

# Problems of Television

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**M**ANY lengthy discussions or arguments between intelligent people end nowhere because the participants forgot to define their terms before they started. If one is not certain just what is meant by the words one uses in a presentation of a subject, naturally one can hardly expect to arrive at clear conclusions or to secure general agreement in an argument. And this, peculiarly enough, is one of the great difficulties in any analysis of the problems of television. The first question which arises is: "What is television?"—and there are generally as many different answers as there are persons who have approached the question.

Many people, basing their ideas of television on the popular press or the more optimistic and imaginative articles on the subject, have somewhat the following picture of what constitutes television. They imagine themselves seated in their living room on a winter's evening. Across the room is the wall, with a bare space about nine by twelve feet. On the arm of the comfortable chair in which they are seated is a push-button marked: "Television." According to their conception of television, they will touch this button and there will suddenly appear on the wall of the room facing them a nine-by-twelve foot picture, blazing in the full colors of nature, and depicting in the most perfect and exquisite detail a football game in Massachusetts, a temple dance in Java, or a pageant in Buda-Pesth!! One hardly likes to shatter so admirable a thought, but unless some radically new and relatively unforeseen discoveries are made, it will be many a long decade before even a remote approximation can be made to this result. It is to be noted that no assertion is made here that such perfected television is "impossible". We cannot go further than to say that such television is not here today, and that, in the light of present-day knowledge or likely knowledge in the near future, such television is improbable for a long time to come. Perhaps some scientific maestro will find the answer tomorrow—and more likely not.

**I**F we leave the group of people who have the preceding ultra-optimistic view of what constitutes television, and go to the opposite extreme, we reach, among others, the experimenters or "television amateurs." These enthusiasts are already having many enjoyable experiences with a type of television which exists and which is sufficient to give them satisfaction. In many cases, using home-made and simple equipment, they are able to view a small picture which nevertheless has many defects. A few square inches in size, of a rather trying pink color, with but little detail and definition of the various things included in the picture, and with flicker of the picture and shifting of the whole image, the amateur "lookers" are nevertheless satisfied with the results. For them the thrill of accomplishing "television" is the important thing. The wonder of a moving picture that comes to them through the air from a distance is sufficient to make the quality, size, brilliancy, and entertainment capabilities of the picture of little importance. One might almost say that they are more interested in the "tele" part of the television than in the "vision"; more entranced by the distant sources of the picture than by the details of the picture itself or the use to which it is to be put. This is by no means to be interpreted as an attack on the attitude or interests of the amateur. He is getting a delightful and perfectly legitimate pleasure out of his avocation of trapping air-pictures, and none should say him nay.

And what of the general public of the future? Will people of next year or five years from now demand

and obtain the type of television defined by the ultra-optimist, or will they be quite content with the already achieved and crude picture which meets the present needs of the experimenter? There seems little doubt that in this instance, as in so many other cases of human desires, the practical result lies between the extremes. Probably television must be better than what would satisfy even the fairly critical amateur, but need not be nearly so remarkable as what is desired by the ultra-optimist. Just how large, brilliant, and defined a picture will be required only time can tell. We cannot answer the question in advance of extensive trials of the public taste, any more than we could tell in advance how speedy "rapid transit" must be to meet the needs of the traveller in the subway. Presumably the public will answer the question in a simple and forceful way, namely by purchasing on any considerable scale only such equipment as thoroughly meets its minimum requirements or better. Those engineers and manufacturers who most intelligently select the picture characteristics will be rewarded by an enthusiastic buying response—and those less far-seeing will be convinced by the same somewhat brutal method.

**A**NOTHER problem of television is the program. Broadcasting has always presented a unique and extraordinarily difficult program problem to its sponsors. It is likely that there is no other type of entertainment which requires so steady and continued a flow of interesting or instructive material, and of music of one sort or another. An ordinary "legitimate" theatre, so-called, will utilize say two full hours of entertainment in the form of a dramatic presentation to "fill the house" for anything from a few weeks to several months. Probably such a theater will not need more than 10 or 20 hours of material per year to meet its needs, unless the nature of the offered material is such as to require its speedy and luckless withdrawal. A great motion picture studio, working at top pace and expending many millions of dollars over a period of a year, may produce an amount of continuous entertainment material running for less than one hundred hours. But broadcasting stations may transmit more than one hundred program hours in a single week! We thus have a situation where the insatiable maw of the microphone demands and receives many tens or even hundreds of times as much entertainment fodder per year as any other division of the entertainment industry. It is little wonder that those who devise the astounding volume of program material, both network and local, which is radiated from six hundred broadcasting stations of the United States sometimes show less than continuous originality and sparkle in their contributions to the public enjoyment. Any one who aspires to the task of being witty, artistic, musical, and educational some sixteen hours a day, without a pause, can be justly described as a "glutton for punishment."

When television comes, it will bring in its train an exaggerated form of the present problems of program construction and rendition. Vast hordes of artists with attractive physiognomies and magnetic voices, or outstanding musical skill on some instrument, must be fed into the program hopper. Dramatists, librettists, teachers, musical arrangers, and other specialists in great swarms must be at the instant disposal of the program dispensers. The amount of ingenuity and continued effort which will be required to meet this hitherto unheard-of demand for a flood of entertainment of a difficult sort to devise is really somewhat appalling. Premature attempts to meet the future need along these lines are obviously inadvisable. Endless planning, trial, and test of an amazing variety of program material and new methods for its presentation will certainly be required.

It has been said there is nothing new under the sun. Whatever one may think of the general truth of this statement, it certainly does not hold for the problems of television. They are novel as the art itself. Only two of them have been cited, but there are many others some of which are quite as difficult in their way as those mentioned. But this need not cause alarm. In due course, and when the time is ripe, the experiments will have been repeated until an acceptable solution of each of the problems has been found; the public will have been given a true picture of the pleasures of television entertainment which await it; and a new form of art will come into existence to enlighten and entertain and to add substantially to the human value of the world's hours of leisure. For problems are, after all, largely a challenge to the inspiration, ingenuity, and determination of mankind. These factors being present, television will in its own time come to that position of importance in human affairs to which it is clearly entitled.

## U. S. TELEVISION STATIONS

Call Letters	Power	Company	Location
2000-2100 kc.			
*W3XK	5 kw	Jenkins Laboratories	Wheaton, Md.
*W2XCR	5 kw	Jenkins Television Corp.	New York, N. Y.
*W2XAP	250 w	Jenkins Television Corp.	portable
*W2XCD	5 kw	DeForest Radio Co.	Passaic, N. J.
*W2XBU	100 w	Harold E. Smith	Near Beacon, N. Y.
*W9XAO	500 w	Western Television Research Corp.	Chicago, Ill.
W3XF	200 w	WJR, The Goodwill Station	Pontiac, Mich.
W6XAH	1 kw	Pioneer Mercantile Co.	Bakersfield, Calif.
W9XK	100 w	Iowa State University	Iowa City, Ia.
2100-2200 kc.			
W3XAD	500 w	RCA Victor Co., Inc.	Camden, N. J.
*W2XBS	5 kw	National Broadcasting Co.	New York, N. Y.
W2XCW	20 kw	General Electric Co.	S. Schenectady, N. Y.
*W8XAV	20 kw	Westinghouse Electric & Manufacturing Co.	E. Pittsburgh, Pa.
*W2XR	500 w	Radio Pictures, Inc.	Long Island City, N. Y.
*W9XAP	1 kw	Chicago Daily News	Chicago, Ill.
W3XAK	5 kw	National Broadcasting Co.	Bound Brook, N. J. (portable)
*W6XS	1 kw	Don Lee Broadcasting System	Near Gardena, Calif.
W9XAK	125 w	Kansas State College of Agriculture and Applied Sciences	Manhattan, Kans.
2200-2300 kc.			
W9XAL	500 w	First National Television Corp.	Kansas City, Mo.
2750-2850 kc.			
*W2XAB	500 w	Atlantic Broadcasting Corp.	New York, N. Y.
W9XG	1½ kw	Purdue University	W. Lafayette, Ind.
W2XBO	500 w	United Research Corp.	Long Island City, N. Y.
W9XAA	500 w	Chicago Federation of Labor	Chicago, Ill.
W3XE	1½ kw	Philadelphia Storage Battery Co.	Philadelphia, Pa.
2850-2950 kc.			
*W1XAV	500 w	Shortwave & Television Lab., Inc.	Boston, Mass.

## U. S. TELEVISION STATIONS

Call Letters	Power	Company	Location
*W9XR	5 kw	Great Lakes Broadcasting Co.	Downer's Grove, Ill.
*W2XR	500 w	Radio Pictures, Inc.	Long Island City, N. Y.
43000-46000 kc.			
W3XAD	50 w	RCA Victor Co., Inc.	Camden, N. J.
W2XBT	750 w	National Broadcasting Co.	portable
W1XG	30 w	Shortwave & Television Lab., Inc.	portable
43000-44000 kc.			
W9XD	500 w	The Journal Co.	Milwaukee, Wis.
43500-50300 kc.			
W3XAD	50 w	RCA Victor Co., Inc.	Camden, N. J.
W2XBT	750 w	National Broadcasting Co.	portable
W1XG	30 w	Shortwave & Television Lab., Inc.	portable
60000-80000 kc.			
W3XAD	50 w	RCA Victor Co., Inc.	Camden, N. J.
W2XBT	750 w	National Broadcasting Co.	portable
W1XG	30 w	Shortwave & Television Lab., Inc.	portable

\* Stations on regular operating schedules during 1932. The others are of an experimental nature, having no regular schedules.