

Video Motion Detection Best Practices

How Does Video Motion Detection Work?

Video Motion Detection in the Alarm.com cameras is the camera's ability to trigger recordings based on any detected motion. The camera identifies motion by measuring how the video's pixels change from one moment to the next. There is not a PIR motion detector built into our cameras, but when VMD is set up correctly, it can be an effective way to capture activity and generate notifications for the customer.

When editing Video Motion Detection windows identify your main areas of concern and draw narrow windows near those areas. For example, if there is a jewelry box on the desk, make sure to draw a VMD box either around, or along the path leading up to that area.

Drawing VMD Windows:

What to avoid In VMD windows

Some movement or pixel changes will cause false triggers. It is best to avoid these as much as possible:

- Trees, foliage or any type of fabric that the wind or an air vent may blow should be avoided.
- Avoid any windows that are not a security concern. When the sun rises and sets, these may cause false triggers.
- Any areas with numerous shadows, such as a window that people (not of concern) walk past or with shading from trees. Remember to think about how the lighting may change throughout the day; an area that was not shaded may become shaded later in the day.
- Always be sure to use all 3 VMD windows in the place of one larger window. The smaller the box, the less prone to false-triggers the recordings will be.

What if the customer wants the entire camera view to trigger recordings?

Rather than creating one large box that will not be precise, try creating lines or "barriers". The goal is to catch a person of interest as they cross through the window.

Example



You will notice that we:

- Avoided the windows due to sunlight changes.
- Created barriers that must be crossed when entering the area.
- Created another box that must be crossed when going through the room.
- Used all 3 windows.
- Kept all the windows as small/skinny as possible.

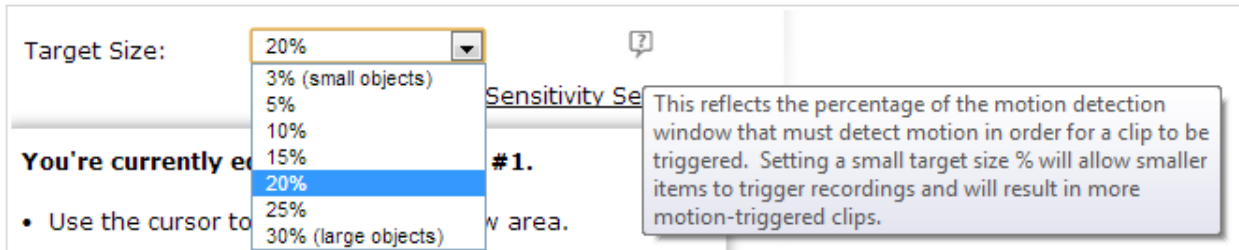
Selecting Target Size and Sensitivity:

What is Target Size?

Target size is what percentage of the window must have movement in it to trigger a clip. Too large of a target size and the camera may not trigger for anything less than an object the size of a car. Too small of a target size and leaves blowing in the wind may trigger recordings. You need to find the happy medium.

What percentage should I pick?

A great rule of thumb is to estimate the percentage of a window that a person would fill (if that fits the request) and then select one size larger. For example, in the image above, if one of the chairs was the same size as a person, that person would take up about 15% of the window. Therefore, when selecting the target size, we should select 20%. That percentage would pick up a person, but will most likely not pick up any stray shadows.

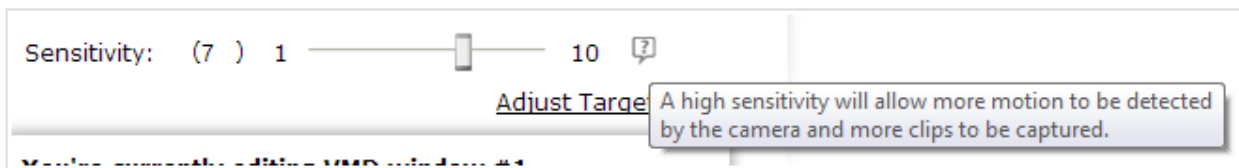


What is Sensitivity?

Sensitivity is a measure of how drastic a change is needed to trigger a clip. Higher sensitivity means a smaller shift in the video is needed to trigger a clip. But too high of a sensitivity and the camera may trigger constantly.

What level is the best?

Typically you should start with a sensitivity of 7 and fine-tune from there. If the sensitivity needs to be maxed at 10 then your window placement, size, and target size most likely need to be adjusted.














What if We Can't Make VMD Work?

At a certain point, you may find that VMD may not work in the customer's situation due to the surroundings such as flying insects or precipitation. This does not mean that the customer can't have reliable recordings.

A lot of our cameras have I/O Ports in them which will allow you to hardwire a sensor. You could even use a motion sensor! Cameras that have these ports are the ADC-V510, ADC-

V610PT, ADC-V700X, ADC-VS1, ADC-V520, ADC-V520IR, ADC-V720, ADC-V720W, and ADC-VS420.

You can find out more information about the I/O schedules and setup from the Digital input trigger guides. The guides can be found on the Dealer Site under Support Documents. Most of these guides are interchangeable across the cameras, so if your camera has an I/O port you can use just about any guide as reference.

Video Cameras	Fixed Lens - (ADC-V510)		
	Pan/Tilt - (ADC-V610PT)		Digital Input Trigger Guide
	Outdoor - (ADC-V700X)		
	1 Channel Video Server - (ADC-VS1)		
	Indoor Fixed - (ADC-V520)		
	Indoor Fixed w/IR - (ADC-V520IR)		Digital Input Trigger Guide
	Indoor Fixed Pan/Tilt - (ADC-V620PT)		
	Outdoor Wireless - (ADC-V720W)		Digital Input Trigger Guide
	Outdoor PoE - (ADC-V720)		
	Indoor Dome - (ADC-V820)		
	4 Channel Video Server - (ADC-VS420)		Digital Input Trigger Guide