

AVS/ASAP-01 (December 2023)

1<sup>st</sup> Edition

Guideline for

**Alarm Validation Scoring (AVS-01)**

Integration Within

**Automated Secure Alarm Protocol (ASAP)**

**Sponsor**

The Monitoring Association (TMA)

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Printed in the United States of America

Published by

The Monitoring Association

7918 Jones Branch Drive, Suite 510, McLean, VA 22102

[www.tma.us](http://www.tma.us)

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This guide was developed by a sub-committee of the AVS-01 Committee - December, 2023

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## Revision History:

Original Version – December, 2023

## Limitation of Liability

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## Purpose

Where the use of AVS is adopted by involved parties, this guideline documents the normalized method for TMA-AVS-01 alarm score information to be provided to public safety by an alarm monitoring center, within the *Automated Secure Alarm Protocol* (ASAP).

The current version of AVS is limited to intrusion alarm monitoring.

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## Overview

This version of the guideline applies to the currently deployed 2016 version of the ASAP standard. Future revision(s) of this guideline will accommodate later versions of the ASAP standard.

It is not the intent of this guideline to educate the reader about the purposes of the ASAP service and associated ASAP standards and/or the TMA-AVS-01 standard. Those using this document for its intended purpose are expected to have a full understanding of the ASAP program and the guiding ASAP standards as well as the TMA-AVS-01 standard.

The ASAP service has a standardized method for agents in an Alarm Monitoring Center and tele-communicators in an ECC/PSAP to electronically exchange free form textual messages related to alarm events, eliminating the need for voice phone calls. The textural message exchange is accomplished within the “update” message capability defined by the ASAP protocol.

An example of the current update messaging use is; a tele-communicator in an ECC/PSAP requesting information concerning the estimated time of arrival of the homeowner or business manager, and the AMC alarm operator answering accordingly.

The text messages are XML based encapsulated in the “update” message.

## Future AVS Integration

The 2016 version of the ASAP protocol is currently in production. The methodology described herein to provide AVS data is intended for deployment using the 2016 version.

The 2021 version of the ASAP standard is not currently in production. The 2021 version, once in production, will enhance the exchange of AVS related data. The 2021 version includes data fields specific to TMA-AVS-01.

Additional development within AMC automation platforms, ECC/PSAP CAD platforms and the ASAP service is required before the 2021 version is put in production. The implementation of the 2021 version is not currently scheduled.

IT IS IMPORTANT TO NOTE that the use of the update message methodology for AVS information exchange described herein will remain a requirement after the 2021 version of the ASAP protocol is put into production. Therefore, the financial investment and associated ROI for the software development to accommodate AVS data via the 2016 “update” message workflow will remain applicable after the 2021 version is in production.

## Alarm Monitoring Center Workflow

1. If an AVS score is to be calculated for an alarm event, completion of the AVS scoring process is to be completed prior to the initial alarm notification being transmitted to the ECC/PSAP
2. AVS score creation may be a manual calculation, and/or created by processes within the AMC automation platform, or a hybrid of both.
3. When an alarm notification is sent via ASAP to an ECC/PSAP CAD platform, the ASAP protocol enables use of the “update” message for an alarm notification as follows:
  - a. the AMC automation platform sends an alarm notification to ECC/PSAP CAD
  - b. the ECC/PSAP CAD accepts the alarm notification and assigns a unique alarm event number to the notification
  - c. the ECC/PSAP CAD sends an acknowledgement to the AMC automation platform that includes the unique alarm number.
  - d. the alarm notification is immediately displayed in the CAD dispatch queue.
    - i. NOTE: completion of tasks a, b and c typically occurs in under 5 seconds
  - e. When the AMC automation system receives the event alarm number for the alarm notification, the automation system and CAD system functionality to exchange free form text messages via an update message specific to the alarm event number, is enabled
4. In accordance with the AMC workflow
  - a. the AMC operator and/or AMC automation system, enters AVS information in an update message specific to the alarm notification.
  - b. the automation system forwards the update message containing the AVS information to the ECC/PSAP CAD system.
5. Workflows within the AMC shall send the AVS “update” message as quickly as possible after the initial alarm notification.
6. The update message capability for alarm notifications remains available for the exchange of additional messaging as may be appropriate in accordance with the original purposes of the update message capability.

### 1. ECC/PSAP Workflow

1. Workflows within a PSAPs/ECC are determined by local Public Safety alarm management policies.
2. ECC/PSAP workflows should accommodate the slight delay between the initial alarm notification and subsequent AVS level information being received.

### 2. Update Message Format

1. The following chart defines the format for AVS data to be inserted into the update message field.

AVS Alarm Score	Fixed Message	Supporting data specific to alarm event
Level 1	AVS INTRUSION ALARM LEVEL 1 - CALL FOR SERVICE - NO ADDITIONAL INFORMATION AVAILABLE	
Level 2	AVS INTRUSION ALARM LEVEL 2 - CALL FOR SERVICE - WITH PROOF OR A HIGH PROBABILITY OF PERSON(S) AT THE ALARM SITE,	Operator enters what they saw or heard or know to confirm human presence.
Level 3	AVS INTRUSION ALARM LEVEL 3 - CALL FOR SERVICE - PERSON(S) PRESENT AND THREAT TO PROPERTY	Operator enters what they saw or heard or know to confirm threat to property.

Level 4	AVS INTRUSION ALARM LEVEL 4 - CALL FOR SERVICE - PERSON(S) PRESENT AND THREAT TO LIFE	Operator enters what they saw, or heard, or know, to confirm threat to life.
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### 3. Examples of Alarm Level message with supporting data

(Note the comma after the fixed text and the operator entered text)

#### Example 1

AVS INTRUSION ALARM LEVEL 1 - CALL FOR SERVICE - NO ADDITIONAL INFORMATION AVAILABLE

#### Example 2

AVS INTRUSION ALARM LEVEL 2 - CALL FOR SERVICE - WITH PROOF OR A HIGH PROBABILITY OF PERSON(S) AT THE ALARM SITE, observed person on camera at location

#### Example 3

AVS INTRUSION ALARM LEVEL 3 - CALL FOR SERVICE - PERSON(S) PRESENT AND THREAT TO PROPERTY, see two persons on video, wearing hoodies, hurriedly putting items in a backpack

#### Example 4

AVS INTRUSION ALARM LEVEL 4 - CALL FOR SERVICE - PERSON(S) PRESENT AND THREAT TO LIFE, multiple people in video, one with a handgun

## Appendix A (Informative)

3.1. These definitions are “informative”, in that, they are terms that are often used within the alarm industry but are not required language. Much of this listing’s source is found in the TMA ANSI CS-V-01. Definitions

### 3.1.1. Alarm Level(s) (0, 1, 2, 3, 4)

Levels are a system designed to add some meaning to the supervising center’s *Call for Service*. They are a result of operator observations and/or a combination of observations and automation assistance.

Defined as:

Level 0: No *Call for Service*

Level 1: A *Call for Service* with no other information.

Level 2: A *Call for Service*, with proof of or a high probability of knowing person or persons are present at the alarm site.

Level 3: A *Call for Service*, knowing person or persons are present at the alarm site and it appears there is a threat to property.

Level 4: A *Call for Service*, knowing person or persons are present at the alarm site and it appears there is threat to life.

### 3.1.2. Alarm Monitoring Center (AMC)

A facility that receives signals from protected premises alarm systems and at which personnel are in attendance at all times to act upon to these signals. (Also known as: Central Station, Monitoring Center, Supervising Station)

### 3.1.3. Analytical Data

Information that is the result of raw data being analyzed by program algorithms that have been developed to give understanding to the events being presented.

### 3.1.4. Analytical Data Confirmation

An automated process whereby raw elements of data, when put into context, result in the determination that there is a high probability that an event is occurring that warrants a *Call for Service* to the *ECC/PSAP*

### 3.1.5. Automated Secure Alarm Protocol (ASAP)

A form of electronic communication utilizing ANSI standard protocols developed cooperatively by the Association of Public-Safety Communications Officials (APCO) and The Monitoring Association. With ASAP, life safety signals are processed through the Nlets system of state-to-state *ECC/PSAP* communication.

### 3.1.6. Automation Data

Data that is presented to the operator that is the result of the *Alarm Monitoring Center’s* automation system.

### 3.1.7. AVS Intrusion Alarm Levels (0-4)

Once an Intrusion Alarm has been processed using the AVS-01 procedures an alarm level is established. When the ECC acknowledges the alarm receipt, this data is then transmitted to the ECC via the “Update” feature of the ASAP message protocol and the screen provided by the Automation system being utilized:

Example

“AVS INTRUSION ALARM LEVEL 2 - CALL FOR SERVICE - WITH PROOF OR A HIGH PROBABILITY OF PERSON(S) AT THE ALARM SITE, observed person on camera at location”



### **3.1.8. Biometrics**

The measurement and/or analysis of physical, biological, behavioral, and other human characteristics typically used in verifying the identity of a person or that a person is present.

### **3.1.9. Burglar Alarm (Intrusion Alarm)**

An event that is received by the monitoring center that indicates a sensor(s) has detected an entry into a protected premises, that occurs when the alarm system is “armed.”

### **3.1.10. Call for Service (Notification)**

A call or *Data Message* to the law enforcement authority, such as *ECC/PSAP/911* or the telephone number used to reach the responding law enforcement agency, that the *Alarm Monitoring Center* is in receipt of an alarm.

### **3.1.11. CS-V-01 (Alarm Confirmation, Verification and Notification Procedures)**

A standard that was first developed and published in 2004, by the then CSAA (now TMA) by a committee which had representatives from; security industry, national trade associations, a sheriff’s office, an insurance company, and UL. It was based on industry best practices that had been used in industry supported studies. It has gone through several upgrades over the years and just has been updated in 2021.

The standard spells out the “best practices”, in alarm handling, in the attempt to reduce false *Calls for Service*. And with the integration of it within AVS-01, AVS-01 builds upon that foundation.

*CS-V-01* is also suggested to be a part of municipal ordinances, as suggested by it’s being incorporated into the “Model Ordinance” of the Security Industry Alarm Coalition (SIAC).

### **3.1.12. Customer Confirmed Event**

Monitoring station personnel in contact with the customer and/or customer-representative, receive information from same that the alarm event is valid.

#### **a. Electronic**

An electronic signal transmitted to the *Alarm Monitoring Center* that indicates to its personnel or to its *Call for Service* computer that no emergency appears to exist or confirms that an emergency does exist.

#### **b. Verbal**

A personal contact by means of telephone or audio conversation with an authorized code holder or other authorized person for the protected premises to confirm that no emergency exists, or confirms that an emergency does exist.

#### **c. Video**

An electronic picture, pictures or images viewing an area of the protected premises from which an alarm signal has been received which permits *Alarm Monitoring Center* personnel to view the area which has an alarm to confirm suspicious and unauthorized activity is or is not occurring.

### **3.1.13. End User (Customer/subscriber)**

The person who is using the alarm system. Very often not the owner/customer/subscriber, but a person who is authorized to operate the “*End User*” interface.

### **3.1.14. Emergency Communications Center/Public Service Answering Point (ECC/PSAP)**

A facility responsible for receiving and processing Calls for Service (3.1.10) for emergency service organizations such as fire departments, law enforcement departments, and emergency medical service organizations.

### **3.1.15. Enhanced Call Confirmation (ECC, formally ECV – Enhanced Call Verification)**

A process, described within the ANSI TMA CS-V-01 standard, whereby the supervising-station will make multiple attempts to confirm or deny that an alarm is or is not false.

### **3.1.16. Human Activity**

There are indications that humans are and/or have recently been in the area of the alarm event.

### **3.1.17. Human Presence**

Data presented that would indicate there is a human(s) present on the protected property.

### **3.1.18. Level (See 3.1.1)**

**3.1.19. Metadata** - Data about the content, quality, condition, and other characteristics associated with media or other data. Examples including, but not limited to, date/time of creation, source, versioning.

### **3.1.20. Structural Damage**

Damage that is evident to the very structure of the protected premises. (Window broken, door forced open)

### **3.1.21. Trip/Tripped**

The act or current state of a detector that has been violated by a condition which it was designed to detect, i.e.; opening of a door, motion detector “seeing” motion in its field of view, heat detector’s temperature being at a level it was designed to detect, and the like.

### **3.1.22. Unknown Persons Onsite**

Within the Artifact, unidentified persons are detected, cannot identify themselves, and cannot be identified to or by the monitoring station personnel.

### **3.1.23. Update (ASAP Message)**

An element, available within the ASAP to PSAP protocol, that is labeled “Update”, which supports sending additional data to the ECC/PSAP that has already been made aware of the *Call for Service*.