



Roger A. Howell, of Long Beach, Calif., who for several years was the only amateur "looker-in" of the Don Lee Los Angeles television station, W6XAO. He has been honored for his work in television by the Hollywood Television Society.

At 22 miles, this is a fair sample of what the more distant television fans in the Los Angeles area are able to pick up from W6XAO.



FOR seven years the Don Lee Broadcasting System has been operating its experimental television station, W6XAO, in Los Angeles. Meanwhile, San Francisco has done comparatively little to prepare for television broadcasts, although San Francisco's several precipitous hills give her the advantage of natural high elevations for transmitters.

Away back in the early days of these experimental television broadcasts at Los Angeles, there were no amateur lookers-in. Now there are a considerable number—but just how many, the station itself would like to know. Amateurs are enthusiastic over results they have seen. The number of lookers-in is rapidly increasing. Los Angeles and other cities within a 25-mile radius offer a population of some 3,000,000 potential television fans.

The necessity of building a set especially to receive the Los Angeles station's broadcasts has discouraged a great many interested spectators. With the expected adoption of RMA standards by Don Lee, no doubt the amateurs will spring up like "mushrooms" after a Spring shower.

Station W6XAO has been transmitting its visual program on 45,000 kilocycles and its audio program on 49,750. The station is on the air every night from Tuesday through Friday with an hour's show, from 7:30 to 8:30 o'clock; and from 7:00 to 8:00 o'clock on Mondays and Saturdays with movie films. Lookers-in find an interesting and entertaining assortment of live camera pick-ups made in the studio. There are world news reports, sport casts, a continued serial play, musical entertainers, tap dancers, lecturers on television and a great many other features.

Because of the experimental factors involved, the station has welcomed all comments by amateurs who have tuned in and watched the programs. The first amateur television experimenter to tune in regularly was Roger A. Howell, Long Beach radio service specialist, who built a set six years ago and gave Don Lee the good news that the telecasts were coming in at Long Beach, 22 air miles from the transmitter. Howell has continually changed his equipment, improving it

Television Programs Received at 22 Miles on Home-Made Set

Richard W. Emery

California experimenter picks up telecasts regularly in home

as television progressed, and has kept the station advised of reception in Long Beach. For several years he was the only outside looker-in on the Los Angeles television broadcasts.

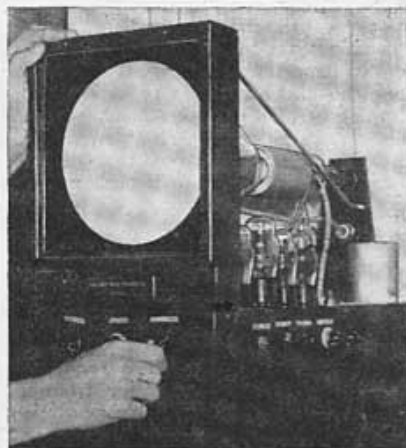
Gradually, through interest of the Hollywood Television Society, additional sets were built and put in operation. The society meets regularly. It has recognized Howell's contribution to television by giving him its first citation to honorary membership, an honor later awarded to Dr. Lee de Forest of Los Angeles, Dr. R. D. Lemert of Hollywood and Harry R. Lubcke, director of television for the Don Lee Broadcasting System.

Howell has been operating his receiving set at his home in Long Beach, and his nightly guest-list attests the great interest

which the public now has in television. He has had as many as thirty visitors in one evening, to see one of the television programs. In his set a nine-inch tube is used in the receiver, which gives a picture $6\frac{1}{2}$ by $7\frac{1}{2}$ inches when masked down.

The principal problem in television in the Los Angeles area at present is that of power. The television broadcasts are made on 1000 watts and, around the outskirts of the metropolitan

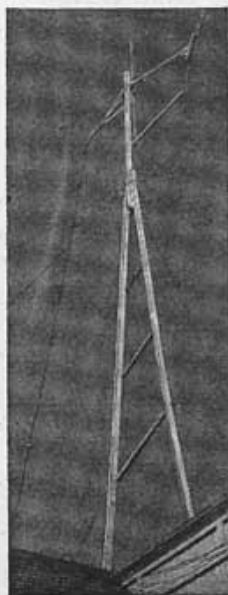
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Mr. Howell's home-built television receiver. The nine-inch field is cut to about $6\frac{1}{2}$ inches by $7\frac{1}{2}$ inches when masked down.

Left—Mr. Howell's dipole antenna rises 70 ft. above the ground.

Below: 10-second exposure, at 3 feet of W6XAO announcer, made at distance of 22 miles, on Roger Howell's receiver.



Television—22 Miles

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area, even slight interference causes distortion or interruption. Diathermy machines and automobile ignition systems are the worst offenders in this regard. Howell believes that if the power were stepped up to 10,000 watts, reception would be tremendously improved. Within five miles of the station, however, little interference is now being experienced by lookers-in.

Howell has found that a vertical dipole antenna with a parasitic reflector, 70 feet above the ground, helps greatly to overcome the lack of power in signals received. Images on his set are sufficiently bright to permit excellent photographs to be taken of them, with fast film and ten-second exposure.

Keen interest of the California television fans shows itself at the meetings of the Hollywood Television Society. Recently, at one of the society's gatherings, 100 spectators watched a program being received on a nine-inch tube. Most of those 100, as should be expected, went away even more keenly interested in television.

Frank Andrews, "Around the World" commentator on WGXAO, planned and executed recently a program believed to be the world's first attempt at visual education in the public schools by television. Members of the Hollywood Television Society installed receivers in public school in Los Angeles and Long Beach, the University of Southern California, Pomona College and other schools, for reception of a telecast dramatization of the crossing of the Pacific by Pan-American Airways clipper. The Los Angeles Board of Education and the Pan-American company cooperated in the venture, which was outstandingly successful.