

CAM630 WDR NiteDevil Dome

The CAM630 *NiteDevil* Dome Camera produces high quality images and works in very low light conditions 0.0001 Lux. The dome has many features including a 3D axis mounting inner bracket for wall mounting, 600 TVL, SONY SuperHad CCD, 2.8mm ~ 10.5mm varifocal lens and an OSD facility for balancing light levels at night (Shield function), motion detection, privacy masking and camera setup options. This camera has remote menu control using the RS485 interface and gives extraordinary results day and night.



Electronic Features

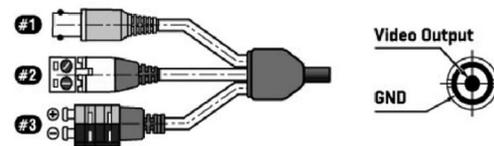
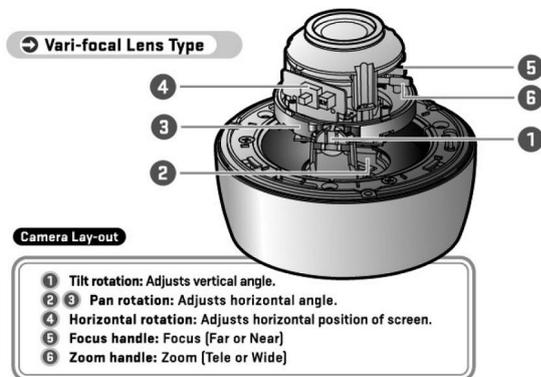
- ✓ 1/3" SONY SUPER HAD 600 TVL CCD
- ✓ Low illumination down to 0.0001 Lux
- ✓ Menu for motion detection & camera setup
- ✓ Dual power 12vDC or 24vAC polarity sensitive
- ✓ Accidental surge & electronic shock protected.
- ✓ RS485 control for menu control

Mechanical Features

- ✓ Vandalproof, weatherproof & tamperproof
- ✓ Shield function for night time viewing
- ✓ 3 Axis 3D built-in bracket
- ✓ Vari-focal 2.8 ~ 10.5 mm auto DC iris lens
- ✓ Aluminium housing with polycarbonate smoked cover

Mounting the Camera

The camera is for mounting on a wall, ceiling or outdoor fascia board. An optional wall bracket is also available. Note that this camera has a 3D gimble allowing wall mounting as well as ceiling mounting. Note that fitting the screws into a ceiling will require support for the screws.



No.	Function	Terminal Color	Remark
#1	Video Output	Yellow	1.0 Vp-p
#2	Power Input	Green	24VAC[20V-28V]or12VDC[11V-15V], Max 4.8W
#3	Control	Black & Gray	RS-485 (Pelco-D)

Connecting Video

The dome camera comes with a fly lead for video out. To reduce installation time the video out lead is terminated into a female BNC connector. This allows the installer to effortlessly connect the camera to control equipment via a BNC lead. A special setup joystick controller is located on the side of the PCB board and this allows access to the OSD menu. A short RCA lead and connector is supplied to connect an optional test video monitor.

Powering the Camera

The dome requires either a 12V DC regulated or 24vAC power supply. Connections **are polarity sensitive** therefore the power **must** be connected the right way round. The camera is provided with a fly lead with a green and black terminal connector for power. This camera draws a maximum of 300mA at 12v DC. Ensure that a regulated power supply is used if using 12vDC and allow adequate headroom i.e only use a power supply with a minimum rating of 500mA.

Connecting RS845

The RS485 for controlling the menu has a black and grey terminal connector. You can use a CAT5 pair without baluns.

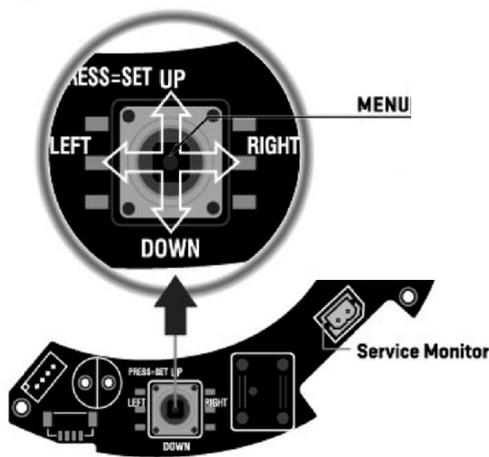
The terminal connector has a press button to secure cable connections, which must be connected to a keyboard or DVR using the correct polarity.

NiteDevil Hi-Res 600TVL Colour Dome Camera

SETUP MENU				
CAMERA TITLE	ON / OFF			
LENS	DC LENS			
	AGC	OFF / LOW / MIDDLE / HIGH		
NITEDEVIL	BRIGHTNESS	0 ~ 80		
	SHUTTER	AUTO / OFF / A.FLK / x (2 ~ 512) / (1/90000 ~ 1/160)		
	NITEDEVIL 03	OFF / AUTO x 2 (2 ~ 128)		
	AUTO	D/N LEVEL	LOW / MIDDLE / HIGH	
		DELAY	1,3,5,10,30,60 SEC	
DAY or NIGHT		NITE TURBO	ON / OFF	
	DAY			
	NIGHT			
	WDR	WDR LEVEL	LOW / MIDDLE / HIGH	
	BLC	BLC LEVEL	LOW / MIDDLE / HIGH	
SMART IRIS		AREA SETTING	ON / OFF (16 ZONES)	
	SHIELD	ALL AREA SET	ON / OFF	
		SHIELD COLOUR	GREY / D.GREY / BLACK	
		SHIELD LEVEL	1 ~ 5	
	ATW1			
	ATW2			
W-BALANCE	PUSH			
	MANUAL	COLOUR TEMP	INDOOR / OUTDOOR	
		RED	-100 ~ +100	
		BLUE	-100 ~ +100	
NOISE REDUCE	ON	LEVEL	0 ~ 63	
		MOTION	ON / OFF	
	DIGITAL ZOOM	ZOOM	X1.00 ~ x 6.13	
		DZOOM PAN	-100 ~ +100	
		DZOOM TILT	-100 ~ +100	
	FLIP	OFF / V-FLIP / MIRROR / ROTATE		
IMAGE	COLOUR	ON / OFF		
	CONTRAST	0 ~ 100		
	SHARPNESS	0 ~ 100		
	CR GAIN	-100 ~ +100		
	CB GAIN	-100 ~ +100		
EXTRAS	CAMERA NUMBER	NUMBER	000 ~ 255	
		POSITION		
	MOTION	ZONE AREA	ZONE 1 ~ ZONE 4	
		ZONE STATE	ON / OFF	
		WIDTH	16 ~ 100	
		HEIGHT	12 ~ 100	
		MOVE X	8 ~ 92	
		MOVE Y	6 ~ 94	
		SENSITIVITY	0 ~ 100	
	PRIVACY	MASK NUMBER	MASK 1 ~ MASK 8	
		MASK STATE	ON / OFF	
		MASK COLOUR – grey/white/red/green/blue/yellow/black		
		WIDTH	4 ~ 100	
		HEIGHT	4 ~ 100	
		MOVE X	2 ~ 98	
		MOVE Y	2 ~ 98	
	LANGUAGE	ENGLISH		
	ANTI SHAKE	ON / OFF		
	SYNC	INT		
	MONITOR MODE	CRT / LCD / USER		
NITEDEVIL RESET				
COMM SET	BAUD RATE – 4800 / 9600 / 19200 / 38400 / 57600			
	SAVE & REBOOT			
SAVE & QUIT				

OSD (On Screen Display) Function.

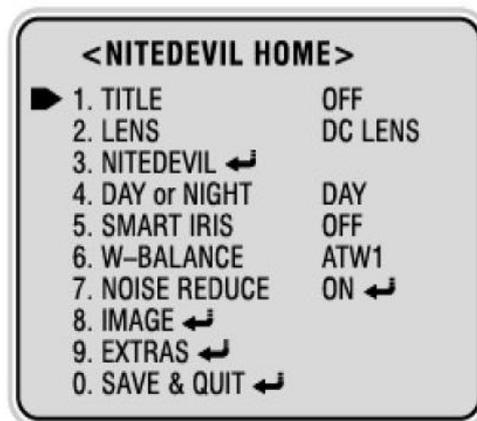
Remove the dome cover using the allen key supplied to access the pcb board for entering the menu.



Press and hold MENU button down for one second to access setup mode.

Select the status using the joystick by using UP, DOWN, LEFT and RIGHT.

The following menu will be displayed on your monitor on pressing SET button (Joystick controller):



NOTE: All items with the ← icon allow you to access a submenu by pressing the SET button down. The above menu shows the default settings. The Initial option in the submenu only defaults that menu. If you wish to default all settings you must select **NITEDEVIL RESET** in **EXTRAS** menu.

MENU SETUP

The above menu is displayed when this camera is defaulted. To get the best setup for this camera you must adjust the menu settings according to the environment it is being used in. It is recommended that you set **DAY or NIGHT** from **DAY** to **AUTO** to enable night time viewing.

1. TITLE **Allows 15 character camera title**

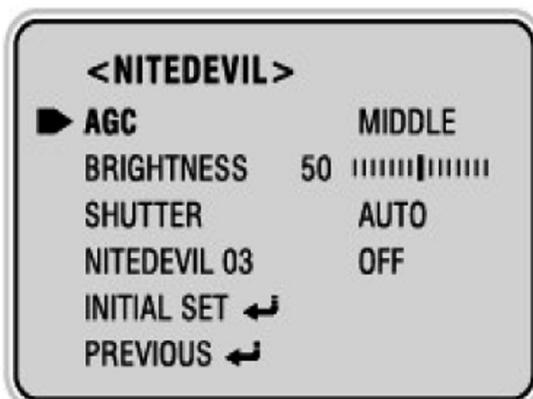


- ←, → : Move cursor to Left/Right direction from selected character
- CLR : Delete all selected characters
- POS : Set the position of Camera Name on the screen
- END : CAMERA TITLE Save & Quit

- 1.1 Select ON using the LEFT or RIGHT button and then press the MENU button.
- 1.2 Use the four direction buttons to move to a desired letter and select the letter by pressing the MENU button.
- 1.3 Repeat this to enter multiple letters.
- 1.4 You can enter up to 15 letters.

2. LENS **This option set to DC LENS**

3. NITEDEVIL **This options allows the NITEDEVIL feature to be used**



3.1 AGC Automatic Gain Control
 Select AGC using the UP or DOWN button. You can select between OFF, LOW, MIDDLE and HIGH using the LEFT or RIGHT button.

3.2 BRIGHTNESS
 Select using the UP or DOWN button. You can select between 0 ~ 80 by using the LEFT or RIGHT buttons.

3.3 SHUTTER Use to set shutter speed

Select SHUTTER using the UP or DOWN button. You can select AUTO, OFF, A.FLK or adjust the shutter speed between x2 ~ x512 or select 1/90000 ~ 1/160 using the LEFT or RIGHT button. **Setting to AUTO or A.FLK allows the NiteDevil mode to work.**

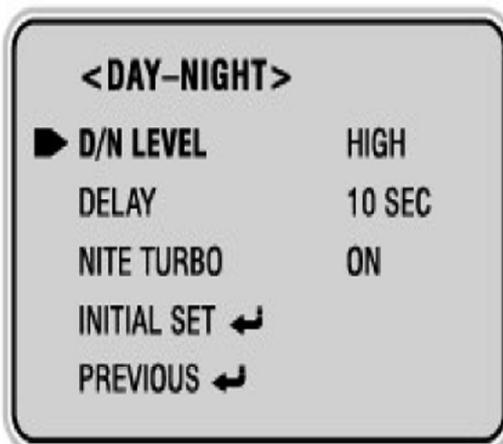
3.4 NITEDEVIL03 Allows Nitedevil mode if shutter set to AUTO or A.FLK

When the shutter speed is AUTO or A.FLK, select NITEDEVIL 03 using the UP or DOWN button. You can adjust the NITEDEVIL 03 value between OFF, AUTO x(2 ~ 128) using the LEFT or RIGHT button. **For night viewing always set to AUTO x 2 or above.**

3.5 INITIAL SET This allows defaulting the settings of this menu

Select INITIAL SET using the UP or DOWN button and then press the MENU button.

4. DAY or NIGHT This option sets DAY (colour only), NIGHT (b/w only) or AUTO (colour day and b/w night)



4.1 D / N LEVEL Set D/N level

Select D/N Level using the UP or DOWN button. You can select between LOW, MIDDLE or HIGH using the LEFT or RIGHT button.

4.2 DELAY Delays switch time

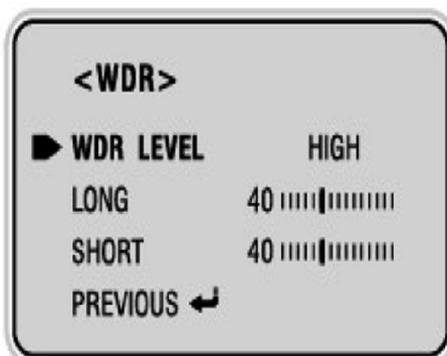
Select delay time from 1, 3, 5, 10, 15, 30 & 60 secs.

4.3 NITE TURBO Best Setting

Using the LEFT and RIGHT buttons you can select between ON / OFF

5. SMART IRIS You can select options OFF, WDR, BLC and SHIELD using the LEFT or RIGHT buttons.

5.1 WDR Wide Dynamic Range balances light levels.



5.1.1 WDR LEVEL

Select between LOW, MIDDLE or HIGH.

5.1.2 LONG Distance setting

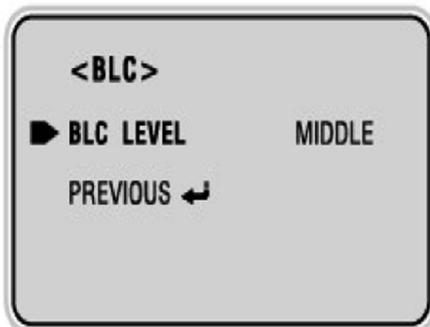
Select value between 0 ~ 60 using LEFT or RIGHT buttons.

5.1.3 SHORT Distance setting

Select value between 0 ~ 60 using LEFT or RIGHT buttons.

5.2 BLC LEVEL

Backlight Compensation balances light levels



5.2.1 BLC LEVEL

BLC compensation level

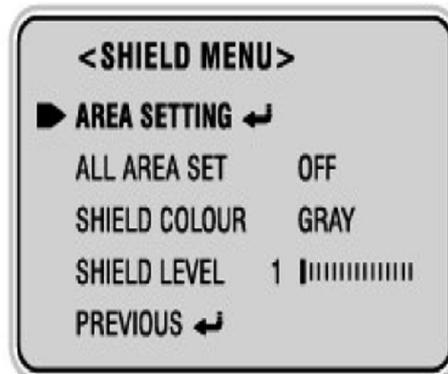
Select from LOW, MIDDLE and HIGH using the LEFT or RIGHT button.

5.3 SHIELD

The Shield function reduces glare levels in areas set

5.3.1 AREA SETTING

Select AREA setting using the UP or DOWN button and then press MENU button to enter mode. The full screen is divided into 16 areas. Use the LEFT or RIGHT button to move to a desired area and then select either OFF or ON by pressing the UP or DOWN button. Exit by pressing the MENU button.

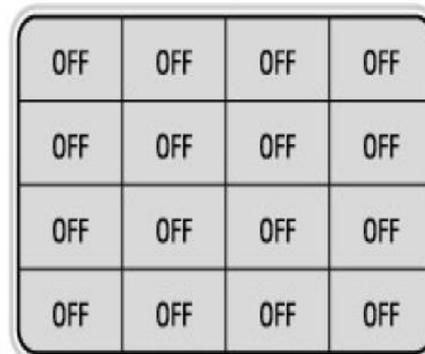


5.3.2 ALL AREA SET

To select all areas select the ON or OFF setting using the LEFT or RIGHT button.

5.3.3 MASK COLOUR

Select Mask Colour using the UP or DOWN button. Select from GRAY, D. GRAY and BLACK using LEFT or RIGHT button.



5.3.4 SHIELD LEVEL

Select Shield level using the UP or DOWN button. You can adjust from 1 ~ 5 using the LEFT or RIGHT button.

6. W-BALANCE White Balance Setting

Select from ATW1, ATW2, PUSH or MANUAL

6.1 ATW1

Select white balance for colour temperature range 2000 ~ 10000°K.

6.2 ATW2

Select white balance for colour temperature range 2000 ~ 12000°K.

6.3 PUSH

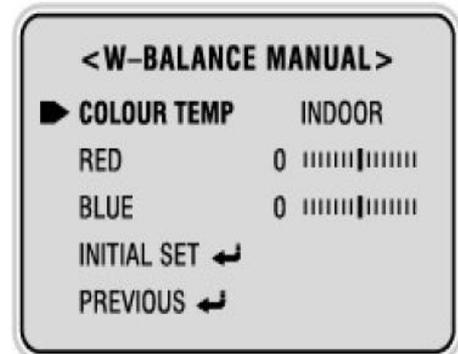
The colour temperature is adjusted using camera picture.

6.4 MANUAL Allows manual setup of white balance settings
 Select W-BALANCE menu then press menu button down.

6.4.1 COLOUR TEMP Select Indoor or Outdoor
 Select between Indoor and Outdoor using the LEFT or RIGHT button. INDOOR : 3200°K OUTDOOR 5100°K

6.4.2 RED
 Select RED using the UP or DOWN button. You can adjust the RED colouring from -100 ~ +100 using the LEFT or RIGHT button.

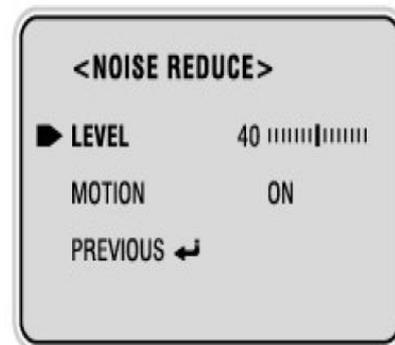
6.4.3 BLUE
 Select BLUE using the UP or DOWN button. You can adjust the BLUE colouring from -100 ~ +100 using the LEFT or RIGHT button.



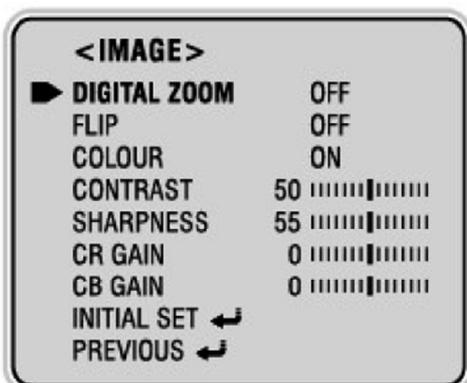
7. NOISE REDUCE This option reduces electronic interference
 Select NOISE REDUCE using the UP or DOWN button.
 Select ON using the FEFT or RIGHT button and then press the Menu button.

7.1 LEVEL Sets noise reduction level
 Select LEVEL using the UP or DOWN button. You can adjust between 0 ~ 63 using the LEFT or RIGHT button.

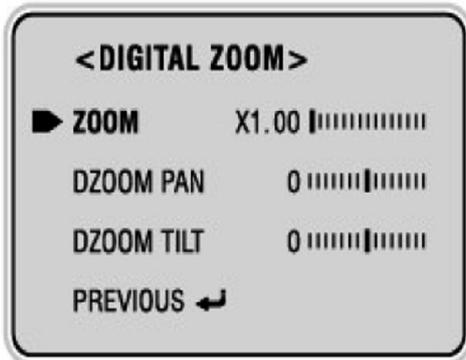
7.2 MOTION
 Select MOTION using the UP or DOWN button. You can select either ON or OFF using the LEFT or RIGHT button.



8. IMAGE Used for setting picture quality
 Select IMAGE using left or RIGHT button then press MENU button down.



8.1 DIGITAL ZOOM
 Select DIGITAL ZOOM and switch ON using LEFT or RIGHT button. Then press MENU button.



8.1.1 ZOOM

Select ZOOM using the UP or DOWN button. You can vary the zoom from X1.00 ~ X6.13 using the LEFT or RIGHT button.

8.1.2 DZOOM PAN

Select DZOOM PAN to adjust horizontal zoom range between -100 ~ +100 using LEFT or RIGHT button.

8.1.3 DZOOM TILT

Select DZOOM TILT to adjust vertical zoom range between -100 ~ +100 using LEFT or RIGHT button.

8.2 FLIP Select option to OFF, V-FLIP (vertical flip), MIRROR or ROTATE

8.2.1 V-FLIP Flip the picture vertically on the screen

8.2.2 MIRROR Flip the picture horizontally on the screen

8.2.3 ROTATE Rotate picture 180 degrees

8.3 COLOUR Select colour using ON / OFF using LEFT or RIGHT buttons

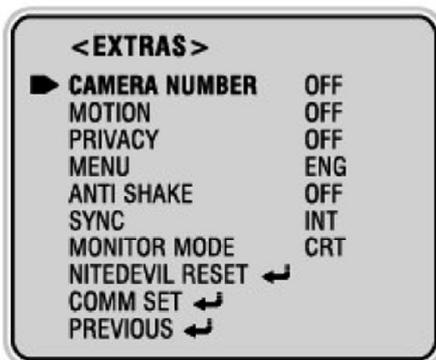
8.4 CONTRAST Select contrast between 0 ~ 100 using the LEFT or RIGHT button.

8.5 SHARPNESS Select sharpness between 0 ~ 100 using the LEFT or RIGHT button.

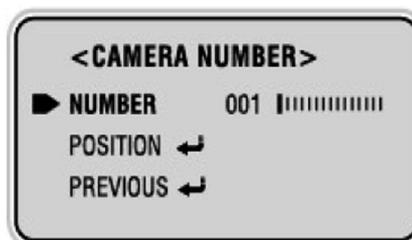
8.6 CR GAIN Select red gain between -100 ~ +100 using the LEFT or RIGHT button.

8.7 CB GAIN Select blue gain between -100 ~ +100 using the LEFT or RIGHT button.

9. EXTRAS Select EXTRAS for Camera No., Motion, Privacy, Menu Language, Anti Shake, Sync, Monitor Mode, NiteDevil Reset and Comm Set.



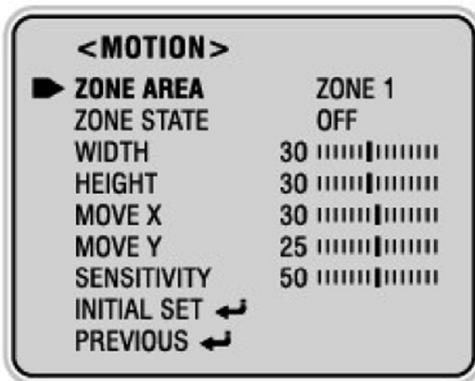
9.1 CAMERA NUMBER This allows applying a camera ID for RS485 connection



9.1.1 NUMBER Select an ID number between 000 ~ 255 for RS485 control

9.1.2 POSITION Select position by using UP and DOWN button and pressing Menu. You can only move number position using the LEFT or RIGHT button. Press Menu to set.

9.2 MOTION **This option provides a display when motion detected.**
Display is MOTION AT: <n> (where n = zone 1 ~ 4)



9.2.1 ZONE AREA **4 zones available**
 Select ZONE AREA using UP or DOWN button.
 Up to 4 zone areas can be selected.

9.2.1 ZONE STATE **Select Zone ON/OFF**
 Select ON or OFF using LEFT or RIGHT button.

9.2.2 WIDTH **Set Horizontal size**
 You can increase or decrease the size of the horizontal plane of the zone between 16 ~ 100 by using LEFT or RIGHT button.

9.2.3 HEIGHT **Set Vertical Size**
 You can increase or decrease the size of the vertical plane of the zone between 12 ~ 100 by using LEFT or RIGHT button.

9.2.4 MOVE X **Move Horizontal Position**
 You can move the horizontal position of the zone between 8 ~ 92 by using LEFT or RIGHT button.

9.2.5 MOVE Y **Move Vertical Position**
 You can move the vertical position of the zone between 6 ~ 94 by using LEFT or RIGHT button.

9.2.6 SENSITIVITY **Select Sensitivity of Motion Detection**
 You can adjust the sensitivity of motion detection between 0 ~ 100 by using the LEFT or RIGHT button.

9.3 PRIVACY

Allows up to 8 Privacy Masking areas to be set

Select PRIVACY using UP or DOWN button and select ON using LEFT or RIGHT button. Then press MENU button.



9.3.1 MASK NUMBER Select areas 1 ~ 8

Select the Mask Number by using the LEFT or RIGHT button.

9.3.2 MASK STATE Switch Mask ON / OFF

Allows the Mask Number to be switched on or off.

9.3.3 MASK COLOUR Set colour of Mask

Select colour from GREY, WHITE, RED, GREEN, BLUE, YELLOW or BLACK using LEFT or RIGHT button.

9.3.4 WIDTH Set Horizontal size

You can increase or decrease the size of the horizontal plane of the mask between 4 ~ 100 by using LEFT or RIGHT button.

9.3.5 HEIGHT Set Vertical Size

You can increase or decrease the size of the vertical plane of the mask between 4 ~ 100 by using LEFT or RIGHT button.

9.3.6 MOVE X Move Horizontal Position

You can move the horizontal position of the mask between 2 ~ 98 by using LEFT or RIGHT button.

9.3.7 MOVE Y Move Vertical Position

You can move the vertical position of the mask between 2 ~ 98 by using LEFT or RIGHT button.

9.4 MENU The Language is ENGLISH only.

9.5 ANTI SHAKE This option compensates for camera shake

Select ON using the LEFT or RIGHT button.

9.6 SYNC This is set to INT by default.

9.7 MONITOR MODE Select Monitor Mode between CRT, LCD or USER

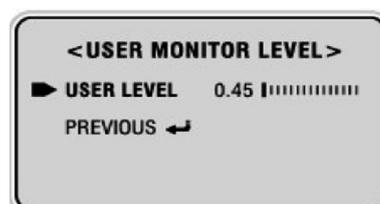
Select between CRT and LCD monitor, and use USER for Gamma setting.

9.7.1 CRT or LCD monitor

Select between CRT or LCD using LEFT or RIGHT buttons.

9.7.2 USER Gamma Setting (0.45 ~ 1.0)

Select using LEFT or RIGHT buttons.

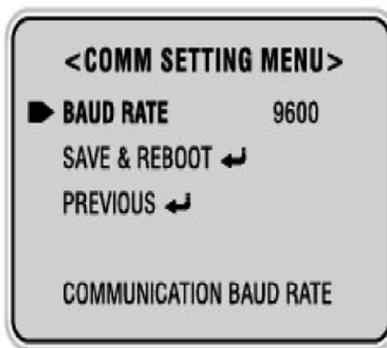


10. NITEDEVIL RESET Reset camera to manufacturer's settings

Select NITEDEVIL RESET using UP and DOWN button and then press MENU button to reset to factory default.

11. COMM SET Allows menu to be controlled using RS485 connection

Press the MENU button to access the COMM SET menu.

**11.1 BAUD RATE**

Select a baud rate between 4800, 9600, 19200, 38400 and 57600 using the LEFT and RIGHT button.

11.2 SAVE & REBOOT

To apply the baud rate you must select SAVE & REBOOT by pressing MENU button.

To enable control of the RS485 connection using a PTZ keyboard or Alien DVR, you need to do the following:

- a) Connect a CAT5 match twisted pair to the Black and Grey RS485 camera terminal connector ensuring the + and – connections are correctly connected on the keypad or DVR. On the Alien DVR the T+ refers to the + and the T- refers to the – connections. The control works only on the PELCO-D setting and this must be set in the DVR PTZ menu for the correct channel. Also the baud rate must be set (recommend 4800) in the DVR and in the camera COMM SET menu. Also ensure the Camera ID set in the camera menu (see 9.1.1) is the same as the ID in the PTZ menu.
- b) Enter a CALL 95 via the DVR or keypad to display the menu. Zoom+ and Zoom- moves up and down the menu. Focus+ and Focus- changes values and setting CALL 95 will enter submenus and save settings.

Technical Specifications

Function	Specification
Imaging Sensor	Sony 1/3" SuperHad CCD
Signal System	PAL 625 lines
Scanning system	2:1 Interface
Effective Pixels	752(H) x 582(V)
S/N Ratio	More than 52 dB (AGC Off)
Horizontal Resolution	Horizontal: 600 TVL Colour / 700 TVL Black & White
Video Output Level	1.0 v p~p (75Ω, composite)
Lens	Built-in DC Iris Vari-focal Lens (2.8 ~ 10.5mm, F= 1.4)
Minimum Illumination	Colour: 0.05Lux / 0.0001 (Auto Sens-up)
Sync System	Internal
OSD language	English
Shutter Speed	Auto / OFF / A.FLK/ x (2 ~ 512) / (1/90000 ~ 1/160)
White Balance	ATW1 / ATW2 / PUSH / MANUAL
Nitedevil03	OFF / AUTO x 2 (2 ~ 128)
Noise Reduce	ON / OFF (0 ~ 63)
AGC	Low / Middle / High / Off
WDR	Up to 60dB (LOW / MIDDLE / HIGH)
Backlight Compensation	LOW / MIDDLE / HIGH
Shield	ON / OFF (16 Zones)
Flip	Vertical / Mirror / Rotate views
Anti Shake	ON / OFF
Digital Zoom	X 1.00 ~ x 6.13
Day or Night	AUTO / DAY / NIGHT
NITE TURBO	ON / OFF
Motion	ON / OFF (4 programmable Zones)
Privacy	ON / OFF (8 programmable Zones)
RS485 menu control	PELCO-D protocol, baud rate and ID adjustable
Supplied voltage	12vDC & 24v AC ± 20%
Power Consumption	300 mA
Dimensions	Base 148mm, Dome 100mm
Operating Temperature/Humidity	-10°C to 60°C / 30% ~ 80% RH

All specifications are approximate. nitedevil.com reserves the right to change any product specifications or features without notice. Whilst every effort is made to ensure that these instructions are complete and accurate, nitedevil.com cannot be held responsible in any way for any losses, no matter how they arise, from errors or omissions in these instructions, or the performance or non-performance of the equipment that these instructions refer to.



This symbol on the products and/or accompanying documents means that used electronic equipment must not be mixed with general household waste. For treatment, recovery and recycling please return this unit to your trade supplier or local designated collection point as defined by your local council.

WEE/CG0783SS