

# ES-229 & ES-230

## NTSC / PAL COLOR BAR GENERATORS

The **ES-229** and **ES-230** are Color Bar Generators that can be used for aligning monitors or for checking the signal fidelity of a video system. Both units generate RS-170A full-field bars or black-burst. The **ES-229** provides one composite output and one S-Video output while the **ES-230** provides eight composite outputs. Front-panel DIP switches allow selection of Auto-Black, Bars / Black, Interlace / Progressive, NTSC pedestal On / Off, Chroma On / Off and PAL mode.

If the "Tone" option is ordered on the **ES-229**, a 1 KHz tone is output from the rear-mounted RCA connector and on the **ES-230**, the frequency can be set to 400 Hz or 1 KHz.

### Features

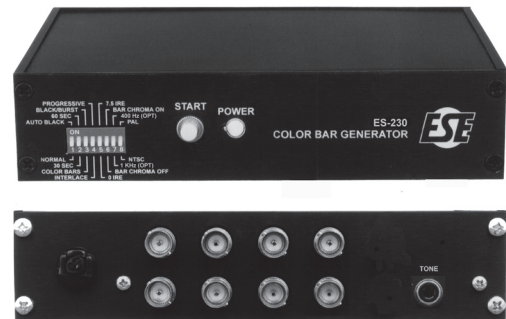
- Auto-black Mode (30 Or 60 Second Delay)
- Optional 1 KHz (400 Hz) Tone
- Switchable NTSC Pedestal
- Color Bars Or Black-Burst
- Interlace Or Progressive
- PAL And NTSC Modes
- Chroma On/Off

### Applications

- Pre-Blacking Video Tape
- Video System Synchronization
- Alignment Of Video Monitors
- Pre-Blacking Video Tape
- Checking Signal Fidelity Of Video Systems



ES-229



ES-230

### Operation Notes:

The "Auto-Black" mode generates Color Bars (& Tone if ordered) for 30 or 60 seconds after the START button is pressed, then switches to silent Black-Burst. In "Bars" mode, only color bars are output and in "Black" mode, only Black-Burst is output. The "Interlace/Progressive" switch allows for either 524/624 Line Progressive or 525/625 Line Interlace operation and the "Pedestal" switch allows selection between 7.5 IRE Setup or 0 IRE when in NTSC mode (In PAL mode, 0 IRE is output regardless of setting.). Burst is always present whether the "Bar Chroma" switch is on or off.

### Specifications

	ES-229	ES-230
<b>Outputs:</b>	1 Composite, BNC 1 S-Video, Mini-DIN	8 Composite, BNC
<b>Video Level:</b>	75% amplitude, 75% saturation (NTSC) 75% amplitude, 100% saturation (PAL)	75% amplitude, 75% saturation (NTSC) 75% amplitude, 100% saturation (PAL)
<b>Output Impedance:</b>	75Ω	75Ω
<b>Differential Gain:</b>	0.8%	0.8%
<b>Differential Phase:</b>	0.8°	0.8°
<b>SNR:</b>	60db	60db
<b>Hue Accuracy:</b>	1.0°	1.0°
<b>Saturation Accuracy:</b>	1.0%	1.0%
<b>Enclosure:</b>	Desk-Top, Black Anodized Aluminum	Desk-Top, Black Anodized Aluminum
<b>Dimensions:</b>	1.6" H x 7" W x 5" D	1.6" H x 7" W x 5" D
<b>Tone (optional):</b>	1 KHz Sine Wave, 0 dbm, RCA	400 Hz / 1 KHz Sine Wave, 0 dbm, RCA
<b>Electrical:</b>	117 VAC, 50/60 Hz	117 VAC, 50/60 Hz
<b>Power:</b>	5W maximum	5W maximum
<b>Options:</b>	J, P, P2, Tone, UL	J, P, P2, Tone, UL