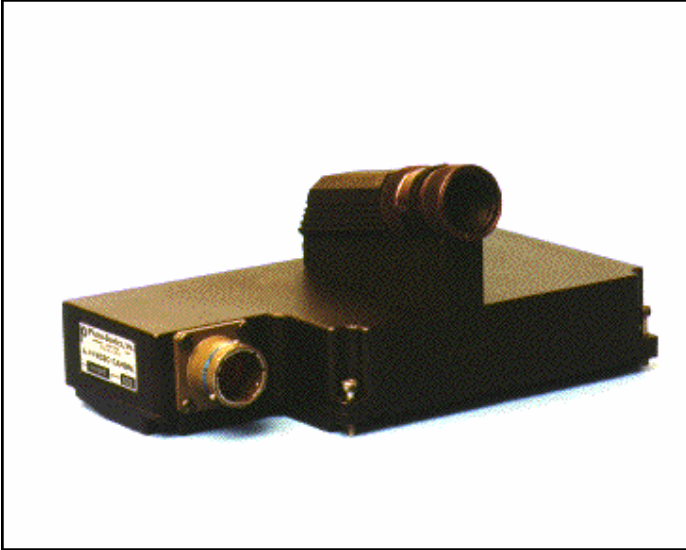




Photo-Sonics, Inc.

F-16A/B/ADF HUD CAMERA



SPECIAL FEATURES

- ◆ **EXPOSURE LOCK** - Maintains proper exposure of target during pull up.
- ◆ **EVENT MARK** - Gray for both day and night operation - can be quickly disabled for installations that utilize a VCR having the event mark incorporated.
- ◆ **HIGH RESOLUTION** - Up to 470 Lines.
- ◆ **AUTOMATIC EXPOSURE CONTROL** - 19 f-stop dynamic range.
- ◆ **AUTOMATIC GAIN CONTROL** - 6 f-stop dynamic range.
- ◆ **EASY MAINTENANCE** - Output signals are available on the single interface camera connector which can fault isolate down to the SRU without the need to disassemble camera.
- ◆ **POWER** - Built-in circuitry to enable power supply on PCB to be changed from 115 VAC to 28 VDC.

This Color Video HUD Camera is an intelligent mix of Mil-Standard and commercial-off-the-shelf components and operates successfully on both the A/OA-10A and F-16A/B/ADF HUDs. The camera system provides the unique features and reliability of a full Mil-Standard camera without the high cost. The camera assembly is mounted on top the HUD directly behind the combining glass so that it records precisely what the pilot sees including the outside world and the HUD symbology. The camera converts the optical images into electrical video signals for output to an on-board video recorder or transmitter. The camera electronics incorporate extensive filtering to provide exceptional, noise-free, image quality using aircraft power.

The A/OA-10A HUD camera has a proven track record with over four years of operation on the A/OA-10A aircraft in USAF, the ANG and the AFRES.

Photo-Sonics, Inc has over thirty years experience in the design and production of gunsight and HUD cameras. We have delivered over 5000 units to the U.S. and foreign governments. Call for information on other camera configurations.

820 So. Mariposa St. Burbank, CA 91506

Phone 818-842-2141 Fax 818-842-2610 mail@photosonics.com

FEATURES

- ◆ Automatic Exposure Control with lens iris
- ◆ Adjustable air-to-ground exposure lock (0-10 sec)
- ◆ Visual event mark
- ◆ 115 VAC, (85-265 VAC) 47-440 Hz, single phase
- ◆ Internal or external sync
- ◆ Pickup device - Interline-transfer hyper HAD CCD, 1/2"
- ◆ Horizontal resolution:
 - NTSC - 470 TV lines
 - PAL - 460 TV lines
- ◆ Picture elements:
 - NTSC - 768(h) x 494(v)
 - PAL - 752(h)x582(v)
- ◆ S/N ratio:
 - NTSC - >-48dB
 - PAL - >-46dB
- ◆ Sensitivity - 0.35 Lux
- ◆ Minimum sensitivity - 4.5 Lux at f/1.2
- ◆ Shutter speeds - 1/60th second, 1/1000 second, flickerless, and CCD iris (AEC), Off for A/0-10A and for F-16A/B/ADF
- ◆ Automatic AGC
- ◆ Gamma - 0.45/1
- ◆ White balance - ATW, 3200K, 5600K, and Manual
- ◆ Video formats - Y/C component and NTSC composite
- ◆ Weight - less than 2 lbs
- ◆ 12 month warranty

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-25°C to +71°C
Storage Temperature	-55°C to +80°C
Altitude	43,000 feet
Over Pressurization	-15,000 feet
Humidity Operating	+90% RH, 60°C, 2 hours
Humidity Storage	48 hours (two 24 hour cycles)
	95% RH, +50°C, 6 hours
	85% RH, +38°C, 16 hours
Vibration	Random, 6 G rms, 5 minutes duration
Shock	9 Gs, 11 msec., 1/2 sine wave, 3 axes
Acceleration	Lateral (Nx) - 6 Gs
	Longitudinal - 6 Gs
	Normal (+Nz) - +8 Gs
	Normal (-Nz) -6 Gs

OPTICAL SPECIFICATIONS

Lens Focal Length	FOV Degrees		FOV Milliradians		Application
	Horiz	Vert	Horiz	Vert	
16.42mm, f1.4	22.06	16.63	384.9	290.3	HUD-Special
14.7mm, f1.4	24.56	18.55	428.7	323.7	HUD-Special