iTX Emergency Alert Service

User Manual

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Miranda

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1 INTRODUCING THE iTX EMERGENCY ALERT SERVICE

iTX provides support for the FCC Emergency Alert System (EAS) required at all United States call letter stations. It currently supports the following EAS encoder/decoder devices, or ENDECs:

- Trilithic EASyCast
- Monroe DASDEC-II*

  * Must be purchased with the 'DVS168 Communication Protocol' option.

EAS control is provided by an EAS button on an iTX Desktop working with the iTX Emergency Alert Service. The service runs on a backend server and receives EAS alert data from a configured ENDEC.

On processing an EAS event, an ENDEC sends an audio (WAV) file and text (TXT) file via FTP to the server where the iTX Emergency Alert Service is running. The audio file contains a voice-over for the alert; the text file contains the text that is to be displayed in a CG crawl while the voice-over is playing.

Once the files are transferred, the ENDEC opens a TCP/IP connection to the iTX Emergency Alert Service and sends a notification message to the configured channel. The service informs an EAS button on the iTX Desktop of the EAS event. The EAS button signals to the operator that there is a pending emergency alert.

The operator selects a primary event in the schedule grid and clicks the EAS button. This adds the current/last EAS event as a secondary event to the selected primary event with a default 10 second offset (the offset time is configurable). When the schedule reaches the EAS event, the voice-over and CG events playout over the video-clip or live event that is currently or about to go on air.

Multiple ENDECs can be connected to the same iTX Emergency Alert Service and then assigned to individual playout channels. An additional license can enable some EAS devices to use SNMP traps to check connectivity to the iTX Emergency Alert Service.

2 CONFIGURATION INSTRUCTIONS

iTX support of the Emergency Alert System relies on the proper configuration of several hardware and software components, including the EAS device, ITX Emergency Alert Service and the iTX Desktop's EAS components.

The following sections describe how to configure the necessary iTX and EAS device components and parameters to receive and playout EAS messages on an iTX channel:

- "Installing iTX Emergency Alert Service on the Framework Server" on page 2-2
- "Configuring a Trilithic EASyCast device" on page 2-4
- "Configuring a DASDEC-II device" on page 2-7
- "Installing the iTX Desktop EAS components" on page 2-9
- "Configuring the iTX Emergency Alert Service" on page 2-10

☑ NOTE

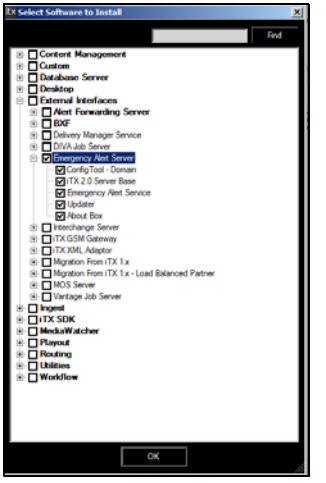
To limit the scope of this document, the configuration procedures in this chapter assume that the ITX system and EAS devices are properly installed and that the iTX channel configuration already exists.

Installing iTX Emergency Alert Service on the Framework Server

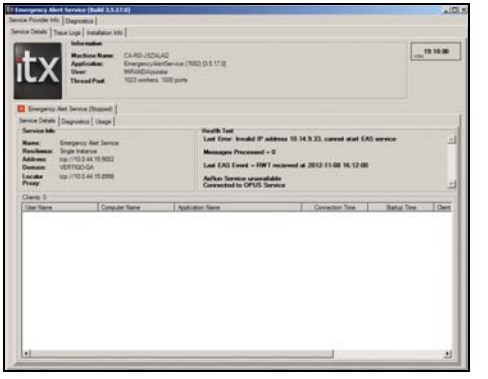
The iTX Emergency Alert Service runs on the iTX Framework server and interfaces with the EAS devices that issues EAS files, as well as the iTX Desktop components that schedule the playout of the EAS messages.

To install the iTX Emergency Alert Service:

1. If the Emergency Alert Service has been previous installed, begin by stopping the Emergency Alert Service using the iTX Server Controller.
2. Run the iTX installer on the iTX Framework Server and select the **Emergency Alert Service** components.



3. Verify the installation by selecting **Start>All Programs>iTX 2.0>Server Controller** to ensure that the Emergency Alert Service is listed on the Server Controller and that the **Emergency Alert Service** window is also open. Select the **Trace Logs** tab and the **Diagnostics** tab to check for any errors.



4. Ensure that an FTP Server is set up on the Framework Server. If not, proceed to set one up.

5. Ingest the iTX EAS Desktop template files.
   a. Create a folder in the Media Watcher Inbox that matches the name of the channel using the EAS.
   b. Navigate to the following directory:
      `C:\Program Files (x86)\iTX 2.0\Services\EmergencyAlertService\DesktopTemplates`
   c. Copy the **`ChannelControlEas.DTP`** and **`EasControl.DTP`** files and paste them in the iTX Inbox.

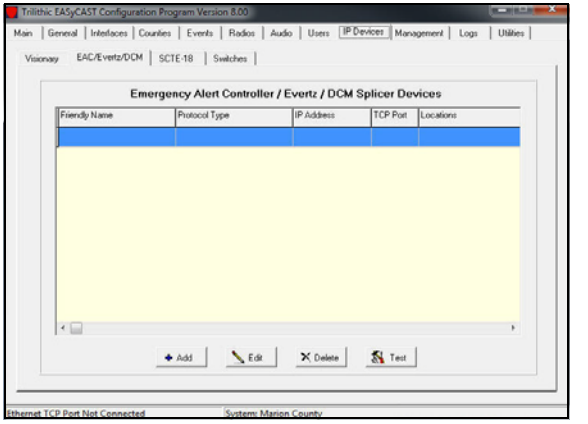
Configuring a Trilithic EASyCast device

The iTX Emergency Alert Service supports the EASyCast device by Trilithic.
Please consult the manufacturer's web site for official documentation and installation instructions (http://eas.trilithic.com).

The following procedure guides you through the steps required to configure the EASyCast device to feed EAS messages to the iTX Emergency Alerts Service.

1. Start the EASyCAST Configuration software by double-clicking the EASyCAST icon on the desktop, or by using the Windows Start button to navigate to the EASyCast program.

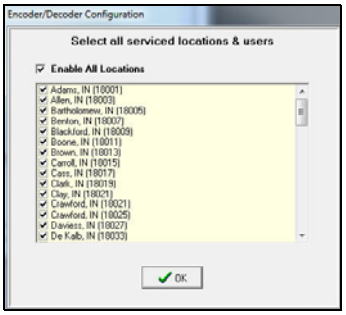
2. Select the **IP Devices** tab and the **EAC/Evertz/DCM** tab. Click the **Add** button.



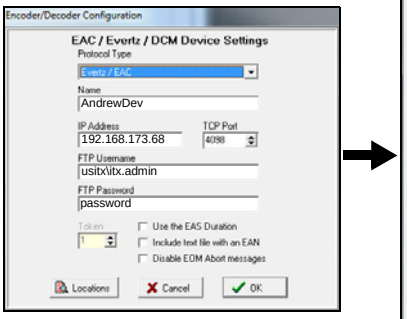
3. Specify a name, the IP Address, TCP Port, FTP Username and FTP Password of the machine hosting the iTX Emergency Alert Service.

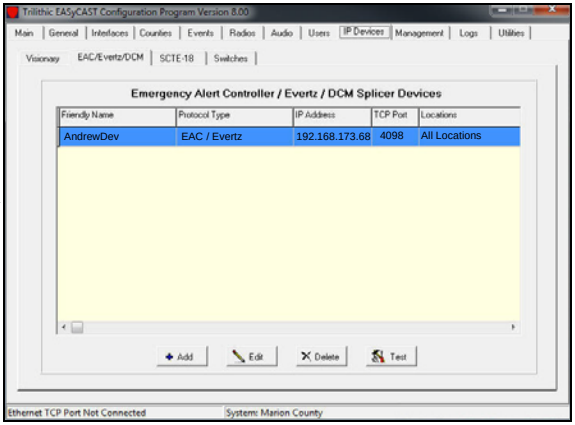
   Ensure that the IP Address and Port are identical to those configured for the iTX Emergency Alert System (**EAS Listener IP Address** and **EAS Listener Port**) as described on page 2-11.

4. Click the **Locations** button, select **Enable All Locations** and click **OK**.



5. Click **OK** in the Encode/Decode Configuration dialog and the device is added.





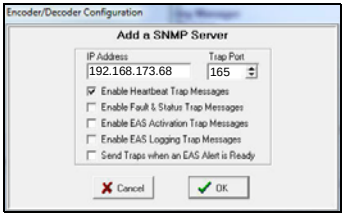
6. Optional - Some EAS devices, including the EASyCast, can be configured to use SNMP traps to check the device's connectivity to the iTX Emergency Alert Service. Note that an additional license is required to use this functionality.

   To configure the EASyCast device receive SNMP heartbeat traps:

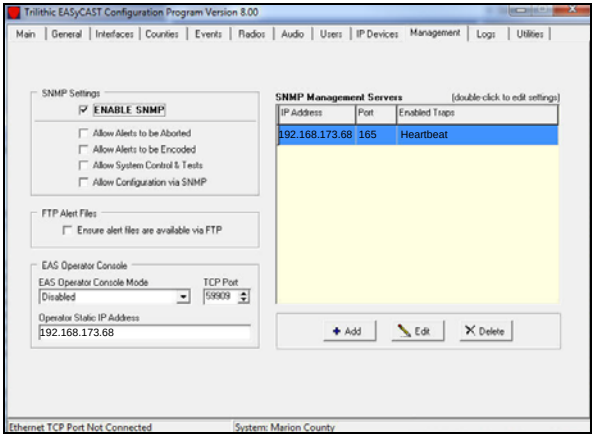
   a. Select the **Management** tab and click **Add** to add the ENDEC Manager Server.

   b. Specify the **IP Address**, **Trap Port** and select the **Enable Heartbeat Trap Messages** option. Click **OK**.

   Ensure that the IP Address and Trap Port are identical to those configured for the iTX Emergency Alert System (**EAS Listener IP Address** and **EAS Listener Port**) as described on page 2-11.



c. With the ENDEC Manager Server added, select the **Enable SNMP** option and specify the IP Address in the **Operator Static IP Address** field.



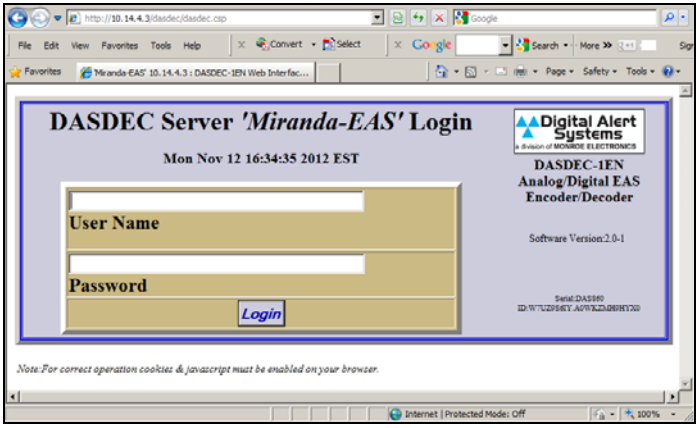
7. Select the **Main** tab and click the **Program Configuration** button to apply the changes made to the EASyCast device's configuration.

Configuring a DASDEC-II device

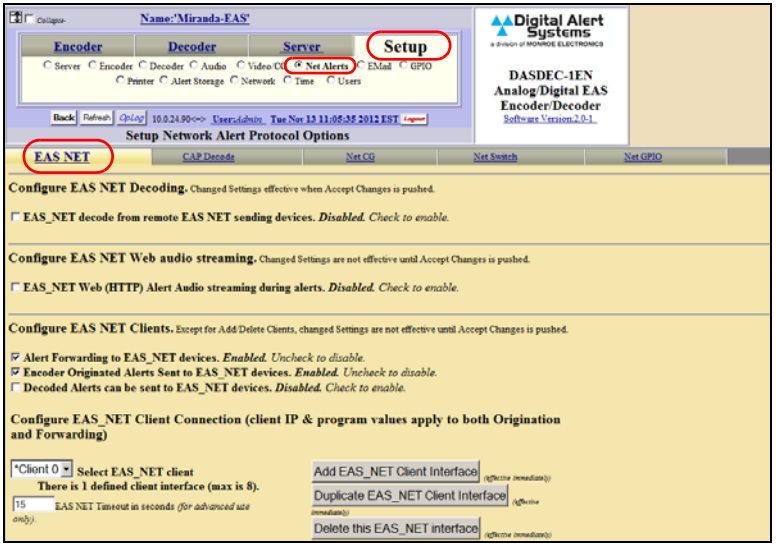
The iTX Emergency Alert Service supports the DASDEC-II by Monroe Electronics. Please consult the manufacturer's web site for official documentation and installation instructions (http://www.digitalalertsystems.com).

The following procedure guides you through the steps required to configure the DASDEC device to feed EAS messages to the iTX Emergency Alerts Service.

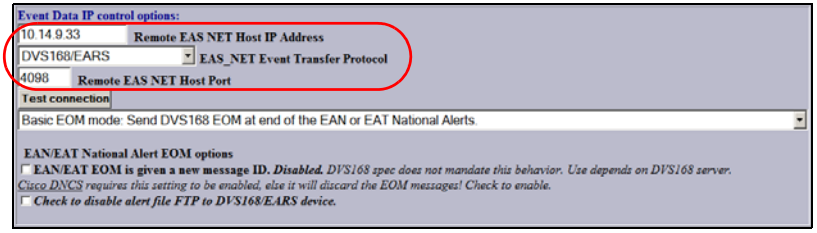
1. Open Internet Explorer and type the DASDEC device's IP address in the address bar (http://10.14.4.3) and hit return.



2. Log into the DASDEC Server by entering a valid User Name and Password.
3. Select the **Setup** tab, enable the **Net Alerts** radio button and select the **EAS Net** tab.



4. Scroll down to the **Event Data IP Control** section. Specify the IP address and port of the host running the iTX Render Service.

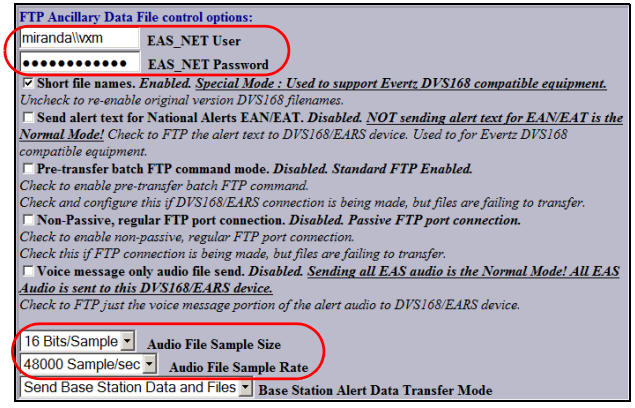


5. In the **FTP Ancillary Data File control options**, specify the FTP user account information in the **EAS_NET User** and **EAS_NET Password** fields.

   Note the *double slash characters* after the domain name (e.g. miranda\\vxm)

   Also, set the **Audio File Sample Size** and **Audio File Sample Rate** fields.

   Note that iTX supports the audio combination of 16 Bits/Sample and 48000 Sample/second without the need to up-convert.



6. Click the **Accept Changes** button to apply the new settings.
7. Close the DASDEC configuration tool.

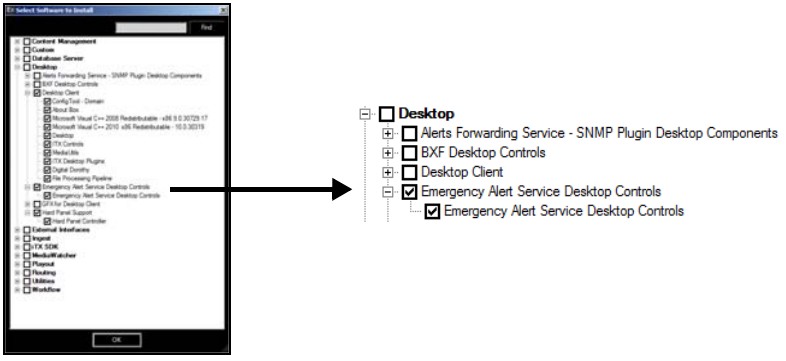
Installing the iTX Desktop EAS components

Two layout views must be installed on the computer hosting the iTX Desktop:

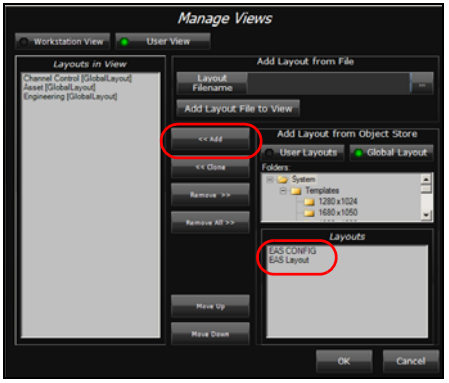
- The **EAS Config** layout tab in the iTX Desktop displays the **Emergency Alert System Configuration** window, which contains the iTX EAS parameters.
- The **EAS Layout** provides an **iTX Channel Control (Global)** layout containing an **EAS button**. The EAS button is associated with the iTX Emergency Alert Service and is the operators main control for receiving and playing out EAS messages.

To install the iTX Desktop EAS components and add the layouts:

1. Run the iTX Installer on the computer hosting the iTX Desktop application and select the **Emergency Alert Service Desktop Controls** options.



2. Once the installation is complete and open the iTX Desktop application.
3. Open the Manage Views dialog by right-clicking the Layout Selection Bar (bottom) and select **Manage Views**.
4. Select the **User View** tab and then select **Global Layout** from the **Add Layout from Object Store** section.
5. Select the **EASConfig** and **EAS Layout** Global layouts and click the **<<Add** button to add these layouts to the **Layouts in View** pane. Click **OK**.



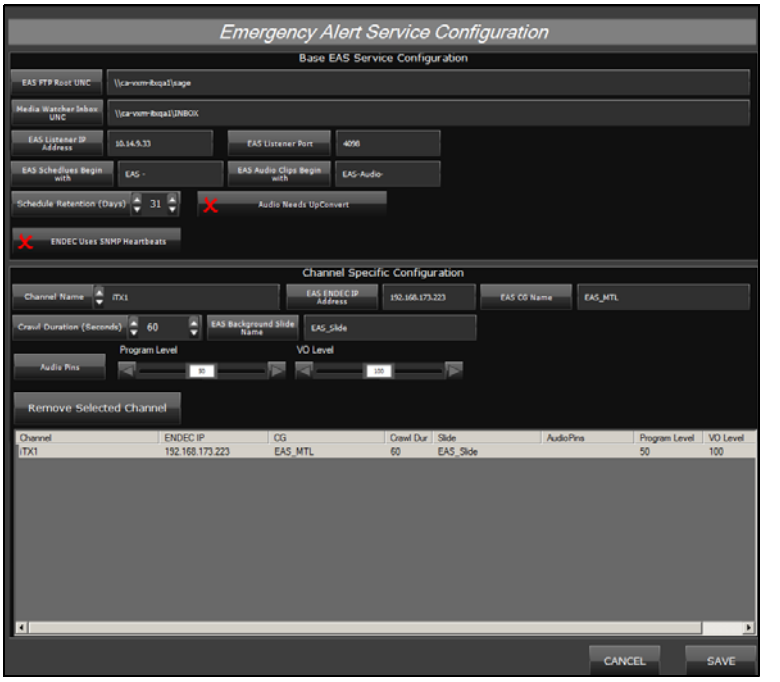
The **EAS Config** and **EAS Layout** tabs are added to the Layout Selection Bar.

Configuring the iTX Emergency Alert Service

Selecting the **EAS Config** layout tab in the iTX Desktop displays the **Emergency Alert System Configuration** window.

The **Base EAS Service Configuration** section (upper portion) allows you to identify and configure the iTX EAS service details for your iTX system.

Since the iTX EAS service can serve multiple ENDEC devices, the **Channel Specific Configuration** (lower portion) allows you to define an iTX EAS profile for each iTX channel and then add the channel's profile to the table. Each channel's EAS profile includes the IP address of the EAS encoder/decoder device assigned to the channel, as well as channel specific properties that govern the style of the on-air EAS message.



Base EAS Service Configuration

The Base EAS Service Configuration section allows you to specify settings that determine how the iTX Emergency Alert Service receives and treats incoming EAS messages from any of the ENDEC devices associated with an channel. You must set the following parameters:

- **EAS FTP Root UNC** - The UNC path of the FTP Server where the ENDEC will send EAS Files.
- **Media Watcher Inbox UNC** - The UNC path of the Inbox that the Media Watcher is monitoring for EAS files.

- **EAS Listener IP Address** – The IP address of the machine hosting the iTX Emergency Alert Service.
- **EAS Listener Port** – The port that the iTX EAS listens to for messages from the ENDEC. Both the IP address and port are configured in the ENDEC IP Device configuration (see page 2-4 and page 2-8).
- **EAS Schedules Begin with** - The name by which EAS Schedules will be prefixed.
- **EAS Audio Clips Begin with** - The name which EAS Audio clips will be prefixed.
- **EAS Schedule Retention (Days)** – The number of days before EAS Schedules and EAS Audio clips will be deleted from the system. Deletion is based on Schedules/Audio Clips meeting the **Created before** criteria in conjunction with their names starting with the **EAS Schedules Begin with** or **EAS Audio Clips Begin with** settings.
- **Audio Needs Upconvert** – Enable this setting if the audio file from the ENDEC needs to be up-converted prior to processing in iTX.
- **ENDEC uses SNMP Heartbeats** – Enable this setting if the ENDEC supports SNMP Heartbeat messages.

Or,

- **EAS SNMP Por**t – The port to listen for ENDEC SNMP Heartbeat messages. The IP address used will be the same as the EAS Listener IP Address.
- **MAX Heartbeat Loss** – The maximum number of heartbeats that can be lost from a specific ENDEC before the iTX EAS is put in a Warning state.

Channel Specific Configuration

The Channel Specific Configuration section allows you to associate an ENDEC device to a specific iTX channel and then specify its settings, or select the channel and edit its existing settings.

To configure a specific iTX channel for EAS:

1. Click the **Channel Name** button.

   A dialog appears and lists the available channels.
2. Select the channel that you want to configure and click **OK**.

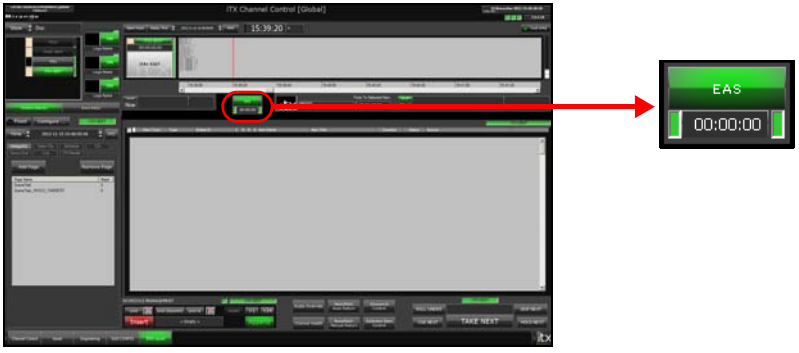
   The channel is immediately added to the table below with default values for the **Channel Name**, **Crawl Duration**, **Program Level**, and **VO Level**. All remaining values are blank until you specify values for them using the Channel Specific Configuration parameters.
3. Edit the values of the Channel Specific Configuration parameters. The channel specific values are filled in/updated dynamically as you change/add them. See below for a description of each parameter.
4. Click **Save** to apply the settings to the database, or click **Cancel** to discard any changes since the last save.

Channel Specific Configuration parameters

- **Channel Name** – The Channel Name button allows you to select which channel to add the table below. The up/down controls allow you to add a channel to the table and/or select a channel to display and/or edit its settings.
- **EAS ENDEC IP Address** – The IP address of the specific ENDEC device that will be associated with the iTX channel.
- **EAS CG Name** – The asset name of the CG to be used when scheduling EAS Events. The asset must already exist and have the Text Field named “CG_TEXT”.
- **Crawl Duration (seconds)** – The amount of time, in seconds, the crawl will be displayed on air. If the duration of the audio file from the ENDEC is longer than the Crawl Duration value, then the audio’s duration will be used.
- **EAS Background Slide Name** – The asset name of the Graphics to be used when scheduling. The Graphics asset must already exist in iTX.
- **Audio Pin** – The pin number to place the EAS Audio on. When the **Audio Pins** button is clicked, the **Audio Pins To Connect** dialog appears, which allows you to select which audio pins to use for the Voice Over; any combination 1-16 is valid.
- **Program Level** – The slider configures the level of the program audio which the EAS alert will be playing over. Set a value from a range of 1-100.
- **VO Level** – The slider configures the level of the Voice Over audio of the EAS Alert which will play over the on-air program. Set a value from a range of 1-200.
- **Remove Selected Channel** button – To remove the channel from the table, select the channel in the table and click the **Remove Selected Channel** button.

3 PLAYING OUT AN EAS ALERT

Selecting the **EAS Layout** tab in the iTX Desktop displays an **iTX Channel Control (Global)** layout, which contains the **EAS button**.

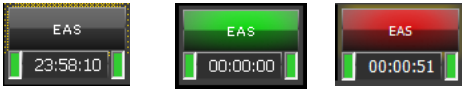


The EAS button is the interface control that allows operators to receive and playout EAS messages delivered from the iTX Emergency Alert Service and EAS device. Specifically, the EAS button provides operators with:

- a quick or detailed status of the iTX EAS service and iTX channel
- a visual indication of the EAS button's connectivity to the iTX EAS service
- a visual alert of incoming EAS messages and how much time is remaining in the alert
- a control for scheduling when the EAS message will be played out on-air

EAS button - status, alerts and timer

As the primary user interface control for the iTX Emergency Alert Service, the EAS button's color and behavior is designed to provide operators with visual cues as to its current state and whether operator interaction is required.



The color and behaviour of the EAS button indicates the following states:

- **Non-Active (grey color)**
  The EAS button has no connection to the EAS service.
- **Green, Not flashing**
  The EAS button is connected to the EAS service and channel.
- **Red, Flashing**
  An EAS event has been received and the clock begins to count down until the alert expires.
- **Red, Not flashing**
  The EAS event has been taken to air and the clock counts down until the alert is off air.

Below the EAS button is a count-down clock which displays the time remaining before the EAS event expires. This alerts the operator that the EAS event must be added to a primary event before the timer reaches zero.

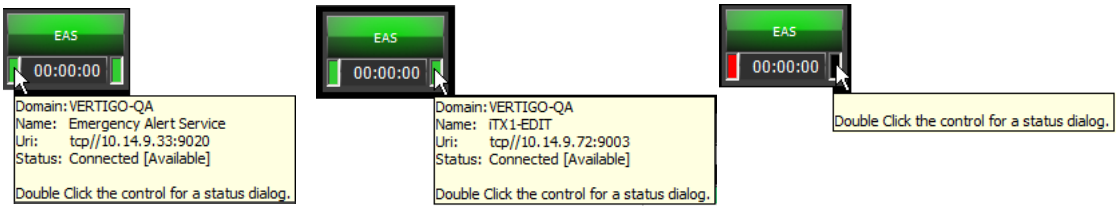
iTX EAS service and iTX channel status

The colour of the two rectangular buttons on each side of the EAS button's timer provide a quick visual indicator of the status iTX Emergency Alert Service (left button) and the iTX channel status (right button).

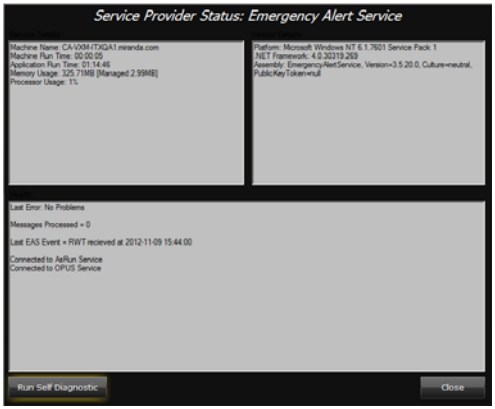
The colour of the buttons indicates the following statuses:

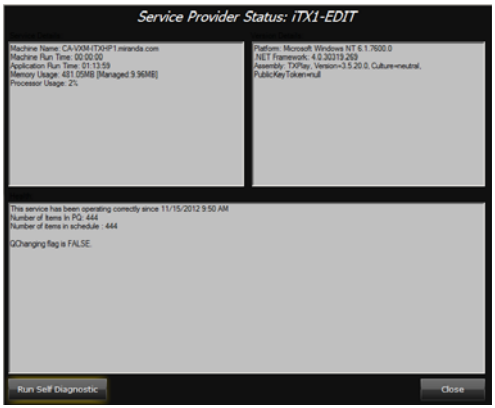
- **Green** - The EAS service or iTX channel is working properly.
- **Yellow** - The EAS service or iTX channel is in a Warning state. Double-click the button and then click the **Run Self Diagnostics** button to troubleshoot the problem.
- **Red** - The EAS service or iTX channel is in an Error state. Double-click the button and then click the **Run Self Diagnostics** button to troubleshoot the problem.
- **Black** - The EAS service or iTX channel is not working at all.

The examples below demonstrate that hovering over the buttons provides a more detailed information about the iTX EAS service, the iTX channel and its current status.



Regardless of the service's or channel's state, you can double-click the status button to display the **Service Provider Status** dialog, which provides even more details. Click the **Run Self Diagnostic** button to run and display a Diagnostic Report.

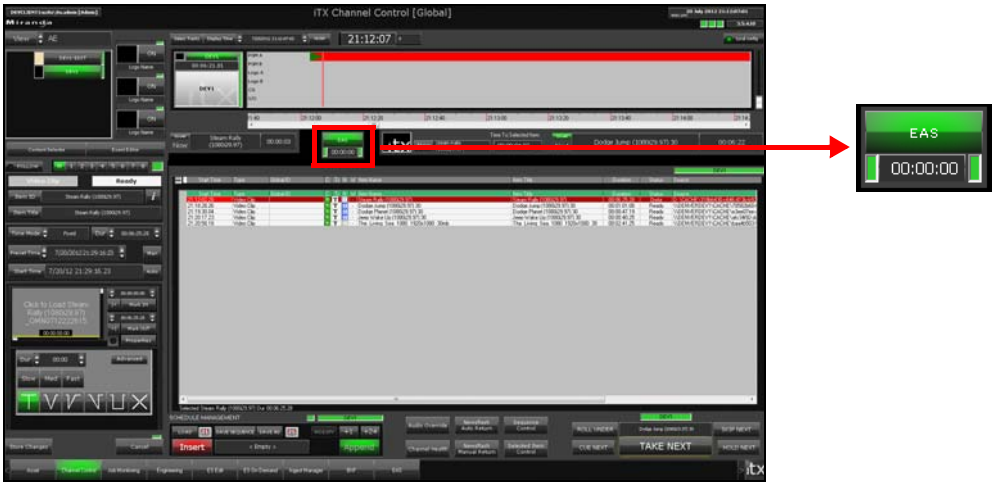




Inserting an EAS secondary event into a schedule

Since the EAS event's audio and crawling text is displayed over the channel's normal programming, operators must add the EAS message as an secondary event of an upcoming primary event in the playout schedule.

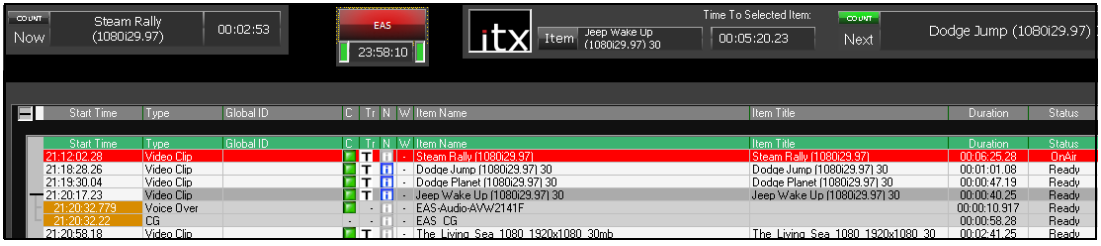
When the EAS button on the iTX Desktop is green and not flashing, this indicates that it is actively connected to the iTX Emergency Alert Service and that no EAS events are active (pending or playing).



When an EAS event is received, the iTX Desktop's EAS button turns red and flashes to alert the operator that there is a pending emergency alert. Below the EAS button, the count-down timer displays the amount of time remaining before the EAS event expires and will no longer be available for playout.

The operator must now select an upcoming primary event in the schedule grid that the EAS event will playout out with.

The operator then clicks the EAS button and the EAS alert's audio and text crawl are added to the selected event as secondary Voice Over and CG events.

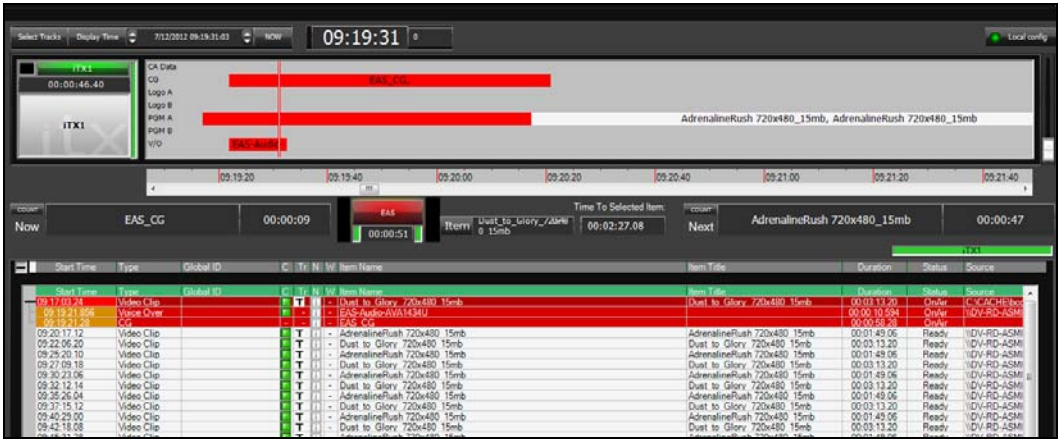


The duration of the CG event is determined by the **Crawl Duration** setting on the **EAS Config** tab, while the Voice Over event's duration is determined by the duration of the audio file from the EAS device. If however, the duration of the audio file from the EAS device is longer than the **Crawl Duration** value, then the audio's duration is used to determine the duration of both the CG event and the voice-over event.

☑ NOTE

Both secondary events are given an offset (e.g. 10 seconds) relative to the beginning of the primary event. The Offset value can be edited using the Event Editor.

When the channel's playout reaches the scheduled EAS events, the EAS button stops flashing, but remains red to indicate that the EAS event has been taken to air and the clock counts down until the alert is off air. When the EAS alert is finished playing out, the EAS button changes back to a solid green.



☑ NOTE

If for any reason the playout of the EAS event must be aborted, the operator can click the **Take Next** button to force the playout to the next scheduled event. This will not only remove the content of the EAS event, but also the primary event's content as well.