VOL. VIII

APRIL, 1937

NO. 7

INTERNATIONAL



- Short Wave News.
- Accurate Station List.
- Hourly Tuning Gnide.
- Police Stations.
- Aircraft Stations.
- And Other Features.

THE VOICE OF THE

INTERNATIONAL SHORT WAVE CLUB

EAST LIVERPOOL. OHIO, U. S. A.



"THE WORLD AT YOUR FINGER-TIPS"

THIS may truthfully be said of the combination RME-69 Communication Receiver and DB-20 preselector and image rejector—with visual meter tuning, electrical band spread, crystal filter selectivity—why worry about those distant signals which usually are so difficult to locate and many times too weak to listen to.

Sit down in front of an RME and discover the difference.

RADIO MFG. ENGINEERS, INC.

306 FIRST AVENUE

PEORIA, ILLINOIS



NC-100

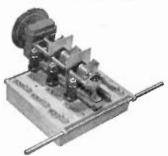
"Automatic Coil-Shift"

RECEIVER



New in every sense of the word, the twelve-tube NC-100 Receiver includes every refinement for difficult short wave work. Unique among its many unusual features is the perfected Tuning Unit with its "Automatic Plug-In Coils," which combines the high electrical efficiency of plug-in coils with the convenience of the coil switch. Tuning from 540 KC. to 30 MC. in five ranges, each of the fifteen coils is shielded in its own compartment of cast aluminum. The turn of a knob on the front panel brings the desired range into position and plugs it in. Idle coils are isolated, leads are short, calibration is exact. There are no "dead spots" with the NC-100. Fully worthy of the advanced performance of the remarkable Tuning Unit are the other details of the superheterodyne circuit. Thorough use of low loss insulation and of air-delectric condensers, together with carefully designed

high-Q coils results in exceptionally high signal-to-noise ratio and high usable sensitivity. Complete panel controls, ranging from the precision Micrometer Dial (direct reading to one part in five hundred) to the tuning dial for the separate CW oscillator, make operation of the NC-100 as pleasant as it is precise. These are but a few of the many ontstanding details of this remarkable receiver. (Mail the coupou for a completely illustrated folder.



NATIONAL COMPANY, INC., MALDEN, MASS.

GENTLEMEN:	Please send	me your	Illustrated	folder	completely
describing the NC-1	100 Receiver.	•			

Name	 	 	
Address	 	 	ISW-4-37

Special One Month Sale

TO MEMBERS OF INTERNATIONAL SHORT WAVE CLUB

Include the copy of this advertisement with your order to get these special prices. Orders mailed on or before April 30th only will be accepted at these prices.

MODEL 4T Amplivox Noise Bucker SPECIAL

This method of noise SUPPRESSION actually LIMITS the interference from the noises LOUDER than the SIGNAL. Sources interrupting your reception such as AUTOMOBILES, MOTORS, POWER LINES, SIGNS, OIL BURNERS, Etc., will not interfere because the famous J. J. LAMB circuit, used in the NOISE BUCKER, will suppress these noises in SIGNAL to NOISE ratio of as much as a 1000 to 1.

MODEL 4-T uses four metal tubes. Two wires and an adapter make all the connections necessary. Can be used on all superheterodyne receivers Shipping weight, 4 lbs. When ordering please give make and model of receiver and include postage. \$8.75

4 GENUINE RCA METAL TUBES. YOUR NET PRICE.....

\$3.35

AMPLIVOX AURITON SPECIAL (A PHONE JACK AT YOUR)

Enables you to listen in COMPLETE PRIVACY... with COMPLETE CLEAR-NESS, and COMPLETE FREEDOM from interference. A TYPE in stock for any make and model of receiver.

List Price \$6.75. Shipping weight, 1 lb. SPECIAL PRICE TO YOU.....

\$3.25

Together with Special Multi-Phone Plug.

SPECIAL COMBINATION OF ACME DeLUXE PHONES, AMPLIVOX AURITON

and a multi-phone plug to take one to four pairs of phones.

List Price \$10.00. Shipping wt. 2 lbs. SPECIAL PRICE TO YOU....\$3.95

SPECIAL COMBINATION TRIMM Featherweight (4 oz.) Supersensitive 2400 ohm. PHONES, AMPLIVOX AURITON

and a multi-phone plug to take one to four pairs of phones.

List Price \$17.75. Shipping wt. 2 lbs. SPECIAL PRICE TO YOU....\$8.75

WHEN ORDERING PLEASE GIVE MAKE AND MODEL OF RECEIVER.

UNUSUAL BARGAINS IN SURPLUS STOCK

In the conduct of our business there has accumulated items of stock which had been purchased for experimental development in our laboratory work, for test equipment, surplus of manufacturing, building up of our Amateur Radio Station, etc. To clean our shelves and realize some cash on it, we are selling all of it at below wholesale cost. Our stock includes Transmitting Condensers, Dials, Tube Sockets, parts of various Tube Adapters, chassis for Beat Frequency Oscillators, Special Coils for Beat Frequency Oscillators, Wooden Cabinets for one and two tube receivers, resistors, power transformers, special multi-phone plugs, phone jacks, line cords, and other items to numerous to mention. A special 50 cent or dollar package can be fixed up or ask for what you want. If you are a radio get builder or experimenter, don't wait until this stock is sold out.

SOL PERLMAN, E.E. (W2JCU)

TECHNICAL ADVISOR OF N. Y. CHAPTER OF I. S. W. C.

227 FULTON ST., New York-PHONE:

REctor2-3028

LETTER WRITING CONTEST

Short wave reception has made wonderful progress in the past five years. A person who tuned for stations five years ago would have marveled at reception as it is today. Still, we are a great ways off from perfect radio conditions. The conflict of many languages, the constant shifting of frequencies and the changing of schedules still present an opportunity for improvement. The mixing-up of telegraph and broadcast stations on the dial can be eliminated and local interference can be reduced greatly. Everyone has some idea on how short wave radio can be improved and thousands are awaiting a chance to voice their opinion but have no one to listen to them. Here is where we give each and every person an opportunity to give their opinion and also an opportunity to win a beautiful radio in return for their efforts.

The l.S.W,C. has enough faith in the readers of this magazine to offer a 1937 Model Hallicrafter Sky-Buddy receiver to the person offering the best suggestion on "How can short wave reception be improved?" Everyone knows what the Sky-Buddy is. We do not have to describe it. It is complete radio, with a range of from 14 to 550 meters, built-in speaker,

tubes and power supply.

The rules of the contest are simple. Hand writing, spelling, clever wording of sentences and similar things will have no bearing on the contest. This means that anyone can win. The idea or plan is all that will be considered by the judges.

Following are the rules:

1. Letters must be in the offices of the International Short Wave Club at 907 Vine Street, East Liverpool, Ohio, by midnight on August 31, 1937.

2. Letters should be addressed to the club and the words "Contest Editor" written in the bottom left-hand corner of the envelope. Hand

writing, spelling, etc., will not be considered.

3. The suggestion must be workable. It may be some plan to organize short wave station owners, or a plan to improve the International Short Wave Club. It may be a new gadget to work on a radio receiver. It may be a plan to use identifications for different countries. It may be a plan to separate code and broadcast stations. Or it may be one of hundreds of ideas that you may have.

4. All entries must be subscribers to International Short Wave Radio.

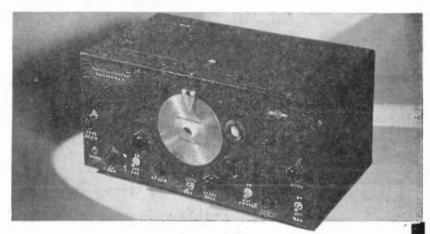
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Members of the club are asked to pass this information along to other short wave fans. It is only by reaching many people that we expect to get enough people interested in the contest to make it worth while. Even the newest beginner may have some good suggestlon. So pass the word along, even if you do not take part yourself. If this contest should be a success, and we get some good ideas from it, we will have a larger one with more prizes. But, if it should be a failure, that, of course, will end all such plans. So, get behind it and boost by telling your friends about it. Who knows but what the friend you talk to may offer a plan that will make short wave radio much more interesting for you than it is today.

Please pass this along to a friend and give him an opportunity of participating in this contest and winning a receiver.



The SKY CHALLENGER



BUILT TO hallicrafters | STANDARDS OF PRECISION!

Features That Make the SKY CHALLENGER Amateur Radio's Greatest Value!

- 9 Tubes-6 metal-3 glass.

 38 M.C to 535 K.C. (7.9
- to 540 meters).

 5 Band 338° Main Tun-
- ing Dial.
- Electrical Band Spread.
- Iron Core I. F. Transformers.
- Direct Calibration Tuning — No charts or tables.
- Automatic Volume Con-
- Single Signal Crystal Control.
- Beat Frequency Oscilla-

A LTHOUGH it was announced but a few short weeks ago the SKY CHALLENGER is already proving one of the most popular of the Hallicrafters fine receivers.

No wonder! Never before has such tremendous value been offered the amateur operator and short wave listener! It has every feature needed for efficient reception—at a price everybody can afford to pay.

The SKY CHALLENGER provides complete coverage from 7.5 to 540 meters (no gaps) including all the active amateur bands, short wave broadcast, aviation, police and regular broadcast band as well. Its electrical band spread and five Band 338 degree Dlal make tuning easy and its dozens of other features combined with Hallicrafters precision engineering make the SKY CHALLENGER the equal in performance of many much higher priced receivers.

Your dealer has it, and it's available on Hallicrafters favorable time payment plan.

SEE IT AT YOUR DEALER OR WRITE FOR COMPLETE INFORMATION.

the hallicrafters, inc.

2607 INDIANA AVENUE, CHICAGO, ILL.

America's Leading Manufacturers of Communications Receivers

CABLE ADDRESS: HALLICRAFT, CHICAGO

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Note:—Readers who may find it more convenient may send 5 shillings to Arthur Bear, 100 Adams Gardens Estate, London, SE16, England.

Readers ars 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. ADVISORY COMMITTEE

IOSEPH B. SESSIONS Pres. Sessions Foundry Co. Bristol, Conn.

JACOB KLEIMANS Meyer Koulish Co. New York City

CHARLES SCHROEDER Radio W3ATR Philadelphia, Pa.

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 gratest 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......

PLEASE SEND POSTAGE

This new price does not include postage. Readers are requested to send the necessary postage when ordering. shipping weight is eight pounds. 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.

Floor model, 10 pounds.

Address your letters to-

INTERNATIONAL SHORT WAVE CLUB, East Liverpool, Ohio

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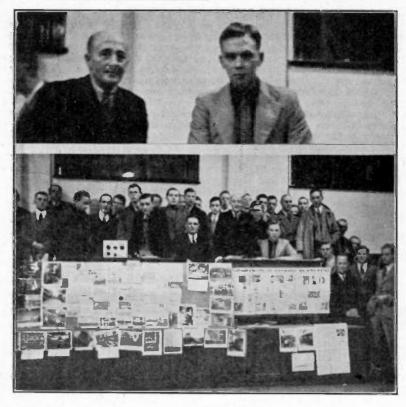
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This issue is dedicated to the officers and members of the newly organized Brighton, England, Chapter. This Chapter held their first meeting in January and in the photograph above we see a portion of the many people who attended that meeting. In the top photo we see Mr. John Bennett on the left and Mr. Arthur E. Bear on the right. Mr. Bennett organized the Brighton Chapter and Mr. Bear is our European representative.

In the eight years this club has been in existance, hundreds of members have written to us about starting a chapter. Still, only a few chapters are in existance. Every city of any size should have a chapter. These chapters are of great help to listeners. Most everyone who writes to us about starting a chapter seems to think that we should start it. But, it requires some enthusiastic hard-working person right on the spot to do it. To start a chapter, go to your local Y.M.C.A. or High School and ask

for a room in which to hold a meeting. Arrange the date and then go to all your local radio stores and ask them to put notices in their windows. Then write letters to the editors of your local newspapers and ask them to give the chapter publicity. Invite everyone to attend the first meeting, not just I.S.W.C. members. Sign up all the new members you can and arrange to hold meetings at certain dates, so that everyone will know when to attend. If there is to be some expense, ask for contributions at first and then arrange to charge so much each month for membership. Elect officers at the first meeting, not forgetting the publicity director for the chapter. In cases where there are not enough short wave fans in the neighborhood to start a large chapter, arrange to hold meetings in the homes of the members. Mr. Bennett, who organized the Brighton Chapter had some very difficult things to overcome, but he succeeded. He wrote letters to many newspapers, put signs in store windows and even went to other towns near Brighton and had invitations put into windows. It requires work to start a chapter, but there are many cities, particularly in the U.S.A., where chapters should be in force today and are not.

We welcome all the new members of the Brighton Chapter and thank

all those that helped make this chapter possible.

The London Chapter, England, continues to grow and meets at 80 Theobalds Road, W. C. 1, every Friday at 8:00 P.M. Television demonstrations are featured, lectures by famous people, demonstrations of receivers and code lessons are regular attractions. These clubrooms are open every evening from 6:00 to 11:00 P.M. and Saturdays from 2:00 P.M. They are installing a transmitter and already have a nice receiver available at all times. They also have a very nice library of radio books.

The Guernsey Chapter meets regularly at 5 Well Road, St. Peters Port. For details write to F. S. Le Pavoux, 8 Upper Canichers, St. Peters Port, Guernsey Island.

The New York Chapter meets on the first and third Fridays of the month at Stuyvesant High School, East Fifteenth Street, between First and Second Avenues. Code lessons start at 7:30 P.M. and the regular meeting at 8:00 P.M. Special speakers and demonstrations are featured at each meeting. For details write to J. N. Kleiman, 2610 Glenwood Road, Brooklyn, New York.

The Brighton Chapter is drawing members from the entire district surrounding Brighton and is making great progress. They meet each Wednesday at 7:30 P.M. at 100 Cromwell Road, Hove, Sussex. For details write to John Bennett, 205 Braeside Avenue, Brighton, 6.

The following people want to correspond with other listeners: Holley M. Shepperd, 75 Coolidge Road, Arlington, Mass. Carl and Ann Eder, Pouch A, Willmar, Minn. (Exchange Cards.) Joe Rudolph, 1403 Farnam Street, La Crosse, Wisconsin. Reuven Sokolovsky, 4 Nachlat Benjamin Street, Tel-Aviv, Palestine. Jacob Zimpelman, R. R. 4, Wabash, Indiana. (foreign)

The wife of Club-member Shokichi Yoshimura, well known member of Moji, Japan, died in January. We offer our good friend our most sincere sympathy.

Station HJ1ABP, P. O. Box 37, Cartagena, Colombia, writes to say that a special program is broadcast each Saturday at 10:00 P.M., E.S.T. on 9.62 mc. A contest, open to all listeners, is being held.

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: EASAF, 8LW, 8AB, 8AT, 8AL, 8AN, 8BG, 8AO, 8AS, 8AH, 8LC, SUIGG, 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.

BOOSTERS

The following people have earned our thanks for having secured new members for the club since the last magazine was printed. We appreciate

their efforts to help us very much:

Stuart Walmsley, Los Angeles, Calif.; R. D. Wade, Amarillo, Texas; J. H. Chapman, Leicester, England; W. G. Graham, Johannesburg, South Africa; (4) Arthur E. Sunny, New York City; A. F. Larkman. Sidcup, Kent, England; C. E. Coker, Guernsey, Channell Islands; F. S. La Pavoux, Guernsey, Channell Islands; Frank Fontella, New York; Robie Kempton, Arlington, Mass.; Philip E. Pons, Woodhaven, N. Y.; Jack Ward, Toronto, Ontario; R. B. Commans, Manila, P. I.; J. O. Girourd, Villardville, Sask.; Harry Noe, Brooklyn, N. Y.; George Harot, New York City; F. G. Beebe, Cutchogue, New York; Carl Eder, Willmar, Minn.; F. S. Abbe, Los Angeles, Calif.; Dr. Charles F. L. Fuller, Cowansville, Quebec; Dr. J. F. Tollman, Omaha, Nebr.; Charles Eggenweiler, West Los Angeles, Calif.; Frank E. Lyons, Kingston; Jamaica, W. I.; Luis Martinez G., Tuxtepec, Oax, Mexico.

WANTED-RME-69 or NC-100 receiver. Ballintine, 1809 Cheltenham Avenue, Philadelphia, Pa.

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

VPD2, Suva, Fiji Islands, after a trial on 8.72 mc. has moved back to 9.54 mc. where they broadcast daily 5:30 to 7:00 A.M. They are much better there. (Eder, Dorr, Rossi, Oxrieder, Walcott) VPD, a phone on 13.07 mc. was heard at 9 A.M. several times calling Australia (Gallagher).

VK6ME, Perth, West Australia, is on the air on 9.597 mc. testing. They are heard Monday, Wednesday and Friday 6:00 to 7:30 A.M. (Rossi, Pa. Wednesday and Thursday (Myers, Calif.) Heard 6:30 to 7:30 A.M. (Herzog, N. Y.; Walcott, Calif.)

ZMBJ on the ship "Awatea" is on 8.84 mc. broadcasting when at sea. They usually phone Australia and New Zealand between 11:00 P.M. and 6:00 A.M. and broadcast between 1:00 to 3:00 A.M. It has 400 watts power and I. H. Jones, the operator, verifies. Slogan is "The Ears and Voice of Tasmania." A great many people have heard it.

VK8SC, Port Hedland, West Australia, on 6.96 mc. veries 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. (Moots, Mo.)

FOSAA, 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 till 12:45 A.M. (Myers, Walcott..

VK9MI on the ship "Kanimbla" is broadcasting on about 6.02 mc. between 5:00 and 7:30 A.M. Send reports to 95 William St., Melbourne, C1, Australia. (Myers, Walcott, Eder.)

VK3LR verie says 3:00 to 8:30 A.M. Sunday to Friday and 10:00 P.M. Friday to 8:30 A.M. Saturday now, (Fuller, Quebec). Heard till 9:30 A.M. in England (many).

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 13.10 mc. once. (Myers, Calif.) VIZ3 at Fiskville, on 11.50 mc. was heard phoning once at midnight. (Gallagher, Calif.)

AFRICA

Station CR7AA, Lourenco Marques, Portuguese Africa, is on 6.13 mc. and also on 11.718 mc. They use a different call-sign on 11.718 but the listeners do not agree on it. Some say it is CR7BA, some CR7BH, some CR7AB. They also show a different schedule from what they are heard on It is reported on 11.718 mc. in America between 9:30 and 11:00 A.M. and 12:30 and 3:30 P.M. weekdays and 10:00 A.M. to 12:30 P.M. Sundays. (Durban, Natal, Africa; Cooke, India; Rossi, Pa., Myers, Calif.; Chavez, Calif.; Gallagher, Calif.; Walcott, Calif.; Espoy, Calif.) The address is announced P. O. Box 594, Lourenco Marques, Portuguese East Africa.

FIQA, Tananarive, Madagascar, is now on 31.54 meters or 9.515 mc. testing between 9:45 and 10:30 A.M. (Hansen, Durban, Natal.) Usually on about 6.01 mc.—Editor. French speaking stations, which may be FIQA on various wavelengths are reported as follows: One on 6.01 mc., on 9.44 to 9.54 (moving) and on 11.80 mc. all heard at the same time, 10:00 to 11:00 A.M. and signs off with playing the "Marseillaise." (Walcott, Calif.) One on 7.48 mc. heard 6:00 to 9:30 A.M. signs off with "Marseillaise" and another on 11.86 almost daily 6:00 to 9:30 A.M. also uses same sign-off. (Walcott) One on 9.59 mc. at 10:30 A.M. using French. (Gallagher, Calif.) One on 40.17 meters, 7.29 mc. heard daily at 5:30 A.M. (Keenan, Australia.) Also midnight to 12:30 A.M. daily on 9.51 mc. (Hansen).

EAJ43, Santa Cruz de Teneriffe, Canary Islands, on 10.37 mc. seems to have added time to their schedule and they are heard now as late as 9:30 P.M. and as early as 4:00 P.M. broadcasting. (Herzog, Kash, Flagg,

Van Bergen, Hodge, Stark.)

VQ7LO, Nairobi, Kenya, on 6.08 mc. notifies listeners they have moved their schedule up fifteen minutes and now broadcast Sundays 5:15 to 6:00 A.M.; Tuesdays and Thursdays 8:15 to 9:15 A.M.; daily 11:15 to 2:15 P.M. (Chapman, England.) Heard 10:45 P.M. one Sunday. (King,

England.)

EA9AH, Tetuan, Spanish Morocco, operated by General Franco's army is on the air more often and longer now. Known as "Radio Nacional" and "The Voice of the Trenches," this station is heard on about 14.03 mc. almost every day from 2:00 to 9:00 P.M., and on 7.00 mc. around 11:00 P.M. working amateurs. The station is not exactly on these frequencies, sometimes being as high as 14.10 mc. and 6.90 mc. The address is Apartado 127. (Stempel, Oxrieder, Beck, Kash, Ives, Seymour.) 10:00 to midnight. (Legge).

A station called "Poste Prive Experimental" at Tunis, North Africa, is on 48.72 meters or 6.157 mc. testing in French between 12:30 and 2:30 P.M. Is FT4AJ, owned by M. de Matteis, 20 Ts Sadikia, Tunis. (Orchard, Eng.) A station in Asmara on 8.06 mc. is broadcasting daily 10:00 to 11.00 A.M. (Gullberg, Sweden.) On 33.70 meters, 10:30 A.M. to noon. (Cooke, India). The phone ZSR, on 9.18 mc. phones London regularly at 6:00 P.M. (Myers,

California.)

ASIA

India. A letter from the officer in charge says VVS at Mingaladon, Burma, is on 23.37 meters, 12.84 mc. and they work VVN, Madras Fort,

India, which is on 22.62 meters, 13.26 mc. Heard 5:00 to 6:30 A.M. (Keenan, Australia). New 10 kw. stations are planned for Bombay, Delhi, Madras and Calcutta for broadcasting, according to Calcutta newspapers. Norman Baynes of Mangalone, sends us a letter he received from J. Pushparay, Director, Station VUTMC, Wireless Station, Palace, Mysore, India, saying they broadcast on 49.03 meters, 6.085 mc. every Wednesday from 7:00 to 8:00 A.M. E.S.T. The phone VWY, Poona, listed on 8.98 mc. is really on 9.04 mc. and heard phoning London 1:00 to 3:00 A.M. (Myers, Calif.) Reported around 6:00 to 9:00 A.M. and noon to 3:00 P.M. by others.

Java. Station YDB on 9.65 mc., PLP on 11.00 mc., PMN on 10.28 mc. and YDA on 15.15 mc. broadcast the same program daily from 5:30 to 10:00 A.M., and remain on the air till 11:00 or 11:30 A.M. on Saturdays and Sundays. These same stations are sometimes heard between 6:00 and 7:30 P.M. (evenings). PMH, Bandoeng, on 6.72 mc. also broadcasts between 5:30 and 10:30 A.M. and heard on the Pacific Coast. YDA, Tandpongpriok, on about 3.04 mc. is heard on the Pacific Coast around 5:30 to 10:30 A.M., too. Heard on 3.10 mc. (Gallagher).

Java Phones. We show many phones in our station list, and can not mention them here. Some late news follows: PLV on 9:42 mc. sometimes broadcasts between 8:00 and 10:00 A.M. (Hodge, Calif.) YBZ, Menado, Celebes Island, verie says 7.68 mc. and come from Bandoeng, Java, (Walcott, Calif.) YCP at Balikapan, Borneo, on 9.12 mc. was heard 5:45 to 6:15 A.M. One on 7.87 mc. calls Java 5:30 to 8:00 A.M. irregularly. PLQ on 10.68 mc. is now used and a PLN on 11.60 mc. is also used between 5:00 and 10:30 A.M. These are not heard all the year round, (Walcott, California).

ZGE, Kuala Lumpur, Federated Malay States, a little heard station, has moved to 6.21 mc. and is now heard Sundays, Tuesdays and Fridays 6:40 to 8:40 A.M. (Walcott, Calif.) ZHI, Singapore is now off the air (Dept. of Commerce report). ZHJ, owned by Penang Wireless Society, 40 Park Road, Penang, is on 6.08 mc. daily 12.40 to 14:00 G.M.T. or 7:40 to 9:40 A.M., E.S.T., according to letter, (Sparks, Calif.)

Philippines. A phone KBB, Manila, on 8.71 mc. phones ships 5:00 to 8:30 A.M. KZGF, Manila is on 5.81 mc., a station on 6.46 mc. are heard 3:30 to 6:00 A.M. And a KZGG at Cebu, P. I., on 7.83 mc. phones around 4:15 P.M. (afternoons) daily, (Walcott, Calif.)

Japan. Japan has altered their broadcast schedules some. JVN on 10.66 mc. broadcasts midnight to 1:00 A.M. JZJ on 11:80 and JZI on 9.53 mc. broadcasts from 9:00 to 10:00 A.M. Either JZJ on 11.80 and JZI on 9.53 mc. or JZJ and JVM on 10.74 mc. broadcast daily 2:30 to 4:30 P.M. JVP is not used on this broadcast now. JZJ on 11.80 and JVN on 10.66 mc. is used 4:00 to 5:00 P.M. daily. JVM on 10.74 mc. may replace JVN at times. Other reports show JZJ at midnight (Hodge). JZI at 2:30 to 3:30 P.M. (Gullberg). JVN from 10:30 to 11:00 A.M. one Sunday (Stark). JZI at 2:45 P.M. one Sunday (Van Bergen). JVN is heard daily 5:00 to 6:00 A.M. (Herzog). We have many reports on these stations on schedule, but particularly thank members Boothroyd, Studholme, Ward, Arickx, Gallagher and Hansen.

Japanese Phones. There are too many Japanese phones to mention them here, but they will be found in our list. Many new ones, not listed, are reported. These follow. One on 19.38 mc. 12:30 to 1:00 A.M. One on 9.24 mc. 2:30 to 4:00 A.M. On 9.69 2:30 to 4:00 A.M. On 4.67 mc, 5:00 to 7:00 A.M. On 6.00 mc. 5:00 to 7:00 A.M. phoning 4.67. On 2.74 mc. daily 6:00 to 9:00 A.M. On 2.85 mc. daily 6:00 to 9:00 A.M. On 3.05 mc. daily 6:00 to 9:00 A.M. On 15.74 mc. once 12:30 to 1:00 A.M. On 11.85 mc. once 2:45 to 3:00 A.M. All are unidentified stations, (Walcott, Calif.) One on 10.59 mc. and one on 5.85 mc., time not stated, (Gallagher, Calif.) Station JVK on 12.02 mc. heard phoning Argentina at 7:30 A.M. once (Cooke, India). Phoned Manila 5:00 A.M. once, (Dean, Conn.)

Japanese airports are heard on about 6.48 mc. between 2:00 and 5:45 A.M. J2AA, Haneda Airport, J2IK, J3AI and J2AF are heard (Walcott, Calif.) J2AA on 6.48 mc. is station reported as JZAK before. Heard 1:30 to 2:15 P.M. now, (Gallagher, Calif.)

JFZC on the ship "Chichibu Maru" has been heard by dozens now. They operate on 17.70 mc. and 6.55 mc., phoning KWU, California, JVE Japan, JZG Japan and KBB Manila. Heard between 9:00 P.M. and 9:00 A.M. as a rule, being on 17.70 between 11:00 P.M. and midnight almost every day, (Walcott, Grey).

CQN, Macao, Portuguese China, has moved to about 29.94 meters or 10.02 mc. and broadcast Mondays and Fridays 7:00 to 8:30 A.M. (Walcott, Calif. and Cooke, India.)

XGOX, Hanking, China, verie says 43.99 meters or 6.82 mc., 6:00 to 9:00 A.M. daily. Address Central Broadcasting Administration, (Scala, N. Y.) Moved to 6.87 mc. and heard now 5:30 to 9:40 A.M. daily, (Walcott, Calif.)

Chinese Phones. In our list are many Chinese phones. New stations reported show the following: XTB, Lunghwa on 26.35 meters, 11.38 mc. calling Hankow at 5:00 A.M. and a Canton station on 31.70 meters, 9.46 mc. calls Swatow at 6:00 A.M. (Kennan, Australia). XTZ on 5.48 mc. is heard 8:00 to 9:00 A.M. XBX on 6.98 mc. is heard 11:00 A.M. to noon and YTC, Canton on 9.49 mc. is heard 9:00 to 10:00 A.M. (Hodge, Calif.) XTV, Canton, using 9.30 mc. and 9.50 mc. is heard 7:00 to 10:00 A.M. and XPC on 9.29 mc. is heard at 7:00 A.M. and an XGU on 9.27 mc. (new frequency) is heard at 7:00 A.M. (Myers, Calif.) XTF, Swatow on 11.74 mc., XTG, Swatow on 9.36 mc. phone Shanghai daily 2:45 A.M. XTF also phoned XTV Canton at 8:40 A.M. once. XTK, Hankow, on 9.08 mc. was heard at 4:00 A.M., from 7:00 to 8:00 A.M. and also daily at 9:40 A.M. (Walcott, California).

VPB, Colombo, Ceylon, has moved from 6.03 mc. to 6.13 mc. and broadcasts daily 7:00 to 11:00 A.M. now, (Walcott, Calif.) Try around 7:00 A.M.

Siberia, U.S.S.R. Station RV15 on 4.27 mc. has a harmonic on 8.54 mc. that is heard better than the original wave, between 2:00 and 9:00 A.M. (Gallagher, Calif.) The phone station ROU at Omsk on 18.965 mc. was heard at 1:15 A.M. (Miller, Ky.) A station at Chita on 38.85 meters or 7.72 mc. was heard at 5:00 A.M. (Keenan, Australia).

Alaxandrovsk, Sakhalin Island, on 6.73 mc.; Petropavlossk, Kamchatka on 5.446 mc.; Nikolaievsk, Siberia, on 4.77 mc. were heard 5:45 to 6:45 A.M.

often and once 9:45 to 10:15 A.M. testing with RV15. Nikalaievska on 4.77, broadcasts 6:30 to 8:45 A.M. at times. A station on 11.72 mc. is heard broadcasting from 1:00 to 5:30 A.M. while phone stations on 14.57 mc., 10.74 mc., 11.96 mc., 12.39 mc., 11.22 mc. and 6.16 mc. have been heard between midnight and 8:00 A.M. (Walcott, Calif.) A station roaming around 11.60 mc. and 11.62 mc., heard midnight to 3:00 A.M. (Gallagher. Calif.) One on 4.88 mc. heard 8:00 to 8:30 A.M. One on 12.80 mc. broadcasts daily 1:00 to 4:00 A.M. One on 11.71 phones daily 1:00 to 5:30 A.M. One on 16.38 mc. phones daily midnight to 12:30 A.M. (Walcott, Calif.)

THE EUROPEANS

SM5SX, Stockholm, Sweden, on 11.71 mc. was heard one Thursday and one Saturday between 1:30 and 2:05 A.M., when they signed off in Swedish, (Nelleman, Illinois). This station may also be heard irregularly around 4:00 and 6:00 P.M.

Holland. PCJ has moved to Hilversum, from Eindhoven. The latest schedule says PHI is on 17.77 mc. Sundays 7:00 to 10:00 A.M., other days excepting Wednesdays 8:00 to 9:30 A.M. and Saturdays till 10:00 A.M. PCJ is on 15.22 mc. Tuesdays 4:30 to 6:00 A.M. Wednesdays 8:00 to 11:00 A.M. PCJ on 9.59 mc. broadcasts Sundays 2:00 to 3:00 P.M. and 7:00 to 8:00 P.M. Tuesdays 1:30 to 3:00 P.M. and Wednesdays 7:00 to 10:00 P.M. Veries do not agree to this schedule, but this is the latest schedule and the veries were not printed recently. PCJ does not sign off at 10:00 P.M. on Wednesdays but usually stays on till 10:50 P.M. (Hummerstone and Gallagher). PCJ was heard on 11.71 mc. sending special program to U. S. A. 4:00 to 4:30 once, (Herzog, N. Y.) Maybe this was PHI—Editor. The phone PLC on 9.37 mc. was heard at 4:00 A.M. (Myers). PCV on 18.05 mc. was heard at 1:00 P.M. (Gallagher).

TFJ, Reykajavik, Iceland, on 12.24 mc. broadcasts Sundays 1:40 to 2:00 P.M. in English and 2:00 to 2:30 P.M. in German or Danish. This station also phones England and Denmark irregularly. Calls GBC 9:30 to 10:45 A.M. daily, and calls OXT which is supposed to be on 12.30 mc. at Copenhagen, (Walcott, Calif.)

England. Two new powerful transmitters are being tested now, but the schedule sent to us for April follows:

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

17.79 mc.—GSG from 1:00 to 3:00 A.M. and 6:00 A.M. to noon.

15.26 mc.—GSI from 12:15 P.M. to 4:00 P.M. 15.18 mc.—GSO from 1:00 to 3:00 A.M.

15.14 mc.—GSF 6:00 A.M. to noon, 4:00 to 5:00 P.M., 6:00 to 8:00 P.M., 9:00 to 11:00 P.M.

11.75 mc.—GSD 12:15 to 4:00 P.M, 6:00 to 8:00 P.M., 9:00 to 11:00 P.M.

9.58 mc.—GSC 4:00 to 5:45 P.M., 9:00 to 11:00 P.M.

9:51 mc.—GSB 1:00 to 3:00 A.M., 6:00 A.M. to noon, 12:15 to 8:00 P.M.

Last month they used GSF instead of GSB, which they listed, from 6:00 to 8:00 P.M. and 9:00 to 11:00 P.M., and also used it between 6:00 and 8:45 A.M. (Herzog, DeMent). GBTT on the ship "Queen Mary" was heard on 13.35 mc. at 6:10 P.M. (Studholme, Eng.) A new phone, GBA,

on 16.14 mc. works XOJ China around 6:00 A.M. (Rossi, Pa.) Another, GAB on 18.04 mc. worked CGA, Canada at 11:12 A.M., (Herzog).

YTC, Belgrade. Yugoslavia, on 6.10 mc. schedule now is daily 1:00 to 3:00 A.M., 6:30 to 8:25 A.M., noon to 6:25 P.M., Sundays at 6:15 A.M., Thursdays and Saturdays 8:45 to 9:00 A.M. English is used daily 3:30 to 3:45 P.M. and some days 1:20 to 1:40 P.M. (Studholme, England). Heard 3:30 to 4:10 P.M. once, (Kash, N. Y.) The best time to get this station is between 1:00 and 3:00 A.M. in America.

LZA, Sophia, Bulgaria, veries say they are on 20.04 mc. but they are on about 14.92 mc. They send out several conflicting schedules, so we can not state which is correct. Heard on 14.87 mc. 12:30 A.M. Sundays, (Eden, Minn.) On 14.85 mc. 12:30 to 2:00 A.M. Sundays, (Gallagher, Calif.) On 14.92 mc. 12:30 A.M. Sundays, (Miller, Ky.)

2RO, Rome, Italy, is on 11.81 mc. from 6:43 A.M. to 12:30 P.M. and then moves to 9.64 mc. from 12:45 to 5:45 P.M. daily. Every day except Sundays they are on 9.64 mc. from 6:00 P.M. to 7:45 P.M. also. They sent a special program for re-broadcasting to America, March 3rd at 4:30 P.M. (Herzog). The phones IQA on 14.73 mc. and IRF on 13.22 mc. sent one February 20th at 1:30 P.M. (Kash).

Programs from Germany for April are scheduled as follows:

17.76 mc.—DJE-12:05 to 5:15 A.M.; 5:55 to 11:00 A.M.

15.34 mc.-DJR-8:00 to 9:00 A.M.

15.28 mc.—DJQ—6:00 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.

A station DJO on 11.80 mc. and DJL on 15.11 mc. sent a special March 13th, 7:30 to 8:00 P.M. for station WTEL, Philadelphia (Flagg, Mass.) Station DJT on 15.36 mc. is a new one heard late afternoons and evenings (Oxrieder, Pa.) DJO and DJB relayed a program from Sweden March 21st, (Wooten, Ala.) DJD will send a special April 6th at 3:35 P.M. (Zimpelman, Ind.) DJA was heard 6:00 to 7:00 A.M. daily last month when not scheduled, (Herzog, N.Y.)

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 and DZH heard every Wednesday from 1:00 to 3:30 P.M. with program, (Flagg, Mass.) DZC heard at 6:00 P.M. (Studholme). DZH at 6:00 P.M. (Herzog).

The Communist Party of Germany has a secret station on 29.79 meters or 10.07 mc., broadcasting daily from 1600 to 1700 G.M.T. or 11:00 A.M. to

noon, E.S.T. They announce "Transmitter of the German Communist Party talking on 29.8 meters." They want reports sent to any Communist Party headquarters throughout the world, but do not say where the station is located, (Niederle, Czechoslovakia). 4:00 to 5:00 P.M. daily

(Studholme, England).

The U. S. S. A. broadcasts for April will come over RAN on 9:60 mc. daily 7:00 to 9:30 P.M., RNE on 12.00 mc. Sundays 6:00 to 7:00 A.M., Sundays 10:00 to 11:00 A.M. and Wednesdays 6:00 to 7:00 A.M. and RV59 on 6.00 mc. daily 2:00 to 5:00 P.M. RV59 moved to 6.03 or 6.04 mc. for a few days last month and RNE moved to about 12.11 mc. but they both moved back to original wave, (Gulberg, Smith and Studholme). RNE was heard 8:00 to 9:00 P.M. with program and once heard till 12:30 A.M. (Flagg, Mass.) Soviet phones are shown in our list. Some unidentified ones are as follows: One on 11.72 mc. broadcasting daily 6:00 A.M. (Gullberg, Sweden). One one 12.05 mc. at 11:00 P.M., one on 11.66 mc. at 11:00 P.M., one on 11.70 mc. broadcasting 11:00 P.M. to 1:30 A.M., one on 10.30 mc. 10:00 P.M., one on 11.96 mc. at 1:30 A.M. and one on 11:96 at 1:30 A.M. (Gallagher, Calif.)

France. A new station is heard on 9.10 or 9.11 mc. between 1:15 and 3:00 A.M. broadcasting, (Adler, N.Y. and Walmsley, Calif.) TYA2, a phone on 9.04 mc. broadcast music at 1:00 P.M. one Sunday, (Studholme, Eng.)

Portugal. CSW, Lisbon, sends veries saying they are on 11.04 mc. from 1700 to 2300 (noon to 6:00 P.M., E.S.T.) and 9.94 mc. from 2300 to 100 G.M.T. (6.00 P.M. to 8:00 P.M., E.S.T.) Nothing is said of them being on 22.00 mc. or on 11.80 mc. as reported last month, (Beck, Ill.; Studholme, Eng.; Johnson, N. Y.; Herzog, N. Y.; Kash, N. Y.; French, Mich.) CT1AA is on 9.65 mc. Tuesdays, Thurdays and Saturdays 4:00 to 7:00 P.M. and on about 12.12 mc. Sundays around noon to 3:00 P.M., irregularly. This station was also testing on 9.65 mc. as late as 9:00 P.M. many times last month, and was, without a doubt, the station reported at CR6AA by Mr. Karpen last month. Heard by (Bennett, Ill.; Anderson, Wisc.; Kash, N.Y.; DeMent, Texas). Heard on 12.10 mc. (Oxrieder, Cooke and Gullberg). between 2:00 and 5:30 P.M. still, but it is not heard in America, we doubt. The Portuguese Catholic Station on 5.97 mc. or 5.98 mc. is broadcasting A new phone, CUY, Lisbon, on 9.20 mc. was calling GBU, Rugby, England, 4:30 to 6:00 A.M. (morning) once, (Walcott, Calif.)

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.

Switzerland. Geneva has changed schedule. One statement is that HBL and HBP broadcast from 7:30 to 8:30 P.M. Saturdays instead of 5:30 to 6:15 P.M. (MeMent, Texas; Dean, Conn.; Gulberg, Sweden; Studholme, England). Another is that HBO and HBJ are used instead of HBL and HBJ, (Dean, Conn.; Shaffer, Iowa). A verie says HBH is on 16.23 meters, 18.48 mc., HBF on 16.26 meters, 18.45 mc.; HBJ on 20.64 meters, 14.535 mc.; HBO on 26.31 meters, 11.403 mc.; HBL on 31.28 meters, 9.595 mc. and also on 32.10 meters, 9.345 mc.; HBP on 38.48 meters, 7.717 mc.

and HBQ on 44.14 meters, 6.675 mc. (Fuller, Quebec). HBO is used every Monday at 2:15 A.M. to work VLK, Australia, (Boothroyd, Eng.)

Norway. A letter says LKJ1, Jelroy, is on 9.53 mc. from 5:00 to 8:00 A.M. and on 48.94 meters or 16.13 mc. from 11:00 A.M. to 5:00 P.M. and the power is soon to be increased from 1 kw. to 5 kw. (Rye, Jowa). This settles that wavelength matter.—Editor.

SPF, Gdynia, Poland, was heard on 12.32 mc. broadcasting phonograph records and using many languages one Tuesday 2:30 to 2:45 P.M. (Studholme, Eng.) SPW, Warsaw, on 13.63 mc. broadcasts Mondays, Wednesdays and Fridays, 12:30 to 1:30 P.M. They sent special programs around 3:15 P.M. March 12th and 24th (Herzog).

Spain. Since the war began, many new and strange stations have been reported, none of which could be checked up because of the mail being held up. Some of these have changed calls, moved to new locations and altered schedules, so we can not list them. Here is what we know about them now. EAJ8, Bilboa, is on 7.26 mc, with a lady announcing. Heard 7:00 to 7:20 P.M. with English. Is not EAJ, San Sabastian, as this one is on the government side, (Studholme). EAJ(8), San Sabastian is an insurgent station called "Radio Raquette" (sounds like racketay). It is on 7.21 mc. and was heard at 8:15 A.M., 3:30 to 4:00 A.M., 8:30 to 10:00 A.M., noon to 4:00 P.M. and 5:00 to 7:00 P.M. Gave address as Avenida 27, (Flagg, Mass.; Studholme, England, and Curiel, Curacao). EDR4, at Palma de Mallorco, Island of Majorca (English spelling) is on 46.30 meters or 6.48 mc., and heard afternoons 4:30 to 5:15 P.M. Plays Spanish marches and says "Viva Espana." Calls itself Radio Poste Nacional en Servica Nacionalistes a Palma de Mallorca." Also heard 7:00 to 8:00 P.M. calling: "Atencion Americas Latina" (Flagg, Mass.) Moves from 6.53 to 6.58 mc. (Oxrieder, Pa.) EAH, Union Workers station at Valleras on 9.48 mc. seems to have disappeared. It was heard 4:00 to 5:00 P.M. daily. EAJ1, Barcelona, on 41.70 meters, 7.194 mc., is heard daily 4:00 to 5:00 P.M. Nationalist troops also have a station near 7.00 mc. and 14.00 mc. broadcasting on both frequencies at 2:45 P.M. daily. Announce "Radio Nacional A Z," (Boothroyd, England). Others reported are ENC1, Barcelona, on 6.99 mc., ECP2 on 7.143 mc. PSU1, Barcelona, on 7.18 mc. and EAP1 on 7.08 mc. all heard irregularly. A station EHX on 10.62 mc. was heard phoning Chile 9:30 to 10:00 P.M. one Friday (Flagg, Mass.)

EAQ, Madrid, Spain, is now on 31.65 meters or 9.48 mc., where EAR used to be and they use the call-sign EAQ2. They announce they were on the air 2:30 to 9:30 P.M., giving war news in English at 2:30 P.M., 6:30 P.M. and 7:30 P.M., E.S.T. We do not know if they still use 9.86 mc. or not now that they are on 9.48 mc. Address is Box 951. (Scala, N. Y.; Wooten, Ala.; Anderson, Wisc.; Wilbur, Ill.; Lynch, Texas; Edwards, Pa.; Dement, Pa.; Zimpelman, Ind.; Verbrughe, Mich.; Atherton, Vt.; Gallagher, Calif; McDermott, N.Y.)

OLR, Podebrady, Czechoslovakia, uses many frequencies and schedules. This is just outside of Prague, or Praha as some spell it. The latest call-signs and frequencies are as follows: OLR2A on 6.01 mc. (49.92 meters); OLR2B 6.03 (49.75), OLR2C 6.115 (49.06), OLR3B 9.50 (31.57), OLR3A 9.55

(31.41), OLR4B 11.76 (25.51), OLR4A 11.84 (25.34), OLR4C 11.875 (25.26), OLR4D 11.90 (25.21), OLR5C 15.16 (19.79), OLR5A 15.23 (19.70), OLR5B 15.32 (19.58), OLR6A 21.35 (13.99). Three different people sent us what is supposed to be the correct schedule, yet all three are different, so we can not give the schedule. We know they are on either 9.55 mc. or 6.01 mc. every day 2:30 to 4:30 P.M. and on either 9.55 mc. or 11.84 mc. Mondays and Thursdays from 7:00 P. M. to 11:00 P.M. (for America). They may be heard on any other frequency at any time of the day or night, judging from reports. Try week-days 9:00 A.M. to noon, Sundays 2:00 to 3:00 A.M., Thursdays and Saturdays 5:00 to 7:30 A.M. Schedules came from E. J. Niederle, Czchoslovakia, V. Sevick, Chesky Brod, Czechoclovakia and J. Depp, of Penn'a. Other reports came from members Gallagher, Atherton, Herzog, Adler, Oxrieder, Arickx, Shaffer, Smith and included OLR3A, OLR4A, OLR4D, OLR4C.

SOUTH AMERICANS

The consul General of Peru sends us the following list of stations: OAX4D on 5.78 mc., 51.9 meters, 3,500 watts, "Radio Dusa," Owner is Difusora Universal, Camaba 372, Lima. (2) OAX5C, 6.00 mc., 50.00 meters, 100 watts, "Radio Universal," owner is J. Antonio Umbert F, Tacna 112, Ica. (3) OAX4Z on 6.09 mc., 49.24 meters, 15,000 watts, "Radio Nacional." owner is Peruvian Government, Av Petit Thouars, Lima. (4) OAX4P on 6.122 mc., 49.00 meters, 250 watts, "Radio Andina Junin," owner is J. Alberto Madueno, Cuzco 25, Huancayo. (5) OAX6A, 6.122 mc., 49.00 meters, 100 watts, "Radio Arequipa," owner is Eduardo L. Caceres, Munoa Najar 141, Arequipa. (6) OAX7A, 6.128 mc., 48.96 meters, 100 watts, "Radio Cuzo," owner is Carlos Lizarraga Fisher, Montero 43, Cizco. (7) OAX1A, 6.15 mc., 48.78 meters, 200 watts, "La Voz de Chiclayo," owner is Carlos J. Montjoy, Elias Aguirre, 171, Chiclayo. (8) OAX4G, 6.23 mc., 48.15 meters, 400 watts, "Radio Grellaud," owner is Robert Grellaud y Cia, Albacay, 915, Lima. (9) OAX4K, 6.425 mc., 46.69 meters, 200 watts, "Radio Coicochea," owner is Ing Juan P. Goicochea, Ocona 158, Lima. (10) OAX4I, 9.52 mc., 31.51 meters, 200 watts, "Radio Internacional," owner is Radio International, S. A., Ed. Mineria 605, Lima. (11) OAX4T, 9.562 mc., 31.38 meters, 10,000 watts, "Radio Nacional," owner is Peruvian Government. Petiti Thouars, Lima. (12) OAX5A, 11.80 mc., 25.42 meters, 100 watts, "Radio Universal," owner is J. Antonio Umbert F., Tacna 112, Ica.

OAX4J is heard on 9.33 mc., but moves around once in awhile. It is heard between 6:30 and 10:45 P.M. as a rule but was heard as late as 1:00 A.M. (Pegge, Myers, Oxrieder, Hodge, Herzog, Beck, Walmsley). OAX5B on 11.80 mc. is the short wave call and OAX5A is the long wave call according to listeners. This one supposed to broadcast from 7:00 to 10:00 P.M. but it is reported until 11:30 P.M. (Rossi, Walcott, Herzog.) OAX4Z relays OAX4A and is heard from 7:30 to 11:30 P.M. and signs off with the National Anthem sung by a chorus of voices. (Rossi, Oxrieder, Espoy, Gallagher.) The phone OCI was heard at 1:00 A.M. once on 10.97 mc. (Gallagher.) Member Hodge of California reports OAX5B on 11.78 mc. and also OAX4B on 11.80 and then says OAX4J is on 9.33 mc. and another one is on 9.52 mc.

Colombia. HJ1ABE on 9.50 mc. has a harmonic on 18.95 mc. that is strong, (Seymour, Md.) HJ1ABP on 9.60 mc. broadcasted a special 24 hour program March 14 and 15 celebrating their first anniversary. (Ward, Seymour, Shaffer.) HJ3ABD on 6.05 mc. is heard until 11:55 P.M. instead of just 11:00 (Pegge, Eng.) HJ3ABX, on 6.12 mc. schedule says weekdays 1:30 to 2:00 P.M. and 5:30 to 11:30 P.M., Sundays noon to 1:30 P.M. and 6:00 to 11:00 P.M. (Stockbridge, Mass.) HJ2ABC on 9.57 mc. heard at 5:30 P.M., schedule says 6:00 (Herzog, N. Y.) HJ4ABD moves around between 5.975 and 5.98 (Oxrieder). HJ3ABE was heard on 12.15 mc., 11:30 P.M. to midnight once. (Herzog, N. Y.) This must be a harmonic of some station near 6.06 mc.—Editor.

YV1RL, "Radio Popular," on 5.93 mc. is still testing Venezuela. between 8:00 and 10:30 P.M., but not regularly. Gave address as Apartado 247, Maracaibo, (Hodge, Calif.; Curiel, Curacao; Stark, Mo.; Gallagher, Calif.; Pegge, Eng.) YV1RI, Coro, was on 6.21 mc., 7:51 to 8:36 P.M. (Curiel, Curacao.) Moved to 6.19 mc. (Bradley, Md.) The official list says YV1RE on 6.07 mc. relays YV1RD, but they announce the opposite. (Oxrieder, Pa.) YVIRB on 5.85 mc. was heard at 6:10 A.M. once. (Eder. Minn.) An YV1RP was heard on 5.87 mc. at 6:00 A.M. (Kash, N. Y.) He probably heard YV1RB-Editor. YV5RP, Radio Philco, Caracas, on 6.27 mc., veries say they relay YV5RQ and gives address as Apartado 508. (Studholme, England, and Kash, N. Y.) A YV station is heard near 11.70 mc., and this must be a harmonic of YVIRB on 5.85 mc. (Herzog and Stark.) YV1RH veries say 6.36 mc. The schedule is daily 6:00 A.M. to 7:30 A.M., 11:00 A.M. to 2:00 P.M. and 5:00 to 11:00 P.M. their time, which is a half an hour ahead of E.S.T. (Atherton, Vt.) It is really on 6.36 (Bradley, Md.)

Ecuador. HC2OBA on 9.44 mc. broadcasts 8:10 to 10:10 P.M. Uses slogan "La Voz de Alma." (Flagg, Mass.) It is HC2RA and heard until 10:30 P.M. (Hodge, Calif.) Sounds like HCODA. (Oxrieder, Pa.) A verie from HCK says they are on 5.885 mc. from 8:30 to 10:30 P.M., Quito Time, with 250 watts. (Rubio, Cuba.) A verie from HCJB shows 4.107 mc. and 8.948 mc. (Legge, N.Y.) HC1PM verie says 5.725 mc. with new schedule Saturdays only 9:00 to 11:00 P.M., E.S.T. It is known as "El Palomer," Quito. (Bradley, N. Y.)

CP7, La Paz, Bolivia, on 15.30 mc. (?) was heard 7:00 to 8:00 P.M. (Hodge, California.)

PPQ, Rio de Janeiro, Brazil, on 11.66 mc. was broadcasting 7:30 to 8:18 P.M. once. (Reese, N. Y.) Our list shows PRA8 and PRF5 broadcasting.

Chile. CEB, Santiago, on 12.30 mc. is still going strong and still says "Radio Service" often. Most agree it is CEB and the address is Casilla 761, Santiago. It is heard between 5:00 and 11:00 P.M. but the schedule says 11:00 A.M. to 1:00 P.M. and 4:00 to 8:00 P.M., E.S.T. Announces "C as in Chile, E as in England and B as in Boston." (McMenamy, Calif.) Says "Seh Aye tres Ah Jay" which is CE3AG. (Beck, III.) A CEM on 8.88 mc. was heard at 10:30 P.M. (Myers, Calif.) A station CEBM on 6.14 mc. at Magallenes was heard at 10:00 P.M. (Hodge, Calif.) Mr. Hodge also says a radio service is on 12.32 mc. and a Radio Ferris is on 11.41 but we believe he means CEB.

British Guiana. VP3MR, Georgetown, veries say 6.01 mc. and schedule is 4:45 to 8:45 P.M. weekdays and 7:45 to 10:15 A.M. Sundays. Power was increased from 150 to 250 watts. (Carroll, N. J.) Caught on 6.02 mc.

once, but usually on 5.98 mc. (Oxrieder)

Argentina. LSX on 10.35 mc. broadcasts Mondays and Fridays 5:00 to 6:00 P.M. LRU on 15.29 mc. broadcasts from 7:00 A.M. to 6:00 P.M. and LRX on 9.66 mc. from 5:00 or 6:00 P.M. to 1:00 A.M. LRU at 6:15 A.M. once. (Cooke, India.) LSN3 on 9.90 mc. sent a program at 7:00 P.M. LSY on 18.12 mc. sent one March 9 at 10:00 A.M. LSL on 21.60 mc. (This should be 21.16 we believe.) sent one March 10 at 1:30 A.M. (Gallagher) LSY on 18.12 mc. relayed opera from New York 4:40 to 5:10 P.M., March 20th. (Studholme.)

CENTRAL AMERICANS

Panama. A letter from Lieut. George Williams of HP5J states that a new station HP5A, "La Voice of the Ismo," will open in March on 49 meters and will have three times the power of HP5J. (Studholme, Eng.) A letter from Leo Marchosky, Cia Chiricana Radiodifusora y Television, Apartado 129, David, Chicigui, Panama, says a station HP5L will be on 11.74 mc. The slogan is "La voz de Interior." (Oxrieder, Pa.) Heard on 11.74 saying "La voz de Baru," and gave same address as above. (Beck, Ill.) HP5I, Aguadulce, called "La voz del Interior" and "Radio Philco" verie says 25.22 meters, 11.895 mc. 7:30 to 9:30 P.M. daily, (Atherton, Vt.) Is on 11.896 mc. to 11.899 mc. moving, and says 11.895 mc., and is on the air daily 7:30 to 9:30 P.M. now. (Oxrieder, Pa.) Reported HP5J on 11.895 mc. (Myers, Calif.) Must be HP5I he means-Editor. HP5K verie says 6.005 mc. 7:00 to 9:00 A.M., 11:30 to 1:00 P.M. and 6:00 to 11:00 P.M. now. (Legge, Pa.) HP5B verie says 49.75 meters or 6.03 mc., 5:00 to 10:00 P.M. Heard 6:00 to 9:00 P.M. Address is Apartado 910, Panama City. (Scala, N. Y.)

Costa Rica. TILS on 5.90 mc. gave address as P. O. Box 3, San Jose, and not at Puntarenas. (Oxrieder, Pa.) Heard calling YNLG at 11:09 P.M. (Atherton, Vt., and Legge, Pa.) Reported as TILC on 5.88 mc. at 1:30 A.M. (Kash, N. Y.) TI4NRH moved to 9.66 mc. last month. Says 9.67 in verie. ((Oxrieder, Pa.) TIOW on 6.85 mc. said they were operated by Otto F. Wimmer, Jr., Box 45, Port Limon. Heard 2:30 to 3:00 P.M.

(Beck, Illinois.)

Guatemala. A verie from TGWA says 9.45 mc. noon to 2:00 P.M. and 8:00 P.M. to midnight E.S.T. (Herzog, N. Y.) They also broadcast some Saturdays from 8:00 P.M. to 6:00 A.M. Sundays—Editor. TG2X schedule is Mondays, Thursdays and Saturdays 1:00 P.M. to midnight. Heard on Tuesday, March 17. (This is Wednesday—Editor.) (Zimpelman, Ind.) Station TG2, Guatemala City, was relaying TG1 on 6.215 mc. one Monday and says to send deports to Director General of Electrical Communications. No time stated in report. (Oxrieder, Pa.)

Nicaragua. YNOP verie says "Radiodifusora Bayer" is on 5.758 mc. weekdays 8:30 to 10:30 P.M. with 1 kw. power. International coupons are no good and a three cent stamp should be sent. (Beck, Ill.) Same only verie says YN10P. (Flagg, Mas.) YNOP is off the air now according

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to statement heard on YN1OP on 20 meter amateur phone. (Stark, Mo.) Heard on 5.72. (Hodge, Calif.) A station YNPR (new), Managua, heard on 8.60 mc. until 9:00 or 9:30 P.M. often. (Stark, Mo.) A YN1PR, "Radiodifusora Pilot," Managua, is on 8.58 mc. and 8.67 mc. moving. No time given in report. (Oxrieder, Pa.)

XEBR. A letter says XEBR is on 11.82 mc. relaying XEBH, a long wave station. XEBR has 150 watts power and broadcasts 1:00 P.M. to 4:00 P.M. and 8:00 P.M. to 11:00 P.M., E.S.T. Address is apartado 68, Hermosillo, Son, Mexico. (Field, Calif.) Heard 4:00 to 5:00 P.M. (Hodge, Calif.) Until midnight. (Walcott, Calif.) On schedule. (Beck, Ill.; Myers, Calif.; Espoy, Calif.)

XEYU, The National University of Mexico, Mexico City, is a new station on 9.60 or 9.61 mc. Was heard at 1:30 P.M. and promised to verify all reports. (Verbrughe, Mich.) Heard 8:25 to 9:30 P.M. (Beck, Ill.) Signed off at 2:10 A.M. once. (Stockbridge, Mass.) Between RAN and

HP5J. (Flagg, Mass.)

XEUZ, National Broadcasting Company of Mexico, "Radio Nacional," is on 6.11 mc. broadcasting from 9:00 P.M. on, and signing off at any time between 1:00 A.M. and 3:00 A.M. They relay XEFO and gave their address as Apartado 2641, Mexico City. (Eder, Minn.; Beck, Ill.; Herzog, N.Y.; Hodge, Calif.; Pegge, Eng.)

XETU, Guadalajara, on almost the same wave as XEUZ was heard

9:10 to 10:40 P.M. (Beck, Ill.)

XEPW, Mexico City, is also right near 6.12 mc. Heard announcing "La Voz del Aguila Azteca Desde Mexico" and says "American Buick" often. Heard 10:00 to 10:30 P.M. (Beck, Ill.) Is XETW and heard 8:00 P.M. to midnight. (Hodge, Calif.) Is XETW and address is apartado 8403, Mexico City. (Wade, Texas.)

XEBM, Mazatlan, Sinaloa, on 15.44 mc., not 15.30 mc., gave address as Avenue Angel Flores, 156, Altos. (Beck, Ill.) This one is called "El Pragonero del Pacifico," says 15.30 mc., has 50 watts power and gives address as P. O. Box 50 (Purkey, Calif.; Wade, Texas.) Is usually heard

8:00 to 10:00 P.M. weekdays and all day Sundays.

XEDQ, Guadaljaro, Jalisco, on 9.48 mc., roamed around a bit before settling here. They relay XED, have 500 watts power and broadcast 8:00 P.M. to midnight. The address is apartado 197. (Espoy, Wade and Bradley) XEME on 8.19 mc. is scheduled to 11:00 P.M. but heard until 11:45. (Hodge, Calif.) XEBT on 6.00 mc. is heard until 2:30 A.M. often. (Smith, Eng.) Two new phones are reported. XEM1 on 6.55 mc. and XEM2, which is at Guanacebi, Durango, on 6.74 mc., is heard often. (Wade, Texas.) At 9:30 P.M. daily. (Espoy, Calif.) On 6.72, not 6.74. (Gallagher, Calif.)

WEST INDIES

HIX, Trujillo, on 6.34 mc., has changed call to HI1X, and a station HI2X is now on 11.96 mc. and an HI3X is on 15.26 mc. HI1X and HI2X broadcast Tuesdays and Fridays 8:10 to 10:10 P.M. Many disagree with this schedule, showing them signing off as early as 9:00 P.M. and some

disagree on the exact frequency used. HI3X was reported by Captain Oxrieder only, and he gives no time in his report. Other reports come from the following members: Nelson, Rossi, Beck, Noe, Stempel, Flagg, Spuhler, Depp, Herzog, Dean, Walcott, Legge, Gallagher, Ward.) Signs off at 9:30 P.M. (Flagg, Ward.)

HIN verie says 48.05 meters or 6.24 mc. and 26.6 meters or 11.84 mc., noon to 2:00 P.M. and 7:30 to 9:30 P.M. (20 minutes ahead of E.S.T. Smith, Eng.) Heard until 10:15 P.M. (Smith, Ky.) On 12.48 mc. until

10:40 P.M. (Stark, Mo.) From 7:30 to 9:15 P.M. (Dean, Conn.)

HI5G, Concepcion de La Vega, is a new station on 31.58 meters or 9.50 mc., heard between 5:45 P.M. when PRF5 signs off and 5:55 P.M.

when GSB comes on. (Flagg, Mass.)

HIG on 6.28 mc. heard daily now 5:50 to 6:10 P.M. when schedule says 7:10 to 9:30 P.M. (Pegge, Eng.) HI1A on 6.19 mc. heard until 11:06 P.M. instead of just 10:00 P.M. (Pegge) HI7P on 6.80 mc. has a new schedule. It is daily 12:40 to 1:40 P.M. and 6:40 to 8:40 P.M. weekdays and 9:40 to 10:40 A.M. Sundays. Signed by Jose M. Roques R. and is owned by newspaper "Dario de Comercio." (Bradley, N. Y.) Is on 6.78. (Oxrieder)

Curacao. Station CUROM, owned by the Curacao Radio Omroep. (Curacao Radio Club) is on 50.60 meters or 5.93 mc. with 750 watts power and broadcast weekdays 6:36 to 8:36 P.M. Send reports to Radio Curacao, Curacao, D. W. I. (Curiel, Curacao.) This station was reported last month on this wave by Peterson of St. Martins. Now, however, this station is heard on about 9.46 mc., but at a different time than what this shows. Heard between XEDQ and TGWA between 9:00 and 11:00 P.M. one Thursday. (Flagg, Mass.) Heard on 9.46 from 8:00 to 9:15 P.M. (Dean, Conn.) On 9.47 at 9:00 P.M. (Legge, Pa.)

New Bermuda phones are reported. ZBB is on 5.025 mc. and ZBT is on 10.335 mc. and they tested around 11:00 P.M. several times. (Rossi, Pa.)

FZF6, "Radio Fort De France," Martinique, once on 9.36 mc. seems to be missing just now. Letters from the station say they are on the air from 11:30 A.M. to 12:30 P.M., 6:15 to 7:15 P.M. and 8:00 to 9:00 P.M. daily. (Spuhler, May Oxrieder, Stempel, Bradley). On 9.36. (Kash, N. Y.) We will still list this, but we are not sure they are on the air now.

A station WCU in Puerto Rico, is on 9.94 mc. irregularly. (Spuhler, Walcott.) Is WKU and on 9.90 mc. (Gallagher) Heard around 7:00 to 9:00 P.M. HH3W, Port-Au-Prince, Haiti, is supposed to close down at 8:00 P.M. but is heard until 8:23 P.M. once on 9.64 mc. (Studholme, Eng.)

NORTH AMERICA

A new Canadian, CFRX, is relaying CFRB, Toronto, Ontario, on 6.07 mc. Is called "Rodgers Short Wave Station," and is reported between 10:00 A.M. and 4:00 P.M. often and 5:00 to 10:00 P.M. quite regular and several times tested around 3:00 A.M. (Oxrieder, Pa.; Stempel, Conn.; Shaffer, Iowa; Hersowitz, Md.; Seymour, Md.; Teague, Mich.)

A letter from the Canadian Marconi Company says CFCX and VE9DN are not the same although both are on 6.005 mc. CFCX is located on the

Mount Royal Hotel and relays CFCF programs. VE9DN is a high powered transmitter located at Drummondville and is used Saturdays 11:30 P.M. to about 12:30 A.M. to send messages to Far North listeners. VE9BM, mentioned in December, is operated by the Northern Electric Company, 121 Shearer Street, Montreal. CGS is owned by General Airways at Ronyn Quebec. It can operate on 3.43 mc., 4.755 mc., 5.63 mc. (Fuller, Quebec.)

CRCX, Bowmanvile, Ontario, is on a new schedule. They are on 6.09 mc. daily except Saturday and Sunday noon to 8:00 P.M.; Saturdays noon to 8:00 P.M. and 11:00 P.M. to midnight and Sundays 11:00 A.M. to 8:00

P.M. This is direct from W. A. Shane, station manager.

VE9HX, Halifax, N. S., verie says 500 watts now on 6.13 mc. weekdays 10:00 A.M. to 2:00 P.M. and 6:00 P.M. to midnight; Fridays 2:00 to 4:00 P.M.; and Sundays 3:00 P.M. to midnight only. (Spector, N. Y., and Stockbridge, Mass.) Comes on at 6:30 A.M. however. (Stockbridge) VE9CA, Calgary, on 6.03 mc. heard until 2:00 A.M. instead of just midnight. (Stark, Mo.) VOWQ, North West River, Laborador, on 8.65 mc. called CZ9U, St. Flier, Quebec. (Seymour, Md.)

Amelia Earhart had a 50 watt transmitter using the call KHAQQ operating on 3.10 mc. and 6.21 mc. for voice when she made her airplane hop to Hawaii. Reports should be sent to W. B. McMenamy, Box 291, Beverly Hills, Calif., who is an old-time I.S.W.C. members. (Myers, Calif.)

W2XAD, Schenectady, has added time and now broadcast from 10:00 A.M. to 6:00 P.M. instead of 3:45 P.M. (Darlington in charge of operations)

Heard until 8:15 P.M. once. (Studholme, England.)

W2XE has changed schedule again, but for just how long we do not know. They change almost from week to week now, Is on 21.54 mc. from 7:30 to 2:00 P.M., on 17.76 mc. irregularly, on 15.27 mc. from 6:00 to 7:00 P.M., on 11.83 mc. from 7:00 to 10:00 P.M. and on 6.12 mc. from 10:00 to 11:00 P.M.

W6XKG, Los Angeles, on 25.95 mc. is making a hit. They broadcast 24 hours a day with 100 watts power, but will have 10000 watts soon. Veries come from 1417 South Figueoa Street. (Many members.)

W3XAL on 6.10 mc. was heard at 3:00 A.M. one morning. (Shaffer, Iowa.) W9XAA on 6.08 mc. was heard at 1:00 A.M. (Pegge, England.) W2II, Hicksville, N.Y., relayed WOR on 8.80 mc. once. (Rossi, Pa.) An NFV was heard on 6.48 mc. at 7:00 P.M. (Kash, N. Y.) On 6.516 mc. from 6:50 to 7:15 P.M. (Fuller, Quebec.) Probably a station operated by the U.S. Navy—Editor. New phone WNK at Hialeah, Florida, on 9.355 mc. (Oxrieder, Pa.) Is WSK or WHK and heard every night at 8:00 P.M. (Herzog, N. Y.)

MEMBERSHIP CONTEST

There has been little change made in the totals of the leaders in the membership contest for the Hallicrafter Sky Chief and the National SW5 receivers, so we are not taking space to list these leaders again. We ask each person to keep an eye on their closing date, so there will be no trouble about memberships reaching us after the closing date.

TO CORONATION VISITORS

Arrangements are being made by John C. Bennett of the Brighton, England, Chapter for a party of members from America, The British Empire and the continent of Europe who will be in London for the Coronation, to visit Broadcasting House, the headquarters of the British Broadcasting Corporation. Regulations governing visits to Broadcasting House are very strict and reservations must be made in advance. As the number will be strictly limited, and this may be your only opportunity of seeing broadcasting as it is done in England, those who desire to join the party should make immediate application to John C. Bennett, 205 Braside Avenue, Brighton, 6, England, giving name, address, address in London and date of arrival. This visit applies only to overseas members.

EXPERIMENTAL

EL1A, Williams Hunting Expedition at Liberia, West Africa, is a 50 watt station on 14.275 mc. heard phoning U.S.A. amateurs using an aerial nearly 1000 feet long. Heard Sunday evenings as late as 11:30 P.M. (Dean, Ill., and Hofmaster, Ohio.) IBEJ on the S.S. Conte Rosso uses 8.78 and 8.80 mc. phoning KBB, Manila, around 5:30 to 6:00 A.M. GMBJ on the Empress of Britain heard on 13.22 mc. daily except Sundays 10:10 to 10:30 A.M. (Walcott, Calif.) Many yachts on 2.738 mc. are heard phoning each other around 11:00 P.M. (Espoy, Calif.) WQA on 21.22 mc. and WQD on 18.96 mc. relay the opera program Saturdays 2:00 to 5:00 or 5:30 P.M. (Karpen and Harrison.)

Get your tickets now for the Gala SWL Fest to be held at Woodhaven, L. I., N. Y., on June 5th, 1937. An all-wave radio will be given away as a door prize. Tickets now on sale at head-quarters, 7417 87th Avenue, Woodhaven, Long Island, New York. Price \$2.50. Everyone welcome.

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WITH THE REPORTERS

The following people have sent reports to us during the past month and we thank them:

John B. Keenan, Sydney, Australia; Reuven Sokolovsky, Tel-Aviv, Palestine; Shokichi Yoshimura, Moji, Japan; Rene Arickx, Antwerp, Belgium; Vaclav Sevcik, Cesky Brod, Czechoslovakia; L. J. Niederle, Praha, Czechoslovakia, Ingvar Gullberg, Hedemora, Sweden; Johann P.

Curiel, Curacao, D. W. I.

J. M. R. Studholme, London, England; L. Smith, London; R. C. Qooke, Kolar, Goldfields, South India; George W. King, Liverpool, England; Peter Shenton, Huntington, England; J. H. Chapman, Leicester, England; S. Boothroyd, Upper Mill, England; J. Garrett Pegge, Chesham, Bucks, England; Dr. George F. L. Fuller, Cowansville, Quebec; F. Hummerstone, Ponoka, Alta.

J. D. Bennett, Springfield, Illinois; Mrs. Grace M. Beck, Chicago, Ill.; Herbert O. Nelson, Chicago; Henry Nelleman, Chicago; Frank Grey, Downers Grove, Ill.; Carter Harrison, Jr., Chicago; Jacob Wabash, Ind.; Emil Anderson, Racine, Wisconsin; Carl Eder, Willmar, Minn.; C. A. Rye, Ames, Iowa; Ray Shaffer, Waterloo, Iowa; O. E. Stark, Pierce City, Mo.; Ray Metty, Kansas City, Mo.; Richard Verbrugghe, Jr., Detroit, Mich.; Ivan French, Diamondville, Michigan.

Ira Spector, New York City; Nathan Rosen, New York City; Gus Adler, Little Neck, N. Y.; Harry Noe, Brooklyn; Dr. R. C. Kash, Staten Island, N. Y.; H. S. Bradley, Hamilton, N.Y.; Mills Van Bergen, Syracuse, N.Y.; Enrico Scala, Jr., Bronx, N.Y.; John E. Johnson, Staten Island, N. Y.; Charles Ward, Brooklyn, N.Y.; Ernest Reese, Niagara Falls, N.Y.; Capt.

McDermott, Staten Island, N. Y.

Stuart Walmsley, Los Angeles, Calif.; Roy Myers, Los Angeles; Henry Espoy, Los Angeles; G. C. Gallagher, San Francisco; L. G. Chavez, Los Angeles; Charles Hodge, Long Beach, Calif.; A. Wendell Field, San Diego, Calif.; Roy De Ment, Plainview, Texas; James Wooten, Mobile, Alabama; Mrs. P. C. Fair, Mansfield, La.; Paschall Lynch, Colorado, Texas.

Fred Atherton, Rutland, Vermont; Frank Stockbridge, Westboro, Mass.; W. D. Flagg, Holyoke, Mass.; Nathan Ives, Southington, Conn.; Arthur Dorr, Wethersfield, Conn.; W. A. Dean, Hartford, Conn. An unsigned

card from Chittenden, Vt.; Joseph Stempel, Brighton, Conn.

Robert Rossi, Philadelphia, Pa.; Roger Legge, Jr., Philadelphia; Ford Edwards, Wilmerding, Pa.; Chester Dement, Upper Darby, Pa.; John W. May, Wilkinsburg, Pa.; Joe Depp, Sewickley, Pa.; Captain R. B. Oxrieder, State College, Pa.; Charles Havlena, Washington, D. C.; Wallace W. Smith, Louisville, Ky.; Charles Miller, Covington, Ky; Richard Bradley, Baltimore, Md.; Neville Seymour, Baltimore, Md.; Alberst Spuhler, Cleveland, Ohio; Miss Eileen Hofmaster, Sandusky, Ohio.

FOR SALE—Grunow modern 6-tube superhet, distant verifications, four band switch, wonderful tone, beautiful cabinet. \$17.00 complete. H. Fischer, Room 1119, 1123 Broadway, New York City.

FOR SALE-Scott Custom Built Fifteen Lido Cabinet. Glenn Watt, Chanute, Kansas.

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 converations 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.

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STATION
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            Meters
                                                      Meg.
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 Janerio, 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-14.27—20.38—GAA, Rugby, England. Phones LSL and PPU near 8:00 A.M. T-14.97—20.04—OPL, Leopoldsville, 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-15.14-19.78-WKN, Lawrenceville, N. J. Phones GAU, daytime.
T-15.01-19.98-KAX, Manila, P. I. Phones daytime.
T-15.24-19.69-CEC, 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 Ares, Argenina. 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-15.88-18.89-ZSS, Klipheuval, S. Africa. Phones 6 A.M. to 2:30 P.M., England.
T-15.91-18.83-PLE. Bandoeng, Java. Phones Holland 6 to 11 A.M. KWX irregularly.
   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.
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-16.44—18.25—FTE, St. Assise, France. Phones Germany, 10:00 A.M.
T-16.48—18.20—GAW, Rugby, England. Phones LSM, PPU, mornings.
T-16.58—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-16.63—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-16.91—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.

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-FZES, Djibouti, Fr. Samoliand. 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 Samoliland, phones Italy daytime.
 T-18.44-16.30-WLK, Lawrenceville, N. J. Phones England.
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 AM. E-18.62-16.11-IRY, Rome, Italy. Used irregularly for special broadcasts.
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T-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, Shanghia, 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-LSL, 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.
   T-19.42-15.45-11IG, Addis Ababa, Ethiopia, phones Italy 7:00 to 10:00 A.M.
  T-19.47-15.41-KWO, Dixon, California.
E-19.53-15.36-DZG, Zeesen, Germany.
T-19.54-15.35-KWU. Dixon, California.
T-19.55-15.04-RKI, Moscow, U.S.S.R. Phones Hawaii, 2:00 to 7:00 P.M. Phones almost any time.
 T-19.95-15.04—RKI, Moscow, U.S.S.R. Phones almost any time.

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-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—HJA3, Barranquilla, Colombia, phones WNC, Florida.

E-20.27—14.80—WQV, Rocky Point, N. Y., heard irreguarly.

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-20.45-14.67—GBL, Rugby, England. Phones JVH 1:00 to 7:00 A.M.
 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-20.64-14.54-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. Phones WNC afternoons.
T-20.71-14.48-HRL5, Nacaome, Honduras, testing with 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-HRF, Tegucigalpa, Monduras, 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-PZ1AA, Paramaribo, Dutch Guiana, in the evenings.

E-21.58-13.90-WQP, Rocky Point, N. Y. Testing with RNE irregularly, mornings.

T-21.77-13.83-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-22.40-13.39-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.
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., irreg.
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-23.31-2.86-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-32.38-12.83-CNR, Rabat, Morocco. 5:00-8:00 A.M., 2:00-4:00 P.M., irreg.
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Meters
                                                 Meg.
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   T-23.47-12.78-GBC, Rugby, England.
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                                                                                                                                                                                  Phones ships irregularly, mornings.
   T-24.20-12.40-DAF, Norden, Germany.
   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-24.52—12.24—TFJ, Reykajavik. Iceland. Phones GCB and OXT 5:00 to 10:00 A.M. T-24.56—12.22—TYA, Pontoise, France. Phones the Normandie, irreguarly. T-24.63—12.18—RWJ. Alma-Ata. U.S.S.R. Phones 1:00 to 8:00 A.M. irregularly.
 T-24.05-12.15-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-Alger, Algeria, Africa. Mid-nite to noon, irreg.

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-JUC, 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.
           -25.63—11.71—KIO, Kauhuku, Hawaii. Heard in the evenings testing.
-25.73—11.66—JVL, Nazaki, Japan. Phones 6:00 P.M. to 11:00 A.M. irregularly.
-25.73—11.66—PPQ, Rio de Janeiro, Brazil. Phones often and broadcasts, irreg.
-25.87—11.59—VRR4, Stony Hill, Jamaica. Testing with WNC in daytime.
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 E-26.9-11.59—VRAM, 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.

E-26.31—11.40—HBO, Geneva, Switzerland. Used for special broadcasts.

r-27.35—10.97—OCI, Lima, Peru. Phones HJY, evenings.

r-27.37—10.96—ZLTZ, Wellington, New Zealand. 11:00 P.M. to 7:00 A.M., Australia.

r-27.67—10.84—KWV, Dixon, California. Phones Hawaii, daytime.
E-27.65-10.85-WKW, Dixon, California. Prones 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-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, Lewrenceville, 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.
          -28.76-10.43-YBG, Medan, Sumatra. Phones Java 5:00 to 8:30 A.M.
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-28.80-10.42-XGW, Shanghai, China. Phones almost any time.
F-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.
B-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-IJZC, Zeesen, Germany. 3:00 to 9:00 P.M., Irregular.
E-29.33-10.23-CED, Antofagastan, Chile, heard 7:00 to 9:30 P.M. irregularly.
T-29.45-10.22-PSH, Rio de Janeiro, Brazil. Sending music, evenings.
T-20.50-10.17-RIO Rabu, II S. S. R. phones 10:00 P.M. to 10:00 A.M. irregularly.
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, Leopoldsville, Belgian Congo. 12-2 A.M., noon-3:00 P.M., irregularly. 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.
I-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, Manchuguo, Phones Japan 2-4 A.M., 8-1 0P.M., irreg.
T-30.30—9.87—WON Lawrenceville, N. I. Phones Fredhard evenings.
 T-30.40- 9.87-WON, Lawrenceville, N. J. Phones England evenings.
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TIME
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                                                                                                                               STATION
  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.
 E-30.51 - 9.50 - LS1, Buenos Aires, Argentina. Used irregularly, evenings.

T-30.75 - 9.76 - VK2ME-VLK, Sydney, Australia. Phones Java 4:00 to 8:00 A.M.

T-30.77 - 9.75 - WOF, Lawrence, N. J. Phones England, evenings.

E-31.00 - 9.67 - DZA, Zeesen, Germany. Broadcasts irregularly.

T-31.58 - 9.50 - XTV, Canton, China. Phones 2:00 to 11:00 A.M., irreg.
 1-31.36-9.50-AIV, Canton, China. Phones 2:00 to 11:00 A.M., https://doi.org/10.100/10.100 A.M., https://doi.org/10.100/10.100 A.M., https://doi.org/10.100/10.100 A.M., https://doi.org/10.100/10.100/10.100 A.M., https://doi.org/10.100/10.100/10.100 A.M., https://doi.org/10.100/10.100/10.100 A.M., https://doi.org/10.100/10.100/10.100 A.M., https://doi.org/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.1000/10.1000/10.1000/10.1000/10.1000/10.1000/10.1
T-32.68—9.18—ZSR, Klipkeuval, So. Africa. Phones England 1:00-7:00 P.M., Irreg. T-32.72—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 Indics. F-33.26—9.02—GCS, Rugby, England. Phones New York evenings. R-33.29—9.01—KEI. 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—Algier, Algieria. Phones Paris irregularly.
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.
 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, Makasser, 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.

8.68-GBC, Rugby, England. Phones ships irregularly.

E-34.68-8.65-WVD. Seattle. Wash. Testing irregularly.

T-34.68-8.65-WVD, Seattle. Wash. Testing 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-36.95-8.19-PSK, Rio de Janeiro, Brazil. Sending music 6:00 to 7:30 P.M.

T-38.06-7.86-SUX, Cairo, Egypt. 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 Janiero, Brazil. Heard between 6:00 and 11:00 P.M.. irreg.

T-39.06-7.68-YBZ, Manado, Celebes, DEI. 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.
R-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 mdnight.
T-39.68—7.56—FZE9, Djibouti, French Somaliland. Phones Paris.
T-39.89—7.52—KKH. Kauhuku. Hawaii. Phones KWO evenlings
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—KEQ, Kauhuku, Hawaii. Phones Dixon nights.
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—IVT. Nazaki, Japan. 1:30 to 8:00 A.M., oftimes with music.
     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-JFZC, Ship Chichibu Maru. Phones irregularly.
E-46.73-6.42-W9XBS. Chicago, Illinois. Heard irregularly broadcasting.
     E-46.79—6.41—HJA3, Barranquilla, Colombia. Phones HJA2, irregularly Droaccasting.
E-47.39—6.35—JZG, heard relaying JVT. JOAK from 5:00 to 7:30 A.M., irregularly.
50.00 to 60.00 meters or 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, Lawenceville, N. J. Phones Bermuda nights.
T-51.46—5.83—TDD, Shinkio, Manchukuo. Phones Japan 10:00 P.M. to 6:00 A.M.
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TIME Meters Meg. STATION
TIME

7-51.50—5.82—HJA2, Bogota, Colombia.
Phones HJA3 afternoons and evenings.
Phones HJA3 afternoons and evenings. Meg. STATION 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

Normandie; GMBJ, Empress of Britain; DOAH, Breman, DOAI, GBTT, Queen Mary, Normandie; GMBJ, Empress of Britain; DOAH, Breman, DOAI, Europa; DHEY, Deutchland; DHJZ, Hamburg: DOAX, Columbus; DHAO, Hansa; DHRL, New York; ICEJ, Rex; IBLI, Conte de Savonia; GBZW, Berengaria; DHDL, Cap Arcona; JFZC, Chichibu Maru; 1BEI, Conte Rosso.

EQUIPMENT REPORTS WANTED

Right now we have six people waiting for a report from someone who has recently purchased a Hammarlund Super-Pro, four waiting for Silver-Masterpiece V reports, four wanting Midwest 18-tube set report and one awaiting an RME-69 report. We have several letters on the NC-100 and the Scott, but suggest that members continue to send in their comments on any new receiver they may buy. These reports are turned over to people interested in buying the receiver and it helps them decide matters. We have received reports from nearly 200 people since we started this idea and have turned about 150 of these over to others who asked us for them.

You may not get much credit for taking the time to drop us a letter letting us know how you like a certain new receiver, but it certainly helps the other fellow. All you have to do is tell us just how it works, if you like it and what features you like about it. You do not have to show a list of the stations you received or anything like that. These reports are turned over in full to the inquiring party, without any comment from the editor. It is a grand plan and deserves the help of every member.

FOR SALE-McMurdo Silver Custom Built Masterpiece 111X, polished chronium chassis, power unit amplifier, large speaker. Glenn Watt, Chanute, Kansas.

Why Take

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ON THE AIR

The following stations are known broadcasters. Telephone stations are listed in another section. A station shown on 6.00 mc. will come in on 6 on a calibrated dial. A station shown at 7.00 will come in at 7 on the dial. Stations shown between 6.00 and 7.00 will be heard between 6 and 7 on the dial. The time is Eastern Standard. Add five hours for G. M. T. When $\frac{1}{4}$, $\frac{1}{2}$ or $\frac{3}{4}$ is shown the station starts or ends the program on the quarter hour.

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21.5413.92—W8XKPittsburghSMTWTFS							7 8	S														
21.5213.94—W2XENew YorkSMTWTFS																						
21.4713.97—GSHDaventrySMTWTFS					•	6	7 8	9	10	11	S											
19.0215.77—HS8PJBangkok M	٠.						. 8	9	S													٠.
17.7916.68—GSG Daventry SMTWTFS		1 2	S		. (6	7 8	9	10	11	S											
17.7816.87—W3XALNew YorkSMTWTFS								9	10	11	N	1	2 3	4	S							
17.7716.88—PHIHuizenSMT TFS						. 3	8	9	S	,		٠							٠			
17.7616.89—DJEBerlinSMTWTFS	1	2	3	4	5	6	7 8	9	10	S												
15.4419.43—XEBM Mazatlan Irreg.																						
15.3719.52—HAS-3BudapestS				Ċ				9	S					Ī		•					S	
15.34.19.56—DJRBerlinSMTWTFS			•				8	g	~			•				•		•	•	• •	• •	• •
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15.2919.62—LRUBuenos Aires. SMTWTFS	• • •		•	•			7 8	Q	10	11	N	î.	2 9	₹ 4	l 5	رد	*	•	•	• •	• •	• •
15.2819.63—DJQBerlinSMTWTFS	• • •		•		•	is	• O	Nο	t a	4)	7.4	-	<i>-</i> •	, ,	5	6	7	è	à	10	ď	
15.2719.64—W2XENew YorkSMTWTFS																						
15.2619.66—GSI Daventry SMTWTFS																						
15.2519.68—W1XAL .BostonS																						
15.2419.68—TPA2 Pontoise SMTWTFS		٠.			. (5 7	8	9	10	S		•		٠	٠						٠.,	
15.2419.68—CR7AA Lourenco M Irreg.			٠		•		. 8	9	$\frac{1}{2}$		•	1	2 5				٠					
15.2219.71—PCJHilversum See Note B				2	5 8	5 7	S	9	S													
15.2119.72—W8XKPittsburghSMTWTFS								9	10	11	N	1	2 3	4	5	6	\mathbf{s}		٠.			
15.2019.73—DJB Berlin SMTWTFS.																						
15.19.19.75—ZBW4Hong Kong Irreg.					5	6	7 8	9	S													
15.1819.76—GSO Daventry SMTWTFS	1	2	S		a																	
15.1519.80—YDCBandoengSMTWTFS																						
15.1419.82—GSF DaventrySMTWTFS		L 2	S		. (6 7	8	9	10	11	S	٠		4	5	6	7	8	9	10	S	

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11.90. 25.21—XEWI Mexico City. See Note C.	12.0025.00—RNE .	Moscow	.S				. 6	S		10	S										
11.87. 25.27—W8XK Pittsburgh SMTWTFS 789 s 11.85. 25.32—DJP Berlin SMTWTFS N 1 2 3 4 5 s 11.84. 25.34—OLR4A Praha Irreg. 5 6 7 8 9 10 11 s ½ 3½ . 7 8 9 10 s 11.83. 25.36—W9XAA Chicago Irreg. 7 8 9 10 11 N 1 2 3 4 5 s . 11.83. 25.36—W2XE New York SMTWTFS . 7 8 9 10 11 N 1 2 3 4 5 6 7 8 9 10 s 11.83. 25.38—XEBR Hermosilla Irreg 10 11 N 1 2 3 4 5 6 7 8 9 10 s . 11.81. 25.40—2R04 Rome SMTWTFS 7 8 9 10 11 ½ . 11.80. 25.42—JZJ Nazaki SMTWTFS 8 s 4 s . . 11.80. 25.42—OAX5B Ica, Peru SMTWTFS 8 s . 4 s . . 11.79. 25.45—W1XAL Boston MTWTFS 3 4 s 11.77. 25.49—DJD Berlin SMTWTFS 9 10 11 N 1 2 3 4 5 6 7 8 9 10 s . . . 11.75. 25.53—GSD Daventry SMTWTFS ½ 0 7 8 ½ 	11.9025.21—XEWI 11.9025.21—HP5I	Mexico City	See Note C			1				••	• •			3	S	6	7	8	9 10) 11	8
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6.24	48.08-	HIN	.'Trujillo	SMTWTES	3					Π.		٠.		3/4	N	1	2	3	Į .		į		4		
			.La Ceiba																		-		9 1		
6.22	40.11— 40.11	-nkb	.Valera	SMITWIFE CMTWITE	,	٠	٠	٠					٠.		٠	•	٠	٠		6		12	9 1	U S	•
			. Coro																				0 0		
			.Kuala Lampu																						
0.21.	40.01-	-ZGE	.Kuara Lampu	rs T F		٠	•	٠		. 6	1		10	4.4	, B.T	4		2	 4 5		·		· ·		
0.20.	. 48.39	-UUNG	Santiago	SIVIT WIT			٠	٠		•	2	ย	10	11	N	_ T	4	J '	4 D	6	- 8	ō	9 10	U S	٠.
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- h 17.	48.62—	-AEXA	.Mexico City .	irreg.						0 1	íδ	S			N	T	8		. ŧ	- 6	7	8	s.		

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6.16	.48.70—	OAX1A .	.Chiclayo	SMTWTFS.																. 8	9	10	g	
6.16.	.48.70-	YV5RD .	. Caracas	.SMTWTFS.								. 10	11	N	S	. :	3 4	5	6	7 8	9	8		
6.15.	.48.80-	HI5N	.Trujillo	.SMTWTFS.															1.	7 8	1			
6.15.	.48.85 - 0	$^{ m CJRO} \ldots$.Winnipeg	.SMTWTFS.															6 '	7 8	9	10	11	S
6.15.	.48.78 - 1	HJ4ABU .	. Pereira	.SMTWTFS.								9 10	11	S					6	7 8	9	8		
6.14.	. 48.86-	ZEB	Bolawayo	. T F .											1	2	1							
6.14.	.48.86-	W8XK	Bolawayo .Pittsburgh	.SMTWTFS.	. 1	S																10	11	M
6 13	49 00-0	CR7AA	Lourenco M	MTWTES				F	. ^	0		10	1/.								,			1/
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6.13	48 92	VE9HX	.Halifax	SMTWTES		•	٠		-4		0 1	1 10	11	N	1	٠.	, 5	5	2	7 6	. 0	10		
6.13	48 94	LKI.	Jeloy	SMTWTES		•	•			•		2 10	11	N	1	9 3	1	5	0	, 0	J	10	8	• •
6.13	48 92	VP3RG	Georgetown .	SMTWTES		•	•			•		• •	11	14	1	2 0	2 4	5	2	7 9				
6.13	48 92-0	COCD	. Havana	SMTWTFS		٠	•	•-						•	•		, 1	5	6	େ ଓ ଅଟେ	. 0	10	11	3./
6.12	49 00-	CX A 4	.Montevido	Irreg	. 13	•	•				•			•	•		i	5	2	େ ଓ ଅନ	. 0	10	11	TAT
6.12	49 00-	HISARY	Bogota	Irreg		•	•			•	•	1/2	11	N	i			1	6	7 0	0.	10	14	• •
6.12	49.02—	XEUZ	. Mexico City	Irreg	· 1	2	g	•			•	• /2	11		1	٥,		2	J	. 0	•,	10	72 11	M
6.12	49 02-	XEPW	.Mexico City .	SMTWTFS		_												•			à	10	11	741
6.12	.49.02-	W2XE	New York	SMTWTFS.						•				•	•			•	•			10	6	D.
6.11.	.49.10-1	H.I1ABB	Barranquilla	SMTWTFS										•	٠		1	5	6 '	7 8	g	q	i,	• •
6.11.	. 49.10-	VUC	Calcutta	Irreg			į					10	11	g			- 2		0	. 0	·	ы	• •	• •
6.11.	.49.10-	HJ4ABB.	.Manizales	Irreg											•			•	3	7 8	9	10	11	
6.10.	.49.18—	YTC	Belgrade	SMTWTFS.	. i	2	S		1	7	1			N	i	2 :	4	q	,		•	10	11	
6.10	.49.18X	W9XF	.Chicago	SMTWTFS	'nΞ						*			- 1	Ť.	- '			•		•		11	M
6.10.	.49.18-V	W3XAL	.Bound Brook.	SMTWTFS.															6 7	8	9	10	S	171
6.10.	. 49.18—	HJ4ABE.	.Medellin	SMTWTFS.									11	8					6	78	.9	10	16	
6.09.	. 49.20-	ZTJ	.Johannesburg	SMTWTFS.	1	ĺ.	1 2	4 5	6	7 5	3 .			Ñ	1 2	2 3	7.					10	12	1/4
6.09.	. 49.22-0	CRCX	Bowmanville	SMTWTFS.										N	1	2 3	4	5	6	7 s			• •	/4
6.09	.4922—I	IJ4ABC	Ibague	Irreg.										1	Ī					8	9	· ·		
6.09	49.26-2	ZBW2	.Hang Kong	. Irreg			3	4 F	6	7	8	9 8									•	D	• •	
6.08.	.49.30-0	OAX4Z	.Lima, Peru	SMTWTFS.										i.				·	1	8	9	10	16	
6.08	49 30—	H.I5ABD.	.Cali	Irreg .																7 8	9	Q	. –	
6.08.	.49.31-	VO7LO	Nairobi	. Irreg				. 3	1				11	N	1	2							•	
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6.08.	.49.34—2	ZHJ	.Penang	SMTWTFS	١					. 3	7	3			٠.											
6.07.	. 49.42(CFRX	.Toronto	Irreg.									. 1	LO :	11	N	1 :	2 3	4	5	6	7	8 9	10	8	
6.07.	.49.40-	VE9CS	.Vancouver	Irreg.		8												2 3	4	5	6	7	8 9	10	11	M
			.Maracaibo																							
			Bogota																							
6.06.	. 49.50-0	OXY	Skamlebaek	SMTWTFS	ł												1	2 3	3 4	5	S				٠.	
6.06.	.49.50-	W8XAL .	Cincinnati	SMTWTFS	5	1	S			. 1	7	8	9	10	11	N	1	2 3	3 4	5	6	7	S		11	M
			Philadelphia.																							
6.05.	.49.55 - 1	HJ3ABD.	Bogota	Irreg.																		2	8	9 10	8	
6.04.	.49.65 - 1	HJIABG.	.Barranquilla .	SMTWTFS											11	N	1	2 3	3 4	5	6	7	8-	9 10	8	
6.04.	.49.67-	W1XAL .	Boston	MT F																		ž	8	<u>.</u> .		
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6.03.	. 49.75	VE9CA	Calgary	Irreg.		1	S			6	7	8	9 1	10	11	S						7	8 8	10	11	IV.
			.Medellin																							
			Panama City,.																							
			Santa Marta																							
6.02.	. 49.83-1	PRA8	Pernambuco.	Irreg.														. :	3 4	5	6	7	S			
6.02.	.49.83 - 1	$DJC \dots$	Berlin	SMTWTFS											1/2	N	1	2 3	3 3							
6.02.	.49.83 - 1	HI3U	Santiago, D. R.	MTWTFS							1/2	8	8			N	1	8		5	6	7	8 9	9 1/2		٠.
			Bogota	S								٠				12	1	8		5	S					
6.01.	.49.85-	HJ3ABH.	Bogota	SMTWTFS	5										1/2	N	1	S			6	7	8	9 10	8	
6.00	49 96-0	<u> </u>	Havana	SMTWTES	2							8	9 1	1 Ո	11	N	1	23	4	5	6	7	8 0	10	9	
6.01.	.49.92-0	OLR2A .	.Praha	Irreg.						56	7	8	9	10	11	N	1	2 3	3							
6.00.	.49.96(CFCX	.Praha Montreal	SMTWTFS								8 9	9 1	0	11	N	1 3	2 3	4	5	6	7 2	8 9	10	8	
			Montreal																							
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			Lisbon																							
			Georgetown																							
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Meg.	Meters	Station	City	Day		1 :	2 3	3 4	5	6 7	8	9 1	.0 1	1	N :	1 2	3	4	5	6	7 8	9	10	11	M
5.95.	.50.421	HJN	Bogota	MTWTFS	3								:	11	N	1 8	3.				. 2	9	1/2	٠.	٠.
5.94.	.50.51-7	ΓG2X	Guatemala	M TS	S				((See	N	ote	H)				4	5	S			10	11	8
5.93.	50.597	VVIRL	Mara c aibo	Irreg.																	. 8	9	1/2	٠.	
5.92.	.50.68 - 1	HH2S	PtAu-Prince	SMTWTFS	3																7 8	9	S		
5.92.	.50.68-	YV4RH	Valencia	Irreg.		1	8 .												5	6	7 8	9	10	11	M
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5 00	51.15	UT1T	SanPedrodeM																						
			Maracaibo																						
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5.80.	.51.72—	YV5RC	Caracas	SMIWIF	· ·	٠				10-		· ·	T	ГТ	IN	1 6	1		9	0	6 0	, 9	72		
			Salisbury																						
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5.74.	.52.26—	$\operatorname{\mathbf{rgs}}$	Guatemala City	WT S	3															6	7 8	s			
5.73.	.52.36—	HCIPM .	Quito	Irreg.																			10	11	8
5.72.	.52.45—	YV2RA	San Cristobal.	Irreg.																	7 8	9	10	1/2	
5.15	.58.30	РМҮ	Bandoeng	SMTWTF	S				12	6 7	8	9	10	11	S										
			Guayaquil																						
			Khabarovsk																						

NOTES: A—Also broadcasts Sundays 11:10 to 12:20 P.M. B—Sundays 7:00 to 8:00 A.M., Tuesdays 4:30 to 6:00 A.M. and Wednesdays 8:00 to 10:00 A.M. C—Mondays, Wednesdays, Fridays 3:00 to 4:00 P.M. and 9:00 to midnight, Tuesdays and Thursdays 7:30 P.M. to midnight, Saturdays 9:00 P.M. to midnight and Sundays 12:30 to 2:00 P.M. D—Some Saturdays 8:00 P.M. to 6:00 A.M. Sunday mornings. E—Saturdays 9:40 to 10:40 P.M. F—Also Sundays 7:45 to 10:45 A.M. G—Daily 2:00 to 2:15 P.M. and Sundays 5:00 to 5:30 A.M. H—Also Sundays 1:00 to 2:00 P.M. I—Both ZEC and ZEB broadcast Sundays 3:30 to 5:00 A.M., Mondays 11:00 A.M. to noon, Tues. and Fri. 1:15 to 3:15 P. M. and Thursdays 10:00 to 10:15 A.M. and 11:00 A.M. to noon.



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H AMMARLUND now announces a special "Super-Pro" receiver, to cover from 7½ to 240 meters, that affords new outstanding results!

The new 7½ to 15 meter range in this latest model is the result of painstaking research and engineering, and is not just a casual makeshift! Two steps of R.F. amplification are used in this range as well as in the remaining four ranges from 15 to 240 meters. This provides an image rejection ratio of 150 to 1 (real one spot tuning), and a sensitivity of 0.8 micro-volt (30% modulated) with a signal to noise ratio of 6 to 1 at 10 meters!

The 2000 kilocycle span on the 10 meter amateur band is covered by 90 degrees of the band spread dial. Similar wide band spread is available on the other popular high frequency bands.

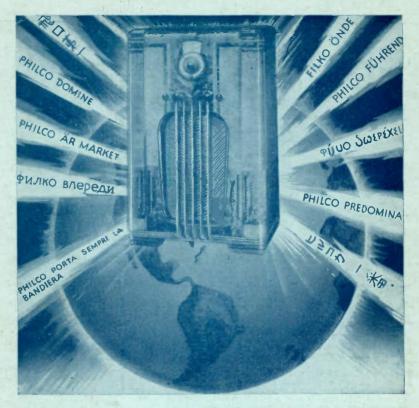
All of the other popular features that contribute to the success of the standard 15 to 555 meter "Super-Pro" have been retained in this model, viz: direct tuning, accurately calibrated 3 to 16 kc. band-width panel control, graduated

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