

# Improved R. C. A. Color Is Shown; Complicating of TV Battle Seen

By JACK GOULD

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WASHINGTON, Dec. 5—The Radio Corporation of America staged a dramatic surprise here today in demonstrating an improved color television system that compared favorably with the method developed by the Columbia Broadcasting System.

The R. C. A. system, which can broadcast color that can be received in black and white, without the use of adapters, by the 9,000,000 sets now in use, reproduced pictures that had good definition and stability, freedom from flicker and, for the most part, satisfactory fidelity.

The success of the demonstration, held for newspaper men and television industry leaders, appeared certain to add major complications to the controversy over color television. Last October the Federal Communications Commission approved the Columbia color method on the ground that it was superior to the R. C. A.

system. R. C. A. is contesting the commission decision in Federal Court in Chicago.

Brig. Gen. David Sarnoff, chairman of the board of R. C. A., tonight challenged the commission to authorize trial use of both the Radio Corporation and Columbia systems.

"Let the public decide for itself which system is really preferred," he declared. "We're ready to accept that challenge."

General Sarnoff held that today's demonstration refuted the commission's contentions that his concern's system had basic flaws that could not be corrected. He noted that R. C. A. had promised, prior to the commission's approval of Columbia color, to show its improvements this week.

Neither the Federal Communications Commission nor the Columbia Broadcasting System had

**Continued on Page 51, Column 3**

# IMPROVED COLOR IS SHOWN BY R. C. A.

Continued From Page 1

immediate comment on the demonstration.

General Sarnoff explained that the F. C. C. members had not been invited because they were involved in the Chicago court action. Columbia officials are to see R. C. A. color on Dec. 15.

The Columbia color system, which uses a mechanically revolving filter disk to inject the color elements, requires the use of adapters for present sets if these sets are to continue to receive black-and-white pictures from color stations. R. C. A. uses a tri-color, electronic tube to reproduce the colors. Both systems require consisted of scenes to show color values.

Today's demonstration took place here in the National Broadcasting Company studios, about two miles from the transmitter, and consisted of scenes to illustrate the value of color over black and white.

Shown were dresses of orchid nylon and apple green moire tafeta, hats in salmon pink and sandy-colored felt, towels of light blue and vivid red and assorted fabrics. There was also a turning model carrousel, decorated in lavender, greenish gold, sky blue, yellow and red. Children's Christmas toys and commercial products also were held before the cameras.

By and large the colors had good brilliance. In comparison with Columbia color, the R. C. A. tints seemed somewhat less "warm," particularly in the case of the pastel shadings. However, the primary colors of red, blue and green appeared less harsh to the eye than was the case with the C. B. S. system.

## Color Fidelity Checked

The color fidelity, which later was checked by watching the screen and then looking directly into the studio where the models appeared, was entirely satisfactory in the case of flesh tones, generally one of the more critical tests.

The one flaw that did appear was a tendency toward green in some images. A white blouse worn by a model had a greenish cast, and a lavender gown was reproduced on the screen with a somewhat bluish tint. On the other hand, other gowns were reproduced with startling fidelity, equal to that in the recent C. B. S. demonstrations.

In the formal demonstration, there was not too much evidence of how the colors would stand up upon extensive movement by the models in front of the screen. Later, arrangements were made for one of the models to twirl in front of the camera. That test showed all colors stayed in their proper places and, so far as laymen could tell, there was nothing wrong with the "registration" of the colors.

Tuning an R. C. A. color set was easy. For the most part there are only the normal adjustments associated with a black-and-white receiver. In switching from a black-and-white program on another station to the R. C. A. color transmission, there were only two additional knobs to turn. They enabled the viewer to choose his own contrast in colors, which, incidentally, enabled one to enhance the "warmth" in the hues.

The black-and-white images taken off the color transmission were excellent, definitely superior to those presented by the Columbia color system with the use of an adapter.

Today's color pictures were

shown on receiving tubes of 12½ inches, but General Sarnoff emphasized that larger color tubes actually would be easier to build. One of the drawbacks to the Columbia system is the fact that the revolving disk limits the picture size to 12½ inches before magnification. The R. C. A. color tube can be used, however, with

the Columbia system, which would eliminate the problem of picture size.

Under the R. C. A. system, however, conversion of a present set appeared more formidable than is the case with the Columbia method. The black-and-white tube must be replaced by the tri-color tube and a number of additional circuits in-

stalled on a shelf in back of the receiver.

Another problem, only lightly touched upon at the demonstration, was the fact that the R. C. A. system used a color sampling frequency of 3.58 megacycles. Many present sets on the market, it was acknowledged, are not equipped to pass such a frequency, which probably would make conversion impractical.

General Sarnoff and his associates declined to make any estimates of the costs of color sets or converters.

Under normal circumstances, without legal entanglements or military priorities on parts and tubes, General Sarnoff said, it would probably take a year or two to get color equipment in mass production.