

VOL. VIII

JULY, 1937

NO. 10

# INTERNATIONAL



SHORT

WAVE

RADIO

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

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- Published Monthly.

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EAST LIVERPOOL, OHIO, U. S. A.



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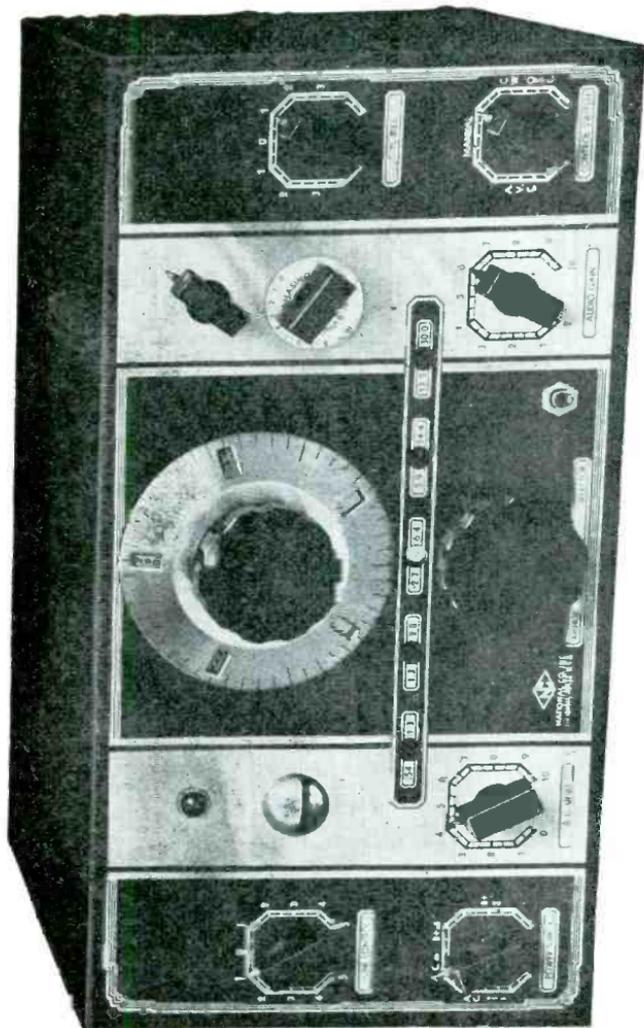
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An illustrated folder will be sent on request.

**NATIONAL COMPANY, INC., MALDEN, MASS.**

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 5 shillings to Arthur Bear, 100 Adams Gardens Estate, London, SE16, 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 \$2.75



F. O. B. Indianapolis, Indiana.

A beautiful 12-inch globe showing the short wave stations of the world, with call-letters and location, for only \$2.75 F.O.B. Indianapolis. This globe is made by the world's greatest globe makers. It is modern in every detail, with all the latest changes in spellings and boundaries made.

The base is of walnut, highly finished. The globe itself can be cleaned by merely washing it with a damp cloth. Every short wave fan should have one of these globes for several good reasons. First of all, it marks the location of stations heard. Second, you can measure distances to the stations you hear. Third, it adds charm and beauty to any radio. Fourth, it creates interest in your short wave reception when people see this globe.

Floor model on high pedestal (same globe), each. . . . . **\$3.75**

### PLEASE SEND POSTAGE

This new price does not include postage. Readers are requested to send the necessary postage when ordering. The shipping weight is eight pounds. In cases where more than enough postage is sent, we will return all not used.

Ask your postmaster for the postage rate on 8 pounds from Indianapolis, Indiana.

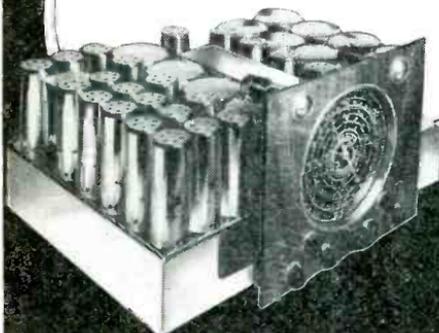
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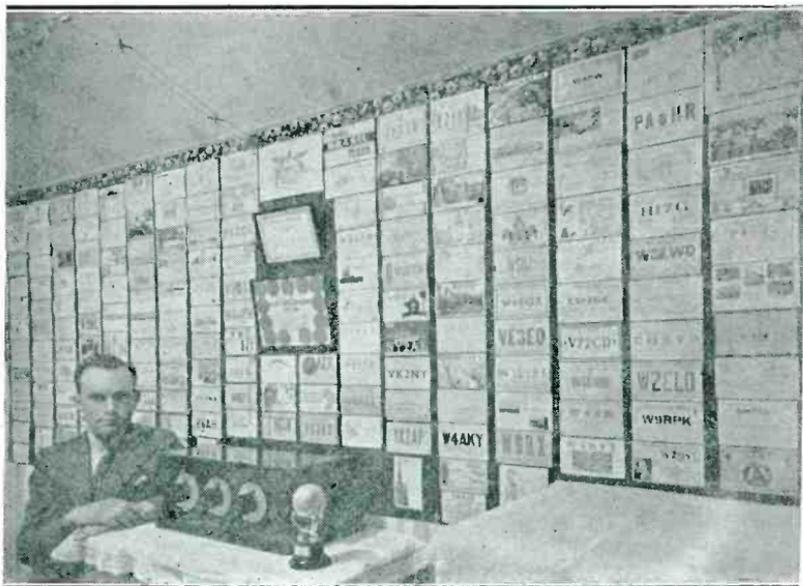
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### ERNEST ORCHARD, WEYMOUTH, ENGLAND

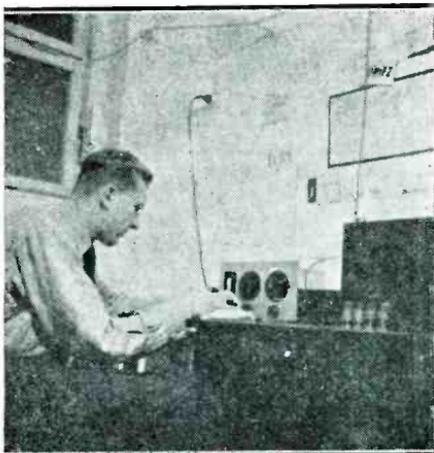
Mr. Orchard is the leading European Heard-All-Continents Club member, with 13 verifications from each continent. His H-A-C certificate can be seen in the photo just above his receiver. The other certificate is his membership certificate to the I.S.W.C. The trophy shown is the one donated to our London Chapter by "World Radio," the official B. B. C. radio magazine. It was won by Mr. Orchard in a DX contest. Mr. Orchard uses a 12-foot cage aerial and a three-tube receiver. His verifications show that he certainly knows how to tune.

### SEND REPORTS ON NEW EQUIPMENT

When you buy something new for your short wave work, whether it is a receiver, an antenna, a pre-selector or whatever you may mention, please tell us how it works for you. Hardly a day passes but what someone asks us for help in selecting some new thing. When we have letters from users of the new equipment, we pass these letters along. We are particularly in need of reports on the new Scott receiver, the RME69, the National HRO and the NC-100, the new Super-Pro, and the RCA Spider-web antenna. We could use 25 letters on the Spider-web. Help others, as you once needed help, by sending us your report on new equipment.

### ING VLAD HRDLICKA

Ing, Hrdlicka lives in the Y. M.C.A. at Praha, Czechoslovakia, and is an ardent short wave DX fan, as everyone will be able to see from his verifications.



### ARTIFICIAL VERIES

Something new has been started and we are not just sure that we think the idea will be a success. Carroll H. Weyrich of 4310 Evans Chapel Road, Baltimore, Maryland, started a few months back to monitoring the Daventry stations every so often and verifying reports sent to him, since the Daventry stations do not verify. He listens to Daventry the first Saturday of the month from 6 to 7 A.M., 9 to 10 A.M., 6 to 7 P. M. and 9 to 10 P.M. and the first Sunday 3 to 4 A.M., 2:45 to 3:45 P.M. and 4 to 5 P.M. Anyone sending him a report and 5c gets a verie from him. He does the same thing with HRN, Honduras, from 9:00 to 10:00 P.M. on the 2nd and 3rd Mondays of the month. And now we have listeners on the west coast and in England doing the same thing with other stations. If this keeps up, stations everywhere will refuse to verify and allow someone to take over the job for them.

Anyone can get a monthly magazine from Daventry telling them exactly what will be on the air at any given hour of the day. For this reason they do not verify. That is their point of view. They do not realize just how much value most short wave fans attach to a little card verifying their report. We only wish they did.

### JAVA BROADCAST WINNERS

The best report received from over 5,000 miles on the January second broadcast from Java was from N. De Las Casas, Apartado 124, Caracas, Venezuela. The second best was from Reginald De Souza, Maracaibo, Venezuela. The best from over 2,000 miles was from R. Z. Ride, Melbourne, Australia. Although the broadcast was announced in many magazines and by many clubs, most of the reports came from I.S.W.C. members, according to Mr. Hardeman, who had charge of the program.

### CHAPTER NEWS

The New York Chapter met on the lawn of the Reaney Brothers on June 25th. No plans have been made for summer meetings, but it is hoped that they will have several outings and excursions to interesting points around New York.

The London Chapter meets every Friday evening at 80 Theobald's Road, W. C. 1, in the center of London. Once each month they give a television demonstration which is very interesting. A new receiver is demonstrated every meeting, interesting speakers are introduced and there is always something new. The chapter holds open house at their club rooms every day. The room is equipped with a very attractive library, a short wave receiver and various other things. This chapter also publishes a monthly News Letter, a copy of which will be sent to anyone in the world sending them postage or a reply coupon.

The Brighton Chapter meets every Wednesday evening at 100 Cromwell Road, Hove, where there are spacious rooms. Every meeting adds interest. Receivers are demonstrated, members exchange notes, show verifications and similar things take place. For details write to John Bennet, 205 Braeside Ave., Brighton, 6.

The Guernsey Chapter meets every other Tuesday. Many special features are planned for the summer, details of which may be had by writing to F. S. LaPavoux, 8 Upper Canischers, St. Peters Port, Guernsey. The meeting place is 5 Wells Road, St. Peters Port. The combined British chapters held an outing or field day on Sunday, June 13th, when receiving and transmitting stations were taken out into the country. Contests were arranged and the whole affair was a grand success.

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### BRADLEY APPOINTMENT

H. S. Bradley, 66 Main Street, Hamilton, N. Y., has been appointed QSL manager for the ARRL for veries the ARRL receive for American short wave fans from amateurs. Listeners should provide Mr. Bradley with a self-addressed stamped envelope, No. 8 size, in order to have his cards forwarded to him.

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### PEN-PALS

The following people want to exchange letters and cards with other short wave fans.

Rd. Merlehan, 5 Valentia Parade, North Circular Road, Dublin, Ireland.  
George Epps, 693 Tenth Avenue, New York City (Super-Pro owners).

Dr. R. C. Kash, 15 Randall Avenue, Staten Island, N. Y.

Dr. F. Earle Hall, Postoffice Bldg., Winchendon, Mas. (British Colonies stamps).

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### SPECIAL PROGRAM

Frank Fontella of Wilmerding, Pa., tells us he is arranging a special I.S.W.C. program from station COCQ, Havana, on 9.75 mc. for July 18th, from 1:00 to 2:00 A.M., E.S.T., or 0600 to 0700 G.M.T.

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### MICROPHONE NAMING CONTEST

Amperite is offering I.S.W.C. members an opportunity to win some nice prizes, in a microphone naming contest. Turn to the Amperite advertisement and notice the illustration of their new nameless mike and stand, shown at the top of the ad. All you have to do is select a name for this new mike and send it to the Amperite Company, whose address appears in the ad. Your letters must be postmarked no later than August first. The person sending in the name selected as the best by the judges will receive a microphone and stand free of charge. The next ten best names will receive stands free of charge. Remember the closing date.

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### SPANISH EDITION OF SUPER-PRO BULLETIN AVAILABLE

For the extensive Spanish-reading public, and I.S.W.C. over-seas members, a special Spanish edition of the Super-Pro broadside, with its numerous photographs, curves and technical and popular information, has been released by the Hammarlund Mfg. Co. This bulletin, like the English edition, is most complete, containing a wealth of details on every phase of the Super-Pro design, construction and application. Copies will be gladly mailed to anyone interested, free of charge.

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### SPECIAL AUGUST ISSUE

This note of warning. If your subscription is expiring, or if you are thinking of subscribing and putting it off till fall, you had better sign up right now for we are bringing out a special magazine in August. We promise readers that their August issue will be used throughout the entire year and that most of you will want two and three copies. Additional copies will be sold to members at ten cents each.

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### SPECIAL PROGRAM FROM CURACAO.

On August 27th, from 7:36 to 8:36 P.M., E.S.T. (August 28th, 0036 to 0136 G.M.T.) Station PJC1, Curacao on 50.60 meters or 5.93 mc. will broadcast a program for you I.S.W.C. members. This was arranged by Johan P. Curiel, Mundo Nobo No. 143, Curacao. A special verification card will be printed and mailed to all those sending in a report and an International Postage coupon. Send reports either to Mr. Curiel or to PJC1, Breedstraat No. 181, Willemstad, Curacao.

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### LETTER WRITING CONTEST

Up to the present time, this contest is a failure. We are giving a 1937 Model Sky-Buddy Receiver to the person sending in the best letter telling how to improve short wave reception. Only a very few people have sent in such a letter. The time expires August 31st at Midnight. The letter should give some plan to make short wave radio better. It may be any sort of a plan that is workable. Just tell us in your own way how you think short wave radio can be bettered. Clever phrasing, fancy writing and such things will not be considered.

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

### AUSTRALIA

This month VK2ME on 9.59 mc. broadcasts from midnight to 2:00 A.M. Sundays, 4:30 to 9:30 A.M. and 11:30 A.M. to 1:30 P.M. VK3ME broadcasts on 9.50 mc. week-days 4:00 to 7:00 A.M. VK3LR verifies say they broadcast on 9.58 mc. from 3.00 to 8.00 A.M., but they are being heard almost daily now from 1:00 A.M. till 8:30 A.M. This includes Sundays (Campbell, Calif., and Galagher, Calif.)

VK9MI, on the ship "Kanimbla" verifies and say they will broadcast on 6.01 mc from 7:00 to 7:15 A.M. on July 8th, 11th, 14th, 18th, 21st, 25th, August 5th, 6th, 11th, 15th, 18th, 22nd and September 2nd. They have 50 watts power. The address is McIlwraith McEachern, Ltd., Box 255C, Melbourne, Australia, (DeMent, Texas).

ZMBJ on the motor ship "Awatea" will not be heard on 8.84 mc. hereafter. International law says that all broadcasts must take place on the broadcast bands. So, ZMBJ will have to close down or build a new transmitter, which is not likely. (This news came from Australia).

FO8AA, Radio Oceanie, Tahiti, on 7.10 mc. is supposed to broadcast from 11:00 P.M. to midnight on Tuesdays and Fridays but many times they stay on the air until 12:45 A.M. (Myers, Walcott, Riggle.)

VK8SC, Port Hedland, West Australia, on 6.96 mc. verifies say they have a 200 watt transmitter. This is owned by Australian Medical Service, to broadcast medical services for a flying doctor. Heard every Sunday 4:30 to 5:15 A.M. Was also heard 8:30 to 8:45 A.M. once calling the postmaster at Melbourne, (Walcott, Calif.)

ZLT, Wellington, New Zealand, is heard phoning Australia between 11:00 P.M. and 6:00 A.M. on 11.05 mc. Australia has telephone stations at Sydney operating on 10.52 mc. and 9.76 mc. They are used to phone Java, New Zealand and England. When testing they use the call VK2ME. When working Java they use VLJ. When working England they use VLK. When working New Zealand the call VLZ is used. VLZ was heard on 13.34 mc. at 5:00 A.M. almost daily phoning ships, (Walcott, Calif.)

### AFRICA

CR7AA on 6.13 mc. and CR7BH on 11.718 mc. broadcast on the following schedule now. Weekdays 11:45 P.M. to 12:30 A.M.; 9:30 A.M. to 11:00 A.M. and 12:45 P.M. to 3:45 P.M. Sundays 5:30 to 7:00 A.M.; 10:00 A.M.

to 12:30 P.M. and 1:30 P.M. to 3:30 P.M. CR7BH is heard in America between 8:30 A.M. and 11:00 A.M. This schedule is from Mr. L. E. Hansen, Durban, Natal, Africa. Mr. Burdett of North Rhodesia, Africa, says they are on from 4:30 to 6:30 A.M. also. Address is Box 594, Lourenco, Marques, Portugese East Africa. Veries say CR7BH has 250 watts power (Gallagher, Walcott, Walmsley and Keith). Heard 11:30 P.M. to midnight, and 5:30 to 6:30 A.M. (McDermott, N. Y.) Heard closing down Sundays at 12:20 P.M. (Riggle, Ohio). Verifies program heard at 7:30 A.M. so schedule is wrong, (Kash, N. Y.)

CR6AA, Lobito, Angola, Africa Occidental Portugese, in a letter, tells us that they have 750 watts power and broadcast on 7.177 mc. Wednesdays and Saturdays 2:45 to 4:30 P.M., E.S.T. They have tested on 9.66 mc. irregularly and still test on this frequency but regular broadcasts take place on 7.177 mc. still.

Radio Guardia Civil, at Tetuan, Spanish Morocco, is on about 6.48 mc. between 5:00 and 11:00 P.M. irregularly with war news. Heard 7:00 to 8:15 P.M. quite regularly, (Kash, N. Y.; Rossi, Pa. and Oxreider, Pa.) EA9AH, Tetuan, Spanish Morocco, operated by General Franco's army and known as "Radio Nacional" and "The Voice of the Trenches" is on 14.03 mc. and 7.00 mc., roaming around near these frequencies. They broadcast war news and talk to amateurs all over the world. Try between 2:00 and 9:00 P.M. on 14.03 mc. and between 7:00 and 11:00 P.M. on 7.00 mc. The address is Apartado 124, Tetuan. Verie from Radio Guardia Civil says 45.5 meters or 6.58 mc. (Kash, N. Y.) Heard on 6.48 (Oxrieder). EA9AH on 14.00 mc. heard around 1:00 to 1:45 A.M. (Stark, Mo.) On 14.04, 7:00 P.M. and 1:00 A.M. (Rossi, Pa.) 11:30 P.M. (Shaffar, Iowa). At 5:00 P.M. and midnight, also station EA9BJ on 7.12 mc. evenings (Legge, N. Y.) Verie from Radio Guardia says news is given at 10:45 A.M., 4:45 P.M. and 7:00 P.M. (Legge, N. Y.)

Capetown. The African broadcasting Corp. is now testing a transmitter at Capetown on 6.02 mc., irregularly, (Hansen, Durban).

FIQA, Tananarive, Madagascar, is trying two or three new wavelengths and roams around a lot. One frequency is near 6.01 mc. Another is near 31 meters, where they have roamed from 9:50 to 9:58 mc. and one near 25 meters where they roam from 11.80 to 11.88 mc. They broadcast from midnight to 12:30 A.M. and 9:45 and 10:30 A.M. (Walcott, Calif. and Hansen, Africa). They claim 11.95 mc. but heard nearer 11.85 mc. Heard midnight to 12:30 A.M. and 9:45 to 10:30 A.M. (Hansen). Heard on 31.6 meters and 25.4 meters, (Cooke, India). On 9.53 mc. 3:30 to 4:00 A.M. and 11:34 mc. irregularly, (Partner, Wash.) A French station on 9:39 heard 7:30 to 8:30 A.M. also, (Walcott).

Canary Islands. EAJ43, Santa Cruz de Teneriffe, on 10.37 mc. broadcasts 2:00 to 4:00 P.M., 5:45 to 7:00 P.M., 7:20 to 9:45 P.M. according to letters, (Kash, N. Y.) Amateurs in the Canary Islands are busy broadcasting war news. EA9BJ on 7.12 mc., EA8AS, Teneriffe, on 7.21 mc., EA8AK at Santa Cruz de las Palmas, on 7.12 mc. and EA8AE, las Palmas, on 7.02 mc. are all heard between 7:00 P.M. and midnight, (Legge, Pa.) EA8AE also on 14.07 mc. heard at 7:00 P.M. Is at Puerto de la Luz, (Rossi, Pa.)

EA8AT on 14.12 mc. at 4:40 P.M. and EA2BH on 14.12 mc. at 7:00 P.M. were heard, (Kash, N. Y.)

ZUD, Pretoria (new) in 43.50 meters or 8.73 mc. is testing 7:00 to 8:00 A.M., E.S.T. or 1200 to 1300 G.M.T. Reports should be sent to Radio Engineer, care of Postmaster, G. P. O., Pretoria, (Hansen, Durban, Natal). Is also on 60 meters or 5.00 mc. according to newspaper.—Editor. ZNB, Mafeking, on 5.90 mc. is broadcasting from 1:00 to 2:30 P.M. daily, (Hansen, Durban, Natal).

A verification now says that TPZ is the call of the station on 12.12 mc. at Alger, Algeria, and TPZ2 is the call on 8.96 mc. Both phone Paris irregularly, lately the one on 12.12 mc. has been broadcasting almost every afternoon between 3:30 and 4:30 P.M. The phone OPL on 20.24 mc. was heard 8:15 to 9:30 A.M. and OPM on 10.14 mc. was heard 8:50 to 9:00 A.M., both off schedule, (Walcott, Calif.) New African phone on 16.23 mc. called Rome one Friday 8:00 A.M. (Karpen, Pa.) Asmara, Eritrea, on 33.5 meters, 8.96 mc. heard at 12:30 P.M. (Cooke, India). Must mean TPZ2 —Editor. IDU, Asmara phone on 13.38 mc. heard at 1:30 A.M. (Gallagher, Calif.) This is a new wavelength—Editor. Station on 15.43 mc. verified as IUG. (Walcott) Verified as IUD. (Oxrieder)

## ASIA

Manila. Erlanger & Galinger, Inc., is testing a new transmitter on 25.38 meters or 11.84 mc. from 9:00 P.M. to 9:00 A.M., E.S.T. (10:00 A.M. to 10:00 P.M. Manila time). They relay KZEG, "The Sunshine Station of Manila," until 5:30 or 6:00 A.M. and then relay KZRM, Radio Manila, till 9:00 A.M. (Walcott, Calif.) Heard 5:00 to 9:00 A.M. and reports should go to P. O. Box 283, Manila, (Chavez, Calif.)

ZGE, Kuala Lumpur, Federated Malay States, moved from 6.23 mc. to 6.20, to 6.18, to 6.23, to 6.14 and then to 6.25 mc. all in one month. They broadcast Sundays, Tuesdays and Fridays 6:40 to 8:40 A.M. They always announce 6.13 mc. (Walcott, Calif.) ZHJ, Penang, moved to 6.055 mc. and broadcasts weekdays 6:40 to 8:40 A.M., not 7:40 to 9:40 (Walcott). Both ZGE and ZHJ heard, (Gallagher, Calif.) A phone ZGB on an announced frequency of 13.643 mc. was heard 7:30 to 8:15 A.M. phoning PLQ, Java, (10.68) mc.) using scrambled speech, (Walcott).

VPB, Colombo, Ceylon, has moved again, this time to 6.097 mc. A verie says 6.16 mc. from 6:30 to 11:30 A.M. (Walcott). Gone now, as it is used only spring and fall, (Partner, Wash.) Still heard, (Gallagher, Calif.)

Saigon. The station announcing as "Philco Radio" is now broadcasting on the 25 and 50 meter bands, roaming between 5.90 and 5.98 mc. and 11.70 and 11.73 mc. and announcing 6.01 and 11.71 mc. all the while. They come on any time from 4:30 to 6:30 A.M. and stay on till 9:30 A.M. The address was announced as Box 295, Saigon, (Walcott). A French speaking station on 7.45 mc. is heard daily 6:00 to 9:30 A.M., playing Chinese music 6:00 to 7:30 A.M. and French afterward, (Walcott). A station at Hanoi, Indo-China is on 40 meters according to member Hardemann of Java, so we assume this is the one. FZS, a phone, was

heard on 18.388 mc. 5:45 to 6:00 A.M. once, (Walcott). A verie says FZR4 is the call of the phone on 16.233 mc. (Rossi, Pa.)

Siberia. Station RV15, on 4.27 mc. has harmonics on 8.54 mc. and 12.81 mc. that are heard better than the original wave, and are heard between 1:00 and 6:00 A.M. RFM, Khabarovsk, on 11.82 mc. is broadcasting daily 5:00 to 10:00 A.M. (Karpen, Pa.) Heard phoning at 9:00 A.M. (Gallagher, Calif.) Another new phone, RCH on 15.01 mc. phones a new station on 16.39 mc. daily 5:00 to 9:00 A.M. (Karpen). May be RTW on 16.35--Editor.

HSSPJ, Bangkok, Siam, is still an unsettled argument. We have five schedules for this station, all supplied by reliable fans. They are on 9.35 mc. They broadcast either Mondays or Thursdays from 8:00 to 10:00 A.M., we do not know which. Then, they are on the air either Thursdays, Fridays, Saturdays or Sundays from 1:00 to 2:30 A.M. or maybe it is P.M., as reports all differ. The announcer said 1:00 to 2:30 A.M. Sunday, Bangkok time, or 1:00 to 2:30 P.M., E.S.T., Saturdays, (Walcott). Heard Thursday at 2:00 P.M. (Worcester, Hawaii). We want the facts on this station.

Hong Kong. Letters from ZBW say that the test period is over and they will no longer verify, (Atherton, Wayand, Baines, Teague). Now using ZBW3 on 9.53 mc. most of the time. ZBW4 on 15.19 mc. heard once, (Wooten, Ala. and Sokolovsky, Palestine). Heard between 5:00 and 10:00 A. M.

Chinese Phones. China now has phones in nearly all their larger cities, most of which are listed in our station list. One new one reported is XTA, Hankow, on 9.53 mc. heard at 9:00 A.M. (Gallagher, Calif.)

Java. Stations YDB on 9.55 mc., PLP on 11.00 mc., PMN on 10.26 mc. and YDC on 15.15 mc. broadcast the same programs daily 5:30 to 10:00 A.M. and Saturdays and Sundays till 11:00 or 11:30 A.M. YDB on 9.55 and YDC on 15.15 mc. also broadcast from 10:30 P.M. to 2:00 A.M. now, (Hardemann, Java.) PMH, Bandoeng, on 6.72 mc. also broadcasts between 5:30 and 10:30 A.M. and is heard on the Pacific coast. YDA, Tandpong-priok, on 3.04 mc. is heard on the Pacific coast between 5:30 and 10:30 A.M. We show many Java phones in our list. A new one, located at Palembang on 7.87 mc. phones PLQ 5:30 to 8:00 A.M. and PLV after 8:00. YPC, Balikpapan, Borneo, on 9.12 mc. is heard between 5:45 and 6:15 A.M. (Walcott, Calif.)

Japan. The schedule of Japanese broadcasts now are:  
 12:00 to 1:00 A.M.—JZK on 15.16 mc.  
 9:00 to 10:00 A.M.—JZK on 15.16 and JZJ on 11.80 mc.  
 2:30 to 3:30 P.M.—JZK on 15.16 and JZJ on 11.89 mc.  
 4:00 to 5:00 P.M.—JZK on 15.16 and JZJ on 11.80 mc.

These stations now have a power of 50 k. w. In addition, station JVN on 10.66 mc. is heard often relaying baseball games between midnight and 3:00 A.M. Dozens of phones are heard using music to test modulation, too. A station JZF on 15.63 mc. will be used soon, according to member Satar of Iowa. JZK and a JVA on 18.91 mc. sent musical program to Berlin 5:00 to 7:00 A.M. one Tuesday, (Karpen, Pa.) Other reports came from

members Rossi, Sieben, Davenport, Shaffar, Boothroyd, Pegge, Studholme, Gallagher, Campbell, Chavez, McManamy, and Walcott.

**Japanese Phones.** New Japanese phones are being heard on 9.24 mc., 11.85 mc., 10.09 mc. and 10.135 mc. between 5:00 and 7:00 A.M. (Walcott, Calif.) JIA, at Taihoka, Taiwan, on 15.74 mc. is heard around 8:00 to 8:45 P.M. (Rossi, Pa.) Japanese airport stations are heard on 6.48 mc. between 2:00 and 5:45 A.M. One is J2AA, Haneda airport. Others heard are J2IK, J3AI and J2AF. The ship "Chichibu Maru" is operating on voice on 17.70 mc. and 6.55 mc. calling land stations KWU, California; JVE, Japan, and KBB Manila, and is heard between 9:00 P.M. and 9:00 A.M. as a rule, being on 17.70 mc. between 11:00 P.M. and midnight often. (Many).

**India.** VUB, Bombay, on 9.59 mc. went off the air last January, was off for some time, and is now used very irregularly. VUC, Calcutta, which we still doubt has ever been heard in America, is now broadcasting on 6.11 mc., weekdays 2:06 to 4:36 A.M., 6:36 to 12:06 noon, Saturdays 10:06 P.M. to Sundays 2:06 A.M. and 7:36 to 12:06 noon according to schedule published in India, (Walcott, Calif.) A station of 40 watts power on 49.03 meters or 6.085 mc. is operated in the palace at Mysore and it is at present operating Monday, Wednesday and Friday 9:00 to 11:30 A.M. and other days, except Sunday, 8:00 to 10:30 A.M. (Cooke, India). First reported by Norman Bayne of Bangalore, India. VWY2, Poona, a phone on 17.48 mc. was heard at 6:09 A.M. phone GAU, England, (Rossi, Pa.) Sent special broadcast to London, 2:30 to 2:55 P.M. one Saturday, (Studholme, Eng.)

**Rangoon, Burma.** A station operated by the Government was heard first on 6.085 mc., then on 6.14 mc. and lately on 6.005 mc. broadcasting between 9:00 and 9:35 A.M. daily, (Walcott, Calif.) A new phone at Victoria Point, Burma, on 7.645 mc. sometimes broadcasts 7:00 to 8:30 A.M. (Keenan, Australia). A letter from the officer in charge says VVS, Mingaladon, Burma, is on 12.84 mc. and they phone VVN, Madras Fort, India, which is on 13.26 mc. Heard 5:00 to 6:30 A.M. (Keenan, Australia). VVS heard on 12.87 mc., not 84, 6:00 to 7:30 A.M. (Walcott, Calif.)

### THE EUROPEANS

**England.** The programs for July are as follows:

21.53 mc.—GSJ, 6:00 to 8:45 A.M. and 9:00 to noon.

21.47 mc.—GSH, 6:00 to 8:45 A.M. and 9:00 to noon.

17.79 mc.—GSG, 12:00 to 2:15 A.M., 6:00 A.M. to noon, 12:15 to 5:45 P.M.

15.31 mc.—GSP, 6:00 to 8:00 P.M.

15.26 mc.—GSI, 12:15 to 3:45 P.M. and 9:00 to 11:00 P.M.

15.18 mc.—GSO, 12:00 to 2:15 A.M., 6:00 A.M. to noon, 6:00 to 8:00 P.M., 9:00 to 11:00 P.M.

15.14 mc.—GSF, 9:00 A.M. to noon, 4:00 to 5:45 P.M., 9:00 to 11:00 P.M.

11.75 mc.—GSD, 12:00 to 2:15 A.M., 12:15 to 3:45 P.M., 6:00 to 8:00 P.M., 9:00 to 11:00 P.M.

9.58 mc.—GSC, 9:00 to 11:00 P.M.

9.51 mc.—GSB, 12:00 to 2:15 A.M., 12:15 to 5:45 P.M., 6:00 to 8:00 P.M.

The programs are from 11:30 P.M. to 1:45 A.M. instead of midnight to 2:15 A.M. according to Partner of Washington. The B.B.C. wishes to

make it known that these artificial verifications signed by one Carroll Weyrich and Bernard Ahman, Jr., are issued without their authority and approval.

Germany. The programs scheduled for July follow:

- 17.76 mc.—DJE—12:05 to 5:15 A.M.; 5:55 to 11:00 A.M.; Sun. 11:10 to 12:25 P.M.  
 15.34 mc.—DJR—8:00 to 9:00 A.M. and 4:50 to 10:45 P.M.  
 15.28 mc.—DJQ—12:00 to 11:00 A.M., 4:50 to 10:45 P.M.; Sundays 11:10 to 12:25 P.M.  
 15.20 mc.—DJB—12:05 to 5:15 A.M., 5:55 A.M. to 11 A.M., 4:50 to 10:40 P.M., Sunday 11:10 A.M. to 12:25 P.M.  
 15.11 mc.—DJI—12 to 2 A.M.; 8 to 9 A.M.; 11:35 to 4:30 P.M. Sundays 6:00 to 8:00 A.M.  
 11.77 mc.—DJD—11:35 A.M. to 4:30 P.M.; 4:50 to 10:45 P.M.  
 9.54 mc.—DJN—12:05 to 5:15 A.M.; 5:55 to 11 A.M.; 4:50 to 10:45 P.M.  
 9.56 mc.—DJA—12:05 to 5:15 A.M., 4:50 to 10:45 P.M.  
 6.02 mc.—DJC—11:35 A.M. to 4:30 P.M.

Germany also has experimental stations, DZA on 9.675 mc., DZB on 10.04 mc., DZC on 10.29 mc., DZE on 12.13 mc., DZG on 15.36 mc. and DZH on 14.46 mc. which may be used at times. DJP on 11.85 mc. is heard most every afternoon starting around 11:35 A.M. and lasting till 4:30 P.M. DZC, DZE, DZG and DZH broadcast every Wednesday for the Penambuco Radio Club (PRA8), Brazil, between 2:00 and 3:00 P.M. (Mascarenhas, Brazil. Heard 5:00 to 5:30 P.M. with these programs, (Hansen, Africa). Heard at 2:00 P.M. (Studholme, England). On the 14th and first days of each month, stations DZC on 10.29 mc. and a station on 11.855 mc., either DJO or DJP relays a program from YUA, Belgrade, (See YUA news). A new phone, DFZ on 20.02 is in use, (Legge, N.Y.)

YUA, Belgrade, Yugoslavia, is the call of the station on 6.10 mc., not YTC. Verifications say so, (Pegge, Boothroyd, Rossi, and Reamy). The schedule is 1:00 to 3:00 A.M., 6:30 to 8:35 A.M., noon to 6:35 P.M., weekdays, Sundays at 6:15 A.M. in addition. Thursdays and Saturdays at 8:45 to 9:00 A.M. Twice monthly, on the first and 14th, from 7:00 to 8:15 P.M., YUA is relayed by two German stations, DZC on 10.29 mc. and either DJQ or DJP on 11.855 mc. (Rossi, Pa.; Reamy, N. Y.; Boothroyd, England, Radakovich, Ohio). On June 21st, from 1:00 to 1:45 P.M., station YUA dedicated their program to the International Short Wave Club. This was arranged by George W. King, Liverpool, England. Information did not reach us in time for publication. We thank both Mr. King and the station owners.

OER, Vienna, Austria, has always claimed 11.80 mc., but has been heard on 11.78 mc. Now member Rossi says they are really on 11.80.

The U. S. S. R. Station RKI. 19.95 meters or 15.04 mc. is broadcasting along with RAN, 9.60 mc., from 7:00 to 9:15 P.M. now, and has also been heard as early as 4:00 P.M. and as late as midnight broadcasting. RNE on 12.00 mc. still broadcasts daily 2:00 to 5:00 or 6:00 P.M., Sundays 6:00 to 7:00 A.M. and 10:00 to 11:00 A.M., and Wednesdays 6:00 to 7:00 A.M. (Karpen, Pa.; Wooten, Ala.; Shaffar, Iowa; Kleimans, N. Y.; Nichols, Pa.

McDermott, N. Y.; Rossi, Pa.; Adler, N. Y.; Waite, N. Y.; Pedicora, N. Y.; Eder, Minn.; Heglund, Flrdioa, and Edwards, Pa.) Call is RAR on 15.04 (Hart, Curacao).

Denmark. OXY is now on 11.805 mc. and 6.06 mc. testing irregularly from 1:30 P.M. on, (Studholme, England). Is on 25.5 meters and 31.5 meters between 2:00 P.M. and 4:00 P.M. and on 49.5 meters from 3:00 to 6:30 P.M. (Lindbergh, Sweden). Heard on 11.72, (Mascarenhas, Brazil).

Hungary. Budapest has added time to their schedule and now operate HAS3 on 15.37 mc. Sundays 9:00 to 10:00 A.M. and HAT4 on 9.125 mc. Sundays 7:00 to 8:00 P.M., Wednesdays 7:00 to 8:00 P.M. and Saturdays 6:00 to 7:00 P.M. This comes direct from the station. Reports are wanted and should be sent to Radiolabor Gyali-ut 22, Budapest.

LZA, Sofia, Bulgaria, verie says 14.97 mc. weekdays 6:00 A.M. to 7:30 A.M. and 1:00 P.M. to 3:45 P.M., Sundays and Holidays 1:00 A.M. to 5:30 P.M. (Stark, Mo.; Oxrieder, Pa.; Field, England, and Beck, Ill.) Many Americans have heard this one Sundays between 12:30 A.M. and 1:30 A.M.

Czechoslovakia. At last a regular program and schedule has been arranged. They are sending out printed bulletins now showing the monthly programs in advance. These are available to everyone. Will be sent for six months for three International Postal Reply Coupons (purchased at your local postoffice.) or for a year for six. Address is Vydavatel Radiojournal, Zodpovsny Redakor Z, Vadsedalik, Polensky a Cowdebs. Parah XII-1334, Czechoslovakia. The schedule for July shows: OLR5A—15.23 mc., 9:20 to 11:20 A.M. and 2:00 to 2:15 P.M., daily.

OLR4A—11.84 mc, 2:30 to 4:30 P.M. daily and Mondays and Thursdays 7:00 to 9:10 P.M. Note change in time. OLR5A heard once with OLR4A 7:00 to 9:10, (VanBergen, N. Y.)

Poland. A verie from SPW on 13.63 mc. says Mondays, Wednesdays and Fridays 1:30 to 2:30 P.M., but they verified a report of a program heard 1.08 to 1:30 P.M., when they signed off saying they would be back at 12:30 P.M. (Stockbridge, Mass.)

Italy. 2RO, Rome, is now broadcasting on 11.81 mc. most of the time, starting at 6:43 A.M. Some days they sign off this wave at 5:00 P.M., other days at 7:45 P.M. When they sign off before 7:45 P.M. they go to 9.64 mc. till 7:45 P.M. If you fail to hear this station on 9.64 mc. always tune to 11.81. 2RO was testing on 17 meters once according to member Russell of Pa. We also thank members Edwards, Nichols and McLaughlin for reports.

Switzerland. Proprams are now being broadcast Saturdays over HBL and HBP from 5:30 to 6:15 P.M. and over HBJ and HBO from 6:45 to 8:00 or 9:00 P.M. A list of stations shows HBH on 18.48 mc., HBF on 18.45 mc., HBJ on 14.535 mc., HBO on 11.403 mc., HBL on 9.595 mc. and 9.345 mc., HBP on 7.717 mc. and HBJ on 6.675 mc. HBJ and HBO heard Saturdays till 8:00 P.M. (Walmsley, Calif.) Heard till 8:40 P.M. (Stark, Missouri).

France. TPA4 on 11.72 mc. heard till 2:00 A.M. instead of just 1:00 (Stark, Mo.) Other French stations are shown in list.

Holland. PHI, Huizen, on 17.77 mc. broadcasts Sundays 7:00 to 10:00 or 11:00 A.M.; Mondays, Tuesdays, Thursdays, Fridays and Saturdays 8:00 to 9:30 or 10:00 A.M. PCJ, on 15.22 mc. broadcasts Tuesdays 4:30 to 6:00 A.M., and Wednesdays 8:00 to 11:00 A.M. PCJ on 9.59 mc. broadcasts Sundays 2:00 to 3:00 P.M., Sundays 7:00 to 8:00 P.M., Tuesdays 1:30 to 3:00 P.M. and Wednesdays 7:00 to 10:00 P.M. PDK, a phone at Kootwijk on 10.42 mc. broadcasts 1:30 to 1:45 A.M. almost daily, (Cooke, India).

Communist Stations. Within recent months a station, or stations, has been heard broadcasting for Communist listeners. Because they change wavelengths from time to time in order to avoid interference from what appears to be purposely-made signals, we do not list these stations. At the present time here is the schedule and waves. From 4:00 to 4:55 P.M. they are on 10.07 mc. for Germans, and sometimes on 9.84 mc. From 5:00 to 5:45 P.M. they are on two waves, 10.43 mc. and 10.62 mc. for Italians. From 6:00 to 6:55 P.M. they are on 9.53 mc. From 7:00 to 8:00 P.M. they are on three waves, using some of the following: 10.30 mc., 9.45 mc., 7.32 mc., 9.52 mc. or 7.49 mc. German police caught one broadcaster in some woods near the French border on May 25th, but another transmitter took up the work a few days later. The transmitter was mounted on an automobile, (Rossi, Pa.)

Sweden. SM5SX was replaced by a new transmitter at Motala, using the call SBG and they operate on 11.70 mc. from 1:20 A.M. to 11:00 A.M. at intervals and from 11:00 A.M. to 1:30 P.M. regularly and then go to 6.06 mc. from 1:30 P.M. to 5:00 P.M. Reports sent to SM5SX brought replies from Motala saying they had 500 watts power. SM5SX was operated by the Stockholm Technical School, everyone will remember. A letter said they would resume tests on 15.15 mc. between 11:00 A.M. and 5:00 P.M. This was received by member Stockbridge of Massachusetts. Member Studholme of England, now reports it on 15.16 or 15.17 mc. broadcasting between 3:30 and 4:00 P.M. one Wednesday.

Spain. EAQ on 9.86 mc. and EAQ2, or EAR if you wish, on 9.49 mc. still broadcasts daily. War stations are reported by many listeners, but none have been positively identified except by announcements. Here is the list, in order of their frequencies: AZ, National troops near Madrid (14.00 mc.) at 2:45 P.M. EAH, Valleras (9.48 mc.) heard 4:00 to 5:00 P.M. EAJ8, Bilbao (7.26), around 7:00 P.M. EAJ, San Sabastian, address Avenida 27, (7.20 mc.) heard all day long. EAJ1, Barcelona (7.194) heard 4:00 to 5:00 P.M. PSU1, Barcelona (7.18) 3:50 P.M., 8:15 P.M. and 1:30 P.M. ECP2, location not known (7.143) heard 4:00 to 6:00 P.M. EAP1, location unknown (7.08) heard at midnight. FE1, Vallavid (7.025) heard at 1:30 P.M. EA2CE, Aragon (7.00) heard 1:30 to 2:30 P.M. AZ, National troops near Madrid (7.00) heard at 2:45 P.M. ENC1, Barcelona (6.99) heard at 5:40 P.M. EDR4, Palma de Mallorca, Island of Majorca (6.48 mc, 6.53 mc. and 6.58 mc.) heard 4:30 P.M., 5:15 P.M. and 7:00 to 8:00 P.M.

## SOUTH AMERICANS

Peru. OAX4J verification says 9.52 mc. (heard on 9.33 however) daily noon to 3:00 P.M. and 5:00 P.M. to 1:00 A.M. Called "Radio Internacional" and signed by Antonio Vasquez P. (Gallagher, Calif.) OAX4Z verie says 49.37 meters (Pegge, England). Is really on 6.08 mc.—Editor. OAX1A, on 6.17 mc. at Chiclayo, verie says daily 8:00 to 11:00 P.M. and Saturdays till midnight. Address is Casilla No. 9, Chiclayo (Legge, N. Y.) OAX5A on 11.80 mc. signed off with "Estrellita" or "Little Star" at 11:50 P.M. when schedule says 11:00 (Beck, Ill.) OAX6A, Radio Arequipa, Casilla Correo 293, Araquipa, is heard on 6.122 mc. and is heard 8:00 to 11:00 P.M. Said they had a new 100 watt transmitter, crystal controlled. Badly interferred with by W2XE, XEUZ and HJ3ABX, (Rossi, Pa.) OAX4P, La Voz de Huancayo, on 5.975 mc. is heard now 9:00 to 11:00 P.M. (Oxrieder, Pa.)

Colombia. HJ1ABE, Cartagena, on 9.50 mc. now broadcasts weekdays 6:45 A.M. to 6:00 P.M. and 8:00 P.M. to 10:30 P.M. (Foshay, N. J.) HJN has closed down. HJ1ABB is still on 4.78 mc. and HJ2ABC on 4.79 mc. although we expected them to drop back down in wavelength with the coming of summer. HJ1ABE gives special English programs Mondays, 11:00 P.M. on HJ1ABP on 9.62 mc. gives one Saturdays 10:00 to 11:00 P.M. HJ4ABP on 6.03 mc. gives one Saturdays 11:00 P.M. to midnight.

British Guiana. VP3MR, Georgetown, moved to 6.05 mc. (Studholme, England). Heard on 6.064 mc. once, (Oxrieder, Pa.) Veries say 49.42 meters or 6.07 mc. now, and schedule is weekdays 5:30 to 9:30 P.M., B.G.T., or 4:15 to 8:15 P.M., E.S.T., and Sundays 9:00 A.M. to 12:00 B.G.T., or 8:45 to 10:45 A.M., E.S.T. (Stockbridge, Mass.)

Dutch Guiana. Station PZH, Paramaribo, has moved from 7:00 mc. to 6.788 mc. (Oxrieder, Pa.) This station operates between 3:00 and 8:45 P.M. and is very hard to land, so we do not suggest trying for it unless you have a good receiver.

Venezuela. YV6RC, Bolivar, on 6.416 mc. is broadcasting daily till 9:15 P.M. (Foshay, N. J.) Is called "Radio Bolivar" and signs off at 7:30 P.M. Sundays, (Rossi, Pa.) On 6.146 mc. weekdays till 9:30 P.M. and Sundays till 6:00 P.M. (Oxrieder, Pa.) YV2RA, La Voz de la Tachira, at San Cristobal, moved from 5.72 to 5.755 mc. (Rossi and Oxrieder). YV1RD verie says 6.07 mc. (Pegge, England). Is heard on 6.08—Editor. YV5RJ, Caracas, called "La Voz de la Esfera" and owned by the newspaper "Diaro de Esfaro" is on 6.255 mc. relaying YV5RI between 5:30 P.M. and 11:00 P.M. (Rossi, Bradley, Atherton, Pegge, Gallagher). YV5RP, Radio Philco; Caracas, on 6.27 mc. was heard till 11:00 P.M. when schedule says 9:30 P.M. (Walmsley, Calif.)

CP1, La Paz, Bolivia, on 9.89 mc. was heard once broadcasting at 8:30 P.M. It was on Tuesday. (Gallagher, Calif.)

Chile. Is the station on 12.30 mc. CB615, CE3AG or CEB. They have announced all these calls and have verified as CB615. The address is Casilla 761.

Brazil. Is PPQ, Rio de Janeiro on 11.66 or 11.67 mc. still broadcasting from 7:00 to 8:00 P.M. They were relaying PRD2 of the green and yellow network, between 7:45 and 8:15 P.M. The address of PRD2 was Rio

Cruzeiro de Sul, 19 Praca Floriano, Rio. (Marcarenhas, Brazil). Verie came from Caixa Postal 500, Rio de Janeiro, (Legge, N. Y.) A new phone PSE on 14.93 mc. called WLK, New York at 5:50 P.M. once, (Davenport, Vermont).

Ecuador. The station called HCODA by some, HC20DA by others and HC20BA by still others was on 9.44 mc. for a long time. Now it is heard on 8.65 mc. till midnight, (Kash, N. Y.) It is heard on 9.37, but was on 9.28 first, (Gallagher, Calif.) HC1EC, a new station at Quito was on 8.60 mc. once, (Rossi, Pa.) HCK, Quito, on 7.52 mc. broadcasts Saturdays around 10:00 P.M. now, (Rossi, Pa.)

### CENTRAL AMERICANS

XEWW, Mexico City, using the slogan "La Voz de la America Latina desde Mexico" has appeared on two wavelengths. One is 9.50 mc. and the other near 15.15 mc. A letter from them says they have 10 kw. power, the verie shows a caballero abducting a willing Senorita, the address is given as Apartado 2516, but no schedule is mentioned. This was received by member Gallagher of California. The station has been heard on 9:50 as early as 8:00 A.M. and as late as 1:00 A.M. next day. The following sent reports: (Adler, N.Y.; Beck, Ill.; Eder, Minn.; Edwards, Pa.; Worcester, Hawaii; Neve, Mexico; Walmsley, Calif.; Shaffar, Iowa; Partner, Wash.; Chavez, Calif.) On 15.15 mc. or maybe 15.17 mc. they have been heard 8:00 A.M. to 8:00 P.M. and once at midnight. (Ewards, Pa.; Shaffar, Iowa; Partner, Wash.; Stockbridge, Mass.) Reported a XEUU, on 15.23 mc. 5:45 to 6:00 P.M. (Stark, Mo.) Reported XEAW, Reynosa, Tams on 15.16 mc. (Rossi, Pa.) XEWW is almost on top of JZK, Japan.

XETM, apartado 74, Villa Hermosa, Tabasco, on 11.52 mc. is a brand new station heard between 7:00 and 11:00 P.M. (Rossi and Oxrieder, Pa.) Is XETN, apartado 24 and heard until Midnight. (Verbrughe, Jr., Mich.)

XEBR. A letter from XEBR says they are on 11.82 mc. relaying XEBH from 1:00 P.M. to 4:00 P.M. and 9:00 P.M. to midnight, E.S.T. Address is Apartado 68, Hermosillo, Son, Mexico, (Beck, Rossi, Flagg, Field).

XEYU, Mexico City. This one was on 9.60 mc. in April announcing the National University of Mexico, Napoles 60, Mexico City. It was heard between 9:00 P.M. and 2:30 A.M. Now a letter says the station is owned by Ramon de la Barrera and it is an amateur on 40 meters as XE1BU, but they experimented on 9.60 mc. with 500 watts and the University of Mexico was not mentioned in the letter. (Chavez, Calif.) Is not heard now.—Editor.

XEUZ, National Broadcasting Company of Mexico, "Radio Nacional," is on 6.11 mc. broadcasting between 9:00 P.M. and signing off at any time between 1:00 and 3:00 A.M. They relay XEFO and XEFA and give address as Apartado 2641, Mexico City,

XEPW, Mexico City, is also near 6.12 mc. Verie says they relay XEJW and the address is Apartado 8403 and the owners are Jose Luis Garza G and Fox E. Hijo. Use slogans like "American Buick" and La Voz del Aguila Azteca Desde Mexico" (Swope, Calif.; Beck, Ill., and Oxrieder, Pa.)

XEAW, new station heard on 8.63 mc. between 8:00 and 10:00 P.M. (Erwin, Ill.) Is at Vera Cruz, on 8.63, heard 9:00 P.M. to 12:50 A.M. using slogan "Auditorio del Continent." (Rossi, Pa.)

XEWV another new one is on 11.41 mc., but was on 11.33 mc. and 11.38 mc. testing around 10:00 P.M. and gave address as apartado 3808, Guadalajara, Jalisco, Mexico. (Rossi, Pa.) Heard on 11.33. (Oxrieder, Pa.) On 11.36 mc. 9:00 P.M. to 11:30 P.M. (Walmsley, Calif.) A station XETA, Monterey, is on 11.76 mc. daily, after 5:00 P.M. (Partner, Wash.)

XEBM, Mazatlan, Sinoloa, on 15.44 mc. verie says Aparatdo 78 (Chavez, Calif.) Usually heard 8:00 to 10:00 P.M. weekdays and all day Sunday.

Station XEDQ, Guadalupe, Jalisco, is on about 9.48 mc. and roams around quite a lot. They relay XED, have 500 watts power and broadcast 8:00 P.M. to midnight. The address is Apartado 197. It is on 9.52 mc. using chimes, Cuckoos, siren, etc. Heard 2:00 to 3:00 P.M. (Beck, Ill.) It is on 9.45 mc. now. (Oxrieder, Pa.) XEFT is heard on 9.50 mc. and not 9.48 mc. and heard until 12:07 A.M. (Stark, Mo.) On 9.49 (Oxrieder, Pa.)

Guatemala. TG2, Guatemala City, on 613 mc. broadcasts every night now 10:00 P.M. to 1:00 A.M. (Partner, Wash.) Heard testing 5:00 to 11:00 P.M. by many.

YNPR, Managua, Nicaragua, moved to 8.58 mc., (Gallagher, Calif.) On 8.61 (Stark, Mo.) On 8.60 and heard using German Wednesdays and Fridays 11:00 P.M. to midnight, (Kash, N. Y.)

Panama. HP5H is a new station on 6.05 mc. heard between 7:00 and 10:00 P.M. broadcasting, going off the air at 10. (Rossi, Pa.) Not heard there anymore, but was heard in May, (Oxrieder, Pa.) Heard now on 6.122 mc., not 6.05 at 9:00 P.M. (Partner, Wash.)

Costa Rica. Veries from TILS, Box 3, San Jose, Radio Parati" says 5.80 mc. but it is crossed off and 5.90 is written in (Oxrieder, Pa.) TI2H, a new one, has moved to 5.81 mc. from 5.795. Heard 7:00 to 11:00 P.M. (Rossi, Pa.) Schedule, (Oxrieder, Pa.) TILS verie says 5.905 mc. 11:00 A.M. to 2:00 P.M. and 6:00 to 11:00 P.M. (Stockbridge, Mass.)

## WEST INDIES

COGF, Matanzas, Cuba, on 11.80 mc. is the latest addition to the Cuban list. This one has been heard as early as 7:00 A.M. and as late as midnight and apparently reaches out quite well. They relay CMGF and usually sign off playing "The Merry Widow" waltz. Their address was announced as Betancourt 51, Matanzas. They use a three note chime before announcements. Some say 11.79 mc. is the true wavelength. (Reports came from members Partner, Shaffar, Gallagher, Erwin, Walmsley, Chavez, Studholme, Adler, Karpen, Nichols, Stark, Weiss; Eder, Edwards, Davenport, Wooten and Fortune).

COJK, Camaguey, is not old CO9JQ. A letter from Frank H. Jones says COJK is a new 2000 watt transmitter on 8.665 mc., located six miles outside of Camaguey. Address is Finlay No. 3, Altos, Camaguey. He gives no schedule. Heard as early as 7:00 P.M. and as late as 3:00 A.M. next day talking to amateurs. Usually broadcasts 7:00 to 11:00 P.M. (Nichols, Stark, Hart, Kash, Eder). They relay CMJK.

CO9XX, Tuninucu, was testing for the Cuban government on 15.55 mc. in May. A letter from Frank H. Jones, the owner, says they will be on 15.55 or perhaps 10.22 mc. in July and again around September.

COBC or COBT, Havana, is another new station. Heard on 9.27 mc. and on 9.36 mc. relaying CMBC afternoons and once till 1:00 A.M. (Stark, Mo.) Jumping around 9.27 to 9.37 mc., 7:00 to 11:00 P.M. (Oxrieder, Pa.) Is COBT, slogan "Progreso Cubano" and roaming between 9.28 and 9.375 mc. Gave address as Apartado 32, Havana, (Rossi, Pa.)

Martinique. Is anyone able to give us information on "Radio Fort de France" today. Last March they were heard well and often on 9.36 mc. Veries said 9.45 mc. daily 11:30 A.M. to 12:30 P.M., 6:15 to 7:15 and 8:00 to 9:00 P.M. Suddenly they disappeared. Then they were reported once on 12.50 mc. Member Buchanan of Canada claims his verie said 11:00 A.M. to noon and 5:15 to 6:15 P.M., but that does not say where the station is now.

Curacao. Verifications signed by D. Molenkamp says, PJCI, Willemstad, is on 50.60 meters week-days, 7:00 to 9:00 P.M. local time or 6:36 to 8:36 P. M., E.S.T. and Sundays on 31.67 meters or 9.47 mc. 10:36 A.M. to 12:36 P.M. (Sark, Mo. and Legge, N. Y.) They have 150 watts power. It is owned by the government and is under the supervision of the Curacao Radio Vereeniging. On 5.95 mc.

HH3W, Port Au Prince, Haiti, on 9.64 mc. heard till 8:30 when schedule says 8:00, (Pegge, England).

Dominican Republic. There isn't much news this month. HIN still is heard around 12.48 to 12.50 mc. and some say it is a harmonic and some say it is not. They are on 6.24 mc. Heard 5:20 to 9:20 P.M. HI5G Concepcion de la Veges on 9.50 mc. was reported several times around 5:45 to 5:55 P.M., but not lately. HI3U was reported signing off at 7:50 P.M. on 6.02 mc. when the schedule calls for 7:50 to 10:30 P.M. HI5N on 6.16 mc. is now at Moca City and announces "La Voz de Moca."

## NORTH AMERICA

W10XDA on the Schooner "Morrissey" left New York for the arctic regions on June 22nd. The transmitter will again be in charge of Cliff Foss. They will operate on 12.862 most of the time with the University of West Virginia and with W20J, operated by Mrs. Foss at Brooklyn. An RME receiver and DB-20 perselector has been installed. (Brady, N. Y.)

W2XAD on 15.33 mc. now broadcasts 10:00 A.M. to 6:00 P.M. with an antenna beamed toward London and from 6:00 to 8:00 P.M. with a non directional antenna. W2XAF is on 9.53 mc. with a non directional antenna from 4:00 to 6:00 P.M. and then from 6:00 P.M. to midnight beamed toward Buenos Aires. W8XK, Pittsburgh, is heard on 15.21 mc. till 6:00 P.M. instead of just 5:00 P.M. (Stark, Mo.) W9XAA, Chicago, on 6.03 mc. was heard at 7:00 A.M. when schedule shows 6:00 P.M. to midnight (Edwards, Pa.) We believe W9XAA closes down for the summer, when repairs will be made.—Editor. Station W3XAL, New Jersey, was heard on 6.47 mc. at 2:45 A.M. once, just before the eclipse broadcast, (Shaffar, Iowa). W2XGB, Press Wireless, Hicksville, N. Y., on 17.31 mc. is heard relaying

WOR between 10:00 A.M. and 2:00 P.M., (Bear, England). Heard as late as 9:00 P.M. (Shaffer and Gallagher).

Canada. The only Canadian news is CGA, Montreal, is reported on 18.18 mc. (new) phoning London almost daily 7:00 A.M. to 3:00 P.M. (Karpen, Pa.)

Hawaii. Hawaii has phones KKP on 16.04 mc., KIO on 11.68 mc., KKH on 7.52 mc., all used to relay programs to the U. S. A., evenings, as late as 1:00 A.M. A new one, KQH is reported testing once on 14.90 mc. at 1:00 A.M. (Gallagher, Calif.) And a KKL on 15.51 mc. carried a program at 2:00 P.M. on June 20th, (Shaffar, Iowa.)

American Phones, WQP on 13.90 mc. and WQE on 18.98 mc. sent a program upon the arrival of the Russian flyers at 12:45 P.M., 3:00 P.M. and 3:30 P.M. (Wooten, Ala.)

### EXPERIMENTAL STATIONS

UPOL, the Soviet station at the North Pole was heard using code on 16.72 mc. (Karpen, Pa.) This may use voice some day, so here is your tip. KAHZT on a plane is broadcasting on 12.286 mc. every Sunday from 2:00 to 2:30 P.M. while flying over National Parks, (Karpen, Pa.) Verie came from United Airline Transport Corp., 5936 So. Cicero Ave., Chicago, (Erwin, Ill.) Heard 2 P.M. (Partner, Wash.) WOEH on sea plane "Cavalier," flies between New York and Bermuda and uses 12.863 mc., 8.655 mc., 6.425 mc. and 4.796 mc., but uses voice on 12.863 mc. Sent special program to NBC 9:00 to 10:15 A.M. (Davenport, Vt.) At 4:00 P.M. (Rossi, Pa.) WMEF on 17.31 mc. heard calling W3XZ 9:30 to 10:10 P.M. (Gallagher, Calif.) Was at Canton Island and sent Eclipse broadcast. Heard 2:00 to 2:30 P.M. once on 12.62 mc. (Karpen, Pa.) Worked W2XAF on 17.80 mc. once at 4:45 P.M. (Cooke, India).

### WITH THE REPORTERS

To the following people goes our thanks for the information used in this magazine. Their letters, cards and telegrams are all appreciated:

Wm. Lyon McLaughlin, New York City; Gus Adler, Little Neck, N. Y.; Captain George McDermott, New Brighton, N.Y.; Dr. R. C. Kash, New Brighton, N. Y.; Ralph Brady, Brooklyn, N. Y.; Roy Waite, Balston Spa, N. Y.; Charles Pedicora, Brooklyn, N. Y.; Jacob Kleimans, Brooklyn, N. Y.; Myron D. Reamy, Yonkers, N. Y.; Roger Legge, Jr., Binghamton, N. Y.; Captain Oxrieder, State College, Pa.; Thomas Nichols, Philadelphia, Pa.; Robert Rossi, Philadelphia, aPa.; Ford Edwards, Wilmerding, Pa.; Fred Karpen, Johnstown, Pa.; Miss E. L. Fortune, York, Pa.

Ashley Walcott, San Francisco, Calif.; G. C. Gallagher, San Francisco, Calif.; L. G. Chavez, Los Angeles; Stuart Walmsley, Los Angeles; Walter McMenamy, Los Angeles; H. S. Campbell, Upland, Calif.; J. Wendell Partner, Tacoma, Wash.; Roy E. DeMent, Texas.

Carl and Anne Eder, Willmar, Minn.; O. E. Stark, Pierce City, Mo.; Grace M. Beck, Chicago, Ill.; Tom Erwin, Harrin, Ill.; Morgan Foshay, Montclair, N. J.; Wm. Weiss, Louisville, Ky.; Leonard Seiben, Chicago, Ill.;

Ed. Davenport, Pittsford, Vt.; H. Shepperd, Andover, Mass.; Emmett Rigle, Massillon, Ohio; J. B. Wooten, Mobile, Ala.; Frank Stockbridge, Westboro, Mass.; Mrs. Irving Heglund, Lake Worth, Florida; Louis Radakovich, Cleveland, Ohio.

Douglass Worcester, Honolulu, Hawaii; Wm. Buchanan, Sydney, N. S., Canada; E. G. Neve, Torreonm Coah, Mexico; Charles Hart, Curacao, N. W. I.; E. W. J. Field, Watford, Herts, England; S. Boothroyd, Uppermill, England; J. R. Garrett Pegge, Chesham, Bucks, England; George W. King, Liverpool, England.

### ULTRA-SHORT WAVES

A few members have written to us regarding stations heard on the ultra-high frequencies. Below we list what information we have on these stations. The figures given are megacycles.

- 25.95—W6XKG, Los Angeles, Calif. Broadcasts 24 hours daily.  
 26.40—W9XAZ, Milwaukee, Wisconsin. Relays WTMJ 1 P.M. to midnite.  
 30.57—KBCH, Pasadena, Calif. U. S. Forestry Service.  
 30.61—W2XEN, Roselle Park, New Jersey, Police.  
 31.60—W8XKA, Pittsburgh, Pa. Relays KDKA 3:00 to 11:00 P.M.  
 31.60—W3XKA, Philadelphia, Pa. Relays KYW noon to 10:00 P.M.  
 31.60—W1XKA, Millis, Mass. Relays W1XK 9:00 A.M. to noon.  
 31.60—W4XCA, Memphis Tenn. Relays WMC, 7:30 A.M. to 11:00 P.M.  
 31.60—W3XEY, Baltimore, Md. Relays NBC 6 P.M. to midnite.  
 31.60—W8XAI, Rochester, N. Y. Relays WHAM.  
 31.60—W8XWJ, Detroit, Mich. 6:15-12:30 P.M., 2-5 P.M., 7-10 P.M.  
 31.60—W2XDV, Wayne, New Jersey. Relays WABC.  
 31.60—W9XHW, Minneapolis, Minn. 9:00 A.M. to 5:00 P.M.  
 31.60—W9XPD, St. Louis, Md. Relays KSD 9:00 A.M. to midnite.  
 31.60—W9XJL, Superior, Wisc. Relays WEBC around 11:00 A.M.  
 33.33—W2XEM, Newark, N. J., Police. City Hall.  
 33.33—W2XFA, Jersey City, N. J. City Hall.  
 35.60—W1XAO, Boston, Mass., Police. City Hall.  
 35.60—W2XMS, Police station, location not known.  
 35.60—W3XFK, Police station, location unknown.  
 35.60—W3XES, Baltimore, Md. Relays WCAO, 9:00 A.M. to 5:00 P.M.  
 35.60—W2XDV, Wayne, N. J. Owned by CBS, 9-11 A. M.  
 37.10—W2XHP, Kingston, N. Y. Police. City Hall.  
 37.50—W3XES, Baltimore, Md. Broadcasts 5 to 11 P. M.  
 38.60—W2XDV, Wayne, N. J. Relays WABC.  
 41.00—W2XDV, Wayne, N. J. Relays WABC.  
 41.00—W2XGH, Schenectady, N. Y., daily 8:00 A.M. to 11:00 P.M.  
 55.50—W8XK, Pittsburgh, Pa., daily 1:00 to 9:00 P.M.  
 55.50—W1XKA, Boston, Mass., daily 6:00 A.M. to midnight, Sundays starts at 8:00 A. M.

JUST moved to d. c. district—have a. c. Hallicrafters Super Sky rider, SX-11, 1937 model, new tubes, speaker in cabinet, with CRYSTAL. Sent express paid for \$65. Purchased in Dec. 1936 for \$111.50. First \$65 takes it. M. W. Blender, Station WCFL, Chicago, Ill.

### AMATEURS

Every day there are hundreds of amateur stations heard near 20 meters between 14.11 and 14.30 mc. Many of these are overseas. None operate regularly. Here is a list of amateurs in Asia, Africa and Australia that actually have verified reports sent to them, and these veries have been seen by your editor. There are other stations on the air but we have not seen verifications from them. For addresses, we suggest that you buy a copy of Radio Amateur Call-Book which lists over 62,000 amateur stations, with the address of each one. These sell for \$1.25 a copy and we will accept your order for one. The list follows: Australia (all stations begin with call VK), VK2AZ, 2ABG, 2AP, 2AS, 2ABD, 2AT, 2OK, 2EX, 2EP, 2RB, 2LZ, 2UC, 2NO, 2HP, 2VA, 2TA, 2UJ, 2NY, 2IQ, 2TF, 2JZ, 2UD, 2SK, 2WJ, 2TF, 2JT, 2OO, 2TI, 2XM, 2XU, 3OC, 3KX, 3HL, 3ZL, 3WU, 3MR, 3GM, 3OC, 3WW, 4HR, 4BS, 4VD, 4BB, 4UU, 4JX, 4SX, 5JC, 5AI, 5FM, 5LR, 5WG, 5SU, 5MZ, 6MW, 7JB, 7KV. For Australia try around 6:00 P.M. to midnight in summer and 4:00 to 9:00 A.M. in winter. Africa: EA8AF, 8LW, 8AB, 8AT, 8AL, 8AN, 8BG, 8AO, 8AS, 8AH, 8LC, SU1GG, SU1T, SU1RK, 1SG, 1CH, 1KG, 5X, 8MA, VQ4CRL, VQ4CRO, ON4CSL, EA9AH, FM4AA, FT4AF, CN8MU, CN8AA, CN8MA, CN8AC, ZT1P, ZT2F, ZT1JR, ZT2B, ZT6Q, ZT6N, ZT6X, ZE1JF, ZE1JR, ZE1JS, ZS1JS, ZS1AH, ZS1C, ZS1B, ZS2N, ZS2X, ZS4J, ZS6AF, ZS6AM, ZS6A, ZS6T, ZS5Z. Asia: PK4DG, PK4AU, PK4VR, PK1MX, KA1KY, KA1AK, KA1AN, S6AQ, XU8MT, CR8AA, VS6AG, VS2AK, VS7RA, VS7GJ, VS7SF, and the following which begin with VU: VU2CQ, 2BY, 2JN, 2HQ, 2LS, 2EB, 2FY, 2CS, 2EB, 2LK, 3KF, 7KH, 7RA and 7RS. A member in Pittsburgh says he has received 165 Australian amateurs on voice and another in Chicago says he heard two stations on each Continent within two hours on the 20 meter amateur band. There must be at least 4000 amateurs now on the air between 14.11 and 14.30 mc.

### BOOSTERS

To the following we owe a dept of thanks for having secured new members for the club since our last issue was sent out. It is members of this type that helps us carry on our work. Justin Lafontant, Port-au-Prince, Haiti; Walter McManamy, Los Angeles, Calif.; Ernest Orchard, Weymouth, England; A. F. Larkman, London, England; F. S. LePavoux, Guernsey, Channel Islands; K. K. Van der Heide, Aruba, N. W. I.; Douglas Worcester, Honolulu, Hawaii; DX Radio Sales, Beverly Hills, Calif.; Ross Radio, Syracuse, N. Y.; Arthur Kindell, Wellington, New Zealand; Ora Stark, Pierce City, Mo.; Comilo Suarez, Brooklyn, N. Y.; Joseph B. Sessions, Bristol, Conn.; Guy Barreyre, Port-au-Prince, Haiti; H. S. Campbell, Upland, Calif.

### HEARD-ALL-CONTINENTS CLUB

Heard all continents means that a short wave listener has heard short wave stations on each of the continents and have proven it by submitting verifications from the stations. This section of the International Short Wave Club was started in 1931 and has been holding the interest of all short wave fans ever since. Practically every short wave club has copied this idea in one form or another, but the original Heard-All-Continents

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We here set down the rules and regulations concerning this organization: (1) Any person entering the H-A-C must have verifications from each of the continents; namely Asia, Africa, Australia, Europe, South America and North America. (2) These verifications must be sent to the Club at East Liverpool, Ohio. No photos, photostatic copies or sworn statements will be accepted. The real verifications must be sent. (3) Verifications must bear a postmark unless there is reasonable proof that it is real and original, such as a verification on a private stationery. (4) All amateur verifications must indicate the station was heard on voice, by having words like "Phone," "Voice" or "Broadcast" on it. This must be written by the station operator and all must bear a postmark. (5) A station operating on 2 frequencies will be counted as two stations only if two veries are received. (6) Stations on islands will be counted with the nearest mainland. (New Zealand and Fiji Islands are counted with Australia; Java with Asia, etc.) (7) Postage to prepay the return of the veries must be sent with the verifications.

If insufficient postage is sent, the veries will be held until the required amount is sent. Do not send any veries unless you send postage to pay for their return. (8) If a certificate is desired, 15 cents must be sent to cover the cost of handling and mailing. In a case where the member already has a certificate and he is applying for a higher rating,

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he need only send one cent to cover the cost of a new seal which will be sent. This seal may then be pasted on the certificate already on hand. These certificates measure  $8\frac{1}{2} \times 11$  inches, are printed in two colors and are suitable for framing. (9) One verification from each continent entitles the member to class A, two to class AA, three to class AAA, etc.

Lack of space prohibits us showing a list of all persons who have qualified for the certificate. We have issued 812 certificates so far. Most of these are in the 1-A and 2-A class. H. S. Bradley, 66 Main Street, Hamilton, New York, retains his lead in the club with a total of 61 stations on each continent. Most of his stations are, of course, amateurs heard on voice. Some people may doubt that such a list is possible, but there are hundreds of amateurs heard on each of the continents on voice.

Sgt. H. J. Dent, Bombay, India, is second with 37 from each continent. Sgt. Terry Adams, Bombay, India, has 27. Sam Solito, Leetsdale, Pa.; has 26. Charles Miller of Covington, Ky., has 24. Robert Rossi, Philadelphia, Pa., and Ed. Lips of Pittsburg, Pa., both have 21. D. R. D. Wadia, Bombay, India, and John W. May, Wilkinsburg, Pa. have 17 each. P. A. Portmann, Woodside, N. Y., has 16. Frank Grey, Berwyn, Illinois; has 15. Ernest Orchard, Weymouth, England, leads the Europeans with 13, but T. W. Moss, Exeter, England, is giving him a battle with 12. Luther

Henderson, Fort Worth, Texas, and Arthur W. Lunn, Maplewood, N. J.; have 11. Members Emmett Riggle, Massillon, Ohio, Roy Myers, Los Angeles, Calif.; Harry Miner, Wallaston, Mass., and Walter Kurtz, Kansas City, all have 10. Nick Gaug, Bronx, N. Y. has 8. J. R. McAllister, Struthers, Ohio; C. A. V. Heathcote, Liverpool, England, and Howard Muir, Racine, Wisconsin, each have 7.

In the 6-A class are Ricardo F. Rubio, Havana, Cuba; W. A. Dean, Hartford, Conn. In the 5-A are J. Wendell Partner, Tacoma, Wash.; Floyd Murphy, Palestine, Ill. In the 4-A are Arthur Bruder, Allston, Mass.; H. F. Fey, Long Island City, N. Y.; P. Alberto, New York City, C. G. Hurtado, Curacao, D. W. I., and Fred Baines, Sydney Mines, N. S. Canada

In the 3-A class are Bernard Kinzel, New York City; F. A. Beane, Ridgewell, England; John Kirby, New York City; F. Edwards Fellows, Short Hills, New Jersey; Roy Waite, Balston Spa, N. Y.; W. F. Eady, Harrow, Middx, England; Clifford Walters, Pittsburgh, Pa.; Walter Wilson, London, England; Lowell F. Barrows, Delaware, Ohio; Fred Atherton, Rutland, Vt.; Edwin Hatch, Philadelphia, Pa.; W. T. Wyatt, Essex, England; Howard Eck, East Lansing, Michigan; R. Lawton, Whitefield, England; M. M. Holmes, Berwyn, Ill.; L. D. Brewer, Phoenix, Ariz.; G. P. Burdett, Monze, North Rhodesia, Africa; S. W. Parr, London, Eng.; Robert Stuart, Allentown, Pa.; John Edwards, Sale, Manchester, England; W. D. Flagg, Holyoke, Mass.; W. H. Chippendale, Concepcion, Paraguay.

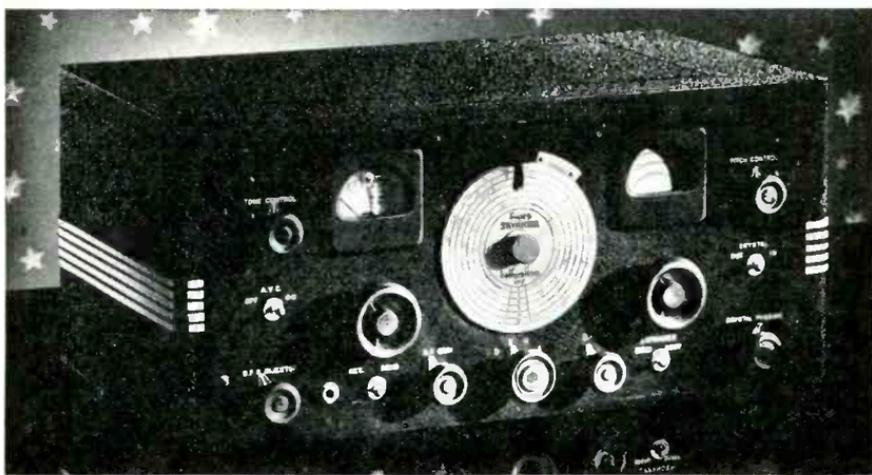
In 2 A class are David McIntosh, L. G. Chavez, Kenneth Elbrecht, Russell Leader, A. F. Larkman, W. E. Doty, W. C. Motz, P. E. Thompson, Shokichi Yoshimura, Angus Taylor, S. J. A. Nichol, K. G. Schram, H. Homer Lindsay, J. H. A. Hardemann, Warren D'Orsay, Carlos Irizarry, Thomas Tynan, George Lourey, Wilson Gamble, Dr. R. C. Kash, P. E. Donnelly, L. E. Hansen, Thomas Nichols, J. M. R. Studholme, E. G. Neve, T. E. Port and Joseph Lippincott.

The latest persons to join the 1-A class alone are given here. They are Nichols St. George, Jack Jeffs, Roy Dement, Edward Hofert, James Coleman, L. Smith, Leon Hutchinson, Mrs. Irving Heglund and James Keith.

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### PATRONIZE OUR ADVERTISERS

We wish every member could sit down at our desk and read all of the letters we receive. One thing they would soon discover is that there are many firms advertising receivers and parts that should be in jail. Hardly a week goes by but what someone writes and tells us how some firm had mistreated them. Before any firm takes space in this magazine, they are carefully investigated. It pays to patronize our advertisers, even if they should charge more for something than a firm you see advertising elsewhere, for you are assured the firm that takes space with us has meet with our approval.



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# TELEPHONE STATIONS

The time given is Eastern Standard. Add five hours for G. M. T.

**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.

Meters	Meg.	STATION	TIME
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	PSA, Rio de Janeiro, Brazil.	Phones WKK, WLK, daytime.
T-14.24	21.06	KWN, Dixon, Calif.	Phones irregularly.
T-14.27	21.03	LSN, Buenos Aires, Arg.	8:00 A.M. to 4:00 P.M. WKK and WLK.
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	19.78	WKN, Lawrenceville, N. J.	Phones GAU, daytime.
T-15.01	19.98	KAX, Manila, P. I.	Phones daytime.
T-15.24	19.69	CFC, Santiago, Chile.	Phones LSR, HJY near 11 A.M. and 4 P.M.
T-15.28	19.62	VQG, Nairobi, Kenya, Africa.	7:30 to 9:30 A. M., England.
T-15.39	19.50	LSQ, Buenos Aires, Argentina.	Heard testing near 2:00 P.M.
T-15.50	19.35	FTM, 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-15.62	19.21	ORG, Brussels, Belgium.	Phones OPL, mornings.
T-15.68	19.13	LSM, Buenos Aires, Argentina.	Phones EAQ, DHO, GAA, mornings.
T-15.88	18.89	ZSS, Kiphueval, S. Africa.	Phones 6 A.M. to 2:30 P.M., England.
T-15.93	18.83	PLE, Bandoeng, Java.	Phones Holland 6 to 11 A.M. KWX irregularly
T-16.05	18.69	XGS, Shanghai, China.	Heard 7:00 to 8:00 A. M., Irreg.
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.
E-16.22	18.48	HBH, Geneva, Switzerland.	Used for special programs.
E-16.26	18.45	HBF, Geneva, Switzerland.	Used for special purposes.
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-16.38	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	PMC, Bandoeng, Java.	Phones PCV, 3:10 to 9:20 A.M.
E-16.55	18.12	LSY, Buenos Aires, Argentina.	Irregular.
T-16.58	18.09	TYE2, Pontoise, France.	Phones U.S.A. 7:00 A.M. to 3:00 P.M.
T-16.63	18.04	GAB, Rugby, England.	Phones Canada 10:00 A.M. to noon.
T-16.82	18.05	PCV, Kootwijk, Holland.	6:00 to 9:00 A.M. Java.
T-16.85	18.27	17.80	16.42—Ships. Heard in daytime.
T-16.91	17.74	HSP, Bangkok, Siam.	Phones Japan, Germany and England.
T-16.94	17.70	IAC, Piza, Italy.	Phones Africa, 5:00 A.M. to noon.
T-17.00	17.64	XGN, Shanghai, China.	Phones London 7 to 9 A.M., Mon., Wed., Sat.
E-17.33	17.31	W2XGB, Hicksville, N. Y.	Tests Irreg., relaying WOR.
T-17.12	17.52	DFB, Nauen, Germany.	Phones LSM and YVQ near 9:00 A.M.
T-17.16	17.48	VWY2, Poona, India,	phones England 7:00 to 10:00 A.M.
T-17.36	17.28	FZE8, Djibouti, Fr. Somaliland.	Phones Paris 5 A.M.-2 P.M., Irreg.
T-17.52	17.12	WOO, Ocean City, New Jersey.	Phones ships, irregularly.
T-18.31	16.38	ITK, Mogadiscio, Italian Somaliland.	Phones Italy daytime.
T-18.34	16.35	RTW, Moscow, U.S.S.R.	Phones midnite to 9:00 A.M.
T-18.44	16.30	WLK, Lawrenceville, N. J.	Phones England.

Meters	Meg.	STATION	TIME
T-18.47	-16.24	KTO, Manila, P. I.	Phones Japan 5:00 to 9:00 P.M., irregularly
T-18.51	-16.20	FZR, Saigon, Indo-China	Phones Paris mornings.
T-18.59	-16.14	GBA, Rugby, England.	Phones China-Japan 3:00 to 10:00 A.M.
E-18.62	-16.11	IRY, Rome, Italy.	Used irregularly for special broadcasts.
r-18.71	-16.04	KKP, Kauhuku, Hawaii	Phones KWU 1:00 to 7:00 P.M.
T-18.81	-15.95	RRR, Khabarovsk, U.S.S.R.	Phones 11:00 P.M. to 9:00 A.M. irreg.
T-18.89	-15.88	FTK, St. Assise, France.	Phones Saigon 8:30 to 11:00 A.M.
T-18.99	-15.80	XOJ, Shanghai, China	Phones Japan 5:00 P.M. to midnight.
T-18.91	-15.86	JVD, Nazaki, Japan.	Phones almost all day and night.
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	LST, Buenos Aires, Arg.	Phones GAA 8 A.M. to 1 and FTM 1-2 P.M.
T-19.15	-15.66	JVE, Nazaki, Japan.	Phones almost any time.
T-19.20	-15.61	JVF, Nazaki, Japan.	phones U.S.A. near 5:00 A.M. and 8:00 P.M.
T-19.31	-15.53	HSG2, Bangkok, Siam.	Tests Sunday 11 P.M., Fri. 4:00 A.M.
E-19.35	-15.50	CO9XX, Tuinucu, Cuba.	Testing irregularly 5:00 to 9:00 P.M.
T-19.42	-15.45	IIG, Addis Ababa, Ethiopia.	phones Italy 7:00 to 10:00 A.M.
T-19.47	-15.41	KWO, Dixon, California.	Phones Hawaii in place of KWU.
E-19.53	-15.36	DZG, Zeesen, Germany.	Broadcasts irregularly.
T-19.54	-15.35	KWU, Dixon, California.	Phones Hawaii, 2:00 to 7:00 P.M.
T-19.68	-15.25	RIM, Tashkent, U.S.S.R.	Phones RKI near 7:00 A.M.
T-19.92	-15.06	WNC, Hialeah, Florida.	phones many stations in daytime.
T-19.95	-15.04	RKI, Moscow, U.S.S.R.	Phones almost any time.
T-19.99	-15.01	RCH, Kerbi, Siberia.	Phones midnite to 9:00 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-20.08	-14.94	HJB, Bogota, Colombia.	phones WNC daytime.
T-20.08	-14.94	HII, Trujillo, Dominican Republic.	phones WNC daytime.
T-20.08	-14.94	HJA3, Barranquilla, Colombia.	phones WNC, Florida.
E-20.27	-14.80	WQV, Rocky Point, N. Y.	heard irregularly Mon. and Thurs. 4:00 to 5:00 P.M.; Tues. and Fri. 2 to 3 P.M.
T-20.29	-14.79	ROU, Omsk, Siberia.	phones Moscow 7:00 to 9:00 A.M. irregularly
T-20.37	-14.73	IQA, Rome, Italy.	phones 8:00 to 11:00 A.M. irregularly.
T-20.45	-14.67	GBL, Rugby, England.	Phones JVH 1:00 to 7:00 A.M.
T-20.55	-14.60	JVH, Nazaki, Japan.	Phones and also broadcasts at times.
T-20.56	-14.59	WMN, Lawrenceville, N. J.	Phones England daylight.
T-20.58	-14.58	RTV, Moscow, U.S.S.R.	Phones around 7:00 A.M.
T-20.64	-14.54	HBJ, Geneva, Switzerland.	Used irregularly.
T-20.65	-14.53	LSN, Buenos Aires, Argentina.	Phones New York daytime
T-20.71	-14.48	YSJ, San Salvador, Salvador.	Phones WNC afternoons.
T-20.71	-14.48	HRL5, Nacaome, Honduras.	testing with WNC daytime.
T-20.71	-14.48	TIU, Cartago, Costa Rica.	phones WNC daytime.
T-20.71	-14.48	YNA, Managua, Nicaragua.	phones WNC daytime.
T-20.71	-14.48	HPF, Panama.	phones WNC daytime.
T-20.71	-14.48	HRF, Tegucigalpa, Honduras.	phones WNC daytime.
T-20.71	-14.48	TGF, Guatemala City.	phones WNC daytime.
T-20.72	-14.48	IBS, Rome, Italy.	Phones Africa mornings.
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-20.75	-14.46	DZH, Zeesen, Germany.	Irregular.
E-20.97	to 21.26	-14.30 to 14.11	—Amateur phones heard in daytime.
E-21.46	-13.98	PZIAA, Paramaribo, Dutch Guiana.	in the evenings.
E-21.58	-13.90	WQP, Rocky Point, N. Y.	Testing with RNE irregularly, mornings
T-21.70	-13.83	SUZ, Cairo, Egypt.	Phones GAA 7:00 A.M. to 3:30 P.M.
T-21.77	-13.76	TYE2, St. Assise, France.	Phones Africa daytime.
E-21.91	-13.69	KKZ, Bolinas, California.	Used irregularly
T-21.98	-13.65	HJY, Bogota, Colombia	Phones irregularly
T-21.73	-13.79	RVU, Vladvostok, U.S.S.R.	4:00 to 10:00 A.M., irreg.
T-22.09	-13.58	GBB, Rugby, England.	Phones Canada and Egypt, daytime.
T-22.37	-13.41	YSJ, Salvador, San Salvador.	phones WNC daytime.
T-22.40	-13.38	IDU, Asmara, Eritrea.	phones Italy 8:00 A.M. to 3:00 P.M. irregularly
T-22.40	-13.39	WMA, Lawrenceville, N. J.	Phones England, daytime.
T-22.44	-13.37	JVU, Nazaki, Japan.	Around 6:00 to 10:00 A.M.
T-22.48	-13.35	YVQ, Maracay, Venezuela.	Phones Florida, daytime
T-22.50	to 24.3	-13.34	to 12.35—Ships. Heard in daytime.
T-22.58	-13.28	CGA3, Drummondville, Canada.	Phones ships and England daytime.

Meters	Meg.	STATION	TIME
T-22.70	-13.22	IRI, Rome, Italy.	phones Japan irregularly 5:00 to 8:00 A.M.
T-22.74	-13.19	RFL, Khabavorsk, U.S.S.R.	Around 4:00 to 10:00 A.M.
T-23.08	-13.00	FYC, Paris, France.	Phones Ships, Irregularly.
T-23.29	-12.88	RTZ, Irkutsk, U.S.S.R.	10:00 P.M. to 10:00 A.M., irreg.
T-23.31	-12.87	VVS, Mingaladon, India.	Phones 5:00-7:00 A.M., Irreg.
T-23.33	-12.86	IAC, Piza, Italy.	Phones Africa 8:00 A.M. to 1:00 P.M.
T-23.36	-12.84	WOO, Ocean Gate, N. J.	Phones ships irregularly.
T-23.38	-12.83	CNR, Rabat, Morocco.	5:00-8:00 A.M., 2:00-4:00 P.M., irreg.
T-23.47	-12.78	IBC, Rugby, England.	Phones ships irregularly.
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.
T-24.49	-12.25	TYB, Pontoise, France.	Heard late afternoons, irregularly.
T-24.52	-12.24	TFJ, Reykjavik, Iceland.	Phones GCB and OXT 5:00 to 10:00 A.M.
T-24.56	-12.22	TYA, Pontoise, France.	Phones the Normandie, irregularly.
T-24.63	-12.18	RWJ, Alma-Ata, U.S.S.R.	Phones 1:00 to 8:00 A.M. irregularly.
T-24.69	-12.15	GBS, Rugby, England.	Phones New York.
E-24.73	-12.13	DZE, Zeesen, Germany.	7:00-9:00 A.M., 5:00-9:00 P.M., irreg.
T-24.75	-12.12	TPZ, Alger, Algeria.	Phones Paris midnight to noon, broadcasts 3:30 to 4:30 P. M., irregularly.
T-24.86	-12:07	XTU, Canton, China.	Phones China 2:00 to 9:30 A.M.
T-24.96	-12:02	JVK, Nazaki, Japan.	Phones 4:00 to 8:00 A.M., irreg.
T-25.00	-12:00	RNE, Moscow, U.S.S.R.	Almost any time. Try 11 P.M. to 10 A.M.
T-25.02	-11.99	FZS, Saigon, Indo-China.	Phones Paris mornings.
T-25.09	-11.95	IUC, Addis Ababa, Ethiopia.	Phones Rome around noon and midnight.
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.
T-25.38	-11.82	RFM, Khabarovsk, U.S.S.R.	Phones around 7:00 to 11:00 A.M.
E-25.63	-11.71	KIO, Kauhuku, Hawaii.	Heard in the evenings testing.
T-25.73	-11.66	JVL, Nazaki, Japan.	Phones 6:00 P.M. to 11:00 A.M. irregularly.
T-25.73	-11.66	PPQ, Rio de Janeiro, Brazil.	Phones often and broadcasts, irreg.
E-25.87	-11.59	VRK4, Stony Hill, Jamaica.	Testing with WNC in daytime.
E-26.09	-11.50	XAM, Merida, Yucatan.	Irregularly 1:00, 6:00 and 7:00 P.M.
T-26.16	-11.47	XTS, Swatow, China.	Phones around 2:45 to 9:00 A.M.
T-26.29	-11.41	XTB, Shanghai, China.	Phones around 3:00 to 9:30 A.M.
E-26.31	-11.40	HBO, Geneva, Switzerland.	Used for special broadcasts.
T-27.35	-10.97	OCI, Lima, Peru.	Phones HJY, evenings.
T-27.37	-10.96	ZLT2, Wellington, New Zealand.	11:00 P.M. to 7:00 A.M., Australia.
T-27.50	-10.91	KTR, Manila, P. I.	Phones ships around 7:00 to 10:00 A.M.
T-27.62	-10.86	RQT, Irkutsk, U.S.S.R.	Phones around 3:00 to 5:00 A.M.
T-27.67	-10.84	KWV, Dixon, California.	Phones Hawaii, daytime.
E-27.65	-10.85	DFL, Nauen, Germany.	Irregular.
T-27.86	-10.77	GBP, Rugby, England.	Phones VLK 11:00 P.M. to 8:00 A.M.
T-27.93	-10.74	JVM, Nazaki, Japan.	Phones 6:00 P.M. to 11:00 A.M. irregularly.
T-28.09	-10.68	PLQ, Bandoeng, Java.	PNT 8:00 to 10:00 A.M.
T-28.09	-10.68	WNB, Lawrenceville, N. J.	Phones Bermuda, daytime.
T-28.14	-10.66	JVN, Nazaki, Japan.	Phones 6:00 P.M. to 11:00 A.M. irregularly.
E-28.28	-10.61	WEA, Rocky Point, N. J.	Tests irregularly with Europe.
T-28.44	-10.55	WOK, Lawrenceville, N. J.	Phones Brazil and Argentina, irregularly
T-28.49	-10.53	JIB, Taiwan, Japan.	Phones Japan 10:00 P.M. to 10:00 A.M.
T-28.51	-10.52	VK2ME-VLK, Sydney, Australia.	1:00 to 8:00 A.M. GBP.
T-28.76	-10.43	YBG, Medan, Sumatra.	Phones Java 5:00 to 8:30 A.M.
T-28.79	-10.42	TYE3, St. Assise, France.	Phones U.S.A. 3:30 to 7:00 P.M.
T-28.79	-10.42	XGW, Shanghai, China.	Phones almost any time.
T-28.80	-10.42	PDK, Kootwijk, Holland.	Phones Java, 7:30 to 9:40 A.M.
E-28.85	-10.40	KEZ, Bolinas, California.	Used irregularly.
E-28.91	-10.38	WCG, Rocky Point, N. Y.	Tests irregularly.
T-28.93	-10.37	JVO, Nazaki, Japan.	Phones 6:00 P.M. to 11:00 A.M. irregularly.
T-29.04	-10.33	RVV, Vladivostok, U.S.S.R.	Phones around midnight.
E-29.04	-10.33	ORK, Brussels, Belgium.	1:30 to 3:00 P.M., daily.
E-29.13	-10.30	LSQ, Buenos Aires, Argentina.	Used for special tests.
T-29.13	-10.30	PPM, Rio de Janeiro, Brazil.	Phones irregular.
E-29.15	-10.29	LZC, Zeesen, Germany.	3:00 to 9:00 P.M., Irregular.
E-29.27	-10.25	LSL, Buenos Aires, Argentina,	testing 5:30 to 7:00 P.M.
E-29.33	-10.23	CED, Antofagastan, Chile,	heard 7:00 to 9:30 P.M. irregularly.

Meters	Meg.	STATION	TIME
T-29.45	10.22	PSH, Rio de Janeiro, Brazil.	Sending music, evenings.
T-29.50	10.17	RIO, Baku, U. S. S. R.	phones 10:00 P.M. to 10:00 A.M. irregularly.
T-29.58	10.14	OPM, Leopoldville, Belgian Congo.	12-2 A.M., noon-3:00 P.M., irreg.
T-29.76	10.08	RIR, Tiflis, U. S. S. R.	Phones 10:00 P.M. to 10:00 A.M., irregularly.
T-29.79	10.07	EHY, Madrid, Spain.	Phones YVR near 4:00 P.M., irregularly.
T-29.80	10.06	TDE, Shinkio, Manchukuo,	phones Japan 1:00 to 9:00 A.M., irregularly.
T-29.83	10.05	ZFB, Hamilton, Bermuda.	Phones U.S.A. and ships, daytime.
T-29.83	10.05	SUV, Cairo, Egypt.	Phones England around 1:00 to 5:00 P.M.
E-29.88	10.04	DZB, Zeesen, Germany.	Irregular.
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-30.23	9.92	JDY, Dairen, Manchukuo.	Phones Japan 2-4 A.M., 8-1 0P.M., irreg.
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.
E-30.40	9.87	JYS, Kemikawa-Cho, Japan.	Relays JOAK Irreg., mornings.
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.
T-30.75	9.76	VK2ME-VLK, Sydney, Australia.	Phones Java 4:00 to 8:00 A.M.
E-30.77	9.75	WOF, Lawrence, N. J.	Phones England, evenings.
T-31.00	9.67	DZA, Zeesen, Germany.	Broadcasts irregularly.
T-31.08	9.65	DGU, Nauen, Germany.	Phones Egypt in daytime.
T-31.58	9.50	XTV, Canton, China.	Phones 2:00 to 11:00 A.M., irreg.
T-31.61	9.49	KFI, Bolinas, Calif.	Used irregularly.
T-31.71	9.46	Tripoli, Africa.	Phones IAC, Italy, 6:00 A.M. to 1:00 P.M., irreg.
T-31.86	9.42	PLV, Bandoeng, Java.	9:00-11:00 A.M., 6:00-11:00 P.M. irreg.
T-32.02	9.37	PLC, Kootwijk, Holland.	Phones 3:00 to 10:00 A.M., irreg.
T-32.05	9.36	XTR, Swatow, China.	Phones around 4:00 to 9:30 A. M.
T-32.15	9.33	CGA-4, Drummondville, Canada.	Phones ships and England, irregularly.
T-32.32	9.28	XTC, Shanghai, China.	Phones 2:00 to 11:00 A.M., irreg.
T-32.33	9.28	GB, Rugby, England.	Phones CGA and SUV afternoons.
T-32.68	9.18	ZSR, Klipkeuval, So. Africa.	Phones England 1:00-7:00 P.M., irreg.
T-32.74	9.17	WNA, Lawrenceville, N. J.	Phones England evenings.
T-32.83	9.14	YVR, Maracay, Venezuela.	Phones Europe afternoons.
T-32.89	9.12	YCP, Balikpapan, Borneo.	5:00-7:00 A.M., phones East Indies.
T-33.04	9.08	XTK, Hankow, China.	Phones around 4:00 to 9:30 A. M.
T-33.19	9.03	TYA2, Paris, France.	Phones Algeria, 6 P. M. to midnite, irreg.
T-33.26	9.02	GCS, Rugby, England.	Phones New York evenings.
E-33.29	9.01	KEJ, Bolinas, California.	Tests irregular.
T-33.41	8.98	VWY, Poona, India.	Phones England 6:00-10:00 A.M., irreg.
T-33.48	8.96	TPZ2, Alger, Algeria, Africa.	Phones Paris daytime.
E-33.52	8.95	WEL-W2XBJ, Rocky Point, N. Y.	Testing irregularly, evenings.
T-33.93	to 36.58	8.84 to 8:20	Ships. Heard irregularly.
E-34.10	8.79	HKV, Bogota, Colombia.	Testing, 5:30 to 11:00 P.M., irregularly.
T-34.19	8.77	PNI, Makassar, D. E. I.	Phones Java near 4:00 to 5:00 A.M.
T-34.44	8.71	KBB, Manila, P. I.	Phones ships 5:00-9:00 A.M., irreg.
T-34.56	8.68	GBC, Rugby, England.	Phones ships irregularly.
E-34.68	8.65	WVD, Seattle, Wash.	Testing irregularly.
T-34.68	8.65	VOWQ, North West River, Laborador.	Phones irreg.
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.
T-36.95	8.12	KTP, Manila, P. I.	Phones KWX 10:30 to 11:00 A.M.
T-38.06	7.86	SUX, Cairo, Egypt.	Phones Rome and London afternoons.
E-38.50	7.78	PSZ, Rio de Janeiro, Brazil.	Heard between 6:00 and 11:00 P.M. irreg
T-39.06	7.68	YBZ, Manado, Celebes, DEL.	Phones PNI 5:00-7:00 A.M.
T-39.32	7.63	RIM, Tashkent, U.S.S.R.	Heard 5:00 to 11:00 A.M. in winter.
T-39.42	7.61	KWX, Dixon, California.	Phones Hawaii nights.
T-40.60	7.39	ZLT2, Wellington, New Zealand,	phones Sydney 3:00 to 7:00 A.M. irreg
B-40.65	7.38	XECR, Mexico City,	broadcasts Sundays 6:00 to 8:00 P.M.
T-39.68	7.56	KWY, Dixon, Calif.	Phones weekdays 9:30 P.M. to midnite.
T-39.68	7.56	FZE9, Djibouti, French Somaliland.	Phones Paris.
T-39.89	7.52	KKH, Kauhuku, Hawaii.	Phones KWO evenings.

Meters	Meg.	STATION	TIME
T-39.95	7.51	RKI, Moscow, U.S.S.R.	Heard 5:00 to 11:00 A.M. in winter.
T-40.71	7.37	KFO, Kauhuku, Hawaii.	Phones Dixon nights.
T-42.98	6.98	KZGC, Cebu, P. I.	1:00 to 4:45 A.M. and 6:30 to noon.
E-43.00	6.98	XBA, Tacubaya, Mexico.	9:30 A.M. to 1:00; 7:00 to 8:30 P.M.
T-43.45	6.90	GDS, Rugby, England.	Phones New York nights.
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., oftines with music
T-44.64	6.72	XEM2, Guanacachi, Dur. Mexico.	Tests around 9:30 P.M., irreg.
T-44.94	6.67	HBO, Geneva, Switzerland.	Used for special Broadcasts.
T-44.96	6.67	YVQ, Maracay, Venezuela.	Phones irreg.
T-45.10	6.65	IAC, Piza, Italy.	Phones ships evenings.
T-45.11	6.65	IFZC, Ship Chichibu Maru.	Phones irregularly.
T-45.80	6.55	XEM1, Mexico.	Tests around 9:30 to midnite.
E-46.73	6.42	W9XBS, Chicago, Illinois.	Heard irregularly broadcasting
E-46.77	6.41	HJA3, Barranquilla, Colombia.	Phones HJA2, irregular.
E-47.39	6.35	IZG, beard relaying JVT IOAK	from 5:00 to 7:30 A.M. irregularly.
E-47.54	6.31	TG2, Guatemala City.	Relays TGI around 5:00 to 9:00 P.M., Irreg.
50.00 to 60.00	6.00 to 6.00 to 5.00 Mc.	—Aircraft stations.	
T-50.93	5.89	JIC, Taiwan, Japan.	Phones Nazaki 5:00 to 10:00 A.M. winter.
T-51.26	5.85	WOB, Lawrenceville N. J.	Phones Bermuda nights
T-51.46	5.83	TDD, Shinkio, Manchukuo.	Phones Japan 10:00 P.M. to 6:00 A.M.
T-51.50	5.82	HIA2, Rogota, Colombia.	Phones HIA3 afternoons and evenings.
T-52.26	5.74	XTD, Shanghai, China.	Phones Hankow 4:00 A.M. to noon.
E-52.97	5.66	CFU, Rossland, Canada	Works CFO and CFN near 10 P.M., irreg
T-54.74	5.48	XTZ, Hankow, China.	Phones Shanghai 4:00 A.M. to noon
T-54.74	5.48	XTL, Hankow, China.	Heard around 5:00 to 7:00 A.M., phoning.
E-55.56	5.40	HJA-7, Cucuta, Colombia	Mondays 4:30 to 7:30 P.M., irregularly.
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, England.	Phones to ships, irregularly.
T-61.15	4.90	CGA8, Drummondville, Canada.	Phones ships irregularly.
T-61.98	4.84	GDW, Rugby, England.	phones U.S. A. nights.
T-63.13	4.75	WOO, Ocean Gate, N. J.	Phones ships irregularly.
T-66.50	4.51	ZFS, Nassau, Bahamas.	Works WND evenings.
T-67.87 to 73.17	4.42 to 4.10	Shins.	Heard irregularly.
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.

VOFM, Monarch of Bermuda; GFJY, Caledonia; GBTT, Queen Mary; FMNS, Normandie; GMBI, Empress of Britain; DOAH, Bremen; DOAT, Europa; DHEY, Deutschland; DHTZ, Hamburg; DOAX, Columbus; DHAO, Hansa; DHRL, New York; ICFJ, Rex; IBLI, Conte de Savonia; CBZW, Berengaria; DHDL, Cap Arcona; JFZC, Chichibu Maru.

### CR6AA BROADCAST

Received too late for the June magazine, but in time to notify a good many members was word that CR6AA, Lobito, Angola, Africa, would broadcast an I.S.W.C. program on June 16th from 5:00 to 5:30 P.M. on 7.177 mc. and 9.666 mc. Reports may not be plentiful, CR6AA, but our thanks are many.

### DX BROADCASTS

Leo A. J. DeRoo, on Honolulu, is giving DX tips over station KGMB, Honolulu, on 1320 kc. at 9:00 P.M., Hawaiian time, or 2:30 A.M., E.S.T. every Wednesday.

\*

# "HATS OFF TO A GRAND SET— THE *New* 'SUPER PRO'"



\* "THE most efficient receiver we have ever used," says William Greer, chief engineer of WNEL, Puerto Rico. Mr. Greer adds, "We have tried several radio receivers, all of them considered to be well designed and constructed, but the Hammarlund "Super-Pro" is the only set that we have been able to use in the transmitting plant to pick up the Signals of WAVB, for rebroadcasting. Before purchasing the "Super-Pro" it was necessary to locate the receiver some distance from WNEL and then make use of lines to the transmitter. The "Super-Pro" does not seem to be susceptible to the high noise level and conditions which ordinarily result in cross talk as the other receivers we have used. The antenna used is a 30 foot doublet located about 70 feet from the antenna of WNEL. No attempt was made to filter the 1290 kc. frequency of WNEL out of the receiver input. Yet it was found possible to receive stations in the United States whose field intensity could not have been more than a few micro-volts, and whose frequencies were separated from WNEL's by only a few kilocycles."

The "Super-Pro" receivers afford such exceptional results because they have such features as—calibrated band-width, beat oscillator, audio and sensitivity controls; stand-by switch; AVC-Manual control; 8 metal and 8 glass tubes; separate humless power supply; trouble-free cam switch, and a host of other notable improvements. Models for 7½ to 240 meters and 15 to 560 meters, crystal or standard are available for table or rack mounting. Mail coupon for "Super-Pro bulletin with full details!

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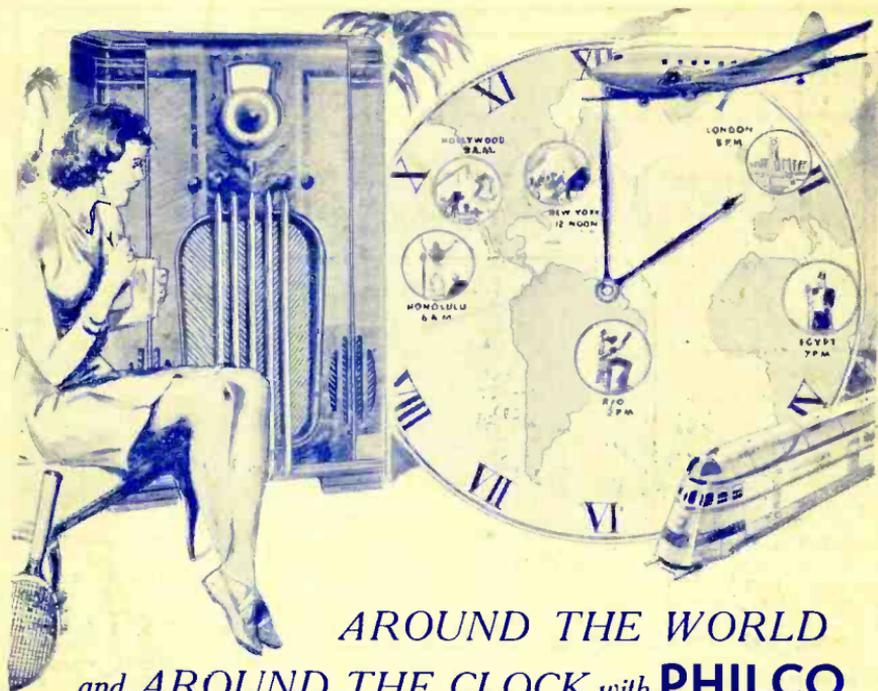
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