

# Audio & Video, HDTV Hum Eliminators



Calrad's line of hum eliminators, also referred to as a hum buckler or a ground loop eliminator, is designed to remove interference created by long cable runs, 60 cycle power demands, grounding noise, and magnetic coupling. Normal voltage differences between system grounding points cause small AC power currents to flow through video cables. At power frequencies, a voltage drop of only 7mV peak can cause a visible hum bar. Ground loop current flows through the shield of coaxial video cable which produces a magnetic field in the core of the hum eliminator to create an inductor, or choke. The high impedance of this choke in the ground path effectively removes the hum from the signal cable at the output port of the unit.

The major advantage using a hum eliminator over an isolation transformer is high bandwidth. The low-frequency response extends to DC avoiding an effect, seen on waveform analyzers, called field-rate tilt and a high-frequency response of 100 MHz or more make these units suitable for high-definition and projection systems. These units are passive devices which remove induced hum while being transparent to the video signal.

Single channel units are designed for composite signals, multi-channel units can be used either for multiple composite signals, component, or RGB plus sync signals. Other models are also available with internal audio ground loop isolators to remove both audio and video interference.



**40-975 SDI Digital Video, Hum Eliminator**

Single channel SDI Digital Video Hum Eliminator. 75 ohm Impedance, Data rate 1.5Gb/sec, size 4.68" x 3.68" x 2.0" BNC input \ output jacks.



**40-977 4 Channel SDI Hum Eliminator**

4 Channel SDI Digital Video Hum Eliminator. 75 ohm Impedance, Data rate 1.5Gb/sec, size 7.40" x 4.70" x 3.20" BNC input \ output jacks.



**40-973 Composite Video, Analog L+R Audio Hum Eliminator**

Composite Video \ Analog L+R Hum Eliminator. 75 ohm Impedance, Video 0-200Mhz bandwidth, 10K Impedance, Audio bandwidth 200-15Khz, size 8.7" x 4.1" x 2.1" Red, White, Yellow colored input \ output RCA jacks.



**40-970 HDTV Component Video Hum Eliminator 1080P, 1080I, 720P, 480P**

HDTV Component Video Hum Eliminator passes 1080P, 1080I, 720P, 480P. 75 ohm Impedance, 0-200Mhz bandwidth, size 8.7" x 4.1" x 2.1" Red, Green, Blue colored input \ output RCA jacks.