

VOL. VI

DECEMBER, 1934

NO. 3

INTERNATIONAL



- Short Wave News.
- Accurate Station List.
- Hourly Tuning Guide.

- Police Stations.
- Aircraft Stations.
- And Other Features.

THE VOICE OF THE
INTERNATIONAL SHORT WAVE CLUB

EAST LIVERPOOL, OHIO, U. S. A.

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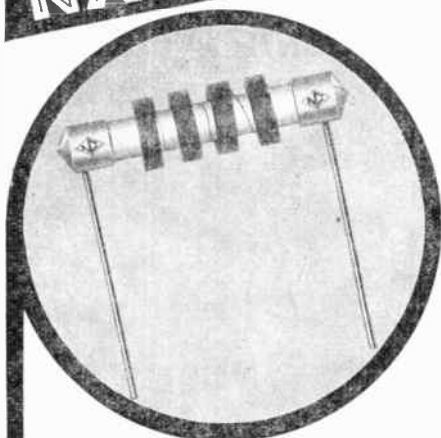
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Sol Perlman, E. E., Technical Advisor, N. Y. Chapter, International Short Wave Club, has been made Manager of our Technical Correspondence Department. He will gladly advise you on the proper use of any Lynch Products.



NATIONAL



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DON'T sacrifice dependable day-in, day-out performance for a few pennies difference in R.F. Choke costs! Be sure you get the original and genuine patented **NATIONAL Type 100 R. F. Choke**. Designed for utmost convenience in installation, suitable for either grid-leak or pigtail mounting, small and compact, the Type 100 can be used close to tubes where longer leads would introduce operating difficulties. Its accurate and dependable rating adapts it to the majority of R. F. Choke requirements in modern Short Wave Receivers and Low Powered Transmitters. It is sturdy and reliable. Before you buy, look for the diamond **NC** trade-mark, proof of advanced research and manufacturing facilities behind every **NATIONAL RADIO PRODUCT**.

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NATIONAL COMPANY, Inc., Malden, Massachusetts.

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TERMS AS LOW AS \$5.00 DOWN

a tuning range of 9 to 2400 meters (33 Megacycles to 125 KC)—enabling you to easily and successfully tune in even low powered foreign stations up to 12,000 miles away with crystal-clear, loud-speaker reception.

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This bigger, better, more powerful, clearer toned, super selective, 16-tube radio gives you absolute realism—assures you of life-like, crystal clear tone—unlike anything you have ever experienced before. You will hear one more octave—overtones—that cannot be brought in with ordinary radios. Now, hear every instrument, every voice, every shade and inflection of speech.

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Cable Address Miraco. . . . All Codes

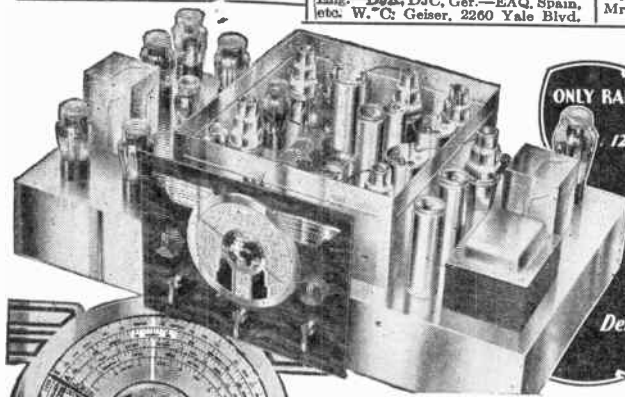


Hammond, La.—The greatest distance I have received so far is Byrd at the Pole direct, not a relay through LSX, EAQ and VK2ME come clearly as locals. DJB, GSC, GSB, come in extremely well.
R. T. Pursley;



Springfield, Ill.—I investigated all makes of radios, and I chose the Midwest. No radio made can equal it. I logged with ease and good volume: LSX, LSN, HJIAB, HJ5ABD, YVIBC—VK2ME, Australia—GSC, GSB, GSA.
[Eng.—DJA, DJC, Ger.—EAQ, Spain, etc. W. C. Geiser, 2260 Yale Blvd.

Conneaut, O.—There is not a better radio than the Midwest. Everyone says they never heard such a wonderful tone. We have gotten many foreign stations very clearly. Our Midwest is worth more than we paid for it.
Mrs. M. C. Mondy, 17 1/2 Marshall St.



**ONLY RADIO COVERING
9 TO 2,400 METERS.
12,000 MILE TUNING RANGE**

**WORLD'S GREATEST
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New
**Deluxe Auditorium-Type
SPEAKER**



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This dial was designed in keeping with the trend of the times, yet is not an airplane dial! It is a many-purpose dial that performs many functions. Now, Midwest guarantee that inexperienced persons can secure good foreign reception. Send for FREE miniature of actual rotating dial which clearly shows these outstanding advantages:

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5. Simplified Tuning Guide Lights.
6. Automatic Select-O-Band Indicator.
7. Illuminated Pointer Indicator.
8. Silent Shadow Tuning—Improvement on Meter Tuning.
9. Centralized Tuning.

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as low as
\$5⁰⁰
DOWN**

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LABORATORIES**

Increasing costs are sure to result in higher radio prices soon. Buy before the big advance... NOW... while you can take advantage of Midwest's sensational values...no middlemen's profits to pay. You can order your 1935-36 High Fidelity radio from the new Midwest catalog with as much certainty of satisfaction as if you were to select it in our great radio laboratories. You save 30% to 50% when you buy this popular way...you get 30 days FREE trial...as little as \$5.00 down puts a Midwest radio in your home. Satisfaction guaranteed or money back. Write for new Free catalog today!

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50%**



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Little Jean Hudson, W3BAK, 9 years old, won code receiving championship of the world in Class E, 2 months after beginning **CANDLER SHORT-CUT CODE COURSE**.

Read What These Amateurs Say:

"When I enrolled for your Short-Cut Code Course my speed was 3 wpm. In exactly 2 weeks from the day I began, I went to Boston, confident I would pass the government exam., which I did, easily. I can now copy 20 w.p.m., and speed still increasing."—Capt. John L. PenDell, W1DNA, 45 Customhouse Wharf, Portland, Maine.

"I am for Candler Short-Cut Code Course 100%." Dr. H. A. D. Baer, W3-EEY, Allentown, Pa.

"After a few weeks interesting study I was able to pass government exam., with 100% rating. Thank you, Mr. Candler."—Harry C. Hicks, W2GOH, 2471 University Ave., New York, N. Y.

"Before taking your Short Cut Code Course I knew nothing of code. I passed my test when I was on Lesson No. 5. It is the easiest and fastest way to acquire code speed."—Dewaine Hardin, W7DAV, Nyssa, Oregon.

"Just a line to tell you I passed the exam. and have my station on the air, thanks to your Short-Cut Code Course."—A. P. Blosser, W2HCP, 82 Dove St., Albany, N. Y.

"It was easy for me to secure my amateur license after taking your Short-Cut Code Course, which I found to be really more than I expected. 73."—C. J. Sligar, W7AHG, 1719 Carlisle Ave., Spokane, Wash. ..

Only \$5.00 (\$5.50 in Canada and Foreign Countries) for complete **SHORT-CUT CODE COURSE**
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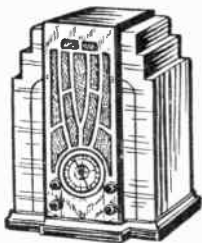
Enclosed is \$5.00, for which send me the complete **SHORT-CUT CODE COURSE** in 10 Lessons. If I do not find this **COURSE** to be the greatest value I have ever received, or if it is unsatisfactory in any way, I will return it to you and you will return my \$5.00 at once.

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A 5-Tube Receiver with 7-Tube Efficiency. Tunes 14.9 to 74.9 and 191.0 to 555.2 meters. Has latest airplane dial, A. V. C. and uses 1-6A7, 1-6D6, 1-75, 1-42 and 1-80 tubes. Conveniently calibrated and marked for the principal European Short Wave reception ranges. Band-spread action is remarkable for its effective tuning of distant signals. Only one of the many fine S.W. sets offered by ALLIED. Others include All-Wave Supers tuning 13 to 2500 meters, Professional Short Wave Sets, "Skip-Band" Models, etc. Also a full line of S.W. Converters, Beat Note Oscillators, Pre-selectors, etc. All featured in the New 1935 ALLIED Catalog—yours for the asking.



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Send for our great new 1935 Catalog. Over 100 pages filled with top-notch radio equipment. We specialize in Short Wave merchandise. Amateurs, experimenters, and servicemen will find all their needs fully answered at consistently lower prices. We handle all the leading SW. lines, including National and Hammarlund; the latest S.W. and All-Wave sets and Kits; transmitting gear; new Antenna Systems; test instruments; Sound Equipment; parts, accessories, etc. Write for your Free copy today!



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International Short Wave Radio is published monthly by the International Short Wave Club of East Liverpool, Ohio, U. S. A. Subscription rate \$1.00 per year anywhere. Post Office or Express Company money orders, checks, cash or United States postage stamps accepted. The rate of exchange on \$1.00 may be learned at all postoffices or banks. Single copies, 10c each.

Note:—Readers who may find it more convenient may send their subscriptions to Arthur Bear, 10 St. Mary's Place, Rotherhithe, London, S. E. 16, England.

Readers are asked to be careful not to mistake this organization for others which may have a similar name. This is the original International Short Wave Club and all mail should be addressed to International Short Wave Club, East Liverpool, Ohio.

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ARTHUR J. GREEN, Editor.

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This Beautiful Globe for only \$3.25



Here is a rare bargain for the short wave fan. Imagine a 12-inch globe, printed in many colors and up-to-date in every detail, delivered to your door for only \$3.25, if you live in the U. S. A., or for \$3.75 if you live elsewhere.

Here is another pleased customer. He has purchased three for himself and friends. On June 29th, Dr. Gilbert S. Bovard, of Sierre Madre, California, wrote us saying:

"My doctor friend is exceedingly pleased with his globe and now his secretary asks me to get one for her. Hoping that another is available, I am enclosing a check for \$3.25."

Why not get a globe to mark the places where you have tuned-in stations, measure distances to these stations, follow the expeditions and add to the beauty of your radio set as well as add to your pleasure in tuning? Just send \$3.25 (for U.S.A. members), or \$3.75 (for foreign members) and this globe will be shipped. (We do not pay customs tax to foreign countries.)

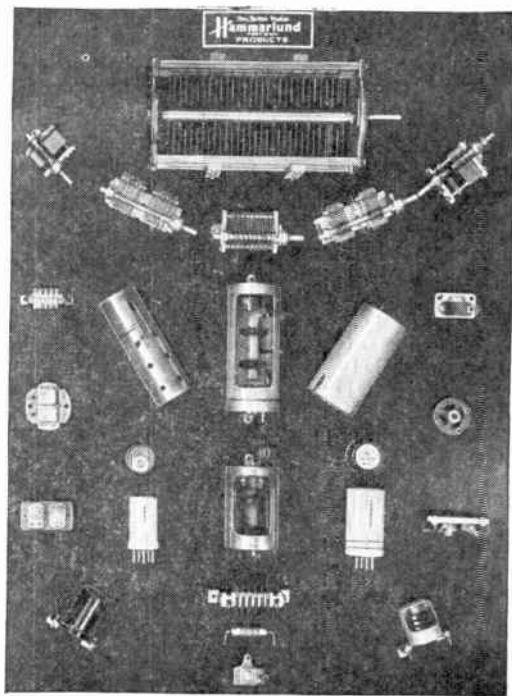
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Name

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.....IC-12



THE LONDON, ENGLAND, CHAPTER

Here is a photograph of a meeting of the London Chapter members made in October. Certainly a nice group of members, we must say, and the Chapter is to be congratulated for the nice turu-out. This chapter meets each Friday of the month, with the exception of the second, at RACS Hall, Wandsworth Road, London, within hearing distance of "Big Ben." Every meeting brings some new and interesting event. They are also active outside of the meeting-place, visiting airports, telephone exchanges, broadcast stations, and putting on special tests and having Field Days. Anyone living within traveling distance of London who is not a chapter member should join up at once.

MEMBERSHIP CONTEST

The contest for the Postal International receiver and other prizes announced some months ago is fast coming to a close. It certainly is getting to be some contest, if you know what we mean. On the 27th of November, the standings were as follows: J. B. L. Hinds, Yonkers, N. Y. (42 members); J. C. Van Gendt, Aruba, D. W. I. (41 members); W. D. Martin, Honolulu, Hawaii (30 members); E. F. Youngblood, East Cleveland, Ohio (25); W. Hafeman, Cristobal, Canal Zone (20); Thomas Malone, New York City (20); Hal Thompson, San Francisco, Calif. (19); Fred B. Heller, Jr., Philadelphia, Pa. (16); Z. Hinajosa, Jr., Maracaibo, Venezuela (15); W. Peterson, Brooklyn, N. Y. (11); Harold Seaton, Sevierville, Tenn. (10); E. F. Germandt, Berkeley, Calif. (9); W. H. Rowley, Plymouth, England (8); W. A. Dean, Hartford, Conn.

HEARD-ALL-CONTINENTS CLUB

The aim of all short wave fans is to become a member of the Heard-All-Continents Club. And the aim of all members of this club is to get into a higher class. To join this exclusive society, you have to prove that you are a real expert short wave tuner, and that you know how to get results with a short wave receiver. For, you must show that you have heard at least one station on every continent and Australia. To be eligible for this organization, a member must send us a verification from at least one station in Asia, Africa, Europe, Australia, South America and North America. These verifications must be sent to headquarters, along with return postage and five cents to cover the expense of printing and mailing a special certificate which is sent to all those who are made members.

One verification from each continent makes the listener eligible for Class A. Two from each continent makes him eligible for Class AA and three for Class AAA. All verifications must be sent in at one time for each group.

Following are the members of this society:

Class AAAAAA (six verifications): Howard S. Bradley, Hamilton, N. Y.

Class AAA (three from each continent): Arthur W. Lunn, Jr., Maplewood, New Jersey. W. T. Wyatt, Essex, England. Nick Gaug, New York City. Howard Eck, East Lansing, Michigan. Emmett G. Riggle, Massillon, Ohio. J. R. McAllister, Struthers, Ohio. R. Lawton, Whitefield, England.

Class AA (two from each continent): R. H. Tomlinson, Port Chester, N. Y. Shockchi Yoshimura, Moji, Japan. Ed Lips, Pittsburgh, Pa. Albert E. Emerson, Cleveland, Ohio. P. E. Thompson, New York City.

Class A (one from each continent): Stannard Smith, Los Angeles, Calif.; Mrs. A. B. Large, West Newton, Pa.; Frank Wolf, Baltimore, Md.; Thomas Reaney, Brooklyn, N. Y.; Charles Guadaguino, Detroit, Mich.; Walter Chapin, Boston, Mass.; Robert Stuart, Allentown, Pa.; W. C. Eisen-garth, Pittsburgh, Pa.; Harold Seaton, Sevierville, Tenn.; Adolph Dick, Jr., Brooklyn, N. Y.; J. Warren Donahue, Los Angeles, Calif.; Wm. H. Leeds, Long Island, N. Y.; James E. Wilkinson, Hawthorne, Calif.; Albert J. Leonhardt, Brooklyn, N. Y.; J. B. L. Hinds, Yonkers, N. Y.; James G. Jones, Roanoke, Va.; L. J. Bonham, Toronto, Canada; W. C. Gangloff, Cincinnati, Ohio; E. W. Munt, Irvington, N. J.; E. Sigman, Chicago, Ill.; Louis A. Baer, Bakersfield, Calif.; Capt. H. Hall, New York City; Wm. R. Scott, Springdale, Conn.; A. E. Bear, London, England; Donald Teague, Jr., Santa Paula, Calif.; Harry Hunt, Wankie, Southern Rhodesia, Africa; A. R. Nichols, East Greenwich, R. I.; Otis Brush, Jasonville, Ind.; H. Weston Taylor, Philadelphia, Pa.; Wolfgang Fritzsche, Rochville Center, N. Y.; E. J. Parrish, Huntington, W. Va.; Hans Neustadt, Englewood, N. J.; Prof. D. Gadoury, Montreal, Canada; F. L. Stitzinger, Eria, Pa.; C. S. Wells, Concord, New Hampshire; C. H. Armstrong, Atlanta, Georgia; Roy E. Bilheimer, Fullerton, Pa.; F. Rivard, Fitchburg, Mass.; Frank R. Grey, Chicago, Ill.; S. C. DeLeo, Yakima, Washington; Robert George Bode, Maspeth, Long Island, N. Y.; C. Chippindall, Sydney, Australia; Colin McRae, Lawrenceville, N. J.; C. R. Caraven, Vancouver, B. C., Canada; Arthur

Stapfer, St. Louis, Mo.; F. E. Woodhouse, London, England; Clarence Sargent, Dansville, N. Y.; Forrest Ashworth, Greencastle, Ind.; Jerry Silhanek, Cleveland, Ohio; Edward Engles, Brooklyn, N. Y.; George Harrold, Audubon, N. J.; G. W. Slack, Mansfield, Nott., England; J. B. Sessions, Bristol, Conn.; William Warner, St. Leonards, Exeter, England; Henry Tydall, Jr., Burlington, Vt.; Richard Zorn, Tuscon, Arizona; Francis McDaniels, Washington, D. C.; Seymour Lampel, Brooklyn, N. Y.; H. J. Davison, Bayamon, P. R.; Ted Seaton, Seiverville, Tenn.; Mike Mickelson, Francis A. Beans, Halstead, Essex, England; Robert Brenner, Foster, Ohio; James E. Brown, Laredo, Texas; Fred Maybarduk, Brooklyn, N. Y.; Robert Woods, Sand Springs, Oklahoma; Guy R. Bigbee, Fort Benning, Ga.; Stephen Fortmeyer, Brooklyn, N. Y.; Thomas Van Meter, Bridgeton, N. J.; Dixon Russell, Baltimore, Md.; Neil Campbell, Bathgate, West Lothian, Scotland; Dr. W. C. Wolverton, Linton, North Dakota; Ramon Marti, Santurce, Puerto Rico; D. R. D. Wadia, Bombay, India; E. A. A. Hardwick, Misterdon, England; Edward Wepler, St. Louis Mo.; Myron D. Reamy, Yonkers, N. Y.; A. F. G. Bruder, Allston, Mass.; E. S. Barnett, South Boston, Va.; Fred Fahnauer, Leavenworth, Kansas; Stanley Frederickson, Brooklyn, N. Y.; Dr. R. C. Kash, Sevierville, Tenn.; Joseph Miller, Brooklyn, N. Y.; Roy Waite, Ballston Spa, N. Y.; Edwin Hatch, Philadelphia.

THE CHAPTERS

The Jersey City Chapter held their first meeting at the home of C. Manson, 2159 Hudson Blvd. on October 23. The officers elected were E. A. Murphy, Chairman; Charles Manson, Vice Chairman; R. E. Fisher, Secretary; D. Scaldallo, Treasurer; Fred W. Kutzner, Publicity. This Chapter meets on the second and fourth Thursdays of each month at the same place. Features for December 13, pre-selector and pre-amplifier. December 27, 13 tube all-wave receiver.

The Manchester Chapter meets at the British Legion Hall, Long Street, Middleton, Manchester, on December 4 and 18 at 8:00 P.M.

The Exeter Chapter meets at 56 East Grove Road, Exeter, England, on the second and fourth Fridays of each month..

The Cleveland East Side Chapter held their first meeting recently in the Oliver Hazard High School. For details on future meetings write to Herbert Steffen, 17914 Windward Road, Cleveland, Ohio.

The Leicester Chapter meets on Wednesdays at 4B, Princess Road Leicester, England, at 8:00 P.M.

The New York Chapter meets at Irving Plaza, Irving Place and East 15th Street, on the second and fourth Fridays of each month. Recently they held an auction sale, where members auctioned off their own parts. It was such a huge success and offered such amusement that they have decided to repeat it again this month. This Chapter broadcasts over WVFW, WLTH and WARD, each Thursday at 11:00 P.M. They also have a tuning station at 10 Glenmore Avenue, Brooklyn, where members bring their own receivers. For complete details write to 1622, 44th St., Brooklyn, N. Y.

Charles Miller, 309 View Place, Covington, Ky., is trying to start a chapter in the Cincinnati district. Interested members should get in touch with him.

APPRECIATION

If all the people who have helped us during this past month, in one way or another, were listed, it would take as many pages as there appear in this magazine. Therefore, we can not list them all. Each person who sent in news, suggestions, lists of prospective members and such things, are to be thanked. The advertisers who have taken space help greatly. The stations that sent special programs, the dealers who recommended the club and the manufacturers who mentioned us in the installation papers are all very kind.

And now, take a look at this long list of members who got other members for us. Believe it or not, every one of these people got us a new member or more: Hal Thompson, San Francisco, Calif.; L. C. Graft, Oakland, Calif.; Howard G. Dwyer, Mt. Vernon, N. Y.; Henery Espoy, Los Angeles, Calif.; DX Radio Sales Co.; Frank Mogol, Baltimore, Md.; C. Cramp, Leicester, England; Mitchell, Jr., Chicago, Illinois; Mr. MacIntyre, England; N. Lawton, Manchester, England; Mr. Goodheart, New York City; J. A. Pepper, Jobabo, Cuba; August Balbi, Los Angeles, Calif.; Gene Morris, New Orleans, La.; F. Walters, Cartagena, Columbia; Victor Ziminsky, New York City; H. C. Gordon, Shamrock, Texas; Dr. Antonio M. Cancio, Sancti-Spiritus, Cuba; Charles Manson, Jersey City, N. J.; Edmund Burke, Miranda, Oriente, Cuba; Louis Magliorini, New Brunswick, N. J.; Donald I. Gross, Asheville, North Carolina; Charles Eggenweiler, Los Angeles, Calif.; J. B. Feigenbaum, San Francisco, Calif.; F. L. Stitzinger, Erie, Pa.; W. A. Dean, Hartford, Conn.; V. P. Mathews, Flint, Michigan; D. R. D. Wadia, Bombay, India; W. D. Martin, Honolulu, Hawaii; Max Weiss, Long Beach, Calif.; Fritz Schlumpp, New York City; George V. Sundry, Flint, Michigan; E. L. Wilson, Rumford, Maine; Howard Macomber, Rutland, Vt.; H. C. Hill, San Diego, Calif.; W. R. Gillies, Chicago, Illinois; George C. Voth, Elyria, Kansas; Ralph Williams, Garden City, N. Y.; George Laroche, Cap-Haitian, Haiti; L. E. Hansen, Esplanade, Lurban, South Africa; Richard Rogers, Westwood, Mass.; H. S. Bradley, Hamilton, N. Y.; Electric Service Co., Leesburg, Florida; Elmer Applegate, Newburgh, N. Y.; L. W. Kinsey, Humboldt, Nebraska; R. C. Taylor, Andover, Mass.; Harold Goodhue, Sherbrooke, Quebec; A. J. Bubnick, Curry, Alaska; John Wenner, Williamsport, Pa.; Fred Smith, Smallridge, Detroit, Michigan; W. P. Daugherty, Ottawa, Illinois; H. J. Davison, Bayamon, P. R.; C. A. Sutermeister, New York City; Philco Radio of England; Selfridge and Co., London, England; Louis J. Rawlinson, Audubon, New Jersey; Charles Manson, Jersey City, N. J.; A. L. Hunt, Cressen, Pa.; Robert E. Lawrence, Montclair, N. J.; Carl Scherz, San Angelo, Texas; Mrs. Elmer Erikson, Anchorage, Alaska; Andrew Shassetz, Monarch, Wyoming; Leo Lacroix, Norton, Vt.; W. Hafeman, Cristobal, Canal Zone; Dr. Richardson, Los Angeles, California; Dwight C. Baum, Riverdale-on-Hudson, N. Y.; Alan Quillan, Ocean City, N. J.; B. M. Bailey, Albany, N. Y.; C. T. Hanavan, Los Angeles, Calif.; E. A. Monson, eWst Palm Beach, Florida; Frank E. Lyons, Kingston, Jamaica.

Remember to send in your news as soon as you get it. Don't risk missing the issue by waiting until the last day.



Dr. R. C. Kash, M. D.

Dear ISWC.:

I am enclosing a photo of myself and lay-out. In the picture can be seen my membership certificate, phonograph record that I got as a verification from XETE, one of your globes, your world map and a Scott Deluxe receiver.

My time is limited to after office hours since I am a Director of the Sevierville Health department. Only the stations across the pond and fence are of interest to me.

I have been radio-minded since 1923 and have built several sets. Became interested in short waves three years ago and had poor luck until a fan in Pennsylvania advised me to take the I.S. W.C. magazine. That was the best radio advice I ever had. At the time I had identified two stations, EAQ and DJC. Today I have logged 104 foreign stations.

DXing is not my only hobby. The picture was composed, exposed, developed and printed by myself.

Yours truly,

DR. R. C. KASH, Sevierville, Tenn.

LATE JANUARY ISSUE

You can not expect people to work when vacation time comes. Therefore, we can not expect to get the January issue out on time, when Christmas and New Years Day, turkey and all, comes along right when we are supposed to be getting out a magazine. So, boys and girls, don't get over-anxious if your January number is a bit late.

CALL BOOKS PRICE CHANGED

Radio Amateur Call Book, Inc., writes us that the price of their call-book has been raised to \$1.25 in U.S.A. and \$1.35 in foreign lands. This call book lists over 60,000 stations now, including American and foreign amateurs, their call, location and owners. We can get them for members who write to us.

CARL SCHERZ

Gentlemen:

I am enclosing one dollar for my renewal, and I do not know of anything else the money is better spent for. I am also enclosing a Kodak picture of my set, verifications and myself. The numbers refer to the following: 1—Zeesen, Germany. 2—Record from XETE. 3—San Angelo Radio Club. 4—XETE. 5—COC. 6—VE9JR and CJRX. 7—DJB and EAQ. 8—GSE and BSD. 9—YV1BC. 10—CP5 11—YV3RC. 12—I.S.W.C. magazine. 13—VK2-ME. 14—HC2RL. 15—Philco 16B receiver.

Please send me a few membership applications. There are two or three more prospective members I believe I can get in a short time.

Cordially yours,

CARL SCHERZ.

San Angelo, Texas.

**NO BACK COPIES**

Please don't ask for any back copies of the magazine now. Our supply is gone. We printed several thousand extra copies of the October issue, expecting them to last a long time, but they are all gone. If members wish we will repeat the list of addresses, with additions, in an early issue.

SPECIAL PROGRAMS

Arthur E. Bear, our European representative, has arranged to broadcast a special I. S. W. C. Christmas program from station EAQ, Madrid, Spain, on Friday, December 21 from 7:00 to 7:30 P.M. Mr. Bear will speak. A special verification card will be sent to anyone who writes to Mr. Bear. We thank the owners of EAQ and Mr. A. G. Richards of London, for making this program possible.

W8XAL, Cincinnati, Ohio, on 49.50 meters, 6.0% mc., will broadcast a special program on December 16 from 2:00 to 3:00 A.M. This program was arranged by club-member Charles Miller, Covington, Kentucky.

Station VE9HX on 49.10 meters, 6.11 mc., will broadcast a special program on December 22, from 4:30 P.M. to 4:30 A.M., the following day. A part of this program will be dedicated to the International Short Wave Club.

The KDKA, DX Club now broadcast on Saturday mornings from 12:30 to 1:00 A.M., or 0530 to 0600 G.M.T.

SHORT WAVE NEWS

What many people call "skill" in tuning for short wave stations is nothing more or less than knowing **WHEN** and **WHERE** to tune for stations. Nearly all short wave stations are experimental and change their wave lengths or schedules almost without notice. To know when these changes take place is as important to successful reception as having a good receiver.

The average short wave station list contains hundreds of stations that have closed down, changed wavelengths or schedules, or have never really operated. The only reliable and helpful information comes direct from listeners, and even this must be published quickly in order to be of help. The information in this magazine is gathered by members of the club living in practically all parts of the world. Without this information, hundreds, or even thousands, of programs would be missed by readers. And without it, we would not be able to produce such a magazine. So, we say to all, "Thank You." This information is corrected up to within three days of the date of mailing. Other magazines usually make up copy from two to four months in advance of publishing.

The time is given in Eastern Standard. Add five hours for Greenwich Mean Time.

THE WEST INDIES

COH, Havana, Cuba, on 31.80 meters, 9.43 mc., is now one of the best stations heard in the United States. Naturally we have had a great many reports, too many in fact, to publish a list of them. In letters to members listed below the owners have given the following information: They broadcast daily from 10 to 11 A.M., 5 to 6 P.M. and 8 to 9 P.M. On Thursdays they broadcast a special program from 11:00 A.M. to Noon. The manager is H. Tayas Bazan and the address is Calle B. No. 2, Vedado, Havana, Cuba. They relay CMCY, a long wave station, irregularly. Such letters have been received by the following: John Kovatch, Escorse, Mich.; H. S. Bradley, Hamilton, N. Y.; Ralph Williams, Garden City, N. Y.; C. D. Hall, Chillicothe, Ohio; H. Hozey, Collongwood, N. J.; Myron D. Reamy, Yonkers, N. Y.; Nick Gaug, New York City; Edward Lips, Pittsburg, Pa.; Nelson S. Bell, Well esley, Mass.; Walter Jasiorowski, Milwaukee, Wis.; and Sam Solite, Leetsdale, Pa.

CM2OA, Havana on 42 meters, 7.10 mc., will be heard broadcasting musical programs soon. H. S. Bradley, Hamilton, N. Y.

W4XP, San Juan, Puerto Rico, owned by Piza and Martinez, 59 Brau Street, San Juan, will be heard relaying WNEL soon. J. Martinez Bernacet, Santurce, Puerto Rico, and H. J. Davison, Bayamon, P. R.

COC, Box 98, Havana, Cuba, on 49.96 meters, 6.00 mc., broadcasts regularly from 9:30 to 11:00 A.M. and 4 to 6 P.M. Also each Saturday

from 11:30 P.M. to about 12:30 A.M. This comes from a letter to Fred Hafner, Buffalo, N. Y. In addition, they have been heard relaying CMCY around 8:00 to 10:00 P.M. This comes from Fred B. Heller, Jr., Philadelphia, Pa.; Lawrence Gagnon, Quebec City, Canada, and J. B. L. Hinds, Yonkers, New York.

HIH, on 44.12 meters, 6.80 mc, at San Pedro de Macoris, Republic of Dominicana, is reported as follows: From 4 to 6 P.M. by Pedro Quintana, Cabot, Cifuentes, Cuba, and John J. Kirby, New York City. From 5:30 to 7:30 P.M. by F. L. Stitzinger, Erie, Pa. Christian Rymer of Sanchez, Republic of Dominicana, reports them from 12:10 Noon to 1:40 P.M. also, and adds that they have 75 watts and call themselves "La Voz del Higuamo."

HI1A, same city, plays the National Anthem now instead of "Anchors Aweigh" according to Robert Rossi, Philadelphia. Nick Gaug, New York City, says they are on 6.18 mc. with 50 watts daily from 11:20 A.M. to 1:40 P.M. and 7:40 to 9:40 P.M. according to a letter from them. W. A. Dean, Hartford, Conn., and Ed Lips, Pittsburg, also help with reports.

HIX, Santo Domingo, Dominican Republic, on 50.17 meters, 5.98 mc. This station has moved from 49.5 meters to the above. A letter to Harry B. Dorr, Hartford, Conn., says "We transmitt on approximately 50.5 meters, trying to get away from high-powered European and American stations. Time is 8:10 P.M., E.S.T., on Tuesdays and Fridays." Ralph Williams, Garden City, says on 5.98 mc. John Shanks, Russellville, Tenn., says on 50.20 meters and John Kirby, New York City, says on 50.10 meters.

HI4D, same city, on 46.25 meters, 6.48 mc. We made a blunder last month. The proper schedule of this station is Mondays to Saturdays inclusive (every day except Sunday, in other words) from 11:55 A.M. to 1:40 P.M. and 4:40 to 7:40 P.M. They announce "La Voz de Quisquilla. Quisquilla is the name of a small town according to Carlos Lopez Ona of Havana. Fred Heller, Jr., Philadelphia, tells us he heard this station near 45.32 meters, not 46.25. And we certainly thank the following for correcting us on the schedule: Carl Foresteiri, New York City; H. S. Bradley, Hamilton, N. Y.; Dr. R. C. Kash, Sevierville, Tenn., and W. T. Morris, Richmond, Va.

HI1A, (location not known, but believed to be at Santo Domingo) on 5.95 mc., from 9:00 to 10:00 P.M. on October 26th. Pedro Quintana Cabot, Cifunte, Cuba.

CENTRAL AMERICANS

TIEP, "La Voz del Tropica" at San Jose, Costa Rica, is on a new wavelength. It is Sundays only on 22.35 meters, 13.42 mc. They were heard from 1 to 4 P.M. saying they would be on this wave every Sunday. This was reported by members Harry Dorr, Hartford, Conn.; James Wooten, Mobile, Alabama; Nelson S. Bell, Wellesley, Mass.; Albert Emerson, Cleveland, Ohio; H. S. Bradley, Hamilton, N. Y. This station is still on 44.7 meters, 6.71 mc., daily from 7 to 10 P.M. This comes in letters sent to C. D. Hall, Chillicothe, Ohio, and Dixon Russell, Baltimore, Maryland. The adres is Apartado 257.

TIXGP3, 'La Reina del Aire' in San Jose, Costa Rica, is now on a wavelength between OAX4D and YV5RMO, or about 5.78 mc. now. Several different call letters have been sent us, but we believe the above is correct as the letters TIX stand for Costa Rica, GP for Gonzales Pinto, the owner and 3 for the district. Some say it is TIX only, and others TIXf3. Anyhow, it is heard from around 9:00 to 11:30 P.M., and as late as midnight, signing off with 'Ted Lewis' recording of the "Good Night" song. The address is Apartado 775, San Jose. Help has been received from the following members: Sam Solito, Leetsdale, Pa.; Fred Hafner, Buffalo, N. Y.; G. C. Gallagher, San Francisco, California; Howard Eck, Lansing, Michigan; Carl Foresiteiri, New York City; Mario Cassina, Corona, N.Y.; and Walter Jasiorowski, Milwaukee, Wisconsin.

TGX, Guatmela City, is reported on two waves. Samuel Sternberg, Far Rockaway, N. Y., says it is on 52.25 meters and not 50.50 and also says it is heard from 7:30 P.M. until Midnight and announced they would be on the air Saturdays at 9:00 P.M. H. S. Bradley, Hamilton, N. Y. reports it on 5.82 mc. Robert Rossi, Philadelphia, Pa., reports it at 9:30 P.M. one Tuesday, and also said it broadcast an anniversary program, commemorating their 92nd Independence on November 1. Letters from the station give the schedule from 8 to 10 A.M. (mornings) excepting Sundays, then from 1 to 2:30 P.M. and 8 P.M. to Midnight. The power is 100 watts, the wave is 50.5 and the address is Radiofusora TGX, M. A. Mejicano Novals, Guatemala City, C. A. Ed Lips of Pittsburgh has such a letter. Charles Hoffman of Terre Haute, Indiana, tells us they tested Tuesday and Wednesday mornings several times from 2:15 to 2:45 A.M.

TGW, Guatemala City, on 5.88 mc. is reported by James Spalding, Louisville, Ky., on this wave at 9:35 P.M. We wonder if it wasn't TGX instead ?

XEBT, Mexico City, the "Siren, Cuckoo and Crow" station, has moved. It has roamed around a bit, but at the last moment seems to be on about 50.3 meters, 5.96 mc., As for reports, we are like Jimmie Durante "We got a million of them."

HRM, Tela, Honduras, on 15.40 mc and 13.81 mc. We are a bit confused on this one. Bob Everard, Standon, England, first reported it working phone with WNC, Florida, near 20.5 meters from 3:36 P.M. to 3:40 P.M. James Spalding, Louisville, Ky., also heard it around 4:30 P.M. H. S. Bradley, Hamilton, New York, has a letter from them saying they are owned by the Tela Railroad Company and they say they are on 15.40 mc. and 13.81 mc., operate on code with Boston and New Orleans usually, has 400 watts, and have been testing phone lately, hoping to be able to open a regular phone service with WNC soon.

SOUTH AMERICANS

YV5RMO, Maracaibo, Venezuela, has moved from 49.34 meters up to 51.28 meters, 5.85 mc. We had at least two hundred reports, and acknowledge only the first few. These came from Harry B. Dorr, H. S. Bradley, Pedro Quintana Cabot, W. A. Dean, W. C. Motz, F. L. Stitzinger, Donald Gross, R. Brauholdt, George R. Paris, Roy Waite, Cyrus Will, J. B. L.

Hinds, Dr. H. S. Taylor, Nelson S. Bell, John Kirby, Sam Solito, Andrew Schassetz and Harold Seaton.

YV4RC has also changed. It is at Caracas, Venezuela, and on 47.10 meters, 6.37 mc. It is heard from 4:30 to 10:30 P.M., although three members report it as late as 11:30 P.M. This was also reported by over a hundred members and we acknowledge only the first few who sent in the news. They are F. L. Stitzinger, H. S. Bradley, Fred B. Heller, Jr., Fred Halner, R. Braunholdt, Charles Miller, Harry Dorr, Robert Zecher, Roy Waite, Frank W. Warner, John Kirby, Nelson S. Bell and Howard Eck.

YV6RV, Valencia, Venezuela was reported by Robert Rossi, Philadelphia, in September, but we have news from Radio Club Venezolano of Caracas, saying that this station is under construction and will be on the air early in December on 49.75 meters, or 6.03 mc. They will use the signature "La Voz de Carabobo."

YVR, Maracay, Venezuela, on 32.83 meters, 9.41 mc., after a long silence has been phoning EHY, Madrid, (29.79 meters) from 4:15 to 4:45 P.M. Lawrence Gagnon, Quebec, Canada. YVQ on 44.96 meters, 6.67 mc., broadcast music one Saturday night at 10:30 P.M. Reported by John Shanks, Russellville, Tenn.

YV2RC on 49.08 meters, 6.11 mc., and YV3RC on 48.78 meters, 6.15 mc., both in Caracas, Venezuela, has been broadcasting a special program each Thursday and Saturday from 8:30 to 9:00 P.M., a special "Silvertone Program" sponsored by the Sears Roebuck Company of Chicago. The Sears Roebuck Company and members Roy Waite, Ballston Spa, N. Y., Edward Houlgate, London, Ontario, and Charles Pedicora, Brooklyn, all send us this news.

Carroll C. Foltz of North Baltimore, Ohio, reports a station calling itself "Maracay, Venezuela" on 25.65 meters around 5 to 6 P. M. They once worked a station HJA8.

HJ1ABB, Barranquilla, Colombia, on 46.50 meters, 6.45 mc., broadcast a special program to members of this club November 4. We thank them earnestly. Reports on this station indicate they are on a new schedule. Here are a few: At 4:30 P.M. by H. S. Bradley, Hamilton, N. Y.; 5:45 P.M. by Alan Quillan, Ocean City, Md.; 6:30 P.M. by Wm. Fiedler, Milwaukee, Wisconsin; 5:30 P.M. by Fred Karpen, Johnstown, Pa. Their former schedule is still shown in our list waiting for accurate details on the new one.

HJ1ABE, Cartagena, Colombia, on 49.05 meters, 6.11 mc. is scheduled Mondays from 10 P.M. to Midnight and Wednesdays from 8 to 10 P.M.

HJ1ABD, Cartagena, on 49.18 meters, 6.09 mc., worked YV4RC from 10 to 11 P.M. one Monday according to H. S. Bradley, Hamilton, N. Y. It was reported one Saturday 11 P.M. by Harold Seaton, Sevierille, Tenn.

HJ1ABG, Barranquilla, on 49.65 meters, 6.03 mc., relays a station HJ1ABF from 6:00 to 10:00 P.M. and the correct address is P. O. Box 445. This comes from Mario Cassina, Corona, N. Y.

HJ2ABA, Tunja, has moved. It is on about 48.60 meters, 6.17 mc., according to reports. They say in a letter that they have 500 watts power and the schedule is 6 to 10 P.M. and the wave is 6.15 mc., and call them-

selves "Ecos de Boyaca." This comes from H. S. Bradley who tells us they are really near 48.10 meters. John Shanks, Russellville, Tenn., reports them on 48.7 meters from 7 to 11 P.M.

HJ3ABD, Bogota, on 40.55 meters, 7.40 mc., uses a cuckoo call, repeated twice and is usually heard between 7:30 and 11:00 P.M. although it was heard once at a later hour. This comes from many members. Sam Solito of Leetsdale, Pa., reports them calling Prado and TIEP once at 12:15 A.M.

HJ3ABH, Bogota, on 49.92 meters, 6.20 mc., "La Voz de la Victor," is back on the air and sends a beautiful card according to Hector McCormick of Bucaramanga, Colombia. He says the schedule is given as Noon to 1:00 P.M. and 7:00 to 10:00 P.M. daily. The address is Almacenes Victor de Manuel J. Gaitan, Bogota. H. S. Bradley of Hamilton, N. Y., tells us they are on 5.97 mc., and not 6.20 mc. Maybe so.

HJ4ABB, Manizales, on 42 meters, 7.15 mc., was heard once from 5:40 to 6:15 P.M. broadcasting, according to Sam Solito, Leetsdale, Pa. Many others report them around 8 to 9 P.M. Dr. R. C. Kash of Sevierville, Tenn., says they are heard on Tuesdays and Fridays regularly.

HJ4ABC, Pereira, is on 48.3 meters, 6.25 mc., and was heard one Monday from 8:00 to 8:22 P.M. according to H. S. Bradley, Hamilton, N. Y.

HJ5ABD, Cali, on 46.30 meters, 6.48 mc., say they are on 47 meters, 6,490 kc., but this is incorrect as 47 meters is not 6,490 kc. This from Mr. Bradley, whom we thank. Sam Solito, Leetsdale, Pa., says they use a three-note chime and it was heard at 10:15 P.M. Many correct us on this. They have 100 and not 1000 watts power.

HKQ, Base Aera de Cali, on 6.50 mc., was reported between 4 and 5 P.M. directing aircraft according to Pedro Quintana Cabot, Cifuentes, Cuba.

HJA3, Barranquilla, on 46.77 meters, 6.42 mc., after a long silence was heard again. John Kirby, New York City, reports it one Monday at 4:45 P.M. on phone.

HJN, Bogota, on 49.46 meters, 6.06 mc., was broadcasting this past month and reported by many. Hector McCormick of Bucaramanga, Colombia, tells us it is owned by the government but reports should be addressed to Biblioteca Nacional, Bogota, Colombia.

HKE, Bogota, on 41.55 meters, 7.22 mc., was not reported many times last month. The schedule is Mon., Thurs., from 6 to 7 P.M. and Tues., Saturdays from 8 to 9 P.M.

HJ3ABF, Bogota, is off the air according to Hector McCormick. HJ5ABC, Cali, is on 53.75 meters and not 53 meters according to Samuel Sternberg, Far Rockaway, N. Y. We have no news on HJ2ABC, Cucuta, or HJ3ABI, Bogota.

LSX, Buenos Aires, Argentina, on 28.98 meters, 10.35 mc., has been relaying the programs from Little America each Wednesday from around 9 to 10 P.M. This is a regular feature. They also worked 2RO, Rome, Italy, once at 6:30 P.M. according to Nick Gaug, New York City, and W2XAF on November 13 from 6 to 7 P.M. for some special broadcast according to George Van Honk, Erie, Pa.

James Alexandre of Auckland, New Zealand, asks about a Buenos

Aires station heard working JVN and JVM at 1:30 P.M. to Midnight on October 3, 5 and 7.

CP5, La Paz, Bolivia, on 49.34 meters, 6.08 mc., broadcast a special program for I.S.W.C. members last month, but was pretty much smothered by powerful American stations. They got through Okey between 11:00 and 11:35 P.M., and was heard and reported by two members only, H. Hozey, Collingswood, New Jersey, and Lewis R. Greenman, Conneaut, Ohio. Letters to members somehow conflict. Last month two letters said the schedule was 8 to 9 P.M. One to Walter Jasiorowski, Milwaukee, Wisconsin, says 7:45 to 9:15 P.M. One to Mario Cassina says 8 to 9 P.M., but he says he hears them from 7:30 to 10 P.M. One to Ed. Lips, Pittsburgh, Pa., says 7:30 to 9:00 P.M.

HC2RL, Guayaquill, Ecuador, on 45.00 meters, 6.67 mc., remain on the regular schedule which is Sundays from 5:45 to 7:45 P.M. and Tuesdays from 9:15 to 11:45 P.M. However, one Monday they broadcast a special program of some visiting orchestra, this taking place between 8 and 11:50 P.M. It was heard quite well, too. Reports came from H. Hozey, Collingswood, New Jersey; Fred Heller, Jr., Philadelphia, Pa.; Don Haupt, Indianapolis, Indiana; Fred Hafner, Bucalo, N. Y.; George Van Honk, Erie, Pa.; Carl Forestieri, New York City and Walter Jasiorowski, Milwaukee, Wisconsin.

PRF5, Rio de Janeiro, Brazil, on 31.56 meters, 9.50 mc., broadcasts regularly each week-day from 5:30 to 6:15 P.M. Do not send reports on this station to the Radio Club of Brazil as they will send a verification of PRE3. Send reports to Impresna Nacional Gabinete do Director Generale, Rio de Janeiro.

PPQ on 25.73 meters, 11.66 mc., was very active this month. This is a phone station. Here are some reports: Used a two-tone gong and heard from 6:50 to 8:00 P.M. by Thomas Van Auken, Livingston, Texas.

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Worked Paris from 2:00 to 2:20 P.M. reported by Bob Everard, Standon, England. Reported at 4:30 P.M. by Lawrence Gagnon, Quebec, Canada.

PPM on 29.04 meters, 10.31 mc., sent music from 4:25 to 4:55 P.M. according to Shokichi Yoshimura, Moji, Japan. From 6:50 to 7:00 P.M. calling New York is reported by W. C. Motz, Amerst, Va. A letter from Companhia Radiotelegraphica, Brasileira, Caixa Postal 500, Rio de Janeiro, says they are on 10.31 mc. Such letters were received by Myron D. Reamy, Yonkers, N. Y., and Samuel Sternberg, Far Rockaway, N. Y.

The Telephone stations are reported as follows: PSA on 14.23 meters or 21.08 mc., sent a special Armistice Day program to New York at 4:00 P.M. for rebroadcast. This is reported by Nelson S. Bell, Wellesley, Mass.; Fred Hafner, Buffalo, New York, and F. L. Stitzinger, Erie, Pa, it is reported also daily at Noon phoning, by Lawrence Gagnon, Quebec, Canada. PSF on 20.08 meters, (most say this is on 20.42 meters, 14.69 mc.) sent this same program on Armistice Day from 4 to 5 P.M., and working LSL, Argentina. This comes from John Kirby, New York City. Fred Hafner, Buffalo, N. Y., and H. J. Davison, Bayamon, P. R. PSK on 36.65 meters, 8.19 mc., phones Argentina around 5 P.M. often according to H. S. Bradley, Hamilton, N. Y.

OAX4D, Lima, Peru on 51.90 meters, 5.78 mc., was reported on two waves last month, and we are not sure which is which now. There is some confusion with OAX4B, you see. A letter to Edward Houlgate, London, Ontario, which does not give the call-sign, says in brief that they are the only station near 52 meters and OAX4C on 38 meters is off the air for repairs and that they, the 52 meters station, moved to 48 meters, 6.23 mc., and will also try near 42 meters to determine the most suitable wave. Their schedule is Sundays from 7 to 9 P.M. and the address was given as Auto Talleres Reunidos, Apartado 1242, Lime, Peru. Now, whether this is OAX4B or OAX4D is still not known.

On 48 meters the call was understood by some members as OAX4D and by others as OAX4B. Simon E. Yriberry of Arequipa, Peru, writes that OAX4D is on 51.90 meters, 5.78 mc., on Wednesdays and Saturdays from 9 to 11 P.M., call themselves "La Voz del Peru," give their address as P. O. Box 853 and the short wave station is owned by All-American Cables. OAX4B is on 48.39 meters, 6.20 mc., daily from 7 to 9 P.M. and the address is Messrs. Grellaut & Company, Lima, Peru. According to this both OAX4D and OAX4B must be near 48 meters, since the 52 meter station moved to 48 meters. But, we have three different addresses, please note.

Some reports follow: On 48 meters we have a station at 9 P.M. heard by H. S. Bradley, Hamilton, N. Y., and Charles Miller, Covington, Kentucky. At 10:00 P.M. reported by John Shanks, Russellville, Tenn. On 51.90 meters, 5.85 mc., we have a station announcing as "Radio DUSA (the letters spelled out) who give their address as Box 853 and also as All American Cables Company, and it is reported between 8:30 and 11:00 P.M. by Samuel Sternberg, Far Rockaway, N. Y.; Robert Rossi, Philadelphia, Pa.; W. C. Motz, Amherst, Va.; H. S. Bradley, Hamilton, N. Y.; Walter Jasiorowski, Milwaukee, Wisconsin; John Kirby, New York City;

Dominic Larendini, Minotelo, N. J., and John Shanks, Russellville, Tenn. Oh, yes, it was reported as early as 7:00 P.M. and as late as Midnight.

OCJ1, Lima, on 19.87 meters, or 15.10 mc., worked phone with LSM, Argentina, from 2:00 to 2:20 P.M. according to Sam Solito, Leetsdale, Pa. It was one Tuesday. An OCJ2 on 14.84 mc. was calling HJY, Colombia, at 10:35 A.M. once, according to Wm. Fiedler, Milwaukee, Wisconsin. They used the letters one and two.

THE EUROPEANS

Rome, Italy, on 30.67 meters, 9.78 mc., broadcast quite a number of times last month. This is a new station and they started off broadcasting regular programs to America in English each Monday, Wednesday and Saturday from 6:30 to 8:00 P.M. Later on, they changed to other waves but at certain times they come back to this one. And, have been heard as early as 2:30 P.M. broadcasting, but not in English. This was one of the best stations heard in America this past month, and believe it or not, we received letters from over 300 members. Gosh, we couldn't mention them all, so here are the first ten reports: Charles Miller, Bruce, T. O'Leary, Guy R. Bigbee, Francis Worrel, Nick Gaug, Stuart Fuller, Carroll C. Foltz, James Pickering, R. H. Braunholdt and F. L. Stitzinger.

Rome, Italy, 37.41 meters, 8.02 mc., was used irregularly on the American programs broadcast on Mondays, Wednesdays and Fridays from 6:30 to 8:00 P.M., but it too was silent for a time while other waves were used. The call-sign used by this station is IRS, by the way. This station also may be heard as early as 2:30 P.M. and usually is used from 6:30 to 8:00 P.M. But, if you don't hear it, try on one of the other two waves mentioned. First reports on this one came from Bernard Kinzel, Harry Dorr, George Van Honk, George Paris, Ray Waite, Albert Emerson, Dr. H. S. Saylor, August Ulrich and Peter Lasorelle.

Rome, Italy, on 49.20 meters, 6.09 mc., (some say 49.02, some 49.34) alternates with stations on 30.67 meters or 37.4 meters to broadcast that American program on Mondays, Wednesdays and Saturdays. The call is IRA, we understand. It, too, can be heard as early as 2:30 P.M. By the way, these stations give a new address. It is EIAR, Via Montello (or Monsello) No. 5, Roma, Italy. EIAR are the initials of the company which operate these stations and must not be confused with call letters. A letter to Harold Goodhue, Sherbrooke, Quebec, says they use 25.4 meters, 31.13 meters and 48.70 meters, but these are all wrong. First reports on this station were from members Lawrence Gagnon, Frank Warner, Louis Kreamer, T. R. McNamee, W. Goodell, Charles Pedicaro, Robert Rossi, John Kovatch, Robert Short, and Carl Foresteiri.

IRM, Rome, Italy, on 30.52 meters, 9.83 mc., was mistaken for the new Rome station by many. This station did send a program sponsored by the English and Italian Radio Club of Rome once from 4:15 to 6:00 P.M. This came from Max Horlick, Youngstown, Ohio. It tested with WCG and WEL, Rocky Point, N. Y. between 5:30 and 6:30 P.M. several

times. This comes from H. J. Davison, Bayamon, P. R., and Thomas Grey, Lyons, Illinois. IRM on 8.10 mc. was heard saying "Pronto, Pronto, this is IRM working IRS on 8.10 mc" This was at 4:45 P.M. and reported by Carlos Irizarry, Brooklyn, N. Y. We wonder if it was not IRS which is broadcasting on 8.20 mc. as explained above.

PHI, Huizen, Holland, on 25.57 meters, 11.73 mc., broadcasts one hour later than we have been showing it in our list. This is from 8:30 to 11:00 A.M. daily excepting Tuesdays and Wednesdays. Nick Gaug, New York City, and George Van Honk, Erie, Pa., fix us up on this. November 21st (Wednesday) they broadcast a special program dedicated to the returning Dutch flyers of the London-Melbourne Air Race. This came over PCJ also. John Kirby of New York City tells us this.

PCJ, Eindhoven, Holland, on 19.71 meters, 15.22 mc., is on the air only on Sundays now. This from A. M. Pleyte, Yarmouth, Maine, who should know.

CT1AA, Lisbon, Portugal, on 31.25 meters, 9.59 mc., is no longer on 31.07 or 31.17 meters. They are back on their old wave. They are heard from 4:30 to 7:00 P.M. on Tuesdays and Fridays. R. Lawton of Manchester, England, heard them sending a special program on October 20 at 11:50 A.M. when the President of the Republic spoke. F. A. Beane, Ridgewell, England, heard them November 4 from 11:00 to 11:40 A.M. broadcasting a flying circus. F. H. Osborne, London, England, heard them at 9:30 A.M. that day broadcasting this stunt flying. L. A. Kippen of Romford, England, says he heard CT1AA on or near 75 meters, 4 mc., from 7:00 to 9:00 P.M.

HBL on 31.27 meters, 9.59 mc.; HBP on 38.47 meters, 7.80 mc.; HBJ on 20.06 meters, 14.96 mc., relayed a special program to America from Geneva, Switzerland on November 1 at 3:00 P.M. They tested several days previous at the same time. This comes from members Lawrence Gagnon, Quebec, Canada, and Bob Everard, Standon, England. HBL sent special programs to South Africa between 2:50 and 3:30 P.M. according to Lewis R. Greenman, Conneaut, Ohio, and Shokichi Yoshimura, Moji, Japan. This was on November 2 and 3. R. Lawton of Manchester, England, tells us that hereafter the first Saturday of each month will be set aside to broadcast special programs to different countries from 5:30 to 6:15 P.M. They will keep their regular Saturday news programs going from 5:30 to 6:15 P.M. on the other Saturdays of the month.

EAQ, Madrid, Spain, on 30.4 meters, 9.87 mc., went roaming for a short time last month, getting off as much as three meters from their regular wave. But they soon corrected it. This comes from Edward Burleson, Urbana, Illinois, and S. B. Hachman, Chicago, Illinois. They announced their "official schedule is 2215 to 2400 G.M.T. daily and Saturdays from 2000 to 2200 G.M.T." This is 5:15 to 7:00 P.M. daily and Saturdays from 3:00 to 5:00 P.M. but their official magazine gives it from 1:00 to 3:00 P.M. on Saturdays, and they also broadcast until 7:30 P.M. on Tuesdays, Thursdays, Saturdays and Sundays.

EHY, Madrid, a phone on 29.79 meters, 10.07 mc., was heard working with YVR, Venezuela, from 4:15 to 4:45 P.M. according to Lawrence

Gagnon, Quebec, Canada. A letter from owners to Ed Lips, Pittsburg, says they are on 20.86 mc. from 10:00 A.M. to 1:30 P.M. and on 10.07 mc. in the afternoons.

LKJ1, Jeloy, Norway, on 31.41 meters, 9.55 mc. We can take it, boys, we can take it. Last month we said this was LCL and said one member had proof. Now comes many saying it is LKJ1. Letters from the station say it is LKJ1 and they relay Oslo on one of four waves, but are usually on 31.41 meters. Such letters comes from members Harry Dorr, Hartford, Conn.; Bernard Hinzl, Bronx, New York; Ed Lips, Pittsburg, Pa.; Harry V. Miner, Wollston, Mass.; Emmett G. Riggle, Massillon, Ohio, and Shokichi Yoshimura, Moji, Japan. Bob Everard, Standon, England, says this station is heard nearly every day from 5:00 to 6:00 A.M. although the schedule says 11:00 A.M. to 6:00 P.M.

ORK, Bruxelles, Belgium, on 29.04 meters, 10.33 mc. Letters from this station now gives a new schedule, it being 2:45 to 4:15 P.M. These letters say all announcements are given in French and Flemish and the programs are as follows: 2:45 to 3:00 P.M. news in French; 3:00 to 4:00 P.M. musical program; 4:00 to 4:15 P.M. news in Flemish. The announcements go like this: "Ici Bruxelles, INR, Emmission speciale pour le congo par la station de Ruyssede ORK, 29 meters, 04." This comes from F. L. Stitzinger, Erie, Pa.; John Shanks, Russellville, Tenn.; and Dominic Lorenzini, Minatola, New Jersey.

The German station programs for December are as follows:

DJB on 19.73 meters, 15.20 mc., from 3:45 A.M. to 7:15 A.M. for Asia.
DJN on 31.45 meters, 9.54 mc., from 3:45 A.M. to 11:30 A.M. for Asia.
DJA on 31.38 meters, 9.57 mc., from 8:00 A.M. to 11:30 A.M. for Asia.
DJD on 25.51 meters, 11.76 mc., from Noon to 4:45 P.M. for Africa.
DJC on 49.83 meters, 6.02 mc., from Noon to 4:45 P.M. for Africa.
DJA on 31.38 meters, 9.57 mc., from 5:15 P.M. to 9:15 P.M. for S. A.
DJC on 49.83 meters, 6.02 mc., from 5:30 P.M. to 10:45 P.M. for N. A.

This schedule comes to us through some mighty speedy service on the part of H. J. Davison, Bayamon, P. R., and with the help of John Schlaffer, Sedalia, Missouri.

DJN on 31.41 meters, 9.54 mc., was heard quite a lot this past month, relaying the programs both afternoons and evenings. Reports came from members H. S. Bradley, F. L. Stitzinger, Esca Forgy, Fred B. Heller, Bernard Kunzel, Carroll C. Foltz, Robert Williams, Nick Gaug, Francis Worrell, H. J. Davison, Lawrence Gagnon and Wm. Neal. We also must thank members Wendall Neal, Smith Center, Kansas, and Charles Miller of Covington, Ky., for help.

DJA tested with Tokyo, Japan, and sent special program from 6:30 to 7:11 A.M. is reported by Shokichi Yoshimuri, Moji, Japan. DIQ on 29.15 meters, 10.29 mc., is reported from 3:00 to 3:20 P.M. one Sunday by Nick Gaug, New York City, and at 8:50 A.M. testing with JVM by R. Lawton, Whitefield, England. DAN, Nordeish Radio, on 52.73 meters, and also on 69.4 meters has been working with German Ships in the mornings according to R. Lawton. He also reports DFL on 27.73 meters and DFD on 20.45 meters working JVH, Japan, around 5:15 A.M.; DFD on 20.45 meters and DJA on 31.38 meters sending a special program to

GREATER THAN EVER

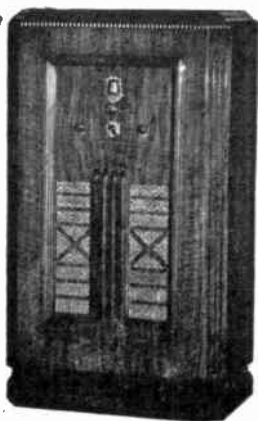
Chassis Refinements

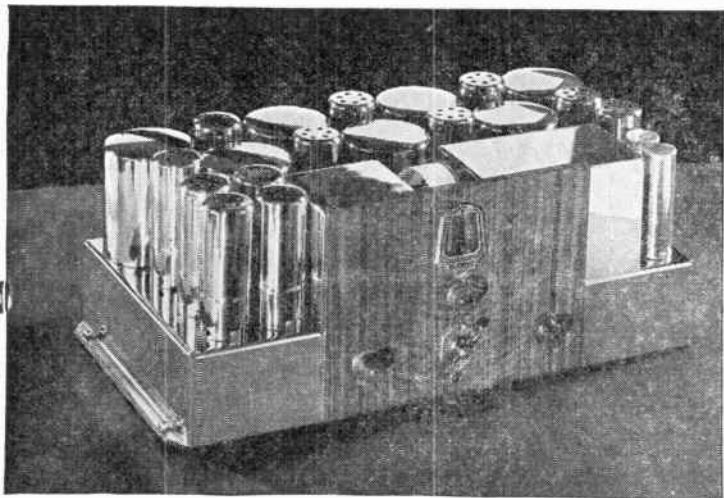
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Japan from 7:00 to 7:30 A.M. and DFD at 4:50 A.M. telephoning Japan. Robert Rossi, Philadelphia, reports DFR on 19.23 meters, 15.60 mc., working New York near 10:00 A.M. W. A. Dean, Hartford, Conn., reports DFP on 7.88 mc. working Japan from 4:00 to 5:30 A.M. and using a two-toned squeak as an identification signal. They said that DFT "is no more." Max Horlick of Youngstown, Ohio, has been telling us that a DXJC in Hamburg, Germany, is on 18.18 meters, 16.50 mc., very often between 8:00 and 11:30 A.M. relaying the programs of DJA, Germany. We argued a bit, but he insists this is correct. Does anyone else know anything about this station.

Pontoise, France, announcing a new schedule, says they have been forced to make these changes for some reason or other. Here is the schedule now.

7:00 A.M. to 11:00 A.M. on 19.68 meters, 15.25 mc.
 11:15 A.M. to 2:15 P.M. on 25.23 meters, 11.88 mc.
 3:00 P.M. to 6:00 P.M. on 25.23 meters, 11.88 mc.
 7:00 P.M. to 10:00 P.M. on 25.60 meters, 11.72 mc.
 11:00 P.M. to 1:00 A.M. on 25.60 meters, 11.72 mc.

This information comes to us through Leroy Northrup, Orange City, Florida; John Shanks, Russellville, Tenn.; Walter Jasorowski, Milwaukee, Wisconsin. Carroll Foltz, North Baltimore, Ohio, sends a tip that they give news in English daily at 8:30 A.M.

TYA, Paris, France, on 12.21 mc. phones around 9:00 to 10:00 A.M. quite often, says H. S. Bradley, Hamilton, N. Y. They work Algeria. Another station that may either be in France or Algeria is reported working the ship "Ile de France." It was on 24.75 meters, 12.12 mc., at 9:15 A.M. when heard by Lawrence Gagnon, Quebec City, Canada. They used a three-tones whistle when standing-by. The Ile de France answered on 22.76 meters. R. Lawton of Manchester, England, also reports it from 6:10 to 6:55 A.M.

HAS, Budapest, Hungary, on 42.86 meters, 6.84 mc., is heard again. It was reported one Sunday from 5:00 to 6:00 P.M. by H. S. Bradley, Hamilton, N. Y., and on Mondays and Thursdays by H. G. Peebles, Detroit, Michigan. Lester H. Smith of Quincy, Mass., asks about one. He tells of hearing a station on 4.25 mc. sending musical chimes and saying "Budapest Calling."

The British Broadcasting Corporation stations will broadcast as follows in December. This comes through the quick work of Arthur E. Bear, our London friend.

3:00 A.M. to 5:00 A.M. GSD on 25.53 (11.75) and GSB on 31.55 (9.51).
 6:00 A.M. to 7:30 A.M. GSG on 16.86 (17.79) and GSF on 19.82 (15.14).
 7:30 A.M. to 9:00 A.M., GSF on 19.82 (15.14) and GSB on 31.55 (9.51).
 9:15 A.M. to 10:45 A.M., GSE on 25.29 (11.86) and GSB on 31.55 (9.51).
 10:45 A.M. to 12:00 Noon, GSB on 31.55 (9.51) and GSA on 49.59 (6.05).
 12:00 Noon to 12:45 P.M., GSD on 25.53 (11.75) and GSA on 49.59 (6.05).
 1:00 P.M. to 4:30 P.M., GSD on 25.53 (11.75) and GSB on 31.55 (9.51).
 4:30 P.M. to 5:45 P.M., GSB on 31.55 (9.51) and GSA on 49.59 (6.05).
 6:00 P.M. to 8:00 P.M., GSC on 31.30 (9.58) and GSA on 49.59 (6.05),

Mr. Bear also tells us of a special broadcast scheduled for Christmas Day from 8:00 to 10:45 A.M. or 1300 to 1545 G.M.T. They will use GSD, GSB and GSG. GSD will really be old G5SW back on the air. Two new transmitters are also provided by the BBC. They are a GSJ on 13.93 meters and a GSI on 19.66 meters. Two British amateurs, G2LZ and G2HY, will send special tests to New Zealand this month. They will be on 42 meters, or 7 mc. On the first and second Saturdays of December they will use G2LZ from 2:00 to 2:30 A.M. On the same days, G2HY will be on the air from 12:00 to 12:30 A.M. and on the third and fourth Saturdays they will use G2HY from 2:00 to 2:30 A.M. Reports should go to 10 Berecroft Gardens, Grays, Essex, England. We are not sure these are on voice, but if they are not, a certain member will get his just desert. F. A. Beane is the man.

GAG, Rugby, phones on 15.80 meters relaying GSF one Sunday from 8:00 to 10:00 A.M. and GDW on 62.24 meters sent music one Sunday night from 6:00 to 11:00 P.M. according to Fred Karpen, Johnstown, Pa. GBC at Rugby now phones Ships on a new wavelength of 93.8 meters, 3.19 mc., according to R. Lawton, Manchester, England, who heard it at 1:45 P.M.

RV59, Moscow, U.S.S.R., on 50 meters, 6 mc., is being heard in America quite well now and just about every day from 4:00 to 5:00 P.M. On Sundays, Mondays, Wednesdays and Fridays they use English at this time. One member, Carl Forestiere of New York City, tells us they are heard as late as 6:00 P.M. at his place. Other reports came from H. S. Bradley, Hamilton, N. Y.; Lawrence Gagnon, Quebec City, Canada; Ralph Williams of Garden City, N. Y., and Emmett Riggle, Massillon, Ohio.

The schedule of the Russian stations for December is as follows: Sundays, Mondays, Wednesdays and Fridays, they are on 50 meters with English. Saturdays at 10 to 11 P.M. and Sundays from 6:00 to 7:00 A.M. and 10 to 11 A.M. they are on 25 meters, 12 mc. This comes from Reuben W. Cohen, Chicago, Illinois; Theodore Gohres, Union City, N. J.; Harold Goodhue, Sherbrooke, Quebec; Charles Pedicaro, Brooklyn, N. Y.; Fred Karpen, Johnstown, Pa.; Walter Jasiorowski, Milwaukee, Wisconsin, and D. D. Lowmiller, Minneapolis, Minn.

Russian phones are reported as follows: REN, Moscow, on 25 meters, 12 mc., is heard almost daily from 5:00 until 9:00 A.M. phoning others. They are also heard Saturdays near 8:00 to 11:00 A.M. testing with New York and also on Sundays broadcasting programs to America. RKI, Moscow, is also heard at these same times, and on all but the Sunday broadcasts. They are on 19.94 meters, 15.04 mc. Ralph Williams of Garden City, N. Y., says an RKR, Novosibirsk, on 12.01 mc. was heard phoning RSE one Friday at 8:32 A.M. James Alexander of Auckland, New Zealand, says an RTD at Almata on 22.50 meters, 13.95 mc., was heard at Midnight saying "Hello, Moskva, Almata calling." He also reports another Russian on 23.1 meters working Moscow near 2:00 A.M. George Van Honk, Erie, Pa., reports RNE one Tuesday from 8:00 A.M. to Noon. RKI and RIM were heard around 2:30 to 3:45 A.M. by Bob Everard of Standon, England. John De Myer of Lansing, Michigan, writes "please give this publicity. Through the IDA stations RNE and RKI will broadcast December 30 from 9:00 to 10:00 A.M." They will be heard that day from 6:00 to 7:00 and 10 to 11 A.M. according to their own schedules.

THE ASIATICS

PKYDA, or as announced YDA, at Batavia, Dutch East Indies, is being heard by a great many listeners now since we gave out the dope on them. They are on 49.02 meters, 6.12 mc. (same wave as W2XE) and they are heard almost every day from 5:30 to around 10:00 A.M. fading out in Eastern U.S.A. around 7:00 A.M. Since they started getting reports from so many in U.S.A. they have started announcing in English. And, boy, they tell you who they are, spelling out the words. We have unofficial word that a new 10,000 watt crystal-controlled station is being built in Holland for this radio society now. Please note, they do not say PKYDA, but simply YDA, but PY is their official call letters. PKYDB at Soerabaya, on 59.66 meters, a sister station, has been off the air a long time. This comes from W. H. Pepin, Maylands, Australia.

PMY, Bandceng, 58.3 meters, 5.15 mc., is still broadcasting from 5:40 to 9:40 A.M. and oftentimes until 10:40 A.M. according to R. Lawton, Manchester, England. No one has reported this one in many months. PLV, the Bandoeng phone on 9.42 mc. was heard working Tokyo at 3:00 A.M. by W. D. Martin, Honolulu, Hawaii.

SUV, Suva, Fiji Islands, used an improvised telephone transmitter for test on 22.92 meters and was heard October 4th and 7th, from 9:00 to 9:20 A.M. testing with Sydney. This from James Alexander, Auckland, New Zealand. A tip for Messrs. Tomlinson and Hall mentioning dates this way.

RV15, Khabarovsk, Siberia, on 70.65 meters, 4.25 mc., is reaching the United States again. It is heard on the West coast as early as 4:00 A.M. and on the East coast from around 5 to 7 A.M. Reports, by the way, should not go to Moscow, but direct to the Far East Radio Station, RV15 Khabarovsk, U.S.S.R. G. C. Gallagher, San Francisco; John Kirby, New York City; A. Shessetz, Monarch, Wyoming; James Pickering, Highstown, N. J.; Esca Forgy, Shamrock, Texas; H. C. Gordon, Shamrock, Texas, and W. A. Dean, Hartford, Conn., report this one.

VUB, Bombay, India, on 31.36 meters, 9.56 mc., broadcast a special program on November 11 from 6:30 to 9:30 A.M., E.S.T. Their regular schedule is from 11:30 A.M. to 12:30 Noon, when it is not heard in the U.S.A. It was reported by Harry B. Dorr and W. A. Dean, both Hartford, Conn., and W. C. Motz, Amherst, Va. Queer the Skipper didn't hear it. He'll get a verie anyhow. D. R. D. Wadia, Bombay, tells us this station may close down November 15. Fred Corey, San Jose, California, reports it on 49 meters at 6:00 A.M., but maybe it was VUC.

KAY, Manila, P. I., on 20.03 meters, 14.40 mc., worked JVE, Japan, near 6:50 P.M. according to H. S. Campbell, Upland, California. KAZ on 3.09 meters worked KWZ, Dixon, from 10:25 to 10:42 A.M. according to Shokichi Yoshimura, Moji, Japan. KZE or KSE on about 30 meters working KVV is reported by John Colnar, Roseville, California, at 10:30 A.M. and it may be KAZ with a new call. KBJ or KPJ on about 22.66 meters, 13.24 mc., from 2:40 to 2:51 A.M. is reported by James Alexander, Auckland, New Zealand. It is the Philippine terminal of the Tokyo-Manila phone, opened September 26. W. H. Pepin of Maylands, West Australia,

reports KBJ on 37.5 meters; JVQ, Tokyo, on about 38.07 meters and KAZ on about 30.03 meters working each other.

The Japanese stations have at last started sending verifications. And they are nice. On one side is a photo of the aerials and a program schedule of the long wave station JOAK. On the other is a list of all the stations at Nazaki with their frequencies and a formal verification note. Their address is S. Kuramochi, KokusaiDenwa Kaisha Ltd., Osaka Building, Kojimachiku, Tokyo, Japan. The card says that JOAK is relayed by one of the following stations: JVM, JVN, JVP, or JVF. The schedule of JOAK is given as follows: 7:00 to 7:10 P.M. weather and news; 9:40 to 9:45 P.M. Market; 10:40 to 11:10 P.M. news; 1:50 to 2:20 A.M. Market and news; 4:00 to 7:30 A.M. childrens hour, entertainment and news; 7:30 to 8:00 A.M. time signals, weather forecast; 5:20 to 5:40 P.M. physical exercises. Such cards have been received by Dr. R. C. Kash, Sevierville, Tenn.; Dr. W. C. Wolverton, Linton, North Dakota; J. B. L. Hinds, Yonkers, N. Y.; Myron D. Reamy, Yonkers, N. Y.; John Kirby, New York City; Joseph Miller, Brooklyn, N. Y.; arl Scherz, San Angelo, Texas, and John Stewart, Houston, Texas.

JVT, on 44.44 meters, 6.75 mc., is a regular phone, but relays JOAK irregularly, although most every day. It is heard from around 1:30 to 7:30 A.M. Reports have come from H. S. Campbell, Upland, California; James Alexander, Auckland, New Zealand; J. B. L. Hinds, Yonkers, N. Y.; John Kirby, New York City; H. C. Gordon, Shamrock, Texas; Thomas Van Auken, Livingston, Texas, and John Stewart, Houston, Texas.

JVP on 39.95 meters, 7.51 mc., phones often between 6:30 and 7:00 A.M. Robert Rossi, Philadelphia, reports. JVQ on 40.16 meters, 7.47 mc., announced recently that they had opened two new transmitters at Nazaki. This comes from A. B. McDonough, New Zealand Short Wave Club. It is heard from 6:05 to 7:45 A.M. by Thomas Van Auken, Livingston, Texas. JVV on 51.81 meters, 5.79 mc., from 4:00 to 7:40 A.M. is reported by Mr. Van Auken. JVN on 28.14 meters, 10.66 mc., at 1:15 A.M. is reported by H. S. Campbell, Upland, California. Also by James Alexander, Auckland, New Zealand. From 5 to 6 P.M. and 10 to 11 P.M. it is reported by A. Antogiuni, Greenfield, California. At 1:30 A.M., 4:30 P.M., 5:15 P.M. and 5:30 P.M. it is reported by W. D. Martin, Honolulu, Hawaii. JVM on 27.93 meters, 10.74 mc., is reported at 1:30 A.M. by H. S. Campbell. From 4:30 to 6:10 A.M. it is reported by Robert Rogers, Arundale, Quebec, Canada. W. D. Marti, Honolulu, Hawaii, reports it at 5:00 to 5:30 P.M. JVH on 20.55 meters, 14.60 mc., works Berlin and London mornings and sends music at times. It is heard between 5:30 and 7:30 A.M. by Bob Everard, Standon, England.

JVF on 19.20 meters, 15.61 mc., broadcast several special programs last month. On Armistice Day they sent a special program to America. This was around 5 to 6 P.M. Then, one other day they sent a special program of welcome to Babe Ruth, the baseball player, who spoke to friends in America. This was from 7:00 to 7:15 P.M. on November 9. Then they relayed several baseball games, too. Reports have come from W. D. Martin, Honolulu, Hawaii; H. S. Campbell, Upland, California; Lawrence Gagnon, Quebec, Canada; P. E. Donnelly, Los Angeles, Calif.; Charles Miller, Covington, Ky.; G. C. Gallagher, San Francisco; Albert

Emerson, Cleveland; Nelson Bell, Wellesly, Mass.; James Spalding, Louisville, Ky.; Fred Karpen, Johnstown, Pa., and C. Lidstrom, Salt Lake City, Utah, who says that it is also heard from 4:00 to 6:00 A.M. and 3:45 to 4:00 A.M.

JYS on 9.84 mc. at Kemikawa-Cho is reported at 1:30 A.M. by H. S. Campbell, and from 4:00 to 7:00 A.M. by W. C. Motz, Amherst, Va. JYT on 15.76 mc., same place, was reported by Mr. Campbell working KWO at 4:30 P.M. He also reports a JIB at Tawaian on 10.53 mc. talking to Tokyo at 1:20 A.M. H. S. Bradley sends this list of stations which work with the Nazaki stations. At Taihoku, JIA is on 15.74 mc., and JIB on 10.53 mc. At Taiwan is JIC on 5.89 mc. and 15.32 mc. In Manchuria is JZA on 15.68 mc, JZB on 10.06 mc. and JZC on 5.83 mc. At Darien there is JDX on 15.51 mc., JDY on 9.92 mc. and JDZ on 5.71 mc. A list of all the Nazaki stations was listed in the last issue and the active phones are listed above.

FZS, Saigon, Indo China, is on 16.33 meters and not 16.35 meters according to a letter received by A. B. Baadsgaard, Ponoka, Alta. They phone Paris morning.

ZHI on 49.9 meters, 6.01 mc., and ZGE on 48.92 meters, 6.13 mc. A letter received by Mr. Baadsgaard from the Malayan Amateur Radio Society, Kuala Lumpur, Federated Malay States says ZGE works on Tuesdays, Fridays and Sundays from 6:40 to 8:40 A.M. It also adds that ZHI at Singapore broadcasts on Mondays, Wednesdays and Thursdays from 1:40 to 8:10 A.M. and Saturday nights from 10:40 P.M. until 1:12 A.M. on Sunday mornings.

ZLT, Wellington, New Zealand, is on 7.38 mc. phoning Sydney, Australia, around 4:00 A.M. according to W. D. Martin, Honolulu, Hawaii.

XGN, Shanghai, is on 16.38 mc. and was heard on Thursday and Friday at 11:00 A.M. according to Max Horlick, Youngstown, Ohio. This is our first report on this. He said they called Madrid and California. XGR on 26.00 meters, 11.54 mc., was reported at 7:00 A.M. using English and calling Manila by Fred Karpen, Johnstown, Pa. It was on one Thursday.

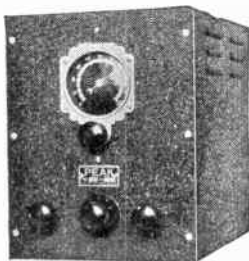
VK2ME, Sydney, Australia, on 31.28 meters, 9.19 mc., tested with W2XAF several mornings last month. This comes from Lewis R. Greenman, Conneaut, Ohio, and George Van Honk, Erie, Pa. They broadcasted regularly each Sunday morning on this wave also. Nelson Bell, Wellesley, reports them working KWO at 4:00 P.M. on this wave. On 22.49 meters it was reported working KWO and KWN at 8:40 A.M. by James Alexander, Auckland, New Zealand. And W. D. Martin, Honolulu, Hawaii, reported them on 15.05 mc., but failed to give the time of day.

VK3LR, Lyndhurst, Australia, on 31.41 meters, 9.58 mc., it said will soon be off the air, if not already. They have a nice QSL card. Such cards have been received by Dr. W. C. Wolverton, Linton, North Dakota, and Emmett Riggle, Massillon, Ohio. It is signed by H. P. Brown, Director General, Postmaster General's Department, Melbourne. Under the call VK3XX this station has been heard at 1:00 A.M. As VK3LR, it broadcasts daily excepting Sundays from 3:00 to 8:00 A.M. The phones VLZ are on 37 or 38 meters phoning ZLT, New Zealand, from 1:45 to 2:45 A.M. according to Robert Everard, Standon, England. A card to Frank

Grey says VK3XX is the experimental call of VK3LR. Mr. Grey lives at Berwyn, Illinois.

THE EXPERIMENTAL STATIONS

KFZ, Admiral Byrd's station at Little America, has been using two wavelengths only during the past two months. These are 33.94 meters (8.84 mc.) and 31.57 meters (9.52 mc.) Each Wednesday they broadcast a program to the United States. They usually start testing around 9:00 P.M. Station LSX, Argentina, still picks up the program and sends it to the United States, as KFZ can not be heard well enough direct to be rebroadcast. About thirty members report direct reception of KFZ this past month on these waves, while Ralph Williams of Garden City, N. Y., reports them on 44.98 meters (6.67 mc.) and 22.73 meters (13.20 mc.) the same night. Dr. R. C. Kash, Sevierville, Tenn., and Lester Smith, Quincy, Mass., are to be thanked also. Edward Weppler of Lafayette, Indiana, tells us the numbers of the frequencies have all been changed. Here is the way he gives them: No. 1—52.26 meters (5.74 mc.); No. 2—45.11 meters (6.65); No. 3—45.05 (6.60); No. 4—44.98 (6.68); No. 5—34.01 (8.82); No. 6—33.94 (8.84); No. 7—32.22 (9.31); No. 8—31.57 (9.52); No. 9—25.36 (11.83); No. 10—22.76 (13.18); No. 11—22.73 (13.20); No. 12—22.68 (13.28); No. 13—22.66 (13.24); No. 14—22.62 (13.26); No. 15—19.64



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Less Tubes, for 110 v. 50-60 cycle A.C.
220 volt, \$1.25 extra 110 volt 25 cycle, \$1.50 extra

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214 PARK PLACE

Dept. SW-12

BROOKLYN, N. Y.

(15.27); No. 16—17.04 (17.60); No. 17—17.03 (17.62); No. 18—13.94 (21.52); No. 19—13.89 (21.60); No. 20—13.87 (21.63).

KNRA on the Seth Parker is now away out in the Pacific. They send a program each Monday starting to test around 8:30 P.M. They have been using 33.94 meters, 8.84 mc, all these weeks. Of course they may change as they get further away from the United States and conditions change. They work WQO, Rocky Point, usually. Recently they added that WIOXF, the small-powered station they carry aboard would be back in operation soon, but that means little to most fans. The NBC are now offering a "left handed" verification now, saying "We are not allowed to give formal verifications of KNRA, but we hope you hear them AGAIN." We thank the following for their reports: John Russell, Dayton, Ohio; W. C. Motz, Amherst, Va.; George Van Honk, Erie, Pa.; G. C. Gallagher, San Francisco, California; H. S. Saylor, Altoona, Pa.; Nelson S. Bell, Wellesley, Mass.; Robert Rossi, Philadelphia, Pa.; Ralph Williams, Garden City, N. Y.; J. Arnold Klein, Felts Mills, N. Y.; H. J. Davison, Bayamon, P. R.; Mario Cassina, Corona, N. Y.; O. Ingmar Oleson, Ambrose, N. D.; Carl Anderson, Biggsville, Illinois; W. D. Martin, Honolulu, Hawaii; C. Fred Heller, Jr., Philadelphia, Pa., and James Spalding, Louisville, Ky.

FNSM on the Ile de France works Paris on about 23 meters at 9:00 A.M. quite often according to H. S. Bradley, Hamilton, N. Y. The Ship, "Rex," ICEJ, sent a special program to the Columbia System once last month. Albert Emerson of Cleveland said they were on 13.05 mc. or 4.10 mc., not certain which, while F. L. Stitzinger of Erie, Pa., reports them on 4.33 mc. The 13.05 mc. station was WOO we believe, on 12.84 mc. really.

THE AFRICANS

VQ7LO, Nairobi, Kenya Colony, on 49.50 meters, 6.06 mc., is heard in Hawaii from 12:00 Noon to 1:30 P.M. by W. D. Martin. He says they are on 6.09 mc. really.

ZTJ, the Johannesburg station, can be heard at the same time. They are on 49 meters, 6.12 mc. These stations are heard in Europe also. Many thought that YDA, Java, was ZTJ.

ZSS, Cape Town, works phone with GAJ, England now from 3:30 to 5:30 A.M. according to R. Lawton, Whitefield, England. They use scrambled speech and the wave is 15.38 meters, 18.89 mc.

Rabac, Morocco, is still on the air. They have started to reach the U.S.A. again after a long silent period. On 37.33 meters, 8.05 mc, they broadcast each Sunday afternoon from 2:30 to 5:00 but fade out around 4:30 P.M. now. Members J. B. Sessions, Bristol, Conn.; Mario Cassina, Corona, N. Y., and Nelson S. Bell, Wellesley, Mass., all report it this month. They are also on 23.38 meters, 12.83 mc., on Sundays at 7:30 to 9:00 A.M., but we have not had a report in months. Edward Burleson of Urbana, Illinois, heard them on that wave working phone with Paris at 7:00 A.M. once.

The station at Tripoli, Italian North Africa, was again on the air. It was on 31.7 meters, 9.46 mc., at 10:50 A.M. working IRM, Italy, according to a report from R. Lawton, Whitefield, England. This station is owned by Reale Automobile Club, D'Italia, Sede Coloniale de Tripoli, Africa.

THE NORTH AMERICANS

VE9DN, Drummondville, Canada, is back on the air. It is on 49.96 meters, 6.00 mc., and it broadcasts each Saturday night starting about 11:30 and is on the air up until 1:00 or 1:30 A.M. Sunday morning. These programs are for Canadian listeners in the Far North Regions. The programs come from long wave station CMCR this year. Reports have come from Walter Jasiorowski, Milwaukee, Wisconsin; Mario Cassina, Corona, N. Y.; H. G. Peebles, Detroit, Michigan; Thomas Van Auken, Livingston, Texas; Howard Eck, Lansing, Michigan; Harold Seaton of Sevierville, Tenn.

CJRX on 25.60 meters, 11.72 mc., and CJRO on 48.85 meters, 6.15 mc., have been heard at times not on their schedule. These stations are broadcasting daily from 8:00 to 11:00 and 11:30 P.M. to Midnight. On November 3 and, they broadcast all afternoon. Lawrence Gagnon, Quebec City, reports this. Max Horlick of Youngstown, Ohio, reports them one Sunday from 5 to 8 P.M. while Francis Worrel of Ann Arbor, Michigan, heard them from 4:00 to 5:30 P.M.

VE9CS, Vancouver, B. C., Canada, is back on the air. Harold Seaton, Sevierville, Tenn., reports them on 49.96 meters, 6 mc., while G. C. Gallagher of San Francisco, California, reports them on the same wave as HJN or 49.45 meters, 6.07 mc., from 9:45 to 10:30 P.M.

CFU, Rossland, B. C., on 52.97 meters, 5.70 mc., is back again. They are reported working CFN (?) at 8:00 P.M. by Fred Karpen, Johnstown, Pa., and in the evenings by C. Lidstrom, Salt Lake City, Utah. The phone station on 61.15 meters was heard using the call CGA8 and not CGA5 by Fred Karpen and Francis Worrell. We fixed this list recently to conform with the list sent out by the stations, but maybe they use several calls.

The Canadian Police stations according to word from Bob Morrison, Vancouver, B. C., are as follows: CJW at St. John, N. B., on 124.2 meters, 2.416 mc.; CJZ at Verdun, Quebec, on 122.3 meters, 2.452 mc.; VYR at Montreal on 175.2 meters, 1.712 mc.; VYW at Winnipeg on 122.3 meters, 2.452 mc., and CGZ at Vancouver, B. C., on 122.3 meters, 2.452 mc.

W9XAA, Chicago, Illinois, on 49.34 meters, 6.08 mc., is back on the air. They are heard almost every Sunday afternoon regularly and then many evenings irregularly. Some of their programs are in foreign languages, so watch your step, fellows. Reports have come from Robert Zecher, Norfolk, Conn.; Lawrence Gagnon, Quebec, Canada; James Pickering, Heightstown, N. J.; Harold Seaton, Sevierville, Tenn.; Harold Mack, New York City; J. Arnold Klein, Felts Mills, N. Y.; Mario Cassina, Corona, N. Y.; L. M. Isom, Franklin, Indiana; Francis Worrell, Ann Arbor, Michigan; Walter Jasiorowski, Milwaukee, Wisconsin.

W1XAL, Boston, Mass., on 49.67 meters, 6.04 mc. The Broadcasting Studio Radio Club of Boston, Mass., informs us that they have taken over W1XAL for the broadcasting of Educational programs. These will be broadcast as follows: Sundays from 7:30 to 10:00 P.M.; Tuesdays from 7:30 to 9:00 P.M.; Thursdays from 7:30 to 9:30 P.M. They are sending out a program sheet showing what programs will be broadcast during the month. Reports came from Fred Hafner, Buffalo, N. Y.;

F. L. Stitzinger, Erie, Pa.; C. M. Garmon, Trout Lake, Michigan; Cyrus Will, Glencoe, Illinois; L. W. Plehn, Sheboygan, Wis.; G. C. Gallagher, San Francisco; Charles Miller, Covington, Ky.; Wendal Neal, Smith Center, Kansas; Edward Houlgate, London, Ontario; James Pickering, Highstown, N. J.; H. G. Peebles, Detroit, Michigan; Edward Burleson, Urbana, Illinois; H. J. Davison, Bayamon, P. R.; Thomas Van Auken, Livingston, Texas; George Paris, Dallas, Texas; Fred Karpen, Johnstown, Pa.; Edward Weppler, Lafayette, Indiana; J. Arnold Klein, Felts Mills, N. Y.; Francis Worrell, Ann Arbor, Michigan; Mario Cassina, Corona, N. Y.; Ed. Lips, Pittsburg, Pa.; Lawrence Gagnon, Quebec, Canada; Samuel Sternberg, Far Rockaway, N. Y.; Walter Jasiorowski, Milwaukee, Wisconsin; Fred Heller, Jr., Philadelphia, Pa.

KKZ Bolinas, Calif., 21.91 meters, 13.69 mc., worked JVF Japan, Armistice Day between 4:00 and 5:00 P. M. This comes from members Albert Emerson, Cleveland, Ohio; Charles Miller, Covington, Ky., and Francis Worre". Ann Arbor, Mich.

KEE, Bolinas, on 38.89 meters, 7.71 mc. was heard many times last month sending musical programs. They were testing with stations in Hawaii, Japan and the Philippines for special broadcasts. These tests took place between 8:00 P. M. and 1:00 A. M., irregularly, and were reported by members R. G. Summers, Buffalo, N. Y.; Nick Gaug, New York City; Max Horlick, Youngstown, Ohio; C. M. Garmon, Trout Lake, Mich.; John Gink, Brooklyn, N. Y.; John Kirby, New York City; Carlos J. Lopez Ona, Havana, Cuba; Carl Forestieri, New York City; Lawrence Gagnon, Quebec City, Canada; L. M. Isom, Franklin, Ind.; W. D. Martin, Honolulu, Hawaii; H. G. Peebles, Detroit, Mich.; Robert Zecher, Norfolk, Conn. and Dellner Sopher, Steger, Ill.

KWE, Bolinas, 19.44 meters, relayed JVF Armistice Day 4:00 to 5:00 P. M. KKQ on 11.95 mc. relayed the California vs. Southern California football game, 5:00 to 7:50 P. M., according to Wm. Fiedler, Milwaukee, Wisconsin.

The Navy Ships "Saratoga" (NEBL), "New Mexico" and "California" were heard last month, when they passed through the Panama Canal. This was reported by Max Horlick, Youngstown, Ohio. They worked with Rock Point stations on 8.95 and 6.74 mc., these stations using the call W2XBJ for this purpose. They were heard November 1st from 11:00 to 11:30 P. M.

The Great Lakes lighthouse stations were operating on voice again recently. WWG Cheboygan, Michigan, and WWHJ on the Tender "Lilac" at 6:00 P. M. on 88 meters, is reported by R. G. Summers, Buffalo, N. Y. WWG and a WWDE is reported by Francis Worrell, Ann Arbor, Mich.

KNZT, KNZW and KNZU, National Park stations on 116 meters at 10:50 P. M. several times, is reported by C. Lidstrom, Salt Lake City, Utah. He also reports a KNRO, a 50 watt station at Death Valley on 87.84 meters, 3.41 mc., at 11:45 P. M.

WYBF, owned by the U. S. Engineers, at Napoleon, Missouri, is a 400 watt transmitter. It is under control of the War Department at Kansas City. A letter from them says that WYBF is at Napoleon, WYDR is on the

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dredge-boat "McGregor" and it has 50 watts power. They operate near 115 meters between 8:00 P. M. and midnight, irregularly. Helpful reports have come from J. F. Townsend, Canton, Ohio; Cyrus Will, Glencoe, Ill., and Dellner Sopher, Stenger, Illinois. They say 2.604 mc.

to follow. KO9 is at Mitchell Field, VKI is at Selfridge Field, Michigan.

The Army stations are too numerous and use too many odd calls to try IF3 is at Bolling Field, Virginia. Then there were LU7, M65, F14, FY4, GE6, WMBT, M29, M30 and PFI125, all reported. These stations were heard on about 45.00 or 47.00 meters, some at night and some in daytime. We are told that LU7 was in Eddie Rickenbacker's plane that broke the trans-continental record. Reports have come from R. G. Summers, Buffalo, N. Y.; George Van Honk, Erie, Pa.; Fred B. Heller, Jr., Philadelphia, Pa.; Wm. Fiedler, Milwaukee, Wis.; H. G. Peebles, Detroit, Mich.; John Bink, Brooklyn, N. Y.; Dr. H. S. Saylor, Altoona, Pa.; Harold Seaton, Sevierville, Tenn.; Edward Wepler, Lafayette, Ind., and J. Arnold Klein, Felts Mills, N. Y. These stations are near 6.4 mc., we are told. VT1 and WMBT at Selfridge Field, Michigan, relayed an air-race Saturday, November 17th.

Last minute flashes. Rober Ayala, son of the President of Paraguay, through D. C. Baum, of Riverdale-on-Hudson, N. Y., tells us that two new stations are being built at Asuncion, Paraguay. They are ZP10 on 6,666 kc. and ZP11 on 3800 kc. ZP10 with 2000 watts power. ZP10 on 45.00 meters, 6.66 mc. will broadcast from 11:00 A. M. to around 7:00 P. M. He also says that CP7, La Paz, Bolivia, on 15.00 mc. broadcasts when Bolivia claims victories over Paraguay in the war.

HC2ET, Guayaquil, Ecuador, is reported by Sam Solito of Leetsdale Pa., on 65.22 meters, 4.60 mc., one Saturday night from 10:15 to 10:45 P.M. They used a twelve note chime, in four groups, and announced "HC2ET, Casilla (box number) 239, Guayaquil, Ecuador."

HJ1ABB, Barranquilla, Colombia, on 46.51 meters will broadcast a 24-hour program December 8th, beginning at midnight on the 7th. They will celebrate their Fifth anniversary on the air. Congratulations HJ1ABB. This news comes from W. C. Motz, Amherst, Virginia, and E. A. Burseson, Urbana, Illinois.

FOR SALE to highest bidder: Pilot Shortwave adaptor complete with cabinet and tubes (cost \$59.50). Logged 12 countries. Readrite 700 set tester and several meters. All perfect. Also \$59.50, 8-tube Patterson All Wave receiver, nearly new \$35.00. Harvey J. Ridge, Rice Lake, Wis.

FOR SALE—National SW3 DC Radio Set with three tubes, three coils, 20-40-80 meters. \$20. J. H. Cooper, 1224 Greene St., Augusta, Ga.

FOR SALE—12-tube Lincoln SW33, Deluxe, complete speaker, PA and tubes. Also two stage Patterson Pre selector, cable and plug connection to Lincoln. Daily foreign reception. Perfect condition. \$100.00 Cash. W. B. Bell, Walhalla, South Carolina.

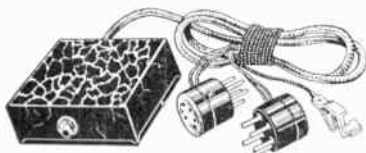
FOR SALE—McMurdo Silver Masterpiece All-Wave receiver and tubes, without cabinet. In good shape. Make me an offer. V. Linquist, Care of Builders Woodwork Co., Burlington, Iowa.

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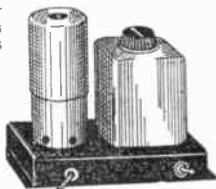
cable brings this phone jack to your fingertips. Ideal for receivers where phone jack is inaccessible. **Can also be used to operate a second speaker at another part of the house.** Complete as illustrated; List, \$6.75; Net..... **\$3.95**

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BEST STATIONS AND HOURLY GUIDE

Meg.	Meters	Station	Country	Day	A. M.														P. M.																																																											
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11.72	..	25.60—CJRX	Canada	Daily																																						8	9	10	11	s																														
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10.74	..	27.93—JVM	Japan	Daily																			4	5	6	s																																																		
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9.54	..	31.45—DJN	Germany	Daily																			$\frac{1}{4}$	4	5	6	7	8	9	10	$\frac{1}{2}$																																													

Meg. Meters	Station	Country	Day	A. M.											P. M.												
				1	2	3	4	5	6	7	8	9	10	11	N	1	2	3	4	5	6	7	8	9	10	11	M
9.53	.31.48	—W2XAF	U. S. A.	Daily	.	.	.	.	.	.	.	.	.	.	.	.	.	½	7	8	9	10	s	..
9.51	.31.55	—VK3ME	Australia	Wed., Sat.	.	.	.	5	6	7	.	.	.	.	.	.	.	.	.	.	.	.	.	..
9.51	.31.55	—GSB	England	Irreg.	.	.	3	4	s	½	8	9	10	11	N	1	2	3	4	5	s	.	..				
9.51	.31.55	—PRF5	Brazil	Daily	.	.	.	.	.	.	.	.	.	.	.	.	.	½	6	½	.	.	.	..
9.43	.31.80	—COH	Cuba	Daily	.	.	.	.	.	.	.	.	10	s	.	.	.	.	5	s	.	8	s	..
8.05	.37.33	—CNR	Africa	Sunday	.	.	.	.	.	.	.	.	.	.	.	.	3	4	s	.	.	.	..
7.80	.38.47	—HBP	Switzerland	Saturday	.	.	.	.	.	.	.	.	.	.	.	.	.	½	½	.	.	.	..
7.14	.42.00	—HJ4ABB	Colombia	Daily	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	5	s	.	..	
6.71	.4470	—TIEP	Costa Rica	Daily	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7	8	9	s
6.67	.45.00	—HC2RL	Ecuador	Sunday	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6	7	8	..	
6.62	.45.31	—Prado	Ecuador	Thur.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	9	10	s
6.45	.46.50	—HJ1ABB	Colombia	Daily	.	.	.	.	.	.	.	.	.	.	N	s	.	.	.	7	8	9	s	
6.15	.48.79	—YV3RC	Venezuela	Week days	.	.	.	.	.	.	.	.	.	½	11	N	s	.	½	5	6	7	8	½
6.15	.48.85	—CJRO	Canada	Daily	8	9	10	11	s		
6.14	.48.86	—W8XK	U.S.A.	Daily	1	4	5	6	7	8	9	10	11	M
6.12	.49.02	—W2XE	U.S.A.	Daily	5	6	7	8	9	s		
6.11	.49.08	—YV2RC	Venezuela	Daily	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	6	7	8	9	s
6.10	.49.18	—W3XAL	U.S.A.	M., W., S.	4	5	6	7	8	9	10	11	..	
6.09	.49.22	—VE9GW	Canada	See List	.	.	.	.	7	8	9	10	11	N	1	2	3	4	5	6	7	.	.	..
6.05	.49.59	—GSA	England	Daily	.	.	.	.	.	.	.	.	.	.	11	½	.	½	5	6	7	s	.	..
6.02	.49.83	—DJC	Germany	Daily	N	1	2	3	½	½	6	7	8	9	10	..
6.00	.49.96	—COC	Cuba	Daily	½	10	s	4	5	s		
6.00	.50.00	—RV59	U. S. S. R.	Daily	.	.	.	.	.	.	.	.	.	.	.	2	3	4	5	6	.	.	.	..
5.98	.50.17	—H1X	Rep. Dom.	See List	.	.	.	.	.	.	9	10	s	.	.	.	3	4	s	.	.	9	10	..
5.97	.50.26	—HVJ	Vatican	Daily	.	.	.	5	s	.	.	.	.	.	.	½	.	.	.	.	.	.	.	..
5.96	.50.30	—XEBT	Mexico	Irreg.	6	7	8	9	10	11	M	
5.95	.51.20	—HJ4ABE	Colombia	Daily	6	7	8	9	..	s		
5.85	.51.28	—YV5RMO	Venezuela	Daily	.	.	.	.	.	.	.	.	.	.	.	.	.	½	6	7	8	9	10	s
4.25	.70.65	—RV15	U. S. S. R.	Daily	.	.	3	4	5	6	7	8	s	7	8	9	s		
4.11	.73.00	—HCJB	Ecuador	Daily	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7	8	9	s	..

(s) means that the station signs off at that hour. Stations marked ½ means that they start or end their program on the half-hour. "See List" means to look in our station list, as the station does not operate regularly at the time stated. Please note—Time given is Eastern Standard. Write in local time in space provided underneath Eastern Standard Time.

"ON-THE-AIR"

Because of the world-wide membership of this organization and the speed in which this magazine is edited and published, this list is considered by most short wave fans, and manufacturers of short wave receivers, as the most complete, up-to-date and authentic in the world. No other publication has the world-wide circulation of this organization, and none are able to bring out such an accurate up-to-date list in such a short time.

The time given is in Eastern Standard. Add five hours for G. M. T. Mark down the dial readings of the stations heard on the margin of the paper and it will guide you to the location of other stations on your dial.

B—Stands for Broadcast stations. These stations broadcast programs, usually relaying some long wave station.

T—Stands for Telephone Stations. These stations are used to relay telephone conversations across oceans and a carrier wave, or "whistle," may be heard for several hours without any voice being heard. Some stations use a "chopper" which distorts the voice and makes it impossible to understand.

E—Stands for Experimental Stations. These stations are never on the air regularly. They are usually telegraph stations which are rented by some chain to relay a broadcast to some foreign country. You never can tell when you will hear them.

Meter Meg. STATION

TIME

- B—13.92—21.54—W8XX, Pittsburgh, Pa. Relays KDKA, 7:00 A.M. to 2:00 P.M. daily.
 T—14.01—21.41—WKK, Lawrenceville, N. J. Phones LSN 8:00 A.M. to 4:00 P.M.
 T—14.17—21.16—LSL, Buenos Aires, Arg. 8:00 A.M. to 1:00 P.M. GAA and PSF.
 T—14.23—21.08—FSA, Rio de Janeiro, Brazil. Phones WKK, WLK daytime.
 T—14.27—21.03—LSN, Buenos Aires, Arg. 8:00 A.M. to 4:00 P.M. WKK and WLK.
 T—14.38—20.86—EHY-EDM, Madrid, Spain. Phones South America, mornings.
 T—14.72—20.38—GAA, Rugby, England. Phones LSL and PPU near 8:00 A.M.
 T—14.97—20.04—OPL, Leopoldville, Belgian Congo. Phones ORG mornings.
 T—14.99—20.02—DHO, Nauen, Germany. Phones PPU and LSM mornings.
 T—15.14—19.81—WKN, Lawrenceville, N. J. Phones GAU daytime.
 T—15.24—19.69—CEC, Santiago, Chile. Phones LSR, HJY near 11 A.M. and 4 P.M.
 T—15.31—19.60—LSF, Buenos Aires, Argentina. Testing 7 to 9 A.M. irregularly.
 T—15.37—19.52—IRW, Rome, Italy. Phones Argentina mornings.
 T—15.39—19.50—LSQ, Buenos Aires, Argentina. Heard testing near 2:00 P.M.
 T—15.50—19.35—FTM, St. Assise, France. 10:00 A.M. to 2:00 P.M. LSG.
 T—15.50—19.35—PMA, Bandoeng, Java. Phones Holland mornings.
 T—15.57—19.27—PPU, Rio de Janeiro, Brazil. Phones FTM, 10:30 A.M. to 3:00 P.M.
 T—15.58—19.25—DFA, Nauen, Germany. Phones 10:00 A.M. to 2:00 P.M. irregularly.
 T—15.68—19.13—LSS, Buenos Aires, Argentina. Phones EAQ, DHO, GAA mornings.
 T—15.88—18.89—ZSM, Klipkeval, S. Africa. Phones GAS, 6:30 to 7; 10 to 10:45 A.M.
 T—15.93—18.83—PLE, Bandoeng, Java. Phones Holland 6 to 11 A.M. KWX irregularly.
 T—16.06—18.68—OCI, Lima, Peru. Testing with HJY near 2:00 P.M.
 T—16.11—18.62—GAU, Rugby, England. Phones New York mornings.
 T—16.25—18.46—HJY, Bogoto, Columbia. Phones CEC, LSR, 11 A.M. and 4:00 P.M.
 T—16.30—18.40—PCK, Kootwijk, Holland. Phones Java near 7:00 A.M.
 T—16.35—18.35—WLA, Lawrenceville, N. J. Phones England 8:00 A.M. to 4:00 P.M.
 T—16.35—18.35—FZS, Saigon, Indo-China. Phones Paris 5:00 A.M. irregularly.
 T—16.38—18.31—GAS, Rugby, England. Phones New York mornings.
 T—16.39—18.30—YVR, Maracay, Venezuela. Phones Germany 10:00 A.M.
 T—16.44—18.25—FTE, St. Assise, France. Phones LSM, PPU, mornings.
 T—16.48—18.20—GAW, Rugby, England. Phones New York mornings.
 T—16.50—18.18—CGA, Drummondville, Canada. Phones England daytime.
 T—16.50—18.18—PMC, Bandoeng, Java. Phones PCV, 3:10 to 9:20 A.M.
 E—16.55—18.12—LSY, Buenos Aires, Argentina. Irregular.
 T—16.63—18.04—GAA, Ruby, England. Phones Argentina, 10:00 A.M. to 2:00 P.M.
 T—16.82—18.05—PCV, Kootwijk, Holland. 6:00 to 9:00 A.M. Java.
 B—16.86—17.79—GSG, Daventry, England. 6:00 A.M. to 7:30 A.M.
 B—16.87—17.78—W3XAL, Bound Brook, New Jersey. 10:00 A.M. to 4:00 P.M. daily.

Meter	Meg.	STATION	TIME
T-16.89	-17.76	IAC, Piza, Italy.	Phones ships early mornings.
E-16.89	-17.76	DJE, Nauen, Germany.	Heard irregularly in the mornings.
T-16.85	to 18.27	-17.80	to 16.42—ships. Heard in daytime.
T-16.92	-17.75	HSP, Bangkok, Siam.	Works Germany, 4:30 to 6:30 A.M.
T-17.10	-17.54	VWV, Poona, India.	Phones GBU, 2:00 to 8:00 A.M.
T-17.12	-17.52	DFB, Nauen, Germany.	Phones LSM and YVQ near 9:00 A.M.
T-17.34	-17.30	Italian ships.	Phone WOO and IAC, daytime.
T-17.37	-17.27	DAF, Norden, Germany.	Phones ships irregularly.
T-17.52	-17.12	WOO, Ocean Gate, New Jersey.	Phones ships irregularly.
T-18.44	-16.30	WLK, Lawrenceville, N. J.	Phones England.
T-18.56	-16.16	GBX, Rugby, England.	4:00 to 11:00 A.M. VLK.
T-18.71	-16.04	KKP, Kauhuku, Hawaii.	Phones KWU. 1:00 to 7:00 P.M.
T-18.89	-15.88	FTK, St. Assise, France.	Phones Saigon 8:30 to 11:00 A.M.
T-18.91	-15.86	CEC, Santiago, Chile.	Phones OCJ 11 A.M., 1 and 4:40 P.M., irreg.
T-19.02	-15.81	LSL, Buenos Aires, Arg.	Phones GAA 8 A.M. to 1 and FTM 1-2 P.M.
T-19.03	-15.76	JYT, Kemikawa-Cho, Japan.	Irregular.
T-19.15	-15.6	JVE, Nazaki, Japan.	Phones Java 3:00 to 5:00 A.M.
T-19.19	-15.62	OCJ, Lima, Peru.	Phones CEC daytime.
T-19.20	-15.61	JVF, Nasaki, Japan.	Phones U.S.A. near 5:00 A.M. and 8:00 P.M.
T-19.47	-15.41	KWO, Dixon, California.	Phones Hawaii in place of KWU.
T-19.54	-15.35	KWU, Dixon, California.	Phones Hawaii 2:00 to 7:00 P.M.
B-19.56	-15.34	W2XAD, Schenectady, New York.	2:30 to 3:30 P.M. daily.
B-19.64	-15.27	W2XE, Wayne, N. J.	Relays WABC 11:00 A.M. to 1:00 P.M.
T-19.68	-15.25	RIM, Tashkent, U.S.S.R.	Phones RKI near 7:00 A.M.
B-19.68	-15.25	Pontoise, France.	7:00 A.M. to 11:00 A.M. daily.
B-19.71	-15.22	PCJ, Eindhoven, Holland.	Sundays, 8:00 A.M. to 11:30 A.M.
B-19.72	-15.21	WBXK, Pittsburgh, Pa.	Relays KDKA 10:00 A.M. to 4:00 P.M.
B-19.73	-15.20	DJB, Zeesen, Germany.	3:45 A.M. to 7:15 A.M. daily.
B-19.82	-15.13	GSF, Daventry, England.	6:00 to 9:00 A.M. daily.
B-19.84	-15.11	HVJ, Vatican City.	Daily 5:00 to 5:15 A.M., Sat., 10:00 to 10:30 A.M.
T-19.91	-15.07	WNC, Hialeah, Florida.	Phones HJB, RXC and YVQ, daytime.
T-19.94	-15.04	RKI, Moscow, U.S.S.R.	Phones RIM near 7:00 A.M.
T-20.03	-14.98	KAY, Manila, P. I.	Phones DFS 5 to 7 A.M.; U.S.A., 7 to 8 P.M.
T-20.06	-14.96	HJB, Bogota, Colombia.	Phones Hialeah daytime.
T-20.42	-14.69	PSF, Rio de Janeiro, Brazil.	7 A.M. to 6 P.M. LSL, WLK, WOK.
T-20.55	-14.60	JVH, Nazaki, Japan.	Phones Europe 4:00 to 8:00 A.M.
T-20.56	-14.59	WMN, Lawrenceville, N. J.	Phones England daylight.
E-20.60	-14.56	HBJ, Geneva, Switzerland.	Experimenting.
T-20.65	-14.53	LSN, Buenos Aires, Argentina.	Phones New York daytime.
T-20.69	-14.50	TIR and TIU, Cartago, Costa Rica.	Phones many stations daytime.
T-20.69	-14.50	YNA, Managua, Nicaragua.	Phones Hialeah daytime.
T-20.69	-14.50	HPF, Panama City.	Phones Florida daytime.
T-20.71	-14.48	TGF, Guatemala City.	Phones Florida daytime irregularly.
T-20.73	-14.47	WMF, Lawrenceville, N. J.	Phones England daylight.
T-20.75	-14.46	GBW, Rugby, England.	Phones WNC 6:00 A.M. to 6:00 P.M.
E-20.97	to 21.26	-14.30	to 14.11—Amateur phones heard in daytime.
E-21.58	-13.90	WQP, Rocky Point, N. Y.	Testing with RNE irregularly mornings.
T-21.70	-13.83	SUZ, Cairo, Egypt.	Phones GAA 7:00 A.M. to 3:30 P.M.
T-21.98	-13.65	HJY, Bogota, Colombia.	Phones irregularly.
T-22.06	-13.60	JYK, Kemikawa-Cho, Japan.	Irregular.
T-22.09	-13.58	GBB, Rugby, England.	Phones Canada and Egypt daytime.
E-22.22	-13.50	WKU, Rocky Point, N. Y.	Irregular.
T-22.35	-13.42	GCJ, Rugby, England.	Phones JVH 3:00 to 8:00 A.M.
B-22.35	-13.42	TIEP, San Jose, Costa Rica.	Sunday afternoons.
T-22.40	-13.39	WMA, Lawrenceville, N. J.	Phones England daytime.
T-22.48	-13.35	YVQ, Maracay, Venezuela.	Phones Florida daytime.
T-22.50	to 24.3	-13.34	to 12.35—Ships. Heard in daytime.
T-22.58	-13.28	CGA3, Drummondville, Canada.	Phones ships and England daytime.
E-22.65	-13.24	KILS, Alaska.	Irregular. Used in Byrd broadcast.
E-22.68	-13.23	KFZ, Little America and KNRA, "Seth Parker."	
E-22.76	-13.18	DGG, Nauen, Germany.	Phones Asia mornings irregularly.

Meter	Meg.	STATION	TIME
T-23.00	13.04	German ships.	11:15 A.M. and 1:30 P.M.
T-23.36	12.84	WOO, Ocean Gate, N. J.	Phones ships irregularly.
T-23.38	12.83	HJA3, Barranquilla, Colombia.	Phones U.S.A. daytime.
T-23.38	12.83	CNR, Rabat, Morocco.	Phones St. Assise 5:00 to 8:00 A.M.
B-23.38	12.83	RABAT, Morocco.	Broadcasts Sunday 7:30 to 9:00 A.M.
T-23.45	12.80	IAC, Piza, Italy.	Works ships mornings.
T-23.47	12.78	GBC, Rugby, England.	Phones ships irregularly.
T-23.70	13.22	KPJ, Manila, P. I.	Heard 3:00 to 8:00 A.M. with Java.
T-24.20	12.40	DAF, Norden, Germany.	Phones ships irregularly mornings.
T-24.40	12.30	PLM, Bandoeng, Java.	Phones VK2ME near 6:30 A.M.
T-24.41	12.29	GBU, Rugby, England.	Phones America evenings.
B-24.53	12.23	CTICT, Lisbon, Portugal.	Sun., 7 to 9 A.M.; Thurs., 4 to 6 P.M.
T-24.69	12.15	GBS, Rugby, England.	Phones New York.
T-24.88	12.06	PDV, Kootwijk, Holland.	Tests near 7:30 A.M.
B-25.00	12.00	RNE, Moscow, U.S.S.R.	Sat. 10-11 P.M., Sun. 6-7 and 10-11 A.M.
T-25.02	11.99	FZS, Saigon, Indo-China.	Phones Paris mornings.
E-25.11	11.97	KKQ, Bolinas, California.	Heard irregularly evenings.
T-25.12	11.95	FTA, St. Assise, France.	Phones CNR 4 to 7 A.M.; LSM 10 to 12 P.M.
B-25.23	11.90	Pontoise, France.	11:15 A.M.-2:15 P.M. and 3:00 to 6:00 P.M.
B-25.27	11.87	W8XK, Pittsburgh, Pa.	Relays KDKA 4:30 to 10:00 P.M. daily.
B-25.28	11.86	GSE, Daventry, England.	9:15 A.M. to 10:45 A.M. daily.
B-25.36	11.83	W2XE, Wayne, N. J.	Relays WABC 3:00 to 5:00 P.M.
B-25.51	11.76	DJD, Zeesen, Germany.	Noon to 4:45 P.M. daily.
B-25.53	11.75	GSD, Daventry, England.	3:00 to 5:00 A.M. and Noon to 4:30 P.M.
B-25.57	11.73	PHI, Huizen, Holland.	8:30 to 11:00 A.M., except Tues. and Wed.
B-25.60	11.71	Pontoise, France.	7:00 P.M. to 10:00 P.M. and 11 P.M. to Midnite.
B-25.60	11.72	CJRX, Winnipeg, Canada.	8:00 to 11:00 P.M., 11:30 to Midnight.
E-25.63	11.71	KIO, Kauhuku, Hawaii.	Heard in the evenings testing.
E-25.73	11.66	PPQ, Rio de Janeiro, Brazil.	Used irregularly in evenings.
E-26.09	11.50	XAM, Merida, Yucatan.	Irregularly 1:00, 6:00 and 7:00 P.M.
T-27.26	11.00	PLP, Bandoeng, Java.	Phones PNI from 5:00 to 7:00 A.M.
T-27.30	10.99	ZLT, Wellington, New Zealand.	5 to 7 A.M. irregularly. VLJ.
T-27.35	10.97	OCI, Lima, Peru.	Phones HJY evenings.
E-27.65	10.85	DFL, Nauen, Germany.	Irregular.
T-27.67	10.84	KWV, Dixon, California.	Phones Hawaii daytime.
T-27.93	10.74	JVM, Nazaki, Japan.	Heard 1:30 to 7:00 A.M. and 7 to 11 P.M.
T-28.04	10.77	GBP, Rugby, England.	Midnight to 8:00 A.M. VLK.
T-28.09	10.68	WNB, Lawrenceville, N. J.	Phones Bermuda daytime.
T-28.12	10.67	CEC, Santiago, Chile.	Testing with HJY irregularly evenings.
T-28.14	10.66	JVN, Nazaki, Japan.	Phones Europe 3:00 to 8:00 A.M.
E-28.28	10.61	WEA, Rocky Point, N. Y.	Tests irregularly with Europe.
T-28.44	10.55	WOK, Lawrenceville, N. J.	Phones Brazil and Argentine irregularly.
T-28.51	10.52	VK2ME-VLK, Sydney, Australia.	1:00 to 8:00 A.M. GBP.
E-28.79	10.42	XGW, Shanghai, China.	Testing near 6:00 A.M.
T-28.80	10.42	PKD, Kootwijk, Holland.	Phones Java, 7:30 to 9:40 A.M.
T-28.80	10.40	YBG, Medan, Sumatra.	5:30-6:30, 12:30-1:30 A.M., 7:30-8:30 P.M.
E-28.85	10.40	KEZ, Bolinas, California.	Used irregularly.
E-28.91	10.38	WCG, Rocky Point, N. Y.	Tests irregularly.
B-28.98	10.35	LSX, Buenos Aires, Argentina.	6:15 to 7:15 P.M. daily. Wed., 10 P.M.
E-29.03	10.33	ZFD, St. Georges, Bermuda.	Heard afternoons irregularly.
B-29.04	10.33	ORK, Brussels, Belgium.	2:45 to 4:15 P.M. daily.
E-29.06	10.32	PPM, Rio de Janeiro, Brazil.	Testing 6:00 to 11:00 P.M. irregularly.
E-29.15	10.29	DIQ, Nauen, Germany.	Used irregularly.
T-29.25	10.26	PMN, Bandoeng, Java.	Near 5:30 A.M. daily. VLK.
T-29.45	10.22	PSH, Rio de Janeiro, Brazil.	Sending music evenings.
T-29.50	10.17	RIO, Bakou, U.S.S.R.	Phones Moscow 8:00 to 10:00 A.M.
T-29.58	10.14	OPM, Leopoldville, Belgian Congo.	Phones ORK 9-11 A.M., 3-6 P.M.
T-29.79	10.07	EHY, Madrid, Spain.	Phones YVR near 4:00 P.M. irregularly.
T-29.83	10.05	ZFB, Hamilton, Bermuda.	Phones U.S.A. and ships daytime.
T-29.83	10.05	SUV, Cairo, Egypt.	Phones GAA after 3:30 P.M.
T-30.09	9.97	KAZ, Manila, P. I.	Phones PLV near 2:00 A.M.

ALWAYS MENTION THE CLUB WHEN BUYING

Meter	Meg.	STATION	TIME
T-30.15	9.95	GCU, Rugby, England.	Phones New York evenings.
T-30.21	9.93	HKB, Bogota, Colombia.	Phones PSK irregularly evenings.
T-30.30	9.90	LSN, Buenos Aires, Argentina.	6:00 P.M. to 6:00 A.M. WLO.
T-30.40	9.87	WON, Lawrenceville, N. J.	Phones England evenings.
B-30.40	9.87	EAQ, Madrid, Spain.	Daily 5:15 to 7:00 P.M., Sat. 1 to 3 P.M.
E-30.49	9.84	JYS, J1AA, Chiba-Ken, Japan.	Near 4:00 to 8:00 A.M. irregularly
T-30.52	9.83	JRM, Rome, Italy.	Phones Egypt afternoons.
T-30.60	9.80	GCW, Rugby, England.	Phones America evenings.
E-30.61	9.80	LSI, Buenos Aires, Argentina.	Used irregularly evenings.
B-30.67	9.78	Rome, Italy.	Mon., Wed. and Fri., 2:30 A.M. to 8:00 P.M., irregular.
T-30.75	9.76	VK2ME-VLK, Sydney, Australia.	Phones Java 4:00 to 8:00 A.M.
T-30.77	9.75	WOF, Lawrenceville, N. J.	Phones England evenings.
T-30.90	9.71	GCA, Rugby, England.	Phones Argentina around 6:00 P.M.
T-31.08	9.67	DGU, Nauen, Germany.	Phones Egypt 11:00 A.M. to 5:00 P.M. <i>irreg</i>
B-31.25	9.59	CT1AA, Lisbon, Portugal.	Tues. and Fri., 4:30 to 7:00 P.M.
B-31.27	9.59	HLB, Geneva, Switzerland.	5:30 to 6:15 P.M.
B-31.28	9.59	VK2ME, Sydney, Australia.	Sun., 12-2; 4:30-8:30; 9:30-11:30 A.M.
B-31.28	9.59	W3XAU, Philadelphia, Pa.	Noon to 7:50 P.M.
B-31.30	9.58	GSC, Deventry, England.	6:00 P.M. to 8:00 P.M. daily.
B-31.31	9.58	VK3LR, Melbourne, Australia.	3:00 to 8:00 A.M. except Sundays.
B-31.36	9.57	W1XAZ, Boston, Mass.	7:00 A.M. to 1:00 A.M.
B-31.36	9.57	VUY-VUB, Bombay, India.	Wed. and Sat., 11:00 A.M. to 12:30 Noon.
B-31.38	9.57	DJA, Zeesen, Germany.	8:00-11:30 A.M. and 5:15 to 9:15 P.M.
B-31.41	9.55	LKJ, Jeloy, Norway.	Relays Oslo, 11:00 A.M. to 6:30 P.M., irreg.
B-31.45	9.54	DJN, Zeesen, Germany.	3:45 A.M. to 11:30 A.M. daily.
B-31.48	9.53	W2XAF, Schenectady, N. Y.	6:30 to 11:00 P.M. daily.
B-31.55	9.51	VK3ME, Melbourne, Australia.	Wed. 5:00 to 6:30; Sat. 5 to 7 A.M.
B-31.55	9.51	GSB, Daventry, England.	3:00-5:00 A.M., 7:30-Noon, 1:00-5:45 P.M.
B-31.56	9.50	PRF5, Rio de Janeiro, Brazil.	Daily 5:30 to 6:15 P.M.
T-31.63	9.48	PLW, Bandoeng, Java.	Phones Australia 3:00 to 8:00 A.M. irregularly
E-31.67	9.47	WET, Rocky Point, N. Y.	Irregular.
B-31.80	9.43	COII, Havana, Cuba.	10:11 A.M., 5:00-6:00 P.M., 8:00-9:00 P.M. daily.
T-31.86	9.42	PLV, Bandoeng, Java.	Phones 7:40 to 9:40 A.M.
T-32.15	9.33	CGA4, Drummondville, Canada.	Phones Ships and England irregularly
T-32.33	9.28	GCB, Rugby, England.	Phones CGA and SUV afternoons.
T-32.72	9.17	WNA, Lawrenceville, N. J.	Phones England evenings.
T-32.83	9.14	YVR, Maracay, Venezuela.	Phones Europe afternoons.
T-33.26	9.02	GCS, Rugby, England.	Phones New York evenings.
E-33.29	9.01	KEJ, Bolinas, California.	Tests irregularly.
E-33.52	8.95	WEL-W2XBJ, Rocky Point, N. Y.	Testing irregularly evenings.
T-33.41	8.98	VWY, Poona, India.	Phones England near 8:30 A.M.
T-33.93	8.84	8.84	to 8.20—Ships. Heard irregularly.
E-33.94	8.84	KFZ, Little America and KNRA, "Seth Parker."	
T-34.19	8.77	PNI, Makasser, D. E. I.	Phones Java near 4:00 to 5:00 A.M.
T-34.56	8.68	GBC, Rugby, England.	Phones ships irregularly.
T-35.02	8.57	WOO, Ocean Gate, N. J.	Phones ships irregularly.
T-35.42	8.47	DAF, Norden, Germany.	Phones ships irregularly.
T-35.80	8.38	IAC, Piza, Italy.	Works ships irregularly.
T-36.65	8.19	PSK, Rio de Janeiro, Brazil.	Sending music 6:00 to 7:30 P.M.
B-37.33	8.05	CNR, Rabat, Morocco, Africa.	Sunday 2:30 to 5:00 P.M.
B-37.41	8.02	IRS, Rome, Italy.	Mon., Wed. and Fri., 2:30 to 8:00 P.M., irreg.
T-37.60	7.98	HSJ, Bangkok, Siam.	Phones Germany 4:30 to 6:00 A.M. irregularly.
E-37.97	7.	LSL, Buenos Aires, Argentina.	Heard afternoons and Evenings.
E-38.02	7.89	DFT, Nauen, Germany.	Heard near 2:00 P.M. irregularly.
T-38.06	7.86	SUX, Cairo, Egypt.	Phones Rome and London afternoons.
B-38.07	7.88	JYR, J1AA, Chiben-Ken, Japan.	Heard 4:50-7:50 A.M. relaying JOAK.
B-38.36	7.82	OA4AC, Lima, Peru.	Heard 9:00 to 11:30 P.M.
B-38.47	7.80	HBP, Geneva, Switzerland.	5:30 to 6:15 P.M. Saturdays.
E-38.50	7.78	PSZ, Rio de Janeiro, Brazil.	Heard between 6:00 and 11:00 P.M. irreg.
T-39.34	7.63	RIM, Russia.	Phones RKI 6:00 to 8:15 A.M.
T-39.42	7.61	KWX, Dixon, California.	Phones Hawaii nights.

24 = 5 380 120

BE A BOOSTER FOR THE CLUB

Met.	Meg.	STATION	TIME
T-39.89	7.52	-KKH, Kauhuku, Hawaii. Phones KWO evenings.	
B-39.89	7.71	-KEE, Bolinas, California. Testing evenings irregularly.	
T-39.97	7.50	-RKI, Russia. Phones RIM 6:00 to 8:15 A.M.	
B-40.55	7.40	-HJ3ABD, Bogota, Colombia. 7:30 to 11:00 P.M.	
T-40.71	7.37	-KEQ, Kauhuku, Hawaii. Phones Dixon nights.	
B-41.55	7.22	-HKE, Bogota, Colombia. Mon. 6 to 7 P.M.; Tues., Fri. 8 to 9 P.M.	
B-42.00	7.14	-HJ4ABB, Manizales, Colombia. Daily 4-6; Tues., Fri. 7:30-10:00 P.M.	
E-42.86	7.00	-HJ5ABE, Cali, Colombia. Irregularly evenings.	
T-43.45	6.90	-GDS, Rugby, England. Phones New York nights.	
E-43.86	6.84	-HAS, Budapest, Hungary. 3:00 to 5:30 P.M. irregularly.	
B-44.12	6.80	-IH1H, San Pedro de Macoris, R. D. 4:00 to 7:00 P.M., irregular.	
T-44.41	6.75	-WOA, Lawrenceville, N. J. Phones England nights.	
T-44.44	6.75	-JVT, Nazaki, Japan. 1:30 to 8:00 A. M. oftimes with music.	
E-44.54	6.74	-WEJ-W2XBJ, Rocky Point, N. Y. Testing irregularly evnngs.	
E-44.67	6.73	-WQO, Rocky Point, N. Y. Used irregularly.	
B-44.71	6.71	-TIEP, San Jose, Costa Rica. 5:00 to 10:00 P.M. irregularly.	
T-44.96	6.67	-YVQ, Maracay, Venezuela. Testing near 10:00 P.M. irregularly.	
B-45.00	6.67	-HC2RL, Guayaquil, Ecuador. Sun., 5:45-8:00; Tues., 9:15-11:45 P.M.	
T-45.10	6.65	-IAC, Piza, Italy. Phones ships evenings.	
E-45.11	6.65	-KFZ, Little America and KNRA, "Seth Parker."	
B-45.31	6:62	-PRADO, Riobamba, Ecuador. Thursdays 9:00 to 11:30 P.M.	
B-45.38	6.61	-REN, Moscow, U.S.S.R. 1.00 to 6:00 P.M.	
B-46.25	6.48	-IH14D, Santo Domingo, D. R. 11:55-1:40 P. M., 4:40-7:40 P. M.	
B-46.30	6.48	-HJ5ABD, Cali, Colombia. 7:00 to 10:00 P.M.	
B-46.51	6.45	-HJ1ABB, Barranquilla, Colombia. 11:45-12:45 Noon; 7:00-9:30 P.M.	
B-46.69	6.43	-W3XL, Boundbrook, N. J.	
E-46.77	6.42	-HJA3, Barranquilla, Colombia. Phones HJA2, irregular.	
B-47.10	6.37	-YV4RC, Caracas, Venezuela. 4:30 P.M. to 10:30 P.M.	
B-47.50	6.32	-HIZ, Santo Domingo, R. D. Daily 4:40-5:40; Sat. 11:00-12:40 P.M.	
B-47.80	6.23	-H11A, Dominican Republic. 12:10 to 1:40 and 7:40 to 9:40 P.M. daily.	
E-48.00	6.25	-Army aircraft heard in daytime.	
B-48.00	6.21	-OAX4B, Lima, Peru. 7:00 P. M. to 9:00 P. M., Irregular.	
B-48.60	6.17	-HJ2ABA, Tunja, Colombia. 1:00-2:00 P.M. and 7:00 to 10:00 P. M.	
B-48.78	6.15	-YV3RC, Caracas, Venezuela. 10:30 to 1:30 and 4:30 to 9:30 P.M.	
B-48.85	6.15	-CJRO, Winnipeg, Canada. 8:00 to 11:00 P.M.; 11:30 to Midnight.	
B-48.86	6.14	-W8XK, Pittsburgh, Pa. Relays KDKA 4:30 P.M. to about 2:00 A.M.	
B-48.92	6.13	-ZGE, Kuala Lumpur, Malaya States. Sun., Tues., Fri. 6:40-8:40 A.M.	
B-48.94	6.13	-LCL, Jeloy, Norway. Relays Oslo 11:00 A.M. to 6:00 P.M.	
B-49.00	6.12	-Johannesburg, Africa. 4 to 6; 8:00 to 10:30; 11 A.M. to 3:40 P.M.	
B-49.02	6.12	-YDA, Bandoeng, Java. Heard between 6:00 and 11:00 A.M.	
B-49.02	6.12	-W2XE, Wayne, N. J. Relays WABC 6:00 to 11:00 P.M.	
B-49.05	6.12	-HJ1ABE, Cartagena, Colombia. Mon., 10-12; Wed., 8-11 P.M.	
B-49.08	6.11	-YV2RC, Caracas, Venezuela. 10:30 to 1:00; 5:15 to 10:00 P.M.	
B-49.10	6.11	-VE9HX, Halifax, N. S. 8:30 to 11:30 A.M. and 5:00 to 10:00 P.M.	
B-49.10	6.11	-VUC, Calcutta, India. 9:30 A.M. to Noon, Sat., 11:45 P.M. to 3 A.M.	
B-49.18	6.10	-W3XAL, Bound Brook, N. J. Mon., Wed., Sat. 5 P.M. to 1 A.M.	
B-49.18	6.10	-W9XF, Chicago, Illinois. 3:30 to 7:00; 8:30 P.M. to 1:00 A.M.	
B-49.20	6.09	-IRA, Rome, Italy. Mon., Wed. and Fri. 2:30 to 8:00 P. M., irreg.	
B-49.22	6.09	-VE9CW, Bowmanville, Canada. Mon., Tues., Wed., 3 to 12 P.M.; Thurs., Fri., Sat., 7 to 12 P.M.; Sun., 1 to 9 P.M.	
B-49.29	6.09	-VE9BJ, St. John's, N. B., Canada. Near 5:00 and 11:00 P.M.	
B-49.34	6.08	-CP5, La Paz, Bolivia. 8:00 to 9:00 P.M. daily.	
B-49.34	6.08	-W9NAA, Chicago, Illinois. Irregularly, altho usually Sun. P.M.	
B-49.40	6.07	-OKY, Skamleback, Denmark. 2:00 to 6:30 P.M. irregularly.	
B-49.42	6.07	-OER2, Vienna, Austria. 9:00 A.M. to 5:30 P.M.	
B-49.45	6.07	-HJN, Bogota, Colombia. 8:00 to 11:00 P.M. irregularly.	
B-49.50	6.06	-W3XAU, Philadelphia, Pa. Relays WCAU 8:00 to 11:00 P.M.	
B-49.50	6.06	-W8XAL, Cincinnati, Ohio. 6:30 A.M. to 7:00 P.M.; 10 P.M. to 2 A.M.	
B-49.50	6.06	-VO7LO, Nairobi, Kenya Colony. 11 A.M. to 2 P.M. daily.	
B-49.54	6.05	-GSA, Daventry, England. 10:45 A.M.-12:45 P.M. and 4:30-8:00 P.M.	
B-49.60	6.05	-HJ3ABI, Bogota, Colombia. 8:00 to 10:00 P.M. irregularly.	

Meter	Meg.	STATION	TIME
B-47.61	6.04	HJABC, Barranquilla, Colombia.	6:00 to 10:00 P.M.
B-47.67	6.04	WIXXI, Boston, Mass.	8 P.M. to 8:00 P.M., irregular.
B-49.83	6.02	DHC, Zossen, Germany.	Noon to 4:30 P.M. and 8:10 to 10:45 P.M.
B-49.83	6.02	QCN, Macao, China.	Monday and Friday, 7:00 to 9:00 A.M.
B-49.92	6.02	HJABH, Bogota, Colombia.	Notes 1:00 P.M. and 7:00 to 10:00 P.M.
B-49.92	6.01	ZHI, Singapore, Mal., Fed., Thurs.	5:40-8:10; Sat., 10:40-1:10 A.M.
B-49.92	6.01	VEDM, Drummondville, Canada.	Sat. 11:30 P.M. to Sun. 1:00 A.M.
B-49.90	6.00	RV19, Moscow, U.S.S.R.	Daily, 2:00 to 4:30 P.M.
B-49.92	6.00	COC, Havana, Cuba.	9:30-11:00 A.M.; 4-6 P.M. daily. Sat. 11 P.M.
B-50.17	5.98	RIX, Santo Domingo, E. D. Is.	Tues. and Fri., 8:10 to 10:10 P.M.; Saturdays, 7:40 to 10:40 A.M. and 2:40 to 4:40 P.M.
B-50.25	5.97	HJABC, Cucutta, Colombia.	11:00 A.M. to Noon; 6:00 to 9:00 P.M.
B-50.26	5.97	HVJ, Vatican City.	Daily, 2:00 to 2:15 P.M., Sun. 5:00 to 5:30 A.M.
B-50.30	5.96	NLBT, Mexico City.	7:00 P.M. to 9:00 A.M. Irregularly.
B-50.42	5.95	HJABE, Medellin, Colombia.	Mon. 7:00 to 11:00 P.M.; Tues., Thurs., Sat. 6:15 to 8:00 P.M.; Wed., Fri. 7:30 to 10:10 P.M.
T-51.26	5.85	WOB, Lawrenceville, N. J.	Phone Bermuda nights.
B-51.28	5.85	VAIRMO, Maracaibo, Venezuela.	5:15 to 8:00 P.M.
B-51.40	5.83	HCK, Quito, Ecuador.	8:00 to 11:30 P.M. irregularly.
B-51.44	5.82	TXGPI, San Jose, Costa Rica.	4:00 to 11:00 P.M. Irregularly.
T-51.50	5.82	HJA3, Bogota, Colombia.	Phones HJA3 afternoons and evenings.
T-51.7	5.80	KZGF, Manila, P. I.	Phones from 5:00 to 8:00 A.M.
B-51.76	5.77	QAN, Lima, Peru.	Wed. and Sat. from 8:00 to 11:30 P.M.
B-51.77	5.74	FGN, Guatemala City.	7:00 P.M. to Midnight irregularly.
E-52.97	5.66	CFU, Rosland, Canada.	Works CPO and CFN near 10 P.M. irreg.
B-53.57	5.60	HJABC, Cali, Colombia.	8:00 to 10:00 P.M.
E-55.56	5.40	HJA-7, Cucuta, Colombia.	Testing irregularly.
T-58.10	5.15	PMY, Bandung, Java.	Phone Australia near 11:00 A.M.
T-58.02	5.08	WCN, Lawrenceville, N. J.	Phone England evenings.
T-58.78	5.02	ZFA, Hamilton, Bermuda.	Phone U.S.A. and Ships at night.
T-60.28	4.98	GBC, Rugby.	Phone to ships irregularly.
T-61.15	4.90	CAF, Drummondville, Canada.	Phone ships and England evenings.
T-62.24	4.82	GDW, Rugby, England.	Phone New York evenings.
T-64.11	4.75	WOO, Ocean Gate, N. J.	Phone ships irregularly.
B-65.85	4.55	WDN, Rocky Point, N. Y.	Phone KSRK evenings.
T-66.50	4.51	VPN, ZF3, Nassau, Bahamas.	Phones WND and GYD 2 to 10 P.M.
T-67.87	73.17	4.41 to 4.10	Ships. Heard irregularly.
T-69.44	4.32	GDB-G6RN, Ruby, England.	Testing 7:00 to 10:00 P.M.
E-69.60	4.31	WTDV, WTDW, Virgin Islands.	7:00 to 3:00 P.M.; weather reports.
B-73.00	4.00	HCJB, Quito, Ecuador.	7:30 to 9:45 P.M. daily except Monday.
B-70.63	4.25	RV15, Khabarovsk, U.S.S.R.	1:00 to 9:00 A.M.
T-73.21	4.10	WND, Hialeah, Florida.	Phone irregularly with VPN.
E-75	73.00	4.00 to 3.90	Amateurs on voice.

SHIP STATIONS

These stations are telephone stations but are sometimes rented to broadcast a special program from a ship. They operate on four bands: 16.85 to 18.27 meters, 22.50 to 24.3 meters, 13.92 to 16.58 meters and 67.87 to 73.17 meters. In megacycles this is 17.80 to 15.42, 13.34 to 13.33, 8.84 to 8.20 and 4.42 to 4.10.

VQJM, Monarch of Bermuda; GLSQ, Olympia; GFJY, Caledonia; GMIQ, Belgaard; GFWV, Majeestic; GDLJ, Homeric; GMBJ, Empress of Britain; DOAH, Bremen; DOAI, Europa; DHEY, Deutschland; DHJZ, Hamburg; DOBN, Columbus; DHAO, Albert Ballin; DHRL, New York; ICEJ, Rex; IBLI, Conte de Savoia; GBZW, Berengaria; FNSM, Ile de France; GLRZ, Aquitania; VOJP, Queen of Bermuda; DHTY, Resolute. DHDI, Cap Arcadia; WNBH, Leviathan.

SPECIAL STATIONS

KFZ, Little America (South Pole) near 45, 34, 11.57, 25.36, 23, 19.64, 17 and 14 meters.
KNRA, The Schooner "Seth Parker." 48.70, 24.30, 21.22 meters and same as KFZ.
KILS, Alaska. Same as W10XDA in meg., 4.40, 8.81, 8.83, 13.21, 13.24, 17.62, 17.66.

WHICH IS YOUR ANTENNA?



HI-FI COMPLETE SYSTEMS READY-TO-HANG

Just attach to your masts. LYNCH materials used exclusively.

HI-FI DUPLEX SYSTEMS

No. 886—Doublet cage (41 ft.) with 35 ft. Giant Killer cable lead-in. Complete with new Hi-Fi Duplex Antenna and receiver couplers and Double Light-

ning Arrester. List Price...\$23.00. Your net cost **13.75**
Kit Lynch materials to build 886. List price \$16.75. Your net cost. **\$9.95**

No. 896—Doublet single wire (78 ft. flat top) with 35 ft. Giant Killer cable lead-in. Complete with new Hi-Fi Duplex Antenna and receiver couplers and Double Light-

ning Arrester. List Price...\$15.50. Your net cost. **9.25**
Kit Lynch materials to build 896. List price \$12.50. Your net cost. **\$7.50**

Each additional 5 feet of Giant Killer Cable Lead-in, attached—List Price 40c; Net Cost 25c

HI-FI SIMPLEX SYSTEMS

No. 887—Inverted L 41 ft. cage with 35 ft. Giant Killer cable lead-in. Complete with new Hi-Fi Receiver Coupler and Double Light-

ning Arrester. List Price...\$19.50 Your net cost **11.75**
Kit Lynch materials to build 887. List Price \$13.25. Your net cost.. **7.85**

No. 897—Inverted L (78 ft. flat top) with 35 ft. Giant Killer cable lead-in. Complete with new Hi-Fi Receiver Coupler and Double Lightning Arrester.

List Price...\$12.00 Your net cost.. **7.20**
Kit Lynch materials to build 897. List price \$9.00. Your net cost.. **5.40**

TRANPOSED LEAD-IN ANTENNA SYSTEMS Ready-to-Hang

No. 862—Doublet Cage (41 ft.) with 25 ft. transposed lead-in and 10 ft. Giant Killer cable. Complete with new Universal Coupler and

Double Lightning Arrester List pr. \$24.25. Your net price **14.50**
Kit Lynch materials to build 862. List price, \$14.25. Your net cost. **8.45**

No. 872—Doublet single wire (78 ft. flat top) with 25 ft. transposed lead-in and 10 ft. Giant Killer cable. Complete with new Universal Coupler and

Double Lightning Arrester. List pr. \$15.00. Your net cost **8.95**
Kit Lynch materials to build 872. List price \$11.75. Your net cost.. **6.95**

No. 863—Inverted L 41 ft. cage with 25 ft. transposed lead-in and 10 ft. Giant Killer cable. Complete with new Universal Coupler and Double Lightning Ar-

rester. List pr. \$24.25. Your net cost **14.50**
Kit Lynch materials to build 863. List price \$14.25. Your net cost. **8.45**

No. 873—Inverted L (78 ft. flat top) and 25 ft. transposed lead-in with 10 ft. Giant Killer cable. Complete with new Universal Coupler and

Double Lightning Arrester. List pr. \$15.00 Your net cost **9.85**
Kit Lynch materials to build 873. List price \$11.75. Your net cost **6.95**

Each additional 5 feet of Transposed Lead-in, attached, List Price, \$1.50. Net cost, 90c.

Other sizes of Antenna Systems, including 78 ft. cages, Doublet or Inverted L, transposed or Giant Killer cable lead-in built to order. For estimate, send sketch of location, showing space available, heights and sources of interference. Mention make of receiver.

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TECHNICAL ADVISOR OF THE NEW YORK CHAPTER OF THE CLUB

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NOISE REJECTING

NOISE COLLECTING



The above drawing explains graphically how our Systems reduce noises and boost signals. A transposed lead-in or Giant Killer Cable DOES NOT pick up any signal but merely "pipes" the signals from flat top to receiver. When the flat top is erected high above the ground, you remove it from the field or man-made interference. Man-made noises lose intensity much faster when traveling upward than when traveling in a horizontal direction. A four wire cage increases signal strength because the four wires act as four paths (instead of one as in a single wire) for the signals to enter your receiver.

TO SELECT THE ANTENNA FOR YOUR LOCATION—(See Opposite Page)

Cage antenna (for greater volume) is used where space available for the flat top (horizontal part of Antenna) is less than 80 feet. Use No. 862 or No. 886 if you can take the lead-in off the center; where the lead-in must be taken off at one end, use No. 863 or 887. A Giant Killer cable lead-in for entire length (No. 886 and 887) is used where lead-in must run at an angle.

Single wire flat top may be used where space available is more than 80 feet. Use No. 872 or 896 if lead-in can be taken off in center, or No. 873 or 897 where lead-in must be taken off one end. Complete Giant Killer cable lead-in (No. 896 or 897) is used where the lead-in is taken off at an angle or run around corners. When used with HI-FI Couplers, the Giant Killer cable lead-in gives the same results as a transposed lead-in.

Giant Killer Cable is also used to bring transposed lead-in from window to receiver.

NOTE—The transposed lead-in or Giant Killer cable lead-in (the part of system which provides for noise reduction) may be of ANY LENGTH, without loss of volume.

LYNCH ANTENNA SUPPLIES

List Price	Net Price	List Price	Net Price
\$2.75 Kit 10 Cage Spreaders.....	\$1.65	\$1.50 Heavy Hi-Mho Wire, 100 feet...	.90
\$2.75 Kt 10 Transposition Blocks.....	1.65	\$3.00 Giant Killer Cable, 50 ft.....	1.80
\$2.00 Kit 8 Navy Type Insulators.....	1.20	\$12.50 DeLuxe Kit, of 10 spreaders, 20	
\$1.25 Double Lightning Arrester.....	.75	transposition blocks, 8 navy type insula-	
\$1.50 New Universal Coupler.....	.90	tors, 300 ft. Hi-Mo wire, double light-	
\$1.00 Light Hi-Mho Wire, 100 feet...	.60	ning arresters and Universal Coupler.	\$7.50

NEW LYNCH HI-FI COUPLERS AND KITS

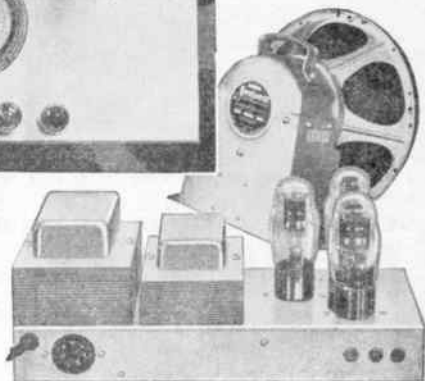
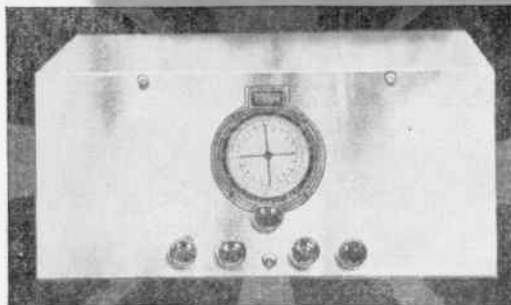
\$3.50 HI-FI DUPLEX Antenna Coupler (for doublets using Giant Killer cable lead-in)...	\$2.10
\$2.50 HI-FI RECEIVER COUPLER (for ALL systems using Giant Killer cable lead-in)	\$1.50
\$6.75 HI-FI DUPLEX ANTENNA COUPLING KIT, of antenna coupler, receiver coupler and 50 feet of Giant Killer cable.....	\$4.05
\$7.00 HI-FI SIMPLEX ANTENNA KIT, of receiver coupler, 125 ft. heavy Hi-Mho wire, 35 ft. Giant Killer cable, 3 type insulators, 2 nail-it knobs, 1 stand-off insulator	\$4.20

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Simply pull out the tuning knob and the second dial pointer spreads out the crowded short wave band over the full 180 degree scale! **Masterpiece III** provides actual band-spread tuning over all four wave bands. Try it 10 full days in any kind of competitive test. Write for details of offer.

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ALL-WAVE Superheterodyne

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- 10-500 M. Tuning Range
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- All A. C. Operation

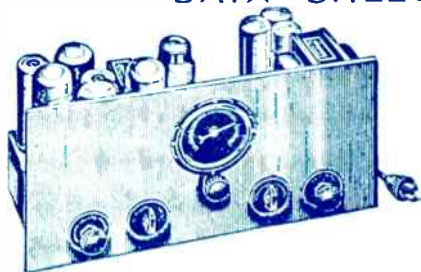
Truly a professional type receiver that can be easily assembled without the use of special tools or test equipment. For the small sum of \$2.50 you can start building, for this is the cost of the ALL STAR FOUNDATION. This includes: 1. Drilled Eraydo Front Panel. 2. Drilled Base. 3. Large Schematic Diagram. 4. Wiring Diagram. 5. Pictorial Diagram. 6. Detailed Instructions for Assembling. You may buy the balance of the parts from us as needed—at LOWEST WHOLESALE PRICES!

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POSTAL



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