The new CCT525 NiteDevil

The NiteDevil Dome Camera produces high quality images and works in extremely low light conditions. The dome comes with a new 4~40mm vari-focal Auto DC Iris Lens. The dome was originally developed for bars and nightclubs but is also a good choice for external dimly lit areas such as car parks and compounds. The dome has many features including a 3D axis mounting bracket for wall mounting, IP66 weatherproof, vandal resistant, 540TVL, a preview video connector and an OSD facility providing options for motion detection, zoom, privacy masking and camera setup options. No need for additional lighting with this camera. It is truly amazing.

Electronic Features
1/3" SONY SUPER HAD 540 TVL CCD -
Low illumination down to 0.002 Lux -
Digital 10 Bit Image Enhanced Technology –
Menu for Motion Detection & camera setup -
Low power consumption 12vDC 220mA or
24vAC at 90mA -
Accidental Surge and Electronic Shock
Protected.
Digital Zoom facility.

Mechanical Features
Vandalproof, Weatherproof and Tamperproof –
3 Axis 3D built-in bracket –
Vari-focal 4 ~ 40 mm Auto DC Iris Lens –
Robust Aluminium housing with Polycarbonate
Smoked Cover –
External OSD control for picture quality.
Optical Zoom facility

Mounting the Camera

The camera is for mounting on a wall, ceiling or outdoor facia board. An optional wall bracket is also available CCT501. Note that this camera has a 3D gimble allowing wall mounting as well as ceiling mounting.

Powering the Camera

The dome requires a 12V DC or 24vAC regulated power supply. NOTE THAT THIS DOME CAMERA IS NOT POLARITY SENSITIVE. THIS MEANS THAT YOU MUST FOLLOW THE CORRECT POLARITY ON THE POWER CONNECTOR. The camera is provided with a fly lead with a SPECIAL TWO PIN connector. It is recommended to use a power supply that is rated higher than the current consumption of the camera i.e. POW800 for 12v DC operation or the POW600 for 24v AC operation.
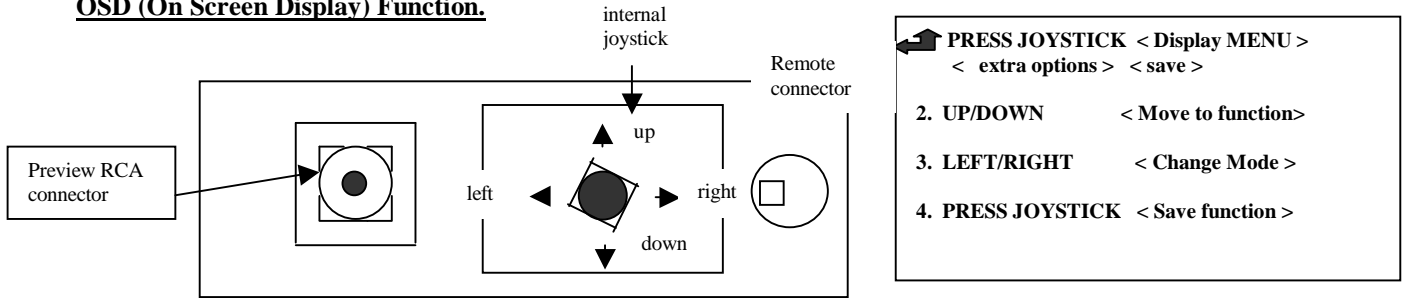
Connecting the camera to control equipment.

The dome camera comes with a fly lead for power and video out. To reduce installation time the video out lead is terminated into a male BNC connector. This allows the installer to effortlessly connect the camera to control equipment via a female BNC-BNC lead. A special setup joystick controller and a preview RCA connector is fitted to the camera board to allow a test monitor to be connected without removing the video output line. Also a remote is supplied which is plugged into the controller direct on the PCB board.

Menu Setup

There are two ways to adjust the On Screen Display function. Using the on-board joystick on the camera board or by using the remote controller supplied. The remote controller is connected to the 6pin DIN connection on the camera board.

OSD (On Screen Display) Function.

internal
joystick

Remote
connector

Preview RCA
connector

up

left   right

down

PRESS JOYSTICK < Display MENU >
   < extra options > < save >

2. UP/DOWN   < Move to function>

3. LEFT/RIGHT   < Change Mode >

4. PRESS JOYSTICK < Save function >

The Preview RCA connector located on the camera board can be connected to a test monitor to allow easy setup.

Remote Controller

Plug the remote controller into the remote connector on the camera board and press the select menu button.

UP/TELE

LEFT/FAR

RIGHT/NEAR

SELECT MENU
SETUP / ENTER

DOWN/WIDE

OSD 1 ZOOM
Remote Controller
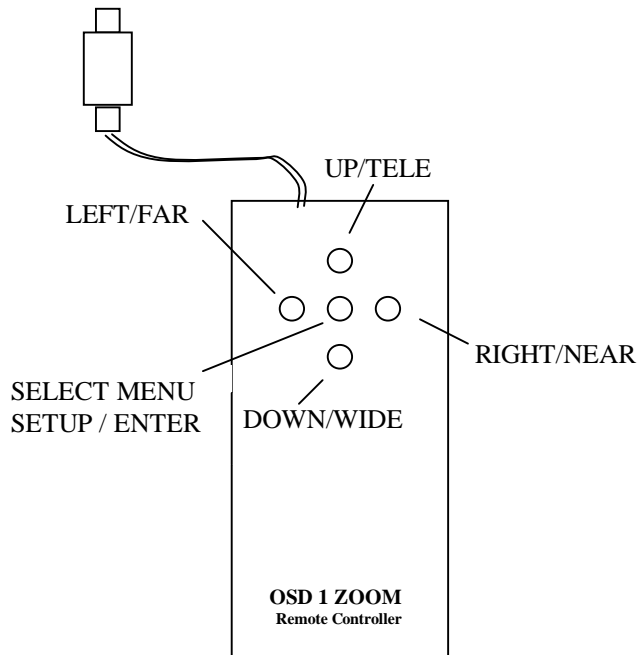
THE SETUP MENU

The SETUP menu will now be displayed on the monitor.

Please select any function by using the UP and DOWN buttons.

Press the LEFT or RIGHT buttons to change a mode. When the LEFT or RIGHT buttons are pressed available values and modes are displayed in order. Keep pressing the button until the mode you require is selected.

Use the Near and Far buttons for ZOOM control and Tele and Wide for FOCUS control

Select EXIT in the menu and then press the SETUP button to close the operation.

If   is displayed at the mode you wish to select, it means that there is a submenu available.
If --- appears at the mode item it means that there are no other modes available.

```
                              SETUP

LENS                DC ⬅ / MANUAL
SHUTTER             ---- / FLK

WHITE BAL.          MANUAL ⬅ / AWC ⬅ / ATW
BACKLIGHT           OFF / LOW / MIDDLE / HIGH

AGC                 OFF / LOW ⬅ / MIDDLE ⬅ / HIGH ⬅
DNR (Dig. Noise Reduct) OFF / LOW / MIDDLE / HIGH

SENS-UP             OFF / AUTO ⬅
(Low luminance compensation)


SPECIAL ⬅
EXIT


⬅ = Press down joystick button
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                              SETUP FUNCTIONS

LENS   DC < Auto DC Iris > ⬅ (Press joystick for brightness control 1 ~ 70)
           MANUAL

SHUTTER   --- / FLK < flickerless option >
           < --- means no mode available >
           < Using the DC lens, the shutter speed is fixed at 1/60. Select FLK if
           flickering occurs due to an illumination and frequency imbalance. >

WHITE BALANCE   MANUAL ⬅ / AWC ⬅ / ATW
           < The screen colour can be adjusted by using this option. Select either AWC,
           ATW or MANUAL. >
           ATW < Auto Tracking White Balance – set for use outdoors, sodium lamp,
           inside tunnels, fluorescent light etc. >

           AWC ⬅ < Auto White Balance Control – use a piece of white paper to make
           optimum setting according to current lighting source. If this changes this setting
           will have to be re-adjusted. Press joystick for red and blue setting 1 ~ 256 >

           MANUAL ⬅ < Manual mode provides fine adjustment. Select ATW or
           AWC first. If white balance unstable use AWC. Press joystick for red and blue
           setting 1 ~ 256 > Select the AWC mode if white balance not functioning.

BACKLIGHT COMP.   LOW / MIDDLE / HIGH / OFF
           < When there is strong backlight behind the object, clear images of the
           background and object can still be obtained by using the BACKLIGHT function.
           The level of backlight compensation can be adjusted between LOW, MIDDLE or
           HIGH. >

AGC   LOW ⬅ / MIDDLE ⬅ / HIGH ⬅ / OFF
           < As the level of gain increases the screen gets brighter and the noise level
           increases. >
           OFF   < The gain is fixed at 6dB >

           LOW   ⬅ < Set for gain 6dB ~ 18dB >

           MIDDLE   ⬅ < Set for gain 6dB ~ 30dB >

           HIGH   ⬅ < Set for gain 6dB ~ 34dB >
           Press joystick for adjusting BRIGHTNESS 1 ~ 70.

DNR

LOW / MIDDLE / HIGH / OFF
(Note: the higher DNR setting will reduce noise but increase ghosting)
OFF   < There is no reduction in noise level. >
LOW   < Small reduction in noise level with almost no ghosting. >
MIDDLE < There is sufficient noise level reduction without causing too
                much ghosting. >
HIGH   < Noise levels greatly reduced however ghosting more prevalent >

SPECIAL NOTE: If AGC is turned OFF, DNR will not function

SENS-UP

AUTO   (low luminance compensation – Press joystick to amplify level
                Min x2 ~ Max x128)
OFF
< SENS-UP maintains a bright, clear screen image by automatically detecting
changes in low light level conditions. Pressing the joystick in AUTO mode
will provide adjustment of storage magnification from x2 ~ x128. As the
magnification increases, the screen gets brighter but moving objects get more
afterimage effect. If storage magnification is increased while SENS-UP is
operating, it may result in noise and spots across monitor may appear. This is
normal. >
SPECIAL NOTE:
When SHUTTER is in manual mode SENS-UP does not operate

SPECIAL

 See SPECIAL menu details below
< The SPECIAL menu includes the following options:
CAMERA ID
DAY/NIGHT
SYNC
MOTION DET
PRIVACY
MIRROR
DZOOM
SHARPNESS
RESET
RETURN >

EXIT

< Select Exit and press joystick to finish setup. >

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                              SPECIAL

CAMERA ID           OFF  /  ON  ⬅

DAY/NIGHT           AUTO  /  COLOUR / B/W

SYNC                INT / LL

MOTION DET          OFF  /  ON  ⬅

PRIVACY             OFF  /  ON  ⬅

MIRROR              OFF  /  H-REV / V-REV

DZOOM               OFF / ON

SHARPNESS           OFF  /  ON  ⬅

RESET  ⬅

RETURN  ⬅
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SPECIAL FUNCTIONS

CAMERA ID   OFF / ON ⬅   (Press joystick for ID characters)
                      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
                      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
                      ◄ ► CLR POS END

< Up to 15 characters can be selected for the ID. Move the cursor to the required character and press joystick to lock the character. The cursor will now move to the next space. Repeat with next character and so on. When name chosen move cursor to POS and press joystick. The name now appears in top left hand corner of display. Move using the 4 directional keys and press joystick again. Now select END and press joystick to complete ID. >

< If you press the joystick after moving cursor to CLR, all the letters will be erased. To change a character move cursor to the arrow at bottom left of screen

and press SET. Now position cursor above character you wish to change and select, then move cursor to replacement character and press joystick. >

SPECIAL NOTE: If Camera ID is switched to OFF, ID will not be displayed even though it has been input.

DAY/NIGHT   AUTO - This sets camera to DAY/NIGHT mode. Colour for daytime and Black & white for night time.
                   COLOUR - The colour mode is selected permanently.
                   B/W - Black & White mode only.
                   < If AGC is OFF you cannot select AUTO mode. If Infra-red light is used you may have a problem with focusing and COLOUR (Day & Night) >

SYNC   INT -   Internal synchronisation
                   LL   -   External line lock synchronisation
                   <If LL set, the video is synchronised between cameras with a synchronous

MOTION DET	OFF / ON

AREA SEL   1 / 2 / 3 / 4
AREA STATE   ON / OFF
 TOP DOWN   1 ~ 73
 LEFT RIGHT   1 ~ 96
< Movement in 4 areas on the screen can be selected and when movement is detected the words "MOTION DETECTED" are displayed on the screen. Press AREA SEL and select area required. Select ON for area required. Set the size of the area to be observed using the UP, DOWN, LEFT and RIGHT selectors. Press the joystick to save the settings.
NOTE: MOTION DETECTION IS A MONITOR SCREEN DISPLAY MESSAGE ONLY - THERE IS NO MOTION DETECT OUTPUT SIGNAL. >

PRIVACY   OFF / ON
AREA SEL   1 / 2 / 3 / 4
AREA STATE   ON / OFF
AREA TONE   1 ~ 100
TOP DOWN   1 ~ 73
LEFT RIGHT 1 ~ 96
< Select areas on the screen that you do not want displayed. Press AREA SEL . Select ON for area required. Set the size of the area to be observed using the UP, DOWN, LEFT and RIGHT selectors. Press the joystick to save the settings. >

MIRROR   OFF / H-REV / V-REV
< If set to H-REV inverts the horizontal image or V-REV vertical image. OFF cancels the inversion. >

DZOOM   OFF / ON
Configures magnification limit from 2x ~ 8x using this option. Position cursor over DZOOM using Up or Down button, set DZOOM to ON and press SET button.

SHARPNESS   OFF / ON
< The outline of the video image becomes cleaner as the Sharpness level is increased. If the level goes up excessively it may affect the video image by generating noise. Press joystick to display setting for sharpness 1 ~ 31. Press the joystick to save the settings.

RESET
< Press the joystick to reset to manufacturers settings. Note that the SENS-UP setting is switched OFF, AGC set to Middle and DNR set to low. >

RETURN
< Returns to previous menu >

CCT525 Camera Specifications

Image Sensor	1/3" SONY Colour Super HAD	Effective Pixels	PAL 752 (H) x 582 (V)
Electronic Shutter	1/50 – 1/100,000 sec	Sync. System	Internal / Line Lock
BLC	Automatic selected by menu	S/N Ratio	More than 50dB (AGC off)
Image Output	$1V_{pk\text{-}pk}$ 75Ω	Gamma Correction	0.45
Resolution	540 TVLines (digital 10 bit)	White Balance	Automatic select by menu
Min Illumination	.002 lux at F1.6 (SENS-UP x128)	Sync. System	Internal Sync.
Input Voltage	12v DC or 24vAC	Smear Effect	0.005%
Power Consumption	220 mA / 90 mA	Scanning System	PAL 625 Lines
MTTF	80,000 hours or more	Humidity	Within 85% (IP66 rated)
Lens	4~40mm Auto DC Varifocal	Weight	922g camera only
AGC	4dB ~ 35dB auto (Max / Off)	Dimension	135mm diameter x 110mm H
Output Terminal	BNC – Video, 2.1mm Jack power	Operating Temp.	-20°C ~ 60°C
Weatherproof	IP66 rated	Housing	Aluminium – Ivory finish
3 Axis Bracket	Pan 180°, Tilt 90°, Rotate 360°	Wall bracket	Optional CCT501
Test monitor output	RCA connection for additional test monitor output		

Special Features

Optional Wall Bracket CCT501

Digital Noise Reduction
Motion Detection via On Screen Menu
Privacy Masking via On Screen Menu
Mirror Option   via On Screen Menu

Troubleshooting
No screen display   * check power
connection

                              * check video line
                              * check brightness of Auto
                                Iris Lens

Unclear video image   * check lens is clean
                              * adjust monitor contrast
                              * ensure display screen is not exposed directly to sunlight.

Screen is dark   * adjust monitor contrast
                              * adjust brightness level of the Auto Iris Lens – Refer LENS settings
                              * adjust lens focus lever

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