

 **VITEK** **VTC-BRE24F**
INDUSTRIAL VIDEO PRODUCTS, INC. Day/Night 960H Infrared
Ball Camera



- 1/3" High Resolution CCD
- 700 TV Lines of Resolution (960H)
- E-WDR by Adaptive Tone Reproduction
- 24 Dynamic Infrared LEDs with up to 65' Range
- 0.003 Lux / 0 Lux with IR LEDs On
- IR Corrected 3.6mm Fixed Iris Lens
- 2DNR Noise Reduction
- Motion Detection, Privacy Masking & Highlight Masking
- OSD (On Screen Display) menu
- 12 VDC Operation

VITEK



CAUTION

**RISK OF ELECTRICAL SHOCK
DO NOT OPEN**



CAUTION:

To reduce the risk of electric shock, do not expose this apparatus to rain or moisture. Only operate this apparatus from the type of power source indicated on the label. The company shall not be liable for any damages arising out of any improper use, even if we have been advised of the possibility of such damages.



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



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

PACKAGE CONTENTS

- 1 x VTC-BRE24F Camera
- 1 x Mounting Bracket
- 1 x User Manual
- 1 x Hex Wrench
- 1 x Mounting Screws/Anchors Pack
- 1 x Mounting Template

CONNECTION

1. Connect the camera video output to the monitor video input with a 75Ω coaxial cable.
2. DC12V Input Terminal
Connect the power connector of the camera to a 12V DC regulated power supply.

NOTE: Please use the correct power adaptor, DC12V (regulated), to operate this unit. The tolerance of this unit is $DC12V \pm 10\%$. Over the maximum DC12V power input will damage the video output connector (VIDEO OUT).





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INFORMATION this equipment has been tested and found to comply with limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These Limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

WARNING Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

CAUTION To prevent electric shock and risk of fire hazards

- Do NOT use power sources other than that specified.
- Do NOT expose this appliance to rain or moisture.

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

Contents

1. **EXPOSURE**
2. **DAY & NIGHT**
3. **WHITE BAL**
4. **MONITOR**
5. **IMAGE**
6. **DNR**
7. **MOTION**
8. **SYSTEM**
9. **EXIT**

Warning

The camera needs periodic inspection.

Contact an authorized technician for inspection.

Stop using your camera when you find a malfunction.

If you use your camera around smoke or unusual heat for a long time, fire may be caused.

Do not install the camera on a surface that can not support it.

Unless the surface is suitable, it could cause falling or other hazards.

Do not disassemble the camera.

It may result in fire, electric shock or other hazards.

Do not hold plug with wet hands.

It could cause an electric shock.

Do not use the camera close to a gas or oil leak.

It may result in fire or other hazards.

[OSD Menu]

EXPOSURE	ALC / ELC
DAY / NIGHT	DAY / NIGHT / AUTO / EXTERNAL / CDS
WHITE BAL	MANUAL / PUSH / ATW
MONITOR	GAMMA / CHROMA / SHARPNESS / SHADING / PED.LV
IMAGE	BACK LIGHT / CONTRAST / POSI/NEGA / H-MIRROR / PRIVACY
DNR	LOW / MIDDLE / HIGH / OFF
MOTION	ON / OFF
SYSTEM	CAM TITLE / CAM ID / ID DISP / SYNC / BAUDRATE / LANGUAGE / SPECIAL
EXIT	SAVE / MANUAL / INITIAL / RESTORE

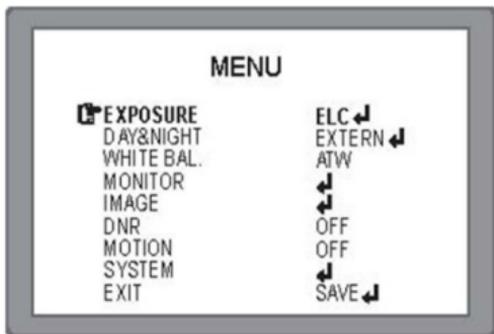
How to use OSD button(Tact Switch) in OSD control board or OSD cable

Press : enter into OSD menu and save settings at EXIT.

Push UP / DOWN : select function wish to activate.

Push LEFT / RIGHT : adjust level / value and mode of sub-menu

OSD Main Menu



MAIN MENU	DEFAULT	DESCRIPTION
EXPOSURE		Select Lens type according to mounted / built-in lens. * ELC : Electronical Iris Lens (Manual Iris Lens / Fixed Focal Lens). * ALC: Auto Iris Lens(DC)
DAY&NIGHT		* AUTO: DAY or NIGHT is decided automatically by light level coming through lens. * DAY: Color video output * NIGHT: B/W video output regardless of light level * EXT: Day(Color) or Night(B/W) is decided by external light sensor or LED control board All IR LED cameras should set EXT. * CDS: Not used
WHITE BAL	ATW	* ATW (Auto Tracking White Balance) * MANUAL: Adjust White Balance with fixed values of BLUE and RED * PUSH: White Balance is performed when enter button of OSD is pressed
MONITOR		* Set GAMMA, CHROMA, SHARPNESS, SHADING & PED. LEVEL of Monitor
IMAGE		* BACK LIGH: Select HLC or BLC and adjust it. * Select CONTRAST ON or OFF * POSI / NEGA: Select Posi or Nega image. * H-MIRROR: Select MIRROR ON or OFF * PRIVACY: Set PRIVACY ON or OFF
DNR	OFF	Set DNR level, LOW or MIDDLE or HIGH
MOTION	OFF	Select MOTION ON or OFF
SYSTEM		Set CAM TITLE, CAM ID, ID DISP, SYNC, BAUDRATE, LANGUAGE and SPECIAL
EXIT		SAVE, MANUAL, INITIAL, RESTORE

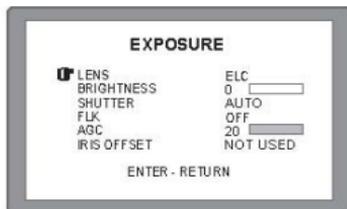
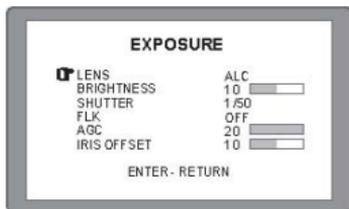
1. EXPOSURE

Select lens type in accordance with mounted/built-in lens.

* ALC : Auto Iris Lens

* ELC : Electronic Iris Lens

(Fixed Focal Lens / Manual Iris Vari-focal Lens)



EXPOSURE (ALC / ELC)	DEFAULT	DESCRIPTION
BRIGHTNESS		Adjust the brightness level of screen when the environment is extremely bright or dark.
SHUTTER	AUTO	Adjustable shutter speed. This is useful when the light condition is changing quickly * Set AUTO, 1/50 ~ 1/120K
FLK	OFF	Select FLICKERLESS ON or OFF. In the FLK ON, sensitivity will be reduced under low light
AGC	20	Setting AGC level, 0 ~ 20. The higher gain level, brighter picture with more noise.

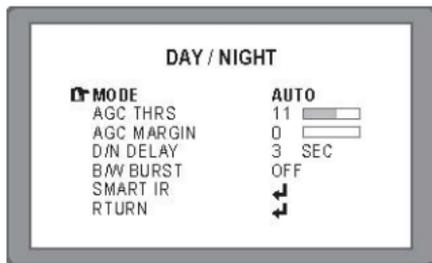
2. DAY & NIGHT

DAY & NIGHT	DEFAULT	DESCRIPTION
DAY & NIGHT	IR LED CAMERA : EXT NONE IR CAMERA : AUTO	* AUTO: Camera decide DAY or NIGHT by himself through incoming light level. ICR is also moving DAY or NIGHT (ICR Version). * DAY: Camera works as a regular color camera. ICR is inserted to cut IR spectrum from light (ICR built-in Camera)

DAY & NIGHT	DEFAULT	DESCRIPTION
DAY & NIGHT		* NIGHT: Camera works as a regular B/W camera. ICR move to pass IR spectrum. * CDS : Not used * EXT : DAY or NIGHT is decided by external signal(included CDS sensor) built in camera. All of IR LED Cameras must be set to EXT.

2-1. AUTO

Usually cameras with no IR LED is set AUTO. But IR LED cameras should set EXT.



AUTO	DEFAULT	DESCRIPTION
AGC THRS	11	* Setting threshold level to switch from to DAY <--> NIGHT.
AGC MARGIN		* Setting threshold margin to switch from to DAY <--> NIGHT. * If AGC margin is too small, may occur switching D <--> N repeatedly. Recommend more than 10
D/N DELAY	3SEC	* Dwell time before switch D <--> N after check light level. * DELAY can avoid unnecessary switching by short term light. * To make right switch D <--> N, camera should retain the present environment for longer than DELAY(DWELL TIME).
B/W BURST	OFF	* Select BURST ON or OFF
SMART IR		* Not used (Camera with no IR LED set Auto and no need SMART IR)

2-2. NIGHT

NIGHT	DEFAULT	DESCRIPTION
BURST	OFF	* Select BURST ON or OFF
SMART IR	OFF	* Set LED POWER, ANTI-SAT & SAT AREA. Can set SAT AREA when use ANTI-SAT.

Note: If set D&N at Night, White Balance is not activated.

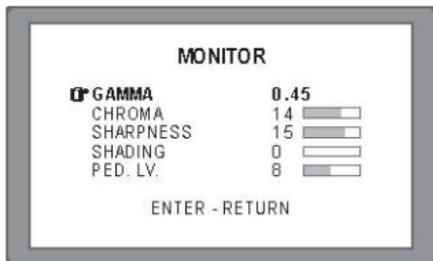
2-3. EXT

EXT	DEFAULT	DESCRIPTION
EXTERN S/W		* Must keep HIGH (IR LED Cameras only). If use LOW, picture changes to B/W.
D / N DELAY	3SEC	* Dwell time before switch D <--> N after check light level. * DELAY can avoid unnecessary switching by short term light. * To make right switch D <--> N, camera should retain the present environment for longer than DELAY(DWELL TIME).
B / W BURST	OFF	* Select BURST ON or OFF
SMART IR		* Set LED POWER, ANTI-SAT & SAT AREA. Can set SAT AREA when use ANTI-SAT.

3. WHITE BAL

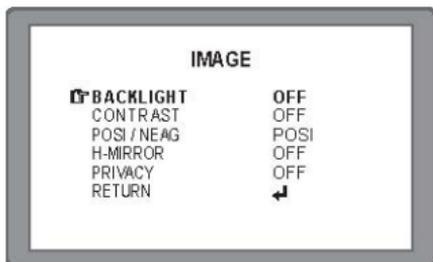
WHITE BAL	DEFAULT	DESCRIPTION
WHITE BAL	ATW	* ATW(Auto Tracking White Balance) * MANUAL: Adjust White Balance with fixed values of BLUE and RED. User can adjust the color and temperature by controlling RED and BLUE gain Recommend to use when the light temperature is fixed all the time. * PUSH: Use when White Balance is deviated. Press Enter(Set) button. White Balance is performed whenever the enter(set) button is pressed

4. MONITOR



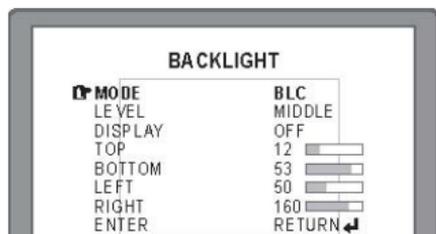
* Set GAMMA, CHROMA, SHARPNESS, SHADING & PED. LEVEL of Monitor

5. IMAGE



5-1. BACK LIGHT

5-1-1 BLC



BLC LEVEL	DEFAULT	DESCRIPTION
DISPLAY	MIDDLE	* Set up BLC LEVEL, MIDDLE, HIGH or OFF * Select ON or OFF of BLC area. BLC area appear in blue square frame.
TOP/BOT TOM		* Adjust size of BLC area by moving TOP / BOTTOM / LEFT / RIGHT menu.

BLC is useful function to see outside from inside under the environment bright background of the object



5-1-2 HLC : HLC cut out highlighted area then mask it with black color. Can set HLC level

HSBLC ON

HSBLC OFF



5-2. CONTRAST

Set D-WDR & DEFOG or OFF

5-2-1 D-WDR

D-WDR LEVEL	DEFAULT	DESCRIPTION
D-WDR		* Selectable AUTO or MANUAL
LEVEL		* Set D-WDR level, LOW / MIDDLE / HIGH

5-2-2 DEFOG

5-2-3 POSI / NEGA

Selectable POSI or NEGA image.

5-2-4 H-MIRROR Selectable MIRROR ON or OFF

5-2-5 PRIVACY

This helps you can mask areas you not want to see but want to hide on the screen, offering total 8 masking zones.



PRIVACY	DEFAULT	DESCRIPTION
MASK LV		* Can select a masking color for each masking area out of the 12 colors
AREA NO		* Selectable up to 8 area
DISPLAY		* Select ON or Off. ON --> Display the selected masking area
TOP/ BOTTOM		* Adjust size of selected masking area

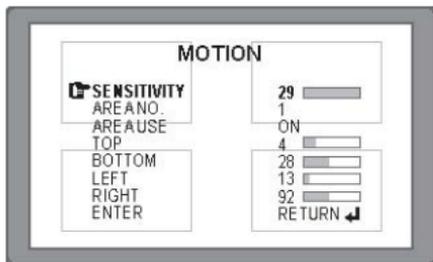
6. DNR

DNR(Digital Noise Reduction) is technology useful at low light.
But too strong reduction may occur tail effect and loss sharpness.

* Can choose DNR level, LOW / MIDDLE / HIGH

7. MOTION

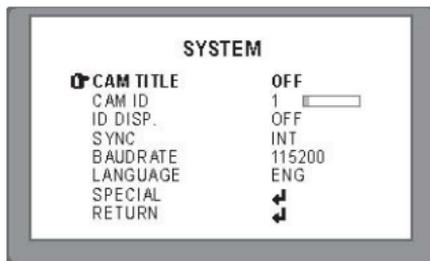
Motion Detection allows to observe moving object in 4 different areas on the screen. Programmable Area No, Size, position, sensitivity and display ON or OFF



Note : When detect something, display "MOTION !!!" on the monitor.

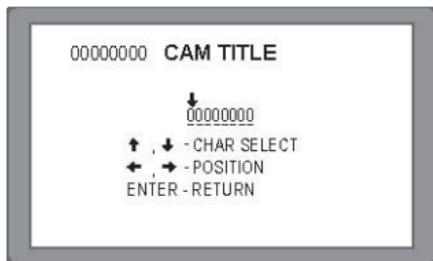
MOTION	DEFAULT	DESCRIPTION
SENSITIVITY		* Set sensitivity of detection
AREA NO		* Selectable detection area up to 4 areas.
AREA USE		* Determines whether use the selected area or not
TOP / BOTTOM..		* Adjust size of selected area.

8. SYSTEM



SPECIAL	DEFAULT	DESCRIPTION
CAM TITLE	OFF	* Can make camera name up to 8 letters by using UP / DOWN button Can use 0~9 & A~Z
		* LEFT / RIGHT button : choose lettering position
		* ON: Camera name(camera title) is displayed on left top of the screen
CAM ID		* Set camera ID No. up to 256 from 0 to 255
ID DISP.		* On : Camera ID No. is displayed on right top of the screen
SYNC		* Fixed INT(Internal Sync)
BAUDRATE		* Set Baud Rate, 2400 / 4800 / 9600 / 57600 / 115200
LANGUAGE		* Available ENGLISH / CHINESE
SPECIAL		* Detect and compensate defective pixel. * Selectable Font color of OSD Menu (support total 8 colors)

8-1. CAM TITLE



*Can input max. 8 letters with A~Z & 0~9 by using UP / DOWN button.

*LEFT / RIGHT: move CAM TITLE input position

Note) If 'OFF' is selected, the CAM TITLE does not appear on the monitor even if it has been inputted.

9. EXIT

SAVE: Save all of adjusted(changed) value

RESTORE: Return to before setting

INITIAL: Return to factory default

MANUAL: Keep changed data & value but not saved. After turn off then turn on, return to before setting value.

Detailed Specifications

VTC-BRE24F

Image Device	1/3" High-Resolution Inter-Line CCD (960H)
Resolution	700 TVL (960H)
Effective Pixels	976(H) x 494(V)
Minimum illumination	0.003 Lux (0 Lux with LED ON)
Infrared LEDs	24 Dynamic IR LEDs
IR Distance	65' (20m)
Day/Night	Auto
Built-In Lens	3.6mm IR Corrected Lens
Light Compensation	HLC (Highlight Compensation) / BLC (Backlight Compensation)
Noise Reduction	2DNR
White Balance	ATW / AWB / Push
E-WDR	YES by ATR (Adaptive Tone Reproduction)
Motion Detection	YES
Privacy Mask	Up to 8 Programmable Mask Areas
Water Resistance	N/A
Power Source	DC12V ($\pm 10\%$)
Operating Conditions	14°F to +140°F (-10°C to +60°C) @ 85% RH
Dimensions	2.68" x 3.15" (68mm x 80mm)

VITEK LIMITED PRODUCT WARRANTY

VITEK products carry a three (3) year limited warranty. VITEK warrants to the purchaser that products manufactured by VITEK are free of any rightful claim of infringement or the like, and when used in the manner intended, will be free of defects in materials and workmanship for a period of three (3) years, or as otherwise stated above, from the date of purchase by the end user. This warranty is non-transferable and extends only to the original buyer or end user customer of a Vitek Authorized Reseller.

The product must have been used only for its intended purpose, and not been subjected to damage by misuse, willful or accidental damage, caused by excessive voltage or lightning.

The product must not have been tampered with in any way then the guarantee will be considered null and void.

This guarantee does not affect your statutory rights.

Contact your local VITEK Reseller should servicing become necessary.

Vitek makes no warranty or guarantee whatsoever with respect to products sold or purchased through unauthorized sales channels. Warranty support is available only if product is purchased through a Vitek Authorized Reseller.



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