HTINTT5H

700Line Intensifier H™

Traditional Box type camera
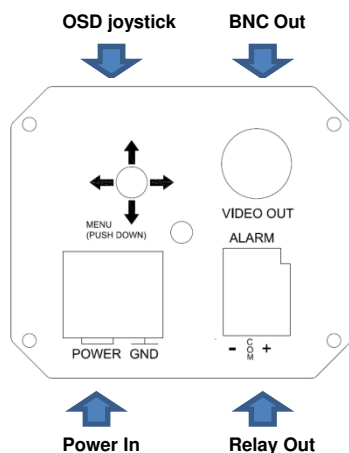
speco technologies®

200 New Highway, Amityville, NY 11701
800-645-5516 / www.specotech.com

1. PACKAGE CONTENTS

1	Camera
2	Mounting Screw
1	Mounting Bracket
1	Wrench

2. BACK PANEL CONFIGURATION

OSD joystick   **BNC Out**

MENU
(PUSH DOWN)

VIDEO OUT
ALARM

POWER GND   - C +
                       O
                       M

Power In   **Relay Out**

3. FEATURES

PRESETS
Used for a quick and easy setup for the installation environment.

700TVL Resolution
Horizontal resolution of 700 TV lines is achieved by using a SONY Super-HAD CCD with 520,000 pixels, and a custom DSP yielding pictures with a high S/N ratio.

INTENSIFIER 3
More powerful performance in low light condition. High quality pictures can be captured in very low light conditions.

WDR
Allows you to get a clear image even with strong back-lighting.

SPECO DNR
DSP chip can remove image noise to produce clean images in low light conditions.

HLC (High Light Compensation)
This function reverses bright spots in the picture (such as headlights). This enables the entire system to do a better job of resolving and displaying grayscale information such as a license plate.

Motion Detection with Alarm Output
Built in motion detector with adjustable areas of coverage will send a signal to an external alarm device when motion is detected.

PRIVACY MASK
Mask up to 8 areas of the picture where viewing is not desired. Each zone can be Independently programmed via the OSD

STABILIZER
Removes image jitter that is caused by vibrations in the surroundings.

DIGITAL ZOOM
Digitally enlarge the picture.

DAY/NIGHT
Can show color pictures in all lighting conditions or automatically switch to a B/W picture in low light conditions

OSD
All camera functions are menu driven for easy use.

4. OSD MENU DETAILS

1. PRESET

Used for a quick and easy setup for the installation environment.

SPECO TECH
1. PRESET MODE   LOW LIGHT
2. MAIN SETUP↵
3. EXIT   SAVE

MAIN SETUP
1. LENS   DC↵
2. EXPOSURE↵
3. WDR   OFF
4. WHITE BAL   ATW
5. BACKLIGHT   OFF
6. SPECO DNR   ON↵
7. DAY/NIGHT   COLOR
8. SPECIAL↵
9. RETURN↵

2. LENS SETUP

- BRIGHTNESS : Adjusts the video brightness.
- IRIS SPEED : Adjusts Iris control speed of the DC lens.
- FOCUS ADJ : To adjust the DC lens focus correctly, you must change MODE to ON under the FOCUS ADJUST menu. Adjust the lens focus and after the lens focus had been adjusted, change MODE to OFF.

3. EXPOSURE SETUP

◆ BRIGHTNESS : Adjusts the video brightness.
◆ SHUTTER : You can select auto or manual shutter.
* A.FLK : Select this when you see picture flicker, this can happen when the frequency of the local lighting clashes with the camera.
* ESC : Select this to control the shutter speed automatically. If ESC is selected, the shutter speed is automatically controlled depending on the ambient illumination of the subject.
* MANUAL : You can control shutter speed manually. (1/60 ~ 1/120,000)
* --- : Shutter speed is fixed at 1/60 sec. (1/50 sec.)

◆ AGC (AUTO GAIN CONTROL) : The higher the gain level, the brighter the screen - but the higher the noise.
* OFF : Deactivates the AGC function.
* LOW : Allows automatic gain control from 5.3dB to 32dB.
* HIGH : Allows automatic gain control from 5.3dB to 37dB.
◆ INTENSIFY : When it is night or dark, the camera automatically detects the light level and maintains a clear picture if this mode is activated.
* OFF : Deactivates the INTENSIFY function.
* AUTO : Activates the INTENSIFY function.
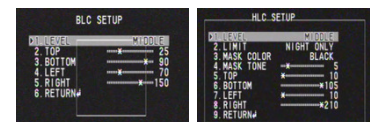
4. WDR SETUP

WDR illuminates darker spots of an image while retaining the same light level for brighter spots to even out the overall brightness of images with high contrast between bright and dark spots.

5. WHITE BAL. SETUP

◆ ATW : Select this when the color temperature is between 1,700˚K and 11,000˚K.
◆ OUTDOOR : Select this when the color temperature is between 1,700˚K and 11,000˚K. (sodium light inclusion)
◆ INDOOR : Select this when the color temperature is between 4,500˚K and 8,500˚K.
◆ MANUAL : Select this to fine-tune White Balance manually. Set White Balance first by using the ATW or AWC mode. After that switch to MANUAL mode, fine-tune the White Balance and then press the Function Setup switch.
◆ AWC→SET : For optimal luminance level for the current environment, point the camera towards a sheet of white paper and press the Function Setup switch. If the environment changes, readjust it.

6. BACK LIGHT SETUP

◆ USER BLC : Enables a user to select a desired area on a picture and view that area more clearly.
◆ HLC (High Light Compensation) : If the scene contains extremely bright light areas such as car headlights, the light can mask out much of the on-screen detail. Use this feature to remove these exceptionally bright light areas to allow detail such as car license plate numbers to become visible.

BLC SETUP
1. LEVEL   MIDDLE
2. TOP   25
3. BOTTOM   90
4. LEFT   70
5. RIGHT   150
6. RETURN↵

HLC SETUP
1. LEVEL   MIDDLE
2. LIMIT   NIGHT ONLY
3. MASK COLOR   BLACK
4. MASK TONE
5. TOP   105
6. BOTTOM
7. LEFT   10
8. RIGHT   210
9. RETURN↵

☞**NOTES**
■ Because there can be a difference in the effectiveness of HLC according to the amount of light area in the screen, optimize the installation angle for the best HLC performance.
■ When dark, HLC is activated in NIGHT ONLY mode when a bright light exceeds a specific amount.
■ When in NIGHT ONLY mode, HLC is not activated in daylight or in nighttime when bright light is not present

7. SPECO DNR SETUP

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

☞ **NOTE**
■ When the AGC mode of the EXPOSURE menu is 'OFF', you cannot set the SPECO DNR to 'ON' or 'OFF'.
■ When adjusting the noise reduction level in DNR3 mode, remember that the higher the level that is set, the greater the noise level reduction, as is the brightness of the image.

8. DAY/NIGHTSETUP

◆ **COLOR :** The picture is always displayed in color.
◆ **B/W :** The picture is always displayed in black and white.
- **BURST MODE :** You can turn on or off the burst signal on B/W mode.
◆ **AUTO :** The mode is switched to 'Color' in a normal environment, but switches to 'B/W' mode when ambient illumination is low. To set up the switching time for AUTO mode, press the Function Setup switch. You can turn on or off the burst signal on B/W mode.
- **BURST MODE :** You can turn on or off the burst signal on B/W mode.
- **DURATION :** You can select brightness of illumination about changing the day/night mode.
- **DWELLTIME :** You can select the duration time ab

	COLOR→B/W	B/W→COLOR
FAST	2 lux	5 lux
SLOW	1 lux	5,5 lux

9. SPECIAL SETUP

◆ **IMAGE ADJ.**
• **Monitor**
• **Reverse**
***PIP (Picture in Picture) :** Displays a full size image along with the thumbnail to provide more detailed information.
• **D-ZOOM :** Digital zoom up to 16x
• **Font Color**
• **Sharpness**
• **Language**

◆ **SYNC :** In areas where the supply is at 60Hz(NTSC), 50Hz(PAL), you can synchronize the output phase of multiple cameras using the power synchronization function (Line-Lock) without using a synchronization signal generator.
- **INT :** Internal Synchronization Type
- **L/L :** Power Synchronization Type, Line-lock

◆ **MOTION :** This camera allows you to observe movement of objects in 8 different areas on the screen, and the words 'MOTION DETECTED' appear on the screen when movement is detected.
- **MOTION :** Enable or disable the motion detection feature.
* **DETECTION :** Activates motion detection
- **DETECT BOX :** Outlines an object on the screen in a box when movement matches a custom motion type.
- **ALARM OUT :** Trigger the signal from the Alarm Output Terminal of the camera when an object's movement matched a custom motion type.
- **DETECT AREA :** Defines the motion detection area.
- **MASK AREA :** Specify a detection exception area to mask. Select a mask area number and specify the size and position.
* **AREA :** Select up to 4 areas
* **MODE :** Turn the selected area ON or OFF.
* **TOP/BOTTOM/LEFT/RIGHT :** Adjust the size and position of the selected area.
- **SENSITIVITY :** Set the sensitivity of the motion detection. The higher the level, the motion detection sensitivity is increased to recognize smaller movements.
- **DET. SIZE :** Selects an object size to detect on the screen. The higher the level means the larger the detection size.

◆ **PRIVACY**
- **AREA SEL :** You can select up to 12 PRIVACY areas.
- **MODE :** Turn the selected area ON or OFF.
- **MASK COLOR :** Determine area color. Select GREEN, RED, BLUE, BLACK, WHITE and GRAY.
- **TRANSPARENCY :** Add or remove transparency from the masked area.
- **SEL POS :** Adjust the size and position of the selected area.
- **X POS, - Y POS**

5. DIMENSIONS

2.5" W

2.2" H

4" L
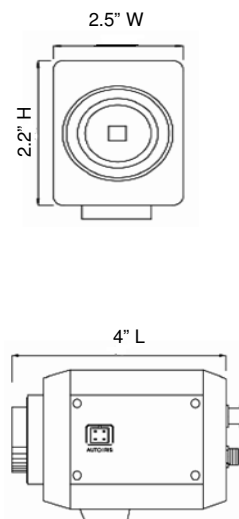
6. SPECIFICATION

Image Pick-Up Device	1/3" 960H Sony Super HAD CCD
Total Pixels	NTSC=1020(H) * 508(V) / PAL=1020(H) * 596(V)
Effective Pixels	NTSC=976(H) * 494(V) / PAL=976(H) * 582(V)
Scanning Frequency	NTSC=15.734KHz(H) & 59.94Hz(V) PAL=15.625KHz(H) & 50.00Hz(V)
Scanning System	2:1 Interlace
Synchronization	Internal
Resolution	700TV Lines
Minimum Illumination	0.15 Lux, 0.00002 Lux (Sens-up)
S/N Ratio	More than 52dB
Video Output	CVBS: 1.0Vp-p / 75Ω
Electronic Shutter Speed	NTSC=(1/60sec~1/120,000sec) PAL=(1/50sec~1/120,000sec)
WDR	On / Off (Level adjustable)
BLC	BLC / HLC / OFF
Day & Night	Color / BW / AUTO / EXT
Gain Control	Low / High / Off
White Balance	ATW / Outdoor / Indoor / Manual / AWC (1,700°K ~ 11,000°K)
Intensify	Auto / Off (Selectable x2 ~ x512)
Motion Detection	On / Off (8 Programmable Zones)
Privacy Masking	On / Off (12 Programmable Zones)
SPECO DNR	On / Off (Level adjustable)
Power Supply	DC 12V / AC24V(Dual Voltage)
Power Consumption	DC 12V 260mA / AC24V 240mA
Lens	CS Mount Lens Optionally
Operational Temp.	-4ºF~140ºF RH 95% Max
Storage Temp.	-4ºF~140ºF RH 95% Max
Dimension	2.51"(W) * 2.20"(H) * 3.46"(D)
Weight	1.5 lbs

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Rev. 130115