

Preparing for the National EAS Test

Information and Preparation for DASDEC™ Users

Introduction

On November 9th, 2011, FEMA and the FCC will conduct the first national test of the EAS system in the lower 48 states. All broadcast radio and television stations are required to participate in this test, and report back to the FCC within 45 days with their test results.

This advisory is written to provide broadcasters with some key information about the upcoming national EAS test. Below, we provide basic background on the operations of national alerts during an “actual” emergency, as well as detail on the upcoming national EAN test procedures scheduled for November 9th, 2011.

Background: How National EAS Alerts (“EAN” and “EAT”) Work

Per the FCC, the primary purpose of the Emergency Alert System is to provide a means by which the President or his designee can speak to the country in the case of a national emergency. The EAS is defined by the FCC Part 11 rules. In current FCC rules, two alert codes are reserved for use by national authorities:

- **“EAN” = Emergency Action Notification**
 - Message format: “EAN” tones → Unlimited audio message from national authorities → “EOM” tones
- **“EAT” = Emergency Action Termination**
 - Message format: “EAT” tones → Message indicating the emergency action is over → “EOM” tones

It is important to understand the *EAT is a completely separate event code* with a different message from the EAN as it follows the same message format as any other EAS message. It is not used as a terminator of the EAN. It does signal that whatever event opened by the EAN has now ended, but it is not a component in the EAN message format.

During an Emergency Action Notification (“EAN”), broadcasters receive an actual (or live) “EAN” message. Their EAS devices monitoring respond with the header tones for the “EAN” message, followed by switching in the real-time audio, which is unspecified in its duration, from national authorities. The end of this message would be signaled by the standard End of Message (“EOM”) tones, which is the signal to the EAS device that the “EAN” message announcement has ended.¹

The First National EAS (“EAN”) Test

On November 9th at 2:00 p.m. EST, the FCC and FEMA will initiate a national test of the Emergency Alert System. This will be the first national EAS test ever conducted and will consist of a single broadcast Emergency Action Notification (“EAN”) message sent simultaneously from a FEMA Operations Center to Primary Entry Point (PEP) AM/FM radio stations across the country.

During the November 9th test, PEP stations will relay the “EAN” message to other broadcast and cablecasters in their coverage area, as well as to the public directly over that PEP radio station. This national test is conducted to verify the conventional Emergency Alert System. This test will NOT involve the new Common Alerting Protocol [CAP] capabilities.

¹ The End of Message (“EOM”) is the audio signal to the EAS device to end decoding of an alert event. In the case of the EAN, the EOM instructs the EAS device that the alert announcement has ended and to return to a normal operating mode.

Broadcasters are expected to monitor at least two sources (in most cases the PEP and an LP-1 or LP-2 stations) to receive the EAS message, and broadcast the message to the public in their area. These monitoring assignments are typically specified in state EAS plans. *If you are uncertain as to your EAS monitoring assignments, please consult your state or territorial EAS plan, or contact your State Emergency Communications chairperson.* You may check the current listing of state plans at the FCC website (insert here)

During the test, broadcasters will receive a live “EAN” message with a Washington, DC location code. Your DASDEC will monitor the tone headers for the “EAN” message, which will be followed by approximately 3 to 3 ½ minutes of audio from FEMA. The end of the test will be signaled by the standard EAS End of Message (“EOM”) tones, which signals to the DASDEC and other EAS encoder/decoders that the “EAN” message transmission has ended, and regular programming may resume.

- **An “EAT” message will NOT be used during the national test.**

Within 45 days after the test, EAS participants will be required to report to the FCC the results of the national EAS test at their facility. An on-line electronic reporting system is being set up by the FCC to help simplify this reporting. At this writing we understand the information to be reported may include: time the “EAN” was received, duration of the “EAN”, how the “EAN” functioned at that facility, the specific type of EAS equipment used at the facility and other observations the EAS participant wishes to make.

Preparing the DASDEC

Digital Alert Systems is continually working to improve its products and customers are encouraged to download and install the latest version of software at:

www.digitalalertsystems.com/registration_updates.html

With the rare exceptions noted below, your equipment is factory ready to handle an EAN message, including the upcoming National EAS test. The DASDEC will automatically forward the EAN with the Washington, DC location code and will not require further configuration on your part. The DASDEC automatically forwards an EAN regardless of its operating state - automatic or manual forward mode. No human intervention is required. If your facility has been successfully running the Required Monthly Test (RMT) on all program streams there should be no problems with the wiring configurations or settings.

In advance of the national EAS test your preparations should involve the following:

- Double check the DASDEC is powered on. (sounds silly, but check)
- Confirm in your internal tuners or external monitoring devices are set and able to receive the assigned source for an EAN per your State/Territorial EAS Plan.
- If using external radios, make sure the audio for the monitoring device or tuner is properly configured and connected to your DASDEC device through an available input.
- The DASDEC’s internal tri-band radio receivers provide optimized performance however, if using external radio receivers, we suggest using a receiver/tuner with good solid audio output levels, and 75Ω coaxial cable to minimize interference.
- Ensure each DASDEC has been programmed with the correct station/facility call letters.
- Confirm the clock is properly set. If your using the NTP function it should be correct, however it’s very important to verify.
- For radio stations, make sure that the DASDEC is properly connected to your station/facility audio air chain
- For television operations, make sure that the DASDEC is properly connected to the station/facility audio air chain and character generator.
- Confirm the **Duplicate EAS Event** settings (more information below).
- EAS-Net centralcast users should read the special application note available on the Digital Alert Systems website..

Conclusion

The information contained in this advisory has been provided to assist you in understanding and preparing for the upcoming national EAS test. We greatly value your feedback, assessments and commentary during the test preparation process, as well as after the actual national EAS test itself. As always, we are available to assist you at support@digitalalertsystems.com or via telephone at 585-765-1155.

IMPORTANT EXCEPTIONS REGARDING FIPS AND EAS CODE FILTERING

The following applies to all software version 2.0-0 a03 and above:

1. If you are using Serial Port devices, GPO relays, NetGPO relays, or the Monroe Hub Controller relays, and you have set up FIPS codes or EAS codes as filters, you do NOT have to specifically add EAN or EAT or the any specific FIPS codes to activate the GPO during an EAN or EAT event. The EAN/EAT event codes are now purposely included, providing a little less flexibility, but much simpler and more intuitive user interaction.

The following applies only to software version 2.0-0 a02 or below

1. If you are using GPO relays, NetGPIO relays, or the Monroe Hub Controller relays no changes are necessary if the current settings show **Activating FIPS = Any FIPS** and **Activating EAS Codes = All EAS Codes**.

2. If you have set up FIPS codes or EAS codes as filters, then you must also ensure an EAN will activate if desired.

If specific FIPS codes are programmed for a relay, add the two District of Columbia FIPS codes, **Washington,DC (011000)** and **District of Columbia,DC (011001)** into the **Activating FIPS** list².

If specific EAS codes are programmed for the relay, be sure to add the **NATIONAL EMERGENCY ACTION NOTIFICATION** and **NATIONAL EMERGENCY ACTION TERMINATION** to the **Activating EAS Codes** list if activation of this relay during an **EAN** or **EAT** is desired. Typically relays run upon EAS Audio and Video are used to insert EAS audio into a program stream, and should be EAN and EAT enabled.

NOTE: GPO programming in releases prior to 2.0-0_a03 allows EAN's to be purposely blocked. You must carefully review your filtering configuration to ensure the desired behavior is properly programmed.

3. For serial devices, code filtering is rarely used therefore; most systems will not require this advanced option, Again, no changes are necessary if the current settings show **Activating FIPS = Any FIPS** and **Activating EAS Codes = All EAS Codes**

If specific FIPS codes are programmed for a serial port, be sure to add the two District of Columbia FIPS codes, **Washington,DC (011000)** and **District of Columbia,DC (011001)** into the **Activating FIPS** list for *each* filtered serial port.

If specific EAS codes are programmed for a serial port disregard the presence of EAN/EAT in the list, and be sure to add the **NATIONAL EMERGENCY ACTION NOTIFICATION** and **NATIONAL EMERGENCY ACTION TERMINATION** to the **Activating EAS Codes** list.

Please refer to the current operating manual if you need further instructions on setting the FIPS and EAS filtering options.

² This may require placing the two codes to the selectable list by entering **Setup > Decoder > Forwarding** in the section **Configure FIPS code filters for Decoder Auto-Forwarding & Manual Forward Blocking** selecting **District of Columbia, DC (11)** from the pull down list, then select the two FIPS in the lower table and clicking Add -> to include them to the **Configured Available Encoder FIPS Locations** list on the right. Then returning to the GPO configuration to add them to the activation list.

Duplicate Alert Handling

The DASDEC offers a number of options for handling duplicate alerts. In this context duplicates do not refer to exact duplicates, but differ in the **EAS Station ID** field. These are alerts forwarded over the EAS system later thus is decoded after the first instance of the alert has been decoded.

For software version 2.0-0 and above

On the **Setup > Decoder > Forwarding** page is a section labeled **Duplicate Alert Active List Options**. Our recommendation (using the pull-down menu select **Cancel duplicate alerts (that only differ in Station ID and/or ORG code) as they arrive. Place on expired list** option as shown in Figure 1. This option provides a "first in, only one allowed out" setting so if a duplicate alert arrives from another station, it is simply auto expired.

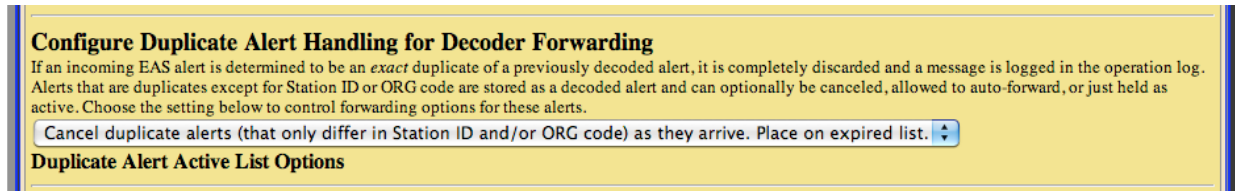


Figure 1 Recommended setting for Duplicate Alerts

Note: If operators are used to selecting which duplicate to forward based on audio quality then you will not want to use this option and select from the other option below.

The other selection option is **Allow duplicate alerts (that only differ in Station ID and/or ORG code) to be placed on active list** as shown in Figure 2 meaning a duplicate alert (again, defined as the same alert code/time/location but different station ID) will be displayed on the active alert list.

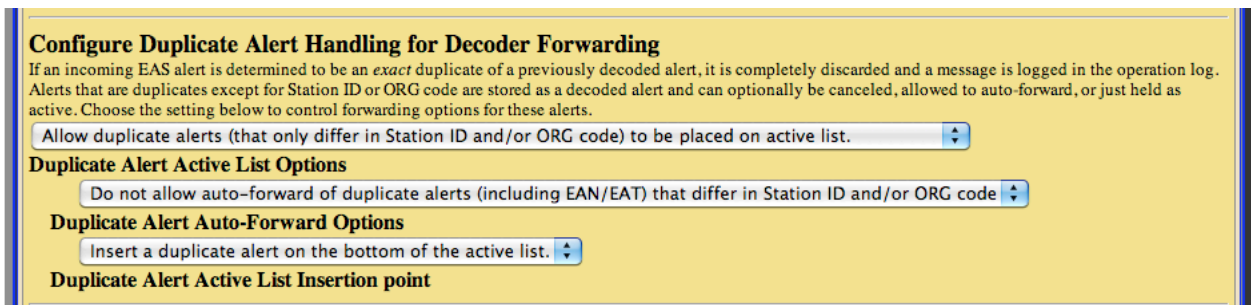


Figure 2 Allowing Duplicate Alerts to be placed on active list with recommend sub-options.

When duplicate alerts are allowed on the active list, two sub selections appear.

In all but the rarest occasions, the setting for **Duplicate Alert Auto-Forward Options** should be set via the pull-down menu to **Do not allow auto-forward of duplicate alerts (including EAN/EAT) that differ in Station ID and/or ORG code**. This will stop auto-forwarding of a 2nd **EAN** from another station.

We also recommend **Duplicate Alert Active List Insertion Point**, be set to **Insert a duplicate alert on the bottom of the active list** to reduce an opportunity for an operator to manual forward the duplicate alert.

For software version 1.8-6 and below

Duplicate alerts are always allowed on the active list, but auto-forwarding is controlled through the **Duplicate Alert Auto-Forward Options** control. On the **Setup > Decoder > Forwarding** page select **Do not allow auto-forward of duplicate alerts (including EAN/EAT) that differ in Station ID and/or ORG code** from the option list.

For software version 1.8-5a and below: Upgrade your software! The duplicate alert handling control option does not work for EAN/EAT alerts.