SHORTWAVE BROADCAST DXING THE FOUNDATION YEARS

Jerry Berg

"IN THE BEGINNING . . ."

To explore the history of SWBC DXing in the 1930's is to enter the golden age of shortwave broadcasting. Because the 30's were so near in time to the very beginnings of broadcasting, and because radio was so different then, a little stage setting is in order.

Before 1912. We usually think of broadcasting as starting with KDKA in 1920. The history of radio goes back much farther, however. Although the landscape of radio's pre-1912 history is strewn with many now-obscure devices, like the spark gap transmitter, the coherer and decoherer, the audion and the variocoupler, radio's early days were as much a tale of entrepreneurship, corporate intrigue and personal egos as of technical advancements.

Companies came and went, along with patent battles, stock swindles and fierce personal and professional competition. The inventors and their wireless companies—the National Electric Signalling Company, the Marconi Company, the DeForest companies—were big players on the radio scene. In addition to vying for a competitive advantage, they were out to prove the usefulness and commercial viability of the new medium. Other important players were the U.S. Navy, the first major organization to try to integrate radio into its work, and the amateurs, or "experimenters," who were in the game for the fun of it and to see how far the technology could be pushed.

Things were pretty laissez faire back then, especially with the amateurs. You just chose a frequency and did your thing, which was usually sending code to other amateurs. It is hard to believe today that virtually all transmitting in the early days, by everyone and for all purposes, was in the area below 1500 kHz.--in what we think of as the long and medium wave bands. As a result, huge generators, large antennas and tremendous power were needed for long distance communication. The belief that long distance required long wavelengths, i.e. low frequencies, was one of the great scientific mistakes of radio's infancy.

1912-1919. The first major attempt to bring order to the radio spectrum was in 1912. Although there was still much argument over both the theory and usefulness of wireless, as a practical matter a high level of interference had developed, and it was getting worse. Ship-to-shore contact was one of radio's major early uses, and shipboard safety an important issue. The cavalier attitude toward wireless on some vessels, including several which could have stemmed the loss of life on the Titanic, plus the interference, rumors and misleading messages that filled the air from unknown sources during that event (the amateurs were suspected), engaged the public's interest and galvanized the government to action.

Despite anti-regulatory lobbying by the wireless companies and the amateurs, both of whom were still relatively disorganized and ineffectual, Congress enacted the Radio Act of 1912. For the first time, wavelengths were apportioned to particular services, a radical step at a time of minimalist government and free enterprise spirit.

Although the act was mainly maritime in nature, one of its most important provisions was to deny amateurs their freedom to roam. They were relegated to the range below 200 meters, bands that were largely unknown and thought to be of little value. The navy attributed most interference to the amateurs and was happy to see them on the road to a hoped for extinction. From the amateurs' viewpoint, their subsequent development of the shortwave spectrum was less a love affair than a shotgun marriage, at least in the beginning.

In the years between 1912 and 1920, radio technology was monopolized by the military and the big corporations. There was huge growth in the amateur ranks as well, with the number of licensed amateurs growing from 322 in 1913 to 10,279 in 1916. Around this time the government published the first amateur call book, revealing to the experimenters for the first time their actual numbers. Other publishing efforts began as well. The American Marconi Company commenced publication of Wireless Age in 1913, and in 1915 the ARRL was formed and began publishing QST.



Spark transmitters were the standard prior to World War I, but they were unsuitable for voice transmission. It was the development of transmitting tubes and amplitude modulation which permitted broadcasting as we know it. More and more amateurs were supplementing code with voice, along with occasional impromptu music broadcasting. The major radio interests considered these low level "entertainment" transmissions frivolous, but they persisted until 1917 when the amateur stations were closed down for the duration of World War I, not to reopen until September 1919. Many amateurs answered the wartime call for skilled radio operators.

1920 and after. Spark gap transmitters faded into history after the war. Amateurs who were able to get their hands on the new (and expensive) transmitting tubes resumed talking over the air and playing a bit of music as well. One of the most famous of the amateurs was Frank Conrad, a Westinghouse engineer who had been an amateur operator before the war. When he resumed his amateur activities, he talked to other amateurs and played records over his station, 8XK (the "W" and "K" prefixes were largely ignored in those days). He also broadcast concerts, including some live performances.

In September 1920, in order to boost sales of electronic gear, the Joseph Horne Department Store in Pittsburgh ran an ad, informing the public that radio sets capable of receiving Frank Conrad's programs were available for \$10. Westinghouse was the first to perceive a potential market that went beyond merely the technically inclined. They authorized Conrad to build a more powerful "broadcasting" station right at the Westinghouse plant. This was KDKA, generally recognized as the first non-experimental broadcaster. On November 2, 1920, KDKA made history by being the first radio station to carry the results of a presidential election (that of Warren G. Harding).

The "radiotelephony" (broadcasting) boom was on. As of March 23, 1922 there were 98 licensed BCB stations. Among the station owners were newspapers, churches, department stores, municipalities, manufacturers, radio shops, colleges and the Y.M.C.A.[1] By August the number had grown to 253[2], and by October it had leaped to 502[3]. The Department of Commerce, which was in charge of licensing, was receiving three or four applications a day.

The programming of the time was pretty basic:

"Most of [the stations] commence broadcasting at 11:00 A.M., play one or two selections on the Victrola, and possibly give a weather forecast. At noon the time signals from the Navy Station at Arlington are received and relayed by some of the radiophone stations so that the radio audience may correct their time pieces. At one o'clock some general news is sent out and more selections of music. Each hour, thereafter, a brief program is sent out. In the evening speeches by well known men and women are made on various topics, and musical concerts of one or two hours duration broadcasted. The music is provided by artists of the opera and stage. Vocal and instrumental music is enjoyed nights by thousands. "[4]

You didn't need digital readout because all broadcasting stations operated on one of two wavelengths. The main channel was 360 meters (833 kHz.), used for news, lectures and entertainment. A second channel, 485 meters (619 kHz.), was used for government sponsored market and weather reports. Some stations used both. Channels were referred to by their wavelength, i.e. in meters, not kilocycles.

A listener described the QRM on 360 meters:

"In regard to the broadcasting wavelengths, cannot something be done? Monday night, April 3 [1922], I invited a few friends to listen to KDKA, but we didn't. I just got him nicely tuned in, and in came WWJ, and in a few minutes along came KYW, and I could not tune them out because they were all on 360 meters. . . . Why can't the different broadcasting stations split up on a five meter difference?"[5]

The problem was partially addressed in August 1922 when a special "Class B" license was authorized for "super" broadcasters, the larger, well established stations that could meet more stringent technical requirements and that featured "high class entertainment" ("mechanical music" was forbidden).[6] Class B stations were moved to 400 meters (750 kHz).

The interference wasn't eliminated, however. Within a few months, congestion developed on 400 meters in the large population centers, and time sharing was instituted. In May 1923, after the navy agreed to free some of its frequencies, a broadcast band extending from 550 to 1350 kHz. was established, with stations classified according to power, frequency and type of programming.

The authority of the Secretary of Commerce to allocate frequencies, a discretionary power he had assumed since 1912, was successfully challenged in court by WJAZ in 1926 and resulted in a temporary moratorium of station licensing and a general free for all. Stations took to the air without benefit of license and changed frequency at will. These were the first pirates. The chaos came to an end with the passage of the Radio Act of 1927, which,

among other things, established a Federal Radio Commission to allocate frequencies. By this time there were over 700 stations in operation and another 200 under construction.

WHAT IT WAS LIKE

Understanding the broadcast band activity of the day is necessary because the roots of shortwave DXing are firmly planted in the world of medium wave. Shortwave DXing developed from BCB DXing as the properties of the shortwave spectrum were discovered.

Indeed, before anyone had thought of the term "SWL," the phrase "BCL," for "broadcast listener," was in wide use. It deserved its own acronym because, at first, the use of radio for broadcasting--transmitting news, entertainment and the like--was considered a novelty. Until KDKA, radio was thought of mainly in point-to-point terms: a particular transmitter sending to a particular receiver for a specific purpose. The notion that someone might want to transmit generally into the ether for whoever might be listening was a concept that developed only after 1920. And it was not without its critics. Phonograph and theater interests were vigorous opponents of entertainment broadcasting, fearful that the new medium would displace their share of the market (just as the entertainment industry recently opposed digital recording).[7]

Many ordinary people spent a lot of time tuning the standard broadcast band, trying to see how far their receivers could pick up. What we would call "DXers" were referred to quaintly as "fans." Serious DXers were "DX fiends" or "DX hounds." Long distance reception was news even in the non-radio press. From Scribner's Magazine, 1923:

"One of our visitors remarked that it is about as much fun hearing the announcements, and thereby finding where you are among the red spots on the map as it is listening to programmes. And it is even so. This fishing in the far away with the radio hook and line is rare sport. The line is long, the fishing is getting better all the time, and it usually does not take many minutes to find out what you have on the hook."[8]

The distinction between program listening and DXing was already being drawn. As one commentator put it: "Some day, perhaps, I shall take an interest in radio programs. But at my present stage they are merely the tedium between call letters." [9]

There were some amazing demonstrations of medium wave DXing prowess in the 1920's. One was by E. H. Scott, founder of the world famous receiver line of the same name. Scott's success in DXing North American medium wave stations from New Zealand in 1925 using his homemade "World's Record Super 9" superhet receiver was what got the company started. Around the same time, Jack Moskovita of San Pedro, California had confirmed loggings of 287 stations, 66 of them outside the United States. His best DX was a 140-watt Australian, and he had regular reception from Japan and Australia.

Ollie Ross of Vallejo, California was probably the world's champion BCB DXer in 1931, boasting 1,309 stations logged, many of them in foreign countries. He claimed to have DXed over four years from 36 states, sometimes listening 22 hours a day. Commenting on the questioning of such claims by some readers, a RADEX editor observed: "At first I, too, felt some skepticism about the Vallejo log, as I could not find enough stations to accord with it, but the great mass of verification reports convinced me. . . . Mr. Ross has just forwarded to me another large consignment of astonishing, even bewildering, verification reports. They are in all sorts of foreign languages "[10] Doubting the veracity of others' reports was a fairly frequent occurrence on the early BCB DX scene.

An example of how different broadcasting was then is an event that is almost beyond comprehension today: the international radio broadcast tests, which were held annually from 1923 through 1926. During these tests, nearly all U.S. BCB stations closed down at an agreed upon hour each night for a week in order to give U.S. DXers a better chance to log foreign medium wave stations. Although the results seem not to have matched the level of pre-test promotion, that nearly the entire broadcasting industry would cooperate in such a venture is a measure of the seriousness that was attached to long distance radio listening.

The equipment environment for the BCL was, of course, very different from what we are familiar with today. Prior to the appearance of the superheterodyne receiver in the mid to late 1920's, radios were of the regenerative type. Called "bloopers," they often generated oscillations so loud as to interfere with reception on other receivers in the neighborhood. Then came the tuned radio frequency (T.R.F.) set, the more stable neutrodyne, and finally the superhet.

There was a fascination with circuitry. The literature was filled with endless versions of receiver "hook ups" bearing colorful names: the Globe Trotter, the Pentode Four ("four" being the number of tubes), the Explorer Eight, the Periphone Master, the Universal Two, the Professional Nine, the Triplex Two, the Candy Box Special, the Wyeth All-Wave Six, the DX Super, and on and on. Each variation was heralded as important for one reason or another, all part of the search for the little things that would make a difference.

Most early receivers were homemade, either from a kit or from a circuit diagram taken from a magazine and constructed with parts bought separately. They were battery operated and built on a wooden base, hence the term "breadboard." The earliest sets had the wiring on the underside of the board. During the radio boom there were 30,000 dealers in the country handling radio equipment, with countless advertisements promoting all manner of radio parts companies, each promising more than its competitors.[11] Many radio aficionados became custom set builders, making radios for others on a full-time or part-time basis.

THE ARRIVAL OF SHORTWAVE

Marconi had done some experimenting with shortwave spark transmitters as early as 1901. These transmitters operated around a frequency of 2.5 MHz. (considered a "high" frequency at the time), and were intended only as an alternative means of *short* range transmission. The distance potential of shortwave was not suspected until around 1920, and it took several more years of experimenting before shortwave propagation at various times and frequencies, along with the directionality of shortwave, started to be understood.

Once this occurred, however, a surprising amount of experimental shortwave broadcasting developed in America. Although it would be many years before the United States would be a major international shortwave broadcaster, it was the pioneer of the medium. Just as KDKA was first on the broadcast band, so it was also first in shortwave broadcasting. In 1920, Frank Conrad began experimental shortwave transmissions from his home in Pittsburgh on 2 MHz. using the call 8XS. He started keeping a more or less regular schedule, relaying KDKA on wavelengths as high as 60 meters. This led to the construction by Westinghouse of station KFKX in Hastings, Nebraska, whose purpose was to pick up the KDKA shortwave signal transmitted by 8XS on 3.2 MHz. and relay it on medium wave, for local use, and on shortwave, for rebroadcast by west coast medium wave station KGO. KFKX started operation in 1923, marking another chapter in the on again, off again story of "national" broadcasting in the United States. The KDKA shortwave signals were also picked up and rebroadcast by medium wave stations in England and South Africa. [12] 8XS eventually became W8XK. (The 8XS callsign was returned to the government, and Frank Conrad transferred his historic "amateur" call of 8XK to Westinghouse for their future shortwave broadcasting efforts. The "W" was added later.)

Other U.S. stations followed suit. In 1924, General Electric began shortwave relays of WGY by way of shortwave transmitters W2XAF and W2XAD at its Schenectady plant. The same year, The Crosley Corporation obtained a license to relay the BCB programming of WLW over its shortwave transmitter, W8XAL (later WLWO). In 1925, RCA and NBC joined forces to relay WJZ by way of a 50 kw. shortwave transmitter in Bound Brook, New Jersey. CBS carried WABC programming over shortwave station W2XE in Wayne, New Jersey beginning in 1928.

Overseas, the startup year was 1927, with both PCJ, Eindhoven, the Netherlands, and 5SW, Chelmsford, England coming on the air on the still-familiar frequencies of 9590 and 11750 kHz. respectively. TI4NRH in Costa Rica began broadcasting the following year.[13] In April 1928, increased interest in shortwave led *Radio News* to begin "On the Short Wave," which was one of the first, if not the first, shortwave broadcast column in a mass circulation publication. It lasted about a year.

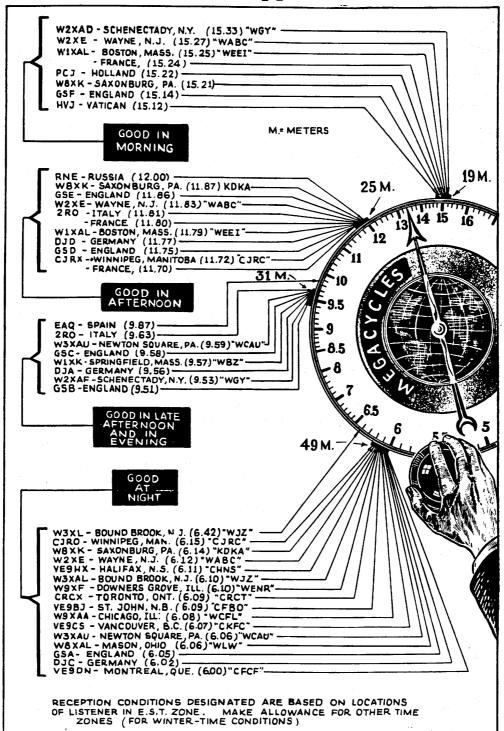
Shortwave broadcasts remained experimental partly because there were few shortwave receivers available. The first A.C. radios appeared in the late 1920's and usually covered only the broadcast band. These receivers were much more sensitive than the earlier, battery designs, but they were also vulnerable to heavy line noise interference, especially on shortwave. Thus early shortwave fans usually had to be content with battery operation.

Shortwave first became available to the general public by way of AM radio converters. These were not satisfactory, however, and special shortwave receivers soon began appearing. A 1931 article in the Pilot Radio and Tube Corp. house journal, *Radio Design*, explained the problems of shortwave receiver development in those days.

"Short-wave broadcasting, as distinctly distinguished from amateur short-wave telegraphy, began attracting the interest of radio experimenters about two years ago, and quickly developed into an indoor sport of considerable proportions. It lured back to the radio fold many former DX fans of the 1920-1925 period who had dropped out of the "game" because chain broadcasting and high power had robbed it of its early glamor. The mere possibility of hearing voice and music from Europe and the Antipodes revived the old fever, and soon thousands were hanging breathlessly on vernier dials, swearing at the fading and the interference, and enjoying themselves thoroughly.

"At first these people were satisfied with "junk box" receivers operating on batteries and possessing hand capacity and many of the other troubles associated with elementary regenerative sets. However, they had been spoiled by the efficient all-electric broadcast receivers already on the market, and they began to demand comfort with their thrills. In an effort to fill their needs, radio engineers spent some effort on the receiver problem, and in quick succession there appeared a series of improved sets. First, the simple regenerative tuner took on an untuned screen-grid R.F. stage and a little shielding. Then a tuned screen-grid job with double shielding made

Where the Stations Appear on Your Dial



its commercial appearance. Batteries still remained a nuisance to those people who had outgrown the spilling-acid-on-the-rug stage, but A.C. short-wave operation, when successful at all, was usually a laboratory accomplishment and therefore unfit for the public. Finally David Grimes and John Geloso, Pilot engineers, discovered the source of the mysterious tunable hums that caused so much trouble, wiped them out with a few simple expedients, and produced the A.C. Super-Wasp, the first completely A.C. operated short-wave receiver on the market. Brought out in September, 1929, this set has enjoyed a phenomenal sale throughout the world, its popularity strengthening its sponsor's conviction that the short-wave fan was maturing and that his ranks were being increased by new converts who were never fans before but who were adopting the short-wave hobby because it was interesting.

"There was still one feature of short-wave operation that caused concern, and that was the matter of plug-in coils. The early receivers used a maximum of three coils, which could be inserted and removed without much trouble because the sets were wide open. However, as the benefits of shielding became evident and the number of coils per set rose to as high as ten (five pairs to cover a range from 15 to 500 meters), the coils themselves became a nuisance. Getting them in and out of necessarily tight shield cans was an operation that tested the temper and bruised the knuckles, and left the set owner in no mood to make delicate adjustments on hair trigger dials." [14]

The article went on to explain how these problems had been solved with Pilot's new Universal Super-Wasp A.C. shortwave receiver, one of the first commercial shortwave sets on the market and a classic among today's antique radio collectors.

Shortwave got an important boost in the early 1930's with the introduction of "all wave" A.C. sets. These receivers permitted tuning either BCB or shortwave without changing coils, and were a major technological breakthrough. Today, with shortwave broadcasting largely unknown to the general public, it is hard to believe that Hugo Gernsback was correct in 1938 when he said that "practically all radio sets that you may purchase in the open market are built for broadcast and short wave reception."[15] This is borne out by the numbers, however. In 1933-34, 66% of the new receivers sold had a shortwave capability. By 1936, almost 100% of the new, large model radios and 65% of the table models were able to receive shortwave.[16]

From the start, shortwave reception had been a natural byproduct of the exploration of the new wavelengths below 200 meters. Those who engaged in it were experimenters at heart, and the early development of shortwave radio reception was sustained by them. However, with the rapid advances in receiver design of the 1930's, which included improved selectivity, better sensitivity, easier tuning, enhanced fidelity, etc., shortwave reception became less an experimental marvel and more an ordinary fact of life.

The potential for shortwave as an information and entertainment medium was widely touted, and the public's interest in it grew. Shortwaves were the "thrill bands." Magazines devoted exclusively to shortwave listening could be found on the newsstands, along with others that offered shortwave news in smaller doses. New York's "Radio Row," the most famous radio shopping center in the world, went shortwave. "The windows are full of the latest short-wave and all-wave receivers and the sidewalks during lunch hour and on Saturday afternoons are again crowded with little knots of fans who discuss their international DX accomplishments and swap circuit 'dope,' station verifications, etc." [17]

As early as 1928, Gernsback was predicting that shortwave would completely replace regular BCB broadcasting. In 1933 he spoke of a DX renaissance:

"When people were building their own sets, in the early '20's, the favorite pastime was a one-tube set with which you could listen to stations hundreds of miles away. People used to sit up all night trying to get the distant stations. Then, at the end of the '20's, the DX interest lagged somewhat, and by 1930 it seemed to have completely died down, except for a few professionals who kept at it with unabated vigor. * * * [O]nce again editors of radio publications are beginning to be flooded with DX accomplishments which, this time, are of no mean order. A few hundred paltry miles are no longer of any interest. Your present DX listeners, and I am now speaking of broadcast listeners only, are going out for REAL distance. Listening from one end of the country to the other means nothing. * * * On the short waves, DX listening is, of course, commonplace; because a good two-tube set will bring in stations from the maximum distance on this planet, i.e., 12,500 miles; and these records are so common that every schoolboy in the United States today who owns a short-wave set thinks nothing of listening to stations in Australia and other parts of the world. "[18]

Despite the initial enthusiasm, however, widespread interest in shortwave as a popular radio medium could not be sustained. Among the non-technical general public it fell victim to the massive growth of high power and high quality BCB broadcasting. Who could be bothered with shortwave? It could not provide the reliability, fidelity and ease of tuning that people were demanding (and getting used to) on the broadcast band. American

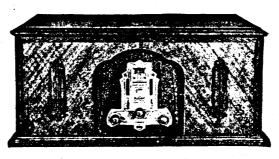
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ethnocentrism in matters of news and information probably played a part too. Who really cared what was going on in all those foreign places anyway?

In addition, American shortwave stations were discovering what some of their modern counterparts are rediscovering—that it isn't easy to make shortwave pay. This was particularly true in the early days when, at various times, the government either greatly restricted or completely forbade commercial advertising on U.S. shortwave. By the time Uncle Sam took over shortwave broadcasting in November 1942, most of the private American shortwave broadcasters were glad to give it up.

The 1930's were indeed the golden age of shortwave broadcasting. It was a time of development of both the medium and the hobby. There were also lots of shortwave sideshows in the 30's. The world was not as small as it is today, and shortwave found a special niche in speeding the reporting of events. The Pilot company was there when the Graf Zeppelin arrived in 1929, providing live transmissions to WOR, and shortwave helped speed news of the verdict in the Lindbergh kidnapping trial.

Shortwave also facilitated communication with people in remote areas. Maintaining radio contact with the Byrd Antarctic expedition was big news. Pilot promoted the fact that its equipment was on both the Byrd expedition and the 1929 Dickey Orinoco expedition to the Venezuelan interior. Radio provided contact with excursions to other far away places, like the MacGregor Arctic Expedition and the round-the-world jaunt of the windjammer Seth Parker. Shortwave's role in speeding police or physician response in emergencies was also emphasized, and Short Wave Craft magazine even theorized that Amelia Earhart might have survived had she had different radio gear aboard her plane.

The Byrd expedition was the subject of frequent comment.

"The Byrd 'mailbag,' as it has come to be known, is broadcast regularly to Little America through the facilities of [G.E.] short-wave station W2XAF at Schenectady, N.Y... Practical advice on various matters has become more the rule of late, crowding out the more routine comments on the weather and the penguins which predominated in early letters. Some time ago, when a member of the airplane crew was injured in a fall, W2XAF broadcast a prescribed treatment from a chiropractor on the Pacific Coast. Only recently, when it was made known that Admiral Byrd's flapjacks were sticking in the pan, seasoned advice on what to do about it was forthcoming from a number of housewives. . . . * * * Birthdays are the occasion for a flood of messages from relatives and friends and the broadcast takes on the semblance of a party. . . . * * * The most striking feature of the short-wave broadcasts to date has been the practically perfect reception of the messages reported by the expedition. The listeners, totally enclosed by the Antarctic night, say that the voice of the broadcaster comes through as clearly as if it were in the next room. "[19]

Shortwave radio not only covered the news--sometimes it was the news. How the natives responded to seeing radio for the first time during the Terry-Holden expedition into the Amazon jungles of British Guiana, and the role of radio in the 1931 "Trader Horn" movie making expedition in Kenya, were events that were described with relish. Pilot even staged a special international goodwill flight of its "flying radio laboratory" to South America, and promoted it widely.

It was in news and entertainment that shortwave broadcasting, with its ability to instantly put us in touch with other peoples and cultures, was expected to excel. These were the days before prepackaged, international entertainment and live, worldwide TV news. The gulf between peoples was wide, and it was natural that shortwave should try to bridge it. How successfully this was done is open to question, but more than a little news about the artists and entertainment on particular shortwave stations could be found. The bi-monthly Official Short Wave Listener Magazine gave prominence to shortwave programming, and some publications, like the national AM radio weekly, Radio Guide, had a special page describing the programs to be heard on international shortwave during the coming week.

THE STATIONS OF THE 30's

In 1985, Canadian DXer Tom Williamson reminisced about what it was like listening to shortwave in England 50 years earlier.

"... [I]t is very difficult to imagine what a thrill it was all those years ago to 'hear America.' Even on shortwave... it was not a regular daily event to tune in the U.S.A., and even the radio hams of that time used to refer to 'getting across the pond' when they made Transatlantic contacts... *** The usual Europeans were heard, as in modern times, including Radio Moscow. Switzerland was heard on various channels with call signs like HBJ, HBQ and HBO, and the slogan 'Radio Nations' (it was the site of the League of Nations). France was one of my favorite sources of jazz music, but mainly on AM from Radio Paris. Each Saturday we could tune in to a period of musical history in the form of the 'Hot Club de France,' which featured a session of toe tapping hot

rhythms from the immortal Stephane Grappelli (still playing that fabulous violin in the U.S. today), and Django

Reinhardt and others. They really set the air waves jumping.

"From the good old U.S.A. we had the era of big band swing. My generation was brought up on this, and I well remember the orchestras of Artie Shaw, Glenn Miller, Benny Goodman and others. 'Swing And Sway With Sammy Kaye' was a favorite, heard over W3XAU, Philadelphia. Many happy 'small hours' were spent listening to W4XB. 'By the palm fringed shores of blue Biscayne Bay in tropical America' was their slogan, and they had 5 kw. output on 6040 kHz. Operated by the Isle of Dreams Broadcasting Co., they relayed WIOD, Miami, still on the air on 610 kHz. From the northern region, familiar voices were VONG, St. Johns, Newfoundland, then not yet part of Canada, and the amazing, low power CHNX, Halifax, Nova Scotia, still using only 500 watts on the same old frequency of 6130 kHz. "[20]

Europe. Europe was the home of many of the biggest international broadcasters. The BBC transmitter site at Daventry had eight transmitters and 18 antennas, and would remain in service until its eventual close on March 29, 1992. Two frequencies were used on each of five beams, some of them still familiar BBC channels, e.g. 15260 (GSI), 11750 (GSD) and 9510 (GSB). (In the early days of shortwave, individual transmitters were often assigned their own call letters.) The World Service was known as the Empire Service back then.

From Holland, Eddy Startz was already the principle host on "The Happy Station" program over PCJ, the historic Philips station at Eindhoven. PCJ programs were intended mainly for the Dutch East and West Indies,

but they were heard worldwide. "Shortwave signal magnificent," read a telegram from Bandung.

The main Axis station was Deutscher Kurzwellensender, Zeesen, Germany, which also used two frequencies in parallel and boasted four transmitters. With calls like DJD, DJN and DJQ, it was the first station to have a highly developed directional antenna system. One listener noted: "[W]e've danced here several times to music from DJD. They broadcast a German orchestra one evening playing 'Stormy Weather' and we just had to dance." [21]

Ente Italiano Andizone Radiofoniche (E.I.A.R.), station 2RO, in Rome transmitted with 25 kw. (increased to 100 in the late 30's) on 9635 and 11810 kHz., usually rebroadcasting the daily program of Italian longwave

stations but also presenting special programs for the Americas.

Other regular Europeans included Radio Colonial, Pontoise, France on 11710, 11900 and 15250 kHz.; EAQ, Radiodifusion Ibero-Americana, Madrid, Spain, which used 20 kw. and was well heard on 9870 kHz.; Belgian station ORK, 10330 kHz. in Ruysselde, used both for broadcasting and for point-to-point communication with the Belgian Congo; and 12 (later 50) kw. station HVJ, Vatican City. "HVJ is easily recognized by the announcement, 'Radio-Vaticano,' and by the ticking of a clock in the studio." [22] And you didn't need pirates to hear Ireland; the Irish shortwave station at Athlone broadcast on 17840, 15120 and 9595 kHz.

Portugal boasted both a government station, CT1AA, 9600 kHz. (also called Radio Colonial), and a private station, CT1GO, Radio Clube de Portugal, Parede, on 6200 and 12400 kHz. The Hungarian stations HAS and HAT, "Radio Labor, Station of the Royal Hungarian Post," were widely heard and sent a QSL card with a little

photograph pasted in the middle.

The Soviet Union was a major player in the shortwave game of the 1930's. Stations heard in mid-decade were RV15 in Khabarovsk, said to be an easy log on 4273.5 kHz., and Moscow channels RV59, 6000 kHz., RAN, 9600 kHz., RNE, 12000 kHz., RKI, 15145 kHz., and RV96, 15183 kHz. "I was turning the dials this afternoon around 1:45 and I heard a station on 25 meters, something new to me, playing violin music. The music stopped and a voice, 'This is Moscow calling . . .' He talked entirely in English, asking for reports of reception, giving the address as Radio Station RNE, Gorki St., No. 17, Moscow, U.S.S.R. It signed off before 2 p.m. Reception was QSA5, R7/S/N. They are experimenting with the United States."[23]

Africa. There were some stations here, but in radio terms it was still an unknown continent. Many stations in Africa and elsewhere were not dedicated broadcasters but combination utility and broadcast senders. They would carry regular broadcast programming, or handle government or commercial traffic, depending on the need. One such was CNR, Radio Maroc, which transmitted on 8036 and 12825 kHz. VQ7LO, "Kenya Colony," was on 6060 kHz. It was located at Kabete, five miles from, and 1,000 feet above, Nairobi. Programs consisted of music, twice daily news bulletins and relays of the British Empire Service.

An oft heard station was CR6AA, 7170 kHz., in Lobito, Angola. In South Africa there was the African Broadcasting Co., Ltd., with the same address--P.O. Box 4559--as today's Radio RSA. An interesting station was EA9AH, Tetuan, Spanish Morocco, a combination amateur-broadcast station that was one of Franco's key propaganda outlets during the Spanish Civil War. Radio Tananarive was also on the air. "The transmissions begin with a piece of recorded music entitled 'Ramona,' and end with the French National Anthem. The station operates on 6000 kcs. with a power of 400 watts antenna. We transmit every day except Monday, programs consisting of musical selections rendered by artists, or recordings, as well as news flashes." [24]

Nearly all short-wave broadcasting stations in operation today use what is known as the "characteristic" or "in-Nearly all short-wave broadcasting stations in operation today use what is known as the "characteristic" or "interval" signal, which may consist of various oral phrases or musical notes. These are used solely for the benefit of the listener, enabling him to readily identify the station, even though he may not hear the call letters clearly. For instance FYA, Pontoise, France, plays the "Marseillaise" at the beginning and the end of each broadcast; CT1AA, Lisbon, Portugal, uses three calls of the cuckoo. If you hear a constant "ticking" as of a clock, you will know that this is HVJ of the Vatican City, Italy. Many other signals and phrases are used and they are given in the following list.

How You Can **Identify Foreign** Stations by "Signatures"

Call.	Location.	Identification.	Remarks
GSH	Daventry, England	(See GSB). [Stations appear in order of frequency]	
PMC	Bandoeng, Java	(See PLF).	
LSY	Buenos Aires, Argentina	Begins transmissions by sounding E, E, G sharp, and A, on xylophone.	
PLF	Bandoeng, Java	Begins transmissions with three tone auto horn. Notes are F, D, C.	
GSG	Daventry, England	(See GSB).	
DFB	Nauen, Germany	Sounds three tone whistle at beginning of transmissions. Notes are D, C, G.	
DJB	Zeesen, Germany	(See DJC).	
GSF	Daventry, England	(See GSB).	
SSE	Daventry, England	(See GSB).	
2RO	Rome, Italy	Woman announcer announces "Radio Roma Napoli."	
DID	Zeesen, Germany	(See DJC).	
SD	Daventry, England	(See GSB).	
PHI		Announces "This is Huizen."	
	Huizen, Holland	Announces "I his is Huizen."	
YA	Pontoise, France	Plays the "Marseillaise" at beginning and end of transmissions.	
DRK	Brussels, Belgium	Plays Belgium national hymn at close of programs.	100
AQ	Madrid, Spain	Announces "Ay-ah-coo, transradio Madrid."	
T1AA	Lisbon, Portugal	Sounds the cookoo calls between selections.	
/K2ME	Sydney, Australia	Laugh of Kookaburra bird at beginning and end of transmissions.	
1BL	Geneva, Switzerland	(See HBP).	
)JA	Zeesen, Germany	(See DJC).	
SC	Daventry, England	(See GSB).	
K3ME	Melbourne, Australia	Opens programs with clock chimes.	
SB	Daventry, England	Big Ben Chimes on quarter hours. Announces "London calling on—(stations and	
AC	Piza, Italy	wavelengths)." Begins and ends transmissions by playing "God Save The King." This song has the same tune as our "America." Calls "Pronto, pronto—(name of ship)."	
SK(PRA3)		Plays chimes like the NBC chimes when signing off.	
NR	Rabat, Morocco	Announces "Radio Rabat dans Maroc." Uses metronome between selections.	
(BP	Geneva, Switzerland	Announces "Hillo, hillo, radio nations."	
TEP		Announces "La Voz del Tropico."	
IC2RL	Guayaquil, Ecuador		
RADO	Riobomba, Ecuador	Plays the Ecuadorian National Anthem at beginning and end of transmissions.	
IJ1ABB		Announces "Estacion el Prado, Riobomba, Ecuador."	
	Barranquilla, Colombia.	Announces "Achay-hota-uno-ah-bay-bay."	
IJ5ABD	Cali, Colombia	Announces "Achay-hota-thinko-ah-bay-bay."	
111A	Santo Domingo	Plays "Anchors Aweigh" at start and finish of programs.	
/V3RC	Caracas, Venezuela	Announces "Ee-vay-trays-erray-say." Plays bells on the hour.	
V2XE	Wayne, New Jersey	Announces in English, German, French, Spanish and Italian.	
/V2RC	Caracas, Venezuela	Announces "Ee-vay-dos-erray-say." Sounds four strokes on chimes every fifteen minutes.	
E9HX	Halifax, Nova Scotia	Sounds four strokes on a gong at beginning of transmissions.	
XY	Skamleback, Denmark	Midnight chimes at 6 P. M. E. S. T.	
E9CS	Vancouver, B. C	Sounds two bells between selections.	
3SA	Daventry, England	(See GSB).	
)JC	Zeesen, Germany	Announces in German, and English. Eight notes of old German song played over and over at beginning of transmissions.	
(EBT	Mexico City, Mexico	Sounds auto horn after each selection.	
RV59	Moscow, U. S. S. R	"International" is played at beginning and end of transmissions.	
1VJ	Vatican City, Italy	Announces "Pronto, pronto, radio Vaticano." Clock ticking.	
rgx	Guatemala City, S. A.		
V5RMO	Maracaibo, Venezuela.		

[•] The editors will be glad to have readers of this magazine send us information concerning new musical and other station signatures which they may hear and which do not appear in the above list We wish to publish every bit of information we can obtain which will aid you short-wave listeners in quickly identifying any foreigns station which you may happen to tune in. A great many foreigns use the Spanish alphabet in pronouncing their call letters and the following phonetic Spanish alphabet will prove valuable to many short-wave listener "Fans."

A is pronounced as ah; B as bay; C, say; D, day; E, ay; F. effray;

Courtesy N. Y. Sun

G, hay; H, ah-cheh; I, ee; J, hota; K, Kah; L, ellay; M, em-may; N. en-nay; O. oh; P, Pay; Q, koo; R, air-ray; S, es-say; T, tay; U, oo; V, vay; W, doh-bleh-vay; X, eckis; Y, ee-griega; Z, theta; Numerals: One, cono; Two, dos; Three, trehs; Four, quatro; Five, thing-ko; Six, sase; Seven, see-ate; Eight, ocho; Nine, noo-ay-ve; Ten, diez.

FYA, the French station, opens and closes its program with the Massrillasse played by an orchestra. Their famous slogan is "Ici, Parec (Paris)."

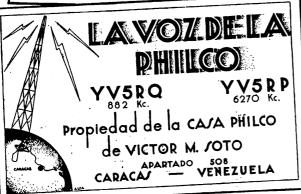
н.₹.96.

Radio Centre, Solyanka, 12, Moscow, U. S. S. R. Dear Listeney.

We are glad to verify that you heard our broadcast on Sunday June 7th 1936 at 9.30p. Melock, M.T. on a wave length of . 19.76. . . metres.

We shall always be glad to hear from you and to have reports of reception. We shall also welcome criticisms of our programs and suggestions for improvement in the future.

> Yours truly, Inna Marr-Chief Editor.



E. I. A. R.

ENTE ITALIANO AUDIZIONI RADIOFONICHE

SHORT-WAVE STATION

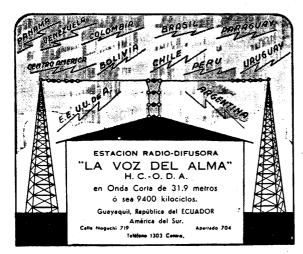
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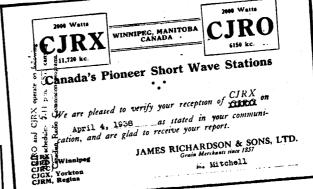
5 VIA MONTELLO, ROME

Dear Sir:

We are very pleased to verify your reception of the following transmission from our short-wave station 2ROS (year) 36 (month) March (day) 5 16 (at) 5:45 (Sentral European Time) Yours sincerely.

E. l. A. R.







Special International Good

NEWS

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World Wide UNIVERSITY CLUB Broadcasting BOSTON, MASS. Foundation U.S.A.

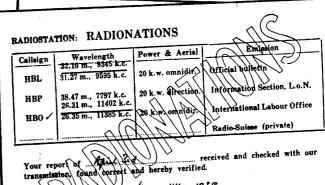
W1XAL VERIFIES YOUR RECEPTION REPORTED ON

Feb. 9, 1939 5.30 EST AM _11.79Mc

Thank you and please write us again.

Do you know this is a non-profit Station supported by gifts and voluntary contributions? Won't you become a part of this Station by joining our WORLD WIDE LISTENERS' LEAGUE? Write for our leaflet.

Will Broadcasts. 15.25 — 6.04 — 11.79 — 21.46 — 11.73 — 15.13 Mc.



May 11th 1958. League of Nations - Geneva

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Latin America. As would be true for many years to come, there were many shortwave stations in Latin America. By 1940 there were 32 stations on the air in Venezuela, 23 in Colombia, 10 in Peru, even two in Bolivia (the still familiar R. Illimani and R. Fides).[25] Then, as now, Latin America was the preserve of private rather than governmental broadcasting, much of it out of band.

Slogans were in common use, but stations were often referred to by their call letters alone. Among the more familiar were YV2RC, Broadcasting Caracas, 5800 kHz., YV3BC, Radiodifusora Venezuela, Caracas, 6145 kHz., and YV5RMO, Ecos del Caribe, Maracaibo, 6070 kHz. "Every Monday evening we broadcast operas or other classical music and the rest of the week is dedicated to lovers of the more popular variety, especially local music. Our programs open and close with the playing of the 'Blue Danube March.' YV5RMO announces as 'Ecos del Caribe' (Echoes of the Caribbean), and one stroke on a gong usually precedes this announcement." [26]

Other widely reported stations included HJ1ABG, Emisora Atlantico, 6042.5 kHz., Barranquilla, Colombia, HJ7ABD, Radio Bucaramanga, 9630 kHz., and HJ4ABL, Manizales. "At the present time, HJ4ABL announce their schedule as Saturday nights only, from 11 until about 11:30 p.m., EST, at which time they broadcast a program for English-speaking people, although announcements are made in Spanish, German and Dutch as well as English. HJ4ABL uses the slogan 'Ecos del Oriente' (Echoes of the West) and was heard using an automobile horn a few times as an identification signal." [27]

LSX, Transradio Internacional, Buenos Aires, Argentina broadcast on 10350 kHz. and often relayed programs from the Byrd Expedition to Little America. The 1930's also saw the birth of HCJB. It started broadcasting on Christmas Day, 1931, with 200 watts on 4107 kHz. A medium wave channel was soon added, as was a 10 kw. transmitter on 12455 kHz. The rest, as they say, is history.

Founded in 1932, HC2JSB, Ecuador Radio, on 7850 kHz., claimed to be the first commercial broadcaster in the country. Other out of band Ecuadorians included Station PRADO in Riobamba on 6620 kHz., and HC2RL, Guayaquil, on 6670 kHz. "Their regular schedule is Sundays from 5:45 to 7:45 p.m. and Tuesdays from 9:15 to 11:15 p.m., EST. These programs open and close with the playing of the Ecuadorian National Hymn, and the expression 'Quinta Piedad' is used often in the announcements [Marie Piedad Castillo de Levi was the station owner]. The January 14 [1934] program from this station will feature primarily Ecuadorian national music, and as Dr. Levi [station director Roberto Levi] has planned to have artists from the National Conservatory of Music and the Academia de Artistas Nationales, we believe the program will be a very interesting one. "[28]

Peru didn't have anywhere near the number of stations it has today, but it could boast nine by 1937, including the widely heard OAX4J, R. Internacional, on 9520 kHz. Bolivia had 1 kw. CP5, R. Illimani, La Paz on 6080 kHz. Brazilians were not as plentiful as Spanish stations, but one that was well heard was PSH, Radio Internacional do Brazil, Rio de Janeiro, on 10220 kHz. Others included Short Wave Radiotelephone Station PRF5, Rio de Janeiro, on 9501 kHz., and PRA8, Radio Clube de Pernambuco, on 6040 kHz.

Many Central American stations and loads of Cubans and Mexicans simulcasted on shortwave. There was HP5, R. Miramar, Panama on 6030 kHz.; HI1A, La Voz del Yaque, Santiago, Dominican Republic, 6185 kHz.; TIPG, La Voz de la Victor, San Jose, Costa Rica, 6410 kHz.; TIGPH, Radio Alma Tica, also in San Jose, 5830 kHz.; TGTQ, Radio Internacional, "La Voz de la Capital," Guatemala City, 6285 kHz.; the widely heard 200 watter TGW, Radiodifusora Nacional, 9450 kHz., also in Guatemala City; HI9T, Broadcasting Tropical, Puerto Plata, Dominican Republic; and many others.

Among the Cubans were COBZ, Radio Salas, 9030 kHz.; COCX, La Voz del Radio Philco, 11435 kHz.; COCW, The Voice of the Antillies, 6330 kHz.; Transradio Columbia, 9833 kHz.; COGC, Laboratorio Radio-electrico, 6150 kHz.; etc., etc. COCD, La Voz del Aire, operated on 6130 kHz. "This station relays the programs of CMCD from the Palace Hotel and is heard most regularly between 2200 and 2400. Announcements are nearly always in Spanish, English being used only once in a while. Four chimes precede the announcements, as a rule, and Ted Lewis' familiar 'Good Night Song' closes the programs at midnight." [29]

Mexico boasted XEBR-XEBH, Radio Difusora de Sonora, on 11820 kHz.; XEFT, La Voz de Veracruz, 9510 kHz.; XEBT, El Buen Tono, 6010 kHz.; XEWW, 9500 kHz.; and many others. It was from another early Mexican that one of the hobby greats, the late August Balbi, received his very first QSL. This station was XETE, Empreso de Telefonos Ericsson, broadcasting on 6130 and 9600 kHz. and logged by Balbi on June 15, 1933. "XETE tends to remind one of that other popular Mexican station, XEW, which has been missed for a long time. Some of the most beautiful programs ever heard on short waves were transmitted from XEW, and XETE seems to be continuing the good work "[30]

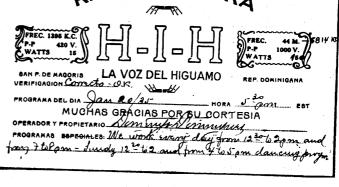
The most famous Central American was TI4NRH, San Jose, Costa Rica. Starting out with a power of 7.5 watts in 1928 (increased to 500 watts during the 1930's), the station's owner, Sr. Amando Cespedes Marin, gained worldwide recognition for his promotion of friendship and understanding among peoples. A renaissance man of his day, he carried on extensive correspondence with hobbyists in all corners of the globe. He was a well known personality among DXers, dedicating special programs to radio clubs and going the extra mile for shortwave



SHORT-WAVE NATIONAL STATION SITUATED AT LYNDHURST, VICTORIA, AUSTRALIA.

Frequency 9.58.0. kcs. Power 60.00...... walls in aerial. Modulation capability, 100 per cent. Station equipped with unidirectional arrial systems.

Radiating the programmes of the Australian Broadcasting Commission.



listeners. Sr. Marin's station issued some of the most impressive QSL's of all time--oversized, multi-colored certificates that put to shame almost any other QSL ever issued, before or since.[31]

North America. There would be no Voice of America or equivalent in the United States--no international government broadcaster--until 1942. All U.S. shortwave broadcasting was in private hands.

Entrepeneurial spirit led to a large variety of American shortwave outlets, most of them simulcasting their parent BCB stations. Some smaller stations went on shortwave just to satisfy an engineer's desire to dabble in a new medium. Others ventured into international broadcasting to reach listeners directly, or provide programming for rebroadcast via local BCB stations in other countries. The latter point is important. Although today we think of shortwave in terms of direct broadcasting, the intention in the early days was often to get the signal to the target area for pick up and rebroadcast by local medium wave stations. At the end of the decade the comparative effect of U.S. vs. Axis shortwave broadcasting, especially to Latin America, was evaluated in part by the number of local rebroadcasting arrangements that each side had entered into.[32]

America's shortwave broadcasters were the offspring of the giants of the American radio industry. A complete examination of this era requires a study of the alphabet soup of call letters of the day (the experimental "X" calls were exchanged for regular four-letter calls in 1939). In addition to KDKA, Westinghouse operated W2XK (later WBOS) in Boston. There was NBC's W3XAL (WBOU) in Bound Brook, New Jersey, General Electric's W2XAF (WGEO) in Schenectady and W6XBE (KGEI) in San Francisco, Crosley's W8XAL (WLWO) in Cincinnati, and CBS's W2XE (WCBX), Wayne, New Jersey and W3XAU (WCAU), Philadelphia. Boston's World Wide Broadcasting Foundation, W1XAL (WRUL), was the most serious attempt to produce educational programming specifically for shortwave. The station had an extensive program development department, and boasted a news connection with the Christian Science Monitor.

Among the lesser stations were W4XB (WIOD), the "Wonderful Isle Of Dreams" station in Miami; W9XAA (WCFL), the Chicago Federation of Labor station in Chicago; and W9XF (WENR-WMAQ), Downer's Grove, Illinois. All contributed to the growing interest in shortwave broadcasting in America. [33]

In Canada, numerous shortwave broadcasters likewise changed calls and metamorphosized over the years. James Richardson & Sons, Ltd. of Winnipeg, Manitoba, purveyors of stocks, bonds and grain since 1857, was the first shortwave broadcaster in Canada, starting out with 2 kw. as VE9JR (11720 kHz.) and VE9CL (6150 kHz.), later becoming CJRX and CJRO, and then (in 1943) CKRX and CKRO. There were many others: CFCX (on 6005 kHz. even back then), VE9HX (later CHNX) on 6110 kHz., CJCX on 6010 kHz., and CFRX on 6070 kHz. A popular station was 200 watter VE9GW, Bowmanville, Ontario which simulcast CKGW's programming over 6095 kHz. until its demise in 1933. Newfoundland had VONH, the Broadcasting Corporation of Newfoundland, 5970 kHz.. It was eventually absorbed by the CBC, becoming first CBNX and then CKZN.

In the United States, the 30's also saw the inception of FM broadcasting in the shortwave bands. In the early 40's, before being allocated their present frequencies, FM stations operated in the 41-50 MHz. band. Before that, in the mid to late 30's, these stations were allowed to experiment in the 11 meter band, 25-27 MHz. W9XTC, Minneapolis simulcast WTCN-1250 on 26050 kHz. W6XKG transmitted from Los Angeles on 25950 kHz., 24 hours a day. W9XJL, Superior, Wisconsin, 26100 kHz., was the foremost performer of them all. "The power is only 80 [later 250] watts, but . . . reports have been received from 11 countries. At this writing, 20% of the received mail has come from England!"[34] There were so many 11 meter "FMers" that in December 1937, the magazine All-Wave Radio began a column about the FM bands. Called "Ultra-High," it was edited by a young man who would eventually become a friend to many of us: the late Oliver "Perry" Ferrell, founder, with his wife Jeanne, of Gilfer Shortwave.

Asia. The Asian continent was a happily mysterious place on shortwave.

In Japan, NHK controlled all broadcasting activity. Hour-long programs were beamed to all parts of the globe from 20 and 50 kw. facilities of the International Wireless Telephone Company of Japan in Nazaki. (Reception on the east coast was reported as fair at best.)

There was some interesting activity from Manchuria, known as Manchukuo after the Japanese takeover in 1932. There had been intermittent broadcasting from Manchuria telephone and telegraph stations JQAK and JDY at Dairen on the Kwantung Peninsula, but from July 1939, MTCY, the Central Broadcasting Station in Hsinking, began regular international shortwave broadcasts, including an English program to western North America at 0630-0720 GMT on 11775 kHz., 20 kw.

The Chinese broadcasting scene was confusing, and would become more so during the next decade. At first the main station was XGOA, located at the pre-war capital of Nanking, but when the war started at the end of the decade the Chinese government moved to Chungking. From there shortwave broadcasting became the responsibility of the Central Broadcasting Station, commonly known as XGOY. There were numerous other "X's" operating under various authorities in the 1930's: XPSA at Kweiyang; XTC, Shanghai; XTJ, the China

Information Committee station, Hankow; XMHA, "The Call of the Orient," Shanghai; XTPA, the Canton Broadcasting Station; the "Station Radiophonique Française 'Art et Culture,'" Shanghai; etc. Many of these stations were heard in the United States.

Indonesia, a Dutch colony at the time, had several stations. The Netherlands Indies Broadcasting Co., Ltd., "NIROM" as it was called, was located in Batavia (Djakarta). Distant precursor to Radio Republik Indonesia, it broadcast from various locations in the islands. Java Wireless Station PLP, Bandoeng, was also often heard relaying broadcast programming over its 1.5 kw. transmitter.

India started shortwave broadcasting in May 1934 but VUB, Bombay, on 9570 kHz. (4.5 kw.) and VUC, Calcutta, on 6110 kHz., appear to have been not particularly well heard. Southeast Asia and the Malayan Peninsula boasted some exotic stations, including HSP in Bangkok on 17750, and FZS, Saigon, on 11990. The 6 MHz. band in this area was interesting, and included several stations in what were then known as the "Straits Settlements": ZHJ, The Penang Wireless Society, on 6080 kHz.; ZGE, Kuala Lumpur on 6130 kHz.; and ZHI, Singapore on 6010 kHz. A well heard station from the area was ZHP, the British Malaya Broadcasting Corp., on 9690 kHz.

The Pacific. Australia boasted the first major shortwave stations in the Pacific, the Amalgamated Wireless twins, VK3ME, Melbourne, 2 kw. on 9510 kHz., and 20 kw. VK2ME, 9590 kHz., in Sydney, both of which were widely heard by U.S. listeners. These stations were soon followed by another, VK3LR, Lyndhurst, on the frequency of-what else?--9580 kHz., and VK6ME in Perth. The Kookaburra interval signal first came into use in the 1930's.

Another widely heard Pacific station was the Amalgamated Wireless station VPD in Suva, Fiji. Less often heard but still reported and verified occasionally was VK9MI aboard the M/V Kanimbla. Promoted as the first shipboard broadcasting station, it was owned by McIlwraith McEacharn Ltd. and operated at 1200 GMT on 6010 and 11710 kHz., using 200 watts. "They have three studios facing the ballroom--beautifully fitted out and artistically furnished in green, cream and chromium. A quartet of girl singers live permanently on board and under the direct control of Miss [Eileen M.] Foley, who claims the distinction of being the only woman in the world in full charge of a broadcasting station. The Kanimbla quartet render musical programs for the benefit of the passengers in addition to broadcasting from the ship."[35]

It was also in the 30's that shortwave was first used as a propaganda weapon. Within a week after the start of the Spanish Civil War in July 1936, every major broadcasting station in Spain was directly controlled by either the Rebels or the Loyalists. Many operated on shortwave, and some could be heard in the United States. The broadcasting scene was as chaotic as the fighting, but a DXer's delight.

As the threat from the Axis powers escalated in the latter part of the 1930's, shortwave propaganda grew on a grand scale. It was at that time that some of the now familiar propaganda techniques were first developed: use of mailbag programs, favorable interviews with visiting tourists, and announcers speaking with the accent of the target population. Truth, as they say, was an early victim. South America was a favorite target of the Axis countries, particularly Germany and Italy. American shortwave broadcasting was still in private hands, and, although transmission times were increased, there was no serious, coordinated effort to counter Axis broadcasting until much later.

It was also during the 1930's that jamming was first used. In the Spanish Civil War it consisted of sending an open carrier on the target station's frequency. Things soon got more sophisticated, however, with German "Storsenderen" emitting music, code and shrieking whistles.

DXing

Gernsback said it well in 1926: "I can not imagine any greater thrill than that which comes to me when I listen, as I often do, to a station thousands of miles away. It is the greatest triumph yet achieved by mind over matter "[36]

The thrill was even greater if you were young. Well known shortwave enthusiast Jack Jones remembers when the DX bug bit him. It was 1928, and he was 12 years old.

"In 1927 [my father] got another Atwater-Kent (single dial) and late one afternoon--very probably October or November 1928--we heard [medium wave] KDKA relay 5SW, Chelmsford, England, 5:30 to 6:30 p.m. CST. I distinctly recall the midnight chimes of Big Ben and the announcer saying, '5SW, the experimental station of the Marconi Company, closing down. Good night everybody, good night.' This really got me hooked, and I started reading about radio and those remarkable short waves. I started a campaign to get dad interested in a shortwave adapter I saw advertised, but he kept stalling until one day he said that Mr. Jess Huffman (two houses down, and a radio bug) wanted to show me his shortwave receiver! I didn't even know there was one within 100 miles of Tupelo, Mississippi! This was probably late 1929. Needless to say I hurried down to see Mr. Jess. There I

found a Pilot Super Wasp four-tube shortwave set! I had seen them in magazines and approached his with the respect and awe due royalty. He plugged in the yellow ring coil and got 8XK on its 60 meter wave, 2XAF on 31 meters and HKD [Columbia] on 49 meters (orange ring coil). I was absolutely enthralled. To top it off, he called me early one morning and said he had Australia. All the homes on our street had hedges, and I either ran through them or jumped over them getting down to his house. Sure enough, 3ME, Melbourne, was heard. I visited Mr. Jess often and he'd sit at the Super Wasp and fiddle around. Finally he'd say, 'Jack, I can't get anything. Get over here and see what you can do.' Mr. Jess would stomp out of the room in a bad humor and I'd be in seventh heaven."[37]

Today's DXer would feel relatively at home in the 30's. By the start of the decade the principles of shortwave propagation were well understood, including sky waves vs. ground waves, the reflective properties of the ionosphere (then called the Kennelly-Heaviside layer), skip, the sources of signal distortion, the seasonality of reception, the relationship of sunspots to radio propagation-even diversity reception.

Likewise there was much knowledge of antennas. Most often used were wire antennas, like the inverted-L, the T-aerial and the inverted-V, all connected to the receiver by a single wire lead in, or "Hertzian" antennas (dipoles) connected by a twisted pair. DXers also understood the properties of vertical antennas and the concepts of directionality, antenna length, grounds, etc.

The biggest factor in the growth of shortwave in the 30's was the development of the superheterodyne receiver. Although basic superhet technology was understood in the early 1920's, its growth was retarded for almost ten years by R.C.A.'s withholding of its superhet patents from receiver manufacturers, leaving early superhet development to the experimenters and custom set builders. Once this problem was overcome, the new technology transformed the shortwave receiver from an experimenter's instrument to a common household device. It also led to the development of the communications receiver. The full story of the communications receiver is beyond the scope of this article.[38] Suffice it to say that it brought with it for the first time such things as calibrated dials, bandspread, S-meters, antenna trimmers, AVC, multiple conversion, etc.

It was the era of the grand old names in radio receivers--Philco, Hammarlund, Hallicrafters, McMurdo Silver, National, Scott--as well as some lesser ones, like Howard, Lincoln, Midwest, Lafayette, Patterson and RME. There were receivers for every taste and pocketbook--those that were "little more than broadcast receivers repackaged in metal communications-type cabinets"[39], modest radios like the Hallicrafters Sky Buddy and Sky Champion, better sets like the Hallicrafters Sky Rider and the Hammarlund Comet Pro and Super Pro, and high enders like the short lived Hallicrafters Skyrider Diversity, a 25-tube, IF notch-equipped, high fidelity receiver advertised as reducing fading to "negligible proportions," and the prestigious, chrome plated all wave sets manufactured by E. H. Scott Laboratories.

That there is nothing new under the sun seems applicable to the early days of shortwave. The shortwave broadcasting bands were basically the same as they are today, except that there was much more out of band broadcasting, and the 60 meter band was not used for broadcasting to any significant degree until the *end* of the 1930's. People already longed for the good old days. They complained about band overcrowding, stations that didn't verify, and countries that didn't accept IRC's. The International DXers Alliance already had a mint stamp service in operation by 1935.

The casual home tape recording of today was a long way off, but, for the most serious listener, equipment was available to record programs on celluloid or aluminum records. The process in 1930 was described as follows:

"Go to your local phonograph dealer and get a diamond point used for the purpose of recording, and also get some blank recording records, which come in different sizes to suit the amount of reproduction desired. Substitute the recording point for the present reproducer, which is attached to the movable arm connecting to the horn or sound chamber. Then place your radio speaker directly in front of the phonograph horn and when the radio program comes in, start the turntable with a recording record on it, at the proper speed, and set the recording point on the record in the same way that the records are ordinarily played. The volume of the radio should be quite loud but not distorted." [40]

Although the art advanced some by mid-decade, disk cutting was still the only way of making recordings. It was expensive, but one DXer reported making extensive use of recorded reception reports. "Usually, I send at least one record to the station heard as a form of report requesting verification. In most cases, the response is almost immediate. Often, the station plays the record on one of its local programs and, occasionally, there is a newspaper write-up about the event. I have quite a few clippings from different corners of the globe. *** [T]he expense is usually terrific. The biggest item is the wastage of records. . . . I hate to think of the pile of wasted disks I have around the house. "[41]

An author's description of Latin American DXing in 1935 also sounds familiar. "The numerous

Short Wave Listener 259 December, '35-January, 1936 7080 kc. VP3MR 6550 kc. 42.68 motors GEORGETOWN, BRI, GUI, AMA, B.A. Ben, 7:43-16215 s.m. Mee, 3:43-445, 6:45-7:45 s.m. Wed, 6:45-7:45 s.m. Tan, 5-8:45 s.m. Bet, 8:45-7:45 s.m. Bet, 8:45-7:45 s.m. TIRCC Dies GJJU KC. 8. 45.77 motors RADIOEMISORA CATOLICA COSTARRICENSE SAN JOSE COSTA RICA Swn. 12:45-2:30. 6-7. 8-9 p.m. 9560 kc.

a. al.as motors

anoADCASTING MOUSE.

accident solution

17.20-12 a.m.

al.1139 a.m.

**D, Station

9760 kc. VL-VLZ2

C. SO.74 meter
AMALAGNA AUGURALIA
SYDMEY, AUGURALIA
Phonon Jero and N. Zemiand
early a.m.

9750 kc. WOF *DJA 6528 kc. His 6528 kc. His motors BANTO DOMINGO. D. R. BANTO BAL. 8-10 p.m. *YV6R\ 10660 kc. UDDU KC. J. 28.14 motors HAZAKI, JAPAN Phonos Europe 3-8 a.m. 7030 kc. HRF 8- SAM PEDRO BULA. ROBUTANAS. ROBUTES on hits and other wat Irragular in wat IIAB HIL HRPI 10520 kc. VL 28.51 meters SYDNEY, AUSTRALIA Calls Rusby, early a.m. VLK 9540 kc. *DJ 31.46 meters BHOADCASTING MEGUAE BERNAN GERMANY 1246-1 a.m. 6.124 a.m. 6.124 a.m. 6.124 a.m. *DJN 6520 kc. *YV6RV
-8. 44.81 molors
VALENCIA, VENEZUELA
12 n.-1 p.m., 8-10 p.m. 30.77 motors
LAWRENCEVILLE, N. J.
Phosos England, ovening HJIABK S. 42 motors
CALLE, BOLIVIA,
PROGROSO-IGUALDAD
BARRANQUILLA, COLUMBIA
Testing in evening 10430 kc. 9635 kc. *2R 81.13 motors 10.00 E. 774.V 10.00 F. 774.V 10.00 F. 774.V *2RO Q45U KC. - 28.76 meters MEDAN, SUMATRA 5:30-6:30 s.m., 7:36-8:30 s.m. 6500 kc. HJ5ABD 9530 kc. *W2XAF 5996 kc. PZI
6. 0. 800 10 received in creeding in cree B. 46.15 molers MANIZALES, COL. 12-1:30 s.m., 7-10 s.m. S. 31.48 motors

GENERAL ELECTRIC CO.
SCHENECTADY, N. Y.
Relays WGY 4 p.m.-12 m.
Sen. 4:18 p.m. - 12 m. 6482-kc. H140
6482-kc. H140
8 ANTO DOMINGO. DOMINICAN REPUBLIC
Except See. 11:55 ANTO 146
p.m.: 4:60-7:60 p.m. PDK 10410 kc. 28.80 meters KOOTWIJK, HOLLAND Calls Java 7:30-8:40 s.m. 9625 kc. *CT1AA -B. SIL17 meters LIBBON. PORTUGAL TOOL. THORE. Sat. 4:30-7 p.m HI4D *CT1AA LKJI 9525 kc. LK. 81.5 meters JELOY, NRWAY 8-8 n.m., 11 n.m.-6 p.m. 10410 kc. KES 9600 kc. XEFT

a. 31.35 meters of the control of th 28.60 motors SQLIMAS, CALIF, Tests evenings 6450 kc. HJ4ABJ

B. "LA v62.51 meters CAMBERE."

BAQUE COLOMBIA

B. p.m. 10350 kc.
25.00 motors
MARGENTHA
ARGENTHA
Tools (respectory 8 p.m.-12 mM
sight) 9518 kc. *VK3ME

AMALGAMATED WIRELESS.

MELSOURIE AUSTRALIA
DISTRICT A LSX 5905 kc GDS RUGBY, ENGLAND Cath N.Y.C. evening 6447 kc. HJIABB 6447 kc. HJ1ABB -8. 48.53 meters -8. 48.53 met 9595 kc. *HB

BL27 meters

LEAGUE OF HATIORS

BENEVA: SUPERLAND

Betterdays, 3:00-8:18 mm.

Blom. at 1.48 mm. 14 kc. SAM PEDRO de MACORIA DOMINICAM REP 2:10-140 p.m., 7:40-9 p.m., Www. 3-4 q.m., 4:15-8 p.m. *HBL *ORK 9510 kc. #GSI

BLS moley

BLS mol 6425 kc. W9X

X. 46,7 motors

Dolly Nove Building.

Chicago, Ill.

Operates irregularly in after HUYSSELEDE, BELGIUM Breedents 2:30-4 g.m. W9XBS 50 kc. *JV 9590 kc. +VK2ME

B. Blue motors

AMALSA MATO WIRELESS

ETO AT YORK ST.

SYONEY AUSTRALIA

13. 429-829-8-11 s.m. 10290 kc. DIO *IVT X. 29.16 motors

KONIGSWUSTERHAUSEN,

GERMANY

Breedessts irregularly 6410 kc. TIPG 10260 kc. PMN 9590 kc Short Wave Listener 257 December, '35-January, 1936 12235 kc. TF.

G. SEVELAND PROCES England mersings, Process England mersings, Processes England Sec. 12.46-1 p.m. JVH Best Short Wave Stations TE 11750 kc. *GSD 1/30 kc. *GS 28.83 meters BRITISH BROAD, CORP. DAVENTRY, ENGLAND 3:30-8:30 a.m. 12:15-4 s.m. This list of short-wave relay broadcasting, commercial and experimental stations
is the result of several years of work.
Names and addresses of the stations have
Names and addresses of the stations have
**Stars designate the most active and best head stations. Times are Eastern Standard

**Commercial phone

**Rependent of the stations of your own set.

**Commercial phone

**Rependent of the stations of your own set.

**Commercial phone

**Rependent of the stations of your own set.

**Commercial phone

**Rependent of the stations of your own set.

**Commercial phone

**Rependent of the stations of your own set.

**Times are Eastern Standard

**Times are Eas 12150 kc. 11730 kc. PHI

8. HUJEEN. HOLLAND
DOM: N. HOLLAND
DOM: N. HOLLAND
2. H. HOLLAND
11720 kc. *CJRX

8. 13.6 **CJRX

0 ally. F. G. CARADA
Oally. F. G. CARADA
Oally. F. G. CARADA WMA 24.60 meters RUGBY, ENGLAND Calle N.Y.C., afternoon ж. з. 12000 kc. *RNI -8. 25 meters MOSCOW, U. 8. 8. R. 8m. 6-9. 10-11 s.m.; Daily 12.30-2 p.m.; Wed. 5-6 8.m. *RNE LSN B-Broadcast service. C_Commercial phone. Station Station 11991 kc. FZS2 -C- SAIGON, 1800-CHINA Phone Parls, morning 15250 kc. WIXAL

-8. 19.47 meters

-8. SOSTON, BASS.

-6. Sersquiar, in morning TIR IAC 17760 kc. 21540 kc. W8XK

B. STINGHOUSE ELECTRIC PITTEBURGH. PA.

7-8 a.m.: Pology KDKA 11715 kc. W8XK Colle ships, 6:30-7:30 a.m. 25.81 motors
"RADIO COLONIAL"
PARIS, FRANCE
7-18 p.m.
11 p.m.-1 a.m. 15245 kC.

18.46 mothers

18.47 mg.a010 COLONIAL"

PARTIS. FRANCE

Service de de Grancillo, Paris

188 fee 7-11 h.m. +pC 11950 kc. KKO 17310 kc. W3X

X. 17.33 meters
MATIONAL BROAD. CO.
BOUND BROOK. H. J.
Tests Irregularly W/3XL 25.10 meters
BOLINAS, CALIF,
Yeets, irregularly, evenings LSY 11710 kc. #HJ4ABA B. 23.43 meters MEDELLIN, COLOMBIA 1128 a.m.-1 p.m. 630-1630 p.m. 20700 kc. L. Solver LONG GRANDE ARGENTALA TOST Irregularly 20380 kc. G. 4.72 motors 11940 kc. 17080 kc. Gl GRC 15220 kc. *PC.

8- N. V. PHILIPS RADIO
EINDHOVEM, HOLLAND
Abo Tont. 3-6 s.m.,
Wed. 7-11 s.m. G- 25.12 motors STE. ASSISE, FRANCE Phones CHR mersing Hurlingham, Argo., sights *PCJ 11680 kc. K. 25.50 motors KAHUKU, HAWAII Tools in the evening G. RUGEY ENGLAND
Colla Argentine. Brazil.
mortings
19900 kc. LSG KIO 16233 kc. FZR: c- sate meters sateon. INDO-CHINA calls Peris and Paritis Islan 11890 kc FZR3 "RADIO COLONIAL" PARIS. FRANCE (130 a.m. - 8 p.m. IS M BELON MONTE GRANDE, ARGENTINA Tests brooslerly, 15210 kc. *W8XK 15.72 meters 1560 kc 15660 kc. J. 15.16 motors II. 16 motors MAZAKI. JAPAN Phonos Jone 3-3 s.m. X. S. 85 motors
AMALGAMATEO WIRELESS
OF AUSTRALASIA
MELBOURNE, AUSTRALIA
'elle Canada evening and early
s.m. JVE 19345 kC. *PM/ -B.G. 15.51 meters BANDOENG. JAVA Calle Holland carry a.m. Breadests Tues. Ther. Bat. (0:80-10:30 s.m. 15620 kc. 15200 kc. *DJB 11200 kc. XDJQ

-B. 86.79 molers

80.X 2025.

MEXICO CITY, MEX.

Doubly 530-6-01 B.M., 10 B.M.,

12 m. Roboys XEW 18.2 motors HAZAKI, JAPAN 4000 U. B., S B.B. & 4 P.I 5200 KC. 19.74 meters BROADCASTING HOUSE BIRLIN. GERMANY 2X5-7:15 a.m., 8-11:50 s.m. 1860 kc. GAU 15415 kc. KW -G- 15.45 meters DIXON. CAL Phone Hawaii 2-7 s.m. KWO 18620 kc. B.B.C. BROADCASTING
HOUSE, LONDON, ENGLAND 15140 kc. *GSF
.e- 19.62 motors
DAVENTRY.
B.B.C. BROADCASTING
HOUSE. LONDON. ENGLAND
120-526. 6-835 a.m. RUGBY, ENGLAND Calls N. Y., Saytime 11050 KC. ZLT4
27-15 motors
WELLINGTON. H. ZEALAND
Phonon Assignia and England
carty on Assigniary on Senday. 15370 kc. *HAS3
B. BUDAPETT. HUNGARY
Breadensts Burderx. 5-18 s.m.
15355 kc. KWU 18345 kc. FZS

G-SAIGON, INDO-CHINA
Phonos Paris, early morning FZS 15120 kc. **

19.86 **

VATICAM CITY ROME. TIALY 19.20 to 19.35 a.m. day

Bot. 10-1035 a.m. *HVJ 5355 kc. KWU c- 19.53 meters - DIXON, GAL. Phones Pacific inter and Japan 8340 kc. WL. 16.36 meters LAWRENCEVILLE, N. J. Cults England, deptime WLA 18340 kc 11000 kc. PLP BANDDOENS, JAVA BANDDOENS, JAVA Roleys HIROM programs 3:30-a.m. irregular on Sondays 15330 kc. *WZXAD PCV 17810 kc. 15090 kc. RKI
-C- 15.50 serters
-C- 15.50 serter KOOTWIJK, HOLLAND Calle Jevs, 8-9 s.m. 17790 kc. (33G)

B. B. Morror

D. W. H.T.

B. E. C. GARDON. ENGLAND

B. E. C. GARDON. ENGLAND

AWAXA 10740 kc. 11800 kc. 1800 kc. CO9WR
25.42 motors
35.42 motors
4.40 cm of series
4.40 cm of series
5.40 cm of series
4.40 cm of series
6.40 cm WGY daily, 2-8 p.m. Sen. 10:36 s.m.-4 p.m. C. 27.93 meters

NAZAKI, JAPAN

Only 12 m.1 s.m., 4.6 s.m.,

Trees, and Fri. 2.3 p.m.

Men, and Thors, 4.5 p.m. 15070 kc. | 5070 kc.

Rio DE JANEIRO, BRAZIL
Colle N.V. Beanes Aires and
Europe, doytime
WNC PSD DIG 15280 kc. DJC 19.83 motors BERLIN. GERMANY 12:30-2 s.m. 17780 kc. *W3XAL

18.27 meters

NATIONAL BROAD, CO.
SOURCE BROAD, M. J.
SOURCE BROAD, S.
Releas 912. Daily ess. San.
Releas 9 4.m.-1 y.m. 10675 kc. -c- 26.1 motors *W3XAL 11790 kc. W1XAL -8- 25.45 meters B08TON. MABS. Boo. 3-7 3.m. WNB 15055 kc. WNC 15270 kc. *W2XE LAWRENCEVILLE, N. J. Calle Bermuda, daytime BROADCASTING HOUSE, BERLIN, GERMANY 12 n. 4.30 p.m. 14980 kc. K .c. 20.03 meters EANILA. P. . Phonon Paritie Isles KAY 10670 kc. 17775 kc. *CEC 28.12 meters 8ANTIAGO, CHILE adeasts Tues., There., Sun. 8.85-8:30 p.m. 15260 kc. GSI

B AVENTAY. ENGLAND
B B C. BROADCASTING
HOUSE LONDON. ENGLAND GSI 14950 kc. -G- 29.67 maters -G- BOSOTA. COL. Galle WHG, dayt HJB 17760 kc. DJE BROADCASTING HOUSE BERLIN, GERMANY Irregular 5-1136 a.m.

They say you CAN'T, but I SAY YOU

get Enjoyable Programs Every day of



Pioneer Designer of 'round the world broadcast receivers.

Seven years ago, newspaper and magazine editors gave columns and columns of space to the amazing performance of a theretofore unknown receiver. They heralded the advent of transoceanic reception, on the broadcast band (200-550 meters) as the greatest radio achievement of the age. They named the receiver "World Record Super," because it brought in 117 programs from 19 stations, ALL OVER 6000 miles away, and WITHIN THE SHORT SPACE OF 13 WEEKS.

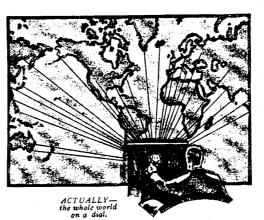
This receiver was the work of E. H. Scott, who believed that a radio set designed in accord with certain advanced ideas of his own, and engineered to micrometric precision, would do things no other receiver was ever able to do. These sets were built in the laboratory. Not even a screw was touched by an unscientific hand, and the radio industry was given a new target.

During the following years, E. H. Scott set still higher standards for radio's performance. Today, as the culmination of these efforts, he offers the Scott All-Wave, a hand-built instrument of scientific precision that is sold with a guarantee of regular, 'round the world reception, or YOUR money back.

Many prominent radio engineers STILL contend that dependable daily reception of extremely distant foreign stations is impossible.

"It can't be done!" they shout. They insist that the distance is too great—that atmospheric conditions are too variable—that signal strength is insufficiently constant—that if foreign reception is to be obtained at all, an ideal location must be had—and, last, that there is no receiver generally available today that is sensitive enough to bring in foreign stations regularly.

Many of those making these statements are receiver manufacturers; men who have been forced to conclude that mass production methods cannot



produce receivers capable of regular foreign reception. Seeming disbelief in the practicability of foreign reception is therefore the result of someone's failure. The only reason for sincere disbelief is ignorance of the facts.

You are entitled to the truth. It is your privilege to know the FACTS, because the most interesting—the most enjoyable world of radio is to be found

between 15 and 200 meters. Hence, I have written this answer to disbelievers and to the unadvised, and I am spending my own money to publish these four pages of FACTS.

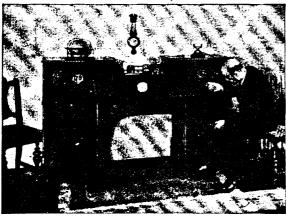
You will find in them a full explanation of what foreign reception is; how regularly it comes in; what the programs are and how they sound. In addition—you'll find undeniable PROOF that the Scott All-Wave 15-550 meter Superheterodyne is certain to give you enjoyable round the world reception every day of every month of the year. Yes, EVERY day, even during the summer months! I say, "You CAN do it!"

CAN



4 Pages of PROOF

from dozens of Foreign Stations Every month of the Year



Reception from VK3ME sent back to Melbourne, Australia, by telephone from Chicago by E. H. Scott.

The AUSTRALIAN TEST

first proved regular reception possible

For a considerable period, short wave broadcasts from England, France and Italy have been picked up by the broadcasting chains in this country, on highly developed laboratory-type short wave receivers and re-broadcasted on the 200-550 meter band to listeners in America. The fact that these broadcasts were always planned, weeks in advance, convinced us that their reception was contemplated with absolute certainty. Why, then, couldn't all foreign broadcasts be depended upon't To ascertain whether or not they could be, we selected the station farthest from Chicago that broadcasted regularly, and set out to see how many of its programs we could pick up with the Scott All-Wave.

All Programs Recorded

VK3ME at Melbourne, Australia, is 9560 air miles from Chicago. This station broadcasts two times a week on a wave length of 31.55 meters. The reception test was begun June 6th, 1931. Ten months have elapsed, and every broadcast (excepting three) was received with sufficient loud speaker volume to be clearly heard and logged. The three programs were missed only because an illegal code transmission interfered.

Teach broadcast from VK3MF has not only been clearly heard.

coue transmission interfered.

Each broadcast from VK3ME has not only been clearly heard, and its reception verified by the station, but they have all been recorded just as they came from the amplifier of the Scott All-Wave on aluminum discs. These recordings are available to anyone who wishes to hear them.

Program Returned to Australia by Phone

The engineer of VK3ME was curious to know with what quality

his program was received in Chicago. He realized, of course, that clarity was sufficient to permit logging of details, but beyond that he was skeptical. So on January 23rd, 1932 Mr. Scott telephoned VK3ME from Chicago, and while VK3ME's program was being received,

program was being received, the telephone mouthpiece was pointed toward



MELBOURNE

the speaker and the program sent back to Melbourne—another 9560 miles, and with perfect clarity as verified by the engineer's written acknowledgment.

This 10 month test on reception from a point nearly 10,000 miles away, proves, beyond any doubt, that enjoyable foreign reception can be

depended upon, IF the receiving equipment is competent. It PROVES that DISTANCE is no obstacle! And it PROVES that variable conditions of the atmosphere are not insurmountable obstacles! To further substantiate our contentions we began a test of VK2ME at Sydney. VK2ME's acknowledgment of this reception is reproduced below. Both of these tests PROVE that

there IS a receiver having more than enough sensitivity to detect and reproduce the broadcast from foreign stations regularly and with adequate volume!

WESTERN UNION CAN'T VIA REAGE STREET 34 SOFILERS 7/13/0 LEG B SCOTT AND CLARATORIZED 4400 ANTERSOO ANT CLICAGO LILA 1400 ANTERSOO ANTERSOO ANTERSOO

Other Owners Do

This remarkable performance was not a stunt. It was not a freak happen-stance occurring to one

Scott All-Wave ideally located and installed. To the contrary, it appears as mediocre performance when compared to the 9,535 logs of foreign reception sent to us during January, February and March from Scott All-Wave owners located in all parts of the country! These logs, constituting further proof of the practicability of foreign reception, are discussed on the next two pages.

(Turn the page, please)

9535 Detailed Logs by Scott

Clarity

The detail contained in this log, submitted by Mr. Roye Bilheimer of Pennsylvania, demonstrates the clarity with which the Scott All-Wave brings in foreign stations 10,000 miles away. This log was made Feb. 28, 1932, and while only 30 minutes of it are shown here, the log, as submitted, covered the entire 2 consecutive hours of the broadcast.

O a.m. E.S.T.—Chines are heard striking the hour of 9 to m. and you say, "Just 9-00 o'clock, Sunday 500 m. and you say, "Just 9-00 o'clock, Sunday 500 m. You go no to say, "YKZAE, 47 York Street, Sydney, Australia, would be pleased to receive reports from those overseas relating to the reception of these programs. Our next record is rather an interesting broadcast. I am going to play for you, a record recorded in Chicago. This record was picked up by Mr. Secto of Chicago, an ardent listener of VKD Mr. Secto of Chicago, an ardent listener of VKD and aluminum dises, and therefore YKD Mr. Secto of the reception in the United States, especially in Chicago. This is a musical selection by the Band of His Majesty's — Guards. Stand by a second, please."

ond, please."

6:00 a.m., E.S., ... - VKEME. Sydney, Australia. The record year, see even listening to was one made in Chicago by the see even listening to was one made in Chicago by the second of t

"Kookaburra." that was also picked up in Chicago by the same genitleman.

6/y am. E.S.T.—Laugh of the "Kookaburra." Now you wasp. "That was the laugh of the 'Kookaburra reproduced in Chicago again after receiving the original recording from VK2ME. We should be glad to receive reports from other listeners as to how they receive these recordings." A talk of the day is entitled "Australla Kloimes, Direct and Travel Association. Now you continue with the talk:

Association. Now you continue with the talk:

Association in the unabline of southern seas, Australis is the world; in the unabline of southern seas, Australis is the continue with the talk:

association of the continue

the continent, where many still lead their primitive lives.

8:12 e.s. T. — They were entertained by Australian aborigines who size located in a settlement there. They were amused to see them throw their beomerangs, that strange wooden weapon which, when thrown by a person, returns to the thrower, and the visitors had an amusing time practicing among themselves. Rudolph Firml gazed at a group of black fellows who were playing a tune with the leaf of the euralprius tree, "Rose Marie," from the famous play he had written.

6:14 a.m. E.S.T.—You are now sneaking of native bears, and say: "Here the visitors saw the quaint and lovable little bears. Living toys: one of the ladies bears, and the same threat of the euralpria same little native animals. Some of the ladies brought honcy and candy, and were greatly disappointed when their gifts were refused by the bears. They prefer to get their own sweets from the eucalprus tree.

"Australia welcomes the visitor. We want the world to know us better, and we, ourselves, seek a greater knowledge of people of other lands. In these days, travel is more than a great pleasure make—it is a great peace maker, and that is what the world today is most in need of. This concludes my short talk, entitled "Australia Commences the Travel Idea. prepared to a great peace maker. They force to the Australian National Traveler's Association.

6:15 a.m. E.S.T...Whe Bod of His Midesty's Air Force

6:15 a.m. E.S. T.—The Band of His Majesty's Air Force will play "Washington Braves," arranged by Victor Herbert.

6:18 a.m. E.S.T.—VK2ME. Sydney. Australia. You now give the time as 18 minutes nast 9:00 Sunday evening. Contraito solo, "God Shail Wipe Away All Tears," by Sullivan.

Sullivan.

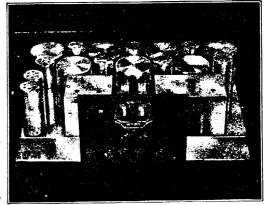
622/2 a.m. E.S.T.—VK2ME. Sydney. Australla. An orcan solo. "Just Imagine." by Leslie James.
This is coming through with fine volume and clarity,
abhough the weather here is very bad. It is very
forcy and rainy.

forgy and rainy.

6.25 a.m. E. S.T. — VEZME. Sydney, Australia. The time is 26 minutes past 9:00 Sunday verning. You now announce that the first selection, a waitz. announce that the state of a waitz. The band of His Majestry Quards directed by R. G. Evans, playing "Intermazio," by Recves

and prove the absolute Dependability of the Scott All-Wave

9,535 Detailed logs of foreign programs have been sent to us since January 1st, 1932. All of these logs are completeproving that the reception was not only heard, but that the clarity was perfect.
Two of these logs are reproduced (in part only, for lack of space) on these pages. Think of it! 9,535 logs from 186 stations in 40 different foreign countries! It is difficult to understand, how anyone



after reading these logs, could believe that dependable, day in, day out foreign reception is anything but a complete, and thoroughly satisfactory actuality.

What Countries Will You Hear?

Any Wednesday, Saturday or Sunday morning you can tune in the Australian stations and listen to a three hour program, in English, of course. Then if you wish something with a decidedly foreign flavor, you can dial Saigon, Indo-China, and listen to the weirdest, Eastern music you have ever heard.

Right after breakfast, most any morning, you can tune in the Radio Colonial at Paris, France—or Chelmsford, England, from which station comes an English version of the World's latest news

or the WORIG'S latest news.

From 11:30 A. M. until 5 P. M. you have your choice of musical programs, talks, plays, etc. from Italy, France, Germany or England. In the late afternoon, the offerings from Portugal will be found very entertaining.

In the evening you may have your choice of a dozen or more different stations including Colombia and Ecuador in South America. Then, too, there is Spain, and

Is this all?—Indeed not!—These are just a few of the many foreign stations that will be found on the dial of the Scott All-Wave. A complete list showing the exact time to tune dozens of foreign stations, is furnished with the receiver.

What Will You Hear?

From a large number of these foreign stations you'll hear news in English, and you'll delight in the variety of aspect the different countries give to an item of international interest.

International interest.

You'll hear music from everywhere. Weird chants from Indo-China, and in contrast, a tango from the Argentine. From Rome you'll hear the real Grand Opera—you'll hear the voice of the Pope, the Vatican Choir and solo voices mellowed in Italian sunshine. From Germany you'll hear political speeches, music and news. From France, Spain and Portugal you'll hear a wonderful musical program that will thrill you hour after hour. From England you'll hear plays—drama—comedy and musicales; delightful presentations, refreshingly different from those to which you are accustomed. You'll never tire of foreign reception, because it never loses its novelty. its novelty.

Will the Reception Be Clear?

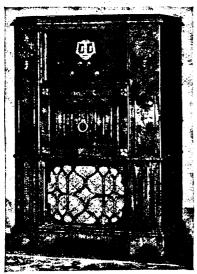
Foreign stations are tuned easily and smoothly with a Scott All-Wave. As the dial is turned to the correct spot, the station comes on, in most cases, with the same naturalness, clarity, and roundness of tone that characterizes domestic reception.

of Foreign Reception **Owners** and How You hear it

Usually, you can have more volume than you wish, which means simply that the sensitivity may be lowered beneath the noise level, thereby permitting the program to come through with truly enjoyable bell-like clarity. There's no doubt about it. Dependable foreign reception is here; yours to thrill to; yours to enjoy as you have never enjoyed radio before.

Read These Logs*

The log reproduced at the right represents one day that E. B. Roberts of Massachusetts spent with his Scott All-Wave. During the day he journeyed from France to England, to Italy, back to France and in the evening to South America. The other log is that sent in by Mr. Roye Bilheimer of Pennsylvania who made a point of logging every word put on the air by VK2ME, Sydney, Australia, February 28, 1932. If you have any doubt concerning the authenticity of these two logs or the others sent to us, see the auditors' report herewith. Read these logs—then consider that 9,533 more detailed logs bear witness to the new world of radio pleasure opened to YOU by the Scott All-Wave 15-550 meter Superheterodyne.



THE SCOTT WELLINGTON Typical of the many excellent models of Scott Consoles, the Wellington is a beautiful example of deluxe cabinet artistry. Fashioned from burl walnut and funshed to go with the finest furniture. The center drawer contains the optional phonograph equipment, which, when wanted, is supplied with an automatic ten record changer.

Prove to yourself the practicability of Short Wave foreign reception

These four pages have told the story of short wave foreign reception in no uncertain terms. They have PROVED that clear, enjoyable reception of foreign stations can be enjoyed by anyone irre-spective of the state or country in which he lives. And we want to prove to you, right in your own home—that YOU can tune 'round the world whenever you choose and enjoy every program you hear. To do that, we'll build a Scott All-Wave 15-550 meter superheterodyne to your order; we'll test it on reception from London, Sydney or Rome—and give you the exact dial readings. If you don't get enjoy-able foreign reception from these stations-if the receiver does not eclipse every statement made for it, you may return it and your noney will be refunded. The cou-pon below will bring full particu-lars of this offer—also the techni-cal details of the Scott All-Wave. Clip the coupon—mail it now.

The E. H. Scott Radio Laboratories, Inc. 4450 Ravenswood Ave., Dept. SW 62 Chicago, Ill.

The E. H. Scett Radio Laboratories, Inc., 4450 Ravenswood Ave., Dept. SWC 62 Chicago, Ill.
Send me full particulars of the Scott All-Wave Superheterodyne.
Name
Street
Town State

*AUDITORS' REPORT

We hereby certify that we have examined and counted 9,535 logs of programs reported by purchasers of Scott All-Wave Receivers from 186 stations, foreign to the country in which received, during the months of January, February, March, 1932.

CHESNUTT, MURPHY, Poole & Co. Certified Public Accountants

News and Music From Four Foreign Countries Received in One Day

THESE logs, made March 7, 1932, and submitted by E. B. Roberts of Massachusetts, indicate the variety of foreign programs that may be heard with a Scott All-Wave. For lack of space, only a portion of each log appears here.

NEWS FROM FRANCE STATION RADIO COLONIAL—PONTOISE

STATION RADIO COLONIAL—PONTOISE

S:44/2 am. E.S.T.—"This is Radio Colonial from Paris
culture. Wavelength 19.68 meters."
News in English from the Continental Daily Mail, Great
Britain—The financial recovery of Great Britain has
aroused the interest of the world.

8:45 a.m. E.S.T.—Chimes.
From N. Y. Sunday—The U. S. view is that the world
economic crists is behind. Sterling reflected by rising
to a new high. Sunday—Small patients are not willing.
From General Sterling and Sterling reflected by the sterling r

From N. Y., Sunday—Bulletin on the death of Band-master Sousa.

8:51½ a.m. E.S.T.—From Berlin, Sunday—Speeches resaid-ing the election next Sunday, Will Hindenburg or Hilter be elected only question.

8:55 a.m. E.S.T.—From N. Y., Sunday—The Lindbergha have turned to the underworld for help as the authori-ties seem helpiess.

NEWS AND MUSIC FROM ENGLAND STATION G58W-CHELMSFORD

the Shr. S.T.—News Bulletins for the Middle Zone.
Wild convrighted.
Briand died today. An ardent advocate of peace.
Builetin regarding the Indian Budget.
Far East Bulletin—Dr. Yen announced that China is ready to enter negotiations to restore peace. The Japanese have no intention of advancing further.
Builetin regarding the kidnaping of the Lindbergh baby—no news as yet.

NEWS AND MUSIC FROM ITALY—STATION 12RO

2:49 p.m. E.S.T.—Tailing in Italian of the results of the six-day bicycle race in Madison Square Garden, which six-day bicycle race in Madison Square Garden, which compared to the six-day bicycle race in McMamara-Peden.

2:52 p.m. E.S.T.—Now talking about Primo Carnera and Young Stribling.

2:54 p.m. E.S.T.—Maddio Roma-Napoll."

News bulletins from the U.S. A. Shanghai and Tokio. News regarding the Lindbergh baby.

2:59 p.m. E.S.T.—Announcement.

3:01/2 p.m. E.S.T.—Announcement. Gave names of Italian cities. Music by orchestra between announcements.

3:02 p.m. E.S.T.—Orchestra between announcements.

MORE MUSIC FROM FRANCE STATION RADIO COLONIAL—PONTOISE

3:57 p.m. E.S.T.—"The Marseillaise."
3:59 p.m. E.S.T.—"Hilo, Hilo, Ici. Paree. Station Badio Colonial."

Sign E.S.; — Ano, And Violin selection.

**Colonial ST — Piano and Violin selection.

**Region E.S.T — Announcement.

**Anouncement.

**Sign E.S.T — Announcement.

**IS p.m. E.S.T — Cello solo.

**LiS p.m. E.S.T — Cello solo.

MUSIC FROM SOUTH AMERICA—STATION HKF BOGOTA, COLOMBIA

BOGOTA, COLOMBIA

8:25 p.m. E.S.T.—Vocal solo. Man singing native selection.
8:28 p.m. E.S.T.—Vocal solo. Man singing native selection.
8:28 p.m. E.S.T.—Announcement.
Bartione solo, with choruses singing.
8:33 p.m. E.S.T.—Announcement.
8:46 p.m. E.S.T.—Native instrumental selection.
8:46 p.m. E.S.T.—Native instrumental selection.
8:47 p.m. E.S.T.—Native instrumental selection.
8:48 p.m. E.S.T.—Announcement.
8:53 p.m. E.S.T.—Announcement.
Bartions solo.
9:02 p.m. E.S.T.—Announcement.
9:03 p.m. E.S.T.—Native dance selection.
9:06 p.m. E.S.T.—Native dance selection.
9:06 p.m. E.S.T.—Station announcement.
Colombia, South America.
2:10 p.m. E.S.T.—Station announcement.
Volume very good. Some fading.

Spanish-speaking stations of South and Central America are, without doubt, the source of the average fan's most difficult identification problems! Few of these stations ever give English announcements; many of them shift wavelength at will, and new ones are appearing almost daily, to add to the listeners' confusion. [42]

Tom Williamson observed that "the biggest single difficulty in the hobby was getting accurate information about stations in respect to address and wavelengths used at different times of the day." [43] From this need there developed an active hobby press. DXers had to get their information where they could, but once the need was established there was no absence of publications seeking to meet it.

THE HOBBY PRESS

Magazines: The Gernsback Trilogy. The biggest name in early radio magazines was Hugo Gernsback, founder of two of the most important shortwave publications of the day, Radio News and Short Wave Craft, and their shortwave "little brother," Official Shortwave Listener Magazine. (Gernsback also published Radio Craft, a widely read magazine which carried occasional shortwave news but concentrated on technical topics.) Often described as the father of science fiction, Gernsback was an "author, inventor, scientific prophet, magazine publisher and broadcast pioneer" [44]—an eccentric to some, a visionary to others. His penchant for mixing fantasy with art led to interesting magazine covers which depicted electronic gadgetry and futuristic machines of all kinds. And his descriptions often came true.

Of all the early radio magazines, Radio News was probably the most widely read, with an advertised circulation of 400,000 by 1925. What set Radio News apart was the breadth of its coverage. It had something for everyone: electronics, amateur radio, equipment, antennas, broadcasting, radio servicing, DXing and program listening. It had contests, humor, extensive advertising for all kinds of parts, receivers and other equipment, plus monthly Gernsback editorials on every conceivable radio subject. Another interesting feature was its short stories, wherein radio always played the decisive role in saving a damsel in distress, averting a natural disaster or bringing a scoundrel to justice.

Radio News' first major foray into shortwave came in 1933 with the "DXer's Corner" column. Laurence M. Cockaday, Radio News Editor and a major inventor-developer in radio's early days, edited the column himself.

"What was only a year ago considered a fad, the reception of long-distance short-wave transmissions from the far corners of the earth, is now taking hold among a much larger group of listeners than heretofore thought possible. Thousands of new recruits have joined the ranks of the short-wave listeners during the last few months in America and they are persons in all walks of life. . . . [They] have been 'bitten by the bug' and have purchased the finest type of equipment they could find for this purpose. . . . With a good short-wave set today it is possible to sit down and pull in stations 3,000 to 12,000 miles distant and receive them enjoyably and comfortably. If one knows how to tune, there is certainly more thrill and adventure on the short waves in a half hour than on the broadcast waves in many hours' listening. "[45]

BCB DXers might disagree with that last statement, but it illustrates the potential which shortwave was thought to have.

Cockaday's column was impressive. It featured a monthly "World Short Wave Time-Table" showing the stations that operated each hour of the day. It also had loggings, "best bets" and station news supplied by readers and "Official Radio News Short Wave Listening Post Observers." Later it included DXers' photos, pictures of QSL's, feature articles, distance maps and club news, plus extensive shortwave station lists that contained addresses, ID texts and interval signals.

In August 1934, Radio News supplemented its shortwave coverage with "Captain Hall's Short-Wave Page," an interesting monthly world tour of shortwave broadcast (and sometimes amateur) DX activity. Captain Horace L. Hall was a well known hobby personality who had written for another excellent albeit short lived hobby magazine, Short Wave Radio. He lived in Manhattan and got started in shortwave as an offshoot of his post-merchant marine retirement vocation--building museum-quality ship models. He worked best in the late night hours, and during breaks he would smoke and listen to the radio, discovering shortwave stations after the BCBers signed off. For a few months in 1934 and 1935, Hall also edited a column, "Capt. Hall's Short-Wave Page," for The Globe Circler, bulletin of the International DXers Alliance (more on the IDA below).

In October 1933, Radio News actually changed its name to reflect the increased attention to shortwave. It became "Radio News and the Short-Waves" through December 1934, and "Radio News and Short-Wave Radio" from January 1935 through June 1938, when the "shortwave" was dropped. In April 1938, the magazine took on a slicker, modernized look. Cockaday joined the navy and his column was replaced with "Short Wave Flashes" by Charles A. Morrison, President of the International DXers Alliance. The column was dropped in 1939, in part a victim of the magazine's growing emphasis on amateur radio. Shortwave coverage would not resume until 1944 when, as a result of "many requests received from . . . readers," the "International Short-Wave" column began

under the editorship of Kenneth R. Boord.

The second in the Gernsback trilogy was Short Wave Craft. Hugo Gernsback caught the mood of the times in his introduction to the first issue in 1930:

"Today's widespread enthusiasm for the great and unlimited possibilities of short waves recalls, in many ways, the days of 1921-1922 when the first real boom in radio had arrived.

"Just now, short-wave activities are certainly the hotbed of new radio developments. There are no longer revolutionary possibilities in the highly-standardized medium-wave broadcasting, or in the commercial receiving set of today, which has tended more and more to reduce radio to automatic reception of local stations.

"But radio history, in the present cycle, is repeating itself. There are over 100,000 short-wave enthusiasts, in the United States and Canada alone, who are daily listening to short-wave voice and music broadcasts from . . . 10,000 miles away and more . . . Then, there are in this country alone some 20,000 radio amateurs who are in regular telegraphic communication with each other in all parts of the globe.

"But short waves are very much more than just a hobby--they are important from a commercial standpoint. Television in the home, toward which our largest commercial laboratories are feverishly working, is possible by no other means than through the use of short waves. The trans-oceanic telephone, to Europe and to liners at sea, depends upon short waves; which are also relied upon to bring all sorts of international events to us for rebroadcasting over our American networks on the higher waves. Airplane radio cannot do without short waves today; for they are essential to make flights safe for passengers and property. Explorers in our days find it absolutely necessary to carry with them short-wave equipment. The success of Admiral Byrd cannot very well be imagined without short waves for his communication during his entire stay in the Antarctic." [46]

Short Wave Craft ran a regular station list, "Short-Wave Stations of the World," which included all known shortwave stations, arranged by frequency. "When To Listen In," a short column of SWBC station information by Robert Hertzberg (and later M. Harvey Gernsback), was another feature in the early years, as were loggings from readers. In November 1936, Short Wave Craft inaugurated "Let's 'Listen In" with Joe Miller. It was a high quality, well illustrated column featuring narrative news of serious DX value, mostly SWBC but with a little utility and ham news as well.

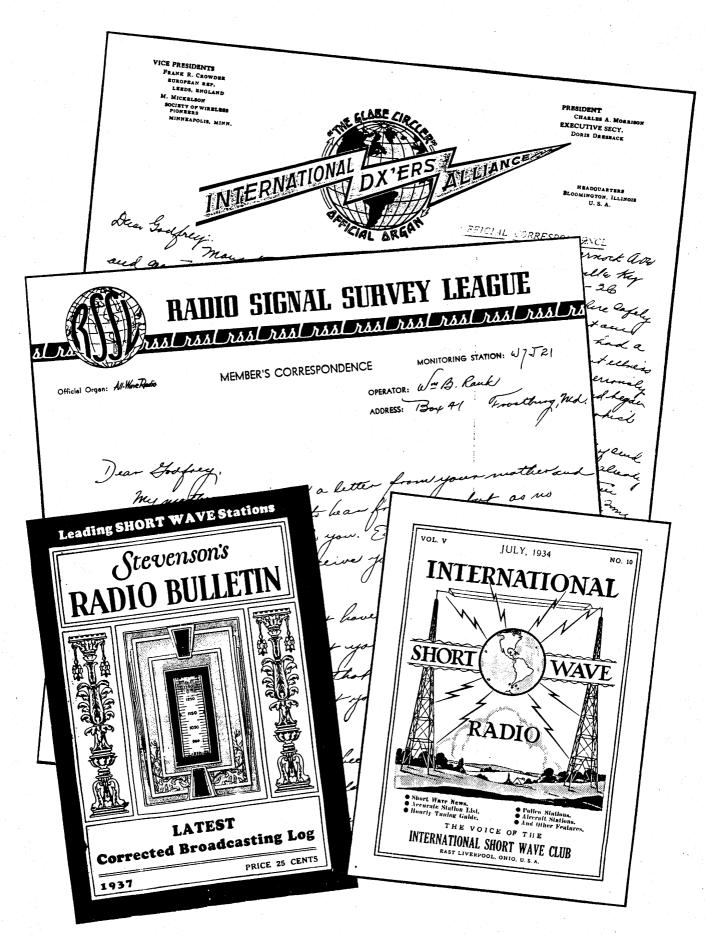
In January 1937 the magazine changed its name to Shortwave and Television, and in June it upgraded the format and content of the monthly "World Short-Wave Station List," turning it into probably the most authoritative list of its day. It was arranged by frequency and showed station name and call, operating times, and some addresses. Occasional supplemental lists provided valuable information on station ID's.

In October 1938 the magazine changed its name again, this time to *Radio and Television*. A new emphasis on amateur radio was announced, the notion of experimentation and set building having gradually lessened among listening enthusiasts. Joe Miller's column bit the dust at the end of 1939. He returned briefly in June 1941, inquiring as to reader interest, but nothing further materialized.

Radio and Television merged into Radio Craft in the November/December 1941 issue of the latter. These were the war years. The market was shrinking, resources for publishing were becoming scarce, advertising was down and amateur radio and TV development were at a standstill. Rather than run two magazines at a loss, Gernsback decided to try one at a profit. It was promised that Radio and Television would eventually resume publication as a separate magazine, but it didn't, and Radio Craft itself became Radio-Electronics in 1948.

The third of the Gernsbacks was the much shorter lived Official Short Wave Listener Magazine. This general circulation, newsstand magazine devoted exclusively to SWBC listening was published every other month beginning in late 1934. It was non-technical, concentrating on station lists, tuning information (antennas, ID's, interval signals, etc.), and station and program information. It was the latter that made OSWL unique. The magazine featured articles and photos about shortwave programs and shortwave radio personalities. Some examples of OSWL articles:

- "London Calling"
- CT1GO, Station of the Portugal Radio Club
- The Short-Wave Voice from Germany
- W8XAL--The Short-Wave Outlet for WLW Programs
- How NBC Broadcasts on Short Waves
- Short Wave Beauties from Holland
- When Moscow Turns On the Short Waves
- New Stations In Latin America
- 3LR's Short-Wave Voice from "Down Under"
- Bright Spots in U.S.S.R. Programs



- Musical Artists from Australia
- Hungarian Short-Wave Artists
- Novel Programs from India

It was the first time anyone had thought that there might actually be a group of shortwave program listeners out there. Unfortunately, OSWL's short life (it was absorbed by Short Wave Craft in June 1936) did not prove that an exclusively SWL magazine could make it, but OSWL was very nice while it lasted.

Other Magazines. A great little DX magazine-perhaps the greatest ever published--was RADEX. For most of its life, from 1924 through February 1942, RADEX was issued ten times a year (monthly except for a single June-July-August issue). Each issue contained 100 pages.

One of the grand old names of DX, Carleton Lord, described RADEX's beginnings:

"It was intended for [BCB] listeners who did not have access to a newspaper with daily listings of programs. The listener would check the evening programs in RADEX, select those he would like to hear, and then note the nearest stations that would be carrying them. During the late 20's, many listeners would report the distant stations they had heard, and this led to a growing section for 'Letters to the Editor.' * * * Editor/Publisher Fred C. Butler boasted that monthly letters ran from a few hundred to over 1,000 and, of those requiring a reply, every one received a note in the magazine or a personal response. "[47]

RADEX's appeal in the 1920's was its organization of station information. Each issue carried a list of BCB stations arranged in frequency order, with three blank boxes next to the frequency for entering one's receiver dial settings (in those days, sets typically had two or three separate tuning controls with 0-100 markings). Interpolation between known frequencies permitted you to know roughly what channel you were tuned to. The magazine also contained separate station listings by call letters and state. From these listings came the magazine's official name, Radio Index, which was abbreviated RADEX.

Besides the indices, RADEX carried articles about stations, receivers, antennas, radio servicing and many other topics. There were questions from readers, editorials, crossword puzzles, contests, and an hour-by-hour calendar of network programs. The titles of the columns were great—"Riding the Ether Waves," "With the Midnight Marauders," "Monthly Gathering of the Clan," "In the Wee Hours With the RADEXers," "Stories of the Log Builders."

RADEX carried commentary on many topics, like obnoxious advertising, reminiscences of the "early" days of radio, and various metaphysical aspects of QSLing. The entire magazine was written in a chatty, informative, "DXer's" style. It was more like a club than a magazine, and in fact a "RADEX Club" was established in 1938. If you could have had only one DX magazine, it would have been RADEX.

Through the pre-shortwave 20's, RADEX's orientation was, naturally, toward the broadcast band. Late in 1930 it started carrying some shortwave information, and in June 1932 it presented its first list of shortwave stations of the world, soon to be a regular feature. RADEX belonged to DXers, especially BCB DXers, but it was on its way to earning the deserved appellation, "the DXer's bible," among shortwavers too. Letters from DXers in foreign countries began appearing, along with more articles about shortwave--"Breaking Into the Short Waves," "What's On the Short-Waves," "Coming Treats On the Short Waves," etc. Some columns spanned both BCB and shortwave, like "Leaves From A DXer's Scrapbook" by "Count de Veries" (Carleton Lord).

An interesting RADEX anomaly was the magazine's cover, or "frontispiece." As the emphasis on DXing grew, RADEX carried less and less program information, but every cover still featured the picture of a female radio personality of the day--Clara Bow, Mary Nolan, Frances Langford, "Annette Hanshaw, Van Heusen program Contralto," "Alice Joy of the Prince Albert Quarter Hour" ("she has a mellow voice of low register"), and dozens of others.

Likewise, throughout the magazine proper were many photographs of radio entertainers placed smack in the middle of articles that had absolutely nothing to do with them. There was Guy Lombardo in the middle of an article about radio salesmen, the "Cuckoo Hour" gang in the middle of a discussion of volume controls, Lowell Thomas in the midst of some DX tips, Ed Wynn surrounded by aerials and grounds, etc. The photos lasted through 1938 and the cover ladies through September 1939, long after RADEX had become basically a DX publication.

Publication of RADEX was suspended after the February 1942 issue, another victim of wartime instability.

During its almost 20-year history, however, it set a new standard in DX publishing.

All-Wave Radio would have been my second favorite magazine. It was published from September 1935 to mid-1938, when it was absorbed by Radio News. The main shortwave column was called "Globe Girdling" and was edited by J. B. L. Hinds, a resident of Yonkers, New York and an accountant with the New York Central

Railroad. Like Radio News' Captain Hall, Hinds had also written for Short Wave Radio magazine. He started DXing in 1930 with a Pilot Super Wasp, and by the time he started editing for All-Wave Radio had graduated to a Hammarlund Pro, one of the early communications receivers. He knew the shortwave scene well. His columns were full of loggings and DX news, and were illustrated with numerous QSL's from his own collection. Supplementing his column was one of the most extensive monthly station lists of the day, showing frequencies and hours of operation for both broadcast and utility stations, plus separate, periodic lists of station addresses. All-Wave Radio knew what DXing was all about.

Other Literature. Beginning in the 20's and lasting into the 30's there developed something called the "radio log and callbook." Today when someone says "callbook" we think of amateur radio, but in the early days there were many "callbooks" which covered medium wave and shortwave broadcast stations exclusively.

The callbook publications were basically station lists, arranged in different ways. They came in several forms. Some were standalone publications which were updated and republished on a recurring basis. One such was White's Radio Log, which was published as a standalone booklet into the 1950's, eventually being incorporated into Radio-TV Experimenter magazine and, from 1971 to 1981, Communications World. It was last published in 1985. There were several other publications like White's.

Many "radio logs and call books" were issued as one-time or "occasional" publications, usually in the form of pocket- or magazine-size pamphlets. Often they were distributed as promotional items by radio manufacturers and other businesses. In addition to the station information, they often contained advertising.

Some magazines had "call book" or "log" in their title, sometimes as a result of mergers with other publications. Although they also carried station lists, their main orientation was usually on the technical side-circuits, schematics, construction, radio theory, etc. Included here were publications like Radio Call Book Magazine and Technical Review (absorbed by Radio News in December 1932), Citizens Radio Call Book Magazine and Scientific Digest, and Radio Listeners' Guide and Call Book.

ORGANIZING

There was a lot of organizing by both clubs and magazines in the 1930's.

Just as there had been many amateur radio clubs in the days of the experimenter, so there were now many listener clubs. The Great Lakes Radio Club, the New England Radio Club, the Transcontinental Radio DX Club, Canadian DX Relay, the North American Radio Club, the United States Radio DX Club--all are gone now. Magazines like Radio News and RADEX offered the clubs generous publicity.

Most of the clubs were small, ranging from 15 to 125 members, and concentrated on BCB DX. Often they issued "tip sheets," sometimes on a weekly basis. A major activity of many clubs was arranging, through their courtesy programs committees, special broadcasts dedicated to the club's members from BCB stations. (Although special programs were arranged occasionally for shortwave listeners, especially by *RADEX* and the International DXers Alliance, it was primarily a BCB activity.)

Many hundreds of these special programs were arranged each season--so many that numerous scheduling conflicts developed. This led to sharp practices. Some clubs would ask stations to dedicate to them a portion of a program arranged by another club, others would not publish information on special programs arranged by other clubs, etc. Inter-club sniping abounded, and periodic efforts toward inter-club cooperaton seemed to go nowhere.

The only survivor of these early clubs is the National Radio Club, established in 1933 as an exclusively BCB club. Most of the smaller clubs merged into larger ones, and the larger clubs eventually got into shortwave. Most shortwave activity was oriented toward the east and central United States.

Then, as now, radio club bulletins were an important source of information. Of the clubs that carried shortwave information in the 1930's, the big three were the Newark News Radio Club, with its early publication, *The Dialist*, precursor of the *NNRC Bulletin*; the International DXers Alliance, publisher of *The Globe Circler*; and the Universal Radio DX Club, which published *The Universalite*.

The NNRC was formed in 1927 and had 1,800 members by 1933, making it the largest of the clubs. Dues were \$2 the first year, \$1 thereafter. In its early days the NNRC was principally a MW club, and the vehicle for publishing DX information was the Newark News newspaper itself, which carried various club features written by members under nommes de plume such as "Roamer," "Dial Twister," and "Air Raider." In 1934 the club commenced publication of The Dialist, a magazine of about 40 pages that bore a distant resemblance to RADEX. It was commercially printed, with a glossy cover, and it featured club news, station information, articles about DXing, gossipy items about radio personalities of the day, and a monthly list of U.S. BCB stations (again a la RADEX). Unfortunately, its demise came at the early age of one year when it found itself in competition for advertising with its sponsoring parent, the Newark News. The less glitzy and non-commercial NNRC Bulletin started up soon thereafter and was published continuously until the club closed its doors in April 1982.

The International DXers Alliance was formed in 1932 by well known Bloomington, Illinois DXer Charles A. Morrison. Known over the years as the IDA, it emphasized foreign DX, mainly MW at first. Dues were \$1 a year. The monthly bulletin, *The Globe Circler*, started out as a four-page mimeographed affair which was distributed to about 50 persons. Interest in shortwave started developing, and in August 1934 the club went "all wave." By 1935 the bulletin had grown to a 16-page pamphlet more closely resembling today's club bulletins, with loggings, station news, new member info, club chapter news, etc. It was sent to over 1,200 persons in 50 countries. There were also several IDA regional district bulletins, and a *British Globe Circler* published in England for the club's 100 European members. The IDA deserves much credit for the many important hobby activities in which it was engaged.

The Universal Radio DX Club was another well known club (not to be confused with the Universal DX Club which was absorbed by the NNRC in 1938). It was headed by Charles C. Norton. Upon its founding in 1933 it began issuing a DX "tip sheet" every 10 days. Dues were 85 cents a year. By the late 30's its weekly bulletin, *The Universalite*, was well known. It contained BCB tips and station changes, shortwave information, a special report on DXing in Japan from a URDXC member there, and members' letters. The URDXC continued in existence into the 60's with Charles Norton still at its head. (Norton died in 1991 in Vallejo, California.)

The first major shortwave-only club was the International Short Wave Club, headquartered first in Klondyke, Ohio, then in East Liverpool, Ohio. It commenced operation in 1929. Annual dues were \$1. The bulletin, *International Short Wave Radio*, was a 5 x 7*, 20-40 page, professionally printed bulletin containing interesting DX items, station lists, station photos and advertising. At first the coverage was primarily utility stations, but it soon moved into SWBC, which became its concentration.

Another noteworthy club was the Quixote Radio Club. Formed in 1933, it issued a weekly bulletin, *The Short Wave Reporter*. Encouraging activity by club members was a concern even back then. Active QRC members (those who submitted at least one report weekly) received 20 issues of *The Reporter* for \$1. Inactive members received only 10 issues.

There were some less serious "clubs" as well, like the Before Breakfast Short Wave Club. "There are no dues, meetings, minutes or other parliamentary nuisances. It is merely a friendly, fraternal and not too serious organization of early birds who believe in the old adage about catching the worm. [48] A membership certificate was sent upon receipt of two QSL's from shortwave stations 1,000 miles distant that were logged between 5 and 9 a.m.

Radio magazines also played a role in hobby organizing. Short Wave Craft sponsored something called the Short Wave League. Although it seemed preoccupied mainly with the issue of whether to abolish the amateur code requirement below 5 meters, it was promoted as "a scientific membership organization for the promotion of the short wave art." Members received a membership certificate and could purchase stationery, maps, globes, seals, etc., and the official Short Wave League button (enamel 35 cents, "solid gold" \$2).

Another Short Wave Craft project was the Short Wave Scouts, whose purpose was "to bring to headquarters reliable information on the operation of the various short-wave stations of the world." A monthly Short Wave Scouts silver trophy was awarded to the person who submitted the log containing the greatest number of shortwave stations verified during a 30-day period. The first silver trophy was awarded in January 1934. It was "designed by one of New York's leading silversmiths. It is made of metal throughout, except the base, which is made of handsome black Bakelite. The metal itself is quadruple, silver-plated, in the usual manner of all trophies today. It is a most imposing piece of work, and stands from tip to base 22-1/2".... The work throughout is first-class, and no money has been spared in its execution. It will enhance any home, and will be admired by everyone who sees it. "[49]

All-Wave Radio attempted to organize DXers through the Radio Signal Survey League, which was introduced in February 1937 and given its own column most months. The purpose of the R.S.S.L. was to improve domestic and international radio transmission and reception conditions through a worldwide network of monitors who would conduct organized monitoring surveys for stations requesting it. There were five divisions: BCB, SWBC, amateur phone, amateur CW and "noise survey," the latter intended to help alleviate man-made electrical interference in local areas. There was an R.S.S.L. section manager in each state, and local chapters were encouraged. Members reported their survey results on forms which showed reception conditions in a graphic format. The R.S.S.L. also offered listener supplies (survey forms, stationery and R.S.S.L. metalette seals), and "DX Reception Citations" (certificates attesting to one's verification totals).

There was much organizing surrounding the R.S.S.L., perhaps too much, and when all was said and done, there had been a lot more said than done. The level of survey participation was not what had been hoped for. When All-Wave Radio was taken over by Radio News in August 1938, the R.S.S.L. faded into history. Still, the experiment was important as an organized, hobby-oriented attempt not just to exchange DX tips but to actually improve international reception and thus make shortwave radio more attractive to non-technical people.



Official DX Listening Post

This is to Certify

EUGENE S. ALLEN with outstanding DX reports and co-operation has proved his qualificat

Official Universal Radio DX C Listeniug Post Observer



This Card Identifies Frank Masedo R1870 AS AN ACTIVE MEMBER OF The Radex Club

and is issued in recognition of interest in long distance radio reception, and nacknowledgment of subscription to RADEX "The All Wave Radio Log to

The Radex Publishing Co.
12 Locust Ave.
Emerson, N. J.

OFFICIAL CERTIFICATE OF VERIFIED INTERNATIONAL

HIS CERTIFIES that:

has submitted to RADIO DIGEST for official verification, evidence of international reception during international Radio Week, January 24 to 30, 1926.

AND, this further certifies that RADIO DIGEST has verified the evidence submitted by comparing with official confidential data on programs broadcast by foreign stations cooperating in International Radio Week.

Given under our hand and weak this truth day of February 1026.

Given under our hand and seal this tenth day of February 1926

Official DX Cistening House

THIS IS TO CERTIFY

has met all the requirements for outstanding DX radio reception, and in acknowledgement

has been appointed:

OFFICIAL RADIO NEWS SHORT WAVE LISTENING POST OBSERVER

Directors of the DX CORNERS, RADIO NEWS

Growth of the clubs meant that DXers, and their reputations, started getting known. Among the big names of the shortwave listening scene of the 30's were many we don't remember, like Oliver Amlie of Philadelphia, Ray LaRocque, Robert Skyten and Gil Harris of Massachusetts, John J. Oskay of New Jersey, Page Taylor of Detroit, and Anthony C. Tarr of Seattle. Others we can recall a bit more easily, like August Balbi of Los Angeles, Larry Lundberg of Minneapolis, Art Hankins of Greensburg, Pennsylvania, Carroll Weyrich of Baltimore, and the man who is surely the dean of American shortwave DXers, Roger Legge. And there were some even bigger names. In October 1934, RADEX reported that Bing Crosby and Dick Arlen were going to stage a week-long DX battle from their Hollywood homes. They would use identical McMurdo Silver receivers, and the one who logged fewer stations would write a check for \$1,000 to a children's charity.[50]

Although distance discouraged the kind of national conventions we are used to today, it was in 1939 that the IDA sponsored one of the first national shortwave DX meetings, the Golden-Gate DX Festival, July 8-11, 1939 in San Francisco, site of the International Golden Gate Exposition. There were special broadcasts over G.E.'s "Treasure Island" (San Francisco) shortwave station, W6XBE (later KGEI). There was also an IDA barbecue, plus displays, lectures, etc. It was noted that "\$15 or \$20 should carry anyone thru the entire four days of the Festival and Exposition nicely, and that covers all expenses: registration, meals, hotel, sightseeing, etc. Many could do it for less than that by careful planning."[51] The IDA bulletin contained instructions for reaching the convention site by train, bus and auto, and urged members to take the special "Globe Circler Tour," a seven-day railroad trip from Chicago to San Francisco by way of Oregon aboard the Northern Pacific Railway's "North Coast Limited." The round trip train fare, including sleeper coach, was \$89.90-\$98.90 per person, including some side trips and ferries. "Excellent meals, 50 cents, 75 cents, \$1. Also 'off the tray items', 5 cents to 25 cents." Those were the days.

COMPETING

There were many opportunities, big and small, to distinguish oneself. Magazines were always offering a few dollars or a free subscription for the best operating tips, or "kinks," as they were called. RADEX offered a radio map or a copy of their magazine to the winner of the monthly puzzle contest. Official Short Wave Listener Magazine offered a silver trophy for the best listening post photo.

Short Wave Craft ran a contest for the best article about a homemade shortwave receiver or converter wherein you had to not only write the article but also send in the set! First prize was \$50. Another time, Short Wave Craft offered over 100 prizes to readers who submitted the best captions for a Short Wave Craft cover depicting an angry wife sitting up in bed shaking her finger at her spouse, who was in another bed with his headphones on. The winner of the grand prize (a Pilot 11-tube Super Dragon receiver): "There 'Antenna' Justice" ("There Ain't Any Justice"—get it?). The second prize winner was "The Ethernal Triangle"; 14th prize winner, "Radio Raises Spain But Wifey Raises Cain." I guess you had to be there.

There was also some serious contesting. DX contests developed first among medium wavers. In 1934, the IDA ran the Randolph Trophy contest for verifying the largest number of medium wave stations at least 2,000 miles distant during a six month period. The grand prize went to a Hawaiian DXer with 114 stations. First prize was a 40"-high trophy, with several smaller but equally impressive trophies going to other winners.

A big shortwave contest in the mid-1930's was the International Short Wave Club's Denton Trophy Contest, named after Clifford E. Denton, well known shortwave engineer of the day. The winner was the person who obtained the largest number of SWBC veries from stations logged during a six-month period. First prize was a silver trophy, second prize a medal. Other winners received engraved scrolls.

Clubs issued various kinds of awards, just as they do today. In August 1935 the IDA announced the "Doctor of Short Waves degree" (D.S.W.) which required 100 shortwave veries from at least 25 countries besides the applicant's own (and including at least three QSL's from each continent). Clubs, as well as RADEX, had "singleton" contests wherein you "registered" a veri from a station which you believed no one else in North America had. Once entered, it could be "eliminated" from the list by someone else with the same veri.

An interesting DX artifact from the 30's was the radio map, basically a map which also contained station information. An offshoot of the radio map was the radio atlas, a booklet combining maps, station lists and information about the various stations and countries. There were many variations on this theme, with radio maps sometimes being used by electronics houses as promotional items.

One reason maps were popular was that reception distance was a recognized yardstick of DXing prowess. Much was made of being able to log stations 12,000 miles away, and advertisements contained letters from satisfied customers attesting to the distance feats that were possible with a particular receiver. Likewise, DX contests sometimes had a mileage component to them. You might have to log a given number of stations in various distance categories, or the point value of a logging might be dependent on its distance.[52] In the Denton Trophy Contest, for example, ties were broken based on total number of reception miles represented by the contestant's logs.

A DX REPORT

For Christmas

It's going to be a problem to find gifts this year that will be both useful and inexpensive. Why not make it a RADEX Christmas?

For \$3.50

Two years' subscription to RADEX with a leatherette cover.

For \$1.75

One year's subscription and the radio map.

For \$1.50

The Headphone Adapters or The Filtered Aerial.

For \$1.00

Next five issues of RADEX or the Book on Radio Theory and Practice.

> For 50 Cents The beautiful leatherette cover.

DX Listeners

Why have your verification questioned?

USE LOVE'S Standard Verification Cards

Designed by a DX fan with the one idea of making it easy to secure lots of iron-clad verifications. Love's Standard Verification Cards are easiest for the DX listener, because—He has only to fill in blank spaces on cards, sign, and mail to broadcast station. Easiest on Broadcaster, because—He has only to check DX report with his own records, sign on back of card, and return to sender. (This means prompt station response.) Completed verification contains, on one card, 3½ x 6½ inches, full program log including exact time when heard and is Oked and signed on back by proper authority at broadcast station, making an ideal perification. Cards are arranged to be filed alphabetically by call letters.

Special Introductory Offer

Send one dollar, P. O. money order, check or currency, for 50 (double) cards, mailed postpaid anywhere in the U. S., Canada, or Mexico, or 100 (double) cards, \$2.00 postpaid; 300 (double) cards, \$5.00 postpaid. Special prices in quantities to DX clubs.

Address-

PAUL LOVE Mission Ranch Phoenix, Arizona

SENSATIONAL YNLF LA VOZ de NICARAGUA

MANAGUA, NICARAGUA, C. A.

An opportunity to the merchants of North America to substantially increase the volume of their business through the use of our medium. Offers-

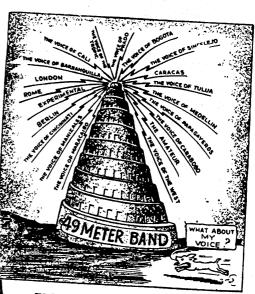
our measum.
We are the only station in Nicaragua operating simultaneously on Long and Short Waves. We present, exclusively, the best and most famous talent of our

We receive compliments from all parts of the Globe on the excellence of our programs and the clarity of reception.

Frequencies—6451 Kc.

Broadcasting Daily Eastern Standard Time 8 A. M. to 9 A. M. 1 P. M. to 3 P. M. 6:30 P. M. to 10:30 P. M. WRITE US FOR DETAILS

TUNE US IN



THE NEW TOWER OF BABEL.

VERIFICATIONS

In 1933 a listener suggested that "verification collections will some day be valued as a phase of what other collectors call Americana, since radio is yet in a comparative infancy." [53] While the efforts of the Committee to Preserve Radio Verifications were still more than 50 years away, the station-listener relationship produced some interesting memorabilia from the very start. During the 1920-25 period, for example, when stations were interested in knowing who was listening and what they thought of the programs, listener comments were commonly called "applause." This was before the days of listener research, even before most commercials. Artists were seldom compensated for performing on the air, and neither they nor the station knew who, if anyone, was listening.

Enter the "Applause Card," a "fill in the blanks" postal card which the listener sent to the station or artist, expressing appreciation for the broadcast—a kind of "reverse QSL," if you will. Generic applause cards were issued by radio companies and other commercial firms. Some individual listeners designed their own.

True verification cards were exchanged among hams even before the days of AM radio, so, considering the broadcasters' additional need for program comments, it is not surprising that QSLing took hold among BCB stations as well. The additional elements of geographic and cultural distance between broadcaster and listener made QSLing a natural for shortwave stations.

The rules of QSLing were the same in the 30's as they are today. So was the question of what it all meant. "I send for every verification that I can, and when my pop sees me writing out a dozen or so he wants to know what's the sense of it all. He says it does no good to have a letter from a station saying that they were broadcasting that time and that they were glad that I heard the program. I'm quite at a loss to argue with him except to say that it is an interesting hobby. He claims that it is a waste of stamps." [54]

Reception reports were not of higher quality in "the good old days." Many BCB reports were sent on postcards. An announcer who had set up various DX broadcasts at two BCB stations complained that most DXers were deficient in reporting signal quality, which was the main interest of the station. He said that in only 88 of 4,387 reports received was signal quality adequately reported. In the rest it was a sketchy technical report, often just a few words. "I have a number of friends associated with foreign short wave broadcast stations," he reported, "and letters from them indicate that the number of slip-shod reports is astonishing. I find that even 'fake' reports are received by these stations in numbers that make the situation rather serious." [55] The New Zealand DX Radio Association released data indicating some faking of reception reports. In one case, 30 people reported a station which had been off the air for two months. In another, NZDXRA-published details of a fictitious broadcast produced glowing reports from some listeners.

All-Wave Radio kept track of stations that did not verify, and, as today, DXers tried everything to get QSL's. After nine attempts to QSL 2RO in Rome, Captain Hall sent a registered letter to Il Duce himself. In response, he received a letter from the Italian Consul General in New York, requesting his presence. The Consul informed the captain that, as a result of his letter, Mussolini had conducted a thorough investigation of the conditions at 2RO. "Premier Mussolini thanks you so much for writing him, because he is interested in just these things. His policy is to investigate the smallest complaints." Hall informed the Consul that many SWL's had blackballed 2RO because it was a notorious non-verifier. Three months later he had a second visit wherein the Consul informed him that things had been cleaned up at the station and that, among other things, they had hired an Englishman to answer correspondence. Hall's next report was answered in 21 days.[56]

And there were the usual disappointments, such as the non-verification letter from 500 watter CQN, Macao which J. B. L. Hinds received in response to his report. It turned out that the station didn't broadcast on Sundays, the day when various DXers thought they were hearing it. "All of us who thought we had the station on any Sunday were mistaken, as that station never has broadcast on Sunday, and the station we did have was H1X, in [the Dominican Republic]."[57]

One thing that was different about QSLing was the cost. The 1934 postal rate to the Americas was three cents an ounce (not a half ounce), five cents to the rest of the world. Of course, air mail to many areas became available only late in the decade. Registering a letter added 15 cents to the postage. An International Reply Coupon cost nine cents. And you had to be careful how you addressed reports. Letters addressed to "Russia," not the "U.S.S.R.," were returned. (Some things really have changed.)

A lot of energy went into the issue of what did or did not qualify as a bona fide QSL--whether it was an actual verification, only an acknowledgment, etc. This was partly because contests were often based on verified loggings, and the QSL's usually had to be submitted as proof. The 30's were also witness to some rather heated debates pertaining to QSLing. One had to do with what were known as "monitored veries." It started out fairly benignly on the BCB side in 1936 but came to full boil on shortwave.

By way of their general manager, two jointly owned and usually non-verifying BCB stations, WJRD, Tuscaloossa, Alabama and WMFO, Decatur, Alabama, gave an Indianapolis DXer written permission to verify reports on their frequency tests for them. The DXer pledged to personally monitor the tests, and he prepared a

POST CARD RADIO APPLAUSE CARD

Radio Station K F N F Henry Field Seed Co., Shenandoah, Iowa

Gentlemen:

I want to express my appreciation with this APPLAUSE CARD, of the Program received from your station on Latt. 9 M. I wish to especially commend the following:



I bathered a Rose Maria Gertrule Healy Listener Henry Delangy Addrew 478 Colorus Phy City Buffalo State My With "APPLAUSE CARDS"

A Word of Appreciation from Hartford, Conn.

We are glad to advise you that we enjoyed your program on the evening of 100 9 4 1924

We enjoyed particularly the selectionaby miss. maria Gertrude Healey. Name Ins. + Ima, a.f. Elmer.

Address 214 Blue Hills are

Compliments of Hartford

APPLAUSE CARD

BROADCASTING STATION WBZ City Boston State Mass On Sunday Mar 8 1925 at I heard your station broadcasting the following: My I heard your station broadcasting the following: 11456 d.

Hearly and Daughter Marke Gentrude Healy's
Singing period. Enjoyed the singing very
much tengratulations toping me may
be favored with thier sino may again m
the future. Respectfully comonth from My set is home made _ tube regenerative. Aerial: 78 ft. long. 15 to Emerett J. Dane, Route No. 5., Cortland, N. Y.

WESTINGHOUSE EXPERIMENTAL STATION KFRX HASTINGS, NEBRASKA

THE FIRST RE-BROADCASTING STATION IN THE WORLD.

remule.

We reprot that we are unable to answer your kind communication in more personal.

That, however, is impossible because of the number of letters received. We wish, the programs and assure you that your support will bein a represent our appreciation for the time and arouble you have taken to compose the programs and assure you that your support will bein us in planning better profor the future.

Gracefully yours.
THE WENTINGHOUSE ELEC. & MFG. CO.
STATION KFKX

RADIO ACKNOWLEDGMENT CARD

Date Alex 12 - 192 4

Station -K Q V- begs to acknowledge your Letter

Reporting on Program and Transmission of April 19 700 Our Artists and the Personnel of the Studio greatly appreciate this attention and hope to hear again from you during the season.

Daily Programs— (except Sun.) 10.30 A.M. and 3.P.W.— Evening Programs—(except Sun.) & 00 to 10.00 P. M.— Monday—Wednesday and Frida Tues.—Thur.—Sat. and Sun. Eve. "SILENT".

270 Meters

STUDIO PHONE

DOUBLEDAY-HILL ELECTRIC CO.

Thus Manuels Faller

THE COMMERCIAL APPEAL BROADCASTING STATION MAR 1 1 1924

Memphis, Tenn... WMC Thanks You for Acknowledgment of Reception of Its Programme

Remarks_

GEO. D. HAY ("The Saloms Old Judge"), Director P. G. ROOT and J. E. KARLOUF, Operators Transmers: Western Electric sections In A Sale Breadesting Transmers Programmes Printed Dally in The Commercial Appeal (Central Standard Time)

BROADCASTING STATION

SCHEDULE JANUARY & FEBRUARY

SUNDAY PROGRAMS 10:30 a.m. end 4:30 p.m. CHILDREN'S STORIES Every Friday evening at 6:36 WERELY HEALTH TALKS
Every Friday evening at 7:40 NEWS BULLETING ally, escapt Saturday and Sanday, 6:15 p.co.

U. S. NAVAL OSSERVATORY TIME SIGNALS Daily, 11:55 a.m. and 9:55 p.m. Wedneeday and Saturday, 11:55 a.m. only, No time signals Sunday OFFICIAL WEATHER FORECAST
Daily, expect Sunday, 12:45 p.m.,
on 485 Section
TIME REFERENCE
Eastern Standard. Changes in
achedule announced by Radiophone

phone N. Y. PRODUCE MARKET REPORTS Delly, except Saturday and Sun-day, 12:30 and 6:00 p.m.

GENERAL ELECTRIC COMPANY, Schenectady, N. Y., U. S. A.

January, 1923

n. y. stock exchange reports

PC-244-10th Edition

special two-color verie which he offered to DXers submitting to him directly a correct report and a postage stamp. It was an unusual arrangement but it prompted few complaints.

In the 30's the BBC had the same policy which it followed (with occasional exceptions) for many years thereafter: it did not verify reports. In 1936, two well known DXers started monitoring the BBC Daventry station at pre-announced dates and times and issuing "QSL's" for correct reports accompanied by five cents to cover costs. They did this, they said, to stimulate interest in the hobby. Reports had to be mailed within 24 hours and had to contain the names of at least two songs or an accurate description of talks.

The process was well publicized in the hobby press, and the two public spirited DXers commended for doing a splendid job. Unfortunately, despite the organizers' apparent care in their releases to hold themselves out only as third-party monitors and not official BBC representatives, the QSL's implied something else: "Dear radio friend: Your report of reception of . . . transmitter on _[date]_ has been carefully checked and found correct. Please accept this card as your verification of reception. Many thanks for your report. THE BRITISH BROADCASTING CORP. Checked by:_______. Verified by:_______. " It was postmarked U.S.A., but the front looked mighty authentic.

This prompted the BBC to demand an end to the practice. Soon an enormous controversy arose within the hobby, with much questioning of the motives of those involved. (Around the same time another DXer established a similar arrangement for "verifying" reception of ZBW, Hong Kong, which had ceased QSLing.) Although some 400 Daventry reports were "verified" in this way, with no indication that the process was other than completely honest, the whole thing was thought subject to abuse and the organizers voluntarily ended it. At heart, it looked too much like DXers buying QSL's from other DXers.

Of a similar genre were the "dime veries." In 1937 the Quixote Radio Club inaugurated a system whereby club headquarters accumulated reports for certain Latin American stations which suffered from QSL lethargy and forwarded them to the stations as a group. With your report you sent 13 cents--three cents to cover the cost of getting the report to the station and ten cents for the return postage.

The Quixote program started out with HRN in Tegucigalpa, Honduras, but soon the QRC had 15 stations, including some relative non-verifiers, agreeing to honor reports submitted in this way. Unlike Daventry, the stations sent their own QSL directly to the reporter—the club was involved only in getting the report to the station. The service was available to QRC members and non-members alike.

The difficulty was that some of the stations adopted the practice of verifying only reports received in this way, ignoring others or returning them unverified with instructions to resubmit through the QRC. Some DXers were concerned that if the QRC program caught on, stations might insist that all reports be sent by way of such services and stop accepting direct reports altogether. Other DXers complained that, prior to commencement of the service, the "difficult" stations involved did verify some reports and that those who submitted proper reports and got them verified were being disadvantaged by this homogenized reporting process. Probably more because the service developed around the same time as the Daventry controversy, the QRC abandoned it.

These novel approaches to QSLing went the route of their BCB big brother, the EKKO stamp. Created by the EKKO Company of Chicago in the mid-1920's, EKKO stamps were engraved, postage-stamp size stamps carrying a picture of an eagle (for Canadian stations, a beaver), the letters "E-K-K-O" in the corners and the call letters of the station. They came in different colors. For \$1.75 you could buy an EKKO stamp album which contained spaces assigned to the various stations, just like a postage stamp album. The album came with a supply of "Proof of Reception" cards, basically card-size reception reports. You sent the station either one of these cards or a regular reception report, enclosed a dime, and the station sent you back its EKKO stamp, along with a QSL card or letter if they had one. Some people kept the stamps in the album, others affixed them to the veries. (Some stations had their own, non-EKKO verification stamps, and some did not use stamps at all.) Later, the EKKO Company started selling the stamps directly to any listener who sent in a QSL from a station. The EKKO stamp fad ended when listeners started trading them. They remained an interesting radio collectible, but they lost their value as true verifications.

AT DECADE'S END

In the mid-1930's, IDA President Charles A. Morrison wrote a four part series in *Radio News* about the future of shortwave.[58] We were on the verge of a new "international unity," he said. Shortwave would annihilate distances and bring with it peace among nations. In addition to the need for better equipment, better development of the medium's commercial potential, and better frequency allocations ("[t]he present congestion of the 49-meter band is a good example of the need for action on this line," he wrote), Morrison spoke of the desirable growth of "national radio voices" (and bemoaned the absence of such a voice in the United States).

The development of shortwave in the 1930's had indeed been breathtaking. For the first time, live radio broadcasting could take place with relative ease over great distances. All that was needed was the wisdom to use this new resource properly.

Unfortunately, although the globe was shrinking, man had grown no wiser. War clouds were gathering, and instead of shortwave increasing international understanding, just the opposite was happening. On the international bands the Axis stations had seized the high ground, broadcasting propaganda of hitherto unknown proportions. Their activities were being carefully watched. The BBC Monitoring Service was already in operation, and in November 1939 the Princeton University School of Public Affairs set up the Princeton Listening Center, the object of which was to study international broadcasting in wartime and record the texts of broadcasts originating from the Axis countries. It wasn't until 1941 that NBC and CBS set up their own monitoring stations to obtain overseas news and the F.C.C. established the Foreign Broadcast Monitoring Service. [59]

Shortwave listening hobby activity decreased at the end of the decade and continued at a slow pace as the war's demands on the home front increased. Equipment and information would soon be in short supply, as would DXers themselves, many of whom would join the service, putting the hobby aside as they and the rest of the world turned their attention to more serious matters.

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- [50] RADEX, No. 82, p. 32 (October 1934).
- [51] IDA "Stop Press Sheet," June 1939.
- [52] The RADEX 1937 Mystery DX Contest (medium wave) involved logging as many participating BCB stations as you could at 0200-0600 EST on February 20, 21 and 22, 1937. You received 2.5, 5 or 10 points, depending on distance, for an "identification report" (an announcement or one selection heard), and 10, 20 or 30 points for a "complete report" (three successive selections or 10 minutes of program details). Participating stations transmitted special programs, and the goal of the organizers was to have five broadcasts every hour. Some 36 stations actually participated, but contestants did not know which ones they would be, or the frequencies. Entries had to be mailed by midnight February 24. First prize was a 23-tube Scott receiver.
- [53] RADEX, No. 74, p. 42 (December 1933).
- [54] RADEX, No. 88, p. 15-16 (April 1935).
- [55] Morton W. Blender, "What About Reports?" RADEX, No. 109, p. 13 (May 1937).
- [56] Short Wave Radio, Vol. 1, No. 5, p. 32 (March 1934).
- [57] Short Wave Radio, Vol. 1, No. 10, p. 11 (August 1934).
- [58] Charles A. Morrison, "The Future of International Short-Wave Reception," *Radio News*, Vol. XVI, No. 10, p. 599 (April 1935); Vol. XVI, No. 11, p. 674 (May 1935); Vol. XVI, No. 12, p. 745 (June 1935); Vol. XVII, No. 1, p. 27 (July 1935).
- [59] Rolo, p. 260-268; Harold N. Graves. Jr., War On the Short Wave (New York: The Foreign Policy Association, "Headline Books," 1941), p 64.

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