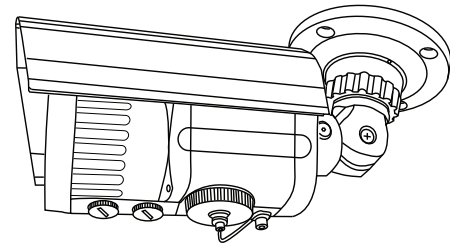


Ultra Resolution Day & Night Bullet Camera



Ultra Resolution Day & Night Bullet Camera

P/N 01.BSM.11.0070201B
V1.0

Models: DPB14TLX

Please read this manual thoroughly before use and keep it handy for future reference.

IMPORTANT SAFEGUARDS

1. READ AND RETAIN INSTRUCTIONS

Read the instruction manual before operating the equipment. Retain the manual for future reference.

2. CLEANING

Turn the unit off and unplug from the power outlet before cleaning. Use a damp cloth for cleaning. Do not use harsh cleansers or aerosol cleansers.

3. ATTACHMENTS

Do not use attachments unless recommended by manufacturer as they may affect the functionality of the unit and result in the risk of fire, electric shock or injury.

4. MOISTURE

Do not use equipment near water or other liquids.

5. ACCESSORIES

Equipment should be installed in a safe, stable location. Any wall or shelf mounting accessory equipment should be installed using the manufacture's instructions. Care should be used when moving heavy equipment. Quick stops, excessive force, and uneven surfaces may cause the equipment to fall causing serious injury to persons and objects.

6. VENTILATION

Openings in the equipment, if any, are provided for ventilation to ensure reliable operation of the unit and to protect it from overheating. These openings must not be blocked or covered.

7. POWER SOURCES

The equipment should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied at the installation location, contact your dealer. For equipment designed to operate from battery power, refer to the operating instructions.

8. GROUNDING OR POLARIZATION

Equipment that is powered through a polarized plug (a plug with one blade wider than the other) will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. Do not defeat the safety purpose of the polarized plug.

Alternate Warning: If the equipment is powered through a three-way grounding-type plug, a plug having a third (grounding) pin, the plug will only fit into a grounding-type power outlet. This is a safety feature. Do not defeat the safety purpose of the grounding-type plug. If your outlet does not have the grounding plug receptacle, contact your local electrician.

9. CORD AND CABLE PROTECTION

Route power cords and cables in a manner to protect them from damage by being walked on or pinched by items placed upon or against them.

10. LIGHTNING

For protection of the equipment during a lightning storm or when it is left unattended and unused for long periods of time, unplug the unit from the wall outlet. Disconnect any antennas or cable systems

that may be connected to the equipment. This will prevent damage to the equipment due to Lightning or power-line surges.

11. OVERLOADING

Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

12. SERVICING

Do not attempt to service the video monitor or equipment yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

13. DAMAGE REQUIRING SERVICE

Unplug the equipment from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- A. When the power supply cord or the plug has been damaged.
- B. If liquid has spilled or objects have fallen into the Unit.
- C. If the equipment has been exposed to water or other liquids.
- D. If the equipment does not operate normally by following the operating instructions, adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage to the unit.
- E. If the equipment has been dropped or the casing Damaged.
- F. When the equipment exhibits a distinct change in performance.

14. REPLACEMENT PARTS

When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

15. SAFETY CHECK

Upon completion of any service or repairs to the equipment, ask the service technician to perform safety checks to verify that the equipment is in proper operating condition.

16. FIELD INSTALLATION

The installation of equipment should be made by a qualified service person and should conform to all local codes.

17. CAUTION-these servicing instructions are for use by qualified service personnel only. to reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

17-1 Class 2 power source only.

17-2 Do NOT use power source other than that specified.

INTRODUCTION

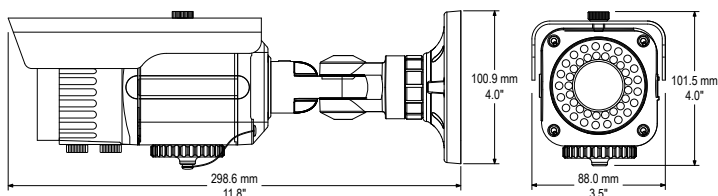
Features

- 1/3" Sony Super HAD™ II CCD
- Excellent low light performance using Polaris Vision 2 technology.
- Smart IR technology
- 0.15 Lux / F1.2 (Color)
- 0.001 Lux w/Sense-Up at x256
- 0 Lux w/IR LED
- 600 TV lines(Color) of resolution
- 3D Digital Noise Reduction (3D-DNR)
- OSD menu control
- True Day/Night with ICR
- Privacy Masking / Motion Detection
- VIDEO OUT(BNC)
- Test Monitor Output
- 2.8-10.5mm Varifocal Day/Night Lens F1.4
- Octagon junction box compatible

SPECIFICATIONS

General	DPB14TLX
Image Sensor	1/3" Sony Super HAD(tm) II CCD
Effective Pixel	H: 768 V: 494
Effective Pixel Area	H: 5.59mm V: 4.68mm
Scan System	2:1 Interlace NTSC
Scan Frequency	H: 15.734KHz, V: 59.94Hz
Synchronization	Internal
Minimum Illumination	0 Lux IR LED On
S/N Ratio	50dB @ AGC Off
Resolution	600 TV Line
White Balance	Auto 1800°K ~ 10500°K
AES Speed	1/60~1/100000 Sec
Gain Control	Auto
BLC	Manual
Video Output	1.0Vpp @ 75 ohm
Termination	BNC Female
Lens/ Lens Mount	Manual 2.8 ~ 10.5mm F1.4
Viewing Angle	H: 96.7° ~ 24.1°, V: 71.2° ~ 18.2°, D: 124.3° ~ 30.2°
Power Source	12V DC / 24V AC
Power Consumption	Max 8W
Operating Temp Range	-40°C ~ 50° C
Operating Range	Within 90% RH
Dimensions (LxHxW)	298x101x88 mm
Gamma	0.45

MEASUREMENTS



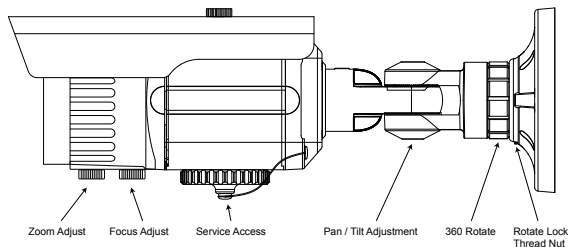
PACKAGING CONTENT

Bullet package contains the following:

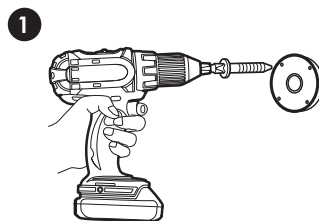
- Camera in housing -----1
- Instruction guide (This Document)-----1
- Mounting screw pack -----1
- Service Video Cable -----1
- Sunshield Screw (fitted to camera)-----1
- Allen Key -----1



PARTS DESCRIPTION



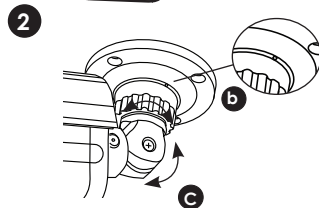
INSTALLATION



1a) Loosen the thread nut with the included allen key and turn the camera base counter clockwise to remove it from the camera mount.

1b) Mount the camera base to the surface.

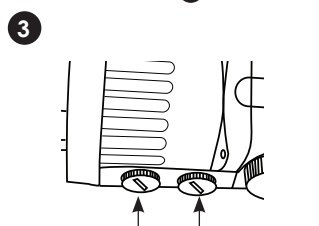
NOTE: The camera base is compatible with an Octagon junction box



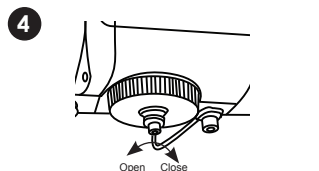
2a) Attach camera back onto the camera base by turning it counter clockwise.

2b) Tighten the thread nut to secure the camera's horizontal angle.

2c) Use a Phillips head screwdriver to adjust the vertical viewing angle of the camera.



3) Adjust lens zoom and focus turning the two external adjustment screws located on the underside of the camera. Adjustment can be made using fingers, or with use of a flat head screwdriver.



4) OSD Settings and video test port are accessed via the service access port on the underside of the camera. Turn counter-clockwise to remove the cap.

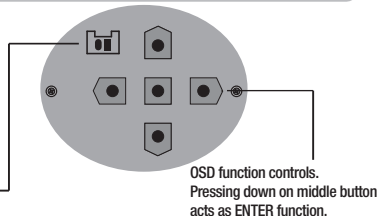
Note: Apply considerable pressure when replacing the cap to keep camera weather proof.

CAMERA ADJUSTMENT

Menu Setup



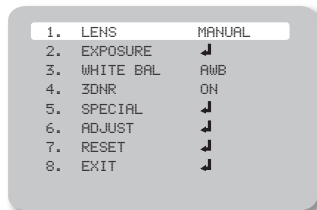
Service Connector output.
Use supplied cable to connect to this output.



MENU TREE SUMMARY

LENS	• MANUAL
EXPOSURE	• SHUTTER • AGC • SENS-UP • BLC • D-WDR • RETURN
WHITE BAL	• AWB • ATW • AWC SET • OUTDOOR • INDOOR • MANUAL
3DNR	• OFF • ON
SPECIAL	• CAM TITLE • D-EFFECT • MOTION • PRIVACY
	• SYNC • LANGUAGE
ADJUST	• SHARPNESS • MONITOR • OSD COLOR
RESET	• FACTORY • RETURN

1. Press ENTER on the function buttons to access the setup menu.
 - Main setup menu is displayed on the monitor screen.



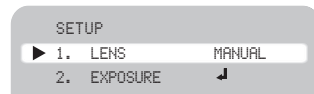
2. Select a function by pressing up and down and move left or right buttons to change setting value and press ENTER to confirm selection.
3. If a menu option features a '↓', a sub menu is available which can be accessed by pressing the ENTER button
4. Once finished updating settings, highlight 'EXIT' and press ENTER to exit setup menu

CAMERA ADJUSTMENT

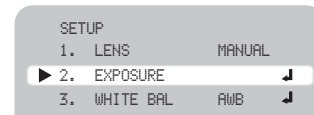
LENS

Using this function, you can control screen brightness.

1. Highlight 'LENS' in the main setup menu
2. Press the ENTER to access the DC lens setup menu.
3. After completing setting update, highlight 'RETURN' to save setting and return to previous menu

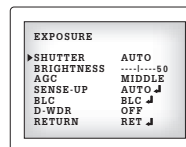


EXPOSURE



The EXPOSURE menu is used to set the automatic light control method for the camera.

1. Highlight 'EXPOSURE' in the main setup menu
2. Press ENTER to access the exposure setup menu.



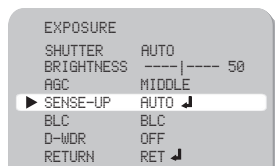
SHUTTER : Select the shutter mode. (1/60, FLK - 1/100,000 sec, x2 - 256)
Default setting is 1/60

BRIGHTNESS: The brightness level can be adjusted within the range of 0 - 100. Default setting - 50

AGC: Auto gain control (LOW / MIDDLE / HIGH)
Default setting is MIDDLE

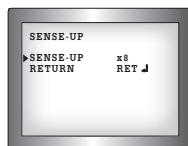
CAMERA ADJUSTMENT

SENSE-UP



Select digital slow shutter speed setting in order to allow extra light into the camera thereby providing higher sensitivity in low light conditions. NOTE only adjustable if SHUTTER setting is set to 'AUTO' or '1/60'

- OFF : Deactivates the SENS-UP function.
- AUTO : Activates SENS-UP function. Enter submenu to select maximum low shutter value



Selectable low shutter values are as follows:
x2 x4 x8 x16 x32 x64 x128 x 256 (default - x8)
For proper setup, check setting during low light / night time conditions.

Notes

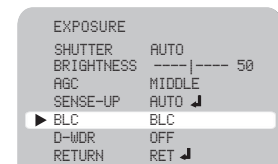
- It's recommended to keep the value in the x2 to x64 range to limit ghosting effect.

CAMERA ADJUSTMENT

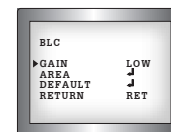
BACKLIGHT (BLC)

The BLC menu is used to adjust backlight compensation function to sharpen subjects in backlight situations

1. Highlight 'BLC' in the exposure setup menu.
2. Press the ENTER to access the BLC setup menu.



- BLC (Backlight Compensation):
Enter the BLC submenu to select an area in the scene which requires enhancing.
Change the GAIN value (LOW/MIDDLE/HIGH) to set level of enhancement.



- HSBLC (Highlight Compensation):
If a scene contains very bright light sources (e.g. car headlights), they will be masked to provide greater detail in the rest of the scene.
Enter the HSBLC submenu to select an area in the scene which requires masking.
Change the LEVEL value to set level of masking and change MODE to set whether to mask all day long or during low light conditions only.

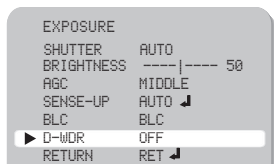
Default setting is OFF

CAMERA ADJUSTMENT

Wide Dynamic Range (D-WDR)

- D-WDR : The D-WDR menu is used to adjust dynamic range of the camera electronically. This is especially useful in high contrast scenes in order to brighten up darker parts of the scene.

1. Highlight 'D-WDR' in the exposure setup menu.
2. Move buttons left and right to change setting to OFF/INDOOR/OUTDOOR. Default setting is OFF



- INDOOR : Preferred setting when camera is installed indoors. Default settings are LOW-6 and HIGH-9

OUTDOOR:

Preferred setting when camera is installed outdoors.
Default settings are LOW-11 and HIGH-11

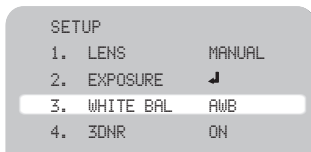


White Balance (White Bal.)

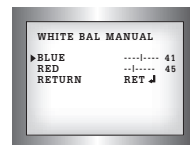
White balance function adjusts displayed colors to account for different lighting temperatures.

1. Highlight 'WHITE BAL' in the main setup menu.
2. Press the left/right buttons to change setting to: AWB/AWC->SET/MANUAL/INDOOR/OUTDOOR/ ATW
Default setting is AWB (Auto White Balance)

CAMERA ADJUSTMENT



- AWB(Automatic White Balance) : This mode automatically adjusts white balance
- AWC-SET : To obtain the optimum state under the current luminance levels, direct the camera to point toward a sheet of white paper and press the SET button. If the environment changes, including the light source, the white balance will require re-adjustment.
- MANUAL : The manual adjustment setting enables detailed color adjustment. Select 'ATW' or 'AWB' first then change to 'MANUAL' adjustment setting and press ENTER. Set the appropriate color temperature by increasing / decreasing the red and blue color values and monitor the color changes of the object. Default settings are BLUE-41, RED-45
- INDOOR : Select this when the color temperature is between 4,500°K and 8,500°K.
- OUTDOOR : Select this when the color temperature is between 1,800°K and 10,500°K. (sodium light)
- ATW(Auto Tracking White Balance) : This mode can be used within the color temperature range 1,800°K ~ 10,500°K



Notes

- White Balance may not work properly under the following conditions. In this case select the AWC mode.

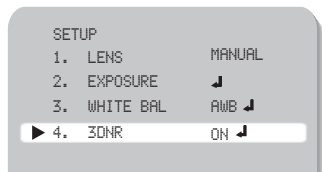
- 1 When the color temperature of the environment surrounding the subject is outside of the supported temperature range (e.g. clear sky or sunset).
- 2 When the ambient illumination of the subject is dim.
- 3 If the camera is directed towards a fluorescent light or is installed in a place where illumination changes dramatically, the White Balance function may become unstable.

CAMERA ADJUSTMENT

Digital Noise Reduction (3D DNR)

This function reduces the background noise in a low luminance environment.

1. Highlight '3DNR' in the main setup menu.



2. Press the left/right buttons to change setting to OFF/ON

○ OFF - Noise is not reduced

○ ON - Noise is reduced

3. Press ENTER to access the submenu for ON setting.

In the 3DNR submenu you can adjust the noise reduction level values range from 0 to 100. Default setting is 60.



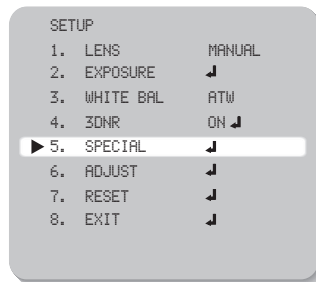
Notes

- Noise levels can be very subtle, and may not be always noticable on adjusting
- When adjusting the noise reduction level in 3DNR submenu, remember that the higher the level set, the more the noise level will be reduced, however this can have a softening effect on the image.

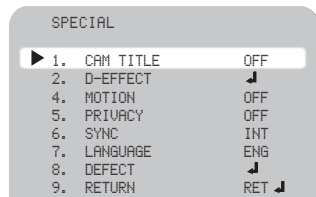
CAMERA ADJUSTMENT

SPECIAL.

1. Highlight 'SPECIAL' in the main setup menu.



2. Press ENTER to access the submenu for SPECIAL settings.



○ CAM TITLE : If you enter a title, the title will appear on the monitor.

1. Press left/right buttons to change setting to OFF/ON

○ OFF - No camera title is displayed

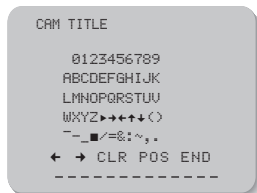
○ ON - Camera title is displayed

CAMERA ADJUSTMENT

Notes

- When the CAM TITLE is OFF no title will be displayed on the monitor even if you had previously setup a name. This is the master display setting.
- Only English is available in this mode for camera title.
- Only max 15 characters for the title allowed.

2. Press ENTER to access the submenu for ON setting. Here you will be able to enter the camera title.



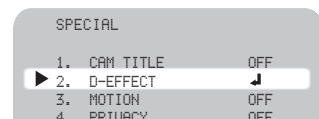
3. Press left/right/up/down buttons to select a letter/number/symbol and press ENTER to confirm selection. Repeat steps until camera title is completed and select 'POS' to select on-screen location for title and 'END' to save title. You can enter up to a maximum of 15 characters.

Notes

- If you move the cursor to CLR and press the ENTER, all the letters are deleted. To edit a letter, change the cursor to the bottom left arrow and press ENTER. Move the cursor over the letter to be edited, move the cursor to the letter to be inserted and then press the ENTER.

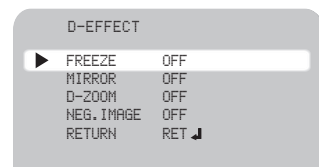
CAMERA ADJUSTMENT

- D-EFFECT: Applies digital effects to camera image.
 1. Highlight 'D-EFFECT' in the SPECIAL setup menu.

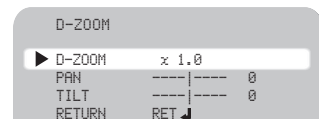


2. Press ENTER to access the submenu.

Notes



3. FREEZE: Freezes current image displayed
4. MIRROR: MIRROR will mirror the image. V-FLIP, will flip the image vertically. ROTATE, will vertically flip and also mirror. OFF, no image effect applied.
5. D-ZOOM: Allows digital zoom and position to be set.



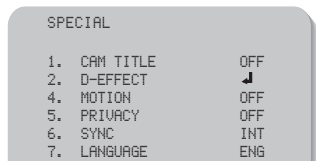
Digital Zoom can range from 1x to 32x. Too much digital zoom will result in blocky image. Pan / Tilt range is -100 to 100.

CAMERA ADJUSTMENT

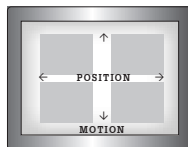
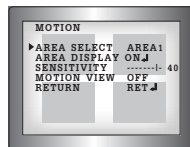
➤ MOTION:

You can monitor activity more efficiently, because a signal is generated by the camera whenever motion is detected. Visual notification is also available.

1. Highlight 'MOTION' in the SPECIAL setup menu



2. Press left/right buttons to change setting to OFF/ON
3. Press ENTER to access the submenu for ON setting



- AREA SELECT: Select motion detection area number. AREA 1-4
With the area selected will be shown flashing on and off visually.
- AREA DISPLAY: Turns selected motion detection area ON or OFF.
Pressing ENTER when ON will change display to set the position and the size of the area. Pressing the direction buttons will change the setting, and press ENTER to accept.
After you have set both position, size you can RET or AGAIN
- SENSITIVITY: Adjust sensitivity for selected motion detection area (0-40).
- MOTION VIEW: Turn motion detection view ON or OFF. When turned on, upon detection of motion, motion is shown as green dots to indicate area in which motion is taking place.



Notes

- Motion detection is normally part of a DVR which would provide more flexible customization options.

CAMERA ADJUSTMENT

➤ PRIVACY:

Hide an area so that it is not displayed on the monitor.

1. Highlight 'PRIVACY' in the SPECIAL setup menu.
2. Press left/right buttons to change setting to OFF/ON
3. Press ENTER to access the submenu for ON setting



- AREA SELECT: Select privacy area number. AREA 1-8
With the area selected will be shown flashing on and off visually.
- AREA DISPLAY: Turns selected privacy area ON or OFF.
Pressing ENTER when ON will change display to set the position and the size of the area. Press direction buttons will change the setting, and press ENTER to accept.
After you have set both position, size you can RET or AGAIN
- COLOR: Range 0-15. Sets the color of the selected privacy area.

➤ LANGUAGE:

The OSD supports English, Korean, Japanese, Chinese, Simplified Chinese, Russian

➤ DEFECT:

For Service use only!

ADJUST

➤ ADJUST:

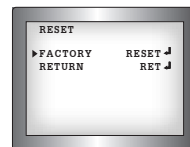
- SHARPNESS: Image edge sharpness 0 (soft image) to 31 oversharp (default is 12)
- MONITOR: CRT/LCD/USER setting for monitor type
Note: For direct monitor connection only.
(default is CRT)
- OSD COLOR: 0-15 color for OSD menu text
(default is 3)



RESET

➤ RESET:

This will reset all settings for all menus to manufacturer defaults. This allows you to return to shipped settings from the manufacturer.



TROUBLESHOOTING

Refer to the following table if you are experiencing trouble with your camera. Contact an authorized technician if the table does not provide you with a solution to the trouble.

- **Nothing appears on the screen.**

Check that the power cord and line connection between the camera and monitor are connected properly.
Check that you have properly connected VIDEO cable to the camera VIDEO output jack.

- **The image on the screen is dim.**

Is lens stained with dirt? Clean lens with soft, clean cloth.
Adjust the monitor contrast & brightness controls
Re-position the camera if necessary.

- **The image on the screen is dark.**

Adjust the contrast feature of the monitor.
If you have an intermediate device, set the 75Ω / Hi-z properly.

- **The camera is not working properly, and the surface of the camera is hot.**

Check that you have properly connected the camera to an appropriate power source.

- **The Motion Detection function does not work.**

Check that MOTION DEF of SPECIAL SETUP menu is 'ON' for the selected area.

- **Color is not correct.**

Check the setting of WHITE BAL SETUP menu .

- **When the resistance value of copper wire is at [20°C(68°F)]**

Copper wire size (AWG)	#24(0.22mm ²)	#22(0.33mm ²)	#20(0.52mm ²)	#18(0.83mm ²)
Resistance (Ω/m)	0.078	0.050	0.030	0.018
Voltage Drop (V/m)	0.028	0.018	0.011	0.006

As shown in the table above, voltage decreases as the wire gets longer. Therefore use of an excessively long adaptor output line for connection to the camera may affect the performance of the camera.

*Standard voltage for camera operation : AC 24V ±10% or DC 12V ±10%

*There may be some deviation in voltage drop depending on the type of wire and the manufacturer.



Notes

- Be sure to connect power only after all the installation is complete.
- Use the UL listed, class 2 power transformer or AC24V adaptor.