

HIGH-QUALITY 3-CHANNEL MIXER EQUALIZER

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HUGO GERNSBACH, Editor

Control Room—CBS Color Studio

(See page 4)

*The scene behind
the scene; operating
facilities in a CBS
color television studio*



Similar to the cover illustration, this photo gives a more detailed view of control room.

CONTROL ROOM

By JOHN KOUSHOURIS*

THE cover photo, taken from the rear of the control room in CBS color Studio 72, gives a bird's-eye view of the technical operating and staging areas.

On the upper level, the technical director (left) is seated at the switching console. He can select a camera or film chain, test signal, remote feed or a special effects feed by depressing buttons. To his right is seated the show director who issues orders to the camera men and boom operators via an intercom system. Instructions are issued to the operating personnel on the stage by the show director, technical director and audio engineer via microphones.

The equipment below is the color video console. To the left are the controls for all telecine facilities which include 35- and 16-mm film, and 35-mm slide transparencies. To the right are control units for cameras 1 through 4.

There is a color control technician seated at each camera position to set up each camera electronically so that a high-quality color reproduction or picture is produced. The major part of his setup work is concerned with viewing the camera picture on a black-and-white video monitor. A final check-out of the camera chain is made by viewing respective color monitors located above the operating position.

Seated at the center of this video console is the color technical director who is concerned with color match between cameras as viewed on the color line monitor, adequate lighting for good-quality pictures and correct choice of colors for good color reproductions.

On the left side of the video console is a black-and-white slide reproduction of a young lady and directly above it can be viewed the same picture in color. On both sides of this color picture is a color bar display used primarily as a test signal in matching both encoders and individual monitors. Above these color monitors, within the control room,

is located a black-and-white presentation of the color test bars on a black-and-white client's monitor. It is important today, since the majority of the viewing audience has black-and-white receivers, that we be concerned with the black-and-white reproductions as well as color.

The three-tube color cameras and test pattern can be seen through the control-room windows on the studio stage floor. Between the cameras is a gyrating test pattern. The upper chart is used in registering the three color channels in the three-tube color cameras. In the center is a standard black-and-white RETMA test chart. Linearity and resolution are adjusted when the camera is focused on this chart. In the lower portion is a gamma chart consisting of a series of 10 steps in the gray scale from what we consider white to black in television. Each channel is electronically adjusted so that the red, green and blue Image Orthicons track uniformly from the black through the intermediate grays to white. This is done by turning a knob on a selsyn

motor which rotates a remotely located selsyn-motor-controlled iris. The lens can be closed down or opened from the video console and this is carried out when the camera is trained on the gamma chart. By making electronic adjustments while we open and close the camera iris, we correct any tracking errors.

The audio facilities in a color studio are identical with those in monochrome operations. The audio console (not shown) is located to the left of the technical director.

The audio racks are located behind the audio console and they house the audio amplifiers and jackfields. Adjacent to the audio console, two record turntables are installed for playing back records and transcriptions. Directly behind the turntables is an announcer's booth with excellent visibility of the production console and video monitors. Just as the video control technician works with a camera man on stage, so the audio engineer works with boom operators and pushers in the staging area.

END



Technicians adjusting the color cameras.

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