

Sage Alerting Systems Getting Ready for the National EAN Test

Sage Digital ENDEC 3644 – all firmware versions
Sage EAS ENDEC 1822 – firmware versions 5.124, 6.1, and 6.2
Sage EAS ENDEC 1822 – older firmware, 5.88 to 5.123
Sage EAS ENDEC 1822 – versions prior to 5.88 (including version 5.27)

1 Summary

This document describes steps you should take to ensure that your station will perform properly for any live EAN, such as the test EAN that is currently scheduled for 2:00pm Eastern Time, November 9, 2011.

For the Sage Digital ENDEC, you will need to review the audio levels document to make sure that your audio levels are not too hot. Please read http://www.sagealertingsystems.com/SB_001.pdf

For the Sage Digital ENDEC (3644) as well as the original Sage EAS ENDEC (1822), the default filter settings for EAN will work correctly, and your station will relay the EAN. It is possible to modify your settings so that the ENDEC will NOT relay the EAN. This document describes how to verify that your ENDEC still has its default EAN settings.

This document is based on our understanding of how EAN's are being sent, based on information from FEMA and from the results of the Alaska tests. The default settings worked fine in Alaska and in continuing testing performed by FEMA at its test facility.

It should also be noted that the FCC is currently deciding what to do with the EAS Handbook, which has been acknowledged by the FCC to be out of date. A new handbook may not be available before the November test. As of September 1, 2011, statements from FEMA and FCC are that an EAT will not be sent as part of the November test. This will not affect the ENDEC's ability to properly relay and finish an EAN. The normal default operation of the ENDEC for EAN meets all of the current requirements for handling an EAN for regular EAS participants.

2 What is an EAN?

The EAN is an Emergency Action Notification, and is the code that will be sent by the President in the event of a national emergency. This is the primary reason for the existence of the EAS system. The EAN differs from all other alerts in that it has no time limit. All other alerts are limited to two minutes of audio, the EAN is not. The EAN should also be carried immediately – you need to start sending it even while the alert is still being received. The default settings will make sure that this happens.

3 Sending Automatically

The EAN is intended to be sent immediately, and automatically. If you are automated and unattended, you must make sure that the EAN can get on the air, on its own. You should have your audio routed through the

ENDEC's main input/output (either analog or digital), or through downstream switches that are controlled by the ENDEC'S GPO "push to talk" mechanism.

Some stations choose to route the ENDEC through their console, requiring an operator to manually put the ENDEC on the air. In this case, it is very important that closing end of message (EOM) signal (braap braap braap) is also sent on the air. This is especially important if your station is monitored by other stations, such as if you are an LP1 or LP2. If your operators hear the end of the spoken portion of the alert, or notices several seconds of dead air, they MUST NOT simply switch the ENDEC out of the loop. This will keep downstream stations from hearing the end of message, and they will keep relaying your signal, even after your station has returned to normal programming. A mistake at your station will cause problems for other stations. Do not make this mistake.

If, for some reason, you are sure that the EAN has terminated incorrectly upstream from you, you must get your ENDEC to send the EOM tones. This is easy, just use the "abort" soft key from the front panel. Then read the screen, and click yes twice more. The ENDEC will send the EOM tones. This is the preferred way to end an abnormal EAN event.

DO NOT simply turn off, or reboot your ENDEC. This will not send the EOM message, again causing problems for downstream stations.

If you do power off or reboot your ENDEC, or if something else keeps the EOM tones from going on the air, you can clear the downstream stations by sending a required weekly test. The EOM from the weekly test will also clear any downstream stations that are still waiting for an EOM. They will terminate the EAN relay, and send the EOM tones to their downstream listeners.

To review, your station must send the EOM tones on the air to clear your downstream listeners. If an EOM didn't go to air, for whatever reason, send an RWT, and make sure it does go to air.

4 Filter for EAN

You must have a filter for event type EAN, with "all locations" or a blank for locations. The filter must also have Primary Entry Point or All originators as the originator. The ENDEC ships with a suitable file for EAN. If you made changes to that filter, you will need to check your settings.

5 Checking your Filter Settings

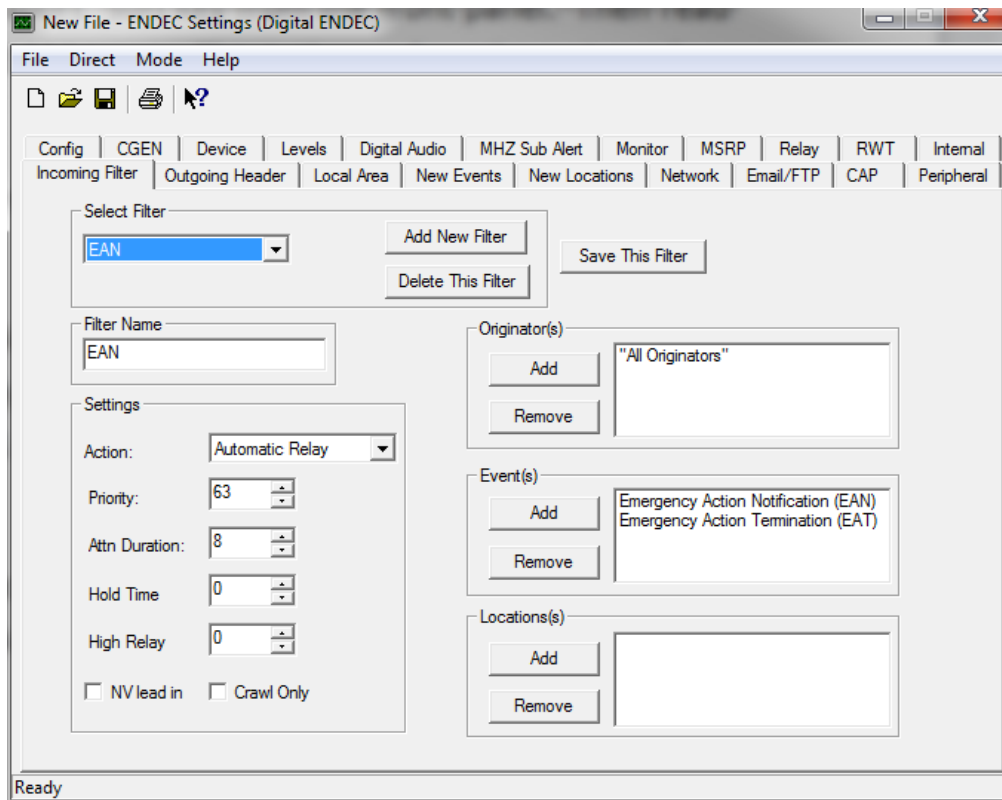
5.1 Sage Digital ENDEC Model 3644, All Firmware Versions

Use the ENDECSetD program to review your Incoming Filters. You can download it from the Sage PC software page: <http://www.sagealertingsystems.com/support-pc.htm>

You can download the settings file through the LAN or through a serial port. Refer to the quick start guide for assistance:

<http://www.sagealertingsystems.com/docs/digital%20endec-%20quick%20start%201-0g.pdf>

You should have a filter named EAN. By default, it will look like this:



You should not add other alerts to the EAN filter.

If you have added EAN to some other filter and deleted the default EAN filter, your configuration may work, if you have a wildcard location and originator, and a priority of 63. If you don't, the best action is to remove EAN/EAT from your filter, and add the above filter.

If you don't have EAN or EAT in any of your filters, the ENDEC will blink four lights on the front panel, and will have a descriptive error message in the "MSG" buffer on the front panel.

You need a wild card location for the EAN, either blank, or "all locations".

EANs are not sent to individual states or counties, EANs are nationwide events. There is no “all of United States” FIPS code. While there may be such a choice in the ENDECSetD list, it is there to allow the ENDEC to display “all of United States” on the log file, no matter what FIPS code is present in the EAS list. The confusion over location codes and the EAS is caused by not having an “all United States” FIPS code in the FCC’s part 11 rules, and by the EAS protocol being limited to a total of 31 location codes per message. Since there is no all of United States code, and there are more than 31 states, there is no way to issue a single nationwide alert. The solution that FEMA is using is to send the EAN to the Washington DC location code. The ENDEC, by default, will relay this EAN because of its wildcard location in the EAN filter.

5.2 Sage EAS ENDEC Model 1822, Firmware Versions 5.124, 6.1, and 6.2

Use the ENDECSET program to review your Incoming Filters. You can download it from the Sage PC software page: <http://www.sagealertingsystems.com/support-pc.htm>

To use the ENDECSET program, set one of the ENDEC serial ports to the ENDECSET device. Connect a “null modem” serial cable (one that reverses pins 2 and 3) between a serial port on the PC and the selected com port on the ENDEC. If your PC does not have a serial port, you’ll need to purchase a USB to serial connector from your local electronics emporium, and connect the null modem cable to that. Use the ENDECSET Direct/Settings menu to select the PC’s comm. Port and baud rate. The ENDEC’s computer, com2, com3, and com6 are usually 9600 baud, com4 and com5 are 1200 baud.

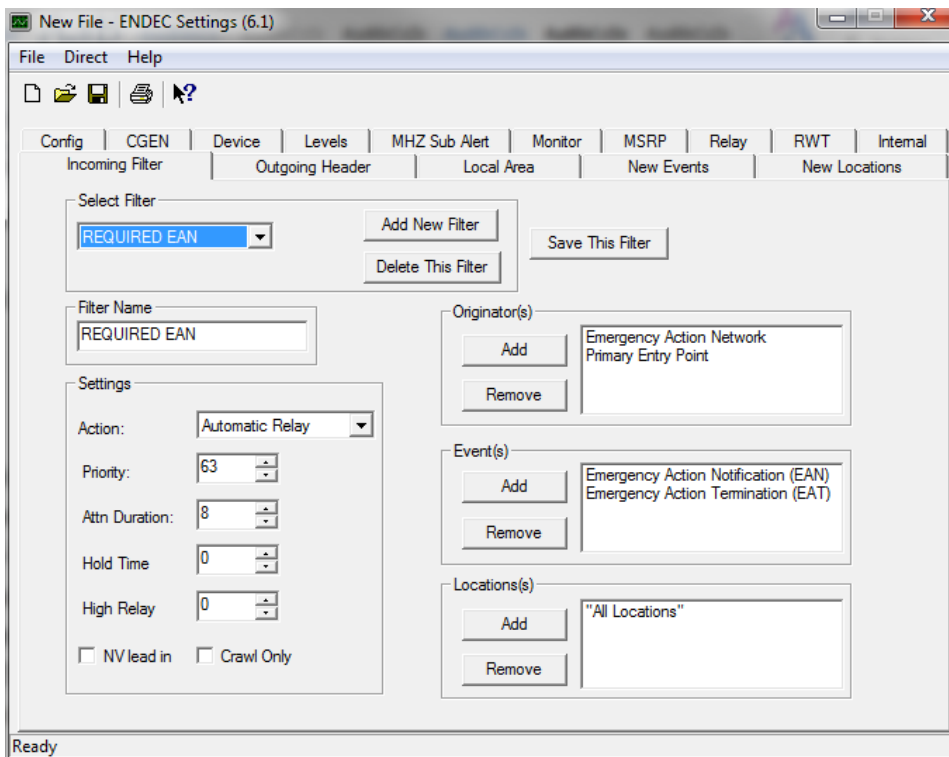
Using the ENDECSET Direct/Get Settings from ENDEC menu, save the settings from your ENDEC into a file.

Edit the settings as required.

Using the ENDECSET Direct/Put This Settings File to ENDEC menu, send the editing settings to the ENDEC.

Finally, use the ENDECSET Direct/Reboot ENDEC menu to restart the ENDEC.

You should have a filter named REQUIRED EAN. By default, it will look like this:



You should not add other alerts to the REQUIRED EAN filter.

If you have added EAN to some other filter and deleted the default REQUIRED EAN filter, your configuration may work, if you have a wildcard location and originator, and a priority of 63. If you don’t, the best action is to remove EAN/EAT from your filter, and add the above filter.

If you don't have EAN or EAT in any of your filters, the ENDEC will blink all four lights on the front panel, and will have a descriptive error message in the "MSG" buffer on the front panel.

You need a wild card location for the EAN, either blank, or "all locations". See the above description for the Digital ENDEC for why this is so.

5.3 Sage EAS ENDEC Model 1822, Firmware Versions 5.88 to 5.123

Use the EPROG program to review your Incoming Filters. You can download it from the Sage PC software page: <http://www.sagealertingsystems.com/support-pc.htm>.

Warning, this software is from 1997, and will not run under windows 7. You will need to load it under the Windows 7 XP mode.

Download your settings using the procedure in the eprog readme file. Edit the settings file using eprog command 5, and use the <F7> print to file function key to print your settings to a file.

You should have a filter named REQUIRED EAN. By default, it will look like this:

```
Incoming:
      name: REQUIRED EAN
      originator: Emergency Action Network
      originator: Primary Entry Point
      event: EAN, Emergency Action Notification
      event: EAT, Emergency Action Termination
(-00001) location: All Locations
      priority: 63
      action: Automatic Relay
ATTN Duration: 8
      Hold Time: 0
      NV lead in: N
      crawl only: N
```

You should not add other alerts to the REQUIRED EAN filter.

If you have added EAN to some other filter and deleted the default REQUIRED EAN filter, your configuration may work, if you have a wildcard location and originator, and a priority of 63. If you don't, the best action is to remove EAN/EAT from your filter, and add the above filter.

If you don't have EAN or EAT in any of your filters, the ENDEC will blink all four lights on the front panel, and will have a descriptive error message in the "MSG" buffer on the front panel.

You need a wild card location for the EAN, either blank, or "all locations". See the above description for the Digital ENDEC for why this is so.

5.4 Sage EAS ENDEC 1822 – versions prior to 5.88

Versions prior to 5.88 are no longer supported. All ENDEC users were sent a update ROM with version 5.88.

In the very unlikely event that you have an ENDEC will a version less than 5.88 (version 5.27 was the initial 1996 release), you will need to verify your settings with the front panel. Refer to the user manual here: <http://www.sagealertingsystems.com/docs/endecman6-1.pdf>

The original version of the ENDEC manual is not available on line, but the procedure to edit filters is the same. See section 5.4