



RADIO NEWS



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A RADIO UTOPIA

By HUGO GERNSBACK



WE Americans are prone to pat ourselves on the back when we contemplate that, in the radio art, we have always been first, and still are far ahead of all other nations. In America the radio amateur movement back in 1910 first reached wide proportions and, again, in America we had the jump on the rest of the world, when broadcasting started. We have maintained this lead ever since. We have more broadcast stations than all the rest of the world and more radio sets in the United States, by far, than in any other two nations. All of this is not said in any vainglorious spirit, but simply as a statement of fact.

On the other hand, when it comes to telling the rest of the world about the greatness of America, and our achievements in all other directions, radio, with all its vaunted development in this country, has as yet a great and important duty to fulfill.

To make plain what I refer to, let me mention only one instrumentality that, perhaps more than all others combined, has Americanized the rest of the world. That instrumentality, as every one knows, is the motion picture. The world has learned more about America, its customs, its institutions, and its civilization, from the motion picture than from anything else. The reason, of course, is simple. The motion picture, due to the diligence of the film industry, has been broadcast over the entire globe, right into the lives of the millions of inhabitants scattered over our planet.

Nor has the American motion-picture industry permitted the lead to be taken away by another country. It may be said, therefore, that the American motion picture is supreme in the world today; and particularly when it is pointed out that it is the greatest single missionary of America, and, incidentally, of world peace.

Let us now turn to radio, and see how we appear in this light; that is, if we wish to draw a parallel between American radio and the motion picture. We actually find that American radio is known in foreign countries only through the press and through news items. The man in the street, indeed, the average man who owns a radio set, never hears American programs; or does so only if he is one of the few select experimenters who use short-wave sets.

We know, of course, that no radio transmitter in the United States can reach far over its borders, except into Canada and Mexico. When it comes to Europe or Australia, Asia, or Africa, American programs are practically never heard there, except on special short-wave sets, which may be left out of the discussion because there are so few of them.

Let us now say that the entire civilized population of the globe, no matter where located, should be in a position to listen every day to American programs. Would that not be performing a great service for this country? Would it not, in a great measure, help to maintain the peace between America and others, and would it not, like the motion-picture industry, be the best missionary that we could possibly have in foreign countries?

Therefore I propose my plan. I know that it may sound fantastic and Utopian in the extreme; but, if some one had told you, thirty or forty years ago, that the motion-picture industry would become what it is today, it would have sounded, perhaps, far more fantastic than the plan which I am about to propose.

The plan, in short, is to erect in this country five ultra-power broadcast stations—a perfectly feasible project for the present-day radio art. These stations, of course, could not be self-supporting, but might be partly supported by advertising, and perhaps otherwise

through the subsidy of a number of rich men, of whom we have plenty in this country.

I propose to erect five super-power stations, each of a minimum power of 25,000 kilowatts. If this figure could be increased to 50,000 kilowatts, so much the better.

Suppose we have four stations at the four corners of the country, as follows: one in the northern part of Maine, to cover Europe and Africa. The second, in the lower part of Florida, would cover South America. The third, in the northern part of the State of Washington, would cover Asia. The fourth, in Southern California, would cover Australasia. Each of these stations would operate on anywhere from 25,000 to 50,000 kilowatts; and each station would be a beam-transmission station, sending a beam fan-wise toward the continent that is to benefit by the reception.

The most powerful broadcast station in this country now operates on about 50 kilowatts. It covers a range of about 500 miles, on an average, consistently. The transatlantic radio-telephone operates on between 100 to 250 kilowatts; by means of which the Atlantic is now bridged by the human voice every day.

It will be seen, therefore, that the ultra-power stations which I propose are of a power at least 100 times greater than those in use now. That, however, need not disturb us; because even a station that operates on a power of 25,000 kilowatts would not use more power than one of the giant ocean liners in use today.

The fifth station would be located somewhere in the center of the United States, at a suitable location. This would not be a beam station, but would be used for general broadcasting for the United States itself. Now, the plan would be to tie all five stations up by the usual telephone net, and to broadcast from point, such as New York, Chicago, or San Francisco, whichever would be deemed advisable. The five stations could operate on a single wavelength, all being controlled by crystals, if necessary, so that only a single wavelength would be required. This would mean that there would be no conflict in their reception in the various parts of the world, and the special wavelength would soon become recognized as that of America. With 25,000 to 50,000 kilowatts power, a good signal could be laid down over practically all civilized parts of the world. Thus, for instance, the station in Maine would lay down a good signal that could be heard at practically all times of day as far as Moscow. The reason here is that transmission over the sea is much better than over land.

The plan, I admit, is fantastic, but certainly not more fantastic than radio itself was forty years ago. Against the plan may, of course, be cited, first, the tremendous expense of operating the stations; but we need not be concerned with this at once, for the simple reason that in time, I believe, with a partly-commercial program, the five stations would perhaps maintain themselves.

The second, and more important, objection is the time-difference; but this is not insurmountable either, because we could broadcast during our day, which, for part of the globe, would be night time. The night programs could easily be repeated in daylight the next day, by having the program of the previous evening recorded on a telegraphophone, if this should be necessary.

A third objection will be raised on the score of the difference in languages; but, more than ever before, radio listeners of the world are familiarizing themselves with English; and the establishment of these stations, with their programs regularly audible, would give a tremendous impetus to this movement. And that is what we want.

IN which the Editor falls in with the belief that American radio development leads the world—but compares it unfavorably with the American motion picture in the matter of international influence—and suggests a method by which America can express herself to the entire world through the ears of its radio listeners—the possibilities of radio broadcasting by ultra-power world stations—and their effect in promoting international better understanding from Moscow to the Argentine and from the North Cape to New Zealand.

Mr. Hugo Gernsback speaks every Tuesday night at 9. P. M. from station WRNY on various radio and scientific subjects.