

## **CCT542 Vision Plus Auto Focus Day/Night Colour Camera**

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The CCT542 is a high performance colour camera with a built in 35 x *Auto Focus* zoom lens - means one camera really does suit many applications.

The powerful 3.6 – 126mm lens provides an optical zoom facility of **35x**. This takes the guesswork out of which lens to use and the advanced auto-focus feature constantly readjusts to keep moving objects in focus. This is a true Day-Night camera incorporating an automatic built-in Infra Red cut-off filter to filter out excessive IR light during the day but allows true low light operation at night down to .12 Lux. The RS485 control enables this camera to be used successfully in PTZ housings.



### FEATURES

- Autofocus
- Built in IR Cut-Off filter
- Low Light Moonlight Mode
- **35x** built-in Zoom Lens
- RS485 Remote Control Option
- On Screen Set-up Menu

### ON SCREEN SETUP MENU

This camera is supplied with the lens pre-fitted and configured so the installation is as quick and easy as possible. The CCT542 has a number of advanced features, which are accessible via an On Screen Set-up Menu that provides the installer with the flexibility of making the necessary settings to get the very best performance from this camera.. Just press the menu button for three seconds with a monitor connected.

### TRUE DAY-NIGHT

This camera is equipped with a built in automatic IR cut-off filter that works by filtering out excessive IR light during the day to give great colour reproduction but retreats at night to give true low light operation down to 0.12 Lux. This option can be switched on or off via an On Screen Display menu.

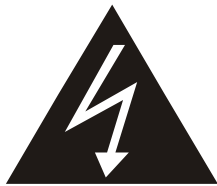
### RS485 REMOTE CONTROL OPTION

The RS485 remote control option allows the CCT542 camera to be used with great success in PTZ housings and domes. The camera can then be controlled by a remote keypad or compatible DVR with PTZ functionality. The camera has an On Screen Display menu to set the camera address and baud rate and two protocols, Pelco-P or Pelco-D are automatically detected.

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### SAFETY PRECAUTIONS



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of insulated dangerous Voltage within the product's enclosure that may be sufficient magnitude to constitute risk of electrical shock to persons.

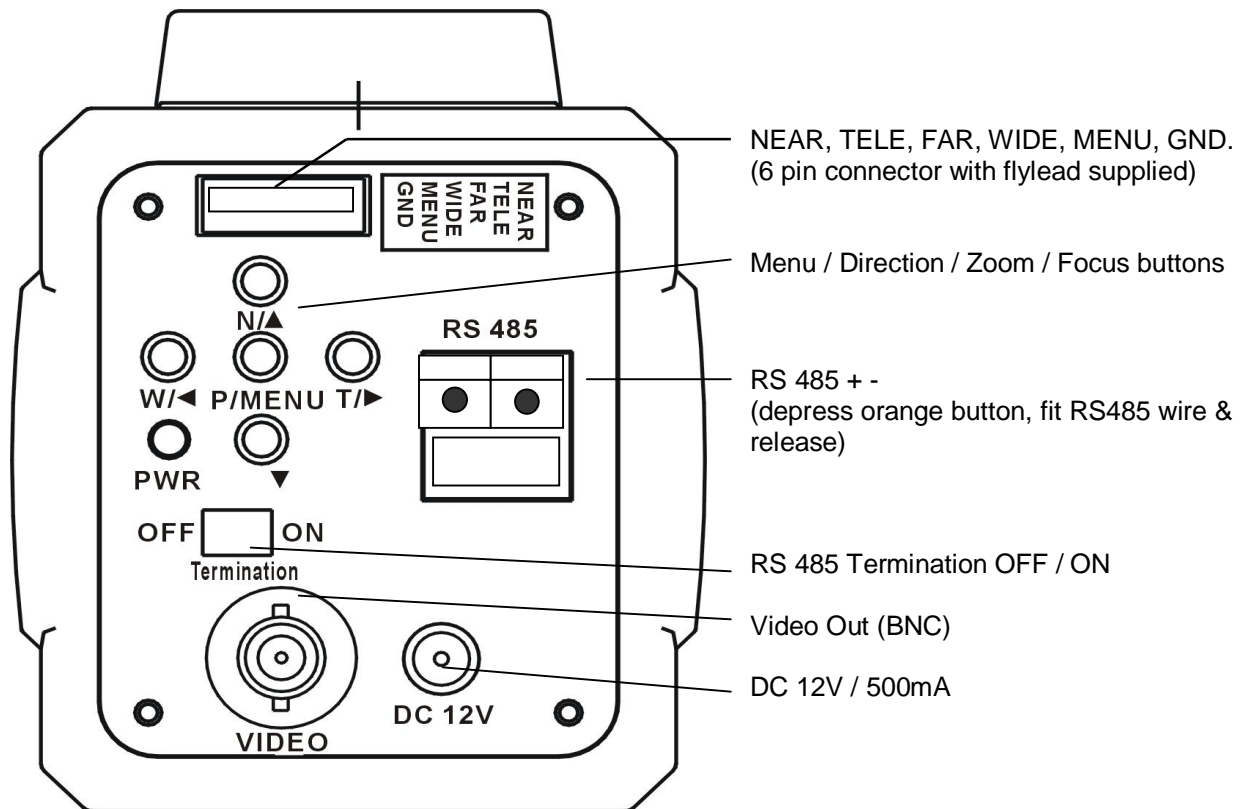


The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operations and maintenance (servicing) instructions in the literature accompanying the appliance.

1. Do not touch the imaging surface of the sensor. Use a soft cloth moistened with alcohol to clean the surface, if it is touched accidentally.
2. Ensure the supply voltage is correct as specified for the particular type of camera before operation.
3. Do not expose the camera to rain, moisture or to temperature outside the specified limits, without a suitable housing.
4. Avoid focusing directly towards the sun.
5. Do not attempt to service this unit yourself unless you are authorised to do so. Opening the cover may expose you to dangerous voltage or other hazards. Refer all servicing to qualified personnel only.

**CCT542 Vision Plus Auto Focus Day/Night Colour Camera**

**REAR PANEL**



**Menu** : Press menu for 2 ~ 3 seconds, MENU OSD ON.

**Direction button** : Up/Down/Left Right N / F (Near / Far) T / W (TELE/ WIDE)

**RS 485 + -** : RS485 control port.

**RS485 Termination** : OFF / ON

**DC 12V/.5A** : Power supply.

**Video Out** : BNC Video out connector.

**Pan/Tilt connector** : NEAR, TELE, FAR, WIDE, MENU, GND.

**SPECIAL NOTE:** A special interface is needed if this camera is fitted into a dome or the 6 pin connector used to control the PTZ operation. Using this connector incorrectly can damage the camera and void your warranty.

**CCT542 Vision Plus Auto Focus Day/Night Colour Camera****CONNECTIVITY****Powering the Camera**

This camera requires a 12v DC 500mA regulated power supply.

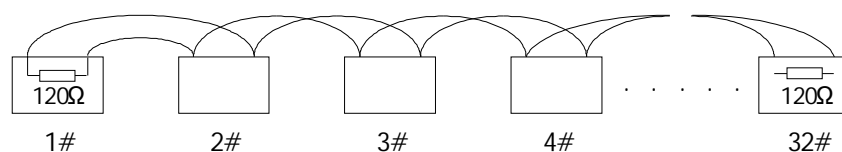
**Telemetry**

In order to pass instructions to the camera for controlling the telemetrics, a two wire RS485 data lead must be connected from the camera to either a DVR with telemetric capability or a compatible keypad. You will need to program the camera via the Remote Setup Menu, setting the camera address (ID) and the baud rate to 2400/4800/9600. Two protocols Pelco-D or Pelco-P are automatically detected. Note that the RS485 connections on the back of the camera must be correctly connected to the + and – connections. The general settings used are Pelco-D and 2400 baud rate but you will need to check the compatibility of the control equipment you intend to use with this camera. As specified by RS485 standards, RS485 is a half-duplex data transmission type with characteristic impedance of 120Ω. The general RS485 standard recommends a “daisy chain” connection of equipment that is to be controlled. This means that the control cable is looped out of one camera to the next camera and so on. The last camera in the line is then fitted with what is known as a “termination resistor”. This has a value of 120Ω.

The resistor is built in the CCT542 cameras and is activated by moving the RS485 termination switch to ON. The keyboard itself generally has a built-in 120 Ω resistor. These termination resistors help make the signal more stable and give the system better reliability so that the cameras function as expected. A common mistake installers make is not making sure the 120 Ω resistor is switched ON in the LAST camera. Also installers often select the resistor to ON in another camera in the chain, these errors will make control of the camera unpredictable.

A simplified Daisy chain is shown below:

This first diagram shows the cables looping in one camera and out of another;

**Standard Daisy-Chain connection for the RS485 control signal**

(just the last camera only has the 120Ω resistor set to on, the first device is the keyboard and has the 120Ω built in as default)

**Setting the Address & Baud Rate**

In order to set the address and baud rate you will need to access the camera menu via a connected monitor. Hold the menu button in for 2 to 3 seconds to enter the Main Menu. Select the Remote Setup Menu to make the necessary changes.

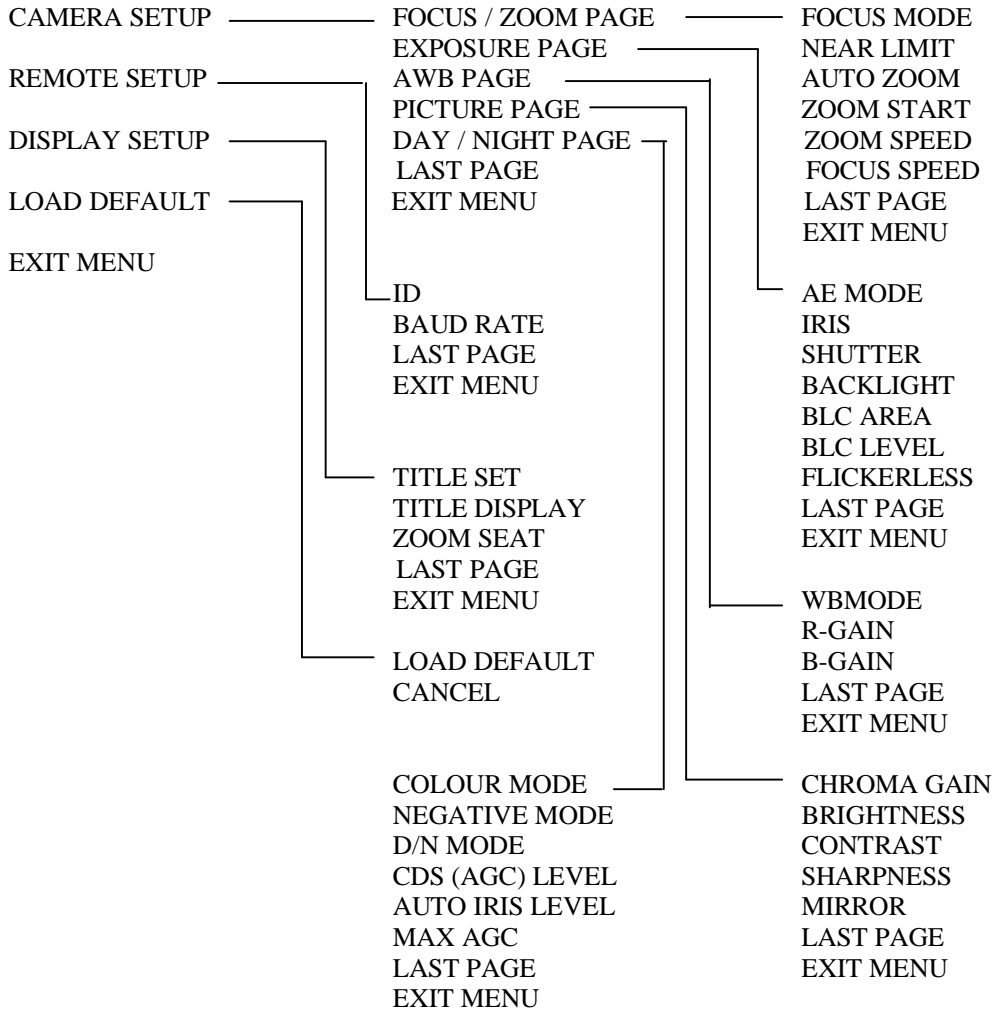
**Video**

The video connection is via a BNC connection.

CCT542 Vision Plus Auto Focus Day/Night Colour Camera

MENU TREE

MAIN MENU



Note: Will not do AF adjustment whilst in OSD menu.

**CCT542 Vision Plus Auto Focus Day/Night Colour Camera**

**MENU SETUP**

**CAMERA SETUP**

REMOTE SETUP  
 DISPLAY SETUP  
 LOAD DEFAULT  
 EXIT MENU


**FOCUS / ZOOM PAGE**

EXPOSURE PAGE  
 AWB PAGE  
 PICTURE PAGE  
 DAY/NIGHT PAGE  
 LAST PAGE  
 EXIT MENU

**CAMERA SETUP**

**>FOCUS / ZOOM PAGE**

FUNCTION	Values
FOCUS MODE	AUTO / MANUAL / 1 PUSH
NEAR LIMIT	1M / 2 M / 3 M / 5M / 10M, 1 cm / 10 cm / 50 cm
AUTO ZOOM	ON. / OFF
ZOOM START	1 x ~ 30 x
ZOOM SPEED	0 ~ 7
FOCUS SPEED	0 ~ 7 (Manual Focus Speed)
LAST PAGE	Return to previous page
EXIT MENU	Exit Menu

**1 PUSH:**

Will only auto focus once after each zoom action.

**NEAR LIMIT:**

The NEAR LIMIT is the nearest distance that the auto focus will be in focus.

For example: When the object you are focusing is between 10M and infinity, you should set the NEAR LIMIT to 10M. As long as the FUNCTION MODE – AUTO is set, the camera will start focusing from 10M.

**AUTO ZOOM ON:**

(This option only available if the FUNCTION MODE – AUTO is selected first.)

If object is out of focus for 3 ~ 5 seconds, lens will auto zoom out and then auto focus again.

**ZOOM START:**

The ZOOM WIDE limit is set by using the ZOOM START option. E.g setting to 2x means zoom wide limit is 2x.

**>EXPOSURE PAGE**

FOCUS PAGE	_____	AE MODE
<b>EXPOSURE PAGE</b>	_____	IRIS
AWB PAGE	_____	SHUTTER
OTHERS PAGE	_____	BACKLIGHT
LAST PAGE	_____	BLC AREA
	_____	BLC LEVEL
	_____	FLICKERLESS
	_____	MAX AGC
	_____	LAST PAGE

AE MODE	AI / SHUTTER / IRIS / MANUAL
IRIS	AUTO / MANUAL
SHUTTER	1/60 (1/50) ~ 1/100,000 second
BACKLIGHT	ON / OFF
BLC AREA	CENTER / LEFT / RIGHT / TOP / BOTTOM
BLC LEVEL	LOW / NORMAL / HIGH
FLICKERLESS	ON / OFF.
MAX AGC	80 ~ 255
LAST PAGE	Return to previous page

**AE MODE**

Set on AI (Auto Iris):

BACKLIGHT, BLC AREA, BLC LEVEL are adjustable. SHUTTER will be set on 1 / 60, and IRIS is in auto mode. **(This mode is suggested for indoor use.)**

Set on SHUTTER:

SHUTTER is adjustable, and IRIS is in auto mode.

Set on IRIS:

IRIS is in manual mode, and SHUTTER is in auto mode. **(This mode is suggested for outdoor use.)**

Set on MANUAL:

SHUTTER and IRIS are both in manual mode.

In this mode the buttons FOCUS Near / Far control the IRIS Open / Close.

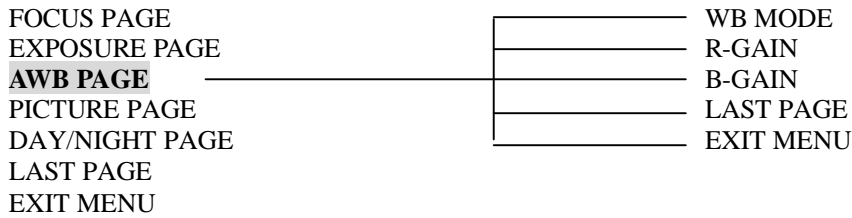
**FLICKERLESS MODE**

Flickerless function will not work if BACKLIGHT is switched ON.



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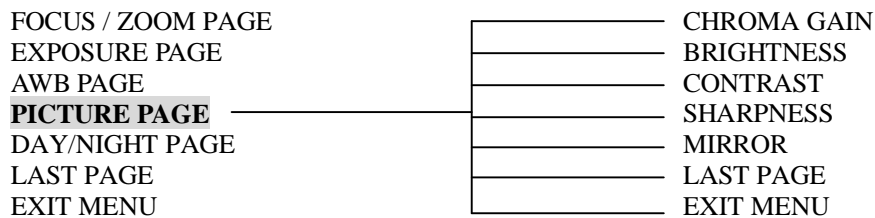
**>AWB PAGE**



WB MODE	AUTO / MANUAL / INDOOR / OUTDOOR/AT-LOCK
R-GAIN	001 ~ 255
B-GAIN	001 ~ 255
LAST PAGE	Return to previous page
EXIT MENU	Exit Menu

When WB Mode is set to AT-LOCK you can press MENU button or remote ZOOM IN to lock WB. In MAUAL mode R-Gain and B-Gain can be adjusted. If INDOOR or OUTDOOR set, value is fixed.

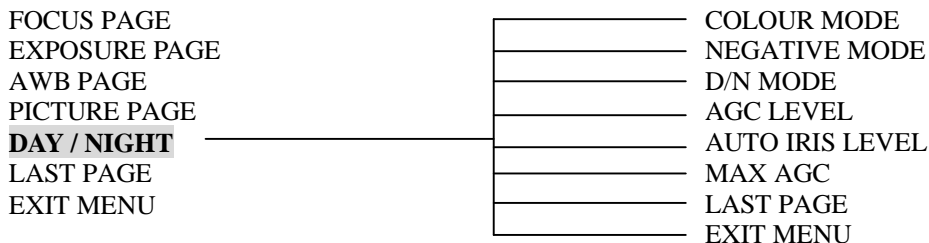
**>PICTURE PAGE**



CHROMA GAIN	30 ~ 60
BRIGHTNESS	0 ~20
CONTRAST	50 ~ 200
SHARPNESS	LOW / NORMAL / HIGH
MIRROR	ON / OFF
LAST PAGE	Return to previous page
EXIT MENU	Exit Menu

**CCT542 Vision Plus Auto Focus Day/Night Colour Camera**

**>DAY / NIGHT PAGE**



COLOUR MODE	ON / OFF
NEGATIVE MODE	ON / OFF
D/N MODE	AGC / DAY / NIGHT / CDS
AGC (CDS) LEVEL	AGC: 0 ~ -15 / 0 ~ +15 CDS: 0 ~ -50 / 0 ~ +15
AUTO IRIS LEVEL	0 ~ -25 / 0 ~ +25
AGC MAX	50 ~ 250
LAST PAGE	Return to previous page
EXIT MENU	Exit Menu

**D/N MODE** (Day and Night mode):

DAY: Force to day mode. (IR FILTER CUTS IN PERMANENTLY)

NIGHT: Force to night mode. (IR FILTER CUTS OUT – B/W MODE PERMANENTLY ON)

AGC: Switch by AGC level. (Only work in AI mode with BLC - OFF) USE THIS FOR D/N MODE

CDS: Switch by CDS level. (AUTO CDS MODE)

**AGC (CDS) LEVEL**

If you increase the AGC level ensure AGC MAX is set to higher limit.

**AUTO IRIS LEVEL**

In auto IRIS mode, brightness is adjustable by this level.

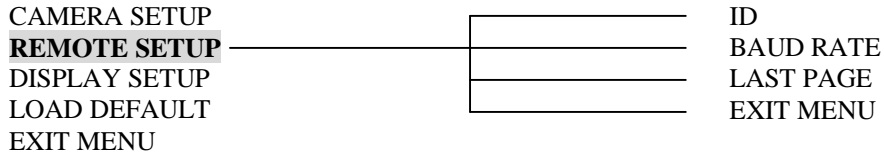
**IRIS SPEED**

Adjust IRIS response speed in auto IRIS mode.

**PS. Colour and negative function, only active in DAY mode.**

**CCT542 Vision Plus Auto Focus Day/Night Colour Camera**

**REMOTE SETUP**



ID	1 ~ 255.
BAUD RATE	2400 / 4800 / 9600
LAST PAGE	Return to previous page

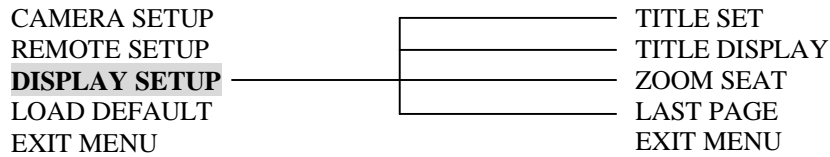
NOTE: If using keypad for controlling camera set to PELCO-D, 2400 Baud Rate and Address 1 onwards. Protocol PELCO-P or PELCO-D is automatically detected.

**USING KEYPAD**

First use camera buttons to set above settings. Then connect RS485 data lead ensuring A & B connections correct way round. Now press MENU button on keypad to display menu on monitor. Use joystick UP/DOWN for option selection and LEFT/RIGHT to alter values. Press TELE to enter value and ENTER to clear menu option.

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DISPLAY SETUP



TITLE SET	0,1,2,3,4,5,6,7,8,9,A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P,Q,R,S,T,U,V,W,X,Y,Z , - ; : / ; . ; , ; ( )
TITLE DISPLAY	ON / OFF
ZOOM SEAT	ON / OFF
LAST PAGE	Return to previous page
EXIT MENU	Exit Menu

**LOAD DEFAULT**

CAMERA SETUP  
REMOTE SETUP  
DISPLAY SETUP  
**LOAD DEFAULT**  
EXIT MENU

Press menu button to  
reload default.

**SPECIAL NOTE:**

THIS CAMERA IF LOAD DEFAULT IS SET, WILL OPERATE OUT OF THE BOX WITHOUT FURTHER SETTINGS. THIS INCLUDES DAY/NIGHT MODE SETTING (AGC OPTION)

**EXIT MENU**

CAMERA SETUP  
REMOTE SETUP  
DISPLAY SETUP  
LOAD DEFAULT  
**EXIT MENU**

Press menu button to Exit

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**CCT542 Vision Plus Auto Focus Day/Night Colour Camera**

**TECHNICAL SPECIFICATIONS**

Image Sensor	¼" Interline Sony Super HAD Colour CCD
Image Output	1V pk-pk 75Ω
Picture Resolution	596 x 795 PAL
Horizontal Resolution	>500TVL @ 1x zoom
Minimum Illumination	Normal – Day 0.7 Lux / Night 0.43 Lux Max AGC – Day 0.22 Lux / Night 0.12 Lux
Input Voltage Range	12V DC 500mA
Lens	35 x Zoom (3.6mm – 126mm auto-focus, F1.65 ~ F4.2)
Day/Night function	Automatic switching IR cut off filter
OSD	On Screen Menu with camera, remote & display setup
RS485	RS485 control with 2400, 4800 & 9600 baud rates
Focus	Auto / Manual / One Push
Preset Function	64
Zoom Speed	Max speed 10 sec./ wide → tele
Auto White Balance	Auto and manual settings for indoor/outdoor use
Electronic Shutter	Auto/Manual
Shutter Speed	1/50 ~ 1/100,000 sec
S/N Ratio	> +48dB
Backlight Compensation	ON / OFF
Dimensions	62mm(W) x 112mm(D) x 74mm(H)
Weight	350g
Operation Temperature	-10°C - 50°C
<b>NEW Remote Controller</b>	Sets menu settings and controls camera remotely



**REMOTE CONTROLLER**

**IRIS + / IRIS -** : OPEN / CLOSE

**← →** ZOOM : IN / OUT

**↓ ↑** FOCUS : NEAR / FAR

**OK** : ENTER

**MENU** : ENTER / EXIT