



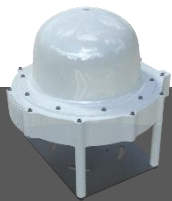
**GROUND**AWARE®

Operator Training



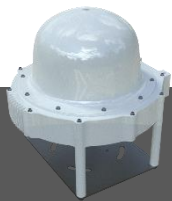
**OBSERVATION  
WITHOUT  
LIMITS**

# User interface (Track Display)



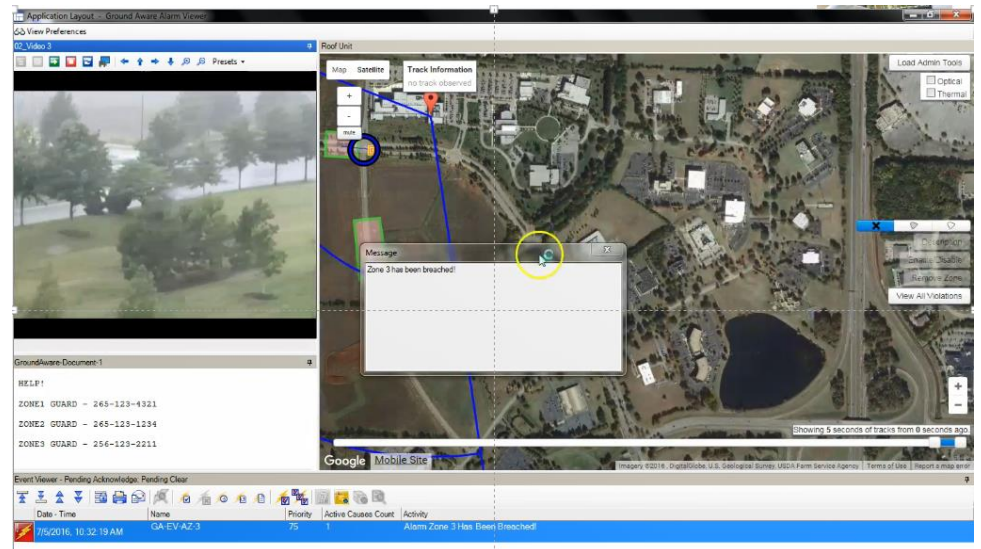
## Tailored Interface

- Intelligent alarms based on classification, direction, time-of-day, and other parameters
- Cameras slew and record of alarming tracks
- Logging violation in database
- VMS and event logger software can be integrated to receive GA alarms

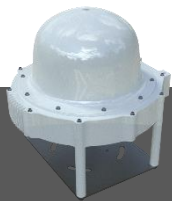


# Black Screen Approach to Automated Monitoring

- GroundAware working in background
- When alarm occurs, alarm data sent automatically to:
  - VMS for cue/slew and recording
  - PSIM for event & response management
- Radar and camera information presented inside VMS/PSIM interface



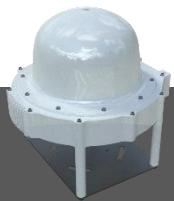
No need to stare at another screen... instead operators are prompted in real time when events happen, then engaged by systems already in place



## Basic interface controls

The screenshot displays the GroundAware software interface overlaid on a satellite map. The interface includes several key components:

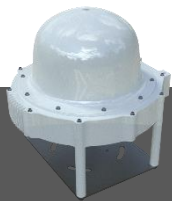
- Location details:** A panel in the top-left corner showing company information (Dyntetics, Inc., 1002 Explorer Blvd NW, Huntsville, AL 35806) and track information (ID: 4120, Duration: 12.5 seconds, Speed: 49.6 mph, etc.).
- Operator Controls:** A central panel with two buttons: "Automated Camera Slewing Enabled" and "Automated Alarm Reporting Enabled".
- Admin Tools Link:** A button labeled "Admin Tools" in the top-right corner.
- Radar Connection Status:** A small panel on the left showing "Radar Status 1360 Offline" and "4120 Connected".
- Radar:** A central radar display showing a "Selected Alarming Track" highlighted in red.
- Alarm Drawing & Saving View Violations:** A panel on the right with buttons for "Save Zones" and "View All Violations".
- Manual camera control:** A button on the right side of the interface.
- Time window selection:** A control at the bottom of the interface.
- Alarm volume controls:** A control at the bottom left of the interface.
- Track:** A blue line on the map representing the vehicle's path.
- Map/Satellite:** A "Map" button in the top-right corner.



# Operator Controls

Operators can manually enable/disable Automated Camera Slewing and Alarm Reporting for a temporary period of time.

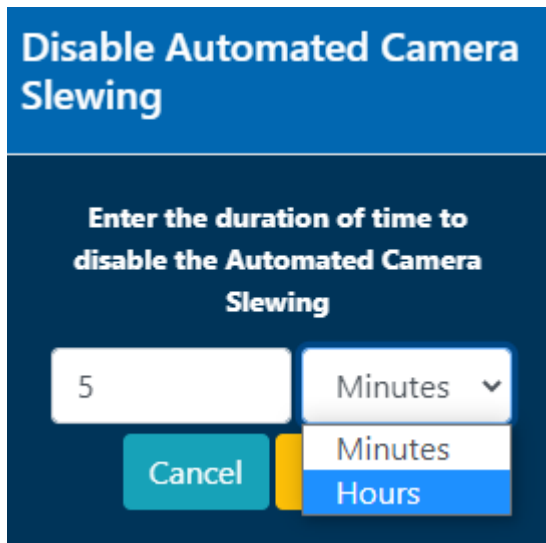
System administrators can choose what the max disable time is, up to 24 hours.



# Operator Controls

The disable button presents the operator with screen. Operators can still use the camera control circle on the interface to make manual requests for the GroundAware system to move the cameras.

Notice that the operator control area has updated to reflect the time until that system has re-enabled.



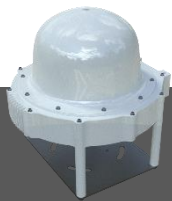
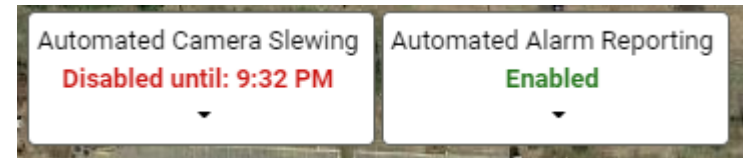
**Disable Automated Camera Slewing**

Enter the duration of time to disable the Automated Camera Slewing

5 Minutes

Cancel

Minutes  
Hours



# Alarm behavior / advanced tools

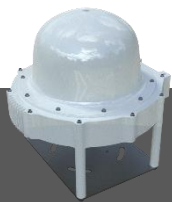
## Alarm Behavior

When a track violates an alarm zone, the window displaying that track will come to the front and alert the user. An audible alarm is played, but can be muted by the user. The alarm zone that has been violated will turn red and the camera will automatically slew to the alarming track.

**ALARMS AND ALARM ZONES ENABLE MONITORING OF SPECIFIC AREAS.**

## Integrations

Typically, once an alarm has happened, it will be sent to each of the other software integrations that have been configured in the GroundAware system. (VMS, PSIM, etc.)



# Tracking targets

When GroundAware detects a target, the system automatically begins tracking the target based on movement. Easy-to-see symbols are used to represent targets onscreen.



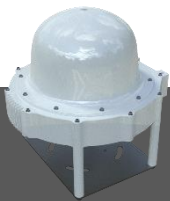
**Track Information**

- ID: 4120-2082658
- Duration: 14.9 seconds
- Updated: 0 seconds ago
- Speed: 62.9 mph
- Heading: W (-92.9 degrees)
- Quality: 12
- Distance: 256.2 m (840.5 ft)
- Altitude: -0.3 m (-1.1 ft)
- Classification:
  - VEHICLE: 10
  - TRUCK: 10
  - UNKNOWN: 2
- Look at track!

**Radar Status**

- 1340 Offline
- 4120 Connected

**NOTE: Multiple targets can be detected and tracked without concern of “maxing out” GroundAware.**



# Generating feature data on targets

GroundAware automatically begins picking up data on targets. Size, speed of movement, heading, and classification. These data points are used to help make intelligent alarming/response decisions.

**Click on a target to select it and make its detailed data visible.**

**Manually click to make integrated cameras slew to target and follow it; note: this will automatically happen for alarms.**

**Track Information**

- Autoselect new violations
- ID: 4120-2092350
- Duration: 12.5 seconds
- Updated: 0 seconds ago
- Speed: 49.8 mph
- Heading: W (-89.4 degrees)
- Quality: 20
- Distance: 275.7 m (904.6 ft)
- Altitude: 5.7 m (18.6 ft)

**Radar Status**

- 1340 Offline
- 4120 Connected

Automated Camera Slewing: Enabled

Automated Alarm Reporting: Enabled

Map Satellite

Admin Tools

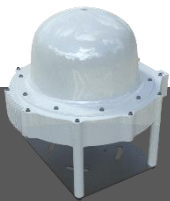
Save Zones

View All Violations

Showing 5 seconds of tracks from 0 seconds ago

Google

Imagery ©2023, Mapbox Technologies, U.S. Geological Survey, USDA Farm Service Agency, Terms of Use | Report a map error

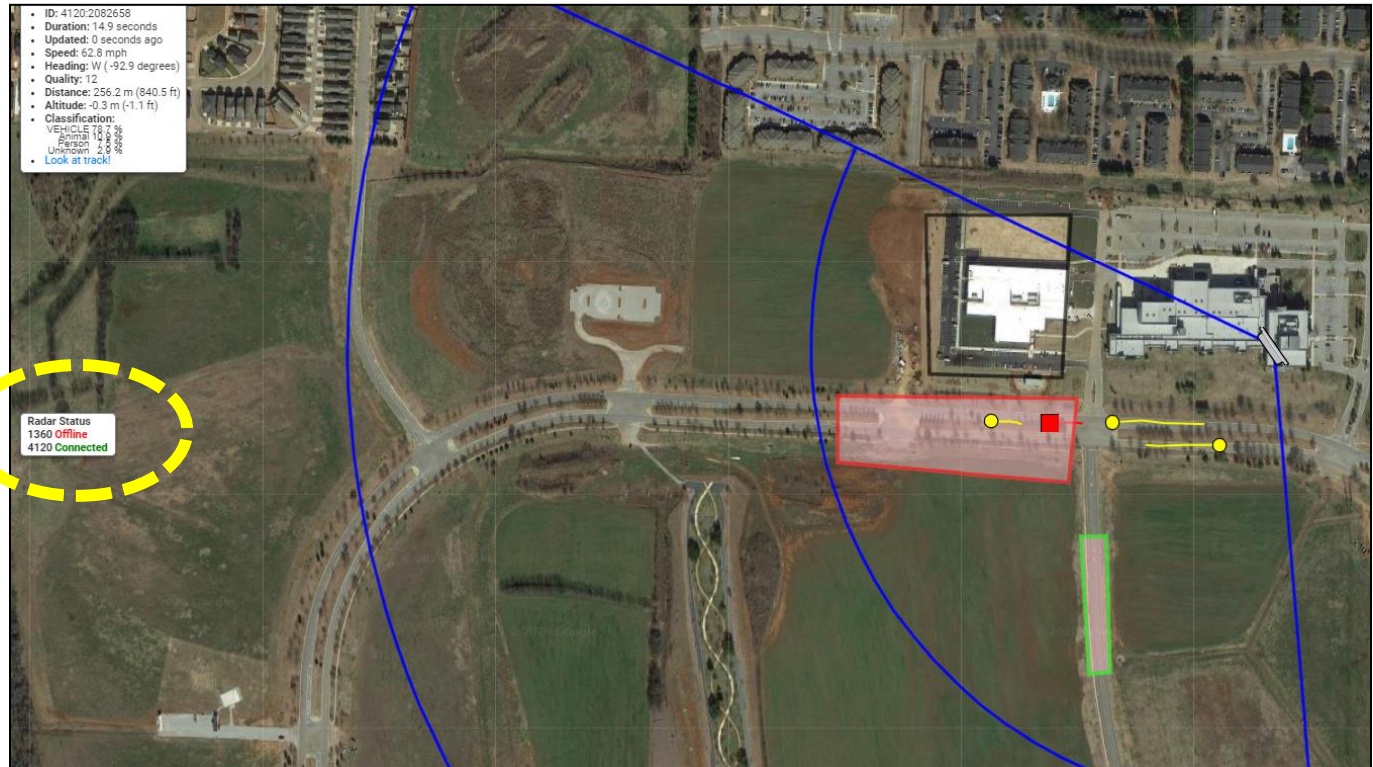


# Radar status indicator

Displays the general state of the connection to each radar attached to the webserver and is refreshed every 15 seconds.

The state can be:

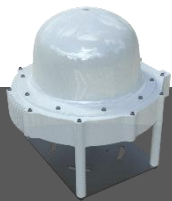
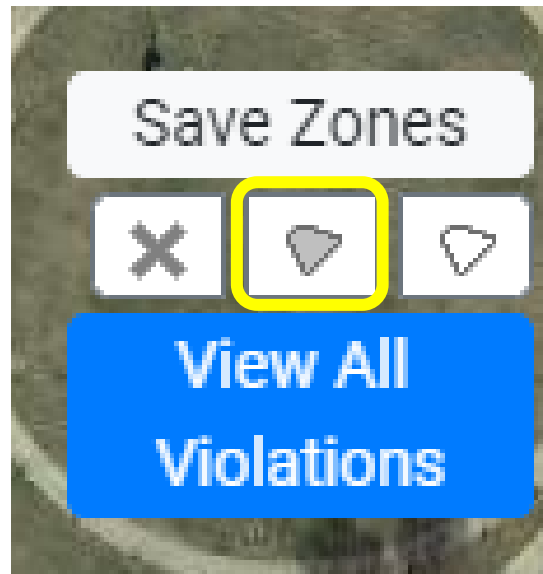
- **Connected**  
if radar track messages are being received (even if there are no tracks in the message)
- **Timing Out**  
if radar track messages recently stopped been received
- **Offline**  
if no radar track messages have been received in the last 10 minutes



# Adding alarm zones

The addition of alarm zones is meant to be an intuitive process that involves 3 steps.

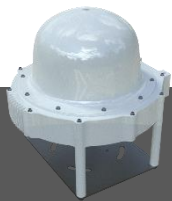
- 1) Press the *Add Alarm Zone* button centered in the middle of the right-hand side of the track-display.



## Adding alarm zones

2) Draw a polygon on the map over an area of interest by clicking to create the vertices of the polygon (minimum 3 points). To close and finish the polygon click on the first or last vertex added.

Once the draw has completed, the zone configuration area will pop-up automatically



# Adding alarm zones

3) This is the configuration area for the alarm zone with default options

**x**

## Alarm Zone Configuration

Description:

DEMO-1

---

Radars:

1360

4120

---

Schedule:

SMTWTFS 12:00 AM to 12:00 AM

Edit

X

Add

---

Classification:

Aircraft

Animal

Person

Vehicle

Unknown

---

Heading:

NW	N	NE
W	X	E
SW	S	SE

---

Response:

Log to File

Slew Cameras

---

Transparency:

---

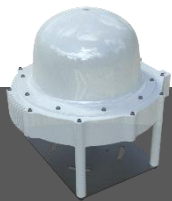
Trigger Test Alarm

Edit Zone

Save Zone

Remove

View Violations



# Adding alarm zones

- 4) Select the time of day and day of the week when the alarm zone will be active by clicking **Edit**. Default setting for a zone enables the zone for all days of the week at all times.

Schedule:

SMTWTFS 12:00 AM to 12:00 AM

Edit

X

Add

## Add Zone Rule

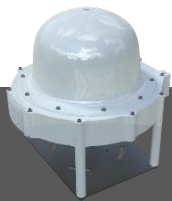
S M T W T F S

Start Time: 06:00 AM

Stop Time: 07:00 AM

Save

Cancel

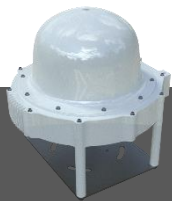


## Modify existing alarm zones

Existing alarm zones can be removed, temporarily disabled, or modified in terms of track class and direction that will trigger an alarm. Simply select the alarm zone and click the button for the desired action.

Disabled alarm zones are denoted by no outline around the shaded region.

Note that unless administrator tools are loaded and the zones saved as the default, the changes shown in your local interface will not affect what violations are logged to the system or seen by other users.

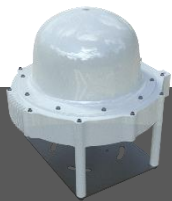
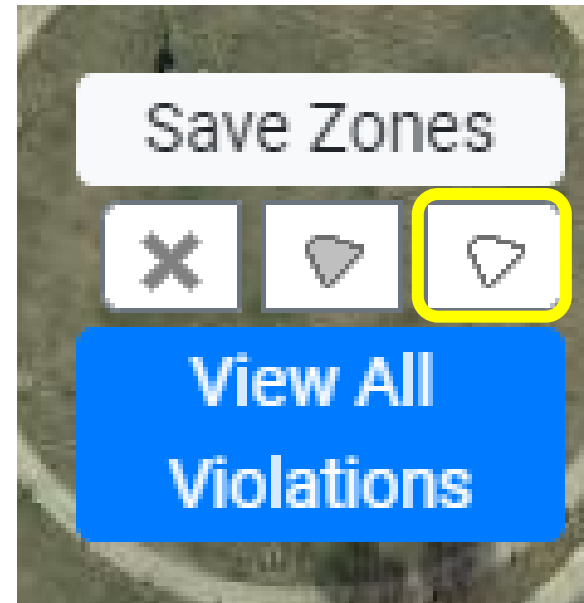


# Adding silent zones

Silent zones are useful for eliminating distractions or carving notches out of alarm zones for spaces where traffic may be allowed. They remove all of the track updates inside of their bounds and do not allow those updates to trigger alarms.

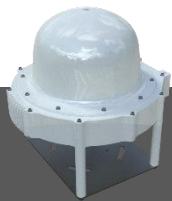
Adding silent zones is a two-step process, similar to adding alarm zones.

- 1) Press the **Add Silent Zone** button



# Adding silent zones

- 2) Draw a polygon around the area to be ignored and name the silent zone. The silent zone will then be shown by a black outline on the map (see the figure below). Tracks inside this polygon will not alarm in your local interface and will not be shown.



# Radar Specific Zones

Zones can be specified to only be active for a particular radar. So an administrator can very specifically tailor which areas should alarm **and** only trust the tracks from particular radars

**x**

### Alarm Zone Configuration

Description:

DEMO-1

Radars:

1360

**4120**

Schedule:

AM to 12:00 AM

Edit X

**x**

### Silent Zone Configuration

Description:

Radars:

1360

4120

Edit Zone

Save Zone

Remove

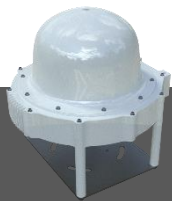
Click to add text

Click to add text

Click to add text

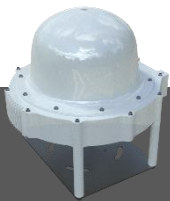
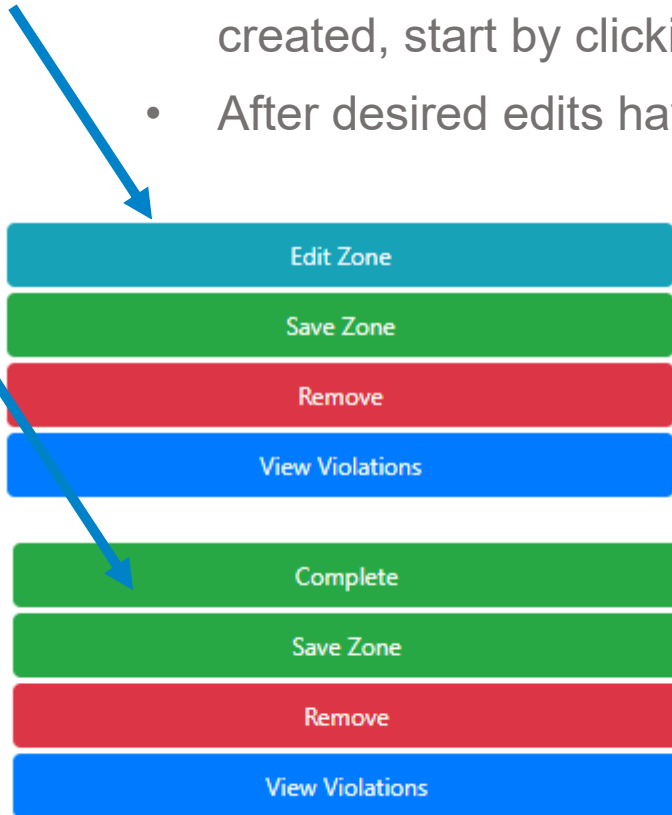
**Only tracks from 4120 will raise alarms**

**Both radars will be silenced from this zone**



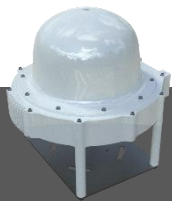
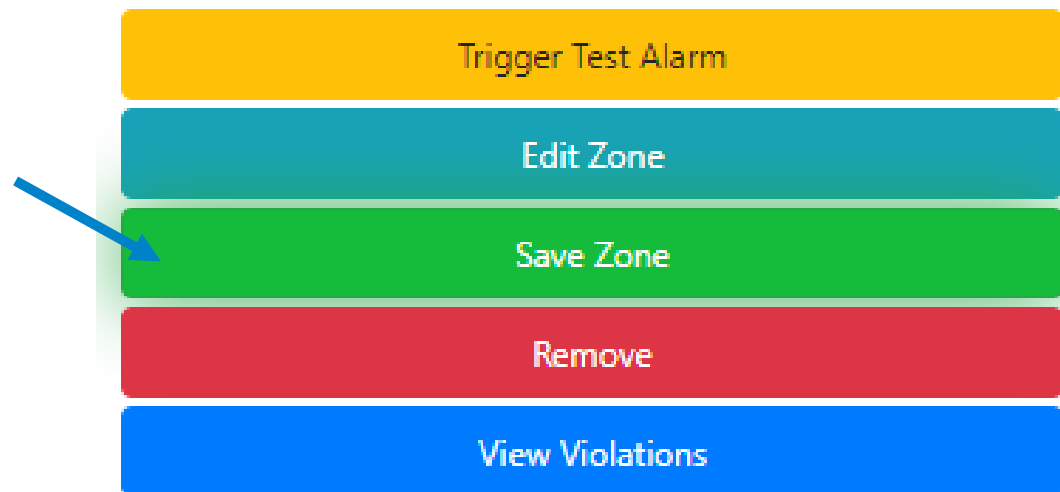
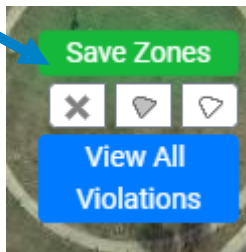
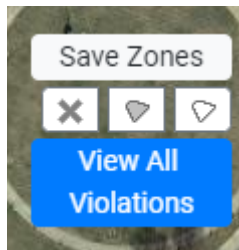
# Editing Zone Shape

- Zones boundaries can be adjusted after they have been created, start by clicking “Edit Zone”
- After desired edits have been made, click “Complete”



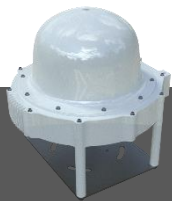
# Saving Zone Changes

- If any change to a zone is made, the Save Zones buttons will flash to indicate that they must be clicked for the settings to persist



# Using the Violation Logger

To view recent alarm zone violations (as defined by the administrator's global alarm and silent zones), first navigate to the track-display.



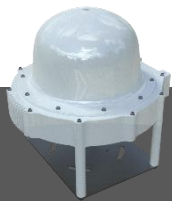
## Using the Violation Logger

Click the **View All Violations** button on the right-hand side of the screen to open the view violations page. If you only want to see violations from a particular alarm zone, select the zone and the button will be replaced by a **View Zone Violations** button.

The view violations page is an auto-generated table of the recent alarms. Clicking on one of the violation log links displays a map view similar to the track display that shows the history of the entire track and the alarm zone that it violated.

### Violations

Time	Track ID	View Violation using	Status	Comment
Wed Aug 16 2017 14:46:51 GMT-0500 (Central Daylight Time)	2:11665	<a href="#">1502912811930_1491511503601-2-11665.vlog</a>	Non-threatening	Authorized vehicle
Wed Oct 28 2015 12:32:31 GMT-0500 (Central Daylight Time)	2:1395718	<a href="#">1446053551166_1446053429368-2-1395718.vlog</a>	Threat	Robber stealing copper.
Wed Oct 28 2015 12:32:31 GMT-0500 (Central Daylight Time)	2:1395679	<a href="#">1446053551160_1446053429368-2-1395679.vlog</a>	Not Reviewed	
Wed Oct 28 2015 12:32:30 GMT-0500 (Central Daylight Time)	2:1395700	<a href="#">1446053550535_1446053429368-2-1395700.vlog</a>	Not Reviewed	
Wed Oct 28 2015 12:32:29 GMT-0500 (Central Daylight Time)	2:1395677	<a href="#">1446053549753_1446053429368-2-1395677.vlog</a>	Undecided	
Wed Oct 28 2015 12:32:27 GMT-0500 (Central Daylight Time)	2:1395626	<a href="#">1446053547225_1446053429368-2-1395626.vlog</a>	Not Reviewed	
Wed Oct 28 2015 12:32:27 GMT-0500 (Central Daylight Time)	2:1395622	<a href="#">1446053547207_1446053429368-2-1395622.vlog</a>	Not Reviewed	
Wed Oct 28 2015 12:32:23 GMT-0500 (Central Daylight Time)	2:1395514	<a href="#">1446053543410_1446053429368-2-1395514.vlog</a>	Not Reviewed	
Wed Oct 28 2015 12:32:22 GMT-0500 (Central Daylight Time)	2:1395509	<a href="#">1446053542679_1446053429368-2-1395509.vlog</a>	Non-threatening	No issue.
Wed Oct 28 2015 12:32:15 GMT-0500 (Central Daylight Time)	2:1395343	<a href="#">1446053535012_1446053429368-2-1395343.vlog</a>	Undecided	

[Previous Page](#)
[Next Page](#)


# Using the Violation Logger

The violation page will automatically play the violation from the time of the alarm onward to the end of the track, displaying the camera information that correlates to the time of the alarming track. Users may manually select and deselect camera feeds based on which camera has the best view of the alarm.

The screenshot displays the GroundAware Violation Logger interface. It features a central map view with a red line indicating a violation track. A blue circle highlights a specific point on the track, with a blue arrow pointing to it. The interface includes two information panels on the left, a top right navigation bar, and a bottom right control panel.

**Violation Information**

- Started: Wed Aug 16 2017 14:46:01 GMT-0500 (Central Daylight Time)
- Duration: 51.3 seconds
- Violated At: 49.9 seconds
- Classified As: Vehicle
- Status: **Non-threatening**
- Description: Authorized vehicle

**Violation Track Information**

- ID: 2:11665
- Elapsed: 42.9 seconds
- Speed: 12.7 mph
- Heading: W (-97.9 degrees)
- Quality: 40
- Distance: 101.7 m (333.6 ft)
- Altitude: -0.1 m (-0.2 ft)
- Classification:
  - VEHICLE 61.7 %
  - Person 29.2 %
  - Animal 9 %
  - Unknown 0.1 %

**Captured violation imagery will automatically play onscreen to show what transpired upon target meeting criteria for an alarm**

Map | Satellite

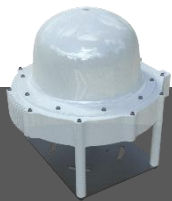
Play

View/Edit Information

Google

Showing update 139 of 175 updates

Imagery ©2019, Maxar Technologies | Terms of Use | Report a map error



# Using the Violation Logger

From a violation log page, any operator may save information about the violation to the server. To do so, click the **View/Edit Information** button on the right-hand side of the screen.

The screenshot displays an aerial view of a construction site with a red box highlighting a specific area. On the left, two information panels are visible:

- Violation Information:**
  - Started: Wed Aug 16 2017 14:46:01 GMT-0500 (Central Daylight Time)
  - Duration: 51.3 seconds
  - Violated At: 49.9 seconds
  - Classified As: Vehicle
  - Status: Non-threatening
  - Description: Authorized vehicle
- Violation Track Information:**
  - ID: 2:11665
  - Elapsed: 42.9 seconds
  - Speed: 12.7 mph
  - Heading: W (-97.9 degrees)
  - Quality: 40
  - Distance: 101.7 m (333.6 ft)
  - Altitude: -0.1 m (-0.2 ft)
  - Classification:
    - VEHICLE 61.7%
    - Person 29.2%
    - Animal 9%
    - Unknown 0.1%

On the right side of the screen, there are buttons for 'Map', 'Satellite', 'Play', and 'View/Edit Information'. The 'View/Edit Information' button is highlighted with a yellow arrow pointing to a modal dialog box titled 'Edit Violation Information'. This dialog box contains:

- A 'Status' dropdown menu with 'Non-threatening' selected and circled in yellow.
- A 'Description' text input field containing 'Authorized vehicle' and circled in grey.
- 'Cancel' and 'Save' buttons at the bottom.

Yellow text on the right side of the dialog box reads: 'Dropdown provides optional status descriptions:' followed by a list:

- Not Reviewed
- Nuisance
- Threat
- Non-Threat
- Undecided

White text on the left side of the dialog box reads: 'Manual comments can be input to provide further details for after-action review, forensics, etc.' with a white arrow pointing to the description field.

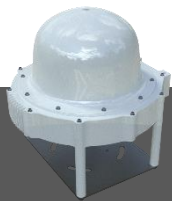


# Using the Violation Logger

The dialog box displayed allows the user to select the status of the alarm event and enter a comment about the alarm. The possible choices for status are “Not Reviewed,” “Nuisance,” “Non-threatening,” “Undecided,” and “Threat.” The default status for all alarm events is “Not Reviewed.” These fields are shown in the list view on the view violations page and each status is shown in a unique color.

An example of each status in the list view format is shown below.

Wed Oct 28 2015 12:32:30 GMT-0500 (Central Daylight Time)	2:1395700	<a href="#">1446053550535_1446053429368-2-1395700.vlog</a>	Threat
Wed Oct 28 2015 12:32:29 GMT-0500 (Central Daylight Time)	2:1395677	<a href="#">1446053549753_1446053429368-2-1395677.vlog</a>	Undecided
Wed Oct 28 2015 12:32:27 GMT-0500 (Central Daylight Time)	2:1395626	<a href="#">1446053547225_1446053429368-2-1395626.vlog</a>	Non-threatening
Wed Oct 28 2015 12:32:27 GMT-0500 (Central Daylight Time)	2:1395622	<a href="#">1446053547207_1446053429368-2-1395622.vlog</a>	Nuisance
Wed Oct 28 2015 12:32:23 GMT-0500 (Central Daylight Time)	2:1395514	<a href="#">1446053543410_1446053429368-2-1395514.vlog</a>	Not Reviewed



# Questions?



**Need additional training or help to make you  
more productive?**

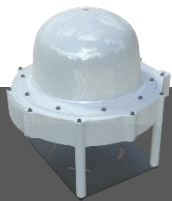
**Please call us....**

**GROUNDWARE CUSTOMER CARE**

**256-268-5239**

**Or email:**

**[customersupport@owlknows.com](mailto:customersupport@owlknows.com)**



This training document is proprietary information of Observation Without Limits LLC. It is intended solely for use by licensed customers of the GroundAware system.

Copyright 2024, Observation Without Limits LLC.

All rights reserved.

**O.W.L.**

**355 Quality Circle, Suite F**

**Huntsville, Alabama 35806 USA**

