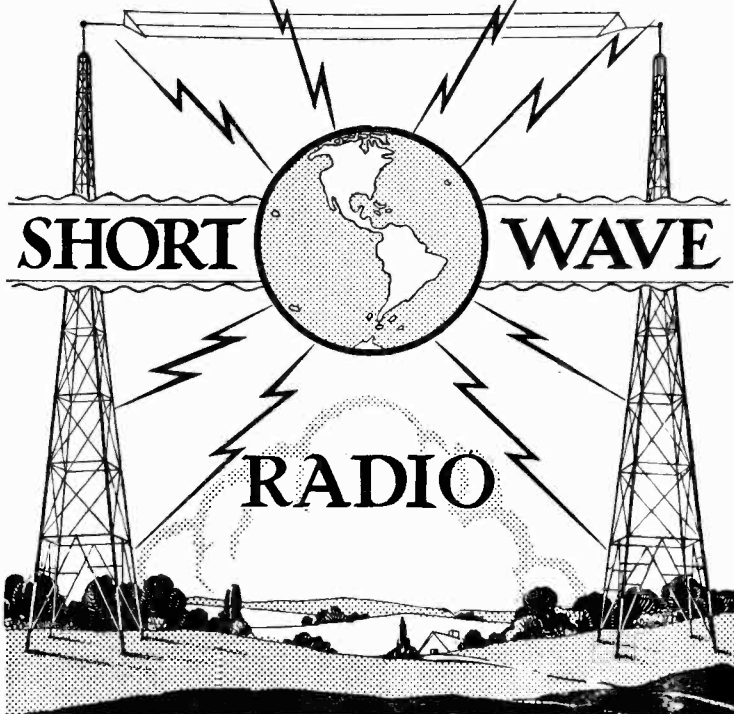


VOL. VI

JANUARY, 1935

NO. 4

INTERNATIONAL



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

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

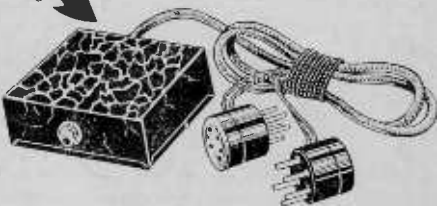
THE VOICE OF THE
INTERNATIONAL SHORT WAVE CLUB

EAST LIVERPOOL, OHIO, U. S. A.

"THE MISSING LINK"

The AMPLIVOX
double-purpose
PHONE RECEPTOR
FOR RECEIVERS
NOT EQUIPPED FOR
EARPHONE RECEPTION

A NECESSITY FOR
EVERY RECEIVER



No tampering with wiring to install • Installs in one minute without tools • Inserting phone jack automatically silences speaker • Pulling phone plug out puts receiver back to speaker operation • Five foot cable makes it a phone jack at your fingertips • Needs but a fraction of volume used for loud speaker • Uses all tubes of receiver • Helps to identify stations heard faintly on the speaker.

AND THE EXTRA FEATURE

May be used, without changing, with another loudspeaker at a remote point from receiver (kitchen, bedroom, porch, etc.) or for Radio Recording. NOTE—Models available for using phonograph pickup on your receiver.

List Price, \$6.75.

Your Net Price,

(Complete, as illustrated).....

\$3.95



SPECIAL PLUGS, will take up to
 4 pairs phones.....39c

Most Sensitive Earphones for Short Wave Reception and Most Comfortable to Wear

They Weigh but Four (4) Ounces, Headband Included. TRIMM Featherweight Phones, 24000 ohm. impedance can pick up signals so faint that they would not be heard in speaker. List Price, \$10.00.

YOUR NET PRICE..... **\$6.95**

BALDWIN TYPE C, mica diaphragm

phones, Net..... **\$4.75**

CANNONBALL Phones, 2000 ohms.....\$1.25

PHONE PLUGS, for single pair phones.....19c

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Guaranteed to Produce Results

Reduces man-made noise which comes in through the electric power lines. When inserted between the radio receiver and the electric outlet socket or between any noise producing equipment (vacuum cleaners, motors, electric fans, refrigerators, etc.) and the electric outlet socket, it will suppress the disturbance. List Price, 6.75..... **\$3.95**

YOUR NET PRICE.....



SEE OUR OTHER ADVERTISEMENTS ON PAGES 48 AND 49.

SOL PERLMAN, E.E. CONSULTING ENGINEER ON
 ANTENNA PROBLEMS TO LYNCH

TECHNICAL ADVISOR OF THE NEW YORK CHAPTER OF THE CLUB

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ALWAYS MENTION THE CLUB WHEN BUYING

"MIRACULOUS!"

LYNCH
—HI-FI—

TRADE MARK REGISTERED
(High-Fidelity)

ANTENNA SYSTEMS

**Guaranteed to outperform
any other aerial**

"The Doubleday-Hill Electric Company of Pittsburgh reports that performance of the LYNCH Hi-Fi Antenna System is absolutely miraculous, as never before have they been able to demonstrate any short wave reception, but now they get practically everything that is on the air."
—FRANK A. BAUMGARTEN

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for your protection. It cannot be duplicated by others. There is nothing "just as good." Don't accept substitutes because

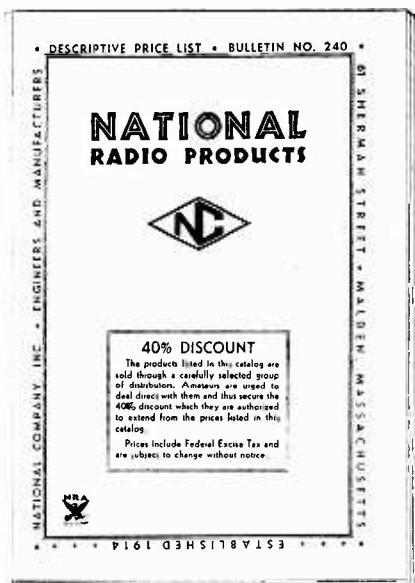
**"No Radio Can Be Better Than Its Aerial—
No Aerial Is As Good As a LYNCH Aerial."**

Full Information on Request

**Arthur H. Lynch, Inc., 227 Fulton St., N. Y.
PIONEER OF NOISE-REDUCING AERIALS**

ANNOUNCEMENT

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.



YOUR COPY IS READY!

NEW NATIONAL CO. CATALOGUE No. 240

The new NATIONAL Company Catalogue No. 240 is ready. Many new items are illustrated and described, including the new HRO Amateur Receiver, new TR 5-Meter Transceiver, new Cathode Ray Oscilloscope, new Transmitting Condensers, new PW Precision Condenser and Micrometer Dial Unit, many other new components for Short Wave Receiver construction; and the latest catalogue information on the well known NATIONAL SW-3, FB-7A, FB-XA, PSK Preselector, and other SW Receivers and Converters; and Power Units, Dials, Condensers, Transformers, Chokes, etc., for high frequency work.

USE COUPON BELOW

NATIONAL CO., Inc., 61 Sherman Street, Malden, Mass.

Gentlemen: Please send me your new Catalogue No. 240. I enclose 6c to cover postage and mailing.

Name.....

Address..... ISW-1-35



SAVE UP TO 50% by BUYING YOUR RADIO DIRECT FROM MIDWEST LABORATORIES

Thrill to Guaranteed WORLD WIDE HIGH FIDELITY
Performance with this Amazing New 1935-36

BEFORE you buy any radio write for the new FREE 1935-36 Midwest "Fifteenth Anniversary" catalog and see for yourself the many reasons why 110,000 satisfied customers bought their radios direct from the Midwest Laboratories and saved from 1/3 to 1/2. Why pay more than the direct-to-you laboratory price? You, too, can make a positive saving of from 30% to 50% by buying this more economical way. Learn why Midwest outperforms sets costing up to \$200.00 and more. Never before so much radio for so little money! Midwest gives you triple protection with: 1 Yr. Guarantee, Foreign Reception Guarantee, Money-Back Guarantee.

16-TUBE
All-Wave
RADIO

30 DAYS FREE TRIAL

TERMS AS LOW AS \$5.00 DOWN

50 ADVANCE 1935 FEATURES

Many exclusive features include: Micro Tenuator... Fidel-A-Stat... Separate Audio Generator... Ceramic Coil Forms, etc. Only Midwest covers 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.

All 5 Wave Bands enable you to enjoy today's finest High Fidelity American programs. In addition you get Canadian, police, amateur, commercial, airplane and ship broadcasts and derive new delight and new excitement from unequalled world-wide broadcasts... England, France, Germany, Spain, Italy, Russia, Australia, etc. Send today for money-saving facts!

SENSATIONAL HIGH FIDELITY RECEPTION

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.



NEW STYLE CONSOLES

This Midwest 36-page catalog pictures a complete line of beautiful, artistic de luxe console and chassis in four colors. Write for new FREE catalog today!

Midwest long-range radios are priced as low as— **\$27.50**

MIDWEST RADIO CORP.

DEPT. 29-A — CINCINNATI, OHIO, U. S. A.

Established 1920

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 GSB, GSB, come in extremely well.
R. T. Fursley,



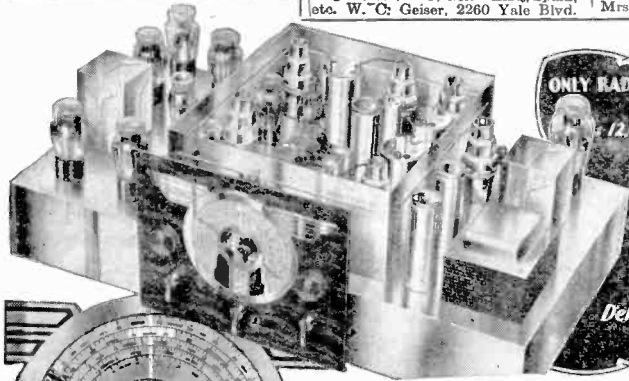
Springfield, Ill.—I investigated all makes of radios, and I chose the Midwest. No radio made can equal it. I logged with ease and good volume: LSX, LSN, HJLABB, HJ5ABD, YVHIC—VK2ME, Australia—GSC, GSB, GSA.

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.



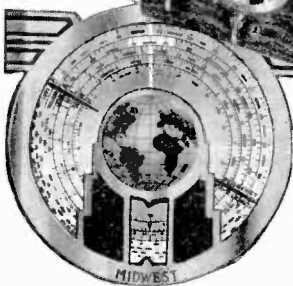
Mrs. M. C. Mondy, 174 Marshall St.



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

WORLD'S GREATEST
RADIO VALUE

\$57⁵⁰
with New
Deluxe Auditorium-Type
SPEAKER



Only Midwest Gives You Multi-Function Dial

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:

TERMS
as low as
\$5.00
DOWN

1. Dial calibrated in Kilocycles, Megacycles and Meters.
2. Call letters of American Broadcasting Stations printed on dial [and illuminated.]
3. Slow-Fast, Smooth-Action Tuning.
4. Station Group Locator.
5. Simplified Tuning Guide Lights.
6. Automatic Select-O-Band Indicator.
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8. Silent Shadow Tuning—Improvement on Meter Tuning.
9. Centralized Tuning.

DEAL DIRECT WITH LABORATORIES

Increasing costs are sure to result in higher radio prices soon. Buy before the big advance...NOW..

SAVE UP TO 50%

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!



Send for FREE 1935 Catalog!

MAIL COUPON TODAY! FOR AMAZING 30-DAY FREE TRIAL OFFER AND NEW 1935 CATALOG

MIDWEST RADIO CORP., Dept. 29-A Cincinnati, Ohio.

Without obligation on my part send me your new FREE 1935 catalog, FREE Miniature Dial, and complete details of your liberal 30-day FREE trial offer. This is NOT an order.

User-Agents Make Easy Extra Money

Check Here for Details

Name _____

Address _____

Town _____ State _____

Check here if interested in a world-wide battery radio.

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.

Every month we receive letters from members who bought this globe, telling how pleased they are with it. But here is positive proof that the globe is Okay. Dr. Gilbert S. Bovard, Sierre Madre, Calif., has purchased four for himself and his friends. T. F. English, Fort Spring, W. Va., has ordered three for friends who saw his. Donald I. Gross, Asheville, N. C., has ordered three for friends who saw his. Many others have ordered their second and third globe, after receiving the first one.

WE PAY THE POSTAGE

In judging the price on these globes, remember that we pay the postage. This amounts to as much as \$1.00 to many distant places.

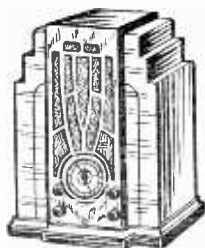
Why not get a globe to mark the places where you have tuned-in stations, measure distances to these stations, follow the expeditions and add to the beauty of your radio set as well as add to your pleasure in tuning? Just send \$3.25 (for U.S.A. members), or \$3.75 (for foreign members) and this globe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

Address your letter to the—

INTERNATIONAL SHORT WAVE CLUB, East Liverpool, Ohio

NEW BAND SPREAD SUPERHET WITH DUAL 3-GANG CONDENSER

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.



★ CONTINUOUS BAND-SPREAD ★ **ALL-STAR** FREE CIRCUIT DIAGRAM AND PARTS LIST ALL-WAVE Superheterodyne

Here's today's sensation in Short Wave Build-Your-Own Kits. Thousands of Short Wave fans are talking about, and building this remarkable set. Designed by 8 of America's leading radio parts manufacturers. Amazing for DX results! Offers continuous band-spread tuning; optional beat-note oscillator; 10-550 meter tuning range; 7-tube superhet. circuit, A. C. operated; latest tubes; pre-adjusted coils, etc. Easy to build—detailed instructions show where each wire goes. Write today for FREE Parts List and circuit diagram. Only \$2.50 will start you building this great set. For this sum you get the All-Star Foundation Kit consisting of drilled chassis base and front panel, instructions, diagrams, etc. Then you buy the remaining parts as you need them. Write for complete information.

FREE! ALLIED'S NEW 1935 RADIO CATALOGUE! FREE!

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!



WRITE TODAY!

Allied Radio

833 W. JACKSON BLVD., CHICAGO, ILL.
Dept. IS.

Please send me the following:

- FREE 1945 RADIO CATALOG.
 FREE ALL-STAR PARTS LIST.

Name.....

Address.....

CYRIL GILMOUR

Mr. Gilmour was one of our first Canadian members.

He has been of great help to the club by sending in news and comments. He is in his fourth year in short wave work, and also his fourth year in the I. S. W. C.

Mr. Gilmour lives in Kingston, Ontario. He says he first heard of the Club in a notice the manufacturer had put in a set. He

says he thanks that notice and that manufacturer to this very day.

His verifications consist of stations most everywhere. His most prized verification is from G5SW, a station now off the air.



DISTANCES AND MAIL TIME FROM NEW YORK CITY

A great many times we have been asked to tell members how long it takes to get a reply from a certain station. This is something no one can say. A lot depends on how quick the station takes care of the report. But, we can tell you how long it takes a letter to go from New York City to the station. Members should figure how long it takes for their letter to reach New York and how long it takes a station to answer a letter, when figuring how long it should be to get a reply. In this list we give the distance from New York and the mail time.

	Miles	Days		Miles	Days
Berlin, Germany.....	4,597	12	Lima, Peru.....	3,807	14
Bombay, India.....	9,434	25	Lisbon, Portugal.....	5,342	12
Brussels, Belgium.....	4,137	11	Moscow, U. S. S. R.....	5,639	18
Buenos Aires, Arg.....	6,914	18	Melbourne, Australia..	11,253	31
Calcutta, India.....	11,324	28	Mexico City, Mexico....	3,760	6
Cape Town, S. Africa..	11,033	27	Paris, France.....	3,946	10
Colon, Panama.....	2,273	7	Rio de Janeiro, Brazil..	5,493	13
Cairo, Egypt.....	6,135	17	Rome, Italy.....	4,954	14
Copenhagen, Denmark..	4,639	13	Santiago, Chile.....	5,398	22
Geneva, Switzerland...	4,349	12	Shanghai, China.....	9,530	23
Huizen, Holland.....	4,043	11	Singapore, S. S.....	13,358	36
Honolulu, Hawaii.....	5,599	12	Stockholm, Sweden....	5,405	15
Jeloy, Norway.....	4,372	13	Tokio, Japan.....	8,717	18
Khabarovsk, Siberia..	11,343	25			

Please do not ask for back copies of the magazines. We do not have any.



HENRY SHAW AND WILLIAM TOWNSEND

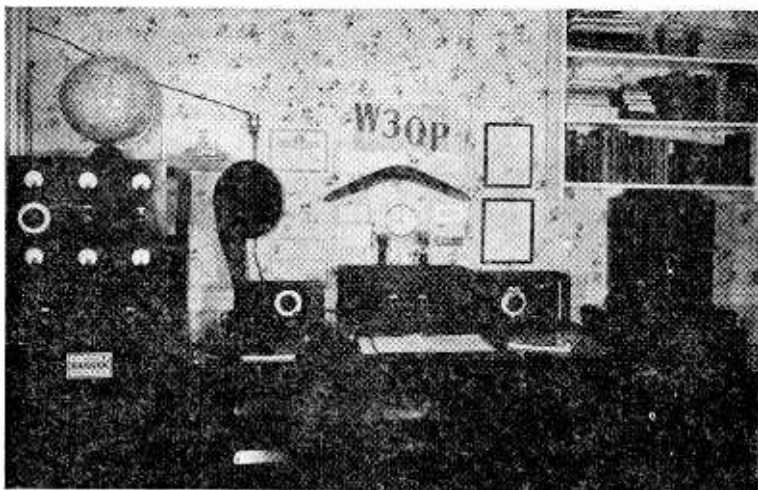
Here are members Henry Shaw of Cape May, New Jersey and William Townsend of Ocean City, New Jersey. The serious-minded young man of the left is Mr. Shaw and the one who seems to think the world is a grand place is Mr. Townsend. This photo was taken recently upon an occasion when Mr. Shaw paid Mr. Townsend a visit. These two young men have been life-long friends, having went through school together. Both joined the I. S. W. C. many years ago and both are enthusiastic members.

The equipment used by Mr. Townsend and some of his verifications are shown in the photo. He says his first verification came from HRB, before that station closed down. He adds that the only reason he is not an H-A-C. is that it takes too much effort to get up early in the mornings to get Asia. It certainly shows he is honest, to admit this. He also says that "I assure you that I would have given up short waves as a hobby in disgust long ago if it were not for the Club." Thanks for the compliment, W. T., and we hope we can keep you interested for a long time to come.

LATE JANUARY ISSUE

Due to the fact that Christmas Day and New Year's Day came at a time when we were getting out this issue of the magazine, we are a little bit late. We imagine that the mails will be heavy at this time also, and this will add to the delay in receiving this magazine.

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



JOHN B. MORGAN II, CHESTNUT HILL, PA.

When Jack Morgan opens his copy of this magazine, he is going to be a much surprised man, for he hasn't the slightest suspicion that we are going to use this photograph of his radio room. But, honest effort can not go on forever unrewarded. And we certainly owe Mr. Morgan a lot of thanks for the things he has done for us. Without hesitation we can say that he has directly brought more than one-hundred new members into the Club. And always in a quiet, off-hand manner, with never a thought of personal glory, or compensation.

Mr. Morgan owns and operates station W3QP, an amateur station, which is shown on the left. The world globe was won some years ago in an I.S.W.C. contest. He sent us this photo at the time to show how thankful he was for the globe. And listen, Jack, if running this photo makes you any happier, it makes us happy, too.

Every Christmas thousands of radios are sold. This one was no exception and many people will tune for short wave stations for the first time. Here are a few words of help. American-made receivers are now calibrated in megacycles on the short wave bands. The numbers such as 6 and 7 on the dials mean 6.00 and 7.00 mc., and the space in between represents wavelengths between 6.00 and 7.00 mc. The second group of numbers in our station list is megacycles and stations shown between 6.00 and 7.00 in the list will be heard between 6 and 7 on the dial. Of course those nearest 6.00 will come nearest 6 on the dial, etc.

CHAPTER NEWS

London, England. An election of officers was held on November 16. The following were elected: President, J. E. Underhay; Secretary and Treasurer, Arthur E. Bear; Chairman, J. E. Hunter, Vice-Chairman, A. F. Larkman; Technical Advisors, G. Hayes, C. H. Durrante, F. Rand and W. J. Nobbs. This chapter meets at RACS Hall, Wandsworth Road, London, SW8, each Tuesday with the exception of the second one in each month. The time is 8:00 P.M. and all are welcome. At present this Chapter is demonstrating American-made receivers.

Leicester, England. This Chapter is holding a contest called "the Talbott Trophy Contest." It is for distant stations, and verifications count. The Trophy was given by Rex Talbott. They meet Wednesdays at 4B Princess Road.

Manchester, England. This Chapter celebrated their first year with a special meeting on December 4. They will meet in the future as follows: January 7 and 22; February 5 and 19; April 2 and 16. They start at 7:15 P.M. Officers recently elected are H. Wild, Chairman; R. Lawton, Secretary and Treasurer; H. Andrews, Technical Advisor. Owing to the success of a recent "junk sale" another one will be held Jan. 22.

Jersey City, New Jersey. This Chapter meets January 10 and 24 at 7:30 P.M. at 2159 Hudson Blvd., Jersey City. Everyone living within traveling distance is invited to attend. Demonstrating popular receivers at each meeting.

New York City. Meets at Irving Plaza, Irving Place and East 15th Street, on the second and fourth Friday of each month. This Chapter also broadcasts over WVFW, WLTH and WARD on 1400 kilocycles each Thursday at 11:00 P.M. They also have a tuning station at 10 Glenmore Avenue, Brooklyn, where members bring their receivers and tune. For details write to 1622 44th Street, Brooklyn, N. Y.

CLUB SUPPLIES

Just remember that the Club sells many useful articles to short wave fans. We have a beautiful 12-inch Globe for \$3.25, club stationery with the club emblem at fifty cents per hundred sheets. Seals for those who wish to use ruled paper, or their own stationery, for thirty cents per hundred.

By request we have printed a Short Wave Help Book. It lists such things as "How to Get Verifications," the address of nearly every Short Wave Broadcast Station in the world, helpful tips on tuning and many other things. These are not sold as a treatise on Short Wave Radio. It is merely a number of things which have been printed in the club magazine in the past and which has been requested by members over and over again. Nearly every Short Wave fan will be pleased to have one of these. If one is purchased and the owner is not pleased with it we stand ready to refund the money at once. In writing please mention "Short Wave Helps and Hints." The price is five cents a copy.

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

A new Cuban station is on the air. Details are just a bit vague at present. The station is on about 48.23 meters or 6.22 mc. and it was heard between 5:00 and 10:00 P.M., usually broadcasting between 7:30 and 10:00 P.M. and working other stations like COH, COC, YV3RC, KHE and HI1A. One member reported it at Midnight working amateurs. We are told that it is at Cienfugese, Cuba, by some, but one member tells us it is owned by Radio Laboratories de Grau y Camineros, Box 137 Agramonte y Heredia, Santiago de Cuba, Oriente, Cuba. Listeners should try for it most any night between 5:30 and 10:00 P.M. Reports have come from Ramon Marti, Santurce, P. R.; Samuel Sternberg, Far Rockaway, N. Y.; James Spalding, Louisville, Ky.; Charles Miller, Covington, Ky.; John Shanks, Russellville, Tenn.; H. S. Bradley, Hamilton, N. Y.; Walter Jasiorkowski, Milwaukee, Wis.; Henry Shaw, Cape May, N. J., and W. C. Motz, Amherst, Va.

COH, Havana, Cuba, on 31.80 meters, 9.43 mc., at Calle B No. 2, Vedado, Havana, must be moving around a bit. It is reported on 8.64 mc. by W. K. Elliot, Cowdersport, Pa., and on 9.46 by Max Horlick, Youngstown, Ohio. Anyhow, it appears to be on 9.43 mc. most of the time. The schedule is daily from 10 to 11 A.M., 5 to 6 P.M. and 8 to 9 P.M. Fred Karpen, Johnstown, Pa., tells us that each Thursday they have some special broadcast usually from 8 to 12 Noon.

COC on 49.96 meters, 6.00 mc., seems to be settled. The schedule is 9:30 to 11:00 A.M., 4 to 6 P.M. and Saturday nights only from 11:30 P.M.

to 12:30 A.M. Fred Hellers, Jr., Philadelphia, reports them one Monday and Tuesday from 8 to 9 P.M. Box 98, Havana, is the address. Several members also report this station on 24.9 meters, or about 12 mc. George Van Honk, Erie, Pa., reports this one Sunday morning from 7:00 to 11:30 A.M. Thomas Van Auken, Livingston, Texas; Gordon Schuman, Appleton, Wisconsin and Robert Zecher, Norfolk, Conn., also reports it on 24.9.

HI4D, La Vaz de Quisquilla, Santo Domingo, Republic of Dominicana, on 45.38 meters, 6.61 mc., has several conflicting reports. Here they are: The schedule calls for broadcasts each week-day from 11:55 A.M. to 1:40 P.M., and 4:40 to 7:40 P.M. This is from Carl Forestiere, New York City. Samuel Solito, Leetsdale, Pa., and H. S. Bradley, Hamilton, N. Y., reports them on 6.61 mc. regular time. Walter Jasiorkowski, Milwaukee, reports them on 6.61 mc. at 9:10 P.M. Henry Shaw, Cape May, New Jersey, reports them using English on 6.60 mc. Charles Miller, Covington, Ky., reports them on the air one Sunday morning at a little past Midnight working amateurs.

HIL, Santo Domingo, R. D., is reported on 45.94 meters, 6.53 mc., and not 46.51 meters, 6.45 mc. No schedule is known.

HIOZ, Santo Domingo, R. D., is reported on 45.4 meters from 6:45 to 8:15 P.M. by W. C. Motz, Amherst, Va. May be a mistake in call letters.

HI3C, La Voz del Rio Dulce, La Romana, R. D., in a card to Ramon Marti, Santurce, Puerto Rico, say they are on 43.48 meters, 6.90 mc., with 15 watts power. No schedule given. Ramon Marti tells us they were on 45 meters.

HIH, San Pedro de Macoris, R. D., "La Voz del Higuamo," on 44.10 meters, 6.81 mc, sends a card saying they are broadcasting daily from 7:15 to 7:45 A.M., 12:30 A.M. to 2:00 P.M. and 7:00 to 8:00 P.M. daily Dominican Time which is twenty minutes ahead of E.S.T. Remember this. W. C. Motz, Amherst, Va., reports them at 7:00 A.M. one Thursday, so it must be Dominican time even though the cards does not say so. H. S. Bradley, Hamilton, N. Y.; Carl Forestiere, New York City; Myron D. Reamy, Yonkers, N. Y.; C Winslow Lewis, Jr.; Charles Nabours, Cameron, Texas, and John Kirby, New York City, have such cards from the station.

W4XP, San Juan, P. R., will not relay WNEL at all, but will pick up programs for this station on about nine meters. Ramon Marti, Santurce, Porto Rico.

ZFS, Nassahu, Bahamas, on 66.50 meters, 4.51 mc., is back again. John Kirby, New York City, heard them at 5:30 P.M. working ships.

HIX, Santo Domingo, R. D., says they are on 50.5 meters, but are really on 50.08 meters, 5.99 mc. The schedule is Tuesdays and Fridays from 8:10 to 10:10 P.M. and Sundays from 8:40 to 10:40 A.M. and 2:40 to 4:40 P.M. Carlos Lopez Ona, Havana, Cuba, reports them one Saturday also, sending a baseball game at 4:00 P.M.

HI1A, San Pedro de Macoris, R. D., is between YV3RC and OAX4B on the dials and not on 47.80 meters, or 6.23 mc., according to Dr. Kash, Sevierville, Tenn. John Shanks, Russellville, Tenn., reports them using chimes like our NBC and heard signing off once at 8:45 P.M. and again

from 10 to 11 P.M. once. Mr. Shanks says it is on about 48.2 meters, 6.62 mc. Ramon Martin tells about the chimes too. We hate to move this station on our list, as it may go back to 47.8 again.

CENTRAL AMERICANS

HP5B, Box 910, Panama City, Panama, on 49.5 meters, 6.05 mc., also called HP5A at times when working with other stations and not broadcasting. This station has been reported by many members. It broadcasts nightly from 8:30 to 10:30 P.M. and is found between DJC, Germany, and XEBT, Mexico. It was also heard at odd hours of the day working with other stations. From 1:30 to 3:30 A.M., at 5:00 P.M., at 11:00 P.M. and at Midnight, according to reports. They use English and Spanish. Reports have come from Harold Lamont, J. B. L. Hinds, Carlos Irizarry; H. S. Bradley, Robert Stuart, E. Sigman, John Shanks, Lewis Prettyman, John Kovatch, Carl Cochran, Wilfred Siddle, Carlos Lopez Ona, Samuel Sternberg, Samuel Solito, Frank Grey, Walter Jasiorkowski, P. M. Baldwin, A. B. Baadsgaard, Salvador Cazabon, Gordon Schumann, G. C. Gallagher, Albert Leonhardt, Jasper Mulle, Henry Shaw, Carl Anderson, Dr. R. C. Kash.

XEBT, Mexico City, Mexico, on 50.10 meters, 5.99 mc. is broadcasting most every night from 6:00 P.M. to 1:00 A.M. Robert Edgren of Pacific Grove, California, tells us that the Cuckoo call is the station identification while the rooster crowing and train whistling, etc., are program signals.

HRM, Tela, Honduras, on 20.72 meters, 14.48 mc., phones WNC, Florida irregularly and works code on 21.72 meters, 13.81 mc., according to a letter from A. B. Engle, Chief Operator, Tela Railroad, Tela, Honduras, to Bob Everard, Standon, England.

TGF, Guatemala City, Guatemala, on 20.72 meters, 14.48 mc., address is Walter C. Bay, Supt., 12 Calle Oriente 1B, Guatemala City, according to Bob Everard, Standon, England.

TGW on long waves announced recently that they expected to go on short waves 50.51 meters, 5.94 mc., and 25.25 meters, 11.88 mc., around the first of the year. This was heard by A. M. Pleyte, Yarmouth, Maine.

TGX, Guatemala City, on 51 meters, 5.88 mc., in a letter to Donald I. Gross, West Asheville, North Carolina, says they are on 5.94 mc. and 11.88 mc. (same as said above for TGW, please note). TGX is reported on 51 meters, 5.88 mc., from 9:00 P.M. to Midnight by John Shanks, Russellville, Tenn. The schedule is daily excepting Sundays from 6:00 to 8:00 A.M.; 11:00 A.M. to 1:30 P.M., and 6 to 10 P.M. but we do not believe they keep this schedule faithfully.

YNLF, Managua, Nicaragua. A card from this station to John B. L. Hinds, Yonkers, New York, says they have 1,000 watts on 44.71 meters, 6.714 mc., and on the air daily from 10 to 11 P.M. However, written on the top were the words "daily 8:00 to 9:00 P.M." John Shanks of Russellville, Tenn., reports this station on 50.4 meters, 5.95 mc. It was working with HP5B. Samuel Sternberg, Far Rockaway, New York, says it was on 49.90 meters, 6.01 mc.

YNCU, Managua, Nicaragua. This station worked HP5B on 42.9 meters, 6.99 mc., at 11:00 P.M. several times according to Wilfred Siddle, Birmingham, Alabama.

TI4NRH, Heredia, Costa Rica. A letter from the owner to Samuel Solito, Leetsdale, Pa. says they expect to be on the air again from 5:30 to 7:00 P.M.

TIEP, San Jose, Costa Rica, on 44.71 meters, 6.71 mc. This station broadcasts on this wave daily from 7:00 to 10:00 P.M. and works amateurs at other times of the day. A TRK, Cartago, Costa Rica, was reported on this wavelength also. It was calling HPC, Panama City, at 5:45 P.M. according to Samuel Solito, Leetsdale, Pa. TIEP on 22.35 meters, 13.42 mc., was not reported once this month. They were supposed to broadcast each Sunday from 1:00 to 4:00 P.M. on this wave.

TIXGP3, San Jose, Costa Rica, on 51.50 meters, 5.82 mc. Some conflicting reports have been received on this. Samuel Solito, Leetsdale, Pa., reports it at Midnight working station HJ1ABG. Carlos Lopez Ona, Havana, Cuba, reports it at 1:15 P.M. announcing "La Reina del Aire" (The Queen of the Air) on 51.90 meters. They used a trumpet call before each announcement. John Shanks, Russellville, Tenn., tells us they do not use chimes and that the station using chimes moved to 49.4 meters. Both were near 51.8 meters at one time. Henry Shaw, Cape May, New Jersey, says the call is TIXF3, while others are just as sure it is TIXGP3. F. L. Stitzinger, Erie, Pa., says it comes on at 7 P.M. instead of 8 P.M.

HPC, Panama City, Panama, on 42.92 meters, 6.99 mc., is reported by John B. Morgan, Philadelphia, after 5:00 P.M.; by Walter Jasiorski, Milwaukee, Wisconsin, on 40 meters phoning Bogota at 6:00 P.M.

SOUTH AMERICANS

W. H. Chippendale, Concepcion, Paraguay, sends us a newspaper photo of the new ZP10 mentioned last month. He gives the address as "El Orden" Asuncion, Paraguay, the wavelength as 8.10 mc. and the announcement as "Say Day Bay dees Ascuncion." We were told last month that ZP10 was on 45.00 meters, 6.66 mc. and broadcast 11:00 A. M. to 7:00 P. M. irregularly. A station CE3AC, Santiago, Chile, on 45.4 meters is reported working with a station in Asuncion, Paraguay, which is on 46.7 meters, 6.42 mc. at night, by Walter Jasiorkowski, Milwaukee, Wis.

OAX4D, Lima, Peru, 51.90 meters, 5.78 mc. Although some mystery still surrounds this station and several others in Lima, we have cleared up one part of it. A letter sent to us by Jean Salles of Mexico City, shows us that there is only one address for the stations heard on 51.9, 48.00 and 38.36 meters, which must mean that all are operated by the same people. This letter showed "Auto Talleres Reunidos" at the top of the page, "Messrs. Grellaut & Company" below that, "Apartado 1242" as the postal address and "Avenida Abancay 915 to 923" as the street address. According to this, stations OA4AC, OA4AD and OA4AB must be one station on different waves, operating at different times. OAX4B on 48.00 meters, 6.23 mc. broadcasts Wednesdays and Sundays, 7:00 to 9:00 P. M. OAX4D on 51.9 meters, 5.78 mc., broadcasts Wednesdays and Saturdays 9:00 P.M. to

11:30 P.M. OAX4C on 38 meters has been off the air for some time. John DeMyer, Lansing, Michigan, has a letter from R. Grellaud, saying OAX4B is on the air as given above. W. C. Motz, Amhurst, Va., has a letter from All-American Cables, Box 853, Lima, who rent the short wave station to the owners of OA4AD, Lima, for re-broadcasting their programs. It says OA4AD is on 51.9 meters. Hyman Cohen of New York City, says they send the letters OA4AD in code after each broadcast, while Henry Shaw of Cape May, tells us they send the letters OAX4D in code. George Tingle of Chapetique, El Salvador, says OAX4B signs off with the recording of "the Good Night Song" and that it is heard often at 5:00 P.M. OAX4D on 5.78 mc calls itself "The Voice of Peru" and uses the "Good Night" song also. We have reception reports from several hundred members on these stations.

OCJ2, Lima, Peru, 20.19 meters, 15.848 mc., a phone, was working HJY Colombia, 4:00 to 5:00 P.M. and 11:00 to 11:15 A.M. according to members H. S. Bradley, Hamilton, N. Y. and Sam Solito, Leetsdale, Pa.

PSK, Rio de Janeiro, Brazil, 36.65 meters, 8.19 mc. is relaying the Radio Club of Brazil again according to Fred Heller, Jr., Philadelphia, who heard them at 7:00 to 7:30 P.M. Again we remind members that PRF5, 31.56 meters, 9.50 mc. is not relaying this program. This station broadcasts the National programs from 5:30 to 6:15 P.M. and reports should be addressed to Impresna Nacional Gabinete do Director Generale, at Rio de Janeiro.

PPQ, Rio de Janeiro, 25.73 meters, 11.67 mc. was heard quite often last month. Bruce T. O'Leary, Marshall, Mich., reports it 4:45 to 5:00 P.M. and George Van Honk, Erie, Pa., 6:30 to 7:30 P.M. Myron D. Reamy, Yonkers, New York, has a letter giving their address as Caixa Postal 500, Rio. H. S. Bradley of Hamilton, New York, tells us there are two Brazilian phones near 20 meters. PSE is on 20.05 meters, 14.96 mc. usually phoning Madrid, 9 to 10 A.M., and Argentina and New York in the afternoons. PSF is on 20.42 meters or 14.69 mc.

CP5, La Paz, Bolivia, 49.34 meters, 6.08 mc., say they are on the air daily from 7:45 to 9:15 P.M. Bob Everard, Standon, England reports.

PRADO, 45.31 meters, 6.62 mc. was testing with station WET New York, December 11th, at 6:25 P.M., this from H. J. Davison, Bayamon, P. R., and J. Leesburg, Kelawana, B. C. This station broadcasts Thursdays, 9:00 to 11:30 P.M.

HJ1ABB, Barranquilla, Colombia, 46.51 meters, 6:45 mc. New schedule is 4:30 P.M. to 10:00 P.M. now. This station tested with W2XAF, New York, December 17th from 6:30 to 7:00 P.M. They also broadcast a special 24-hour program December 7th and 8th. From 12:00 midnight to 12:30 A.M. the program was dedicated to the I.S.W.C. This station is now relaying long wave station HJ1ABA, so you hear two stations announced over the air. We thank the following for help on this: C. B. Locke, Chicago; John Shanks, Russellville, Tenn.; Sam Solito, Leetsdale, Pa.; F. L. Stitzinger, Erie, Pa.; Lester H. Smith, Quincy, Mass.; K. W. Caldwell, Gallup, New Mexico; H. J. Davison, Bayamon, P. R.; Forrest Messell, Chillicothe, Ohio; Walter Jasiorkowski, Milwaukee, Wis.; John Kirby, New York City.

HJ1ABD, Cartagena, Colombia, 49.20 meters, 6.098 mc., Box 252. Letter says they broadcast daily 7:30 to 9:00 P. M. and 11:30 A. M. to 1:00 P. M. They use a signature "Condas de la Heroica." This was received by John Shanks, Russellville, Tenn. H. S. Bradley, Hamilton, N. Y., got a card saying the schedule was 11:15 to 1:15 P. M. and 7:15 to 9:15 P. M. daily. So, when the owners don't know, who are we to claim to know the schedule.

HJ1ABE, Cartagena, 49.05 meters, 6.10 mc. broadcasts Wednesdays 8:00 to 10:00 P. M. and Sundays 9:00 to 11:00 A. M. and Mondays 10:00 P. M. to midnight, according to their own statement, but Henry Shaw, Cape May, New Jersey, says they are on 50.4 meters 7:00 to 10:00 P. M. almost every night. He must be confusing them with some other station.

HJ2ABA, Tunja, 48.60 meters, 6.17 mc. broadcasts Tuesdays, Thursdays and Saturdays 7:00 to 10:00 P. M. and Fridays at 11:00 A. M. to 1:00 P. M., according to the station owners. John Shanks, Russellville, Tenn. tells us they are on 48.10 meters, not 48.6, and it is heard between 5:30 and 5:50 P. M. Maybe it was Charles Miller, Covington, Ky., and not Mr. Shanks who sent this report in.

HJ2ABC, Cucuta, 50.20 meters, 5.98 mc., is owned by the same man as HJ2ABA, Pompilio Sanchez. The schedule is daily 11:00 A. M. to noon and 6:00 to 9:00 P. M. John Shanks, Russellville, Tenn., reports an HJ2ABE or I at Cucuta on 50.9 or 5.78 mc. from 7:00 to 10:00 P. M. This may be some station relayed by HJ2ABC.

HJ1ABG, Barranquilla, 49.65 meters, 6.04 mc., is reported at 11:30 P. M. calling Costa Rica, by John Kirby, New York City. Walter Jasiorkowski, Milwaukee, reports it as early as 4:00 P. M. saying also that they announce as "Radio Atlantico."

HJ3ABD, Bogota, on 40.55 meters, 7.40 mc. They give their schedule as 6:00 to 11:00 P. M. daily. They also work tests with other stations after 11:00 P. M., however. They announce as "Colombia Broadcasting" and use bells and some kind of a bird signal. H. S. Bradley of Hamilton, New York, says he hears them often at 5:00 P. M. Other helpful reports have come from Carlos Lopez Ona, Havana, Cuba; Ed Lips, Pittsburg, Pa., and Dr. R. C. Kash, Sevierville, Tenn., who tells us the address is Box 509.

HJ3ABF on 48.7 meters, 6.2 mc., at Bogota. This station is not off the air, as stated last month. The schedule is daily excepting Sundays Noon to 1:30 P. M. and 7:00 to 11:00 P. M. They use English on Fridays from 6:30 to 7:00 P. M. They use six chimes and announce in English often. Walter Jasiorkowski, Milwaukee, Wisconsin, says they are not on that wave, but on 48.47 meters, or 6.18 mc.

HJ3ABH, Bogota, Colombia, on 50.1 meters, 5.99 mc. This station uses three chimes. One schedule gives the time from 12:00 Noon to 2:00 P. M. and from 7:00 to 11:00 P. M. daily. Another says that on Wednesdays and Saturdays they start at 6:00 P. M. and Sundays from 4:00 to 8:00 P. M. Reports have come from Walter Jasiorkowski, Milwaukee, Wisconsin, and John Shanks, Russellville, Tenn.

HJ5ABB, Manizales, Colombia, on 42.00 meters, 7.15 mc., gives their

schedule as week-days from 12:15 to 1:00 P.M. and Wednesdays and Fridays from 7:30 to 10:00 P.M. and Sundays from 2:30 to 5:00 P.M., but we do not believe they adhere to this. H. S. Bradley, Hamilton, New York, reports them daily from 5:00 to 7:00 P.M. A. M. Pleyte, Yarmouth, Maine, tells us of hearing it at 7:45 P.M. often. Chas. Miller, Covington, Ky., reports it one Saturday at 6:30 P.M. W. C. Motz, Amherst, Va., reports it.

HJ4ABE, Medellin, on 50.59 meters, 5.93 mc., gives their schedule as daily from 11:30 A.M. to 12:30 Noon. Sundays, Tuesdays, Thursdays, and Saturdays from 6:30 to 10:00 P.M.; Mondays, Wednesdays, Fridays, from 7:15 to 11:00 P.M.

HJ5ABC, Cali, on 58.82 meters, 5.10 mc., give their schedule as daily from 11:00 A.M. to Noon; Tuesdays and Thursdays from 8:00 to 10:00 P.M. and Sundays from 12:00 to 1:00 P.M.

HJ5ABD, Cali, on 46.15 meters, 6.50 mc., give their schedule now as daily from 12:00 to 1:30 P.M. and 7:00 to 10:00 P.M. No reports have been received from members.

HJN, Bogota, on 49.35 meters, 6.07 mc., has a new transmitter which went on the air December 21st with a special program. They were on from 1:00 to 3:00 A.M., that day. The regular schedule is 12:00 to 1:30 P.M. and 6:00 to 11:00 P.M., daily excepting Sundays and Holidays. Robert L. Weber, West McHenry, Illinois, and H. M. Pleyte, Yarmouth, Maine, reports this and gives the address as Ministerio de Correos y Telegrafo, Bogota, Colombia.

HKE, Bogota, on 41.55 meters, 7.22 mc. This station is on 7:10 mc., and heard on Thursdays and Fridays according to Max Horlick, Youngstown, Ohio, although the owners give the wave as we do and say they broadcast on Mondays and Thursdays from 6:00 to 9:00 P.M. and Saturdays from 8:00 to 9:00 P.M. Mr. Horlick reports them at 11:00 P.M. to 1:00 A.M.

The Colombian Phones. HKQ, Base Aera de Cali, 6.50 mc., was reported working aircraft between 4:00 and 5:00 P.M. by Pedro Quintana Cabot Cifuentes, Cuba. HJA3 on 19.91 meters, 15.07 mc., worked WNC, Florida, at 10:00 A.M. says Albert Emerson, Cleveland, Ohio. Fred Karpen, Johnstown, Pa., says this station is on 20.05 meters, not 19.91. HJA3 on 6.40 mc. was reported at 1:30 A.M. working HJA2 by H. S. Campbell, Upland, California. HJA7 on 5.50 mc., owned by Colombian Petroleum Corp. at Cucuta, operated by club-member Charles Schiffer, sends a verification. Look for this station around 4:00 to 4:30 P.M. Robert Jackson, St. Louis, Mo.; Ralph Williams, Garden City, New York and H. Hozey, Collingswood, New Jersey, have replies from this station. HJY of Bogota, owned by All-American Cables, verified to Kenneth Albrecht, Cheshire, Conn. An unusual thing.

YV6RV, Valencia, Venezuela, on 49.75 meters, 6.03 mc., called "La Voz de Carabobo" will be on the air soon.

YV5RMO, Maracaibo, Venezuela, sends a card to R. B. Law, Toronto, Canada, and Dr. R. C. Kash, Sevierville, Tenn., saying they are now on 51.28 meters, 5.85 mc., and their address is Apartado 214. They use the

identification "Ecos del Caribe." H. J. Davison, Bayamon, P. R., says this station tests with YV4RC often around 4:00 P.M. and after 11:00 P.M. This station is heard on 25.7, but this is a harmonic. W. C. Motz.

YV4RC, Caracas, Venezuela, on 47.10 meters, 6.37 mc., is on the air daily from 4:30 P.M. to 10:30 P.M. now. YV3RC, Caracas, on 48.78 meters, 6.15 mc., is reported once at 8:45 A.M. on Sundays by Francis Worrell, Ann Arbor, Michigan. This station is on the air from 4:30 to 9:30 P.M. YV2RC, Caracas, on 49.08 meters, 6.12 mc., tested with the station WET, New York, once at 10:30 to 11:00 P.M. YV3RC was heard at the same time. This came from H. J. Davison, Bayamon, P. R.; Charles Miller, Covington, Ky., and H. S. Bradley, Hamilton, N. Y. A station on 25.65 meters, 11.70 mc., is reported by several members and it seems to be in Venezuela. It was heard saying they were in Maracaibo and reported at 8:00 to 9:00 A.M. and 5:00 to 6:00 P.M. Carroll C. Foltz, North Baltimore, Ohio; Fred Karpen, Johnstown, Pa., and James Pickering, Hightstown, New Jersey, heard this. The phone, YVR, Maracay, on 32.83 meters, 9.14 mc., phones Madrid, Spain, near 4:10 P.M. according to Mr. Pickering.

PRADO, Rio Bamba, Ecuador, on 45.31 meters, 6.62 mc., broadcasts Thursdays from 9:00 to 11:30 P.M., but W. D. Martin, Honolulu, Hawaii, tells us he heard it on December 3rd from Midnight to 1:00 A.M.

HCK, Quito, Ecuador. Each time we list this station at one place, it is reported at another. Sam Solito, Leetsdale, Pa., reports it on 52.00 meters, 5.76 mc., from 9:15 to 10:05 P.M. H. S. Campbell, Upland, Calif., reports it at 10:03 P.M. F. L. Stitzinger, Erie, Pa., gives the wave as 5.74 mc. and it signed off at 11:00 P.M. on December 12 and 14. Henry Shaw, Cape May, New Jersey, says it signed off at 9:30 P.M. on December eleven. W. C. Motz, Amherst, Va., gives the wave as 52.1 meters and reports it from 8:30 to 10:30 P.M. Walter Jasiorkowski, Milwaukee, Wisconsin, reports it on 5.75 mc.

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HC2ET or P, Guayaquil, Ecuador, 65.20 meters, 4.60 mc., announced their schedule as 9:00 to 11:30 P.M. on Wednesdays and Saturdays. They play their National Anthem at close-down. The address is Apartado 249 and they announce as "El Telegrafo." This all comes from H. S. Bradley of Hamilton, N. Y. J. C. Gallagher, San Francisco, gives the wave as 64.5 meters and the time as 7:00 to 8:00 P.M. Henry Shaw, Cape May, New Jersey, reports it from 9:40 to 10:17 P.M.

LSX, Buenos Aires, Argentina, still relays the programs from Admiral Byrd each Wednesday at 9:00 P.M. They are also said by Fred Heller, Jr., of Philadelphia, to relay a station LS5 between 6:00 and 8:30 P.M. LSL, same city, on 19.02 meters, 15.81 mc., phones GAA, England, near 1:40 P.M. according to Sam Solito, Leetsdale, Pa. LSI on 30.61 meters, 9.80 mc., same city, sent a special program on December 12 from 4:00 to 5:30 P.M. They were also heard at 2:00 P.M. This comes from Max Horlick, Youngstown, Ohio. This station also broadcasts a special program several nights between 7:00 and 8:15 P.M. along with station LSN on 30.30 meters, 9.90 mc., according to Fred Heller, Jr., Philadelphia, Pa.

Net Work. Before ending the South American news we wish to remind members that a great many of these stations and many in Central America and the West Indies get together and exchange programs and talk with each other from 11:00 P.M. until as late as 4:00 A.M. There are too many to name them all for as many as twenty stations have been heard in one night in one of these "get-togethers."

THE EUROPEANS

Rome, Italy, on 49.02 meters, 6.09 mc., and 30.67 meters, 9.78 mc. This station has been broadcasting on one of these two waves nearly every day during the past month. Each Monday, Wednesday and Friday they broadcast a special "American Hour" from 6:30 to 8:00 P.M., using English. It may be on one or the other wavelength, there seems to be no set wave. On 37.4 meters, or 8.02 mc., the station was reported once and that time it was relaying a program from Sweden, Switzerland, Hungary, and other European countries. It was on this wave one Saturday at 7:00 P.M. according to R. Braunholdt, Evanston, Illinois. Nearly every day the station can be heard on 30.67 meters, 9.87 mc., from 12:00 Noon to 5:30 P.M. And on the nights mentioned above the American program is broadcast.

Rome, Italy. The address of these stations is E. I. A. R. Ente Italiano Audizioni Radiofoniche, Roma (49), Italy, or Montello 5, Roma, Italy. F. L. Stitzinger, Erie, Pa., received a card from the first address and W. A. Dean, Hartford, Conn., from the second. The "American Hour" can be recognized by the "Star Spangled Banner" played at the beginning and close of each program. Those who reported this station in the afternoons on 30.67 meters are George Van Honk, Charles Hoffman, J. B. L. Hinds, Carlos Lopez Ona, Thomas Van Auken, J. S. Tennen, M. D., Charles Miller, Salvador Cazabon, Carroll Foltz, Roy Sanders, J. Leesburg, Walter Jasiorkowski, John Kirby, and Stuart Walmsley. H. J. Davison, Bayamon, P. R., reports it at 9:15 P.M. on 30.67 meters.

IRM, Rome, Italy, a telephone station is reported working LSX one

Monday from 5:00 to 5:30 P.M. and WOF, New York, one Thursday at 5:45 to 6:30 P.M. This by C. Winslow Lewis, Wellesley, Mass. Max Horlick, Youngstown, Ohio, reports it from 1:30 to 2:00 P.M. working LSX. George Van Honk, Erie, Pa., reports it on December 19 and 20 working LSX between 6:00 and 7:00 P.M. IRW on 15.37 meters, at Rome is reported sending music often between 8:30 and 9:30 A.M. by Fred Karpen, Johnstown, Pa. IAC, Piza, Italy, a phone on 45.1 meters works ships at 2:40 P.M. according to James Pickering, Hightstown, New Jersey.

CT1AA, Lisbon, Portugal, on 31.25 meters, 9.59 mc. This station has changed their schedule. They broadcast now each Tuesday, Thursday and Saturday from 4:30 to 7:00 P.M. They use three cuckoo calls as an identification. This station is also reported on 80 meters between 7:40 and 8:10 P.M. once by Bob Everard, Standon, England. Other reports on the new schedule came from Walter Jasiorkowski, Milwaukee, Wis.; Henry Shaw, Cape May, New Jersey; Frances Worrell, Ann Arbor, Mich.; W. A. Dean, Hartford, Conn.; Thos. Van Auken, Livingston, Texas; Thomas Grey, Lyons, Illinois; J. B. L. Hinds, Yonkers, N. Y.; Charles Miller, Covington, Ky.; Sam Solito, Leetsdal, Pa.; Carroll Foltz, North Baltimore, Ohio; F. A. Beane, Ridgewell, England; Stuart Walmsley, Los Angeles, California; Fred Karpen, Johnstown, Pa.; Robert Rossi, Philadelphia, and H. J. Davison, Bayamon, P. R.

CT1GO, Portugese Radio Club, Parede, Portugal. This is a new station which was officially opened December 21st. They have been broadcasting on 48.4 meters, 6.20 mc., each Wednesday and Friday from 7:20 to 8:15 P.M. and each Sunday from 8:00 to 9:00 P.M. and 10:00 to 11:00 P.M. They have also been broadcasting on 24.20 meters, 12.40 mc., each Thursday and Saturday from 7:20 to 8:15 P.M. and each Sunday from 9:00 to 10:00 A.M. and 5:00 to 7:00 P.M. and 9:00 to 10:00 P.M. No reports of reception in America have been received and we would like to know which of these programs is heard best here so that we can tell members when to try for this station. This information comes from members A. F. Caddick, Wallington, England; A. Nicol, Dunfermline, Scotland; Sam Solito, Leetsdale, Pa. and F. A. Beane, Ridgewell, England. Station CT1CT, Lisbon, Portugal, is reported on 31.00 meters now, testing one Thursday from 4 to 6 P.M. and one Sunday from 7 to 9 A.M. by Mr. Beane. On their regular wavelength this station does not reach America well.

HAS, Budapest, Hungary. Here is some good news. A letter direct from the operators, The Research Labs for Electrical Communication of the Royal Hungarian Post, Gyali-ut 22, Budapest IX, Hungary, tells us that starting December 23rd, they would broadcast over HAS on 19.518 meters, 15.37 mc., each Sunday from 8:00 to 9:00 A.M. and on HAT on 55.56 meters, or 5.40 mc., each Sunday night from 8:00 to 9:00 P.M. And they want all the reports they can get. This station was heard and reported on 19.52 meters by H. S. Bradley, Hamilton, New York, and Myron D. Reamy, Yonkers, N. Y. They have a lady announcer.

OXY, Denmark, is not on 49.5 meters, 6.06 mc., but on 49.4 meters, 6.07 mc., and it is reported by A. F. Larkman, London, England, weekdays from 12:00 Noon to 5:30 P.M. and Sundays from 1:00 to 5:30 P.M.

RKI, Moscow, on 39.97 meters, 7:50 mc., and RIM, Tashkent, on 39.94 meters, 7.63 mc., may be heard almost any day phoning each other between 6:00 and 8:00 A.M. This comes from members Myron D. Reamy, Yonkers, N. Y.; Thomas Van Auken, Livingston, Texas; H. S. Bradley, Hamilton, N. Y.; Harold Lamont, Elmhurst, N. Y.; W. A. Dean, Hartford, Conn.; Lewis R. Greenman, Conneaut, Ohio; Carroll C. Foltz, North Baltimore, Ohio, and John Kirby, New York City. Bob Everard, Standon, England, reports them at 1:20 A.M.

The Broadcast program in English from Moscow is as follows: RV59 on 50 meters, 6 mc., on Sundays, Mondays, Wednesdays, and Fridays from 4 to 5 P.M.; Saturdays from 10 to 11 P.M. on 25 meters, 12 mc., and on Sundays on the same wave from 6:00 to 7:00 A.M. and 10:00 to 11:00 A.M. This comes from Ferdinand Maybarduk, Brooklyn. John Furneaux, Dallas, Texas; Carl Forestieri, New York City; C. V. Churchill, Brooklyn, New York; Donald Gross, Asheville, North Carolina; Charles Eggenweiler, West Los Angeles, California; J. C. Herriot, Delaware, Ohio, and James McCann, Baltimore, Md.

RNE, Moscow, on 25 meters, 12 mc., in addition to broadcasting those Sunday programs is heard phoning and testing with several stations. H. J. Davison, Bayamon, P. R., reports them daily from 5:00 to 7:00 P.M. Bob Everard, Standon, England, reports them sending music many days each week from 9:00 to 10:00 A.M. Fred Karpen, Johnstown, Pa., tells us they are heard each Wednesday at 7:30 A.M. Fred Karpen, Johnstown, Pa., tells us they have added an hour each Sunday making it 9 to 11 A.M. George Van Honk, Erie, Pa., tells of hearing a German program over this station one Saturday from 5:00 to 5:45 P.M.

Russian Phones. Here are some reports. RNE, works between 1:00 and 8:00 A.M.; RIR, Tiflis, on 29.7 meters, 10.10 mc.; RTD, Alma-ata, on 22.51 meters, 13.34 mc.; RTA, Novosibirsk, on 23.36 meters, 12.84 mc., are reported by J. B. Keenan, Sydney, Australia; RKI on 19.94 and RNE on 25 test with stations in Rocky Point, New York, nearly every Saturday between 7:00 and 10:00 A.M. This is reported by many. RTD, Alma-ata, works RNE around 2:40 A.M. according to James Alexander, Auckland, New Zealand. An RKF, 43.67 meters, is reported by Max Youngstown, Ohio, calling New Zealand and Vancouver one Thursday from 11:30 P.M. to 12:10 the next day. Also from 1:30 A.M. to 2:15 A.M. calling Rome, Italy.

LKJ1, Jeloy, Norway. A letter from this station to R. Braunholdt of Evanston, Illinois, says that they broadcast now on 31.41 meters, 9.55 mc., from 5 to 8 A.M. and on 448.94 meters, 6.13 mc., from 10 A.M. to 6 P.M. This was received too late to make the change in the station list and hourly guide.

The German Broadcast schedule for the month of January follows:
 12:30 A.M. to 2:00 A.M.—DJB on 19.74 (15.20) and DJQ on 19.63 (15.28)
 3:45 A.M. to 7:15 A.M.—DJB on 19.74 (15.20) and DJN on 31.45 (9.54)
 8:00 A.M. to 11:30 A.M.—DJA on 31.38 (9.57) and DJN on 31.45 (9.54)
 12:00 Noon to 4:30 A.M.—DJD on 25.49 (11.77) and DJC on 49.83 (6.02)
 5:15 P.M. to 9:15 P.M.—DJA on 31.38 (9.57)

5:30 P.M. to 10:30 P.M.—DJC on 49.83 (6.02) and DJN on 31.45 (9.54)

During the month of December quite a number of special tests and broadcasts took place over the German telephone stations. December 20, from 12:45 to 1:00 P.M., DJD on 25.49 meters, 11.77 mc.; DJR on 19.56 meters, 15.34 mc., and DFR on 19.23 meters, 15.60 mc. were used according to Ralph Williams, Garden City, N. Y.; Francis Worrel, Ann Arbor, Michigan, says DJD, DFR and a DIQ on 29.15 meters, 10.29 mc., was used. Samuel Solito, Leetsdale, Pa., tells us DIQ, DJB, a DFL on 27.65 meters. Charles Miller, Covington, Ky., reports DJB. Carroll C. Foltz, North Baltimore, reports DIQ and a station near 9.87 mc., one Tuesday from 3:00 to 4:00 P.M. George Van Honk, Erie, Pa., reports the Dec. 16 broadcast over DIQ, DFL, DFR and DJD. Fred Karpen, Johnstown, Pa., adds DFE near 30.58 meters, 9.81 mc. Harold Aston, Boston, Mass., and Notary G. C. Chapelle, Floriana, Malta, help us with the German broadcast schedules.

DFL on 27.65 meters, 10.85 mc., and a DFD (wave not stated) is used to work JVH, Japan, each Tuesday and Thursday at 4:00 A.M. according to R. Lawton, Whitefield, England, who says that a DFT on 38.02 meters, 7.82 mc., was tried but found not good. Wm. Palmer, Jr. of Cleveland, Ohio, reports a DFC, Nauen, near 20 meters working Tokyo near 9:00 A.M. DAF, Norden, Germany, is on a new wavelength according to H. S. Bradley, Hamilton, N. Y. It is 22.92 meters, 13.09 mc., and they work ships between 8:00 and 10:00 A.M.

DGU, Nauen, on 31.08 meters, 9.67 mc., phones Egypt every day now and works them almost all day long. Here are some reports: At 2:30 P.M. by Frank Grey, Berwyn, Illinois; 6:30 A.M. by Myron D. Reamy, Yonkers, N. Y.; 2:15 P.M. by Thomas Grey, Lyons, Illinois; 5:00 A.M. by W. A. Dean, Hartford, Conn.; 3:00 P.M. by Fred Heller, Jr., Philadelphia; 5:30 A.M. by F. A. Beane, Ridgewell, England.

EAQ, Madrid, Spain, on 30.40 meters, 9.87 mc. Schedule is now from 5:15 to 7:30 P.M. every day, according to Stuart Walmesley, Los Angeles, and H. J. Davison, Baymon, P. R. They tested one Friday at 9:15 P.M. according to George Van Honk, Erie, Pa. They sent a special program to New York on December 23rd according to Charles Miller, Covington, Ky., from 12:45 to 1:00 P.M.

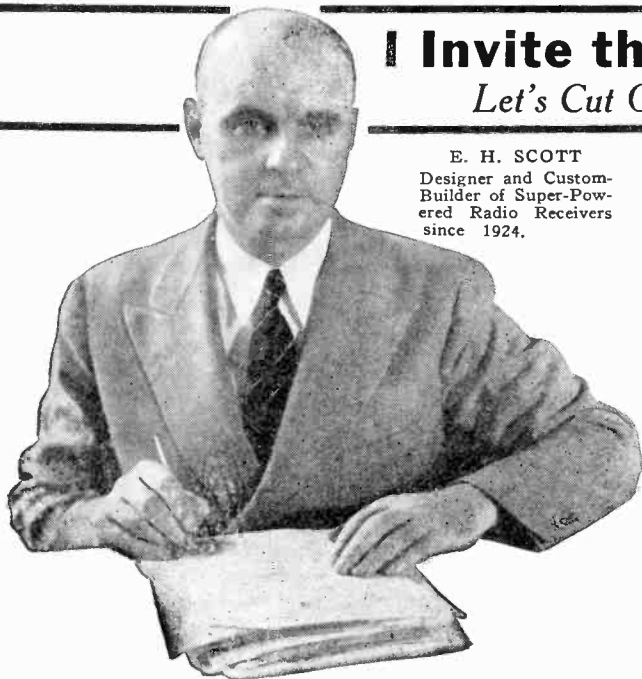
EHY, Madrid, a phone on 29.79 meters worked Argentina at 3:20 P.M. and a station near 41 meters answered according to James Pickering, Hightstown, New Jersey, and Sam Solito, Leetsdale, Pa.

The Swiss stations, HBL on 31.27 meters, 9.58 mc., and HBP on 38.47 meters, 7.80 mc., broadcast each Saturday from 5:30 to 6:15 P.M. They sent a special program at 6:00 P.M. on December 11 and another on December 16 from 5:00 to 6:00 P.M. This news is from Charles Hoffman of Terre Haute, Indiana; Walter Jasiorkowski, Milwaukee, Wisconsin, and A. M. Pleyte, Yarmouth, Maine. HBQ on 44.98 meters sent the special program on December 11 according to Sam Solito, Leetsdale, Pa.

A new Swiss station, HB9B, owned by the Radio Club Basle, Box 1, Basle, Switzerland, is broadcasting each Thursday from 4:00 to 4:30 P.M. on 42.14 meters, 7.12 mc. This news is from R. Lawton, Whitefield,

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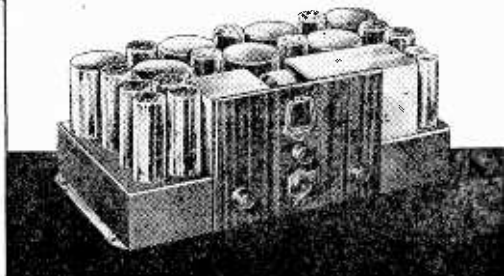
DEPT. 8A5

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England, and F. A. Beane, Ridgewell, England. Mr. Beane also reports it on 80 meters once at 4:00 P.M.

Pontoise, France. Following is the schedule of the stations at Pontoise at the present time according to Raymond Mens, Toledo, Ohio. H. J. Davison, Bayamon, P. R., tells us they send news in English at 8:00 P.M. and 8:30 A.M.;

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.

The address of this station is given in two ways on two different verifications. One is Radio Coloniale 98 Bis Boulevard Haussman, Paris 8, and the other is Ministere des Postes, 103 Rue de Grenelle, Paris. Replies have come from both.

TYA, St. Assise, France, a verification on this station has been received from Telegraphie Sans Fil, 5 Rue Froidevaux, Paris, saying that TYA does work Algeria on phone. This was received by H. S. Bradley, Hamilton, N. Y. It is on 12.21 mc.

The British Broadcast Corporation's stations will broadcast as follows in January, according to the station owners and Herbert Stern, New Rochelle, New York.:

3:30 A.M. to 4:30 A.M.—GSD on 25.53 (11.75) and GSB on 31.55 (9.51)
 4:30 A.M. to 5:30 A.M.—GSF on 19.82 (15.14) and GSD on 25.53 (11.75)
 6:00 A.M. to 9:00 A.M.—GSF on 19.82 (15.14) and GSE on 25.29 (11.86)
 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),

G5SW on 25.53 meters, 11.75 mc., was used on Christmas Day to broadcast a special program and was heard between 9:00 and 10:30 A.M. They used the call GSD. The station GDB-G6RX on 69.44 meters, 4.32 mc., is back again and reported testing in the evenings. A great many report this.

PCJ, Holland, on 19.71 meters, 15.22 mc., made a number of tests last month. December 18 from 7:00 P.M. to 3:00 A.M.; December 19 from 3:00 to 11:00 A.M. and December 20 from 11:00 A.M. to 7:00 P.M., this station was on the air. PHI, Huizen, on 25.57 meters, 11.73 mc., was heard on several of these tests. PHI broadcasts daily excepting Tuesdays and Wednesdays from 8:00 A.M. to 10:30 A.M. PCJ relays the same programs on Sunday, although one member tells us they announced they would be heard Saturdays also. This news comes from members Carroll C. Foltz, North Baltimore, Ohio; George Van Honk, Erie, Pa.; Charles Miller, Covington, Ky.; Fred Karpen, Johnstown, Pa.; A. M. Pleyte, Yarmouth, Maine; H. J. Davison, Bayamon, P. R.; Walter Jasiorowski, Milwaukee, Wisconsin; Nick Gaug, New York City; Thos. Van

Auken, Livingston, Texas; Lewis R. Greenman, Conneaut, Ohio; J. Furneaur, Dallas, Texas; Mills Van Bergen, Syracuse, N. Y.; C. Winslow Lewis, Wellesley, Mass., and J. Leesburg, Kelowna, Canada.

PDM on 38.96 meters, 7.70 mc., sent a special program to the West Indies one Friday from 6:23 to 7:20 P.M. according to members, A. M. Pleyte, Yarmouth, Maine, and H. J. Davison, Bayamon, P. R.

THE ASIATICS

Australia is not considered Asia, but here is the news from there. VK2ME, VK3ME and VK3LR are all keeping their regular schedule, although 3ME was on the air for two weeks in November relaying a station 2DB according to A. B. McDonough, Wellington, New Zealand. This VK3XX is VK3LR testing according to a letter from the operators. This station tested with W2XAF, New York, one Monday and one Thursday near 7:00 A.M. according to A. Braunholdt, Evanston, Illinois. They are on 31.31 meters, 9.53 mc. A station VK3ZX, 33 Saturn St., Caulfield, SE8, Melbourne, is testing each Sunday from 1:00 to 3:00 A.M. on 41 meters according to A. B. McDonough, Wellington, New Zealand. This must be an amateur station, as they ask for reports in America. The phone station VLK at Sydney on 30.75 meters, 9.76 mc., can be heard between 5:00 and 7:00 A.M. with music and voice according to Fred Heller, Jr., Philadelphia.

ZLR, Wellington, New Zealand, on 40.60 meters, 7.39 mc., works VLZ, Australia, at 3:25 A.M. according to James Alexander, Auckland, New Zealand, and Bob Everard, Standon, England, reports it at 2:30 P.M. also. ZLT, same city, does not work England direct, as stated recently. They work VLK, who sends it to England on 28.5 meters. ZLT is on 27.30 meters, 10.99 mc. This is from John B. Keenan, Sydney, Australia.

YDA, Bandoeng, Java, on 49.02 meters, 6.12 mc. This station is being heard by members almost everywhere now. They come on the air around 5:00 A.M. And usually sign off around 10:00 A.M. with the song, "End of A Perfect Day," although they have been heard as late as 11:00 A.M. They speak in English daily at 7:00 A.M. according to C. B. McMullen, San Pedro, California, and Fred Karpen, Johnstown, Pa. The call is YDA and not PKYDA according to H. S. Bradley, who says the PK is not assigned to all Java stations. W. H. Pepin, Maylands, West Australia, tells us the same programs are sent over 80 meters also and gives their address as N. V. Nederlandsche Indische Radio Omroep, Batavia, from where he got his verification. Stuart Walmsley, Los Angeles, got his reply from Mr. A. H. K. Mulder, Local Broadcast leader, N. I. R. O. M. Stations, Bodjong, Semarang, Java. YDB on 49.67 meters is reported heard now by Thomas Van Auken, Livingston, Texas, while Walter Jasiorkowski, Milwaukee, Wisconsin, tell us he hears this same program on both 49.02 meters and 75.53 meters usually around 6:30 A.M.

PNI, Makassar, on 8.77 mc., is reported phoning Bandoeng around 3:30 A.M. by W. D. Martin, Honolulu, Hawaii. PLV on 31.86 meters, 9.42 mc., calls Tokyo daily at 3:00 A.M. says Mr. Martin. It is reported heard most every morning phoning PDV and PCK, Holland, around 8:00 A.M.

by Harold Lamont, Elmhurst, N. Y. G. C. Gallagher, San Francisco, reports it phoning Japan at 3:30 A.M., also at 10:00 A.M. W. H. Pepin, Maylands, Australia, reports it from 5:30 to 5:40 A.M. Charles Eggenweiler, West Los Angeles, reports it at 2:30 A.M. Ed Lips, Pittsburg, Pa., reports it at 5:00 A.M. F. A. Beane, Ridgewell, England, reports it at 10:00 A.M. working KWV, California. Sam Solito, Leetsdale, Pa., reports it sending a special December 25th from 5:25 to 6:15 A.M.

Japanese Stations. Here are some interesting reports on these phones. Thomas Van Auken, Livingston, Texas, reports a new one on 71.80 meters, 4.18 mc. (between HCJB and RV15) relaying JOAK from 6:00 to 7:45 A.M. JVH on 20.55 meters, 14.60 mc., works DFD, Germany, at 5:30 A.M. according to members James Alexander, Auckland, New Zealand, and Bob Everard, Standon, England. JVE on 19.15 meters, 15.60 mc., works PLV, Java, daily at 4:00 A.M. according to Mr. Alexander. JVF on 19.20 meters, 15.61 mc., is reported at 5:00 P.M. working KWO by Sam Solito, Leetsdale, Pa., and Fred Karpen, Johnstown, Pa. At 6:00 P.M. they were calling KWU, Dixon, is reported by Charles Nabours, Cameron, Texas, and at 4:00 P.M. quite often says Ralph Williams, Garden City, N. Y. JVN on 28.14 meters, 10.66 mc., relayed JOAK at 2:00 A.M. reports W. D. Martin, Honolulu. They opened the telephone circuit with the U.S.A. with a special program last month and have daily contact now with Dixon around 5:00 P.M. according to member Ralph Williams. G. C. Gallagher, San Francisco, reports them at 2:45 A. M.

JVM on 27.93 meters, 10.74 mc., working KWU at 9:45 P.M. is reported by Mr. Martin. H. S. Campbell reports them at 1:40 A.M. From 12:45 to 1:13 A.M. it was heard working KWX by Sam Solito. They were working KWY from 8:00 to 8:30 P.M. once reports Fred Corey, San Jose, California. Paul Tyree, Oakland, California, reports them after 11:00 P.M. JVO on 28.9 meters, 10.38 mc., works with stations on 28.4 meters and 29.8 meters, believed to be JIB, Formosa and JZB, Manchuria, all using scrambled speech. Heard between 2:00 and 7:00 A.M. by John B. Keenan, Sydney, Australia. H. S. Campbell, Upland, California; reports them at 1:45 A.M. JVP (?) on 10.66 mc. at 1:35 A.M. is reported by Mr. Campbell. He also reports a JVV on 5.75 mc. from 1:00 to 1:15 P.M. and Robert Edgreen, Pacific Grove, California, reports them from 5:00 to 6:00 P.M.

JVT on 44.44 meters, 6.75 mc., is the most reported Japanese station now. The programs that were broadcast over this station, however, seem to have been changed to JVU on 51.81 meters, 5.50 mc., and to the station reported on 71.80 meters, 4.18 mc. JVT was reported between 11:00 P.M. and 8:00 A.M. by the following: James Alerander, Max Horlick, H. S. Campbell, W. D. Martin, W. A. Dean, G. C. Gallagher, J. Leesburg and Sam Solito. JVU on 51.81 meters, 5.50 mc., is reported relaying JOAK at 5:00 to 7:45 A.M. by Thomas Van Auken, Livingston, Texas; at 2:00 A.M. by W. D. Martin, Honolulu, and at 1:40 A.M. by H. S. Campbell. The address of these stations is Kokusai-Denwa Kaisha, Ltd., Osaka Bldg., Kojimachiku, Tokio, Japan, and they have verified many reports.

The Japanese commercial stations at Kemikawa-Cho are reported as

follows: Wm. Palmer, Jr., Cleveland, Ohio, reports J1AA on 19.04 meters testing with KWO at 6:00 P.M. JYT-J1AA on 30.49 meters, 9.84 mc., sent music and worked Dixon at 4:45 A.M. and also between 6:18 and 7:25 P.M. according to H. S. Campbell. Henry Shaw, Cape May, New Jersey, reports them calling Manchuko at 4:00 A.M. one Sunday.

VUB, Bombay, India, on 31.36 meters, 9.57 mc., was on the air nearly every Sunday last month between 7:30 and 8:30 A.M. The station was heard by members R. Braunholt, Evanston, Illinois; F. C. Herriot, Delaware, Ohio; George Van Honk, Erie, Pa.; John B. L. Hinds, Yonkers; N. Y.; Lowell F. Barrows, Delaware, Ohio; Dr. R. C. Kash, Sevierville, Tenn.; F. A. Beane, Ridgewell, England; Roy Sanders, Worchester, Mass; R. Lawton, Whitefield, England, sends word that this station is on the air daily from 10:00 A.M. until a little after Noon. The schedule says 11:30 A.M. to 12:30 Noon on Wednesdays and Saturdays only.

VWY, Pooma, India, a phone, can be heard phoning GAU, England, on 17.10 meters daily. It leaves the air just about 8:00 A.M. This is from Harold Lamont, Elmhurst, New York.

RV15 on 70.65 meters, 4.25 mc., Siberia, can be heard in the United States at the present time. Here are some reports: Thomas Van Auken, Livingston, Texas, reports it from 7 to 10 A.M. Capt. McMullen, San Pedro, California, reports it from 2:00 to 10:30 A.M. John Gregory, Los Angeles, California, reports it from 8:50 to 9:00 A.M. G. C. Gallagher, San Francisco, California, reports it from 5:00 to 8:00 A.M. Dr. R. C. Kash, Sevierville, Tenn., reports it from 7:00 to 7:30 A.M. Robert Edgreen, Pacific Grove, California, reports it from 5:00 to 7:00 A.M. Walter Jasiorkowski, Milwaukee, Wisconsin, reports it from 7 to 8 A.M.

KTN, Manila, Philippines, on 18.58 meters, 16.14 mc., was heard working KWV, Dixon, California, one evening and a KTO on the same wave was reported by Charles Eggenweiler, West Los Angeles, phoning KKP, Hawaii. This must be the same station using different calls when working different stations.

VPD, Suva, Fiji Islands, on 22.73 meters, 13.20 mc. Here is one to keep any American out of bed a few nights. This station is testing each Monday and Thursday from 5:30 to 6:30 P.M., Suva Time, which we believe is Tuesday and Friday from 12:30 to 1:30 A.M. This station is operated by Amalgamated Wireless Company, Suva, Fiji Islands, and this information all comes from W. D. Martin, Honolulu, Hawaii.

FZS, Saigon, Indo-China, on 25.02 meters, 11.99 mc., was reported sending music several mornings between 9:00 and 10:30 A.M. by Lewis R. Greenman, Conneaut, Ohio. Medan, Sumatra, on 41.49 meters, 7.23 mc., is called PK3BQ and is owned by the Medan Radio Society according to W. H. Pepin, Maylands, West Australia. For a time it was heard broadcasting around 3:00 A.M. but it is not reported now. ZHI, Singapore, Straits Settlement, on 49.83 meters (instead of 49.92 meters, 6.01 mc.) was reported signing off at 1:00 A.M. by Thomas Van Auken, Livingston, Texas. We have a member in Singapore now and hope to get all the facts on this station soon.

THE AFRICANS

SUZ, Cairo, Egypt, on 21.70 meters, 13.83 mc., can be heard working DGU, Nauen, Germany, nearly every day at 7:00 A.M. and working London around 3:00 P.M. The first is reported by Myron Reamy, Yonkers, New York, and the later by Bob Everard, Standon, England, and R. Lawton, Whitefield, England. SUV on 29.83 meters, 10.05 mc., phones DGU daily at 2:30 P.M. says Ed Lips, Pittsburg, Pa.

VQ7LO, Nairobi, Kenya Colony, on 49.50 meters, 6.06 mc., is on the air daily from 11:30 to 3:00 P.M. according to a letter received by Ed Lips, Pittsburg, Pa. W. D. Martin of Honolulu, Hawaii, tells us they reach Hawaii daily from 11:00 A.M. to 2:00 P.M. They send five or six short whistles and announce "7LO, Nairobi, calling." Mr. Lips also tells us the address of the Johannesburg station is Box 4559, Johannesburg, and the schedule is 11:45 P.M. to 12:30 A.M.; 4 to 7 A.M. and 8 A.M. to 4 P.M. on 49 meters, 6.12 mc. They have 5,000 watts power but the person who hears them is lucky. A letter from OPL and OPM, Belgian Congo, says they work Belgium from 4:30 to 6:30 A.M. and 11:30 to 1:00 P.M. now. They usually use OPL on 14.97 meters, 20.04 mc.

THE EXPERIMENTAL STATIONS

KFZ, Little America, South Polar Region, continues to broadcast a program each Wednesday, starting to test with LSX, Argentina, around 8:00 P.M. They have been on 33.94 meters, (8.84 mc.) and 31.57 meters, (9.52 mc.) nearly all the past month, but may use some other wave at any time. Here is the latest list of waves they can use:

No. 1—52.26 meters, 5.74 mc; No. 2—45.11 meters, 6.65 mc; No. 3—45.05, 6.60 mc; No. 4—44.98 meters, 6.68 mc; No. 5—34.01 meters, 8.82 mc; No. 6—33.94 meters, 8.84 mc; No. 7—32.22 meters, 9.31 mc; No. 8—31.57 meters, 9.52 mc; No. 9—25.36 meters, 11.83 mc; No. 10—22.76 meters, 13.18 mc; No. 11—22.73 meters, 13.20 mc; No. 12—22.68 meters, 13.28 mc; No. 13—22.66 meters, 13.24 mc; No. 14—22.62 meters, 13.26 mc; No. 15—19.64 meters, 15.27 mc; No. 16—17.04 meters, 17.60 mc; No. 17—17.03 meters, 17.62 mc; No. 18—13.94 meters, 21.52 mc; No. 19—13.89 meters, 21.60 mc; No. 20—13.87 meters, 21.63 mc.

KNRA on the Seth Parker is no longer broadcasting a regular Monday program. However, they are still testing with stations in Rocky Point, New York, and Bolinas, California, and are heard mostly on 33.94 meters, 8.84 mc. They may use the same waves as shown for KFZ.

ICEJ on the S. S. Rex in a letter to H. S. Bradley and one to F. L. Stitzinger, say they work IAC, Italy, daily from 5:45 to 6:30 A.M. on 22.98 meters, 13.05 mc. They may also work at any time on one of the other bands set aside for ship communication. A special broadcast from the S. S. New York on December 19 from 9:00 to 9:15 P.M. was heard on 67.90 meters, 4.42 mc., by Fred Karpen, Johnstown, Pa.

THE NORTH AMERICANS

W3XAL, Bound Brook, New Jersey, announced a drastic change in schedule according to H. J. Davison, Bayamon, Puerto Rico, but we are

not quite able to make it all out. On 16.87 meters, 17.78 mc., they broadcast from 9 to 10 A.M. and 3 to 4 P.M. on Mondays, Wednesdays and Saturdays and on 49.18 meters, 6.10 mc., they broadcast from 5 to 6 P.M. on the same days, or perhaps it is Tuesdays, Thursdays and Fridays, we are not quite sure. We have not altered our station list for this as we do not know the exact details.

W8XK, Pittsburg, Pa., has made some changes, we are told by Mr. Davison and Ernest Orchard, Weymouth, England. The plant manager of KDKA is a I.S.W.C. member, so he will read this and give us exact figures. We understand that they open up at 7:00 A.M. on 19.72 meters, 15.21 mc., and 13.92 meters, 21.54 mc. The first stays on the air until 4:15 P.M. and the last only until 2:00 P.M. On Sundays they open up at 9:00 A.M.

W9XAA, Chicago, Illinois, on 49.34 meters, 6.08 mc. This station has been on an irregular schedule. They may usually be heard Sundays from 11:00 A.M. to 7:00 P.M. broadcasting programs in foreign languages. Other days they may be heard at any time. Our request for information has been ignored. Reports of a helpful nature have come from members Thomas Grey, Lyons, Illinois; Arthur Mitchell, Hollidays Cove, W. Va.; Samuel Solito, Leetsdale, Pa.; Max Horlick, Youngstown, Ohio; Charles Miller, Covington, Ky.; Walter Jasiorkowski, Milwaukee, Wisconsin.

W3XAU, Philadelphia. Letters from this station give the schedule and wave as 31.28 meters, 9.59 mc., from Noon to 11:00 P.M. and nothing is said about the 49.5 meter wave. And, to tell the truth, they haven't been on 31.28 meters for some time. This news is from members Francis Worrell, Ann Arbor, Michigan, and H. J. Davison, Bayamon, P. R.

VE9CS, Vancouver, B. C., Canada, on 49.40 meters, 6.07 mc., broadcasts Sundays from 1:45 to 3:30 P.M. and 7:00 P.M. to 1:00 A.M. Mondays regularly and on Week-days they may be heard irregularly between 7:00 and 8:30 P.M. This is from Bob Morrison, Vancouver, who tells us they have only 1½ watts power, perhaps the worlds smallest short wave station.

VE9DN, Drummondville, on 49.96 meters, 6.00 mc., broadcasts Saturday nights from 11:30 P.M. until about 1:00 A.M. They were also heard testing one Saturday morning around 10:50 A.M. by members Lester Smith, Quincy, Mass., and Fred Karpen, Johnstown, Pa.

CJRX and CJRO, Winnipeg, Manitoba, on 25.60 meters, 11.72 mc., and 48.85 meters, 6.15 mc., broadcasts daily from 8 to 11 P.M. and 11:30 P.M. until Midnight. They also broadcast at irregular times. CGA8, a phone at Drummondville on 61.15 meters, 4.90 mc., must use two different calls, one for ships and one for telephone service, for, when working GDB at Rugby they are heard saying CGA8 and when working ships CGA5.

The Army Stations were very busy this month. They work on about 48.00 meters, 6.25 mc., and were heard at 7:00, 8:00, 11:00, A.M., 5:00 P.M. and 10:00 P.M., by different members. They are JJ6, a plane; WO9 at Mitchell Field; IF3 or IS3, Bolling Field; IO9, a plane; VK1, Selfridge Field. Reports have come from Ferdinand Maybarduk, Brooklyn; Louis Weisse, Dayton, Ohio; Raymond Mens, Toledo, Ohio; James Spalding, Louisville, Ky.; Charles Miller, Covington, Ky.; Walter Jasiokowski,

(Continued on Page 44)

The New **PATTERSON**
PR-12 All-Wave Radio



8 to 550 Meters.
 Built-in Pre-Selector.
 13 Matched Sylvania Tubes.
 10½ inch Dynamic Speaker.
 Modulation Meter.
 R Meter.
 2-Speed Selector Airplane Dial.
 Built-in Monitor.
 Manual and A. V. C.

Single Dial Tuning.
 High signal to noise ratio.
 Quiet, humless headphone reception.
 Duplex operation within 20 kilocycles.
 Newly designed Coils.
 3 Stages audio amplification.
 Self-contained power supply.
 Marconi or doublet antenna.
GUARANTEED SIX MONTHS.

Many Exclusive Features not found on any other receiver.

SHIPPED PREPAID If Full Purchase Price accompanies your order.

Send for Large Descriptive Catalogue

WE ALSO BUILD AMATEUR, POLICE, AND BROADCAST TRANSMITTERS.

All Standard Receivers and Pre-Selectors shipped Prepaid at lowest prices—Write for details.

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IN STOCK
 IMMEDIATE
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 CLUB MEMBERS
 PRICES
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 (Absolutely nothing
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Metal Cabinet with-
 out Crystal,
\$82.00
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Metal Cabinet, with
 Crystal,
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 Prepaid

Console without
 Crystal,
\$99.65
 Prepaid

Console with Crystal,
\$105.55
 Prepaid

Chassis also avail-
 able.

WISHING A HAPPY NEW

Simple Explanation Why Our Antenna Systems Reduce Noise and Boost Volume!

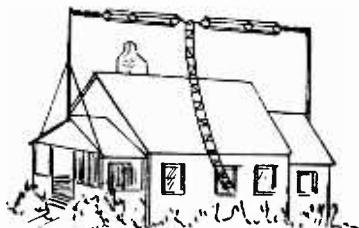


Fig. 1—Cage Doublet Antenna (886 or 862), for limited space; lead-in off center.

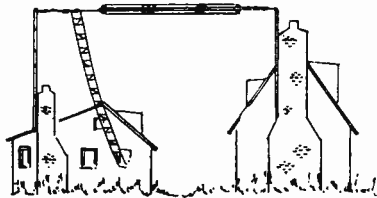


Fig. 2—Inverted L Cage Antenna (887 or 863) for limited space; lead-in off one end.

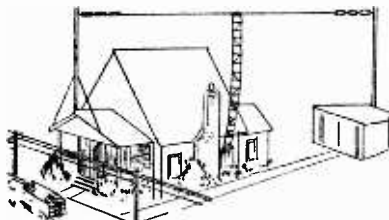


Fig. 3—Single Wire Flat Top Antenna (896 or 872), for space over 80 feet; lead-in off middle.

GIANT KILLER CABLE

(or Transposed) Lead-in DOES NOT pick up any signal but merely "pipes" the signal from flat top receiver. When the flat top is erected high above the ground, you remove it from the field of 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. 886 (or 862) if you can take the lead-in off the center; where the lead-in must be taken off at one end, use No. 887 (or 863).

Single wire flat top may be used where space available is more than 80 feet. Use No. 896 (or 872) if lead-in can be taken off in center, or No. 897 (or 873) where lead-in must be taken off one end.

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

LYNCH ANTENNA SUPPLIES

List Price	Net Price
\$2.75 Kit 10 Cage Spreaders.....	\$1.63
\$2.75 Kit 10 Transposition Blocks.....	1.63
\$2.00 Kit 8 Navy Type Insulators.....	1.20
\$1.25 Double Lightning Arrester.....	.75
\$1.50 New Universal Coupler.....	.90
\$1.00 Light Hi-Mho Wire, 100 feet.....	.60
\$1.50 Heavy Hi-Mho Wire, 100 feet.....	.90
\$3.00 Giant Killer Cable, 50 feet.....	1.80
\$12.50 DeLux Kit, of 10 spreaders, 20 transposition blocks, 8 navy type insulators, 300 ft. Hi-Mho wire double lightning arresters and Universal Coupler	\$7.50

SOL PERLAN, E.E. CONSULTING ENGINEER ON ANTENNA PROBLEMS TO LYNCH
TECHNICAL ADVISOR OF THE NEW YORK CHAPTER OF THE CLUB

227 FULTON STREET, NEW YORK, N. Y.

YEAR To All Members of the I. S. W. C. and Our Patrons in 45 States and 29 Countries

FOR 1935 RECEPTION

HI-FI COMPLETE SYSTEMS, READY-TO-HANG
Just attach to masts.
LYNCH MATERIALS USED EXCLUSIVELY

5 Reasons Why

We feature **GIANT KILLER CABLE LEAD-IN** in our **ANTENNA SYSTEMS**.

- Because this cable is transposed every six inches within three special coverings with live rubber on the outside and will withstand all weather conditions.
- Because its flexibility permits running the lead-in around corners and at angles.
- Because when used with **LYNCH HI-FI Couplers**, it will reduce noises to same extent as standard transposed lead-in.
- Because it may run for hundreds of feet without loss of signal strength.
- Because **ITS LOW PRICE** makes it the **MOST ECONOMICAL** noise-reducing lead-in to use for **ALL WAVE** and **SHORT WAVE RECEIVERS**.

New Lynch Hi-Fi Couplers, Kits and Giant Killer Cable

- \$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, 45 ft. Giant Killer cable, 3 type insulators, 2 nail-it knobs, 1 stand-off insulator. **\$4.20**
- \$3.00 GIANT KILLER CABLE**, 50 ft. **\$1.80**

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.

FLASH! We are happy to announce that beginning January 1, 1935, we have been appointed authorized **NATIONAL** service representatives.

SOL. PERLMAN, E. E.

227 FULTON STREET NEW YORK, N. Y.

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. 862, with 25 ft. transposed lead-in and 10 ft. Giant Killer cable, List **\$24.25**; Net... **\$14.50**
862 Kit, List **\$14.25**. Net... **\$8.45**



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 Lightning Arrester.

List Price... **\$15.50**,
Your net cost. **9.25**

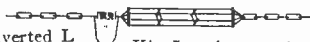
Kit Lynch materials to build 896. List price, **\$12.50**.

Your net cost. **\$7.50**

No. 872, with 25 ft. transposed lead-in and 10 ft. Giant Killer Cable, List **\$15.00**; Net... **\$8.95**

872 Kit, List **\$11.75**,
Your net cost... **\$6**

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 Lightning Arrester.

List Price... **\$19.50**
Your net cost **11.75**

Kit Lynch materials to build 887. List pr. **\$13.25**.
Your net cost... **\$7.85**

No. 863, with 25 ft. transposed lead-in and 10 ft. Giant Killer Cable, List **\$24.25**; Net... **\$14.50**

863 Kit, List **\$14.25**,
Your net cost... **\$8.45**



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 pr. **\$9.00**.
Your net cost... **\$5.40**

No. 873, with 25 ft. transposed lead-in and 10 ft. Giant Killer Cable, List **\$15.00**; Net... **\$8.95**

873 Kit, List **\$11.75**.
Your net cost... **\$6.95**

Each additional 5 feet of Giant Killer Cable Lead-in, attached, List Price, 40c. Net cost... **.25c**

(SEE OUR OTHER ADV. ON PAGE 47)

"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 dials

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	-W8XK, 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	-20.85	-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	-LSM, Buenos Aires, Argentina.	Phones EAQ, DHO, GAA mornings.
T-15.88	-18.89	-ZSS, Klipkeuval, 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	—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	WVY, 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-18.71	-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-19.52	-15.37	HAS, Budapest, Hungary.	Sundays from 8 to 9 A.M.
B-19.56	-15.34	W2XAD, Schenectady, New York.	2:30 to 3:30 P.M. daily.
B-19.63	-15.28	DJO, Zeesen, Germany.	12:30 to 2:00 A.M.
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	W8XK, 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.	4:30 to 9:00 A.M.
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.
B-20.71	-14.48	HRM, Tela, Honduras.	Phones WNC irregularly in 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 3:50 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.
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, Maracaib, 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-22.68	-13.23	KFZ, Little America and KNRA.	"Seth Parker."
B-22.75	-13.20	VPD, Suva, Fiji Islands.	Tues. and Fri., 12:30 to 1:30 A.M.

Meter	Meg.	STATION	TIME
E-22.76	-13.18	DGG, Nauen, Germany.	Phones Asia mornings irregularly.
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.
B-24.20	-12.40	CT1GO, Parede, Portugal.	Thurs. and Sat., 7:20 to 8:15 P.M.; and Sundays, 9 to 10 A.M., 5 to 7 P.M., and 9 to 10 P.M.
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	CT1CT, 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.	6:00 to 10:45 A.M.
B-25.36	-11.83	W2XE, Wayne, N. J.	Relays WABC 3:00 to 5:00 P.M.
B-25.49	-11.77	DJD, Zeesen, Germany.	Noon to 4:30 P.M.
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 Midnight.
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	PDK, 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.

Meter	Meg.	STATION	TIME
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.
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	IRM, 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 daily from 5 A.M. to 5 P.M.
B-31.25	9.59	CT1AA, Lisbon, Portugal.	Tues., Thurs., and Sat., 4:30 to 7:00 P.M.
B-31.27	9.59	HBL, 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	LKJ1, Jeloy, Norway.	Relays Oslo, 11:00 A.M. to 6:30 P.M., irreg.
B-31.45	9.34	DJN, Zeesen, Germany.	3:45 to 11:30 A.M. and 5:15 to 10:30 P.M.
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.	3:30-4:30 A.M.; 9:15-12:00; 1:45-4:45 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	COH, 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, Maraca, 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	to 36.58	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.

Meter	Meg.	STATION	TIME
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.
E-39.68	7.56	KWY, Dixon, California.	Phones Japan irregularly.
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-40.60	7.39	ZLR, Wellington, N. Z.	Phones Sydney from 3 to 5 A.M. irregularly.
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.
B-42.14	7.12	HB9B, Basle, Switzerland.	Thursdays from 4:00 to 4:30 P.M.
E-42.86	7.00	HJ5ABE, Cali, Colombia.	Irregularly evenings.
T-43.45	6.90	GDS, Rugby, England.	Phones New York nights.
B-44.12	6.80	HIIH, 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-45.94	6.53	HIL, Santo Domingo, R. D.	Irregular.
B-46.25	6.48	H14D, 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.	4:30 to 10:00 P.M. daily.
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	YV3RC, 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	6.23	OAX4B, Lima, Peru.	7:00 P. M. to 9:00 P. M., Irregular.
B-48.40	6.20	CT1GO, Paredc, Portugal.	Wed., Fri., 7:20-8:15 P.M.; Sun. 8-11 P.M.
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 5:00 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	6.10	HJ2ABD, Cartagena, Colombia.	Daily from 7:30 to 9:00 P. 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	VE9GW, 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	W9XAA, Chicago, Illinois.	Irregularly, altho usually Sun. P. M.
B-49.40	6.07	VE9CS, Vancouver, B. C.	Sundays 1:45-3:30 P.M., 7 P.M. to 1 A.M.,

Meter	Meg.	STATION	TIME
B-49.40	6.07	OXY, 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	W8XAL, Cincinnati, Ohio.	6:30 A.M. to 7:00 P.M.; 10 P.M. to 2 A.M.
B-49.50	6.06	VQ7LO, Nairobi, Kenya Colony.	11 A.M. to 2 P.M. daily.
B-49.59	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	HJ3AB1, Bogota, Colombia.	8:00 to 10:00 P.M. irregularly.
B-49.65	6.04	HJ1ABG, Barranquilla, Colombia.	6:00 to 10:00 P.M.
B-49.67	6.04	W1XAL, Boston, Mass.	5:00 P.M. to 8:00 P.M., irregular.
B-49.83	6.02	DJC, Zeesen, Germany.	Noon to 4:30 P.M. and 5:30 to 10:45 P.M.
B-49.83	6.02	CQN, Macao, China.	Monday and Friday, 7:00 to 9:00 A.M.
B-49.90	6.02	HP5B, Panama City, Panama.	8:30 to 10:30 P.M. daily.
B-49.92	6.02	HJ3ABH, Bogota, Colombia.	Noon-1:00 P.M. and 7:00 to 10:00 P.M.
B-49.92	6.01	ZHI, Singapore.	Mon., Wed., Thurs., 5:40-8:10; Sat., 10:40-1:10 A.M.
B-49.96	6.00	VE9DN, Drummondville, Canada.	Sat., 11:30 P.M. to Sun. 1:00 A.M.
B-50.00	6.00	RV59, Moscow, U.S.S.R.	Daily, 2:00 to 6:00 P.M.
B-50.00	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	HIX, Santo Domingo, R. D.	Tues. and Fri., 8:10 to 10:10 P.M.; Sundays, 8:30 to 10:40 A.M. and 2:40 to 4:40 P.M.
B-50.25	5.97	HJ2ABC, Cucuta, 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	XEBT, Mexico City.	6:00 P.M. to 3:00 A.M. Irregularly.
B-50.42	5.95	HJ4ABE, 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 10:30 P.M.
B-50.50	5.94	TGX, Guatemala City.	11 A.M. to 2:30 and 6 to 10 P.M.
T-51.26	5.85	WOB, Lawrenceville, N. J.	Phones Bermuda nights.
B-51.28	5.85	YV5RMO, Maracaibo, Venezuela.	5:15 to 9:00 P.M.
B-51.40	5.83	HCK, Quito, Ecuador.	8:00 to 11:30 P.M. irregularly.
B-51.50	5.82	TXGP3, San Jose, Costa Rica.	8:00 to 11:30 P.M. Irregularly.
T-51.50	5.82	HJA2, Bogota, Colombia.	Phones HJA3 afternoons and evenings.
T-51.72	5.80	KZGF, Manila, P. I.	Phones from 5:00 to 8:00 A.M.
B-51.90	5.78	OAX4D, Lima, Peru.	Wed. and Sat. from 8:00 to 11:30 P.M.
E-52.97	5.66	CFU, Rossland, Canada.	Works CFO and CFN near 10 P.M. irreg.
B-53.57	5.60	HJ5ABC, Cali, Colombia.	8:00 to 10:00 P.M.
E-55.56	5.40	HJA-7, Cucuta, Colombia.	Testing irregularly.
B-55.56	5.40	HAT, Budapest, Hungary.	Sundays from 8:00 to 9:00 P.M.
T-58.30	5.15	PMY, Bandoeng, Java.	Phones Australia near 11:00 A.M.
T-59.08	5.08	WCN, Lawrenceville, N. J.	Phones England evenings.
T-59.76	5.02	ZFA, Hamilton, Bermuda.	Phones U.S.A. and Ships at night.
T-60.26	4.98	GBC, Rugby.	Phones to ships irregularly.
T-61.15	4.90	CGA5, Drummondville, Canada.	Phones ships and England evenings.
T-63.13	4.75	WOO, Ocean Gate, N. J.	Phones ships irregularly.
T-66.50	4.51	VPN, ZFS, Nassau, Bahamas.	Phones WND and GYD 2 to 10 P.M.
T-67.87	7.37	4.12 to 4.10	Ships. Heard irregularly.
T-69.44	4.32	GDB-G6RX, Ruby, England.	Testing 7:00 to 10:00 P.M.
E-69.60	4.31	WTDV, WTDW, Virgin Islands.	2:00 to 3:00 P.M.; weather reports.
B-70.65	4.25	RV15, Khabarovsk, U.S.S.R.	1:00 to 9:00 A.M.
B-73.00	4.11	HCBJ, Quito, Ecuador.	7:30 to 9:45 P.M. daily except Monday.
T-73.21	4.10	WND, Hialeah, Florida.	Phones irregularly with VPN.
E-75 to 75.8	4.00 to 3.96	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, 33.93 to 36.58 meters and 67.87 to 73.17 meters. In megacycles this is 17.80 to 16.42, 13.34 to 12.35, 8.84 to 8.20 and 4.42 to 4.10.

VQJM, Monarch of Bermuda; GLSQ, Olympic; GFJY, Caledonia; GMJQ, Belgand; GFWW, Majestic; GDLJ, Homeric; GMBJ, Empress of Britain; DOAH, Bremen; DOAL, Europa; DHEY, Deutchland; DHJZ, Hamburg; DOBX, Columbus; DHAO, Albert Ballin; DHRL, New York; ICEJ, Rex; IBLI, Conte de Savoia; GBZW, Berengaria; FNSM, Ile de France; GLRZ, Aquitania; VQJP, Queen of Bermuda; DHTY, Resolute. DHDL, Cap Arcona; WNBW, Leviathan.

Milwaukee, Wisconsin; James Pickering, Heightstown, New Jersey; H. J. Davison, P. R. A WYH at San Diego is also reported. The blimps "Enterprise" and "Resolute" and a station WMEP, Wingfoot, near Akron, Ohio, may be heard working near 45 meters, 6.67 mc., also. WMEP is usually on 45.20 meters, 6.62 mc. H. S. Bradley, Hamilton, N. Y.; Delner Sopher, Steger, Illinois, and H. J. Davison, Bayamon, P. R., report them.

W2XAF, Schenectady, New York, on 31.48 meters, 9.53 mc., will broadcast special Spanish programs each Wednesday from 6:35 to 7:30 P.M. and Friday from 7:00 to 7:30 P.M. according to the operators. This news should interest many of our South American members.

Hawaiian stations. Here are a few reports on these stations. Carlos Lopez Ona reports KKH on 39.89 meters, 7.52 mc., testing from 11:25 P.M. to 12:25 A.M. Sam Solito reports them once from 1:00 to 1:30 P.M. with a musical program. Robert Edgreen reports them at Midnight on December 14 with a program. Paul Tyree and Walter Jasiorkowski report them sending music in the late evenings. KKP, Honolulu, is reported on 16.04 mc. at 9:35 P.M. one Saturday with the Chesterfield program by E. W. Eggenweiler. KIO, Kokohead, on 25.63 meters, 11.71 mc., sent music at 5:30 P.M. according to H. S. Campbell and worked KWV according to G. C. Gallagher.

CT2AJ, St. Miguel, Azores Islands. A letter from H. E. J. Smith, manager, says that this station is on 85.7 meters, 3.50 mc., each Wednesday and Saturday from 5:00 to 7:00 P.M. E.S.T. The address is Ponta Delgada, St. Miguel, Azores. The announcements are "Say Tay Doix Ah Jhota." Thanks Mr. Smith, and lots of luck.

PEN-PALS

The following members would like to correspond with others:

Hector McCormick, Calle 5 No. 630, Bucaramanga, Colombia.
 F. H. Osborn, 42 Napier Road, Leytonstone, London, E-11, England.
 Bernard Goldman, 108-49 52nd Avenue, Corona, N. Y. (Foreign only).
 O. Ingmar Oleson, Ambrose, North Dakota. (Scott owners.)
 W. T. Myatt, The Lodge, Finch Lane, Bushey, Herts, England.
 Francis Nicolas, 33 Samosett Street, Holyoke, Mass.
 C. Cramp, 49 Avenue Road, Leicester, England.
 Thomas Grey, 8037 West 45th Street, Lyons, Illinois. (17 years old.)
 Dr. R. C. Kash, Sevierville, Tenn. (Scott and foreign.)

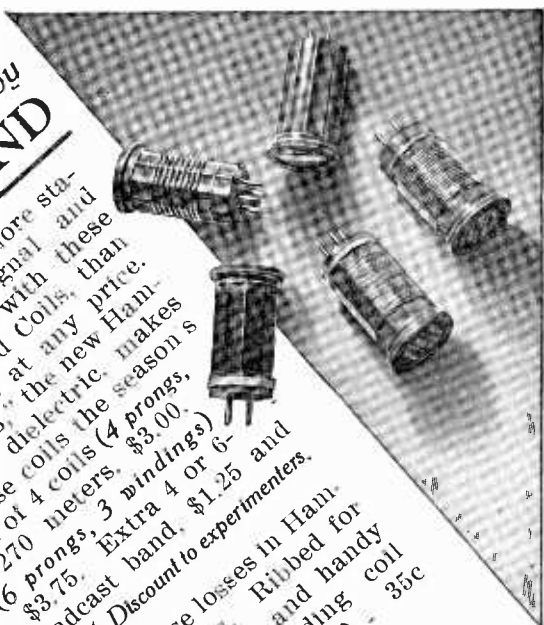
FOR SALE to the highest bidder—Fidelity 16B Philco. Just out Nov. 1, code 125, logged 11 countries. Cost \$89.50. Reason for selling, bad location. Headphones and \$6.00 RCA short wave aerial included. Wendell Neal, Smith Center, Kansas.

FOR SALE—Best offer. Patterson PR-10. Perfect condition, like new. Purchased new May, 1934. Two spare tubes. Reason for selling, want smaller receiver. Schultz, 108 East 13th St., Indianapolis, Indiana.

FOR SALE—Silver Marshall Model 727 All-wave, D. C. Super-Wasp, SW5 National AC, Perlman station finder, High power rack and pinion microscope, medical vibrator. Want pre-selector, oscillators, and meter equipment. Glenn Watt, Chanute, Kansas.

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Users say they get more stations, louder signal and sharper tuning with these low-priced Hammarlund coils than with any other coils at any price. Perfection of "XP-53" the new Hammarlund low-loss coils makes the performance of these coils the season's radio sensation. Set of 4 coils (4 prongs, 2 windings) for 15-270 meters, \$3.00. Set of four coils (6 prongs, 3 windings) for 15-270 meters, \$3.75. Extra 4 or 6-prong coils for broadcast band, \$1.25 and \$1.50 respectively. 40% Discount to experimenters. No artificial coloring to cause losses in Hammarlund "XP-53" Coil Forms. Ribbed for air-spacing. Easy-grip flanges and handy "Meter-Index" inserts for recording coil each. 6-prong forms, 40c each. 35c each. 40% Discount to Experimenters.



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 Address.....

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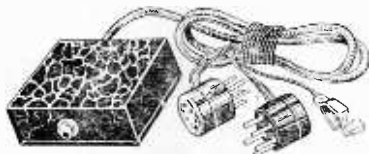
This is the fifth time we have had the pleasure of wishing our members a Happy New Year and thanking them for their help and cooperation in the past. And, this time we are more enthusiastic than ever before, for the past year has been our best, without the slightest doubt. We certainly have friends and we certainly appreciate these friends. We realize that without them we would be lost. And as we start a new year, our hope is that we can make more friends while holding those we already have. We owe our very existence to our friends and we realize this. May we, therefore, take the space to say to one and all "A Very Happy 1935, and many thanks for all your help and kindness."

We thank each of those who have sent in news, comments and criticism. We thank each firm which has taken space with us. We thank each editor who has mentioned the club. We thank each radio manufacturer and dealer who has recommended the club to customers. And, we each station owner who has mentioned the club over the air. We thank everyone who has said a good word for us.

Those who have sent in new members to the organization during the past month are mentioned here: Thos. Van Auken, Livingston, Texas; Henry J. Freedman, Philadelphia; D. R. D. Wadia, Bombay, India; W. F. Ryan, Pittsburgh, Pa.; Robert Irwin, Chicago, Illinois; Fred B. Hellers, Jr., Philadelphia; Harry C. Lange, New York City; Edgar R. Beck, Miami, Florida; Robert Rossi, Philadelphia; Joseph Kelly, Kingston, N. Y.; Charles Blinn, Jr., Philadelphia; W. Hafemann, Cristobal, Canal Zone; Gus J. Kleher, Rogers City, Michigan; H. M. Weatherly, Knoxville, Tenn.; W. G. Runge, Oakland, California; Robert Lawrence, Montclair, N. J.; Cooper Dewey, Hereford, Texas; A. Hiram Shafer, Powelltown, W. Va.; H. S. Bradley, Hamilton, N. Y.; R. C. Baxter, Nagpur, India; Stuart Walmsley, Los Angeles, Calif.; David Capriles, Curacao, D. W. I.; Arthur S. Barber, Schenectady, N. Y.; J. T. English, Fort Spring, W. Va.; Thomas Greay, Lyons, Ill.; Hal Thompson, Berkeley, Calif.; A. Stanley Elphrim, Baltimore, Md.; V. P. Mathews, Flint, Michigan; J. W. Cope, Kelowna, B. C., Canada; C. B. Bowling, Columbia, Mo.; E. E. Heine, Hannibal, Mo.; Mrs. E. Gabhardt, Racine, Wis.; Elmer C. Applegate, Newburgh, N. Y.; Ralph B. Williams, Garden City, N. Y.; G. A. Reinhardt, Baltimore, Md.; Tilgham McCabe, Salisbury, Md.; Paul Fedders, Buffalo, N. Y.; H. M. Parkhurst, Philadelphia; W. E. Watson, Youngstown, Ohio; Carl Scherz, San Angelo, Texas; Charles Hoffman, Terre Haute, Ind.; W. D. Martin, Honolulu, Hawaii; R. A. Durham, Louisville, Ky.; W. C. Gangloff, Cincinnati, Ohio; A. H. Dalal, Out Fort, Broach, India; C. T. Hanavan, Los Angeles, Calif.; R. M. Holt, Flushing, N. Y.; George Mycoff, Pittsburg, Pa.; R. D. Rogers, Wilmington, Del.; W. C. Gabriel, Klamath Falls, Ore.; I. F. Mattson, Banes, Cuba; George Remond, Meridan, Conn.; John B. Morgan II, Philadelphia; A. G. Bryan, Balboa Heights, Canal Zone; D. H. Talley, Terre Haute, Ind.; Ralph Brady, Brooklyn, N. Y.; W. W. Wall, Cedar Rapids, Iowa; Lewis Winner, New York City; P. V. Verrall, St. Vincent, B. W. I.; John Heinbokel, Wyandotte, Michigan; Edward Bares, Egg Harbor City, N. J.; L. E. Hansen, Esplanade, Durban, Africa; Philco Radio of London; R. Lawton, Whitefield, England; Elain Favereau, St. Pierre and Miquelon.

HAPPY NEW YEAR! AND GOOD RECEPTION IN 1935

The New DOUBLE PURPOSE PHONE RECEPTOR



For Receivers Not Equipped for Earphone Listening

No tampering with wiring to install ● Installs in one minute without tools ● Inserting phone jack automatically silences speaker ● Pulling phone plug out puts receiver back to speaker operation ● Five foot cable makes it a phone jack at your fingertips ● Needs but a fraction of volume used for loud speaker ● Uses all tubes of receiver ● Helps to identify stations heard faintly on the speaker.

And the Extra Feature

May be used, without changes, with another loudspeaker at a remote point from receiver (kitchen, bedroom, porch, etc.) or for Radio Recording.

NOTE—Models available for using phonograph pick-up on your receiver.

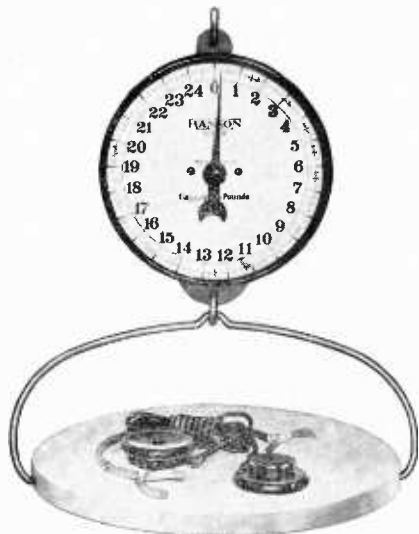
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Your net price..... **\$3.95**
(Complete, as illustrated.)

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THEY WEIGH BUT FOUR (4)
OUNCES, Headband Included.



TRIMM Featherweight Phones, 24000 ohm. impedance, can pick up signals so faint that they would not be heard in speaker. List Price, \$10.00.

YOUR NET PRICE..... **\$6.95**

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CANNONBALL Phones,
2000 ohms..... **\$1.25**

PHONE PLUGS, for single pair phones...19c

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Major Glenn, foremost British scientist, engaged in transmission phenomena research of the most precise nature at Cambridge University, England, tested 47 of the world's finest all-wave receivers. My MASTERPIECE alone withstood all his tests and was adjudged by him to be the finest, most capable all-wave receiver ever produced.

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William C. Bostwick, consulting engineer of Ithaca, N. Y., associated with one of America's greatest universities, says, after having made exhaustive scientific and measurement tests on all-wave receivers, "MASTERPIECE III is head and shoulders above everything else."

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Paramount sound technicians, which staff includes some of the foremost authorities on high frequency work and sound reproduction, selected MASTERPIECE III from the entire field for the Richard Arlen-Bing Crosby International DX contest with results that are today a world's record for DX reception.

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Columbia Broadcasting system after having exhaustively tested practically every make of all-wave receiver, adopted MASTERPIECE III for official use in their Chicago studios.

BYRD -

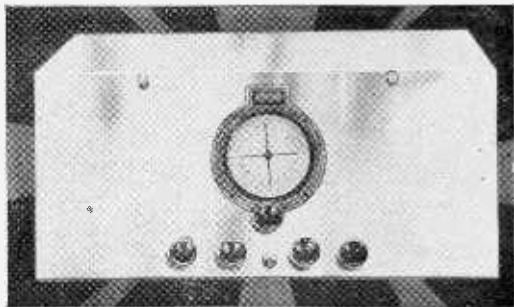
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