

# RET1021

## Retina Vandal Proof IR Dome Camera

with SONY High Resolution CCD Sensor & On-Screen Adjustability



### INTRODUCTION

The RET1021 IR color camera employs the latest SONY technology optical components. This day/night, indoor/outdoor model features a water-resistant housing. It will provide rich color, high definition pictures. Easy to install and convenient to use. It will adapt to most CCTV systems. Please read this instruction manual carefully to ensure proper use of the product.

### WARNINGS



To prevent fire or shock hazard, do not expose the unit to prolonged contact with water.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the application.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.



**CAUTION**  
Risk of Electrical Shock DO NOT OPEN



**CAUTION:** TO REDUCE THE RISK OF ELECTRICAL SHOCK DO NOT REMOVE COVER OR BACK. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

**CAUTION:** TO PREVENT ELECTRICAL SHOCK AND RISK OF FIRE HAZARDS, DO NOT USE OTHER THAN SPECIFIED POWER SOURCE.



**CAUTION**  
Risk of Damaging Camera



**CAUTION:** PLEASE NOTE THE CAMERA'S OPERATING TEMPERATURE AND ENVIRONMENT REQUIREMENTS. AVOID USING THE CAMERA AT EXTREME TEMPERATURES.

**CAUTION:** NEVER POSITION THE CAMERA TO FACE THE SUN OR A BRIGHT OBJECT. THIS MIGHT DAMAGE THE CCD.

**CAUTION:** DO NOT MOUNT THE CAMERA NEAR A HEAT SOURCE.

**CAUTION:** USE ONLY THE RECOMMENDED POWER SUPPLY.

**CAUTION:** WHEN USING THE CAMERA IN LIGHTNING CONDITIONS, BE SURE TO INSTALL A SURGE - PROTECTION DEVICE, OR DISCONNECT POWER SUPPLY PLUG AND CABLE.

**CAUTION:** IN ORDER TO CAPTURE HIGH QUALITY PICTURES, THE POWER SUPPLY'S CABLE AND VIDEO OUTPUT CABLE SHOULD NOT BE TOO LONG.

### IN THE BOX

- (1) RET1021 Vandal Proof IR Dome Camera
- (1) User Manual

### PRODUCT OVERVIEW

#### Sensor (CCD)

SONY 1/3" High Resolution CCD Sensor

#### Auto Gain Control (AGC)

Built-in auto gain control (AGC) circuit. The color camera can provide high definition picture in low light conditions.

#### Auto-Electronic Shutter (AES)

Built-in auto electronic shutter function. The color camera's AES speed can reach 1/1000,000.

#### Gamma Characteristic

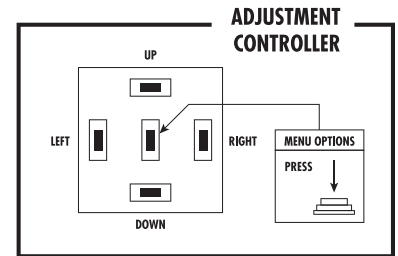
Camera Gamma characteristic is 0.45.

#### Scanning Mode

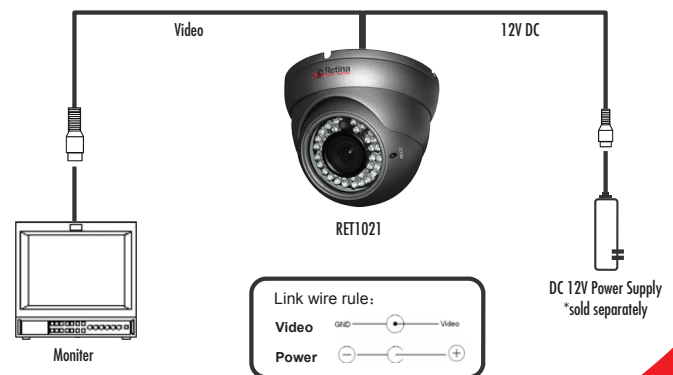
NTSC or PAL mode.

#### Night-time Vision

0 Lux with IR Red ON.



### CONNECTIONS



# USER MANUAL

# RET1021

**Retina Vandal Proof IR Dome Camera**  
with SONY High Resolution CCD Sensor & On-Screen Adjustability



## SPECIFICATIONS

<b>Model</b>	RET1021
<b>Pick Up Element</b>	SONY 1/3" CCD
<b>Effective Picture Elements (H*V)</b>	NTSC: 976x582 PAL: 976x494
<b>Horizontal Resolution</b>	700 TV Lines
<b>S/N Ratio</b>	>65dB
<b>Clock Frequency (MHz)</b>	NTSC: 19.0699 PAL: 18.9375
<b>Scanning System</b>	2:1 Interface
<b>Minimum Illumination</b>	0 Lux (with IR LED ON)
<b>Synchronous System</b>	Internal, Negative sync.
<b>Auto Electronic Shutter</b>	NTSC: 1/60~1/100,000 PAL: 1/50~1/100,000
<b>Gama Characteristic</b>	0.45
<b>IR Distance</b>	30m (with 36 Unit Infrared LED)
<b>IR Status</b>	<10 Lux by CDS
<b>IR Power On</b>	CDS Auto Control
<b>Video Output</b>	1 Vpp, 75 Ohm
<b>Auto Gain Control</b>	Auto
<b>Power/Current</b>	12V DC (±10%) / 400mA
<b>Lens</b>	4-9mm (optional)
<b>Water Resistance</b>	IP65
<b>Dimensions</b>	ø131 x 93(H) mm
<b>Weight</b>	1.76 lbs
<b>Storage Temperature</b>	-30~+60°C RH 95% Max
<b>Operating Temperature</b>	-10~+50°C RH 95% Max

## TROUBLESHOOTING

- No picture after providing power.**  
Possible power supply voltage abnormality. Check for proper power supply voltage and polarity. Ensure that all the connecting cables and monitors are hooked up properly.
- Interference (hum bars) are moving through the picture.**  
Check the monitor and peripheral equipment used.
- The picture background changes color continuously.**  
The fluorescent light's electromagnetic field can cause color roll. This is a normal phenomenon. Reduce the number of fluorescent lights, or increase the distance between the camera and the fluorescent lights.
- The picture quality is poor or "fuzzy"**  
This is usually due to poor quality cables or poor connections. Ensure that all the connecting cables and monitors are hooked up properly, or switch to higher quality connecting cables.

## LIMITED WARRANTY

This warranty remains in effect for one year from the date of purchase. Except as specified below, this warranty covers all defects in material and workmanship. The following are not covered: Damaged caused by accident, misuse, abuse, product modification or neglect, damage occurring during shipment, damage from failure to follow instructions contained in the owner's instruction booklet, damage resulting from the performance of repairs by someone not authorized by Retina Security Equipment, or any claims based on misrepresentations by the seller. This warranty does not cover incidental or consequential damages. It does not cover the cost of removing or reinstalling the unit. This warranty is void if the serial number has been removed or defaced.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state. Some states do not allow the exclusion or limitations of incidental or consequential damages or limitation on how long an implied warranty lasts so the above may not apply to you.

## HOW TO OBTAIN SERVICE

Please call us at (800) 844-9555 Monday – Friday 8am – 5pm. Central Standard Time. We may direct you to an authorized dealer/technician or request that you return the product for repair. You must present the original bill of sale to establish the date of purchase.

Please do not ship your product to us for repair without prior authorization. You are responsible for transportation of your product and payment of any shipping charges. If the repairs are covered under warranty, we will pay the return shipping charges.

*NOTE: Do not attempt to disassemble the camera. Doing so may void your warranty. No user-serviceable parts inside.*

## ON-SCREEN SETTINGS

LENS	ANUAL/DC/VIDEO
EXPOSURE	SHUTTER AUTO,FLK,1/50,1/250,1/500,1/2000,1/4000,1/5000,1/10000,1/100000
	BRIGHTNESS 0-255
	AGC LOW/MIDDLE/HIGH/OFF
	D-WDR OFF/ON(LEVEL-0-63)
WHITE BAL	ATW1,ATW2,AWC,SET,MANUAL:(INDOOR/OUTDOOR/MANUAL)
BACK LIGHT	OFF
	BLC:AREA SEL/AREA STATE/GAIN/HEIGHT/LEFT/RIGHT/TOP/BOTTOM HLC:LEVEL-0-255/MODE(ALL DAY/NIGHT ONLY)
DPC	COVER THE LENS THEN PRESS ENTER KEY
DAY/NIGHT	COLOR
	B/W BURST(OFF/ON),IR SMART(OFF/ON:IR GAIN/HEIGHT/WIDTH/LEFT/RIGHT/TOP/BOTTOM),IR LEVEL(HIGH/LOW)
SPECIAL	AUTO OFF
	CAM TITLE ON/OFF
	MOTION OFF/ON AREA SEL: AREA 1-4 AREA STATE: ON/OFF HEIGHT/WIDTH/LEFT/RIGHT/TOP/BOTTOM/DEGREE/VIEW
	PRIVACY OFF/ON AREA SEL: AREA 1-8 AREA STATE: ON/OFF HEIGHT/WIDTH/LEFT/RIGHT/TOP/BOTTOM/COLOR
	PARK LINE OFF/ON(LT/LB/RT/RB/E/N/T)
	LENS SHAD: OFF/ON
	ZDNR: OFF/ON
	MIRROR: OFF/ON
	IMAGE ADJ FONT COLOR: FONT(0-15)/ID & TITLE(0-15) COTRAST: 0-255, SHARPNESS: 0-31, NEG. IMAGE: OFF/ON DISPLAY: CRT(PED LEVEL-0-63/COLOR GAIN-0-255) LCD(GAMMA-0-1)/PED LEVE-0-63/COLOR-0-255 USER(GAMMA-0-1)/PED LEVEL-0-63/COLOR-0-255
	COMM ADJ CAM ID: 0-255 BAUD RATE:2400/4800/9600/19200/38400/57600 PROTOCOL:PELCO-D/PELCO-P/NEXTCHIP DISPLAY ID: ON/OFF ID PUS
	LANGUAGE ENGLISH/CHINESE
	RESET EXIT FACTORY RESET



# USER MANUAL