

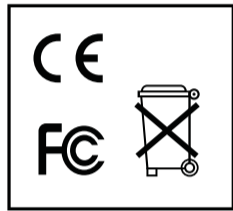
# General Specifications

Model No.	CM-201	CM-205	CM-205-L9	CM-215
Image Sensor	1/3" Sony SuperHAD	1/3" Sony SuperHAD	1/3" Sony SuperHAD	1/3" Pixim Orca
Imaging DSP	Sony SS-11X	Sony HQ-1	Sony HQ-1	Pixim
IP Rating	IP55	IP55	IP55	IP55
Type / Format	NTSC	NTSC	NTSC	NTSC
Wide Dynamic Range	No	No	No	Yes, 120dB Max Dynamic Range
Minimum Illumination	1.2 lux @ F1.6 (50 IRE)	0.6 lux @ F1.2 (50 IRE)	0.6 lux @ F1.2 (50 IRE)	0.6 lux @ F1.2 (50 IRE)
Day / Night	Yes	Yes	Yes	Yes (Auto, On, Off)
Horizontal TVL	500 TVL	Day: 540 TVL / Night: 570 TVL	Day: 540 TVL / Night: 570 TVL	504+ TVL
Service Monitor Jack	No	Yes, 2.5mm (3/32) T/S Jack	Yes, 2.5mm (3/32) T/S Jack	Yes, 2.5mm (3/32) T/S Jack
S/N Ratio	48dB	>50dB	>50dB	>48dB @ F1.2, 50 IRE
Focal Length	4~9 mm	3.3~12 mm	9~22 mm	3.3~12 mm
Iris Control	DC Type Auto IRIS Control	DC Drive	DC Drive	DC Drive
Synchronization	INT	INT / LL	INT / LL	INT / LL
Video Output	1.0Vpp, 75Ω Unbalanced	1.0Vpp, 75Ω Unbalanced	1.0Vpp, 75Ω Unbalanced	1.0Vpp, 75Ω Unbalanced
White Balance	Automatic White Balance	AWB, AWB-EX	AWB, AWB-EX	AWB, ATW, MWB, ATW-EX
Auto White Balance Range	2500 K ~ 9700 K	2700 K ~ 11000 K (AWB-EX 2000 K ~ 18000 K)	2700 K ~ 11000 K (AWB-EX 2000 K ~ 18000 K)	2200 K ~ 7500 K (AWB-EX 2000 K ~ 11000 K)
Backlight Compensation	Central Area for DC IRIS Lens	Center Area	Center Area	Fully Adjustable
Auto Gain Control	ON/OFF	AGC-EX / AGC Norm	AGC-EX / AGC Norm	Fully Adjustable
Operating Temperature	14°F ~ 122°F (-10°C ~ 50°C)	14°F ~ 122°F (-10°C ~ 50°C)	14°F ~ 122°F (-10°C ~ 50°C)	14°F ~ 122°F (-10°C ~ 50°C)
Heater	No	No	No	No
Power Consumption	3.2W (Max)	4.2W (Max)	4.2W (Max)	4.2W (Max)
Rated Amperature	0.27A (12vDC) / 0.13A (24vAC)	0.35A (12vDC) / 0.175A (24vAC)	0.35A (12vDC) / 0.175A (24vAC)	0.35A (12vDC) / 0.175A (24vAC)
Input Voltage	12vDC / 24vAC (±10%)	12vDC / 24vAC (±10%)	12vDC / 24vAC (±10%)	12vDC / 24vAC (±10%)
Weight	0.6 lbs (0.27 kg)	0.6 lbs (0.17 kg)	0.6 lbs (0.17 kg)	0.6 lbs (0.17 kg)
Dimensions	Dome : ø3.9" (100 mm) x H: 2.1" (55 mm) Housing: ø4.7" (120 mm) x H: 1.9" (50 mm)	Dome : ø3.9" (100 mm) x H: 2.1" (55 mm) Housing: ø4.7" (120 mm) x H: 1.9" (50 mm)	Dome : ø3.9" (100 mm) x H: 2.1" (55 mm) Housing: ø4.7" (120 mm) x H: 1.9" (50 mm)	Dome : ø3.9" (100 mm) x H: 2.1" (55 mm) Housing: ø4.7" (120 mm) x H: 1.9" (50 mm)
Housing / Dome Cover	White / Clear	White / Clear	White / Clear	White / Clear

## Regulatory Compliance

**Emissions** FCC part 15 Class B  
CE: EN55011  
ICES-003  
EN55022  
CISPR 11  
CISPR22  
ANSI C63.4

**Immunity** CE: EN50130-4



**FCC COMPLIANCE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced Radio/TV technician for help.

**CISPR 22 WARNING:** This is a Class B product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

**POWER SUPPLY REQUIREMENTS:** For use with listed Audio/Video product and only connected to 15W or less power supply. \*Power supply should be a NEC Class 2 / LPS Supply.

**EQUIPMENT MODIFICATION CAUTION:** Equipment changes or modifications not expressly approved by the manufacturer, the party responsible for FCC compliance, could void the user's authority to operate the equipment and could create a hazardous condition.

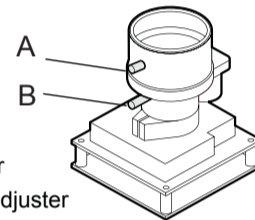
This class B digital apparatus complies with Canadian ICES-003.  
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

**ATTENTION:** The information in this document is subject to change without notice. OpenEye shall not be liable for technical, editorial errors or omissions contained herein.

## Camera Adjustments

### Standard Camera CM-201

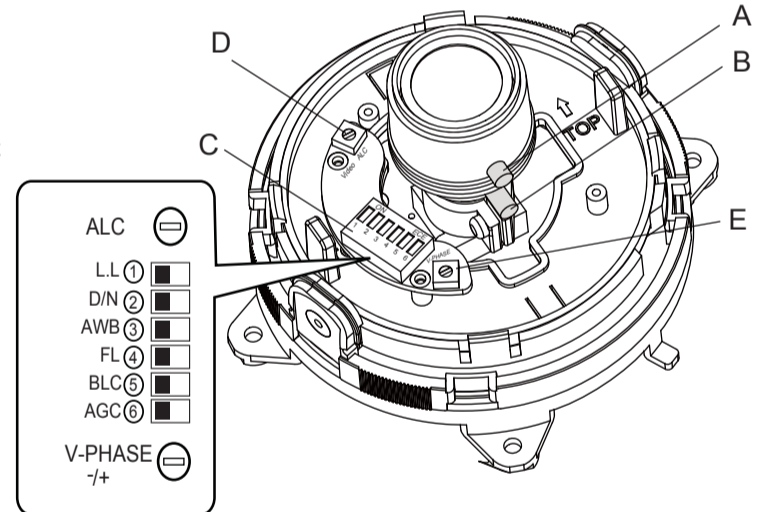
Twist the controls on the side of the varifocal lens to adjust the focus and field of view settings.



A : Focus adjuster  
B : Field of view adjuster

### High Resolution Camera CM-205/CM-205-L9

A : Focus adjuster  
B : Field of view adjuster  
C : DIP switches  
D : ALC adjustment  
E : V-PHASE adjustment



#### DC-IRIS Adjustment (ALC)

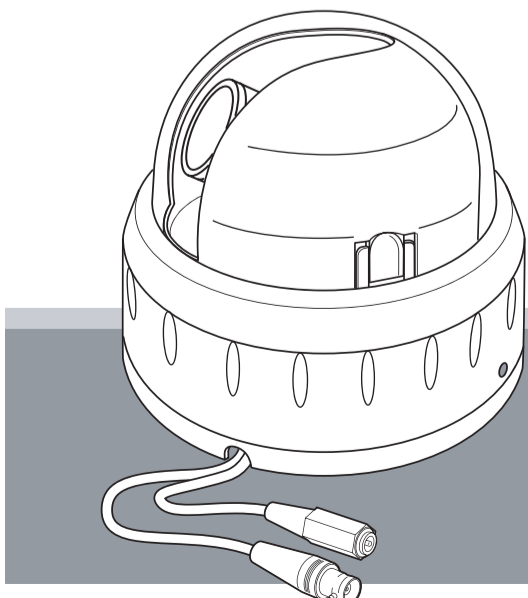
This is factory preset. It should not normally require adjustment.

#### Vertical Phase Adjustment (V-Phase)

Use this adjustment when using an 24vAC supply to align the camera phase with that of the power supply.

# OpenEye®

## Tamper Resistant Indoor Dome Camera



### Camera Setup

model no. CM-201  
CM-205  
CM-205-L9  
CM-215

	FUNCTION	OFF <input type="checkbox"/>	<input type="checkbox"/> ON
①	L.L	INT	LL
②	D/N	OFF	ON
③	AWB	NORMAL	EX
④	FL	OFF	ON
⑤	BLC	OFF	ON
⑥	AGC	EX	NORMAL

The bank of DIP switches allows the following settings to be made:

#### Line Lock (INT/LL)

In LL Mode, the V-Phase may be adjusted to compensate for connected supply phase differences. Only applicable for 24vAC supply. When using a 12vDC power supply, the camera should be operated with **INT** (internal) sync.

#### DAY/NIGHT Mode (D/N)

When this switch is set to ON the camera will produce color images under normal lighting conditions. In reduced light the camera will switch to Monochrome mode.

#### Auto White Balance (AWB Normal/AWB-EX)

**AWB:** The camera operates in the normal AWB range (2700 K ~ 11000 K).  
**AWB-EX:** The camera operates in the extended AWB range (2000 K ~ 18000 K).

#### Flickerless Mode (FL/ON)

The camera reduces flicker in the image under fluorescent lighting.

#### Back Light Compensation (BLC)

When set to **ON**, this option improves the camera's response to strong, unwanted lighting effects behind the desired subject.

#### Low Light Sensitivity (AGC-EX/AGC Norm)

When set to **EX**, sensitivity in low light will automatically increased. Selecting **NORMAL** will remove noise from the image, but will also limit the camera's sensitivity.

# OPTIX

Please carefully read these instructions before using this product.

Save this manual for future use.

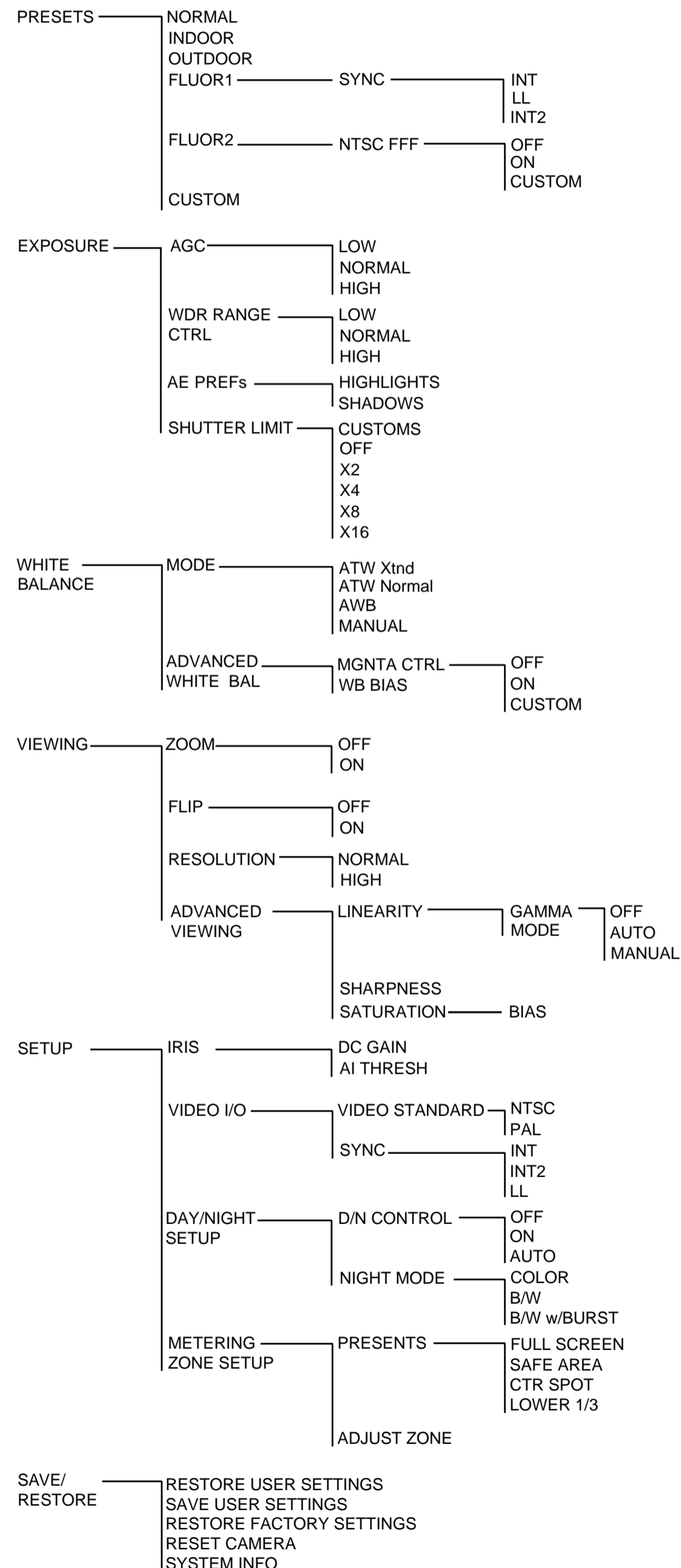
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# Camera Adjustments & Programming

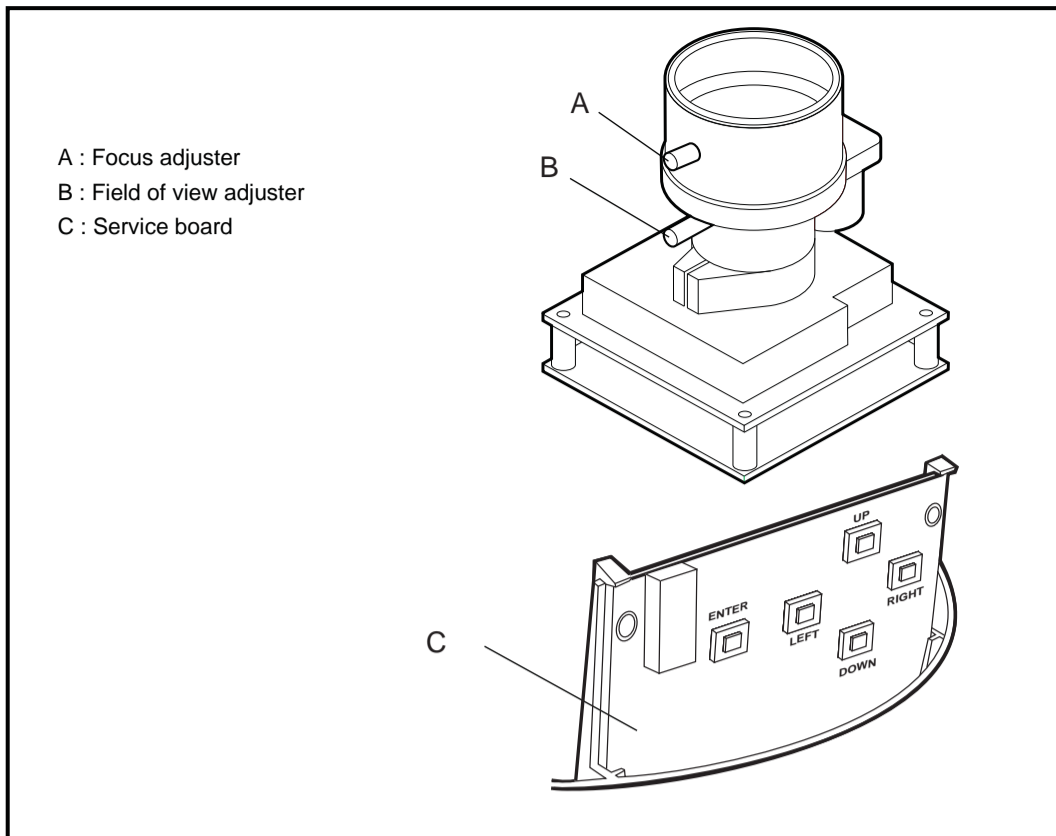
With the exception of the focus and field of view adjustments (made using controllers A and B) all settings for the Wide Dynamic Range camera (CM-215) are made using its on-screen menu display. A working video monitor and a separate plug-in service board ( C ) are required to view and select options.

## Menu Map (WDR Camera CM-215)

Press the ENTER button on the control board for three seconds to view the menu.



## Camera Adjustment (WDR Camera CM-215)



- A : Focus adjuster
- B : Field of view adjuster
- C : Service board

## Menu Description

### PRESETS

There are five unique "factory set" general configuration presets. Select the general configuration preset which best suits your requirements for a specified environment. Pressing the ENTER key on the selected option will display the parameters of a general configuration preset, pressing the ENTER key again will select the general configuration preset.

*NORMAL* - Provides the most versatile settings for general purpose applications.

*INDOOR* - Optimized for indoor scenes with windows and/or glass doors.

*OUTDOOR* - Optimized for sunny outdoor scenes.

*FLUOR1* - Line Lock recommended.

*INT 1* - Internally generated sync.

*LL - Line Lock* - Sync is locked to the AC supply cycle and permits adjustment of V-phase to correct for vertical sync picture roll. (Applicable for 24VAC supply only. If a 12 volt DC power supply is used the camera will run in INT1 or INT2.)

*INT 2 - Internal Flickerless* - Internally generated sync that can reduce flicker under florescent lighting.

*FLUOR2* - Prevents flicker without requiring Line Lock by use of shutter.

### EXPOSURE

There are four different exposure modes available for selection. Each exposure mode controls the electronic shutter differently and is suitable for different lighting environments.

*AGC* - Automatic Gain Control - When low Light Priority is set to gain, gain increases as light decreases up to the maximum set by gain limit. No color artifacts are visible, and the dynamic range is not decreased as gain increases.

*WDR RANGE CTRL* - Use WD control, electronic shutter control, mechanical iris control, and the low-brightness zone controls selected in LOW Lux MODE to control the exposure time automatically. Seamless switching between control zones delivers shockless AE.

*AE PREFs* - Automatically optimizes the scene for highlights or for shadows.

*SHUTTER LIMIT* - Limits the shutter value.

### WHITE BALANCE

There are four different white balance modes available for selection. Each white balance mode controls the electronic shutter differently and is suitable for different lighting environments.

*ATW Xtnd* - Extended Auto White Balance Range - use this setting for scenes that may have an extremely wide range of color temperature.

*ATW Normal* - Selects a normal Auto White Balance Range, for general operation. If necessary the range is configurable with low limit (to help with reds) and high limit (to help with blues) adjustments.

*AWB* - Save or cancel AWB and all changes.

*MANUAL* - Allows manual setting of the color temperature of the image. This can be achieved by using the Kelvin option, or using similar methods the installer may be familiar with. This setting is also pertinent to static environment applications where the lighting conditions never change, like indoor hallways.

### VIEWING

*FLIP* - This mode reverses the top and bottom sides of the liner.

*GAMMA MODE* - Select appropriate gamma mode for type of display. Gamma correction compensates for non linear grayscale in a display device or to make non standard luminance.

*MANUAL* - Manual Gamma may be used to enhance detail in low light areas of an image which would normally not be visible with highlights present in the image.

*SHARPNESS* - Adjusts overall image sharpness.

*SATURATION* - Adjusts overall color content of the image.

### SETUP

*IRIS- DC GAIN* - Adjusts the iris control gain when using a DC iris.

*AI THRESH* - Adjust the threshold at which the automatic iris becomes active.

*DAY/NIGHT SETUP* - Day/Night operation. This feature may be used to improve low light performance by reducing noise from the video signal or to force the camera into Night mode regardless of lighting conditions.

### SAVE/RESTORE

*RESTORE USER SETTINGS* - This will undo any changes made since the last "Save Setting".

*SAVE USER SETTINGS* - Save any programming changes to ensure they are retained after power loss or reset. If changes are not saved, the camera will revert to the previous settings on power-up.

*RESTORE FACTORY SETTINGS* - Restore camera settings to factory default - full reset, all previous program will be lost including video standard which will default to NTSC.

*RESET CAMERA* - Save any programming changes to ensure they are retained after power loss or reset. If changes are not saved, the camera will revert to the previous settings on power-up.

*RESET CAMERA* - This is a soft reset and has the same effect as cycling the camera power.

*SYSTEM INFO* - Displays the camera firmware version.