



INDUSTRIAL VIDEO PRODUCTS, INC.

## VTC-C544

### 1/3" "DSP" Color CCD Camera

# INSTRUCTION MANUAL

**Warning:** To prevent fire or electric shock hazard, do not expose the appliance to rain or moisture

## 1 General

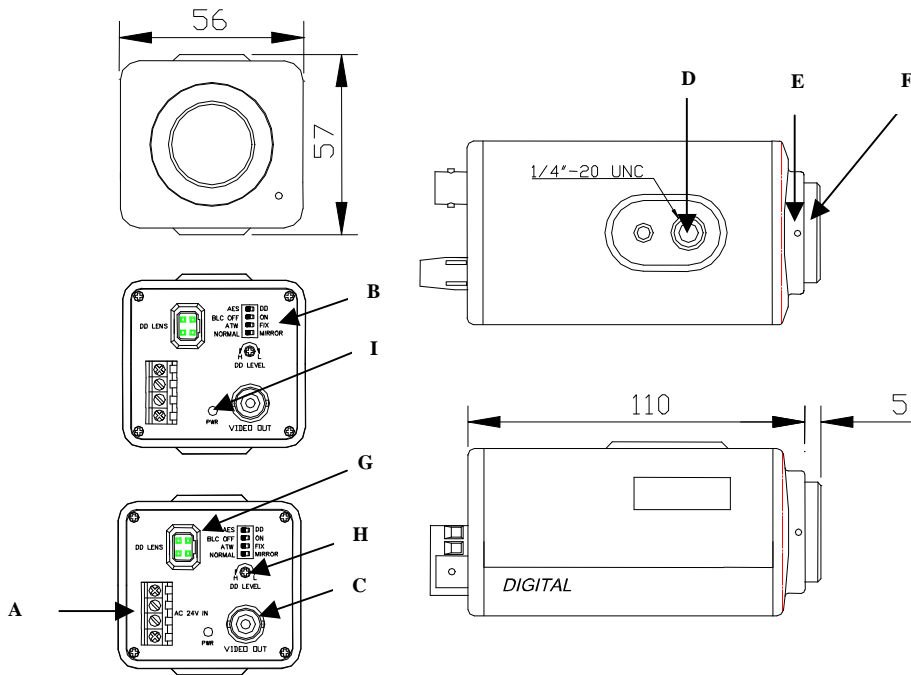
This color video camera employs a 1/3" SONY solid-state, charge coupled imaging device, and is equipped with a newly developed DSP (Digital Signal Processor) for video signal processing to provide high color fidelity and a sharp, stable picture.

## 2 Features

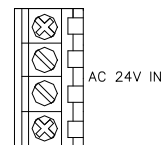
1. 380 lines of horizontal resolution and high quality video utilizing digital processing
2. 0.5lux Minimum illumination and signal-to-noise ratio of 48 dB is achieved by employing a highly sensitive image sensor with micro lenses and low noise circuit design.
3. High quality picture –A digital signal processor performs digital horizontal and vertical aperture enhancement to produce high quality picture.
4. A newly developed intelligent wide range Auto Tracing White Balance (ATW) that automatically adjusts the tone according to the color temperature of the light source.
5. Smart digital control Auto BLC, the combination of Histogram equalizer and Central windows weighting BLC functions ensure for use against any unusual lighting conditions.
6. Advanced Auto Exposure System for both fixed iris and auto iris lenses controls the amount of light to ensure optimum video signal.
7. Built-in Line-lock sync.

**To prevent electric shock, do not remove screws or covers.  
There are no user serviceable parts inside.  
Contact a qualified service person if necessary.**

### 3 Name of parts and functions



A. Power input block terminal  
AC 24V model for external Vertical phase input as Line lock



- B. Dip-switch
- 1.CCD IRIS (AES) / AUTO IRIS SW(DD Drive)
  - 2.NORMAL / BACKLIGHT SW
  - 3.ATW / FIX SW
  - 4.Normal / Mirror SW

AES	<input type="checkbox"/>	DD
BLC OFF	<input type="checkbox"/>	ON
ATW	<input type="checkbox"/>	FIX
NORMAL	<input type="checkbox"/>	MIRROR

C. Video output terminal(BNC)



D. Holder screw hole

E. Flange focal lock screw

F. C (CS) mount adapter  
If a CS mount lens is to be used, remove the C mount ring.

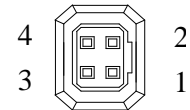
G. Auto iris lens connector(MINI JACK)  
For use with auto iris lens without EE amp, set the lens selector switch to "DD" position.

Note: This camera does not support “Video” Type auto iris lenses.

Connector cable leads

- |                     |                     |
|---------------------|---------------------|
| 1. Damping coil (-) | 3. Driving coil (+) |
| 2. Damping coil (+) | 4. Driving coil (-) |

AES	<input type="checkbox"/>	DD
BLC OFF	<input type="checkbox"/>	ON
ATW	<input type="checkbox"/>	FIX
NORMAL	<input type="checkbox"/>	MIRROR



#### H. DC lever Adjuster (VR)

For DC drive auto iris lens driving level adjustment; in order to obtain optimum exposure in varying lighting conditions.



#### I. Power pilot LED

## 4 Auto Tracing White Balance

### 4.1 ATW—Auto tracking white balance

This camera is equipped with an digital auto tracing white balance function, This ensures white balance control based on the absolute color temperature of the object and adjusts automatically.

Auto color temperature tracing white balance is a feedback system, that aligns the white balance by detecting the R-Y and B-Y signal. After performing white detection, the convergence shift processing is judged and accurately operated by internal micro-controller.

The operating color temp. range is from 3200°K to 7500°K approximately.

### 4.2 FIX—fixed white balance

Point the camera at a white object and bring it into focus. Move dip switch to the FIX mode.

## 5 AE Mode

### 5.1 AES (CCD IRIS) mode

AES mode is performed by the CCD iris and AGC, the range of the electronic shutter is from 1/50(1/60) to 1/100,00 second; the AGC range is from 0 to 36 dB.

### 5.2 Auto Iris DD Mode

In this mode, the shutter speed is fixed at 1/60 sec. NTSC. Auto exposure operation is performed by AGC through the microcontroller and mechanical iris of external lens. The back light compensation amount is calculated by internal microcontroller, then output and supplied to the governor inside the auto iris lens.

## 6 Auto Back-light Compensation

This auto BLC function consists of two methods of Backlight compensation; one is Central Windows weighted average BLC, the other is Histogram calculating BLC. Microprocessor (dip switch ON position)

The combination of two types of backlight compensation makes it easier to arrange

backlight operation to match the imaging conditions and installation location.

Note:

Compensation may be insufficient under extremely bright conditions.

## 7 Specifications

<b>Image device</b>	1/3" interline transfer SONY Super HAD CCD
<b>Signal system</b>	NTSC standard
<b>Picture Elements</b>	542(H) X492 (V)
<b>Scanning system</b>	525 lines
<b>Sync system</b>	Line-Lock (24V AC Model)
<b>Horizontal resolution</b>	380 TV lines
<b>Minimum illumination</b>	0.5 lux at F1.2
<b>Aperture correction</b>	H aperture and V aperture
<b>Gain</b>	Max. Gain 36dB; Off
<b>S/N ratio</b>	Better than 48dB
<b>Auto exposure system</b>	AES (CCD iris): 1/50(1/60) - 1/100,000 sec. / Auto Iris mode: 1/60 sec.
<b>Auto iris lens</b>	Accepts DC servo iris lens
<b>ATW</b>	ATW: 3200°K to 7500°K
<b>Backlight compensation</b>	Auto detect On/off; Histogram plus windows weight BLC
<b>Video output signal</b>	Composite: 1 V p-p at 75 Ohm
<b>Lens mount</b>	C & CS mount
<b>Operating temperature</b>	14°F to 122°F (-10°C to 50°C)
<b>Power source</b>	AC 24V
<b>Power consumption</b>	2W (AC type)
<b>Dimensions (W x H x D)</b>	2.25" x 2.05" x 4.33" (57 x 52 x 110mm)



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