

Radio in Europe Before the "Mike"

GREAT STRIDES BY GERMANY

EXCELLENT PROGRAMME STANDARD

GERMANY has made the greatest strides of any country in broadcasting progress in the last year, according to the observations of William Dubilier, a well-known radio inventor, who has just returned to New York from Europe where he made a survey of the radio field.

Broadcasting in that country is under Government supervision. Each listener in pays a yearly license fee of £2 8s., which goes to support the broadcasting stations and the necessary microphone talent.

About a dozen excellent broadcasting stations are in operation, giving the audiences the finest programmes possible.

Multi-Valve Sets Popular.

IN Germany, the multi-valve, or vacuum tube with several tube units within the same glass bulb, is highly popular just now. Complete radio sets, capable of excellent loud-speaker rendition on local signals, retail for £2 8s. The broadcasting stations are of sufficient power to provide good service with sets of moderate amplification.

French Anti-fader.

ACROSS the border, in France, broadcasting is also conducted by the Government, although there are a few independent broadcasters. The broadcasting service is far from ideal in that country, but fortunately the listeners-in can tune in on British, German and other foreign stations if need be. Mr. Dubilier saw an anti-fading device in France which impressed him deeply. This device maintains a uniform signal strength irrespective of whether it is receiving from a local or distant station, and compensates for fading.

British Radio Progressing.

BRITISH broadcasting, according to Mr. Dubilier, is steadily progressing, with one organisation, under Government control, handling it. The stations in various parts of England are engaged mainly in network operation. Interesting work is being done with short-wave broadcasting, in order to bring programmes from the Mother Country to the far-flung colonies.

Interesting Device.

While in England, Mr. Dubilier saw an intensely interesting device which does not use tubes or batteries of high potentials, yet serves as an excellent amplifier. It has an amplification of about thirty per stage. The details were not revealed to Mr. Dubilier beyond these facts.

BROADCASTING PERSONALITY

FAMOUS DIVA EXPLAINS

According to radio broadcast experts (says the "New York Times") 90 per cent. of the vocalists and musicians who seek a place as stars of the air fail because they are not able to perfect themselves in what is known as the broadcast studios as radio technique. That is the peculiar ability to inject the performer's personality into the microphone and hence to millions of receiving sets throughout the country with an unimpaired faithfulness.

An outstanding example of the mastery of this new musical art is that of Olive Palmer, coloratura soprano in the programmes broadcast every Friday through the NBC red network. A former grand opera star, Miss Palmer's individuality and methods have proved ideal for perfected radio performance. Her own story of her achievement shows the difficulties which air aspirants have to overcome.

Developed Own Technique.

"WHEN I first began my radio career," said the diva, "I realised that all of my operatic training would be of but little avail. By that I mean that in broadcasting I should not have the inspiration which comes from scenery, lights and the visible presence of an audience. Then, too, what might be termed the acoustics of the microphone and of the air itself are of course vastly different."

So Miss Palmer set out seriously to study the new technique. Since her radio debut her voice has been broadcast during 463 separate hours. For each one she has spent three hours in rehearsing or a total of 1389 radio hours.

"Although my audience does not see me, I continue to act," Miss Palmer continued. "I must feel my roles to get them over and this applies to even the simplest songs. So I act as I would on the concert or operatic stage, and it is a wonderful inspiration to know that hundreds of thousands are listening as I sing to them."

Asked to what specific thing she attributed her mastery of the radio art, Miss Palmer replied promptly.

Stands Close to the "Mike."

"My success has been due, more than anything else, to my discovery of the proper way to address the microphone. I have tried it from all angles and all distances. Finally I discovered that standing a little to the left and about eighteen inches from the microphone gives me the most satisfactory results—a discovery which seems to be borne out by the studio experts and the kindly comments of the radio critics who review my performances."

Radio Beacon

WONDERFUL AID TO AVIATORS

SIMPLE AND EFFECTIVE

THE aviator of the future will receive his radio compass bearings visually, and will not be required to fly with a headset clamped over his ears, as a result of the development of visible radio, a demonstration of which was recently made to prominent government Bureau of Standards at College United States Congress by the Government Bureau of Standards at College Park, Md. While the new method gives a visible signal, it is not to be confused with television, the principle being different.

THE new direction finder resembles in appearance an ordinary compass. A needle-like reed, moved by electrical impulses received from a radio beacon, is on the dashboard of the plane, and warns the pilot if he leaves his designated course for an instant. This visual indicator, as it is called, is the latest aid to airmen developed by the Bureau of Standards of the Department of Commerce. It does away with headphones, and also eliminates wire antenna.

Only Small Set Needed.

THE radio beacon system for guiding aircraft permits the marking out of an invisible but infallible course along which aviators can fly regardless of fog or other weather conditions. To make use of this system, an airplane need only be provided with a small receiving set carrying an indicator. An occasional glance at the indicator tells the pilot whether he is following the course, or how far off he has deviated from it.

The directive radio-beacon is a special kind of radio station, usually located at an airport, just off the landing field. Instead of having a single antenna like an ordinary radio station, it has two loop antennas at an angle with each other. Each of these emits a set of waves which is directive, i.e., stronger in one direction than others. When an airplane flies along the line exactly equidistant from the two beams of radio waves, it receives signals of equal intensity from the two. If the airplane gets off this line it receives a stronger signal from one than the other.

Reeds Vibrate on Signal.

THE indicator connected to the receiving set on the airplane shows when the signals from the two beams are received with equal intensity, by means of two vibrating reeds which are tuned to different modulating frequencies used on the two antennas at the directive radio-beacon station. When the beacon signal is received the two reeds vibrate. The tips of these reeds are white with a dark background behind them so that when vibrating they appear as a vertical white line. The reed on the pilot's right is tuned to a frequency of 65 cycles, and the one on the left to 85 cycles. It is only necessary for the pilot to watch the two white lines produced by the vibrating reeds. If they are equal in length, he is on his correct course. If the one on his right becomes longer than the other, the airplane has drifted off the course to the right (into the region where there is more of the 65 cycles). If he drifts off the course to the left, the white line on the left becomes longer.

Tells Pilot Location.

THIS beacon system has an additional feature whereby the pilot is informed of the distance traversed along the course. This is done through the installation of supplementary radio beacons of another type, which have been named "marker beacons" to be placed along the airway at short intervals. These markers are of very low power, and emit a characteristic signal which the airplane pilot will receive for one of two minutes. They tell the pilot when he is passing over a specified place, so that he can locate himself and know his position. In fact, through keeping track of these marker beacons, the pilot will be able to gauge wind conditions and note any change in direction or velocity as he proceeds during the flight. These "marker beacons" operate a 60-cycle reed vibrator mounted on the airplane's instrument board. Each marker beacon will send the characteristic signal assigned for its location, which will coincide where possible with the characteristic flash signal of the light beacon at the same location. Thus the marker beacon signals will come to the pilot in a logical and automatic manner.

Require Special Sets.

SPECIAL receiving sets and antennas for use on airplanes in connection with the beacon system have been developed. They are even simpler than those in use hitherto. The familiar trailing wire, with its possible dangers and its directive effect introducing apparent variation in the course, is eliminated. It is replaced by a short special receiving set which is highly sensitive, light in weight, and exceptionally proof against engine ignition interference.

ONE of the problems still to be worked out is caused by the discovery that radio fading sometimes causes slight shifts of the indicated course at

Television

AMERICA TO BEGIN

BAIRD'S PATENT BOUGHT

LATEST mail advices from America state that the Baird Television Company have just sold the American rights of their recently-perfected machine to an American syndicate. The syndicate, an official of the company stated, sent experts all over the world to find a television apparatus which would be commercially possible, and their visit to England synchronised with the completion of the new Baird television, with which they expressed themselves completely satisfied.

They propose to set up their own broadcasting station in America forthwith. The Baird Company are to have a 50 per cent. interest in the new venture, and will send directors to the board.

A Liner to be Fitted.

ANOTHER newspaper account supplements this bare announcement with the following details:—

The Leviathan, the colossal flagship of the United States Lines, will be the first liner in the world to have a permanent television transmitter and receiving abroad. This is stated by Herbert Z. Pokress, one of the three Americans controlling the Baird television rights in America.

"The recent reception of television transmission accomplished aboard the Berengaria—an English-owned vessel," Mr. Pokress said, "was just a demonstration of the practicality of the apparatus . . . but when we secured American rights to the Baird apparatus we also arranged that the first ship to be equipped with permanent apparatus be an American one."

Pokress arrived in New York recently on the Leviathan, together with Nathan Feldstern, of Philadelphia. With Charles Izenstark, of Chicago, Pokress and Feldstern control the Baird rights in America, and will operate under the name of the American Baird Television Corporation. Sir Charles Higham, representative of the English Baird group, was also on board the ship.

Other Nations Plan Television.

INTERVIEWED in the temporary headquarters at the Hotel Astor, Pokress, acting as spokesman for the three, stated that he understood that Baird television rights for France and Australia also had been closed in London at the time of his departure.

"It will only be a short time, it seems," continued Pokress, "that television will be an international proposition."

Two of Baird's engineers, Captain W. Gerard and Captain Jerry W. Clapp, were brought along by Feldstern and Pokress to supervise the inauguration of the system. Captain Clapp had previously visited the United States with Captain O. G. Hutchinson, another Baird engineer.

"John L. Baird, the inventor of the apparatus, will arrive here with Captain Hutchinson within sixty days," he said, "when television broadcasting will be undertaken either by single stations or by one of the national chains."

"Apparatus will soon be in the process of manufacture, and kits will be sold very soon—sooner than the public expects."

Assembled Sets May Be Sold.

ALTHOUGH the company will only sell kits at the start, Pokress remarked, it is expected that assembled sets will follow shortly.

While he would not assert what metropolitan station will broadcast television, Pokress said that he has received inquiries from a large number of stations, including WOR and also the Gimbel Brothers interests, which control four broadcasting stations.

He asserted that a private Press demonstration will soon be arranged and the apparatus will also be demonstrated at the Radio World's Fair in September.

Wait and See.

COMMENTING on the foregoing news, "Popular Wireless," the British journal, says: "We do not propose to make any comments on this matter, as it is outside the policy of 'Popular Wireless' to pass any criticisms except on matters purely technical or matters connected with the policy of the B.B.C. We can only remind readers of our already well-known views on the matter, and the views of such men as Sir Oliver Lodge, Dr. Lee de Forest, Dr. J. H. T. Roberts, and others."

"Whatever the activity of financial groups in connection with television development, it is now a generally accepted fact among scientific men of repute, and men who have taken the trouble thoroughly to investigate the scientific and the commercial practicality of television systems, that television in the home, or any television service designed as a public utility service, must inevitably be delayed until some new principle in connection

night at distances over fifty miles. This effect is at its worst in mountainous regions where the beacon is most needed. One solution under consideration is placing the beacons closer together, less than 100 miles apart. This may have some other advantages, allowing greater simplicity and reliability. This night variation may be greatly reduced by the new short antenna; this remains to be investigated.

Regional System

CHOICE OF TWO PROGRAMMES

FOR CRYSTAL OWNERS

FOR some time past rumours have been in circulation in the Home Country concerning a regional broadcast scheme which, it was said, the British Broadcasting Corporation was going to establish at an early date. In brief the scheme was that a chain of high-power stations should be established just outside the main centres of population and that they should transmit different programmes on two wavelengths simultaneously.

As is usual, the rumour preceded by many months the actual official statement about the regional scheme. It was only during the last few days (says the London "Wireless Export Trader" of May), that we have heard anything definite in this connection from the B.B.C., and even now the official statement gives very few more details than the rumours that were in circulation last year.

BRIEFLY the statement is this:—The Postmaster-General's sanction has now been given for the erection of the first of the chain of stations. The transmitter will serve London and the South-Eastern area, and consequently the site will probably be somewhere to the north of London. It has been an open secret for some months past that the district of Potters Bar has been engaging the attention of the B.B.C. engineers, but we understand the location has not yet been definitely fixed. It seems likely, however, that it will not be far from this spot.

The work on this new station, the B.B.C. says, will begin very shortly, and it is anticipated that it will be ready for service within twelve to fifteen months from the present time.

WHEN the whole chain of stations is working, all England will have a choice of two programmes that will be available even to the users of crystal sets, while the owners of multi-valve receivers will be able to get a choice of four, six, eight or more programmes according to the power of the set. Further, the scheme will cover Britain even better than do the B.B.C. stations at the moment.

It is the fashion in Britain to complain about broadcast programmes, but with the inception of the new scheme the public will have little left to find fault with. Truly the lob of the British listener is a happy one!

with television systems has been discovered. So far that system is unknown. It might be discovered tomorrow, or it might not be discovered for fifty years.

"Only time can show the truth of the criticisms passed in this journal and of the soundness of the policy we have advocated in connection with television. In other words, we can but repeat that very well-known political slogan, 'Wait and See'—a slogan, by the way, the last word of which has a meaning particularly apt when expressed in connection with television."

THE "Report on the health of the (British) Army for 1926," recently published, contains this paragraph: "The soldier of to-day having, to a very large extent, given up the consumption of alcohol, beer and other intoxicating beverages have been replaced by cocoa and coffee or other soft drinks."

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