

## **Volume 3**

### **Number 184**

#### **The Battle for Color Television - I**

**Lead: If Peter Goldmark had had his way, television would have never been broadcast in black and white.**

**Intro.: *A Moment in Time* with Dan Roberts.**

**Content: By the late 1920s most of the technical problems of TV broadcasting were solved. A way had been found to convert light into electricity. The transmission of this electrical signal would be done just like radio, but the major obstacle proved to be the way in which the signal would be picked up or scanned. Television is in many ways similar to a motion picture. Characters in a movie don't move. Motion picture film is simply a series of still photographs put end to end and run so fast across the screen that the mind of the viewer gets the impression of movement. Television operates in basically the same way. Hundreds of frozen images per second are picked up or scanned by the camera, converted to electricity, and then sent on to the TV set which sits the next room or fifty miles away and reconverts the signal.**

**There are basically two ways of scanning. Mechanically, shining light through a spinning disk with tiny holes or spirals that would let the light through to be converted, or using an electron gun that fires a signal across the photosensitive background which then converts the signal. The spinning disk was simpler to use. The electron gun was**

more complicated but produced a clearer picture. From the 1930s to the early 1950s advocates of these two ways of scanning were engaged in one of history's great technological debates. Whoever prevailed would make millions. On one side was NBC, its parent company, the Radio Corporation of America's hard driving Chairman, David Sarnoff. NBC backed the electronic system. On the other side was CBS which under Chairman William Paley advocated the spinning disk.

RCA and Sarnoff were the pioneers. By 1940, using electronic scanning, it had launched commercial black and white TV, but as early as 1936 CBS's chief engineer, Peter Goldmark, had convinced Paley that the network should skip black and white television and go directly to color using a spinning disk. Next time: Color Wars.

At the University of Richmond, this is Dan Roberts.

### Resources

Fisher, David E. and Marshall Jon Fisher, "The Color War," *American Heritage of Invention and Technology* 12 (3, Winter 1997): 8-18.

Lebar, Stanley. "The Color War Goes to the Moon," *American Heritage of Invention and Technology* 13(2 Summer, 1997): 52-54.

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