



Color TV research and development by Zenith and Rauland provided the first 21-inch rectangular 3-gun color tube in 1954.

COLOR TELEVISION

The first organized work of Zenith engineers on color television started in 1940, at which time all necessary VHF transmitter, receiver and studio equipment, including direct pickup cameras, were constructed in the Zenith laboratories. Experimental work continued with this equipment until all experimentation ceased because of the war. The first color broadcasts in Chicago were transmitted over Zenith's VHF station in 1940 and 1941.

In November, 1945, experimental work was resumed on the pre-war color equipment, and color broadcasting was resumed in 1946 on the new UHF transmitter equipment built in the Zenith laboratories. Before the National Television Standards Committee was established in 1950, Zenith's color equipment utilized the field sequential sys-

tem. Other Chicago manufacturers used Zenith's color transmission for their own color experiments, no other color signals being available in Chicago up to then.

Zenith built several sets of color signal generating equipment in 1950. One set was delivered to The Rauland Corporation for use in testing color picture tubes which they were developing. Another set of equipment also utilized the multiplexing equipment and was later used by the NTSC for developing color television standards. These standards ultimately incorporated many of the principles of Zenith's multiplexing equipment.

In the fall of 1950 Zenith was transmitting the NTSC type color signals. By then it had become apparent that the CBS field sequential system was not practical and Zenith's entire efforts were thereafter devoted to the

multiplex system which was ultimately adopted by the NTSC and the Federal Communications Commission. By 1951 Zenith had established a regular schedule calling for color transmission one hour each day, Monday, Wednesday and Friday over its VHF and UHF stations. This schedule continued with only minor interruptions until 1953.

As the year 1953 neared its close, the Federal Communications Commission gave its approval to the NTSC system of color television. As a pioneer in the color field, Zenith had evolved a color wheel system years before, and had built color wheel receivers for the CBS system.

Zenith had also been instrumental in development work connected with the NTSC system, using its Chicago TV transmitter and its engineering and research facilities to the fullest. When the first "compatible" color sets were demonstrated to the FCC by the industry in October, 1953, Zenith was one of the 13 manufacturers to participate in the demonstration. Further Zenith demonstrated its own color tube in its own color set—there were only two other manufacturers able to do so.

But, though compatible color television had been approved by the Commission, Zenith was the first manufacturer to classify color at that stage as an interim development. The company stated its belief that the available three-gun color tube was too complicated, that the pictures were too small, and that the price was too high for popular appeal. Zenith demonstrated color sets but offered none for sale. The company was emphatic in stating that it would not make sets for the public under existing conditions, but that Zenith would be very definitely in color set production as soon as good size picture tubes with simplified circuitry and reduced cost would combine to make a useful consumer product. Meantime, the company redoubled its research efforts to bring that day closer.

One of the products of this continuing research was demonstrated to Zenith distributors in mid-1954. It was a Zenith color television set equipped with a Rauland-made 21" rectangular 3-gun picture tube. Again, as Zenith took pains to make clear, this set was not offered for sale.

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Courtesy of Al Anderson