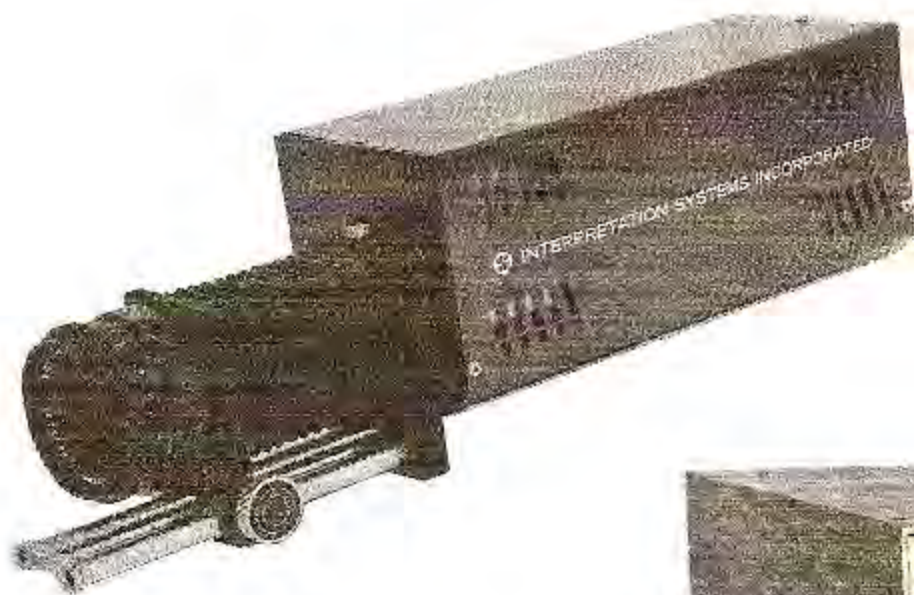


CVC-1

IMAGE ANALYSIS CAMERA



The CVC-1 Image Analysis Camera is a rugged two-piece vidicon camera designed for those applications requiring extremely uniform shading and high signal-to-noise characteristics. Applications include remote sensing data reduction, radiograph analysis, reconnaissance, weather satellite image studies, special applications, and laser beam profile analysis. These applications have typically depended upon slow scan, optical techniques for image analysis. However, the improved shading correction circuitry and state-of-the-art signal-to-noise performance of the CVC-1 have allowed these and other difficult problems to be solved using video equipment.

When included in U.S. systems, the CVC-1 operates at a 525 line per frame, 30 frame per second format. For European and selected other systems, the camera scans at 625 lines per frame, 25 frames per second. In all cases the output is interlaced 2:1. The camera is designed to accept ISI's Model BL-35 Bellows/Lens Assembly which provides a wide range of magnification (1:50) and no optically degrading effects. Other 35mm mount lenses with Pentax thread can be used, if required.

The CVC-1 Image Analysis Camera can be used in a simple closed circuit display system, as shown in *Figure 1* or it can be

used in conjunction with one or more of ISI's image enhancement modules, such as the VP-8 Image Analyzer or the AP-3 Analog Encoder to form a complete image analysis system as shown in *Figure 2*.



Figure 1

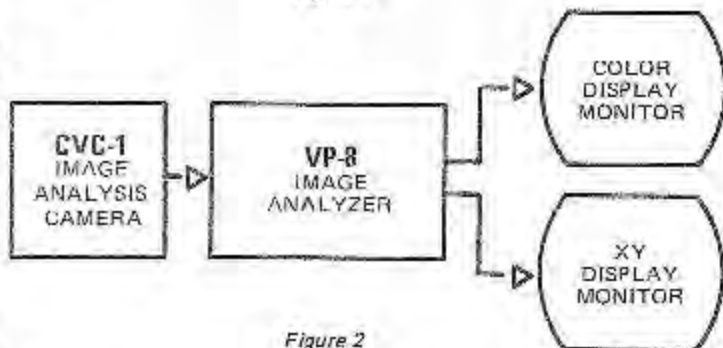


Figure 2



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SCAN FORMATS

STANDARD 60 Hz SYSTEMS: 525 lines per frame, 30 frames per second, 2:1 interlace.

STANDARD 50 Hz SYSTEMS: 625 lines per frame, 25 frames per second, 2:1 interlace.

OTHER SYSTEMS: Units can be ordered to operate in scan formats other than standard.

INPUTS

POWER: 117 or 230 VAC, 60 or 50 Hz, 40 VA.

COMPOSITE SYNC/COMPOSITE BLANKING: External sync and blanking sources can be used but are not normally required. 75 ohm, BNC.

OUTPUTS

VIDEO: Two parallel composite or non-composite, 0.7-1.5 volt outputs are available, 75 ohm, BNC.

SYNC: Two parallel standard composite sync outputs are available, 75 ohm, BNC.

BLANKING: Two parallel standard composite blanking outputs are available, 75 ohm, BNC.

PERFORMANCE

CAMERA TUBE TYPE: 1" vidicon No. 8541-A standard.

VIDEO BANDWIDTH: 8MHz.

SIGNAL-TO-NOISE RATIO: 43db @ 8MHz, peak-to-peak signal to RMS noise, unfiltered and unweighted.

RESOLUTION:

line rate	H Res. 8 MHz	V Res.	Corner Res.
525	650	350	600
625	650	400	600

GRAY SCALE SENSITIVITY: 1.0 footcandle highlight illumination on face of image tube produces 100 IRE units of video at

camera control output terminal. Camera resolves all 10 shades of gray on EIA TV Resolution Chart with 0.5 footcandle illumination.

GEOMETRIC DISTORTION: Less than 2%, using EIA Standard RS-213.

SHADING: Better than 3% full field uniformity; nine shading circuit controls provided for operator adjustment as needed.

SCAN FAILURE PROTECTION: Image tube scanning beam is automatically turned off in the event of a scan failure. "Protect" light is visible on the CCU.

MECHANICAL

DIMENSIONS:

- Camera Head: 4" x 4" x 9" length.
- Camera Control Unit (CCU): 19" wide x 5.25" high x 15" deep, standard 19" rack mount.

WEIGHT:

- Camera Head: 5 lbs.
- Camera Control Unit: 25 lbs.

CABLE LENGTH (Camera Head to CCU): 10' length standard.

TYPE OF LENS MOUNT: 35mm "Pentax" thread

CAMERA MOUNTING: Single threaded 1/4"-20 hole in base of camera head accepts standard tripod, pan and tilt, or pedestal mounting screw.

BL-35 BELLOWS/LENS ASSEMBLY, (included with CVC-1):

- Lens Type: fixed focal length
- Focal Length: 35mm
- Field of View: 63°
- Aperture Range: f2.8 - f16
- Mount: Pentax thread
- Range of Magnification: 1:50
- Minimum size of film which can be displayed full screen: 4mm
- Maximum size of film which can be displayed full screen: greater than 200 mm



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