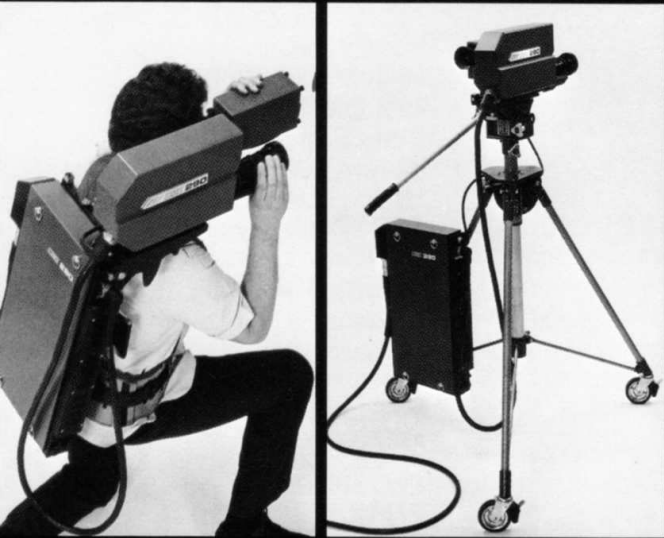


**cei**

# CEI-290 PORTABLE PRODUCTION COLOR TELEVISION CAMERA SYSTEM

## TAKE A NEW LOOK



The CEI-290 is a rarity among portable television camera systems—perfect for both field and studio production work.

Outdoors, it's a cameraman's delight. Complete with lens and viewfinder, it weighs just 19 pounds. Back-pack electronics weigh only 16 pounds. The cameraman can set the back-pack down up to 1,000 feet from the camera control unit—and still have 30 feet of mobility.

In the studio, the 290 quickly mounts on a tripod. Add the optional 7" viewfinder, and you have a versatile production camera with a picture that's indistinguishable from big-camera pictures.

The 290 is part of the CEI 200 Series professional family of camera systems, along with the 280 and 287 studio cameras. And it is a true family, with total modularity, faultless color matching, and common operating and camera control units. The cost savings and convenience provided by this commonality are substantial.

Major 290 system features include:

- Three 1" lead oxide tubes, including extended red.
- Solid-state electronics throughout.
- Detachable, tiltable 1" viewfinder with 7X magnifier, plus optional 7" quick-connect viewfinder for studio production.
- Standard Angenieux f/2.8 10:1 zoom lens with quick-release mount.
- Extremely high (50dB) signal-to-noise ratio.
- Very fast warmup and long-term stability.
- Preset shading for all three channels.

- Black stretch to improve contrast in dark areas under outdoor sun-shade or other high contrast lighting situations.
- Variable gain controls for gain control over R, G, B camera output, with switch for instant return to original color balance.
- Lightweight camera cable with automatic advance timing.
- Completely modular camera control unit.
- Masking amplifier for easy color matching with other types of cameras.
- Highly accurate and stable NTSC encoder.
- White pulse automatic gain control in each channel permits adjustment of masking while camera is "on the air" without affecting peak white signal or maintenance of white balance.
- Two independent intercom channels.
- Video monitoring at camera head to facilitate special effects.
- Optional image enhancer which not only generates vertical and horizontal detail, but also includes comb filtering and noise coring.
- Optional pulse advance system provides a complete crash lock color sync generator.
- Latest in state-of-the-art electronic design for operating convenience, long-term stability, and easy maintenance.

Take a new look at the CEI-290 portable production camera now. Get in touch with your CEI representative today.

# CEI-290 SPECIFICATIONS



**STANDARDS. Scanning:** EIA 525/60, CCIR 625/50.

**Encoding:** NTSC (in accordance with FCC and EIA requirements), PAL, and SECAM. **Power:** 117/220V  $\pm 10\%$ , 47-63 Hz.

**CAMERA TUBES.** Three 1" lead oxide: broadcast or industrial quality Green; broadcast or industrial quality Blue; broadcast or industrial quality extended Red.

**PERFORMANCE. Horizontal resolution:** at center, limiting at no less than 550 lines, typical 600 lines. Response is 100% at 300 lines with aperture correction, depending upon pick-up tube and lens limits. **Signal-to-noise ratio:** 50dB

(unweighted) while camera delivers 0.7V white signal is achieved under following conditions: lighting color temperature 3200°K; 50 f/c incident light level; iris at f/2.8; contours ON; bandwidth limited to 4.2 MHz; viewing 60% reflectance Munsell white; unity gain. **Maximum sensitivity:** under same conditions but with 15 f/c incident light and +12dB gain, camera delivers 0.7V output at reduced S/N ratio.

**Geometric distortions:** less than  $\pm 0.5\%$  within circle equal to picture height. Less than  $\pm 1\%$  elsewhere, excluding zoom lens distortions.

**CONTOURS.** Horizontal aperture correction and contours-from-green.

**IMAGE ENHANCEMENT.** 2-line enhancer for vertical aperture equalization plus horizontal enhancement.

**ZOOM LENS.** Angenieux 10:1 f/2.8 15:150.

**FLARE COMPENSATION.** Individual red, green, blue flare compensation provided.

**SHADING ADJUSTMENT.** Horizontal and vertical sawtooth and parabola for each channel.

**MASKING AMPLIFIER.** Permits adjustment of hue and saturation without affecting gray scale tracking.

**GAMMA CORRECTION.** Continuously variable from 1.0 to 0.35 for each channel.

**INTERCOM.** Two external party lines available. Input impedance is 200 ohms at approximately 500mV p-p.

**VIEWFINDER.** Detachable, tiltable, 1" with 7X magnifier. Resolution 600 lines at 23 foot Lamberts. High peaking ON-OFF control. Feeds: Y, R, G, B, Encoded, R-G, B-G, or External. Optional 7" viewfinder for studio use.

**CONTROLS. Camera Control Unit (CCU)** includes all power, set-up, and other controls, plus electronics.

**Operating Control Unit (OCU)** provides all DC controls normally used during camera production operation, and may be remotely located.

**CAMERA CABLE.** CEI lightweight, 1000' automatic advance timing. Optional TV-81, 2000'.

**INPUTS.** With lockable pulse generator installed, composite video 1.0V p-p. Otherwise, Sync, Blanking, H Drive, V Drive, Subcarrier.

**OUTPUTS.** All impedances are 75 ohms. R, G, B camera video 0.7V noncomposite. Encoded video: two fixed noncomposite and two switchable composite 1.0V or noncomposite 0.7V.

**MONITOR OUTPUTS.** Two noncomposite 0.7V p-p. Sequencer optional.

**COLOR REGISTRATION. Zone 1:** circle equal to 0.8 picture height, 0.1%. **Zone 2:** circle equal to picture width, 0.2%. **Zone 3:** elsewhere, 0.4%.

**ENVIRONMENTAL.** System operates satisfactorily at altitudes up to 10,000 feet and in ambient relative humidities up to 90% within temperature range of  $-20^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$ .

## PHYSICAL CHARACTERISTICS.

**Camera head,** less optics: 13" long by 8 $\frac{1}{8}$ " high by 4" wide; weight 12 pounds. **Lens:** weight 3 pounds. **Viewfinder:** 11" long by 4 $\frac{1}{2}$ " high by 3 $\frac{1}{4}$ " wide; weight 4 pounds.

**Back-pack electronics unit:** 23" high by 15 $\frac{3}{4}$ " wide by 3 $\frac{1}{4}$ " deep; weight 16 pounds.

**Standard Bell Hip-Pack unit:** weight 8 $\frac{1}{2}$  pounds. **CCU configured for rack**

**mounting with rack slides:** 19" wide by 7" high by 18" deep; weight 45 pounds; requires 4" rear clearance for cable service. **OCU configured for rack mounting:** 19" wide by 1 $\frac{3}{4}$ " high by 3" deep; weight 5 pounds.

CEI operating control and camera control units are common to all 200 Series cameras.

# CEI

Take your new look at CEI now. Write CEI, 880 Maude Avenue, Mountain View, California 94040. Or call: (415) 969-1910

