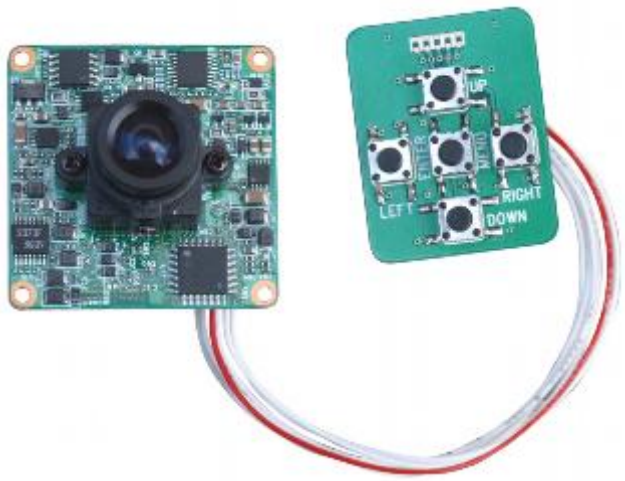
The PCB820 520 TVL Hi-Res NiteDevil 3.8mm Board Camera

produces excellent quality images. It provides fantastic colour representation and a very clear image. The PCB820 comes with an OSD menu and a small control board. This 12v DC camera offers Digital Noise Reduction, Mirror and Flip functions, Privacy Masking, Day/Night settings plus other functions, and can be used most effectively in covert operations.

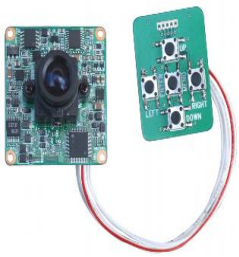


Mounting the Camera
These board cameras come with four fixing holes at the corners of the board. The camera has two connection leads, one fitted for 12v DC power and video, and a separate cable for menu control.

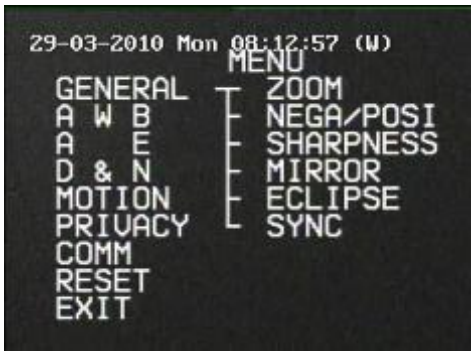
Powering the Camera
This board camera requires a 12V DC regulated power supply. The board camera is provided with a 2.1 jack plug connected. The centre pin of the jack plug connects to 12vDC + on the power supply. The black power ground (0v outer connection on jack plug) connects to 12vDC-. It is recommended to use a power supply that is rated higher than the current consumption of the camera e.g. POW150 would be adequate for powering one camera, but when powering more you must look at the bigger power supplies. Using an underrated power supply will cause it to run hot and will greatly reduce its life. If you are using the Easy Connection Kits that comprise of the (CCT801/802/808/809) to power and connect your camera (12V models only) please proceed as per the instructions supplied with The Easy Connection Kit. You will need to cut off the DC Plug ONLY and use the bare wires to connect through a terminal block. The 12V positive is the RED wire, the 0V is the BLACK wire. Always use a 12vDC regulated power supply. This board camera draws 250mA so the power supply must be rated at 300mA minimum to provide sufficient headroom.

Video Connection
The same fly lead is used for the video connection. The board camera is provided with a BNC connection for video. The inner connection of the BNC is the video connection and the BNC outer is the video ground. Remember that the Video out from the camera is like any other electrical circuit and requires two wires to complete the circuit. When using a coax type cable such as RG59 or similar for video, the outer braid of the coax provides the ground connection and the inner the video connection.

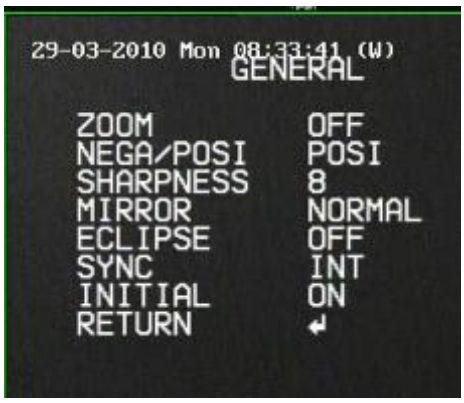
Camera Menu
This board camera provides additional camera options selected using the OSD menu. To enter the menu, press the centre menu button.



When you enter the menu you will see the menu options displayed down the left hand side of the screen and the submenus for the relevant option shown down the right hand side of the screen. If you press the down button you can move to the required option and by pressing the right button can enter or change the option.



GENERAL MENU



ZOOM OFF / 1.25x / 1.5x /1.75x / 2x

NEGA/POSI POSI positive or NEGA negative

SHARPNESS 0 ~ 10 (default 8)

MIRROR Normal / Horizontal / Vertical / Rotate

ECLIPSE No function available

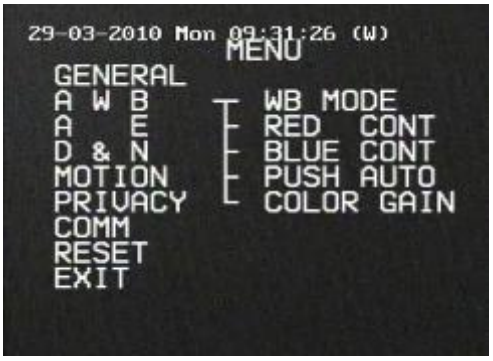
SYNC INT - internal sync not changeable

INITIAL Set to ON to default camera to manufacturers settings.

RETURN Return to main menu

AUTOMATIC WHITE BALANCE

WB MODE Auto / Hold / User



If Auto selected only Colour Gain can be adjusted. Red 32 ~ 192 Def 135
Blue 32 ~ 192 Def 140

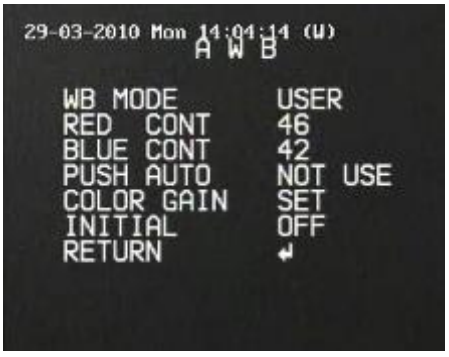
Initial - defaults settings.

The Hold option allows the Push Auto option to be used. This is similar to the Auto option.

Push Auto is not functional.

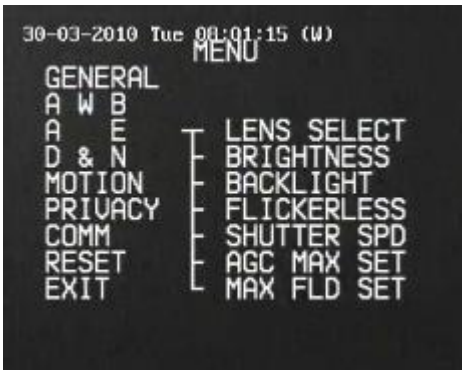
Colour Gain can be adjusted.
Red 32 ~ 192 Def 135 / Blue 32 ~ 192 Def 140

The User option allows the setting of the Red and Blue contrast. These are different from the colour gain controls that adjust colour hue as these control the overall picture contrast in red and blue.



AUTOMATIC EXPOSURE

Allows you to set Lens settings, Brightness, Automatic Gain Control and Backlight Compensation



A E Automatic Exposure

LENS SELECT ELC – Electronic Light Control
Fixed Iris Lens
DC - Direct Drive Lens
Auto Iris Lens
Use ELC with this camera.

BRIGHTNESS 0 ~ 60 Default 20

BACKLIGHT Backlight Compensation
Evens out light levels.
OFF / LOW / MID / HIGH

FLICKERLESS Not used.

SHUTTER SPEED Not used.

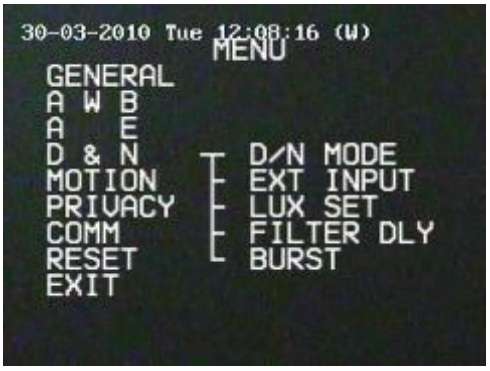
AGC MAX SET Automatic Gain Control AGC OFF / LOW / MID / HIGH
Default = MID

MAX FLD SET OFF / 2 FLD / 4 FLD / 8 FLD / 16 FLD / 32 FLD / 64 FLD
Default = 32 FLD
This is the SENSE-UP option.

INITIAL Default settings

DAY & NIGHT

Allows you to set colour during day and black & white at night or continuous colour or black & white.



D & N Day and Night Mode

AUTO Automatically switches from colour to black & white at night
DAY Permanently stays in colour mode.
NIGHT Permanently stays in black & white mode.

LUX SET LOW / MID / HIGH Set Lux level for switching

FILTER DLY 0 ~ 10 SECS Default 5 Number of seconds before switching

BURST Considers light burst before switching Default ON

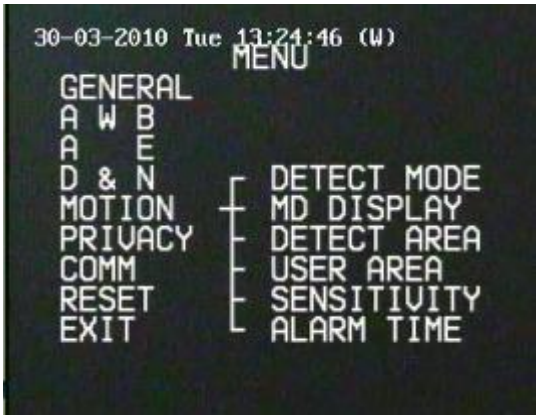
INITIAL ON / OFF Defaults settings

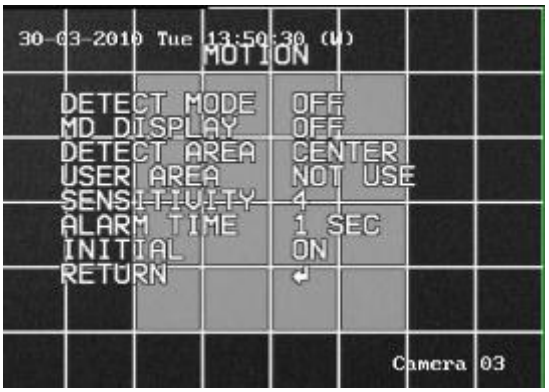
EXT External

EXT INPUT HI-COLOR High Colour
LOW-COLOR Low Colour

MOTION

Allows you to set motion so that a warning can be displayed on screen when motion is detected.





MOTION Motion Detection

DETECT MODE OFF / ON Sets Motion Detection on or off

MD DISPLAY OFF / ON Sets Motion Detection display on or off.

DETECT AREA

CENTER	Sets central area for detection as shown above
OUT	Sets area surrounding central area but not top line
UPPER	Sets top line only
WHOLE	Sets whole area for motion detection
USER	Sets individual areas by pressing right button followed by down button

USER AREA SET Saves settings

SENSITIVITY 0 ~ 8 Default = 4

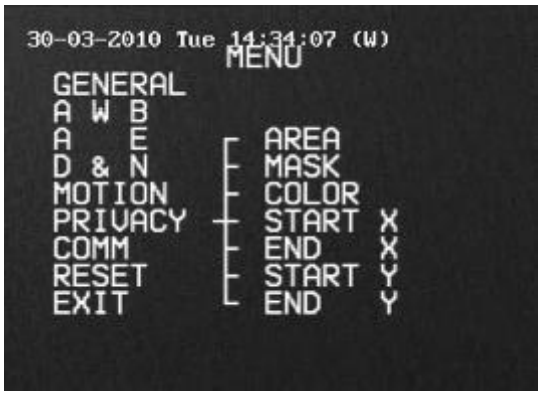
ALARM TIME 1 ~ 60 seconds

INITIAL ON / OFF Defaults settings

This camera can only display motion detection option as it has no alarm facilities.

PRIVACY MASKING

This option allows you to set up to 4 masking areas so that video can be excluded.



AREA 1 ~ 4 Select between 1 and four areas for privacy masking

MASK OFF / ON Switch area privacy masking to ON

COLOR BLACK / GREY / WHITE / Select colour for masking

START X Start position for horizontal position for mask area

END X End position for horizontal position for mask area

START Y Start position for vertical position for mask area

END Y End position for vertical position for mask area

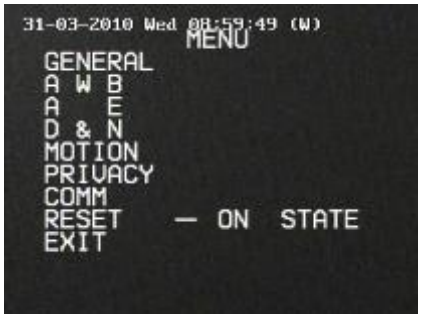
INITIAL ON / OFF Defaults settings

COMM

This option in not available on this camera.

RESET

Allows all manufacturers settings to be applied



Technical Specifications

Model	PCB820
Mode	PAL
Image Sensor	1/3" CCD interline transfer type
CCD Total Pixels	752 x 582
Sync System	Internal
Scanning	2:1 Interlace
Lens	3.8mm
Resolution	520 TVL
Horizontal frequency	15.625kHz
Vertical frequency	50.00Hz
White Balance	White Balance adjustment using menu
S/N Ratio Typical (max)	50dB
Min/Max Sense-Up	Minimum 0.3 Lux (F1.4 20IRE) / Maximum 64 times
Horizontal Mirror Function	OFF (Normal Image) / ON (Horizontal Image Inversion)
Vertical Mirror Function	OFF (Normal Image) / ON (Vertical Image Inversion)
BLC Function	Backlight Compensation adjustable using menu
Digital Noise Reduction	Built In
Electronic Shutter	1/50 ~ 1/120000 sec
Gamma Correction	0.45
Gain Control	Automatic Gain Control adjustment using menu +18dB Maximum
Video Output	1.0v p~p composite video @ 75ohms Video 0.714v p~p Sync 0.286v p~p
Burst level	0.286v p~p
Operation Temperature	-10°C ~ +45°C
Operation Humidity	Within 85% Relative Humidity
Power Consumption	12vDC 250mA (Use minimum 300mA power supply unit.)
Dimensions of camera board	38mm x 38mm x 33mm depth
Dimensions of controller	33mm (w) x 28mm (h) x 6.5mm (d)
Video/Power flylead	BNC (video) and 2.1 jack socket (power) on shared flylead 43.5cm
Controller flylead	10.0 cm

WEE/CG0783SS

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.