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A/OA-10C VIDEO CAMERA

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PART NUMBER 93-2010

NSN 5821- 01- 468- 6516FJ

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-10C 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 three years of operation on the A/OA- 10A aircraft at Nellis AFB.



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 - 4 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.

FEATURES

- Automatic Exposure Control with lens iris
- Adjustable air-to-ground exposure lock (0-10 sec)
- Visual event mark
- 115 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
- Picture elements:
 - NTSC - 768(h) x 494(v)
- S/N ratio:
 - NTSC - >48dB
- Sensitivity - 2000 Lux at f/5.6
- 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/O-10C
- AGC - on/off
- 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		
	Horiz	Vert	Horiz	Vert	Application
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

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