

VOL VII

SEPTEMBER, 1936

NO. 12

# INTERNATIONAL



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

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

THE VOICE OF THE  
**INTERNATIONAL SHORT WAVE CLUB**

EAST LIVERPOOL, OHIO, U. S. A.



**A COMMUNICATION RECEIVER WITHOUT PARALLEL  
AS TO FLEXIBILITY AND EASE OF OPERATION**

Every short wave listener thinks in terms of

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2. Smooth dial operation,
3. Accurate logging of stations,
4. Comparative signal strength of stations.

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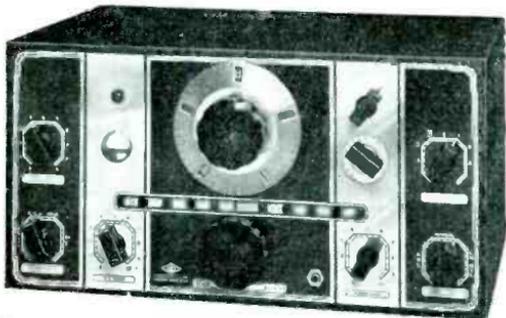
With a crystal filter circuit as standard equipment—a unit which actually works wonders on phone and C.W. when interference is heavy—you have a surprise in store when sitting down to an RME-69 and logging them from all corners of the globe.

Bulletin 69 sent on request, giving full description and prices.

**RADIO MFG. ENGINEERS, INC.**

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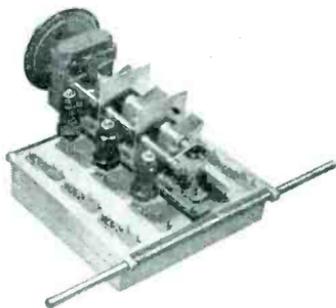
# NC-100

*"Automatic Coil-Shift"*

## RECEIVER



**N**EW 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-dielectric 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 outstanding details of this remarkable receiver. Mail the coupon for a completely illustrated folder.



NATIONAL COMPANY, INC., MALDEN, MASS.

**GENTLEMEN:** Please send me your illustrated folder completely describing the NC-100 Receiver.

Name .....

Address ..... ISW-9-36

## The Most Effective Method of Combating Man-Made Noises

### The New 4-TUBE AMPLIVOX NOISE BUCKER



Suitable for any SUPERHETERODYNE regardless of make or model. Embodies the famous J. J. Lamb circuit, **UNIVERSALLY RECOGNIZED BY RADIO AUTHORITIES** throughout the world as the revolutionary method of suppressing man-made interference from automobiles, motor, power lines, signs, oil burners, etc.

**NOT A FILTER** but a noise control which does not allow noises to rise above the level of the signal. Reduces man-made noises at a ratio as high as 1000 to 1, in most cases eliminating it entirely. Uses 4 metal tubes, drawing filament voltage from AC line. Shipping **\$9.75**  
Wt. 4 lbs. List Price \$16.50. **YOUR NET PRICE.....**

**GOING FAST AT THIS SPECIAL PRICE**

### AMPLIRAD PRE **AMPLIFIER (Booster)** SELECTOR

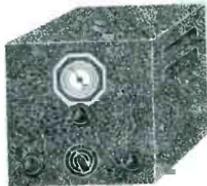
Self powered, 13-200 meters; no plug-in coils; for any antenna; uses two metal and one glass tube, 110-120 v. A.C. Will increase sensitivity, boost selectivity. Strengthens signal by adding R.F. amplification to your receiver. Will reduce noise level, decrease interference and repeat points (image frequency).

Formerly sold for \$28.80 with Tubes.  
MY SPECIAL PRICE TO YOU (with tubes)...

**\$20.95**

(For a Limited Time Only.)

(Shipping weight, 20 lbs.)



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With this device you CAN BE SURE that your receiver will bring in EVERY STATION that is capable of PICKING UP, WITHOUT MISSING OR SKIPPING. Snapping a toggle is the entire operation. When switch is ON, the receiver will emit a whistle every time it is tuned to a station. Snap switch OFF, whistle disappears and station remains at peak . . . No tampering with wiring of receiver to install. Uses one tube powered from receiver. Formerly sold for \$6.75 less tubes.

No. 756 BEAT NOTE OSCILLATOR. List price **\$5.95**  
\$11.25. MY SPECIAL PRICE TO YOU.....

With Genuine RCA Tube.

When ordering, mention model and make of receiver.

**15-DAY-MONEY-BACK GUARANTEE ON ANY ITEM ADVERTISED HERE.**

**SOL PERLMAN, E.E.** (W2CU)

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

227 FULTON ST., New York—PHONE:

**Rector 2-3028**

# WANTED 1000 SHORT WAVE LISTENERS TO TRY THE CONVENIENCE and PLEASURE OF EARPHONE LISTENING WITHOUT ANY RISK!



## AMPLIVOX Phone RECEIVER

At No Risk or Obligation to Keep It  
*If your receiver is not equipped for earphone listening, your reception is cut in half*

Do you want to listen at night or early morning without disturbing family or neighbors? Do you want to tune in stations not heard on the loudspeaker? Do you want to identify stations easily? Then try the "MISSING LINK."

### HERE IS OUR PROPOSITION

Use the AMPLIVOX PHONE RECEIVER for 15 days from the day you receive it and if not fully satisfied with the results, return it and your original money order or check will be immediately returned to you without "It's" or "But's."

Suitable for ANY receiver regardless of make or model. ANYONE CAN INSTALL IT IN ONE MINUTE without tools. Positively no tampering with the wiring of receiver. Inserting phone plug automatically silences speaker. CAN BE USED WITHOUT CHANGE FOR EXTENSION SPEAKER instead of phones. **\$3.95**  
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Amplivox Phone Receiver, Trimm Featherweight (4 oz.) Supersensitive 24000 ohm and Plug to take one to four pairs of phones. List Price \$17.75. Special Price to you

**\$9.15**



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ACME DE LUXE PHONES  
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PHONE PLUG to take one to four pairs of phones.

YOUR SPECIAL PRICE

**29c**

WHEN ORDERING PLEASE GIVE MAKE AND MODEL OF RECEIVER

**SOL PERLMAN, E.E.** (W2)CU

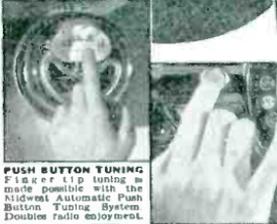
TECHNICAL ADVISOR OF N. Y. CHAPTER OF I. S. W. C.

227 FULTON ST., New York—PHONE: REctor 2-3028

# Only MIDWEST GIVES YOU PUSH BUTTON TUNING

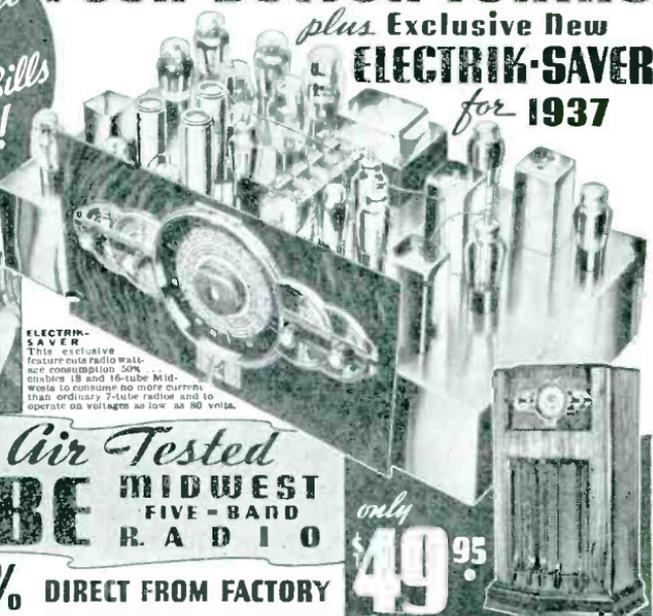
plus Exclusive New  
**ELECTRIK-SAVER**  
for 1937

*Doubles  
World-Wide  
Radio Enjoyment  
and Slashes  
Radio Current Bills  
in Half!*



**PUSH BUTTON TUNING**  
Figure 11 P tuning is made possible with the Midwest Automatic Push Button Tuning System. Doubles radio enjoyment.

**ELECTRIK-SAVER**  
This exclusive feature cuts radio wattage consumption 50%. Includes 18 and 16-tube Midwests to consume no more current than ordinary 7-tube radios and to operate on voltages as low as 90 volts.



## NEW 1937 *Air Tested* **16-TUBE** MIDWEST FIVE-BAND RADIO

**SAVE UP TO 50%**

**DIRECT FROM FACTORY**

NO middlemen's profits to pay! See for yourself that Midwest offers you greater radio values—enables you to buy the more economical factory-to-you way that scores of thousands of radio purchasers have preferred since 1920. Never before so much radio for so little money! Why pay more? The broad Midwest Foreign Reception and Money-Back Guarantee insure your satisfaction. You get 30 days FREE trial in your own home!

Once again, Midwest demonstrates its leadership by offering the world's most powerful and most beautiful ALL-WAVE 16-tube, 5-Band Radio. A startling achievement, it makes the whole world your playground. Powerful Triple-Twin tubes (two tubes in one!) give 18-tube results. This advanced radio is a master achievement, a highly-perfected, precisely-built, radio-musical instrument that will thrill you with its marvelous super performance... glorious crystal-clear "concert" realism... and magnificent foreign reception. The Dual Audio Program Expander gives a living, vital realistic quality to voice and musical reproduction.

**74 ADVANCED 1937 FEATURES**  
This Super DeLuxe Midwest is so powerful, so amazingly selective, so delicately sensitive that it brings in distant foreign stations with full loud speaker volume on channels adjacent to powerful locals. Scores of marvelous Midwest features, many of them exclusive, make it easy to parade the nations of the world before you. You can switch instantly from American programs... to Canadian, police, amateur, commercial, airplane and ship broadcasts... to the finest and most fascinating foreign programs.

With a Midwest, the finest entertainment the world has to offer is at your command. It is preferred by famous orchestra leaders, musicians, movie stars and discriminating radio purchasers everywhere. You can order your Midwest "Air-Tested" radio from the new 40-page catalog with as much certainty of satisfaction as if you were to come yourself to our great factory. (It pictures the beautiful 1937 radio in their actual colors!) You pay as little as \$5.00 down! Three-tranched guarantees protect you: (1) A Foreign Reception Guarantee — (2) Absolute Guarantee of Satisfaction — (3) One-Year Warranty.



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**ORDINARY LIGHT BULB** TODAY!



I FIND MYSELF SINGING ALONG WITH MIDWEST'S MARVELOUSLY LIFE-LIKE PROGRAMS—  
*Irene Dunne*



A COMPARISON CONVINCED ME I SHOULD HAVE A MIDWEST. IT IS A SLENDID PERFORMER.  
*Fred Mac Murray*



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(LESS TUBES)

**TERMS AS LOW AS \$5.00 DOWN**

Only *MIDWEST* Gives You

**16 TUBES • 5 WAVE BANDS**

**9 to 2200 METERS • ELECTRIK SAVER**

- PUSH BUTTON TUNING •
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- DOUBLE PUSH-PULL AUDIO**

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

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## This Beautiful Globe for only \$2.75

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

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

A free globe hand-book included in each sale.

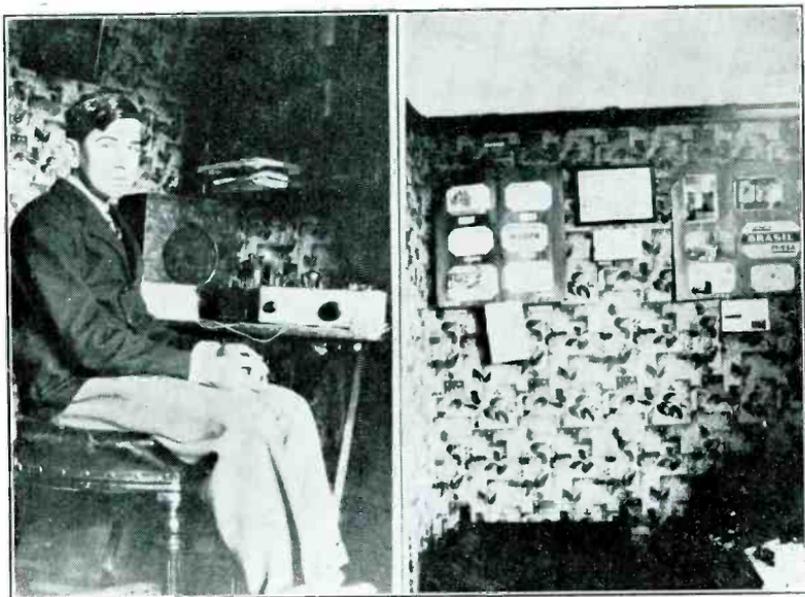
### PLEASE SEND POSTAGE

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

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

Address your letters to—

**INTERNATIONAL SHORT WAVE CLUB, East Liverpool, Ohio**



### FRANK W. HENNIG, OF ENGLAND

Mr. Hennig lives at 50 Marlowe Road, Broadwater, Worthing, Sussex, England. He is perhaps the youngest member of the International Short Wave Club, having joined us when he was but 14. He became interested in radio when he was eleven years of age, and has, with the assistance of an older brother, built quite a number of receivers.

The receiver in the photo is home-made, and with it Mr. Hennig got quite a kick when he tuned in Admiral Byrd at Little America. This reception was direct. He has a rather long list of stations, and a number of prize verifications. He likes to correspond with other young fellows interested in short waves, and promises to answer all letters received. He is particularly interested in hearing from boys around his own age, or from 14 to 17.

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### IN MEMORIUM

Members will regret to learn that Mr. E. J. Wetton of Strathfield, N. S. W., Australia, died last July. Mr. Wetton has been bed-fast for years, and short waves has been his greatest hobby. He has hundreds of pen-pals throughout the world, who will regret to learn of the passing of this sun-shine spreading short wave fan.



### ANDREW SHASSETZ

Not so long ago, it was said that the territory surrounding Utah and Wyoming was the poorest place in the United States for short wave reception. Mr. Shassetz, who lives at Monarch, Wyoming, has done a lot to over-come this rather doubtful belief. In the picture here we see enough verifications to convince anyone that Monarch is a pretty good DX location.

Mr. Shassetz started DXing in late 1932, so he is not what might be called an old-timer. He joined the I. S. W. C. in 1933, so he has been an I.S.W. C. fan almost since he started in short waves. He has one distinct advantage over many short wave fans, he speaks and understands Polish, German, Dutch, Bohemian and to use his own words "a little

English." This gives him an advantage over many short wave fans, although English is used by most all short wave stations at one time or another. We thank him for this fine photo, and wish him a lot more DX.

### BOOSTERS

The following people are boosters of the club. Since the last issue of this magazine, each of these people has secured a new member for the club. Our sincere thanks goes out to all of them. L. S. McKinnon, Kelowna, B. C., Canada; Frank Lyons, Kingston, Jamaica; Thomas J. Weaver, Baltimore, Maryland; H. E. Clampett, Arkansas City, Kansas; Siegfried Wegener, Colon, Panama; R. M. Holt, New York City; Ed. Schmeichel, Chicago, Illinois; L. R. Gillett, Hunsdon, England; F. S. La Pavoux, Guernsey, Channel Islands; J. Dowding, Guernsey, Channel Islands; A. M. Gibbs, Ilford, Essex, England; John Bennett, Brighton, Sussex, England; Philco Radio of London, England; H. H. Golden, East Liverpool, Ohio; Carlos Lopez Ona, Havana, Cuba; C. H. Hodge, Long Beach, California; Luis Salazar, New York City.

### MEMBER WILL SPEAK

Club member Oliver Amlie plans to broadcast over station W3XAL on September 20th at 1:00 A.M., E.S.T. W3XAL is at Bound Brook and operates on 49.18 meters, 6.10 mc.



# NC-100

*"Automatic Coil-Shift"*

# RECEIVER

(Note: This is the first of a series of articles which will appear in this magazine describing the leading short wave and all wave receivers. The new 1937 models will be described in detail. Readers are requested to write in telling us what new receivers they are interested in, so that we can decide what ones to describe in these articles.)

This new National receiver is a twelve tube superheterodyne covering all frequencies from 540 kc. to 30,000 kc. in five steps. The circuit employed consists of one stage of RF (6K7 tube) first detector (6J7 tube) high frequency oscillator (6K7 tube) two stages of I. F. (using 6K7 tubes) second detector (6C5 tube) transformer coupled push-pull pentode amplifier (two 6F6 tubes) while a separate beat frequency tube (6J7) is coupled to the second detector for C. W. reception. A rectifier tube (type 80), a separate AVC tube (6J7), and an indicator tube for tuning (6E5) completes the circuit. A built-in power supply provides all voltages for operation. The NC-100 is supplied with all tubes tested in the receiver at the time of alignment.

### Unique Coil Changing.

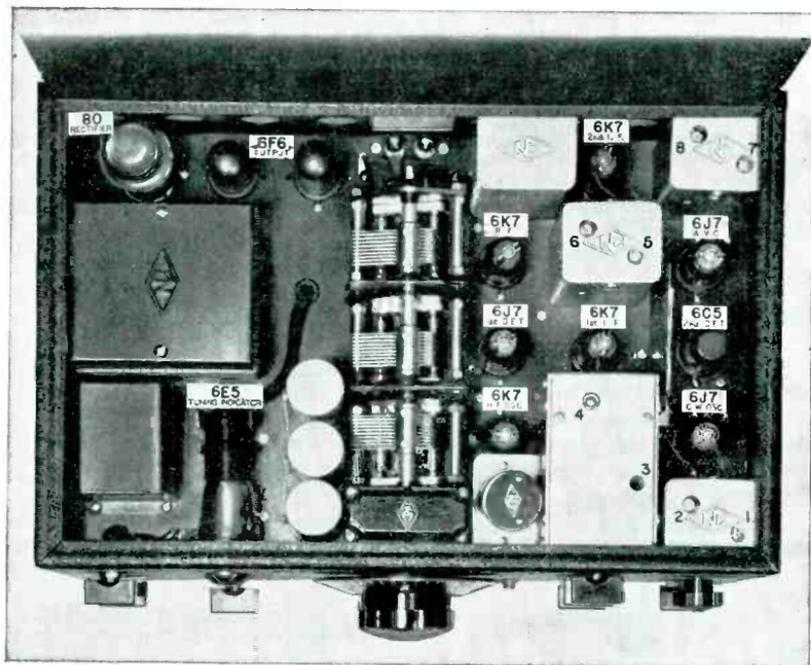
The outstanding feature of the new NC-100 is the unique system of changing coils. The simplicity of the arrangement combines all the desirable features of plug-in coils, still it eliminates the work of plugging in the various coils. The coil changes are made on the front panel, and all coils are thrown out of the circuit excepting those that are used on the band selected. All coils are enclosed in the receiver.

### Output

The NC-100 gives an undistorted audio output of ten watts. The output leads are all brought to a 4-prong socket which is mounted on the rear of the chassis. The speaker furnished with the receiver is supplied with cable and plug. A headphone jack is mounted on the front panel and is wired in such a manner that the speaker is shut off when the headphones are in use.

### Tuning Controls

The main tuning dial is located in the center of the front panel, and it operates a 3-gang condenser. The dial has a step-down ratio of 20 to 1. In tuning across one coil range, the dial makes ten complete revolutions. Through this mechanism it is possible to obtain a continuous reading of 0 to 500, with the result that all signals are spread out on the scale, making tuning and logging both convenient and precise. The tuning system is so arranged that the dial reading increases with the frequency.



### Other Features

The NC-100 has automatic volume control, manual R. F. gain control, and audio gain control, making it possible to hold the weakest signal on the dial. The five waveband selectors are so marked that there is no chance of getting them mixed and tuning on the wrong band for a station. Near the tuning dial is a pilot light, or bullseye, and an electron ray tuning indicator. The pilot light is on at all times when the AC switch is turned on, while the tuning indicator provides a means of seeing when the station is tuned in exactly right. The NC-100 is built for both amateurs and broadcast listeners.

### Comes Complete

The NC-100 marks one new feature in the National line. It comes COMPLETE, with tubes, speaker and everything required to operate. It may be had with or without crystal and with or without high fidelity speaker. A discount of 40 percent is offered from the list price of the receiver when it is purchased through an authorized agent. The National Company continues to make the HRO, the HRO, Jr., and just about all kinds of radio parts needed to build and operate a radio receiver or an amateur transmitter. When in need of any radio part, write to the National Company, Department ISW, Malden, Mass., for prices and details.

# 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.

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## AUSTRALIA

VK2ME, Sydney, 9.59 mc. broadcasts Sundays 12:30 to 2:30 A.M., 4:30 to 8:30 A.M. and 9:30 to 11:30 A.M. in September.

VK3ME, Melbourne, on 9.51 broadcasts weekdays 4:00 to 7:00 A.M. Really on 9.595 mc. same as VK2ME now. (Oxrieder, Pa.)

VK3LR, Melbourne, on 9.58 mc. broadcasts daily 3:15 to 8:30 A.M.

VK6ME, Perth on 9.59 mc. (same as VK2ME) was testing in the laboratories at Sydney, but will be sent to Perth soon, where broadcasts will take place regularly. Heard at 2:00 A.M. (Sterns, England). One Saturday 11:30 A.M. to 12:15 P.M. (Orchard, England.) From 5:30 to 7:00 A.M. (Erwin, Ill.)

VK9MI, the ship "Kanimbla" on the maiden voyage to Sydney was heard testing on 11.74 mc. and 6.075 mc. Also heard on 6.00 mc. daily between 6:00 and 6:30 A.M. for a time. (Walcott, Calif.) Address is "Miss Foley, c/o Messrs. McIlwraith and McEachern, Melbourne, Australia." (McDonough, New Zealand.)

VK8SC, Port Hedland, Western Australia, on 6.96 mc. heard testing with VK3LR near 9.00 A.M. (Walcott, Calif.)

VK2DL, Canterbury on 7.30 mc. broadcasts Sundays 3:00 to 5:00 A.M. Reports to 14 Watkins Street.

VPD, Suva, Fiji Islands, on 13.075 mc. broadcasts between 12:30 and 1:30 A.M. daily excepting Sundays.

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## AFRICA

ZEC, Salisbury, Rhodesia, on 5.80 mc. and ZEB, Bulawayo, on 6.147 mc. broadcast the same program Sundays 3:30 to 5:00 A.M., Mondays 11:00 A.M. to noon, Tuesdays 1:15 to 3:15 P.M., Thursdays 10:00 A.M. to 10:45 A.M. and 11:00 A.M. to noon, Fridays 1:15 to 3:15 P.M. Send reports to the postmaster at Salisbury. (Burdett, Africa; Graham, Africa, and Cram, England.)

CR6AA, Lobito, Angola, on 7.177 mc. broadcasts Wednesdays and Saturdays 2:45 to 4:45 P.M. (Burdett, Africa.)

CR7AA, Lourenco Marques on 6.137 mc. broadcasts weekdays 12:45 P. M. to 3:15 P.M. and Sundays 8:00 to 10:30 A.M. (Burdett, Africa.)

FIQA, Tananarive, Madagascar, on 6.02 mr. relays FIU between 7:00 A. M. and 1:00 P.M. (Burdett, Africa) Is on 6:00 mc. 3:30 to 4:45 A.M. and 10:00 to 10:45 A.M. according to letter. (Adams, India.) On 6.02 mc. at 7:00 A.M. (Carville, France.)

ZTJ, Johannesburg, relays station JB on 49.20 meters, 6.09 mc. weekdays 11:45 P.M. to 12:30 A.M., 3:15 A.M. to 7:00 A.M., 9:00 A.M. to 11:30 A.M., 7:55 to 1:00 A.M. and 12:00 P.M. to 5:15 P.M. (Burdett, Rhodesia.)

Canary Islands. EA8AB, Santa Cruz, Tenerife, on 7.21 mc. broadcasts Mondays, Wednesdays and Fridays 3:15 to 4:15 P.M. EDR3, or EHZ on 16.30 mc. phoned Brazil near 5:30 A.M. once. (Rossi, Pa.) Heard on 10.37 mc. broadcasting daily from 3:00 to 6:00 P.M. using Spanish, French, German and English, saying "This is EAJ43, Radio Club Tenerife on 201 and 28 meters." (Neiderly, Czechoslovakia). On 10.88 mc. at 5:00 A.M. one Sunday phoning EDN Spain. (Fey, N. Y.) Amateur stations EA8AT, EA8LW, EA8AL, EA8AH, EA8AJ and EA8AO are all heard on about 14.10 mc. afternoons and evenings.

African phones. SUX, Cairo, Egypt, on 7.98 mc. phones England around 4:00 to 6:00 P.M. SUV, same city, on 10:05 mc. phones around 1:00 to 5:00 P.M. SUZ, same city, on 13.83 mc. phones around 11:00 A.M. to 1:00 P.M. VQG, Nairibo, Kenya, on 19.63 mc. phones London between 7:00 and 8:30 A.M. daily. Address is Box 777. OPL, Leopoldsville, Belgian Congo, on 20.04 mc. phones Belgium 10:00 A.M. to 3:00 P.M. OPM, same city, on 10.14 mc. phones between midnight and 2:00 A.M. and 2:00 and 3:00 P.M. ZSS, Capetown, on 18.89 mc. phones England between 6:30 A.M. and 1:00 P.M. CNR, Rabat, Morocco, on 12.82 mc. phones Paris between 3:00 and 4:00 P.M. irregularly. FZE9, Djibout, French Somaliland, heard on 9.67 mc. at 12:30 A.M. phoning TYA2, Paris. This was on Saturday. (Carville, France). FZE9 was reported on 8.57 mc. between 4:48 and 6:00 P.M. in May, and on 17.20 mc. between 9:00 and 9:45 A.M. in May. A station at Algiers, Algeria, on 8.96 mc. phones Paris around 12:30 A.M. (Miller, Ky. and Fey, N. Y.)

## ASIA

HSSPJ, Bangkok, Siam, verifies and says they are on 9.35 mc. from 1700 to 1900 G.M.T. or noon to 2:00 P.M. Mondays. (Walmsley, Calif.) Another verie says they are on 10.955 mc (not 10.995) Mondays 8:00 to 10:00 A.M. and on 9.35 from noon to 2:00 P.M. (Erwin, Ill.) Heard on 9.35 mc. Thursdays 8:00 to 10:15 A.M. (Balbi, Calif.) On 9.35 mc. both Mondays and Thursdays 7:00 to 10:00 A.M. (Walcott, Calif. and Karpan, Pa.) HSP, Bangkok on 17.74 mc. not 17.75 mc., phones Japan every Sunday at 11:00 P.M. and Friday at 4:00 A.M. (Walcott, Calif.)

Colombo, Ceylon, on 6.05 mc. broadcasts from 1300 to 1500 G.M.T. or 8:00 to 10:00 A. M., E.S.T. according to a letter from the Chief Telecommunications Engineer, Broadcasting Office, Torrington Square, Colombo. (Keenan, Australia.)

KZRM, Manila, P. I., has been heard through short wave station KAZ, Manila, on 9.97 mc. between 3:00 and 6:00 A.M. (Stevens, England, and Karpen, Pa.) Every day phone station KAX, Manila, on 19.98 mc. calls a station ZGB at Kuala Lumpur, French Malay Settlements. (Walcott, Calif.) Does anyone know anything about ZGB?

ZBW, Hong Kong, on 8.75 mc. say they broadcast from 4:30 to 6:15 A.M. and 8:00 A.M. to 3:00 P.M., G.M.T. which equals 11:30 P.M. to 1:15 A.M. and 4:00 to 10:00 P.M., E.S.T. It is heard best 3:00 to 7:00 A.M.

ΧGOX, Nanking, China, relays long wave station XGOA on about 8.65 mc. although they announce 8.62 mc. They are heard daily 6:00 to 9:00 A.M. and at 8:05 A.M. use English. (Walcott, Calif.) They were on 9.54 mc. but moved in June.

CQN, Macao, Portuguese China, on 9.57 mc. broadcasts Mondays and Fridays from 7:00 to 8:30 A.M. They moved from 9.67 mc. to 9.57 mc.

Chinest Phones. XOJ on 15.795 mc. phones London between 5:00 and 6:00 A.M. and Japan around 1:00 A.M. At 10:00 P.M. once. (Fey, N.Y.) Calls GBX daily at 7:15 A.M. (Rossi, Pa.) XGN on 17.64 mc. phones London at 7:00 A.M. daily. XGW on 10.42 mc. phones Japan between 11:00 P.M. and 3:00 A.M. A phone at Shanghai announcing frequency as 11.40 mc. phones a station at Hankow on 11.70 mc. between 3:00 and 4:00 A.M. (Walcott, Calif.) Chinese phones on 9.29 mc. and 9.08 mc. are heard between 4:00 and 4:45 A.M. irregularly. (Walcott, California.)

YDA, Tdj Priok, Java, on 3.04 mc. broadcasts 5:30 to 10:30 A.M. daily, and on Mondays, Wednesdays and Fridays till 11:00 A.M. The same station is on 6.04 mc. from 7:30 P.M. to 2:00 A.M. also. YDB, Soerabaia, on 9.65 mc. broadcasts 5:30 to 10:30 A.M. daily and Mondays, Wednesdays and Fridays till 11:00 A.M. The same station is on 11.86 mc. from 7:30 P.M. to 2:00 A.M. (but no one reports it.) PMN, Bandoeng, on 10.26 mc. and PLP, Bandoeng, on 11.00 mc. are supposed to broadcast from 7:00 to 8:30 P.M., 10:30 P.M. to 2:00 A.M. and 5:30 to 10:30 A.M., but they are only reported between 5:30 and 10:30 A.M. This information comes from a new verification, in the form of a book, that the NIROM is sending out. (Antognini, Koliboriso, Hardemann, Stempel, Gallagher, Walcott and others.) Phone stations PMA or 19.35 mc. and PLE on 18.83 mc. reported broadcasting Sundays in July between 4:30 and 10:30 A.M. (Shenton, England; Hughes, England; Portmann, New York; Studholme, England; Karpen, Pa.) PLE broadcasted once between 11:00 P.M. and 1:00 A.M. sending music. (Balbi, Calif.; Gallagher, Calif.) PLH, Bandoeng, on 15.15 or 15.16 mc. heard broadcasting same programs as YDB between 4:30 and 10:30 A.M. (Balbi, Calif.; Nierderle, Czechoslovakia; Gullberg, Sweden; Northey, India and Karpen, Pa.) New broadcasting station on 4.87 mc. heard from 4:30 to 10:30 A.M., address is Batavische Radio Vereenging, Koningsplein Zuid, 12, Batavia -C, Java. (Kolibonso, Java.)

Java Phones. PMA on 19.35 mc. phones Holland between 5:30 and 11:00 A.M. PLE on 18.83 mc. phones Holland between 5:30 and 11:00 A.M. and phones the U. S. A. and Japan between 6:50 and 8:00 P.M. PLV on 9.42 mc. is heard between 9:30 and 11:00 A.M. and 6:50 and 11:00 P.M. YBG, Medan, Sumatra, on 10.42 mc. was broadcasting one Thursday 7:00

to 7:40 A.M. (Starr, Canada.) Heard phoning 5:00 to 6:30 A.M. (Walcott, Calif.) YBZ at Menado, Celebes Island, is a new phone on 7.68 mc. Walcott, Calif.) Amateurs PK4SN, PK4CR and PK4AU on 14.30 mc. are heard between 6:00 A.M. and 11:00 A.M. (McMenamy, Calif.)

VWY?, Poona, India, on 17.54 mc. heard phoning London again from 6:00 to 8:30 A.M. often. (Karpen.)

Afghanistan. A letter from the Ministre de PTT, Kaboul, Afghanistan, says they have two small 500 watt stations. One is at Kaboul, YAA on 71 meters, one at Herat, YAH, on 58 meters. The phone each other daily at 1330 G.M.T. or 8:30 A.M., E.S.T. And telegraph Russia at other times. They want reports, having received only one other, that from the U. S. A. (Oram, England). A Scala, of Bronx, New York, received a letter last March saying they had AFK on 71.50 meters, 4.193 mc. and 30.90 meters, 6.607 mc. and APH on 71.50 meters or 4.193 mc. and 50.80 meters, 5.135 mc. but 5.135 is not 50.80 meters. We suggest trying on 4.19 mc. and 5.13 mc. at 8:30 A.M., E.S.T. or 1330 G.M.T.

Saigon, Indo-China. A Saigon station is broadcasting in the 25 meters band, moving around between 11.70 and 11.72 mc. It was heard between 7:00 and 9:40 A.M. announcing in English and French and saying "Ici Radio Saigon." (Walcott, Calif.; Balbi, Calif. and Northey, India.)

TDE, Shinkio, Manchuko, on 10.065 mc. phones Japan daily 3:00 to 9:00 A.M. (Walcott, Calif.) Also heard 3:00 to 6:00 A.M. (Sparks, Calif.)

JIB, Taiwan, Japan, on 10.53 mc. phones JVL, Japan, between 2:00 and 9:00 A.M. (Sparks, Calif.; Walcott, Calif.) At 5:30 A.M. one Sunday. (Fey, N.Y.) JIC on 5.89 mc. was logged at 8:00 A.M. once. (Gallagher, Calif.)

Siberia. Station RV15 on 4.25 mc. broadcasts 1:00 to 9:00 A.M. daily. Heard in the U. S. A. in winter time. RWJ, Alma-Ata, on 12.18 mc. phones Moscow around 6:00 A.M. ROU, Omsk, on 14.79 mc. phones around 6:00 A.M. RFL, Khabarovsk, on 13.19 mc. phones around 6:00 A.M. RVU, Vladivostok on 13.79 mc. phones around 6:00 A.M. RRR, Khabarovsk, on 15.95 mc. heard between 4:00 and 5:00 A.M. (Kriebel, Pa.) RRR heard between 5:00 and 8:00 A.M. (Karpen, Pa.)

JVA, Nazaki, Japan, on 18.91 mc. phoned London at 4:00 A.M. (Walcott, Calif.) JVD, Nazaki, on 15.86 mc. is heard at 1:00 A.M. up to 7:00 A.M. phoning. JVF on 15.62 mc. also heard 1:00 A.M. to 9:00 A.M. phoning. JVH on 14.60 mc. is broadcasting regular programs from midnight to 1:00 A.M. every day, and then sometimes broadcast baseball games till 3:00 or 3:30 A.M. Then from 5:00 to 7:40 A.M. they relay JOAK programs. Every Tuesday and Friday they broadcast from 2:00 to 3:00 P.M. also. And every Monday and Thursday from 4:00 to 5:00 P.M. JVH is the big station in Japan to tune for. JVM on 10.74 mc. is heard Tuesdays and Fridays from 2:00 to 3:00 P.M. broadcasting and at other times phoning. JVN on 10.66 mc. broadcasts quite often from 1:00 to 4:00 A.M. a play-by-play description of a baseball game. They also relay JOAK programs from 1:50 to 2:15 A.M. and 4:00 to 7:40 A.M. nearly every day. (Walcott, Calif.; Gallagher, Calif.) JZA, (a new one to us) on 15.68 mc. heard phoning 4:30 to 6:00 A.M. (Portmann, N. Y.) The ship "Chichibu Maru," on 6.64 mc. sent a special program celebrating the awarding of the 1940 Olympic

games to Japan. JVQ on 7.47 mc. also took part. No time stated in report. (Walcott, Calif.)

### THE EUROPEANS

The programs from Zeesen, Germany, for September are scheduled as follows:

DJA on 9.56 mc.; 12:05 to 5:15 A.M. and 4:50 to 10:445 P.M.  
 DJB on 15.20 mc.; 12:05 to 5:15 A.M.; 5:55 to 11:00 A.M.; 4:50 to 10:45 P.M.  
 Sundays only 11:10 to 12:20 noon.  
 DJD on 11.77 mc.; 11:35 A.M. to 4:30 P.M. and 4:50 to 10:45 P.M.  
 DJE on 17.76 mc.; 12:05 to 5:15 A.M. and 5:55 to 11:00 A.M.  
 DJL on 15.11 mc.; 12:00 to 2:00 A.M., 8:00 to 11:00 A.M., 11:35 to 4:30 P.M.  
 Sundays only 6:00 to 8:00 A.M.  
 DJN on 9.54 mc.; 12:05 to 5:15 A.M. and 4:50 to 10:45 P.M.  
 DJQ on 15.28 mc.; 5:00 to 7:00 A.M., 7:15 to 11:00 A.M., 4:50 to 10:45 P.M.  
 DJR on 15.34 mc.; 8:00 to 10:00 A.M.

Putting it another way,

12:05 to 5:15 A. M.—DJA, DJB, DJN and DJE.  
 5:55 to 11:00 A. M.—DJB, DJE, DJQ, DJL, DJR (see above.)  
 11:35 to 4:30 P. M.—DJD and DJL.  
 4:50 to 10:45 P. M.—DJN, DJQ, DJA, DJD and DJB.

The following test stations may also be heard:

DZA on 31.00 meters, 9.675 mc. from 5:00 to 7:00 P. M.  
 DZB on 29.88 meters, 10.04 mc. from 7:00 to 9:00 P.M.  
 DZC on 29.15 meters, 10.29 mc. from 3:00 to 10:45 P.M.  
 DZE on 24.73 meters, 12.13 mc. from 7:00 to 9:00 A.M., 5:00 to 7:00 P.M.  
 DZH on 20.75 meters, 14.46 mc. from 4:00 P. M. to 10:45 P.M.

Member Eady of England, sends a different schedule. He says DZA is on from 1:00 to 3:00 P.M., DZB from 5:00 to 7:00 P.M., DZE from 5:00 to 7:00 P.M., DZH from 3:45 to 5:45 A.M. and a DZG on 19.51 meters, 15.36 mc. is on from 3:45 to 5:45 P.M. Last month, while the Olympic games were in progress, there was a great number of special broadcasts sent out over almost all of these stations. It would take a lot of space to mention them all. Since they are all over with, we will not mention them, but thank members Palmer, Hughes, Spuhler, Studholme, Smith, Kash, Atherton, and Adler for reports.

Radio Podebrady, at Podebrady, 60 miles east of Praha, Czechoslovakia, has been testing on 15.23 mc., 11.76 mc. and 6.1115 mc. At first they spent half an hour on each wavelength, starting about 2:00 P.M. each day. However, lately they have been heard on 15.23 mc. almost all day long, from about 8:00 A.M. up to 10:00 P.M. We judge from this that they will be heard soon on 11.76 mc. all day long, testing on that frequency. They announce now that reports should be sent to the Radio Broadcasting Corporation, Praha, Czechoslovakia. We have reports from 42 members in 17 countries of this station, so we will not mention them here. We suggest that everyone dial down to 15.23 mc. and to 11.76 mc. from time to time and chances are they will run into a powerful signal from this station.

SPW, Warsaw, Poland, on 13.63 mc. broadcasts Mondays, Wednesdays and Fridays 11:30 A.M. to 12:30 P.M. (Kriebel, Pa.) SPF Glynia, Poland, was heard on 12.32 mc. and 8.22 mc. between 12:45 P.M. and 1:35 P.M. and report brought a reply from SP1CC, Emil Jurkiewicz Aadjotoya, Glynia, Poland. (Sloper, England.)

From Daventry, England, comes this schedule for September:

GSB on 9.51 mc.; 1:15 to 3:15 A.M. and 12:15 to 5:45 P.M.  
 GSC on 9.58 mc.; 6:00 to 8:00 P.M. and 9:00 to 1100 P.M.  
 GSD on 11.75 mc.; 1:15 to 3:15 A.M.; 12:15 to 3:25 P.M. and 6 to 8 P.M.  
 GSF on 15.14 mc.; 9:00 A.M. to noon; 3:40 to 5:45 P.M. and 9 to 11 P.M.  
 GSG on 17.79 mc.; 6:00 A.M. to noon; 3:40 to 5:45 P.M.  
 GSH on 21.47 mc.; 6:00 to 8:45 P.M.; 9:00 A.M. to noon.  
 GSO on 15.18 mc.; 12:15 to 3:40 P. M.  
 GSP on 15.31 mc.; 6:00 to 8:00 P. M.

GBTT on the "Queen Mary," that broke the record last month for transatlantic crossing, may be heard on 12.40 mc. and 4.42 mc. Their address is Chief Operator, Queen Mary, Pier 90, North River, New York City. A station GBA, a new phone, on 16.14 mc. calls XGN China, between 6:00 and 9:00 A.M. (Karpen, Pa.)

2RO, Rome, Italy, on 11.81 mc. now broadcasts from 6:43 A.M. to 10:30 A.M.; 11:30 A.M. to 7:45 P.M. with antenna changes at 8:55 A.M., 12:30 P.M., 1:20 P.M. 1:43 P.M., 2:04 P.M., 5:30 P.M. and 6:15 P.M. (Erwin, Ill.; Murphy, Ill.) The American Hour comes over on 11.81 mc. now. (Smith, Mass.; Erwin, Ill. and Karpen, Pa.) Before long, however, they may change back to 9.65 mc., so if you miss them on 11.81, tune to 9.65 mc.

LZA, Sofia, Bulgaria, sends out verifications saying they are on 20.04 meters or 14.97 mc., but it is heard on either 14.80 or 14.85 mc. (Kreibel, Pa. and Childs, Pa.) The schedule is Sundays 12:30 A.M. to 8:00 A.M. and 10:00 A.M. to 4:30 P.M., other days 5:00 to 7:00 A.M. and Tuesdays and Thursdays from 1:00 to 3:00 P.M. Roger Legge, of New York, says his verie is different. The schedule he got says daily 5:00 to 6:30 A.M., noon to 3:45 P.M., Sundays 12:01 A.M. to 4:30 P.M. Heard at 7:00 A.M. (Fey, N.Y.) At 1:45 P.M. (Palmer, Ohio.) Signs off at 3:00 P.M. (Making Legge schedule wrong) (Rossi, Pa.)

Belgrade, Yugoslavia, on 6.10 mc. say they are on the air now 12:55 A. M. to 3:00 A.M. daily, 6:15 to 8:15 A.M. daily, 1:00 to 6:05 P.M. daily, 4:00 to 5:00 A.M. Sundays and 6:15 to 6:30 A.M. Sundays. The address is Poste de radio a ondas Courtes, 16 Milosa Velikog, Belgradt, Yugoslavakia. (Studholme, England and others.)

SM5SX, Stockholm, Sweden, on 11.71 mc. (25.63 meters) is broadcasting from 1:45 A.M. to 2:05 A.M., 6:25 to 9:00 A.M., 11:00 A.M. to 5:00 P.M. daily, 1:45 to 2:05 A.M., 6:25 to 7:00 A.M. and 8:00 A.M. to 5:00 P.M. Saturdays and 3:30 A.M. to 7:00 A.M. and 9:00 A.M. to 5:00 P.M. Sundays. (Gullberg, Sweden). The address is Royal Technical University, Stockholm, Sweden. Reported by Oram, England; Orchard, England; Stevens, England; Jeffs, England; Studholme, England. This station was also heard on 11.705 mc. talking to amateur VE1CR, Nova Scotia, from 7:00 to 7:45 P.M. and is heard often at 6:00 P.M. (Ward, N. Y.) Heard on 14.308

mc. sometimes sending music 11:00 A.M. to 5:00 P.M. (Palmer, Ohio.) Tests with amateurs Mondays, Tuesdays and Wednesdays on 11.705 mc. at 5:15 P.M., then goes to 14.344 mc. (Rossi, Pa.)

PHI, Huizen, Holland, on 17.77 mc. broadcasts Sundays 8:00 to 10:00 A.M., 1:00 to 2:00 P.M., Mondays 8:00 to 10:00 A.M., Thursdays 8:00 to 10:00 A.M., Fridays 8:00 to 10:00 A.M. and Saturdays 8:00 to 10:00 A.M. They will soon move to 11.74 mc.

PCJ, Eindhoven, Holland, on 15.22 mc. broadcasts Sundays 7:00 to 8:00 A.M., Tuesdays 4:00 to 6:00 A.M., Wednesdays 7:00 to 11:00 A.M. PCJ on 9.59 mc. broadcasts Sundays 7:00 to 8:00 P.M., Wednesdays 7:00 to 10:00 P.M. Heard 5:00 to 7:00 P.M. (Grey, Ill.)

TFJ, Reykjavik, Iceland, now broadcasts on 12.24 mc. Sundays from 1:40 to 2:00 P.M. in English and from 2:00 to 2:30 P.M. in German or Danish.

Switzerland. HBH is on 16.22 meters, 18.48 mc. HBJ is on 20.64 meters, 9.595 mc. HBP is on 38.47 meters, 7.797 mc. HBL and HBP broadcast every Saturday from 5:30 to 6:15 P.M. They also are reported the first Mondays of the month from 4:00 to 7:00 A.M. HBL or HBO tests with VK3LR, Australia, from midnight Sundays to 1:00 A.M. Mondays, George Trisdorfer, of Brooklyn, has a letter saying HBP and HBL broadcasts from 7:00 to 7:30 P.M. Saturdays, and Captain Oxrieder says this is true as they broadcast from 5:30 to 6:15 P.M. and then from 7:00 to 7:30 P.M. Captain Oxrieder is the only person that ever reported this to us. Last month, during the Spanish uprising, stations HBJ, HBH and HBO sent many special programs around 5:30 to 6:30 P.M. (Kash, Hyde, Spuhler, Karpen) Station HBA, a new one on 6.12 mc., was heard testing at 7:55 P.M. once. (Carville, France.)

Russia. The short wave broadcasts from Russia for September follow:  
 On 15.17 mc., Sundays 1:30 to 2:00 P.M.  
 On 15.03 mc., Sundays 10:00 to 11:00 A.M.  
 On 12.00 mc., Sundays 6:00 to 7:00 A.M. and 10:00 to 11:00 A.M., Wednesdays 6:00 to 7:00 A.M. and daily 2:00 to 5:00 P.M.  
 On 9.59 mc., daily 7:00 to 8:00 P.M. (7:00 to 7:30 in English).  
 RAN on 9.52 mc. moved to 9.59 mc. last month (Rossi, Pa.; Bradley, Md.; Stempel, Conn.; Legge, N. Y.; Ward, N. Y. and Child, Pa.) Station on 15.18 mc. is called RV96 according to a verie. (Legge, N. Y.)

Russian Phones. RNE, Moscow, on 12.00 mc. may be heard most any time of the day or night. RKI, Moscow, on 15.04 mc. is heard between 3:00 and 10:00 A.M. We list it on 15.09 mc. but it is on 15.04 mc. (Walcott, Calif.) RIM, Tashkent on 15.25 mc. is heard 5:00 to 9:00 A.M. ROU, Bakou, on 10.17 mc. and RIR, Tiflis on 10.07 may be heard between 10:00 P.M. and 4:00 A.M. Last month stations RIR, RIO and ROU were all heard between 7:00 and 7:30 P.M. relaying the program of station RAN (Rossi, Pa.; Karpen, Pa.) RIM was heard as late as 11:30 A.M. (Karpen.) RKI on 39.97 meters, 7.50 mc. was heard broadcasting at 5:00 P.M. once. (Studholme, England.)

Norway is soon to blossom out with a new bunch of stations according to J. E. Oram, Bournemouth, England. Here they are: LKZ on 21.50 mc.

(13.95 meters.) 21.46 mc. (13.98.) LKX 17.785 (16.87.) LKW 17.755 (16.90.) LKV 15.78 (19.78.) LKU 11.83 (25.36.) LKQ 11.735 (25.56.) LKE 9.572 (31.34.) LKD 9.55 (31.41.) LKJ 9.54 (31.45.) LKC 9.53 (31.48) and LKL 6.13 (48.94.)

France. TPA2 on 19.68 meters, 15.25 mc. broadcasts from 1:00 A.M. to 4:00 A.M. and 5:00 A.M. to 10:00 A.M. TPA3 now comes on at 1:00 A.M. also and broadcasts till 4:00 A.M., and then from 10:15 A.M. to 5:00 P.M. TPA3 is on 25.23 meters, 11.90 mc. TPA4 on 25.63 meters or 11.71 mc. comes on from 5:15 to 9:15 P.M. and 9:45 P.M. to midnight. A station TYA2 on 9.04 mc. gives news at 11:30 A.M. to 12:45 P.M. and heard on 12.25 mc., 4:30 to 5:15 A.M. broadcasting. (Studholme, England.)

Spain. EAQ, Madrid, on 9.86 mc. has remained on the air in spite of the civil war taking place in Spain, but no one knows how much longer they will be heard. The schedule is 5:15 to 9:30 P.M. Heard till 10:30 P.M. several times. (Erwin, Ill.) A station EHZ or EHJ on 10.26 mc. was heard broadcasting almost daily 6:30 to 8:30 P.M. according to Stempel of Connecticut. Anyone else hear it? EA9H, Rebel headquarters at Ceuta, Spanish Morocco, was heard on 7:00 mc. at 2:00 P.M. calling Spanish cities and a station EA9AE in Melilla. A station EA1AZ at Le Coruna, Spain, was heard phoning Trujillo, Dominican Republic and Havana, Cuba, at 10:00 P.M. on 7:00 mc. Salazer, N. Y.) A Station on 10.74 mc. was heard from 6:55 to 7:10 P.M. calling Barcelona, Spain. (Child, Pa.)

### SOUTH AMERICANS

CED, Antofagasta, Chile, on 10.23 mc. is heard weekdays relaying the program of station CEC, Santiago, from 7:00 to 7:15 P.M. (Legge, N. Y.) Also heard phoning CEC between 8:30 and 9:15 P.M. (Walcott Calif. and Oxrieder, Pa.) CEC, Santiago, on 10.67 mc. broadcasts daily 7:00 to 7:15 P.M. CB960 Santiago on 9.60 mc. is heard broadcasting irregularly between 9:00 P.M. and 1:00 A.M. They verify, but do not give the schedule. The address is Apartado 1342, Santiago. They say they are the first regular short wave broadcast station in Chile. (Rossi, Pa. and Walcott, Calif.)

PZ1AA, Paramaribo, Surinam, Dutch Guiana, on 13.98 mc. was broadcasting from 6:20 to 6:45 P.M. (Child, Pa.)

HJ1ABB, Barranquilla, Colombia, seems to be on 9.55 mc. and 6.45 mc. first on one and then on the other. They have been heard between 9:00 A.M. and 4:00 P.M. on 9.55 and on 6.45 from 4:30 to 10:00 P.M.

HJ1ABE, Cartagena, on 9.50 mc. is broadcasting most every evening between 7:30 and 9:30 P.M. and on Mondays till 11:30 P.M. They were heard at 10:15 P.M. calling I.S.W.C. members. (Antognin, Calif.; Flynn, Ireland; Van Honk, Pa.; Verbrugge, Michigan, and Atherton, Vt.)

HJ1ABG, Barranquilla, on 6.04 mc. say they broadcast weekdays 11:00 A.M. to 11:00 P.M. and Sundays 11:00 A.M. to 8:00 P.M. (Sparks, Calif. and Kash, Tenn.)

HJ1ABJ, Santa Marta, on 6.025 mc. say they broadcast daily 11:30 A.M. to 2:00 P.M. and 5:30 to 10:30 P.M. (Orchard, England.) Moved to 6.017. (Oxrieder, Pa.)

HJ1ABP, Cartagena, on 9.61 mc. broadcasts from 11:00 A.M. to 1:00 P.M. and 5:00 to 11:00 P.M. weekdays and 11:00 A.M. to 1:00 P.M. and 3:00 to 6:00 P.M. Sundays. Their address is Box 37. The address of HJ1ABE is Box 31. Do not confuse the stations nor the address. Heard at 11:20 P.M. (Verbrugge, Mich.) On 9.63, not 9.61 mc. (Bradley, Md.)

HJ2ABC, La Voz de Cucuta, heard on 9.576 mc. at 8:00 P.M. (Rossi, Pa.) On 9.59 mc. (Legge, N. Y.) HJ3ABC heard on 9.59 mc. (Kash, Tenn.) He must mean HJ2ABC.

HJ3ABX, Bogota, on 6.122 mc. is heard between 7:00 and 11:30 P.M. The address is Calle 14, No. 738.

HJ4ABD, Medellin, "La Voz de Citia," has moved again, from 5.76 mc. to 6.135 mc. (Oxrieder, Pa.)

HJ4ABE, Medellin, on 6.092 mc. broadcasts from 11:00 A.M. to noon and 6:00 to 10:30 P.M.

HJ4ABP, Medellin, "Emisora Philco," has moved to 6.03 mc., they announce. (Rossi, Pa.) Really on 6.028 mc. (Oxrieder, Pa.)

HJ4ABU, Pereira, has moved from 6.04 mc. to 6.145 mc. (Rossi, Pa.) (Oxrieder, Pa.)

HJU, Buenaventure, on 9.51 mc. broadcasts noon to 2.00 P.M. and 8:00 to 11:00 P. M. Mondays, Wednesdays and Fridays.

OAX4G, Lima, Peru, say they are on 6.23 mc. and broadcast daily from 7:00 to 10:00 P.M. OAX4D, Lima, on 5.78 mc. broadcasts Wednesdays and Saturdays from 8:00 to 11:30 P.M. Nothing has been heard of OAX4J which was supposed to open in August on 6.00 mc.

VP3MR, Georgetown, British Guiana, has moved to about 50.00 meters, 6.00 mc. They broadcast weekdays from 4:45 to 8:45 P.M. and Sundays from 7:45 to 10:15 A.M. They may not stay on 6.00 mc. long. (Rossi, and Oxrieder, Pa.) VP3BG, same city, on 41.55 meters or 7.22 mc., was heard from 5:56 to 6:40 P.M. (Eady, England.)

YV5RMO, Maracaibo, Venezuela, on 5.85 mc., has a new slogan. It is "Ecos del Zulia." The schedule is weekdays 8:45 to 9:45 A.M.; 11:15 to 12:45 P.M. and 4:45 to 9:45 P.M.; Sundays 11:45 to 12:45 P.M.

YV7RMO, Maracaibo, on 6.07 mc. is heard between 8:00 P.M. and midnight now.

YV9RC, "Emisora ondas Populares," Caracas, Venezuela, sends veries saying they are on 6.40 mc., the address is Apartado 1931 and the owner is Gonzales Veloz Mancera. The station is located at Los Jardines. El Valle, outside of Caracas. No schedule is given, but it is heard between 7:00 and 11:00 P.M.

YV11RB, Ciudad, Bolivar, "Ecos del Orinoco," says they have 30 watts power, the address is apartado 34 and they are on 6.545 mc. It is heard between 6:00 and 10:30 P.M. We believe everyone knows the waves and schedules of such stations as YV2RC, YV3RC, YV6RV and YV4RC.

PRF5, Rio de Janeiro, Brazil, on 9.50 mc., in a letter to Johan Curiel, Curacao, says they broadcast daily 4:45 to 5:45 P.M., the first 45 minutes in Portuguese and the last 15 minutes as follows: Monday in English; Tuesday in Esperanto; Wednesday in German; Thursday in Italian; Friday in Spanish; Saturday in French. Send reports to Radio Division, Departamento de Propoganda, Ministerio de Justicia e Negocios Interiores,

Rio de Janeiro. Station PPW, Rio, on 9.44 mc. was heard one Sunday morning at 4:30 A.M. (Portmann, N. Y.)

LRU, Buenos Aires, Argentina, on 15.29 mc. broadcasts from 7:00 A.M. to 8:45 P.M. and LRX on 9.66 mc. from 8:00 to 9:00 P.M. (Karpen, Pa.) The station sends out a schedule saying 7:00 A.M. to 4:45 P.M. and 5:00 to 9:00 P.M. Max Horlick, Youngstown, Ohio, claims he hears LRU between 12:30 A.M. and 2:00 A.M. in the morning. Dr. Kash of Tennessee says LRU can be heard as late as 7:30 P.M. So, they must not be sticking to a schedule. LSX on 10.35 mc. has been heard many evenings sending music between 6:00 and 9:30 P.M.

Prado, Rio Bamba, Ecuador, on 6.62 mc. broadcasts Thursdays 9:00 P.M. to 11:30 P.M. HC2RL, Guayaquil, an 6.67 mc., broadcasts Sundays 5:45 to 7:45 P.M. and Tuesdays 9:15 to 11:15 P.M. HC2JSB, Guayaquil, moved to 9.51 mc. and broadcasts every day from 11:00 A.M. to 2:00 P.M. and 4:00 to 11:00 P.M. (Kriebel, Pa.)

HC2CW, Guayaquil, Ecuador, "Ondos del Pacifico," moved from 8.41 mc. to 8.52 mc. and is heard around 10:00 P.M. (Rossi, Pa.) Heard on 8.25 mc., not 8.52, signing off at 1:00 A.M. Address Box 1156 (Kash, Tenn.)

HCK, Quito, Ecuador, moved from 5.885 mc. to 3.75 mc., up on long waves we are told.

CP4, La Paz, Bolivia, on 6.08 mc. is broadcasting between 7:00 and 10:00 P.M. and CP6 on 9.12 mc. is broadcasting between 3:00 and 4:00 A.M. (Erwin, Illinois) No one else has reported these stations in months.

### CENTRAL AMERICANS

XBA, Tacubaya, D. F., Mexico, on 43.00 meters, 6.977 mc. sends out weather reports from 9:30 to 1:00 P.M. and broadcasts programs from 7:00 to 8:30 P.M. daily. This news was sent by Sr. Jose C. Gomez, Servicio Meteorologico Mexicano, Tacubaya, D. F. Mexico, to H. S. Bradley and W. Siddle. Heard around 11:00 P.M. to midnight working amateurs. (Siddle, Alabama.)

XBC, Vera Cruz, on 45.80 meters, 6.55 mc., say they broadcast daily at 8:15 A.M., 9:00 A.M., 11:00 A.M., 6:00 P.M. and 8:00 P.M., sending out weather reports and news. This is Observatorio Meteorologica, Vera Cruz. (Bradley, N. Y.) Another letter says they have 100 watts power and their former call was XFA2. (Siddle, Ala.) Heard broadcasting programs 7:00 to 8:30 P.M. (Siddle)

XEXA, Mexico City, 48.55 meters, 6.18 mc., sent a booklet to Fred Atherton of Vermont, showing they relay station XEXM weekdays only (no Sundays), 6:00 A.M. to 9:00 A.M., 1:00 P.M. to 2:45 P.M. and 5:00 to 9:00 P.M. XEXA heard on 15.00 mc. afternoons (Horlick, Ohio). Heard on 14.98 mc. at 10:40 A.M. once. (Erwin, Illinois) XAM, Merida, Yucatan, on about 26.09 meters, 11.50 phoned Mexico City, which was on about 31.86 meters, 3.42 mc. (Antognini, California.)

XEWI, Mexico City, told us they were searching for a new wavelength free from interference, and at present operate on Mondays 3:00 to 4:00 P. M., Tuesdays and Thursdays 7:30 to 8:45 P.M., and 10:30 P.M. to midnight;

Wednesdays 3:00 to 4:00 P.M., Fridays 3:00 to 4:00 P.M. and 9:00 P.M. to midnight, and Saturdays 9:00 to 11:00 P.M., and Sundays 1:00 to 2:15 P.M. Cards say they are on 11.90 mc. now. (Rossi and Walcott.)

XEXO (City not mentioned) on 15.33 mc. was heard broadcasting on 15.33 mc. almost daily 9:00 to 11:00 P.M., relaying XEB. (Karpen, Pa.) Station on 11.90 mc. phones XEXA afternoons. (Horlick, Ohio.)

Panama. HP5B, Panama City, on 49.75 meters, 6.03 mc., broadcasts Noon to 1:00 P.M. and 7:00 to 10:30 P.M. HP5F, Colon; on 49.34 meters; 6.08 mc., broadcasts weekdays 11:45 A.M. to 1:15 P.M. and 7:45 P.M. to 10:00 P.M. and Sundays 10:45 to 11:30 A.M. and 4:00 to 6:00 P.M. The address is Box 423 (Flagg and Siddle). HP5J, Panama City, on 31.28 meters, 9.59 mc., broadcasts 7:30 to 10:00 P.M. weekdays and 2:00 to 3:00 P.M. Sundays, they say, while it is reported at 7:00 P.M. and 11:00 P.M. by W. D. Flagg, Mass. HP5K, Colon, on 49.96 meters, 6.005 mc., broadcasts 7:30 to 9:00 A.M., Noon to 1:00 P.M. and 6:00 to 9:00 P.M. relaying HP5O, "La Voz del Victor." The address is Box 33. Power now 200 watts. (R. C. A. Bulletin.) A station HP5Z in Panama City is now on 49.00 meters, 6.12 mc. evenings. (Vandecar, Michigan) This could be a mistake as no one else has ever reported this one. Captain Oxrieder claims HP5J is really on 9.605 mc.

HRD, La Ceiba, Honduras, on 6.235 mc., "La Voz de Atlantida," broadcasts daily 8:00 to 11:00 P.M. and Sundays 4:00 to 6:00 P.M. and is heard good in America. Station HRN on 5.87 mc. is getting a bad name for promising verifications and not sending them.

A letter from C. H. W. Nason, of station TGW says TGW is on long waves, owned by the Ministerio de Fomento. TGWA is the short wave outlet on 9.45 mc. TG1X is an experimental call for all waves and will soon be used on a new ultra-short wave station on 31.60 mc., or near nine meters. TG2X is owned by the National Police of Guatemala. TGS is operated by the radio office of the Presidents Palace. They want reports on all frequencies. That explains the calls. TGW has a long wave schedule of noon to 1:00 P.M.; 8:00 to 9:00 P.M., and 10:00 P.M. to midnight weekdays and Saturday nights from 10:00 P.M. to 6:00 A.M. Sundays. (Erwin, Illinois, and Horlick, Ohio) TGWA is not always tied in on these programs, but the station is heard Saturday nights from 10:00 P.M. to 6:00 A.M. Sundays and also many nights around 9:00 P.M. and midnight (Kash, Tenn; Gallagher, California; Murphy, Illinois; Oxrieder, Pa.; Legge, N.Y.) TGWA has 250 watts. TG2X on 5.94 mc. has 250 watts also and their schedule is Mondays, Thursdays and Saturdays 4:00 to 6:00 P.M.; 10:00 P.M. to midnight; Sundays 1:00 to 2:00 P.M. TGS on 5.713 mc. has 100 watts and broadcasts Wednesdays, Fridays and Sundays 6:00 to 8:00 P.M. (Letter received by H. S. Bradley, New York.)

YNLF, Managua, Nicaragua, is reported on 31.15 meters, 9.63 mc. in the evenings (Oxrieder, Pa.). YNGU, "Alma Nica," Managua, say in a letter that they are on 32.26 meters, 9.30 mc. daily noon to 1:30 P.M. and 6:00 to 6:30 P.M. and Sundays 11:00 A.M. to noon, Managua time. Senorita Matilde Haydee Diaz is director and address is Apartado 295, (Rossi, Pa.). Does anyone hear them there? YN1GG, Managua, is on the air again on 6.58 mc. according to Mr. Rossi.

TIPG, San Jose, Costa Rica, said last month they were going on 9.55096 mc. (Oh Yea) and broadcast from noon to 2:00 P.M. and 6:00 to 11:30 P.M. They did go on that wave, but must have decided it would not do, as they are now back on 6.41 mc. (Siddle, Ala.; Kriebel, Pa.; Bradley, Md.; Oxrieder, Pa.; Niederle, Czechoslovakia) Heard on 9.55 at 7:00 A.M. Card says they are on 9.55096 mc. from 7:30 to 9:30 A.M.; noon to 2:00 P.M. and 6:00 to 11:30 P.M. (Erwin, Ill.)

TI4NRH, Heredia, Costa Rica, is on 9.67 mc. (Legge, Erwin, Siddle); on 9.68 (Rossi); 9.72 (Kash); 9.60 (Hyde); 9.685 (Oxrieder); 9.69 (Stempel). Whatever the right wave, they broadcast 8:00 to 9:00 P.M. and 11:30 P.M. to midnight.

A letter from Luis Cordero Castro of station TIGPH says they are on 51.50 meters, 5.83 mc., with 1000 watts power from Noon to 2:00 P.M. and 7:00 to 11:00 P.M., E.S.T. TIGPH is known as "Alma Tica" and it is also on long waves (650 kc.) They also own a station TIX, "La Reina del Aire," on long waves (800 kc.) and a TIVCA on long waves (1225 kc.) and they relay TIX over TIGPH daily from 10:00 to 11:00 P.M. Their address is Apartado 800.

TIRCC, San Jose, on 45.81 meters or 6.55 mc. broadcasts daily 6:00 to 7:00 P.M. and Thursdays and Sundays 6:00 to 11:00 P.M. TIEP, San Jose, on 44.71 meters, 7.61 mc. broadcasts 5:00 to 10:00 P.M.

### WEST INDIES

HIN, "The Voice of the Dominican Party," at Trujillo, D. R., has been heard on a number of different wavelengths during the past month. This is a new station. Here are the reports and readers can figure things out for themselves. On 11.28 mc. one Friday from 6:25 to 6:45 P.M. and said they would be on 6.243 mc. at 4:00 P.M. next day. (Ward, New York.) On 6.245 mc. often in the evenings (Oxrieder, Pa.) On 6.243 mc. near 8:00 P.M. (Atherton, Vt.; Legge, N.Y.; Child, Pa.; Kreibel, Pa.) Heard on an announced frequency of 11.28 mc. from 6:10 to 6:45 P.M. one Friday. (Walcott, California.) Says 750 watts power on 48.5 meters, 7:30 to 9:30 P.M., daily and on 11.28 mc., 12 noon to 2:00 P.M. (Bradley, Md.)

H18A, Trujillo, on 6.35 mc. heard announcing "La Fa Doc de el Aire" between 8:00 and 9:00 P.M. Gave address as Apartado 1302. (Rossi, Pa.)

H14V, Trujillo, "La Voz de la Marina," has moved to 6.475 mc. The schedule is 11:40 A.M. to 1:40 P.M. and 5:00 to 10:00 P.M. (Oxrieder, Pa.)

H18Q, Trujillo, on 48.08 meters, 6.24 mc., say they broadcast 11:00 A.M. to 2:00 P.M. and 5:00 to 8:00 P.M. local time, or 10:40 A.M. to 1:40 P.M. and 4:40 P.M. to 7:40 P.M., E.S.T. Their address is Avenida Espana No. 12, Ciudad Trujillo.

HIX, Trujillo, Dominican Republic, say they are on 48.92 meters, 6.13 mc. now. The schedule is Sundays 7:40 to 10:40 A.M., Tuesdays and Fridays 12:10 to 1:10 P.M., 4:40 to 5:40 P.M. and 8:10 to 10:10 P.M. and other days 12:10 to 1:10 P.M. and 4:40 to 5:40 P.M. (Oxrieder, Pa. and Herzog, N. Y.).

H15N, Santiago, Dominican Republic, on 48.80 meters, 6.15 mc., says

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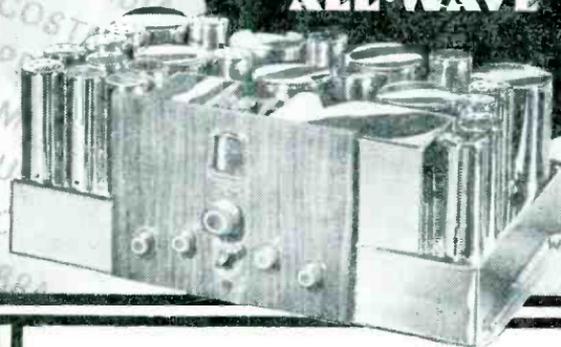
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"N for Nebraska." Their address is P. O. Box 195. It is heard often. (Lane, Calif.; Craft, Calif.). A station HI5E, Trujillo, was heard on 31.58 meters, 9.50 mc. from 7:50 to 8:40 P.M. one Saturday night (Atherton, Vt.)

HI3C, La Romano, D. R., has moved again, this time to 6.723 mc. (Oxrieder, Pa.) On 6.75 mc. (Legge, N. Y. They moved to 6.015 mc. in July, but apparently didn't like it. The schedule is 12:30 to 2:00 P.M. and 5:00 to 6:00 P.M.

HI3U, Santiago, D. R., in a letter say they are on 49.88 meters, 6.015 mc. from 7:30 to 9:00 A.M., noon to 2:00 P.M., 5:00 to 7:00 P.M. and 8:00 to 9:30 P.M. P.M. week-days and Sundays 12:30 to 2:00 P.M. and 5:00 to 6:00 P.M. The address is Apartado 123.

HI1S, Santiago de los Caballeros, on 6.42 mc. say they broadcast daily 11:40 A.M. to 1:40 P.M. and 5:40 to 7:40 P.M. and 9:40 to 11:40 P.M.

The station WPT mentioned last month is really WCT, San Juan, Puerto Rico, that phones WNC, Florida, on 13.41 mc. at 9:50 A.M. and 5:50 P.M. every day. (Legge, N. Y.)

Haiti. George Laroche, of Haiti, sends this news: HH3W has 30 watts power on 31.37 meters or 9.595 mc. and is owned by Ricardo Widmaier, P. O. Box A117. They are on the air weekdays only 1:00 to 2:00 P.M. and 7:00 to 8:00 P.M. now. HH2S has 100 watts on 49.41 meters on 6.60 mc., and it is owned by a radio society whose address is P. O. Box A103. They are on the air daily except Sunday 7:00 to 9:45 P.M., and sign off with the Swan Song. HH2Y has 30 watts on 31.41 meters or 9.55 mc. and it is owned by YVan Michel and has no regular schedule. HH3W is actually on 9.64 mc. (Reported Oxrieder, Pennsylvania, and Child, Pennsylvania.) It is on 9.59 mc. and was heard at 8:00 A.M., in the morning. (Kash, Tenn.) Station HH2T that we listed on 11.57 mc. works as an amateur now on 20 meters. (Erwin, Ill.) It was heard on 11.57 mc. between 6:30 and 7:00 P.M. (Palmer, Ohio) HH2S is really on 5.91 mc. (Oxrieder, Pa.)

HH3NW, Port Au Prince, Haiti, is a sister station to HH3W and broadcasts on 6.34 mc. between 7:00 and 8:00 P.M. This is a new station. (Rossi, Pa.; Oxrieder, Pa.; Kreibel, Pa., and Child, Pa.)

COCQ, Havana, Cuba, on 30.77 meters or 9.75 mc. is heard relaying station CMQ between 6:50 A.M. one day and 1:00 A.M. the next day. This station uses all sorts of identifications, like man laughing, baby crying, siren, bell, chimes, train puffing, trumpets, crowds cheering and an auto horn. They announce as "Radio Victor" and "La Voz del Victor." We have reports from over seventy members on this new powerful station.

COCX, Havana, Cuba, is another new station on the air. They announce as "General Electric Company of Cuba." The station has been heard on several different frequencies and we don't dare to say where they are now. Here are the reports and members can figure things out for themselves. On 12.05 mc. at 2:25 A.M., said they had 1500 watts power, (Stempel, Conn.) Heard 12:10 to 1:30 A.M., saying they were on 11.650 mc. but was actually on 12.615 (some difference) and said they would be back Sunday at 11:00 P.M. Last heard on 11.54 mc. (Oxrieder, Pa.) Announced 11.95 mc., heard 12:45 to 1:30 A.M. (Horlick, Ohio) On 25.25

meters. (Kreibel, Pa.) On 12.25 mc. relaying station CMAC midnight to 1:00 A.M. (Gallagher, Calif.) On 11.795 mc. at 9:45 P.M. (Erwin, Ill.) On 12.23 mc. till 1:05 A.M. once and then on 12.18 mc. at 1:20 A.M. (Walcott, Calif.)

CMX, a new station at Havana, was heard drifting from 12.135 mc. to 12.125 mc. and then back to 12.16 mc. broadcasting between 10:30 and 11:30 P.M. (Oxrieder, Pa.) CMK was on 7.00 mc. working 40 meter amateurs at 11:20 P.M. once (Siddle, Ala.) We do not know if CMX and COCX are related or not.

Station CMA5, owned by the Cuban Transatlantic Telephone Corporation, was heard on 8.63 mc. at 11:30 P.M. (Siddle, Ala.) CMB on 11.60 mc was broadcasting from 3:20 to 6:30 P.M. once. (Child, Pa.) We believe everyone knows the waves and schedules of such stations as COCO, COCD, CO9JQ, CO9WR, COCH and COKG. They are shown in our list.

### NORTH AMERICA

W1OXDA on the schooner "Effie Morrissey" is heard on voice on about 21.26 meters, 14.11 mc., testing with amateur stations. Operator this year is Clifton F. Foss, whose home address is 8214 11th Ave., Brooklyn. Send reports to him. Mrs. Foss can be heard talking to him over station W2OJ most every evening. The ship will be home again September 10th, so we will not hear it again now till next summer. Quite a few members report it.

W2XAD has added more time. Mr. Darlington of the station tells us W2XAD works now from 10:00 A.M. to 3:45 P.M. daily and W2XAF comes on at 4:00 P.M. and stays till midnight.

W3XAU, Philadelphia, will leave the air August 5th in order to increase their power to 10,000 watts according to Mr. Leitch, the manager.

W2XE, Wayne, New Jersey. This station changes schedule so fast that we can not keep up with the changes. From reports received, they must have made three changes in two weeks' time. W2XDV, a sister station works on 31.60 mc., 35.60 mc., 38.60 mc. and 41.00 mc., all ultra-short waves. (Teague, Mich.)

W3XL, Bound Brook, New Jersey, on 17.31 mc. was heard at 5:30 P.M., August 14th after a year or so silence. (Walcott, Calif.)

W2XGB, Hicksville, New York, was heard on 17.31 mc. in July at 10:30 A.M. and 2:30 P.M. calling Cuban stations. (Davison, Stempel, Legge.) Reported on 6.43 mc. at 10:00 P.M. once. (Stevens, England.)

W9XAA, Chicago, does not seem to have a regular schedule now. One day they are on 11.83 mc. and the next perhaps on 6.08 mc. or maybe not on the air at all.

W1XAL, Boston, Mass., is also guilty of keeping an irregular schedule. They use 15.25 mc., 11.79 mc. and 6.04 mc. W1XAM, New Britain, Conn., on 10:20 mc. has 50 watts power and broadcasts weekdays 8:00 to 10:00 P.M. according to Mr. Irons of that city. It is strange that no one hears the station.

Hawaii. Station KKH, on 7.25 mc. usually broadcasts a special program on Mondays from 11:00 P.M. to midnight and phones the U. S. A. quite often. KKP on 16.04 mc. also phones the U. S. A. in daytime. Was heard broadcasting a special program to the U. S. A. from 11:30 P.M. to midnight Mondays. (Bradley, Md.) KKQ, Bolinas, California, on 11.97 heard relaying these programs back 11:00 P.M. to 1:00 A.M. (Atherton, Vt.)

VE9HX, Halifax, N. S., Canada, on 6.13 mc. has 200 watts power and broadcasts Mondays to Fridays 9:00 A.M. to 1:00 P.M. and 5:00 to 11:00 P.M., Fridays 1:00 to 3:00 P.M., Saturdays and Sundays 9:00 to 1:00 P.M. and 2:00 to 11:00 P. M.

CFCX, Montreal, Canada, on 6.00. mc. told us they had 750 watts power and broadcast weekdays 6:00 A.M. to 11:15 P.M. and Sundays 9:00 A.M. to 11:15 A.M. Their address is Box 1690. They told us 750 watts, told others 75 watts and now tells Member Seaman of New Hampshire, 2000 watts.

CJRX and CJRO, Winnipeg, Manitoba, Canada, do not come on the air at 4:00 P.M., they are on from 6:00 P.M. to midnight. (Adler, N. Y.; Erwin, Ill.; Stempel, Conn.) VE9CA, Calgary, Alberta, on 49.75 meters, 6.03 mc. is heard daily till 12:30 A.M. and on Thursdays till 2:00 A.M. (Crafts, Calif.) Their schedule was given as daily 6:00 A.M. to noon and 7:00 P.M. to midnight. CRCX, Bowmanville, is supposed to broadcast week-days 5:30 to 11:30 P.M. and Sundays 11:45 A.M. to 11:30 P.M., but was heard signing off at 3:00 P.M. and coming back at 5:00 P.M. till 11:00 P.M. (Teague, Mich.) CFU, the phone station on 5.66 mc. was heard on 8.70 mc., a new wave, at 7:15 P.M. once, (Sparks, Calif.). A station CGA2 on an announced frequency of 13.745 mc. phoned England at 10:00 A.M. (Erwin, Ill.). Station CGA3 on 13.28 mc. usually does this daily.

A station VE9EX at Vancouver is on 136.40 meters, 2.20 mc., and is heard irregularly. It has only 3 watts power and that is about the only interesting thing about it. It is owned by Radio Service Engineers, 734 Davie Street.

Alaska. The following stations may be considered long wave stations by some, but they may be of interest to others: KAEW, Umnak; KAJJ, Atka; KAJU, Attu, on 5.20 mc. heard at 3:00 A.M. and 5:30 A.M. WXE, Anchorage, on 8.86 mc., at 1:00 A.M. once and on 5.96 mc. at 3:00 A.M. and on 2.99 mc. at 2:15 A.M. WXP, Fairbanks, on 5.91 mc. was heard at 1:30 A.M. and then on 12.24 mc. at 6:00 P.M. WXY, Nome, on 2.60 mc. is heard daily at 5:30 A.M. Also heard on 8.78 mc., 2:30 to 6:30 A.M. KLC, Klake, on 2.51 mc., heard 1:30 A.M. KDH, Port Alexander, on 2.53 mc. heard 3:00 to 3:30 A.M. KICE, Nankeen, on 3.36 mc., heard midnight to 3:15 A.M. KIJU, Todd, on 2.986 mc., heard from 1:30 to 3:30 A.M. KIJP, Uganik, on 3.09 mc., heard at 2:30 A.M. KGM, Ketichikan, on 2.51 mc., heard at 1:50 A.M. WXP, Fairbanks, operator says they are on 5.91, 8.62 and 2.604 mc., and not on 8.74 mc. (Walcott and Sparks, Calif.)

### ADDRESS CHANGED

Arthur Bear has moved to 100 Adams Gardens Estate, London, SE16, England.

## WITH THE REPORTERS

The news contained in this issue of the magazine has been gathered and sent in to us by the people whose names appear in this list. We are deeply grateful to them for their kindness. These are not "Listening Posts" but members who took the time to get the news and to send it in during the past month.

W. H. Graham, Springs, Africa; G. P. Burdett, Monze, Rhodesia, Africa; J. H. A. Hardemann, Tjimahi, Java; J. J. Kolibonso, Batavia-Centrum, Java; H. S. Northey, Coimbatore, India; S. F. Carville, Becon Les Bruyeres, France; Inguar Gullberg, Hedemora, Sweden.

Johan P. Curriel, Curacao, D. W. I.; L. J. Niederle, Praha, Czechoslovakia; Dennis O'Flynn, Templemore, Ireland; Flavio Mascarenhas, Rio de Janeiro, Brazil; A. B. McDonough, Wellington, New Zealand.

J. M. R. Stuholme, London, England; F. W. Hennig, England; Robert J. Hughes, Trowbridge, England; Jack Jeffs, Cadishead, Lancs, England; H. Raggett, Boothville, England; R. Stevens, Romford, Essex, England; Ernest Orchard, Weymouth, England; J. E. Oram, Bournemouth, England; W. F. Eady, South Harrow, Middx, England; J. R. Garrett Pegge, Chesham, Bucks, England; Peter Shenton, Graveley, Hants, England; Don Sloper, Milksham, Wilts, England; R. J. Starr, Briercrest, Sask, Canada; Bob Morrison, Vancouver, B. C., Canada.

Stuart Walmsley, Los Angeles, California; August Balbi, Los Angeles; Ashley Walcott, San Francisco; G. C. Gallagher, San Francisco, Calif.; A. Antognini, Greenfield, Calif.; Walter McMenamy, Los Angeles, Calif.; Andrew Shassetz, Monarch, Wyoming.

H. S. Bradley, Hamilton, N. Y.; H. F. Fey, Long Island City, N. Y.; F. W. Van Hoff, Brooklyn, N. Y.; Pierre A. Portmann, Woodside, N. Y.; Gus Adler, Little Neck, N. Y.; George Diamond, Jamaica, N. Y.; Charles Ward, Brooklyn, N. Y.; Roger Legge, Jr., Binghamton, N. Y.; E. Scala, Jr., Bronx, N. Y.; Luis Salazar, New York City.

Joe Child, Philadelphia, Pa.; Fred Karpen, Johnstown, Pa.; Norman Kriebel, Ambler, Pa.; Captain R. B. Oxrieder, State College, Pa.; Robert Rossi, Philadelphia, Pa.; George Van Honk, Erie, Pa.

M. W. Smith, Marblehead, Mass.; Fred Atherton, Rutland, Vermont; John Howe, Irvington, New Jersey; J. Herbert Hyde, Elmwood, Conn.; Robert Irons, New Britain, Conn.; J. Stempel, Bridgeport, Conn.; Joseph Balsams, Lawrence, Mass.

J. B. Wooten, Mobile, Alabama; Wilfred Siddle, Birmingham, Ala.; O. Hersowitz, Baltimore, Maryland; Richard Bradley, Baltimore, Maryland; Dr. Kash, Sevierville, Tenn.; Roland Kelly, Chicago, Illinois; Tom Erwin, Herrin, Illinois; Floyd Murphy, Palestine, Illinois; Frank Grey, Berwyn, Illinois. Max Horlick, Youngstown, Ohio; Wm. Palmer, Parma, Ohio; A. Spuhler, Cleveland, Ohio; Alan Teague, Millington, Michigan; R. Verbrugge, Jr., Detroit, Michigan.

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**SELL**—Skyrider, five tube, self contained power unit, dynatic speaker. Gross Eagle. Want larger receiver, Scott, Silver, Patterson, similar. Glenn Watt, Chanute, Kansas.

### Late News

The following notes were received after the other reports were printed. The University Club of WIXAL will broadcast special programs of the Harvard Tercentenary programs from August 31st to September 10th. They will use 11.79 mc. for daytime programs and 6.04 mc. for evening programs.

CSW, National Broadcasting Station of Portugal was heard on 9.549 mc., between DJA and DJN at 6:00 P.M. one Saturday night. Announced 9.54 mc. (Oxrieder, Pa.)

Member Sloper of England says EDR3 on 28.93 meters is relaying station EA8AB, Canary Islands, between 3:00 and 4:00 P.M. and VQ7LO, Nairobi, Kenya, Africa, on 6.08 mc., broadcasts now Monday, Wednesday and Friday from 5:45 to 6:15 A.M. and 11:30 A.M. to 2:30 P.M.; Tuesday and Thursday from 5:45 to 6:15 A.M.; 8:30 to 9:30 A.M. and 11:30 A.M. to 2:30 P.M. Saturday from 11:00 A.M. to 3:00 P.M. and Sunday 11:00 A.M. to 2:00 P.M.

Dr. Kash reports HJ1ABC, Cartagena, on 9.60 mc. at 8:00 P.M. We wonder if it isn't HJ1ABE, HJ1ABP or HJ2ABC, all three of which have been mentioned in this magazine? COCX reported on 11.55 mc. (Stempel, Conn.) An amateur on 40 meters broadcasting music around midnight. Call is WK9RQ and location San Juan, Puerto Rico. (Salazar, N. Y.)

### A REAL BOUQUET

The July 18th copy of "Western Australian Wireless News" has a very nice thing to say about us. The short wave editor says "There are many fine clubs in different parts of the world, and the writer is a member of several, as well as the official representative in this state for half a dozen. To be quite candid, if you are interested only in short wave listening, then you can do no better than join the oldest and by far the best, The International Short Wave Club. There is no magazine or club in the world so up-to-date as the ISWC." Thanks very much, Australia, we do not deserve such praise, but you may rest assured that such a recommendation will inspire us to improve and carry on.

## RADIO SUPPLIES

**STATIONERY.** The club emblem, printed in blue ink, on a good grade of paper, typewriter size. Does not have a lot of names of officers and such things on it to confuse the stations. Many firms offer special discounts to I. S. W. C. members. Many station owners are I. S. W. C. members and will verify faster if this stationery is used. Price 50c per hundred, postpaid.

**CLUB SEALS.** The club emblem, printed in blue ink. For those members that wish to use their private stationery, but also wish to be known as an I. S. W. C. member. The price is 25c per hundred, postpaid.

**GLOBE.** A beautiful 12-inch globe showing the location of nearly all the short wave stations. Modern in every detail. Washable, and has a fine walnut stand. We have over 200 unsolicited letters from purchasers who have been delighted with this globe. Some members have ordered as many as six globes for their friends, after they have received their first one. Price \$2.75 F. O. B., Indianapolis. Ask your postmaster for the postage rate on eight pounds from Indianapolis and include the amount with your order.

### CHAPTER NEWS

The London, England, Chapter meets at R.A.C.S. Hall, Wandsworth Road, SW8, every Friday except the second in each month. These meetings have been well attended all summer. On Saturday July 25th they held a camp at Westerham where 5-meter experiments were held. The third annual convention will be held on Sunday, September 6th, when short wave fans from all over Europe are expected to attend. The chapter will take part in the Radiolympia Exposition which will be held from August 26th to September 5th.

The Manchester, England, Chapter opens the fall season with a special meeting on Tuesday, September 22nd and will hold meetings every Tuesday thereafter. For details write to Mr. H. Wild, 1 Elm Street, Middleton, Manchester, England.

A new chapter has been formed in Guernsey, Channel Islands. For details write to Mr. F. S. Le Pavoux, 8 Upper Canichers, Guernsey. The officers of the new chapter are J. Dowding, President; F. La Pavoux, Secretary; T. De Putron, E. Vaudin and De La Huliniere, Committee.

A new chapter in Brighton, England, will be opened the third week in September. For details write to John Bennett, 205 Braeside Ave., Brighton 6, England.

### PEN-PALS

The following people would like to exchange letters:

Bengt Lindbergh, Storgatan 22, Pitea, Sweden.  
 Warren D'Orsay, Box 306, Sydney Mines, N. S., Canada.  
 Athur Albohn, 60-21 65th Street, Ridgewood, Brooklyn, N. Y.  
 Adolph Dick, Jr., 263 Lincoln Ave., Brooklyn, N. Y. (Germany)  
 George Swimmer, 259 East Liberty Street, Hubbard, Ohio.  
 T. F. McTear, 9 Kensington Drive, Knock, Belfast, Ireland.  
 Frank Grey, 6530 Sinclair Ave., Berwyn, Illinois. (New Zealand)  
 Ian K. Henderson, 106 Waipapa Road, Hataitai, Wellington E2, N. Zealand.  
 (Listeners in Africa and Europe wanted.)

**FOR SALE**—Rare Bargains. National DC SW-5, battery operated, with coils to cover short and long waves, price \$8.00. Also National SW-35, with gain control, 20-meter band-spread coils and all coils from 9 to 600 meters, good DX set, price \$30.00. Also Scott twin-dial receiver in beautiful Tasman console cabinet, price \$35.00. Also recording machine, that makes records from blank aluminum sheets, will record programs, your own voice, etc, with microphone, complete, price \$20.00. Write to headquarters at East Liverpool for these bargains.

**Why Take  
A Chance?**

**You are protected when you buy from our advertisers!**

Advertising for this magazine is accepted only from firms who, in the opinion of the officers, are of established integrity and whose products have met the approval of officers and members. Play safe and patronize I. S. W. C. advertisers.

### NEWS FROM SIAM

Just the day before we mailed out these magazines, we received a letter from the Chief Engineer of the radio section of the Post and Telegraph Department of Bangkok, Siam. First, the letter says they have no station under the call of HSH. Then they say they have no station "radioting" on 10.25 mc. HSE is really on 10.169 mc. and not 10.005 mc. HS8PJ at Saladeng, is on 27.38 meters, 10.69 mc., and they test Mondays 8:00 to 10:00 A.M., E.S.T. They have added another broadcast Thursdays from 8:00 to 10:00 A.M. on 32.09 meters, or 9.35 mc. HSP is a commercial phone station on 16.91 meters, or 17.74 mc. And it says that this station never gave news at 1:00 A.M. as reported in our May issue, nor is it ever phoning at 1525 G.M.T. Last April they sent a special program to San Francisco on a station called HSE4 on 22.61 meters, or 13.27 mc. This was a special wavelength. They have an amateur station using the call HS1PJ at Saladeng, Bangkok, with 300 watts power on 21.12 meters, or 14.20 mc., and they are on the air every Saturday 10:00 A.M. to 12:30 P.M., E.S.T. (1500-1730 G.M.T.) All this was received too late to make the necessary corrections to our station list.

### SPATARI RADIO LANGUAGE

On August 18th and 19th, the headquarters of the club was honored by a visit from Prof. Carlo Spatari, the inventor of the new Spatari radio language. Prof. Spatari spent the better part of two days explaining the new language and pointing out the advantages that his course holds over other International languages. It was time well spent. Two things he pointed out to us should be mentioned here. The language is based on the seven musical keys; do, re, mi, fa, so, la, si; which are universally used. However, these are not sung, but merely spoken. And, the language is not hard to learn. It is not a language of words, but one of thought. You do not have to study for years to master it. Five or six of these keys, easily spoken, will equal perhaps 45 or 50 words spoken in English.

### HOW TO DIAL

Another radio season is at hand, and this means many new short wave listeners who do not understand how to tune. In this magazine you will notice that we give wavelengths in megacycles, like 6.00 and 7.00. Well, on your dials you will find figures 6 and 7, and evenly divided spaces in between these numbers. A station shown on 6.00 mc. should be heard on 6 on the dial and a station shown on 7.00 mc. will be heard on 7 on the dial, and all stations shown in our list between 6.00 mc. and 7.00 mc. will be heard in between 6 and 7 on the dial. Now, we see stations marked 6.50 and 6.10 and 6.15 mc. Some may wonder how to find these. The space in between 6 and 7 on the dial is marked off in ten even spaces. The mark nearest the figure 6 would be 6.10 mc.; the second 6.20; the third 6.30, etc. Therefore, it is not hard to locate stations like those on 6.10 and 6.15 mc. The one marked 6.15 mc. would be half way between the 6.10 and the 6.20 marks. A person can look at our list, or read our station news and dial to any given wavelength or station immediately.

### MEMBERSHIP CONTEST

The membership contest, which started in January, has come to a close and here are the winners: First prize of a beautiful Hallicrafter Super-Seven receiver, complete, is won by M. Kyaw Min, Education Department, Rangoon, Burma, with 62 memberships. Second prize of a set of dishes made in East Liverpool, the home of the I.S.W.C., is won by Dr. Paul Z. Reist, 312½ Second Avenue, South, Wasau, Wisconsin. Third prize of a set of dishes, is won by Bernard Heckel, 140 Center Street, Struthers, Ohio. Dr. Reist had 43 memberships and Mr. Heckel got 35. L. E. Hansen, Esplanade, Durban, South Africa, is fourth with 16 memberships and he wins the world globe. Members Ralph Brady of Brooklyn, New York, and S. Ogden of Manchester, England, each win a years subscription. Members Fred Baine, D. S. Valentine, Howard Muir and H. S. Northey each win one hundred seals.

Watch for the next issue for an announcement of another contest. We will try to give more prizes this time, so that if a person does not come in first place, they will still have a pretty good prize. Get all set to go. All memberships received from September 1st will be counted in this new contest. You do not have to wait to receive the October issue to start. Go to work right now and just say that you want the memberships counted in the contest.

### EQUIPMENT REPORTS WANTED

We are continually receiving letters asking us about how such and such a receiver, or antenna, or part works. The only way we can answer such letters is to have members tell us how these worked for them. We request every reader of this magazine to tell us when they purchase a new receiver, antenna or part. Give the new equipment a few days trial and then write to us and tell us how it works for you. This will enable us to pass the information along to those in need of it.

### NOTICE, HEARD-ALL-CONTINENTS MEMBERS

In an early issue of this magazine we intend to publish a list of persons who have joined the Heard-All-Continents Club. Anyone desiring to apply for a higher classification should do so now, as the list will perhaps not be run for some time again.

All persons who have let their membership in the International Short Wave Club lapse will not be listed in this H-A-C list. All persons who have made no effort to increase their rating in the past eighteen months will also not be mentioned. Those people will still hold their places in the H-A-C, but they will not be mentioned in the next list we publish, which, as we said, will be printed very soon now.

### CHANGING ADDRESS

Members should notify us immediately when they plan to move. The post office positively will not forward these magazines to a new address. If the party is not at the address shown on the envelope, the magazine is returned to us, the name is taken from the mailing list and no more copies are mailed until we hear from the member.

## POLICE STATIONS

(These stations are used by Police departments to relay messages to police cars that patrol the cities. They come on the air, send their message and go right off again. Since there are several stations on each wavelength, when one is tuned-in just keep your dial set and others will be heard. The first figure given is the wavelength in meters and the second is the wavelength in megacycles. Write dial numbers in space provided.)

120.48	2,490 ( )	122.85	2,442 ( )	KGHS, Spokane, Wash.	
WFPF,	Clarksburg, W. Va.	WPGL,	Binghamton, N.Y.	KGZN, Tacoma, Wash.	
WPDZ,	Fort Wayne, Ind.	KGPX,	Denver, Col.	WPDA, Tulare, Calif.	
WPFJ,	Hammond, Ind.	WPEB,	Grand Rapids, Mich.	WPGJ, Utica, N.Y.	
WPGO,	Huntington, N.Y.	WMDZ,	Indianapolis, Ind.		
WPDT,	Kokomo, Ind.	WPFJ,	Jacksonville, Fla.	124.69	2,406 ( )
KGZU,	Lincoln, Nebr.	WPFL,	Lakeland, Fla.	KGBZ,	Little Rock, Ark.
KGHJ,	Long Beach, Calif.	WPDL,	Lansing, Mich.	KGPW,	Salt Lake City, Utah
WPGS,	Mineola, N.Y.	WPDE,	Louisville, Ky.		
KGHX,	Santa Anna, Calif.	WPFZ,	Miami, Fla.	175.23	1,712 ( )
KGZD,	San Diego, Calif.	WNFF,	Niagara Falls, S. Y.	WPED,	Arlington, Mass.
KGHD,	Seattle, Wash.	WPFY,	Yonkers, N. Y.	WPHF,	Richmond, Va.
KGHE,	Snoqualmie, Wash.			KGPJ,	Beaumont, Texas
WPGN,	South Bend, Ind.	122.85	2,442 ( )	WPDB-C-D,	Chicago, Ill.
121.26	2,474 ( )	WPFJ,	Muskegon, Mich.	KVP,	Dallas, Texas
WPFW,	Bridgeport, Conn.	WPFX,	Palm Beach, Fla.	WPEI,	E. Providence, R.I.
WPGX,	Worcester, Mass.	KGFP,	Portland, Ore.	KGPL,	Los Angeles, Calif.
WFO,	Knoxville, Tenn.	WFFE,	Reading, Pa.	WPFN,	New Bedford, Mass.
KGHG,	Las Vegas, Nev.	WPDH,	Richmond, Ind.	WPPA,	Newton, Mass.
WPDF,	Philadelphia, Pa.	WPES,	Saginaw, Mich.	KGJX,	Pasadena, Calif.
KGHM,	Reno, Nev.	KGZR,	Salem, Ore.	WPDU,	Pittsburg, Pa.
WPFQ,	Swarthmore, Pa.			WPGF,	Providence, R.I.
WRDQ,	Toledo, Ohio	123.45	2,430 ( )	WPGV,	Boston, Mass.
121.65	2,466 ( )	WPDI,	Columbus, Ohio	KGZY,	San Bernardino, Calif.
WPGA,	Bay City, Mich.	WPDN,	Dayton, Ohio	WPEH,	Somerville, Mass.
KGOZ,	Cedar Rapids, Iowa	WPFK,	Hasenack, N.J.	KGZQ,	Waco, Texas
WPGK,	Cranston, R.I.	KGPB,	Minneapolis, Minn.		
KGPN,	Davenport, Iowa	WPEK,	New Orleans, La.	175.85	1,706 ( )
KGZG,	Des Moines, Iowa	KGZJ,	Phoenix, Ariz.	WKDU,	Cincinnati, Ohio
WPDF,	Flint, Mich.	WPGI,	Portsmouth, Ohio	WPET,	Lexington, Ky.
WPEC,	Memphis, Tenn.	WDDS,	St. Paul, Minn.	KGPC,	St. Louis, Mo.
KGPI,	Omaha, Nebr.	WPEJ,	Shreveport, La.		
WPFV,	Pawtucket, R.I.	123.80	2,422 ( )	178.36	1,682 ( )
WPGB,	Port Huron, Mich.	WMJ,	Buffalo, N.Y.	KGHO,	Des Moines, Iowa
KGPK,	Sioux City, Iowa	KGPE,	Kansas City, Mo.	WPGF,	Findlay, Ohio
WPEM,	Woonsocket, R.I.	WPFU,	Portland, Maine	179.21	1,674 ( )
122.05	2,458 ( )	KGZC,	Topeka, Kans.	KGHK,	Palo Alto, Calif.
WPDO,	Akron, Ohio	KGPG,	Vallejo, Calif.	KGPD,	San Francisco, Calif.
WPDV,	Charlotte, N.C.	WPDW,	Washington, D.C.	KGPM,	San Jose, Calif.
WRBH,	Cleveland, Ohio	124.37	2,414 ( )	KGZT,	Santa Cruz, Calif.
KGZW,	Lubbock, Texas	KGZV,	Aberdeen, Wash.	180.07	1,666 ( )
WPGD,	Rockford, Ill.	WPGH,	Albany, N.Y.	WRDS,	East Lansing, Mich.
WPDG,	Youngstown, Ohio	KGZX,	Albuquerque, N.M.	WMP,	Framingham, Mass.
KGZI,	Wichita Falls, Texas	WPDY,	Atlanta, Ga.	WPEW,	Northampton, Mass.
122.40	2,450 ( )	KGPS,	Bakersfield, Calif.	WPEL,	Bridgewater, Mass.
WPEF,	Bronx, N.Y.	WPFH,	Baltimore, Md.		
WPEE,	Brooklyn, N.Y.	WFFI,	Columbus, Ga.	180.88	1,658 ( )
KGZF,	Chanute, Kans.	WCK-WPDX,	Detroit, Mich.	KSW,	Berkeley, Calif.
KGZP,	Coffeyville, Kans.	KGZM,	El Paso, Texas	WPGC,	S. Schenectady, N.Y.
KGPO,	Honolulu, Hawaii	KGZA,	Fresno, Calif.	KGZE,	San Antonio, Texas
WPDK,	Milwaukee, Wis.	WRDR,	Grosse Point, Mich.		
WPEG,	New York, N.Y.	WMO,	Highland Park, Mich.	184.05	1,630 ( )
KGPH,	Oklahoma City, Okla.	WPGM,	Lagrange, Ga.	Fire	
WPHF,	Richmond, Va.	KGZO,	Santa Barbara, Calif.	WEY,	Boston, Mass.
KGPO,	Tulsa, Okla.	KGPF,	Santa Fe, N.M.	WKDT,	Detroit, Mich.
KGZP,	Wichita, Kans.	KGPA,	Seattle, Wash.	KGPD,	San Francisco, Calif.
				KIDA,	Seattle, Wash.

## AIRCRAFT STATIONS

This group of stations is used to relay messages to and from airplanes, such as the location of the plane, flying conditions, etc. They come on the air suddenly, deliver their message and go right off again. This list contains only the land stations, but the planes can be heard on the same wavelengths. When you tune in one, leave your dials set and others will no doubt be heard.

Frequency Index in Meters. Underlined frequencies are the ones normally used.

"A"—95.31, 94.86, 94.56, 94.27, 90.29, 58.67, 53.84, 53.73, 53.63, 52.98.

"B"—103.23, 97.63, 97.15, 60.39, 60.14, 54.45, 54.15, 52.89, 52.7.

"C"—95.92, 92.81, 92.52, 87.02, 86.77, 61.01, 53.55, 53.45, 53.26.

"D"—105.12, 99.83, 55.79.

"E"—129.53, 127.33, 86.52, 63.29, 45.87, 45.8, 45.23, 37.44.

"F"—102.67, 101.84, 100.47, 72.77, 54.07.

"G"—175.64, 104.54, 97.42, 55.5, 53.7, 46.5, 34.44, 28.35.

"H"—203.38, 45.35.

## GROUP "A"

Bakersfield, Calif. .... **KQX**  
Boise, Idaho ..... **KRA**  
Burbank, Calif. .... **KEU**  
Cheyenne, Wyo. .... **KOE**  
Cleveland, Ohio ..... **WNAK**  
Chicago, Ill. .... **WUGG**  
Des Moines, Iowa ..... **KQM**  
Elko, Nevada ..... **KKO**  
Fort Worth, Texas. .... **KGUI**  
Fresno, Calif. .... **KGT**  
Iowa City, Iowa ..... **KQQ**  
Kansas City, Mo. .... **KNAS**  
Kylertown, Pa. .... **WNAM**  
Lincoln, Neb. .... **KRF**  
Medford, Ore. .... **KGE**  
Moline, Ill. .... **WNAU**  
Newark, N. J. .... **WNAO**  
North Platte, Nebr. .... **KMR**  
Oakland, Calif. .... **KFO**  
Oklahoma City, Okla. **KNAV**  
Omaha, Neb. .... **KMP**  
Pasco, Wash. .... **KRD**  
Ponca City, Okla. .... **KGUZ**  
Portland, Ore. .... **KVO**  
Redding, Calif. .... **KTU**  
Rock Springs, Wyo. .... **KQC**  
Sacramento, Calif. .... **KFM**  
Salt Lake City, Utah. **KQD**  
San Diego, Calif. .... **KGOC**  
Seattle, Wash. .... **KZJ**  
Spokane, Wash. .... **KGZT**  
Toledo, Ohio ..... **WNAO**  
Tulsa, Okla. .... **KNAU**  
Wichita, Kansas ..... **KGTE**

## GROUP "B"

Anariku, Texas ..... **KSV**  
Albuquerque, N. M. .... **KSX**  
Burbank, Calif. .... **KSI**  
Butte, Mont. .... **KGTY**  
Camden, N. J. .... **WAEE**  
Columbus, Ohio ..... **WHG**  
Cresson, Pa. .... **WAEG**  
Cheyenne, Wyo. .... **KGTT**  
Chicago, Ill. .... **WAEQ**  
Denver, Colo. .... **KGSS**  
Goodland, Kansas ..... **KGSS**

Indianapolis, Ind. .... **WHM**  
Kansas City, Mo. .... **KST**  
Kingman, Ariz. .... **KGTL**  
Las Vegas, Nev. .... **KGJT**  
Harrisburg, Pa. .... **WAED**  
Newark, N. J. .... **WAEF**  
Oklahoma City, Okla. **KGSC**  
Pittsburgh, Pa. .... **WAEC**  
Pocatello, Idaho ..... **KGTX**  
Pueblo, Colo. .... **KGSR**  
Robertson, Mo. .... **KGTR**  
Salina, Kansas ..... **KGSM**  
Salt Lake City, Utah. **KGTH**  
San Bruno, Calif. .... **KGSB**  
Springfield, Mo. .... **KGTO**  
Tulsa, Okla. .... **KSY**  
Wichita, Kansas ..... **KGTD**  
Winslow, Ariz. .... **KGTA**

## GROUP "C"

Albany, N. Y. .... **WSDM**  
Abilene, Texas ..... **KGUL**  
Atlanta, Ga. .... **WQDP**  
Beaumont, Texas ..... **KGTV**  
Berea, Ohio ..... **WSDQ**  
Big Springs, Texas. .... **KGUG**  
Birmingham, Ala. .... **WDSE**  
Boson, Mass. .... **WSDD**  
Brownsville, Texas. .... **KGUE**  
Buffalo, N. Y. .... **WSDO**  
Burbank, Calif. .... **KGUR**  
Chicago, Ill. .... **WSDG**  
Cincinnati, Ohio ..... **WSDI**  
Columbus, Ohio ..... **WSDP**  
Detroit, Mich. .... **WAEI**  
Douglass, Ariz. .... **KGUN**  
Elmira, N. Y. .... **WAEQ**  
El Paso, Texas. .... **KGUA**  
Evansville, Ind. .... **WAEN**  
Fort Worth, Texas. .... **KGTF**  
Glendale, Calif. .... **KGUR**  
Houston, Texas ..... **KGUB**  
Indianapolis, Ind. .... **WSDZ**  
Indio, Calif. .... **KGUQ**  
Jackson, Miss. .... **WSDB**  
Lake Charles, La. .... **KGTU**  
Little Rock, Ark. .... **KGUW**  
Louisville, Ky. .... **WSDF**

Memphis, Tenn. .... **WSDK**  
Murfreesboro, Tenn. .... **WSDH**  
Mobile, Ala. .... **WAEK**  
Newark, N. J. .... **WSDC**  
New Orleans, La. .... **WQDO**  
Phoenix, Ariz. .... **KGUP**  
Robertson, Mo. .... **KGUT**  
San Antonio, Texas. .... **KGUD**  
San Diego, Calif. .... **KGQZ**  
Shreveport, La. .... **KGUK**  
Springfield, Ill. .... **WAEJ**  
Texarkana, Ark. .... **KGTB**  
Tucson, Ariz. .... **KGUO**  
Waco, Texas ..... **KGUH**  
Portables ..... **WEAP & KGSH**  
Portable ..... **WMER**

## GROUP "D"

Billings, Mont. .... **KGSK**  
Bismark, N. D. .... **KGTP**  
Chicago, Ill. .... **WSDS**  
Fargo, N. D. .... **KNFB**  
Helena, Mont. .... **KGSW**  
Madison, Wis. .... **WSDR**  
Milwaukee, Wis. .... **WAEH**  
Missoula, Mont. .... **KGSY**  
Pembia, N. D. .... **KNWC**  
Spokane, Wash. .... **KGSK**  
St. Paul, Minn. .... **KNWA**

## GROUP "E"

Blythe, Calif. .... **KGUS**

## GROUP "F"

Atlanta, Ga. .... **WEEA**  
Baltimore, Md. .... **WEEB**  
Charleston, S. C. .... **WEEC**  
Greensboro, S. C. .... **WEEG**  
Jacksonville, Fla. .... **WEEJ**  
Linden, N. J. .... **WEEN**  
McRae, Ga. .... **WEEH**  
Miami, Fla. .... **WEEI**  
Orlando, Fla. .... **WEEQ**  
Richmond, Va. .... **WEER**  
Spartanburg, S. C. .... **WEEF**  
Washington, D. C. .... **WEEK**

## GROUP "G"

Brownsville, Texas. .... **KGJW**  
Fairbanks, Alaska. .... **KFIM**  
Miami, Fla. .... **WKDL**  
San Juan, P. R. .... **WMDU**

## GROUP "H"

Suffield, Ohio ..... **WMEP**  
Portable ..... **WMEW**







## "ON-THE-AIR"

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

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

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

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

Meters	Meg.	STATION	TIME
B-13.92	-21.54	W8XK, Pittsburgh, Pa., relays KDKA, 7:00 to 9:00 A.M.	
B-13.95	-21.52	W2XE, Wayne, N. J. Relays WABC 6:30 A.M. to 10:00 A. M.	
B-13.97	-21.47	GSH, Daventry, England, 6:00 to 8:45 A.M.; 9:00 A.M. to Noon.	
T-14.01	-21.41	WKK, Lawrenceville, N. J. Phones LSN, 8:00 A.M. to 4:00 P.M.	
T-14.17	-21.16	LSL, Buenos Aires, Arg. 8:00 A.M. to 1:00 P.M. GAA and PSF.	
T-14.23	-21.08	PSA, Rio de Janeiro, Brazil. Phones WKK, WLK, daytime.	
T-14.27	-21.03	LSN, Buenos Aires, Arg. 8:00 A.M. to 4:00 P.M. WKK and WLK.	
T-14.38	-20.86	EHY-EDM, Madrid, Spain. Phones South America, mornings.	
T-14.72	-20.38	GAA, Rugby, England. Phones LSL and PPU near 8:00 A.M.	
T-14.97	-20.04	OPL, Leopoldsville, Belgian Congo. Phones ORG, mornings.	
T-14.99	-20.02	DHO, Nauen, Germany. Phones PPU and LSM mornings.	
T-15.14	-19.18	WKN, Lawrenceville, N. J. Phones GAU, daytime.	
T-15.24	-19.69	CEC, Santiago, Chile. Phones LSR, HJY near 11 A.M. and 4 P.M.	
T-15.28	-19.62	VQG, Nairobi, Kenya, Africa. Phones London, 7:30 to 8:00 A. M.	
T-15.39	-19.50	LSQ, Buenos Aires, Argentina. Heard testing near 2:00 P.M.	
T-15.50	-19.35	FTM, Assise, France. 10:00 A.M. to 2:00 P.M. LSG.	
T-15.50	-19.35	PMA, Bandoeng, Java. Phones Holland, mornings.	
T-15.57	-19.27	PPU, Rio de Janeiro, Brazil. Phones FTM, 10:30 A.M. to 3:00 P.M.	
T-15.58	-19.25	DFA, Nauen, Germany. Phones 10:00 A.M. to 2:00 P.M. irregularly.	
T-15.62	-19.21	ORG, Brussels, Belgium. Phones OPL, mornings.	
T-15.68	-19.13	LSM, Buenos Aires, Argentina. Phones EAQ, DHO, GAA, mornings.	
T-15.88	-18.89	ZSS, Klipkeuval, S. Africa. Phones GAS, 6:30 to 7; 10 to 10:45 A.M.	
T-15.93	-18.83	PLE, Bandoeng, Java. Phones Holland 6 to 11 A.M. KWX irregularly.	
T-16.06	-18.68	OCI, Lima, Peru. Testing with HJY near 2:00 P.M.	
T-16.11	-18.62	GAU, Rugby, England. Phones New York mornings.	
E-16.22	-18.48	HBH, Geneva, Switzerland. Used for special programs.	
T-16.30	-18.40	PKK, Kootwijk, Holland. Phones Java near 7:00 A.M.	
T-16.35	-18.35	WLA, Lawrenceville, N. J. Phones England 8:00 A.M. to 4:00 P.M.	
T-16.38	-18.31	GAS, Rugby, England. Phones New York mornings.	
T-16.39	-18.30	YVR, Maracay, Venezuela. Phones Germany, 10:00 A.M.	
T-16.44	-18.25	FTE, St. Assise, France. Phones LSM, PPU, mornings.	
T-16.48	-18.20	GAW, Rugby, England. Phones New York mornings.	
T-16.50	-18.18	PMC, Bandoeng, Java. Phones PCV, 3:10 to 9:20 A.M.	
E-16.55	-18.12	LSY, Buenos Aires, Argentina. Irregular.	
T-16.63	-18.04	GAA, Rugby, England. Phones Argentina, 10:00 A.M. to 2:00 P.M.	
T-16.82	-18.05	PCV, Kootwijk, Holland. 6:00 to 9:00 A.M. Java.	
B-16.68	-17.79	GSG, Daventry, England. 6:00 to 8:45 A.M., 9:00 A.M. to Noon.	
B-16.87	-17.78	W3XAL, Bound Brook, N. J. 8:00 A. M. to 3:00 P. M. daily.	
B-16.88	-17.77	PHI, Huizen, Holland, daily except Tues. and Wed., 7:30 to 9:30 A.M.	
B-16.89	-17.86	W2XE, Wayne, N. J. Relays WABC 10:00 A.M. to Noon.	
T-16.89	-17.76	IAC, Piza, Italy. Phones ships early mornings.	
B-16.89	-17.76	DJE, Zeesen, Germany, 12:05 to 11:00 A.M.	
T-16.85	-18.27	-17.80 to 16.42—Ships. Heard in daytime.	
T-16.92	-17.75	HSP, Bangkok, Siam. Works Germany, 4:30 to 6:30 A.M.	
T-17.00	-17.64	XGN, Shanghai, China, phones London 7 to 9 A.M., Mon. Wed. Sat.	
T-17.10	-17.54	VWY, Poona, India. Phones GBU, 2:00 to 8:00 A.M.	
T-17.12	-17.52	DFB, Nauen, Germany. Phones LSM and YVQ near 9:00 A.M.	

Meters	Meg.	STATION	TIME
T-17.52	-17.12	WOO, Ocean City, New Jersey.	Phones ships, irregularly.
T-18.20	-16.12	IRY, Rome, Italy, phoning	7:00 A.M. to 1:30 P.M.
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	ZFR, Saigon, Indo-China.	Phones Paris mornings.
T-18.71	-16.04	KKP, Kauhuku, Hawaii.	Phones KWU 1:00 to 7:00 P.M.
T-18.89	-15.88	FTK, St. Assise, France.	Phones Saigon 8:30 to 11:00 A.M.
T-18.99	-15.80	XOJ, Shanghai, China.	Phones Japan 5:00 P.M. to midnight.
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 Java 3:00 to 5:00 A.M.
T-19.20	-15.61	JVF, Nazaki, Japan, phones	USA near 5:00 A.M. and 8:00 P.M.
T-19.47	-15.41	KWO, Dixon, California.	Phones Hawaii in place of KWU.
E-19.50	-15.46	KKR, Bolinas, California.	Tests irregularly.
B-19.52	-15.37	HAS-3, Budapest, Hungary.	Sundays 9:00 to 10:00 A.M.
T-19.54	-15.35	KWU, Dixon, California.	Phones Hawaii, 2:00 to 7:00 P.M.
B-19.56	-15.34	DJR, Zeesen, Germany.	8:00 to 10:00 A.M.
B-19.56	-15.33	W2XAD, Schenectady, N. Y.	10:00 A.M. to 3:45 P.M. daily.
B-19.60	-15.31	GSP, Daventry, England.	6:00 to 8:00 P.M.
B-19.62	-15.29	LRU, Buenos Aires, Arg.,	7:00 A.M. to 4:45 P.M.
B-19.63	-15.28	DJO, Zeesen, Germany.	5:00 o 11:00 A.M.; 4:50 to 10:45 P.M.
B-19.64	-15.27	W2XE, Wayne, N. J.	Relays WABC noon to 5:00 P.M.
T-19.68	-15.25	RIM, Tashkent, U.S.S.R.	Phones RKI near 7:00 A.M.
B-19.68	-15.24	TPA2, Pontoise, France,	1:00 to 4:00 and 5:00 to 10:00 A.M.
B-19.68	-15.25	W1XAL, Boston, Mass.,	Schedule not known.
B-19.69	-15.23	Podebrady, Czechoslovakia.	See news section.
B-19.71	-15.22	PCJ, Eindhoven, Holland,	Sun. 6:30-7:30; Tues. 4-6; Wed. 7-11 A.M.
B-19.71	-15.21	W8XK, Pittsburgh, Pa.	Relays KDKA 9:00 A.M. to 7:00 P.M.
B-19.74	-15.20	DJB, Zeesen, Germany,	12:05 to 5:15 A.M.; 5:55 to 11:00 A.M.;
			4:50 to 10:45 P.M. (Sunday 11:10 to 12:20 P.M.)
B-19.76	-15.18	GSO, Daventry, England,	3:40 to 5:45 P.M.
B-19.76	-15.18	Moscow, U.S.S.R.,	Sundays 1:30 to 2:30 P.M.
B-19.82	-15.14	GSE, Daventry, England.	9-12 A.M.; 3:40-5:45; 9:00-11:00 P.M.
B-19.84	-15.11	HVJ, Vatican City.	10:30 to 10:45 A.M. daily.
B-19.85	-15.11	DJL, Zeesen, Germany,	12:00 to 2:00; 8:00 to 10:00 A.M.; 11:25 to
			4:30 P.M. (Sunday 6:00 to 8:00 A.M.)
B-19.89	-15.08	RKI, Moscow, U.S.S.R.,	Sundays 10-11 A.M.; phones 10 P.M.-10 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.
B-20.04	-14.97	LZA, Sofia, Bulgaria.	Sunday 12:30 to 8:00 A.M.; 10:00 A.M. to 4:30
			P.M.; weekdays 5:00 to 7:00 A.M.; Tues., and Thurs. 1 to 3 P.M.
T-20.08	-14.94	HJB, Bogota, Colombia,	phones WNC daytime.
T-20.08	-14.94	HII, Trujillo, Dominican	Republic, phones WNC daytime.
T-20.08	-14.94	HJA, Barranquilla, Colombia,	phones WNC, Florida.
T-20.19	-14.86	OCJ2, Lima, Peru.	Phones HKB-HJY-LSN, daytime.
E-20.27	-14.80	WQV, Rocky Point, N. Y.,	heard irregularly.
T-20.29	-14.79	ROU, Omsk, Siberia,	phones Moscow 7:00 to 9:00 A.M. irregularly.
T-20.37	-14.73	IQA, Rome, Italy,	phones 8:00 to 11:00 A.M. irregularly.
T-20.42	-14.69	PSF, Rio de Janeiro, Brazil.	7 A.M. to 6 P.M. LSL, WLK, WOK
T-20.45	-14.67	GBL, Rugby, England.	Phones JVH 1:00 to 7:00 A.M.
B-20.55	-14.60	JVH, Nazaki, Japan,	12:00 to 1:00 A.M.; 4:00 to 7:40 A.M. daily.
			Mon. and Thurs. 4:00 to 5:00 P.M.; Tues. and Fri. 2 to 3 P.M.
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, Salvador.	Phones WNC afternoons.
T-20.71	-14.48	HRL5, Nacaome, Honduras,	testing with WNC daytime.
T-20.71	-14.48	TIU, Cartago, Costa Rica,	phones WNC daytime.
T-20.71	-14.48	YNA, Managua, Nicaragua,	phones WNC daytime.
T-20.71	-14.48	HPF, Panama, phones	WNC daytime.
T-20.71	-14.48	HRF, Tegucigalpa, Honduras,	phones WNC daytime.
T-20.71	-14.48	TGF, Guatemala City,	phones WNC daytime.

Meters	Meg.	STATION	TIME
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.
B-20.75	14.46	DZH, Zeesen, Germany.	4:00 to 7:00 P.M.
E-20.97	to 21.26	14.30 to 14.11	Amateur phones heard in daytime.
T-21.19	13.88	VJZ, Rabaul, New Guinea.	Testing at 5:00 P.M. and 5:00 A.M.
B-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-21.70	13.83	SUZ, Cairo, Egypt.	Phones GAA 7:00 A.M. to 3:30 P.M.
E-21.91	13.69	KKZ, Bolinas, California.	Used irregularly.
T-21.98	13.65	HJY, Bogota, Colombia.	Phones irregularly.
B-22.00	13.63	SPW, Warsaw, Poland.	Mon., Wed. and Fri., 11:30 A.M. to 12:30 noon.
T-22.09	13.58	GBB, Rugby, England.	Phones Canada and Egypt, daytime.
T-22.37	13.41	YSJ, Asmvador, 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-22.48	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	IRJ, Rome, Italy,	phones Japan irregularly 5:00 to 8:00 A.M.
E-22.76	13.18	DGG, Nauen, Germany.	Phones Asia mornings, irregularly.
B-22.95	13.07	VPD, Suva, Fiji Islands.	Daily, except Sun., 12:30 to 1:30 A.M.
T-23.36	12.84	WOO, Ocean Gate, N. J.	Phones ships irregularly.
T-23.38	12.83	CNR, Rabat, Morocco.	Phones St. Assise 5:00 to 8:00 A.M.
T-23.45	12.80	IAC, Piza, Italy.	Works ships mornings.
T-23.47	12.78	GBC, Rugby, England.	Phones ships irregularly.
T-24.20	12.40	DAF, Norden, Germany.	Phones ships irregularly, mornings.
T-24.40	12.30	PLM, Bandoeng, Java.	Phones VK2ME near 6:30 A.M.
T-24.41	12.29	GBU, Rugby, England.	Phones America, evenings.
E-24.52	12.24	TFJ, Reykjavik, Iceland.	Phones CSC irregularly.
T-24.56	12.22	TYA, Pontoise, France.	Phones the Normandie, irregularly.
T-24.69	12.15	GBS, Rugby, England.	Phones New York.
E-24.73	12.13	DZE, Zeesen, Germany.	7:00-9:00 A.M., 5:00-9:00 P.M., irreg.
B-24.99	12.01	COCX, Havana, Cuba,	testing irregularly.
B-25.00	12.00	RNE, Moscow, U.S.S.R.,	daily 2:00 to 5:00 P.M.; Wed. 6:00 to 7:00 A.M.; Sundays, 6:00 to 7:00 A.M. and 10:00 to 11:00 A.M.
T-25.02	11.99	FZS, Saigon, Indo-China.	Phones Paris mornings.
E-25.11	11.97	KKQ, Bolinas, California.	Heard irregularly, evenings.
T-25.12	11.95	FTA, St. Assise, France.	Phones CNR 4 to 7 A.M., LSM 10 to 12 P.M.
B-25.21	11.90	XEWI, Mexico City,	heard in daytime.
B-25.27	11.88	TPA3, Pontoise, France,	2:00 to 4:00 A.M.; 10:15 to 5:00 P.M.
B-25.27	11.87	W8XK, Pittsburgh, Pa.,	relays KDKA 5:00 to 9:00 P.M.
B-25.36	11.83	W2XE, Wayne, N. J.	Relays WABC 5:00 to 9:00 P.M.
B-25.36	11.83	W9XAA, Chicago, Ill.	Schedule not known now.
B-25.40	11.81	2RO4, Rome, Italy,	6:43 to 10:30 A.M.; 11:30 to 7:45 P.M.
B-25.42	11.79	WIXAL, Boston, Mass.,	Sun. 3:30 to 5:00; Mon., Fri., 5:30 to 7 P.M.
B-25.49	11.77	DJD, Zeesen, Germany,	11:35 to 4:30 and 4:50 to 10:45 P.M.
B-25.51	11.76	Podebrady, Czechoslovakia.	See news section.
B-25.53	11.75	GSD, Daventry, England,	1:15 to 3:15 A.M.; 12:15 to 3:25; 6 to 8 P.M.
B-25.60	11.72	CJRX, Winnipeg, Canada,	6:00 P.M. to Midnight.
B-25.63	11.71	TPA4, Pontoise, France.	6:15 to 9:00 P.M., 10:00 P.M. to 1:00 A.M.
B-25.63	11.71	SM5SX, Stockholm, Sweden,	1:45 A.M. to 5:00 P.M. irregularly.
E-25.63	11.71	KIO, Kauhuku, Hawaii.	Heard in the evenings testing.
E-25.87	11.59	VR44, Stony Hill, Jamaica.	Testing with WNC in daytime.
E-26.09	11.50	VIZ3, Fiskville, Australia.	Phones CJA4 irregularly.
B-26.09	11.50	PMK, Bandoeng, Java,	heard 4:00 to 9:30 A.M. irregularly.
E-26.09	11.50	XAM, Merida, Yucatan.	Irregularly 1:00, 6:00 and 7:00 P.M.
T-26.35	11.39	HBO, Geneva, Switzerland.	Used irregularly.
B-26.60	11.28	HIN, Trujillo, D. R.,	6:00 to 10:00 P.M. irregularly.
T-27.15	11.05	ZLT, Wellington, New Zealand.	Phones VLK 1:00 to 7:00 A.M.
B-27.25	11.00	PLP, Bandoeng, Java,	daily 4:00 to 10:00 P.M.
T-27.26	11.00	XBJQ, Mexico City.	Testing irregularly now.

Meters	Meg.	STATION	TIME
T-27.35	-10.97	OCI, Lima, Peru.	Phones HJY, evenings.
T-27.67	-10.84	KWV, Dixon, California.	Phones Hawaii, daytime.
E-27.65	-10.85	DFL, Nauen, Germany.	Irregular.
T-27.86	-10.77	GBP, Rugby, England.	Phones VLK 11:00 P.M. to 8:00 A.M.
E-27.93	-10.74	JVM, Nazaki, Japan, Tues., Fri.,	2 to 3 P.M. Phone 1:30 to 7:40 A.M.
T-28.09	-10.68	WNB, Lawrenceville, N. J.	Phones Bermuda, daytime.
T-28.12	-10.67	PLQ, Bandoeng, Java.	Heard testing broadcast 5 to 10 A.M., irreg.
B-28.12	-10.67	JEC, Santiago, Chile, daily 7 to 8 P.M.	Thurs., Sun., 8:30 to 9 P.M.
T-28.14	-10.66	JVN, Nazaki, Japan. Bcds. Tues. & Fri.	2-3 P.M., Mon. & Thur. 4-5 P.M.
E-28.28	-10.61	WEA, Rocky Point, N. J.	Tests irregularly with Europe.
T-28.44	-10.55	WOK, Lawrenceville, N. J.	Phones Brazil and Argentina, irregularly.
T-28.49	-10.53	JIB, Taiwan, Japan,	phones 1:00 to 10:00 A.M.
T-28.51	-10.52	VK2ME-VLK, Sydney, Australia.	1:00 to 8:00 A.M. GBP.
T-28.79	-10.42	XGW, Shanghai, China,	phones Japan Midnight to 3:00 A.M.
T-28.80	-10.42	PKK, Kootwijk, Holland.	Phones Java, 7:30 to 9:40 A.M.
T-28.80	-10.40	YBG, Medan, Sumatra.	5:30-6:30, 12:30-1:30 A.M., 7:30-8:30 P.M.
E-28.85	-10.40	KEZ, Bolinas, California.	Used irregularly.
E-28.91	-10.38	WCG, Rocky Point, N. Y.	Tests irregularly.
B-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.
E-29.15	-10.29	DZC, Zeesen, Germany.	3:00 to 9:00 P.M., Irregular.
B-29.25	-10.26	PMN, Bandoeng, Java,	5:30 to 10:30 A.M.
E-29.27	-10.25	LSL, Buenos Aires, Argentina,	testing 5:30 to 7:00 P.M.
E-29.33	-10.23	CED, Antofagastan, Chile,	heard 7:00 to 9:30 P.M. irregularly.
T-29.45	-10.22	PSH, Rio de Janeiro, Brazil.	Sending music, evenings.
T-29.50	-10.17	RIO, Bakou, U.S.S.R.	Phones Moscow 8-10 A.M., 10 P.M. to 1 A.M.
T-29.58	-10.14	OPM, Leopoldville, Belgian Congo.	Phones ORK 9-11 A.M., 3-6 P.M.
T-29.76	-10.08	RIR, Tiflis, Siberia.	Phones Moscow 5:00 to 8:00 A. M., irregularly.
T-29.79	-10.07	EHY, Madrid, Spain.	Phones YVR near 4:00 P.M., irregularly.
T-29.80	-10.06	TDF, Shinnio, Manchukuo,	phones Japan, 3:00 to 9:00 A.M.
T-29.83	-10.05	ZFB, Hamilton, Bermuda.	Phones U.S.A. and ships, daytime.
T-29.83	-10.05	SUV, Cairo, Egypt.	Phones GAA after 3:30 P.M.
E-29.88	-10.04	DZB, Zeesen, Germany.	7:00 to 9:00 P.M.
T-30.09	-9.97	KAZ, Manila, P. I.	Phones PLV near 2:00 A.M.
T-30.15	-9.95	GSU, Rugby, England.	Phones New York evenings.
T-30.21	-9.93	HKB, Bogota, Colombia.	Phones PSK irregularly, evenings.
T-30.30	-9.90	LSN, Buenos Aires, Argentina.	6:00 P.M. to 6:00 A.M. WLO.
T-30.40	-9.87	WON, Lawrenceville, N. J.	Phones England evenings.
E-30.40	-9.87	JYS, Kemikawa-Cho, Japan.	Relays JOAK Irreg., mornings.
B-30.43	-9.86	EAQ, Madrid, Spain.	5:15 P.M. to 9:30 P.M. daily. Sat. 1-3 P.M.
T-30.52	-9.83	IRM, Rome, Italy.	Phones Egypt afternoons.
T-30.60	-9.80	CGW, Rugby, England.	Phones America, evenings.
E-30.61	-9.80	LSI, Buenos Aires, Argentina.	Used irregularly, evenings.
T-30.75	-9.76	VK2ME-VLK, Sydney, Australia.	Phones Java 4:00 to 8:00 A.M.
T-30.77	-9.75	WOF, Lawrence, N. J.	Phones England, evenings.
B-30.77	-9.75	COCQ, Havana, Cuba,	7:00 A.M. to 1:00 A.M. next day.
T-30.90	-9.71	GCA, Rugby, England.	Phones Argentina around 6:00 P.M.
B-30.96	-9.69	TI4NRH, Heredia, Costa Rica,	8 to 9 P.M. and 11:30 P.M. to midnite
B-30.99	-9.68	YNLF, Managua, Nicaragua,	heard between 4:00 and 10:00 P.M.
B-31.00	-9.67	DZA, Zeesen, Germany,	5:00 to 7:00 P.M.
B-31.06	-9.66	LRX, Buenos Aires, Argentina,	5:00 to 11:00 P.M. irregularly.
T-31.08	-9.65	DGU, Nauen, Germany.	Phones Egypt in daytime.
B-31.09	-9.65	CT1AA, Lisbon, Portugal.	Tues., Thur. & Sat. 3:30 to 6:00 P.M.
B-31.10	-9.65	YDB, Soerabaja, Java,	daily 4:30 to 10:00 A.M.; Sat. until 11:00.
B-31.13	-9.64	ZRO, Rome, Italy,	daily excepting Sunday 6:00 to 7:30 P.M.
B-31.22	-9.61	HJ1ABP, Cartagena, Colombia,	11:00 A.M. to 1:00; 5 to 11 P.M.
B-31.22	-9.61	HH3W, Port-Au-Price, Haiti.	1:00-2:00 P.M., 7:00-8:30 P.M. P.M.
B-31.25	-9.60	HP5J, Panama City,	11:45 A.M. to 1:00; 7:30 to 11:00 P.M.
B-31.25	-9.60	CB960, Santiago, Chile.	Heard 9:30 P.M. to 1:00 A.M., Irreg.
B-31.27	-9.59	HBL, Geneva, Switzerland.	5.30 to 6.15 P. M., Saturday.
B-31.28	-9.59	VK2ME, Sydney, Aust.,	Sunday 12-2; 4:30-8:30; 11:30 A.M. to 1:30.
B-31.28	-9.59	RAN, Moscow, U.S.S.R.,	daily 7:00 to 8:00 P.M.

Meters	Meg.	STATION	TIME
B-31.28	9.59	PCJ, Eindhoven, Holland, Wednesdays	7:00 to 10:00 P.M.; Sunlays 7:30 to 8:30 A.M.; 1:00 to 2:00; 7:00 to 8:00 P.M.
B-31.31	9.58	VK3LR, Melbourne, Australia.	10:30-3:00 irreg.; 3:15-7:30 A.M., daily.
B-31.32	9.58	GSC, Daventry, England.	6:00-8:00 P.M. and 9:00-11:00 P.M.
B-31.35	9.57	HJ2ABC, Cucuta, Colombia.	11:00 A.M. to noon; 6:00 to 9:30 P.M.
B-31.35	9.57	CQN, Macao Port, China, Monday and Friday	7:00 to 8:30 A.M.
B-31.36	9.57	W1XK, Boston (Millis), Mass.	5:00 A.M. to 11:00 P.M.
B-31.36	9.57	VUB, Bombay, India, Wed., Thurs., and Sat.	11:00 A.M. to 12:30 P.M.
B-31.38	9.56	HJ1ABB, Barranquilla, Colombia, heard Noon	to 6:00 P.M. testing.
B-31.38	9.56	DJA, Zeesen, Germany,	12:05 to 5:15 A.M.; 4:50 to 10:45 P.M.
B-31.41	9.55	TIPG, San Jose, Costa Rica,	12:00 to 2:00; 6:00 to 11:30 P.M.
B-31.45	9.54	DJN, Zeesen, Germany,	12:05 to 5:15 A.M.; 4:50 to 10:45 P.M.
B-31.48	9.53	LKJ1, Jeloy, Norway.	5:00-8:00 A.M., 11:00 A.M. to 6:00 P.M.
B-31.48	9.53	W2XAF, Schenectady, N. Y., daily	4:00 P.M. to Midnight.
B-31.54	9.51	HC2JSB, Guayaquil, Ecuador,	12:00 to 2:00; 4:00 to 11:00 P.M.
B-31.55	9.51	GSB, Daventry, England,	1:15 to 3:15 A.M.; 12:15 to 5:45 P.M.
B-31.55	9.51	VK3ME, Melbourne, Australia.	Week-days 4:00 to 7:00 A.M.
B-31.55	9.51	HJU, Buenaventure, Colombia.	12-2 P.M., 8-11 P.M., Mon., Wed., Fri
B-31.55	9.51	GSB, Daventry, England,	11:30 P.M. to 1:30 A.M.; 12:15 to 5:45 P.M.
B-31.56	9.50	PRF5, Rio de Janeiro, Brazil,	Daily 4:45 to 5:45 P.M., also irreg.
B-31.58	9.50	HJ1ABE, Cartagena, Colombia,	7:30 to 9:30 daily; Mon. 10:30 P.M.
T-31.71	9.46	Tripoli, Africa. Phones IAC, Italy,	6:00 A.M. to 1:00 P.M., irreg.
B-31.75	9.45	TGW, Guatemala City.	9:00 P.M. Saturdays to 6:00 A.M. Sunday.
B-31.80	9.42	COCH, Havana, Cuba,	7:00 A.M. to 1:00 A.M. next day.
T-31.86	9.42	PLV, Bandoeng, Java.	Broadcasts Tues. and Thurs., 10:00-10:30 A.M.
B-31.98	9.38	CSW, Lisbon, Portugal,	between 5:00 and 7:00 P.M. irregularly.
B-32.09	9.35	IISBPJ, Bangkok, Siam,	Thursdays 7:30 to 10:00 A.M.
T-32.15	9.33	CGA4, Drummondville, Canada.	Phones ships and England, irregularly.
T-32.33	9.28	GCB, Rugby, England.	Phones CGA and SUV afternoons.
T-32.72	9.17	WNA, Lawrenceville, N. J.	Phones England evenings.
T-32.83	9.14	YVR, Maracay, Venezuela.	Phones Europe afternoons.
B-32.88	9.12	HAT-4, Budapest, Hungary.	Sundays 6:00 to 7:00 P.M.
T-33.26	9.02	GCS, Rugby, England.	Phones New York evenings.
E-33.29	9.01	KEJ, Bolinas, California.	Tests irregularly.
B-33.50	8.95	HCJB, Quito, Ecuador,	daily except Mon., 7:30 to 9:30 P.M.
E-33.52	8.95	WEL-W2XBJ, Rocky Point, N. Y.	Testing irregularly, evenings.
T-33.41	8.98	VWY, Poona, India.	Phones England near 8:30 A.M.
T-33.93 to	36.58-8.84 to 8:20	Ships.	Heard irregularly.
E-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.
B-34.29	8.75	ZBW, Hong Kong, China.	Daily 11:30 P.M. to 1:15 A.M., Mon. and Thurs. 3:00 to 7:00 A.M., other days 6:00 to 10:00 P.M.
T-34.56	8.68	GBC, Rugby, England.	Phones ships irregularly.
B-34.62	8.66	CO9JQ, Camaguey, Cuba.	5:30 to 6:30 P.M.; 8:00 to 9:00 P.M.
E-34.68	8.65	VVD, Seattle, Wash.	Testing irregularly.
B-34.72	8.64	YNVA, Managua, Nicaragua.	7:30 to 9:30 P.M., Irregular.
T-35.02	8.57	WOO, Ocean Gate, N. J.	Phones ships irregularly.
T-35.42	8.47	DAF, Norden, Germany.	Phones ships irregularly.
B-35.69	8.41	HC2CW, Guayaquil, Ecuador.	8:00 to 11:30 P.M., irregular.
T-35.80	8.38	IAC, Piza, Italy.	Works ships, irregularly.
T-36.65	8.19	PSK, Rio de Janeiro, Brazil.	Sending music 6:00 to 7:30 P.M.
B-36.65	8.19	NFME, Merida, Mexico,	9:00 A.M. to Noon, 5:00 to 11:00 P.M.
B-36.95	8.12	KTP, Manila, P. I.	Phones KWX 10:30 to 11:00 A.M.
T-38.06	7.86	SUX, Cairo, Egypt.	Phones Rome and London afternoons.
B-38.47	7.80	HBP, Geneva, Switzerland.	5:30 to 6:15 P.M. Saturdays.
E-38.50	7.78	PSZ, Rio de Janeiro, Brazil.	Heard between 6:00 and 11:00 P.M., irreg.
E-38.89	7.71	KEE, Bolinas, California.	Tests evenings irregularly.
T-39.34	7.63	RIM, Russia.	Phones RK1 6:00 to 8:15 A.M.
T-39.42	7.61	KWX, Dixon, California.	Phones Hawaii nights.
B-39.47	7.60	TI8WS, Puntarenas, Costa Rica,	heard 6:00 to 11:00 P.M. irregularly.
T-39.89	7.52	KKH, Kauhuku, Hawaii.	Phones KWO evenings.
T-39.97	7.50	RK1, Russia.	Phones RIM 6:00 to 8:15 A.M.
T-40.60	7.39	ZLT2, Wellington, New Zealand,	phones Sydney 3:00 to 7:00 A.M. irreg.

Meters	Meg.	STATION	TIME
B-40.65	7.38	KECR, Mexico City, broadcasts Sundays 6:00 to 8:00 P.M.	
Γ-40.71	7.37	KEQ, Kauhuku, Hawaii. Phones Dixon nights.	
B-41.55	7.22	HKE, Bogota, Colombia. Mon. 6 to 7 P.M.; Tues., Fri., 8 to 9 P.M.	
B-41.55	7.22	VP3BG, Georgetown, B. G., between 3:00 and 8:45 P.M. irregularly.	
B-41.60	7.21	EA8AB, Tenerife, Canary Islands, Mon., Fri., 3:15 to 4:15 P.M.	
B-41.80	7.17	CR6AA, Lobito, Angola, Africa, Wed., and Sat., 2:30 to 4:30 P.M.	
B-42.35	7.08	P11J, Dordrecht, Holland, Saturdays 10:10 to 11:10 A.M.	
B-42.88	7.00	PZH, Paramaribo, Dutch Guiana, 2:40 to 9:40 P.M. irregularly.	
E-43.00	6.98	NBA, Tacubaya, Mexico, 9:30 A.M. to 1:00; 7:00 to 8:30 P.M.	
Γ-43.45	6.90	GDS, Rugby, England. Phones New York nights.	
E-43.82	6.84	KEN, Bolinas, California. Used irregularly.	
B-43.80	6.85	XGON, Nanking, China, daily 6:00 to 9:00 A.M.	
B-44.12	6.80	H17P, Trujillo, D. R. Heard 7:30 to 9:00 P.M.	
B-44.31	6.67	H1H, San Pedro De Macoris, D. R. 7:30 to 9:00 P.M. daily.	
Γ-44.41	6.75	WOA, Lawrenceville, N. J. Phones England nights.	
T-44.44	6.75	JVT, Nazaki, Japan. 1:30 to 8:00 A.M., oftines with music.	
B-44.58	6.73	H13C, La Rorrano, D. R., 12:30 to 2:00 P.M.; 5:00 to 6:00 P.M.	
B-44.71	6.71	T1EP, San Jose, Costa Rica. 5:00 to 10:00 P.M., irregularly.	
B-44.90	6.70	TI2M, San Jose, Costa Rica, heard 9:00 to 11:00 P.M. irregularly.	
E-44.96	5.67	YVQ, Maracay, Venezuela. Broadcasts 8:00 to 8:30 P.M. Saturday.	
B-45.00	6.66	ZP10 Asuncion, Paraguay, heard 10:00 to 11:45 P.M. irregularly.	
B-45.00	6.67	HC2RL, Guayaquil, Ecuador. Sun. 5:45-7:45, Tues. 9:15-11:15 P.M.	
T-45.10	6.65	IAC, Piza, Italy. Phones ships evenings.	
B-45.18	6.64	YV9RC, Caracas, Venezuela, 7:00 to 11:00 P.M. irregularly.	
B-45.31	6.62	PRADO, Riobamba, Ecuador Thursdays 9:00 to 11:30 P.M.	
B-45.25	6.63	HIT, Trujillo, D. R., 12:10 to 1:40; 5:40 to 8:40 P.M. weekdays.	
E-45.80	6.55	NBC, Vera Cruz, Mexico, 8:15; 9:00; 11:00 A.M.; 6:00; 8:00 P.M.	
B-45.81	6.55	TIRC, San Jose, Costa Rica, daily 6 to 7; Thurs., Sun., 6 to 11 P.M.	
B-45.81	6.55	HI4D, Trujillo, D. R. 11:55 to 1:40 P.M., 4:40 to 7:40 P.M.	
B-45.85	6.54	YV11RB, Bolivar, Venezuela, testing between 9:00 and 11:00 P.M.	
B-46.01	6.52	YV6RV, Valencia, Venezuela. 12:00-2:00 P.M. and 6:00-10:00 P.M.	
B-46.13	6.50	H1L, Trujillo, D. R., 11:40 to 1:40; 5:40 to 7:40 P.M. daily.	
B-46.30	6.48	H14V, Trujillo, D. R., 11:40 A.M. to 1:40 P.M.; 5:00 to 10:00 P.M.	
B-46.30	6.48	EJ5ABD, Cali, Colombia. 7:00 to 10:00 P.M.	
B-46.51	6.45	HJ4ABC, Ibague, Colombia, 11:00 A.M. to Noon; 8 to 11 P.M. daily.	
B-46.51	6.45	HJ1AB, Barranquilla, Colombia. 4:30 to 10:00 P.M. daily.	
B-46.73	6.42	HI1S, Puerto Plata, D. R., 11:40-1:40; 5:40-7:40; 9:40 to 11:40 P.M.	
E-46.73	6.42	W9XBS, Chicago, Illinois. Heard irregularly broadcasting.	
E-46.77	6.41	HJA3, Barranquilla, Colombia. Phones HJA2, irregular.	
B-46.80	6.41	TIPG, San Jose, Costa Rica, 12:00 to 2:00 P.M.; 6:00 to 11:30 P.M.	
B-47.10	6.37	YV4RC, Caracas, Venezuela. 4:30 P.M. to 10:30 P.M.	
B-47.24	6.35	HRV, Tegucigalpa, Honduras, heard testing 6:45 to 9:30 P.M.	
B-47.32	6.34	HH3NW, Port Au Prince, Haiti, 1:00 to 2:00; 7:00 to 8:00 P.M.	
B-47.39	6.33	HRP1, San Pedro Sula, Honduras, heard 6:30 to 10:00 P.M. irreg.	
E-47.39	6.35	JZG, heard relaying JVT, JOAK from 5:00 to 7:30 A.M., irregularly	
B-47.50	6.31	HIZ, Trujillo, D. R., 11:30 to 2:45; 5:30 to 9 P.M. daily; Sat. 10 P.M.	
B-47.51	6.30	YV12RM, Maracay, Venezuela, 8:00-10:30 daily; 4:30-11:00 P.M. irreg.	
B-47.77	6.28	CO9WR, Sancti Spiritus, Cuba. 9-10 AM, 12-1 P.M., 4-6 PM., 9-11 PM.	
B-47.77	6.28	HIG, Trujillo, D. R. 7:10-8:40 A.M., 12:40-2:10 P.M., 8:10-9:40 P.M.	
B-48.00	6.25	OAX4G, Lima, Peru, daily 7:00 to 10:30 P.M., Wed. at 6:00 P.M.	
B-48.08	6.24	H1N, Trujillo, D. R., 6:00 to 10:00 P.M. irregularly.	
B-48.08	6.24	H18Q, Trujillo, D. R., 10:40 A.M. to 1:40 P.M.; 4:40 to 7:40 P.M.	
B-48.11	6.23	HRD, La Ceiba, Honduras, Sunday 4 to 6 P.M.; weekdays 8 to 11 P.M.	
B-48.50	6.19	HI1A, Santiago de los Cabaleros, D. R., 11:40 to 1:40; 7:40-9:40 P.M.	
B-48.55	6.18	XEXA, Mexico City, 6-9 A.M.; 1:00-2:45; 5-9 P.M.	
B-48.60	6.17	HJ2AB, Tunja, Colombia. 1:00-2:00 P.M. and 7:00 to 10:00 P.M.	
B-48.62	6.17	HJ3ABF, Bogota, Colombia 7:00 to 11:15 P.M.	
B-48.70	6.16	YV3RC, Caracas, Ven., 10 A.M. to 1:00 P.M.; 3:00 to 9:30 P.M.	
B-48.78	6.15	COKG, Santiago, Cuba. 8:30 A.M. to 11:00 P.M.	
B-48.80	6.14	ZEB, Bulawayo, Rhodesia, Sun. 3-5 A.M.; Tues. and Fri. 1:15-3:15 P.M.	
B-48.80	6.15	HI1N, Trujillo, D. R., 6:40 to 9:10 P.M.	
B-48.80	6.15	CJRO, Winnipeg, Canada, 6:00 P.M. to Midnight.	
B-48.86	6.14	W8XK, Pittsburgh, Pa. Relays KDKA 9:00 P.M. to 1:00 A.M.	

Meters	Meg.	STATION	TIME
B-48.86	6.14	HJ4ABU, Pereira, Colombia,	9:00 to 11:00 A.M.; 7:00 to 8:00 P.M.
B-48.90	6.13	HJ4ABD, Medellin, Colombia,	8:00 to 11:30 P.M.
B-48.92	6.13	HIN, Trujillo, D. R., daily	4:40 to 5:40 P.M.; Tuesday and Friday 8:10 to 10:10 P.M.; Sundays 7:40 to 10:40 A.M.
B-48.92	6.13	ZGE, Kuala Lumpur, S. S.	Sun., Tues. and Fri., 6:40 to 8:40 A.M.
B-48.92	6.13	VE9HX, Halifax, Canada.	9:30-1:30 P.M., 5:00 to 11:00 P.M.
B-48.92	6.13	CODD, Havana, Cuba.	Heard 5:00 P.M. to 1:00 A.M., irregularly.
B-49.00	6.12	HJ3ABX, Bogota, Colombia.	Heard 6:00 to 11:30 P.M., irreg.
B-49.02	6.12	XEFT, Vera Cruz, Mexico.	11:30 to 4:00 P.M., 7:30 P.M. to 12 M
B-49.02	6.12	W2XE, Wayne, N.J.	Relays WABC 7:00 to 10:00 P.M.
B-49.10	6.11	VUC, Calcutta, India.	9:30 A.M. to Noon, Sat. 11:45 P.M. to 3 A.M
B-49.05	6.11	Podebrady, Czechoslovakia.	See news section.
B-49.15	6.10	HJ4ABB, Manizales, Colombia.	8:00 to 11:30 P.M., irregularly.
B-49.18	6.10	Belgrade, Yugoslavia,	12:55 to 3:00 A.M.; 5:15 to 8:15 A.M.; 1:00 to 6:00 P.M. daily. Sundays 4:00 to 5:00 A.M.
B-49.18	6.10	W3XAL, Bound Brook, N.J.	Mon., Wed. & Sat. 4 P.M. to 1 A.M.
B-49.18	6.10	W9XF, Chicago, Ill.	Daily 12-1 A.M. Sun., Tue. & Thur. 8-1 A.M.
B-49.20	6.09	ZTJ, Johannesburg, Africa.	3:30 o 7:00 A.M.; 9:00 A.M. to 4:00 P.M
B-49.22	6.09	CRXC, Bowmanville, Canada.	5:30 to 11:30 P.M. daily, 11:45 A.M. to 11:30 P.M. Sundays.
B-49.25	6.09	HJ4ABE, Medellin, Colombia,	11:00 A.M. to Noon; 6:00 to 11:30 P.M.
B-49.30	6.08	HJ5ABD, Cali, Colombia,	7:00 to 10:00 P.M.
B-49.31	6.08	VQ7LO, Nariobi, Africa.	11:00 A.M. to 3:30 P.M., 5:45 to 6:15 A.M
B-49.34	6.08	W9XAA, Chicago, Illinois.	No apparent regular schedule.
B-49.34	6.08	HP5F, Colon, Panama,	11:45 to 1:15 and 7:45 to 10:00 P.M.
B-49.34	6.08	ZHJ, Penang, S. S.	Daily 6:40 to 8:40 A.M.
B-49.40	6.07	VE9CS, Vancouver, B. C.	Daily 6-7 P.M., Sun. 1:45 P.M. to 1:00 A.M
B-49.42	6.07	YV7RMO, Maracaibo, Venezuela,	testing 9:00 P.M. to 1:00 A.M. irreg.
B-49.42	6.07	OER2, Vienna, Austria.	9:00 A.M. to 5:00 P.M., week-days.
B-49.45	6.06	HJ4ABL, Manizales, Col.,	11-Noon, 5:30-7:30 daily, Sat. 10:30 P.M.
B-49.50	6.06	OXY, Skamlebaek, Denmark.	Daily 1:00 to 6:00 P.M.
B-49.50	6.06	W8XAL, Cincinnati, Ohio.	5:30-7:00 P.M., 10 P.M. to 1:00 A.M.
B-49.59	6.05	HI9B, Santiago City, D. R.,	heard 6 to 10 P.M. 12:30 to 1:40 A.M.
B-49.55	6.05	HJ3ABD, Bogota, Colombia.	7:30 to 11:00 P.M.
B-49.65	6.04	HJ1ABG, Baranquilla, Colombia,	11:00 A.M. to 11:00 P.M.
B-49.67	6.04	W4XB, Miami Beach, Florida,	11 A.M. to 1 P.M., 7:30 to 10:30 P.M.
B-49.67	6.04	W1XAL, Boston, Mass.,	Mon., Tues., Thurs., 7 to 9; Sun. 5-7 P.M.
B-49.75	6.03	VE9CA, Calgary, Canada,	6 A.M. to noon; 7:00 P.M. to midnite Sun.
B-49.75	6.03	HJ4ABP, Medellin, Colombia,	6:00 to 11:00 P.M.
B-49.75	6.03	HP5B, Panama City,	12 Noon to 1 P.M.; 7:00 to 10:30 P.M.
B-49.80	6.02	HJ1ABJ, Santa Marta, Colombia,	6:00 to 11:30 P.M. irregularly.
B-49.83	6.02	XEUW, Vera Cruz, Mexico,	8:00 P.M. to 12:30 A.M. irregularly.
B-49.83	6.02	PRAS, Pernambuco, Brazil.	3:00 to 8:00 P.M., irreg.
B-49.85	6.01	HJ3ABH, Bogota, Colombia.	11:30 to 2, 6 to 11 P.M. Sun. 4-11 P.M.
B-49.88	6.01	HI3U, Santiago, D. R.,	weekdays 7:30 to 9:00 A.M.; 12:00 to 2:00; 5 to 7; 8:00 to 9:30 P.M.; Sundays 12:30 to 2:00; 5 to 6 P.M.
B-49.90	6.01	COCO, Havana, Cuba.	9:30 A.M. to 12:30 Noon; 4:00 to 7:00 P.M.; 8:00 to 10:00 P.M.; Saturdays at 11:30 P.M.
B-49.92	6.01	ZHI, Singapore.	Mon., Wed., Thurs., 5:40-8:10; Sat. 10:40-1:10 A.M
B-49.96	6.00	CFCX, Montreal, Canada,	8:00 A.M. to 11:15 P.M.
B-49.96	6.00	HP5K, Colon, Panama.	7:30 to 9:00 A.M., 12-1 P.M., 6:00-9:00 P.M.
B-50.00	6.00	VP3MR, Georgetown, B. G.,	4:45-8:45 P.M. daily; Sun. 7:45-10:15 P.M.
B-50.00	6.00	RW59, Moscow, U.S.S.R.,	2:30 to 5:00 or 6:00 P.M. daily.
B-50.00	6.00	XEBT, Mexico City,	6:00 P.M. to 1:00 A.M. irregularly.
B-50.00	6.00	HJ1ABC, Quibdo, Colombia	daily 5-6 P.M.; Wed. and Sun. 9-11 P.M.
B-50.10	5.99	HJ2ABD, Bucaramanga, Col.,	11:30-12:30; 5:30-6:30; 7:30-10:30 P.M.
B-50.17	5.98	XEWI, Mexico City.	Tues. and Fri. 6:30-7:45, 9 to 11 P.M., Sat 8-9 P.M
B-50.26	5.97	HVJ, Vatican City.	Daily, 2:00 to 2:15 P.M., Sun. 5:00 to 5:30 A.M
B-50.26	5.97	HJN, Bogota, Colombia,	6:00 to 11:00 P.M. irregularly.
B-50.51	5.94	TG2X, Guatemala City,	heard 4:00 P.M. to 2:00 A.M. irregularly.
B-50.85	5.91	HH2S, Port-Au-Prince, Haiti,	7:30 to 9:40 P.M. irregularly.
B-50.90	5.90	YV8RB, Baraquisimeto, Venezuela.	Noon to 1:00 P.M., 6 to 10 P.M.

Meters	Meg.	STATION	TIME
B-50.93	5.89	JIC, Tawian, Japan, phones JVV	6:00 to 8:00 A.M.
B-50.93	5.89	HCK, Juito, Ecuador. Monday and Friday	8:00 to 10:00 P.M.
B-51.11	5.87	HRN, Tegucigalpa, Honduras. 1:15 to 2:15 P.M., 7:30 to 10:00 P.M. week-days. Sundays 3:30 to 5:30 P.M. and 8:30 to 9:30 P.M.	
B-51.15	5.86	HI1J, San Pedro de Macoris, D. R., 12:10 to 1:40; 6:10 to 8:40 P.M	
T-51.26	5.85	WOB, Lawrenceville, N. J. Phones Bermuda nights.	
B-51.28	5.85	YV5RMO, Maracaibo, V., 8:45-9:45 A.M.; 11:15-12:45; 4:45-9:45 P.M.	
B-51.50	5.82	TIGPH, San Jose, Costa Rica. Noon-2:00 P.M., 7:00 11:00 P.M.	
T-51.50	5.82	HJA2, Bogota, Colombia. Phones HJA3 afternoons and evenings.	
B-51.72	5.80	YV2RC, Caracas, Venezuela, 11:00 A.M. to 2:30; 5:00 to 10:30 P.M.	
B-51.72	5.80	ZEC, Salisbury, Rhodesia, Sun. 3-5 A.M.; Tues. & Fri. 1:15-3:15 P.M.	
B-51.90	5.78	OAX4D, Lima, Peru. Wed. and Sat. from 8:00 to 11:30 P.M.	
B-52.26	5.74	TGS, Guatemala City, Wed., Thurs., and Sun. 6:00 to 9:00 P.M.	
B-52.45	5.72	YV1ORSC, San Cristobal, Venezuela, 7:00 to 11:30 P.M. irregularly	
E-52.97	5.66	CFU, Rossland, Canada. Works CFO and CFN near 10 P.M., irreg	
B-54.74	5.48	TI5HH, San Roman, Costa Rica, 3:30 to 4:00; 8:00 to 11:30 P.M.	
E-55.56	5.40	HJA-7, Cucuta, Colombia. Mondays 4:30 to 7:30 P.M., irregularly	
B-58.30	5.15	PMY, Bandoeng, Java. 6:00 A.M. to Noon.	
T-59.08	5.08	WCN, Lawrenceville, N. J. Phones England evenings.	
T-59.76	5.02	ZFA, Hamilton, Bermuda. Phones U.S.A. and ships at night.	
T-60.26	4.98	GBC, Rugby, England. Phones to ships, irregularly.	
T-61.15	4.90	CGA8, Drummondville, Canada. Phones ships irregularly.	
T-61.98	4.84	GDW, Rugby, England, phones U.S. A. nights.	
B-62.63	4.79	V9BK, Vancouver, B. C. 2:00-4:00 P.M., 7-9 P.M., 11 PM.-1:00 AM	
T-63.13	4.75	WOO, Ocean Gate, N. J. Phones ships irregularly.	
B-65.22	4.60	HJA2ET, Guayaquil, Ecuador. Wed. and Sat. 9:00 to 11:00 P.M	
T-66.50	4.51	ZFS, Nassau, Bahamas. Works WND evenings.	
T-67.87	to 73.17—4.42 to 4.10	Ships. Heard irregularly.	
B-70.65	4.25	RV15, Khabarovsk, U.S.S.R. 1:00 to 9:00 A.M.	
T-73.21	4.10	WND, Hialeah, Florida. Phones irregularly with VPN	
E-75 to 75.8	4.00 to 3.96	Amateurs on voice.	

### SHIP STATIONS

These stations are telephone stations but are sometimes rented to broadcast a special program from a ship. They operate on four bands: 16.85 to 18.27 meters, 22.50 to 24.3 meters, 33.93 to 36.58 meters and 67.87 to 73.17 meters. In megacycles this is 17.80 to 16.42, 13.34 to 12.35, 8.84 to 8.20 and 4.42 to 4.10.

VQJM, Monarch of Bermuda; GLSQ, Olympic; GFJY, Caledonia; GBTT, Queen Mary. Normandie; GMBJ, Empress of Britain; DOAH, Bremen, DOAI, Europa; DHEY, Deutschland; DHJZ, Hamburg; DOAX, Columbus; DHAO, Hansa; DHRL, New York; ICEJ, Rex; IBLI, Conte de Savonia; GBZW, Berengaria; DHDL, Cap Arcona.

### WNYC Broadcasts

The New York Chapter will broadcast from 8:00 to 8:15 P.M. every Tuesday over station WNYC, New York City, on 810 kc. Special speakers will be featured. The Chapter will meet at Stuyvesant High School at 8:00 P.M. on September 15th.

### Short Wave Friends

Do you know of anyone interested in short wave who is not a member of the ISWC, or who is interested in buying an all-wave receiver? If so, we would like to have their name and address, so we can send them a copy of this magazine.

### MOTHER DIES

Club member James B. Wooten of Mobile, Alabama, tells us he lost his mother last month. She was very keen about short wave radio and spent many hours at the dials tuning for foreign DX. We sympathize with Mr. Wooten.



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*The model illustrated is 116X DeLuxe.*

