



From-Columbia Broadcasting System, Inc.
485 Madison Ave., New York 22, N.Y.

CBS' NEW SIMPLIFIED CHROMACODER

This is the new simplified version of CBS' Chromacoder. Both the Chromacoder camera (not shown here) and the Chromacoder are part of the new CBS color pick-up equipment developed by CBS Laboratories Division for use with the NTSC system.

As in black-and-white pick-up, the picture selected for transmission goes to the Master Control room in the form of a single picture signal. There it is fed into the Chromacoder, which translates the single picture signal into three separate simultaneous picture signals, red, green and blue. Then the three simultaneous picture signals undergo the normal processes for transmitting color under the proposed NTSC system. The resultant signal supplied to the transmitter, and sent over the air is, of course, the proposed NTSC signal.

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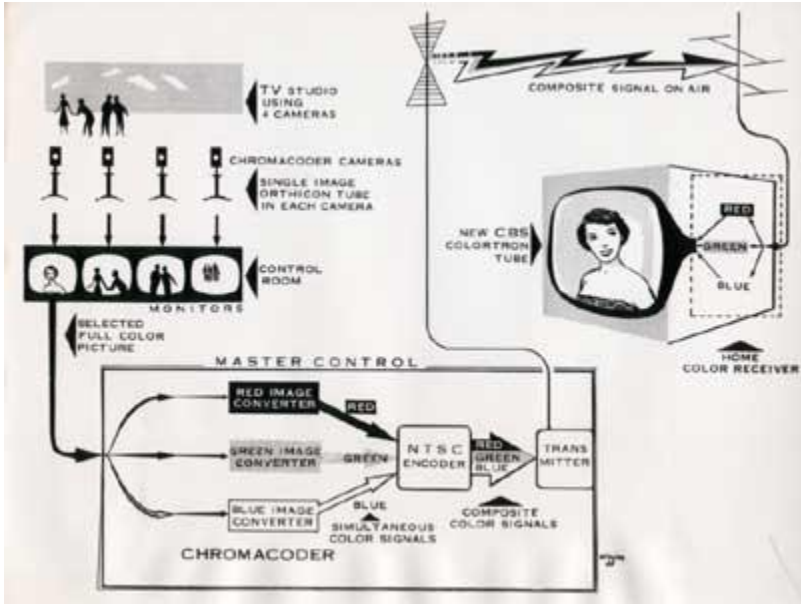
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CBS-COLUMBIA COLOR TELEVISION RECEIVER

One of the models of the CBS-Columbia color television receivers equipped with the new CBS-Colortron picture tube. CBS-Columbia will begin pilot line production 30 days after the FCC adopts the NTSC standards, and some sets will be available immediately thereafter. Line production will commence about 120 days after the FCC approval. The new CBS-Columbia plant in Long Island City, the most completely mechanized receiver manufacturing facility in the country, was built and designed with the specific purpose of producing color television receivers.

When the CBS-Colortron tube reaches a point in mass production where its cost is only thirty per cent above comparable black-and-white tubes, this saving plus simplification of circuits and other manufacturing economies will reduce the price of CBS-Columbia color sets by at least forty per cent. The date for these reduced costs should be somewhere around the end of 1955 or early 1956.

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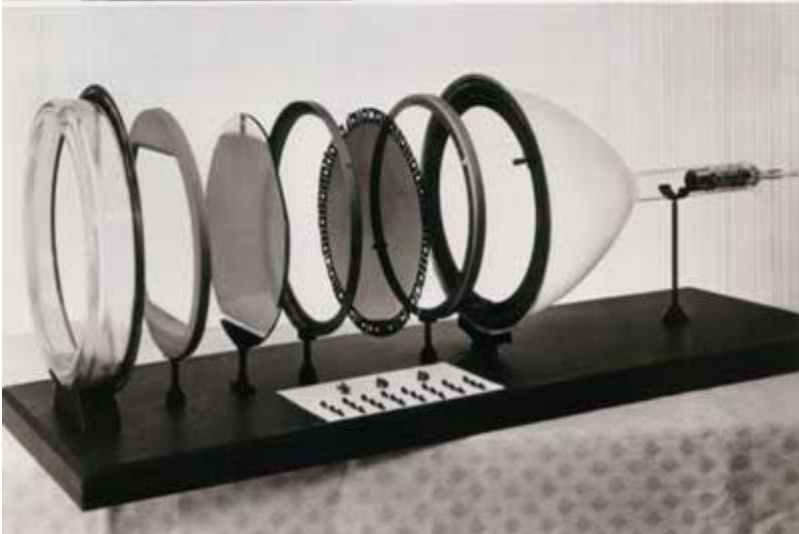
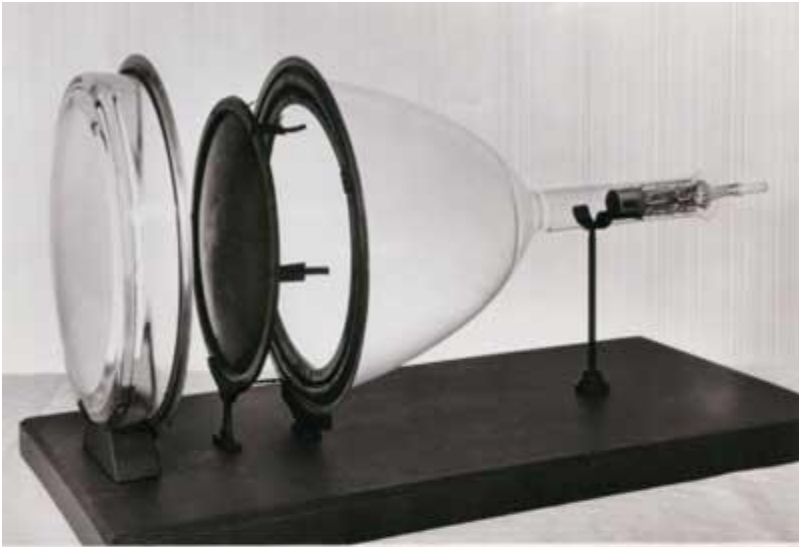
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HOW CBS WILL BRING COLOR TELEVISION INTO YOUR HOME

This diagram shows step-by-step how CBS' new color television equipment, developed for use with the NTSC system, will bring color television into your home. Starting in upper left corner:

Four Chromacoder cameras (or any number, more or less), each containing a single image orthicon tube, are trained on the cast in the studio. Just as in black-and-white operation the picture picked up by each camera appears on a respective monitor in the control room where the director selects the full color picture he wants transmitted. Then the selected picture is fed into Master Control where the Chromacoder converts the sequential red, green and blue images into composite color signals for transmission. This composite signal goes out over the air and is received in home color receivers equipped with the new CBS-Colortron tube.

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CBS-COLORTRON'S ADVANTAGES AT A GLANCE

This disassembly of the CBS-Colortron (upper) and of the planar-mask tube (lower) shows at a glance why the CBS-Colortron can be mass produced for home color television receivers at far lower cost: The CBS-Colortron has many fewer parts, cutting down both cost of material and man-hours for assembly work. In addition, because of the simplicity of its design, and other technical advantages, the CBS-Colortron performs more reliably, is easier to install and service, cannot be damaged by an overload current that could seriously affect the planar-mask tube, has fewer reflecting surfaces between picture and viewer. It will be mass produced in 21-inch rectangular shape at a cost of only 30 per cent more than comparative black-and-white tube-production costs.

The CBS-Colortron picture tube is a product of CBS-Hytron, electronic tube manufacturing division of the Columbia Broadcasting System, Inc.



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THE CHROMACODER CAMERA

The new Chromacoder color television camera (right) developed by CBS Laboratories Division resembles the standard black-and-white television camera (left) in size, shape, weight, simplicity of design, economy of operation, ruggedness and flexibility. Essentially, the Chromacoder camera is a further refinement of the field sequential camera which has been in successful, continuous operation since 1946. The Chromacoder camera has only one orthicon image tube instead of three such tubes used in other color television cameras. It is portable for remote pick-ups and has greater maneuverability in the studio than the cumbersome three-tube cameras.

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