfd., .02 mfd., and .01 mfd., are used. For aligning FM radios capacitors of 68 mmf., 70 mmf., 50 mmf., 200 mmf., and 250 mmf., are used. For TV sets 300 ohm and 50 ohm resistors are used. When aligning



DUMMY ANTENNA is constructed by assembling components to phenolic plugs. Use one plug per component.



CIRCUIT OF SIGNAL GENERATOR TERMINATION

short wave radios it is best to consult the manufacturer's literature to find the proper size dummy to use. For our work we chose a .1 mfd., .05 mfd., 90 mmf., and 50 ohms. The fifth one was left unfinished for future use.

Now that the dummy antennas are made and the termination box finished, how do we use them? If you use Sams Photofacts in your repair work you will find alignment instructions clearly shown for each set that you work on. When aligning IF transformers you will use a .1 mfd. or a .05 mfd. dummy antenna plugged into the two red binding posts. By using the two red binding posts the dummy antenna is placed in series with the signal generator and the clip leads. The 90 mmf. dummy antenna is used when feeding a signal into the antenna socket of an automobile radio. The 50 ohm resistor is a terminating resistor used mostly with FM signal generators. When its use is called for the two red binding posts are jumpered together and the 50 ohm dummy plugged into a red and



TERMINATION IS BUILT into an empty spice can. Binding posts are spaced at top to accept various parts plugs.

	MATERIALS LISTSIGNAL GENERATOR TERMINATION
1	small spice can, from your local supermarket
1	microphone connector, Allied Radio number 41H965
2	crocodile clips, Allied Radio number 45H060
2	insulators for clips, Allied Radio number 45H168
2	red binding posts, Allied Radio number 41H368
1	black binding post, Allied Radio number 41H367
1	8 inch length red flexible wire
1	8 inch length black flexible wire
2	1/4 inch rubber grommets decals, spray paint, etc.
	DUMMY ANTENNAS
10	banana plugs with 6-32 stud, Allied Radio number 41H489
5	pcs. phenolic, masonite, or formica, 3/4 inch wide by 13/8 inch long
1	Sprague .05mfd. capacitor, Allied Radio number 15L127
1	Sprague .1mfd. capacitor, Allied Radio number 15L128
1	Sprague 91mmf. capacitor, Allied Radio number 16L321
1	ohmite 47 ohm, 1⁄4 watt resistor, Allied Radio number 2MM040
All	ied Radio Corp., 100 N. Western Avenue, Chicago 80, Illinois

black binding post. Likewise a 300 ohm terminating resistor is often used in TV alignment work and is connected in the same manner.

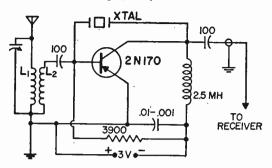
When aligning the RF circuits of a loop operated receiver or a set with a ferrite rod antenna the following method should be used. Either buy a loop antenna or salvage one from a discarded ac-dc radio. If you can get one about six by eight inches so much the better. Mount it on a wooden base so that it will stand vertically and attach two leads with banana plugs on the ends. Connect the antenna to the termination box and set the antenna parallel to the set antenna and about one foot away.

Now that you have the Signal Generator Termination and the dummy antennas you can do away with the usual tangle of wires usually associated with aligning radio or TV receivers. The dummy antennas will enable you to do a professional alignment job and restore the sets to factory-like operation.

RADIO-TV EXPERIMENTER

Ask Me Another

(Continued from page 31)

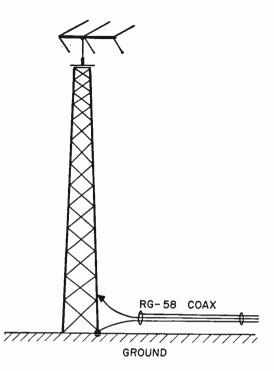


or any 40m crystal between 7000 and 7183 will put 3183 in the 75m band of your receiver. The best bet for WWV would be a 4000kc crystal. This will put WWV on 14mc in the 20M band of the receiver, and also supply a band edge marker at 4000kc on 75m. These crystals, being in the ham bands, are avaliable at low prices. But you can also use many surplus crystals to get almost any MARS frequency into one of the ham bands on your receiver. The only precaution you need to take is to make the interconnecting lead between the receiver and converter of shielded cable so it won't pick up signals from the ham band you are using.

QUESTION: Somebody told me you can use a TV tower for an antenna on short waves. Was he kidding? LP, Plainfield, N. J.

ANSWER: No. A metal TV tower or mast. grounded at the base, is a good antenna for any frequency for which the height of the tower is 1/4 wavelength. Actually, the TV antenna on top of the tower "loads" it at the top, which has the effect of making the tower effectively higher at any given frequency. For highest efficiency at any frequency a tower would have to be "tuned" so it is effectively a $\frac{1}{4}$ wave at that frequency. In the case of a crank-up tower, this could be done by raising or lowering the tower. It can also be done electrically by various matching networks. However, it will give good results. though not necessarily the optimum possible, simply by connecting your receiver to it through a length of RG58 cable.

QUESTION: I got my general ham license only recently. I have been operating so far with a simple, inexpensive rig. Now I would like to build something better. But I understand the FCC is going to take away the operating privileges of generals and I wonder if it is safe to go ahead and make any investment in equipment? JKL, Lima, Ohio.



ANSWER: Don't let scare talk by a few overexcited, prejudiced and self-assertive hams prevent you for even a few days from enjoying the operating privileges available to you NOW. The FCC has not proposed any steps to change amateur allocations or licensing procedures. Undoubtedly, in the next few years it will for the simple reason that some changes will be necessary to accommodate the rapidly multiplying number of hams in the space available and also to justify the use of the spectrum by hams.

The American Radio Relay League in one of the very few bold, but realistic and idealistic, actions it has taken in more than a generation, has made some proposals for consideration, stating some main aims, but making no specific recommendations. Briefly the ARRL has proposed that when changes are made by the FCC they take a form that will provide incentives for: 1) increasing the technical skills and proficiency of hams; and 2) stimulating contributions to the arts and techniques of communication. These are actually the basis for our present privileges. The law states that all frequencies must be used in the public interest. The FCC has allocated some 12% of the space below 30mc to hams on the assumption (well demonstrated by history) that the contributions made by hams in these two fields (plus communication in emergencies, which nowadays, however, the CB'ers do better serve the public interest sufficiently to justify the assignment of so much space to them.

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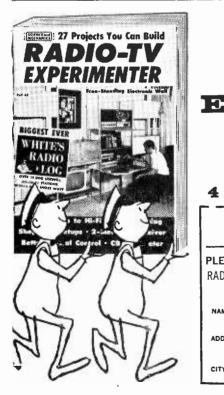
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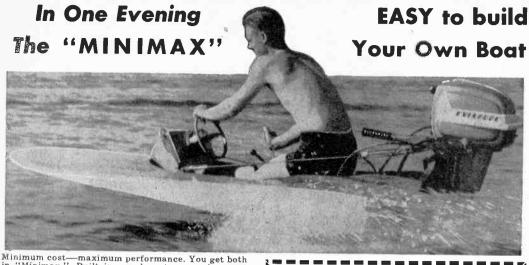
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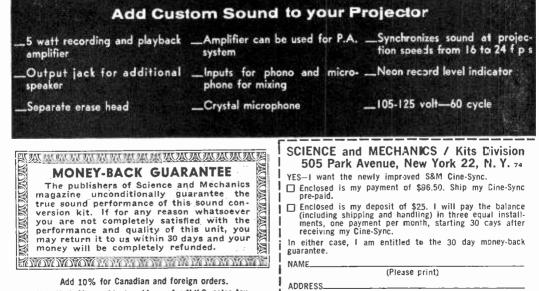
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(please print)

An up-to-date broadcasting directory AM, FM, TV, and short wave stations

WHITE'S RADIO LOG

Vol. 40

No. 4

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U.S. and Canadian AM Stations	U.S. FM Stations by States					
by Frequency						
U.S. and Canadian AM Stations	Canadian FM Stations by Location					
by Location						
U.S. AM Stations by Call Letters	148 U.S. Television Stations					
Canadian AM Stations by Call Letters						
Mexican and Cuban AM Stations						

U. S. and Canadian AM Stations by Frequency

U.S. stations listed alphabetically by states within groups, Canadian stations precede U.S. Abbreviations: Kc., frequency in kilocycles: W.P., watt power: d-operates daytime only. Wave length is given in meters

Abbreviations: Kc., frequency	in kilocycles; W.P., watt	powe	r; d—operates daytime o	nly. V	Vave length is given in meters
Kc. Wave Length W.P.	Kc. Wave Length	W.P. (W.P.	
540	WEBC Duluth, Minn. KWTO Springfield, Mo.	5000 5000		5000 5000	
CBT Grand Falls, N.F. 10000	KMON Great Fails. Mont.	5000	590-508.2		KFAR Fairbanks, Alaska 5000
CBK Regina, Sask. 50000	WGAI Elizabeth City, N.C.	1000		1000	KAVL Lancaster, Calif. 1000 KFRC San Francisco. Calif. 5000
KVIP Redding, Calif. 5000d KFMB San Diego, Calif, 5000		5000 5000		1000	WTOR Torrington, Conn. 1000d
WGTO Cypress Gardens,	WHBO Memphis, Tenn.	5000	CFTK Terrace, B.C.	1000	WIOD Miami, Fla. 5000 WMEL Pensacola, Fla. 500d
Florida 50000d	KFDM Beaumont, Tex.	5000	VOCM St. Johns, N.F.	10000	WMEL Pensacola, Fla. 500d WCEH Hawkinsville. Ga. 500d
WDAK Columbus, Ga. 5000 KBRV Soda Springs, Idaho 500d	KFDM Beaumont, Tex. KPQ Wenatchee, Wash. WJLS Beckley, W.Va,	5000 5000	KHAR Anchorage, Alaska WRAG Carrollton, Ala.	1000d	WRUS Russellville, Ky. 500d
KWMT Ft. Dodge, Iowa 5000d	HILS DECKING, WITH	0000	KBHS Hot Springs, Ark.	5000d	KDAL Duluth, Minn. 5000
KNOE Monroe, La. 5000	570526.0		KFXM San Bernardino, Cal.	1000	WDAF Kansas City, Mo. 5000 KOIM Havre, Mont. 1000
WDMV Pocomoke City, Md. 500d WBIC Islip, N.Y. 250d	CKEK Cranbrook, B.C.	1000	KTHO Tahoe Valley, Calif. KCSI Pueblo, Colo.	10000	KCSR Chadron, Nebr. 1000d
WETC Wendell-Zebulon, N.C. 250d WARO Canonsburg, Pa. 250d	CKCQ Quesnel. B.C.	1000		1000	WGIR Manchester, N.H. 5000
WARO Canonsburg, Pa. 250d	CFCB Corner Brook, N.F.	1000	WPLO Atlanta, Ga.	5000 5000	KGGM Albuquerque, N. Mex. 5000 WAYS Charlotte, N.C. 5000
WYNN Florence, S.C. 250d WDXN Clarksville, Tenn. 1000d	CJEM Edmundston, N.B. CFWH Whitehorse, Y.T. WAAX Gadsden, Ala.	500 d 1000	KGMB Honoiulu, Hawaii KID Idaho Falis, Idaho	5000	WTVN Columbus, Ohio 5000
WRIC Richlands, Va. 1000d	WAAX Gadsden, Ala.	5000	WBBY Wood River, III. WVLK Lexington, Ky.	500d	WIP Philadelphia, Pa. 5000 KILT Houston, Tex. 5000
550	KCNU Alturas. Calif.	5000 5000	WVLK Lexington, Ky.	5000 5000	KVNU Logan, Utah 5000
	KLAC Los Angeles, Callf. WGMS Washington, D.C.	5000	WEEI Boston, Mass. WKZO Kalamazoo, Mich. KGLE Glendive, Mont.	5000	WSLS Roanoke, Va. 5000
CFNB Fredericton, N.B. 50000 CFBB Sudbury, Ont. 1000d	WACL Wayeross, Ga.	5000	KGLE Glendive, Mont.	500d 5000	WHPL Winchester, Va. 500d KEPR Kennewick, Wash. 5000
CHLN Three Rivers, Que. 10000	WKYB Paducah, Ky. WVMI Biloxi, Miss.	1000 10001	WOW Umana, Nebr.	5000	
CKPG Prince George, B.C. 250 KENI Anchorage, Alaska 5000	KGRT Las Cruces, N.Mex.	5000d	WGTM Wilson, N.C.	5000	
KENI Anchorage, Alaska 5000 KOY Phoenix, Ariz. 5000	WINGA NEW YORK, N.T.	5000	WOW Omaha, Nebr. WROW Albany, N.Y. WGTM Wilson, N.C. KUGN Eugene, Oreg. WARM Stranton, Pa.	5000 5000	
KAFY Bakersfield, Calif. 1000	WSYR Syracuse, N.Y. WWNC Asheville, N.C.	5000 5000	WMBS Uniontown, Pa.	1000	CKCM Grand Falls Nftd 10000
KRAI Craig, Colo. 1000 WAYR Orange Park, Fla. 1000d	WLLE Raleigh, N.C.	500d	KTBC Austin, Tex.	5000	KTAR Phoenix, Ariz. 5000
WGGA Gainesville, Ga. 5000 KMVI Walluku, Hawaii 1000	WKBN Youngstown, Ohio	5000 5000	WMBS Uniontown, Pa. KTBC Austin, Tex. KSUB Cedar City, Utah WLVA Lynchburg, Va.	1000	KNGS Hanford, Calif. 1000 KWSD Mt. Shasta, Cal f. 1000d
KMVI Walluku, Hawaii 1000	WFAA Dallas, lex.	5000	KHQ Spokane, Wash.	5000	KSTR Grand Junction. Colo. 5000d
KFRM Concordia, Kansas 5000d WCBI Columbus, Miss. 1000	WBAP Ft, Worth. Tex.	5000	600		WSUN St. Petersburd, Fla. 5000
KSD St. Louis, Mo. 5000	KUD Salt Lake City, Cla	5000		5000	WTRP LaGrange, Ga. 1000d KWAL Wallace, idaho 1000
KOPR Butte, Mont. 1000 WGR Buffalo, N.Y. 5000	WMAM Marinette, Wis.	5000	CFCH North Bay, Ont.	10000	KMNS Sioux City, Iowa 1000
WDBM Statesville, N.C. 500d	500 5140		CFQC Saskatoon, Sask. CJOR Vancouver, B.C.	5000 10000	WTMT Louisville, Ky. 500d WLBZ Bangor, Maine 5000
KFYR Bismarck, N.Dak. 5000			CKCL Truro, N.S.	1000	WIDX Jackson, Miss. 5000
WKRC Cincinnati, Ohio 5000 KOAC Corvallis, Oreg. 5000	CIFA Antigonish, N.S.	5000		1000	WVNJ Newark, N.J. 5000
WHLM Bloomsburg, Pa. 1000	CKEY Toponto Ont	50000 5000		1000	
WPAB Ponce, P.R. 5000 WXTR Pawtucket, R.I. 1000	CKPR Ft. William, Ont.	5000	KOGO San Diego, Calif.	5000	KGW Portland, Oreg. 5000
KCRS Midland. Tex. 5000	CKUA Edmonton, Alta.	10000d 50000		1000d 5000	
KTSA San Antonio, Tex. 5000	CHIC Houterive Oue	5000		5000	WATE Knoxville, Tenn. 5000
WDEV Waterbury, Vt. 5000 WSVA Harrisonburg, Va. 5000	WABT Tuskegee, Ala.	500d	WMT Cedar Rapids. Iowa	5000 1000d	KWFT WICHITA PAILS, Tex. 5000
KARI Blaine, Wash. 5000	KABI Ketchikan, Alaska	1000 5000		5000d	
KMRE Spokane, Wash. 500d WSAU Wausau, Wis. 5000	I KMJ Presno. Galit.	5000	WCAO Baltimore, Md.	5000	WWNR Beckley, W.Va. 1000 WTMJ Milwaukee, Wis. 5000
	KUBC Montrose, Colo. WDBO Orlando, Fla.	5000 5000	WLST Escanaba, Mich. WTAC Flint, Mich.	b0001 1000	630-475.9
560535.4	WGAC Augusta, Ga.	5000	KGEZ Kalispell, Mont.	2000	
CJDC Dawson Creek, B. C. 10000	KFXD Nampa, Idaho	5000	WCVP Murphy, N.C. WSJS Winston-Salem, N.C.	1000d	CKAR Huntsville, Ont. 1000
CHCM Marystown, Nfid., Can. Ikw	WILL Urbana, III. KSAC Manhattan, Kans.	5000d 5000		5000	CHLT Sherbrooke, Que. 10000
CJKL Kirkland Lake, Ont. 5000 CFOS Owen Sound, Ont. 5000	WIBW Topeka, Kans.	5000	WFRM Coudersport, Pa.	1000d	
CKCN Seven Hes, Que, 5000	KALB Alexandria, La.	5000	IWREC Memphis, Tenn.	1000	CKRC Winnipeg. Man. 10000
WOOF Dothan, Ala. 5000d KYUM Yuma, Ariz. 1000	WTAG Worcester, Mass, WELO Tupelo, Miss,	5000 1000		5000	CKOV Kelowna, B.C. 1000
KSFO San Fran., Calif. 5000	KANA Anaconda, Mont.	1000	KERB Kermit, Tex.	b0001 0001	01150 51 1. 4. 014 10000
KLZ Denver, Colo. 5000	WAGR Lumberton, N.C.	500 1000		1000	WIDB Thomasville, Ala. 1000d
WIND Chianto III 5000		5000	010-471.5		KJNO Juneau, Alaska 1000 KVMA Magnolia, Ark. 1000d
WMIK Middlesboro, Ky. 500d	WKAQ San Juan, P.R. KOBH Het Springs, S.Dak.	5000	CKML Mont Laurier, Que,	1009	KIDD Monterey, Calif. 1000
WGAN Portland, Maine 5000 WFRB Frostburg, Md. 1000	WRKH Rockwood, Tenn.	1000d	CIAT Trail. B.C.	0000	KHOW Denver, Colo. 5000
WHYN Springfield, Mass. 1000	KDAV Lubbock, Tex.	500 d	CHNC New Carlisle, Que. CJAT Trail. B.C. CKKL Thompson, Man. CKTB St. Catharines, Ont.	1000	WHITE'S RADIO LOG 129
WQTE Monroe, Mich. 500d	WLES Lawrenceville, Va.	500d	UKIB St. Gatnarines, Unt.	10000	WHILE & RUPIO FOO 123

Kc. Wave Length WMAL Washington, D.C. WSAV Savannah, Ga. WNEG Toccoa, Ga. KIDO Boise, Idaho WLAP Lestington, Ky, KTIB Thibodaux, La, WJMS Ironwood, Mieh, KDWB So. St. Paul, Minn. KXOK St. Louis, Mon. KGVW Belgrade, Mont. 5000 KGVW Belgrade, Mont. KOH Reno, Nev. WIRC Hickory, N.C. WIRC Hickory, N.C. WMFD Wilmington, N.C. KWRO Coquille, Oreg. WEJL Scranton, Pa. WKYN San Juan, P.R. WFRO Providence, R.I. KGFX Pierre, S. Dak. KMAC San Antonjo, Tax. 10004 50004 5004 2004 KGAX Pierre, S. Dak. 2000 KMAC San Antonio, Tex. 5000 KSXX Salt Lake City. Utah 100000 KGDN Edmunds, Wash. 50000 KZUN Opportunity, Wash. 5000 640-468.5 CBN St. John's, N.F. KFI Los Angeles, Calif. WOI Ames, Iowa 10000 50000 5000 1000 WOI Ames, Iowa WHLO Akron, Ohio WHLO Norman, Okla. 1000d 650-461.3 KORL Honolulu, Hawall WSM Nashville, Tenn. KIKK Pasadena, Texas 10000 50000 250d 660--454.3 KMEO Omaha, Nebr. WNBC New York, N.Y. WESC Greenville, S.C. KSKY Dallas, Tex. 500d 50000 10000d 1000 670-447.5 WMAQ Chicago, III. 50000 680—440.9 CHFA Edmonton, Alta, CHLO St. Thomas, Ont. CJOB Winnipeg, Man. CKGB Timmins, Ont. KNBR San Fran., Calif. WCIN St. Petersburg, Fla. WCTT Corbin, Ky. WCBM Baltimore, Md. WNAC Boston, Mass. WDBC Escanaba, Mich. KFEQ St. Joseph, Mo. WINR Binghamton, N.Y. WBVM Rochester, N.Y. WINR Binghamton, N.Y. WINR Binghamton, N.Y. WINR Baltigh, N.C. WINR Baltigh, N.C. WINR Ban Juan. P.Rico. WMPS Memphis. Tem. KBAT San Antonio, Tex. KOMW Omak. Wash. WCA4 Charleston, W.Va. 680-440.9 5000d 1000 10000 50000 1000d 1000 10000 50000 10000 5000 1000 250d 50000 250d 10000 10000 1000d 10000 690-434.5 CBU Vaneouver, B.C. CBF Montreal, Que, WVOK Birmingham. Ala. KVNA Flagstaff. Ariz. KVNA Flagstaff. Ariz. KUEA Benton, Ariz. KBBA Benton, Ark. KBAP Pueblo, Conn. WADS Ansonia. Conn. KEAP Pueblo. Con. KEAP Pueblo. KGC Prineville. Kans. La KICA. KISL St. Louis. Mo. KEY Terrytown. Nebr. KECO Prineville. Oreg. WXUR Media. Pa. KUSD Vermillion. S. Dak. KHEY El Paso. Tex. KZEY Tyler. Tex. WCYB Bistol. Va. WNT Warsaw, Va. WELD Fisher. W.Va. 690-434.5 10000 50000 500004 1000 250d 250d 250d 500d 25000d 10000 1000d 10000 5000 500d 1 0 0 0 d 10004 1000d 500 1000d 10000 250 250d 10000d 250d 500d 700--428.3 WLW Cincinnati, Ohio 50000 710-422.3 /IU-422.3 CISP Leamington, Ont, CFRG Gravelbourg, Sask, CKVM Ville Marle, Que, WKRG Mobile, Aia. KMPC Los Angeles, Calif, KBTR Denver, Colo. WGBS Miami, Fla. WROM Rome. Ga. KEEL Shreveport, La. WHB Kansas City. Mo 10004 5000d 10000 1000 50000 5000 50000 1000d 50000 WHB Kansas City. Mo. WOR New York, N.Y. DZRH Manila, P.I. WKJB Mavaguez. P.Rico WTPR Paris, Tenn. KGNC Amarillo, Tex. KURV Edinburg, Tex. 10000 50000 130

W.P. | Kc. Wave Length KIRO Seattle, Wash, WDSM Superior, Wis. 5000 50000 5000 500d 5000 720-416.4 5000 5000 5000 500d WGN Chicago, III, 50000
 730—410.7

 CJNR Blind River, Ont.
 1000

 CKAC Montreal, Que.
 50000

 CKOM Dauphin, Man.
 10000

 KKD R.
 10000

 KSUD W, Memphis, Ark.
 250d

 WKTG Thomasville, Ga.
 10000

 WKTG Thomasville, Ky.
 5000

 WARD Coolland, Kans.
 1000d

 WARD Cologne, La.
 250d

 WARD Cologne, Mass.
 5000d

 KWAR Warenton, Mo.
 1000d

 KWAC Echiopee, Mass.
 500d

 KWOA worthington. Minn.
 1000d

 KWOA Worthington, No.
 1000d

 WDOS Oneonta, NY.
 1000d

 WOBS Bowling Green. Ohio
 1000d

 WGS Bowling Green.
 1000d

 WGB Sbelby, N.C.
 1000d

 WGB Bowling Green.
 1000d

 WAB Bowling Green.
 1000d

 WPIT Pittsburgh, Pa.
 5000d

 WPIT Libuortr 1000 730-410.7 5000 5000 500d 1000 5000 5000 WPAL Charleston, S.C. WLIL Lenoir, Tenn, KPCN Grand Prairie, Tex. KSVN Ogden, Utah WPIK Alexandria, Va. WMNA Gretna, Va. KULE Ephrata, Wash. WXMT Merrill, Wis. 500d 5000d 1000d 10004 10000
 WART Metrin, Wis.
 1000d

 740 — 405.2
 6

 CBXA Edmonton, Alta.
 50000

 CBL Toronto, Ont.
 50000

 CBL Toronto, Ont.
 50000

 WBAM Montgomery, Ala.
 50000

 KGLM Avalon, Calif.
 10000d

 KGLM Avalon, Calif.
 10000d

 KSSS Colo. Springs, Colo.
 1000

 WFSG Boca Raton, Fla.
 1000d

 WKSS Colo. Springs, Colo.
 1000d

 WKSG Cortez, Coto.
 1000d

 WKS Cortar, Coto.
 1000d

 WKK Blountston, Fla.
 1000d

 WKN Blountston, Fla.
 1000d

 WOLN Oney, III.
 1000d

 WAOP Newport, Ky.
 1000d

 WGS Muort Airy. N.C.
 1000d

 WGS Muort Airy. N.C.
 1000d

 WGS Muort Airy. N.C.
 1000d

 WAS Mourt Airy. N.C.
 1000d

 WHAC Mauntal, Y.N.C.
 1000d

 WHAL San Juan, P.Rico
 1000d

 WIAY Gan Juan, P.Rico
 1000d

 WIAY Humbolt, Tenn.
 250d

 WIAY Humbolt, Tenn.
 250d 740-405.2 750-399.8 WSB Atlanta. Ga. WBMD Baltimore. Md. KMMJ Grand Island, Neb. WHEB Portsmouth, N.H. KSL Portsand, Okla. KXL Portland, Oreg. WPDX Clarksburg, W.Va. 50000 1000d 100001 1000d 250d 1000d 760-394.5 KGU Honolulu, Hawali WJR Detroit, Mich. WCPS Tarboro, N.C. WORA Mayaguez, P.R. 10000 50000 1000d 5000 770-389.4 KUOM Minneapolis, Minn. WCAL Northfield, Minn. WEW St. Louis, Mo. KOB Albuquerque, N.Mex. WABC New York, N.Y. 5000d 5000d 1000d WABC New York. I KXA Seattle, Wash. 50000 10004 780-384.4 WBBM Chicago. III. WJAG Norfolk, Neb. WCKB Dunn. N.C. WBBO Forest City. N.C. KSPI Stillwater. Okla. WAVA Arlington, Va. 50000 1000d 1000d 250d 10000 790-379.5 CFCW Camrose, Alta. CFDR Dartmouth, N. S. Newcastle, N.B. 10000
 New York, N. D.
 50000
 CFDR Dartmouth, N. S.

 Manila, Y. P. Rico
 10000
 CKMR Newcastle, N.B.

 Mavinguez, P. Rico
 2000
 CKMR Newcastle, N.B.

 Paris, Tenn,
 10000
 CKSO Sudbury, Ont.

 Amarillo, Tex.
 10000
 CKEE Tussen Ariz.

 KOSY Texarkana, Ark.
 KOSY Texarkana, Ark.

 WHITE'S RADIO LOG
 LOG
 KABC Los Angeles, Calif.
 1000 10000 500d 5000d 1000 5000d 5000

Kc. Wave Length WLBE Leesburg, Fla. WFUN Miami Beach, Fla. WPFA Pensacola. Fla. WQRA Cairo, Ga. KEKO Kealakekua, Hawaii KEST Boise, Idaho WRMS Beardstown. III. KXXX Colby, Kans. WAKY Louisville, Ky. WRUM Rumford. Me. WSGW Saginaw, Mich. WSGW Saginaw, Mich. WSGW Saginaw, Mich. WSGW Maeee, Miss. KGHL Billings. Mont. WSUC Magee, Miss. KGHL Billings. Mont. KGO fargo, N. Dak. KWIL Albany, Oreg. WEAN Providence, R.I. WEAN Providence, R.I. WEBD Bamberg, SC. WETB Johnson City. Tenn. WGT Muston, Tex. KITH Houston, Tex. KITA Rontolk, Ya. W.P. | Kc. Wave Length 1000d 500d 5000d 1000d 1000d 5000 1000 10004 1000d 10004 1000d 10004 WSIG Mount Jackson, Va. WTAR Norfolk. Va. KGMI Bellingham, Wash. KNEW Spokane, Wash. WEAQ Eau Claire, Wis. 1000d 800—374.8 CHAB Moose Jaw, Sask. CKOK Pentleton, B.C. CFOB Ft. Frances, Ont. CJLX Ft. William, Ont. CJLX Ft. William, Ont. CJRQ Belleville, Ont. CHAC Quebec, Que. CJAD Montreal, Que. VOWR St. Johns, N.F. WHOS Decatur, Ala. WHOS Decatur, Ala. WHOS Decatur, Ala. KAGH Crossett, Ark. KUM Morrilton, Ark. KUM Morrilton, Ark. KUM Morrilton, Calif. KDAD Brighton, Colo. WLAD Danbury, Conn. WSUZ Palatka, Fla. WHAT Swainsboro, Ga. WHAT Swainsboro, Ga. 800-374.8 10000 10000 1000 50000 10000 10000 1000 1 00 0 d 1000d 5000 250 d 250d 250d 10004 500d 250d W LAD Dahbury, Conn. WSUZ Palatka, Fla. WJAT Swainsboro, Ga. WKZI Casey, Ill. KXIC lowa City, Iowa WBOK New Orleans, La. WCCM Lawrence, Mass. WVAL Sauk Rapids. Minn, KREI Farmington, Mo. KOBM Dillon, Mont. WVAL Sauk Rapids. Minn, KREI Farmington, Mo. KIEM Okla City, Okla. KPDQ Portland, Oreg. WCHA Chambersburg, Pa. WDSC Dillon, S.C. WDEH Sweetwater. Tenn. KBUH Brigham City, Utah WSVS Crewe, Va. WKEE Huntington, W.Va. WDUX Waupaca. Wis. 810—370.2 10004 1000d 10004 1000d 1000d 5000 1000d 1000d 10004 250d 1000d 1000d 1000d 250d 1000d 250d 250d 50004 1000 1000d 810-370.2 810—370.2 KGO San Francisco, Calif, WIGO Indianapolis, Ind. WABW Annapolis, Md, KCMO Kansas City, Mo, WGY Schonetady, N,Y, WKBC N. Wilkesboro, N.C, WEEC Rocky Mount, N.C. WEED McKesport, Pa, WKW Sea Iuan, PR 50000 250d 250d 50000 50000 10004 1000d 10004 WKVM San Juan, P.R. 25000 820-365.6 WAIT Chicago. III. WIKY Evansville, Ind. WOSU Columbus, Ohio WFAA Dallas, Tex. WBAP Ft. Worth. Tex. 5000d 250d 5000d 50000 50000 830--361.2 KIKI Honolulu, Hawali WCCO Minneapolis. Minn. KBOA Kennett. Mo. WNYC New York, N.Y. 250 50000 1000d 1000 840-356.9 WTUF Mobile, Ala. WRYM New Britain, Conn. WHAS Louisville. Ky. WVPO Stroudsburg, Pa. 1000d 10004 50000 250d
 WVPO Stroudsburg, Pa.
 250d

 850-352.7
 50000

 CKVL Verdun, Que.
 50000

 CKRD Red Deer, Alta.
 10000

 CJJC Langley Prairie, B.C.
 1000

 WYDE Birmingham, Ala.
 5000

 KICY Nome, Alaska.
 5000

 KICY Nome, Alaska.
 5000

 KICY Nome, Alaska.
 5000

 KICA Denver, Colo.
 5000

 WAUF Gainesville, Fla.
 5000

 KIMO Hio, Hawaii
 1000

 WHDH Boston, Mass.
 50000

 WKBZ Muckeaon, Mich.
 1000

W.P. | Kc. Wave Length W.P. KF.UO St. Louis, Mo. WKIX Raleigh, N.C. WIX Raleigh, N.C. WJAC Johnstown, Pa. WACA Johnstown, Pa. WACA Aquadilla, P.R. WRAP Norfolk, Va. KTAC Tacoma, Wash. 5000 5000 50004 10000 10004 5000 100001 b0001 1000 500 5000 KTAC Tacoma, Wash. 860-348.6 CBH Halifax, N. S. CHAK Inuvik, N.W.T. GJBC Toronto, Ont. WART Hartselle, Ala. WARI Opp, An. KIFN Phoenix, Ariz. KOSE Osceola, Ark. KTRB Modesto, Calif. WOW Naugatuck, Conn. WAZE Clearwater, Fla. WKKO Cocoa, Fla. WKKO Coco 1000 860-348.6 5000 10000 5000 50000 250d 10004 10004 1000d 5000 2504 1000 10000 250d 500d 5000 1000 000d 1000 50004 5000 250d 250d 5000 5000 10000 500d 500d 5000 5000 2504 000d 5000 5000 500d 250d 10004 250d 1000d 1000d 100000 1000d 250d 250d 250d 1000d 5000 10004 WEVA Emporia, Va. WOAY Oak Hill, W.Va. WFOX Milwaukee, Wis. 1000d 10000d 250d 870-344.6 KIEV Glendale. Calif. KAIM Kaimuki, Hawail 250d 5000 KAIM Kaimuki, Hawail WWL New Orleans, La. WKAR E. Lansing, Mich. WHCU Ithaca, N.Y. WGTL Kannapolis, N.C. WHOA San Juan, P.R. KJIM Ft, Worth, Tex. WFLO Farmville, Va. 50000 5000d 1000d 1000d 5000 250d 1000d 880-340.7 WCBS New York, N.Y. WRRZ Clinton, N.C. WRFD Worthington, Ohio 50000 10004 890-336.9 WLS Chicago, III. WHNC Henderson, N.C. KBYE Okla. City, Okla. 50000 10004 1000d 900-333.1 900—333.1 CKTS Sherbrooke, Que. CHML Hamilton, Ont. CHML Hamilton, Ont. CHNO Sudbury, Ont. CJBR Rimouski, Que. CKIL St. Jerome, Que. CVIVI Victoria, B.C. CKBI Prince Albert, Sask. WGOK Mobile, Ala. WGOK Mobile, Ala. WGOK Mobile, Ala. KOPRB Fairbanks, Alaska KHOZ Harrison, Ark. KBIF Fresno, Calit. WSWN Belle Glade, Fla. WGCA Calhoun, Ga. 1000 5000 10000 10000 1000 10000 10000 10000 10000 10000 10000 1000d 5000d WSWN Belle Glade, Fla. WMOP Deala, Fla. WCRY Macon, Ga. WERS Macon, Ga. KSIR Wichita, Kan. WSY Kuchita, Kan. WSIP Wichita, Kan. WSIP Wichita, Kan. WSIP Kleville, Ky. KREH Oakdale, La. WCME Brunswick, Maine WATC Gaylord, Mich. KTIS Minneapolis, Minn. WDDT Greenville, Miss. KFAL Fulton, Mo. KJSK Columbus, Nebr. WOTW Nashau, N.H. WBYN Boonville, N.Y. WSPN Saratoga Sprs., N. WAYN Rockingham, N.C. KFAN Fargo, N.Dak. WCNS Canton, Ohio WFAO Fremont, Ohio WFAO Fremont, Ohio WFAN Philadelphia, Pan. 10004 1000d 1000d 250d 50004 1000d 250d 1000d 5000d 2504 1000d P0001 10004 0000 1000d 000d 10000 N. 1 250d h0001 b0001 1000d 500d WFRO WCPA WFLN WKXV 500d 1000d 1000 WFLN Philadelphia, Pa, 1000 WKXV Knoxville, Tenn. 50000 WCOR Lebanon, Tenn. 1000 KALT Atlanta, Tex. Pa, 1000d 500d

WHDH Boston. Mass. WKBZ Muskegon, Mich.

Kc. Wave Length KCC. WOVE LEngth KMCD Conroe. Tex. KFLD Floydada. Tex. KCLW Hamilton. Tex. WODY Bassett, Va. WATC Staunton. Va. KUEN Wenatchee, Wash. WATK Antigo, Wis. 500d 2504 250d 500d 1000d 250d
 WAIN ARUBO, WIS.
 2500

 910—329.5
 CIDV Drumheller, Alta.
 5000

 CIDV Drumheller, Alta.
 5000
 CKLY Lindsay, Ont.
 1000

 CED Ottawa, Ont.
 1000
 CKLY Lindsay, Ont.
 1000

 CED Ottawa, Ont.
 1000
 CKLY Lindsay, Ont.
 1000

 CFJC Kamloops, B.C.
 10000
 WOVC Dadeville, Ala.
 5000

 KPHO Phoenix, Ariz.
 5000
 KAMO Ganden, Ark.
 1000

 KAMO Ganden, Ark.
 1000
 KOXR Oxnard, Calif.
 1000

 WGAF Valdosta, Ga.
 5000
 S000
 WCAF Valdosta, Ga.
 5000

 WGAF Valdosta, Ga.
 5000
 WGAF Valdosta, Ga.
 5000

 WGAF Ston Rouge, La.
 10004
 WSUI Iowa
 5000

 WGCK Bion Rouge, La.
 10004
 WGM Bionon.
 10004

 WSUI Iowa City, Iowa
 5000
 WGOK Merdelan, Mais.
 5000

 WGCK Bion Rouge, La.
 10004
 KSB Missoula, Mont.
 10004

 WSUI Iowa City, Iowa
 5000
 WGK FB Middletown, Ohio.
 10004

 WSB Missoula, Mont.
 10004
 910-329.5 WDRP Ponce, P.n. WPRP Ponce, P.n. WDRO Spartanburg, S.C. 5000d WJCW Johnson City, Tenn. 5000 KWFG S. Pittsburgh, Tenn. 5000 KAIL Sachlen, Tex. 1000 KRRV Sherman, Tex. 1000 KALL Satt Lake City, Utah 5000 WVTR White River Junction. Vermont 1000d Clabmond, Va. 5000 1000d Ver WRNL Richmond, Va. WHYE Roanoke, Va. KORD Pasco, Wash. KIXI Seattle, Wash. b0001 1000d 1000d KISN Vancouver, Wash. 1000 WHSM Hayward, Wis. 5000d WDOR Sturgeon Bay, Wis. 1000d 920-325.9 CFRY Portage La Prairie, Man, 1000 10000 W BAA W. Latayette, Ind. KFNF Council Bluffs, Ia. WTCW Whitesburg. Ky. WBOX Bogalusa, La. KTOC Jonesboro, La. WPTX Lexington PK., Md. WPTX Lexington PK., Md. KDHL Faribault, Minn. KWAA D wadena, Minn. KRAM Las Vegas, Nev. KGEO Albuquerque. N.Mex. WITM Trenton, N.J. WGHQ Kingston, N.Y. WGHQ Kingston, N.Y. WHRD Catke Placid, N.Y. WHRD Catke Placid, N.Y. WBBB Burlington, N.C. WHND Columbus, Ohio KGAL Lebanon. Orga. WIAR Providence, R.I. WIAN Providence, Sc. 1000d 500d 1000d 1000 1000 1000 0001 5000d 1000 5000d 1000 1000 1000 WIAN Providence, R.I. WTND Orangeburg, S.C. KEZU Rapid City, S.Dak, WLIV Livingston, Tenn. KELP EI Paso. Tex. WLIV Livingston, Tenn. KELP EI Paso, Tex. KECK Ddessa, Tex. KTLW Texas City, Tex. KITN Olympla, Wash. KXLY Spokane, Wash. WMMN Fairmont, W.va. WOKY Milwaukee, Wis. 930-322.4 CFBC Saint John, N.B.

 Kc.
 Wave Length
 W.P.

 CICA Edmonton. Alta.
 10000

 CICA Edmonton. Alta.
 10000

 WETO Gadsden. Ala.
 10000

 WETO Gadsden. Ala.
 10000

 KTKN Ketchikan, Alaska
 1000

 KFGK Fiagstaff, Ariz.
 1000d

 KFGK Fiagstaff, Ariz.
 1000d

 KHG Fiagstaff, Ariz.
 1000d

 KHG Fiagstaff, Ariz.
 1000d

 KHQ Paradise, Calif.
 500d

 WKSB Milford. Del.
 500d

 WKXY Sarasota, Fia.
 1000

 WKY Sarasota, Fia.
 1000

 WKCT Bowling Green, Ky. 1000
 WFMD Frederick, Md.

 WKCT Bowling Green, Ky. 1000
 WFMD Frederick, Md.

 WKCT Bowling Green, Ky. 1000
 WGR Battle, Neth.

 WKCT Bowling Green, Ky. 1000
 WGTA Dagilala, Neth.

 WKCT Bowling Green, Ky. 1000
 WGTA Dagilala, Neth.

 WKCT Bornetter, N.H.
 5000

 WKCT Bornetter, N.H.
 5000

 WGTA Darlotte, N.Y.
 1000

 WGTA Darlotte, N.Y.
 5000

 WGTA Darlotte, N.Y.
 5000

 W.P. | Kc. Wave Length W.P. |Kc. WSAZ Huntington, W.Va. KROE Sheridan, Wyo, WLBL Auburndale, Wis. 10004 5000d 940-319.0 CBM Montreal, Que. CIGX Yorkton, Sask. CIGX Yorkton, Sask. CIGX Yorkton, Sask. CIB Vernon, B.C. KHOS Tueson, Ariz. KFRE Fresno, Calil. WINZ Miami, Fla. WMAZ Maeon, Ga. KAHU Waipahu. Hawaii WMIX Maeon, Ga. KAHU Waipahu. Hawaii WMIX Kornon, Ill. KIOA Des Moines, Iowa WCND Shebbyvile, Ky. WYDD New Orleans, La. WCPC Houston, Miss. KSWA Aurora, Mo. KSWA Charleroi, Pa. WGRP Greenville, Pa. WIPR San Juan. P.R. KIXZ Amarillo, Tex. KATQ Texarkana, Tex. WARG Tuakinson, Wis. 950-315.6 940-319.0 50000 10000 250 50000 50000 50000 10000 5000d 10000 1000 1000d 500004 500d 5000d 10000 1000d 250d 10004 10000 1000d 1000d 5000d 250d 250 950-315.6
CKNB Campbellton, N.B. 10000
CKBB Barrie, Ont. 10000
WRMA Montgomery, Ala. 10000
KrSA Ft, Smith. Ark. 10000
KrSA Ft, Smith. Ark. 1000
KrSA Ft, Smith. Ark. 1000
KAH Auburn, Calit. 5000d
WGTA Summerville, Ga. 5000
WGO Valdosta, Ga. 5000
WGO Valdosta, Ga. 5000
WGO Valdosta, Ga. 5000
KBOL Boise. Idaho 5000
KEOL Boise. Idaho 5000
KEOL Forènzo, Ill. 1000d
WALW Indianapolis, Ind. 1000d
WALW Indianapolis, Ind. 1000d
WALW Indianapolis, Ind. 5000
KOEL Oclwein, Iowa 1000
KRS Arbourville, Ky. 1000d
WBVL Barbourville, Ky. 1000d
WBVL Barbourville, Ky. 1000d
WBVL Barbouryille, Ky. 1000d
WBVL Barbouryille, Ky. 1000d
WBVL Barbouryille, Ky. 1000d
WBKH Hattiesburg, Miss. 5000d
KLIK Jefferson City, Mo. 5000d
KLIK Jefferson, N.C. 5000d
KLK Jereenborg, Oreg. 10000
WPET Greensborg, Pa. 5000d
WPCE Garnesborg, Pa. 5000d
WPCE Arnesborg, Pa. 5000d
WPCE Manesborg, Pa. 5000d
WPEN Philadelphia, Pa. 5000d
WBER Moneks Corner, S. C. 5000d 950-315.6 10001 WJET Greensbord, N.C.
50001 KYES Roseburg, Oreg.
1000d WCC Barnesbord, Pa.
1000d WPEN Philadelphia. Pa.
1000d WBER Moncks Corner, S. 1
1000d WSPA Spartanburg, S.C.
1000d WAGG Franklin, Tenn.
1000d WAGG Franklin, Ten.
1000d KPAC Houston, Tex.
5000 KFRC Houston, Tex.
5000 KEL Lubbock. Tex.
10000 WXGI Richmond, Va.
KMER Kemmerer, Wash.
KJR Seattle, Wash.
10000 WERL Eagle River, Wis. S. C.

Wave Length WKAZ Charleston. W.Va. WKTS Sheboygan. Wis. KMER, Kemmerer, Wyo. 5000 500d
 KMER. Kemmerer, Wyo.
 1000

 960—312.3
 CFAC Calgary, Alta.
 10000

 CHAS Halifax, N.S.
 10000

 CKWS Kingston, Ont.
 5000

 WBRC Birmingham, Ala.
 5000

 WWCVG Kodiak, Alaska
 250

 WCVG Kodiak, Alaska
 250

 KOOL Phoenix, Ariz.
 5000

 WGVG Kodiak, Alaska
 250

 KOOL Phoenix, Ariz.
 5000

 KAPE Apple Valley, Callf, 5000
 5000

 KABE Loakacat, Fia.
 5000

 WGRO Lake City, Fla.
 5000

 WIAZ Albany, Ga.
 5000

 WJAZ Albany, Ga.
 5000

 WBCS Salisoury, Md.
 5000

 WBCS Galisbury, Md.
 5000

 WBC Salisbury, Md.
 5000

 KRA Fagers City, Mich.
 5000

 KRA Salenson, Idamath Falis, Minn.
 5000

 KRA Soettsbuff. Nebr.
 1000

 KWS Farmington, N.Mex.
 1000 960-312.3 970-309.1 5000 1000 5000d 5000 1000d 1000d 5000 1000 5000 5000d 5000 d 1000 100001 1000 5000 1000 5000 500 10000 5000d 1000 5000d 5000 5000d 5000a 5000 5000 1000d 5000 500d 1000d 10004 5000 5000 1000d 1000 5000 5000 1000d 1000d 5000 10000 500d 5000 10004 5000d 500d 980-305.9

Kc. Wave Length WSUB Groton, Conn. WRC Washington, D.C. WDVH Gainesville, Fla. WTOT Marianna, Fla. WBOP Persacola, Fla. WGD Pompano Beach, Fla. WRUP Hartwell, Ga. WRIP Rossville, Ga. KUPI Idaho Fails, Idahc KSGM Chestor, III. WITY Danville, III. KREB Shreveport, La. WCAP Lowell, Mass. WDMC Otsego, Mich, WPBC Minneapolis, Mirn. WAPF McComb, Miss. KMBC Kansas City, Mo. KLYQ Hamilton, Nev. KICA Clovis, N. Mex. KTAN Grants, N. Mex. KTMIN Grants, N. Mex. KTMIN Grants, N. Mex. WTRY Troy, N.Y. WAAA Win.Salere, N.C. WOAE Dayton. Ohio WILK Wilkes-Bare, Fa. WAZS Summerville, S.C. WRBI Winnshoro S.C. WP W.P. | Kc. Wave Length 10004 5000 50004 1000d 10004 10000 500d 500d 500 1000 5000d 1000d 500 1000d 5000 1000d 5000d 1000 10004 5000 5000d WONE Dayton, Ohie WILK Wilkes-Barre, F. WAZS Summerville, S.C. WRBI Winnsboro, S.C. KOSJ Deadwood, S.Dak, WSIX Nashville, Tenn, KFRD Rosenberg, Tex. KSVC Richfield, Utah WFHG Bristol, Va. WHEK Chase City, Va. KUTI Yakima, Wash, WHAW Weston, W.Va. WCUB Manitowoc, Wis. 5000 5000 5000 1000 5000 10004 5000 5000 5004 5000d 10004 WCUB Manitowoe. Wis. WPRE Prairie du Chien, WIs. 1000 1000 990—302.8 CBW Winnipeg. Man. CBY Corner Brook, Nftd. WEIS Center, Ala. WWWF Fayette, Ala. WTCB Flomaton, Ala. KTKT Tueson, Ariz. KKIS Pittsburg, Calif. KLIR Denver, Colo. WBZY Torrington, Conn. WFAB Miami, Fla. WDWD Dawson, Ga. WHO0 Orlando, Fla. WGML Hinesville, Ga. KTRG Honolulu, Hawail WCAZ Carthage, III. WITZ Jasper, Ind. KAYL Storm Lake, Iowa KASL Russell, Kans. 990-302.8 50000 10000 250 1000d 500 d 10000 5000 10004 1000d 1000d 5000 10000 10004 250d 5000 10004 1000d Witz Jasper, Ind. KAYL Storm Lake, Iowa KRSL Russell, Kans. WJMR New Orieans, La. KRIH Rayville, La. WCRM Clare. Mich. WARM Clare. Mich. WARM Clare. Mich. WSCN Monett, Mo. KSVP Artesia. N.Mex WEEB Southern Pines, N.C. WJEH Gallipolis, Ohio WTIG Massillon, Ohio KRKT Albany, Oreg. WIBG Philadelphia. PA WVSC Somerset. Pa. KWAM Memphis. Tenn. KTRM Beaumont, Tex. KAML Kenedy. Tex. KAML Kenedy. Tex. KNIN Wichita Falls, Tsx. KDYL Tooele, Utah WNRV Narrows. Va. WANT Richmond. Va. WKLS Sparta. WIS. 1000-299.8 250d 250d 250d 250d 250d 250d 250d 250d 1000 5000d 1000d 250d 250d 50000 250d 10000 50000 1000d 10000 10000 1000d 1000 250d 10000 1000d 1000d 1000d 250 1000-299.8 1000-277.5 CKBW Bridgewater, N.S. 10000 WCFL Chicago. III. 50000 KTOK Okia. City. Okka. 5000 KSTA Coleman. Tex. 250d KGRI Henderson. Tex. 250d WHWB Rutland. Vt. 1000d WHWB Charlotte Amalle, Virgin Islands 1000 "Corp Ceastle Wash. 50000 KOMO Seattle, Wash. 50000 1010-296.9 500004 50000 500d 1000 10000 5000 1000
 50000
 980-305.9

 50000
 CKNW New Westminster, 5000
 CKNW New Westminster, 5000
 CKMJ Palma Sprgs., Calif. KSAY San Fran. Calif. KSAY San Fran. Calif. S000 CBV Quebec, Que. 5000
 10000

 5000 CBV Quebec, Que. 5000
 5000 CBV Quebec, Que. 5000
 5000 CBV Quebec, Que. 5000
 WINQ Tampa, Fla. 10000

 10000 CKRM Regina, Sask. 5000 WXLF Clanton, Ala. 5000 WXLF Glanton, Alaska 5000 KKAP Fresno, Calif. 5000 KKPW Los Angeles, Calif. 5000 KKUP Slass, Calif. 5000 KKUP Slass, Calif. 5000 KKIP Slass, Calif. 5000 KKUP Slass, Calif 100004 1000d Florida 2500d 50000d 50000d 1000d 500d 1000d KIND Independence, Kans. KOLA DeRidder, La. 250d 1000d 131

Kc. Wave Length WSID Baltimore, Md, WMRT Lansing, Mich. WGHB Maplewood, Minn. WMOX Meridian, Miss. KCHI Chillicothe, Mo. b0001 5000d KCHI Chillieothe, Mo. KXEN Festus, Mo. KRVN Lexington, Nebr. WCNL Newport, N.H. WINS New York, N.Y. WABZ Albermarle, N.C. WAFGW Black Mountain, 250d 25000d 250d 50000 1000d Ċ. NC 10000d 1000d WELS Kinston, N.C. WIOI New Beston, Ohio KBEV Portland, Oreg. 1000d KBEY Portland, Orge, 1 WUNS Lewisburg, Pa, WHIN Gallatin, Tenn, 1 WORM Savannah, Tenn, KBUY Amarillo, Tex. KDDA Housten, Tex. I KAWA Waco, Tex. WELK Charlottesville, Va. WMEV Marion, Va. WMEY Marion, Va. WST Berkeley Sprs., WVA. WST Stevens Pt., Wis. P0001 250d 1000d 250d 5000 1000d 100001 1000d h0001 5000d 250d 1000d 1020-293.9 KGBS Los Angeles, Callf. WCIL Carbondale, III. WPEO Peoria, III. 50000 1000d 10004 KDKA Pittsburgh, Pa. 50000 1030-291.1 WBZ Boston, Mass. 50000 KCTA Corpus Christi, Tex. 50000d 1040-288.3 KHVH Honolulu, Hawall WHO Des Moines, iowa KIXL Dallas, Tex. 5000 50000 10004 1050-285.5 CFGP Grande Prairie, Atta. 10000 CKSB St. Boniface, Man. 10000 CHUM Toronto, Ont. 5000 WHFS Alexander City, Ala. 1000d WCRS Sottsboro, Ala. 250d WCRI Scottsboro, Ala. KVWM Show Low. Ariz. KVLC Little Rock, Ark. KOFY San Mateo, Calif. KLMO Longmont, Colo. WISB Crestview, Fla. WIYY Jacksonville, Fla. WHBO Tampa, Fla. WHBO Tampa, Fla. WAUG Augusta, Ga. WBIE Marietta, Ga. WMNZ Montezuma, Ga. 250d 1000d 10004 1000d 250d 1000d 250d 5004 5000d 5000d 500d 250d WAUG Augusta, Ga. 5 WBIE Marietta, Ga. WMZ Montezuma, Ga. WDZ Decatur, III. 1 KNCO Garden City, Kans. 1 WNES Central City, Ky. KLPL Lake Providence, La. KVPI Villa Platte, La. WMSG Oakland, Md. WQMR Silver Sprg., Md. 1 WPAG Ann Arbor, Mich. S KLOH Pipestone, Minn. 1 WACR Columbus, Miss. 1 KMIS Portagoville, Mo. KSIS Sedalia, Mo. WSTS Massena, N.Y. WBNC Conway, N.H. WSTS Massena, N.Y. WHN New York, N.Y. WSTS Massena, N.Y. WSTS Massena, N.Y. WSTS Massena, N.Y. KEN Baldwinsville, N.Y. WSTS Massena, N.Y. WSTS Massena, N.Y. WSTS Massena, N.Y. WSTS Massena, N.Y. WSTS Master, N.Y. WSTS Massena, N.Y. WSTS Master, N.Y. KUBP Pendleton, Oreg. KKUB Pendleton, Oreg. KKUB Sparta, Tenn. KLEN Killeen, Tex. WMAT Sparta, Tenn. KLEN Killeen, Tex. WGAT Gate City. Va. WBAT Sparta, Ya. WGAT Gate City. Va. WBAT Sparta, Ya. WSTS Mather, Ya. KMAS Kirkland, Wash. I WCCS Staton, Tex. WAT Sparta, Tenn. KLEN Killeen, Tex. KMAS Staton, Tex. WAT Sparta, Tenn. KNEX Kirkland, Wash. I WCCS Parkersburg, W.Y.S WCCS Parkersburg, W.Y.S WCCS Parkersburg, W.Y.S 10000 1000d 500d 250d 2504 500d 10004 5000d 1000d 1000d 250d 10000 500d 1000d 250d 50000 1000d 1000d 1000d 1000d 250d 1000d 1000d b0001 1000 h0001 1000d 250d 250d 250d 250d 250d 1000d 1000d 10004 WCEF Parkersburg, W. Va. WECL Eau Claire, Wis, WLIP Kenosha, Wis. KWIV Douglas, Wyo. 5000d 1000d 2504 250d 1060-282.8 CFCN Calgary, Alta, CJLR Quebee, Que, KUPD Tempe, Ariz, KPAY Chico, Calif. WNOE New Orleans, La, 00001 10000 500 WNDE New Urleans, La, WHFB Benton Harbor, Mich. 50000 1000d WMAP Monroe, N.C. WHDF Canton, Ohio 250d 1000d WHITE'S RADIO LOG WJEM Valdosta, Ga. 132

W.P. |Kc. Wave Length W.P. | Kc. WRCV Philadelphia, Pa. WRJS San German, P. R. 50000 250 10000 1070-280.2 1070—280.2 CFAX Victoria, B.C. CBA Sackville, N.B. CHOK Sarnia, Ont. WAPI Birmingham, Ata. KNX Los Angeles, Calif. WVGG Coral Gables, Fia. WIBE Indianapolis, Ind. KFDI Wichita, Kans. KHMO Hannibal, Mo. WHPE High Point, N.C. WHIA Areelbo, P.R. WFLI Lookout Mitn., Tenn. WDIA Memphis. Tenn. KOPY Alice. Tex. WKOW Madison. WIs. 10800—277.4 10000 50000 5000 50000 50000 1000d 50000 10000 5000 1000d 10000 50000 1000 10000 1080-277.6 KSCO Santa Cruz, Calif. KSCO Santa Cruz, Calif. WTIC Hartford, Conn. WKLO Louisville, Ky. WOAP Owosso, Mich. WUFO Amherst, N.Y. WEWO Laurinburg, N.C. KWJJ Portland, Oreg. WEEP Pittsburgh, Pa. 10000 50000 5000 1000 1000d 1000d KRLD Dallas. Tex. 50000 1090-275.1 1090-2/5.1 CHEC Lethbridge, Alta, CHRS St. Jean, Que, KAAY Little Rock, Ark. WCRA Emigham.III. KHAI Honolulu, Hawaii KNWS Waterloo, Iowa WBAL Baltimore, Md, WILD Boston, Mass, WMUS Muskegon, Mich. KING Seattle, Wash. 5000 10000d 50000 250d 5000 1000d 50000 1000d b0001 50000 1100-272.6 KFAX San Francisco, Calif. 50000 WLBB Carroliton, Ga. 250d WHLI Hempstead, N.Y. 10000d KYW Cleveland, Ohio 50000 WGPA Bethlehem, Pa. 250d 1110-270.1 CFML Cornwall, Ont. CFML Cornwall, Ont. CFTJ Galt, Ont. KRLA Pasadena. Calif. WALT Tampa, Fla. KIPA Hilo. Hawaii WMBI Chicaso, III. KFAB Omaha. Nebr. WBI Charlotte, N.C. WBND Bend, Ores. WNAR Norristown, Pa. WVJP Caguas, P.R. WHIM Providence, R.I. 1000 250 50000 50000d 1000 5000d 50000 50000 5000 500d 250 10004 1120-267.7 WUST Bethesda. Md. KMOX St. Louis. Mo. WWOL Buffalo, N.Y. KCLE Cleburne, Tex. 250d 50000 1000d 250d 1130--265.3 CKWX Vancouver, B.C. KRDU Dinuba, Calif. KSDO San Diego, Calif. KLEI Kailua, Hawaii KWKH Shreveport. La. WCAR Detroit. Mich. WDGY Minneapolis. Minn, WDEW New York, N.Y. 50000 1000 1000 50000 50000 50000 1140-263.0
 IT40-203.0

 CKXL Calgary, Alta.
 10000

 CKXL Calgary, Alta.
 50000

 KRAK Sacramento, Calif.
 50000

 WMIE Miami, Fla.
 10000

 VGEM Boise, Idaho
 10000

 WSIV Pekin, III.
 10000

 WIP Oklahoma City, Okla. 10000
 KIPA Oklahoma City, Okla. 10000

 KIPA Oklahoma City, S.Dak. 10000
 KIPA Solution Soluty Falls, S.Dak. 10000

 KORC Mineral Wells, Tex.
 5000

 WIPA Richmend, Va.
 50000
 1150-260.7 1150-260.7 CKSA Lloydminster, Alta. CHSJ Saint John, N.B. CKOC Hamilton, Dnt. CKX Brandon, Man. CKTR Three Rivers, Que. WBCA Bay Minette, Ala. WGEA Geneva, Ala. WJRD Tuscaloosa, Ala. KCKY Coolidge, Ariz. KXLR No. Little Rock, Ark KFKD Los Angeles, Calif. KAKA Dos Angeles, Calif. KAKA Cos Angeles, Calif. KAKA Cos Angeles, Calif. KAKA Cos Angeles, Calif. KAKA Cos Angeles, Calif. WATM Fanjewood, Colo. WCAX Middletown, Conn. WDEL Wilmington. Del. WTM Tampa, Fla. WFM Fort Valley, Ga. 10000 10000 10000 10000 1000d F0001 5000 Ark. 5000 2500 5000 ali1. 5000 10004 500d 5000 Fla. 1000 5000d 1000d

Wave Length WGGH Marion, III. WJRL Rockford, III. KWKY Des Moines, Jowa KWKY Des Moines, Iowa KSAL Salina, Kans. WMST Mt. Sterling, Ky. WLOC Mumfordville, Ky. WJBO Baton Rouge, La. WGHM Skowhegan, Maine WHMC Gaithersburg, Md. W BO Baton Rouge, La. 5000 W GHM Skowhegan, Maine 5000d W HMC Gaithersburg, Md. 1000 W COP Boston, Mass. 5000 W COP Boston, Mass. 5000 W COP Boston, Mass. 5000 W CASM Albany, Minn. (1000 W XASM Albany, Minn. (1000 W XASM Albany, Minn. (1000 W SASM Stage Beach, Mo. 1000u K KEN Shelby, Mont. (1000 W BAG Burlington, N.C. (1000 W BAG Burlington, N.C. (1000 W GBR Goldsboro, N.C. (1000 W GBR Goldsboro, N.C. (1000 W GUE Cuyahoga Falls, Ohio (1000 W CUE Cuyahoga Falls, Wiss, 5000 W KAG Klamath Falls, Core, 5000 W KHO Nuthington, Pa. 5000 W KHO Aclester, Okla. (1000 W KPA New Kensington, Pa. (1000 W KYA New Kensington, Pa. (1000 K KE Morristown, Tenn. (1000 K KIZZ EI Paso, Tex. (1000 K KIZZ EI Paso, Tex. (1000 K KIZZ EI Paso, Tex. (1000 K KIZ Kuranah, KIZ KURANAH, (1000 K KIZ KURANA KRET Vancouver, wasn. WABH Deerfield, Va. WELC Weich, W.Va. WAXX Chippewa Falls, Wis. WISN Milwaukee, WIs. 1160-258.5 WJJD Chicago, Ill. 50000 KSL Salt Lake City, Utah 50000 1170-256.3 1170-256.3 CFNS Saskaton, Sask. WCOV Montgomery: Ala. KCBQ San Diego. Calif. KUDK San Jose, Calif. KUDK Jan Jose, Calif. KUDH Unolulu, Hawail WLBH Mattoon, Ill. KSTT Davenport, Iowa KVOO Tulsa, Okla. WLCD Ponce, P.R. KPUG Bellingham, Wash. WWVA Wheeling, W.Va. 1180-254.1 WLDS Jacksonville, III. WHAM Rochester, N.Y. 1190-252.0 KROS Tolleson, Ariz. KROS Tolleson, Ariz. KEZY Anaheim, Calif. KNBA Valejo, Calif. WOWO Ft. Wayne, Ind. WANN Annapolis, Md. WKOX Fram'gham, Mass, WLIB New York. N.Y. KEX Portland, Oreg. KLIF Dallas, Tex. 1200-249.9 WOAI San Antonio, Tex. 1210-247.8 KZOO Honolulu, Hawaii WCNT Centralia, III. WKNX Şağınaw, Mich. WADE Wadesboro, N.C. WAVI Dayton, Ohio WCAU Philadelphia, Pa. 10000d 1220—245.8 CJOC Lethbridge, Alta. CKDA Victoria, B.C. CJRL Kenora, Ont. CICW Moncton, N.B. CJSS Cornwall, Dnt. CKSM Shawinigan, Quebec WEZB Birmingham, Ala. WABF Fairhope, Ala. KVSA McGehee, Ark. KLIP Fowler, Calif, KKAR Pomona, Calif, KKAR Pomora, Calif, KKSC Denver, Colo, WDEE Hamden, Conn, WDTY Arlington, Fla. WSAF Sarasota, Fla. WSET Thomaston, Ga. WJSFT Thomaston, Ga. WJFO LaSalle, III. 1220-245.8 1000d 1000d 250d 1000d 10004 1000d WLPO LaSalle, ill WKRS Waukegan, WSLM Salem, Ind. LaSaile, †11. Waukegan, 111.

W.P. | Kc. Wave Length W.P. KJAN Atlantic, Iowa KOUR Independence, Iowa KOFO Ottawa, Kans, WFKN Franklin, Ky, 50004 250 d KUJAN Atlantic, lowa KOUR Independence, lowa KOFO Ottawa, Kans. W FKN Franklin, Ky. KBCL Shreveport, La. W BKI Senford, Maine W LBI Denham Springs, La. W SCH Hastings, Mich. W AVN Stillwater, Minn. 5 W MDC Hazlehurst, Miss. KBHM Branson, Mo. I KLPW Union, Mo. I KLPW Union, Mo. I W KMT Kiens Min., N.C. I W KMT Kings Min., N.C. I W KMT Klene, N.H. I W KMT Klevel, N. Solar KGYN Weiteville, N.C. I KEYO Oakes, N.Dak. I KEYO Oakes, N.Dak. I KEY Goldbaach, Oreg. KGYN Waiterboro, S.C. I W HL Camden, Tenn. W ALD Waiterboro, S.C. I W FL Camden, Tenn. KYLL Livingston, Tex. KZEE Weatherford, Tex. KZST Auburn, Wash. I CASY Aburn, Wash. I CASY Aburn, Wash. I CASY Courschild, Wis. 250d 500d 1000 250d 5000 2504 500d 250d 1000d 250d 5000 5000d 1000d 250d 50004 250d 1000d 1000d 1000d 5000d 10004 1000d 10004 10004 50000 250d 1000d 1000 1000d 1000d 10004 250d 1000d 2504 250d 250d 10004 5000d 250d 1000d WRNE Wis. Rapids, Wis. 1230—243.8 CHFC Churchill, Man. CFKL Schefferville, Que. CFGR Gravelbourg, Sask. CFHR Hay River, Nwt. GFYT Dawson City, Yukon T. CFPA Port Arthur, Ont. CKLD Thetford Mines, Que. CKMP Midland, Ont. VOAR St. John's, Nfd. CKVD Val D'Or, Que. WAUD Auburn, Ala. W BHP Huntsville, Ala. W BHP Huntsville, Ala. W BHP Huntsville, Ala. W BHP Huntsville, Ala. W HEY Instealosa, Ala. KIFW Sitka, Alaska KITO Safford, Ariz. KATO Safford, Ariz. KATO Safford, Ariz. KINO Winslow, Ariz. ICON Conway, Ark. KFPW Ft. Smith, Ark. KBE Baetrsheld, Calif. KWC Earstow, Calif. KWC Stoked, Calif. KMC 500d 1230-243.8 250 250 250 100 100 1000 250 250 50004 5000 100 1000 1000 250 1000 250 10000 250 250 250 10000 250d 250 1000 50000 250 1000 1000 1000 50000 1000 250 250 1000 1000d 50000 1000 250 250 1000 250 250 250d 1000 1000d 1000d 50000 1000d 1000 10004 50000 WUNN Lakelaid, Fla. 1000 WMAF Madison, Fla. 1000 WSBB New Smyrna Bch., Florida 1000 WCNH Quincy, Fla. 1000d WSNH Quincy, Fla. 1000d WSNH Quincy, Fla. 1000d WBIA Augusta, Ga. 1000d WBIA Augusta, Ga. 1000d WBIA Jublin, Ga. 1000 WALI Dublin, Ga. 1000 WAXW Wayeross, Ga. 1000 WAXW Wayeros, Ga. 1000 WAXW Barley, Idaho 250 KRXK Rexburg, Idaho 250 KRXK Rexburg, Idaho 250 KRXK Rexburg, Idaho 1000 WJOB Hammond, Ind. 1000 WHOP Moline, III. 1000 WHOS Sparta, III. 250 WJOB Hammond, Ind. 1000 WHO Popkinsville, Ky. 1000d WHOP Hopkinsville, Ky. 1000d WHOF Haltimore, Md. 1000 WMDB No. Adams. Mass. 1000 WANB No. Adams. Mass. 1000 1000 50000 50000 1000 000d 10004 250d 50000 10000 10000 1000 10000 1000 10000 1000 250d h0001 1000d 250d 1000d WMNB No. Adams. Mass. 500d WEX Salem, Mass. 250d WNEB Worcester, Mass. 1000d WJEF Grand Rapids, Mich. 1000d WIKB Iron River, Mich. 5000d WMPC Lapeer, Mich. 1000 1000 1000 250

1000d

Kc,
 Kc.
 Wave Length
 W.P.
 Kc.
 Wave Length

 WS00 Sit. Ste, Marie, Mich. 1000
 KVRD Cottonwood. Ariz.
 Wave Length

 WSTR Sturgis, Mich.
 1000
 KVRD So. of Globe, Ariz.

 KXHA Alexandria, Minn.
 250
 KVRC Arkadelphia, Ark.

 WKLK Cloquet, Minn.
 1000
 KWRK Stuttgart, Ark.

 KGHS Internat'l Falls, Minn.
 250
 KVPC Pasadena, Calif.

 KMRB Morris, Minn.
 250
 KPLY Crescent City, Calif.

 KMRB Morris, Minn.
 250
 KPC Pasadena, Calif.

 KWAR Corinth, Miss.
 1000
 KROY Saramento. Calif.

 WMA Corinth, Miss.
 1000
 KROS Sarawilie, Miss.

 WSSS Starkville, Miss.
 250
 KSON San Diego, Calif.
 Wave Length
 WHSY Hattiesburg, Miss.
 1000

 WSSO Starkwille, Miss.
 250

 WASY Yazoo City, Miss.
 250

 WASY Yazoo City, Miss.
 250

 KODE Joplin, Mo.
 1000

 KUM Lebanon, Mo.
 1000

 KHOM Moberly, Mo.
 1000

 KHOM Hozeman, Mont.
 1000

 KHDW Hardin. Mont.
 1000

 KLCB Libby, Mont.
 250

 KICK Alasings. Nebr.
 250

 KLCB Libby, Mont.
 250

 KLAS Las Vegas, Nev.
 250

 KLAS Las Vegas, Nev.
 250

 KLAS Las Vegas, Nev.
 250

 KOT Gening, N.H.
 1000

 WAOU Berlin, N.H.
 1000

 KAS Hasson, N.H.
 250

 KYV A Gallup, N. Mex.
 250

 KYV A Gallup, N. Mex.
 100

 KAS Y Posweil, N. Mex.
 100

 WH LG Hudson, N. Y.
 1000

 WH Z Himira, N.Y.
 1000

 WFAY Emira, N.Y.
 1000

 WFAY Ashevite Pilains, N.Y.
 1000

 WFAY Ashevite, N.C.
 1000

 WF K MUR Murray, Utah K KOAL Price, Utah W DY Burlington, Va. W BEI Abingdon, Va. W FVA Fredericksburg, Va. W FVA Fredericksburg, Va. W FVA Fredericksburg, Va. K W YZ Evereit, Wash. K KY K Spokane, W ash. K REW Sunnyside, Wash. W TAP Parkersburg, W.Va. W HDY Appleton, W is. W CLO Janesville, W is. K VOC Casper, W Yo. 10000 1000 1000 250 1000 1000 1000 0001 00001 1000 1240-241.8 ZNS-2 Nassau, Bahamas 250 ZNS-2 Nassau, Dahamis CFLM La Tugue, Que. 1000 CFNW Norman Wells, Northwest Terr. 100 Northwest Terr. CFPR Prinee Rubert, B.C. CFVR Abbottsford, B.C. CJCS Stratford, OR. CJCS Stratford, OR. CJCS Stratford, OR. CKBS St. Hyacinthe, Que. CKCS LaSarre. Que. WERJ Brewton, Ala. WPRN Butler, Ala. WOWL Fiorence, Ala. WARF Jasper, Ala. 250 250 250 250 250 250 250 1000d

W.P. Kc. Wave Length W.P. Kc. 250 1000 250 250 250 1000 100 1000 KNNO San Derina Ulito, KSON San Diego, Calif, KSUA Santa Maria, Calif, KSUE Susanville, Calif, KEDE Golo. Sprgs, Colo. KEDE Monte Vista, Colo. KSLV Monte Vista, Colo. KCRT Trinidad. Colo. WWCO Waterbury, Conn, WECO Eustis, Fla. WICN Eustis, Fla. WICN Fort Myers, Fla. WHMB Molbourne, Fla. WHMB Molbourne, Fla. WHMB trizg.rald, Ga. WDUN Gainesville, Ga. 1000d 250 1000 1000 1000 250 1000 250 250 1000 WFOY St. Augustines Fla.
WFOY St. Augustines Fla.
BHB Fitzg raidi Ga.
WLAG Lagrangi Ga.
WBML Mater Ga.
WBML Mater Ga.
WBML Mater Ga.
WFAX Thomsoville. Ga.
WFAX Thomson, Ga.
WFAX Thomson, Ga.
WFAX Thomson, Ga.
WTA Thomson, Ga.
WEBC Chicago. III.
WEBC Chicago. III.
WEBC Chicago. III.
WEBC Chicago. III.
WEBC Stering. III.
WTA Springfield, III.
WSDR Stering. III.
WTA Springfield, III.
WSDR Stering. III.
WTA Springfield, III.
WSDR Stering. III.
WSCR Spencer, Iowa
KIUL Garden City, Kans.
KALE Wichita. Kans.
wTIM Maysville, Ky.
WSFC Somerset, Ky.
KASO Minden, La.
KANE New Iberia, La.
WGCM Greenwood, Maine
JCEM Cambridge, Md.
WJA Greenmend, Mich.
WJD Ishpeming, Mich.
WJD Sheening, Mich.
WJD Sheening, Mich.
WJNN St. Cloud, Minn.
WFGM Greenwood, Miss.
WGCM Gre 1000 1000 1000 1000 250 250 250 250 1000 1000d 1000 250 500d 1000d 1000 1000 1000 1000 250 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 250 1000d 1000 100 1000 250 250 250 1000d
 KODE Joplin, Mo.
 1000u

 KNEM, Nevada, Mo.
 250

 KBMY Billings, Mont.
 600

 KLTZ Glasgow.
 Mont.
 250

 KBL Helena, Mont.
 250

 KFOR Lincoln, Nebr.
 1000

 KODY North Platte, Nebr.
 1000

 KSJ Bridgeton, N.
 1000

 KALZ Closishad.
 N.Mex.

 G '3 Freeport.
 N.
 1000

 WJTM Jamestown, N.Y.
 1000

 WSY Steneetady.
 N.C.
 1000

 W 10004 250 250 WBIR Knoxville, Tenn. 1000 WKDA Nashville, Tenn. 1000 WENK Union City, Tenn.

W.P. Kc. Kc. Wave Length KVLF Alpine, Tex. KEAN Brownwood, Tex. KORA Bryan, Tex. KOCA Kilgore, Tex. KSCX Raymondville, Tex. KXCK Gonora, Tex. KXCK Gonora, Tex. KXCX Sweetwater, Tex. WSKI Montpelier, Vt. WSKV Potersburg, Va. WTON Staunton, Va. KXLE Ellensburgh, Wash. KGY Olympia, Wash. WKUr Bluefield, W.Va. WTD Charleston, W.Va. WONT Manitowce, Wis. WOBT Rhinelander, Wis. WJMC Rice Lake, Wis Wave Length 1000 1000 250 250 250 iññň 1000 1000 250 1000 1000 1000d 1000 WOBT Rhinelander, Wis. WJMC Rice Lake, Wis. KFBC Cheyenne, Wyo. KEVA Evanston, Wyo. KASL Newcastle, Wyo. KRAL Rawlins, Wyo. KTHE Thermopolis, Wyo. 1000 1000 250 1000 1250-239.9 CHWO Oakville. Ont. CKOM Saskatoon, Sask. WZOB Ft. Payne, Ala. WETU Wetumpka. Ala. KAKA Wickenburg, Ariz. KHIL Willoox, Ariz. KALU Little Hock, Ark. KHOT Madera. Calif. KTMS Santa Barbara. Cal 1000 5000 10000 1000d 5000d 500d 1000d
 KrAY Frystieville, Ark.
 10000

 KrAY Frystieville, Ark.
 10000

 KAY Frystieville, Ark.
 1000

 KHOT Madera. Calif. Calif.
 10000

 KITS Santa Barbara, California
 10000

 KITS Santa Barbara, California
 10000

 KITS Lukiah, Calif.
 5000

 KITC M Golden, Colo.
 10000

 WNER Live Oak, Fila.
 5000

 WITA Tampa, Fila.
 5000

 WITA Hadison, Ga.
 10000

 WITZ Streator, III.
 5000

 WYTH Madison, Ga.
 10000

 WRA Prinecton, Ind.
 10000

 WRA Prinecton, Ind.
 10000

 WRA Prinecton, Ind.
 10000

 WRA Prinecton, Ind.
 10000

 WRA Prinecton, Mo.
 5000

 WHC Koctsville, Ky.
 5000

 WHC Macodary Mins.
 5000

 WHC Koctsville, Ky.
 5000

 WHC Manchester, N.H.
 5000

 WHC Manchester, N.H.
 5000

 WHC Marchan, Mo.
 5000

 WHC Manchester, N.H.
 5000

 WHC Manchester, N.H.
 1000d 1000 500d 1260-238.0
 1260-238.0

 CFRN Edmonton, Alta.
 50000

 OYBU Cebu, P.i.
 1000

 WCRT Birmingham, Ala.
 50000

 KPIN Casa Grande, Ariz.
 1000

 KCCB Corning, Ark.
 5000

 KBLC Nashville, Ark.
 5000

 KBLC Nashville, Ark.
 5000

 KGL San Fernande, Calif.
 5000

 KYA San Francisco.
 5000

 WMMM Westport. Conn.
 10000

 WMKK Newark. Del.
 5000

 WHTW Fort Walton Beach,
 5000

 WAFTW Fort Walton Beach,
 5000

 WWPE Paistas. Flat.
 1000
 250 1000 WAME Miami, Fia. 1000 WAME Miami, Fia. 1000 WAME Miami, Fia. 1000 WAB Baxiay, Ga. 250 WBBK Blaksly, Ga. 250 WBBK Blaksly, Ga. 250 WIH East Point, Ga. 1000 KIFI Idaho Falls, Idaho 1000 KVEI Weiser, Ida 1000 WBE Weiser, Ida 1000 5000d 1000d 5000d 5000 1000d

W.P. Wave Length Kc. Wave Length KWHK Hutchinson, Kans. WXOK Baton Rouge, La. WZEE Boston, Mass. WALM Albion, Mieh. WBL Holland, Mich. KBOX Crookston, Minn. KOUZ Hutchinson, Minn. KOUZ Hutchinson, Minn. WGVM Greenville, Miss. WGX Sprinstheld, Mo. KIMB Kimball, Nobr. WBUD Trenton, N.J. KVSF Santa Fe. N.Mox. WBNR Beacon. N.Y. WGNR Asheboro, N.C. 1000 1000d 5000 1000 5000d 1000 10004 51)00d 5000d 5000 5000 1000d 5000 1000 10004 5000 5000d WGWR Asheboro, N.C. WCDJ Edenton, N.C. WDDK Cleveland, Ohlo WNXT Portsmouth, Ohlo KWSH Wewoka Sominole, KMCM MeMinnville, Oreg. WWYN Erie, Pa. WPHB Philipsburg, Pa. looud 5000 5000 1000 homa 1000 5000d WISU Ponce, r.K. WMUU Greenville, S.C. 1000 5000d WISU Fonce, r.R. WMUU Greenville, S.C. WJOT Lake City, S.C. KWYR winner, S.Dak. WNCH Church Hill, Tenn. WDKN Diekson, Tenn. KDKN Diekson, Tenn. KPSD Falfurias, Ten. KPSD Falfurias, Tex. KTHE Tulia, Tex. KTHE Tulia, Tex. KTHE Taylor, Tex. WCHY Chariottesville, Va. WBCR Christiansburg, Va. KWIQ Moses Lake. Wash. WVIW Grafton, W.Ya. WIS Back River Falls, WEKZ Monroe, Wis. 10004 000d 10004 10004 1000d £000d 1000d 500d 10004 1000d 1 n0 0 d 10004 1000d 500d 1000d WEKZ Monroe, Wis. KPOW Powell, Wyo. 5000 1270-236.1 CHAT Medielne Hat, Alta. CHWK Chilliwack, B.C. CJCB Sydney, N. S. CFGT St. Joseph d'Alma, 10000 10000 10000 CFGT St. Joseph d'Alma, Queb WGSV Guntersville, Ala. WSIM Prichard, Ala. KBYR Anchorage, Alaska KDII Holbrook, Ariz. KADL Pine Bluff, Ark. KCOK Tulare, Calif. WHOG Naples, Fla. WHNT Orlando. Fla. WHY Orlando. Fla. WHY Carlersville, Ga. WJJC Commerce, Ga. KNDI Honolulu, Hawaii KTFI Twin Falls, Idaho WEIC Charleston. III. WHBF Rock Island. III. WCMR Elkhart, Ind. WCX Gary, Ind. WCX Gary, Ind. KSB Liberal, Kans. WAIN Columbia, Ky. 1000 Quebec 10004 10000 1000 10004 5000d 5000d 500d 50000 5000 500d 50004 1000d 5000 1000d 5000 5000 WCMR Elkhart, ind. WWCA Gary, ind. WGRX Madison, ind. KSCB Liberal, Kans. WAIN Columbia, Ky. WFUL Futton, Ky. KVCL Winnfield, La. WBPR Springfield, Mass. WXYZ Datroit, Mieh. KWEB Rochester, Minn. WVOM Joka, Miss. WLSM Louisville, Miss. KUSM St. Joseph, Mo. KUSM Clusiville, Miss. KUSM St. Joseph, Mo. KUSM Clusiville, Miss. KUSM St. Joseph, Mo. KUSM St. Joseph, Mo. KUSM St. Joseph, Mo. KUSM Clusiville, Miss. KUSM St. Joseph, Mo. WDL Vinisgara Fails, N.Y. WDL Vinisgara Fails, N.Y. WHLD Niagara Fails, N.Y. WLSM Labaron, Pa. WBR Labanon, Pa. WBR Spring, Tox. KHEM Big Spring, Tox 1000 1000d 10001 b0001 b00011 1000d 5000 5000 500d 1000d 1000d 5000 500d 1000d 100d 1000d 1000 5000d 10004 500d 5000 10004 5000d 1000 10001 1(i00d 5000 1000d 10004 5000d 500d 5000d 1280-234.2 CHIQ Hamilton, Ont. CJMS Montreal, Que. CKCV Quebec. Que. CJSL Estevan, Sask. 5000 10000 10000 1000 5000 WHITE'S RADIO LOG 132

Wave Length W.P. Kc. Kc. WPID Piedmont, Ala. 1000d Tuscaloosa, Ala. 5000 Phoenix, Ariz. 1000d Newport, Ark. 1000d Arroyo Grande, Calif, 500d WNPT KNBY KCGH KFOX Long Beach. Calif. 5000 KFOX Long Beach. Calif. 1000 KCJH San Luis Obispo, Cal. 5000 KJDY Stockton, Calif. 1000 WSUX Seaford, Del. 10000 WSDX Staturd, Det. WDSP Defuniak Springs, Florida WQIK Jacksonville, Fla. WIPC Lake Wales, Fla. WYND Sarasota, Fla. 5000d
 WQIK Jacksonville, Fia.
 50000

 WIPC Lake Wales, Fia.
 10000

 WYDD Sarasota, Fia.
 50000

 WYDD Sarasota, Fia.
 50000

 WYDD Sarasota, Fia.
 50000

 WYDD Sarasota, Fia.
 50000

 WGE Fevensville, Ind.
 50000

 WGE Fevensville, Ind.
 50000

 WGE Fevensville, Ind.
 50000

 WGE Verora, Ill.
 10000

 WGE Fevensville, Ind.
 5000

 WGE Verora, Ill.
 10000

 WGE Verora, Ill.
 5000

 WE M Freheburg, La.
 5000

 WF C Alma Ume, Mass.
 5000

 WTCN Minnaapolis, Minn.
 5000

 KYO Potosi, Mo.
 10000

 KYO Potosi, Mo.
 50000

 WAD New York, N.Mex.
 50000

 WAD Neenhester, N.Mex.
 50000

 WAD Neenhester, N.Mex.
 5000

 WAND Neechester, Pa.
 5000

 WAD New Sotland Naek, N.C.
 5000

 WAD Neechester, Pa.
 5000

 WAD Neechester, Pa.
 5000

 WAL Jackson, Ohio
 10000< 5000d 1000d 500d WNAM Neenah, Wis. 5000 1290-232.4 CFAM Altona, Man, CKSL London, Ont, WTHG Jackson, Ala, WSHF Sheffield, Ala, WMLS Sylacauga, Ala, KEOS Flagstaff, Ariz, KCUB Tucson, Ariz, KUOA Siloam Sprgs, Ark, KUSA Chico, Calif, KPER Giroy, Calif, KMEN San Bernardino, California 10000 5000 1000d 1000d 1000 1000 5000d 5000d 5000d California 5000 California 5000 KACL Santa Barbara, Calif. 5009d WCCC Hartford, Conn. 500d WTUX Wilmington, Del. 1000d WTMC Ocala. Fla. 5000 WSCM Panama City Beach, Elocida. 500d WSCM Panama City Beach, WIRK W. Palm Bch., Fla. 500d WDEC Americus, Ga. 1000d WTOC Savannah, Ga. 1000d WTOC Savannah, Ga. 5000 WIRL Peorla, Ill. KWNS Pratt, Kansas 5000 WCBL Benton, Ky. 5000d WHIL Nies, Mich. 5000 WNIL Nies, Mich. 500d WOIA Saline, Mich. 500d WOIA Saiine, Mich. KBMO Benson, Minn. WBLE Batesville, Miss. KALM Thayer, Mo. KGVO Missoula, Mont, KOIL Omaha. Nobr. WKNE Keene, N.H. KSRC Socorro, N.M. WKLI Babylon, N.Y. WHBY Hickory, N.C. WEYE Sanford, N.C. WEYE Sanford, N.C. WHO Dayton. Ohio KUMA Pendleton, Oreg. WFGE Altoona, Pa. WICE Providence, R.1. WICE Providence, R.I. WFIG Sumter, S.C. WATO Oak Ridge, Tenn. KBLT Big Lake, Tex.

١.

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Wave Length
 Kc.
 Wave Length
 W.P.

 KIVY Crockett, Tex.
 5000

 KRGV Westaco, Tex.
 5000

 WTRA Wichita Falls.
 5000

 WFVA Colnial Hgts., Va.
 5000

 WGE Leesburg, Va.
 1000d

 WKWS Rocky Mount. Va.
 1000d

 WKWS Rocky Mount.
 5000

 WKMY Rocky Mount.
 1000d

 WGU Logan, W.Va.
 5000

 WGOW Sparta, Wis.
 1000d

 WOW Laramie, Wyo.
 5000
 1300-230.6 CBAF Moneton, N.B. CJME Regina, Sask. WBSA Boaz, Ala. WTLS Tallassee, Ala. WEZQ Winfield, Ala. KWCB Searcy, Ark. KROP Brawley, Calif. KYNO Fresno, Calif. KVNO Fresno, Calif. KVCB Colo. Sprss., Colo. WAZ New Haven. Conn. WRKT Cocoa Beach, Fia. WFFG Marathon, Fia. WFG Marathon, Fia. WFG Marathon, Fia. WEA Newman, Ga. WIMO Winder, Ga. KVZE Lewiston, Idaho WTAQ LaGrange, III. WFAX W. Frankfort, III. WFAX W. Frankfort, III. WHAA Terre Haute. Ind. KGLO Mason City, Iowa WBLG Lexington, Ky. WIBR Baltimore, Md. WJDA Quincy, Mass. WOOD Grand Rapids, Mich. WFBC Baltimore, Md. WJDA Quincy, Mass. WOOD Grand Rapids, Mich. WFBC Jackson, Miss. KMMO Marshall. Mo. I KBRL McCook, Nebr. KPTL Carosn City, Nev. WAAT Trenton, N.J. WOSC Fulton, N.Y. WOSC Fulton, N.Y. WAC Tarensburg. N.C. WFUT Gloidsboro, N.C. WHT Hazieton, Pa. WTH Hazieton, Pa. WTH Maysquez, P.R. WUM Aiken, S.C. WKIZ George, S.C. KOLY Mobridge, S.Dak. I WMIA Nashville. Tenn. KVET Austin. Tera. KKAS Silsbee, Tex. 5000 1000 1000d 1000d 500d 1000d 1000 5000 5000 1000 1000 500d 500d 5000d 5000d 5000d 1000d 5000 1000 100 500d 500d 5000 1000 1000 1000d 5000 1000d 5000 5000 1000d 5000d 5000 250d 10004 5000d 500 5000 5000 500 5000 5000d 1000d 500d 10000 500wd 500d 500d 10004 5000d 5000 1000 1000d 500d 5000 5000 10004 1000d 1310-228.9 CKOY Ottawa, Ont. 50000 CFGM Richmend Hill, Ont. 10000 WHEP Foley, Ala. 1000d CHGB St. Anne-de-la-Pocatiere,
 Wilmington, Del.
 1000d
 WHEP Foley, Ala.
 1000d

 Ocala.
 Florida
 S000
 CHGB St. Anne-de-la-Pocetiere,

 Panama City Beach,
 Guebec S000d
 WJAM Marion, Ala.
 S000d

 W. Palm Bch., Fla.
 S000
 KBUZ Mesa, Ariz.
 S000

 Americus, Ga.
 1000d
 KBUZ Mesa, Ariz.
 S000

 Canton, Ga.
 1000d
 KBUZ Mesa, Ariz.
 S000

 Peoratallo, Idaho
 1000d
 KIOT Barstow, Calif.
 S000

 Peoria, Ill.
 S000
 KTKA Tatt, Calif.
 1000d

 Pratt, Kansas
 S000
 KFKA Greeley. Colo.
 1000d

 Benton, Ky.
 S000d
 WICH Orowich, Can.
 S000d

 Saline, Mich.
 S00d
 WUC Wauchula, Fla.
 S00d

 Saline, Mich.
 S00d
 WUC Wauchula, Fla.
 S00d

 Batesville. Miss.
 1000d
 WBR Waynesbero. Ga.
 1000d

 Missula. Mont.
 S000
 WICH Point, Isl.
 S00d

 Missula. Mont.
 S000
 WICH Makawao. Hawali
 1000

 Souror, N.H.
 S00

Wave Length W.P. |Kc. Kc. WGVC Lengrn W WJLK Asbury Park, N, J. WCAM Camden, N. J. KARA Albuquerque, N.M. I WVIP ML. Kiseo, N.Y. WISE Asheville, N.C. WKTC Charlotte, N.C. WTIK Durham, N.C. KNOX Grand Forks, N.Dak, WFGH Allianes, Ohio KNOX Grand Forks, N.Dak WFAH Alliance, Ohio KNPT Newport, Oreg. WBFD Bedford, Pa. WGSA Ephrata. Pa. WNAE Warren, Pa. WDKD Kingstree, S.C. WDDD Chattanooga, Tenn, WDYI Lekcon, Tenn WDOD Chattanooga, WDOI Chattanooga, WDXI Jackson, Tenn, WBNT Oneida, Tenn. KZIP Amarillo, Tex. WRR Dallas, Tex. KOYL Odessa, Tex. KUBO San Antonio, Tex. WEEL Fairfax, Va. WGH Newport News, Va. KARY Prosser, Wash. WIBA Madison. Wis. 5000d 1320-227.1
 I SAU-227.1
 10000

 CHQM Vancouver, B.C.
 10000

 CKSC New Glasgow, N.S.
 5000

 CJSO Sorel, P.Q.
 1000

 CKKW Kitchener, Ont.
 1000

 WAGF Dothan, Ala.
 1000

 WEN Birmingham, Ala.
 5000d

 KBLU Yuma, Ariz.
 500d

 KBLU Yuma, Ariz.
 500d

 KLAN Lamoore, Calif.
 1000

 KLAN Lamoore, Calif.
 1000

 KLAN Lamoore, Calif.
 1000d

 KCRA Saeramento, Calif.
 500d

 WATE Waterbury, Conn.
 500d

 WAR Venice, Fla.
 500d

 WAR Venice, Fla.
 500d

 WAR Venice, Fla.
 1000d

 WAR Venice, Fla.
 500d

 WAR Venice, Fla.
 500d

 WAR Venice, Fla.
 1000d

 WAG Mayfield, Ky.
 1000d

 WAA Waeuoketa, Iowa
 500d

 WHE Griffin, Ga.
 500d

 WHC Salisbury, Md.
 1000d

 WAR Venice, Fla.
 1000d

 WAR Venice, Fla.
 1000d

 WAR Venice, Fla.</t 1330-225.4 1330—225.4 WROS Scottsboro, Ala, KMOP Tueson, Ariz, KVEE Conway, Ark, KLOM Lompoc, Calif, KLBS Los Banos, Calif, KAHR Redding, Calif, WARN FL Pierce, Fla, WEBY Milton, Fla, WEBY Multon, HI, WEBY Montouth, HI, WRAM Montouth, HI, WRAR Rockford, III, WJPS Evasville, Ind. 1000d 500d 500d 1kd 5000 500d 5000d 1000 1000d 5000d 5000d 5000d 1000d 1000d
 WRR Rockford, III.
 10063

 WJPS Evansville, Ind.
 5000

 WGR Greenburg, Ind.
 5000

 KWWL Waterloo, Iowa
 5000

 WYG Corbin, Ky.
 5000

 WMOR Morehead, Ky.
 10000

 WAOL Arayette, La.
 10000

 WAOL Arayette, La.
 10000

 WACH Watham, Mass.
 5000

 WAR Markhar, Mass.
 5000

W.P. |Kc. Wave Length W.P. Kc. Wave Length WLOL Minneapolis, Minn, WJPR Greenville, Miss, WDAL Meridian, Miss, KUKU Willow Springs, Mo. KGAK Gallup, N. Mex. WEVD New York, N.Y. WFOW New York, N.Y. WHOW New York, N.Y. WHAZ Troy, N.Y. WHEG Newson, N.C. WFIN Findlay, Ohio WKOV Wellston, Ohio WELW Willoughby, O. KFOJ Portland, Oreg. WLU Erle, Pa. WLAT Conway, S. C. WFBC Greenville, S.C. WFBC Greenville, Tex. KSWA Graham, Tex. KSWA Graham, Tex. KINE Kingsville, Tex. KJDK Tyler, Tex. WBTM Danville, Va. WEAR Tasley, Va. WESR Tasley, Va. KFKF Bellevue, Wash. KCFA Spokane, WLOL Minneapolis, Minn, WJPR Greenville, Miss, WDAL Meridian, Miss, 1000 5000 1000 10004 000d 5000d 1000d 5000 5000 1000 5000 5000 5000 1000d 1000 5000 1000d 5000 1000 1000d 1000 5000 d 10004 500d 500wd 5000d 5000d 50004 5000 500 5000 5000 5000 1000d 5000 5000 1000d 5000 1000d 5000 1000d 500d 500d 500d 5000 10004 10004 5000 1000d 5000 5000 1000d 1000d 50000 5000d 1000d 1000 5000 .Va. WHBL Sheboygan, Wis. KOVE Lander, Wyo, 1340-223.7 CFGB Goose Bay, Nfld. CJAF Cabano, Que.

 CFCB Goose Bay, Nfld.
 1000

 CAF Cabano, Que.
 230

 CAF Cabano, Que.
 230

 CFSL Weyburn, Sask.
 1000

 CFYK Yvilow Knife, N.W.T.
 230

 CFYK Yvilow Knife, N.W.T.
 250

 CHAD Amos, Que.
 250

 CLAF Cabuebe, Que.
 250

 CIAC Yumouth, N.S.
 250

 CIAC Aubeec, Que.
 250

 CKAR Voodstock, Ont.
 250

 CKOX Woodstock, Ont.
 250

 WIJOI Florence, Ala.
 1000

 WG Selman, Ala.
 250

 KIKD Miami. Ariz.
 250

 KIKD Miami. Ariz.
 250

 KIKT Taos, N.M.
 250

 KKIT Taos, Ariz.
 250

 KAB Hot Springs, Ark.
 500

 KAB Hot Springs, Ark.
 500

 KAB Hot Springs, Ark.
 500

 KAB Hot Springs, Ark.
 100

 KAD Fresnot, Calif.
 100

 KAP Growille, Calif.
 250

 KAMA Fresno.
 California 1000

 KATA Arcata, Calif.
 250

 KAD Rovoille, Calif.
 250

 KATA Saruata, Calif.
 10 1000 KAIT San Luis Obispo, KIST Santa Barbara, California KIST Santa Barbara, Calif. KDMY Watsonville, Calif. KDEN Denver, Colo. KWRH Salida, Colo. WNHC New Haven, Conn. WOLK Washington, D. C. WSLC Clearmont, Fla. WACK Usermont, Fla. WROD Daytona Beh., Fla. WTYS Marianna, Fla. WSEB Sebring, Fla. WSEB Sebring, Fla. WSEB Sebring, Fla. WSEB Sebring, Fla. 000 1000 1000 250 250 1000 1000 250 250 1000 1000 250 250 WSEB Sebring, Fla. WSEB Sebring, Fla. Fla WAKE Atlanta, Ga. WGAU Athens, Ga. WBQA ususta, Ga. WBQA Qugusta, Ga. WGAA Cedartown, Ga. WGAA Cedartown, Ga. WBT Lyons, Ga. WHIF Tifton, Ga. KAIN Nampa, Idaho KSKI Sun Valley, Idaho KSKI Sun Valley, Idaho KSKI Sun Valley, Idaho KSU Sun Valley, Idaho KSU Sun Valley, Idaho WSOY Decatur, III. WJDL Joliet, III. WJCL Scinton, Iowa KCIN Kensas City, Kans. KSEK Pittsburg, Kans. KSEK Pittsburg, Kans. KSEK Pittsburg, Kans. KYOB Bastrop, La. KTYOB Bastrop, La. WF40 Moulton, Maine WGAW Gardner, Mass. WBCK Fittsheld, Mass. WLEW Bad Axe, Mich. WCAR Hillsdale, Mich. 250 Fla. 1000 1000 1000 1000 250 1000 1000 1000 1000 1000 1000 1000d 1000 250 1000d 1000 250 250 1000 1000 1000 1000 1000 5000 1000

Kc. Wave Length Wanistee, Mich, Menominee, Mich, I Petoskey, Mich. Royal Oak, Mich. Detroit Lakes, Minn. Eveleth, Minn. Willmar, Minn. Willmar, Minn. WMTE WAGN WMBN WEXL WEVE Kroc KWLM WIMB Brookhaven, Miss. WIMB Brookhaven, Miss. KXEO Mexico, Mo. KILID Poplar Bluff, Mo. KICK Springfield, Mo. KICK Springfield, Mo. KICK Springfield, Mo. KATL Miles City, Mont. KATL Miles City, Mont. KHUB Fremont, Nebr. KGFW Kearney, Nebr. KSID Sidney, Nebr. KSID Sidney, Nebr. KBET Reno, Nev. KDET Annover, N.H. WMID Atlantic City, N.J. KNDE Aztec, N.Mex. KKIT Taos, N.Mex. WBO Auburn, N.Y. WENT Gloversville, N.Y. WENT Gloversville, N.Y. WISJ Lockport, N.Y. WISJ Luberitn, N.C. WOXF Oxford, N.C. WOXF Oxford, N.C. WOXF Oxford, N.C. WOXE Asthens, Ohio WIST Sthens, Ohio WIST Sthens, Chio Brookhaven, Miss. Laurel, Miss. Mexico, Mo. WIMR 250 1000d WAML 10004 1000 1000 1000 1000 250 500 1000 250 1000 1000 1000 1000 250 1000 1000 1000 1000 1000 1000 1000 1000 1000 NC 1000 250 1000 WIZE Spring WSTV Steubenville, Omme KIHN Hugo, Okla. KOCY Okla. City. Okla. KTOW Sand Springs, Okla. KTWK Enterprise, Oreg. KIHR Hood River, Oreg. KFIR North Bend, Oreg. WCVI Connellsville, Pa. 1000 250 WSAJ WKRZ WHAT Grove City, Pa. Oil City, Pa. Philadelphia, Pa. WRAW Reading, Pa. WTRN Tyrone, Pa. WBRE Wilkes-Barre, Pa. WWPA Williamsport. Pa. WWPA Williamsport, Pa. WWPA Williamsport, Pa. WGRF Aguadilla, P.R. WGKE Charleston, S.C. WFHI Rock Hill, S.C. WSSC Sumfer, S.C. KIJV Huron, S. D. KRSD Rapid City, S. Dak, WSAC Cleveland, Tenn. WGRV Greeneville, Tenn. WGRV Greeneville, Tenn. WHM Memphis, Tenn. WHCDT Winchester, Tenn. KWCC Abileno. Tex. KAND Corsicana. Tex. KSET EI Paso. Tex. WHHM Nemphis, Tenn. (0000 WCDT Winchester, Tenn, 1000 KWCC Abilene, Tex. 250 KTSL Burnett, Tex. 250 KAND Corsicana, Tex. 250 KEET EI Paso, Tex. 250 KEET EI Paso, Tex. 250 KRBA Lubbock, Tex. 250 KRDA Unkin, Tex. 250 KRDA Dem Pampa, Tex. 250 KTEO San Angelo, Tex. 250 KTEO San Angelo, Tex. 250 WTWN St. Johnsbury, Vt. 1000 WSTA Charlotte Amalie, V.I. 250 WKEY Covington, Va. 1000 WMA Prapewell, Va. 1000 WMA Arange, Va. 250 WEPM Martinsburg, W.Va. 250 WEDY Ladysmith, Wis. 1000 WHDY Ladysmith, Wis. 1000 WHDY Ladysmith, Wis. 1000 WHDY Ladysmith, Wis. 1000 WHT Milwaukee, Wis. 10000 WHT Milwaukee, Wis. 10000 WHT Milwaukee, Wis. 10000 WHT Milwaukee, Wis. 10000 WHT Milwaukee, Wis. 10001 WHAT Claskson. Wyo. 250 KWOR Worland, Wyo. 1000 1350-222.1 CHOV Pembroke. Ont. CJLM Joliette. Que. CKLB Oshawa, Ont. CKEN Kentville. N.S. WJWT Demopolis, Ala. 10000 Elba, Ala. Gadsden, Ala. Bakersfield, Calif. 1000d 5000 WELB KLYD KCKC San Bernardino, Calif. KSRO Santa Rosa, Calif. KSRO Santa Rosa, Calif. KGHF Pueblo. Colo. WNLK Norwalk. Conn. WINY Putnam. Conn. WEZY Cocoa, Fla.

W.P. |Kc. Wave Length
 Y.P.
 Rc.
 Wave Length
 W.P.

 1000
 WDCF
 Dade City, Fla.
 1000d

 1000
 WXYC Ft.
 Myers, Fla.
 1000d

 1000
 WSGS
 Blackshear, Ga.
 500d

 1000
 WRSG
 Blackshear, Ga.
 500d

 1000
 WRPB
 Warner Robins, Ga.
 5000d

 1000
 KRLC
 Lewiston, Idaho
 5000

 1000
 KRLP
 Peoria, Ill.
 1000

 1000
 WAPP Peoria, Ill.
 5000
 KHLC Lewiston, Idaho WAAP Peoria, III. WJBD Salem, III. WJDU Kokomo, Ind. KRNT Des Moines, towa KMAN Manhattan, Kans. WLOU Louisville, Ky. 5 WSMB New Orleans, La. WHMI Howell, Mich. KDIO Ortonville, Minn. 1 WKOZ Kosciusko, Mins. LKOR Charleston, Mo. KBRX O'Neill, Nebr. WKOZ Kosciusko, Miss. KGR Charleston, Mo. KBRX O'Neill, Nebr. WKOZ Kosciusko, Miss. KBRX O'Neill, Nebr. WKOZ Achan, M. KBR Bismarek, N. D. KBMR Bismarek, N. D. KADC Achon, Ohio WCM Celina, Ohio WCHI Chillicothe, Ohio KRHD Duncan, Okla. KTLQ Tahlequah, Okla. KTLQ Tahlequah, Okla. KCAR Carthage, Tean. KCAR Carthage, Wis. Sub Jasper, Tex, KCOR San Antonio, Tex. WPLR Portage, Wis. Sub J360—220.4 250 5000d 5000 500 1000d 1000d 5000d 10004 1000d 1000d 5000d 5000d 5000 1000d 500d 1000d h0001 1000d 250 250 1000d 1000d 250 1000d 1000d 1000d 1000d 500d 1000 250 10004 5000 1000d 250 5000d
 WAP T
 Portsmouth, va.
 S000d

 1000
 WP D
 Portage, Wis.
 5000d

 1000
 1360—220.4
 5000d

 250
 CKBC Bathurst, Nfld.
 1000d

 1000
 WW B Jasper, Ala.
 1000d

 1000
 WW B Jasper, Ala.
 1000d

 1000
 WH C Monroeville, Ala.
 5000d

 1000
 KER Koancke, Ala.
 1000d

 1000
 KER Koancke, Ala.
 1000d

 1000
 KER Cancke, Ala.
 1000d

 1000
 KER Cancke, Ala.
 1000d

 1000
 KEA Helena, Ark.
 500d

 1000
 KEA Helena, Ark.
 500d

 1000
 WCA Matherst, Calif.
 1000d

 1000
 WCA Hartond, Fla.
 500d

 1000
 WAX Main Beach, Fla.
 500d

 1000
 WAX Matheresville, Ga.
 1000d

 1000</td 5000d 250 250 250 1360--220.4

W.P. | Kc. Wave Length 1370—218.8 WBYE Calera, Ala. CFLV Valleyfield, P.Q. KTPA Presett, Ark. (BUC Corona, Calif. KEEN San Jose, Calif. KGEN Tulare, Calif. WKMK Blountstown, Fla. WKOK Pensacola, Fla. WKOK Bisup, Ga. WFDR Manchester, Ga. WFTS Bloomington, Ind. WGTY Gary, Ind. KDTH Dubuque, Iowa KGNO Dodge City. Kans. KALN fola, Kans. WGOH Grayson, Ky. WGTK Braddocks Has. M HI Braddocks Has. M KIK Leenardtown, Md. WKIK Leenardtown, Md. WGHN Grand Haven, Mich WGHN Grand Haven, Minn. 1370-218.8 5000 5000 500d 500d M.d.
 W DEA Ellsworth, Me.
 5000d

 W GHN Grand Haven, Mich.
 500d

 KSUM Fairmont, Minn.
 1000

 W DOB Canton, Miss.
 1000d

 KWT Boonville, Mo.
 1000d

 KCRV Caruthersville, Mo.
 1000d

 KCRV Caruthersville, Mo.
 1000d

 KXLF Butte, Mont.
 5000

 WALK Patchogue, N.Y.
 500d

 WAL Y Patchogue, N.Y.
 500d

 WAL Y Acthogue, N.Y.
 500d

 WAT Gastonia, N.C.
 500d

 WAT Gastonia, N.C.
 500d

 WAT Grand Forks, N.D.
 1000d

 WAT Grand Forks, N.D.
 1000d

 WAT Gastonia, Jreg.
 1000

 WAST Astoria.
 5000

 WOT R Corry, Pa.
 1000d

 WIV V Viegues, P.R.
 1000d

 WIV V Viegues, P.R.
 1000d

 W ME F Mattanogaa. Tenn.
 5000

 W M E Fattanogaa. Tenn.
 5000

 W K K Bastoria, Tenn.
 1000d

 W K K Rogersville.
 1000d

 W K K Gastong Strang. Tenn.
 1000d

 W K G Rogersville.
 WGHN KSUM WDOB 5000 Grand Haven, Mich. 5000 500d 5000 500d 5000
 WRGS Regersville, Tenn.
 1000d

 KOKE Austin, Tex.
 1000d

 KFRO Longview. Tex.
 1000

 KSOP Satt Lake City. Utah
 1000d

 WRSD South Lake City. Utah
 1000d

 WHSE Martinsville, Va.
 5000d

 WHS South Hill, Va.
 5000d

 WROND Moundsville, W.A.
 1000d

 WCCN Neilsville, Wis.
 5000d

 KYWO Cheyenne, Wyo.
 1000
 1380-217.3 CFDA Victoriaville, Que. CKPC Brantford, Ont. CKLC Kingston, Ont, WGYV Greenville, Ala. KDXE N. Little Rock, Ark, I KBVM Lancaster, Calif. KSBW Salinas, Calif. KSBW Salinas, Calif. KSBW Salinas, Calif. KSBW Salinas, Calif. KSLJ Walsenburg. Colo. W MXS Vilimington, Del. WLZ Lake Worth, Fla. WQXQ Ormond Bch., Fla. WZX Ormond Bch., Fla. WXOK Atlanta, Ga. WSIZ Ocilla, Ga. KPOI Honolulu, Hawaii WBZI Brazil. Ind. WKJG Ft. Wayne, Ind. KCII Washington, Iowa WMTA Central City. Ky. WWKY Winchester, Ky. WWKJ Baton Rouge. La. WTH Port Huron, Mich. WTLB Greenville, Mich. KLIZ Brainerd, Minn. KAGE Winona, Minn. WDLT Indianola. Miss. KUDL Kansas City. Mo. KUVR Holdredge, Nebr. WBSX RowYork, N.Y. WBNX New York, N.Y. WBNX New York, N.Y. WHOS Asheville, N.C. WTOB Winston-Salem. N.C. WACS Bittanning. Pa. WACS Cititanning. Pa. WACS Cititannin 1000 KFCB Redfield, S.Dak. 1000 WYSH Clinton, Tenn. 1000 WGMM Millington, Tenn.

W.P. | Kc. Wave Length W.P. KJET Beaumont, 1ex. KBWD Brownwood, Tex. KCRM Crane, Tex. KTSM EI Paso. Tex. KMUL Muleshoe, Tex. KBOP Pleasanton, Tex. WSYB Rutland, Vt. WMRG Richmond, Va. 1000 1000 1000d 10000 1000 5000 500d 10004 1000d 1000 5000 5000 WMBG Richmond. Va. KRKO Everett, Wash. KPEG Spokane, Wasn. WMTD Hinton, W.Va. 1000d 500d 5000 5000 5000d 5000d 5000 1000d 1000d WBEL Beloit. Wis. 5000 5000 1390-215.7 CKLN Nelson, B.C. WHMA Anniston, Ala. KDQN DeQueen, Ark. KADQN DeQueen, Ark. KGER Long Beach, Calif. KGEK Long Beach, Calif. KFML Denver, Colo. WAVP Avon Park, Fla. WYUP Gainesville, Fla. WYUR Chicago. III. WFIW Fairfield, III. KCLN Clinton, Iowa KCEK Concordia, Kans. WANY Albany, Ky. KFRA Franklin, La. KBEA Concordia, Kans. WANY Albany, Ky. KFRA Franklin, La. KEFA Franklin, La. WEGP Presque Isle, Me. KJFW Waynesville, Mo. WCAT Orange, Mass. WPLM Plymouth, Mass. WCER Charlotte, Minn. KAFO Owatonna. Minn. WROA Gulfport, Miss. 1390-215.7 10004 10004 1000 1000d 5000 1000d 5000 500d 1000d 5000 Calif 5000 5000 5000 5000 10000 50004 10000 1000d 5000d 5000 1000 10004 500d 1000d 5000d 10000 500d 1 200 510 1000d 5000d 500d 5000d 10004 5000 1000d 500 KRFO Owatonna, Minn. WROA Gul/port, Miss. WQIC Meridian. Miss. KJPW Waynesville, Mo. KENN Farmington. N.Mex. KHOB Hobbs, N.Mex. WEOK Poughkeepsie, N.Y. WRIV Riverhead. N.Y. WFBL Syracuse. N.Y. WFBL Syracuse. N.Y. WFBL Syracuse. N.C. WJRM Troy, N.C. WJRM Troy, N.C. WJRM Troy, N.C. WOHP Beliefontaine, Ohio WMOH Middleport-Pomroy, Ohio 500d 10004 5000d 1000d 5000 5000d 5000d 1000d 5000 500d 5000 500d WHPD Middleport-Pommo Ohi WFMJ Youngstown, Ohio KCRC Enid. Okla. KSLM Salem, Oreg. WLAN Lancaster, Pa. WISA Isabella, P.R. WISA Isabella, P.R. WHPB Belton, S.C. KJAM Madison, S.D. WISZ Gharleston, S.C. KJAM Madison, S.D. WISZ Gakson, Tenn. KULP El Campo, Tex. KEC Waxhanchie. Tex. KLGN Logan, Utah WEAM Arlington. Va. WKDP Keyser, W. Va. KBEO Yakima, Wash. 1000d Ohio 5000 5000 1000 500d 5000 5000d 1000 500d 10000 5000 5004 1000 1000d 5000 1000d 5000 1000d 1390 1000 1000 1400-214.2 1000d CKDH Amherst, N.S. CJFP Riviere-du-Loup, Que. CKRN Rouyn, Que. CKSW Swift Current, Sask. WMSL Decatur, Ala. WFAA Demopolis, Ala. WFPA Ft, Payne, Ala. WILD Homewood, Ala. 5000 500d 250 1000 250 1000 1000d 5000 5000 1000 5000d 5000 1000 250 1000 WFPA Ft. Payne. Ala, WILD Momewood, Ala, WILD Opelika, Ala, KSEW Sitka, Alaska KCLF Ciifton, Ariz. KIKJ Flagstaff, Ariz, KIKJ Flagstaff, Ariz, KIKJ Flagstaff, Ariz, KUY Puoenix, Ariz, KUY Dorean, Ariz, KCLD El Dorado, Ark, KCLA Pine Bluff, Ark, KCLA Pine Bluff, Ark, KCLA Pine Bluff, Ark, KYAT Berkeley, Calif, KGMS Redding, Calif, KGMS Redding, Calif, KLN Canon City, Colo, KHOE Truckee, Calif, KUKI Ukiah, Calif, KEJZ La Junta, Colo, KFTM Ft, Morgan, Colo, KFTM Ft, Horgen, Colo, WSTC Stamford, Conn. WFLI Willimantic, Conn. 500d 5000 1000 1000 500d 250 250 500d 250 10000 250 500d 250 250 10004 1000 500d 1000 000 L000d 1000 1000 000 250 250 500d 500 Cal. 250 1000 250 5000 000 1000 5004 5000 1000 250 5000 250 5000 500d 250 1000d 250 1000 1.000 1000 1000d 5000 250 250 WNVE Ft. Walton Bch., Fla. 1000d 1000d ្លែកំពុក WRHC Jacksonville, Fla. WPRY Perry. Fla. WTRR Sanford, Fla. WZRH Zephyr Hills, Fla. WCQS Alma, Ga. 1000d 250 250 1000d 1000d 1000d 1000 250 5000 500d 1000d WHITE'S RADIO LOG 135

W.P. Kc. Wave Length Kc. Elberton, Ga. Macon, Ga. Moultrie, Ga. Newnan, Ga. Savannah, Ga. WSGC WNEX WMGA WCOH WGSA KART Jerome, Idalio KRPL Moscow. Idaho KSPT Sandpoint, Idaho WDWS Champaign, III. WGIL Galesburg, III. WROZ Evansville, Ind. WBAT Marion, Ind. KCOG Centerville, Iowa KVFD Fort Dodge, Iow lowa KVOE Emporia, Kans. KAYS Hays, Kans. WCYN Cynthiana, Ky. WIEL Elizabethtown, Ky. KAYS Hays, Kans. WCYN Cynthiana. Ky, WFTG London, Ky, WFTG London, Ky, WFTG Landon, Ky, WFTG Landon, Ky, WFDR Hammond, La. (KAOK Lake Charles, La. 1 WRDO Augusta. Maine 10 WIDE Biddeford, Maine 1 WUDE Biddeford, Maine 1 WUDE Biddeford, Maine 1 WALE Fall River, Mass. 1 WHN Baltimore, Md. 1 WALE Fall River, Mass. 1 WHL Dorthanpton, Mass. 1 WHL Dorthanpton, Mass. 1 WHL Bottol, Mich. 10 WHDE Houghton. Mich. 10 WHD Fungthing, Mich. 10 WHD Funger, Mich. 10 WHD Funger, Mich. 10 WHD Funger, Mich. 10 WHD Foughton. Nich. WASH Saginaw, Mich. 10 WHD Funger, Mich. 10 WHD Forger, Minn. 10 WHD Forger, Miss. WFAG Great, Miss. WFAG Great Falls, Mont. 10 KIFF Feitus, Mo. KIFF Gendiaye, Mont. KARR Great Falls, Mont. 10 KIFF Gendiaye, Mont. KARR Great Falls, Mont. 10 KITS Springfield, Mo. KIFK Genta Falls, Mont. 10 KITS Springfield, Mo. KUTH Tucumeari, N.Hex. WBRL Berlinn. N.H. WTL Lintleton, N.H. WTL Lintleton, N.H. WTSL Burfalo, N.Y. 10 WSLE Duffalo, N.C. 250 1000 1000d 1000d 250 250 250 1000 250 250 1000 Dødensburg, N.Y. Beaufort, N.C. Greensboro, N.C. WSLB WBMA 1000 WBMA Beaulort, N.C. WGBG Greensboro, N.C. WLSE Wallace, N. C, WHCE Waynesville, N.C. WCNF Weldon, N.C. KEYJ Jamestown, N.Dak. WMAN Mansfield, Ohio WHCU Waylosynia: N.C. KEYJ Jamestown, N. Dak. WMAN Mansheid. Ohio WPAY Portsmouth. Ohio KWON Bartlesville. Okla. KNOR Norman, Okla. KNOR State State WEST Easton, Pa. WEST Easton, Pa. WHEST Erie, Pa. WHEST Erie, Pa. WHEST Easton, Pa. WHEST Erie, Pa. WHEST Erie, Pa. WHEST Easton, Pa. WEST Easton, Pa. WEST Easton, Pa. WEST Easton, Pa. KOCS Columbia, S.C. WJIM Clarksville, Tenn. WESE Copper Hill, Tenn. WHUB Cockeville, Tenn. WHUB Cockeville, Tenn. WHES Copper Hill, Tenn. WACM Maryville. Tenn. KEVE Gig Spring, Tex. KUNO Corpus Christi. Tex. KUNO Corpus Christi. Tex. KUNO Corpus Christi. Tex. KUND Gravitle, Tex. KUND Fainview, Tex. KUND Fainview, Tex. KUND Fainview, Tex. KIXX Provo. Utah WINA Charlottesville, Va. WHNH Hillsville, Va. WHH Hortsmouth, Va. 1000d 250 1000ď 1000 1000 1000d 250 250 250 1000 250 250 1000 1000 Hillsville, Va. Portsmouth, Va. So. Boston, Va. Winchester, Va. Longview, Wash. WHIN WINC KEDO Longview, Was Othello, Wash. 250 KTNT Tacoma, Wash. WBOY Clarkesburg, W.Va.

Wave Lenath
 W.P., Kc.
 Wave Length

 1000
 WRON Ronceverte, W.Va.

 1000
 WSPZ Spencer, W.Va.

 1000
 WATW Ashland, Wis.

 250
 WDLZ E au Clairo, Wis.

 1000
 WATW Ashland, Wis.

 1000
 WATM Racine, Wis.

 1000
 WRDB Reedsburg, Wis.

 1000
 WRIG Wausau, Wis.

 1000
 KATI Caspar, Wyo.

 1000
 KADI Cody, Wyo.

 1000
 KADI Cody, Wyo.
 1410—212.6 CFUN Vancouver, B.C. CFUN Vancouver, B.C. CHLP Montreal, Que. WALA Mobile, Ala. WRCK Tuscumbia, Ala. KTCS Fort Smith, Ark. KERN Bakersneld, Calif. KKML Carmel, Calif. KKAL Aredlands, Calif. KCAL Redlands, Calif. KCAL Redlands, Calif. KCAL Redlands, Calif. KCAL Redlands, Calif. WDOV Dover, Del. WMYR Fort Myers, Fla. WBIL Leesburs, Fla. WBIL Leesburs, Fla. WBIL Collins, Colo. WBUL Cesburs, Fla. WBIL Collins, Colo. WBUL Cesburs, Fla. WRIN Elsin, III. WTIM Taylorville, III. WTIM Taylorville, III. WTIM Taylorville, III. WTIM Taylorville, III. WTLM Edmars, Iowa KLEM LeMars, Iowa KLEM LeMars, Iowa KLEM LeMars, Iowa KUBB Soling Green, Ky. WHLN Harlan, Ky. KDBS Alexandria, La. WDW Halfway, Md. WACH Malfway, Md. WACH Markok, Mass. WGRD Grand Hap.. Mich. 1410-212.6 5000d 5000 5000d 1000d 5000d 1000d 100001 1000d 500d 5000d 5000d 1000d WHAG Halfway, Md. WOKW Brockion, Mass. WOKW Brockion, Mass. WERW Brockion, Mass. KLFD Lirand Hap, Mich, KLFD Lirand Hay, Minn, WDSK Cleveland, Miss. WBKN Newion, Miss. WBKN Newion, Miss. WHOE Dunkirk, N.Y. WEIG Eatontown, N.J. WOEE Dunkirk, N.Y. WEIG Elon Fails, N.Y. WOET Glen Fails, N.Y. WOTT Watertown, N.C. WSET Glen Fails, N.Y. WOED Unharn, N.C. WING Dayton, Ohio KPAM Portland, Oreg, WUSH Lansford, Pa. KQV Pittsburgh, Pa. KQV Pittsburgh, Pa. KQV Pittsburgh, Pa. KQV Pittsburgh, Pa. KUNB Manning, S.C. WYMB Manning, S.C. KYLB Cleveland, Tex. KAIL Oalhart, Tex. KAIL Odessa, Tex. KAIL Odessa, Tex. KAIL Odessa, Tex. KNAL Victoria, Tex. WRIS Roanoke, Va, WRDS Charleston, W, WKBH LaCrosse, Wis. KWYO Sheridan, Wyo. 1420—211.1 1000d h0001 500d 1000d 1000d 500d 10000 1000d 5000d 5000d 1000d 1000d 1000d 500d Va. 5000 1420-211.1 WHITE'S RADIO LOG WLNA Peekskill, N.Y.

Kc. Wave Length WMYN Mayodan, N.C. WGAS S. Gastonia, N.C. WYOT Wilson, N.C. WHK Cleveland, Ohio KTJS Hobart, Okla. KYNG Cose bay, Oreg. WCED DuBois, Pa. WEED DuBois, Pa. WEED DuBois, Pa. WEED DuBois, Pa. WEED Chonce, P.R. WERE Cheraw, S.C. KDLE Aberdeen, S. D. KDLE Aberdeen, S. D. KKTN Bonham, Tex. KTRE Lufkin, Tex. KGNB New Braunfels, Tex. KGPE San Angelo, Tex. WBCF St. Albans, Vt. WDDY Gloucester, Va. WKITI Chenalis, Wash. Wave Length W.P. | Kc. 500d KITI Chehalis, Wash. KUJ Walla Walla, Was WPLY Plymouth, Wis. 500d 500 d Wash.
 1430-209.7

 CKFH Toronto, Ont.
 10000

 WFHK Pell City, Ala.
 1000d

 KHEM Monitecilo, Ark.
 1000d

 KARM Fel Centro, Calif.
 1000d

 KARM Ferseno, Calif.
 5000

 KARM Ferseno, Calif.
 5000

 KARM Ferseno, Calif.
 5000

 KARM Ferseno, Calif.
 5000

 WARA Lascanaento, Calif.
 5000

 WLAK Lakeland, Fla.
 5000

 WGFS Corington, Ga.
 5000

 WGFE Panama City, Fla.
 5000

 WGFE Panama City, Fla.
 5000

 WGEF Highland Park, III.
 5000

 WGR Charas, III.
 5000

 WCM Y Grawa, III.
 5000

 WTT Amberst, Mass.
 5000

 WH IA K Ledford, Mass.
 5000

 WH IA K Lorons, Mo.
 5000

 WH IA K Lorons, Mo.
 5000

 WH IA K Larolin, Miss.
 5000

 WH IA K Lorons, Mo.
 5000

 1430-209.7 Whe St. Jouris, Mo. Whe St. Jouris, Mo. King Grand Island, Nebr. WGP, Newark, N.M. KGP, Newark, N.M. KGP, Posweik, N.M. WGP, Newark, N.M. WGP, Storola, O.M. WGP, Storola, O.M. WFOB, Fostoria, Ohio WCLT, Newark, Ohio KALV Alva, Okla, KGAY Salem, Oreg. WYAA Altoona, Pa. WFAA Franklin, Pa. KEBK Biadewater, Tox. KEBK Merekenridge, Tex. KEOH Houston, Tex. KLO Ogden, Utah WIVE Ashland, Va. WDIC Clincho, Va. WBL Welrton, Wash. WER Welrton, W.Sa. 500d 500d 500 1440-208.2 1440-208.2 CFCP Courtenay, B.C. WHHY Montgomery, Ala. KWBY Scottsdale, Ariz. KHOG Fayetteville, Ark. KOKY Little Rock, Ark. KYON Napa, Calif. KPRO Riverside, Calif. KORY Little Rock, Ark. WBIS Bristol, Conn. WABR Winter Park, Fla. WGCG Fermen, Ga. WGIG Brunswick, Ga. WGAJ Anna, III. WOCK Normal, III. WGEM Quincy, III. WGEM Quincy, III. WGEM Quincy, III. WFRS Paris, III. WGEM Quincy, III. WFRS Paris, III. WGEM Quincy, III. WGEM Quincy, III. WGK Ackford, III. WGK Ackford, III. WGK Cehrokee, Iowa KEWI Topeka, Kans. WCDS Glasgow, Ky. WLX Paris, Ky. WALB Monroe, La. WJAB Westbrook, Me. WAAB Worcester, Mass. WGCM Guidey, Mich. WDOW Dowagiae. Mich. KEVE Golden Valley, Minn. WHT Lucedale, Miss. WSEL Pontotoc, Miss. WMVB Milliville, N.J. 1440-208.2 1000d

Kc. Wave Length WBAB Babylon, N.Y. WJL Niagara Falls, N.Y. WSGO Oswego, N.Y. WBLA Elizabethown, N.C. WBUY Lexington, N.C. KILO Grand Forks, N.O. KILO Grand Forks, N.O. KILO Grand Forks, N.O. WHAH Warren, Ohio KMED Mediord, Oreg. WCOL Carbondate, Pa. WGOK Greenville, S.C. WHAP Lansdale, Pa. WGOK Greenville, S.C. WHAL Holly HII, S.C. WHAL Holly HII, S.C. WHAL Holly HII, S.C. WHAL Holly HII, S.C. WITY Cowan, Tenn. WHOM McKenzie, Tenn. KFDA Amarillio, Tex. KEYS Corpus Christi, Tex. KEYS Corpus Christi, Tex. KEYS Corpus Christi, Tex. KEY Livingston, Tex. WALW Blackstone. Va. KDNT Denton, Tex. WALW Blackstone. Va. KDNT Genen Bay, Wis. 1450—206.8 W.P. Kc. Wave Length W.P. 500d 1000d 1000d 5000d 1000d 5000 1000d 1000d 5000d 500d 5000d 1 kwd 250d 500d 5000 1000d P0001 5000d 1000d 5000d 5000d 5000d 5000d 500d 1450-206.8 1450—200.0 CFBM Brochet, Man. CBG Gander, Nfld. CFAB Windsor, N.S. CFJR Brockville, Ont. CHEF Granby, P.Q. WDG Anniston, Ala. WJG Dothan, Ala. WFIX Huntsville, Ala. WLAY Muscle Shoals City, KIAM Cordova, Alaska 1.00 250 Alabam KLAM Cordova, Alaska KAWT Douglas, Ariz. KNOT Pressott, Ariz. KOLD Tucson, Ariz. KENA Mena, Ark. KYOR Blythe, Calif. KYOR Blythe, Calif. KYON Biscondido, Calif. KYON Gassent KYOU Greeley, Colif. KYEN Ventura, Calif. KAGR Yuba City, Calif. KGGR Yuba City, Calif. WJB Bridgeport, Conn. WILM Wilmington, Del. WULW Shington, Del. WUJB Brodsville, Fla. WSFP Biarasota, Fla. WSFP Grasota, Fla. WSFP Grasota, Fla. WSFP Grasota, Ga. WTAL Tallahassee, Fla. WSFP Grasota, Ga. WCD Cornelia, Ga. WKEU Griffin, Ga. KEOK Pavita, Idaho KEEP Twin Falls, Idaho KEE Arayetta, Idaho KEE Arayet 250 5000d 5000d 5000d 1000d 1000d 500d 5000d 500d 5000d 1000d 1000d 5000d 1000d 1000d 1000d 1000d 5000d 1000d 250 250 5000d 500 1000 WATZ Alpena Towinship, Michigan Wichigan Wichigan Wichigan Mich. Wich. Wichigan Wichigan Wichigan Wichigan Kabun Berdili, Mina. Kabun Berekenridge, Mina. KBUN Berekenridge, Mina. KBUN Berekenridge, Mina. KBUN Berekenridge, Mina. KBAMW Breckenridge, Mina. KFAM St. Cloud. Mina. KFAM St. Cloud. Mina. WOX Clarksdale. Miss. WJXN Jackson, Miss. WAT Natchez, Miss. WAT Natchez, Miss. KFTW Fredericktown, Mo. KUBM Great Falls, Mon. KXL Bozeman. Mont. KXLL Missoula, Mont. 500d Michigan 1000d 1000 250 500d 5000d 1000d 500d 500d 5000 250 250 1000 b0001 1000d 1000d 5000d 250 1000d 1000d 5000 1000d 1000d 1000d KXLL Missoula, Mont.

Kc. Wave Length Red Lodge, Mont. Wolf Point, Mont, Beatrice, Nebr. KRBN KVCK KWBE
 KWBE Beatrice, Nebr.
 250

 KONE Reno, New.
 250

 WKXL Concord, N.H.
 1000

 WFPG Atlantic City, N.J.
 1000

 WCTC New Brunswick, N.J.
 1000

 KLOS Albuquerque, N.Mex.
 250

 KLMX Clayton, N.Mex.
 1000

 WOBE Lass Cruces, N.Mex.
 1000

 WCLI Corning, N.Y.
 1000

 WHOL Olean, N.Y.
 1000

 WHOL Olean, N.Y.
 1000

 WHOL Olean, N.Y.
 1000

 WHOL Meen, N.Y.
 1000

 WHOL Meen, N.Y.
 1000

 WKAL Rome, N.Y.
 250

 WWSC Glen Falls, N.Y.
 1000

 WHDL Olean, N.Y.
 1000

 WKAL Rome, N.Y.
 1000

 WKAL Rome, N.Y.
 1000

 WKAL Rome, N.Y.
 250

 WATA Boone, N. C.
 1000

 WGNC Gastonia, N.C.
 1000

 WGNC Gastonia, N.C.
 1000

 WHXP Hendersonville, N.C.
 1000

 WHXP Hendersonville, N.C.
 250

 WFBS Spring Lake, N.C.
 260

 WGEC Sandusky, Ohio
 1000

 WHEC Dandusky, Ohio
 1000

 KGFF Shawnee, Okla.
 1000

 WLEC Sandusky, Orla.
 250

 WHAT Sate College, Pa.
 1000

 KCYL KMHT KAMY KNET KSNY McCamey, Palestine, To Snyder, Tex. Moab, Utah Provo, Utah KURA KEYY KDXII 250 250 KURA Moab, Utah KEYY Provo, Utah KDX U St. George, Utah WSNO Barre, Vt. WTSA Brattlebore, Vt. WFTR Front Royal. Va. WERL Lexington, Va. WMEL Lexington, Va. WMA Martinsville, Va. IKBKW Aberdeen, Wash. KONP Port Angeles. Wash. KONP Port Angeles. Wash. KAYE Puyallup, Wash. KAYE Puyallup, Wash. KAYE Puyallup, Wash. KAYE Puyallup, Wash. WPAR Parkersburg, W. Va. KFIZ Fond du Lac. Wis. WDEB Marshfeld. Wis. WFFP Mark Falls, Wis. WFFP Gark Falls, Wis. KBBS Bugfalo, Wyo. KVOW Riverton, Wyo. 1460-205.4 CJOY Guelph. Ont. CKRB Ville St. Georges, Quebec CJOY Gueepin, Ont. CKRB Ville St. Georges, Quebec CJNB N. Battleford. Sask. WFMH Cullman. Aia. WPNX Phenix City, Ala. KZOT Marianna, Ark. KCCL Paris, Ark. KTYM Inglewood, Calif. KVRE Santa Rosa, Calif. KVRE Santa Rosa, Calif. KVFK Boulder, Colo. KYSN Colo. Sprgs., Colo. WBAR Bartow, Fia. WIXN Distantow, Fia. WOMF Buford, Ga. WMBR Jacksonville, Fla. WOMF Buford, Ga. WIXN Dison, III. WTL Rantoul, III. WTL Rantoul, III. WTL Rantoul, III. WTK Boshen Ind. WCKH North Vernon, Ind. KSD Des Moines, Iowa KCBB Chanute, Kans. WRVK Mt. Vernon, Ky. WALL Baton Rouge. La. WEBT Fockton, Mass. WBKN Big Rapids, Mich. KDMA Montevideo, Minn. WELZ Belzoni, Miss. 5000d 5000 500d 5000d 1000d 500d

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Kc. Wove Length M KADY St. Charles, Mo, KRNY Kearney, Nebr. KENO Las Vegas, Nev. WOXO Albany, N.Y. WHOX New Rochelle, N.Y. WHEC Rochester. N.Y. WFVG Fuquay Spriss, N.C. WRKB Kannapolis, N.C. WRKB Kannapolis, N.C. WMMH Marshall, N.C. WBNS Columbus, Ohio WPVL Painesville, Ohio KROW Dallas, Oreg. KELR El Reno, Okla. WMBA Ambridge, Pa. WGOG Waihalla. S.C. WJAK Jackson, Tenn. WEEN Lafayette, Tenn. KBZ Freeport, Tex. KLLL Lubbock, Tex. WACM Waatosass, Va. WRAD Madiord, Va. KCDI Kirkland, Wash. KIKI Kand. Wash. KIMA Yakima. Wash. WTMB Tomah, Wis. 1470-204.0 W.P. |Kc. Wave Length 5000d 1000d 500d 500d 500d 5000d 5000d 1000d 1000d 500d 5000 5000d 5000d 5000d 1470-204.0 CHOW Welland, Ontario CHOW Welland, Ontario CHOW Welland, Ontario WBLO Evergreen, Ala. 1000d KWSC Sierra Vista, Ariz. 1000d KZNG Hot Springs, Ark. 1000d KUTY Palmdale, Calif. 5000 WMW Meriden, Calif. 5000 WMBD Pompano Beach, Fla. 5000 WAGA Adel, Ga. WOUL Athens, Ga. 1000d WCLA Claxton, Ga. 1000d WGCL Achens, Ga. 5000 WHOT Anderson, Ind. 1000d WHOT Anderson, Ind. 1000d WHOT Anderson, Ind. 1000d KTRI Sieux City, Iowa 5000 WHOT Anderson, Kans. 1000 KTRI Sieux City, Iowa 5000 WACA Claxton, Kans. 1000 KTRI Sieux City, Iowa 5000 WHOT Anderson, Ind. 1000d KTRI Sieux City, Iowa 5000 WJDY Salisbury, Md. 5000 WLAM Lewiston, Maine 5000 WLOY Salisbury, Md. 5000d WKAF Flint, Mich, 5000 WKAF Andlen, Mo. 5000 WKAF Andlen, Mo. 5000 WKAF Andlen, Mo. 5000 WKAF Arareli, Pa. 5000 WKAF Fint, Mich, 5000 WKAF Arareli, Pa. 5000 WCA Spruce Pine, N.C. 5000 WANA Userry Hill, Tenn. 5000 KKAF Aredsport, Oreg. 5000 WGD Georgetown, S. 5000 WGA Georgetown, S. 5000 WGA Henderson, Tex. 5000 WGA Columbia, S.C. 5000 WGA Henderson, Tex. 5000 WGA Henderson, Te
 10000d
 1480-202.6

 10000d
 VOUS Argentia. Nfid.

 5000
 WARI Abbeville. Ala.

 10000d
 WSTS Bridgeport. Ala.

 10000d
 WSTS Bridgeport. Ala.

 10000d
 WXI I trondste. Ala.

 10000d
 WABB Mobile. Ala.

 250d
 KHAT Phoenix. Ariz.

 10000d
 KABE Berryville. Ark.

 5000
 KWUN Concord. Calif.

 5000
 KWUN Concord. Calif.

 5000
 KWUS Santa Ana, Calif.

 5000
 KWIZ Santa Ana, Calif.

 5000
 KOS W windsor, Conn.

 10000
 KXIV Windemere, Fla.

 1000
 WXIV Windemere, Fla.

 1000
 WXIV Windemere, Fla.

 10000
 WXIV Windemere, Fla.

 10000
 WXIV Windemere, Fla.
 1480-202.6 1000d 5000d 500d 5000 500d 1000d 500d

W.P. |Kc. Kc. Wave Length WROW Augusta. Ga. WGSB Geneva. 111. WIBM Jerseyville, 111. WIBM Terre Haute, Ind. WRW Warsaw. Ind. KLEO WITCHIMWA. Iowa KBEA Mission, Kans. KLEO Wichita, Kans. WKOA Hopkinsville, Ky. WTLO Somerset, Ky. KCKW Jena. La. KANV Jonesville, La. KADE Shreveport, La. WMAX Fail River, Mass. WMOS Tawas City, Mich. Wave Length 500d 500d 1000d 1000d 1000d 500d 500d WSAR Fall River, Mass. WMAX Grand Rapids. Michigan WIOS Tawas City, Mich. WYSI Ypsilanti, Mich. KAUS Austin, Minn. KGCX Sidney, Mont. KLMS Lincoln, Nebr. KWEW Hobbs, N. Mex. WLEA Hornell, N.Y. WHOM New York, N.Y. WHOM New York, N.Y. WWOK Charlotte, N.C. WYRN Louisburg, N.C. WYRN Louisburg, N.C. WYRN Louisburg, N.C. WHO Canton, Ohio WTAA Catrobe, Pa. WSH Shippensburg, Pa. KSDR Waterton, S.D. WJFC Jefferson City, Tenn, KBOX Dallas, Tex. KAPE San Antonio, Tex. KAPE San Antonio, Tex. KONI Spanish Fork, Ultah WGFR Springfield, Vt. WBL Richmond, Va. WELU Salem, Va. KFAA Lakewood, Wash. KYAN Vancouver, Wsb. KISA Endyenne, Wyo. 1490—201.2 1000d 500wd 5000 1000 1000d 5000 5000 500d 500d 1000d 5000d 5000 500d 1000d 1000d 5000 5000d 1000d 1000d 5000 1000d 1490-201.2 CKAD Wilmot Station, N.S. CFMR Fort Simpson, NWT. CFRC Kingston, Ont, CKCB Minot Station, N.S. CFMR Fort Simpson, Ont, CKCB Minot Montmagny, Que. WAJF Oceatur, Ala. WHDB Selma, Ala, WHDB Selma, Ala, KYCA Prescott, Arla. WHBB Selma, Ala, KYCA Prescott, Arla. KAIR Tucson, Arla. KAIR Tucson, Arla. KAIR Tucson, Arla. KXAR Hope, Ark. KTLO Mtn. Home, Ark. KDS Paragould, Ark. KTLO Mtn. Home, Ark. KTLO Mtn. Home, Ark. KKOTN Pine Bluff, Ark. KXAR Hope, Ark. KUTL Bakersfield. Calif. KROS Banning, Calif. KROB Calexico. Calif. KROB Calexico. Calif. KBLF Red Bluff, Calif. KBU Boulder, Colo. KGUG Gunnison, Colo, CKOL Sterling, Colo. WTDR Torrington, Colo, WTRL Bredleum, Fla. WBSM Milami Beach, Fla. WSTR Winter Haven, Fla. WSTR Winter Maven, Fla. WSTR Winter Maven, Fla. WSTR Suttarke, Fla. Stranke, Fla N.S. 1000 250 250 250 1000 100 250 250 250 250 1000d 250 0001 KEUN Eunice, La. KCIL Houma, La,

W.P. | Kc. Wave Length W.P. 250 250 250 1000 250 250 ายู่จัง 250 1000 1000d 100 250 250 250 250 1000 1.004 250 250 1000d WOSH UShkosh, Wis, KIML Gillette, Wyo. KLME Laramie, Wyo. KRTR Thermopolis, Wyo. KGOS Torrington, Wyo. 500 1500-199.9 KGMR Jacksonville. Ark. KBLA Burbank. Calif. KXRX San Jose, Calif, WTOP Washington, D.C. WKIZ Key West, Fla. WSEM Donaldsonville. Ga. WSEM Donaldsonville, G WTHN Thomaston, Ga. KUMU Honolulu, Hawaii WPMB Vandalia, 111. WJBK Detroit, Mich. KSTP St. Paul, Minn. KOFN Doniphan, Mo. 1000d 1000d 1000 WHITE'S RADIO LOG

5000d

Kc. Wave Length KPIR Eugene, Ore. WMNT Manati, P.R. WEAC Gaffney, S. C. KWFA Merkle, Tex. h00001 250 1000d 250d KTXO Sherman, Tex. KANI Wharton, Tex. 250 500 -199.1 1510-CKOT Tillsonburg, Ont. KALF Mesa, Ariz. KASK Ontario, Calif. KIRV Fresno, Calif. KTIM San Rafael, Calif. 1000d 100004 1000 500 10004 KTIM San Rafael, Calif, KMOR Littleton, Colo. WNLC New London, Conn. WZZZ Boynton Beach, Fla. WINU Highland, III. WJRC Joliet, III. WKAI Macomb, 111. 1000 10004 500d 10004 WKAI Macomb, fill. KIFG Iowa Falls, Iowa WMEX Boston, Mass. WJCO Jackson, Mich. WLKM Three Rivers, M KCCV Independence, Mo. 500d 5000 5000d Mich 500 1000 d KTTT Columbus, Nebr 500d KITT Columbus, Nebr. WEAL Greensboro, N.C. WBRW Brewster, N.Y. WLAC Nashville, Tenn. KCTX Childress, Tex. 1000d 50000 250d KMOO Mineola, Tex. KROB Robstown, Tex. KSTV Stephenville, Tex. KGA Spokane, Wash. WAUX Waukesha, Wis. 500d 2504 50000 10000d 1520-197.4 KGHT Hollister, Calif. 500 KACY Port Hueneme, Calif. 10000 WVCF Apopka, Fla. 5000d WGNP Indian Rocks Beach, Fla. Fla. WHOW Clinton, III. WLUV Loves Park, III. WSUL Shelbyville, Ind. KSIB Creston. Iowa 10004 000d 5000d 1000 KSIB Creston, lowa 1000d 500d WRSL Stanford, Ky. KXKW Lafayette, La. WVOB Bel Air, Md. WKJR Muskegon Hts., Mich. 10000 1000d WYNZ Ypsilanti, Mich. 250d WYNZ Ypsilanti, Mich. WDSL Mocksville, N. C. WYRP Ocean City, N. J. KMNF Albuquerque, N. Mex. WKBW Buffalo, N.Y. WFYI Mineola, N.Y. WFYI Mineola, N.Y. KOMA Okla, City, Okla. KGON Oregon City, Oreg. WCHE West Chester, Pa. WRAI Rio Piedras, P. R. 1000d 500d 10000d 500d 500d 10000 250 1530—196.1 WCTR Chestertown, Mo. KCAT Pine Bluff, Ark KFBK Sacramento, Calif, WENG Englewood, Fla. KWLA Many, La. WRPM Poplarville, Miss. WTHM Lapeer, Mich. KMAM Butler, Mo. WCKY Cincinnati, Ohie WMBT Shenandoah, Pa. KGTN Georgetown, Tex. KGBT Harlingen, Tex. KGLR Ralls, Tex. WQLA Quantico, Va. 1530--196.1 1530 250d 50000 1000 1000d 1000d 5000d 500d i 250 50000 250d 1000d 50000 1000d 250 1540-195.0 ZNS Nassau, B.W.I. CHFI Toronto, Ont. KPOL Los Angeles, Calif. WSMI Litchfield, III. WBNL Boonville, Ind. 10000 50kwd 50000 1000d 250d WLOI LAPorte, Ind. KXEL Waterloo, Iowa KNEX McPherson, Kans. KLKC Parsons, Kans. WDON Wheaton, Md. 250d 50000 250d 250d WDON Wheaton, Md. WPTR Albany, N.Y. WIFM Elkin, N.C. WBCO Bucyrus, Ohio WABQ Cleveland, Ohio WNIO Niles, Ohio Uhrichsville, Ohio KWFS Eugene, Ore. WJMJ Philadelphia, Pa. WPTS Pittston, Pa. 50000 250d 500d 1000d 10004 50000d 1000d WPTS Pittston, Pa. WPME Punxsutawney, Pa. WADK Newport, R.I. WPHC Waverly, Tenn. KCUL Ft. Worth. Tex. KGBG Galveston, Tex. WWW Richmond, Va. KEVU Bellevue, Wash. 1000d 1000d 50000d 1000 1000 WTKM Hartford, Wis. 500d 1550--193.5 CBE Windsor. Ont. WBHM Birmingham, A WAAY Huntsville, Ala. WMOE Mobile, Ala. 10000 50000d 5000 5000d Ala. 138

W.P. |Kc. Wave Length KFIF Tueson, Ariz, KXEX Fresno, Calif. KKHI San Fran., Calif. KDAB Arvada. Colo. WRIZ Coral Gables, Fla. WORT New Smyrna Bch., F WORT Lampa, Fla. 50000d 500d 10000d 10000d la. 250 WYOU lampa, Fla. WSMA Smyrna, Ga. WJIL Jacksonville, III, WCTW New Castle, Ind, KIWA Sheldon, Iowa KEDD Dodge City, Kans. WIRV Irvine, Ky. WMRV Morganfield, Ky. 100004 1000d 250 500d 1000d 1000d 2504 WMSK Morganfield, Ky. WLUX Baton Rouge, La. KOKA Shreveport, La. WSER Elkton, Md. WSHN Fremont, Mich. WJAQ Jackson, Miss. WSAO Sanitobia, Miss. 5000d 250d 10004
 W JAQ Jackson, Miss.
 10000

 W JAQ Jackson, Miss.
 50000

 W JAQ Jackson, Miss.
 50000

 W SAQ Sanitabia, Miss.
 250

 KGMO Cape Girardeau, Mo.
 250

 KKID St. Joseph, Mo.
 5000

 W BAZ Kingston, N.Y.
 500

 W BAZ Kingston, N.Y.
 500

 W BAZ Kingston, N.Y.
 1000

 W PXY Greenville, N. C.
 1000d

 W TYN Tryon, N.C.
 1000d

 W TYN Tryon, N.C.
 1000d

 W TYN Tryon, N.C.
 1000d

 W DL R Delaware, Ohio
 500d

 W LOA Braddock, Pa.
 500d

 W LOA Braddock, Pa.
 1000d

 W TK To avasota, Pa.
 500

 W KFE Yauco, P.R.
 250

 W SEC Bennetsville, S.C.
 1000d

 W TH Novasota, Tex.
 250

 W KFE Bristol, Tenn.
 1000d

 W YFN Cookville, Tenn.
 250

 W KFE Virton, Va.
 230

 W KFE Virton, Va.
 300d

 W KFE Virton, Va.
 300d

 W KFE Virton, Va.
 300d
 50000 5kwd
 1560-192.3

 CFRS Simeoe, Ont.
 250d

 WAGC Centre, Ala.
 1000d

 KIQS Willows, Calif.
 230d

 KIQS Willows, Calif.
 230d

 KIQS Willows, Calif.
 230d

 KIQS Willows, Calif.
 230d

 KSWI Counceil Bluffs, Iowa
 1000d

 MDXR Paducah, Ky.
 1000

 KQX Jopin, Mo.
 250

 WACK New York, N.Y.
 5000

 WSDC Mocksville, N.C.
 250

 WGLD Chardon, Ohio
 250

 WGXR New York, N.Y.
 5000

 WTNS Coshocton, Ohio
 1000d

 WTNS Coshocton, Ohio
 2500

 WGLD Chardon, Ohio
 250

 WAGL Lancaster, S. C.
 1000d

 WHSD Golivar, Tenn.
 250d

 KGAD Abilene, Tex.
 500d

 KHBR Hillsboro, Tex.
 500d

 KHOK Hoguiam, Wash.
 1000d

 1570—191.1
 1000d
 1560-192.3 1570--191.1 1570—191.1 CHUB Nanaimo, B.C. CKLM Montreal, Canada GFOR Orillia, Ont. WCRL Oneenta, Ala, WRWJ Seima, Ala, KBJI Fordyce, Ark. KBJI Fordyce, Ark. KRSA Alisal, Calif. KCVR Lodi, Calif. KACE Riverside, Calif. KLOV Loveland, Colo. WTWB Auburndale, Fla. 00001 b00001 10000 5000d 250d 250d b0001 1000d 250d
 WTWB Auburndale, Fla.
 5000

 WPAP Fernandina Beach.
 Florida 10000

 WOKC Okeechobee, Fla.
 1000

 WUOKC Okeechobee, Fla.
 1000

 WMES Ashburn, Ga.
 1000d

 WGKC Olege Park, Ga.
 1000d

 WGAC College Park, Ga.
 1000d

 WGKA Atton. Ill.
 250d

 WOKZ Atton. Ill.
 1000d

 WGKA Atton. Ill.
 250d

 WHEX Arenzy Ill.
 1000d

 WGKZ Atton. Ill.
 250d

 WILO Frankfort. Ind.
 250d

 WAWK Kendaliville, Ind.
 250d

 WAWK Kendaliville, Kans.
 250d

 KMCD Fairfield, Iowa
 250d

 KNDY Marysville, Kans.
 250d

 KNSK Pratt, Kans.
 250d

 KULA Leesvile, La.
 1000

 WKKX Vanceburg, Ky.
 250d

 WAR Winnsboro, La.
 1000

 WAR Winnsboro, La.
 1000

 WAR Winnsboro, La.
 1000

 WHAR Winnsboro, La.
 1000

 WAR Winnsboro, La.
 1000

 WHAR Winnsboro, Mass.
 1000
 </ 5000d WHITE'S RADIO LOG WMLO Beverly, Mass. 10004

W.P. |Kc. Wave Length WDEW Westfield, Mass. WMRP Flint, Mich. WFUR Grand Rapids, F0001 10001 WFUR Grand Rapids. Michigan 1000d KUXL Golden Valley, Minn. 500d WONA Winona, Miss. KLEX Lexington, Mo. Storm K. S. WAFS Amsterdam, N.Y. WFLR Dundee, N.Y. WFLR Dundee, N.Y. WAPC Riverhead, N.Y. MAPCA Siler City N.C. MORDA Siler City N.C. MORDA Siler City N.C. MORDA 500 1000d 1000 WTLK Taylorsville, N.C. WCA Siler City, N.C. WCLW Mansfield, Ohio WTW Piqua, Ohio KTAT Frederick, Okla. KOLS Pryor, Okla. KWAY Forest Grove, Oreg. KOHU Hermiston, Oreg. WBDS Danville, Pa. WBUX Doylestown, Pa. WGTW Latrobe, Pa. 2504 250d 10004 000 d 1000d 10004 W GTW Latrobe, Pa. 1000d W GTW Latrobe, Pa. 1000d W FGN Gaffney, S.C. 2300 W JES Johnston, S.C. 250 W LSC Loris, S.C. 1000d W HLP Centerville, Tenn. 1000d W TR B, Ripley, Tenn. 1000d K VLG La Grange, Tex. 250d K VLG La Grange, Tex. 250d K VLG Salt Lake City, Utah 5000 K SWW Pennington Gap, Va. 1000d W YETR Warrenton, W.Va. 500d W HER Warrenton, W.Va. 500d W AFL Appleton, W is. 1000d h0001 1580-189.2 CBJ Chicoutimi, Que. 10000 WEYY Talladega, Ala. 10000 KYND Tempe, Ariz. 100000 KPCA Marked Tree, Ark. 2500 KPDF Van Buren, Ark. 10000 KPDF Van Buren, Ark. 10000 KDAY Santa Monica, Cal. 50000 KHUM Santa Rosa, Calif. 5000 KHUK Colorado Sprgs., Colo. 50000 WWIL FL. Lauderdale, Fla. 10000 WCGF Punta Gorda, Fla. 10000 WCGF Mount Dora, Fla. 10000 WCGF Quinta Gorda, Fla. 10000 WFFE Eastman, Ga. 50000 WHFE Gainesville, Ga. 10000 WKIG Genville, Ga. 10000 WKIG Genville, Ga. 50000 WKID Aurora, III. 2500 WBBA Pittsfield, III. 2500 WKID Urbana, III. 2500 WKID Urbana, III. 2500 CBJ Chicoutimi, Que. 10000 WCNB Connersville, Ind. WJVA South Bend, Ind. WAMW Washington, Ind. 250d 1000d 250d WAMW Washington, ind. KCHA Charles City, Jowa KWNT Davenport, Jowa KOSN Denison, Jowa WAXU Georgetown, Ky, WMTL Leitchfield, Ky, WPKY Princeton, Ky, KLUV Haynesville, La, KLOU Lake Charles, La, WPCC Beardbury Hats A 500d 500d 5004 10000d 250d 250d 1000 KLOU Lake Charles, La. 1000 WPGC Bradbury Hgits, Md. 10000 WJUD St. Johns, Mich. 250d WJUD St. Johns, Mich. 1000d KDOM Windom, Minn. 250d WAMY Amory, Miss. 5000d WLSY Leinand, Miss. 250d WFSY Leinand, Miss. 1000 WFMP Pascagoula-Moss Point Mississionel 1000d WFMP Pascagoula-Moss Point, Mississippi 1000d KCGM Columbia, Mo. 250d KESM Eldorado Springs, Mo. 250d KNIM Maryville, Mo. 250d WOJH Hammonton, N.J. 250d WCRV Washington, N.J. 500d KBZY Albungton, N.M. W NAP Hammonton, N.J. 2500 W CRV Washington, N.J. 2500 KR2Y Albuquerque, N.Mcx, 10000 W PAC Patchogue, N.Y. 100000 W KJK Granite Falls, N.C. 2500 W KJK Granite Falls, N.C. 5000 W W KJ Columbus, Ohio 10000 KLTR Blackwell, Okla. 10000 W COY Columbus, Ohio 10000 KLTR Blackwell, Okla. 10000 W COY Columbus, Pa. 5000 W W CO Y Columbus, Pa. 5000 W W CO Y Columbus, Pa. 5000 W W CO Y Columbus, Pa. 2500 W W CL Y Ork, SC. 10000 W KJ South Knoxville, Tenn. 2500 KKAL Denver City, Tex. 2500 KGAF Gainesville, Tex. 2500 KGAF Gainesville, Tex. KIRT Mission, Tex. KTLU Rusk, Tex. KWED Seguin, Tex. KBYP Shamrock, Tex. KBGO Waco, Tex. WILA Danville, Va. WPUV Pulaski, Va. WTTN Watertown, Wls. 10004 500d 1000d 250d 1000d 5000d 10000 1590-188.7 1000 1000 WATM Atmore. Ala. 5000d WVNA Tuscumbia, Ala. 1000d KPBA Pine Bluff, Ark. 500d KLIV San Jose, Calif. 50004 5000d 1000d

W.P. | Kc. Wave Length W.P. KUDU Ventura, Calif. KCIN Victorville, Calif. WBRY Waterbury, Conn. WOWY Clewiston, Fla. 1000 500d 5000 500d WILZ St. Petersburg Beach, Florida 1000d WELE S. Daytona Bch., Fla. 1000d WELE S. Daytona Beh., Fla WLFA Lafayette, Ga. WTGA Thomaston, Ga. WTMP Evanston, III. WAIK Galesburg, III. WGE Lindianapolis, Ind. WPCO Mt. Vernon, Ind. WGE Goone, Iowa KVGB Great Bend. Kans. WLBN Lebanon. Ky. KEYL White Castle, La. WETV Decan City, Md. WTVB Coldwater, Mich. KRAD E. Grand Forks, KRAD E. Grand Forks, Minn Minn 1000 5000d 500d 5000d 5004 1000 10004 1000d 1000l 5000 10000 WMIC St. Helen, Mich. KRAD E. Grand Forks, Minn WOKJ Jackson, Miss. KDEX Dexter, Mo. KCPS Kansas City, Mo. KCLU Rolla, Mo. WSMN Nashua, N.H. WERA Plainfield, N.J. WAUB Auburn, N.Y. WEHH Elmira Heights. Horscheads, N.Y. WGCSL, Cherryville, N.C. WOSC Chadburn, N.C. WGTG Greenville, N.C. WOSC Chadburn, N.C. WGTG Creenville, N.C. WAKR Akron, Ohio WSRW Hillsboro, Ohio KHEN Henryetta. Okla. KTIL Tillamook. Oreg. WZUM Carnegie, Pa. WZUM Carnegie, Pa. WZEG Chambersburg. Pa. WZUM Carnegie, Pa. WZEG Chambersburg. Pa. WZEG Chambersburg. Pa. KEG Casthage, Tean. KINT El Paso, Tex. KINT El Paso, Tex. KTOD Sinton, Tex. KUS Glen Burnie, Md. KTOD Sinton, Tex. KETO Seattle, Wash. WISK New Richmond, Va. KETO Seattle, Wash. WIXK New Richmond, Va. KETO Keattle, Wash. WIXK New Richmond, Va. KETO Seattle, Wash. WIXK New Richmond, Wis. WAWA West Allis, Wis. KCHY Cheyenne, Wyo. 1600—1875. 500d Minn. 10004 5000d 1000d 1000d 1000d 5000 5004 500d 500d 5000d 1000 500 1000d 5000 500d 500d 1000 1000d 5000d 1000 1000 1000d 10004 10004 000d 5000d 1000d 1000d 500d 1000d 5000 1000 500d 1000 500 5000d 0000 0000 Wis. 5000d 5000 1000d 1000d 1000d 1600-187.5 CHVC Niagara Falls, Ont. WEUP Huntsville, Ala. WAPX Montgomery, Ala. KVID Cottonwood, Ariz. KGK Denton, Ark. KGST Fresno, Calif, KWOW Pomona, Calif, KWOW Pomona, Calif, KUBA Yuba City, Calif, KLAK Lakewood, Colo. WKTX Attantic Beach. Fla. WKTX Attantic Beach. Fla. WKTX Attantic Beach. Fla. WKTX Attantic Garden, Fla. WKTX Attanta Garden, Fla. WHEW Riviera Beach. Fla. WKTA Atanta Garden, Fla. WGGO Chicago Hgts, III. WGGO Chicago Hgts, III. WGGO Chicago Hgts, III. WBTU Linton. Ind. WETU Linton. Ind. KEGA Gedar Rapids, Iowa KCBA Gedar Rapids, Iowa KCBA Cherriday, La. KLVI Vivian. La. WINX Rockville, Md. WBOS Erookline. Mass. WTYM East Longmeadow. Mass. 1600-187.5 10000 5000d 1000 b0001 0001 60001 60001 60001 500d 5000 000d 500 1000 1000d 1000d 1000d 1000d 500d 500d 1000d 5000d 5000 500d 500d 1000d 500d 1000 5000 WTYM East Longmeaton, Mass. 1 WHRV Ann Arbor, Mich. WTRU Muskegon. Mich. WKDL Clarksdale. Miss. WFFF Columbia, Miss. KATZ St. Louis, Mo. KITN Trenton, Mo. KICY Nebraska City, Nebr. KRCY Nebraska City, Nebr. WMCR Oneida, N.Y. WKNG Sag Harbor, N.Y. WXKW Troy, N.Y. WKH Wordside, N.Y. WGIU Charlotte, N.C. 5000d 1000 5000 1000d 500d 5000 5000 500d 500d 10000 500 500d 50000 1000 WIDU Fayetteville, N.C. 10004

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Kc.	Wave Length	W.P. Kc.	Wave Length	W.P. Kc.	Wave Length	W.P.	Ke.	Wave Length	₩. P .
	Reidsville, N.C. W. Jefferson, N.C.		Cushing, Okla. Eugene, Oreg.		L No, Augusta, S.C. T Harriman, Tenn.			Cuero, Tex. McKinney, Tex.	500d 1000d
KDAK	Carrington, N.Dak.	500d KSTH	St. Helens, Oreg.	1000d W K B.	J Milan, Tenn.	1000d	KOGT	Orange, Tex.	1000
	Ashtabula, Ohio Springfield, Ohio		Allentown, Pa. Elizabethtown, Pa.		Borger, Tex. Brownsville, Tex.			Centerville, Utah Wheeling, W.Va.	00001 00003
WITF	Tiffin, Ohio	500d W F I S	Fountain Inn. S.C.	1000d KWE	Midland, Tex.	1000	wcwc	Ripon, Wis.	5000d

U. S. and Canadian AM Stations by Location Abbreviations: C.L., call letters; Kc., frequency in kilocycles; N.A., network affiliation—A: American Broadcasting Co.; C: Columbia Broadcasting System, inc.; M: Mutual Broadcasting System; N: National Broadcasting Co., Inc.

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C: Colum	bia Broadcasti	ng System, inc.;	M: Mutual Br	oadcasting Syst	em; N: Nation	al Broadcasting Co., Inc.
Location	C.L. Kc. N.A.	Location	C.L. Kc. N.A.	Location	C.L. Kc. N.A.	Location C.L. Kc. N.A.
Abbeville, Ala.	WAR1 1480		WAMY 1580	Auburndale, Wis.	WLBL 930	Bedford, Va. WBLT 1950
Abbeville, La.	KROF 960	Amory. Miss. Amos. Que.	CHAD 1340	Augusta, Ga.	WAUG 1050	Beeville, Tex. KIBL 1490
Abbeville, S.C.	WABV 1590	Amsterdam, N.Y.	WAFS 1570		WBBQ 1340 M WBIA 1230 N	Bel Air, Md. WVOB 1520
Abbottsford, B. (Aberdeen, Md.	C. CFVR 250 WAMD 970	Anaconda, Mont.	WCSS 1490 KANA 580		W BIA 1230 N W GAC 580 A	Belen, N. Mex. KARS 860 Belgrade, Mont. KGVW 630
Aberdeen, Miss.	WMPA 1240	Anacortes, Wash. Anaheim, Calif.	KAGT 1340 KEZY 1190		WRDW 1480 C	Bellaire, Ohio WOMP (290 M
Aberdeen, S. Dak	. KDLE 1420	Anaheim, Calif.	KEZY 1190	Augusta, Maine	WRDO 1400 N WFAU 1340 M	Bellefontaine, Ohio WOHP 1390
	KSDN 930 A KXR0 1320	Anchorage, Alaska	KFQD 730 C-A	Aurora, Colo.	KOSI 1430 M	Bellefonte, Pa. WBLF 1330 Bell Fourche, S. Dak. KBFS 1450
Aberdeen, Wash.	KBKW 1450	KE	NI 550 A.M.N WCTA 920	Aurora, III.	WMR0 1280	Belle Glade, Fla, WSWN 900
Abilene. Tex.	KRBC 1470 A KCAD 1560	Andalusia, Ala. Anderson, Calif.	WCTA 920 KPON 1580	Aurora, Mo.	WKKD 1580 KSWM 940	Belleville, Ont. CJBQ 800 Belleville, III. WIBV 1260
	KNIT 1280	Anderson, Ind.	WHUT 1470 M	Austin, Minn,	KAUS 1480 M	Belleville, Ont. CJBQ 800 Belleville, III. WIBV 1260 Bellevue, Wash. KFKF 1330
	KWKC 1340 M	1	WHBU 1240 C	Austin Tru	KAUS 1480 M KQAQ 970	KBVU 1540
Abingdon. Va. Ada. Okla.	WBBI 1230 KADA 1230 A	Anderson, S.C.	WAIM 1230 C WANS 1280 M	Austin, Tex.	KNOW 1490 A KASE 970	Bellingham, Wash. KPUG 1170 M
Adel, Ga.	WAAG 1470	Andrews, Tex.	KACT 1360		KTBC 590 C	KGMJ 790 A KOQT 1550
Adrian, Mich. Aguadilla, P.R.	WABJ 1490 A	Annapolis, Md,	WANN 1190		KOKE 1370	Bellingham Ferndale, Wash.
Aguadilla, P.R.	WABA 850 WGRF 1340		WABW 810 WNAV 1430	Avalon, Calif.	KVET 1300 M KGLM 740	KENY 930 Belmont, N.C. WCGC 1270 M-A
Ahoskie, N.C.	WRCS 970	Ann Arbor, Mich.	WHRV 1600 M	Avon Park, Fla.	WAVP 1390	Beloit, Wis, WGEZ 1490 M
Aiken, S.C.	WAKN 990 WLOW 1330 D	Anno 111	WPAG 1050 WRAJ 1440	Avondale Éstates, Aztec, N. Mex.	Ga. WAVU 1420 KNDE 1340	WBEL 1380
Aitkin, Minn.	WLOW 1330 D KKIN 1000 D	Anna, III. Anniston, Ala.	WANA 1490	Babylon, N.Y.	WBAB 1440 M	Belton, S.C. WHPB 1390 Belton, Tex. KTON 940
Akron, Ohio	WAKR 1590 A		WDNG 1450 A		WGL1 1290	Beizoni, Miss. WELZ 1460
	WADC 1350 C WCUE 1150 M	Anoka. Minn.	WHMA 1390 Kano 1470	Bad Axe, Mich. Bainbridge, Ga.	WLEW 1340 WMGR 930	Bemidji, Minn. KBUN 1450 M
	WHLO 640 M	Ansonia, Conn.	WADS 690 M		WAZA 1360	Bend, Oreg. KBND 1110 A KGRL 940
Alamogordo, N.M.	. KALG 1230 M	Ansonia, Conn. Antigo, Wis.	WATK 900	Baker, Oreg.	KBKR 1490	Bennetsville, S.C. WBSC 1550 M
Alamosa, Colo.	KGIW 1450 M	Antigonísh, N.S. Apolio, Pa.	CJFX 580 WAVL 910	Bakersfield, Calif	. KAFY 550 M KBIS 970	Bennington, Vt. WBTN 1370 Benson, Minn, KBMO 1290
Albany, Ga.	WALG 1590 A	Apopka, Fla.	WAVL 910 WVCF 1520		KERN 1410 C	Benson, Minn. KBMO 1290 Benson, N.C. WPYB 1580
•	WALG 1590 A WLYB 1250	Apopka, Fla. Apple Valley, Cal.	. KAVR 960		KGEE 1230 KUZZ 800	Benton, Ark. KBBA 690
	WGPC 1450 C	Appleton, Wis.	WAPL 1570 WHBY 1230 M		KLYD 1350	Benton, Ky. WCBL 1290
Albany, Ky. Albany, Minn.	WJAZ 960 WANY 1390	Arab, Ala.	WRAB 1380		KWAC 1490	Benton Harbor, Mich.WHFB 1060
Albany, Minn.	KASM 1150 WABY 1400	Arcadia, Fla. Arcata, Calif.	WAPG 1480 KENL 1340	Bellingham, Wash	KPMC 1560 A	Berkeley, Calif. KPAT 1400 Berkeley Springs, W.Va.
Albany, N.Y.	WOKO 1460 M	Arcata, Calif.	KATA 1340	Baldwinsville, N.Y	. WSEN 1050	Berkeley Springs, W.Va. WCST 1010
	WPTR 1540 A	Ardmore, Okla.	KVSO 1240 A	Ballinger, Tex. Baltimore, Md.	KRUN 1400 WBAL 1090 N	Berlin, N.H. WMOU 1230
Albany, Oreg.	WROW 590 C KWIL 790 M	Arecibo, P.R.	WCMN 1280 WMIA 1070	Dattinore, mu.	WBAL 1090 N WBMD 750	WBRL 1400 Berry Hill, Tenn. WVOL 1470
	KRKT 990		WNIK 1230		WCAO 600	Berryville, Ark. KTHS 1480
Albemarle, N.C.	WABZ 1010 WZKY 1580	Argentia, Nfld. Arkadei¤hia, Ark.	VOUS 1480		WFBR 1300	Berwick, Pa. WBRX 280
Albert Lea, Minn Albertville, Ala.	. KATE 1450 A	Arkan. City, Kans Arlington, Fla.	. KSOK 1280		WITH 1230 M	Bessemer, Ala. WYAM 450 Bethesda, Md. WUST 120
Albertville, Ala. Albion, Mich.	WAVU 630 WALM 1260	Arlington, Fla. Arlington, Va.	WOTY 1220 WAVA 780		WSID 1010 WWIN 1400 A-M	Bethlehem, Pa. WGPA 1100
Albuquerque, N.M	. KABQ 1350 KDEF 1150 A		WEAM 1390 KSVP 990 M	Bambers, S.C.	WWBD 790	Beverly, Mass. WMLO 1570 Biddeford, Maine WIDE 1400 M
	KDEF 1150 A	Artesia, N.M.	KSVP 990 M KDAB 1550	Bangor, Maine	WABI 910 A-M WGUY 1250 C	Big Delta, Alaska WXLL 980
	KGGM 6(0 C KOB 770 N	Arvada, Colo. Arroyo Grande, Ca	alif.		WLBZ 620 N	Big Lake, Tex. KBLT 1290 Big Rapids, Mich. WBRN 1460
	KQEO 920 M		KCGH 1280	Banning, Calif. Barboursville, Ky.	KPAS 1490 WBVL 950	Big Sprg., Tex. KBST 490 A
	KARA 1310 KVOD 730	Ashburn, Ga. Asbury Park, N.J.	WMES 1570 WJLK 1310	Bardstown, Ky.	WBRT 1320	KHEM 1270 KBYG 1400 M
	KLOS 1450 KMNF 1520	Ashebero, N.C.	WGWR 1260	Barnesboro, Pa.	WNCC 950 WBAW 740	Big Stone Gap, Va. WLSD 1220
	KMNF 1520 KRZY 1580 A	Asheville, N.C.	WISE 1310 .0S 1380 N-M-A	Barnwell, S.C. Barre, Vt.	WBAW 740 WSNO 1450	Biloxi, Miss. WLOX 1490 M WVMI 570
Alcoa, Tenn.	WEAG 1470		WSKY 1230	Barrie, Ont.	CKBB 950	Billings, Mont. KBMY 1240 M
Alexander City, A	la.	Ashland Ku	WWNC 570 C	Barstow, Calif.	KWTC 1230 A KIOT 1310	KGHL 790 N
Alexandria, La.	WRFS 1050 KALB 580 A	Ashland, Ky.	WCMI 1340 C WTCR 1420	Bartlesville, Okia.	KWON 1400 M	KOOK 970 C Koyn 910
	KDBS 1410	Ashland, Ohio	WNC0 1340	Bartow, Fla. Bassett, Va.	WBAR 1460 WODY 900	KURL 730
Alexandria. Minn.	KSYL 970 N KXRA 1230 A	Ashland, Oreg.	KWIN 1400 M KRVC 1350	Bastrop, La.	KTRY 730	Binghamton, N.Y. WINR 680 N WKOP 1360 M
Alexandria, Va.	WPIK 730 M	Ashland, Va.	WIVE 1430	Batavia. N.Y.	KVOB 1340 WBTA 1490 M	WNBF 1290 C
Algona, lowa Alice, Tex.	KLGA 1600 Kopy 1070	Ashland, Wis. Ashtabula, Ohio	WATW 1400 WAQI 1600	Batesburg, S.C.	WRIR 1430	Birmingham, Ala. WAPI 1070 N
Allegan, Mich.	WOWE 1580	Asiltabula, Olito	WRE0 970	Batesville, Ark.	KBTA 1340 WBLE 1290 WJTO 730	WBHM 1550 WBRC 960 A
Allentown, Pa.	WHOL 1600	Aspen, Colo.	KSN0 5000 D	Batesville, Miss. Bath, Maine	WITO 730	WCRT 1260 A WEZB 1220
	WAEB 790 WKAP 1320	Astoria, Oreg.	KAST 1370 M KIAL 1230	Bath, N.Y.	WESR 1580	WEZB 1220 WENN 1320 M
Alliance Mater	WSAN 1470 N	Atchison, Kans.	KARF 1470	Bathurst, Nfld. Baton Rouge, La.	CKBC 1360 WALL 1460 M	WATV 900 C
Alliance, Nebr. Alliance, Ohio	KCOW 1400 WFAH 1310	Athens, Ga.	WGAU 1340 C WDOL 1470	Baton nouser Eas	WAIL 1460 M WLUX1550	WSGN 610 WYDE 850
Alisal, Calif. Alma, Ga.	KRSA (570		WRFC 960		WYNK 1380 WIBR 1300	WVOK 690
Alma, Ga. Alma, Mich.	WCQS 1400 WFYC 1280	Athens, Ohio	WATH 970 WOUB 1340		WJBO 1150 N	BISDEE, Ariz. KSUN (230 A
Alpena Township,	Mich.	Athens, Tenn. Athens, Tex.	WLAR 1450 M		WLCS 910	Bishopville, S.C. WAGS 1380
Alpine, Tex.	WATZ 1450 KVLF 1240 M	Athens. Tex. Atlanta, Ga.	KBUD 1410 WPLO 590 C	Battle Creek, Mich	WXOK 1260 WBCK 930	Bismarck, N.Dak. KFYR 550 N
Altavista, Va.	WKDE 1280	Atlanta, Ud.	WAKE 1340		WELL 1400 A	KBMR 1350 Bismarck-Mandan, N.Dak,
Alton, III.	WOKZ 1570 CFAM 1290		WAOK 1380	Baxiey, Ga. Bay City, Mich.	WHAB 1260 WBCM 1440 A	KBOM 1270
Altona, Man. Altoona, Pa,	WFBG 1290 N		WERD 860 WGKA 1600		WWBC 1250	Black Mountain, N.C. WBMT 1350
	WRTA 1240 A		WGST 920 A	Bay City. Tex. Bay Minette. Ala.	KIOX 1270 M WBCA 1150	WFGW 1010
Alturas. Calif.			WIIN 970 WQXI 790	Bayamon, P.R.	WRSJ 1560	Black River Falls, Wis. WWIS 1260
Altus, Okla. Alva, Okla.	KWHW 1450 KALV 1430 KBUY 1010 M		WSB 750 N WYZE 1480 C	Baytown, Tex. Beacon, N.Y.	KWBA 1360 WBNR 1260	Blackfoot, Idaho KBLI 690
Alva, Okla. Amarillo, Tex.	KALV 1430 KRUV 1010 M	Atlanta, Tex	WYZE 1480 C KALT 900	Beardstown, 111.	WRMS 790	Blackshear, Ga. WBSG 1350 Blackstone, Va. WKLV 1440
	KFDA 1440 A	Atlanta, Tex. Atlantic, Iowa	KJAN 1220	Beatrice, Nebr. Beaufort, N.C.	KWBE 1450	Blackwell, Okla, KLTR (580
	KGNC 710 N	Atlantic Beach, Fla.	.WKTX 1600 🗆	Beaufort, S.C.	WBMA 1400 WBEU 960	Blaine, Wash, KARI 550
	KIXZ 940 C KRAY 1360	Atlantic City, N.J. W	LDB 1490 A-M		WSIB [490]	Blanding, Utah KUTA 790
Ambrides D-	KZIP 1310		WMID 1340 A	Beaumont, Tex.	KFDM 560 A KPYC 1450	Blind River, Ont. CJNR 730
Ambridge, Pa. Americus, Ga.	KZIP 1310 WMBA 1460 WDEC 1290	Atmore, Ala. Attleboro, Mass.	WATM 1590 WABA 1320	Barrier B. Marrier	KTRM 990	Bloomington, III. WJBC 1230 A Bloomington, Ind. WTTS 1370 A
Ames, lowa	KSAI 1430	Auburn, Ala. Auburn, Calif.	WARA 1320 WAUD 1230 A	Beaver Dam, Wis. Beaver Falls. Pa.	WBEV 1430 WBVP 1230	Bloomsburg, Pa. WCNE 930
Amherst, Mass.	WOI 640 WTTT 1430	Auburn, Calif. Auburn, N.Y.	KAHI 950 WMBO 1340 M	Beckley, W. Va.	WJLS 560 C	WHLM 550 Blountstown, Fla. WKMK 1370
Amherst, N.S.	CKDH 1400		WAUB 1590		WWNR 620	
Amherst, N.Y.	WUF0 1080 WABL 1570	Auburn, Wash. Auburndale, Fia.	KASY 1220 WTWB 1570	Bedford, Ind. Bedford, Pa.	WBIW 1340 WBFD 1310	WHITE'S RADIO LOG 139
Amite, La.						

Location C.L. Kc. N.A.	Location	C.L. Kc. N.A.	Location	C.L. Kc. N.A.	Location	C.L. Kc. N.A.
Blue Earth. Minn. KCLH 1560 Bluefield, W.Va. WHIS 1440 N	Burley, Idaho	KBAR 1280 A-M KBUR 1490 A			Clearfield, Pa.	WCPA 900
WKOY 1240 M	Burlington, N.C.	WBBB 920 M	Charleroi, Pa, Charles City, Iowa	WESA 940	Clearwater, Fla, Cleburne, Tex.	WTAN 1340 WAZE 860 KCLE 1120
Blythe, Calif. KYOR 1450 A Blytheville, Ark. KLCN 910 Boaz, Ala. WBSA 1300	Burlington, Vt.	WBAG 1150 WDOT 1400 WIOY 1230 A	Charleston, Ill. Charleston, Mo.	WEIC 1270 KCHR 1350	Clermont, Fla,	WSLC 1340
Boca Raton, Fla. WFSG 730 Bogalusa, La. WIKC 1490 N	Burnett, Tex.	W JOY 1230 A WVMT 620 N KTSL 1340	Charleston, S.C.	WCSC 1390 C WOKE 1340 A-M	Cleveland, Ga. Cleveland, Miss.	WRWH 1350 WCLD 1490
WBOX 920 Boise, Idaho KATN 1010	Burns, Oreg. Butler, Ala.	KRNS 1230 WPRN 1240		WPAL 730 WQSN 1450	Cleveland, Ohio	WDSK 1410 KYW 1100 WDOK 1260 M
KB01 950 C Kest 790	Butler, Mo. Butler, Pa.	KMAM 1530 WBUT 1050	Charleston, W.Va.	WTMA 1250 N		WERE 1300 WGAR 1220 C
KGEM 1140 M KIDO 630 N		WISR 680 KBOW 1490 C		WCHS 580 C WGKV 1490 A		WHK 1420 WABQ 1540
KYME 740 Bolivar, Mo. KBLR 1550		KOPR 550 M		WKAZ 950 N WTIP 1240 M	Cleveland, Tenn.	WJW 850 N WBAC 1340 M
Bolivar, Tenn. WBOL 1560 Bonham, Tex. KFYN 1420	Cabano, Que. Cadillac, Mich.	KXLF 1370 N CJAF 1340 WATT 1240 M	Charlotte, Mich,	WXVA 1550 WCER 1390	Cleveland, Tex.	WCLE 1570 KVLB 1410
Boone, lowa KFGQ 1260 KWBG 1590	Caguas, P.R.	WNEL 1430 WVJP 1110	Charlotte, N.C.	WBT 1100 C WAYS 610 M	Cleve. Hgts., Ohlo	WJM0 1490 A
Boone, N.C., WATA 1450 Boonville, Ind. WBNL 1540 Boonville, Mo. KWRT 1370	Cairo, Ga. Cairo, III.	WGRA 790 WKRO 1490		WG1V 1600 WKTC 1310	Clifton, Ariz. Clifton Forge, Va	KCLF (400 A WCFV (230 M
Booneville, Miss, WBIP 1400 A	Calais, Maine Caldwell, idaho	WQDY 1230 N KC1D 1490		WSOC 930 M WIST 1240 N	Clinton, ill,	WDIC 1430 WHOW 1520
Boonville, N.Y. WBRV 900 Borger, Tex. KHUZ 1490 M	Calera, Ala.	KBGN 910 WBYE 1370	Charlotte Amalie,	WWOK 1480	Clinton, lowa	KCLN 1390 Kros 1340 m
Beston, Mass, WBZ 1030	Calexico, Calif. Calgary, Alta.	KICO 1490 A CFAC 960		WBNB 1000 WSTA 1340	Clinton, Mo. Clinton, N.C.	KDKD 1280 WRRZ 880 A
WCOP 1150 WILD 1090 WNAC 680		CBX 1010 CFCN 1060	Charlottesville, Va	WBNB 1000 WCHV 1260 A	Clinton, Okla. Clinton, S.C. Clinton, Tenn.	KWOE 1320 WPCC 1410
WEZE 1260 N WEEI 590 C	Calhoun, Ga.	CKXL 1140 WCGA 900 WCEM 1240	Charletterterre	WELK 1010 WINA 1400 M	Cloquet, Minn.	WYSH 1380 WKLK 1230
WHDH 850 WMEX 1510	Cambridge, Md. Cambridge, Mass. Cambridge, Ohio	WTA0 740 A	Charlottestown, P. Chase City, Va.	CFCY 630	Clovis, N.Mex,	KCLV 1240 KICA 980 KCHV 970
WORL 950 M Boulder, Colo, KBOL 1490	Camden, Ark.	KAMD 910 KJWH 1450	Chatham, Ont. Chattanooga, Tenn.	WMEK 980 CFCO 630 WMOC 1450 M	Coachella, Calif. Coalinga, Calif.	KBMX 1470
Bowie, Tex. KDEY 1460 KDEY 1460	Camden, N.J.	WCAM 1310 WKDN 800	W	/APO 1150 A-M	Coatesville, Pa. Cocoa, Fla.	WCOJ 1420 WKKO 860 WEZY 1350
Bowling Green, Ky. WKCT 930 A WBGN 1340	Camden, S. C. Camden, Tenn.	WACA 1590 WFWL 1220		WDEF 1370 N WDOD 1310 C WDXB 1490	Cocoa Beach, Fla. Cody. Wyo.	WRKT 1300 KODI 1400 A
WLBJ 1410 M Bowl. Green, Ohio WMGS 730	Cameron. Tex. Camilia, Ga.	KMIL 1330 WCLB 1220 WHOT 1330	Cheboygan, Mich.	WNOO 1260 WCBY 1240	Coeur d'Alene, Ida Coffeyville, Kans,	. KVNI 1240 M
Boynton Beach, Fla. WZZZ 1510	Campbell, Ohio Campbellsville, K	y. WTCO 1450	Cheektowaga, N.Y. Chehalis, Wash	WNIA 1230 KITI 1420	Colby, Kans,	KXXX 790 WTVB 1590
Bozeman, Mont. KXXL 1450 N KBMN 1230	Campbellton, N.E Camrose, Alta.	CFCW 790	Chelan, Wash. Cheraw, S.C.	KOZI 1220 WCRE 1420	Coldwater, Mich. Coleman, Tex. Colfax, Wash.	KSTA 1000 KCLX 1450
Bradbury Hots,, Md. WPGC 1580 Braddock, Pa. WLOA 1550	Canandaigua, N.Y Cannon City, Col Canonsburg, Pa.	". WCGR 1550 0. KRLN 1400 M	Cherryville, N. C Cherokee, Iowa	. WCSL 1590 KCHE 1440	Colfax, Wash. College Park, Ga. Colonial Heights.	WEAD 1570 Va.
Braddocks Heights, Md. WMH1 1370	Canton, Ga.	WCHK 1290	Chester, III. Chester, Pa.	KSGM 980 WEEZ 1590	Colorado City, Tex.	WPVA 1290
Bradenton, Fla. WTRL 1490 WBRD 1420	Canton, III. Canton, Miss.	WBYS 1560 WDOB 1370	Chester, S.C.	WVCH 740 WGCD 1490	Colo. Sprgs., Colo.	KRD0 1240 KPIK 1580
Bradford, Pa. WESB 1490 M Brady, Tex. KNEL 1490	Canton, N.C. Canton, Ohio	WWIT 970 WCNS 900 M	Chestertown, Md. Cheyenne, Wyo.	WCTR 1530 KFBC 1240 A		KVOR 1300 C KSSS 740
Brady, Tex. KNEL 1490 Brainerd, Minn. KL1Z 1380 Brampton, Ont. CHIC 790	-	WHOF 1060 WHBC 1480 A		KCHY 1590 Krae 1480	Columbia, Ky.	KYSN 1460 M WAIN 1270
Brandon, Man. CKX 1150 Branson, Mo. KBHM 1220 Brantford, Ont. CKPC 1380	Canyon, Tex. Cape Girardeau, M	KCAN 1550 10. KFVS 960	Chicago, Ill.	KVW0 1370 M WAAF 950	Columbia, Miss. Columbia, Mo.	WCJU 1450 M KFRU 1400 A
Brantford, Ont. CKPC 1380 Brattleboro, Vt. WTSA 1450 N WKVT 1490		KZIM 1220 KGMO 1550		WAIT 820 M WBBM 780 C	Columbia, Pa.	KCGM 1580 WCOY 1580
Brawley, Calif. KROP 1300 A Brazil, Ind, WBZI 1380	Carbondale, III. Carbondale, Pa.	WC1L 1020 WCDL 1440		WCFL 1000 WCRW 1240	Columbia, S.C.	WCOS 1400 A WIS 560 N
Breckenridge, Minn. KBMW 1450 Breckenridge, Tex. KSTB 1430	Caribou. Maine Carlisle, Pa. Carlsbad, N,Mex.	WFST 600 WHYL 960 KAVE 1240 C		WEDC 1240 WYNR 1390		WOIC 1320 C WNOK 1230 M
Bremen, Ga. WWCC 1440 Bremerton, Wash, KBRO 1490	Carmel, Calif.	KPBM 740 KRML 1410		WGN 720 M WIND 560 WJJD 1160	Columbia, Tenn,	WQXL 1470 WMCP 1280
Brevard, N.C. WPNF 1240 M-N	Carmi, III. Carnegie, Pa.	WROY 1460 WZUM 1590		WLS 890 A WMAQ 670 N	Columbus, Ga.	WKRM 1340 WDAK 540 N WRBL 1420 C
Brewster, N.Y. WBRW 1510 Brewton, Ala. WEBJ 1240 M	Caro, Mich. Carrington, N.Dal	WKYO 1360		WMB1 1110 WSBC 1240		WGBA 1270 M WCLS 1580
Bridgeport, Ala. WBTS 1480 Bridgeport, Conn. WICC 600 M	Carrizo Springs, T Carroll, Iowa	ex, KBEN 1450 KCIM 1380	Chicago Hgts., III.	WMPP 1470 WCGO 1600	Columbus, Ind.	WOKS 1340 WCSI 1010
Bridgeton, N.J. WNAB 1450 A-M WSNJ 1240 M	Carrollton, Ala, Carrollton, Ga.	WRAG 590 WLBB 1100	Chickasha. Okla. Chico, Calif.	KWC0 1560 KHSL 1290 C	Columbus, Miss.	WACR 1050 WCBI 550 M
Bridgewater, N.S. CKBW 1000 Brigham City, Utah KBUH 800	Carrollton, Mo. Carson City, Nev.	KAOL 1430 KPTL 1300 WBHF 1450 M	Chicopee, Mass.	KPAY 1060 Wace 730	Columbus, Nebr.	KJSK 900 KTTT 1510
Brighton, Colo. KBRN 800 Brinkley, Ark. KBRI 1570 Bristol, Conn. WBIS 1440	Cartersville. Ga.	WKRW 1270	Chicoutimi, Que.	CBJ 1580 CJMT 1420	Columbus, Dhio	WBNS 1460 C WCOL 1230 A
Bristol, Tenn. WOPI 1490 N	Carthage, [[]. Carthage, Mo.	WCAZ 990 KDM0 1490	Childress, Tex. Chillicothe, Mo.	KGTX 1510 KCH1 1010		WMNI 920 M WOSU 820
Bristol, Va. WYKE 1550 WCYB 690 A	Carthage, Tenn. Carthage, Tex.	WRKM 1350 KGAS 1590	Chillicothe, Ohio .	WBEX 1490 A WCHI 1350		WTVN 610 A WVKO 1580
Brockton, Mass. WFHG 980 M WBET 1460 WOKW 1410	Caruthersville, Mo Casa Grande, Ari	z. KPIN 1260	Chilliwack, B.C. Chipley, Fla,	CHWK 1270 WBGC 1240	Colville, Wash. Comanche, Tex.	KCVL 1270 KCOM 1550
Brockville, Ont. CFJR 1450 Broken Bow, Nebr. KCNI 1280	Casey, III. Casper, Wyo.	WKZI 800 KTWO 1470 C	Chippewa Falls, W	WAXX 1150	Commerce, Ga.	WJJC 1270 KWUN 1480
Brookfield, Mo. KGHM 1470 Brookhaven, Miss, WCHJ 1470	Cayce, S.C.	KATI 1400 KVOC 1230 A-M WCAY 620 C	Christiansburg, Va Christiansted, V.I. Church HIII, Tenn,	WIVI 970	Concord, N.H. Concord, N.C. Concordia, Kans.	WKXL 1450 C WEGO 1410
WJMB (340 M Brookings, Oreg, KURY 910	Cedar City, Utah Cedar Falls, Jowa	KSUB 590 C	Church Hill, Tenn, Churchill, Man. Cicero, Ill,	CHFC 1250 WVON 1450		KNCK 1390 KFRM 550 A WWOW 1360
Brookings, S.Dak. KBRK 1430 Brookline, Mass. WBOS 1600	Cedar Rapids, Iow	/A KCRG 1600 A	Cincinnati, Ohio	WCKY 1530 M	Conneaut, Ohio Connellsville, Pa.	WCVI 1340
Brooksville, Fla. WWJB 1450 Brownfield, Tex. KTFY 1300	Cedartown, Ga.	KLWN 1450 WMT 600 C WGAA 1340		WCIN 1480 WCPO 1230 WKRC 550 C	Connersville, ind. Conroe, Tex. Conway, Ark.	WCNB 1580 KMCO 900 KCDN 1230
Brownwood, Jex, KBWD 1380 M	Celina, Ohio Center, Ala.	WGAA 1340 WCSM 1350 WEIS 990 WAGC 1550		WKRC 550 C WLW 700 N-A WSAL 1360	Conway, N.H.	KVEE 1330 WBNC 1050
KEAN 1240 Brunswick, Ga, WG1G 1440 A	Center, Tex.	WAGC 1550 KDET 930	Clanton, Ala.	WSAI 1360 WZIP 1050 WKLF 980	Conway, S.C. Cookeville, Tenn.	WLAT 1330 M WHUB 1400 C
WMOG 1490 Brunswick, Maine WCME 900	Centerville, Iowa	KC06 1400	Clare, Mich. Claremont, N.H.	WCRM 990	Coolidge, Ariz.	WPIN 1550
Reven Tev KORA 1940 M	Centerville, Ind. Centreville, Miss. Centerville, Tenn.	WLBS 1580 WHLP 1570	Claremore, Okla, Clarion, Pa.	WTSV 1230 KWPR 1270 WWCH 1300	Coos Bay, Dreg.	KCKY 1150 C KOOS 1230 M KYNG 1420
WTAW 1150 Buckhannon, W.Va. WBUC 1460	Centerville, Tenn. Centerville, Utah Central City, Ky,	WNES 1050	Clarksburg, W.Va.	WBOY 1400 N WHAR 1340 M	Copper Hill, Tenn. Coquille, Oreg.	WLSB 1400 KWR0 630
BUTTALO, N.Y. WBEN 930 C	Centralia, III.	WMTA 1380 WCNT 1210	Clarksdale, Miss.	WPDX 750 WROX 1450 M	Coral Gables, Fla.	WRIZ 1550
WYSL 1400 WEBR 970 M	Centralia & Cheha Wash.	KELA 1470	Clarksville, Ark.	WKDL 1600 KLYR 1360	Corbin, Ky.	WVCG 1070 WCTT 680 M WYGO 1330
WGR 550 N WKBW 1520 N WWOL 1120 A	Centreville, Miss. Ceres, Calif. Chadburn, N.C.	WLBS 1580 KLOC 920 WVOE 1590	Clarksville, Tenn,	WJZM 1400 M WDXN 540 KCAR 1350	Cordele, Ga. Cordova, Alaska Corinth, Miss.	WMJM (490 M KLAM 1450
Buffalo, Wyo, KBBS 1450 Buford, Ga. WDMF 1460	Chadron, Nebr.	KCSR 610	Clarksville, Tex. Claxton, Ga.	WCLA 1470	Cornella, Ga.	WCMA 1230 WCON 1450
Buford, Ga. WDMF 1460 Burbank, Calif, KBLA 1500	Chambersburg, Pa	WCHA 800 WCBG 1590 WDWS 1400 C	Clayton, Ga. Clayton, Mo.	WGHC 1570 KXLW 1320	Corner Brook, Nfld,	CFCB 570
140 WHITE'S RADIO LOG	Champaign, 111. Chanute, Kans.	MOWS 1400 C	Clayton, N.Mex.	KFU0 850 KLMX 1450	Corning, Ark. Corning, N.Y.	KCCB 1260 WCBA 1350

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Looption CI Ko NA	Location CI Ko NA	Location C.L. Kc. N.	л 1	Location C.L. Kc. N.A.	
Location C.L. Kc. N.A. WCLI 1450 A	WZEP 1460	Eau Claire, Wis, WEAQ 790	N	Fairmont, Minn, KSUM 1370 M	
Cornwall, Ont. CJSS 1220 CFML 1110	De Kalb, III. WLBK 1360 De Land, Fla. WJBS 1490	WBIZ 140 WECL 105) M	Fairmont, N.C. WFMO 860 Fairmont, W.Va. WMMN 920 C	
Corona, Calif. KBUC 1370 Corpus Christi, Tex.	W000 1310	Eau Gallie, Fla. WMEG 920 Ebensburg, Pa. WEND 1580		WTCS 1490 A Fajardo, P.R. WMDD 1480	
KCTA 1030 M	Delano, Calif. KCHJ 1010 Delaware, Ohio WDLE 1550 Delray, Bch., Fla. WDBF 1420	Edenton, N.C. WCDJ 1260		Falfurrias, Tex. KPSO 1260 Fall River, Mass. WALE 1400 M	
KCCT 1150 KEYS 1440	Del Rio, Tex. KDLK 1230	Edmonds. Wash. KGDN 630)	WSAR 1480 A	
KRYS 1360 N KSIX 1230 A-M	Delta. Colo. KDTA 1400 Deming, N.Mex. KOTS 1230	CFRN 126		Falls Church, Va. WFAX 1220 Falls City, Nebr. KTNC 1230	
KUNO 1400 Corry, Pa WOTB 1370	Demopolis. Ala. WXAL 1400 M WJWT 1350	CHED 630 CHFA 680		Fargo, N.Dak. WDAY 970 N KFNW 900	
Corsicana, Tex. KAND 1340 Cortez, Colo. KVFC 740	Denham Sprgs., La. WLBI 1220 Denison, Jowa KDSN 1580	CJCA 930 CKUA 580		KUTT 1550 KXGO 790 A	
Cortland, N.Y. WKRT 920 Corvallis, Dreg. KOAC 550	Denison, Tex. KDSX 950 Denton, Tex. KDNT 1440	Edmundston, N.C. CJEM 570 Effingham, III. WCRA (09)		Faribault. Minn. KDHL 920 Farmersville, La. KTDL 1470	
KFLY 1240	Denver, Colo. KDEN 1340	Elba, Ala. WELB 1350)	Farmington, Me. WKTJ (380	
KLOO 1350 Coshocton, Ohio WTNS 1560 Cottage Grove, Ore. KNND 1400	KFML 1390 KHOW 630 A	El Cajon, Calif. KDEO 91	0 A	Farmington, N.M. KENN 1393	
Cottage Grove, Ore. KNND 1400 Cottonwood, Ariz. KVRD 1240	KIMN 950 A KLIR 990	El Campo, Tex. KULP 1390 El Centro, Calif. KXO 123	0 M I	KWYK 960 KRZE 1280	
KV10 1600 Coudersport, Pa. WFRM 600	KLZ 560 C KBTR 710	El Dorado, Ark. KDMS 129)	Farmville, N.C. WFAG (250) Farmville, Va. WFLO 870	
Council Bluffs, Iowa KFNF 920	KOA 850 N KPOF 910	Eldorado, Kans. KELD 1400		Farrell, Pa. WFAR 1470 Farwell, Tex. KZOL 1570	
KSWI 1560 M-A Courtenay, B.C. CFCP 1440	KFSC 1220 KTLN 1280	Eldorado Springs, Mo. KESM 158		Fayette. Ala. WWWF 990 Fayetteville, Ark. KHOG 1440	
Covington, Ga. WGFS 1430	Denver City. Tex. KKAL 1580	Elgin, III. WRMN 1419 Elizabeth City, N. C.	õ	Fayetteville, N.C. WFAI 1230 C	ŗ
Covington, La. WARB 730 Covington, Tenn. WKBL 1250	DeRidder, La. KDLA 1010	WCNC 124 WGA1 56	0	WFNC 940 M	
Covington, Va. WKEY 1340 A Cowan, Tenn. WZYX 1440 Craig, Colo. KRAI 550	Des Moines, Iowa KCBC 1390 A KIDA 940 M	Elizabethton, Tenn. WBEJ 124	0	WFLB 1490 A WIDU 1600	•
Craig, Colo. KRAI 550 Cranbrook, B.C. CKEK 570	KRNI 1350 C KSO 1460	Elizabethtown, Ky. WIEL 140 Elizabethtown, N.C.		Fayetteville, Tenn. WEKR 1240 M	L
Crane, Tex. KCRR 1380 Crescent City, Calif. KPLY 1240	KWKY 1150 M WHO 1040 N	WBLA 144 Elizabethtown, Pa. WEZN 160	0	Fergus Falls. Minn. KOTE 1250 M	ı.
KPOD 1310 Creston, Iowa KSIB 1520	Detroit, Mich. WCAR 1130 WJBK 1500	Elk City, Okla. KBEK 124 Elkhart, Ind. WTRC 134	JA	Fernandina Beach, Fla. WPAP 1570	
Crestview, Fla. WCNU 1010 WJSB 1050	WJLB 1400 WJR 760	WCMR 127	0	Ferriday, La. KFNV 1600 Festus, Mo. KJCF 1400	
Crewe. Va. WSVS 800 Crockett, Tex. KIVY 1290	WWJ 950 N WXYZ 1270 A	Elkin, N.C. WIFM 154 Elkins, W.Va. WDNE 124 Elko, Nev. KELK 124	Ŏм	Findlay, Ohio WFIN 1830	
Crookston, Minn, KROX 1260	Detroit Lakes, Minn.	Elkton, Md. WSEB 155)	Fisher, W.Va. WELD 630 A	4
Crossett, Ark. KAGH 800 Crossville, Tenn. WAEW 1330	KDLM 1340 Devils Lake, N. Dak.	Ellensburg, Wash. KXLE 124 Ellsworth, Me. WDEA 137	Ŏ	- WEGM 960	
Crowley, La. KSIG 1450 M Cuero, Tex. KCFH 1600	Dexter, Mo. Diboll, Tex. KDLR 1240 M KDEX 1590 KSPL 1260	Elmira, N.Y. WELM 1410 WENY 123	0 N	Fitzgerald, Ga. WBHB 1240 M Flagstaff, Ariz. KCLS 600 M KFGT 1000	j
Cullman. Ala. WFMH 1460 WKUL 1340	Dickinson, N.Dak. KDIX 1260 Dickinson, Tenn. WDKN 1260	Elmira Heights- Horseheads, N.Y.		KJKJ 1400	
Culpeper, Va. WCVA 1490 M Cumberland, Ky. WCPM 1280	Dickson, Tenn. WDKN 1260 Dillon, Mont. KDBM 800	WEHH 159 El Paso, Tex. KROD 60	0 M 0 C	KVNA 690 A KEOS 1290	
Cumberland, Md. WCUM (230 C WTBO (450	Dillon, S.C. WDSC 800 A	KELP 92	0	Flat River, Mo. KFMO 1240 M Flin Flon, Man. CFAR 590	1
Cummings, Ga. WSNE 1410	Dimmitt, Tex. KDHN 1470 Dinuba, Calif. KRDU 1130 Dixon, 111. WIXN 1460	KHEY 69 KINT 159 KIZZ 115	0 0	Flint, Mich. WFDF 910 N WTRX 1330 A	d A
Cushing, Okla. KUSH 1600 Cuyahoga Falls, Ohio	Dodge City, Kans. KGNO 1370 M	KSET 134	0 M	WAMM 1420 WMRP 1570	
WCVE 1150 Cypress Gardens, Fla.WGTO 540	KEDD 1550 Donaldsonville, Ga. WSEM 1500 Doniphan, Mo. KDFN 1500	El Reno, Okia. KELR 146	0	WKMF 1470 N WTAC 500 A	
Cynthiana, Ky. WCYN 1400 Dade City, Fla. WDCF 1350 Dadeville, Ala, WDVC 910	Dothan, Ala, WAGF 1320	Ely, Minn. WELY 145 Ely, Nev. KELY 123	0	Flomaton, Ala. WTCB 990	
Dadeville, Ala, WDVC 910	WDIG 1450 M WOOF 560	Elyria, Ohio WEOL 93 Eminence, Ky. WSTL 160 Emporia, Kans. KVOE 140	0	Florence, Ala. WJOI 1340 M WOWL 1240 A WUWL 1240 A	A .
Dalhart, Tex. KXIT 1410 Dallas, N.C. WAAK 960 Dallas, Oreg. KROW 1460	Douglas, Ariz. KAWT 1450 M KAPR 930	Emporia, Kans. KVUL 140 Emporia, Va. WEVA 86	0	WOLS 1230	•
Dallas. Tex. KRLD 1080 C KIXL 1040	Douglas, Ga. WDMG 860 WOKA 1310	Endicott, N.Y. WENE 143	0 A	WYNN 540 Floydada, Tex. KFLD 900	
KSKY 660 KLIF 1190	WOKA 1310 Douglas, Wyo. KWIV 1050 Dover, Del. WDQV 1410 M	Englewood, Colo. KGMC 115 Englewood, Fla. WENG 153	0	Foley, Ala. WHEP 1310 Fond du Lae, Wis. KFIZ 1450 N	A
WFAA 570 A	WKEN 1600 A	Enid, Okla. KCRC 139 KGWA 96	0 A	Fordyce, Ark. KBJT 1570 Forest, Miss. WMAG 860	
WFAA 820 N KBOX 1480 WRR 1310 M	Dover, Dhio WJER 1450 Dowagiac, Mich. WDOW 1440	Enterprise, Ala. WIRB 60 Enterprise, Oreg. KWVR 134	0	Forest City, N.C. WBBO 780 WAGY 1320	
The Dalles, Oreg. KACI 1300	Doylestown, Pa. WBUX 1570	Enhrata, Pa. WGSA [3]	0	Forest Grove, Ore, KWAY 1570	
Dalton, Ga. WBLJ 1230 M WRCD 1430	Drummondville, Que. CHRD 1340	Ephrata, Wash. KULF 73 Erie, Pa. WWYN 126 WICU 133	Ŏ A O N	Ft. Atkinson, Wis. WFAW 940	
Danbury, Conn. WLAD 800	Dublin, Ga. WMLT 1330	WJET 140	0 M	Ft. Bragg, Calif. KDAC 1230 Ft. Collins, Colo. KCOL 1410 A KZIX 600	٩
Danville. 111. WDAN 1490 C WITY 980	Du Bois. Pa. WCED 1420 C	Erwin. Tenn. WEMB 142	0	Ft, Dodge, Iowa KVFD 1400 N	4
Danville, Ky. WHIR 1230 M Danville, Pa. WBDS 1570	WDBQ 1490 M	WLST 60	0 M		•
Danville, Va. WBIM (330 A WYPR 970	WEBC 560	Escondido, Calif. KOWN 145 Espanola, N. M. KDCE 97	0	Ft. Knox, Ky. WSAC 1470 Ft. Lauderdale, Fla. WFTL 1400	
WDVA 1250 M WILA 1580	Dumas, Tex. KDDD 800	Estevan, Sask. CJSL 128 Estherville, Iowa KLIL 134	0	Ft. Madison, Iowa KXG1 1360	
Darlington, S.C. WDAR 1350 Dartmouth, N. S. CFDR 790	Duncan, Okia. KRHD 1350 M Oundalk, Md. WAYE 860	Etowah Tonn WCDU (22	0 0 M	Ft. Morgan, Colo. KFTM 1400 Ft. Myers, Fla. WINK 1240 C	3
Dauphin, Man. CKDM 730	WEBB 1360	Eugene, Oreg. KORE 145 KPIR 150	οM Ο	W MYR 1410 W XYC 1350	
Davenport, Iowa WOC (420 N KWNT 1580 KSTT 1170 M	Dunkirk, N.Y. WDOE 1410 Dunn, N.C. WCKB 780	KASH 160 KATR 132	όΑ 0	Ft. Payne, Ala. WFPA 400 WZOB 250	
Dawson, Ga. WDWD 990 Dawson, Yukon T. CFYT (230	Du Quoin, 111. WDQN 1580 Durango, Colo. KIUP 930	KERG 128 KUGN 59	0 C	Ft. Pierce, Fla. WARN 1330 WIRA 1400	
Dawson Creek, B.C. CJDC 560	KDG0 1240	KWFS 154	0	Ft. Saint John, B.C. CKNL 970	
W1NG 1410	Durant, Okla. KSFO 750 Durham, N.C. WDNC 620 C WSRC 1410	Eureka, Callf. KINS 98	0 C	Ft. Scott, Kans. KMDO 1600 Ft. Simpson, NWT.	
WONE 980 WAVI 1210	WSSB 1490	. KRED 148	0 M	CFMR 1490	
Dayton, Tenn. WDNT 1280 Daytona Beach, Fía.	Dyersburg, Tenn. WDSG 1450	Eustis, Fla. WLCO 124 Evanston, 111. WEAW 133	0	Ft. Smith, Ark. KFPW 1230 C KFSA 950 A	٩.
WNDB 1150 M-A WMFJ 1450	Eagle Pass, Tex. KEPS 1270	Evanston, Wyo. KEVA 124 Evansville, Ind. WROZ 140	0	KTCS 1410 N KWHN 1320	1
WROD 1340 Deadwood, S.Dak. KDSJ 980	Eagle River, Wis. WERL 950 Eastey. S.C. WELP 1360	Evansville, Ind. WROZ 140 WGBF 128	0 C 0 N	Ft. Valley, Ga. WFPM 1150	
Dearborn, Mich. WKMH 1310 M Decatur, Ala. WHOS 800	E. Grand Forks, Minn. KRAD 1590	WGBF 128 Wiky 82 Wjps 133	D A	Ft. Walton Beach, Fla. WNUE 1400	
WAJF 1490 WMSL 1400 M	Eastland, Tex. KERC 1590 E. Lansing, Mich. WKAR 870	Eveleth. Minn. WEVE 134 Everett, Pa. WWDS 105 Everett, Wash. KRKO 138	0 M	WFTW 1260	4
Decatur, Ga. WGUN 1010 A	E. Liverpool, Ohio WOHI (490 A East Longmeadow, Mass.	Everett, Wash. KRKO 138 KWYZ 123	0	Ft. Wayne, Ind, WGL (250 A WOWO (190 WANE 1450 C	Ś
Decatur, III. WDZ (050	WTYM 1600	Evergreen, Ala. WBLO 147 Fairbanks, Alaska		WKJG 1380 N	4
Decorah, Iowa KDEC 1240	E. Moline, 111. WDLM 960	KFAR 610 A-1		CJLX 800	
KWLC 1240 Deer Lodge, Mont. KDRG 1400 Deerfield, Va. WABH 1150	E. Point. Ga. WTJH 1260 E. St. Louis, 111. WAMV 1490 A	Fairbury, Nebr. KFRB 900 Fairfax, Va. WEEL 131	0-4	Ft. Worth, Tex. KJIM 870 KCUL 1540	
Defiance, Ohio WONW 1280	Easton, Md. WEMD 1460 Easton, Pa. WEEX 1230	Fairfield, III. WEIW (39	0	KFJZ 1270	
De Funiak Springs, Fla. WDSP 1280	Eatontown, N.J. WEST 1400 N WHTG 1410	Fairfield, Iowa KMCD 157 Fairhope, Ala. WABF 122	0	WHITE'S RADIO LOG 141	l

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Location C.L. Kc. N.A.	Location C.L. Kc. N.A.		Location C.L. Kc. N.A.
KNOK 970 Wbap 570 A Wbap 820 N	WENT 1340 C Gold Beach, Oreg. KBLY 1220 Golden, Colo. KICM 1250	Haines City, Fla. WHAN 930 Haleyville, Ala. WJBB 1230 M Halfway, Md. WHAG 1410	Hollister, Calif. KGHT 1520 Hollywood, Fla. WGMA 1320
KXOL 1360 Fostoria, Ohio WFOB 1430	Golden, Colo. KICM 1250 Golden Valley, Minn. KEVE 1440 M	Halfway, Md. WHAG 1410 Halifax, N. S. CBH 860 CHNS 960	Holly Hill, S.C. WHHL 1440 D Holyoke. Mass. WREB 930 Homer, La. KHAL 1320
Fountain City, Tenn. WGYW 1430	Goldsboro, N.C. WFMC 730	Hamden, Conn. WDEE 1220	Homestead, Fla. WILL 1430 Homewood, Ala. WJLD 1400
WROL 1490 Fountain Inn, S.C. WFIS 1600 Fowler, Calif. KL1P 1220	WGBR 1150 A WGOL 1300 Genzales Tev KCTL 1450	Hamilton, Ala. WERH 970 Hamilton, Mont. KYLQ 980 Hamilton, Ohio WMOH 1450	KAIM 870 Honolulu. Hawali KGMB 590 C KZOO 1210
Framinghani, Mass.WKOX 1190 Frankfort, Ind. WILO 1570	Gonzales, Tex. KCTI 1450 Goodland, Kans. KLOE 730 M Goose Bay, Nfld. CFGB 1340	Hamilton, Ont. CHIQ 1280 CHML 900	KHAI 1090 KPOI 1380
Franklurt, Ky. WFKY 1490 M Franklin, Ky. WFKN 1220	Goshen, Ind. WKAM 1460 Grafton, N.D. KGPC 1340 Grafton, W.Va. WVVW 1260	CKOC 1150 Hamilton, Tex. KCLW 900 Hamilton, N. C. WKDX 1250	KIKI 830 KGU 760 N
Franklin, La. KFRA 1390 Franklin, N.C. WFSC 1050 Franklin, Pa. WFRA 1430	Grafton, W.Va. WVVW 1260 Graham, Tex. KSWA 1330 Granby, Que. CHEF 1450	Hammond, Ind. WJOB 1230 Hammond, La. WFPR 1400	KHVH 1040 Korl 650 M Kndi 1270
Franklin, Tenn. WAGG 950 Franklin, Va. WYSR 1250	Grande Prairie, Alta. CFGP 1050	Hammonton, N.J. WNJH 1580 Hampton, S.C. WBHC 1270	KOHO 170 Ktrg 990
Frederick, Md. WFMD 930 C Frederick, Okla, KTAT 1570 Fredericksburg, Tex.	Grand Falls, Nfld. CBT 540 CKCM 620 Grand Forks, N.D. KFJM 1370	Hampton, Va. WVEC 1490 Hancock, Mich. WMPL 920 Hanford. Calif. KNGS 620	KULA 690 A KUMU 1500 KIKU 1420
KNAF 910 M Fredericksburg, Va. WFVA 1230 A	KILD 1440 C KNOX 1310 M	Hannibal, Mo. KHMO 1070 Hanover, N.H. WTSL 1400	Hood River, Oreg. KIHR 1340 Hope, Ark. KXAR 1490
WFLS 1350 Fredericton, N.B. CFNB 550 Fredericktown Mo	Grand Haven, Mich. WGHN 1370 Grand Island, Nebr.	WDCR 1340 Hanover, Pa. WHVR 1280 Hardin, Mont. KHDN 1230	Hopewell, Va. WHAP 1340 Hopkinsville, Ky. WHOP 1230 C WKOA 1480
Fredericktown, Mo. KFTW 1450 Fredonia, N.Y. WBUZ 1570	KMMJ 750 A Krgi 1430	Harlan, Ky. WHLN 1410 Harlingen, Tex. KGBT 1530	Hoquiam, Wash. KHOK 1560 Hornell, N.Y. WWHG 1320
Freeport, III. WFRL 1570 Freeport, N.Y. WGBB 1240	Grand Junction, Colo. KREX 920 C KEXO 1230 A	Harriman, Tenn. WHBT 1600 Harrisburg, III. WEBQ 1240 Harrisburg, Pa. WHGB 1400 A	WLEA 1480 M Hot Springs, Ark. KAAB 1340 A
Freeport, Tex. KBRZ 1460 Fremont, Mich. WBFC 1490 WSHN 1550	KSTR 620 KWSL 1340	WCMB 1460 M WHP 580 C	KBHS 590 KZNG 1470 M Hot Springs,
Fremont, Nebr. KHUB 1340 Fremont. Ohio WFRO 900	Grand Prairie, Tex. KPCW 730 Grand Rapids, Mich.	WKBO 1230 N Harrison, Ark. KHOZ 900 Harrisonburg, Ya. WHBG 1360	S. Dak. KOBH 580 Houghton, Mich. WHDF 1400
Fresno, Calif. KARM 1430 A KBIF 900 KIRV 1510	WJEF 1230 C WFUR 1570	WSVA 550 N Harrodsburg, Ky, WHBN 1420	Houghton Lake, Mich. WHGR 1290 Houlton, Maine WHOU 1340
KEAP 980 KXEX 1550	WGRD 1410 WLAV 1340 A	Hartford, Conn. WDRC 1360 C WCCC 1290 M	Houma, La. KCIL 1490 N Houston, Miss. WCPC 940
KFRE 940 C Kgst 1600 Kmak 1340	WMAX 1480 M WOOD 1300 N Grand Rapids. Minn.	WPOP 1410 M-A WTIC 1080 N Hartford, Wis, WTK M 1540	Houston, Mo. KTBC 1250 Houston, Tex. KCOH 1430 KILT 610
KMJ 580 N KYND 1300	KOZY 1490 M Grangeville, Idaho KORT 1230	Hartseile, Ala. WHRT 860 Hartsville, S.C. WHSC 1450 M	KNUZ 1230 KODA 1010
Front Royal, Va. WFTR 1450 M Frostburg, Md. WFRB 560	Granite City, III. WGNU 920 Granite Falls, N. C. WKJK 1580	Hartwell, Ga. WKLY 980 Harvard. III. WMCW 1600 Harvey, III. WBEE 1570	КРВС 950 N Ктнт 790 Ктвн 740 с
Fulton, Ky. WFUL 1270 Fulton, Mo. KFAL 900 Fulton. N.Y. WOSC 1300	Grants. N.Mex. KMIN 980 Grants Pass, Oreg. KAGI 930 M	Hastings, Mich. WBCH 1220 Hastings, Nebr. KHAS 1230	KXYZ 1320 A Kyok 1590
Fuquay Sprgs N.C. WFVG 1460	KAJO 1270 Gravelbourg, Sask. CFGR 1230 CFRG 710	Hattiesburg, Miss. WBKH 950 WFOR 1400 N WHSY 1230 A	Howell, Mich. WHMI 1350 Hudson, N.Y. WHUC 1230 Hugo, Okia. KIHN 1340
Gadsden, Ala. WGAD 1350 A WETO 930 M WAAX 570	Grayson, Ky. WGUH 1370 Gt. Barrington, Mass.	WXXX 1310 Hauterive, Que. CHLC 580	Hugo, Okia. KIHN 1340 Huli, Que. CKCH 970 Humacao, P.R. WALO 1240
Gaffney, S.C. WFGN 1570	WSBS 860 Gt. Bend, Kans. KVGB 1590 N Gt. Falls, Mont. KFBB 1310 C	Havelock, N.C. WUSM 1330 Haverhill, Mass. WHAV 1490 Havre, Mont. KOJM 610 M	Humboldt. Tenn. WIRJ 740 Huntingdon. Pa. WHUN 1150
Gainesville, Fla, WDVH 980 WGGG 1230 M WRUF 850 N	KUDI 1450 KMON 560 M	Havre de Grace, Md. WASA 1330	Huntington, Ind. WHLT 1300 Huntington, N.Y. WGSM 740 Huntington, W.Va.
Gainesville, Ga. WGGA 550 C WDUN 1240 A	Greeley, Colo. KARR 1400 N KFKA 1310 KYOU 1450	Hawkinsville, Ga. WCEH 610 Haynesville, La. KLUV 1580	Huntington, N.Y. WGSM 740 Huntington, W.Va. WSAZ 930 N WWHY 1470 M Huntsville, Ala. WBHP 1230 M
WLBA 1580 Gainesville, Tex. KGAF 1580 Gaithersburg, Md. WHMC 1150	Green Bay, Wis, WBAY 1360 C WJPG 1440 M	Hays, Kans. KAYS 1400 Hayward, Wis. WHSM 910 Hazard, Ky. WKIC 1390 M	Huntsville, Ala. WBHP 1230 M WEUP 1600
Galax, Va, WBOB 1360 M Galesburg, III. WGIL 1400 WAIK 1590 A	Greeneville, Tenn. WDUZ 1400 A WGRV 1340 WSMG 1450	Hazelhurst, Ga. WVOH 920 D Hazlehurst, Miss. WMDC 1220	WF1X 1450 WAAY 1550 A
Gallatin, Tenn. WHIN 1010 Gallimotis, Obio WIEH 990	Greenfield, Mass. WHAI 1240 M Greensboro, N.C. WBIG 1470 C	Helena, Ark. KFFA 1360 M	Huntsville, Ont. CKAR 630 Huntsville. Tex. KSAM 1490 Huron, S.Dak. KIJV 1340
Gallup, N. Mex. KGAK 1330 A KYVA 1230	WCOG 1320 WEAL 1510 WKTB 1550	Helena, Mont, KCAP 1340 M KBLL 1240 N Hemet, Calif. KHSJ 1320	Hutchinson, Kans. KWBW 1450 N KWHK 1260
Galt. Ont. CKGR 1110 Galveston, Tex. KILE 1400 KGBC 1540	WGBG 1400 A WPET 950	Hempstead. N.Y. WHLI 1100 Henderson, Ky. WSON 860	Hutchinson, Minn. KDUZ 1260 Idabel, Okla. KBEL 1240 Idaho Falls, Idaho K1D 590 C
Gander, Nfid. CBG 1450 Garden City, Kans. KNCO 1050	Greenburg, Ind. WGRB 1330 Greensburg, Pa. WHJB 620 Greenville, Ala. WGYV 1380	Henderson, Nev. KBMI 1400 KTOO 1280	KIFJ 1260 A•M KTEE 900
KIUL 1240 M Garden City, Mich. WERB 1090	Greenville, Ala. WGYV 1380 Greenville, Mich. WPLB 1380 Greenville, Miss, WJPR 1330	WIZS 1450 Henderson, Tex. KGRI 1000	Independence, Ia. KUPI 980 KOUR 1220 Independence, Kans.
Gardner, Mass. WGAW 1340 Gary, Ind. WWCA 1270 WGRY 1370	WDDT 900 WGVM 1260	KWRD 1470 Hendersonville. N.C. WHKP 1450 A	KIND 1010 M Independence, Mo. KCCX 1510
Gastonia, N.C. WGRY 1370 WLTC 1370	Greenville, N.C. WGTC 1590 M	Henryetta, Okla. KHEN 1590 Hereford, Tex. KPAN 860	Indiana, Pa. WDAD 1450 C Indianapolis, Ind. WFBM 1260 A
Gate City, Va. WGAT 1050 Gaylord. Mich. WATC 900	Greenville, S.C. WESC 660	Herkimer, N.Y. WALY 1420 Hermiston, Oreg. KOHU 1570 Herrin, 111. WJPF 1340 M	W GEE 1590 W IBC 1070 W IGO 810 W IRE 1430 N
Geneva, Ala. WGEA 1150 Geneva, III. WGSB 1480 Geneva. N.Y. WGVA 1240 A	WFBC 1330 N WMRB 1490 C-M WMUU 1260	Hettinger, N.Dak. KNDC 1490 Hibbing, Minn. WMFG 1240 N	WIGO 810 WIRE 1430 N WISH 1310 C
Georgetown, Del. WJWL 900 Georgetown, Ky. WAXU 1580	Greenville, Tex. KGVL 1400	WING 030	WXLW 950 M Indianola, Iowa KBAB 1490
Georgetown, S.C. WGTN 1400 M WGOO 1470 Georgetown. Tex. KGTN 1530	Greenwood, Miss, WABG 960 A WGRM 1240 N Greenwood, S.C. WCRS 1450 N	Highland, III. WIWU 1510 Highland Park. III. WEEF 1430	Indianola, Miss. WDLT 1380 Indian Rocks Beach, Fla. WGNP 1520
Gettysburg, Pa. WGET 1320 M Gillette, Wyo. KIML 1490	WGSW 1350 Greer, S.C. WEAB 800	Highland Park, Tex. KVIL 1150 Highland Springs, Va.	Indio, Calif. KREO 1400 A Indiewood. Calif. KTYM 1460
Gladewater, Tex. KEES (430	Grenada, Miss. Gresham, Oreg. WCKI 1300 A WNAG 1400 M KGRO 1230	WENZ 1450 High Point, N.C. WMFR 1230 A WNOS 1590	Inkster, Mich, WCHB 1440 International Falls, Minn, KGHS 1230
WCDS 1440 E	Griffin, Ga. WKEU 1450 M	WHPE 1070	Invrik, N.W.T. CHAK 860 Jola, Kansas KALN 1370
Glasgow, Mont. KLTZ 1240 Glen Burnie, Md. WISZ 1590 Glendale, Ariz. KRUX 1360 Glendale, Calif. KIEV 870	WHIE 1320 WRIX 1410 Grinnell, Iowa KGRN 1410	Hillsboro, Ohio WSRW 1590 Hillsboro, Ores. KUIK 1360 Hillsboro, Tex. KHBR 1560 Hillsdale, Mich. WCSR 1340	Ionia. Mich. WION 1430 Iowa City, Iowa KXIC 800
Glendive. Mont. KXGN 1400 KGLE 590	Groton. Conn. WSUB 980 Grove City, Pa. WSAJ 1340	Hillsville, Va. WHHV 1400 Hito, Hawaii KHBC 970 C	WSUI 910 Iowa Falls, Iowa KFIG 1510 Iron Mtn., Mich. WMIQ 1450 A
WWSC 1450 A	Grundy, Va. WNRG 940 Guayama, P.R. WXRF 1590 Guelph, Ont. CJOY 1460	KIPA 1110 KIMO 850 M Hinesville, Ga. KGML 990	Iron River. Mich, WIKB 1230 M Irondale, Ala. WIXI 1480
Glenville, Ga. WKIG 1580 Glenwood Sprgs., Colo. KGLN 980 M	Gulfport, Miss. WROA 1390 WGCM 1240 A	Hinton. W. Va. WMTD 1380 Hobart, Okla. KTJS 1420	fronton, Ohio WIRO 1230 M Ironwood, Mieh, WJMS 630 M Irvine, Ky. WIRV 1550
Globe, Ariz. KZOW 1240 A Gloucester, Va. WDDY 1420	Gunnison, Colo. KGUC 1490 Guntersville, Ala. WGSV 1270	Hobbs, N.Mex. KWEW 1480 M KHOB 1390 Holbrook, Ariz. KDJI 1270	Isabella, P.R. WISA 1390 Ishpeming, Mich. WJPD 1240
Gloversville-Johnston, N.Y.	Guymon, Okia, KGYN 1220 Hagerstown, Md. WARK 1490 C	Holdredge, Nebr. KUVR 1380 Holland, Mich. WHTC 1450	WJAN 970 Islip, N.Y. WBIC 540
142 WHITE'S RADIO LOG	WJEJ 1240 A-M	WJBL 1260	Ithaca, N.Y. WHCU 870 C

Location	C .L. Kc. N.A.	Location G.I	. Kc. N.A.	Location	C.L. Kc. N.A.	Location C	.L. Kc. N.A.
luka, Miss.	WTK0 1470 A WVOM 1270	Kershaw, S.C. W Ketchikan, Alaska KT	KSC 1300	Las Vegas, Nev,	KENO 1460 A Klas 1230 C	London, Ont.	CFPL 980 CKSL 1290
Jackson, Ala.	WTHG 1290 M	I	KABI 580		KORK 1340 M KRAM 920	Long Beach, Calif.	KFOX 1280 KGER 1390
Jackson, Mich.	WKHM 970 M	Keyser, W.Va. W	KEI 1450 KYR 1270 M		KLUC 1050	Longmont, Colo.	KLMO 1050
Jackson, Miss.	WJCO 1510 WJDX 620 N WJQS 1400 M	Kov Wart Cla WKV	VKLP 1390 VF 1600 A-M	Las Vellas, N. Mex.		Long Prairie, Minn. Longview, Tex.	KFRO 1370 A KLUE 1280
	WJXN 1450	Kilgore, Tex. K	WKIZ 1500 OCA 1240	Latrobe, Pa.	WQTW 1570]	Longview, Wash.	KEDO 1400 A
	WJAQ 1550 WOKJ 1590	Kimball, Nebr.	KLEN 1050 M KIMB 1260	LaTuque, Que.	WTRA 1480 CFLM 1240	Lookout Mtn., Tenn.	KBAM 1270 WFLI 1070
	WRBC 1300 M WSL1 930	King City, Calif.	(RKC 1490 (AAA 1230 A	Laurei, Miss.	WAML 1340 N WLAU 1600 A	Lordsburg, N.Mex.	WW1Z 1380 A KLHS 950 WLSC 1570
Jackson, Ohio Jackson, Tenn.	WLMJ 1280 WDX1 1310	Kings Mountain, N. W	C. KMT 1220	Laurens, S.C.	WNSL 1260 WLBG 860	Loris, S.C. Los Alamos, N.Mex.	KRSN 1490 A
	WJAK 1460 WTJS 1390 A KSGT 1340	Kingsport, Tenn. W	KIN 1320 KPT 1550 N	Laurinburg, N.C.	WEW0 1080 WLCW 1300	Los Angeles, Calif.	KFI 640 N
Jackson, Wyo. Jacksonville, Ark	. KGMR 1500	Kingston, N.Y. V	VBAZ 1550 M /GHQ 920 /KNY 1490 C	Lawrence, Kans.	KEKU 1250 KEWN 1820		KHJ 930 M KFSG 1150
Jacksonville, Fla	WAPE 690	W Kingston, Ont. (/KNY 1490 C CFRC 1490	Lawrence, Mass. Lawrenceburg, Ten	MCCM 800 M		KFWB 980 KGFJ 1230
. '	WZOK 1320 A-M WIVY 1050	0	KWS 960	Lawrenceville, Ga. Lawrenceville, III.	WAKO 910		KFAC 1330. KLAC 570
	WMBR 1460 C WOBS 1360	Kingstree, S.C. W	DKD 1310 KINE 1330	Lawrenceville, Va. Lawton, Okla.			KMPC 710 KNX 1070 C
	WPDQ 600 WQIK 1280	Kinston, N.C. V	VELS 1010 VFTC 960 A	Leadville, Colo.	KCCO 1050 KBRR 1280		KPOL (54) Kgbs (02)
Jacksonville, Ill.	WRHC 1400 WJIL 1550		WISP 1230 M KCDI 1460	Leaksville, N.C. Leamington, Ont.	WLOE 1490 M CJSP 710	Los Banos, Calif.	KRKD 1150 KLBS 1330
Jacksonville, N.C	WLDS 1180 WJNC 1240 M	Kirkland Lake, Ont.	CJKL 560	Leavenworth. Kans Lebanon, Ky.	. KCL0 1410 WLBN 1590	Louisburg, N.C. Louisville, Ga.	WYRN 1480 WPEH 1420
Jacksonville, Tex		Kissimmee, Fla.	#OSL1220	Lebanon, Mo. Lebanon, Oreg.	KLWT 1280 Kgal 920	Louisville, Ky.	WAVE 970 N WAKY 790 M
Jacksonville Bch.,	WZRO 1010	Kitchener, Ont. C	CKCR 1490 KKW 1320	Lebanon, Pa. Lebanon, Tenn.	WLBR 1270 WCOR 900		WHAS 840 C WKL0 1080 A
Jamestown, N.Dal	KSJB 600 C	Kittanning, Pa. W Klamath Fails, Oreg	ACB 1380	Leesburg, Fla.	WLBE 790 M		WINN 1240 WKYW 900 C
Jamestown, N.Y.	WXYJ 1340 M	1 1	CAGO 1150 M LW 1450 A-C	Leesburg, Va. Leesville, La.	WAGE 1290 KLLA 1570		WLOU 1350 TMT 620 A-M
Jamestown, Tenn. Janesville, Wis.	WCL0 1230 M	1	(LAD 960 KNIA 1320	Lehighton, Pa. Leitchfiold. Ky.	WYNS 1150 WMTL 1580	Louisville, Miss. Loveland, Colo.	WLSM 1270 KLOV 1570
Jasper, Ala,	WWWB 1360 WARF 1240	Knoxville, Tenn. V	VBIR 1240 A VIVK 860	Leland, Miss. LeMars, Iowa	WESY 1580 KLEM 1410	Loves Park, Iff. Lovington, N.Mex.	WLUV 1520
Jasper. Ind. Jasper. Tex.	WITZ 990 KTXJ 1350) v	ATE 620 N KGN 1340 M	Lemoore, Calif.	KLAN 1320 WJRI 1340 M	Lowell, Mass.	WCAP 980 WLLH 1400
Jefferson City, M	KWOS 1240 M		KXV 900 M NOX 990 C	Lenoir, N.C. Lenoir, Tenn. Leonardtown, Md.	WLIL 780 WKIK 1370	Lubbock, Tex. K	CBD 1590 M-N KDAV 580
Jefferson City, T	WJFC 1480	Kodiak, Alaska V Kokomo, Ind. V	₩CVQ 960 WIOU 1350 C	Lethbridge, Alta.	CJOC 1220 CHEC 1090		KLBK 1340 KFYO 790 C KLLL 1460 M
Jeffersonville, Ind Jena, La.	KCKW 1480	Koselusko, Miss, V Laconia, N.H. W	KOZ 1850 A	Levelland, Tex. Levittown, Pa.	KLVT 1230 WBCB 1490		KLLL 1460 M
Jennings, La. Jerome, Idaho Jerseyville, III,	KJEF 1290 KART 1400	V 1	VENIJ 1490 KBH 1410 N	Lewisburg, Pa. Lewisburg, Tenn.	WUNS 1010 WJJM 1490 M	Lucedale, Miss. Ludington, Mich.	KSEL 950 A WHHT 1440 WKLA 1450 A
Jesup. Ga.	WJBM 1480 WBGR 1370		WLCX 1490 /KTY 580 A	Lewiston, Idaho	KRLC 1350 M KOZE 1300	Lufkin, Tex.	KRBA 1340 A KTRE 1420 M
Johnson City, Te	WICM 810 C	Lafayette, Ga. V	VLDY 1340 VLFA 1590	Lewiston, Maine	WCOU 1240 M WLAM 1470 A	Lumberton, N.C.	WAGR 580 WTSB 1340 M
Johnston, S.C.	WETB 790 M WJES 250	Lafayette, Ind. W	/ASK 1450 M #AZY 1410	Lewistown, Mont. Lewistown, Pa.	KXL0 1230 M WKVA 920 A	Luray, Va. Lynchburg, Va.	WRAA 1330 WEVA 590 A
Johnstown, N.Y. Johnstown, Pa.	WIZR 930 WJAC 850	Lafayette, La.	WBAA 920 KPEL 1420 A	Lexington, Ky.	WMRF 1490 N WLAP 630 M		WDMS 1320 WWOD 1390 M
1.11.4	WARD 1490 C WCRO 1230 M WJOL 1340	H H	CVOL 1330 N	Lowington (1)	WBLG 1300 A WVLK 590 C	Lynn, Mass.	WBRG 1050 WLYN 1360
Jollet, III.	WJRC 1510 CJLM 1350	LaFollette, Tenn. V	WEEN 1460 WLAF 1450	Lexington, Miss. Lexington, Mo.	WXTN 1150 KLEX 1570	Lyons, Ga. Macomb, 111.	WBBT 340 WKAI 1510
Joliette, Que. Jonesboro, Ark.	KBTM 1230 M KNEA 970	i Laurange, Ga. V	(LBM 1450 VLAG 1240 M VTRP 620	Lexington, Nebr. Lexington, N.C.	KRVN 1010 WBUY 1440	Macon, Ga.	WBML 1240 WCRY 900
Jonesboro, La. Jonesboro, Tenn.	KTOC 920 WJSO 1590	LaGrange, III, V	VTRP 620 VTAQ 1300 KVLG 1570	Lexington, Tenn. Lexington, Va.	WDXL 1490 WREL 1450 N		WIBB 1280 WMAZ 940 C
Jonesville, La. Jonquiere, Que.	KANV 1480 CKRS 590	LaJunta, Colo.	KBZZ 1400 M KLOU 1580	Lexington Pk., Mo Libby, Mont.	1. WPTX 920 KLCB 1230 M	Macon, Miss.	VNEX 1400 A-M WMBC 1400
Joplin, Mo.	WMBH 1450 M KQYX 1560	1	KPLC 1470 N	Liberal, Kans.	KL1B 470 KSCB 270	Madawaska, Me. Madera, Calif. Madill, Okla.	WSJR 1230 Khot 1250
	KFSB 1310 KODE 1230 C	Lake City, Fia. V	KAOK 1400 M VDSR 1340 VGRO 960	Liberty, Ky. Liberty, N.Y.	WPNN 1560 WVOS 1240	Madison, Fla.	KMAD 1550 WMAF 1230
Junction, Tex. Junc. City, Kans	KMBL 1450	Lake City, S.C.	WJOT 1260 VLAK 1430 N	Liberty, Tex. Lihue, Hawali Lima. Ohio	KWLD 1050 Ktoh 1490	Madison, Ga. Madison, Ind.	WYTH 1250 WORX 1270
Junesu, Alaska	KINY 800 C-A UNO 630 A-M-N	W V	/ONN 1230 M /WAB 1330	Lincoln, III.	WIMA 1150 A WPRC 1370	Madison, S.D. Madison, Tenn.	KJAM 1390 WENO 1430
Kailua, Hawaîli Kaimuki, Hawai	KLE1 1130 I KAIM 870	Lake Placid, N.Y. Lake Providence, La.	WIRD 920	Lincoln, Nebr.	KFOR 1240 A Klin 1400	Madison, Wis.	WHA 970 WIBA 1310 N
Kalamazoo, Mich	WKPR 1420 WKZO 590 C	Lake Tahoe, Calif.	KOWL 1490 Kqik 1230	Lincolnton, N.C.	KLMS 1480 WLON 1050		WISM 1480 A-M WKOW 1070 C
	WKLZ 1470 M WKM1 1360	Lake Wales, Fla.	WIPC 1280	Lindsay, Ont. Linton, Ind.	WBT0 1600	Madisonville, Ky.	WTTL 1810
Kalispell, Mont.	KGEZ 600 M KOFI 930	Lake Worth, Fla.	KFHA 1480 WLIZ 1380	Litchfield, Ill. Litchfield, Minn.	WSMI 1540 KLFD 1410 . KLTF 960	Magee, Miss. Magnolia, Ark. Makawao, Hawaii	WSJC 790 KVMA 630 M
Kamioops, B.C. Kane, Pa.	CFJC 910 WADP 960	Lamar, Colo. Lamesa, Tex. Lampasas, Tex.	KLMR 920 M KPET 690	Little Fails, Minn Little Fails, N.Y.	WLFH 1280 KZZN 1490	Malden, Mo.	KNU1 1310 KTCB 1470
Kankakee, 111. Kannapolis, N.C	WKAN 1320 WGTL 870	Lampasas, Tex. Lancaster, Calif.	KPET 690 KCYL 1450 KAVL 610 KBVM 1380	Littlefield, Tex. Little Rock, Ark,	KARK 920 N KARK 920 N KALO 1250 M	Malone, N.Y. Malvern, Ark.	WICY 1490 M KBOK 1310
Kans. City, Kan	WRKB 1460 s. KCKN 1340				KLRA 1010 A	Manassas. Va. Manati, P.R.	WPRW 1460 WMNT 1500 WINF 1230 C
Kansas City, Mo.	KMBC 980 A	Lancaster, Pa, WI	WGAL 1490 N LAN 1390 A-M WLCM 1360 WAGL 1560		KLRA 1010 A KOKY 1440 KAAY 1090 C-M KVLC 1050	Manchester, Conn. Manchester, Ga.	
	KPRS 1590 KUDL 1380	Lancaster, S.C.	WLCM 1360 WAGL 1560	Littleton, Colo.	KMOR 1510 WLTN 1400	Manchester, Ky. Manchester, N.H.	WWXL (450 WFEA 1370 M WG18 610 C
Kealakekua, Haw	WDAF 610 N WHB 710		KUYE 1330 m	Littleton, N. H. Live Oak, Fia.	WNER 1250	Manchester, Tenn.	WKBR 1250 WMSR 1320
Kearney, Nebr.	KGEW 1340 M	1 andley Proficia B C	•	Livingston, Mont. Livingston, Tenn.	KPRK 1340 M WLIV 920	Manhattan, Kans.	KSAC 580 KMAN 1350
Keene, N.H.	KRNY 1460 WKNE 1290 N	Lansdale, Pa. Lansford, Pa.	CJJC 1000 WNPV 1440 WLSH 1410	Livingston, Tex.	KETX 1440 KVLL 1220	Manistee, Mich. Manitou Springs, (WMTE 1340
Kelowna, B.C. Kelso, Wash.	WKBK 1220 CKOV 630 KLOG 1490	Lansing, Mich.	WILS 1320	Lloydminster, Alt; Lock Haven, Pa,	KVLL 1220 a. CKSA 1150 WBPZ 1230 M WUSJ 1340	Manitowos, Wis.	KCMS 1490 WCUB 980
Kenso, wasn. Kemmerer, Wyo Kendallville, Ind	. KMER 950	Lapeer, Mich.	WMRT 1010 WMPC 1230	Lockport. N.Y. Lodi, Calif.	KUVR 1570	Mankato, Minn.	WOMT 1240 M KYSM 1230 N
Kenedy, Tex. Kennett, Mo.	KAML 990 KBOA 830	LaPorte, Ind. Laramie, Wyo.	VTHM 1530 WLOI 1540 KLME 1490	Logan, Utah	KVNU 610 M KSTU 1300	Manning, S.C.	KTO'E 1420 A WYMB 1410 KDBC 1360
Kennewick-Pasco Wash,	-Richland, KEPR 610 C	1	KOWB 1290 M	Logan, W.Va.	KLGN 1390 WLOG 1230 M WVOW 1290	Mansfield, La. Mansfield, Ohlo	KDBC 1360 WMAN 1400 A
Kenora, Ont.	CJRL 1220 WLIP 1050	Larous, rex.	KGNS 1300 KVOZ 1490 M	Logansport, Ind.	WSAL 1230 M	Maplewood, Minn.	WCLW 1570
Kenosha. Wis. Kentville, N.S. Keokuk, Iowa	CKEN 1350 KOKX 1310	LaSarre, Que.	WLPO 1220 CKLS 1240	Lompoc, Calif.	KKOK 1410 KLOM 1330 D	Maquoketa, Iowa	KMAQ 1320
Keokuk, Iowa Kermit. Tex. Kerrville, Tex.	KERB 600 KERV 1280		KOBE 1450 Kgrt 570	London, Ky,	KNEZ 960 WFTG 1400	WHITE'S RADIO	D LOG 143
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Location	C.L. Kc. N.A.	Location C			Location	C.L. Kc. N.A.	Location	
Marathon, Fla.	WEFG 1300	Miami, Ariz.	K1KO 1340		Montmagny, Que.	CKBM 1490	Newark, N.J.	C.L. Kc. N.A. WJRZ 970
Marianna, Ark. Marianna, Fla.	KZOT 1460 WTYS 1340 M	1	WGBS 710 WIOD 610) N	Montpelier•Barre,	WSKI 1240 A		WNJR 1430 WVNJ 620
Marietta, Ga.	WTOT 980 WFDM 1230	. v	VFAB 990 MBM 1220		Montreal, Que.	CBF 690 CBM 940 N	Newark, N.Y. Newark, Ohio	WACK 1420 WCLT 1430
Marietta, Ohio	WBIE 1050 WMOA 1490 A	w	AME 1260	A		CKLM 1570 N CFCF 600 A	New Bedford, Mass	.WBSM (420
Marine City Mich. Marinette, Wis.		l w	/QAM 560)		CHLP 1410	New Bern, N.C.	WNBH 1340 M WHIT 1450 M
Marion, Ala,	WJAM 1310		WSKP 1450 WINZ 940) M (CJAD 800 CJMS 1280	Newberry, S.C.	WRNB 1490 WKDK 1240
Marion, 111. Marion, Ind.	WGGH 1150 WBAT 1400 A	Miami Beach, Fla.	KGLC 910			CKAC 730 C CKGM 980	New Boston, Ohio New Braunfels, Tex	W101 1010 KGNB 1420
Marion, N.C.	WMRI 860 WBRM 1250	w w	MBM 1490 VKAT 1360	b c	Montrose, Colo. Montrose, Pa.	KUBC 580 WPEL 1250	New Britain, Conn.	WHAY 910 A WRYM 840
Marion, Dhio Marion, S.C.	WMRN 1490 A WATP 1430	Wichigan City, Ind. V	VFUN 790		Mooresville, N.C. Moorhead, Minn.	WHIP 1350 KVOX 1280 M	New Brunswick, N.	J. WCTC 1450
Marion, Va.	WMEV 1010 A WOLD 133	Middleport-Pomeroy,	MPO 1390		Moosejaw, Sask.	CHAB 800	Newburgh, N.Y. Newburyport, Mass	
Marked Tree, Ark.		Middlesboro, Ky. W	VMIK 560	·	Morehead, Ky. Morehead City, N. Morgan City, La.	C. WMBL 740 KMRC 1430 M	New Carlisle, Que. New Castie, Ind.	WCTW 1550
Marksville, La. Marlborough, Mass	. WSRD 1470	Middletown, N.Y. V	VCNX 1150 VALL 1340)	Morganneld, Ky,	WMSK 1550	Newcastle, N.B. New Castle, Pa.	CKMR 790 WKST 1280 A
Marquette, Mich. Marshall, Minn.	WDMJ 1320 M KMHL 1400 A	Midland, Mich, W	VPFB 910 MDN 1490		Morganton, N.C. Morgantown, W.Va	WMNC 1430 a. WAJR 1440 N	Newcastle, Wyo. New Glasgow, N.S.	KASL 1240
Marshail, Mo. Marshail, N.C.	KMMO 1300 WMMH 1460		CKMP 1230 KCRS 550		Morrilton. Ark.	WCLG 1300 KVOM 800	New Haven, Conn.	WAVZ 1300 WELT 960
Marshall, Tex.	KMHT 1450 Kadd 1410	1	KJBC 1150		Morris, Minn. Morristown, N.J.	KMRS 1230 WMTR 1250	New thesis to	WNHC 1340 A
Marshalltown, low: Marshfield, Wis,		Milan, Tenn. V	KATL 1340	· 1	Morristown, Tenn.	WCRK 1150 M WMTN 1800	New Iberia, La.	KANE 1240 KVIM 1360
Martin, Tenn, Martinsburg, W.V.	WCMT 1410	Milford, Del. W	KSB 930		Morton, Tex.	KRAN 1280 KRPL 1400	New Kensington, P New London, Conn	. WNLC 1510 M
Martinsville, Va.	WHEE 1870	Milledgeville, Ga. W	/ M V G 1450	I M I	Moscow, Idaho Moses Lake, Wash	. KSEM 1470	New Martinsville, V	V.Va. WETZ 1330 M
Marystown, Nfld. C	WMVA 1450 N an.	Millen, Ga. V Millington, Tenn. W	VGSR 1570 (HEY 1220		Moultrie, Ga.	KW1Q 1260 WMGA 1400 A	Newnan, Ga.	WCOH 1400 M WNEA 1300
Marysville, Calif. Marysville, Kans.	CHCM 560 KMYC 1410 M	Millville, N.I. W	GMM 1580 /MVB 1440)	Moundsville, W.V.	WMTM 1300 a. WMOD 1370	New Orleans, La.	WDSU 1280 N WJMR 990 M
Marysville, Kans. Maryville, Mo.	KNDY 1570 KNIM 1580	Milton, Fla. V	VEBY 1330 VSRA 1490	м	Mountain Grove, N Mountain Home, A	rk. KTLO 1490		WBOK 800
Maryville, Tenn. Mason City, Iowa	WGAP 1400 KGL0 1300 C	Milton Pa. W	MLP 1570	- I	Mountain Home, I	da. KFLI 1240		WNOE 1060 WSMB 1350 A
	KRI8 1490 KSMN 1010	Milwaukee, Wis. W	/EMP 1250	1 1	Mt. Airy, N.C.	WPAQ 740 WSYD 1300 M		WNPS 1450 WTIX 690
Massena, N.Y.	WMSA 1340 A WSTS 1050		/FOX 860 WRIT 1340 WISN 1150	A	Mt. Carmel, Ill. Mt. Ciemens, Mi	WVMC 1360		WWL 870 C WWOM 600
Massillon, Ohio	WTIG 990	V V	VMIL 1290	· 1	Mt. Dora, Fla.	WBRB 1450	Newport, Ark,	WYLD 940 M KNBY 1280
Matane, Que. Matawan, W.Va.	CKBL 1250 WHJC 1360	W N	/TMJ 620	N	Mt. Jackson, Va.	WVGT 1580 WSIG 790	Newport, Ky. Newport, N.H.	WNOP 740 WCNL 1010
Mattoon, III. Mauston, Wis.	WLBH 1170 WRJC 1270	Minden, La. I Mineola, N.Y. V	KASO 1240 VFYI 1520	D	Mt. Kisco, N.Y. Mt. Olive, N.C.	WVIP 1310 WDJS 1430	Newport, Oreg.	KNPT 1810 WADK 1540
Mayaguez, P.R.	WAEL 600 WKJB 710	Mineola, Tex. H Mineral Wells, Tex. I			Mt. Pleasant, Micl. Mt. Pleasant, Tex.	h.WCEN 1150 KIMP 960	Newport, R.I. Newport, Tenn.	WLIK 1270
	V/ORA 760 WPRA 990	Minneapolis, Minn. V V	WCCO 830 VLDL 1330		Mt. Shasta, Calif. Mt. Sterling, Ky.	KWSD 620 WMST 1150	Newport, Vt. Newport News, Va.	WIKE 1490 WGH 1310 A
Mayfletd, Ky.	WTIL 1300 WNGO 1320	W 1	VMIN 1400		Mt. Vernon, 111. Mt. Vernon, 1nd.	WMIX 940 WPC0 1590	New Richmond, W	WTID 1270
Mayodan, N.C. Maysville, Ky.	WMYN 1420 WFTM 1240 M	, v	/DGY 1130 /PBC 980 /TCN 1280	A	Mt. Vernon, Ky. Mt. Vernon, Ohio	WRVK 1460 WMV0 1300	New Rochelle, N.Y	WIXK 1590 , WVOX 1460
McAlester, Okla.	KTMC 1400 KNED 1150		KTCR 690		Mt. Vernon, Wash	. KAPS 1470 KBRC 1430	New Smyrna Beac	WSBB 1230 M
McAllen, Tex. McCamey, Tex.	KRIO 910 M KAMY 1450	к	UOM 770		Muleshoe, Tex. Mullins. S.C.	KMUL 1380 WJAY 1280	Newton, Iowa	WORT 1550 KCOB 1280
McComb, Miss,	WHNY 1250 A WAPF 980		CODY 1320 KCJB 910		Muncie, Ind.	WLBC 1340 C	Newton, Kans. Newton, Miss.	KJRG 950 WBKN 1410
McCook, Nebr.	KBRL 1300 M KWRV 1360	Mission, Kans. I	CBEA 1480 KIRT 1580		Munfordville, Ky, Munising, Mich.	WLOC 1150 WMAB 1400	Newton, N.J. Newton, N.C.	WNNJ 1360 WNNC 1230
McGehee, Ark,	KVSA (220	Missoula, Mont	(GVO 1290	C	Murfreesboro, Ten	WMTS 860	New UIm, Minn. New Westminster,	KNUJ 860
McKeesport, Pa.	WEDO 810 C WPQR 1360 M	1	(XLL 1450 (QTE 1340	M	Murphy, N.C.	WKRK 1320	New York, N.Y.	CKNW 980 WABC 770 A
McKenzie, Tenn. McKinney, Tex.	WHDM 1440 KMAE 1600	Mitchell, S. Dak. H	KYSS 910 (ORN 1490	M	Murphysboro, 111. Murray, Ky.	WINI 1420 WNBS 1340	New TOTK, N.T.	WBNX 1380
McMinnville, Oreg. McMinnville, Tenn	.WBMC 960	Moberly, Mo. K	URA 1450 NCM 1230		Murray, Utah Muscatine, Iowa	KMUR 1230 KWPC 860		WCBS 880 C WEVD 1330
McPherson, Kans.	WAKI 1230 M KNEX 1540	w	ALA 1410 MOE 1550		Muscle Shoats City Alabama	WLAY 1450		WINS 1010 M
McRae, Ga. Mead, Wash.	KNEX 1540 WDAX 1410 KLFF 1590	Ŵ	ABB 1480 GOK 900 TUF 840	A	Muskegon, Mich.	WKBZ 850 A WKJR 1520		WLIB 1190 WMCA 570
Meadville, Pa. Medford, Mass.	WMGW 1490 WHIL 1430	w w	TUF 840	c		WTRU 1600 WMUS 1090		WHN 1050 WNEW 1130
Medford, Dreg.	KMED 1440 A KSHA 860		KRG 710 NLIQ 1360 MOZ 960		Muskogee, Okla.	KBIX 1490 A KMUS 1380		WNYC 830 WOR 710
	KDOV 1300	Mobridge, S.Dak. P	(OLY 1300	D	Myrtle Beach, S.C. Nacogdoches, Tex,	WMYB1450		WA00 1280 WPOW 1330
Medford, Wis.	KBOY 730 KYJC 1230 A+C WIGM 1490 M	W N	VDSL 1520		Nampa, Idaho	KEEE 1230 A KSFA 860 KFXD 580		WQXR 1560 WNBC 660 N
Medicine Hat, Alta Media, Pa.	CHAT 1270	K	TRB 860 BEE 970	A		KAIN 1340 CHUB 1570	Niagara Falls, N.Y	WHLD 1270 WJJL 1440 M
Media, Pa. Melbourne, Fla. Memphis, Tenn.	WMMB 1240 M	Mojave, Calif. K Moline, III. W	CF1V 1360 DOL 1340 QUA 1230	Â	Nanaimo, B.C. Nanticoke, Pa.	WNAK 730 KVON 1440	Niagara Falls. Ont. Nicholasville, Ky.	CHVC 1600 WNVL 1250
mempuis, renn.	WHBQ 560 M WHER 1430	Monahans, Tex. K Moncks Corner, S. C	VKM 1330	M	Napa, Calif. Naples, Fla.	KVON 1440 WNOG 1270 WNRV 990	Niles, Mich.	WNIL 1290
	WMC 790 N WDIA 1070	W	BER 950		Narrows. Va. Nashua, N.H.	WOTW 900 1	Niles, Ohio Nogales, Ariz.	WN10 1540 KNOG 1340 A KICY 850
	WDIA 1070 WMPS 680 WHHM 1340 A	C	BAF 1330 KCW 1220		Nashville, Ark.	WSMN 1590 KBHC 1260	Nome, Alaska Norfolk, Nebr.	WJAG 780
	WLOK 1480 WREC 600 C KWAM 990	Monmouth, ill. W	RMO 990 RAM 1330		Nashville, Ga. Nashville, Tenn.	WNGA 1600 WKDA 1240	Norfelk, Va.	WTAR 790 C WCMS 1050
Mena, Ark.	KWAM 990 KENA 1450	Monroe, Ga. W	MRE 1490 LB 1440 A KLIC 1230	•N		WLAC 1510 C WMAK 1300		WNOR 1230 WRAP 850
Menominee, Mich. Menomonie, Wis.	WAGN 1340 A	н к	NUE 540	M		WLVN 1560 WNAH 1360 M	Normal, 111. Norman, Okla.	WIOK 1440 WNAD 640
Merced, Calif.	WMNE 1360 KYOS 1480 M KWIP 1580	Monroe, N.C. W	QTE 560 MAP 1060			WS1X 980 A WSM 650 N	Norman Wells, Nor	KNOR 1400
Meriden; Conn.	WMMW 1470	Monroe, Wis. W Monroeville, Ala W	EKZ 1260 MEC 1360		Nassau, Bahamas Natchez Miss	ZNS-2 1240 WMIS 1240 N	west Territory Norristown, Pa.	CFNW 1240 WNAR 1110
Meridian, Miss,	WCOC 910 C WDAL 1330 M	Mont Laurier, Que. C Monterey, Calif.	KML 610		Natchez, Miss.	WNAT 1450 M	N. Adams, Mass,	WMNB 1230
	WMOX 1010 WOKK 1450 A WQIC 1390	к	MBY 1240		Natchitoches, La. Naugatuck, Conn.	KNOC 1450 M WOWW 860	N. Augusta, S.C.	WGUS 1380 WFNL 1600 WTHB 1550
Merkle, Tex.	KWFA 1500	Monte Vista, Colo. K	DMA 1460 SLV 1240	A	Navasota, Tex. Nebraska City, Nel	KWBC 1550 br.	N, Battleford, Sask.	CJNB 1460
Merkle, Tex. Merrill, Wis. Mesa, Ariz.	WXMT 730 KBUZ 1310	Montgomery, Ala, W	MNZ 1050 BAM 740		Needles, Calif.	KNCY 1600 KSFE 1340	North Bay, Ont. North Bend, Oreg.	CFCH 600 KFIR 1340 C
Metropolis, III,	KALF 1510 WMOK 920	Ŵ	COV 1170 APX 1600 1HY 1440	υL	Neenah. Wis. Neilisville, Wis.	WNAM 1280 WCCN 1370	North Charleston, S	S.C. WNCG 910
Metter, Ga. Mexia. Tex.	WMAC 1360 KBUS 1590	w	MGY 800	M	Nelson, B.C. Neon, Ky.	CKLN 1390 WNKY 1480	Northampton, Mass.	WHOOL 510
Mexico, Mo. Mexico, Pa.	KXE0 1340 M	WI Montgomery, W.Va,	RMA 950		Neosho, Mo.	KBTN 1420 KNEM 1240	Northfield Minn. N. Little Rock, Ark.	WCAL 770
	WJUN 1220	Monticello, Ark. Kl	MON 1340 HBM 1430	м	Nevada, Mo. New Albany, Ind. New Albany, Miss.	WOW1 1570	North Platte, Nebr.	KXLR 1150
144 WHITE'S	RADIO LOG	Monticello, Ky. W	FLW 1360			WWRK 1260	Nebr.	KNOP 1410

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Location C.L. Kc. N.A.	Location C.L. Kc. N.A.	Location C.L. Kc. N.A.	Location C.L. Kc. N.A.
KODY 1240 N	WDXR 1560 N	Pierre S Dak KGEX 630	Pratt, Kans. KWSK 1570 KWNS 1290
No. Syracuse, N.Y. WSOQ 1220 M No. Vancouver, B.C. CKLG 730	Page, Ariz. KPGE 1340	Pikeville, Ky. WLSI 900	Prescott, Ariz, KYCA 1490 N KENT 1340
N. Vernon, Ind. WOCH 1460 No. Wilkesboro, N.C.WKBC 810	Pahokee Fla WIKLM 1230 I	Pine Bluff, Ark. KCLA 1400	KNOT 1450 A
Norton, Va. WNVA 1350 M Norwalk, Conn. WNLK 1350	Painesville, Ohio WPVL 1460 Paintsville, Ky. WSIP 1490 M Palatka, Fla. WWPF 1260	KADL 1270 Kotn 1490 M	Presque Isle, Me. WAGM 950
Norwich, Conn. WICH 1310 Norwich, N.Y. WCHN 970	WSUZ 800 Palestine, Tex. KNET 1450	KCAT 1530 KPBA 1590	Preston, Idaho KPST 1340
Oakdale, La. KREH 900	Palm Bch., Fla. WQXT 1340 A	Pine City, Minn, WCMP 1350	Prestonsburg, Ky. WPRT 960 WDOC 1310
Oak Grove, La. KWCL 1280	KDES 920	Pineville, Ky. WMLF 1230 Pineville, W,Va. WWYO 970 Pipestone, Minn. KLOH 1050	Price, Utah KUAL 1230 m Prichard, Ala, WSIM 1270
Oak Hill, W.Va. WOAY 860 Oakland. Calif. KEWB 910 KABL 960	KPAL 1450 Palmdale, Calif. KUTY 1470 Palo Alto, Calif, KIBE 1220	Piqua, Ohio WPTW 1570 Pittsburg, Calif. KKIS 990	Prince Albert, Sask. CKB1 900 Prince George, B.C. CKPG 550
KD1A 1310	Pampa, lex. RPUN 1340 m	Pittsburg, Kans. KOAM 860 N KSEK 1340	Prince Rubert, B.C. CEPR 1240
Oakland, Md. WMSG 1050 Oakland Park, Fla. WIXX 1520	KHHH 1230 Panama City, Fla. WDLP 590	Pittsburgh, Pa. KDKA 1020 KQV 1410 A	Princeton, Ind. WRAY 1250 Princeton, Ky. WPKY 1580 Princeton, N.J. WHWH 1350
Oak Park, III. WOPA 1490 Oak Ridge, Tenn. WATO 1290 M	Panama City Beach,	WAMO 860	Princeton, W.Va. WLOH 1490 A Prineville, Oreg. KRCO 690
Oakville, Ont. CHWO 1250 Ocala, Fla. WMOP 900	Fla. WTHR 1480 WSCM 1290	WJAS 1320 N WPIT 730 WRYT 1250	Prosser, Wash. KARY 1310
WTMC 1290 N WKOS 1370	Paradise, Calif. KNGL 930 Paragould, Ark. KDRS 1490	WEEP 1080 M	WHIM IIIO
Ocean City, Md. WETT 1590 Ocean City, N. J. WYKP 1520	Paris, Ark. KCCL 1460	Pittsfield, 111. WBBA 1580	WICE 1290 WJAR 920 N
Uceamake, oreg. Koon 1300	Paris Kv. WKLX 1440	Pittsfield, Mass, WBEC 1420 A WBRK 1340 M Pittston, Pa, WPTS 1540	WLKW 990 WPRO 630
Oceanside, Calif. KUDE 1320 Ocilla, Ga, WSIZ 1380	Paris, Tenn. WTPR 710 Paris, Tex. KPLT 1490 A KFTV 1250	Pittston, Pa. WPTS 1540 Plainfield, N.J. WERA 1590	Provo, Utah KIXX 1400 A
Odessa, Tex. KECK 920 KOSA 1230 C	Parkersburg, W.Va. WCEF 1050	Plainview, Tex. KVOP 1400 M KPLA 1050	KEYY 1450 KOVO 960 M
KOYL 1310 Krig 1410 M	WPAR 1450 C WTAP 1230 A-M	Plant City, Fla. WPLA 910 Platteville, Wis. WSWW 1590	Pryor, Okla. KOLS 1570 Rushlo, Colo KDZA 1230
Oelwein, Iowa KOEL 950 Doallala, Nebr. KOGA 930	Park Falls, Wis. WPFP 1450 Park Rapids, Minn.		KAPI 690 KFEL 970 KGHF 1350 A-M
Ogden, Utah KLO 1430 M KANN 1250	Parry Sound, Ont. CKAR-1 1340	Pleasanton, Tex. KBOP 1340 Pleasantville, N.J. WOND 1400	KGHF 1350 A-M KCS1 590
KŠVN 730 KVOG 1490	Parsons, Kans. KLKC 1540 Pasadena, Calif. KALI 1430	Plymouth, Mass, WPLM 1390	KCSJ 590 KPUB 1480 Pulaski, Tenn. WKSR 1420 A
Opdensburg, N.Y. WSLB 1400 M	KPPC 1240 KRLA 1110	Plymouth, Wis. WPLY 1420	Pulaski, Va. WPUV 1580 Pullman, Wash. KWSC 1250
Oil City, Pa, WKRZ 1340 Okeechobee, Fla. WOKC 1570 Okla. City, Okla. KBYE 890 A	KWKW 1300	Pocahontas, Ark. KPOC 1420 Pocatello, Idaho KSEI 930 N KWIK 1240 M	ROFE 1150 Punta Gorda, Fla, WCCF 1580
KLPR 1140 KOCY 1340	Pascagoula- Moss Point, Miss.	KSNN 1290	Punxsutawney, Pa. WPME 1540 Putnam, Conn. WINY 1350
KOMA 1520 KTOK 1000 A-M	WPMP1580 A	Pocomoke City, Md. WDMV 540 Pointe Claire, Que. CFOX 1470	Puvallun Wash. KAYE 1450
KJEM 800	KGRS 1340	Pomona, Calif. KWOW 1600 KKAR 1220	Quanah, Tex. KOLJ 1150 Quantico, Va. WQVA 1530 Quebec, Que. CBV 980
WKY 930 Okmulgee, Okla. KOKL 1240	Paso Robles, Calif. KPRL 1230 M Patchogue, L.I., N.Y. WALK 1370	Pompano Beach, Fla. WLOD 980	CHRC 800
Old Saybrook, Conn. WLIS 1420 Olean, N.Y. WMNS 1360	WPAC 1580	WRBD 1470 A Ponca City, Okla. WBBZ 1230 M	CJLR 1060 CJQC 1340
Olney, Ill. WHDL 1450 A WVLN 740	Pauls Valley, Okla. KVLH 1470	Ponce, P.R. WPRP 910 WEUC 1420	Quesnel, B.C. CKCV 1280 Quincy, Fla. WCNH 1230 M
Olympia, Wash. KGY 1240 M KITN 920	Pawtucket, R,I. WXTR 550 A Payette, Idaho KEOK 1450	WPAB 550 WLE0 1170	Quincy, Fla. WCNH 1230 M Quincy, 111. WGEM 1440 A WTAD 930 C
Omaha, Nebr, ŘBÓN 1490 KFAB 1110 N KO1L 1290	Peace River, Alta. CKYL 610 Pearsall, Tex. KVWG 1280	WISO 1260 Pontiac, Mich. WPON 1460	Quincy, Mass. WJOA 1300 Quincy, Wash. KPOR 1370
K000 1420	Peekskill, N.Y. WLNA 1420	Pontotoc, Miss. WSEL 1440 Poplar Bluff, Mo. KWOC 930	Quitman, Ga. WSFB 1490
KŇĖČ 660 M WOW 590 C Omak,Wash, KOMW 680	Pell City, Ala. WFHK 1430	KLID 1340 Poplarville, Miss. WRPM 1530	WRJN 1400 A
Omak, Wash, KOMW 680 Oneida, N.Y. WMCR 1600	Pembroke, Ont. CHOV 1350 Pendleton, Oreg. KKID 1240 A	Portage, Pa. WWML 1470 Portage, Wis. WPDR 1350	Radford, Va. WRAD 1460 Raleigh, N.C. WKIX 850 A WNOH 1550
Oneida, N.Y. WMCR 1600 Oneida, Tenn. WBNT 1310 O'Neill, Nebr. KBRX 1350	KUBE 1050 KUMA 1290 A	Portage la Prairie, Man. CFRY 920	WPTF 680 N WLLE 570
Oneonta, Ala. WCRL 1570 Oneonta, N.Y. WDOS 730 Ontario, Calif. KASK 1510	Pennington Gap, Va, WSWV 1570 Pensacola, Fla. WBQP 980	Portageville, Mo. KMIS 1050 Port Alberni, B.C. CJAV 1240	Ralis, Tex. KCLR 1530
Untario, Ureg. KSRV 1360	WBSR 1450	Portales, N.Mex. KENM 1450 Port Angeles, Wash. KAPY 1000 D	Rantoul, III. WRTL 1460
Opelika, Ala. WPHO 1400 M Opelousas, La. KSLO 1230 A	WNVY 1280 A	Port Arthur, Ont. CFPA 1230	Rapid City, S.Dak. KOTA 1380 C KIMM 1150 KRSD 1340
Opp, Ala. WAM1 860 Opportunity, Wash. KZUN 630	WCOA 1370 N WPFA 790	Port Arthur, Tex. KOLE 1340 KPAC 1250 M	KEZU 920
Orange, Mass. WCAT 1390 Orange, Tex. KOGT 1600 Orange, Va. WJMA 1340	Penticton, B.C. CKOK 800 Peoria, III. WAAP 1350 N	Porterville, Calif. KTIP 1450 A Port Hope, Ont. CHUC 1450	Raton, N. Mex. KRTN 1490 A Ravenswood, W. Va. W MOV 1360 Rawlins, Wyo, KRAL 1240 A-M
Orangeburg, S.C. WDIX 1150 A	WMBD 1470 C W1RL 1290	Port Hueneme, Calif, KACY 1520 Port Huron, Mich. WHLS 1450	Raymond, Wash. KAPA 1340
WORG 1580 WTND 920	Perry, Fla. WPE0 1020 M WPRY 1400	WTTH 1380 A	Raymondville, Tex, KSOX 1240 Rayville, La. KRIH 990
Orange Park, Fla. WAYR 550 Oregon City, Oreg. KGON 1520 M	WGKR 1310	Port Lavaca, Tex. KGUL 1560 Portland, Ind. WPGW 1440	Reading, Pa. WEEU 850 A WHUM 1240 C WRAW 1340 N
Orillia, Ont. CFOR 1570 Orlando, Fla. WDBO 580 C	Perry, Iowa KDLS 1310	Portland, Maine WCSH 970 N WGAN 560 C	Redding, Calif. KRDG 1230 M KAHE 1330
WDB0 380 C WH00 990 M WH1Y 1270 WL0F 950 WL0F 950	Peru, Ind. WARU 1600 Petaluma, Calif. KTOB 1490	WLOB 1310 WPOR 1490 A-M Portland, Oreg. KBPS 1450	KQMS 1400 KVCV 600 C
WILLS /40 N	CKPT 1420		KVIP 540 KVIP 540 Red Bluff, Calif. KBLF 1490
Orofino, Idaho KLER 950	Petersburg, Va. WSSV 1240 M Petoskey, Mich. WMBN 1340 Phenix City, Ala. WPNX 1460 A	KLIQ 1290 KEX 1190	Red Deer, Alta. CKRD 850 Redfield, S.Dak KFCB 1380
Oroville, Calif. KAOR 1340 Ortonville, Minn. KD10 1350	Philadelphia, Miss, WHOC 1490		Rediands Calif KCAL 410
Osage Bch., Mo. KRMS 1150 Osceola, Ark. KOSE 860	Philadelphia, Pa, WCAU 1210 C WDAS 1480	KPAM 1410 KPDQ 800	Red Lion, Pa. WGCB 1440 Red Lodge, Mont. KRBN 1450 Redmond. Oreg. KPRB 1240
Oshawa, Ont. CKLB 1350 Oshkosh, Wis. WOSH 1490 A	WFLN 900	KWJJ 1080 A	Red Wing, Minn, KCUE 1250 Redwood Falls, Minn, KLGR 1490
Oskaloosa, lowa KBOE 740 Oswego, N.Y. WSGO 1440	WHAT 1340	KXL 750 Port Neches, Tex. KPNG 1150	Reedsburg, Wis. WRDB 1400
Othello. Wash. KRSC 1400 Otsego, Mich. WDMC 980	WIP 610	Portsmouth, N.H. WBBX 1380 WHFB 750	Regina, Sask. CBK 540
Ottawa, Kans. KOFO 1220	WJMJ 1540 WPEN 950 M WRCV 1060 N	Portsmouth, Ohio WPAY 1400 C WNXT 1260 A Portsmouth, Va. WHIH 1400 A-M	CJME 1300 CKCK 620 CKDM 980
Ottawa, Ont. CBO 910	WTEL 860	Portsmouth, Va. WHIH 1400 A-M WPMH 1010 WAVY 1350 N	CKCK 620 CKRM 980 Reidsville, N.C, WFFC 1600 A WFSV 1220
CFRA 580 CKOY 1810 Ottumwa, Iowa KB1Z 1240 A	Philipsburg, Pa. WPHB 1260 Philipsburg, Kans. KKAN 1490 Phoenix, Ariz. K1FN 860	Post, Tex. KPOS 1370	Remsen, N.Y. WREM 1480
Owatonna, Minn, KRF0 1390	KX1V 1400 KHAT 1480	Poteau Okla. KLCO (280	Reno, Nev. KOH 630 N KBET 1340 M
Owego, N.Y. WEBO 1330 Owensboro, Ky. WOMI 1490 M	KHEP 1280	Potsdam, N.Y. WPDM 1470 Pottstown, Pa. WPAZ 1370	KO1.O 920 C Kone 1450 Kdijt 1230
WVIS 1420 A		Pottsville, Pa, WPAM 1450 WPPA 1360 M	Rensselaer, N.Y. WEEE 1300
Owen Sound, Ont. CFOS 560 Owosso, Mich. WOAP 1080 Oxford. Miss. WSUH 1420	KUGU 980 C KPHO 910 A KUEQ 740	Poughkeepsie, N.Y. WEOK 1390 WKIP 1450 A	Rexburg, Idaho KRXK 1230 Rhinelander, Wis. WOBT 1240 Rice Lake, Wis. WJMC 1240 M
Oxford, N.C. WOXF 1340 Oxnard, Calif. KOXR 910	KRIZ 1230 KTAR 620 N	Powell, Wyo. KPOW 1260 A-M Poynette, Wis. WIBU 1240	Rice Lake, Wis. WJMC 1240 M Richfield. Utah KSVC 980
Ozark, Ala. WOZK 900 Paducah, Ky. WKYB 570 M	Picayune, Miss, WRJW 1320	Prairie du Chien, Wis. WPRE 980	WHITE'S RADIO LCG 145
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Location C.L. Kc. N.A.		Location C.L. Kc. N.A	Location C.L. Kc. N.A.
Richland, Wash. KALE 960	KROY 1240 C	KGB 1360	A KOL 1300
Richland, Wis. WRCO 1450	KXOA 1470	KSON 1240	KOMO 1000 N
Richlands, Va. WRIC 540	Safford, Ariz. KGLU 1480 A	KSDO 1130	KETO 1590
Richmond, Ind. WKBV 1490 A	KATO 1230	Sandpoint, Idaho KSPT 1400	KTW 1250
Richmond, Ky. WEKY 1340 M	Sag Harbor, N.Y. WLNG 1600	Sand Spring, Okla, KTOW 1340	KV1 570
Richmond, Va. WANT 990	Saginaw, Mich, WKNX 1210	Sandusky, Ohio WLEC 1450	Sebring, Fla. WJCM 960
WBBL 1480	WSAM 1400 N	San Fernando, Calif. KGIL 1260	
WRGM 1590	WSGW 790 C	Sanford, Fla. WTRR 1400	
WLEE 1480 M WEET 1320	St. Albans, Vt. WWSR 1420 St. Albans, W.Va. WKLC 1300	Sanford, Me. WSFR 1360 WSME 1220	WSEB 1340 Sedalia, Mo. KDRO 1490 KSIS 1050
WMBG 1380 A	St. Anne.de-la-Pocatiere, Que.	Sanford, N.C. WEYE 1290	Seguin, Tex. KWED 1580
WRNL 910 C	CHGB 1310	WWGP 1050	Selma, Ala. WGWC 1340 C
WRVA 1140 N	St. Augustine, Fla. WFOY 1240 C	San Francisco,	WHBB 1490
WXGI 950	WETH 1420	Calif. KFRC 610	M WRWJ 1570
WWWW 1540	St. Boniface, Man. CKSB 1050	KCBS 740	C Seminole, Tex. KTFO 1250
Richmond Hill, Ont. CJRH 1310 Richwood, W.Va. WVAR 1280 Ridgecrest, Calif. KRCK 1360	St. Catherines, Ont, CKTB 610 St. Charles, Mo, KADY 1460 St. Cloud, Minn. KFAM 1450 N	KFAX 1100 Kgo 810 Knbr 680	A S.C., WSNW 1150 N Seven Iles, Que. CKCN 560
KLOA 1240	WJON 1240	KKHI 1550	M Sevierville, Tenn. WSEV 930
Rimouski, Que, CJBR 900	St. George, S.C. WQIZ 1300	KSAY 1010	Seward, Alaska KIBH 1340 C-A
Rio Piedras, P.R. WUNO 1320 WRAI 1520 Ripley, Tenn. WTRB 1570	St. George, Utah KDXU 1450 St. Helen, Mich, WMIC 1590 St. Helens, Oreg. KOHI 1600	KSAN 1450 KSFO 560	Seymour, Ind. WJCD 1390 Seymour, Tex. KSEY 1230 Shamokin, Pa. WISL 1480
Ripon, Wis, WCWC 1600 Riverhead N.Y. WRIV 1390	St. Hyacinthe, Que. CKBS 1240 St. Jean, Que. CHBS 1090	KYA 1260 San German, P. R. WRJS 1060 Sanitobia, Miss. WSAO 1550	Shamrock, Tex. KBYP 1580 Sharon, Pa. WP1C 790
WAPC 1570 Riverside, Calif. KPRO 1440 KACE 1570	St, Jerome, Que. CKJL 900 Saint John, N.B. CFBC 930 CHSJ 1150	San Jose, Calif, KLOK 1170 KLIV 1590	
Riverton, Wyo. KVOW 1450 M Riviera Beach, Fla. WHEW 1600	St. Johns, Mich. WJUD 1580 St. John's, Nfld. CBN 640	KEEN 1370 KXRX 1500 San Juan, P.R. WAPA 680	Sheboygan, Wis. WHBL 1330 A WKTS 950
Riviere du Loup, Que. CJFP 1400	CJON 930	WHOA 870	". Sheffield, Ala. WSHF 1290
Roanoke, Ala. WELR 1360	Voar 1230	WIAC 740	Shelby, Mont. KSEN 1150 M
Reanoke, Va. WDBJ 960 C	Vocm 590	WIPR 940	Shelby, N.C. WOHS 730 M
WRIS 1410 M Whye 910 Wrov 1240 A	VOWR 800 St. John'sbury, Vt. WTWN 1340 St. Joseph, Mich. WSJM 1400	WKAQ 580 WKVM 810	
WSLS 610 N Roanoke Rapids, N.C.	St. Joseph, Mo. KFEQ 680 KKJD 1550 M	WKYN 630 WITA 1140 San Luis Obispo, Calif.	Shelbyville, Tenn. WHAL 1400 WLIJ 1580
WCBT 1230 M Roaring Sprgs., Pa. WKMC 1370	KUSN 1270 St. Joseph d'Alma, Que. CFGT 1270	KATY 1340 KCJH 1280	Sheldon, Iowa KIWA 1550 Shelton, Wash. KMAS 1280 Shenandoah, Iowa KMA 960 A
Roberval, Que. CHRL 910 Robinson, III. WTAY 1570	St. Louis, Mo. KATZ 1600 KFUO 850	KSLY 1400 KVEC 920 San Marcos, Tex. KCNY 1470	M Shenandoah, Pa. WMBT 1530 Sherbrooke, Que. CHLT 630
Robstown, Tex. KROB 500 D	KMOX 1120 C	San Mateo, Calif. KOFY 1050	CKTS 900
Rochester, Minn. KROC 1340 N	KSD 550 N	San Rafael, Calif. KTIM 1510	Sheridan, Wyo. KWYO 1410 M
KFAV 1520	KSTL 690	San Saba, Tex. KBAL 1410	KROE 930
KWEB 1270	KXOK 630	Santa Ana, Calif. KWIZ 1480	Sherman, Tex. KRRV 910 M
Rochester, N.H. WWNH 930	WEW 770 M	Santa Barbara, Cal. KDB 1490	KTXO 1500
Rochester, N.Y. WBBF 950 M	WIL 1430 A	KGUD 990	Shippensburg, Pa. WSHP 1480
WHAM 1180 N	St. Louis Park, Minn.	K1ST 1340	N Show Low, Ariz, KVWM 1050
WHEC 1460 C	KRS1 950	KTMS 1250 A-	M Shreveport, La. KANB 1300
WRVM 680 WSAY 1370 WROC 1280 N	St. Mary's, Pa. WKBI 1400 St. Paul, Minn. KSTP 1500 N KDWB 630 M	Santa Cruz, Calif. KSCO 1080	KCIJ 1050 C
Rockford, III. WROK 1440 A WJRL 1150	WM1N 1400 St. Peter, Minn. KRBI 1310	Santa Fe, N.Mex. KTRC 1400 KVSF 1260 Santa Maria, Cal. KCOY 1400	C KOKA 1550 M KJOE 1480 M
WRRR 1330	St. Petersburg, Fla. WPIN 680	KHER 1600	KREB 980
Rock Hill, S.C. WRHI 1340 M	WSUN 620 A	KSMA 1240	KRMD 1340 A
WTYC 1150	WLCY 1380 M	KSEE 1480	KWKH 1130 C
Rockingham, N.C. WAYN 900	St. Petersburg Beach,	Santa Monica, Cal. KDAY 1580	Sidney, Mont. KGCX 1480 M
Rock Island, III. WHBF 1270 C	Fla, WILZ 1590	Santa Paula, Calif. KSPA 1400	Sidney, Nebr. KSID 1340 A
Rockland, Maine WRKD 1450 A	St. Thomas, Ont, CHLO 680	Santa Rosa, Calif. KSRO 1350	Sierra Vista, Ariz. KHFH 1420 A
Rockmart, Ga. WPLK 1220	Salamanca, N.Y. WGGO 1590	KHUM 1580	KMVS 1470
Rock Springs, Wyo.	Salem, III, WJBD 1350	KVRE 1460	Sikeston, Mo. KSIM 1400
KVRS 1360 A-M Rockville, Md. WINX 1600 Rockwood, Tenn. WRKH 580	Salem, Ind. WSLM 1220 Salem, Mass. WESX 1230 M	KJAX 1150 Santa Rosa, N.Mex. KSYX 1420	Siler City, N.C. WNCA 1570 Siloam Sprgs., Ark. KUOA 1290 M Silsbee, Tex. KKAS 1300
Rocky Ford, Colo. KAVI 1320 Rocky Mount, N.C. WCEC 810	Salem, Mo. KSMO 1340 Salem, Oreg. KSLM 1390 A KAPT 1220	Sapulpa, Okla. KREK 1550 Saranac Lake, N.Y. WNBZ 1240 Sarasota, Fla. WKXY 930	A Silver City, N.Mex. KSIL 1340 C Silver Sprgs., Md. WQMR 1050
WEED 1390 A	KBZY 1490 N	WSAF 1220	C Sincoe, Ont. CFRS 1560
WRMT 1490	KGAY 1430	WSPB 1450	Sinton, Tex. KTOD 1590
WKWS 1290	Salem, Va. WBLU 1480	WYND 1280	Sioux City, Iowa KSCJ 1360 A
Rocky Mount, Va. WYTI 1570 Rogers, Ark. KAMO 1390	Salida, Colo. Salina, Kans. KVRH 1340 M KSAL 1150 M KCTY 980	Saratoga Springs, N.Y. WSPN 900	KMINS 620 M KTRI 1470
Rogers City, Mich. WHAK 960	KCTY 980	Sarnia, Ont. CHOK 1070	Sioux Falls, S.Dak. KISD 1230
Rogersville, Tenn. WRGS 1370	KQTY 910	Saskatoon, Sask. CFQC 600	KELO 1320
Rolla, Mo. KCLU 1590	Salinas, Calif. KDON 1460	CFNS 1170	KNWC 1270
Rome, Ga. KTTR 1490 WLAQ 1410 A WIYN 1360	Saline, Mich. WOIA 1290	CKOM 1250 Sauk Rapids, Minn.	KSOO 1140 A Sitka, Alaska KIFW 1230 C-A
WRGA 1470 C WROM 710	Salisbury, Md. WBOC 960 WICO 1320 A WJDY 1470	KVAL 800 Sault Ste. Marie, Michigan WSOO 1230	KSEW 1400 Skowhegan, Maine WGHM 1150 Slaton, Tex. KCAS 1050
	Salisbury, N.C. WSTP 1490 M	Sault Ste. Marie,	Smithfield, N.C. WMPM 1270
	WSAT 1280 A	Ontario CJIC 1050	Smiths Falls, Ont. CJET 630
	Salmon, Idaho KSRA 960	CKCY 920	Smyrna, Ga, WSMA 1550
Roseau, Minn. KRWB 1410	Salt Lake City, Utah	Savannah, Ga. WBYG 1450	M Snyder, Tex. KSNY 1450 M
Roseburg, Oreg. KRNR 1490 C	KALL 910 A	WEAS 900	Socorro, N.Mex. KSRC 1290
KRXL 1250	KCPX 1320 N	WSAV 630	Solvay, N.Y. WQSR 1320
KYES 950	KLUB 570 M	WSGA 1400	
Rosenberg, Tex. KFRD 980	KNAK 1280	WTOC 1290	
Rossville, Ga. WRIP 980	KSL 1160 C	WSOK 1230	A WTLO 1480
Roswell, N.Mex. KRSY 1230	KSOP 1370	Savannah, Tenn. WORM 1010	Somerset, Pa. WVSC 990
KGFL 1430 M KBIM 910 KRIK 960	KSXX 630 KWHO 860 KWIC 1570	Sayre. Pa. WATS 960 Scheffield, Ala, WSHF 1290 Schefferville, Que. CFKL 1230	Sonora, Tex. KCKG 1240 Sorel, P.Q. CJSO 1320
Rouyn, Que. CKRN 1400	San Angelo, Tex. KWIC 1570	Schenectady, N.Y. WGY 810	N So. Bend, Ind. WNDU 1490 A
Roxboro, N.C. WRXO 1430	KGKL 960 A	WSNY 1240	WJVA 1580 M
Royal Oak, Mich, WEXL 1340 Rugby, N. Dak. KGCA 1450 Ruidoso, N.Mex. KRRR 1340	KPEP 1420 KWFR 1260 San Antonio, Tex, KAPE 1480	Scott City, Kans. KFLA 1310 Scottsbluff, Nebr.	Southbridge, Mass. WESO 970 So. Boston, Va. WHLF 1400 A
Rumford, Me. WRUM 790	KCOR 1350	KNEB 960 A-	M Southern Pines, N.C.WEEB 990
Rupert, Idaho KAYT 970	KBAT 680 C	KOLT 1320	
Rusk, Texas KTLU 1580 Russell, Kans. KRSL 990	KBER 1150 KITE 930 KUKA 1250	Scottsdale, Ariz. WROS 1330 KWBY 1440	South Daytona Beach, Florida WELE 1590
Russellville, Ala. WWWR 920	KUBO 1310	Scottsville, Ky. WLCK 1250	So. Gastonia, N.C. WGAS 1420
Russellville, Ark. KXRJ 1490	KMAC 630 A & C	Scranton, Pa. WARM 590	A So. Haven, Mich. WJOR 940
Russellville, Ky. WRUS 610	KONO 860	WEJL 630	So. Knoxville, Tenn, WS <u>KT</u> 1580
Rutland, Vt. WHWB 1000	WOAL 1200 N	WGBI 910	C So. Paris, Me. WKTQ 1450
WSYB 1380 M		WICK 1400	So. Pittsburg, Tenn. WEPG 910
Sackville, N.B. CBA 1070 Sacramento, Calif. KCRA 1320 N KFBK 1530 A	San Bernardino, Calif. KCKC 1350 KFXM 590	Seaford, Del. WSCR 1320 Searcy, Ark. KWCB 1300	N So. St. Paul, Minn. KDWB 630 M So. Williamsport, Pa.
KGMS 1380 M	KRNO 1240	Seaside, Oreg. KSRG 730	WMPT 1450
Kjay 1430	Kmen 1290 m	Seattle, Wash. KAYO 1150	M Spanish Fork, Utah KONI 1480
KRAK 1140 M	Sandersville, Ga, WSNT 1490 San Diego, Callf, KCBQ 1170 KFMB 540 C		Sparks, Nev. KBUB 1270 A Sparta, III. WHCO 1230 C Sparta, Tenn, WSMT 1050
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Location C.L. Kc. N.A.	Location C	.L. Kc. N.A.	Location	C.L. Kc. N.A.	
WCOW 1290 Spartanburg S.C. WZOO 1400 M	Tallassee, Ala.	WTNT 1270 C WTLS 1300		KCUB 1290 M KEVT 690	Wadena, Minn. KWAD 920 M Wadesboro, N.C. WADE 1210
WORD 910 N WSPA 950 C	Tallulah, La. Tamua, Fla.	KTLD 1360		KHOS 940 KMOP 1830	Wailuku, Hawail KMVI 550 N Waipahu, Hawaii KAHU 940 Walhalla, S.C. WGOG 1460
Spencer, Iowa KICD 1240 Spencer, W.Va. WSPZ 1400		WDAE 1250 C WYOU 1550		KFIF 1550 KTKT 990 KOLD 1450 C	Walhaila, S.C. WGOG 1460 Wallace, Idaho KWAL 620 M Wallace, N.C. WLSE 1400
Spokane, Wash, KGA 1510 A KDNC 1440		WFLA 970 N WHBO 1050 M WINQ 1010	Tucumcari, N. Mex.		Walla Walla, Wash.
КЦҮК 1230 Кред 1380 Кнор 590 N		WTMP 1150	Tulare, Calif. Tulia, Tex.	KGEN 1370 KTUE 1260	KHIT 1320 KUJ 1420 M KTEL 1490 A
KMRE 550 KNEW 790 M	Taos, N. Mex. Tarboro, N.C.	WSOL 1300 KKIT 1340 WCPS 760	Tullahoma, Tenn. Tulsa, Okia.	WJIG 740 KAKC 970	Walnut Ridge, Ark. KRLW 1320 Walsenburg, Colo. KFLJ 1380
KREM 970 KXLY 920 C	Tarpon Sprgs., Fla. Tasley, Va.	WESR 1830		KOME 1300 KRMG 740 C	Waltham, Mass. WCRB 1330
KCFA 1330 Springdale, Ark, KBRS 1340 A	Taunton, Mass. Tawas City, Mich.	WPEP 1570 W10S 1480		KELI 1430 C KVOO 1170 N	Ward Ridge, Fla. WJUE 1570
Springfield, III. WCVS 1450 A-M WMAY 970 N	Taylor, Tex. Taylorsville, N. C.	KTAE 1260 WSTH 860 WTLK 1570	Tupelo, Miss.	KFMJ 1050 WELO 580 M	Warner Robbins, Ga. WRPB 1350 A
WTAX 1240 C Springfield, Mass. WHYN 560 C	Taylorville, ill.	WTIM 1410 WNTT 1250	Turlock, Calif.	WTUP 1490 A KCEY 1390 WJRD 1150	Warren, Ark. KWRF 860 Warren, Ohio WHHH 1440
WMAS 1450 M WSPR 1270 Springfield, Mo. KGBX 1260 N	Tazewell, Tenn. Tell City, Ind. Tempe, Ariz.	WTCJ 1230 KUPD 1060	Tuscaloosa, Ala.	WACT 1420 WNPT 1280 A	Warren, Pa. WNAE 1310 Warrensburg, Mo. KOKO 1450
KICK 1340 KTTS 1400 C	Temple, Tex.	KYND 1580 KTEM 1400		WTUG 790 WTBC 1230 M	Warrenton, Mo. KWRE 730 Warrenton, Va. WEER 1570
Springfield. Ohio WIZE 1340 A	Terrace, B.C. Terre Haute, Ind.	CFTK 590 WBOW 1230 N	Tuscumbia, Ala.	WVNA 1590 WRCK 1410	Warsaw, Ind. WRSW 1420 Warsaw, Va. WNNT 690
WBLY 1600 Springfield, Oreg. KEED 1050	Tanall Tax	WAAC 1300 A WTHI 1480 C	Tuskegee, Ala. Twenty-Nine Palm	WABT 580 ns, Calif. KDHI 1250	Warwick-E.Greenwich, R.I. WYNG 1590
Springfield, Tenn. WDBL 1590 Springfield, Vt. WCFR 1480 Springhill, La. KBSF 1460	Terrell, Tex. Terrytown, Nebr. Tevarkana, Ark	KTER 1570 Keyr 690 Kosy 790 M	Twin Falls, Idaho		Wasco, Calif. KWS0 1650 Washington, D.C. WGMS 570
Spring Lake, N. C. WFBS 1450	Texarkana, Ark. Texarkana, Tex.	KCMC 740 A KATQ 940	Two Rivers, Wis.	KEEP 1450 WTRW 1590	WMAL 630 A WOL 1450 M
Spruce Pine. N.C. WTOE 1470 Stamford, Conn. WSTC 1400 A	Texas City. Tex.	KTFS 1400 KTLW 920	Tyler, Tex.	K D O K 1330 K G J B 1490 M	WOOK 1340 WWDC 1260 WBC 980 N
Stamford, Tex. KDWT 1400 Stanford, Ky. WRSL 1520	Thayer, Mo. The Dalles, Oreg.	KALM 1290 KODL 1440	T	KTBB 600 A KZEY 690	WRC 980 N WTOP 1500 C Washington, Ga. WKLE 1370
Starke, Fla. WPXE 1490 Starkville, Miss. WSSO 1230 State College, Pa. WMAJ 1450 N	Thermopolis, Wyo.	KRMW 1300 KRTR 1490 M KTHE 1240	Tyrone, Pa. Uhrichsville, Ohi	WTRN 1340 WUND 1540	Washington, Ind. WAMW 1580 Washington, Iowa KCII 1380
Statesboro, Ga. WWNS 1240	Thief River Falls. Minn.	KTRF 1230	Ukiah, Calif. Union, Mo.	KUKI 1400 KMSL 1250 KLPW 1220	Washington, N.J. WCRV 1580 WITN 930 A
Statesville. N.C. WSIC 1400 WDBM 550	Thetford Mines, Qu Thibodaux, La.		Union, S.C. Union City, Tenn.	WBCU 1460 WENK 1240	Washington, N.C. WEEW 1320 Washington, Pa, WJPA #450 M
Staunton, Va. WTUN 1240 A WAFC 900	Thomaston, Ga.	WTGA 1590	Uniontown, Pa. Urbana, III.	WILL 580	House Ohio WCHO (250
Stephenville, Tex. KSTV 1510 Sterling, Colo. KGEK 1230	Thomasville, Ala.	WTHN 1500 WJDB 630	Utica, N.Y.	W KID 1580 WIBX 950 C WBVM 1550	Waterbury, Conn. WATR 1320 A WBRY 1590 C WWC0 1240 M
KOLR 1490 Sterling, III. WSDR 1240 Steubenville, Ohio WSTV 1340 M	Thomasville, Ga. Thomasville, N.C.	WPAX 1240 WKTG 730 WTNC 790		WRUN 1150 WTLB 1310 A	Waterbury, Vt. WDEV 550 M
Stevens Point, Wis. WSPT 1010 Stillwater, Minn. WAVN 1220	Thomson, Ga. Three Rivers, Mich	WTWA 1240 M	Uvalde, Tex. Val D'Or. Que.	KVOU 1400 CKVD 1230	KNWS 1090 KWWL 1330 M Watertown, N.Y. WATN 1240
Stillwater, Okla. KSPI 780 Stockton, Calif. KJOY 1280	Three Rivers, Que.	WLKM 1510 CHLN 550	Valdese, N.C. Valdesta, Ga.	WSUM 1490 WGOV 950 M	W0TT 1410
KSTN 1420 KWG 1230 A	Ticonderoga, N.Y.	CKTR 1150 WIPS 1250 WTTF 1600 M		WGAF 910 A WJEM 1150	WWNY 790 C Watertown, S.Dak. KSDR 1480
Storm Lake, Iowa KAYL 990 Stratford, Ont. CJCS 1240	Tiffin, Ohio Tifton, Ga.	WTIF 1340	Valentine, Nebr.	WVLD 1450 KVSH 940	Watertown, Wis. WTTN 1580
Streator, III. WIZZ 1250 Stroudsburg, Pa. WVPO 840 Stuart, Fla. WSTU 1450 M	Tillamook, Oreg. Tillsonburg, Ont.	WWGS 1430 KTIL 1590 CKOT 1510	Valley City, N.Da Valley City, N.Da	KNBA 1490 M ak. KOVC 1490 M Q. CFLV 1370 ille, Fla. WNSM 1340	Waterville, Me. WTVL 1490 A Watseka, III. WGFA 1360 Watsonville, Calif. KOMY 1340
Stuart, Va. WHEO 1270 Sturgeon Bay, Wis, WDOR 910	Timmins, Önt.	CFCL 620 CKGB 680	Valparaiso-Nicevi		Wauchula, Fla. WAUC 1310 Waukegan, 111. WKRS 1220
Sturgis, Mich. WSTR 1230 Sturgis, S. D. KBNB 1280	Titusville, Fla. Titusville, Pa.	WRMF 1050 WTIV 1230	Van Buren, Ark. Van Cleve, Ky.	KFDF 1580 WMTC 730	Waukegan. III. WKRS 1220 Waukesha, Wis. WAUX 1510 Waupaca, Wis. WDUX 800 A
Stuttgart, Ark. KWAK 1240 M Sudbury. Ont. CKSO 790 CFBR 550	Toccoa, Ga.	WLET 1420 M WNES 630	Van Wert, Ohio Vanceburg, Ky.	WERT 1220 WKKS 1570 CBU 690	Wausau, Wis. WRIG 1400 N WSAIJ 550 A WHVF 1230
CHNO 900 Suffolk, Va. WLPM 1460 A	Toledo. Ohio	WOHO 1470 M WSPD 1370 N WTOD 1560 C	Vancouver, B.C.	CBU 690 CFUN 1410 CHUM 1320	Waverly, lowa KWVY 1470
Sulphur, La. KIKS 1310 Sulphur Sprus., Tex. KSST 1230	Toledo, Oreg.	WTOL 1230 A KTDO 1230		CJOR 600 CKWX 1130 M	Waverly, Tenn. WPHC 1540 Waxabachie, Tex. KBEC 1390
Summerside, P.E.I. CJRW 1240 Summerville, Ga. WGTA 950	Tolleson, Ariz. Tomah, Wis.	KRDS 1190 WTMB 1460	Vancouver, Wash.	KKEY 1150	Waycross, Ga. WACL 570 WAYX 1230 M
Summerville, S.C. WALS 980 Sumter, S.C. WFIG 1290 M WDXY 1240	Tooele, Utah	KDYL 990		KVAN 1480 KGAR 1550	Waynesboro, Ga. WBRO 1310 Waynesboro, Miss. WAEO 990
WDAT 1240 WSSC 1340 A Sunbury, Pa. WKOK 1240 C	-	WIBW 580 C KEWI 1440 WREN 1250 A	Vandalia, 111. Venice, Fla. Ventura, Calif.	WPMB 1500 WAMR 1320 KVEN 1450 M	Waynesboro, Pa, WAYZ 1380 Waynesboro, Va. WAYB 1490 M WRWV 970
Sunnyside, Wash. KREW 1230 Sun Valley, Ida. KSKI 1340	Toppenish, Wash.	KTOP 1490 M KENE 1490	Verdun, Que.	KUDU 1590 CKVL 850	Waynesburg, Pa. WANB 1580 Waynesville, Mo. KJPW 1390
Superior, Nebr. KRFS 1600 Superior, Wis. WDSM 210 N	Teronte, Ont.	CBL 740 N CHEL 1540 D	Vermillion, S.Da Vernal, Utab	KUSD 690	Waynesville, N.C. WHCC 1400 Weatherford, Tex. KZEE 1220
WIGL 970 WWJC 1270 WQMN 1320		CFRB 1010 C CHUM 1050 M		KVEL 1250 CJIB 940 KVWC 1490	Weed, Calif. KDAD 800
Susanville, Calif. KSUE 1240 Swainsboro, Ga. WJAT 800	-	CJBC 860 CKEY 580 M CKFH 1430	Vero Beach, Fla. Vicksburg, Miss.	WAXE 1370 WTTB 1490 A WQBC 1420 M	Weirton, W.Va. WEIR 1430 N Weiser, Idaho KWEI 1260 Weich, W.Va. WELC 1150
Sweetwater, Tenn. WDEH 800 Sweetwater, Tex. KXOX 1240	Torrington, Conn.	WBZY 990 WTOR 610 M		WVIM 1490 CIVI 900	Weldon, N.C. WCNF 1400
Swift Current, Sask. CKSW 1400 Svdney, N.S. CBI 1140	Torrington, Wyo. Towanda, Pa.	KGOS 1490 WTTC 1550		CFAX 870 CKDA 1220	Welland, Ontario CHDW 1470 Wellsboro, Pa, WNBT 1490 M
CJCB 1270 Sylacauga, Ala, WFEB 1340 M	Towson, Md.	WAQE 1570 CJAT 610	Victoria, Tex.	KVIC 1340	Wellston, Ohio WKOV 1330 Wellsville, N.Y. WLSV 790 Wenatchee, Wash, KPQ 560 A
Sylva, N.C. WMSJ 1480 Sylvania Ga WSY 1490	Traverse City, Mic	WCCW 1310	Victoriaville, Que Victorville, Calif. Vidalia, Ga.	KCIN 1590	KUEN 900
Sylvania, Ga. WSYL 1490 Syracuse, N.Y. WHEN 620 C WFBL 1390 M		KTTN 1600 WAAT 1300 WBUD 1260	Ville Marie, Que.	WIVV 1370	Wendell-Zebulon, N.C. WETC 540
WNDR 1260 Wolf 1490 A	Trinidad, Colo,	WBUD 1260 WTTM 920 M KCRT 1240 M	Ville Platte, La Ville St. George	s. Que.	West Amis, Wis. WAWA 1990
WSYR 570 N Tabor City, N.C. WTAB 1370 Tacoma, Wash. KMQ 1360	Troy, Ala. Troy, N.Y.	WTRF 970 M	Vincennes, Ind.	CKRB 1460 WAOV 1450 M WWBZ 1360	W. Bend, Wis. WEKV 1470 Westbrook, Me. WJAB 1440
KTAC 850	Troy N C	WHAZ 1330 WTRY 980 WXKW 1600 WJRM 1390	Vineland. N.J. Vinita, Okla.	WDVL 12/0	West Chester, Pa. WCHE 1520 W. Frankfort, III. WFRX 1300 West Jefferson, N.C.
КТ́NŤ 1400 КVI 570 М Таft, Calif. КТКВ 1310	Truro, N.S.	KHOE 1400 CKCL 600	Vinton, Va. Virginia, Minn.	KVIN 1470 WKBA 1550 WHLB 1400 N	W KSK 1600
Tahiequah, Okia. KTLQ 1350 Tahoe Valley, Calif.	Truth or Conseque New Mexic	nces, o KCHS 1400	Virginia Bch., Vi Virouqua, Wis.		W. Monroe, La. KUZN 1310 W. Palm Beach, Fla.
Talladega, Ala WEYY 1580 WNUZ 1230 M	Tryon, N.C.	WTYN 1550 M KTUC 1400 A	Visalia, Calif. Vivian, La.	KONG 1400 KLVI 1600 WACO 1580 A	WEAT 850 M WJNO 123(I C
Tallahassee, Fla. WMEN 1330 WRFB 1410		KXEW 1600 KAIR 1490 KCEE 790	Waco, Tex.	KAWA 1010 KBGO 1580	
WTAL 1450 M		KTAN 580 A		KWTX 1250 M	WHITE'S RADIO LOG 147

Location C.L. Kc. N.A.	Location C.L. Kc. N.A.	Location C.L. Kc. N.A.	Location C.L. Kc. N.A.
West Plains, Mo. KWPM 1450	Wildwood, N.J. WCMC 1230 M	Windsor, Ont. CBE 1550	WNEB (230
West Point, Ga. WBMK 1310	Wilkes-Barre, Pa. WBAX 1240 M	CKLW 800 M	WORC 1310
West Point, Miss. WROB 1450 M		Winfield, Ala. WEZQ 1300	WTAG 580 C
Westport, Conn. WMMM 1260 M	WILK 980 A Willcox, Ariz, KHIL 1250	Wingham, Ont. CKNX 920	Worland, Wyo, KWOR 1340 M
W. Springfield, Mass. WTXL 1490 A		Winnemucca, Nev. KWNA 1400	Worthington, Minn. KWOA 730
W. Yarmouth, Mass.	Williamsburg, Va. WBCI 740	Winnfield. La. KVCL 1270 Winner, S. Dak. KWYR 1260	Worthington, Ohio WRFD 880
WOCB 1240 M	Williams Lake, B.C.	Winnipeg, Man. CBW 990	Wynne, Ark. KWYN 1400 Wyoming, Mich. WYOQ 1530
Westerly, R.I. WERI 1230 M		CKRC 630	Wytheville, Va. WYVE 1280
Westfield, Mass. WDEW 1570	Williamson, W.Va. WBTH 1400 M	CKY 580	Yakima, Wash. KIT (280
Westminster, Md. WTTR 1470	Williamsport, Pa. WLYC 1050	CJ0B 680	KIMA 1460 C
Weston, W.Va. WHAW 980 M	WRAK 1400 N	Winnsboro, La. KMAR 1570	K B B 0 1390
W. Warwick, R.I. WWRI 1450	WWPA 1340 C	Winnsboro, S.C. WCKM 1250	KQOT 940
Wetumpka, Ala. WETU 1250	Williamston, N.C. WIAM 900	WRB1 980	KUTI 980
Wewoka-Seminole, Okla.	Willimantic, Conn. WILI 1400 M	Winona, Minn. KWNO 1230 A	KYAK 1390 M
KWSH 1260 A		KAGE 1380	Yankton, S.D. KYNT 1450
Weyburn, Sask. CFSL 1340 Wharton, Tex. KANI 1500	Willmar, Minn. KWLM 1340 A	Winona, Miss. WONA 1570	WNAX 570 C
Wharton, Tex. KANI 1500 Wheatland, Wyo. KYCN 1340	Willoughby, Ohio WELW 1330 D Willow Springs, Mo, KUKU 1330	Winslow, Ariz. KVNC 1010 A KINO 1230	Yarmouth, N.S. CJLS 1340
Wheaton, Md. WDON 1540	Willows, Calif. KIQS (560	Winston-Salem, N.C.	Yauco, P.R. WKFE 1550 Yazoo City, Miss. WAZF 1230
Wheeling, W.Va. WHLL 1600	Wilmington, Del. WAMS 1380 M	WAAA 980	Yellowknife, N.W.T.
WBZE 1470	WDEL 1150 N	WAIR 1340	CFYK 1340
WKWK 1400 A	WILM 1450 A	WPEG 1550	York, Nebr. KAWL 1370
WWVA 1170 C	WTUX 1290	WSJS 600 N	York, Pa. WNOW 1250 M
White Castle, La. KEVL 1590	Wilmington, N.C. WMFD 630 A	WT0B 1380 M-C	WORK 1350 N
White Plains, N.Y. WFAS 1230	WHSL 1490	Winter Garden, Fla. WOKB 1600	WSBA 910 A
White River Junc., Vt.	WKLM 980	Winter Haven, Fla. WSIR 1490 M	York. S.C. WYCL 1580
WVTR 910	WGN1 1340 M	WINT 1360	Yorkton, Sask. CJGX 940
Whitehall, Mich. WCBP 1490	Wilmot Station, N.S.	Winter Park, Fla. WABR 1440 M	Youngstown, Ohio. WBBW 1240 M
Whitehorse, Y.T. CFWH 570	CKAD 1490	Wisconsin Rapids, Wis.	W F M J 1390 N
Whitesburg, Ky. WTCW 920 Whiteville, N.C. WENC 1220	Wilson, N.C. WGTM 590 C WLLY 1350	WFHR 1320 M WRNE 1220	WKBN 570 C
Wichita, Kans. KAKE 1240 M	WVOT 1420 M	Wolf Pt., Mont. KVCK 1450 M	Ypsilanti, Mich. WYSI 1480
KLEO 1480 M	Winchester, Ky. WWKY 1380	Wood River, 111. WBBY 590 M	WYNZ 1520 Yreka, Calif. KSYC 1490
KFDI 1070 N	Winchester, Tenn. WCDT 1340	Woodside, N.Y. WWRL 1600	Yuba City, Calif. KUBA 1600
KFH 1330 C	Winchester, Va. WINC 1400 A	Woodstock, N.B. CJCJ 920	KAGR 1450
KS18 900	WHPL 610	Woodstock, Ont. CKOX 1340	Yuma, Ariz. KBLU 1320
KWBB 1410	Windber, Pa. WWBR 1350	Woodward, Okla, KSIW 1450	KVOY 1400 A
Wichita Falls, Tex. KNIN 990 M		Woonsocket, R.I. WNRI 1380	KYUM 560 N
KTRN 1290	Winder, Ga. WIMO 1300	WWON 1240	Zanesville, Ohio WHIZ (240 N
KWFT 620 C		Wooster. Ohio WWST 960	
Wickenburg, Ariz. KAKA 1250	Windsor, Conn. WSOR 1480	Worcester, Mass.	Zarephath, N.J. WAWZ 1380
Wickford, R.I. WKFD 1370	Windsor, N.S. CFAB 1450	WAAB 1440 M-N-A	Zephyr Hills, Fia. WZRH 1400

U. S. AM Stations by Call Letters

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C.L.	Location	Kc.	C.L.	Location	Kc.	C.L.	Location	Kc.	C.L. Location	Kc.
KAAA	Kingman, Ariz.	1230	KAPY	Port Angeles, Wash.	1290	квнв	Sturgis, S. D.	1280	KBWD Brownwood, Tex.	1380
KAAB	Hot Springs, Ark.	1340	KARA	Albuquerque, N.M.	1310	КВНС	Nashville, Ark,	1260	KBYE Okla, City, Okla.	890
KAAY	Little Rock, Ark.	1090	KARE	Atchison, Kan. Blaine, Wash.	1470	KBHM	Branson, Mo.	1220	KBYG Big Spring, Tex.	1400
KABC	Los Angeles, Calif. Ketchikan, Alaska	790	KARI	Blaine, Wash,	550 920	KBHS	Hot Springs, Ark. Fresno, Calif.	590	KBYP Shamrock, Tex. KBYR Anchorage, Alaska	1580
	Oakland, Calif.	580 960		Little Rock, Ark. Fresno, Calif. Great Falls, Mont.	1430	KDIF	Roswell, N.Mex.	910	KR7V Salem Oren	1270
	Albuquerque, N.M.	1350	KARR	Great Falls, Mont.	1400	KBIS	Bakersfield, Calif.	970		1400
KACE	Riverside, Calif.	1570	KARS	Belen N.M.	860	KBIX	Muskogee, Okla.	1490	KCAC Phoenix, Ariz.	1010
KACI	The Dalles, Oreg.	1300	KART	Jerome, Idaho	1400	KB1 Z	Ottumwa, Jewa	1240	KCAD Abilene, Tex.	1560
KACT	Andrews, Tex.	1360	KARY	Prosser, Wash.	1310	KBJT	Fordyce, Ark.	1570	KCAL Redlands, Calif. KCAN Canyon, Tex.	1410
KAUT	Port Hueneme, Calif.	1230	KASE	Austin, lex. Eugene, Ore.	970 1600	KBKK	Baker, Oreg. Aberdeen, Wash.	1490 1450	KCAN Canyon, Tex. KCAP Helena, Mont.	1550 1340
KADL	Ada, Okla. Pine Bluff, Ark.	1270	KASI	Ames, lowa	1430	KRIA	Burbank, Calif.	1500	KCAR Clarksville, Tex.	1350
KADO	Marshall, Tex.	1410		Ontario, Calif.	1510	KBLF	Red Bluff. Calif.	1490		1050
KADY	St. Charles, Mo.	1460	KASL	Newcastle, Wyo.	1240	KBLI	Blackfoot, Idaho	690		1530
KAFP	Petaluma, Calif.	1490	KASM	Albany, Minn.	1150	KBLR	Bolivar, Mo.	1550		1390
	Bakersfield, Calif.	550	KASO	Minden, La.	1240	KBLT	Big Lake, Tex.	1290		1590
	Winona, Minn. Crossett, Ark.	1380 800		Astoria. Ore. Auburn, Wash.	1220	KBLU	Yuma, Ariz. Gold Beach, Oreg.	1320		1170
	Grants Pass, Oreg.		KATA		1340		Henderson, Nev.	1400		1460
	Klamath Falls, Oreg.	1150	KATE	Albert Lea. Minn.	1450	KBMN	Bozeman, Mont.	1230	KCCO Lawton, Okla.	1050
KAGR	Yuba City, Calif.	1450	KATI	Casper, Wyo.	1400	KBMO	Benson, Minn.	1290	KCCR Pierre. S.Dak.	1590
KAGT	Anacortes, Wash.	1340	KATL	Miles City, Mont.	1340	KBMR	Bismarck, N. D.	1350	KCCT Corpus Christi, Tex.	1150
KAHI	Auburn, Calif.	950	KATN	Boise, Idaho	1010	KBMV	Breckinrdg., Minn.	1450		1510
	Redding, Calif. Waipahu, Hawaii	040	KATO	Safford, Ariz. Texarkana, Tex.	1230		Coalinga, Calif. Billings, Mont.	1470	KCD1 Kirkland, Wash	79 0
	Kaimuki, Hawaii	870	KATR	Eugene, Ore.	1320	KBND	Bend, Oreg.	1110	KCEE Tueson, Ariz. KCEY Tunlock, Calif. KCFA Spokane, Wash.	1390
KAIN	Nampa, Ida.	1340	KATY	San Luis Obispo, Cal.	1340	KBOA	Kennett, Mo.	830	KCFA Spokane, Wash.	1330
KAIR	Tucson, Ariz,	1490	KATZ	St. Louis, Mo.	1600	KBOE	Oskaloosa, lowa	740	KCFH Cuere, Tex,	1600
	Grants Pass, Oreg.	1270	KAUS	Austin, Minn. Carlsbad, N.Mex.	1480	K B 0 I	Boise, Idaho	950	KCFI Cedar Falls, Iowa	1250
KAKA	Wickenburg, Ariz. Tulsa, Okia.	970	KAVE	Carisbad, N.Mex.	1240	KBOK	Malvern, Ark.	1310	KCGM Columbia, Mo.	1580
KAKE	Wichita, Kan.	1240	KAVI	Rocky Ford, Colo.	610		Boulder, Colo. Bismark-Mandan,	1490	KCHA Charles City, Iowa KCHE Cherokee, Iowa	1580
KALB	Alexandria, La.	580	KAVR	Lancaster, Calif. Apple Valley, Calif.	960	1.00 1	N. Dak.	1270	KCHI Chillicothe, Mo.	1010
KALE	Richland, Wash.	960	KAWA	Waco, Tex. York, Neb. Douglas, Ariz.	IÕĨÕ	KBON	Omaha, Nebr. Pleasanton, Tex.	1490	KCHJ Delano. Calif.	iõiõ
KALF	Mesa, Ariz.	1510	KAWL	York, Neb.	1370	KBOP	Pleasanton, Tex.	1380	KCHR Charleston, Mo.	1350
KALG		1230	KAWI	Douglas, Ariz.	1450	KBOR	Brownsville, Tex.	1600	KCHS Truth or Consequences	
	Pasadena, Calif. Salt Lake City. Utah	1430	KATU	Beaumont, Tex. Puyallup, Wash.	1450		Butte, Mont. Dallas, Tex.	1490 1480	New Mexico	970
KALM	Thayer, Mo.	1290	KAYG	Lakewood, Wash.	1480	KBOY	Medford, Oreg.	730	KCHV Coachella, Calif. KCHY Cheyenne, Wyo.	1590
KALN	iola, Kan.	1370	KAYL	Storm Lake, Iowa	990	KBPS	Portland, Oreg.	1450	KCID Caldwell, Idaho	1490
KALO	Little Rock, Ark.	1250	KAYO	Seattle, Wash.	1150	KBRC	Mt. Vernon, Wash.	1430	KCII Washington, lowa	1380
	Atlanta, Tex.	900	KAYS	Hays, Kans.	1400	KBRI	Brinkley, Ark.	1570	KCIJ Shreveport, La.	1050
	Alva, Okla.	1430	KATI	Rupert, Idaho Indianola, Iowa	1400		Brookings, S.Dak. McCook, Nebr.	1430	KCIL Houma, La. KCIM Carroll, lowa	1490
	Camden, Ark. Kenedy, Tex.	000	KRAI	San Saba, Tex.	1410	KBRN	Brighton, Colo.	800	KCIN Victorville, Calif.	1590
KAMO	Rogers, Ark.	1390	KBAN	Longview, Wash.	1270	KBRO	Bremerton, Wash.	1490	KCJB Minot, N.Dak.	910
KAMP	El Centro, Calif.	1430	KBAN	Bowie, Tex.	1410	KBRR	Leadville, Colo.	1230	KCJH San Luis Obispo, Cal.	1280
	McCamey, Tex.		KBAR	Burley, Idaho		KBRS	Springdale, Ark.	1340		
	Anaconda, Mont.	580	KBAI	San Antonio, Tex, Benton, Ark.	680		Soda Sprgs., Ida, O'Neill, Nebr,	540 1350		1240
	Shreveport, La. Corsicana, Tex.	1300	KRRR	Borger, Tex.			Freeport, Texas	1460		1480
KANE	New Iberia, La.	1240	KBBC	Centerville, Utah	1600	KBSF	Springhill, La.	1460		1150
KANI	Wharton, Tex.	1500	KBBO	Yakima, Wash.	1390	KBST	Big Spring, Tex.	1490	KCLA Pine Bluff, Ark.	1400
KANN	Ogden, Utah	1250	KBBR	North Bend, Oreg.		KBTA	Batesville, Ark.	1340		1120
KANO	Anoka, Minn.	1470	KBBS	Buffalo, Wyo. Oceanlake, Oreg.	1450		Houston, Mo. Jonesboro, Ark.	1250	KCLF Clifton, Ariz. KCLH Blue Earth, Minn.	1400
KAUH	Duluth, Minn. Lake Charles, La.	1400		Shreveport, La.	1220		Neosho, Mo.	1420		1390
KAOL	Carrollton, Mo.	1430	KREA	Mission, Kans.	1480	KRTO	El Dorado, Kans.	1360	KCLO Leavenworth, Kans.	1410
KAOR	Oroville, Calif.	1340	KBEC	Waxahachie, Tex.	1390	KBTR	Oenver, Colo.	710	KCLR Ralls, Tex.	1530
KAPA	Raymond, Wash.	1340	KBEE	Mødesto, Calif.	970	KBUC	Corona. Calif.	1370		600
KAPB	Marksville, La.	1370	KBEK	Elk City, Okla.	1240	KBUD	Athens, Tex.	1410	KCLU Rolla, Mo.	1590
	San Antonio, Tex.	1480	KBEL	Idabel, Okla.	1240	KBUH	Brigham City, Utah Bemidji, Minn.	800	KCLV Clovis, N.Mex. KCLW Hamilton, Tex.	1240 900
	Pueblo, Colo. Douglas, Ariz.	690 930	KBEB	Carrizo Sprgs., Tex. San Antonio, Tex.	1150	IKBUR	Burlington, lowa	1450	KCLX Colfax, Wash.	1450
KAPS	Mt. Vernon, Wash.	1470	KBET	Reno, Nev.	1340	KBUS	Mexia, Tex.	1590	KCMC Texarkana, Tex.	1230
KAPT	Salem, Ore.	1220	KBEV	Portland, Oreg.	1010	KBUY	Mexia, Tex. Amarillo, Tex.	1010	KCMJ Palm Sprgs., Calif.	1010
			KBFS	Reno, Nev. Portland, Oreg. Belle Fourche. S.Dak.	1450	KBUZ	Mesa, Ariz.	1310		810
148	WHITE'S RADIO	100			910	KRAW	Lancaster, Calif.	1380	KCMS Manitou Sprgs., Colo. KCN1 Broken Bow, Nebr,	1490
			,	11 400, I EA.	100	I KDVU	Bellevue, Wash.	1040	I NOTAL DIOKER DOW, NEDE,	

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C.L. Location	Kc. 570 1470 1280 1400	U.I
KCNO Alturas, Calif. KCNY San Marcos, Tex. KCOB Newton, Iowa	1470	KE
KCOB Newton, Iowa	1280	KE
KCOG Centerville, Iowa	1400	K K K K K K K K K K K K K K K K K K K
KCOK Tulare, Calif.	1430	κĒ
KCOL Ft. Collins, Colo.	1410	
KCON Conway, Ark.	1550	KE
KCOR San Antonio, Tex.	1350	ΚE
KCOW Alliance, Nebr.	1400 1400	ΚE
KCPX Salt Lake City, Utah	1320	KE
KCRA Sacramento, Calif.	1320	KE
KCRC Enid, Okla.	1460 1390 1600	KE
KCRG Cedar Rapids, lowa	1600	KE
KCRS Midland, Tex.	1380 550 1240 1370	KE
KCRT Trinidad, Colo.	1240	KE
KCSI Pueblo, Colo.	590	ΪĶΕ
KCSR Chadron, Nebr.	610 1030	KKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKK
KCTI Gonzales. Tex.	1450	KE
KCTY Salinas, Calif.	980	KE
KCTX Childress, Tex.	1510	ĸ
KCUE Red Wing. Minn.	1290	KE
KCUL Fort Worth, Tex. KCVL Colville, Wash	1540 1270	Ŕ
KCVR Lodi, Calif.	1570 1450 1550 1230	KE
KCYL Lampasas, Tex.	1450	KE
KDAC Ft. Bragg, Calif.	1230	KE
KDAD Weed, Calif.	800 1600	KE
KDAL Duluth. Minn.	610	KE
KDAN Eureka. Calif.	610 790 580	
KDAV LUDDOCK, Iex. KDAY Santa Monica, Calif.	1580	ĸ
KDB Santa Barbara, Calif.	1580 1490 1360	K
KDBC Mansheid, La. KDBM Dillon, Mont.	800	KF
KDBS Alexandria, La.	1410 970 800 1240 1150 1340	K
KDDD Dumas, Tex.	800	ĸ
KDEC Decorah, lowa	1240	K
KDEF Albuquerque, N.Mex.	1340	ĸ
KDEO El Cajon, Calif.	910	K
KDES Palm Sprgs., Calif.	920	K
KDEX Dexter, Mo.	1590	K
KDEY Boulder, Colo.	1460	k
KDGO Durango, Colo.	1240 1150 1340 910 920 930 1590 1460 1500 1240	
KDHI Twenty-nine Palms,	1250	ĸ
 ICOB Nowton: Toya Toya ICOB Nowton: Toya Toya ICOB Conterville, Iowa ICOB Conterville, Iowa ICOB Conterville, Iowa ICOB Conterville, Iowa ICOM Conway, Ark. ICOM Conway, Ark. ICOM Conway, Ark. ICOM Santa Maria, Calif. ICOY Santa Maria, Calif. ICOY Santa Maria, Calif. ICOY Santa Maria, Calif. ICOR Canance, Kans. ICCR Chanute, Kans. ICCR Center Calif. ICCL Fort Worth. Tex. ICDA Weed, Calif. ICDA Weed, Calif. ICDA Weed, Calif. ICDA V Lubbock. Tex. ICDA Carrington, N.D. ICDA Luiuth, Minn. ICDE Ceporah. Iowa ICDE Calon. Calif. ICDE Spanta Borbara, Calif. ICDE Calor. Calif. ICDE Spanta Sprgs., Calif. ICDE Deverah. Iowa ICDE Calif. ICDE Deverah. Iowa ICDE Calif. ICDE Calif. ICDE Calif. ICDE Calif. IC	1250 920 1470 1310 1350 1230 1270	******
KDHL Faribault, Minn. KDHN Dimmitt Tex. KDIA Oakland, Calif. KDIO Ortonville, Minn. KDIX Dickinson, N.Dak. KDIX Dickinson, N.Dak. KDIX Dickinson, Ariz. KDKA Pittsburgh, Pa. KDKA Pittsburgh, Pa. KDLA DeRidder, La. KDLA DeRidder, La. KDLK Del Rio, Tex. KDLK Del Rio, Tex. KDLM Detroit Lakes, Minn. KDLR Detroit, Carthage, Mo. KDMA Montevideo, Minn. KDMA Montevideo, Minn. KDMS Ei Dorado, Ark. KDOL Mojave, Calif. KDOL Mojave, Calif. KDON Salinas, Calif. KDOT Medford, Oreg.	1470	ĸ
KDIO Ortonville, Minn.	1350	K.
KDIX Dickinson, N.Dak.	1230	ĸ
KDJI Holbrook, Ariz. KDKA Pittsburgh, Pa. KDKD Clinton, Mo.	1020 1280 1010 1420	K
KDKD Clinton, Mo.	1280	ĸ
KDLA DERidder, La. KDLA DeRidder, La. KDLE Aberdeen, S. Dak. KDLK Del Rio, Tex. KDLM Detroit Lakes, Minn. KDLR Devis Lake, N. Dak. KDLS Perry, Iowa	1420	K
KDLK Del Rio, Tex.	1340	ĥ
KDLR Devils Lake, N.Dak.	1240	K
KDLS Perry, lowa KDMA Montevideo Minn.	1010 1420 1230 1240 1240 1450 1450 1450 1440 1440 1330 1340	*************
KDLS FORTS, 1000 KDMA Montevideo, Minn. KDMO Carthago, Mo. KDMS El Dorado, Ark. KDNC Spokane, Wash.	1490	K
KDMS El Dorado, Ark. KDNC Spokane, Wash.	1440	ĸ
KDNT Denton, Tex. KDOK Tyler, Tex.	1440	K
KDOL Mojave, Calif.	1340	ĸ
KDOL Mojave, Calif. KDOM Windom, Minn. KDON Salinas, Calif. KDOT Reno, Nev.	1580	K
KDOT Reno. Nev.	1280	i K
KDOV Medford, Oreg. KDQN DeQueen, Ark.	1580 1460 1230 1300 1390) K
KDRG Deer Lodge, Mont.	1400	K
KDRO Sedalia, Mo.	1490	
KDRS Paragould, Ark. KDSJ Deadwood, S.Dak. KDSN Denison, Iowa KDSX Denison, Tex. KDTA Delta Colo.	980	K
KDSN Denison, Iowa	1580	K
KDTA Delta, Colo.	1400	j k
KDTH Dubuque, Iowa KDUZ Hutebinson, Minn.	1260	
KDWB St. Paul, Minn.	630) K
KDRO Sedalia. Mo. KDRS Paragould. Ark. KDSJ Deatwood, S.Dak. KDSN Denison, Iowa KDSX Denison, Tex. KDTA Delta, Colo. KDTH Dubuque, Iowa KDUZ Hutchinson, Minn. KDWB St. Paul, Minn. KDWB St. George, Utah	1490 980 1580 950 1400 1370 630 1260 630 1200 . 1380 1450 990	
KDXU St. George, Utah	145) K
KDZA Pueblo, Colo.	123	5 K
KDXE No. Little Rock, Ark KDXU St. George, Utah KDYL Totele, Utah KDZA Pueb ¹ o, Colo. KEAN Brownwood. Tex. KEAP Fresno, Calif. KEBE Jacksonville, Tex.	123) K
KEAN Brown, Calif. KEAP Fresno, Calif. KEBE Jacksonville, Tex. KECK Odessa, Tex. KEDD Dodge City, Kans. KEDD Dodge City, Wash. KEED Springfield, Oreg.	98	
	92	
KEDD Dodge City, Kans. KEDO Longview, Wasil.	140	0 K 0 K 0 K
KEED Springfield, Oreg.	105	
KEDD Dodge City, Kans. KEDD Longview, Wasil. KEED Springfield, Oreg. KEEE Nacogdoches, Tex. KEEL Shreveport, La.	123(98) 140(92) 155(140(105) 123(71) 137(137)	
KEEN San Jose, Calif.	137	0 H 0 H
KEDD Dodge City, Kans. KEDD Dodge City, Kans. KEDD Springfield, Oreg. KEEL Springfield, Oreg. KEEL Shrevefort, La. KEEN San Jose, Calif. KEEN Twin Falls, Idaho KEES Gladewater, Tex. KEKO Kealakekua, Hawaii KELA Centralia, Wash. KELA Centralia, Wash.	143	
KEKO Kealakekua, Hawaii	73	0
KELA Centralia, Wash. KELD El Dorado. Ark.	140	0
KELI Tulsa, Okla.	137 145 143 79 147 140 143 124	0 H
KELK Elko, Nev. KELO Sioux Falls, S.Dak.	132	31 F

Location L. LOCATION ELP El Paso, Tex. ELR El Reno, Okla. ELY Ely, Nev. ENA Mena, Ark. ENE Toppenish, Wash. ENI Anchorage, Alaska ENN Farmington, N.M. ENO Las Vegas, Nev. ENY Bellingham-Ferndale, Wash. Kc. |460 |230 1490 550 Wash. 9 KEOK Payette, Idabo KEOK Payette, Idabo KEPR Kennewick, Wash. 6 KEPR Kennewick, Wash. 12 KERB Kermit, Tex. 12 KERB Kermit, Tex. 15 KERB Edgene, Oreg. 12 KERB Kervrille, Tex. 15 KERG Eastland, Tex. 15 KERG Eastland, Tex. 15 KERG Eastland, Tex. 15 KERG Eastland, Tex. 14 KEV Hennice, La. 14 KEV Kerstein, Marker, 15 KEYL Divingston, Tex. 14 KEVL White Castle, La. 15 KEVD Eunice, La. 14 KEVL White Castle, La. 15 KEVD Eunice, La. 14 KEVL White Castle, La. 15 KEVT Tueson, Ariz. 14 KEV Minneapolis, Minn. 14 KEV Minneapolis, Minn. 14 KEV Minneapolis, Minn. 14 KEY Dopeka, Kans. 14 KEY Dopeka, Kans. 14 KEY Jongeks, N.Dak. 15 KEYT Luong Prairie, Minn. 14 KEY Jong Prairie, Minn. 14 KEY Jong Origi City, S.Dak. 15 KEYT Long Prairie, Minn. 14 KEY Anaheim, Calif. 11 KFAC Los Angeles, Calif. 15 KFAT Fulton, Mo. 16 KEYB Orous, Christi, Tex. 14 KEYZ Williston, N.Dak. 13 KEZU Rapid City, S.Dak. 15 KFAT Fulton, Mo. 16 KFAS Gerand Jone, Calif. 11 KFAG Cos Angeles, Calif. 15 KFAE Fulton, Mo. 16 KFAT Faitbanks, Alaska 11 KFAG Saramento, Calif. 11 KFAG Cos Angeles, Calif. 12 KFBB Great Falls, Mont. 15 KFBC Cheyenne, Wyo. 12 KFBG Kedfield, S. Dak. 15 KFDM Baumont, Tex. 14 KFDT Baumont, Tex. 14 KFDT Baumont, Ark. 15 KFDT Grand Cullee, Wash. 15 KFDT Meanmanto, Calif. 11 KFAF Aranshiltown, 10 KFFI Moista, Kansa 11 KFIT Modesto, Calif. 11 KFIT Modesto, Calif. 11 KFIT Modesto, Calif. 14 KFIT Morand Forks, N.Dak. 15 KFIT Morand Forks, N.Dak, 16 KFIT Meinta, Kans. 16 KFIT Merabaltown, 10 KFIT Merabaltown, 1 1450 1290 610 600 1590 790 1590 1490 1240 1440 1440 1190 1440 1450 1360 920 1330 900 1450 1100 1250 1310 1240 1530 1440 1580 1070 1360 680 1360 1260 1330 1550 1360 1310 1330 1310 900 1240 1600 900 1240 950 1310

Kc.	C.L. Location	
920	KGAF Gainesville, Tex.	
460	KGAK Gallup, N.Mex.	
230	KGAL Lebanon, Oreg. KGAR Vancouver, Wash.	
550		
450 390	KGB San Diego. Calif.	
460	KGBS Los Angeles, Calif.	
930	KGAL Lebanon, Oreg. KGAR Vancouver, Wash. KGAS Carthage, Tex. KGAY Salem, Oreg. KGBC San Diego. Calif. KGBC Galveston, Tex. KGBS Los Angoles, Calif. KGBT Harlingen, Tex. KGBX Springfield, Mo. KGCA Sidney, Mont. KGDN Edmonds. Wash.	
450 290	KGCA Rugby, N.D.	
610	KGDN Edmonds, Wash.	
270	KGEE Bakersfield, Calif. KGEK Sterling, Colo.	
590 280	KGAY Salem, Ores. KGB San Diego. Calif. KGBD Galveston, Tex. KGBS Los Angeles, Calif. KGBT Harlingen, Tex. KGBX Springfield, Mo. KGCX Sidney. Mont. KGCX Sidney. Mont. KGCX Sidney. Mont. KGCX Sidney. Mont. KGEK Bakersfield. Calif. KGEK Sterling, Colo. KGEM Tulare. Calif. KGEK Long Beach. Calif. KGEZ Kalispell. Mont. KGFY Long Beach. Calif. KGFY Long Beach. Calif. KGFY Long Beach. Calif. KGFY Charge. S. Dak. KGFY Dierre, S. Dak. KGFY Pierre, S. Dak. KGFH Brookfield, Mo. KGHL Billings. Mont. KGHS International Falls. Minn.	
410	KGER Long Beach, Calif.	
230 580	KGEZ Kalispell, Mont. KGEE Shawnee, Okla.	
790	KGFJ Los Angeles, Calif.	
790 590 440 490 240 440 590	KGFW Kearney, Nebr.	
490 240	KGFX Pierre, S.Dak. KGGF Coffeyville, Kans.	
440	KGGM Albuquerque, N.Mex.	•
590 690	KGHL Billings, Mont.	
690 910 440	KGHM Brookfield, Mo.	
190	KGHS International Falls, Minn.	
230 220 400 400	KGIL San Fernando, Calif.	
400	KGIW Alamosa, Colo.	
400	KGKL San Angelo. Tex.	
690 440 450	KGLC Miami, Okla.	
450	KGLE Glendive, Mont.	
360 920	KGLO Mason City, Iowa	•
190	KGLU Safford, Ariz. KGMB Honolulu, Hawaii	
330 900	KGMC Englewood, Colo.	
1450	KGMD Cape Girardeau, Mo.	
610	KGMK Jacksonville, Ark.	
1250 1310 1240 1530	KGMT Fairbury, Nebr.	
240	KGNC Amarillo, Tex.	
1530 1380	KGNU Dodge City, Kans. KGNS Laredo, Tex.	
1380 1440 1580	KGO San Francisco, Calif.	
1070	KGON Oregon City, Oreg.	
560 1360	KGPC Grafton, N.Dak.	
970 680	KGRL Bend, Oreg.	
1360 1260 930	KGRN Grinnell. lowa KGRO Gresham. Oreg.	
930 1330	KGRS Pasco, Wash.	
640	KGST Fresno. Calif.	
1550 1360 1450 1230 1370) KGIN Georgetown, iex.) KGU Honolulu, Hawaii	
1450	KGUC Gunnison. Colo. KGUD Santa Barbara, Calif	F.
1370	KGUL Port Lavaca. Tex.	
1270	KGVO Missoula, Mont.	
1330) KGVW Belgrade, Mont. KGW Portland, Oreg.	
1310	KGWA Enid, Okla.	
900 1240	KGYN Guymon, Okla.	
1380) KHAI Honolulu, Hawali) KHAK Cedar Rapids, Iowa	
1450	KHAL Homer, La.	
540 1050 1 3 90	KHAS Hastings, Nebr.	
1240) KHAT Phoenix, Ariz.	
920	KHBM Monticello, Ark. KHBR Hillsboro, Tex. KHDN Hardin, Mont. KHEM Big Springs, Tex.	
900	KHBR Hillsboro, Tex. KHDN Hardin, Mont. KHEM Big Springs, Tex. KHEN Henryetta, Okla. KHEP Phoenix, Ariz. KHEP Sante Maria Calif	
1240	O KHEM BIG Springs, lex.	
1280	KHBR Hillsboro, Tex. KHDN Hardin, Mont. KHEN Big Springs, Tex. KHEN Henryetta, Okla. KHEP Phoenix, Ariz. KHEY Santa Maria, Calif. KHEY EI Paso, Tex. KHEY Fry Ariz.	
1390	KHEY EL Paso, Tex.	
900	0 KHHH Pampa, Tex.	
98(94(0 KHIL Willcox, Ariz. 0 KHIT Walla Walla, Wash.	
550 1370	0 KHJ Los Angeles, Calif.	
140	0 KHOB Hobbs, N.Mex.	
1310	0 KHOE Truckee, Call. 0 KHOG Fayetteville, Ark.	
1220	0 KHOK Hoquiam, Wash. 0 KHOS Tucson, Ariz.	
86	0 KHOT Madera, Calif.	
140	0 KHOZ Harrison, Ark.	
145	0 KHQ Spokane. Wash. 0 KHSJ Hemet. Calif.	
85	0 KHSL Chico, Calif.	
96 98	 KHEM Big Springe, Tex. KHEM Big Springe, Tex. KHEM Henryetta, Okla. KHEM Phoenix, Ariz. KHER Santa Maria, Calif, KHER Santa Maria, Calif, KHER Valagues, Calif, KHTH Famba. Tex. KHTH Famba. Tex. KHTH Famba. Tex. KHTH Famba. Tex. KHTH Valagwala, Wash. KHTH Walagwala, Wash. KHTH Hauba. Calif. KHO Fayetteville, Ark. KHO Fayetteville, Ark. KHO Fayetteville, Ark. KHO Madora, Calif. KHO Madora, Calif. KHO Moenver, Colo. KHO Jayokane, Wash. KHSJ Hemet, Calif. KHU Borger, Tex. KHU Berremont, Nebr. KHU Borger, Tex. 	
58 59	0 KHUZ Borger, Tex. 0 KHVH Honolulu, Hawaii	
142	0 KHUB Fremont, Nebr. 0 KHUM Santa Rosa, Calif. 0 KHUZ Borger, Tex. 0 KHVH Honolulu, Hawaii 0 KIAL Astoria, Ore, 10 KIBE Palo Alto, Calif. 0 KIBE Seward. Alaska 0 KIBL Beeville, Tex.	
79	0 KIBH Seward, Alaska 0 KIBL Beeville, Tex.	
151	0 KIBL Beeville, Tex.	

No. 11	C.L. Location	Kc.
Kc. 580 330		220
1330 920	KIBS Bishop, Calif. KICA Clovis, N.M. KICD Spencer, lowa	240
1590	KICK Spittigheru, mus	250
1430	KICO Calexico, Calif. KICY Nome, Alaska	850
1540	KID Idaho Falls, Idaho KIOD Monterey, Calif.	590 630
1530	KIDO Boise, Idaho KIEV Glendale, Calif.	630 870
1450	KIFG lowa Fails, la. KIFI Idaho Fails, Idaho	1510
630 1230	KIFN Phoenix, Ariz. KIFW Sitka, Alaska	860 1230
1430 1360 1540 1020 1530 1250 1450 1450 1480 1230 1230 1230 1230 1370 1390 600 1450 1230 1230 1450 1470	KIBS Bisnop, Callt. KICA Clovis, N.M. KICD Spencer, Iowa KICM Golden, Colo. KICM Golden, Colo. KICO Calexico, Calif. KICO Calexico, Calif. KICO Calexico, Calif. KICO Monterey, Calif. KID Idaho Falls. Idaho KIEV Glendale, Calif. KIEV Glendale, Calif. KIEV Glendale, Calif. KIFI Idaho Falls. Idaho KIFI Haho Falls. Idaho KIFI Nebenix, Ariz. KIFI Mood River, Oreg. KIHR Hugo, Okla. KIHR Hood River, Oreg. KIKI Honolulu, Hawaii KIKK Pasadena, Tex. KIKO Miami, Ariz.	1340 1340 1340
1370	KIJV Huron, S.Dak.	830
600	KIKK Pasadena, Tex.	650 1340
1230	KIKS Sulphur, La.	1310 1420
1340	KILE Galveston, Tex.	1400 1440
690	KILT Houston, Tex.	610 1460
1350	KIMB Kimball, Nebr.	1260
1470	KIMM Rapid City, S.D.	1150 950
1230	KIMO Hilo, Hawaii	850 960
1260	KIND Independence, Kans.	1010
1450	KING Seattle, Wash.	1090
1600	KINS Eureka. Calif.	980
590	KINY Juneau, Alaska	800
1300	KIOA Des Moines, Iowa KIOT Barstow, Calif.	1310
590	KIOX Bay City, Tex. KIPA Hilo, Hawaii	1110
1150 790	KIQS Willows, Calif. KIRO Seattle, Wash.	710
1220	KIRT Mission, Tex. KIRX Kirksville, Mo.	1580
1380 1310	KISD Sioux Falls, S.Dak. KISN Vancouver, Wash.	910
1420	KIST Santa Barbara. Calif. KIT Yakima, Wash.	1340
1370	KITE San Antonio, Tex.	930 1420
810 740	KITN Olympia, Wash. KIUL Garden City, Kans.	920 1240
1230 1520 1450 960 960 910 980 1480 9590 1300 1480 1590 1220 1300 1300 1300 1300 1300 1300 130	KIKK Passadena. Tex. KIKK Passadena. Tex. KIKK U Honolulu, Hawaii KIKS Sulphor, La. KIKS Sulphor, La. KIKS Sulphor, La. KILE Giaveston, Tex. KILD Grand Forks, S.Dak. KILT Houston, Tex. KIM A Yakima, Wash. KIM Brilbell, Nebr. KIM Brajid City, S.D. KIMM Denver, Colo. KIMM Denver, Colo. KINS Eureka. Calif. KINS Eureka. Calif. KINS Eureka. Calif. KINS Eureka. Calif. KINS Eureka. Calif. KINS Des Moines, Iowa KIOT Barstow, Calif. KIOX Bay City, Tex. KINS Mancouver, Wash. KIT Yakima. Wash. KIT Yakima. Wash. KIT Noinan, Tex. KIUN Peeos, Tex. KIUN Peeos, Tex. KIUN Peeos, Tex. KIX Seattle, Wash. KIX Seattle, Wash. KIX Sheldon, Iowa KIXI Seattle, Wash. KIX An Atlantic. Iowa KIXI Seattle, Wash. KIX An Atlantic. Iowa KIXA Provo. Utah KIXA Provo. Utah KIXA Pantanga. Calif. KIXA Provo. Utah KIXA Seattle Ara, Calif. KIXA Provo. Utah KIXA Provo. Utah KIXA Santa Rosa. Calif. KIAY Sunction City, Kans. KIA Malsion, S.Dak. KIAK Antantic. Iowa KIAK Santa Rosa. Calif. KIAY Sockton. Calif. KIAY Sockton. Calif. KIAY North Platte. Nebr. KIAY Sheever, La. KIAY Sheever, La.	1400 930
1340	KIVY Crockett. Tex. KIWA Sheldon, lowa	1290 1550
940 1410	KIXI Seattle, Wash. KIXL Dallas, Tex.	910 1040
1230	KIXX Provo, Utah KIXZ Amarillo, Tex.	1400 940
570 1600	KIZZ EL Paso, Tex. KJAM Madison, S.Dak.	1150
1530	KJAN Atlantic. Iowa KJAX Santa Rosa, Calif.	1220
1490 990	KJAY Sacramento, Calif. KJBC Midland, Tex.	1430
1560	KJCF Festus, Mo. KJCK Junction City, Kans.	1400
1290 630	KJEF Jennings, La. KJEM Oklahoma City, Okla.	1290
620 960	KJET Beaumont, Tex. KJFJ Webster City, Iowa	1380
1240	KJIM Ft. Worth, Tex. KJKJ Flagstaff, Ariz.	870 1400
1090	KJLT North Platte, Nebr. KJNO Juneau, Alaska	630
1300	KJOE Shreveport, La. KJOY Stockton, Calif.	1480
1230	KJPW Waynesville, Mo. KJR Seattle. Wash. KJRG Newton, Kans,	950
1420	KIRG Newton, Kans,	900
1560 1230 1270 1590 1280	KJSK Columbus, Nebr. KKAL Denver City, Tex. KKAN Phillipsburg, Kans. KKAR Pomona, Calif.	1580 1490 1220
1270	KKAR Pomona, Calif. KKAS Silsbee, Tex. KKEY Vancouver, Wash.	1300
1000	I KKMI San Francisco, Calif.	1150 1550 1240
690 1420	KKID Pendleton, Oreg. KKIN Aitkin, Minn.	930
1230	KKIN Aitkin, Minn. KKIN Aitkin, Minn. KKIS Pittsburg. Calif. KKIT Taos, N.Mex. KKIO St. Joseph, Mo. KKOK Lompoe, Calif.	990 1340
930	KKOK Lompoc, Calif.	1550
1070) KLAC Los Angeles, Calif. KLAD Klamath Falls, Oreg.	570 960
1400	KKIN Aitkin, Minn. KKIN Aitkin, Minn. KKIT Taos, N.Mex. KKOK Lompoe, Calif. KLAC Los Angeles, Calif. KLAC Los Angeles, Calif. KLAK Lakewood, Colo. KLAK Lakewood, Colo. KLAK Lakewood, Calif. KLAS Las Vegas, Nev. KLBK Lubbock, Tex. KLBM La Grande, Calif. KLBM La Grande, Calif.	1600 1450 1320
1560 94(1250	KLAN Lemoore, Calif. KLAS Las Vegas, Nev.	1230
630	D KLBK Lubbock, Tex. KLBM La Grande, Oreg. KLBS Los Banos, Calif.	1340
90 59() KLBM La Grande, Oreg.) KLBS Los Banos, Calif.) KLCB Libby, Mont.	1230
1320	KLCN Blytneville, Ark.	910 1280
1340	KLCB Libby, Mont. KLCN Biytheville, Ark. KLCP Poteau KLCO Construction KLCO Construction KLEO Cottumwa, Iowa KLEI Cottumwa, Iowa KLEI Kallua, Hawaii KLEI KelMana	630 1480
1290 1340 1580 1490 1040 1230 1221	CLET Kanua, nawan	1130 1410
		1050
134	0	149
	•	

E.L. Location KLEO Wichita, Kans,

 KLEB Ovichita, Kans.
 1490

 KLER Orofino, Idaho
 950

 KLER Orofino, Idaho
 950

 KLEA Lexington, Mo.
 1570

 KLFD Litchheld, Minn.
 1410

 KLF Mead, Wash.
 1590

 KLGA Algona, Iowa
 600

 KLGA Nagan, Utah
 1390

 KLGR Redwood Falls, Minn.
 4900

 KLHS Lordsburg, N.M.
 950

 KLIB Liberal, Kans.
 1470

 KLIC Monroe, La.
 1230

 KLHS KLIB KLIC KLHS LUBBRAIL KANS. KLIB LÜBERAIL KANS. KLID Poplar Bluff, Mo. KLIF Dallas, Tex. KLIK Jefferson City, Mo. KLIL Estherville, Jowa KLIN Lincoln, Nebr. KLIP Fowler, Calif. KLIP Gowler, Calif. KLIP Gowler, Calif. KLIR Derver, Colo. KLIX Twin Fadls, Idaho KLIZ Brainerd, Minn. KLIR Deriver, Colo. KLIX Twin Falls, Idaho KLIZ Twin Falls, Idaho KLIZ Tainerd, Minn. KLKC Parsons, Kans, KLLL Lubbock, Tex, KLMA Learamie, Wyo, KLMA Laramie, Wyo, KLMA Lamar, Colo, KLMS Lincoln, Nebr. KLMA Lincoln, Nebr. KLMA Lincoln, Nebr. KLOA Godland, Kans. KLOA Godland, Kans. KLOG Kelso, Wash. KLOG Kelso, Wash. KLOB Kelso, Colo. KLPM Minot, N.Dak. KLPW Noino, Mo. KLPM Kuntain Grove, Mo. KLTF Little Falls, Minn. KLTF Kittle Falls, Minn. KLTF Kit Lask UNIC, Kia. KLTS Mountain Grove, Mo. KLTF Little Falls, Minn. KLTR Blackwell, Okla. KLTZ Glasgow, Mont. KLUB Salt Lake City. Utah KLUG Las Vegas, Nev. KLUK Evanston. Wyo. KLUV Haynesville, La. KLVT Levelland, Tex. KLYT Bakersfield, Calif. KLYG Bakersfield, Calif. KLYG Bakersfield, Calif. KLYG Bakersfield, Calif. KLYG Larksville, Ark. KLYG Clarksville, Ark. KLYC Clarksville, Ark. KMAC Mamilton, Mont. KMAC Manhattan, Iowa KMAC San Antonio, Tex. KMAA Manhattan, Kans. KMAA Winnsboro, La. KMAA Winnsboro, La. KMAA Winnsboro, La. KMAB Vinnsboro, La. KMAB Winnsboro, La. KMAB Winnsboro, La. KMAB Winnsboro, La. KMAB Winnsboro, Calif. KMAB Winnsboro, Calif. KMAB Moniterzy, Calif. KMBC Kansas City. Mo. KMBC Kansas City. Mo. KMBC Moniterzy, Calif. KMBC Moniterzy, Calif. KMBO Mediord. Oreg. KMCO Conroe, Tex. KMBO Mediord. Oreg. KMEO Mediord. Oreg. KMED Medford, Oreg, KMEN San Bernardino, KMEN San Bernardino, KMEN San Bernardino, KMEN Kenmerer, Wyo, KMHT Marshall, Tex, KMIL Cameron, Tex, KMIN Grants, N.M. KMIS Portageville, Mo. KMIS Portageville, Mo. KMIS Fresno, Calif, KMIS Monroe, La, KMS Sioux City, Iowa KMO Tacoma, Wash, KMO Tacoma, Wash, KMO Great Falls, Mont. KMO Turson, Ariz, KMO Turson, Mash, KMC Morgan City, La, KMC Morgan City, La, KME Spokane, Wash, KMS Morris, Minn, KMS Morris, Minn, KMU Muleshoe, Tex, KMU Muray, Utah KMU Sierra Vista, Ariz, KMY Clayton, Mo. KNAF Fredericksburg, Tex, 1050 550 1230 WHITE'S RADIO LOG KOSI Aurora, Colo.

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Kc. | C.L. Location Kc. 790 KRFO Owatonna, Minn. 1380 KRFS Superior, Nebr. 1250 KRGI Grand Island, Neb. 1490 KRGV Weslasco, Tex. 1430 KRGV Messaco, Tax.
1430 KRGV Messaco, Tax.
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1430 KRIB Mason City. Calif.
1430 KRIM Rayulie, La.
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C.L. Location		C.L. Location KTYM Inglewood, Calif.		C.L. Location KWBG Boone. lowa	Kc. 1		950
KSOO Sioux Falls, S.Dak. KSOP Salt Lake City, Utah	1370	KUAM Agana, Guam	610	KWBG Boone, Iowa KWBW Hutchinson, Kans. KWCB Searcy, Ark.	14501	KYIC Medford, Oreg.	230 740
KSOX Raymondville, Tex. KSPA Santa Paula, Calif.	1400	KUBA Yuba City, Calif. KUBC Montrose, Colo.	580	KWCL Oak Grove, La.	1280	KYME Boise, Idaho KYND Tempe, Ariz, KYNG Coos Bay, Oreg.	.580 420
KSPI Stillwater Okla.	780 1260	KUBE Pendleton, Oreg. KUDE Oceanside, Calif. KUDI Great Falls, Mont.	1320	KWCO Chickasha, Okla. KWEB Rochester, Minn.	1270	KVNO Fresno Calif.	1300 1450
KSPT Sandpoint, Idaho KSRA Salmon, Idaho	1400	KUDI Great Falls, Mont. KUDL, Kansas City, Mo.	1450	KWED Seguin, Ťex. KWEI Weiser, Idaho	1260	KYOK Houston, Tex.	1590
	1200	KIIDII Ventura, Calif.	1590	KWEL Midland, Tex.	480	KYUS merced, Calif.	1450 1480
KSRV Ontario, Oreg.	1380	KUEN Wenatchee, Wash. KUEQ Phoenix, Ariz.	740 590	KWFA Merkle, Tex. KWFR San Angelo, Tex.	15001	KYOH Greeley, Colo-	1450 1280
KSSS Colorado Springs, Colo. KSST Sulphur Springs, Tex.	1230	KUGN Eugene, Oreg. KUIK Hillsboro, Oreg.	1360	KWFS Eugene, Oreg. KWFT Wichita Falls, Tex.	1540 620	KYRO Potosi, Mo. KYSM Mankato, Minn. KYSN Colorado Sprgs., Colo.	1230
KSTA Coleman, Tex. KSTB Breckenridge, Tex.	1430	KUJ Walla Walla, Wash. KUKA San Antonio, Tex.	1420 1250	KWG Stockton, Calif.	1230	KYSS Missoula, mont,	910 560
KSTH St. Helen's. Oreg. KSTL St. Louis, Mo.	1600		1400	KWHI Brenham, Tex. KWHK Hutchinson, Kans.	1260		1230
KSTN Stockton, Calif. KSTP St. Paul, Minn.	1420	KUKU Willow Springs. Mo. KULA Honolulu, Hawaii KULE Ephrata, Wash.	690 730	KWHN Fort Smith, Ark. KWHO Salt Lake City, Utal	1 860 L	KZEE Weatherford, Tex.	1220
KSTR Grand Junction, Colo. KSTT Davenport. Iowa	620 1170	KULP ELCAMDO, IEX.	1390	KWIC Salt Lake City, Utah	1450	KZEY Tyler, Tex. KZIP Amarillo. Tex. KZIX Fort Collins, Colo.	690 1310
KSTV Stephenville, Tex.	1510	KUMA Pendleton, Oreg. KUMU Honolulu, Hawaii	1500	KWIK Pocatello, Idaho	1240	KZIX Fort Collins, Colo. KZNG Hot Springs, Ark.	600 1470
KSUB Cedar City. Utah KSUD W. Memphis, Ark.	590 730	KUNO Corpus Christi, Tex. KUOA Siloam Springs, Ark.	1290	KWIN Ashland, Oreg. KWIP Merced, Calif.	580 1580	KZNG Hot Springs, Ark. KZOK Prescott, Ariz. KZOL Farwell, Tex.	1340 1570
KSUE Susanville, Calif. KSUM Fairmont, Minn.	1240 1370	KUOM Minneapolis, Minn. KUPD Tempe, Ariz.	1060	KWIQ Moses Lake, Wash.	1260	KZOO Honolulu, Hawaii	1210
KSUN Bisbee, Ariz. KSVC Richfield, Utah	1230	KURA Moab. Utah	980 1450	KWIV Douglas, Wyo. KWIZ Santa Ana, Calif.	1480	KZUT Marianna, Ark. KZOW Globe, Ariz. KZUN Opportunity, Wash. KZZN Littlefield, Tex. VOUS Argentia, Nfld. WAAA Winston-Salem. N.C.	1240 630
KSVN Ogden, Utah KSVP Artesia, N.Mex.	730 990	KURL Billings, Mont. KURV Edinburg, Tex.	730 710	KWKC Abilene, Tex.	1080	KZZN Littlefield, Tex.	1490
KSWA Graham, Tex. KSWC Tucson, Ariz.	1330	KURY Brookings, Oreg.	910 690	KWKH Shreveport, La. KWKW Pasadena, Calif.	1130	WAAA Winston-Salem, N.C.	980
KSWI Council Bluffs, Iowa	1560	KUSD Vermillion, S.Dak, KUSH Cushing, Okla.	1600	KWKY Des Moines, Iowa	1150	WAAB Worcester, Mass. WAAC Terre Haute, Ind. WAAF Chicago, III.	1300
KSWM Aurora, Mo. KSWO Lawton, Okla.	1380	KUSN St. Joseph, Mo. KUTA Blanding, Utah	790 980	KWLC Decorah. Iowa	1240	WAAF Chicago, III. WAAG Adel, Ga.	950 1470
KSXX Salt Lake City, Utah KSYC Yreka, Calif.	1490	KUTI Yakima. Wash. KUTT Fargo, N.Dak.	1550	IKWLM Willmar, Minn.	1340	WAAK Dallas, N.C.	960 1350
KSYL Alexandria, La. KSYX Santa Rosa, N.Mex.	970 1420	KUTY Palmdale, Calif. KUVR Holdredge, Nebr.	1470	KWNA Winnemucca, Nev.	1400	WAAP Peoria, III. WAAT Trenton, N.J.	1300 570
KTAC Tacoma, Wash. KTAE Taylor, Tex. KTAN Tucson, Ariz.	850 1260	KUXL Golden Valley, Minn. KUZN W. Monroe, La. KUZZ Bakersfield, Calif.	1570	KWNS Pratt, Kans.	1230	WAAX Gadsden, Ala. WAAY Huntsville, Ala. WABA Aguadilla, P.Rico	1550 850
KTAN Tucson, Ariz. KTAR Phoenix, Ariz.	580 620	KUZZ Bakersfield, Calif. KVAL Sauk Rapids, Minn.	800 800	KWOA Worthington, Minn.	730	WARE MODILE. ALL.	1480
KTAT Frederick, Okla.	1570 600	KVAN Vancouver, Wash. KVCK Wolf Point, Nebr.	1480	KWOC Pontar Blutt, Mo.	930	WABC New York, N.Y. WABF Fairhope, Ala.	770 1220
KTBB Tyler, Tex. KTBC Austin, Tex.	590 1470	KVCI Winnfield, La.	1270	KWON Bartlesville, Okla.	1400	WABG Greenwood, Miss. WABH Deerfield, Va.	960 1150
KTCB Malden, Mo. KTCR Minneapolis, Minn.	690	KVCV Redding, Calif. KVEC San Luis Obispo, Cali	f. 920	KWOR Worland, Wyo. KWOS Jefferson City, Mo. KWOW Pomona, Calif.	1240	WABI Bangor, Maine	910 1490
KTCS Fort Smith. Ark. KTDL, Farmersville, La.	1410 1470	KVEE Conway, Ark. KVEG Las Vegas, Nev.	1330	KWPC Muscatine, lowa	860 1450	WABL Amite, La. WABO Waynesboro. Miss. WABQ Cleveland, Ohio	1570 990
KTDO Toledo, Oreg. KTEE Idaho Falls, Idaho	1230 900	KVEL Vernal, Utah KVEN Ventura, Calif.	1250	KWPR Claremore, Ukla.	1270	WABQ Cleveland, Ohio	1540
KTEL Walla Walla, Wash.	1490 1400	KVET Austin, Tex. KVFC Cortez, Colo.	1300	KWRD Henderson, Iex.	1400 1470	WABR Winter Park, Fla. WABT Tuskegee, Ala.	580
KTEM Temple, Tex. KTEO San Angelo, Tex.	1340	KVFD Ft. Dodge, lowa KVGB Great Bend. Kans.	1400	KWRE Warrenton, Mo.	730 860		1590
KTER Terrell, Tex. KTFI Twin Falls, Idaho	1270	KVI Seattle, Wash.	570	KWRT Boonville, Mo.	630 1370	WABY Albany, N.Y. WABZ Albemarle, N.C.	1400
KTFO Seminole, Tenn. KTFS Texarkana, Tex.	1250	KVIC Victoria, Tex. KVIL Highland Park, Tex.	1150	KWRV McCook, Nebr.	1360 1490	WABW Annapolis, Mu. WABY Albany, N.Y. WABZ Albemarle, N.C. WACA Camden, S.C. WACB Kittanning, Pa.	1590 1380
KTFY Brownfield, Tex. KTHE Thermopolis, Wyo.	1300	KVIM New Iberia, La. KVIN Vinita, Okla.	1360	KWSC Pullman, Wash.	1250 620	WACE Chicopee, Mass. WACK Newark, N.Y.	730 1420
KTHO Tahoe Valley. Calif. KTHS Berryville, Ark.	590 1480	KVIO Cottonwood, Ariz. KVIP Redding, Calif.	1600 540	KWSH Weweka-Seminole,		WACL Waycross, Ga. WACO Waco, Tex.	570 1460
KTHT Houston, lex.	790 630	KVKM Monahans, Tex.	1330	KWSK Pratt, Kans.	1570	WACR Columbus, Miss. WACT Tuscaloosa, Ala.	1050
KTIB Thibodaux, La. KTIL Tillamook, Oreg. KTIM San Rafael, Calif.	1590 1510	KVLB Cleveland, Tex. KVLC Little Rock, Ark. KVLF Alpine, Tex.	1050	KWSO Wasco, Calif.	1050	WADA Shelby, N.C.	1390
KTIP Porterville, Calif. KTIS Minneapolis, Minn.	1450 900	KVLG LaGrange. Tex. KVLH Pauls Valley. Okia.	1570		560	WADA Sheiby, N.C. WADC Akron, Ohio WADE Wadesboro, N.C. WADK Newport, R.I.	1210
KTJS Hobart, Okla. KTKN Ketchikan, Alaska	1420	KVLL Livingston, Tex. KVMA Magnolia, Ark.	1220	KWTX Waco, Tex.	1230	WADU New YORK, N.Y.	1540
KTKR Taft. Calif.	1310	KVMC Colorado City, lex.	1320	KWVR Enterprise, Urey.	1340 1470	WADP Kane, Pa. WADS Ansonia, Conn.	960 690
KTKT Tucson, Ariz. KTLD Tullulah, La.	1360	KVML Sonora, Calif. KVNA Flagstaff, Ariz.	690	KWWL Waterloo, lowa	1330	WAER Allentewn, Pa.	790 600
KTLN Denver, Colo. KTLO Mtn. Home, Ark.	1280	KVNA Flagstaff, Ariz. KVNC Winslow, Ariz. KVNI Coeur d'Alene, Idaho	1010	LIZUVVII WVDDo Ack	1400	WAEL Mayaguez, P. Ricc WAFC Staunton, Va. WAFS Amsterdam, N.Y.	900 1570
KTLO Tahlequah, Okia. KTLU Rusk, Tex.	1350 1580	KVOB Bastrop, La.	610 1340	KWYR Winner, S.Dak.	1260	WAGC Centre, Ala.	1550 1290
KTLW Texas City, Tex. KTMC McAlester, Okla.	920 1400	KVOC Casper. Wyo. KVOD Albuquerque, N. Mex	1230	KAA Seattle, wash.	770	WAGF Dothan, Ala,	1320 950
KTMS Santa Barbara, Calif.	1250	KVOE Emporia, Kans. KVOG Ogden, Utah	1400		1540	WAGL Lancaster, S. C.	1550
KTNC Falls City, Nebr. KTNM Tucumcari, N.Mex. KTNT Tacoma, Wash.	1400	KVOL Lafayette, La.	1330	KXEN St. Louis, Mo.	1010	WAGN Menominee, Mich.	1340
KTOC Jonesboro, La. KTOD Sinton, Tex.	920 1590	KVON Napa, Calif.	1440	KAEW Lucson, Ariz.	1600	WAGS Bishonville, S.C.	580 1380
KTOE Mankato, Minn.	1420	KVOP Plainview, Tex,	1400	KXGI Ft. Madison, lowa KXGN Glendive, Mont.	1360	WAGY Forest City, N.C. WAIK Galesburg, III.	1590
KTOH Lihue, Hawaii KTOK Oklahoma City, Okla. KTON Belton, Tex.	1000	KVOR Colo. Springs. Colo. KVOR Colo. Springs. Colo. KVOW Riverton, Wyo. KVOX Moorhead, Minn. KVOY Yuma. Ariz. KVOZ Laredo, Tex. KVOZ Laredo, Tex. KVPI Ville Platte, La.	1400	j KXGO Fargo, N. Dak. KXIC Iowa City, Iowa	790 800	WAIL Baton Rouge. La WAIM Anderson, S.C.	1460
ICTOO HENDERSON, Nev.	1280	KVOX Moorhead, Minn.	1280	KXIT Dalhart, Tex.	1410	WAIN Columbia, Ky. WAIR Winston-Salem, N.C.	1270
KTOP Topeka, Kans. KTOW Sand Spring. Okla. KTPA Prescott, Ark. KTRB Modesto, Calif.	1490 1340	KVOY Yuma. Ariz. KVOZ Laredo, Tex.	1400	KXJK Forrest City, Ark.	950	WAIT Chicago, Ill,	820
KTPA Prescott, Ark. KTRB Modesto, Calif.	1370 860	KVPI Ville Platte, La. KVRC Arkadelphia, Ark.	1050	KXL Portland, Oreg.	1520 750 1240	WAJR Morgantown, W.Va.	1440
KTRC Santa Fe. N.Mex. KTRE Lufkin, Tex. KTRF Thief River Falls.	1400	KVRD Cottonwood, Ariz, KVRE Santa Rosa, Calif.	1240	KXLF Butte, Mont.	1370	WAKI McMinnville, Tenn.	1230
KTRF Thief River Falls, Minn	1230	KVRH Salida, Colo.	1340	KXLJ Helena, Mont. KXLL Missoula, Mont.	1240	WAKN Aiken, S.C. WAKO Lawrenceville, III.	910
KTRG Honolulu, Hawaii KTRH Houston, Tex.	990 740	KVSA McGehee, Ark.	1220	KXLO Lewiston. Mont. KXLR Little Rock, Ark.	1230	WAKR Akron, Ohio WAKY Louisville, Ky.	1590 790
KTRI Sinux City, Inwa	1470	KVSH Valentine, Nebr.	940	j KXLW Clayton, Mo. KXLY Spokane, Wash.	1320 920	WALA Mobile, Ala. WALD Walterboro, S.C.	1410
KTRM Beaumont, Tex. KTRN Wichita Falls, Tex. KTRY Bastrop, La.	1290	KVWC Vernon, Tex.	1240	KXO El Centro, Calif. KXOA Sacramento, Calif.	1230 1470	WALE Fall River, Mass. WALG Albany, Ga	1400
KTRY Bastrop, La. KTSA San Antonio, Tex. KTSL Burnett, Tex.	730	KVWD Pearsall, Tex. KVWM Show Low, Ariz,	1280	KXOK St. Louis, Mo.	630 1360	WALK Patchogue. N.Y.	1370
KTSL Burnett, Tex. KTSM El Paso, Tex.	1340	KVWO Cheyenne, Wyo. KWAC Bakersfield, Calif.	1370	KXOX Sweetwater. Tex.	1240	WALM Albion, Mich.	1260
KTSM El Paso, Tex. KTTN Trenton, Mo, KTTR Rolla. Mo.	1600	KWAD Wadena, Minn. KWAK Stuttgart. Ark.	920 1240	KXRJ Russellville. Ark.	1490	WALT Tampa, Fla.	1110
KTTS Springfield, Mo. KTTT Columbus Nebr	1400	KWAL Wallace, Idaho KWAM Memphis Tenn.	620 990	KXRX San Jose, Calif.	1320	WAMD Aberdeen. Md.	1420 970
KTUC Tucson. Ariz.	1400	KWAT Watertown, S.Dak.	95(157(KXXL Bozeman, Mont. KXXX Colby, Kans.	1450 790	WAME Miami, Fla. WAMI Opp, Ala.	1260 860
KITR Tella, Mo. KITR Rolla, Mo. KITS Springfield, Mo. KITC Columbus, Nebr. KIUC Tucson. Ariz. KIUE Tulia, Tex. KIW Seattle, Wash. KIW Casner Wyn	1250	KVOZ Laredo, Tex. KVPI Ville Platte, La. KVPR Ottomwod, Ariz. KVRB Cottomwod, Ariz. KVRB Santa Rosa, Calif. KVRH Saida, Colo. KVRS Rock Springs. Wyo. KVSA McGehee, Ark. KVSF Santa Fe. N.Mex. KVSK Valentine, Nebr. KVSK Valentine, Nebr. KVWD Pearsall, Tex. KVWD Pearsall, Tex. KVWD Pearsall, Tex. KVWD Cheyenne, Wyo. KWAC Bakersfield, Calif. KWAC Wadena, Minn. KWAK Walace, Idabo KWAC Watuttgart, Ark. KWAL Walace, Idabo KWAA Watortown, SDak. KWAA Baytown, Tex. KWAB Baytown, Tex. KWBB Wichita, Ken. KWBB Wichta, Ken.	1360	KYA San Francisco, Calif.	1320 1260	WAML Laurel, Miss.	1340
KTWO Casper, Wyo. KTXJ Jasper. Tex. KTXO Sherman, Tex.	1350	KWBC Navasota, Tex.	155	KYCA Prescott. Ariz. KYCN Wheatland, Wyo.	1490 1340	WHITE'S RADIO LOG	151
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	AM Flint, Mich. AD Homestead, Pa. AR Venice, Fla.			Z Ponca City, Dkla. A Bay Minette, Ala.	123	0 WBZ	Boston, Mass. E Wheeling, W. Va.	1 03 1 47	WCR	A Effingham, III. B Waltham, Mass. E Cheraw, S.C.	1090
W A M	13 Wilmington Dal	132		B Levittown, Pa. H Hastings, Mich.	149		I Brazil, Ind. Y Torrington, Conn. L Northfield, Minn. M Camden, N.J.	99	ז ₩UK	i Scottsboro, Ala.	1420
	V East St. Louis, III. W Washington, Ind. Y Amory, Miss.	158			. 93		M Camden, N.J. O Baltimore, Md.			K Morristown, Tenn. L Oneonta, Ala. M Clare, Mich.	1570
WAN WAN	A Anniston, Ala. B Waynesburg, Pa.	149 158	0 WBC	O Bucyrus, Ohio R Christiansburg, Va	154		P Lowell, Mass. B Detroit Mich	980	won	O Johnstown, Pa. R Corinth, Miss.	990 1230 1330
WAN	D Canton, Ohio E Ft. Wayne, Ind. N Annanolis Md	90		U Union, S.C. S Danville, Pa. C Pittsfield, Mass.	146	0 WCA	U Philadelphia, Pa. W Charleston, W.Va. Y Cayce, S.C.	1391	WCR	S Greenwood S C	1450
WAN WAN	N Annapolis, Md. S Anderson. S.C. T Richmond, Va.	1280		E Harvey, ili.	157		Y Cayce, S.C. Z Carthage. III.	680 620 990	WCR	Washington, N.J. W Chicago, III. Y Macon, Ga.	1580
W A N	Y Albany, Ky. K Atlanta Ga	1390		L Beloit, Wis. N Buffalo N V	138		A Corning, N.Y.	1350			900 1390 970
WAU WAP	V Vincennes, Ind. A San Juan, P.R. C Riverhead, N.Y.	1450			C. 95	D WCB	I Columbus, Miss. L Benton, Ky.	550 1290	1 100	Portland, Maine Columbus, Ind. Cherryville, N. C.	1010
WAP	L Jacksonville, Fig.	690 980	WBE	T Brockton, Mass. U Beaufort, S.C. V Beaver Dam, Wis. X Chillicothe, Dhio C Fremont Mich	960 1430	JIWCB	M Baltimore, Md. S New York, N.Y. T Roanoke Rapids, N.C	680 880	WCSI	4 Celina, Ohio 3 Hilisdale, Mich.	1350 1340
WAP	Birmingham, Ala.	1070	WRF	D Redford Pa	1490		Y Cheboygan, Mich. C Hartford Comp	1240	WCST	Amsterdam, N.Y. Berkeley Springs,	1490
WAPU	L Appleton, Wis. D Chattanooga, Tenn. K Mentgomery, Ala.	1570	WBG	C Chipley, Fla. N Bowling Green, Ky.	1240	WCC	M Lawrence, Mass.	800	WCTO	Andalusia, Ala. New Brunswick N. I	920 1450
WAD	F Towson Mid	1600 1570 1600	WBH	R Jesup, Ga. B Fitzgerald, Ga. C Hampton, S.C.	1370	WCC	N Neillsville, Wis. D Minneapolis, Minn. W Traverse City, Mich. J Edenton, N.C. Carbondele Ma	1370	WCT	Chestertown, Md. Corbin, Ky,	1530 680
WARE	A Attleboro, Mass. 3 Covington, La.	1320	WBH	F Cartersville, Ga. M Birmingham, Ala.	1450	WCD	J Edenton, N.C. L Carbondale, Pa	1260	WCU	W New Castle, Ind. 3 Manitowoc, Wis. 5 Cuyahoga Falls, Ohi	1550 980
WAN	E Ware, Mass.	1490	WBIA	P Huntsville, Ala. Augusta, Ga	1230	WCD	L Carbondale, Pa. S Glasgow, Ky. T Winchester, Tenn.	1440	WELL	A Cumberland Md	1230
WAR	Abbeville, Ala, C Hagerstown, Md.	1240 1480 1490		Islip, N.Y. Marietta, Ga. Greensboro, N.C.	540	WCF	C Rocky Mount, N.C. DuBois, Pa. F Parksburg, W.Va.	1420	WCVI	Conneilsville, Pa. Conneilsville, Pa. Murphy, N.C. Kodiak, Alaska	1340 600
WARN	A Scranton, Pa.	590 1330 540	WBIL	Leesburg, Fla. Booneville, Miss. Knoxville, Tenn.	1410		H Hawkinsville, Ga. M Cambridge, Md.	1050 610 1240		I Kodiak, Alaska Springheld, III. C Ripon, Wis. Bristol, Va.	960 1450
WARD	J Peru, Ind.	1600	WBIR	Knoxville, Tenn. Bristol, Conn. / Bedford, Ind.	1240	WCE	N Mt. Pleasant, Mich. 3 Charlotte, Mich.				1600 690 1400
WASK	Havre de Grace, Md. Lafayette, Ind. Boone, N.C.	1450	IWBIZ	Bedford, Ind. Eau Claire, Wis. Hattiesburg, Miss.	1340	WCF	L Chicago, III. R Springfield, Vt	1000	WDA WDA	A Cynthiana, Ky. D Indiana, Pa. E Tampa, Fla. Kansas City, Mo. K Columbus, Ga. Maridian Miss	1450 1250
WAIE	Knoxville, Tenn.	900 620		V Newton, Miss. / West Bend. Wis.	950 1410 1470	WCG	/ Clifton Forge, Va. A Calhoun, Ga. Belmont, N.C. D Chicago Hghts., III.	1230 900 1270	WDAI WDAI	Kansas City, Mo. K Columbus, Ga. Matidian Miss	610 540
WATH	Athens, Ohio Antigo, Wis.				1440 1290	1 1 1 1 1 1 1 1 1	S Canangaigua, N.Y.	1600	I W U A I	Meridian, Miss. V Danville, III. Parlington, S.C.	1330 1490 1350
WATN	Atmoré, Ala. Watertown, N.Y. Oak Bidge, Tenn.	1590 1240 1290	WBLF	Batesville, Miss. Bellefonte, Pa. Lexington, Ky.	1330	WCHI	A Chambersburg, Pa. 3 Inkster, Mich.	800 1440	WDAS	S Philadelphia, Pa. K McRae, Ga. Y Fargo, N. Dak.	1480 1410
WAIP	Marion, S.C. Waterbury, Conn. Sayre, Pa.	1430	WBLO	Dalton, Ga. Evergreen, Ala. Batesburg, S.C.	1230 1470 1430	WCH	E Westchester, Pa. Chillicothe, Ohio Brookhaven, Miss.	1520 1350 1470	IWDBU	/ Fargo, N. Dak. Escanaba, Mich. Delray Beach, Fla.	970 680
WATS	Capito, Fa.	1240	WBLT	Bedford, Va. Salem, Va. Springfield, Ohio	1350	WCHI WCHI	< Canton, Ga. L Chapel Hill, N.C.	1290		Roanoke, Va, Suringtield, Tenn,	1420 960 1590
WATW	Ashland, Wis.	900 1400 1450	WBLY	Springfield, Ohio Beaufort, N.C. McMinnville, Tenn.	1600	WCHI WCHO	Norwich, N.Y. Washington Court	970		A Statesville, N.C. 1 Orlando, Fla. 1 Dubuque, Iowa	550 580
WAUE	Auburn, N.Y.	1590	WBMI	West Point Co	960 750 1310		House, Ohio 5 Charleston, W.Va. 7 Charlottesville, Va.	1250 580 1260	WDCF	Dade City Fla	1490 1350 1340
WAUD	Auburn, Ala. Augusta, Ga.	230	W B M L W B M T	Macon, Ga. Black Mountain, N.C Charlotte Amalie,	1240	WCIL	Carbondale, III. Cincinnati, Ohio Columbia, Miss.	1020	WDD1	Hanover, N.H. Greenville, Miss. Gloucester, Va.	900 1420
WAVA	Arlington, Va.	070	WRNC		1000	WUKE	s Dunn, N.C.	1450 780	WDEA	Gloucester, Va. Ellsworth, Me. Americus. Ga. Hamden, Conn.	1370
WAVI	Dayton, Ohio Apollo, Pa. Stillwater, Minn. Avondale Estates, Ga.	210	WBNO	Boonville, Ind. Bryan, Obio	1050 1540 1520	WCK	Greer, S.C. A Winnsboro, S.C. Cincinnati, Ohio	1300 1250 1530			1220 1370 800
WAVN WAVO	Stillwater, Minn. I Avondale Estates, Ga. I	220		Beacon, N.Y. Columbus, Ohio Oneida, Tenn.	1260 1460			1470	WDFV	Sweetwater, Tenn. Wilmington, Del. Waterbury, Vt.	1150
	Albertville, Ala,	630 630 350	WBNX	New York, N.Y.	1310	WCLC	Camilla, Ga. Jamestown, Tenn. Cleveland, Miss.	1260 1490	WDEV	/ Westfield, Mass. Minneapolis, Minn.	1570 1130
WAWA	New Haven, Conn. I West Allis, Wis. I	300 590	WBOC	Galax, Va. Salisbury, Md. Virginia Beach, Va.	1360 960 1550	WCLG	Cleveland, Tenn. Morgantown, W.Va. Corning, N.Y. Janesville, Wis.	1300	WDIG	Memphis, Tenn. Dothan, Ala.	1070 1450 1150
WAWZ	Zarephath, N.J. I	570 380	WRIIK	New Orleans, La. Bolivar, Tenn. Pensacola, Fla.	800 1560	WCLO	Janesville, Wis. Columbus, Ga.	1230	WDKD	Orangeburg, S.C. Mt. Olive, N.C. Kingstree, S.C.	1430
WAXU	Vero Beach, Fla. Georgetown, Ky. Chippewa Falls, Wis.	3801	WROS	Brookline Mass	980	WCLW	Newark, Ohio Mansfield, Ohio	1430	WDKN	Dickson, Tenn. Walton, N.Y. Marshfield, Wis.	1260
WAYB	Waynesboro, Va. J Dundalk, Md.	4901	WBOY	Terre Haute, Ind. Clarksburg, W.Va. Lock Haven, Pa.	1400	WCME	Harrisburg, Pa.	1230 1460 1230	WDLU	Marshfield, Wis. Port Jervis, N.Y. Delaware, Ohio	1450
WAYN	Rockingham, N.C. Orange Park Fis			Mt. Clemens, Mich. Birmingham, Ala, Bradenton, Fla.	14301	WCME	Brunswick Maina	000			1550 960 590
WATS WAYX WAYZ	Wayeross, Ga. 1				1420 1340	WCMN	Ashland, Ky. Arecibo, P.R. Pine City, Minn.	1280	WDLT	Panama City, Fla. Indianola, Miss. Dtsego, Mich. Buford, Ga.	1380 980
WAZA WAZE	Bainbridge, Ga. I	360 860	WBRK	Lynchburg, Va. Pittsfield, Mass. Berlin, N.H.	1340 1400	WCMS	Elkhart, Ind. Norfolk, Va. Martin Tenn	1270 1050 1410			1460 860
WAZE	Yazoo City, Miss. I Hazelton, Pa. I Summerville, S.C. Lafayette, Ind. I West Lafayette, Ind.	230 490	WBRM	Berlin, N.H. Marion, N.C. Big Rapids, Mich. Waynesboro, Ga.	1250	WCMY	Norfolk, Va. Martin, Tenn. Ottawa. III. Connersville, Ind.	1430	WDMV	Marquette, Mich. Lynchburg, Va. Pocomoke City, Md.	1320 1320 540
WAZY	Lafayette, Ind. I West Lafayette, Ind.	410 920	WBRT	Waynesboro, Ga. Bardstown, Ky.	1310 1320	WCNC	Elizabeth City, N.C. Shelbyville, Ky.	1240	WDNC	Durnam, N.C. Elkins W Va	620 1240
		440 340	WBRW	Waynesboro, Ga. Bardstown, Ky. Boonville, N.Y. Brewster, N.Y. Berwick, Pa. Waterbury, Conn. Boaz, Ala. Bennetsville, S.C. Blackshear, Ga. New Badford Mass	1510	WCNF	Elizabeth City, N.C. Shelbyville, Ky. Weldon, N.C. Quincy, Fla, Newport, N. H. Bloomsburg, Pa. Cantralia, III	1400 1230 1010	WDNG	Anniston, Ala. Dayton, Tenn. Canton, Miss. Prestonsburg, Ky.	1450 1280 1370
WBAG	Baltimore. Md. 1	150 090	WBRY WBSA	Waterbury, Conn. Boaz, Ala.	1590	WCNR	Bloomsburg, Pa. Centralia, III.	930	WDOC	Prestonsburg, Ky. Chattanooga, Tenn.	1310
WBAP	Ft. Worth, Tex. 570, Bartow Ele	740 820 460	WBSG	Bennetsville, S.C. Blackshear, Ga.	1550	WGNU	Grestview, Fla. Middletown, Conn.	1010	WDOE	Chattanooga, Tenn. Dunkirk, N.Y. Marine City, Mich. Cleveland, Ohio	1410 1590
WBAT WBAW	Barnwell, S.C.	400 740	WBT C	harlotte, N.C.	1110	WCOC	Meridian, Miss.	1370 910	WDOK	Cleveland, Ohio Athens, Ga. Wheaton Md	1260 1470 1540
WBAX WBAY	Wilkes-Barre, Pa. 1 Green Bay, Wis. 1	240 360	WBTH	Williamson, W.Va. Danville, Va. Bennington, Vt.	1400 1330	WCOH WCOJ	Newnan, Ga, Coatesville, Pa.	1400	WDOR WDOS	Sturgeon Bay, Wis. Oneonta, N.Y.	910 730
WBBA WBBB	Pittsfield, III. I Burlington, N.C.	550 580 920	WBTN	Bennington, Vt. Linton, Ind. Bridgeport, Als	1370 1600 1480	WCOL	Meridian, Miss. Greensboro, N.C. Newnan, Ga. Coatesville, Pa. Columbus, Ohio Cornelia, Ga. Boston, Mass. Lebanon, Tenn. Columbia, S.C. Lewiston, Maine	1230	WDOT	Cleveland, Óbio Athens, Ga, Wheaton. Md, Sturgeon Bay, Wis. Oneonta, N.Y. Burlington, Va. Dowagiae, Mich. DuQuoin, III. Hartford, Conn. Dillon. S.C. Dyersburg, Tenn. Cleveland. Miss. Mocksyille, N. C.	1400
WBBF WBBI	Rochester, N.Y. Abingdon, Va.	950 230	WBUC	Buckhannon, W.Va. Trenton, N.J.	1460	WCOR	Lebanon, Tenn. Columbia S.C	900	WDQN	Duquoin, III. Hartford Conn	1440 1580 1360
WBBK	Blakely, Ga. i Richmond, Va.	260 480	WBUT	Butler, Pa. Doylestown, Pa.	1050 1570	WCOU	Lewiston, Maine Montgomery, Ala.	1240	WDSC WDSG	Dillon, S.C. Dyersburg, Tenn.	800 1450
WBB0 WBBQ	Forest City, N.C. Augusta, Ga.	780 780 340	WBUZ WBVA	Fredonia, N.Y. Waynesboro	1440 1570 970	WCOW	Sparta, Wis. Columbia, Pa.	1290	WDSK	Cleveland. Miss. Mocksville, N. C.	1410 1520
WRBT	Lyons, Ga	340 240	W BVL W BVM	Linton, Ind. Bridgeport, Ala, Buckhannon, W. Va. Trenton, N.J. Butler, Pa. Doylestown, Pa. Lexington, N.C. Fredonia, N.Y. Waynesboro, Va. Barbourville, Ky, Utica, N.Y. Beaver Falls, Pa.	970 950 1550	WCPC WCPH	Columbia, S.C. Lewiston, Maine Montgomery, Ala, Sparta, Wis. Columbia, Pa, Clearfield, Pa. Houston, Miss. Etowah, Tenn. Cumberland. Ky.	1220		Superior, Wis. DeFuniak Springs, Florida	710 1280
WBBX WBBY		380 590	WBVP	Beaver Falls, Pa. Calera, Ala, Savannah, Ga.	1230 1370	WCPM WCPO		1280	WDSU	Lake City, Fla. New Orleans, La.	1340 1280
152	WHITE'S RADIO LO	G	WBYS	Savannan, Ga. Canton, III.	1450 1560	WCQS	Tarboro, N.C. Alma, Ga,	760	WDUN		1240 800

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C.L. Location WDUZ Green Bay. Wis. WDVA Gainesville. Fla. WDVH Gainesville. Fla. WDVL Dawson. Ga. WDWS Champaign. 111. WDXS B Chatlanooga. Tenn. WDX Lawrenceburg. Tenn. WDX Lawrenceburg. Tenn. WDX Lakson. Tenn. WDX Laksington. Tenn. WDX Auducah. Ky. WDX Y Sumter, S.C. WD2 Decatur, 111. WEAB Greer. S.C. WEAD College Park, Ga. WEAG Caloga, Tenn. C.L. Location 540
 w EAG College Park, Ga.
 1570

 W EAG Alcoa, Tenn.
 1470

 W EAG Alcoa, Tenn.
 1470

 W EAG Alcoa, Tenn.
 1470

 W EAG Arington, N. C.
 1510

 W EAN Providence, R.I.
 790

 W EAS Savannah, Ga.
 900

 W EAY Value Beach, Fla.
 850

 W EAY Value Beach, Fla.
 850

 W EAY Value Savannah, Ga.
 900

 W EAY Value Savannah, Ga.
 900

 W EAY Value Savannah, Ga.
 1330

 W EBB Baltimore, Md.
 1330

 W EBB Baltimore, Md.
 1330

 W EBB Burewton, Ala.
 1240

 W EBO, Marrisburg, III.
 1240

 W EBO, Marrisburg, III.
 1240

 W EDC Chicago, III.
 1240

 W EDC Chicago, III.
 1240

 W ED Goky Mount, N.C.
 1300

 W EE Booky Mount, N.C.
 1300

 W EE Booky Mount, N.C.
 1300

 W EE Chickgord, Va.
 WENN WENO WENT WEOK WEOL WEPG WEPA WEPA Fougnkeepste, N.Y. I Elyria, Ohio S. Pittsburgh, Tenn, Plainfield, N.J. I Garden City, Mich. I Atlanta, Ga. Cleveland, Ohio I Hamilton, Ala. Westerly, R.I. Eagle River, Wis. Van Wert, Ohio Gharleroi, Pa. Bradford, Pa. Greenville, S.C. N. Augusta, S.C. Southbridge, Mass. Tasley, Va. Easton, Pa. Leland, Miss. Johnson City. Tenn. Wendell-Zobulon, N.C. St. Augustine, Fla. 1090 860 WERB WERE WERH WERI 950 1220 WEBL WERT WESA WESB WESC ESN WESO WESR WEST WESX WESY WETB WETC St. Augustine, Fla. Gadsden, Ala. Ocean City, Md. WETO WETU Wetumpka, Ala.

Kc. | C.L. Location C.L. Location WETZ New Martinsville. WEUC Ponce. P.R. WEUP Huntsville. Ala. WEVA Emporta. Va. WEVD New York. N.Y. WEVE New York. N.Y. WEVS Lauis. Mo. WEWS Lauis. Mo. WEXL Royal Oak. Mich. WEYE Sanford. N.C. WEYE Sanford. N.C. WEYE Birmingham, Ala. WEZE Birmingham, Ala. 1420 1330 1340 1340 1290
 w E Y E Sanford. N.C.
 1290

 w E Y Talladega. Ala.
 1580

 w E Z B Birmingham, Ala.
 1220

 w E Z E Biston, Mass.
 1220

 w E Z E Biston, Mass.
 1220

 w E Z E Bizabethtown, Pa.
 1600

 w E Z Williamsburg, Ky.
 1440

 w E Z Williamsburg, Ky.
 1440

 w E Z Winfield. Ala.
 1300

 w E Z Winfield. Ala.
 1300

 w F A Dallas, Tex.
 570, 820

 w F A Bilamit, Fla.
 990

 w F A G Farmville. N.C.
 1230

 w F A Faretell, Pa.
 1470

 w F A S White Plains. N.Y.
 1230

 w F A S White Plains. N.Y.
 1340

 w F A S Talls Church. Va.
 1220

 w F B C Greenville, S.C.
 1330

 w F B C Greenville, S.C.
 1300

 w F B S Spring Lake, N. C.
 1450

 w F B S Spring Lake, N. C.
 1450

 w F B S Spring Lake, N. Y.
 1370

 w F B S Spring Lake, Miss.
 1340

 w F B C Golumbia. Miss.
 1340

 w F E C Miami, Fla.
 1340
 </t N.C. WFHG Bristol, Va. WFHK Peil City, Ala. WFHK Peil City, Ala. WFHK Pils, Rapids, Wis. WFIG Sunter, S.C. WFIL Findlay, Ohio WFIN Findlay, Ohio WFIN Findlay, Ohio WFIN Fainfleid, III. WFKN Franklin, Ky. WFKY Franklin, Ky. WFKY Franklin, Ky. WFLY Franklin, Ky. WFLY Franklin, Fan. WFLB Fayetteville, N.C. WFLN Philadelphia, Pa. WFLD Fadreiks, Ma. WFLN Philadelphia, Pa. WFLC Fudericksburg, Va. WFLC Globsoro, N.C. WFMD Frederick, Ma. WFMD Frederick, Ma. WFMC Fairmont, N.C. WFMD Frederick, Ma. WFM Madisonville, Ky. WFNC Fayetteville, N.C. WFM Madisonville, Ky. WFNC Fayetteville, N.C. WFNG Fostoria, Ohio WFM W Madisonville, Ky. WFNC Fayetteville, N.C. WFOY St. Augustine, Fla. WFOY St. Augustine, Fla. WFOA Frenklin, Pa. WFRB Frostburg, Md. WFRC Frenklin, N.C. WFRB Frostburg, Md. WFRC Frenklin, N.C. WFRE Freaktin, N.C. WFRE Frostburg, Md. WFRC Frenklin, N.C. WFRE Freaktin, N.C. WFRE Fr WFHG Bristol, Va. WFHK Pell City, Ala. WFHR Wis. Rapids, Wis. 930 1460 730 1390 1600 1430 1400 1430 1570 1300 1050 740 1400 1240 1450
 1090
 WFTW Ft. Walton Beach.

 860
 Florida 1260

 1300
 WFUL Fulton. KY.
 1270

 970
 WFUN Huntsville. Ala.
 1430

 1230
 WFUR Grand Rapids. Mich.
 1370

 950
 WFVA Fredericksburg. Va.
 1231

 950
 WFVA Fredericksburg. Va.
 1230

 940
 WFWL Camden. Tenn.
 1220

 940
 WFVC Alma. Mich.
 1280

 950
 WFVA Cadatown. Ga.
 1300

 970
 WGAC Augusta. Ga.
 1300

 970
 WGAC Augusta. Ga.
 1300

 970
 WGAC Augusta. Ga.
 130

 970
 WGAL Lancaster. Pa.
 440

 970
 WGAN Portland. Mien.
 560

 970
 WGAN Cartiand. Mien.
 1220

 930
 WGAS Castonia. N.C.
 1420

 930
 WGAS S. Gastonia. N.C.
 1420

 930
 WGAS Gastonia. M.C.
 1430

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 WGAS Gastonia. M.C.
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 WGAS Gastoniai. M.C.
 1430

Kc. | C.L. Location WGBA Columbus. Ga. WGBB Freeport, N.Y. WGBF Evansville. Ind. WGBG Greensboro, N.C. WGBI Scranton. Pa. WGBB Freeport, N.Y.
WGBF Evansville. Ind.
WGBG Greensboro, N.C.
WGBG Goldsboro, N.C.
WGBS Miami, Fla.
WGCD Chester, S.C.
WGCD Chester, S.C.
WGCD Chester, S.C.
WGEA Geneva, Ala.
WGET Geneva, Ala.
WGET Beloit. Wis.
WGET Beloit. Wis.
WGET Beloit. Wis.
WGET Beloit. Wis.
WGE Gainesville. Ga.
WGGG Gainesville. Ga.
WGGH Marion, 111.
WGH Marjon, 111.
WGH Marjon, N.Y.
WGH Maplewood, Minn.
WGHO Kingston, N.Y.
WGH Stowgan, Maine
WGH Charlotte, N.C.
WGIL Galesburg. III.
WGIZ Charlotte, N.C.
WGKR Perry, Fla.
WGK Perry, Fla.
WGK Perry, Fla.
WGK Perry, Fla.
WGK Pashington, N.Y.
WGM Hilmiston, N.C.
WGM Millington, N.C.
WGM Millington, N.C.
WGM Gasington, N.C.
WGN Granite City. III.
WGN P Indian Rocks Beach, Wanne, N.Y. WGNS Murfreesbore, Tenn. WGNS Murfreesbore, Tenn. WGNY Newburgh. N.Y. WGOM Grayson, Ky. WGOM Grayson, Ky. WGOM Glasbore, N.C. WGOU Georgotown S. C. WGOU Valuosta. Gara WGPC Actiano, N.C. WGR Catano, N.Y. WGR Catake City, Fla. WGR Greenwold, Miss. WGR Cake City, Fla. WGR Greenwolle, Pa. WGR Greenwolle, Ten. WGS Geneva, III. WGS Geneva, III. WGS Greenwolle, Stan WGS Geneva, III. WGS Greenwolle, Stan WGS Geneva, III. WGS Muntington, N.Y. WGS Muntington, N.Y. WGS Muntington, N.Y. WGS Muntington, S.C. WGT Asummerville, Ga. WGS Guntersville, Ala. WGS Geneva, II. WGS Geneva, S.C. WGT Asumerville, Ga. WGS Guntersville, Ala. WGS Geneva, S.C. WGT Geneville, N.C. WGT Geneville, M.S. WGT Geneville, Miss. WGC Geneva, N.Y. WGY Greenville, Miss. WHAG Halfway, Md. WHAG Halfway, Md. WHAG Halfway, Md. WHAG Halfway, Md. WHAG Hariison, Vis, WHAM Rochester, N.Y. WHAM Rochester, N.Y. WHAM Rochester, N.Y. WHAM Hanse City, Mich. WHAM Rochester, N.Y. WHAM Harotsburg, Ky. WHAM Hanso City, Mich. WHAM Harbos, Tenn. WHAM Handason, Wis. WHAM Harbos, Tenn. WHAM Handason, Wis. WHAM Harotsburg, Ky. WHAM Harnoshow, Ny. WHAM Hanso City, Mich. WHAM Harotsburg, Ky. WHAM Harbos, Tenn. WHAM Handason, Wis. WHAM Harbos, Tenn. WHAM Handason, Ky. WHAM Harbos, Tenn. WHAM Handason, His. WHAM Harbos, Tenn. 1220 1420 1050 1340 WHBU Anderson, Ind. 1340 WHBY Appleton, Wis.

L. Location
1270
WHCC Waynesville, N.C.
1280
WHCU Inhaea, N.Y.
1280
WHCU Unhaea, N.Y.
1280
WHCU Unhaea, N.Y.
1280
WHCU Observer, Tenn.
1400
WHER Rochaster, N.Y.
1240
WHER Rochaster, N.Y.
1250
WHEN Syracuse, N.Y.
1250
WHEN Syracuse, N.Y.
1260
WHEN WHER Poley, Ala.
1360
WHER Membis, Tenn.
1480
WHER Membis, Tenn.
1490
WHER Mempis, Tenn.
1400
WHER Mempis, Tenn.
1400
WHER Mempis, Tenn.
1430
WHF Benton Harbor, Mich.
1500
WHH Molthy Hill, S.C.
1310
WHH Montgomery, Ala.
1370
WHH Montgomery, Ala.
1370
WHH Montgomery, Ala.
1370
WHH Montgomery, Ala.
1370
WHW Milsville, Va.
1440
WHIE Griffin, Ga.
150
WHIM Maltain, Tenn.
1600
WHI Maltain, Tenn.
1720
WHI Maltain, Tenn.
1830
WHI Maltain, Tenn.
1930
WHI Maltain, Tenn.
1940
1940< WIBG Philadelphia, Pa. WIBM Jackson. Mich. WIBR Baton Rouge. La. WIBU Poynette, Wis. WIBV Beleville. III. WIBW Topeka, Kans. WIEX Utca, N.Y. WICC Bridgeport, Conn. WICE Providence. R.I. WICH Norwich, Conn. WICK Scranton. Pa. WICO Salisbury. Md. 600 1290 1310 1330 560 1230 WHITE'S RADIO LOG

 C.L.
 Location
 Kc.

 WICU Erie, Pa.
 1330

 WICY Malone, N.Y.
 1490

 WICY Malone, N.Y.
 1490

 WIDE Biddeford, Maine
 1400

 WIDU Fayetteville, N.C.
 1600

 WIEM Elizabethtown, Ky.
 1400

 WIEM Elizabethown, Ky.
 1400

 WIGM Medford, Wis.
 1300

 WIGM Medford, Wis.
 1400

 WIGM Indianapolis, Ind.
 814

 WIIN Attanta, Ga.
 970

 WIKB Iron River, Mich.
 1230

 WIK Evansville, Ind.
 820

 WIK Evansville, Ind.
 820

 WIL St. Louis, Mo.
 1430

 WIL Boston, Mass.
 090

 WIL Cambridge, Ohio
 1270

 WIL Urbana, III.
 580

 WIL Urbana, III.
 580

 WIL D Frankfort, Ind.
 1520

 WIL D Frankfort, Ind.
 1520

 WIL Urbana, III.
 580

 WIL L Urbana, III.
 580

 WIL L Urbana, III.
 580

 WIL L O Frankfort, Ind.
 1520

 C.L. Location WILS Lansing, Mich. WILS Lansing, Mich. WILS St. Petersburg Beach, WIMA Lima, Ohio WIMO Winder, Ga. WIMS Winchegan City, Ind. WINS Charlottasville, Va. WINS Charlottasville, Va. WINS Charlottasville, Va. WING Dayton, Ohio WINI Murphysboro, III. WINK Fort Myers, Fla. WINK Tampa, Fla. WINK Sort, N.Y. WINS New York, N.Y. WINS New York, N.Y. WINS New York, N.Y. WINT Winter Haven, Fla. WINX Rockville, Md. WINY Miami, Fla. WINZ Miami, Fla. WIOD Miami, Fla. WIOT Sawas City, Mich. WIOD Stawas City, Mich. WIPC Lake Wales, Fla. WIPS San Juan, P.R. WIPS San Juan, P.R. WIPS Teionderoga, N.Y. WIRA Fort Pierce, Fla. WIRE Indianapolis, Ind. WIRD Ironton, Ohio WIRK W. Palm Beach, Fla. WIRD Ironton, Ohio WIRY Platisburg, N.Y. WIRA Fort Pierce, Kla. WIRD Ironton, Ohio WIRY Platisburg, N.Y. WIRA Sabella, P.R. WIRD Ironton, Ohio WIRY Platisburg, N.Y. WIS A Isabella, P.R. WIS Mantechn, Wa. 680 1010 WIRY Plattsburg, N.Y. WIS Columbia, S.C. WISC Asheville, N.C. WISE Asheville, N.C. WISE Asheville, N.C. WISE Asheville, N.C. WISE Malanapolis, Ind. WISE Multer, Pa. WISE Kinston, N.C. WISE Kinston, N.C. WISE Charlotte, N.C. WISE Charlotte, N.C. WISE Gen Burnle, Md. WITA San Juan, P.R. WITH Baltimore, Md. WITA San Juan, P.R. WITY Danville, III. WITZ Jasper, Ind. WITZ Jasper, Ind. WIVZ Ashland, Va. WIVI Christiansted, V.I. WIVZ Ashland, Va. WIVY Jacksonville, Fla. WIVY Jackson, Hil. WIXE Norfolk, Nebr. WIZE Springfield, Ohie WIZE Springfield, Ohie WIZE Streator, III. WIXE Mestbrock. Me. WIAG Jahnstöwn, Pa. WIAG Jahnstöwn, Pa. WIAG Jahnstöwn, Pa. WIAG Jahnstör, Ga. WIAG Jahnstör, Ga. WIAG Jahnstör, Ga. WIAG Jackson, Miss. WIAR Providence, R.I. WIAY Mullins, S.C. WIAZ Malany, Ga. WIAS Dalesn, III. WIA

 Kc.
 C.L.
 Location
 I

 1330
 WJBM Jerseyville, III.
 I

 1490
 WJBD Baton Rouge, La.
 I

 1400
 WJBD Baton Rouge, La.
 I

 1400
 WJBS DeLand, Fla.
 I

 1400
 WJC Seymour, Ind.
 I

 1400
 WJC Seymour, Ind.
 I

 1400
 WJC Seymour, Ind.
 I

 1400
 WJC Jackson, Mics.
 I

 1400
 WJC Jackson, Mics.
 I

 1410
 WJD A Quincy, Mass.
 II

 1420
 WJE F Grand Rapids, Mich.
 I2

 1430
 WJE F Grand Rapids, Mich.
 I2

 1430
 WJE F Dover, Ohio
 I4

 1430
 WJE R Dover, Ohio
 I4

 1430
 WJE R Dover, Ohio
 I4

 1430
 WJE R Dover, Ohio
 I4

 1500
 WJE R Dover, Ohio
 I4
 ami, Fia.
ami, Fia.
Boston, Ohio
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Inc.Location1480WKIG Glenville, Ga.1150WKIK L Leonardown, Md.1490WKIN K Lingsport, Tenn.1390WKIN KIngsport, Tenn.1390WKIN K Raleigh, N.C.911WKIX Raleigh, N.C.911WKIX Raleigh, N.C.911WKIX Raleigh, N.C.911WKIX Raleigh, N.C.912WKIS Granter Fails, N. C.9130WKIS Granter Fails, N. C.914WKK Cavancehurg, Ky.915WKK Cocoa, Fia.916WKK Cocoa, Fia.917WKK Cocoa, Fia.918WKK Cocoa, Fia.919WKK Cocoa, Fia.914WKK S Vancehurg, Ky.915WKL S Ludington, Mich.916WKK Cocoa, Fia.917WKL S Vancehurg, Ky.918WKL S Sparta, Wis.919WKK Could Collect, Minn.910WKL K Clouisville, Ky.914WKL K Louisville, Ky.914WKL Y Hartwell, Ga.914WK M K Balamazoo, Mich.914WKM K Balamazoo, Mich.914WKM K Kalamazoo, Mich.914WKM K Koson, N.A.916WKOX Cosciusko, Mics.917WKOX Sociala, Fia.918WKOX Bioghamiton, N.Y.919WKOX Sociala, Fia.920WKOY Bilghamton, N.Y.930WKOY Bilghamton, N.Y.940WKOY Bilghamton, N.Y.950WKOY Bilghamton, N.Y.950WKOY Bilghamton, N.Y.950WKOY Bilghamton, N.S.< WKYW Louisville, Ky. WKZI Casey, III. WKZO Kalamazoo, Mich. WLAC Nashville, Tenn. WLAC Dabbury, Conn. WLAF LaFolletie, Tenn. WLAF La Grange, Ga. WLAM Lakeland, Fla. WLAM Lewiston, Maine WLAM Lexington, Ky. WLAP Ackington, Ky. WLAP Athens, Tenn. WLAS Jacksonville, N.C. WLAS Jacksonville, N.C. WLAT Conway, S.C. WLAU Laurel, Miss, MLAU Grand Rapids, Mich. WLAW Lawrenceville, Ga. WLBA Gainesville, Ga. WLBB Carrollton, Ga. WLBB Carrollton, Ga. WLBC Muncie, Ind. WLBG Laurens, S.C. WLBG Laurens, S.C. WLBH Denham Springs, La. WLBI Denham Springs, La. WLBI Bowling Green, Ky. WLBK Dekalb, III. WLBL Stevens Point, Wis. WLBN Lebanon, Ry. WLBR Lebanon, Pa. WLBS Centerville, Miss. WLEZ Bangor, Maine WLCK Scottsville, Ky.

Kc. | C.L. Location Kc.
 Ref.
 C. L.
 Location

 1580
 W LCM Laurensburg, N.C.

 1370
 W LCO Lustis, Fia.

 1450
 W LCO Eustis, Fia.

 1450
 W LCO Eustis, Fia.

 740
 W LCX LaCrosse, Wis.

 850
 W LCY St. Petersburg, Fia.

 1500
 W LDB Atlantic City, N.J.

 710
 W LDB Atlantic City, N.J.

 710
 W LDS Atlantic, City, N.J.

 750
 W LEC Androxy, Ohio

 1580
 W LEC Sandusky, Ohio

 1580
 W LEC Sandusky, Ohio

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 W LEC Sandusky, Ohio

 1590
 W LEC Sandusky, Ohio

 1500
 W LEC Sandusky, Ohio

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 W LEC Sandusky, Ohio

 1510
 W LEC Sandusky, Ohio

 1511
 W LEW Marcher, Fan.

 1520
 W LEW Marcher, Fan.

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 W LEW Marcher, Fan.

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 W LEW Marcher, Fan.

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 W LEW 910 1490 1240 1450 1340 1490 790 1550 1400 1360 1400 670 1450 940 1460 1400 1380 1450
 910
 WMBD Peoria, III.

 1330
 WMBD Roichmond, Va.

 1600
 WMBH Joplin, Mo.

 1600
 WMBH Chicago, III.

 1340
 WMBH Chicago, III.

 1340
 WMBH Chicago, III.

 1340
 WMBH Chicago, III.

 1340
 WMBL Morehaad City, N.C.

 1450
 WMBN Petoskey, Mich.

 1450
 WMBN Patoskey, Mich.

 1340
 WMBN JackSonville, Fla.

 1340
 WMBN JackSonville, Fla.

 1340
 WMBN Suniontan, Pa.

 1340
 WMBN Tshenandah, Pa.

 1350
 WMCA New York, N.Y.

 1410
 WMCP Columbia, Tenn.

 1350
 WMCR Oneida, N.Y.

 1350
 WMCH Aravard, III.

 1350
 WMCH Hairland, Mis.

 1350
 WMDD Fajardo, P.R.

 1350
 WMD Fajardo, P.R.

 1350
 WMD Fajardo, P.R.

 1350
 WMCB Eau Gallie, Fla.
 1530 570

C.L.	Location	Kc.	C.
WMEK	Chase City, Va.	980	W
WMEN	Pensacola, Fla. Tallahassee, Fla.	1330	w
WMEV	Marion, Va. Boston, Mass.	1010	w
WMFC	Monroeville, Ala, Wilmington, N.C.	1360 630	w
<pre>KLIZ>XCODGSIDEKLIZGSX%FcOlperLizGSX%FcO</pre>	Location Chase City, Va. Pensacola, Fia. Marion, Va. Boston, Mass. Monroeville, Ala. Wilmington, N.C. Hibbing, Minn. Fia. High Point, N.C. Hibbing, Minn. Chase, Fia. High Point, N.C. Moultrie, Ga. Baufordge, Ga. Baufordge, Pa. Montgollery, Ala. Ather Pa. Montgollery, Ala. Minukee, Wis. Milwaukee, Wis. Milwaukee, Wis. Milwaukee, Wis. Milwaukee, Wis. Milwaukee, Wis. Milwaukee, Wis. Milwaukee, Wis. Milwaukee, Wis. Milwaukee, Wis. Mils. St. Paul, Minn. Iron Mountain. Mich. Natchez, Miss. Mit. Vernon. Ill. Gordele, Ga. Pineville, Ky. Beverly, Mass. Sylacauga, Ala. Dublin, Ga. Melbourne, Fla. Marshall, N.C. Westoort. Conn. Gretna, Va. Morganton, N.C. Menomonie, Wis. Columbus, Ohio Olean, N.Y. Manati, P.R. Morteyama, Ga. Marietta, Ohio Chatanooga. Tenn. Mordhead, Ky. Berlin, N.H. Ravenswood, W.Va. Metropolis, Ill. Montgomery, W.Va. Ocala, Fla. Morchead, Ky. Berlin, N.H. Ravenswood, W.Va. Merdight, Tenn. Middleport-Pomeroy, Middleport-Pomeroy, Chicago Heights, Ill. Monde, Mich. Smithfield, N.C. Morganfield, Ky. Decatur, Ala. Marietta, Ohio Chicago Heights, Ill. Mindel, N.C. Morganfield, Ky. Decatur, Ala. Marietta, Chio. Chicago Heights, Ill. Mindel, N.C. Morganfield, Ky. Decatur, Ala. Marietta, Ga. Milord, Mass. Morio, Chio. Morganfield, Ky. Decatur, Ala. Marietta, Ga. Marietta, Ky. Decatur, Ala. Marietta, Ky. Decatur, Ala. Marietta, Ky. Manistee, Mich. Massena, N.Y. Manistee, Mich. Marietta, Cy. Marietta, Cy. Marietta, Ky. Decatur, Ala. Marietta, Ky. Decatur, Ala. Marietta, Ky. Decatur, Ala. Marietta, Ky. Marietta, Ky. Mar	yes yes 1330 610 1330 1510 1510 1510 1510 1510 1510 1450 1450 1450 14230 14230 14230 1430 14400 1440 1450 14490 1240 1240 14400 1400 1240 1240 1240 1240 1240 1240 1240 1240 1240 1240 1240 1240 1240 1240 1240 1240 12500 13500 13500 13400 12300 1240 1240 1240 </td <td>W</td>	W
WMFR	High Point, N.C.	1230	w
WMGA	Moultrie, Ga, Bainbridge, Ga.	930	w
WMGS	Bowling Green, Ohio Meadville, Pa.	730	w
WMGY	Montgomery, Ala. Atlantic City, N.J.	800 1340	w
WMIE	Miami. Fla. Middlesboro Ky.	1140	Ŵ
WMIL	Milwaukee, Wis.	1290	Ŵ
WMIQ	Iron Mountain, Mich.	1450	W
WMIS	Natchez, Miss. Mt. Vernon, III.	940	w
WMJM	Cordele, Ga. Pineville, Ky.	1490 1230	w
WMLO	Beverly, Mass. Sylacauga, Ala.	1570	w
WMLT	Dublin, Ga.	1330	Ŵ
WMMH	Marshall, N.C.	1460	W
WMMN	Fairmont, W.Va.	920	Ŵ
WMMW	/ Meriden, Conn. Gretna, Va.	1470 730	W
WMNB	No. Adams, Mass. Morganton, N.C.	1230	W
WMNE	Menomonie, Wis.	1360	W
WMNS	Olean, N.Y.	1360	W
WMNT	Manati, P.R. Montezuma, Ga.	1050	W
W MOA W MOC	Marietta, Ohio Chattanooga, Tenn.	1490	W I
WMOD	Moundsville, W.Va. Mobile Ala	1370	W
WMOG	Brunswick, Ga.	1490	W
WMOK	Metropolis, 111.	920	Ŵ
WMON	Montgomery, W.Va. Ocala, Fla.	900	W
WMOR	Morehead, Ky. Berlin, N.H.	1330	Ŵ
WMOV	Ravenswood, W.Va. Meridian, Miss.	1360	W N
WMOZ	Mobile, Ala.	960	N N
WMPC	Lapeer, Mich.	1230	N.
WMPL	Smithfield, N.C.	1270	N.
WMPO	Middleport-Pomeroy, Ohio	1390 1470 680 1450 1490 1490 1490 660 1490 660 1280 1570 1340 1550 1480 1550 1480 1550 1340 1320 1380 730 1380 730 1380 730 1380 730 1380 730 1380 730 1380 730 1380 730 1380 730 1380 730 1380 730 1380 730 1380 730 1380 730 1380 730 1380 730 1380 730 1380 730 730 730 730 730 730 730 730 730 73	1
WMPPS WMPRC WMRRC WMRRC WMRRC WMRRSAG WMRSSK WMRSSK WMSK WM	Memphis, Tenn.	680	Ň
WMPT	So. Williamsport, Pa. Greenville, S.C.	1450 I 490	N N
WMRC	Milford, Mass. Monroe Ga.	1490	۱¥
WMRF	Lewistown, Pa. Marion, Ind.	1490	N N
WMRN	Marion. Ohio	1490	1V
WMRP	Flint, Mich.	1570	1 y
WMSA	Oakland, Md.	1050	ÿ
W M SJ W M SK	Sylva, N.C. Morganfield, Ky.	1480	Ý
WMSL	Decatur, Ala. Manchester, Tenn.	1320	Ý
WMST	Mt, Sterling, Ky. Cedar Rapids, Iowa	1150	l v
WMTA	Central City, Ky.	1380	V
WMTC	Hinton, W. Va.	1380	X
WMTL	Leitchfield, Ky.	1580	V
WMTN	A Moultrie, Ga. Morristown, Tenn. Morristown, N.I.	1300	j
WMTF	Morristown, John Morristown, N.J. Murfreesboro, Tenn. Muskegon, Mich. Greenville, S.C. Martinsville, Va.	1250	
WMUS	5 Murfreesboro, Tenn. 5 Muskegon, Mich. 5 Greenville, S.C. 4 Martinsville, Va. 3 Millville, N.J. 6 Milledgeville, Ga. 0 Mt, Vernon, Ohio 8 Myrtle Beach, S.C. 8 Mayodan, N.C. 8 Ft. Myers, Fla.	1090	
WMVA	A Martinsville, Va.	1450	
WMV	Milledgeville, Ga.	1440 1450 1300 1450 1420 1410 1450 680	
WMY	B Myrtle Beach, S.C.	1450	
WMYI	Mayodan, N.C. R Ft. Myers, Fla. Bridgeport, Conn. Boston, Mass. Norman. Okla.	1410	il s
WNAE	3 Bridgeport, Conn. 5 Boston, Mass.	680	
WNAD	Norman. Okla. Warren, Pa.	1310	313
	Grenada, Miss. I Nashville, Tenn.	1400	
WNA	(Nanticoke, Pa.	730	2
WNA	Norristown, Pa.	1110	
WNAU	J New Albany, Miss.	640 1310 1400 1360 1280 1110 1450 1470 1430 570 660	i N
WNA)	Yankton, S.Dak.	570	ś l i
WNB0 WNB1) Norman. Okia. Warren. Pa. Grenada, Miss. I Nashvile, Tenn. (Nanticoke, Pa. N Neenah, Wis. Rorristown. Pa. I Natchez, Miss. J New Albany, Miss. J Annapolis, Md. (Yankton. S. Dak. New York, N.Y. Binghamton, N.Y. H New Bedford. Mass.	1290	31.,
WNB	H New Bedford. Mass. Newburyport, Mass.	1290	
************************************	6 Murray, Ky.	1341	"
WNB WNB	F Wellsboro, Pa. Z Saranac Lake. N.Y.	149	

1

C.E. Location
 Location
 RC.

 WNCA Siler City, N.C.
 1570

 WNCG Carnesboro, Pa.
 950

 WNCG K. Charieston, S.C.
 910

 WND B. Syracuse, N.Y.
 1260

 WND B. Syracuse, N.Y.
 1260

 WND B. Syracuse, N.Y.
 1260

 WND B. South Bend, Ind.
 1490

 WNE B. Worester, Mass.
 1230

 WNE K. Anason, Ga.
 1400

 WNE S. Cantral City, Ky.
 1050

 WNE W. Anason, Ga.
 1400

 WNG M. Anyfield.
 Ky.

 WNI A. Cheektowaga, N.Y.
 1230

 WNI A. Cheektowaga, N.Y.
 1300

 WNI A. Cheektowaga, N.Y.
 1430

 WNI A. Cheektowaga, N.Y.
 1 WOOF DUthan, rea-WOOK Washington, D.C. WOOW Greenville, N.C. WOPH Britslol, Tenn, WOPH Britslol, Tenn, WORA Mayaguez, P.R. WORA Mayaguez, P.R. WORA Mayaguez, S.C. WORA Spartanburg, S.C. WORD Spartanburg, S.C. WORD Spartanburg, S.C. WORK York, Pag. S.C. WORK York, Pag. S.C. WORK Savannah, Tenn. WORT New Smyrna Beach, Florida Florida WORX Madison, Ind. WOSC Fulton, N.Y. WOSH Oshkosh, Wis. WOSL Kissimmee, Fla. WOSU Columbus, Ohio

C.L. Location WOTR Corry, Pa. WOTT Washua, N.H. WOTW Nashua, N.H. WOUB Athens, Ohio WOVE Welch, W.Va. WOW Omaha, Nebr. WOWE Allegan, Mich. WOWE Allegan, Mich. WOW I New Albany, Ind. WOW I New Albany, Ind. WOW I forence, Ala. WOW OFt. Wayne, Ind. WOW I Clewiston, Fla. WOXF Oxford, N.C. WOXF Oxford, N.C. WPAB Ponce, P.R. WPAG Pathogue, N.Y. WPAG Ann Arbor, Mich. WPAC Pathogue, N.Y. WPAG Pathogue, N.Y. WPAD Pathesile, Pa. WPAP Fernandina Baach, Flori WPAO Mount Airy N.C. Kc. | C.L. Location Kc 1370 900 1340 1340 59 158 124 86 500 134 90 55 158 145 105 73
 WPAM
 Pottsville.
 W

 WPAR
 Fernandina Beach,
 Florida
 For

 WPAR
 Parkersburg, W.Va.
 1450
 W

 WPAR
 Parkersburg, W.Va.
 1450
 W

 WPAR
 Parkerson, N.J.
 930
 W

 WPAX
 Thomasville, Ga.
 1240
 Y

 WPAC
 Clinton, S.G.
 1400
 Y

 WPAC
 Clinton, S.C.
 1400
 Y

 WPCC Clinton, S.C.
 1400
 Y

 WPDM Potsdam, N.Y.
 1470
 Y

 WPDQ Jacksonville, Fla.
 1600
 Y

 WPCC Clintons, Stem, N.C.
 1550
 Y

 WPDK Portage, Wis.
 1500

 WPEH Louisville, Ga.
 1420

 Y=WPE Maidleiphia, Pa.
 950

 WPEF Taunton, Mass.
 1570

 WPE B Middleiphia, Pa.
 950

 WPE B Middleiphia, Pa.
 950

 WPE B Middleiphia, Pa.
 950

 WPE B Biddley, Hghts, Md.
 1580

 WPE B Fersborg, Fla.
 1600

 WP

. r	C.L. Location	Kc
0	WQUA Moline, Ill. I	23#
0	WQVA Quantico, Va. 4 WQXI Atlanta, Ga	530
ŏ	WOXL Columbia, S.C.	79) 32)
0	WQXR New York, N.Y.	380 560 340
ğ	WOXT Palm Beach, Fla.	340
ŏ	WRAB Arab, Ala.	350 380
0	WRAC Racine, Wis, WRAD Radford, Va.	1460 1450
ď	WRAG Carrollton. Ala.	590
0	WQUA Moline, III. I WQXA Quantico, Va. I WQX1 Atlanta, Ga. WQXQ Ormond Beh., Fla. WQXQ Ormond Beh., Fla. WQXT Paim Beach, Fla. WRAT Alm Beach, Fla. WRAT Arab. Ala. WRAT Arab. Ala. WRAT Arab. Ala. WRAT Radford, Va. WRAT Radford, Va. WRAT Radford, Va. WRAT Radford, Va. WRAT Radford, Va. WRAT Radford, Va. WRAT, Baleight, N.C.	1440
Ō	WRAK Williamsport, Pa.	14600
ŏ	WRAM Monmouth, 111.	1430 530 1520 1440 1400 1240 1230 850 1540 1250 1470
i0 ស	WRAP Nortolk, va. WRAW Reading, Pa.	1240
50	WRAY Princeton, Ind.	1250
0	WRBC Jackson, Miss.	1300 1470
10 50	WRBD Pampano Beach, Fla. WRBL Columbus, Ga.	1420
30	WRC Washington, D.C.	1420 980 1430 1430 1450 970
00	WRCK Tuseumbia, Ala.	1410
70	WRCO Richland. Wis. WRCS Aboskie. N.C.	970
00	WRCV Philadelphia, Pa.	1060 i 400
90 90	WRDO Augusta, Maine	400
70	WRDO Augusta, Maine WRDS S, Charleston, W.Va. WRDW Augusta, Ga.	1410
50	WREB Holyoke, Mass,	930 600
50 50	WREL Lexington, Va.	1450
20	WREM Remsen, N.Y. WREN Topeka, Kans.	1450 1480 1250 970
50	WREO Ashtabula, Ohio	970 1220
20 70	WRFB Tallahassee, Fla.	1410 960
50 00	WRFC Athens, Ga. WRFD Worthington, Ohio	880
iŏ	WRFS Alexander City, Ala.	1050 1470 1590
80 50	WRGM Richmond, Va.	1590
80 80	WRGS Rogersville, lenn. WRHC Jacksonville, Fla.	1370
70	WRHI Rock Hill, S.C.	1370 1400 1340 1220 540 1400 1250 980
40 60	WRIC Richlands, Va.	540
40	WRIG Wausau, Wis. WRIM Pahokee, Fla.	1250
80	WRIP Rossville, Ga.	980 1410
30 80	WRIT Milwaukee, Wis.	1410
30 40	WQVA Quantico, Va. WQXI Atlanta, Ga, WQXL Columbia, S.C. WQXQ Ormond Bch., Fla. WQXR New York, N.Y. WQXT Palm Beach, Fla. WRAZ Arab, Ala. WRAZ Harb, Ala. WRAZ Harb, Ala. WRAZ Racine, Wis, WRAZ Racine, Wis, WRAZ Racine, Wis, WRAZ Racine, Wis, WRAZ Racine, Wis, WRAZ Ratford, Va. WRAZ Garroliton, Ala. WRAZ Garroliton, Ala. WRAZ Garroliton, Ala. WRAZ Williamsport, Pa. WRAX Williamsport, Pa. WRAX Williamsport, Pa. WRAX Williamsport, Pa. WRAX Princeton, Ind. WRAY Ashington, D.C. WRCD Dalton, Ga. WRCD Ashington, D.C. WRCD Ashington, D.C. WRCY Philadelphia, Pa. WROX Augusta, Ga. WRDS Acoskie, N.C. WRDS Acoskie, N.C. WRD Augusta, Ga. WREB Holyoke, Mass. WREE Menphis, Tenn. WREL Clembis, Tenn. WREL Chens, Ga. WRFB Tallahassee, Fla. WRFD Worthington, Ohio WREY Reidsville, N.C. WRFB Tallahassee, Fla. WRFD Worthington, Ohio WREY Reidsville, N.C. WRFB Alexander City, Ala. WRGA Rome, Ga. WRFD Worthington, Ohio WREY Reidsville, Tenn. WRE Achens, Ga. WRFD Worthington, Ohio WREY Reidsville, Fla. WRIM Robe, Fla. WRIM Robe, Fla. WRIM Robe, Sla. WRIM ROBE, Sla.	1340 1390 1410 1550 1270 1400
80	WRIZ Coral Gables, Fla.	1270
10	WRJN Racine, Wis. WRIS San German, P. R.	1400
20	WRJW Picayune, Miss,	1060 1320 1460 1450 580 1350 1300 1490
90 90	WRKD Rockland, Maine	1450
20	WRKH Rockwood, Jena. WRKM Carthage, Tenn.	1350
40	WRKT Cocoa Beach, Fla. WRLD Lanitt, Ala.	1300
80	WRMA Montgomery, Ala.	950 1050 1410 790 1490
70	WRMN Elgin, III.	1410
60	WRMS Beardstown, III. WRMT Rocky Mount, N.C	1490
10	WRNB New Bern, N.C. WRNF Wis, Banids, Wis,	1490 1220 910 1350 1390 1450 1280 1340
190 130	WRNL Richmond, Va.	910
60	WROA Gulfport, Miss.	1390
990	WROB West Point. Miss WROC Rochester, N.Y.	1450
940 980	WROD Daytona Beach, Fla.	1340
40 30	WROL Fountain City, Tern. WROM Rome. Ga.	1490
10	WROM Rome. Ga. WRON Ronceverte. W.Va.	710 1400
360	WROS Scottsboro, Ala. WROV Roanoke, Va.	
160 100	WROV Roanoke, Va. WROW Albany, N.Y. WROX Clarksdale, Miss.	1240 590 1450
680 600	WROM Röme, Ga. WRON Roneeverte. W.Vz. WROS Seottsboro. Ala. WROV Roanoke. Va. WROV Clarksdale. Miss. WROY Clarksdale. Miss.	1460
i40	WROZ Evansville, Ind. WRPB Warner Robbins, Ga.	1350 1530
i40 i70	WRPM Poplarville, Miss.	1530
20 190	WRRR Rockford. 111.	1310 1330 880
i80 290	WRRZ Clinton, N.C. WRSA Saratoga Spr@s., N.Y.	1280
60	WRSC State College, Pa. WRSL Stanford, Ky.	1520
60 190 550	WRR Dallas, Tex. WRRR Rockford, III, WRRZ Clinton, N.C. WRSA Saratoga Sprgs., N.Y. WRSC State College, Pa. WRSW Warsaw, Ind. WRTA Aitoona, Pa. WRTL Rantoul, III. WRUF Gainesville, Fla. WRUF Gainesville, Fla. WRUN Rumford. Maine WRUN Utica, N.Y. WRUS Russellville, Ky.	1480 1240 250d 850
าย	WRTL Rantoul, III.	250d
60	WRUF Gainesville, Fla. WRUM Rumford. Maine	850 790
230 190	WRUN Utica, N.Y. WRUS Russellville, Kv	790 1150 610 1140
280 100	WRVA Richmond. Va. WRVK Mt. Vernon, Ky.	1140
320	WRVM Rochester, N.Y.	680
)50 40	WRWO Augusta, Ga. WRWH Cleveland, Ga.	1480 1380
50	WRWJ Selma, Ala. WRXO Roxboro, N.C.	1380 1570 1430
120 160	WAAU AUADOFU. N.O.	840
570		155
20	I HUIL D KADIO 100	100

C.L. Location WRAT Pittsburgh, Pa. WSAC Fort Knox, Ky, WSAF Sarasota, Fla. WSAI Cincinnati, Ohio WSAI Grove City, Pa, WSAI Grove City, Pa, WSAI Grove City, Pa, WSAI Gansport, Ind. WSAI Allentown, Pa. WSAI Sailentown, Pa. WSAF All River, Mass. WSAT I. River, Mass. WSAY Anochester, N.Y. WSAV Savannah, Ga. WSAY Rochester, N.Y. WSAZ Hontington, W.Va, WSAZ Huntington, W.Va, WSBA York, Pa. WSBB New Smyrna Beach. C.L. Location WSBB New Conception (1240) WSBC Chicago, III. (240) WSBC Gt, Barrington, Mass. 860) WSBT South Bend, Ind. 960) WSCM Panama City Beach. Florida 1290 (1320) WSCM Panama City Beach, Inc. WSCM Panama City Beach, WSCM Panama City Beach, WSCM Scranton, Pa. WSDR Sterling, II. WSEB Sebring, Fla. WSEL Bontotoc, Miss, WSEN Baldwinsville, N.Y. WSER Elkton, Md. WSET Baldwinsville, N.Y. WSET Baldwinsville, N.Y. WSET Sanford, Fla. WSFR Sanford, Fla. WSFR Sanford, Fla. WSGA Sayannah, Ga. WSGC Elberton, Ga. WSGC Bayannah, Ala. WSGN Sayannah, Ala. WSGN Sayannah, Ala. WSGN Sayannah, Ca. WSHF Sheffield, Ala. WSHF Sheffield, Ala. WSH Shippenburg, Pa. WSIB Beaufort, S.C. WSID Baltimore, Md. WSIM Prichard, Ala. WSIM Printsville, Ky. WSIN Winter Haven, Fla. WSIG Mount Jackson, Va. 790 WSIG Mount Jackson, Va. 790 WSIP Paintsville, Ky. 1490 WSIP Paintsville, Ky. 1490 WSIP Paintsville, Ky. 1490 WSIP Paintsville, Ky. 1490 WSIV Pekin, III. 140 WSIV Paken, III. 140 WSIV Asabville. Tenn. 980 WSJR Madawska, Me. 1000 WSJR Madawska, Me. 1000 WSJR Madawska, Me. 1000 WSJR Madawska, Me. 1000 WSJR Minston-Salem, N.C. 600 WSIK Montpelier-Barre, Vt. 1240 WSKT Asheville, N.C. 1230 WSKT Asheville, N.C. 1230 WSKT Asheville, N.C. 1230 WSLK Golensburg, N.Y. 1400 WSLI Jackson, Miss. 930 WSLI Sakson, Miss. 1220 WSMT Sandersville, Tenn. 1450 WSMT Sandersville, Ga. 1490 WSNT Sandersville, Ga. 1490 WSNT Sanataga Sprgs. N.Y. 900 WSPT Stevens Pt. Wiss. 1010 WSPA Sparatanburg, Sc. 950 WSPT Springfield, Mass. 1270 WSRT Milton, Fla. 1490 WSRT Milton, Fla. 1490 WSRT Marborugh, Mass. 1470 WSRT WHIllsboro, Ohio 1590 WSRO Marlborough, Ma WSRW Hillsboro, Ohio Mass. 1470 WTOR Torrington. Con 1590 WTOT Marianna, Fla.

n.c.Location1250WSSB Durham, N.C.1470WSSC Sumter, S.C.1220WSSO Starkville, Miss.1360WSSO Starkville, Miss.1360WSSO Starkville, Miss.1360WSTC Stamford, Conn.1221WSTT Stamford, Conn.1230WSTK Woodstock, Va.14470WSTK Sturgis, Mich.1280WSTP Salisbury, N.C.14480WSTS Stassena, N.Y.1550WSTV Stuebenville, Ohio1370WSU B Groton, Conn.1370WSU B Groton, Conn.1300WSU Natiose, N.C.1440WSV Scarewe, Va.1240WSV L Shelbyville, Ind.1300WSV Palatka, Fla.1320WSW Pennington Gap, Va.1340WSYB Sutland, Vt.1340WSYB Statiand, Vt.1340WSYB Statiand, Vt.1340WSYB Statiand, Vt.1340WSYB Statiand, Vt.1340WTAD Cambridge, Mass.1340WTAD Cambridge, Mass.1340WTAD Cambridge, Mass.1340WTAD Cambridge, Mass.1340WTAD Cambridge, Mass.1340WTAP Carborn, M.Va.1440WTAX Springfield, III.1550WTAP Carborn, M.Va.1440WTAY Sobinson, III.1550WTAP Charestorn, M.Va.1440WTA 1590 900 1260 1390 1540 WTNT Tallahassee, Fia. WTOB Winston-Salem, N.C. WTOC Savannah, Ga. WTOD Toledo, Ohio WTOE Spruce Pine, N.C. WTOJ Tomah, Wis. WTOL Toledo, Ohio WTON Staunton, Va. WTOP Washington, D.C. WTOP Mashington, D.C.

 Kc.
 C.L.
 Location
 Kc.

 1490
 WTPR Paris, Tenn.
 710

 1340
 WTRA Latrobe, Pa.
 1480

 1230
 WTRB Ripley, Tann.
 1570

 1240
 WTRC Eikhart, Ind.
 1340

 1400
 WTRC Eikhart, Ind.
 1340

 1400
 WTRC Eikhart, Ind.
 1340

 1400
 WTRN Tyrone, Pa.
 1340

 1400
 WTRN Dyersburg, Tenn.
 1330

 1400
 WTRN Dyersburg, Tenn.
 1330

 1600
 WTRN Taropare, Ga.
 620

 1430
 WTR Sanford, Fia.
 1400

 1430
 WTR Taropare, Or.
 1500

 1430
 WTR Sanford, Fia.
 1490

 1430
 WTR Taropare, N.Y.
 980

 980
 WTSA Bratileboro, Vt.
 1450

 1420
 WTSB Lumberton, N.C.
 1340

 1520
 WTE Towanda, P Kc. | C.L. Location WTYC Rock Hill, S.C. WTYM East Longmeadow, Mass. WTYN Tryon, N.C. WTYN Marianna, Fla. WUFD Amherst, N.Y. WULA Eufaula. Ala. WUND Uhrichsville, Ohio WUNE Baton Rouge, La. WUNS Lewisburg, Pa. WUSJ Lockport, N.Y. WUSJ Lockport, N.Y. WUSJ Lewisburg, Pa. WUSJ Lockport, N.Y. WUSJ Havelock, N.C. WUSJ Leckiest, N.Y. WUSJ Havelock, N.C. WUSJ Altoona, P.N. WVAF Richwood, W.Va. WVCF Coral Gables, Fla. WVCF Columbus, Miss. WVIP Mt. Kisson, N.Y. WVJD Caguas, P.R. WVJD Columbus, Ohio WVLD Valdosta, Ga. WVLN Olney, III. WVMI Biloxi, Miss. WVMI Biloxi, Miss. WVMI Burlington, Vt. WVNA Tuscumbia, Ala. WVOB Bel Air, Md.
 680
 W VM I Builoxi, Miss.
 570

 1260
 WVM T Burlington, VI.
 620

 1340
 WVN A Tuscumbia, Ala.
 1590

 1540
 WVN J Newark, N.J.
 620

 1470
 WVOB Bel Air, Md.
 1520

 1370
 WVOE Chadburn, N.C.
 1590

 1370
 WVOE Chadburn, N.C.
 1590

 1370
 WVOE Chadburn, N.C.
 1590

 1300
 WVOH Hazelnurst, Ga.
 920

 1300
 WVOH Berry Hill, Tenn.
 1470

 1300
 WVON Licka, Miss.
 1270

 1290
 WVOS Liberty, N.Y.
 1240

 620
 WOV Wilsan, N.C.
 1420

 1300
 WVON Stouburg, Pa.
 840

 620
 WOS Stouburg, Pa.
 840

 620
 WVOS Wits River, and, Miss.
 1260

 160
 WVW Grafton, WVa.
 1260

 1700
 WVOS Stouburg, Pa.
 840

 180
 WVG Stouburg, Pa.
 840

 190
 WVG Stouburg, Va.
 1260

 190
 WVW Grafton, WVa.< WWBZ Vineland, N.J. WWCA Gary. Ind. WWCC Bremen, Ga. WWCH Clarion, Pa. WWCO Waterbury. Conn. 0.061 WZRO Jacksonville Beach, WZYX Cowan, Tenn. WZZZ Boynton Beach, Fla. 610 WWDC Washington, D.C. 980 WWDS Everett, Pa.

Kc. C.L. Location Kc. WWGP Sanford, N.C. WWGS Tifton, Ga. WWHG Hornell, N.Y. WWHG Hornell, N.Y. WWHY Huntington, W.Va. WWIL Str. Lauderdale, Fla. WWIN Baltimore, Md. 1430 1470 WWIN Baltimore, Md. WWIS Black River Falls, Wis, 620 621 622 632 6400 7400 < 1450 1470 1390 1480 1420 970 920 1540 1480 730 1590 1150 1250 1570 1050 WZOK Jacksonville, Fla. WZOO Spartanburg, S.C. WZRH Zephyr Hills, Fla.

Florida

U. S. FM Stations by States

Abbreviations: Mc., megacycles; asterisk (*) indicates educati	onal	station		
Location C.L. Mc. Location C.L. Mc. Location C.L.	Mc.	Location	C.L.	Mc.
ALABAMA WSFM 93.7 Tuscumbia WVNA			ARIZONA	
Albertville WAVU-FM 105.1 Clanton WKLF-FM 100.9 Tuscaloosa WTBO-FM	95.7	Mesa	KWJB-FM KBUZ-FM	
Andalusia WCTA-FM 98.1 Decatur WHOS-FM 102.1 WUUA	*91.7	Phoenix	KELE KFCA	
Anniston WHMA-FM 100.5 Homewood WJLN 104.7 ALASKA			KOOL-FM KITH	94.5
Birmingham WAPI-FM 99.5 WNDA 92.9 Anchorage KNIK			KNIZ	
156 WHITE'S RADIO LOG Montgomery WFM1 98.9 Collego KUAC			KOY-FM KPHO-FM	92.5

Location	C.L. KTAR-FM		Location	C . <i>L.</i> KFOG	Mc. 104.5	Location Palm Beach	C.L. ₩₩ <u>05</u> .FM	97.9		C.L. Mc. WETN-FM *88.1
Sun City	KYEW KTPM	93.3 106.3		KFRC-FM KGO-FM	103.7	Pensacola St. Petersburg	WGNB	94.1	Winnetka	WNTH *88.1
Tempe Tucson	KUPD-FM KFMM KSOM	97.9 99.5		KNBR-FM KHIP KRON-FM	99.7 106.9 96.5	Sarasota Tallahassee	WTCX WYAK WFSU-FM	99.5 102.5 *91.5	Anderson	WAEM 97.9
ARKA	NSAS	92.1		KSFR	94.9	Tampa	WBGM-FM WDAE-FM	98.9 100.7	Bloomington	WFIU *103.7 WTTV-FM 92.3
Blytheville	KLCN-FM	96.1		KQBY-FM KXKX KYA-FM	88.5 93.3		WFLA-FM WPKM	93.3	Columbus Connersville	WCSI-FM 98.3 WCNB-FM 100.3 WBBS-FM 106.3
Ft. Smith Harrison	KFPW-FM KHOZ-FM	102.9	San Jose	KSJO-FM KRPM	92.3 98.5	Winter Haven	WINT-FM	97.5	Crawfordsviile Elkhart	WCMR-FM 95.1
Jonesboro Little Rock	KBTM-FM KASU KARK	91.9	San Luis Obispo	KSJS KATY-FM	90.7 96.1	Winter Park		*91.5	Evansville	WIKY-FM 104.1 WEVC *91.5
Mammoth Spring Osceola	gs KAMS	103.9	San Rafael San Mateo	KTIM KCSM	*90.9	Albany	WGPC+FM	104.5	Franklin	WPSR 90.7 WFC1 *89.3
Pine Bluff Siloam Springs	KOTH-FM	32.3	Santa Ana Santa Barbara	KWIZ+FM KFIL KRCW	106.3	Athens Atlanta	WGAU-FM WABE	102.5 *90.1 94.9	Frankfort Fort Wayne	W1LO-FM 99.7 WPTH 95.1
	ORNIA		Santa Darbara	KRCW KDB-FM KMUZ	93.7 103.3		WAVQ WPLO-FM WGKA-FM	103.3	Gary Goshen	WGVE *88.1 WGCS 91.1 WGRE *91.7
Alameda Anaheim	KJAZ KEZR-FM	95.9	Santa Clara Santa Cruz	KSCU KSCO-FM	*90.1 99.1	Augusta	WSB-FM WAUG-FM	98.5	Greencastle Greenfield Greensburg	WSMJ 99.5
Arcata Atherton	KTOO KPEN KAFI	*90.5	Santa Maria	KEYM KSMA-FM KCRW	99.1 102.5	Columbus	WBBQ-FM WRBL-FM	103.7 93.3	Hammond Hartford City	WTRE 107.3 WYCA 92.3 WHC1 *91.9
Auburn Avalon Bakersfield	KAFI KBIG KERN-FM	104.3	Santa Monica Sierra Madre	K SRF K MAX	103.1	Gainesville Lagrange	WDUN-FM WLAG-FM	104.1	Huntington Indianapolis	WVSH *91.9 WAJC *104.5 WICR *88.7
Berkeley	KQXR	101.5	Stockton	KUOP KSTN-FM KWG-FM	*91.3	Macon Marietta	WMAZ-FM WBIE-FM WKLS	99.1 101.5		WISH-FM 107.9
20.1000	KPFB KPAT-FM	*89.3 102.9	Thousand Oaks	KNJO	92.7	Newnan Savannah	WCOH-FM WTOC-FM	96.7		WAIV 105.7 WFBM-FM 94.7 WFMS 955
Bijou Claremont	KHUR KSPC	99.9 *88.9	Turlock Ventura-Oxnard	KVEN-FM	100.7	Swainsboro	WJAT-FM WLET-FM	101.7		WIAN *90.1 WIBC-FM 93 1
Coachella El Cajon	KCHQ-FM KECR	93.3		KONG FM KWME-FM	92.1		WAII		Jasper Kokomo	WITZ-FM 1047 WFK0 100.5
Eureka Fresno	KIEM KARM-FM KCIB-FM	101.9	West Covina Woodland	KATT		Honolulu	KAIM+FM KPOI+FM	97 5	Madison Marion	WORX-FM 967 WMR1-FM 106.9
	KFRE-FM KMJ-FM	93.7		ORADO KRNW	97.3		K VO K K U O H	*88.1	Muncie	WBST *90.7 WMUN 104 1 WWH1 *91.5
Garden Grove	K X Q R K G G K	102.7	Colorado Springs	KRCC	*91.3 96.5	ID	АНО		New Albany New Castle	WWH1 *91.5 WNAS *88.1 WCTW-FM 102 5
Glendale	KFMU KUTE	97.1		KSHS KVOR-FM	*90.5 92.9	Bolse Lewiston	KB01-FM Koze-FM	96.7	North Vernon	WYSN *91.1 WOCH-FM 106.1
Hayward	KBBM KTYM-FM KSDA	103.9	Cortez Denver	KZFM KFML-FM KDEN-FM	94.1	Pocatello	KBGL	*88.7	Princeton Richmond	WRAY-FM 98.1 WGLM 96.1
LaSierra Lodi	KOVD EM	07 7		KLIR-FM	100.3	Alton	INOIS WOKZ-FM	100. 3	Salem Seymour	WS1M-FM 98.9 WIOD 93.7
Long Beach	KFOX-FM KLON KNOB	*88.1	-	KLZ-FM KOA-FM KTGM	103.5	Anna Arlington Heigi	WOKZ-FM WRAJ-FM hts WNWC	92.7	South Bend	WETL *91.9 WNDU-FM 92.9
Los Altos Los Angeies	KPGM KABC-FM	97.7 95.5	Grand Junction	KREX-FM	92.3	Aurora Bloomington	WKKD-FM WJBC-FM	101.5	Terre Haute	WPFR 102.7 WTH1-FM 99.9 WVTS 100.7(3) WSKS *91.3
	KBBI KBCA KBIQ	107.5		CTICUT		Carbondale Carmi	WROY-FM	97.3	Wabash Warsaw	WSKS *91.3 WRSW-FM 107.3
	KBMS	105.9	Bridgeport Brookfield	WGHF	95.1	Cham¤aign Chicago	WDWS-FM WLRW-FM WBBM-FM	94.5 96.3	Washington	WFML 106.5 WBAA-FM 99.1
	KCBH KFAC-FM KGLA	92.3	Danbury	WLAD-FM WHCN	105.9	Chicago	WBEZ	*91.5		AWA
	KGLA KHJ KMLA	100.3	1	WDRC-FM WCCC-FM WSCH	106.9		WDHF WEBH	95.5 93.9	Ames Boone	WOI-FM *90.1 KFGQ *99.3
	KNX-FM KPFK KPOL-FM	*90.7		WSCH WRTC-FM WTIC-FM WINF-FM	*89.3 96.5		WEFM WHFC WENR-FM	97.9	Cedar Falls Cedar Rapids	KTCF *88.1 KHAK+FM 98.1
		94.7	Meriden	WBMI	95.7		WFMF WFMQ	100.3	Clinton Davenport	WMT-FM 104.5 KROS-FM 96.1 WOC-FM 103.7
	KLAC-FM KUSC	102.7	Middletown New Haven	WESU WNHC-FM WYBC-FM	99.1		W F M I W K F M	98.7	Des Moines	KDPS *88.1 KDM1 97.3
	KXLU Khof	99.5	Stamford Storrs	WSTC.EM	96.7		WMAQ-FM WMBI-FM WNIB	101.1		KSO 98.5 WHO.FM 100.3
Marysville Modesto	KMYC-FM KBEE-FM	103.3	Waterbury Westport	WHUS WATR-FM WMMM	92.5 107.9		WSBC-FM	93.1	lowa City Muscatine	WMT-FM 91.7 KWPC-FM 99.7
Monterey Mountain View	KTRB-FM KHFR KFJC	96.9	DELA	WARE		Decatur DeKalb	WJJD+FM WSOY-FM WNIC	102.9	Sioux City Storm Lake	KDVR 97.9 KAYL-FM 101.5 KWAR 89.1
Newport Beach Oakland	KNBB KAFE KUDE	103.1	Dover Wilmington	WDOV-FM WDEL-FM	93.7	E St Louis	WLBK-FM WBBR	92.5 101.1	Waverly	NSAS
Oceanside Ontario	KASK-FM	93.5	D.	. С.	99.5	Effingham	WCRA-FM WELG	103.9	Emporia	KSTE *88.7
Oxnard Pasadena	KAAR KPCS KPPC-FM	104.7		WASH-FM WAMU-FM	97.1	Elgin Elmhurst	WRMN-FM WEPS WRSE-FM	*88.1	Garden City Kansas City	KNCO-FM 97.3 KCJC 98.1 KANU *91.5
Palm Springs Redendo Beach	KDES-FM KDES-FM	104.7		WFAN WGAY	100.3	Elmwood Park Evanston	WXFM	105.9	Lawrence Leavenworth Manhattan	KCLO-FM 98.9 KSDB-FM *88.1
Redlands Ridgecrest	KCHL FM KLOA-FM	96.7		WGMS-FM WGTB	103.5	Galesburg	WEAW WNUR WYKC-FM	*88.1	Newton Ottawa	KJRG+FM 92.1 KTJO-FM *86.1
Riverside	KPLI KACE-FM	99.1 92.7		WMAL-FM WOL-FM WRC-FM	107.3	Glen Ellyn Harrisburg	WELF-FM WEBQ-FM	107.1	Parsons Salina	KPPS-FM *91.1 KAFM 99.9
Sacramento	KCRA-FM	97.5		WTOP-FM WWDC-FM	96.3	Highland Park Jacksonville	WEEF-FM WLDS-FM WAJP	103.1 100.5 93.5	Topeka Wichita	KTOP-FM 100.3 KFH-FM 100.3 KMUW *89,1
	KFBK-FM KEBR KH1Q	100.5		RIDA	101.1	Joliet Kankakee	WJOL-FM WKAK-FM	96.7		KCBM-FM 107.3
	KIML KRAK-FM	95.3 92.9	Coral Gables	WXBR WVCG-FM	105.1	Kewanee Litchfield	WKSD WSMI-FM	*91.9 106.1		TUCKY
	KSFM KXR0	96.9 98.5	Daytona Beach Fort Lauderdale	WNDB-FM WWIL-FM	94.5 103.5	Macomb Mattoon	WWKS WLBH-FM	96.9	Ashland Central City	WCMI-FM 93.7 WNES-FM 101.9 WFUL-FM 104.9
Salinas	KX0A-FM KSBW-FM	107.9		WFLM WFTL-FM WMFP	105.9	Morris Mt. Carmel	WRM1-FM WSAB	94.9	Fulton Glasgow Hazard	WGGC 95.1 WKIC-FM 96.5
San Bernardino	KVCR KFMW KEBS	99.9	Fort Pierce			Mt. Vernon Oak Park	WVMC-FM WMIX-FM WOPA-FM	94.1 102.7	Henderson Hopkinsville	WSON-FM 99.5
San Diego	KOGO-FM KFMB-FM	94.1	Jacksonville	WRUF-FM WJAX-FM WMBR+FM	95.1 96.1	Olney Paris	WSEI-FM	92.9	Lexington	WKOF 10C.3 WBKY *91.3
	KFMX-FM KGB-FM	96.5 101.5	Miami	WMBR+FM WKAT-FM WGBS-FM WIOD-FM	93.3 96.3 97.3	Park Forest Park Ridge	WPRS-FM WRHS WMTH	*88.5	Louisville	WLAP-FM 94.5 WFPK *91.9 WFPL *89.3
	KITT KJLM	105.3 98.1		WIHS	*91.7	Peoria Quincy	WMBD-FM WGEM-FM		Madisonville	WFPL 89.3 WFMW-FM 93.9 WNGO-FM 94.7
	K L R O K P R 1 K S D S	94.9 106.5		WEDR WWPB-FM WKAT-FM	101.5	Robinson	WTAD-FM WTAY-FM WROK-FM	100.7	Owensboro	WOMI-FM 92.5 WVIS-FM 96.1
San Fernando San Francisco	KSUS KVFM KALW	94.3	mianii Beach	WKAT-FM WAEZ-FM WMBM-FM	93.1 94.9 93.9	Rockford Rock Island Skokie	WHBF-FM WRSV	97.5 98.9 98.3	Paducah	WPAD-FM 96.9 WKYB-FM 99.3
	KBC0 KCBS+FM	105.3	Ocala Orlando	WMOP-FM WDBO-FM	93.7 92.3	South Beloit Springfield	WBEL-FM WTAX-FM	103.1	Prestonburg	WDOC-FM 95.5
	K D F C K E A R	102.1		WHOO+FM WKIS-FM	96.5 100.3	Taylorvilie Urbana	WGGM WILL-FM	95.0 *90.9	WHITE'S RAI	DIO LOG 157

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Louis Anage E. Lauis M WCL PH	Location	C.L.	Mc.	Location	C .L.	Mc.	Location	C .L.	Mc.	Location	C.L. Mc.
Altzeicher, Marten Weiter ein Weiter ein				E. Lansing	WKAR-FM	*90.5	Glassboro Hackettstown	WGLS+FM WNTI	89.7 *91.9		WIST-FM 95.1 WSOC-FM 103.5
Jannas Life F. 40 Cond Republy With C. 74 State With C. 74 State With C. 74 State S		WIB0-FM	98.1	-	WSWM	99.1	Long Branch	WRLB	107.1	Clingmon's Pk	WYFM 104.7
New Gram WEEL Wield Free	Jennings	KJEF-FM	A 92.7		WGMZ-FM	107.9		WHB1	105.9	Concord	WEGO-FM 97.9
MARCH 2010 MARCH 2		WBEH	89.3	Granu napius	WJEF-FM	93.7		WVNJ-FM	100.3	Elkin	WIFM-FM 100.9
Burnadot Preduction Presson		WRCM	97.1		WMAX-FM	101.3	New Brunswk.	WCTC-FM			WBB0-FM 93.3
MARTIC - M WARD - FM WARD - FM Generation	Shreveport	WMMT KRMD-FM	95.7	.W	00D-FM 105	.7 (s)	Paterson	WPAT-FM	93.1	-	WAGY•FM 105.3
MAINE Crearwith, With, Wit					WXT0-FM	97.9	Red Bank	WFHA-FM	106.3	Goldsbore	WEOR 96.9
Ausunts UP ALI-F M 10-21 WID ***** Hishand R. Law WID ************************************	м	_		Greenville, Mict	1 .		Trenton	WBUD-FM	101.5		WQMG-FM 97.1
Branker, Carriero, W. W. 10, F. M. 102, Strainero, W. W. 10, F. M. 102, W. 10,	Augusta	WFAU-FM			WHPR	*88.1		WCMC-FM	97.5 100.7		WHNC-FM 92.5
Carrier Wilson Wilson Carrier Wilson Wilson Million Million <td>Bangor Brunswick</td> <td>W B0 R</td> <td>*91.1</td> <td></td> <td>WJBL+FM</td> <td>94.5</td> <td></td> <td></td> <td>99.1</td> <td>Hendersonville</td> <td>WHKP-FM 102.5</td>	Bangor Brunswick	W B0 R	*91.1		WJBL+FM	94.5			99.1	Hendersonville	WHKP-FM 102.5
Dress W FR / Fr / M Solar W FR / Fr / M Solar / M W FR / Fr / M Solar / M MARYLAND Annapolis W AND F / M Solar / M W / M Solar / M W / M W / M W / M W / M Solar / M W W W W W W <	Caribou Lewiston	WFST-FM WCOU-FM	93.9	Interlochen	WGYA	103.1			*89.1	Hickory	WHKY-FM 102.9
Public de prinze WILLY-FM 84.20 WILLY-FM 82.3 WILLY-FM 82.3 MARY LAND Midand Will MODE FM 92.5 Link Alter M 92.5 Link Alter M 92.5 Link Alter M 92.5 WILLY-FM 66.5 Market MARY LAND Midand Will MODE FM 92.5 Midand Will MODE FM 92.5 Midand WILLY-FM 66.3 Market MARY LAND Midand Will MODE FM 92.5 Will MODE FM 92.5 Will MODE FM 92.5 Will MODE FM 92.5 Midand Midand FM Midand FM Midand FM Midand FM Midand FM Midand FM Midand FM<		WRJR	91.5		WKHM-FM	106.1		KHEM	96.3	High Point	WHPE-FM 95.5
MARYLAND Midland WGDC-FM 92.7 Reaver NEW Corr USD C-FM 92.7 Bailtaner WGDC-FM Midland WGDC-FM 92.7 NEW Corr WGDC-FM 92.7 Bailtaner WGDC-FM Midland WGDC-FM 92.7 NEW Corr Midland 92.7 NEW Corr 92.7 NEW	Poland Springs	WMTW-FM	94.9		WJIM-FM	97.5	Los Alamos	KRŚN-FM	98.5		WMFR-FM 99.5
Annapolis WINAU-THO Baitissee NEW YORK Camponis VIRDUP Status Baitissee WALE-FM (0.5) WIDD M WIDD M WIDD M Status WIDD M WIDD M Status WIDD M			97.9		WQDC-FM	99.7	Roswell				WEWO-FM 96.5
WANG, YANG, Y			99.1				NEW	YORK		Lexington	WBUY-FM 94.3
Baitimore WC 0.7 + M 02.5 WC 0.7 + M 02		WANN-FM	107.9	Oak Park	WLDM	95.5		WAMC	*90.3		WTSB-FM 95.7
Dataman W C 00 FM 1022 W STR - FM 1023 W STR - FM 1023	Daldimone	WAQE-FM	101.9		WOMC	104.3		WMB0-FM WTFM	96.1 103.5		WKBC-FM 97.3
WFMM + M Statute WIND F M Statute<	Ballimore	WCAO-FM	102.7	Spring Arbor	WSAE	*89.3		WGU-FM	102.3	INALCI SIN	WPTF-FM 94.7
Water Water <th< td=""><td></td><td>WFMM-FM</td><td>93.1</td><td></td><td></td><td>103.1</td><td></td><td>WKOP+FM</td><td>95.3</td><td></td><td>WREV-FM 102.1</td></th<>		WFMM-FM	93.1			103.1		WKOP+FM	95.3		WREV-FM 102.1
WEAL-FM All Manabab WKBO PALS WKBO PALS <t< td=""><td></td><td>WSID</td><td>92.3</td><td></td><td></td><td>95.7</td><td></td><td>WBEN-FM</td><td>106.5</td><td>Rocky Mount</td><td>WEMA 100.7</td></t<>		WSID	92.3			95.7		WBEN-FM	106.5	Rocky Mount	WEMA 100.7
Bethesda Wild F.F.M. 93.3 Wilf F.F.M. Minacapolis K.T.S.F.M. 93.7 W.R.Y.F.M. WC.R.F.M. 93.7 WILF F.F.M. WC.R.F.M. 93.7 WILF F.F.M. WC.R.F.M. 93.7 WILF F.M. WC.R.F.M. 93.7 WILF F.M. WC.R.F.M. 93.7 WILF F.M. WC.R.F.F.M. 93.7 WILF F.M. Status WC.R.F.M. 93.7 WILF F.M. WC.R.F.M. 93.7 WILF F.M. WC.R.F.M. 93.7 WILF F.M. 93.7 WILF F.					KMSO	*90.5		WBFO	*88.7	Roxboro Salisburv	WRX0+FM 96.7 WSTP-FM 106.5
Datassa WHEP 5-Ri 0.22 WHEP 202 WHEP 202 <th< td=""><td>Retherda</td><td>WSID-FM</td><td>92.3</td><td>Minneapolis</td><td>KTIS-FM</td><td>*98.5</td><td></td><td>WGR-FM</td><td>96.9</td><td>Sanford</td><td>WWGP+FM 105.5</td></th<>	Retherda	WSID-FM	92.3	Minneapolis	KTIS-FM	*98.5		WGR-FM	96.9	Sanford	WWGP+FM 105.5
Commerciand Current Stars, Wirks, FM 05-FM 032 Current Stars, Wirks, FM 05-FM 032 Wirks, FM 05-FM 032 Wirks, FM 05-FM 032 Frederick Hagestown Wirks, FM 05-FM 032 St. Clouis Park (KS) FM 105- St. Clouis Park (KS) FM 105- Wirks, FM 05- St. Clouis Park (KS) FM 105- Wirks, FM 05- St. Clouis Park (KS) FM 105- St. Clouis FM 105- St. Clo		WHFS-FM	102.5		WIGL-EM	99.5				Statesville	WFMX 105.7
Production WUPLETEN 983 St. Cloud Fr. Adv. F.M. (04.7) Charry Valley Willington WUPLETEN 983 St. Cloud KRST-FOR Observed St.	Cumberland	WCUM-FM	102.9		WPBC-FM WAYL	101.3	Central Square	WIFE-FM	103.3	Thomasville	WTNC-FM 98.3
Have de Grase Warding fein KNOP 95.3 Öprinning WCL1-FM (95.1) Wintens-salem WARD F.M (95.1) Mission-Salem Worth F.M (95.1) Jakkand Wintens-salem WARD F.M (95.1) Mission-Salem WINTER-TM (95.1) Jakkand WISSISSIPPI Wintens-salem WISSISSIPPI Amherst WARD F.M (95.1) Jakkand WISSISSIPPI Wintens-salem WISSISSIPPI Amherst WARD F.M (95.1) Jakkand WISSISSIPPI Wintens-salem WISSISSIPPI Amherst WARD F.M (95.1) Jakkand WISSISSIPPI Wintens-salem WISSISSIPPI Boston WIND F.M (95.1) Grand City WORD F.M (95.2) Hiname WIND F.M (95.2) WIND F.M (95.2) WIND F.M (95.2) WIND F.M (95.2) WIND F.M (95.2) Jakeastown WIND F.M (95.2) WIND F.M (95.2) WIND F.M (95.2) WIND F.M (95.2) WIND F.M (95.2) Jakeastown WIND F.M (95.2) WIND F.M (95.2) WIND F.M (95.2) WIND F.M (95.2) WIND F.M (95.2) Jakeastown WIND F.M (95.2) WI		WJEJ-FM		St. Cloud St. Louis Park	KFAM-FM	104.7	Cherry Valley	VILW	101.9	Wilmington	WPRV 93.9
Opsitional Actuary and actuary with the provided in the		WARK-FM	106.9	St. Paul	KNOF	95.3	Corning	WCLI-FM	106.1		
Mailori als Company Microsoft als Wick in mission Ochical MASSACHUSETTS Amberat WARF # 88.5 Microsoft in mission Mick in mission	Oakland	WBUZ	95.5			94.9		WKRT-FM WOIV			WYES 107.5
MASSACHUSETTS Amberst WARE-FM 100-7 Garden City WLIE 92.7 OHIO Boston WBUR 90.5 March 100.7 MASSACHUSETTS MARE-FM 92.5 March 100.7 MARE-FM 92.5 Atron WARE-FM 92.5 Boston WBUR 90.5 Clayton KFU0.7M 94.5 Harnell WHOF-FM 90.7 Atron WARE-FM 101.7 WEEL-FM 100.7 WEEL-FM 100.7 KEEV 100.7 KEEV 100.7 WBUR 90.7 Atron WREE-FM 101.7 WHOF-FM 101.7 KEEV 100.7 KEEV 100.7 WEEL-FM 100.7 WBE-FM 101.7 Atron WREE-FM 101.7 WHOF-FM 102.5 KEEV 100.7 WEEL-FM 100.7 WEEL-FM 100.7 MEEL 1	Waldorf	WSMD	104.1			102.9	Eimira Floral Park	W E C W WSHS	*88.1		WSJS-FM 104.1
Amherst WILL FW MISSOURI Henpstaal WILL FW Guyten Guyten WILL FW Guyten Guyten Guyten Guyten Guyten Guyten Guyten				Laurel	WNSL-FM	100.3	Garden Uity	WLIR	92.7		
WFCR *86.5 WEDEN 103.1 WEDEN 103.1 WEDEN 103.1 WEDEN 103.1 WEDEN 103.1 WEDEN 104.7 WEDEN 10		WAMF	*88.1			00.1	Hempstead	WHLI-FM	98.3	Akron	WAPS *89.1
Boston WBUR *90.5 WUELF M (06.7) WELF M (07.7) WELF M (07.7)		WECR	*88.5	Clayton	KFU0-FM			WWHG-FM	105.3	Alliance	
wtp:">wtp:" Kansas City KCM0.Fm 94.3 (KEFS) wtp:">wtp:" 103.7 (MESS) Athens Wtp:">wtp:" 103.7 (MESS) Athens Wtp:">wtp:" 103.7 (MESS) Athens Wtp:" 103.7 (MESS) Barates	Boston	WBUR	*90.9	Joplin		96.1 92.5	Ithaca	WICB	*91.7	Ashland	WNCO-FM 101.3
WUDT-FM 1003 WOBF-FM WOBF-FM 0033 WOBF-FM Jamestown WUDF-FM 033 WOBF-FM Balantanon WOBF-FM WOBF-FM 0035 WOBF-FM Brockina Erockina Cambridge WRC, FM 95.5 WDC FM 03.5 Barca WDC FM		WBZ-FM	106.7	Kansas City	KCMO-FM	94.9		WVBR-FM	101.7	Athens	WOUB-FM *91.5
WH RU WH RU KK <		WEEI-FM	103.3		KTSR	*90.1		WJTN-FM	93.3	Bellaire	WOMP-FM 100.5
WR 0. FM 98.5 WERT-FM PR/S7		WERS WHDH-FM			KCMK	93.3	Mt. Kisco	WRNW	107.1		WBGU *88.1
Brocking Cambridge WEBT-FM 97.7 WBSK-FM KPRS-FM 108.3 WEBT-FM WEDF-FM 98.3 WEBT-FM WEBT-FM 98.3 WEBT-FM WEBT-F		WRKO-FM	98.5		KMBC-FM			WABC-FM	95.5	Canton	WHBC-FM 94.1
Cambridge WCBD-FM (9):1 Chillicothe WEBC-FM (9):1 Chillicothe WEBC-FM (9):3 Fitchburg WTBS-BR 53, Joseph KUOC.FM (9):5 WEBC-FM (9):5 (Clininati WCPC-FM (9):5 Fitchburg WTBS-BR 51, Joseph (St. St. St. Joseph (St. St. St. St. St. St. St. St. St. St.	Brockton	WBET-FM	97.7		KPRS-FM KXTR			WBFM	101.9	Calina	WTOF-FM 98.1
WF EUV FTM St. Josenbar KUSN-FM 105.7 WF EUV FTM 106.7 WF EUV FTM <td></td> <td>WGBH-FM</td> <td>*89.7</td> <td></td> <td>KBOA.EM</td> <td>98.9</td> <td></td> <td></td> <td>97.9</td> <td>Chillicothe</td> <td>WBEX-FM 93.3</td>		WGBH-FM	*89.7		KBOA.EM	98.9			97.9	Chillicothe	WBEX-FM 93.3
Hitchburg WKAR-FM With Au-FM 93. Status KADT 66.5 WKRF.FM 98.9 WKRDUG 93.3 Greenhild WHAU-FM 92.3 WAMV-FM 92.3 WANV-FM 92.3 WKRF.FM 94.7 Lawrence WGR WHL-FM 99.7 KSTL-FM 98.7 WKRF.FM 96.7 Cleveland KYRF.FM 96.7 Lowell WLLH-FM 90.7 KSTL-FM 98.7 WKRF.FM 96.7 WSAL-FM 96.6 Lynn WHIL-FM 90.7 KSTL-FM 98.7 WCRF.FM 96.7 WCRF.FM 96.7 Plymouth WSK WSK 95.7 Springfield KTTS-FM 96.7 WCRF.FM 96.7 WCRF.FM 96.7 Shadiov WMRS.FM 93.1 Settisburg WSK WCRF.FM 96.7 WCRF.FM 96.7 Warbar WKRF.FM 94.1 WCRF.FM 95.7 WDRF.FM 96.7 WCRF.FM 96.7 WARS.FM <td< td=""><td></td><td>WTBS</td><td>88.1</td><td>St. Joseph</td><td>KUSN-FM</td><td>105.1</td><td></td><td>WFUV</td><td>*90.7</td><td>Gincinnati</td><td>WAEF-FM 104.3</td></td<>		WTBS	88.1	St. Joseph	KUSN-FM	105.1		WFUV	*90.7	Gincinnati	WAEF-FM 104.3
Greenfield Haverhill Haverhill WHAI-FM 99.3 Lawrence WCHJ 93.7 Lawrence WCHJ 93.7 Lawrence WCHJ 93.7 Lawrence WCHJ 93.7 Lynn WHL-FM 97.5 New Bedford WDLL-FM 97.5 New Bedford WDLL-FM 93.7 Wedford WDLL-FM 93.7 WORF 103.3 WDC-FM 93.7 WORF 103.3 WDC-FM 93.7 WORF 103.3 WDC-FM 93.7 WDC-FM		WFGM-FM WKOX-FM	104.7	St. Louis	KADI	96.5		WKCR-FM	*89.9		WAKW-FM 93.3
Lawrence WGHJ 93.7 Lowell Lowell WLLF-M 99.7 Lynn WHL-FM 99.7 New Bedford WHL-FM 97.7 New Bedford WHL-FM 97.7 New Sedford WHC-FM 93.7 New Sedford WHC-	Greenfield Haverhill	WHAI-FM WHAV-FM	98.3 92.5		WIL-FM	92.3		WNCN	104.3		WKRC-FM 101.9 WSAI-FM 102.7
Lynn WHIL-FM 102.5 KWIX 102.5 WBOE *90.3 New Bedford WISK 107.5 Springfield KTTS-FM 94.7 WOR-FM 96.7 WOR-FM 96.7 Plymouth WBSM-FM 99.1 Wather #95.5 Work 102.5 WTSK 107.5 WDG 95.5 Springfield WTX 7X 101.5 Work 102.5 WDG 95.5 WDG 95.5 Springfield WHYN-FM 99.1 West Plains WBERASKA WDG 74.6 WDG 74.6 Syningfield WHYN-FM 93.1 WSCB *88.9 Niagara Falls WHDL-FM 95.7 WDG 74.6 WDG 74.6 Waltharmouth WORE FM 90.1 Extington KRUN-FM 93.1 Niagara Falls WHDL-FM 95.7 WHOR-FM 92.5 Will samouth WGR 96.7 Strington KRUN-FM 93.1 Pekskill WLA-FM 100.7 WOR 74.6 Will samouth WGR FM 96.1 Lincoln KRUN-FM 93.1 Riverhead WAC FM 103.1 WOR 74.6 WOR 74.6 WGR 74.6	Lawrence	WGHJ	93.7		KSLH KSTL-FM	*91.5 98.1		WNYC-FM	93.9	Cleveland	KYW-FM 105.7 WXFN-FM 106.6
New Bedford WBSM-FM 97.3 Warnouth WPLM-FM Springned Warnouth WPLM-FM Nisson Springfield WTTSE-FM 94.7 Warnouth WPLM-FM WDC0 95.7 Warnouth WBCD WDC0 95.7 Warnouth Warnouth WDC0 96.7 Warnouth Warnouth WDC0 96.7 Warnouth Warnouth Warnouth WDC0 96.7 Warnouth Warnouth Warnouth Warnouth Warnout	Lynn	WHILFM	107.9			102.5		WOR-FM	98.7		WBOE *90.3
Plymouth S. Hadley Springfield WNBH-FM WINFM 98.1 WHY, FM 98.1 WHY, FM 98.5 WHY, FM 98.7 WHY, FM 98.5 WHY, FM 98.7 WEDK *80.5 WHY, FM 98.7 WHY, FM	New Bedford	WBSM-FM	97.3	Springfield	KTTS-FM	94.7		WQXR-FM WNBC-FM	96.3 97.1		WDG0 95.5
S. Hadley WMHC *88.5 NEBRASKA WEBRASKA WEBRASKA WEBRASKA Springfield WHY-FM 93.1 Beatrice KWB2-FM 92.9 Glean WHLD-FM 93.5 WHK-FM 100.7 WSCB *88.7 Columbus KJSK-FM 92.9 Glean WHA-FM 100.7 WJW-FM 104.1 Watham WCB *84.7 Kearney-Holdrege KRNY-FM 93.1 WHK-FM 104.7 WOUD, *91.7 Watham WCF *90.1 Lincoin KRNY-FM 93.1 Schearney-Holdrege WALN-FM 103.9(s) Cleveland Hts. WCUY-FM 92.3 Winchester WHS.F.FM 99.1 Lincoin KFMQ 93.1 Wirehead WAFC-FM 103.9(s) WCUL-FM 93.9 Wincester WHS.F.FM 96.1 KICN 94.7 WOW-FM 92.3 Wook-FM 92.3 WOUL *90.9 WOUL *90.9 MichHIGAN Settsbluff KICN 94.7 Schenetady WGCF 90.9 Dayton WVIOFM 93.1 Bernin Hrbr. WHFE -FM 90.2 MAR *80.7 Schenetady WGCF 90.5 Dayton WOIN *71.7 Bernin Hrbr. WHFE -FM 93.7 NEW HAMPSHIRE WOUFM 93.7 WOR -FM	Plymouth	WNBH-FM WPLM-FM	99.1	West Plains	KWPM-FM			WRFM	105.1		WERE-FM 98.5
Wieble Wieble Seatrice KWBE-FM 92.9 Wieble	S. Hadley	W MHC	*88.5					WHLD-FM	98.5		WHK-FM 100.7
W AS-FM 63.7 Karney-Holdrege KRNV-FM 98.9 Watham Watham WCUY-FM 92.5 W. Atham WOB-FM 94.3 Lincoln KRNV-FM 93.1 Lincoln KFM 93.1 Watham WCE * 90.5 WCUY-FM 92.5 Williamstown WCE * 90.5 Watham KFM 93.1 Lincoln KFM 93.1 Winchester WAAG Pitter 94.1 Network 94.1 WCUY-FM 92.3 Worcester WAAG 96.1 KFM 94.1 Network WOW-FM 92.3 WOW-FM 92.3 Ann Arbor WUOM *91.7 Settsbluff KICN 94.1 WCM FM 96.5 WCM FM 96.5 WOW-FM 96.5 Bay City WBCM-FM 90.5 KRW FAM 97.1 Schenectady WRGM FM 97.1 East Vegas WOIN FM 98.7 Bartiningham WHE FM FM 94.7 KRW FAM 97.1 KRW FAM 97.1 East		WEDK	*91.7				Plattsburg	WEAV-FM	99.9		WNOB 107.9
W. Yarmouth Williamstown WOCB-FM 94.3 Workester Lexington KFMQ 93.1 KFMQ Williamstown WCIP-FM 103.7 Workespite WBNS-FM 97.1 WORL-FM WBS.1 WORL-FM WIRL WBS.1 WORL-FM WIRL WBS.1 WORL-FM WORL-FM 90.3 WORL-FM WIRL WIRL WORL-FM 90.3 WORL WIRL WIRL WIRL 97.1 WORL WIRL 97.1 WORL </td <td>Waltham</td> <td>WMAS.FM</td> <td>94.7</td> <td></td> <td>10</td> <td></td> <td></td> <td>WPAC-FM</td> <td>106.1</td> <td>Cleveland Hits. Columbus</td> <td>WCUY-FM 92.5 WCBF *00.5</td>	Waltham	WMAS.FM	94.7		10			WPAC-FM	106.1	Cleveland Hits. Columbus	WCUY-FM 92.5 WCBF *00.5
Wincester WIRDST-FM '93.3 WARC	W. Yarmouth	WOCB-FM	94.3		KRUN-FM	93.1	Poughkeepsie	WKIP-FM	104.7		WBNS-FM 97.1
MICHJGAN Seottsbluff K NEW-FM 93-1 WCMF 90-5 Dayton WHI0FM 63-7 Ann Arbor Bay City WUOM *91.7 NEVADA WR0A-FM 92.5 Dayton WHI0FM 63-7 Bay City WBCM-FM 96.7 NEVADA WR0A-FM 97.1 Schenectady WR0A-FM 97.1 East Vergas WOIL <fm< td=""> 104.3 Bernon Hrbr. WHF194.7 NEW HAMPSHIRE Schenectady WGFM 98.1 WAFP 98.7 Delaware WOIL<fm< td=""> 104.3 Dearborn WKMH-FM 100.7 Berlin WMOU-FM 103.7 WFD Fmont WFOB, PB 6.7 Fmont WF0B, PB 9.3 Galinolis WF0L-FM 90.7 Schenectady WOIN 90.7 Elyrin WE0L-FM 104.3 Elyrin WE0L-FM 104.3 Elyrin WE0L-FM 107.3 Elyrin WE0L-FM 107.3 Elyrin WE0L-FM 107.3 Elyrin WE0L-FM 107.3 Elyrin WE0L-FM 90.7 Galinolis</fm<></fm<>	Winchester	WHSR-FM	*91.9		KQAL-FM	94.3	Riverhead V	WEOK-FM WAPC-FM 103	101.5		WMNI-FM 99.7
MICHJGAN Seottsbluff K NEW-FM 93-1 WCMF 90-5 Dayton WHI0FM 63-7 Ann Arbor Bay City WUOM *91.7 NEVADA WR0A-FM 92.5 Dayton WHI0FM 63-7 Bay City WBCM-FM 96.7 NEVADA WR0A-FM 97.1 Schenectady WR0A-FM 97.1 East Vergas WOIL <fm< td=""> 104.3 Bernon Hrbr. WHF194.7 NEW HAMPSHIRE Schenectady WGFM 98.1 WAFP 98.7 Delaware WOIL<fm< td=""> 104.3 Dearborn WKMH-FM 100.7 Berlin WMOU-FM 103.7 WFD Fmont WFOB, PB 6.7 Fmont WF0B, PB 9.3 Galinolis WF0L-FM 90.7 Schenectady WOIN 90.7 Elyrin WE0L-FM 104.3 Elyrin WE0L-FM 104.3 Elyrin WE0L-FM 107.3 Elyrin WE0L-FM 107.3 Elyrin WE0L-FM 107.3 Elyrin WE0L-FM 107.3 Elyrin WE0L-FM 90.7 Galinolis</fm<></fm<>	Worcester	WAAB WTAG•FM	107.3		WOW-FM	92.3	Rochester	WHFM WBBF-FM	98.9 100.1		WTVN-FM 96.3
Ann Arbor Bay City WUOM *91.7 WBCM-FM 96.1 NEVADA WROD-FM 97.1 Defaware WGM 99.5 WONE 104.7 Benton Hrbr. Birmingham WBCM-FM 90.25 Las Vegas KORK-FM 97.1 Schenectady WGFM 99.5 Defaware WSN 99.1 Bernon Hrbr. Birmingham WHF 194.7 NEW HAMPSHIRE Schenectady WGFM 99.5 Defaware WCH 104.7 Coldwater Detroit WTVE-FM 98.3 NEW HAMPSHIRE WJOL-FM 103.7 WON0 100.5 Findiay FIN-FM 100.5 WDT M 106.7 WAR 78.80 Berlin WMU-FM 103.7 WON0 100.5 Fostoria WFO 99.3 WDT M 106.7 Manchester WLBR-FM 95.7 Troy WFL 93.5 Gallinolis WJEK-FM 94.5 WDT M 106.7 Mashua WOTW-FM 106.3 Wethersfield WBR-FM 103.7 WHO B-FM 94.9 WDT M 106.7 MAshua WOTW-FM 106.3 Neshua WOTW-FM 106.3 WHE 94.9 WDT M 107.5 WJBK -FM 103.7 WOTW-FM 106.3 Wethersfield WBR-FM 103.7 WHOH 94.9 WDT M 107.5 WJBK -FM 103.3 Sheboro WGWR -FM 103.7<	МІС			Scottsbluff	KICN KNEW-FM			WCMF	96.5	Dayton	WHI0-FM 99.1
Benton Hrbr. WAEM-Fmi 102-5 Benton Hrbr. Las Vegas KORK-FM 97.1 Reno South Bristol Wolf 2.5 WIE East Liverpool WOHI-FM 104.3 East Liverpool Benton Hrbr. WHF 194.7 Coldwater WHF 194.7 WHF 194.7 NEW HAMPSHIRE South Bristol WSPE *88.1 Syratuse Elyria East Liverpool WOHI-FM 104.3 Detroit WTW-FM 98.3 Detroit NEW HAMPSHIRE WOD-FM 103.7 WDT.FM 100.5 South Bristol WSPE *88.1 WODS-FM 93.3 Findiay	Ann Arbor	WUOM	*91.7				Schangetodu	WROC-FM	97.9	Delaware	WONE 104.7 WSLN *91.1
Birmingham Coldwater WHFI 94.7 WEVE-FM 98.3 NEW HAMPSHIRE Syracuse WAER *88.1 Findiay WEVE.FM 100.3 Dearborn Detroit WKMH-FM 100.3 Berlin WM0U-FM 103.7 WD0FM 103.7 WF0A Findiay WEVE.FM 100.3 WBFG -FM 100.5 Berlin WM0U-FM 103.7 WSVFM 106.1 WSVFM 90.3 Fostoria WF00.96.7 WBFG -FM 106.7 MK WBF, M 93.7 Durham WUNH 90.3 Troy WFP1 91.7 Galipois WDUB.FM 91.3 Galipois Galipois WDUB.FM 91.3 Galipois WDUB.FM 91.4 WOUS.FM 93.3 WOUS.FM 93.3 WOUS.FM 92.9 WOUS.FM 93.3 WOUS.FM 93.3 WHE FM 94.3 WHE FM 94.3 WHOL FM 94.9(5) WF0.FM 92.3 Hillsboro WSW.FM 94.9(5) WF0.FM 92.3 Hillsboro WSW.FM 94.9(5) WF0.FM 92.3 Hillsboro WSW.FM 94.9(5) WHOH 96.7 WHA FM 95.5 WOS.FM 93.3<		WNEM-FM	102.5	Las Vegas	KORK-FM		South Bristol	WMIV	95.1	East Liverpool	WOHI-FM 104.3
Coldwater Dearborn WIVB-FM 98.3 WDS-FM Control Mathematic WIVB-FM WIVB-FM 99.3 WIVB-FM Control Mathematic WIVB-FM Statistic WIVB-FM Stati	Birmingham	WHFI	94.7					WAER	*88.1	Elyria	WEOL-FM 107.3
WCHD 105.9 Manchester WKBR-FM 95.7 WRD-FM 105.5 Greenville WDRK-FM 106.5 WDTM 106.7 Mt. Washington WMTW-FM 94.9 Utica WRN-FM 105.7 Hamilton WORS WORS WORS WORS WORS WORS WORS WHOH 103.5 WHOH 103.5 WHOH 103.5 WORS WFG.FM 94.9 Wite Plains WFAS-FM 103.7 WHOH 103.5 WHOH 103.5 WHOH 103.5 WFO_L-FM 94.9 Wite Plains WFAS-FM 100.5 WFO_L-FM 94.9 WFO_L-FM 95.5 WFO_L-FM 95.5 Lancester WHOK-FM 95.5 Lancester WHOK-FM 95.5 Lancester WHOK-FM 105.9 WIMA-FM 105.9 WIMA-FM 105.9 <	Coldwater	WTVR-FM	98.3 100.3					WDDS-FM WONO	93.1	Fostoria	WF0B 96.7
WCHD 105.9 Manchester WKBR-FM 95.7 WRD-FM 105.5 Greenville WDRK-FM 106.5 WDTM 106.7 Mt. Washington WMTW-FM 94.9 Utica WRN-FM 105.7 Hamilton WORS WORS WORS WORS WORS WORS WORS WHOH 103.5 WHOH 103.5 WHOH 103.5 WORS WFG.FM 94.9 Wite Plains WFAS-FM 103.7 WHOH 103.5 WHOH 103.5 WHOH 103.5 WFO_L-FM 94.9 Wite Plains WFAS-FM 100.5 WFO_L-FM 94.9 WFO_L-FM 95.5 WFO_L-FM 95.5 Lancester WHOK-FM 95.5 Lancester WHOK-FM 95.5 Lancester WHOK-FM 105.9 WIMA-FM 105.9 WIMA-FM 105.9 <	Detroit	WDET-FM	*ioi.9	Claremont	WTSV-FM	106.1	Trov	WSYR-FM	94.5	Gallipolis	WJEH-FM 101.5
WD Fm 106.7 Mt Washington WM IW-FM 94.9 WICa W		WCHD	105.9	Manchester	WKBR-FM	95.7	-	WRPI	*91.5	Greenville	WDRK-FM 106.5
WDTR *90.9 NEW JERSEY White Plains WFAS-FM 103.9 WF0L'FM' 34,3'(5) WJBK-FM 93.1 Asbury Park WJLK-FM 94.3 NORTH CAROLINA Hillsboro WSW-FM 106.7 WMZ 103.7 Astury Park WJLK-FM 94.3 Albemarle WABZ-FM 100.9 Hillsboro WSW-FM 98.1 WMZ 103.7 Astantic City WFDG-FM 103.7 Asheboro WGWR-FM 92.3 Lima WIMA-FM 106.7 WOMC-FM 104.3 Bridgeton WSNJ-FM 107.7 Burlington WBBB-FM 101.1 Marietta WOMO *89.3 WOMC-FM 98.7 Dover WON-FM 105.9 WFNJ-FM 105.9 Marington WBAG-FM 92.9 Marington WRN-FM 106.9 WRN-FM		WARX	99.5	Nat. Washington Nashua	WMTW-FM WOTW-FM		Wethersfield	WBIV	105.7	Hamilton	WQMS 96.7 WHOH 103.5
W UZ 33:- W MZK 97:9 Asbury Park Atlantic City W PG-FM 94:3 Albemarle W ABZ-FM 100.9 Lancester W KSU-FM *88.1 W MZK 97:9 Atlantic City W PG-FM 95.9 Albemarle W ABZ-FM 100.9 Lancester W HOK-FM 95.5 W MZK 97:9 WOSJ-FM 103.7 Asheboro W GWR-FM 92.3 Lima W IMA-FM 102.1 W OMC-FM 104.3 Bridgeton W RN J 51.1 Asheboro W GWR-FM 92.3 Lima W IMA-FM 105.9 W OMC-FM 104.3 Bridgeton W SNJ-FM 107.7 Burlington W BBB-FM 101.1 Marieta W CMO *89.3 W Q MK-FM 98.7 Dover W OHA-FM 105.5 Burlington-Graham Miamisburg W RN FG 193.9 W MK FM 98.7 Dover W FM 91.1 W BAG-FM 92.9 Miadietow W FFE.FM 105.9		WDTR	*90.9				White Plains	WFAS-FM	103.9	V	VFOL-FM 94.9(s)
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158 WHITE'S RADIO LOG Franklin Lakes WRRH 88.7 Charlotte WBT-FM 03.9 New Concerd WMCO-FM 93.9				E. Orange Estontown	WEMU	*91.1		WBAG-FM	92.9 *91 5	Middletown	WPFB-FM 105.9
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Springering WEXT Fill	Salem	WSOM-FM	105.1		WPEN-FM	102.9		KFNE-FM	95.3	Roanoke .	WDBJ+FM 94.9
Bitcherwitz WEXT-FR	Sandusky Springfield	WBLY-FM	103.9		WQAL	106.1	Cleburne	KCLE-FM	94.9		WROV-FM 103.7
Time WTTF, FM 08.7 WTOL, FW 025, FM 08.2 WTOL, FW 025,	Steubenville	WSTV+FM	103.5		WXPN	*88.9		KIXL-FM	104.5		WHLF-FM 97.5
Wind were in we		WTTF-FM	103.7	Pittsburgh	WAMO	92.9 105.9		KNER	*88.1	Staunton	WSGM-FM 93.5
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Arting approx With Part (12,5) Reading multiple procession With Part (12,6) Reading multiple procession	Worthington.C	lumbus		Dettruille	WWSW-FM	94.5	Dumas	KDDD-FM	95.3	Cheney Edmunds	KGFM 105.3
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Water Water Water Water Water Water Kater Kater <th< td=""><td></td><td>WKBN-FM</td><td>98.9</td><td></td><td>WGBI-FM</td><td>101.3</td><td>Ft. Worth</td><td>WBAP-FM</td><td>96.3</td><td>Lynden</td><td></td></th<>		WKBN-FM	98.9		WGBI-FM	101.3	Ft. Worth	WBAP-FM	96.3	Lynden	
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Duration WARD C, M. (2017) WA			102.5	State College Sunbury	WKOK-FM	94.1		KGAF-FM	94.5	Statilo	KBLE 33.3
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Hazieton Jenkintown JohnstownWAZL-FM WIGR-FM WARD-FM UAC.FM WARD-		WMSP	94.9	Knovville	WBIR-FN	1 93.3	Charlottesville	WINA-FM WTIL	95.3		WMKE 102.1
JohnstownWARD-FM92.1 WAC-FMWKRA.FKFredericksburg WAC-FMWFVA-FM103.3 WARD-FMRecineWRIN.FW100.7 WFV9LancasterWGAL-FM101.3 WDA-FMWMA-FM103.3 WARD-FMWARD-FM96.9 WD1A-FMWARD-FM96.3 WD1A-FMWARD-FM96.3 WD1A-FMWARD-FM96.3 WD1A-FMWD1A-FM106.7 WARD-FMRec LakeWJAC-FM96.3 WD2A-FMMeadvilleWARD-FM96.5 WD1A-FMWD1A-FM96.5 WD1A-FMWD1A-FM100.7 WD1A-FMWD2A-FM100.7 WD2A-FMRec LakeWJAC-FM96.3 WD2A-FMMeadvilleWARD-FM96.5 WD1A-FMWFFM96.3 WD2A-FMWENC-FM90.3 WD2A-FMWENC-FM100.7 WD0A-FMWOD-FM97.3 WD2A-FMWOD-FM90.3 WD2A-FMWENC-FM90.3 WD2A-FMOII CityWDJR98.5 WD2A-FMWJIG-FM93.3 WD2A-FMTEXAS WARC-FMWARC-FM90.3 WM2A-FMWARC-FM90.3 WM2A-FMWARC-FM90.3 WM2A-FMWARC-FM90.3 WM2A-FMWARC-FM90.3 WM2A-FMWARC-FM90.3 WARC-FMWARC-FM90.3 WARC-FMWARC-FM90.3 WARC-FMWARC-FM90.3 WARC-FMWARC-FM90.3 WARC-FMWARC-FMWARC-FM90.3 WARC-FMWARC-FM90.3 WARC-FMWARC-FM90.3 WARC-FMWARC-FMWARC-FM90.3 WARC-FMWARC-FMWARC-FM90.3 WARC-FMWARC-FMWARC-FM90.3 WARC-FMWARC-FMWARC-FM90.3 	Hazleton	WAZL-FM	97.9		WU0.	F *91.9		WSVS-FM WFLO-FM	1 104.7 1 95.7	Mannaa	WTMJ-FM 94.1
Lancaster WGAL-FM 101.3 WDA-FM 102.7 WLAN-FM 96.9 Meadville WAGW-FM 100.1 Work FM 100.1 Meadville WGW-FM 100.1 Work FM 100.7 Meadville WGW-FM 100.1 Work FM 100.7 Work FM 100.7 Work FM 100.7 WSYA-FM 102.1 WHGW-FM 102.7 Mashville WSYA-FM 102.7 WHGW-FM 102.7 Mashville WSYA-FM 102.7 WSYA-FM 102.7 Mashville WSYA-FM 102.7 WSYA-FM 102.7 Mashville WSYA-FM 102.7 WSYA-FM 102.7 Mashville WSYA-FM 102.7 WSYA-FM 102.7 WSYA-FM 102.7 Mashville WSYA-FM 102.7 Mashville WSYA-FM 102.7 Mashville WSYA-FM 102.7 Mashville WSYA-FM 102.7 WSYA-FM 102.7 Mashville WSYA-FM 102.7 WSYA-FM 105.3 Marion WMW-FM 106.7 WSYA-FM 105.7 WFR-FM 103.3 WST Bend WBK-FM 103.3 WST B		WARD-FM	92.1	McKenzie	WKT	A 106.9	Fredericksburg	WFVA-FM	101.5	Racine	WRJN-FM 100.7
LebanonWLBR-FM 100.1 MedwirfMasintileWPTN 190.3 WS1X_FM 97.3 SeviervilleJunchburg WS1X_FM 97.3 WS1X_FM 97.3 WJUF 98.5 TuilahomaWSTN_FM 97.3 WS1X_FM 97.3 WJUF 98.5 TUIAhomaUnchburg WS1X_FM 97.3 WS1X_FM 97.3 WS1X_FM 99.3WSVA_FM 100.1 WAUK FM 102.1 MarinsvilleWSVA_FM 100.1 WAUK FM 102.1 WJUF 93.3 WFIX_FM 104.5 WFRA-FM 105.3 WFRA-FM 102.1WSVA_FM 100.1 WSVA-FM 98.7 WFRA-FM 103.3 WFRA-FM 103.3 WFRA	Lancaster	WGAL-FM	1 101.3		WMPS-FN	1 97.1	Hampton	WVEC-FM	101.3	Dias Laka	WIMC-FM 96.3
Lebanon WPLB Normalian WPLN 90.3 Lynchburg WW00.FR 100.1 Watertown WTTN-FM 104.7 Montrose WPELFM 96.5 Sevierville WSIX-FM 97.5 WSIX-FM 97.5 WPRW-FM 106.7 Wateksha WALCK-FM 105.1 Philadelphia WCAU-FM 98.1 TEXAS WBEX-FM 105.3 WIGAS-FM 105.3 WALCK-FM 99.3 Wauwatosa WAUX-FM 92.5 WDAS-FM 105.3 WDAS-FM 105.3 Abilene KACC-FM 192.1 WGH-FM 98.7 WMV-FM 96.7 West Bend WBKV-FM 92.5 WFL-FM 105.3 Abilene KACC-FM 192.1 WFN-FM 102.1 WMV-FM 95.7 WOO-FM 102.1 West Bend WBKV-FM 92.5 WFL-FM 102.1 Alvin KAGC-FM 102.1 WFR-FM 102.1 WMV-FM 95.7 WOO-FM 102.5 West Bend WBV-FM 106.3 WFL-FM 102.1 Alvin KAGC-FM 102.1 KAMC-FM 102.1 WHR 106.3 WYOMING WYOMING C.L. Location KAIM-FM Honduluu, Hawaii(S) 1 KAMS Mamoths Spring, Ark. KARM-FM Fresno, Calif. KARM-FM Fresno, Calif. KAAC-FM Alvin, Tex. KAGC-FM Alvin, Tex. KAGS Shewort Bach, Calif. KAMS Mamoths Spring, Ark. KARM-FM Fresno, Calif. KA		WLAN-FM	96.9	Nachville	WDIA+FI WFM	N 102.7 B 105.9	Harrisonburg	WEMO	\$ *91.7	Stevens Point	WCOW-FM 97.1 WSPT-FM 97.9
Oil City Palmyra Philadelphia WD/R W/WA-FM 98.1 WIXA-FM Tullahoma WJIG-FM 93.3 Wartinsville Newport News Martinsville WiXA-FM Wartinsville 96.3 Work FM Wartinsville 96.3 Wor	Meadville	WMGW-FM	1 100.3		WPL	N 90.3		WWOD-FN	1 100.1	Watertown Waukesha	WTTN-FM 104.7 WAUX-FM 106.1
Palmyra WWW P2.1 Philadelphia WCAU-FM 98.1 WPBS-FM 105.3 WPCA-FM 104.5 WFIL-FM 102.1 TEXAS Abilene KACC-FM *91.1 KFMN 99.3 WPCA-FM 104.5 WFIL-FM 102.1 Abilene KACC-FM *91.1 KFMN 99.3 WPCA-FM 99.7 WRVC 102.5 West Bend WGH-FM 97.3 WRVC 102.5 West Bend WGH-FM 98.7 WRVC 102.5 West Bend WGH-FM 98.7 WRVC 102.5 West Bend WGH-FM 98.7 WRVC 102.5 U S. FM Stations by Stations Warner WRVC 102.5 Cheyenne KVOW-FM 106.3 U.S. FM Stations by Call Letters Abbreviation: (s)-broadcasts stereo C.L. Location KAIM-FM FM solutu. KAIM-FM Alvin. Tex. KASC-FM Los Angeles, Calif. KACC-FM Alvin. Tex. KACE-FM Riverside, Calif. KACC-FM Rive	Oil City	WDJR	98.5	Tullahoma	WSEV-FM WJIG-FM	A 102.1 A 93.3	Marton	WMEV-FN	93.9	Wauwatosa	WHRM *91.9
WPBS-FM 105.3 WPGA-FM 105.3 WFIL-FM 102.1 WFIL-FM 102.1 Alvin KARD-FM 102.1 WFIL-FM 102.1 WFIL-FM 102.1 Alvin KARD-FM 102.1 WTAR-FM 98.7 WRVC 102.5 WTAR-FM 98.7 WRVC 102.5 WTAR-FM 98.7 WRVC 102.5 Cheyenne KVOW-FM 106.3 WOMING WRVC 102.5 Cheyenne KVOW-FM 106.3 CL. Location KARM Stations by Call Letters Abbreviation: (s)-broadcasts stereo C.L. Location KARM Stations Spring, Ark. KARG Stations Spring, Ark. KARG Prosser, Wash, KACE-FM Riverside, Calif. KAKC Tuba, Okla, Tay KAKC Tuba, Okla, Tay KAKC Tuba, Okla, Tay KAKC Tuba, Okla, Tay		WCAU-FM	98.1	Т			Newport News	WGH-FM	1 97.3	West Bend	WBKV-FM 92.5
WPCA-FM 104.5 WFIL-FM 102.1 WFIL-FM 102.1 WFAR-FM 102.1 WFAR-FM 95.7 Cheyenne WRVC 102.5 WFAR-FM 95.7 Cheyenne WRVC 102.5 WFAR-FM 95.7 Cheyenne KOW-FM 106.3 WHAR-FM 95.7 Cheyenne KOW-FM 106.3 WHAR-FM 95.7 Cheyenne KOW-FM 106.3 C.L. Location KAMS Mammoth Spring, Ark. KARD 4005, Calif. KAMS - FM Alvin, Tex. KACE-FM Riverside, Calif. KAKC Tuba, Okla. KAKC Tuba, Okla. KAKC Tuba, Okla. WHAR-FM 95.7 Cheyenne WRVC 102.5 WHAR-FM 95.7 Cheyenne KOW-FM 106.3 WHAR-FM 95.7 Cheyenne KOW-FM 106.3 C.L.		WDAS-FM	105.3	Abilene	KACC-F	4 *91.		WNOR-FM	1 98.7		
U. S. FM Stations by Call Letters Abbreviation: (s)-broadcasts stereo C.L. Location KARC Vanard, Calif. KABC-FM Los Angeles, Calif. KACE-FM Riverside, Calif. KACE-FM Riverside, Calif. KACE-FM Riverside, Calif. KACE Sen Auvin, Tex. KACE Sen Auvin, Tex. KA		WPCA-FN	1 104.5	i	KFMI	N 99.3		WRVC WTAR-FM	102.5 95.7	Cheyenne	
Abbreviation: (s)-broadcasts stereo C.L. Location C.L. Location C.L. Location KAAR Oxnard, Calif. KAIM-FM Honolulu. Hawaii (s) ' KAMS Mammoth Spring, Ark. KARM-FM Fresno, Calif. KARM-FM Fresno, Calif. KABC-FM Los Ängeles, Calif. KAJC-FM AlvIn. Tex. KANG St. Louis, Mo. KARM-FM Fresno, Calif. KACE-FM Riverside, Calif. KAKC Tulsa, Okla. KANU Lavrence, Kans.(s) KASU Jonesboro, Ark. KACE-FM Riverside, Calif. KAKC Tulsa, Okla. KANU Lavrence, Kans.(s) KASU Jonesboro, Ark.					M Stat	ion	s by Cal	l Lette	rc		
C.L. Location KAAR Oxnard, Calif. KABC-FM Los Angeles, Calif. KACE-FM Riverside, Calif. KACE TM Ri											
KAAR Oxnard, Calif. KABC-FM Los Angeles, Calif. KACE-FM Kakart, Calif. KACE-FM Riverside, Calif. KAKC Tulsa, Okla. KAKC Tulsa, Okla.	C.L.	Location				1. (3)-				C.L.	Location
KACA Prosser, Wash. KAJS Newport Beach, Calif. KANT-FM Lancaster, Calif. KASK-FM Dintario, Calif. KACE-FM Riverside, Calif. KAKC Tulsa, Okla. KANU Lawrence, Kans. (s) / KASU Jonesboro, Ark.	KAAR Oxnar	d. Calif.		KAIM-FM HO	nolulu, Hawa	ii (s) †			rk.	KARM-FM Fr	esno, Calif.
KACE-FM Riverside, Calif. KAKC Tulsa, Okla. KANU Lawrence, Kans.(s) 'KASU Junesburg, Ark.	KACA Pross	os Angetes, Ca er, Wash.		KAIS Newpor	t Beach, Calif		IKANT-FM Lar	icaster. Calir.		KASK-FM Dn	tario, Calif,
KAFE Uakiand, Calif. KAFI Auburn, Calif. KAFI Auburn, Calif. KAFM Salina, Kans. KALW San Francisco. Calif. KARK Little Rock, Ark. WHITE'S RADIO LOG 159	KACE-FM R	iverside. Calif.	•	KAKC TUISA.	Okla.		KANU Lawrend	erque, N.Mex		KATT Woodlar	nd, Calif.
KARM Salina, Kans. KALW San Francisco, Galir. KARK Little Rock, Ark. WHILL S RADIO LOG 159	KAFE Oakla KAFI Aubur	no, Calif. n, Calif.		KALH Denver	Colo.		KAPP Redondo	erque, N. M	ex.	WHITE'S PA	
	KAFM Salin	a, Kans.		IKALW San Fi	rancisco, Calli	6	I KARK LITTIO F	IDEK, ATK.		I WHILES NA	PIO TOG 198

C.L. Location C.L. Location KATV - FN Langels, Calif. KATV - FN Langels, Calif. KFRD-FM Sam Francisco, Calif. KFRD-FM Sam Francisco, Calif. KGBD - FN Samples, Calif. KGBD - FN Samples, Calif. KGCA-FM Gainesville, Tez. KGA-FM Gainesville, Tez. KGA-FM Gainesville, Tez. KGCA-FM Samples, Calif. KGM - FM Samples, Calif. KHO - FM Samples, Cali KBIG Avalon, Calif.
KBIG Avalon, Calif.
KBIM -FM Roswell, N. Mex.
KBLE Seattle, Wash.
KBMF Pampa, Tex.
KBMS Los Angeles, Calif.
KBOA-FM Kennett. Mo.
KBOI-FM Medford, Oreg.
KBTM-FM Methorage.
Alaska(s)
KBV-FM Methorage.
KBUA-FM Methorage.
KBTM-FM Anchorage.
Alaska(s)
KBV-FM Methorage.
KBUA-FM Methorage.
KBTM-FM Prove, Utah
KCB-FM San Francisco, Calif.
KCFM St. Louis, Mo.(s)
KCHO-FM Concella. Calif. (s)
KCB-FM Conchella. Calif. (s)
KCB-FM Freno, Calif. (s)
KCB-FM Conchella. Calif. (s)
KCB-FM Kanasa City, Kans.
KCMB-FM Kansas City, Mo.
KCMS-FM Maitou Springs, Colo.
KCOM S-FM Maitou Springs, Colo.
KCOM S-FM Maitou Springs, Colo.
KCOM S-FM Maitou Springs, Colo.
KCM S-FM Sait Lake. Calif.
KCM Santa Monica. Calif.
KCM S-FM Maitou Springs, Colo.
KCM Santa Monica. Calif.
KCM Santa Monica. Calif.
KCM Santa Monica. Calif.
KCM San Mateo, Calif.
KCM San Francisco. Calif.
KCM San Francisco. Calif.
KCM S-FM Bointon Tex.
KDE-F. FM Albuna Tax.
KDE-F. FM Denvon, Tex.
KDM Des Monines, Iowa
KDU San Francisco. Calif.
KDM Des Monines, Iowa
KDU Roisux City. Ia.
KDM Des Monines, Iowa
KDU Roisux City. Calif.
KEAN San Francisco. Calif.
KEAN San Diego. Calif.
K WHITE'S RADIO LOG KOCW Tulsa, Okla.(s)

C.L. Location

C.L. Location Color FM Fulsa, Okla KODA-FM Houston, Tex. (s) KOGM-FM Tulsa, Okla KOGO San Diego, Calif. KOIN-FM Portland, Oreg. KOKH Oklahoma City, Okla. KOLG, FM Portland, Oreg. KONG-FM Visalia, Calif. (s) KOBC-FM Visalia, Calif. (s) KOBK-I Kal Vegas, Nev. (s) KOST Dallas, Tex. KOST Dallas, Tex. KOST Dallas, Tex. KOST Or H Prine Bluff, Ark. KOZE-FM Port Arthur, Tex. KOST Or Her Lewiston. Idaho KPAC-FM Port Arthur, Tex. KOZE-FM Berkeley, Calif. KPCG Pasadena. Calif. KPCG Pasadena. Calif. KPCG Pasadena. Calif. KPFA Berkeley, Calif. KPFA Berkeley, Calif. KPFA M Portland, Oreg. (s) KPFA M Portland, Oreg. (s) KPFA M Portland, Oreg. (s) KPCA-FM St. Louis, Mo. KPOL-FM Honolulu, Hawaii (s) KPOL-FM Honolulu, Hawaii (s) KPOL-FM Honolulu, Hawaii (s) KPCA-FM St. Louis, Mo. KCA-FM St. Kans. Calif. (s) KPFA Seattle, Wash. KCA-FM St. Kans. KCA-FM Stockton, Calif. KRAA-FM Stockton, Ca KRND-FM Shreveport, La, KRNW Boulder, Colo. KRNY-FM Kearney-Holdrege, Nebraska KRON-FM San Francisco, Calif. KROS-FM San Francisco, Calif. KROY-FM Saramento, Calif. KROY-FM Saramento, Calif. KRYM Saramento, Calif. KRSI-FM Saramento, Calif. KRSI-FM St. Louis Park, Minn. KRSN-FM Los Alamos, N.Mex. KRVM-FM Sc. Calif. KSDA Saramer, Calif. KSDA Saramer, Calif. KSDA Sara Cruz, Calif. KSDA San Diego, Calif. KSEO-FM Manhattan, Kans. KSTA San Diego, Calif. KSEO-FM Durant, Okla. KSFR San Francisco, Calif. KSFR San Francisco, Calif. KSHS Colorado Springs, Colo. KSJO-FM San Jose. Calif. KSL-FM Salt Lake City, Utah(s) KSLA Seatle, Wash.(s) KSLA Seatle, Wash.(s) KSLA Santa Sara. KSMA-FM Santa Maria, Calif. KSPC-FM Minley, Calif. KSHS San Jose. Calif. KSL-FM Salt Lake City, Utah(s) KSLA Seatle, Wash.(s) KSTM-FM Sinklowa, Kans. KTAL Texarkana.Tex. KTAP Tucson, Ariz. KTAP Tucson, Ariz. KTAR FM Pheenix, Ariz. KTAP Tucson, Ariz. KTAR FM Pheenix, Ariz KTNT-FM Tacoma, Wash. KTOD Mt. Pleasant, Tex.(s) KTOP-FM Topeka, Kans.

C.L. Location KTPM Sun City, Ariz.(s) KTQM-FM Clovis, N. M. KTRB-FM Modesto, Calif. KTRH-FM Houston, Tex. KTSM-FM El Paso, Tex. KTSK-FM Springfield, Mo., KTWF Tacoma, Wash. KTXF-FM Springfield, Mo.(s) KTXT-FM Lubbock. Tex. KTYM-FM Inglewood, Calif. KUDE-FM Oceanside, Calif. KUDE-FM Oceanside, Calif. KUDF Sait Lako City. Utah KUFR Sait Lako City. Utah KUFR Moly, Calif. KUFA Moly, Calif. KVEC, FM Myentura, Calif. KVEN-FM Ventura. San Luis Obispo, Calif.(s) C.L. Location KVEC-FM San Luis Obispo. Calif. (s) KVEN-FM Ventura. Cajif. KVIK San Fernando. Calif. KVIL Highland Pk., Tex. (s) KVOF-FM El Plaso, Tex. KVOR-FM El Plaso, Tex. KVOR-FM Plainview. Tex. KVOR-FM Plainview. Tex. KVOR-FM Beatrice. Neb. KWT Dallas, Tex. KWAR Eugene, Oreg. KWAR EM Beatrice. Neb. KWFM Minneapolis, Minn. (s) KWG-FM Beatrice. Neb. KWFM Minneapolis, Minn. (s) KWG-FM Stokton. Calif. KWGS Tulsa. Okla. KWIX: Louis Mo. Calif. KWGS Tulsa. Okla. KWIX: Louis Mo. Calif. KWGS Tulsa. Okla. KWH-FM Shorevoport. La. KWKH-FM Shorevoport. La. KWKH-FM Shorevoport. La. KWMO Odessa, Tex. KWMO Odessa, Tex. KWOO-FM Poplar Bluff. Mo. KWDC-FM Muscatine, Iowa KWPM-FM West Plains, Mo. KXEL-FM Shorevoport. Calif. KXX San Francisce, Calif. KXOL-FM Fortso City, Ark. KXXK San Francisce, Calif. KXOL SAngeles, Calif. KXOL SAngeles, Calif. KXOL SAngeles, Calif. KXOL SAngeles, Calif. KXAR Fresno, Calif. (s) KXRR Sacramento. Calif. KXTR Kansas City, Mo. (s) KXRF M Fort Worth. Tex. (s) KXRR Sacramento. Calif. KXOA Sacramento. Calif. KXYA-FM Mankato, Minn. KYW-FM Oklahoma City. Okla. KYSM-FM Moletan, Minn. KYW-FM Oklahoma City. Okla. KZAM Seattle. Wash. (s) WAAB-FM Morringham. Ala. WABC-FM Morringham. Ala. WABC-FM Minningham. Ala. WABC-FM Alimati Geath. Fla. WAIN-FM Minningham. Ala. WABC-FM Minningham. Ala. WABC-FM Marington, D.C. WAAC Mash. Marington, D.C. WAAC MARN-FM Patington, N.Y. WARE Albarton. Ohio WAAK-FM Arinngton. N.S. WAAM-FM Marington, D.C. WANC Albary. N.Y. WARE Albarton. Ohio WAAK-FM Arinngton. N.C. WANC Alb

KTOY Tacoma, Wash.

C.L. Location WAVQ Atlanta, Ga. WAVU-FM Albertville, Ala. WAVY-FM Portsmouth, Va. WAVU-FM Albertville, Ala. WAVY-FM Portsmouth, Va. WAYL-FM Portsmouth, Va. WAYL Minneapolis, Minn.(s) WAYL-FM Waynesboro, Pa. WAZL-FM Hazelton, Pa. WBAP-FM Hazelton, Pa. WBAP-FM Hazelton, N.Y. WBAP-FM Ft. Worth, Tex.(s) WBAY-FM Green Bay, Wis. WBBC-FM Burlington, N.C.(s) WBBC-FM Burlington, N.C.(s) WBBC-FM Ft. St. Louis, III. WBBO-FM Augusta, Ga. WBBC-FM Ventimer Hills, Pa. WBCL-FM Williansburg, Va. WBC1-FM Williamsburg, Va.
WBC1-FM Williamsburg, Va.
WBC1-FM Bay City, Mich.
WBCN-FM Bay City, Mich.
WBCN-FM Buffalo, N.Y.
WBE1-FM Brokoto, N.S.
WBE1-FM Brokoto, S.C. (s)
WBE1-FM Beaufort, S.C. (s)
WBE2-FM Beaufort, S.C. (s)
WBE4-FM Beaufort, S.C. (s)
WBE5 Duffalo, N.Y.
WBG Mewark, N.J.
WG BU Duffalo, N.Y.
WBG Mewark, N.J.
WG BU Duffalo, N.Y.
WBG Mewark, N.J.
WG BU Statimore, Md.
WBLY-FM Knoxville, Tenn.
WBIV Wethersfield, N.Y.
WBLY Lexington, Ky.
WBLY Lexington, Ky.
WBLY Lexington, Ky.
WBNS-FM Columbus, Ohio (s)
WBOE Cleveland, Ohio
WBOS-FM Brookline, Mass.
WBT-FM Molt, Clements, Mich.
WBR C Birmingham, Ala.
WBST-FM Mit, Clements, Mich.
WBU-FM Mither, N.C. (s)
WBUF Buffalo, N.Y.
WBUF FM Trenton, N.J. (s)
WBUF HM Lexington, N.C.
WBUT-FM Butler, Pa.
WBUT-FM Beaver Falls, Pa.
WBZ G Berea, Ohio
WEGC-FM Anderson, Ind.
WBCC-FM Hartford, Conn.
WCC-FM Hartford, Conn.
WCCC-FM Hertford, Conn.
WCCC-FM Hartf WCUM-FM Cumberland, Md. WCUY-FM Cleveland Hts., Ohio WCWM Williamsburg, Va.

C.L. Location WDAC Lancaster, Pa.
WDAE-FM Tampa, Fla.
WDAF-FM Kansas Gity, Me,
WDAF-FM Kansas Gity, Me,
WDB-FM Roanoke, Va.
WDBN Akron, Ohio(s)
WDBO-FM Orlando, Fla.
WDBO-FM Orlando, Fla.
WDBC-FM Orlando, Fla.
WDDE Hamden, Conn.
WDDE Hamden, Conn.
WDDE Hamden, Conn.
WDDE-FM Syracuse, N.Y.
WDEL-FM Wilmington, Del.
WDET-FM Detroit, Mich.
WDFT State College, Pa.
WDGT, FM Detroit, Mich.
WDFT State College, Pa.
WDGT, FM Detroit, Mich.
WDFT Ar M Memphis, Tenn.
WDIA-FM Mover, N.J.(s)
WDHA-FM Statesville, N.C.
WDNC-FM Prestonsburg, Ky.
WDO-FM Chatanoga, Tenn.
WDRC-FM Prestonsburg, Ky.
WDO-FM Chatanoga, Tenn.
WDRC-FM Detroit, Mich. (s)
WDTR Detroit, Mich. (s)
WDWS-FM Champaign. III.
WEA-FM Paistburgh, Pa.
WDUZ-FM Green Bay, Wis.
WDVR-FM Paistburgh. N.Y.
WEA-FM Hartford, Conn.
WDWS-FM Champaign. III.
WEA-FM Hartford, Mass.
WDWR-FM Paistburgh. N.Y.
WEA-FM Hartford, Mass.
WDWR-FM FM Statesville, Ca. (s)
WDTR Detroit, Nich.
WEEN-FM Hartford, Mass.
WDWR-FM Paistburgh. N.Y.
WEEN-FM Chicago. III.
WEEN-FM Mainsourg, V.A.
WEEN-FM Martinsburg, N.Y.
WEEN-FM Mainsola, Pa.
WEEN-FM Mainsola, Pa.
WEEN-FM Mainsola, Pa.
WEEN-FM Mistor, N.C.
WEEN-FM Mainsola, Mainsola, Wis.
WEEN-FM Mainsola, N.C.
WEEN-FM Mainsola, N.Y.
WEEN-FM Mainsola, Mai WFICD Bloomington, Ind. WFLO Kokomo, Ind. WFLA-FM Tampa, Fla. WFLM FL Lauderdale, Fla.(s) WFLD Farnville, Va. WFLD Farnville, Va. WFLT-FM Franklin, Tenn, WFLT-FM Franklin, Tenn, WFMD-FM Frederick, Md. WFMB Roskylle, Tenn. WFMD-FM Frederick, Md. WFME Chicago, III. WFME Chicago, III. WFM Gallatin, Tenn, WFM H-FM Cullman, Ala. WFMI Montgomery, Ala, WFML Washington, Ind. WFMM-FM Baltimore, Md.

C.L. Location WFMQ Chicago, Ill.(s) WFMS Indianapolis, Ind. WFMS Indianapolis, Ind. WFMS Last Orange, N.J. WFMU-FM Madisonville, Ky, WFMZ Aleast Orange, N.J. WFMZ Aleast Orange, N.J. WFMZ Aleast Orange, N.C. WFMS-FM Barlinesian, N.C. WFNS-FM Barlinesian, N.C. WFNS-FM Fostorie. WFOS-FM Fostorie. WFOS-South Norfolk, Va. WFOB couth Norfolk, Va. WFPG Atlantic City, N.J. WFPL Louisville, Ky. WFPL Louisville, Ky. WFPL Man Juan, P.R. WFRO-FM Fremont, Ohio WFST-FM Caribou, Maine WFST-FM Caribou, Maine WFST-FM Ft. Lauderdale, Fla. WFUL-FM Fulton, Ky. WFU-FM Fulton, Ky. WFU-FM Fredericksburg, Va. WGAL-FM Standerdale, Fla. WFU-FM Ft. Cauderdale, Fla. WFU-FM Ft. Cauderdale, Fla. WFU-FM Ft. Cauderdale, Fla. WFU-FM Ft. Cauderdale, Fla. WFU-FM Ft. WFW, Starth Ft. WGB-FM Scanton, Pa. WGB-FM Meduing, Ill.(s) WGET-FM Gettysburg, Pa. WGGC Glassow, Ky. WGGM Faylorville. WGH-FM Newport News, Va. WGH-FM Newport News, Va. WGH-FM Newport News, Va. WGH-FM Maind, Ind. WGB Fint, Mich.(s) WGMA Tiprone, Pa. WGMA Fint, Mich.(s) WGAA Fint, Mich.(s) CL Location (from Ga.) W GPC-FM Albany. Ga. W GPC FM Albany. Ga. W GPM Detroit, Mich. W GPR-FM Detroit, Mich. W GPR-FM Detroit, Mich. W GPS. Greensbro, N.C. W GR FG reencastle, Ind. W GRV-FM Greencyille, Tonn, W GSU Genesco. N.Y. W GRV-FM Washington, D.C. W GTS-FM Takoma Park. Md. W GTS-FM Takoma Park. Md. W GU Genesco. N.Y. W GTS-FM Takoma Park. Md. W GU Gary. Ind. W GU Gary. Ind. W GW GR A Interlochen, Mich. W HA-FM Madison, Wis. (s) W HAI-FM Greenfield, Mass. W HBI-FM Rock Island, III.(s) W HBI Newark. N.J. W HBI-FM Chinton. N.Y. W HCL Hartford City, Ind. W HCL Hartford, Conn. W HCL HARTFM Spracuse. N.Y. W HDL-FM Boston Mass. W HDL-FM Mitgheny. N.Y. W HFB. Howst Paterson. N.J. W HFM Rochester. N.Y. W HFB. Henderson, Mass. W HIL-FM Medford, Mass. W HIL-FM Medford, Mass. W HIL-FM Medford, Mass. W HIL-FM Hendersonville, N.C. W HKW Chillon, Wis. W HKW Chilton, Wis. W HKW Chilton, Was. W HKW Chilton, Wis. W HO.FM Mamiston, Alas. W HO.FM Misagara Falls. N.Y. W HCL-FM Henderson N.C. W HKW Chilton, Wis. W HO.FM Misagara Falls. N.Y. W HO.FM Misagara Falls. N.Y. W HO.FM Misagara Falls. N.Y. W HCL-FM History. N. C. (s) W HO.FM Misagara Falls. N.Y. W HO.FM Menderson Nica. W HO.FM M Hartishung. W HI.FM Henderson Nica. W HO.FM Me WHRB FM Cambridge, mass. WHRM Wausau, Wis. WHSA Highland Twp., Wis. WHSR-FM Winchester, Mass.

C.L. Location WHTG-FM Eatontown, N.J. WHUS Storrs, Conn. WHWC Colfax, Wis. WHYL-FM Carlisle, Pa. WHYN-FM Carlisle, Pa. WHAN-FM Carlisle, Mass. WIAM Lau Claire, Wis. WIAM-FM Williamston, N.C. WIAL Eau Claire, Wis. WIAM-FM Williamston, N.C. WIAM-FM Williamston, N.C. WIBA-FM Madison, Wis. WIBC-FM Indianapolis, Ind. WIBC-FM Philadelphia, Pa. WICB Ithaca, N.Y. WICF Indianapolis.Ind. WIFI Glenside, Pa. WICF Indianapolis.Ind. WIFI Glenside, Pa. WIFI Glenside, Pa. WIFI Glenside, Pa. WIFI Haes, N.Y. WIFI Hanster, N.C. WIFI Hashing, N.Y. WIKY-FM Constant, N.Y. WINT-FM Constant, N.Y. WINT-FM Manchester, Conn. WINZ-FM Miami, Fla. WIPA-FM FN San Juan, P.R. WIRA-FM Ft, Pierce, Fla. WIRQ Rochester, N.Y. WISH FM Indianapolis, Ind.(J) WISK Medford, Mass. WISK Medford, Mass. WISK Medford, Mass. WISK Medford, Mass. WISK-FM Madison, Wis.(s) WISN-FM Milwaukee, Wis. WISN-FM Milwaukee, Wis. WISN-FM Charlotte, N.C. WITA-FM San Juan, P.R. WITA-FM San Juan, P.R. WITA-FM Bathmore, Md. WIJZ-FM Jasper, Ind. WIJZ-FM Jasper, Ind. WIJZ-FM Johnstown, Pa.(s) WJAS-FM Pittsburgh, Pa. WJAZ-FM Holtnott, Mich. WBE-FM Botroit, Mich. WBE-FM Betroit, Mich. WIBC-FM Botroit, Mich. WIBC-FM Hagerstown, Ind. WIBC-FM Seymour, Ind. WIDZ-FM Jackson, Miss. WICD-FM Johnston City, Tenn. WIJE-FM Hagerstown, Md. WIG-FM Tullahoma, Tenn.(s) WIJH-FM Graind Røds., Mich. WIJC-FM Johnston City, Tenn. WIJC-FM Tullahoma, Tenn.(s) WIJC Cherry Valley, N.Y. WIJC FM Riebana, Mich. WIJC Cherry Valley, N.Y. WIJC FM Botroit, Mich. WIJC FM Botroit, Mich. WIJC FM Botroit, Mich. WIJC FM Johnston City, Tenn. WIJC-FM Johnston City, Tenn. WIJC FM Botroit, Mich. WJWF FM Glasgow, Ky. WAAZ-FM Manestown, N.K. WJWF-FM Glasgow, Ky. WKAZ-FM Manestown, N.K. WJWF-FM Riebana, Ala, Sis. WIDF Athens, Ala. WAK KAnkakee, III. WKAG-FM N. Wikesboro, N.C. WKBN-FM Manestorn, N.H. WKCR-FM Manestorn, N.H. WKCR-FM Manestorn, N.H. WKCR-FM Manestorn, N.H. WKCR-FM Manestor, N.Y. WKKF-FM Rateligh, N.C. WKKB-FM Chalason, Mich. WKKA MARARA

WHITE'S RADIO LOG

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C.L. Location WLAD-FM Danbury, Conn. WLAG-FM LaGrange, Ga. WLAY-FM Lancaster, Pa. WLAY-FM Lancaster, Pa. WLAY-FM Grand Rapids, Mich. WLBY-FM Grand Rapids, Mich. WLBY-FM Matkoon, Ill. WLBY-FM Matkoon, Pa. WLDN Oak Park, Mich.(s) WLDS-FM Jacksonville, Ill. WLES-FM Jacksonville, Ill. WLEC-FM Sandusky, Ohio WLDS-FM Jacksonville, Ill. WLEC-FM Sandusky, Ohio WLET-FM Toccoa, Ga. WLF Menosha, Wis. WLI Merrill, Wis. WLI Merrill, Wis. WLI Hicksville, N.Y. WLI Merrill, Wis. WLI Hicksville, N.Y. WLOA-FM Kenosha, Wis. WLM FM Kenosha, Wis. WLM FM Kenosha, Wis. WLM FM Kenosha, Wis. WLOA-FM Braddock, Pa. (s) WLOA-FM Braddock, Pa. (s) WLOE-FM Leaksville, N.C. WLOE-FM Containe, N.C. WLOE-FM Charadois, Tenn. WLOE-FM Asheville, N.C. WLOY Cranston, R.I. WLYC-FM Minneapolis, Minn, WLOY Cranston, R.I. WLY Champaign, Ill. WKR Homanigen, Ill. WKAS-FM Grand Rapids, Mich. WMAJ-FM Chicago, Ill. (s) WMAS-FM Marinette, Wis. WMAZ-FM Marinette, Wis. WMAZ-FM Marine, Ta. WMBD-FM Abaville, N.C. WMAZ-FM Marine, Ta. WMBD-FM Abaville, N.C. WMAZ-FM Marine, Ta. WMBD-FM Auburn, N.Y. WMBR-FM Jacksonville, Fla. WMBCF Merono, Maine WMER Celina, Ohio WMER Kalamazoo, Mich. WMER Kalamazoo, N.C. (s) WMER-FM Marion, Va. WMFP F1. Lauderdale, Fla. WMBC-FM Milwaukee, Wis. WMT Marion, N.C. WMMA-FM Marion, Va. WMFP F1. Lauderdale, Fla. WMFP F1. Lauderdale, Fla. WMFP F1. High Point, N.C. WMFP F1. Sistol, N.Y. WMT F1. Vernon, N.I. WMT Marion, N.C. WMMA-FM Marion, Va. WMFP F1. Coumbus, Ohio WMES-FM Marion, Va. WMFF F1. High Point, N.C. WMMA-FM Marion, N.S. WMHE Toledo, Ohio WMEY-FM Marion, Va. WMFP F1. Coumbus, Ohio WMEY-FM Marion, N.S. WMHE Toledo, Ohio WMEY-FM Marion, N.S. WMT MARAM Gretna, Va. WMT MARAM Gretna, N.S. WMT MARAM WMTW-FM WMTW-FM W Washington, N.H.(s) WMUA Amherst, Mass. WMUS Avford, Ohio WMUL Huntington, W.Va. WMUS-FM Muskedon, Mich. WMUV-FM Greenville, S.C. WMUTM Greenville, S.C. WMUZ Detroit, Mich. WMVA-FM Martinsville, Va.(s) WMVA-FM Martinsville, Va.(s) WMVA-FM Millville, N.J. WMVA-FM Martinsville, Va.(s) WMVA-FM Martinsville, Va.(s) WMVA-FM Martinsville, Va.(s) WMVA-FM Martinsville, N.A. WNAD-FM Mortan Okla. WNAD-FM Norman Okla. WNAD-FM Norma Beach, Fla. WNB-FM Martina Bead, Fla. WNB-FM Martina Bead, Fla. WNB-FM Marting Ala(s) WNDU-FM Ashland, Ohio WNDU-FM Ashland, Ohio WNDU-FM South Bead, Ind. WNEM-FM Central City, Ky. WNEW-FM Central City, Ky. WNEW-FM New York, N.Y. WNEW-FM New York, N.Y. WNEW-FM Macon, Ga.

C.L. Location WODD-FM Grand Rapids, Mich. (s) WOPA-FM Oak Park, III. WOPI-FM Bristol. Tenn. WOR-FM Bristol. Tenn. WOR-FM Bristol. Tenn. WORA-FM Majaguez, P.R. WORA-FM Majaguez, P.R. WORA-FM Majaguez, P.R. WOSL-FM Atlantic City. N.J. WOSL-FM Patueah, N.Y. WOUB-FM Patueah, Ky. WPAT-FM Paterson, N.J. WPAT-FM Paterson, N.J. WPAT-FM Portsmouth, Ohio (s) WPBC-FM Minneapolis, Minn. WPEN-FM Philadelphia, Pa. WPEL-FM Montrose, Pa. WPEL-FM Montrose, R.I. WPEN-FM Philadelphia, Pa. WPIC-FM Sharon. Pa. WPIT-FM Pittsburgh, Pa. WPIG FM Sharon. Pa. WPIT-FM Pittsburgh, Pa. WPIB Princeton, N.J. WPAM San Juan, P.R. WPAM San Juan, P.R. WPAM San Juan, P.R. WPRM SAN JUAN, FIA. WPRM SAN JUAN, WRBS Baltimore, Md. WRC-FM Washington, D.C. WRCM New Orleans, La. WRED Youngstown,Ohio WREO-FM Ashtabula, Ohio

C.L. Location WREV-FM Reidsville, N.C. WRFD-FM Worthington-WRFK R Richmond, Va. WRFL Winchester, Va. WRFL Winchester, Va. WRFS-FM Alexander City, Ala. WRFS-FM Reading, Pa. WRS-FM Baiding, Pa. WRS-FM Milwaukee, Wis. WRIT-FM Reinse, Wis. WRIT-FM Robinser, Fla. (s) WRLD-FM Conce Reach, Fl. (s) WRLD-FM Morris, II. WRHI-FM Morris, II. WRHI-FM Richmond, Va. WRMJ Atlantic City, NJ. WRIJ Atlantic City, NJ. WROK-FM Rochester, N.Y. WROK-FM Rola, Tex. WRRF Franklin Lakes, N.J. WRFH Franklin Lakes, N.J. WRFH-FM Biladelphia, Pa. WRSV-FM Marsaw, Ind. WRTI-FM Biladelphia, Pa. WRUF-FM Gainesville, Fla. WRUF-FM Richmond, Va. WRUF-FM Saginaw, Mich. WRU-FM Michmond, Va. WRVB-FM Madison, Wis. WRVD Ner OTCIINTO, Onn, (s) WRVC MR Saginaw, Mich. WSA-FM Mathata, Ga. (s) WSA-FM M Saginaw, Mich. WSA-FM M Saginaw, Mich. WSB-FM Mattanta, Ga. (s) WSB-FM Michmond, N.S. WSC Spring Arbor, Mic. WSU Carbondale, III. WSSE-FM Cibiago, III. (s) WSA-FM Michmond, Sa. WSU Carbondale, III. WSSE-FM Cibiago, III. (s) WSA-FM Michmond, Sa. WSU Carbondale, III. WSU Carbondale, III. WSSE-FM Cibiago, III. WSI Carbondale, III. WSU Carbondale, III. WSI FM Birmingham, Ala.(s) WSH FM Salem, Ohio WSSE-FM Charlotte, N.C. WSON Salem, Ohio WSYE, FM Salew, Ohio WSYE, FM Salew, Ya. WSYE, WTBS Cambridge, Mass. WTCX St. Petersburg, Fla.(s) WTDS Toledo, Ohio

C.L. Location C.L. LOCGTION
WTFM Babylon, N.Y.(s)
WTHI-FM Terre Haute, Ind.
WTIC-FM Hartford, Conn.(s)
WTIS-FM Hartford, Conn.(s)
WTIS-FM Hartford, Conn.(s)
WTS-FM Charleston, S.C.
WTM-FM Charleston, S.C.
WTM-FM Charleston, S.C.
WTM-FM Charleston, S.C.
WTO-FM Toledo. Ohio
WTO-FM Washington, D.C.
WTS-FM Lumberton, N.C.
WTS-FM Lumberton, N.C.
WTS-FM Calaremont, N.H.
WTS-FM Calaremont, N.H.
WTN-FM Mostington, Ind.
WTV-FM Bolomington, Ind.
WTW-FM Columbus, Ohio
WUCB-FM Chicago, III.
WULS-FM Coldwater, Mich.
WUC Chapel Hill, N.C.
WUNC Chapel Hill, N.C.
WUSY-FM Bethesda, Md.
WUSY Scranton, Pa.
WYA-FM Golumbia, S.C.
WUSY-FM Golumbia, S.C.
WUSY-FM Gand Rapids, Midh.
WUSY Scranton, Pa.
WYA-FM M Altoona. Pa.
WYR-FM H Altoona. Pa.
WYR-FM M Gand Rapids, Midh.
WVKC-FM Mastington, N.C.
WVKC-FM Mesark, N.J.
WVNO-FM Masheld, N.Y.
WYS St. Petersburg, III.
WYNA-FM Newark, N.J.
WVNO-FM Masheld, N.Y.
WYN-FM Newark, N.J.
WVNO-FM Masheld, N.Y.
WYN-FM Calarbay, N.C.
WYST St. Petersburg, Fla.
WYN-FM Mesark, N.J.
WVNO-FM Masheld, N.Y.
WYN-FM Mesark, N.J.
WYNO-FM Masheld, N.Y.
WYN-FM Mesark, N.J.
WYNO-FM Masheld, N.Y.
WYN-FM Mesark, N.J.
WYNO-FM Mison, N.C.
WYN-FM Calarbay, N.C.
WYN-FM Calarba WYSO Yellow Springs, Ohio WYZZ Wilkes-Barre, Pa. WZIP-FM Cincinnati, Ohio

Canadian AM Stations By Call Letters

C.L. Loc	ation	Kc.	C.L.	Location	Kc.	C.L.	Location	Kc.	C.L.	Location	Kc.
CBA Sackville,	N.B.	1070	CBJ	Chicoutimi, Que.	1580	СВХ	Edmonton, Alta.	1010	CFBR	Sudbury. Ont.	550
CBAF Moncton,				Regina, Sask,	540	CBX	A Edmonton, Alta.			Corner Book, Nfld.	570
CBE Windsor, O		1550	CBL	Toronto, Ont.	740	CBY	Corner Brook, Nfld.	990	CFCF	Montreal, Que.	600
CBF Montreal, (690	ĊBM	Montreal, Que.	940	CFAI	3 Windsor, N.S.			North Bay. Ont.	600
CBG Gander, Nfl		1450	CBN	St. John's, Nild.	640	CFAC	Calgary, Alta.			Timmins, Ont.	620
CBH Halifax, N	. S.	860	CBO	Ottawa, Ont.	910	CFAI	M Altona, Man.	1290	CFCN	Calgary, Alta.	1060
CBI Sydney, N.S	5.	1140	CBT	Grand Falls, Nfld,	990	CFAI	R Flin Flon, Man.			Chatham, Ont.	630
		-	CBU	Vancouver, B.C.	690	CFA)	(Victoria, B.C.	870	CFCP	Courtenay, B.C.	1440
				Quebec, Que.	980	CFBC	Saint John, N.B.	930	CFCW	Camrose, Alta.	790
162 WHITE	'S RADIO	LOG	CRW	Winnineg, Man.	990	CFB	A Brochet, Man.	1450	CFCY	Charlottestown, P.E.I.	630

C.L. Location	Kc.	C.L.	Location	Kc.	C.L.	Location	Kc.	C.L.	Location	Kc.
CFDA Victoriaville, Que.	1380	CHLC	Hauterive, Que.	580			1460	CKLG	N. Vancouver, B.C.	730
CFDR Dartmouth, N. S.			Three Rivers, Que.	550		Blind River, Ont.	730		Montreal, Que.	1570
CFGB Goose Bay. Nfld.			St. Thomas, Ont.	680	CIOB	Winnipeg, Man.			Nelson, B.C.	1390
CFGM Richmond Hill, Ont.			Montreal, Que.	1410	CIOC	Lethbridge, Alta.		CKLS	LaSarre, Que.	1240
CFGP Grande Prairie, Alta.			Sherbrooke, Que.	630	CJUN	St. John's, Nild.	930		Windsor, Ont.	800
CFGR Gravelbourg, Sask. CFGT St. Joseph d'Alma, Qu	1230		Hamilton, Ont.	900	CION	Vancouver, B.C. Guelph, Ont.	600 1460		Lindsay, Ont. Mont Laurier, Que.	910 610
CFJC Kamloops, B.C.			Sudbury, Ont.			Quebec, Que.	1340		Midland, Ont.	1230
CFJR Brockville, Ont.	1450	CHNS	Halifax, N.S.	0.00	CIRH		1310		Newcastle, N.B.	.790
CFKL Schefferville, Que.	1230	СНОК	Sarnia, Ont.			Kenora, Ont.	1220		Campbellton, N.B.	950
CFLM LaTuque, Que.			Pembroke, Ont.			Summerside, P.E.I.	1240		Ft. St. John, B.C.	970
CFML Cornwall, Ont.	1110		Welland, Ontario			Sorel, Que,	1320		New Westminster,	
CFNB Fredericton, N.B.			Vancouver, BC.	1320	CJSP	Leamington, Ont.	710		British Columbia	980
CFNS Saskatoon, Sask.	1170	CHRC	Quebec, Que,	800	CISS	Cornwall, Ont.	1220	CKNX	Wingham, Ont.	920
CFNW Norman Wells,			Drummondville, Que.			Victoria, B.C.	900	CKOC	Hamilton, Ont.	1150
Northwest Territory			Roberval, Que.	910		Montreal, Que.	730		Penticton, B.C.	800
CFOB Fort Frances, Ont.			St. Jean, Que.			Wilmot Station, N.S.			Saskatoon, Sask.	1250
CFOR Orillia, Ont.			Saint John, N.B.	1150	CKAF	Huntsville. Ont.	590		Tillsonburg, Ont.	1510
CFOS Owen Sound, Ont.			Nanaimo, B.C.	1570	CKAH		1340		Kelowna, B.C.	630
CFOX Pointe Claire, Que.			Port Hope, Ont.	1450		Barrie, Ont.	950		Woodstock, Ont.	1340
CFPA Port Arthur, Ont.			I Toronto, Ont.	1050		Bathurst, Nfld.	1360		Ottawa, Ont.	1310
CFPL London, Ont.			Niagara Falls, Ont.	1270		Prince Albert, Sask,	900		Brantford, Ont.	1380 550
CFPR Prince Rupert, B.C. CFOC Saskatoon, Sask.			(Chilliwack, B.C.) Oakville, Ont.	1250		. Matane, Que. M Montmagny, Que.	1250		Prince George, B.C. Fort William, Ont.	580
CFRA Ottawa, Ont.			Montreal, Que.			St. Hyacinthe, Que.	1490	CKPT	Peterborough, Ont.	420
CFRB Toronto, Ont.			Cabano, Que.	1340	CVDV	V Bridgewater, N.S.	1000	CKPP	Ville St. Georges, Que.	
CFRC Kingston, Ont.			Trail, B.C.	610	CKCH	Hull, Que.	970		Winnipeg, Man.	630
CFRG Gravelbourg, Sask.			Port Alberni, B.C.	1240	CKCK	(Regina, Sask.	620		Red Deer, Alta.	850
CFRN Edmonton, Alta.			Toronto, Ont.	860		Truro, N.S.	600		Regina, Sask.	980
CFRS Simcoe, Ont.			Belleville, Ont.	800		A Grand Falls, Nfld.	620		Rouyn, Que.	400
CERY Portage la Prairie.		CIBR	Rimouski, Que.	900		Seven Hes, Que.	560		Jonguiere, Que,	590
Ma	n, 920	CJCA	Edmonton, Alta.	930	CKCC	Quesnel, B.C.	570	CKSA	Lloydminster, Alta.	1150
CFSL Weyburn, Sask.	1340	CICB	Sydney, N.S.	1270		VI Williams Lake, B.C.			St. Boniface, Man.	1050
CFTK Terrace, B.C.			Halifax, N.S.	920		Kitchener, Ont.	1490	CKSL	London, Ont,	1290
CFUN Vancouver, B.C.	1410	CICI	Woodstock, N.B.	920		Quebec, Que.	1280		Shawinigan, Quebec	1220
CEVR Abbottsford, B. C.	250		Stratford, Ont.	1240		V Moncton, N.B.	1220		Sudbury. Ont.	790
CFWH Whitehorse, Yukon T	. 5/0		Dawson Creek, B.C.	560		Sault Ste. Marie, Ont.			Swift Current, Sask.	1400
CFYK Yellowknife, N.W.T.	1340		Edmundston, N.B.	570 630		A Victoria, B.C.	1220		St. Catharines, Ont.	610
CFYT Dawson, Yukon T. CHAB Moose Jaw, Sask.	800		Smiths Falls, Ont. Riviere du Loup, Que.	1400		H Amherst, N.S.	1400		Three Rivers, Que.	1150 900
CHAD Amos. Que.	1340		Antigonish, N.S.	580		W Dauphin, Man. C New Glasgow, N.S.	730		Sherbrooke, Que.	580
CHAT Medicine Hat, Alta.	1270		Yorkton, Sask.	940		Cranbreek, B.C.	1320		Edmonton, Alta. Val d'Or, Que.	1230
CHCM, Marystown Nfld.	560		Vernon, B.C.	940		Kentville, N.S.	1350		Verdun, Que.	850
CHEC Lethbridge, Alta.	1090		Sault Ste. Marie, Ont.		CKEN	Toronto, Ont.	580		Ville Marie, Que.	710
CHED Edmonton, Alta.	630		Langley Prairie, B.C.	850		Toronto, Ont.	1430		Kingston, Ont.	960
CHEF Granby, Que.	1450		Kirkland Lake, Ont.	560		3 Timmins, Ont.	680		Vancouver, B.C.	1130
CHEX Peterborough, Ont.	980		Joliette, Que,	1350		M Montreal, Que.	980		Brandon, Man.	1150
CHFA Edmonton, Alta.	680		Quebec, Que.	1060		Galt, Ont.	1110		Calgary, Alta.	1140
CHFC Churchill, Man.	1230	CUS	Yarmouth, N. S.	1340		St. Jerome, Que.	900		Winnipeg, Man.	580
CHFI Toronto, Ont.	1540			800		W Kitchener, Ont.	1320		Peace River, Alta.	610
CHGB St. Anne de la		LO LANE	Ft. William, Ont.			B Oshawa, Ont,			St. John's, Nfld.	1230
Pocatiere, Que			Regina, Sask.	1300			1350		St. John's, Nfld.	590
CHIC Brampton, Ont.	790		Montreal, Que.	1280		C Kingston, Ont.			St. John's, Nfld.	800
CHIQ Hamilton, Ont.	1280	CIMT	Chicoutimi, Que.	1420	GKLD) Thetford Mines, Que.	1230	NOM I	1 GL JUIII S, MIIO.	000

Mexican and Cuban AM Stations Mexican stations audible in the Southwest; the more powerful Cuban stations

Location	C.L.	Kc.	W.P.	Location	C.L.	Kc.	W.P.	Location	C.L.	Kc.	W.P.	Location	C.L.	Kc.	W.P.
	Aexi o			Villa Acuna	XEDH		250	Hermosillo	XEBH	920	5000	Habana	CMW	590	2500
	nexic	.0					250000		XEDL	1250	500 50000		CMCY CMQ	550 630	15000 25000
DATA	CALIFO	2 D N	1.4	DISTRI	TO FE	DER	AL		X ED M X EHQ	590	500		CMCU	660	1000
DAJA				Mexico City	XEB	1220	100000	Magdalena	XEDJ		100		CMBC CMCD	690 760	50000 10000
Cuervos	ŶĔĎŶ		1000	_	XEDF	970	10000	Naco Nogales	XEHF		5000		CMCH	790	10000
El Saugal Ensenada	XEDX XEPF		500 250		X EL X EN	690	5000 20000	San Luis	XECB	1450	250		CMBZ	830	5000
	XEXK	920	250		XEQ	940	150000	Santa Ana	XEAB	1400	250		CMBL CMCF	860 910	15000
Mexicali	XED XEAA		5000 250		XEW	900 730		TAM	IAULIP	AS			CMBF	950	10000 5000
	XEAO		250		XÊFR		50000	Cuidad Migue	IXEHI	1470	500		CMCK	980	5000
	XECL	990	5000		XEIP	1150	10000	Aleman	XEWD	1430	2000		CMBQ CMCX		5000 10000
Tijuana	XEGE XEC	1150	1000 250		XELA XELZ	830	10000	Cuidad Cama	XEZD	1400	250		CMCA	730	10000
Tijuana	XETRA	690	50000		XEMX		5000	Matamoros	XEO	970	1000		СМСВ	1330	1000
	XEAU		5000		XENK	620	5000		XEAM			Holguin	CM KJ CM KP	730 670	5000 1000
	XEAZ XEBG		500		XEOY	590	50000 5000		XEMT	1340	250 250	Holguin Orte		560	5000
	XEGM	950	2500		XEQK	1350	1000	Nuevo Laredo	XEAS	1410	250		CMKV	600	1000
	XEMO		5000 2000		XEQR	1030	10000		XEBK XEDF	1340	100		CM KD CM DC	970	1000
			2000		XERG	690	250		XEFE	790	1000	Marianao	CMDC		1000 5000
CH	IHUAH	UA			XERCN	1110	50000		XEK	960	5000	Neuvitas	CMJD	1300	1000
Chihuahua	XEM		500		XERPM	1500	50000 10000		XEWL	1090	2500 50000	Pinar del Rio	CMAB CMAF	740 680	5000 1000
	XEBU XEBW		1000		XESM		10000	Reynosa	XEOR	1390	1000		CMAN	840	1000
	XEFI	580	1000		XEUN	860	5000		XER1 XERT	810 590	500	0	CMAQ	9211	1000
Ciudad Cam	XERA	1490	250	DL	JRANG	0		Rio Brava	XEOQ	1110	5000 1000	Sagua La Gra	CMHA	1283	1000
Ciudad Cam	XEHA	580	1000	Durango	XEDU	860	1000	Rio Bravo	XEFD	1170	1000	Santa Clara	CMHI	57)	10000
Ciudad Deli				NUE	VO LE	ON		Tampico Valle Hermos	XEFW a XEVI	810	50000 1000	· •	CMHG CMHC	670	1000
	XEBN		250 250	Linares	XER		250						СМНО	640	15000
Ciudad Juar	ez XEF	1420	250	Monterrey	ŶĔĠ	1050	150000		Cuba				CMHW	810	1000
	XEJ	970	5000 500		XENL		5000						CMH0 CMHM		1000
	XÊFV		250		XEH	990	1000	Camaguey	CM JB CM JL	880 920	1000 5000	Sancti Spiritu	s		
			150000		XEAR	570	1000		CMJN	960	1000	C-ations	CMHT		1000
	XEWG		250 1000		XEAW XEFB		1000		CMJE	680	1000	Santiago	CMDA CMKC	770	1000
Hidalgo	XEJS		500		XEMR	1370	500		CMFA CMJR		1000		CMDB	680	1000
N. Casas Gi	randes				X E 0 K		500		CWIC	1000	1000		CMKL	800	2000 2000
_	XETX		250	SAN L	UIS PO	OTO	SI	O a market and	CMJF		1000		CMKW CMKR	1090	1000
CC	DAHUIL	.A		San Luis Po	tosi			Camaluani Ciego de Avil	CMHD	890 760	1000		CMKU	6:10	2000
Ciudad Acu	na XEKD	1010	1000		XEWA	540	150000	CIERO DE AVII	CMJT	700	1000		CMDL	1150 930	1000
Monclova	XEMF		250	S	ONOR/	1				800	1000		CMKB		1000
Piedras Neg	XEMU	920 580	1000	Agua Prieta	XEAQ		250		CMJV		1000	Victoria de las	Tunas		
Sabinas	XEBX	610	5000	-	XEFH	1310	1000	Cienfuegos Consulacion D		680 880	1000		CMDQ CMKT		1000
Saltillo	XESJ XESG		500 1000	Cananea Ciudad Obre	XEFQ	980	500	Consulation L	CMAK		1000		UNIKI	1010	
Torreon	XEBP		5000		XEOX	1430	1000	Guantanamo	CMKS		1000	WHITE'S RA	IDIO L	OG	163

L

Canadian FM Stations by Location											
Location	C.L.	Mc.	Location	C .L.	Mc.	Location	C.L.	Mc.	Location	C .L.	Mc.
Brampton, Ont. Brantford, Ont. Cornwall, Ont.	CKPC-FM CJSS-FM	92.1 104.5		CKLC-FM		Ottawa, Ont,	CKLB-FM CBO-FM CFMO-FM	103.3	Toronto, Ont.	CBC+FM CFRB+FM CHFI+FM	99.1 99.9 98.1
Edmonton, Alta. Ft. William.	CFRN.FM CJCA.FM CKUA.FM	99.5	Kitchener, Ont. Lethbridge, Alta. London, Ont.	CKCR-FM CHEC-FM CFPL-FM	96.7 100.9 95.9	Quebec, Que. Rimouski, Que. St. Catharines,	CHRC-FM CJBR-FM	98.1 101.5	Vancouver, B.C. Verdun, Que.	CJRT-FM CBU-FM CHQM-FM CKVL-FM	91.1 105,7
	CKPR+FM Chns+Fm			CBM-FM	100.7	Ont. Sherbrooke, Que, Timmins, Ont.	CKTB-FM Chlt-FM Ckgb-FM	102.7	Victoria, B.C. Windsor, Ont.	CKDA-FM CKLW-FM	98.5 93.9 97.5

Canadian FM Stations by Call Letters

C .L.	Location	C.L.	Location	C .L.	Location	C.L.	Location
CBF.FM CBM.FM CBO.FM (CBU.FM) CFCF.FM CFPL.FM CFPL.FM	Foronto, Ont. Montreal, Que. Montreal, Que. Ditawa, Ont. Jancouver, B.C. Montreal, Que. London, Ont. Ottawa, Ont. Toronto, Ont.	CFRN.FM CHEC.FM CHFI.FM CHLT.FM CHNS.FM CHNS.FM CHRC.FM CJBR.FM	Kingston, Ont. Edmonton, Alta. Lethbridge, Alta. Toronto, Ont. Sherbrooke, Que. Halifax, N.S. Quebec, Que. Rimouski, Que. Edmonton, Alta.	CJOB-FM CJRT-FM CJSS-FM CKCR-FM CKDA-FM CKGB-FM CKGB-FM	Sydney, N.S. Winnipeg, Man. Toronto, Ont. Cornwall, Ont. Kitchener, Ont. I Victoria, B.C. Timmins, Ont. Oshawa, Ont. Kingston, Ont.	CKPC+FM CKPR-FM CKSF+FM CKTB-FM CKUA-FM CKVL-FM	Windser, Ont. Brantford, Ont. Ft. William, Ont. Cornwall, Ont. St. Catharines, Ont. Edmonton, Alta. Verdun, Que. Kingston, Ont.

Canadian Television Stations

Location	C.L. Chan.	Location	C.L. Ch	an.	Location	C.L. Cha	n.	Location	C .L.	Cho	ın.
ALI	BERTA	Vernon Victoria	CHBC.TV-3		Sydney	CICB-TV		QUE	BEC		
Burmis	CJLH.TV-3 3	LADD	CHEK-TV ADOR	6		CBHT-3	••	Carleton	CHAU-	ту	5
Calgary	CHCT-TV 2 CFCN+TV 8					ARIO		•	CJAO-TV CHSM-		80 7
Drumheller	CFCN-TV-1 8	douse Baj	CFLA-TV	8	Barrie Cornwall	CKVR-TV CJSS-TV	11	Clermont	CFCV-T		75
Edmonton	CBXT-TV 5 CFRN-TV 3	1	TOBA		Elk Lake	CFCL-TV-2	2	Estcourt Gaspe West	CJES-T CFGW-T		70 6
Lethbridge	CJLH-TV 7	Baldy Mountain Brandon	CKOS-TV-I CKX-TV	8 5	Elliot Lake Hamilton	CKSO-TV-I Chch-TV	3	Jonquiere	CKRS	-TV	12
Lloydminster Medicine Hat	CHSA-TV 2 CHAT-TV 6	Winnipeg	CBWT	3	Kapuskasing	CFCL-TV-I	'3	Matane Montreal	CKBL	-TV BFT	9 2
Pivot	CHAT-TV 4		CBWFT CJAY-TV	6	Kenora Kingston	CBWAT CKWS-TV	.8	MUITTEAL	CFCF-	TV	12
Red Deer	CHCA-TV 6 CHCA-TV-2 10			•	Kitchener	CKCO.TV	13		CFTM-	TV SMT	10 6
		Campbeilton	CRCD-TV	7	London North Bay	CFPL-TV CKGN-TV		New Carlisle	CHAU	•TV	5
BRITISH	COLUMBIA	Moncton	CKAM-TV	2	Ottawa	CBOFT	9	Quebec	CFCM CKMI		4
Ashcroft Burnaby	CFCR-TV-2 10 CHAN+TV 8	Saint John	CBAFT CHSJ-TV	4		CBOT CIOH-TV	13	Rimouski	CJBR	-ŤÝ	š
Crescent Valley	CHMS-TV 5	Upsalquitch Lake		12	Parry Sound	CKVR-TV-I	ij.	Riviere du-Loup Rouyn	CKRT CKRN		4
Dawson Creek Enderby	CIDC-TV 5 CHBC-TV-8 5	NEWFOU	NDLAND		Pembroke Peterborough	CHOV-TV Chex-TV	12	Sherbrooke	CHLT	•TV	Ż
Kamioops	CFCR-TV 4	Argentia	CIOX-TV		Port Arthur	CKPR-TV-I	2	Three Rivers	СКТМ	• I V	13
Kelowna	CHBC-TV 2 CHGP-TV-1 72	Corner Brook	CBYT CHEK•TV	5	Sault Ste. Marie Sieux Lookout	CJIC-TV CHSL-TV	2	SASKATC	HEWA	N	
	CABC-TV-4	Grand Falls	CJCN-TV	4	Sturgeon Fails	CBFST	7	Carlyle Lake	CKDS-T		7
Keremeos Lumby	CHBC-TV-9 5 CHBC-TV-4 5	St. John's Stephenville	CJON-TV CFSN-TV	8	Sudbury Timmins	CKSO-TV CFCL-TV	2	East End Moose Jaw	CJFB- CHAB-		24
Nelson	CBUAT-TV-7 9	NOVA		-	Toronto	CBLT CFTO-TV	6	Nipawin	CKBI-T		2
Oliver Peachland	CHBC-TV-3 8 CHBC-TV-10 5	Antigonish	CFXU-TV	9	Windsor	CKLW-TV	9	Prince Albert	CKBI-T		2
Penticton	CHBC-TV-2 13	Halifax	CBHT	3	Wingham	CKNX-TV	8	Regina Saskatoon	CKCK CFQC		28
Prince George Saddle Mountair	CKPG-TV 3 1 CHHC-TV-1 4	Inverness	CJCH-TV CJCB-TV-1	5	PRINCE	EDWARD		Swift Current	CFJB		5
Salmon Arm	CHBC-TV-6 5	Liverpool	CBHT-I	12	ISL/			Val Marie		FB	2
Traił Vancouver	CBUAT II CBUT 2	New Glasgow Shelburne	CFCY-TV-I CBHT-2	7	Charlottetown	CFCY-TV	13	Wanganui Yorkton	CKBI-T CKOS		7
						2.01-11					

U. S. Television Stations

Territories ond possessions follow states. Chon., channel number; osterisk (*) indicates educational station.

•								iensk () maie	ales education	ai sianon.
Locatio	n	C.L. Ch	an.	Location	C.L. Ch	an.	Location	C.L. Chan.	Location	C.L. Chan.
	ALABA	ΔΜΔ		ARKA	NSAS		Satinas	KSBW-TV 8		WNHC-TV 8
Andalus		WDIQ	*2				San Bernardino	KCHU-TV 18		WATR-TV 53
Birming		WAPI-TV	13	El Dorado Ft. Smith	KTVE KFSA-TV	10	San Diego	KVCR-TV *24 KFMB-TV 8		MADE
•		WBIQ	*10	Hot Springs	KFOY-TV	ğ	San Diege	KOGO-TV 10	DELA	WARE
		WBRC-TV	6	Little Rock	KARK-TV	- 4	(Tijuana, Mex.)	XETV 6	Wilmington	WHYY-TV 12
Decatur Dothan		WMSL-TV WTVY	23 4		KTHV	Ц	San Francisco	KFOG-TV 44		
Florence		wowi	15	Texarkana	KATV KCMC-TV	76		KGO-TV 7 KPIX 5	DIST. OF	COLUMBIA
Huntsvil	lle	WAAY-TV	25			0		kQED *9		WETA-TV *26
		WAFG-TV	31	CALIF	ORNIA			KRON-TV 4		WMAL-TV 7
Mobile		WHNT-TV WALA-TV	19		KBAK-TV	29		KBAY-TV 8		W00K-TV 14
MODING		WKRGTV	5		KER0-TV	23	San Jose San Luis Obispo	KNTV II KSBY-TV 6		WRC-TV 4 WTOP-TV 9
Montgon	nery	WCOV-TV	20]	KLYD-TV	17	San Mateo	KCSM-TV 14		WTTG 5
		WSFA-TV	12	Chico El Centro	KHSL-TV XEM-TV	12	Santa Barbara	KEY-T 3		
Munford Selma		WCIQ WSLA	*7	El Centro	KECC-TV	9	Stockton	KOVR 13	FLO	RIDA
Genna			0		KXO	7	Vista	KICV-TV 12	Daytona Beach	WESH-TV 2
	ALAS	KA		Eureka	KIEM-TV	3	COLO	RADO	Fort Pierce-Ver	Beach WTVI 19
Anchora	ge	KENI-TV	2	Fresno	KVIQ-TV KFRE-TV	30	Colorado Springs	κκτν Π	Fort Myers	WINK-TV II
Fairban		KTVA	11	T POSILO	KAIL	53		KRDO-TV 13	Gainesville	WUFT *5 WFGA-TV 12
rairpan	K5	KFAR•TV KTVF	1		KJEO	47	Denver	KBTV 9	Jacksonvine	WJCT *7
Juneau		KINY-TV	8	11	KMJ-TV	24		KLZ-TV 7 KOA-TV 4		ŴĴXŤ 4
	ADITO		-	Hanford Los Angeles	KDAS-TV KABC-TV	21		KRMA-TV *6	Miami	WCKT 7
	ARIZO	INA		Ena Augurea	KCOP	13		KTVR 2		WLBW-TV 10 WTHS-TV *2
Douglas		KCDA	3		KHJ-TV	.9	D	KCTO 2	1	WTVJ 4
Phoenix		KOOL-TV KAET	10		KHIX KMEX-TV	22 34	Durango Grand Junction	KIFL 6 KREX-TV 5	Orlando	WDBO-TV 6
		крноту	5		KNXT	2	Montrose	KREY-TV IO	Palm Beach	WFTV 9
		KTVK	3		KNBC	- 4	Pueblo	KCSJ-TV 5	Panama City	WPTV 5 WJDM-TV 7
~		KTAR-TV	12		KTLA	5	Sterling, Colo.	KTVS 3	Pensacola	WEAR-TV 3
Tucson		KGUN-TV KOLD-TV	13	Oakland	κττν κτνυ	11	CONNE	CTICUT	St. Petersburg	WSUN-TV 38
		KVOA-TV	4	Redding	KVIP-TV	7	Bridgeport	WICC-TV 43	Tallahassee	WFSU-TV *11
		KUAT	*6	Sacramento	KXTV	10	DIINBCHOIL	WEDH *24	Tampa	WFLA-TV 8
Yuma		KIVA	11		KCRA-TV	3	Hartford	WTIC-TV 3		WEDU *3
104	WINTER	D.L.D.C. 10			KVUE	40		WHCT-TV 18		WTVT 13
164	WHITE'S	RADIO LO	JGI		KVIE	*61	New Britain	WHNB-TV 30	W. Palm Beach	WEAT-TV 12

Location	C.L. Ch	an.	Location	C.L. Cha		Location	C.L. Cha	n.	Location	C.L. Chan.
GEO	RGIA			WFPK-TV WHAS.TV	11	MONT	ANA		0	ню
Albany	WALB-TV	10	Paducah	WQXL-TV WPSD-TV	41 6	Billings	KOOK-TV KGHL-TV	2 8	Akron Cincinnati	WAKR-TV 49 WCET *48
Athens Atlanta	WGTV WAGA-TV	*8 5	LOUIS		- 1	Butte Glendive	KGHL-TV KXLF-TV KXGN-TV	4		WCPO-TV 9 WKRC-TV 12
	WAII-TV WSB-TV	2	Alexandria	KALB-TV	5	Great Falls	KFBB-TV	5		WLW-T 5 WCIN-TV 54
Augusta	W ET V W J B F	*30	Baton Rouge	WAFB-TV WBRZ	9 2	Helena	KRTV KBLL-TV	12	Cleveland	ΚΥΨ-ΤΥ 3
Columbus	WRDW-TV WRBL-TV	12	Lafayette	KATC KLFY-TV	3	Kalispell Missoula	KULR KMSO-TV	9 13	0 1 1	WEWS 5 WJW-TV 8
Macon	WTVM WMAZ-TV	9 13	Lake Charles	KPLC-TV KTAG-TV	25	NEBRA	SKA		Columbus	WBNS-TV 10 WLW-C 4
Savannah	WSAV-TV	3	Monroe	KNOE-TV	8	Grand Island	KGIN-TV	ų		WOSU-TV *34 WTVN-TV 6
	WEGA-TV WTOC-TV	*9 11	New Orleans	WDSU-TV	13	Hastings Hay Springs	KHAS-TV KDUH-TV	5 4	Dayton	WHI0-TV 7 WLW-D 2
Thomasvill o Waycross	WCTV WEGS-TV	* ⁶		WVUE WWL-TV	13	Hayes Center Kearney	KHPL-TV Khol-TV	6	Lima Newark	WIMA-TV 35 WGSF *28
HAV	NAU		Shreveport	WYES KSLA-TV	*8 12	Lincoln	KOLN-TV *	10 12	Oxford Steubenville	WMUB-TV 14 WSTV-TV 9
Hilo	кнвс-ту	9		KTBS TV	3	McCook North Platte	KOMC KNOP	82	Toledo	WSPD-TV 13
Honolulu	KHJK KGMB-TV	13	MAI			Omaha	KMTV KETV	37		WTOL-TV N
	KTRG-TV	13	Augusta Bangor	WCBB WABI-TV	10 5	0	WOW-TV	6	Youngstown	WFMJ-TV 21 WKBN-TV 27
Walluku	KONA KHVH-TV KMAU	2 4 3	Orono		*12	Scottsbluff		10	Zanesville	WKST-TV 33 WHIZ-TV 18
W differed	KALA KMVI-TV	3 7 12	Poland Spring Portland	WMTW-TV WCSH-TV	8 6	NEVA	VA KORK-TV	2	OKLA	НОМА
ID A	AHO	14	Presque Isle	WGAN-TV WAGM-TV	13	Henderson Las Vegas	KLAS-TV	8	Ada	KTEN IC
Boise	KB01-TV	2	-	WMEM-TV	١Ö	Reno	KSHO-TV KCRL	13	Ardmore	KXII 12 KOCO-TV 5 KSWO-TV 7
Idaho Falis	KTVB KID-TV	7 3	MARY				KOLO-TV	8	Lawton Okiahoma City	KETA *IS
	KIF1-TV	8	Baltimore	WJZ-TV WBAL-TV	13	NEW HAM				KOKH-TV 25 KWTV 9
Lewiston Nampa	KLEW-TV KCIX-TV	3	Salisbury	WMAR-TV WB0C-TV	2 16	Durham Manchester	WENH-TV' WMUR-TV	9	Tulsa	WKY-TV 4 KQTV 6
Twin Falls	KMVT	E1	MASSACI				RSEY			KOED-TV *II
	NOIS	*8	Adams	WCDC	19		WNDT-TV	13		КV00-ТV 2
Carbondale Champaign	WSIU-TV WCIA	3	Boston	WBZ-TV WGBH-TV	+2	NEW MI	EXICO			GON
Chicago	WCHU WBBM-TV	33 2		WHDH-TV WNAC-TV	5	Albuquerque	KGGM-TV	13	Coos Bay Corvallis	KCBY-TV II KOAC-TV *7
	WBKB WCIV	7 26	Greenfield Springfield	WRLP WHYN-TV	32 40		KNME-TV KOAT-TV	*5 7	Eugene	KVAL-TV 13 Kezi-TV 9
	WGN-TV WNBQ	9 5	Worcester	WWLP WWOR-TV	22 14	Carlsbad	KOB-TV Kave-TV	4 6	Klamath Medford	KOTI 2 KBES-TV 5
	WTTW WSNS	*11 44	MICH		17	Clovis Roswell	KVER-TV KSWS-TV	12 8 2	Portland	KMED-TV 10
Danville Decatur	WICD	24 17	Allen Park	WAN	20	Santa Fe	KVSF-TV	2	ronnanu	KOAP-TV *10
Harrisburg La Salle	WSIL-TV WEEQ-TV	3 35	Bay City Cadillac	WNEM-TV WWTV	5	NEW Y	ORK			KATU-TV 2 KOIN-TV 6
Peoria	WEEK-TV	43	Cheboygan	WWUP-TV WTOM-TV	10 4	Albany	W T E N W A ST	10	Roseburg	KPTV 12 KPIC 4
0	WMBD WTVH	3 1 19	Detroit	WJBK-TV	2 • 56		WTR1 WCDA	35 41	PENNS	LVANIA
Quincy Rockford	WGEM-TV WREX-TV	10		VT-LWW	4	Binghamton	WINR-TV WNBF-TV	40	Altoona	WFBG-TV 10
Rock island	WTV0 WHBF+TV	39 4	(Windsor, Ont.)	CKLWITY	9	Buffalo	WBEN-TV WNED-TV	4	Erie	WICU 12 WSEE-TV 25 WHP-TV 21
Springfield Urbana	WICS WILL-TV	20 *12	Flint Grand Rapids	WJRT WOOD-TV	12		WGR-TV	2	Harrisburg	WHP-TV 21 WTPA 27
			Kalamazoo	WZZM-TV WKZO-TV	13	Carthage	WKBW-TV WCNY-TV	7	Johnstown	WARD-TV 36 WJAC-TV 6
Blocmington	WTTV	4	Lansing Marquette	WJIM-TV WLUC-TV	6 6	Elmira New York	WSYE-TV WABC-TV	18	Lancaster Lebanon	WGAL-TV 8 WLVH-TV 15
Elkhart Evansville	WSJV-TV WFIE-TV	28 14	Mount Pleasant Onondaga WILX	WCMU-TV TV/WMSB	14		WUHF-TV WNEW-TV	31 5	Lockhaven New Castle	WBPZ-TV 32 WKST-TV 33
	WEHT WTVW	50 7	Saginaw Traverse City	WKNX-TV WPBN-TV	57 7		WCBS-TV WOR-TV	2 9	Philadelphia	WCAU-TV 10 WFIL-TV 6
Ft. Wayne	WANE-TV WKJG-TV	15 33	MINNE				WPIX WNBC-TV	4		WUHY TV 35 WPCA TV 17
Indianapolis	WPTA WFBM-TV	21	Alexandria	KCMT	7	Plattsburg	WNYC-TV WPTZ-TV	31 5	Dittahungh	WRCV-TV 3
	WLWI WISH-TV	13	Austin Duluth	KMMT KDAL-TV	6 3	Rochester	WHEC TV WOKR-TV	10	Pittsburgh	WHC II
Lafayette Marion	WFAM-TV WTAF	18 31	Mankato	WDSM-TV KEYC-TV	6 12		WROC-TV WVET-TV	5		WQED *i3 WTAE 4
Muncie	WLBC-TV	49	Minneapolis	KMSP WCC0-TV	9 4	Schenectady	WRGB	6	Scranton	WNEP-TV 16 WDAU-TV 22
South Bend	WNDU-TV WSBT-TV	16	Rochester	WTCN-TV Kroc-TV	11	Syracuse	WHEN-TV WNYS	8 9	Wilkes-Barre York	WBRE-TV 28 WSBA-TV 43
Terre Haute	wтні-тv WA .	10	St. Paul	KSTP-TV KTCA-TV	5	Utica	WSYR-TV WKTV	3 2	RHODE	ISLAND
Ames	WA . W01-TV	5	MISSI		-	NORTH CA	ROLINA		Providence	WJAR-TV 10
Cedar Rapids	KCRG-TV	9 2	Columbus	WCBI-TV	4	Asheville	WISE-TV WLOS-TV	62	60070	WPRO-TV 12
Davenport	WMT-TV WOC-TV KRNT-TV	6	Greenwood Jackson	WABG-TV WJTV	12	Chapel Hill	WUNC-TV	13	Anderson	WALM-TV 40
Des Moines	KDPS-TV	*H	Laurel	WLBT WDAM-TV	3 7	Charlotte	WBTV WSOC-TV	3 9	Charleston	WCSC-TV 5
Fort Dodge	WH0-TV KQTV	13	Meridian	WTOK-TV WCOC-TV	11 30	Durham		42 11		WUSN-TV 2 WITV 7
Mason City Ottumwa					9	Greensboro	WUTV	36	Clemson	WSBF-FM *85.1
Sieux City	KGLO-TV KTVO	3 3	Tupelo	WTWV		Greensburg	WFMY-TV	2	Columbia	WIS-TV 10
	КТVО КТIV КVTV	3 4 9	MISS	OURI		Greenville Raleigh	WNCT WRAL-TV	9		WCCALTV 25
Waterloo	KTVO KTIV KVTV KWWL-TV	3 4	MISS Cape Girardeau Columbia	OURI KFVS-TV KOMU-TV	12	Greenville Raleigh Washington	WNCT WRAL-TV WITN	9 5 7	Columbia Florence Greenville	WCCA-TV 25 WNOK-TV 67 WBTW 8
KAN	KTVO KTIV KVTV KWWL-TV NSAS	3 4 9 7	MISS Cape Girardeau Columbia Hannibal	OURI KFVS-TV KOMU-TV	12 8 7 13	Greenville Raleigh Washington Wilmington	WNCT WRAL-TV WITN WECT WWAY	9 5 7 6 3	Florence Greenville	WCCA-TV 25 WNOK-TV 67 WBTW 8 WFBC-TV 4 WNTV 29
KAN Ensign Garden City	KTVO KTIV KVTV KWWL-TV NSAS KTVC KGLD	3 4 9 7 6 11	MISS Cape Girardeau Columbia Hannibal Jeffersen City Joplin	OURI KFVS-TV KOMU-TV KHQA-TV KRCG-TV KODE-TV	8 7 13 12	Greenville Raleigh Washington Wilmington Winston-Salem	WNCT WRAL-TV WITN WECT WWAY WSJS-TV	9 5 7 6	Florence Greenville Spartanburg	WCCA-TV 25 WNOK-TV 67 WBTW 8 WFBC-TV 4 WNTV 29 WSPA-TV 7
KAN Ensign Garden City Goodland Great Bend	KTVO KTIV KVTV KWWL-TV NSAS KTVC KGLD KLOE-TV	3 4 9 7 6 11 10 2	MISS Cape Girardeau Columbia Hannibal Jeffersen City	OURI KFVS-TV KOMU-TV KHQA-TV KRCG-TV KODE-TV KCM0-TV KCSD-TV	8 7 13 12 5 *19	Greenville Raleigh Washington Wilmington Winston-Salem NORTH D	WNCT WRAL-TV WITN WECT WWAY WSJS-TV	9 5 7 8 12	Florence Greenville Spartanburg SOUTH	WCCA-TV 25 WNOK-TV 67 WBTW 8 WFBC-TV 4 WNTV 29
KAN Ensign Garden City Goodland Great Bend Hays Hutchinson	KTVO KTIV KVTV KWWL-TV NSAS KTVC KGLD KLOE-TV KCKT KAYS-TV KTVH	3497 611 1027	MISS Cape Girardeau Columbia Hannibal Jaffersen City Joplin Kansas City	OURI KFVS-TV KOMU-TV KHQA-TV KCCG-TV KCMO-TV KCSD-TV KMBC-TV WDAF-TV	8 7 13 12 5 *19 4	Greenville Ralelgh Washington Wilmington Winston-Salem NORTH D Bismarck	WNCT WRAL-TV WITN WECT WWAY WSJS-TV OAKOTA KXMB-TV	9 5 7 6 3 12	Florence Greenville Spartanburg SOUTH Aberdeen Deadwood	wCCA-TV 25 wN0K.TV 67 wBTW 8 wFBC-TV 4 wNTV 29 wSPA-TV 7 DAKOTA 7 KXAB-TV 9 KDSJ-TV 5
KAN Ensign Garden City Goedland Great Bend Hays Hutchinson Pittsburg	KTVO KTIV KVTV KWWL-TV NSAS KTVC KGLD KLOE-TV KAVS-TV KTVH KOAM-TV	3 4 9 7 6 11 10 2	MISS Cape Girardeau Columbia Hanniba Jeffiersen City Joplin Kansas City Kirksville Poplar Bluff, Mo.	OURI KFVS-TV KOMU-TV KHQA-TV KCG-TV KCO-TV KCSD-TV KCSD-TV KMBC-TV WDAF-TV KTV0 KP0B-TV	87 13 12 13 12 13 12 15	Greenville Raleigh Washington Wilmington Winston-Salem NORTH D	WRAL.TV WRAL.TV WITN WECT WWAY WSJS-TV OAKOTA KXMB-TV KFYR-TV KDIX-TV WDAY-TV	9576312 12526	Florence Greenville Spartanburg SOUTH Aberdeen Deadwood Florence Mitchell	WCCA-TV 25 WNOK-TV 67 WBTW 8 WFBC-TV 4 WNTZ 29 WSPA-TV 7 DAKOTA KAB-TV KDSJ-TV 5 KDLO-TV 3 KORN-TV 5
KAN Garden City Goodland Great Bend Hays Hutchinson Pittsburg Salina Topeka	KTVO KTIV KVTV KWWL-TV VSAS KTVC KGLD KLOE-TV KAVS-TV KAYS-TV KOAM-TV KSLN-TV WIBW-TV	3497 6110272 127343	MISS Cape Girardeau Columbia Hannibal Jefferson City Joplin Kansas City Kirksville	OURI KFVS-TV KOMU-TV KHQA-TV KRCG-TV KCCD-TV KCSD-TV KCSD-TV KMBC-TV KMBC-TV KF0B-TV KF0C-TV KFCQ-TV KFCC-TV	87 132 1994 152 19 152 19	Greenville Ralelgh Washington Wilmington Winston-Salem NORTH D Bismarek Dickinson	WRAL-TV WITN WECT WWAY WSJS-TV AKOTA KXMB-TV KFYR-TV KDIX-TV WDAY-TV KEND	957632 1252611	Florence Greenville Spartanburg SOUTH Aberdeen Deadwood Florence Mitchell Rapid City	WCCA-TV 25 WNOK-TV 67 WBTW 8 WFBC-TV 4 WNTV 29 WSPA-TV 7 DAKOTA KAB-TV KDSJ-TV 5 KDLO-TV 3 KOTA-TV 3 KOTA-TV 3 KOSD-TV 3
KAN Garden City Goodland Great Bend Hutchinson Pittsburg Salina	KTVO KTV KVTV KWWL-TV NSAS KTVC KGLD KLOE-TV KCKT KAYS-TV KTVH KOAM-TV KSLN-TV	3 4 9 7 6 11 10 2 7 2 7 2 34	MISS Cape Girardeau Columbia Hannibal Jeffersen City Joplin Kansas City Kirksville Poplar Bluff, Mo. St. Joseph	OURI KFVS-TV K0MU-TV KHQA-TV KRCG-TV KCMO-TV KCMO-TV KCMO-TV KMBC-TV WDAF-TV KTVO KP0B-TV KETC KMOX-TV KSD-TV	87325 1325 199435 15294 5	Greenville Ralelgh Washington Wilmington Winston-Salem NORTH D Bismarck Dickinson Far00 Grand Forks	WNGT WRAL-TV WITN WECT WWAY WSJS-TV AKOTA KZMB-TV KD1X-TV KD1X-TV KC0-TV KFME KFME KFME	9576 312 125261 111310	Florence Greenville Spartanburg SOUTH Aberdeen Deadwood Florence Mitchell	WCCA-TV 25 WNOK-TV 67 WBTW 8 WFBC-TV 4 WNTV 29 WSPAC-TV 7 DAKOTA 8 KASB-TV 9 KOB-TV 3 KOTA-TV 3 KOTA-TV 3 KOTA-TV 3 KOTA-TV 6 KPLO-TV 6 KELO-TV 16
KAN Ensign Garden City Goodland Great Bend Hays Hutchinson Pittsburg Salina Topeka Wichita KENT	KTVO KTIV KVTV KWWL-TV VSAS KLOE-TV KCKT KAYS-TV KAYS-TV KSLN-TV WHEW-TV KAKE-TV KAKE-TV	3 4 9 7 6 1 10 2 7 12 7 3 4 13 10 3	MISS Cape Girardeau Columbia Hannibal Joplin Kansas City Kirksville Poplar Bluff, Mo. St. Joseph St. Louis	OURI KFVS-TV KGQ-TV KRQG-TV KCGD-TV KCSD-TV KCSD-TV KFQ-TV KFQ0-TV KFQ0-TV KFQ0-TV KFQ0-TV KFQC-TV KFQC-TV KFVC-TV KFVC-TV	8732599435294521 * 99435294521	Greenville Ralelgh Washington Wilmington Winston-Salem NORTH D Bismarck Dickinson Far00 Grand Forks Minot	WRAL-TY WITN WEDT WWAY WSJS-TV KXMB-TY KFYR-TV KD1X-TV KD2-TV KFQ-TV KFMC-TV KFMC-TV KMOT	9 5 7 6 3 2 12 5 2 6 1 1 1 3 1 0 1 3 1 0	Florence Greenville Spartanburg SOUTH Aberdeen Deadwood Florence Mitcheil Rapid City Reliance	WCCA-TV 25 WNOK-TV 67 WBTW 8 WFBC-TV 4 WNTV 29 WSPA-TV 7 DAKOTA KAB-TV KAB-TV 5 KORN-TV 5 KORN-TV 5 KORN-TV 5 KORD-TV 7 KPSD-TV 7 KPLO-TV 7 KPLO-TV 7
KAN Ensign Garden City Goodland Great Bend Hays Hitsburg Salina Topeka Wichita	KTV0 KT1V KVTV KWWL-TV KWL-TV KGLD KL0E-TV KAVS-TV KSLN-TV KSLN-TV KAKE-TV KARD-TV	3 4 9 7 6 11 10 2 7 7 12 7 34 13 10 3 18	MISS Cape Girardeau Columbia Hannibal Joplin Kansas City Kirksville Popiar Bluff, Mo. St. Joseph St. Louis Sedalia Springfield	OURI KFVS-TV K0MU-TV KHQA-TV KRCG-TV KCMO-TV KCMO-TV KCMO-TV KMBC-TV WDAF-TV KTVO KP0B-TV KETC KMOX-TV KSD-TV	873259943529452160 * 19943529452160	Greenville Ralelgh Washington Wilmington Winston-Salem NORTH D Bismarck Dickinson Far00 Grand Forks	WNGT WRALTY WITN WECT WWAY WSJS-TV AKOTA KFYR-TV KFYR-TV KFYR-TV KENDX-TV KSG0-TV KSG0-TV	95763 12 12526 11130 13	Florence Greenville Spartanburg SOUTH Aberdeen Deadwood Florence Mitcheil Rapid City Reliance Sloux Falls Vermillon	WCCA-TV 25 WNOK.TV 67 WBTW 8 WFBC.TV 4 WNTV 29 WSPAC.TV 7 DAKOTA 8 KASB-TV 9 KOBI-TV 3 KOTA-TV 3 KOTA-TV 3 KOTA-TV 5 KOTA-TV 5 KOTA-TV 6 KUSD-TV 13 KUSD-TV 2

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Location	C.L. Chan,	Location C.L.	Chan.	Location	C.L. Chan.	Location	C.L. Chan.
TENN	ESSEE	Houston KPR		VID	GINIA		WSAZ-TV 3
LEININ		KHOL		1 10	VINIA	Oak Hill	WOAY-TV 4
Chattanooga	WDEF+TV 12	KTR		Bristol	WCYB-TV 5	Parkersburg	WTAP-TV 15
	WRGP-TV 3		UHT *8	Hampton	WVEC-TV 13	Wheeling	WTRF•TV 7
	WTVC 9	Laredo KGN		Harrisonburg	WSVA-TV 3		
Jackson	WDXI-TV 7	Lubbock KCB		Lynchburg	WLVA-TV 13	WISCO	NSIN
Johnson City	WIHL-TV II WATE-TV 6			Norfolk	WHRO-TV 15	Eau Claire	WEAU-TV 13
Knoxville	WBIR-TV 10	Lufkin KTR Midland KMII		Detershing	WTAR-TV 3 WXEX-TV 8	Green Bay	WBAY-TV 2
,	WDIR-IV 10 WTVK 26			Petersburg Portsmouth	WXEX-TV 8 WAVY-TV 10	ditten bay	WFRV 5
Memphis	WHBQ-TV 13	Monahans KVKM		Richmond	WRVA-TV (2		WLUK-TV II
memphila	WKN0 *10		A-TV 7	RICHMONU	WTVR 6	Hurley	WAED-TV 12
	WMCT 5	Port Arthur-Beaumont		Roanoke	WDBJ-TV 7	La Crosse	WKBT 8
	WREC-TV 3		C-TV 4	HOAHOKO	WSLS-TV 10	Madison	WHA-TV *21
Nashville	WDCN+TV *2	Richardson KRE	T-TV *23				WISC-TV 3
	WLAC-TV 5	San Angelo I	CTV 8	WASH	IINGTON		WKOW-TV 27
	WSIX-TV 8						WMTV 33
	WSM-TV 4	San Antonio KUA		Bellingham	KVOS-TV 12	Marinette	WMBV-TV II WISN-TV I2
T -1		KEN		Pasco	KEPR-TV 19	Milwaukee	WISN-TV 12 WITL-TV 6
122	KAS		LRN *9	Pullman	KWSC-TV *10		WMVS-TV *10
Abilene	KRBC+TV 9	KON			KNDD-TV 25		WMVT *36
Alpine	KULF-TV 12	WUA			KCTS-TV *9 King-TV 5		WTMJ-TV 4
Amarillo	KFDA-TV 10	Sweetwater KPA Temple KCE			KING-TV 5 KIRO-TV 7		WXIX 18
	KGNC-TV 4	Texarkana KTA			KOMO-TV 4	Wausau	WSAU-TV 7
	KVI1 7			Spokane	KHQ-TV 6		
Austin	KTBC-TV 7	141		Operane	KREM-TV 2	WYON	IING
_	KVET-TV 24	Washasa WDC			KXLY-TV 4		
Beaumont	KEDM-TV 6	Wichita Fails KFD			KTNT-TV II	Casper	KTW0-TV 2 KFBC-TV 5
Big Spring	KEDY-TV 4 KBTX-TV 3	Vev			KPEC-TV *56	Cheyenne	KFBC-TV 5 KWRB-TV 10
Bryan Corpus Christi	KBTX-TV 3 KRIS-TV 6			1	KTPS *62	Riverton	KWRB-IV IU
Corpus Christi	KAIS-IV D	UTAH			KTVW 13	PUERTO	RICO
Dallas	KRLD-TV 4	Ogden KVO(а.тv 9	Yakima	KIMA-TV 29	PUERIO	RICO
Dallas	KERA-TV *13	Oguen KWC	S-TV *18		KNDO-TV 23	Aguadilla	WOLE-TV 12
	WFAA-TV 8				KYVE *47	Caguas	WKBM-TV II
El Paso	KELP-TV 13		L TV 5	WEST	VIDCINIA	Mayaguez	WORA-TV 5
	KROD-TV 4	- KCPY		WEDI	VIRGINIA		WIPM-TV *3
	KTSM-TV 9		UED *7	Bluefield	WHIS-TV 6	Ponce	WRIK-TV 7
(Ciudad Juarez,	Mex,)		ŪTV 2	Charleston	WCHS-TV 8		WSUR-TV 9
EA MALAN	XEJ•TV 5 KTVT II			Clarksburg	WBOY-TV 12	San Juan	WAPA-TV 4
Ft. Worth	KTVT II WBAP-TV 5			Fairmont	WJPB-TV 5	0411	WIPB-TV 6
Harlingen		Burlington WCA)	(-TV 3		WHTN-TV 13		WKAQ-TV 2
martengen	KUDI-IV 4	WCA7		, manungton	AUTO 101		

World-Wide Short-Wave Stations

Most international broadcasting is done within frequency limits agreed upon at international conventions. These frequency ranges are listed here, at the right, expressed both in frequency and by meter bands (wave-length).

Reception in the various bands varies according to the time of day and season of the year. Reception in the 60, 49 and 41 meter bands is best at night during the winter months. Reception in the 31 and 25 M. bands is best at night, but all year. Reception in the 19, 16, 13 and 11 M. bands is best during the day, also at night during the summer in the 16 and 19 M. bands. This listing includes only SWBC often heard in the U.S. and Canada, exclusive of those in the continental U.S.

Abbr.: AIR-All India Radio; RAI-Radiotelevisione Italiana; RTF-Radiodiffusion Television Francaise; VOA-Voice of America; RFE-Radio Free Europe. • denotes stations beaming evening (U.S. time) broadcasts to the U.S., † morning or afternoon broadcasts, V-varies.

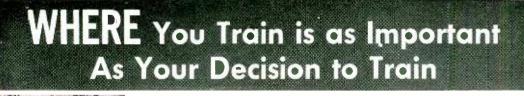
3225 ELBC, Monrovia, Lib. 3245 YVKT, Caracas, Ven.4900 v HJAC, Barranquilla, Col. 4900 v HJAC, Barranquilla, Col.6020 Hilversum, Neth. 6020 Khabarovsk, USSR 6020 Khabarovsk, USSR 6025 Lisbon, Port.6150 BBC, London, Eng. 6155 FEN, Tokyo, Japan 6155 FEN, Tokyo, Japan 6160 HJKJ, Bogota. Col.3265 ZFY Georgetown, Br. 3265 ZFY Georgetown, Br. 3265 HISD, Santo Domingo, D.R. 3290 HJCQ, Bogota, Colombo, Result4910 HCIMI, Quito, Ecua. 4910 Conakry, Guinea 4910 Conakry, Guinea 4920 VVKR, Caracas, Ven. 4920 VVKR, Caracas, Ven. 4935 HJLF, Ibague, Col. 4935 HJLF, Ibague, Col.6020 Hilversum, Neth. 6025 Lisbon, Port. 6030 Baphdad. Iraq 6035 Rangoon, Burma 6035 HRTL, Tegucigalpa, Hond. 6037 HTL, San Jose, C. R. 6170 BBC, Limassol, Cyprus 6170 Singapore, Sing. 6170 VOA, Tangiers, Morocceo	Kcs. Call and Location
3245 VVKT, Caracas, Ven. 4905 HRQN3, Puerto Cortes, 6020 Khabarovsk, USSR 6155 Wien, Austria 3255 ELBC, Monrovia, Liberia 4905 HRQN3, Puerto Cortes, 6020 Khabarovsk, USSR 6155 FEN, Tokyo, Japan 3255 ZFY Georgetown, Br. 4910 HCIMI, Quito, Ecua 6025 Kuala Lumpur, Malaya 6155 FEN, Tokyo, Japan 3265 ZFY Georgetown, Br. 4910 HCIMI, Quito, Ecua 6025 Kuala Lumpur, Malaya 6160 HIKJ, Bopota, Col, 3285 WI.B.S., Grenada, 4910 Conakry, Guinea 6035 Rangoon, Burna 6035 HRTL, Tegucigalpa, Hond. 6160 Algiers, Algerla 3285 WI.B.S., Grenada, 4920 VLM4, Brisbane, Aus. 6035 HRTL, Tegucigalpa, Hond. 6165 HER3, Bern, Switz. 6167 Singapore, Sing. 3286 HISD, Santo Domingo, D.R. 4935 HILF, Ibague, Col. 6040 HJLB, Ibague, Col. 6170 Singapore, Sing. 3280 HISD, Santo Domingo, D.R. 4934 HCX2I, Guayaquit, Ecu. 6040 HJLB, Ibague, Col. 6170 Singapore, Sing.	
3255 ELBC, Monrovia, Liberia YVQL, El Tigre, Ven. 4910 HCIMI, Quito, Ecua. 6025 Kuala Lumpur, Malaya 6155 FEN, Tokyo, Japan 3255 ELBC, Monrovia, Liberia YVQL, El Tigre, Ven. 4910 HCIMI, Quito, Ecua. 6025 Kuala Lumpur, Malaya 6160 Algoria 3255 ZFY Georgetown, Br. Guiana 4910 Conakry, Guinea 6030 Baghdad, Iraq 6160 Algoria 6160 Saigon, S. Vietnam 3280 W.I.B.S., Grenada, 4920 VKR, Caracas, Ven. 6037 TIFC, San Jose, C. R. 6170 BBC, Limassol, Cyprus 3285 HISD, Santo Domingo, D.R. 4935 HJLCI, Ibague, Col. 6040 HJLB, Ibague, Col. 6170 Singapore, Sing. 3290 HJCQ, Bogota, Colomble, Colmayaquil, Ecu. 6040 HJLB, Ibague, Col. 6170 Singapore, Sing.	
3265 ZFY Georgetown, Br. 4910 HCIMI, Quito, Ecua. 6025 Lisbon, Port. 6160 HJIKJ. Bogota. Col, 3265 ZFY Georgetown, Br. 4910 Conakry, Guinea 6030 Baghdad, Iraq 6160 Algeirs, Algeria 3280 W.I.B.S., Grenada, 4910 VLMA, Brisbane, Aus. 6035 HTFL, Tegucigalpa, Hond. 6160 Algeirs, Algeria 3285 HISD, Santo Domingo, D.R. 4935 HJLF, Ibague, Col. 6034 HJLB, Ibague, Col. 6040 HJLB, Ibague, Col. 6167 Singapore, Sing. 3280 HJCQ, Bogota, Colombo, Colomb	
3265 ZFY Georgetown, Br. Guiana 4910 Conskry, Guinea 6030 Baghdad, Iraq 6160 Algieris, Algeria 3265 ZFY Georgetown, Br. Guiana 4910 Conskry, Guinea 6030 Baghdad, Iraq 6160 Algieris, Algeria 3280 W.I.B.S., Grenada, Windward Is. 4920 VLM4, Brisbane, Aus. 6035 Rangoon, BUrma 6160 Saigon, S. Vietnam 3285 HISD, Santo Domingo, D.R. 3290 HJCQ, Bogota, Colombi HCX2I, Guiayaquil, Ecu. 6040 HJLB, Ibague, Col. 6170 Singapore, Sing.	
3280 W.I.B.S., Grenada, 4915 Accrai Ghana 6035 Rangoon, Burma 6160 Saigon, S. Vietnam 3280 W.I.B.S., Grenada, 4920 VLM4, Brisbane, Aus. 6035 HRTL, Tegucigalpa, Hond. 6165 HER3, Bern, Switz. 3280 W.I.B.S., Grenada, 4920 VLM4, Brisbane, Aus. 6035 HRTL, Tegucigalpa, Hond. 6165 HER3, Bern, Switz. 3285 HISD, Santo Domingo, D.R. 4935 HILF, Ibague, Col. 6040 HILB, Ibague, Col. 6170 BBC, Limassol, Cyprus 3290 HJCQ, Bogota, Colond, Colond 4930 HCX2I, Guayaquil, Ecu. 6040 HJLB, Ibague, Col. 6170 Singapore, Sing.	
3280 W.1.B.S., Grenada, Windward Is. 4920 VLM4, Brisbane, Aus. 3285 HISD, Santo Domingo, D.R. 3296 HISD, Santo Logarta, Colomingo, D.R. 3290 HJCQ, Bogota, Colomingo, D.R. 4940 HCXZI, Guayaquil, Ecu. 6040 VDA, Munich, Germany 6040 VDA, Munich, Germany 6170 VDA, Tangiers, Morocco	S203 21 1 Goorgetown, DI,
Windward Is. 4920 YVKR, Caracas, Ven. 6037 TIFC, San Jose, C. R. 6170 BBC, Limassol, Cyprus 3285 HISD, Santo Domingo, D.R. 4935 HJLF, Ibague, Col. 6170 Singapore, Sing. 3290 HJCQ, Bogota, Colombia 4940 HCXZI, Guayaquil, Ecu. 6040 VOA, Munich, Germany 6170 VOA, Tangiers, Morocco	
3285 HISD, Santo Domingo, D.R. 4935 HJLF, Ibague, Col. 6040 HJLB, Ibague, Col. 6170 Singapore, Sing. 3290 HJCQ, Bogota, Colombia 4940 HCXZI, Guayaquil, Ecu. 6040 VOA, Munich, Germany 6170 VOA, Tangiers, Morocco	
3290 HJCQ, Bogota, Colombia 4940 HCXZI, Guayaquil, Ecu. 6040 VOA, Munich, Germany 6170 VOA, Tangiers, Morocco	
	3295 YVOG, Trujillo, Ven.
3300 B.H.B.S., Belize, Br. 4940 YVMO, Barguisimeto, Ven, 6050 HCJB, Quito, Ecua. 6175 Cayenne, Fr. Guiana	
Honduras 4945 HJCW, Bogota, Col. 6050 BBC, London, Eng. 6185 Lisbon, Port.	
3305 YVKX, Caracas, Ven. 4945 Paradys, So, Afr. 6055 HJEX, Cali, Col. 6185 HJCT, Bogota, Col.	
3315 Fort de France, Martinique 4950 Dakar, Senegal 6055 JOZ2, Tokyo, Japan 6195 HJEZ, Coli, Col.	
3316 Freetown, Sierra Leone 4350 YVM, Coro, Ven. 6060 RAI, Caltanissetta, It. 6155 BEC, London, Eng.	
3322 HIUA, Santo Domingo, D.R. 4360 YWQA, Cumana, Ven. 6060 YDF, Djakarta, Indonesia 6195 Pyongyang, N, Korea	
3325 HI5U, Santo Domingo, D.R. 4970 YVLK, Canacas, Ven. 6065 XEXG, Leon, Mex. 6195 Andorra, Andorra	
3326 Kaduna, Nigeria 4972 Yaounde, Cameroon 6065 Horby, Sweden 6200 4VHW, Port-au-Prince,	
3355 YVLC, Valencia, Ven. 4985 Fadio La Cruz del Sur, La 6070 Sofia, Bulgaria Haiti	3355 YVLC, Valencia, Ven.
3366 Acera, Ghana Paz, Bolivia 6070 Biak, West Papua 6305 Andorra, Andorra	
3395 YVOJ. Merida, Ven. 4990 Lagos, Nigeria 6070 BBC, London, Eng. 7095v Tehran, Iran	
4630 HCGBI, Quito, Ecu, 4990 YVMQ, Barquisimeto, 6075 Osterloog, Ger. 7105 Madrid, Spain	
4725 Rangoon, Burma Ven. 6080 ZL7, Wellington, N.Z. 7110 VOA, Colombo, Ceylon	
4765 HJEF. Cali, Col. 4995 CR6RZ, Luanda, Angola 6080 Trans World Radio, Monaco 7110 BBC, London, England	4765 HJEF, Cali, Col.
4770 ELWA, Monrovia, Lib. 5010 HRCPI, Quito, Ecu. 6082 OAX42, Lima, Peru 7115 Rabat, Morocco	
4770 YVMW, Punto Fili, Ven. 5010 St. Georges, Windward Isl. 6085 Munich, Ger. 7120 BBC, London, England	
4780 YVLA, Valencia, Ven. 5020 HJFW, Manizales, Col. 6090 LRYI, Buenos Aires, Arg. 7125 Warsaw, Poland	
4790 YVQN, Puerto La Cruz, 5020 Niamey, Niger Rep. 6090 VL/6, Sydney, Aus. 7135 Taipeh, Taiwan	4790 YVQN, Puerto La Cruz,
Ven. 5030 YVKM, Caracas, Ven. 6090 Luxembourg, Lux. 7145 Bamako, Mali	Ven.
4805 ZYS8, Manaus, Braz. 5040 YVMA, Maracaibo, Ven. 6090 XECMT, C. El Mante. 7150 Moscow, U.S.S.R.	
4810 YVMG, Maracaibo, Ven, 5050 YVKD, Caracas, Ven. Mex. 7155 VOA, Tanglers, Mor.	4810 YVMG, Maracaibo, Ven,
4830 YVOA, San Cristobal. 5075 HJGC Bogota, Col. 6095 ZYB7, Sao Paulo, Braz. 7160 RTF, Paris, France	4830 YVOA, San Cristobal.
Ven. 5875 HBN, Tegucigalga, Hond. 6100 Belgrade, Yugo. 7165 RFE, Germ.	
4835 HJKE, Bogota, Col. 5952 TGNA, Guatemala, Guat. 6105 XEQM, Merida, Mex. 7170 Algiers, Alg.	4835 HJKE, Bogota, Col.
4840v Lourenco Marques, Moz. 5954 TLD, Puerto Limon, C. R. 6105 Cologne, Ger, 7180 Baghdad, Iraq	
4840 YVOI. Valera, Ven. 5960 HICF. Bogota, Col. 6110 BBC, London, Eng. 7180 Moscow, U.S.S.R.	
4845 HJGF, Bucaramanga, Col. 5980v TGAB, Guatemala, Guat, 6115 ZYC7, Rio de Jan., Braz. 7185 BBC, London, Eng.	
4850 YVMS, Barquisimeto, 5980 4VB, Port au Prince, Haiti 6120 LRXI, Buenos Aires 7185 Paradys, So. Africa	4850 YVMS, Barquisimeto,
Ven. 5985 Hilversum, Neth. 6120 4VEH, Cap Haitien, Haiti 7193 Bucharest, Roumania	
4870 Cotonou, Dahomey Rep. 5990 TGJA, Guatemala 6120 BBC, Limassol, Cyprus 7195 VOA, Monrovia, Lib.	
4880 YVKF, Caracas, Ven. 5995 Fort-de-France, Mart. 6130 Port Moresby, New Guinea 7200 R. Malava, Sing.	
4895 Daker, Senegal 6000 Radio Americas 6135 HBMF, La Ceiba, Hond. 7205 VOA, Salonika, Gr.	
4895 ZYR22, Manaus, Braz. 6005 RIAS, Berlin, Ger. 6135 Papeete, Tahiti 7210 Dakar, Mali Fed.	4895 ZYR22, Manaus, Braz.
4900 YVKE, Caracas, Ven. 6010 XEOI, Mexico City, Mexico 6140 VLW6, Perth. Aus. 7215 Trans World Radio, Monace	4900 YVKE, Caracas, Ven.
6015 PRA8, Recife, Braz, 6145 RTF, Allouis, France 7220 VLD7, Melbourne, Aus.	
166 WHITE'S RADIO LOG 6015y Habana, Cuba 6145y PRL9, Rio de Jan., Braz. 7220 Budapest, Hung.	166 WHITE'S RADIO LOG

4750 to 5060 kc/s (60 meter band) 5950 to 6200 kc/s (49 meter band) 7100 to 7300 kc/s (41 meter band) 9500 to 9775 kc/s (31 meter band) 1 1700 to 1 1975 kc/s (25 meter band) 15 100 to 15450 kc/s (19 meter band) 17700 to 17900 kc/s (16 meter band) 2 1450 to 2 1750 kc/s (13 meter band) 25600 to 26 100 kc/s (11 meter band)

METER BANDS

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Electronics is a growing and expanding industry. That's why so many ambitious men are training for careers in this exciting field. They recognize the opportunities to fill in interesting and important positions. But where a man trains and how the school

of his choice teaches the many fields of Electronics-Automation, Radio-Television . . . how it encourages him to reach his goals and realize his ambitions . . . is most important to his success.

This is a fast changing world. A school offering Electronics courses must keep pace. That's why NRI-with nearly 50 years of specialized experience-now offers nine choices of training. Select the course of most interest to you and receive the kind of home-study training that prepares you for a specialized career. NRI's large staff of specialists is always on the job keeping your course material up-to-date . . . helping you earn your way while you train . . . assisting you with job placement. In short, NRI is qualified to help you grow.

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