Corner mount camera

TNV-C7013RC – Clothes color detection

USER GUIDE

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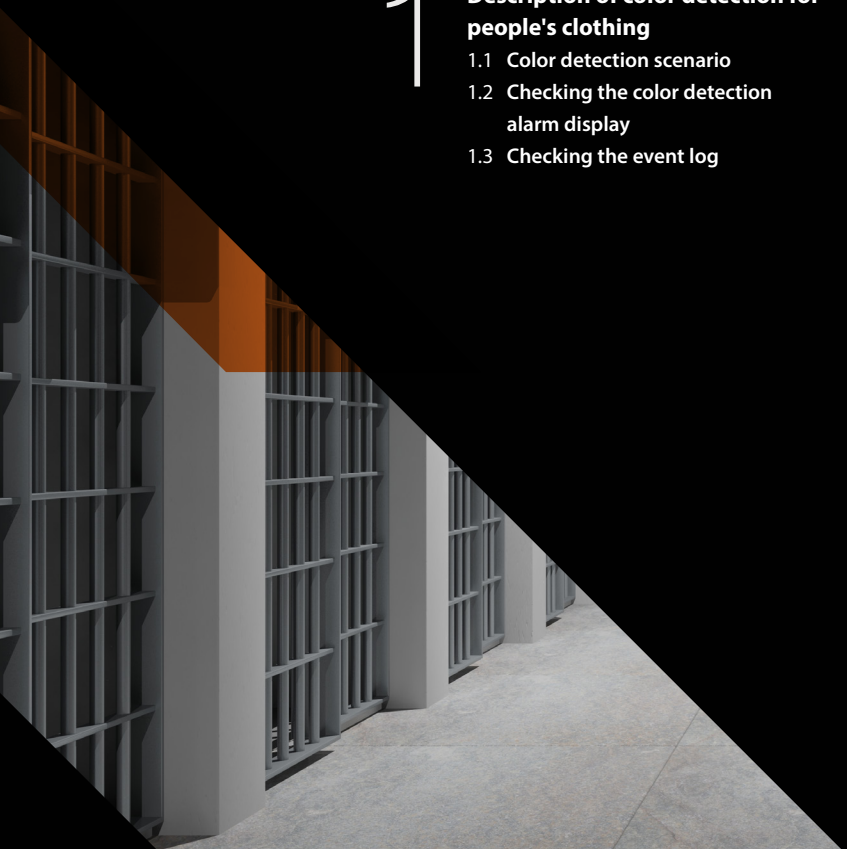


1 Description of color detection for people's clothing

Color detection is a function that detects the full-length clothing color through a color identification algorithm for a person identified by an IVA event. When a person wears clothing of the selected color (**Red**, **Orange**, **Black**) in the IVA line or the area specified by the user, an alarm will go off.

1.1 Color detection scenario

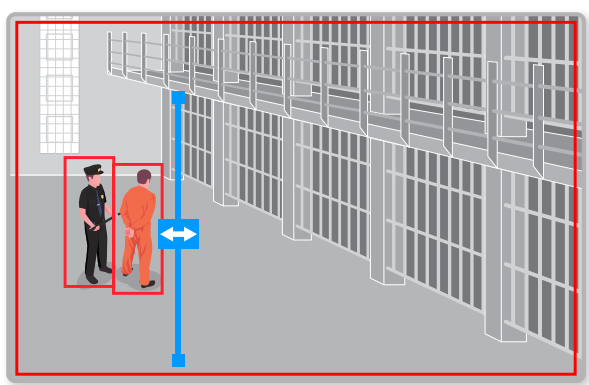
In the function set by the user, when a person wearing clothing that is the color selected by the user satisfies the conditions below, an alarm will go off.

❖ **Line crossing**

❖ **Entering or exiting an area (Enter, Exit)**

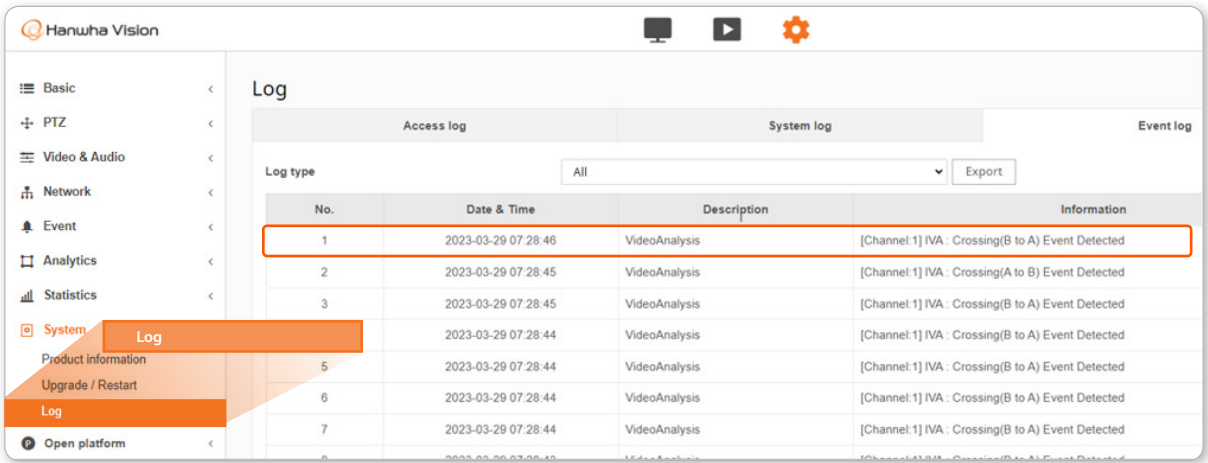
1.2 Checking the color detection alarm display

When the color detection is successful, a red detection mark appears on the live image border of the color detection function and a red border also appears on the person detection area.



1.3 Checking the event log

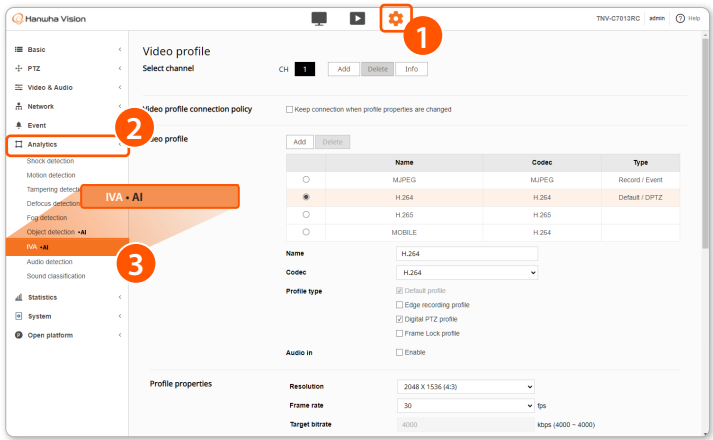
In the [**Setup**] → [**Log**] → [**Event log**] menu, you can check the occurrence of the color detection event, the time it occurred, and in which area it occurred.



2 IVA settings

In IVA, the color detection for people's clothing function can operate in the following way.

1. Click the **Setting**(⚙) button at the top.
2. Click [**Analytics**] on the left menu.
3. Click [**IVA**] in the [**Analytics**] sub-item.



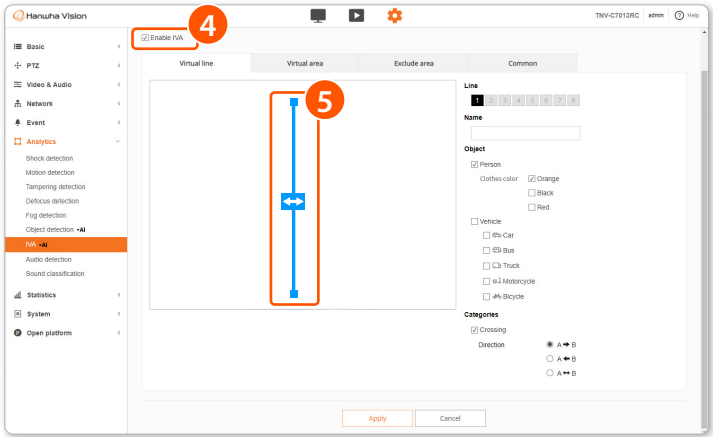
❹ Check **Enable IVA** to activate the IVA function.

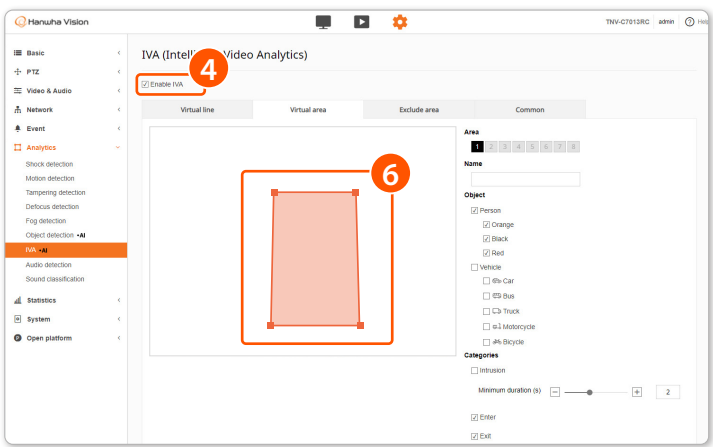
❺ You can set up to 8 lines, and you can set the line names.

❻ You can set up to 8 areas, and you can set the area names.

NOTE:

- *The Enter and Exit functions can operate individually in the set area.*





3 Color setting guide

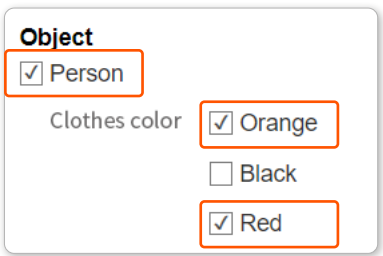
In IVA, the color of a person's clothing can be detected in the following way.

3.1 When you want to detect clothing of any color

- Check Person only

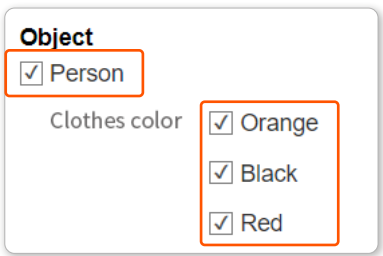
3.2 To detect individual clothing colors

- After checking Person, select colors (Red, Orange, Black) individually
- Because each color supports an independent function, duplicate conditions are possible.



Ex) When you want to detect only the people wearing red and orange clothing

→ Select Red, and Orange after checking Person



Ex) When you want to detect only the people wearing red, orange, or black clothing

→ Select Red, Orange, and Black after checking Person

4 Camera installation guide

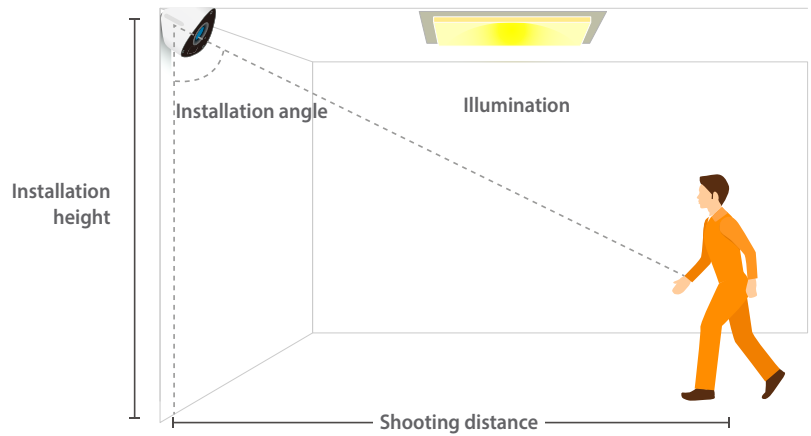
The color detection function provides optimal performance when installed and operated according to this installation guide. Since the video analysis function built into the camera can be affected by the surrounding lighting or the camera angle, please refer to the following information and install it carefully for optimal performance.

☑ **This installation guide guides you through the minimum recommendations you need to follow to use the camera's various functions.**
If you do not follow the installation instructions, the performance of the functions cannot be guaranteed.

☑ **The camera's video analytics function works best in stable lighting conditions.**
Stable lighting is at least 400 lux (indoor standard).

4.1 Recommended camera installation conditions

These are the recommended installation conditions for ensuring stable color detection performance.
The recommended minimum installation conditions for the camera are a height of 2.6 m or more, an angle of 70° or more, and illumination of 400 lux (±10%).
For stable detection, it is recommended to install the camera at a side-view angle.



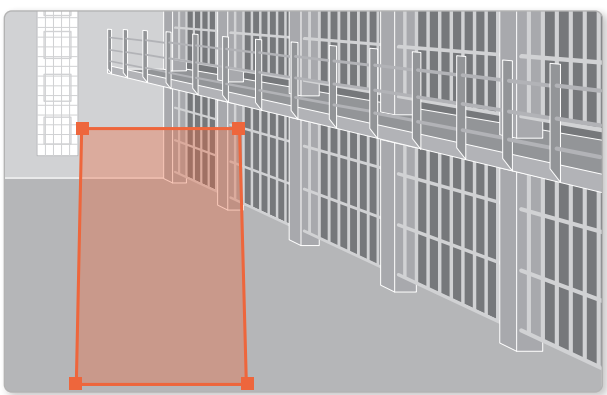
Installation location	Indoor	**Illumination**	400 lux (±10%)
Installation height	2.6 m or more, 4 m or less	**Maximum number of people in ROI**	- 8 people
Installation angle	Over 70°	**Supported colors**	Red, Orange, Black (※ Same colors for the top and bottom)
Shooting distance	2.5 m or more, 15 m or less		

4.2 Recommended camera installation location

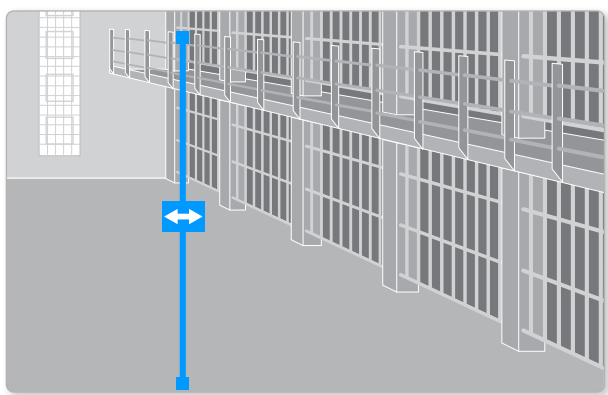
These are the recommended indoor shooting places for ensuring stable color detection performance.
It is recommended that there are no obstructions blocking pedestrians. It is recommended that the background color of the area where the IVA event occurs is not the same as the color of the clothing you want to detect, and that the lighting is even.

4.3 Recommended area and line settings

These are the recommended area and line settings to ensure reliable color detection performance.
It is recommended to designate the walking area as the center, and to set it in such a way that it can pass through each line vertically.



(Recommended area settings)



(Recommended line settings)

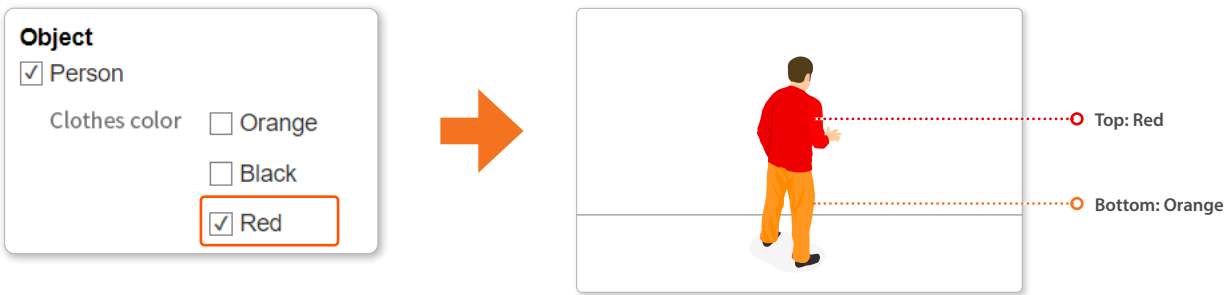
5 Sensing performance limitations

The color detection function may experience degradation in detection performance depending on the installation location and status of the camera.

The following is a guide for situations in which detection performance is degraded.

5.1 When the top and bottom colors are different

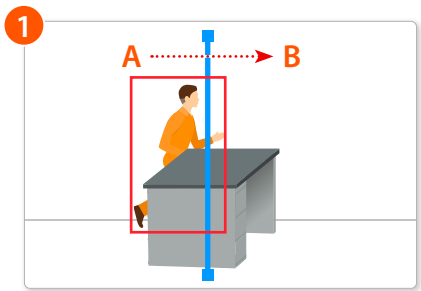
Alarms are not guaranteed if the top and bottom colors are not the same as the color selected by the user.



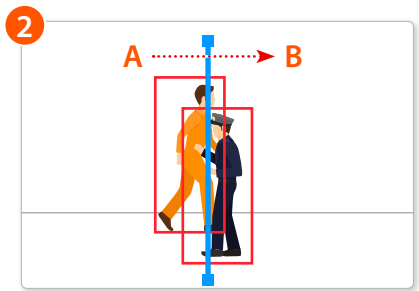
(When the top and bottom colors are different)

5.2 When part or all of the person's body is covered

Color detection alarms are not guaranteed when a person's body is partly or wholly 1 covered by an object, or 2 covered by another person.



(Part of the body covered by an object)

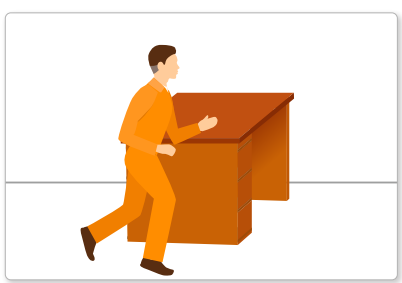


(Overlapping with others)

5.3 When the specified background color is similar to the person's clothing color

Color detection alarms are not guaranteed if the background color of the specified area is similar to the color of the person's clothing.

(When the background color is similar to the clothing color)



(When the colors of the clothing and the background object are similar)

5.4 Others

- When there is a difference from the recommended illumination due to shooting in a place that is too dark or too bright
- When a person moves too fast
- When a reflection, glare, or shadow occurs due to strong light such as direct sunlight or lighting
- When people are repeatedly passing the set line, area, or nearby
- When the sleeves of the top and bottom are rolled up
- When a person is covered by a fence, etc.
- When the shooting distance is 15 m or more
- When the color of the clothes is similar to the color you want to detect

For more information visit us at

www.HanwhaVision.com

6, Pangyo-ro 319beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do

• A/S and technical inquiries TEL 1588.5772

• Website: www.HanwhaVision.com

• Head Office Sales TEL 070.7147.8771-8 FAX 031.8018.3715