FEDERAL SIGNAL
Safety and Security Systems

EMTools

Product Manual

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IMPORTANT SAFETY NOTICES

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions.

- Read and Follow Instructions - All the safety and operating instructions should be read before EMTools is operated. Follow all instructions in this manual.

- Retain Instructions - The safety and operating instructions are located in the software and can be accessed by clicking the “Help” button.

- Heed Warnings - All warnings on EMTools and in the operating instructions should be adhered to.

- Programming Warning – EMTools may fail to operate as intended if programmed incorrectly. Programming should only be performed by personnel thoroughly familiar with EMTool’s operating instructions and the intended method of use.

- Screen resolution should be set to 1024 by 768 pixels for full screen viewing. Go to Window’s Display Properties, Settings, Screen resolution to adjust the resolution setting.

- EMTools must be correctly programmed per the user’s specific application before placing into use. Programming should only be performed after thoroughly reading this manual. Always test EMTools for proper operation after programming and before placing into use.

- When EMTools is used for personnel warning applications, a warning plan should be developed and all users should be trained on the use of the warning system.

- EMTools retrieves alerts posted by NOAA every three minutes. NOAA considers this feed “experimental” and as such Federal Signal cannot guarantee the timeliness of the alerts. Please refer to http://www.weather.gov for further information about the warning system feed.

Federal Signal reserves the right to make changes to devices and specifications detailed in the manual at any time in order to improve reliability, function or design. The information in this document has been

carefully checked and is believed to be accurate; however, no responsibility is assumed for any inaccuracies.

EMTools
User Manual

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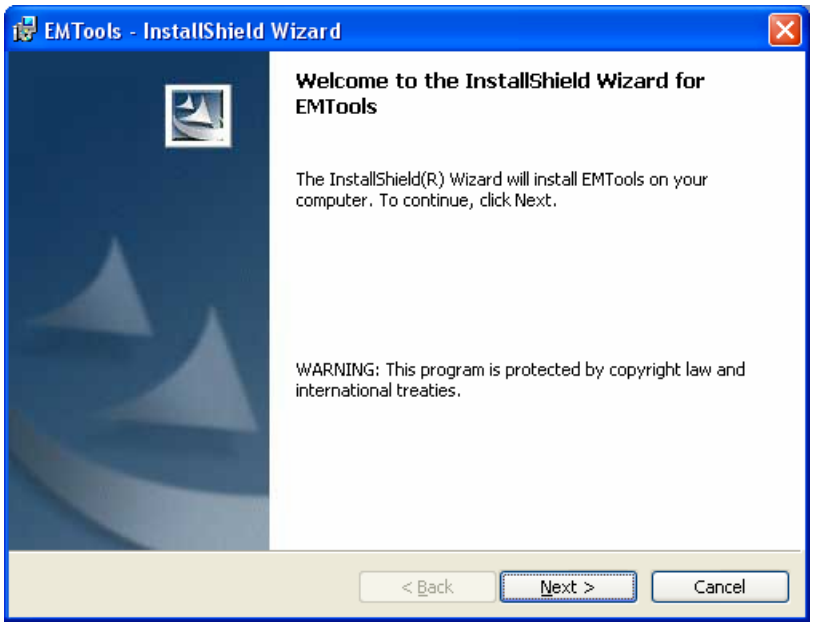
In this Agreement, words importing the singular include the plural and vice versa. Words importing gender include all genders and words importing persons include corporations and vice versa. The division of this Agreement into sections and the insertion of headings are for convenience of reference only and shall not affect the construction or interpretation of this Agreement or any part of it.

1. Minimum Computer Requirements:

- IBM compatible Pentium or greater running at 1GHz or faster
- WindowsXP or 2003 Server
- 2 GB or more of Random Access Memory (RAM)
- 80 GB Hard Disk Drive or larger
- SVGA Color Monitor and Controller
  1024 x 768 resolution, 24 bit color recommended
- CD RD-W Drive
- 101-key enhanced Keyboard
- Mouse

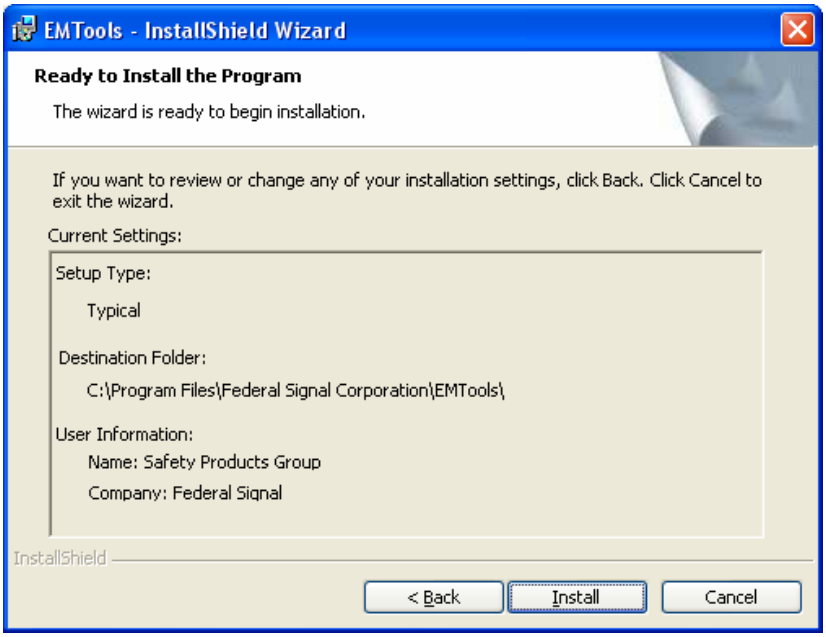
2. Installation

Close all applications on the PC. Insert the EMTools installation disk into the PC. Run the setup.exe program to start the installation. Wait for the files to be extracted. The following popup will appear.

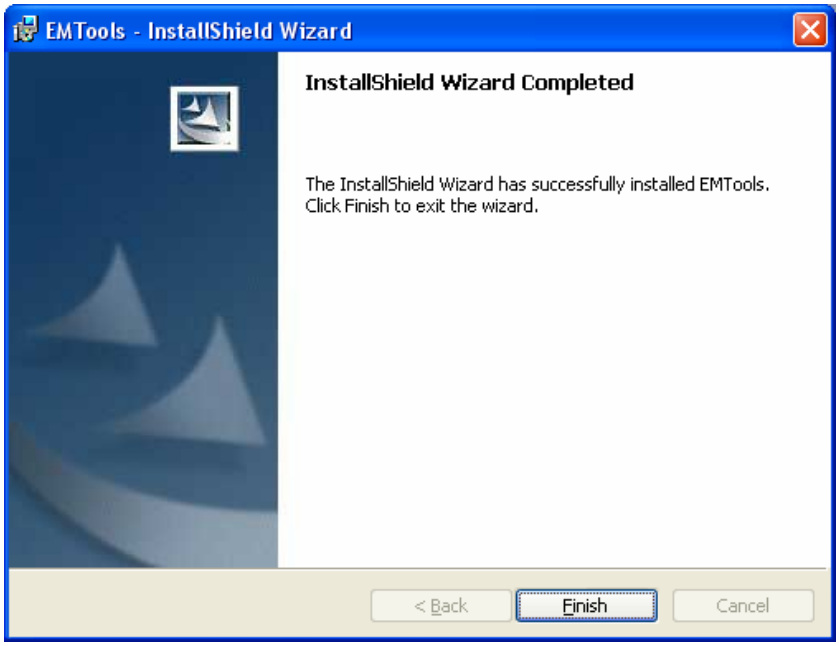


Click Next to continue the installation.

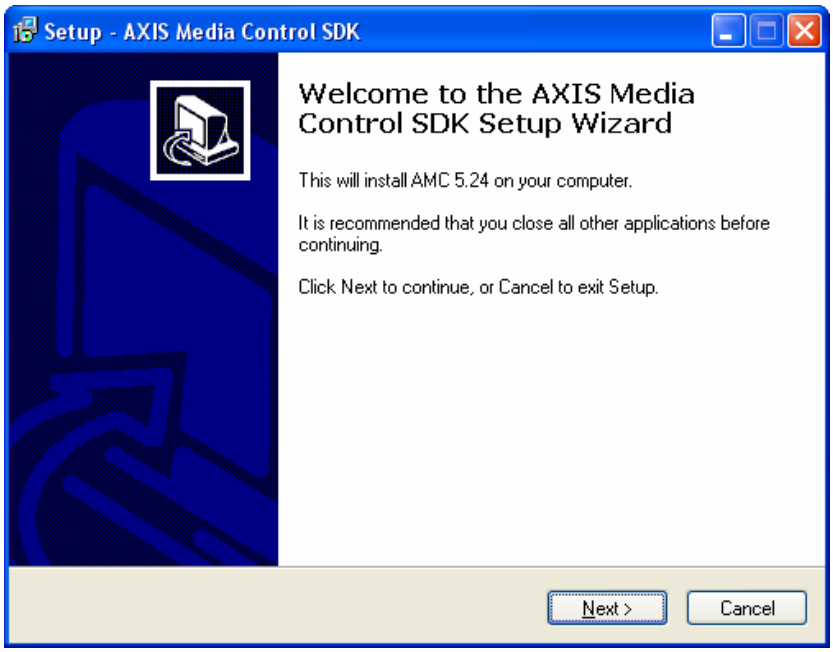
Read and accept the license agreement then hit next to continue the installation.



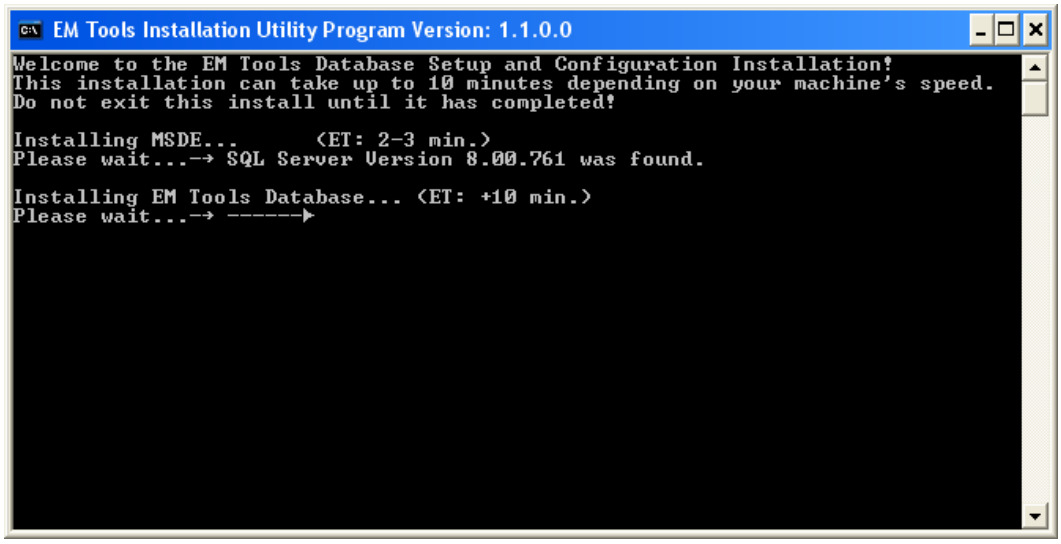
Click Install to install EMTools in the default folder.



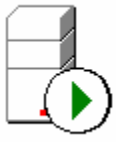
Click Finish.



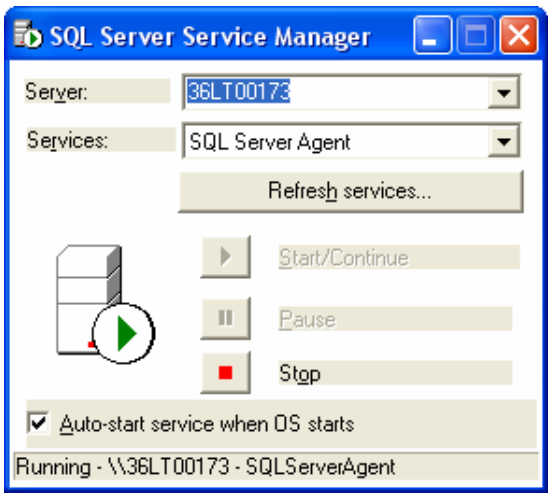
Click next to install the video control drivers.



Wait for the database to be installed. When the installation is complete enter Y to finish the installation and reboot the computer. When the computer restarts, the MS SQL server will be running. The following ICON should be displayed in the lower right hand corner of the screen.



SQL ICON

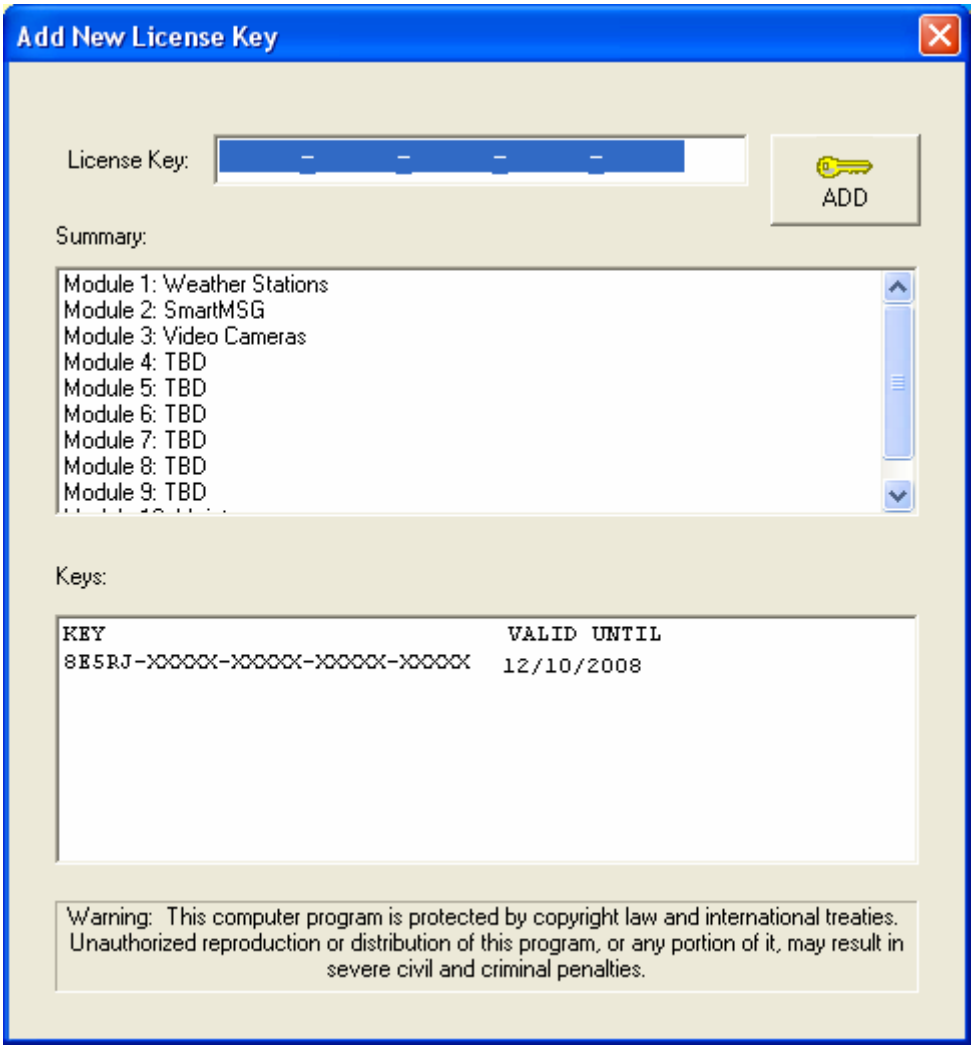


Double click on the SQL ICON. Make sure the Autostart Service check box is checked for all Services and that they have all started.

Emtools.lnk

Run EMTools by clicking on the ICON as shown above. You will be prompted to add a valid license key as shown below. Click OK.

EMTools will launch but will not be useable until the license key is entered. Click Help\Licensing to display the licensing window shown on the following page.



Enter the license key printed on the installation CD or otherwise provided to you by Federal Signal, then click the ADD button. If your key is valid, it will appear as shown above with the proper Valid Until (expiration) date. In addition, all modules you are licensed to use will appear in the Summary.

Next, copy the Tiger file directories for the states you are interested in viewing from the installation disk to your hard drive c:\Tiger folder. The directories are named by the abbreviated state name.

You installation is now complete.

3. Configuring EMTools

3.1 Introduction

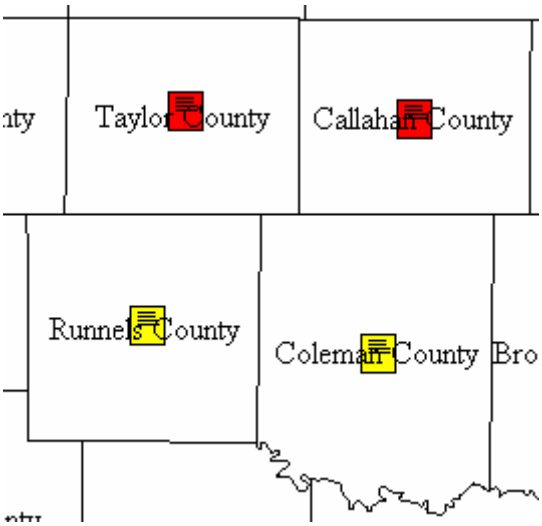
To use EMTools, you first need to configure its basic settings. Once your Basic Configuration is set, you should then configure your Alert Counties and any Weather Zones desired. Next, configure all the desired Weather Events you wish to take actions on for your Alert Counties.

After configuring EMTools, you will then want to load in the appropriate County Boundary map for your State. County Boundary maps for the entire U.S. are installed into your "EMTools GIS Data" folder. These particular maps are labeled with the state's abbreviation (i.e. Florida is FL.GMP). In addition to the County Boundary map, you may also load in a Street file (TIGER\Line©) map or any other desired GIS maps.

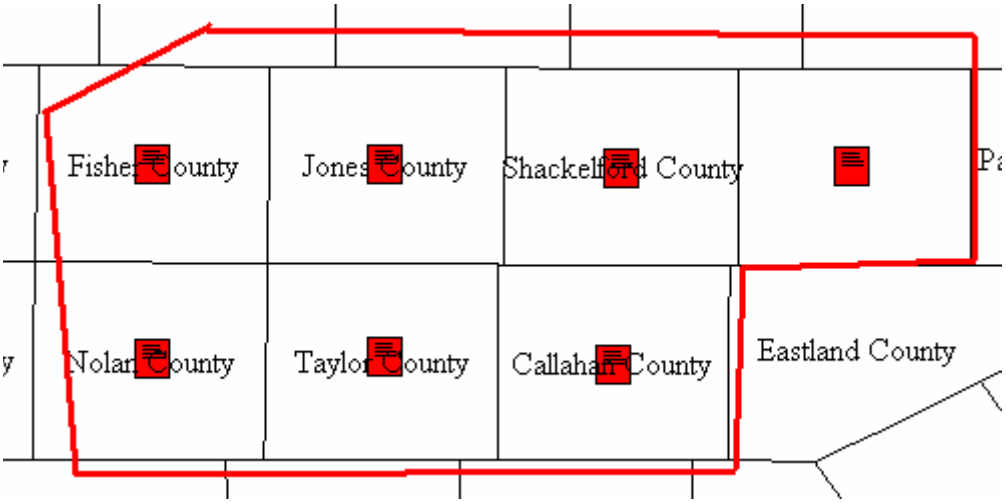
With a County Boundary map loaded in EMTools, you may now insert your Siren Dots. To do this, you must configure your Sirens using SFCDWARE. See the documentation for SFCDWARE on how to add sirens. Once you add a Siren in SFCDWARE and click Update EMTools from the SFCDWARE send menu, it will appear in EMTools approximately 30 seconds after adding it. When you have all your sirens added in SFCDWARE, click the Save button in EMTools to save the dots. Remember, in order for EMTools to activate Sirens, you must have at least one Siren dot on the screen.

Once you have your GIS maps and Siren Dots loaded, you may begin retrieving weather data by pressing the Refresh button on the toolbar.  Pressing this button will begin the process of automatically communicating with the NOAA Weather Server to retrieve CAP Alert data.

When the weather alerts are retrieved from NOAA, EMTools will automatically display a Red or Yellow Icon centered over each County in your State(s) as shown in the image below. The Red Icons indicate that there is a Weather Warning for that county. The Yellow Icons indicate there is a Weather Watch for that county. You may double-click anywhere inside the county to display a dialog box that will give you further information on the Weather Watches/Warnings.



For certain types of Weather Warnings, such as Tornado Warnings, the Weather Service may define a Threat Area Polygon. This polygon indicates the area that is most probable to be affected by the Warning. EMTools will read this polygon information from the weather data and draw the polygon on the screen in red as shown below.

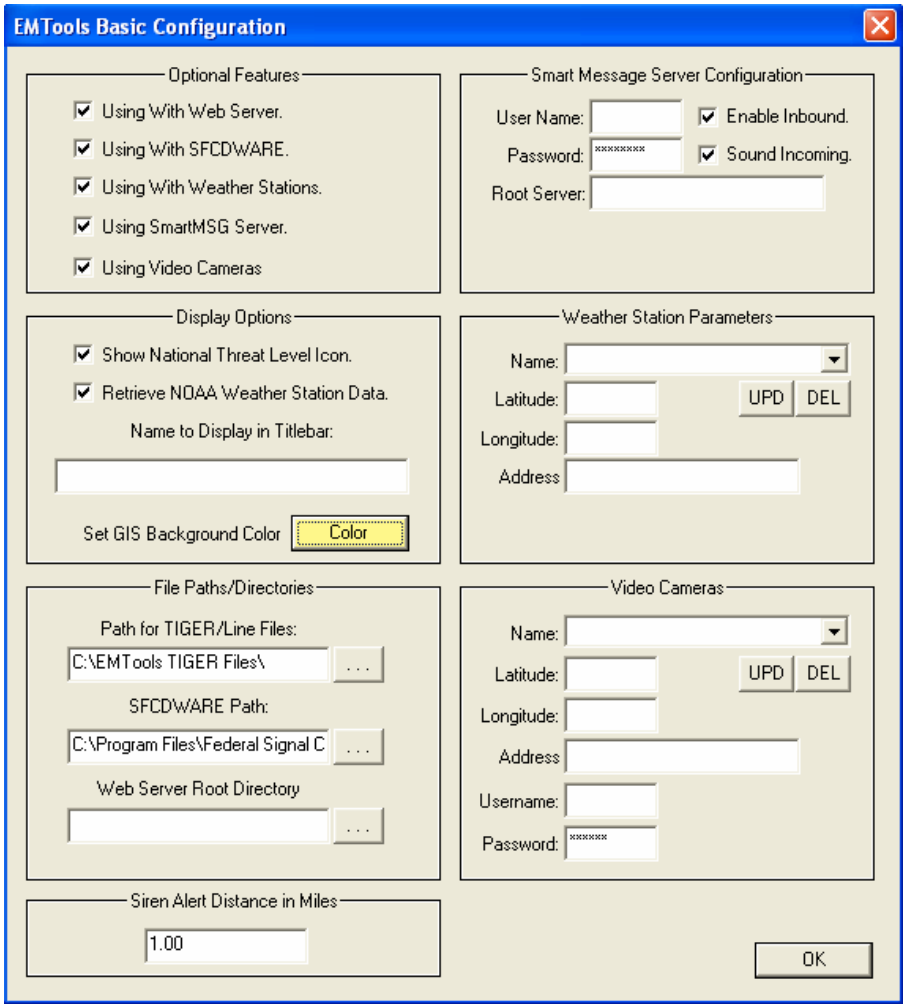


If you have any Weather Events selected to Activate Sirens, only the sirens located inside the polygon are activated. Also, sirens located within your defined Siren Alert Distance of the polygon will also be activated. In the event that no Threat Area Polygon is defined for the Weather Event, all sirens will be activated.

As Weather Events are received from NOAA, EMTools will perform your configured Action for the Weather Event if that Event is issued for one of your Alert Counties. Only Siren Activations are affected by Threat Area Polygons.

3.2 Basic Configuration

To configure EMTools, click “Configuration”, and then “Basic Configuration”. The following window will appear.



Standard Features

Using With Web Server: Check this box if you want to have a web page automatically generated showing current status information. You must install Internet Information Server (IIS) or a Web Server on the computer for this feature to work.

Using With SFCDWARE: Check this box if you want to use SFCDWARE alongside EMTools to activate warning sirens.

Optional Module Features

Using With Weather Stations: Check this box if you are using Federal Signal Weather Station module with EMTools. You must use Federal Signal weather stations.

Using SmartMSG Server: Check this box if you are using the SmartMSG module with EMTools. You must have a SmartMSG Server installed on your network in order to use the SmartMSG feature.

Using Video Cameras: Check this box if you are using the Video camera module with EMTools. You must use Axis cameras.

Display Options

Show National Threat Level Icon: Check this box if you want the National Threat Level Icon displayed on your screen.

Retrieve NOAA Weather Station Data: Check this box if you want EMTools to periodically retrieve weather data from NOAA weather stations currently loaded on the screen.

Name to Display in Titlebar: You may enter any text in this space to personalize your session of EMTools. The text entered here is saved and displayed every time you launch EMTools. You can change this text any time desired.

Set GIS Background Color: Click the Color button and choose from a set of colors for the background, or create your own custom color scheme.

File Paths/Directories

Path for TIGER/Line Files: TIGER/Line© files are used to view Streets and Roads in EMTools. You can copy your TIGER/Line© Files disk anywhere to your PC's hard drive. The TIGER/Line© files are subfoldered by state. Select the root folder for your TIGER/Line© file path. This will normally be "c:\Tiger".

SFCDWARE Path: Enter the Path name where SFCDWARE is installed. This will normally be "c:\program files\Federal Signal Corporation\SFCDWARE".

Siren Alert Distance in Miles: When a Threat Area Polygon is defined by the National Weather Service, EMTools will draw this polygon using the NWS coordinates given. When Sirens are to be activated due to the Threat, EMTools will activate all Sirens inside the polygon and within the Siren Alert Distance outside of the polygon. Therefore, if you have siren dots that are not inside a polygon but are a short distance outside, you can use this parameter to define exactly how far outside the polygon to search for sirens to activate.

Smart Message Server Configuration (Optional SmartMSG Module)

User Name: Enter your SmartMSG Username.

Password: Enter your SmartMSG Password.

Root Server IP: Enter the main SmartMSG Server IP Address.

Enable Inbound: Check this box if you want EMTools to receive SmartMSG's.

Sound Incoming: Check this box if you want an audible tone played when a SmartMSG is received.

Weather Station Parameters (Optional Weather Station Module)

This feature is only available when using the Federal Signal Weather Station with EMTools.

Name: Enter a name for the Weather Station you wish to add to EMTools. After adding the name, enter its **Latitude/Longitude** coordinates and CR1000 **IP Address**. Click the UPDATE button to add the weather station.

Make sure to click the OK button after setting your configuration options.
To add multiple weather stations, just type over the data and click UPDATE for each one.

Video Cameras (Optional Video Module)

This feature is only available when using Axis video cameras.
Name: Enter a name for the video camera you wish to add to EMTools. After adding the name, enter the **Latitude/Longitude** coordinates and the camera's **IP Address**. Enter a username and password for the camera. Click the UPDATE button to add the video camera.

3.3 Define Alert Counties

When EMTools receives a Weather Event that you have configured Actions for, such as a Tornado Warning, the Actions are only performed if the Weather Event is for your selected Alert Counties.

For example, if you select Douglas County, Nebraska as one of your Alert Counties, then EMTools will only perform your selected Actions when one of your configured Weather Events is issued for Douglas County, Nebraska. Therefore, if a Weather Event is issued only for Lancaster County Nebraska, EMTools would do nothing.

You may select as many Alert Counties as desired. In addition, you may have multiple States & Counties selected as well. To select a county, first click the state from the list on the left. Then, double-click on the county from the list on the right. You may add all counties for any state if desired.

To display the Configure Alert Counties/States dialog click Configure on the menu bar and then Define Counties/States on the popup menu. Select the desired states and counties using the Configure Counties/States dialog. *Warning: Only selected counties will receive NOAA alerts!*

3.4 Define Weather Zones

Typically, NOAA issues a Warning or Watch for a specific County using Specific Area Message Encoding (SAME) Codes. However, there are instances when NOAA will use Fire Zone Codes and Coastal Marine Codes instead. Therefore, you must select the Fire Zone and/or Coastal Marine Zone for your area in order to receive these types of Watches and Warnings.

If you do not know your Coastal Marine Zones or Fire Zones, you may determine this using the GIS maps distributed with EMTools.

To select an Alert Zone, double-click on the desired zone in the Configure Weather Zones dialog box. Coastal Marine Zones are shown in the top listbox with Fire Weather Zones defined in the bottom list box. As you select a zone, it will turn red to indicate it is selected.

To display the Configure Weather Zones dialog click Configure on the menu bar and then Configure Weather Zones on the popup menu.

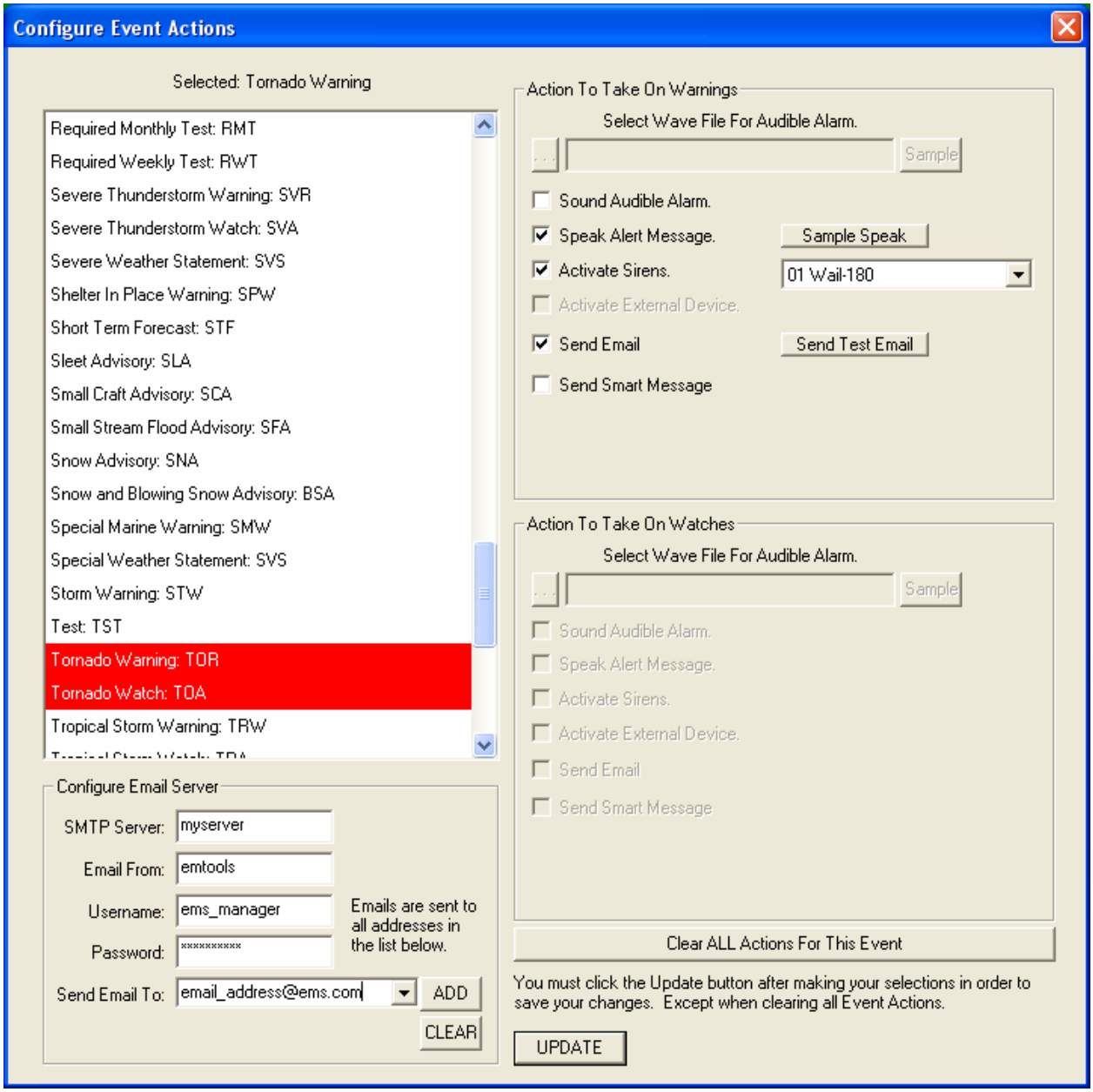
3.5 Weather Event Alarms

EMTools performs several specific actions upon receiving certain Weather Events from NOAA. An example of a Weather Event is a Tornado Warning, Severe Thunderstorm Watch, etc. For each type of Weather Event, you must define what Actions you want EMTools to take. An example would be to activate Sirens upon receiving a Tornado Warning.

To display the Configure Event Actions dialog click Configure on the menu bar and then Configure Event Actions on the popup menu.

The dialog for configuring Weather Events and Actions is shown below. To configure a Weather Event, first click the desired event. Then, select the actions you want EMTools to take for that event.

You may select multiple actions as shown in the example below. In order for Email to be sent, you must have an Internet Service Provider with a valid SMTP Email account.



Sound Audible Alarm: This function will play any desired WAV file. Use the browse button to the left of the Edit Box to select your Wave file or enter its full path and name in the box. To hear what your wave file sounds like, click the Sample button to the right of the Edit Box.

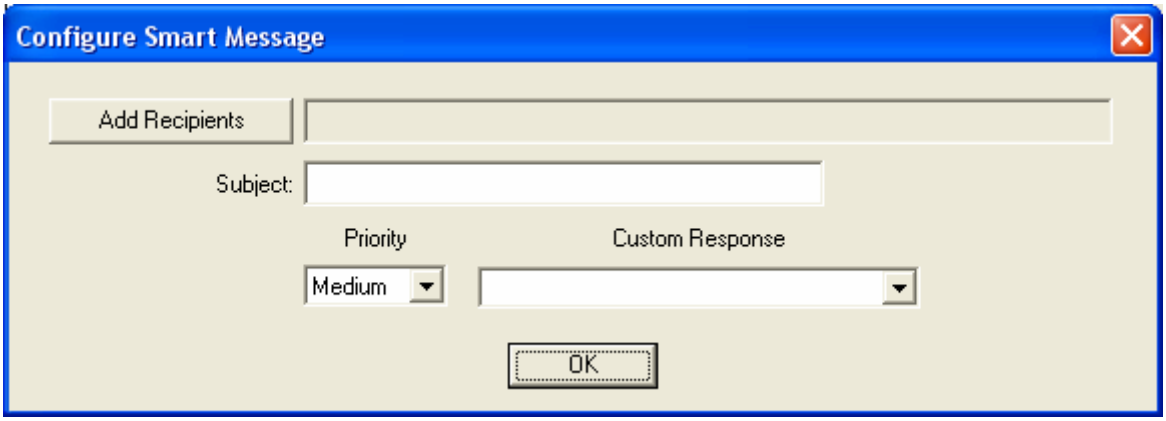
Speak Alert Message: This function will use the Speech Engine to speak the actual Weather Event through your Computer's speakers.

Activate Sirens: To activate Sirens for a specific Weather Event, you must select the Siren Function from the pull-down box. This function is defined in SFCDWARE.
Send Email: In order to have Email sent out, you must have a valid SMTP account. To send emails, add the Email Recipients in the "Send Email To:" box under the Configure Email Server section. Type an email address in the box and then click Add to add the recipients.

Popup Message: This function will display a popup dialog from the lower right side of your screen just above the System Tool Tray. The popup dialog will contain the Weather Event.

Send Smart Message: The Send Smart Message feature is only available if you have a Smart Message Server installed. To issue a Smart Message upon receiving the selected Weather Event, click the Set Smart Message Parameters button. 

This button will display the dialog box shown below. In this window, you must select the Recipients the Smart Message will be sent to. Click the Add Recipients button to add the users who will receive the Smart Messages. You must also define a Subject. You can choose a Priority of Low, Medium or High. Medium priority is the default setting.



A Custom Response must be configured using the Smart Message Client application. Follow the instructions in the Smart Message Client User Manual to create a Custom Response. On this dialog box, you can select a Custom Response to send with your Smart Message. EMTools is capable of receiving Message Responses and displaying them.

Clear ALL Actions For This Event: This button will clear all selected Actions for the selected Weather Event only.

When you are done making your selections for the Weather Event, you must press the UPDATE button to save your configuration. If you do not press the UPDATE button, your selections will not be saved. If you do not configure any Weather Events then no actions will be taken when weather watches or warnings are received from NOAA. As you select and configure a Weather Event, that event will turn red to indicate it has been configured.

4. Loading Maps

4.1 GIS Maps

To load a GIS Map, select File from the main menu. Then, select Open GIS File. EMTools is capable of loading over 50 different types of GIS files including Shapefiles, Binary Interleaved files and GeoTIFF files. You may load as many GIS maps as desired into EMTools.

4.2 Filter GIS data

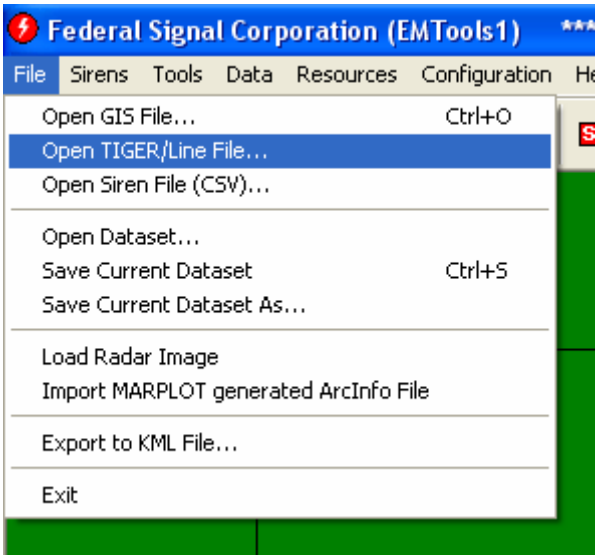
With GIS maps, there are two basic types: Raster and Vector. A Raster file will usually contain information that displays colors at various points such as a Binary Interleaved Elevation file. A Vector file, such as a Shapefile, will contain data such as Lines, Points and Areas. It is possible in EMTools to toggle each of the Lines, Points and Areas on/off using the GIS Filter feature.

To filter GIS data, you must first have a Vector type GIS file loaded. You will typically want to filter Tiger/Line© Street maps since they contain numerous Lines, Points and Areas. Click the Filter Vector Data button on the toolbar (white funnel).

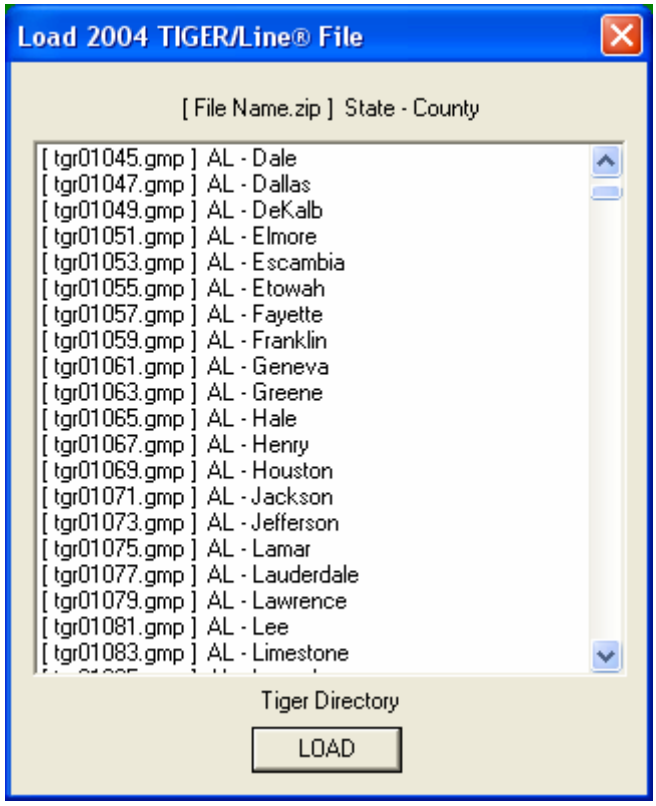
On the Filter GIS Map Features dialog, there are three tabs labeled Point Features, Line Features and Area Features. Click the desired tab to filter the respective feature. Then, click the checkbox next to the feature to enable the feature to display or remove the checkbox to hide the feature.

4.3 TIGER/Line©

To load TIGER/Line© files from the configured TIGER/Line© directory select the “Open TIGER/Line File menu item.



A dialog box containing a list of states and counties will be displayed:



Select the desired county and click LOAD. The selected TIGER/Line© file will now be available for viewing. *If you receive an error while loading Tiger files, verify that the TIGER/Line© file selected is installed in the folder specified in the Basic Configuration dialog (normally c:\Tiger).*

5. Loading Radar Images

EMTools also can download and display RIDGE Radar Images directly from NOAA. To download a Radar image, click the Load Current Radar Image button from the toolbar. This will display the Get Current Radar Image dialog box. On this box, select the drop down listbox and click on the city closest to your desired area. Then, click the OK button to get the Radar Image. After a brief pause, the Radar Image should display on the screen.

You can remove a Radar Image by selecting Database from the main menu. Then, click on Clear All Radar Images to remove the images.

6. Manual Siren Activation

6.1Activating sirens inside user drawn polygon(s)

Sirens can be manually activated in EMTools by drawing a Polygon or Rectangle around them. On the toolbar, you can select "Draw Siren Activation Polygon" by clicking on the below icon

or by clicking on "Sirens", "Manual Activation Polygons", "Draw Siren Activation Polygon."
To draw a siren activation rectangle, you can either click the below icon,

or click on "Sirens", "Manual Activation Polygons", "Draw Siren Activation Rectangle." In order to use this feature, you must first have Siren Dots loaded into EMTools and you must have "Using SFCDWARE" checked in the Basic Configuration dialog.

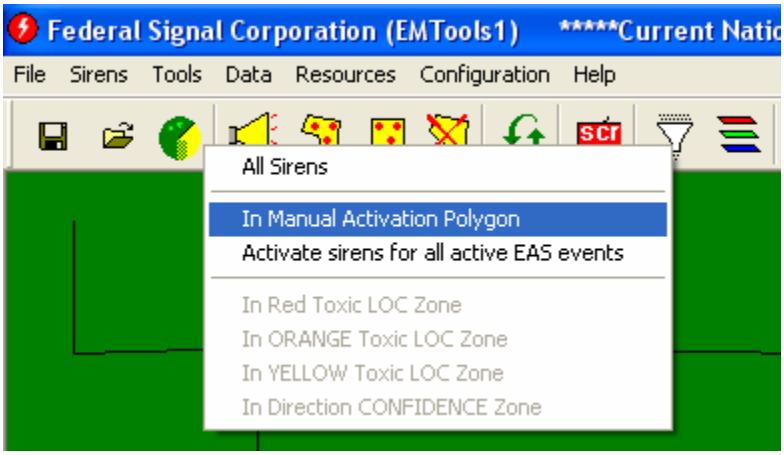
For the **Polygon style activation**, you will click points around the Sirens you wish to activate. When you click your last point, press the right mouse button. This will display the "Define Siren Activation Code" dialog box. This dialog box has a drop down list with all of the Siren Activation Codes you have defined in SFCDWARE. Select the desired code to activate the sirens with. Once you select the code, your Polygon will be displayed in Red on the screen with the Activation Code's name.

For the **Rectangle style activation**, you will draw a box around the Sirens you wish to activate. Left click the upper left corner of the box and hold the button down while dragging the mouse. You should see a rubber-banded box display. Release the left button when you have finished drawing your box. This will display the "Select Siren Activation Code" dialog box. This dialog box has a drop down list box with all of the Siren Activation Codes you have defined in SFCDWARE. Select the desired code to activate the sirens with. Once you select the code, your Polygon will be displayed in Red on the screen with the Activation Code's name.

You may save the activation polygons/rectangles by clicking the Save button. Or, you can remove the Activation Polygons/Rectangles by clicking the "Erase All Activation Polygons" icon from the toolbar seen below.

To activate the sirens in the polygons, click the “Activate Sirens” icon from the toolbar seen below or Select Sirens and then Siren Activation from the menu bar.

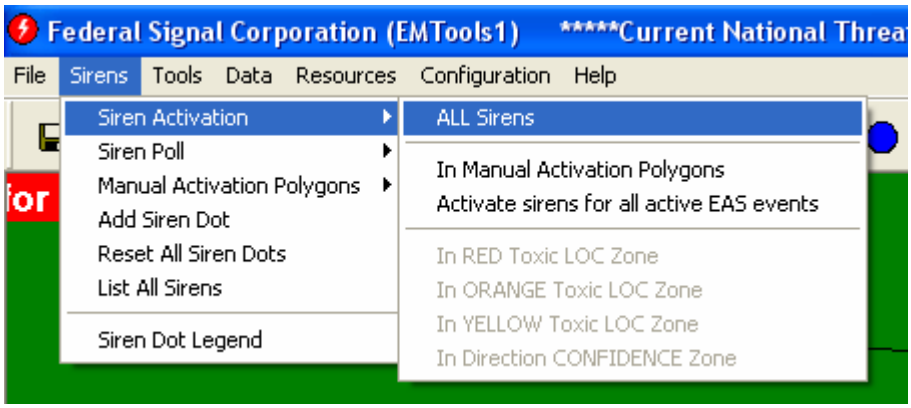
The Siren Activation menu will then be displayed.



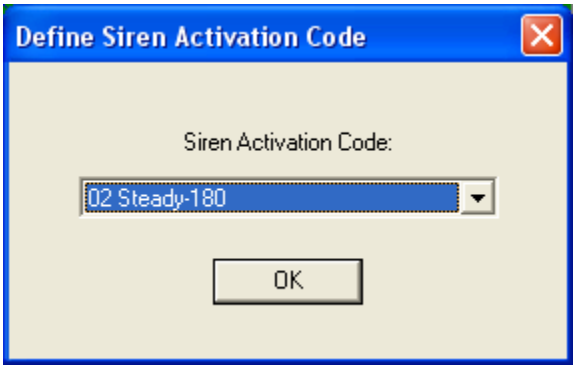
Select “In Manual Activation Polygon” to activate sirens. Another dialog will appear to confirm the activation.

6.2 Activating All Sirens

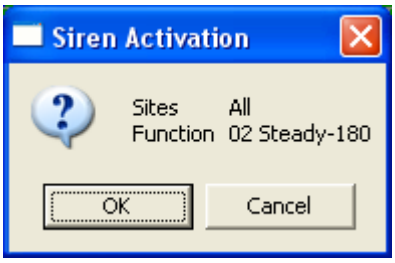
To activate all sirens click the **All Sirens** menu item as shown below or click the Siren Activation icon on the toolbar.



The Define Siren Activation Code dialog will be displayed.

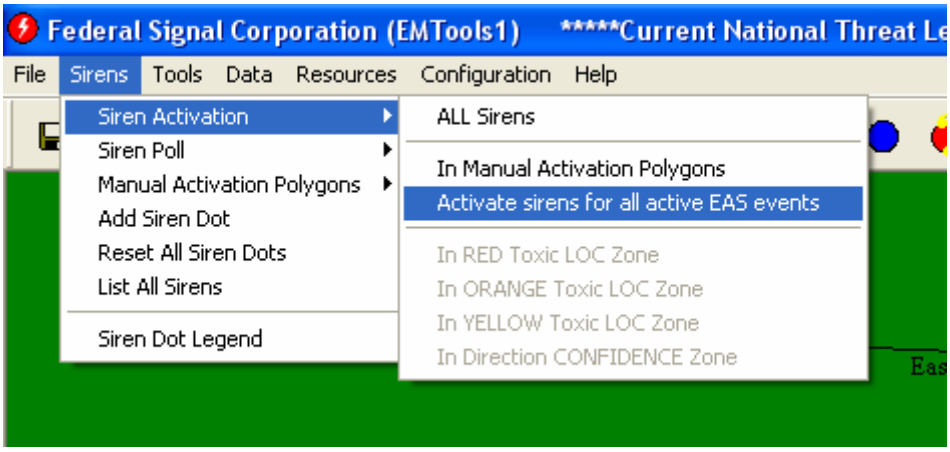


Select the desired function to activate and press OK. The Siren Activation confirmation dialog will be displayed. This is your last chance to abort the activation. Press OK to continue and activate the sirens or Cancel to abort.



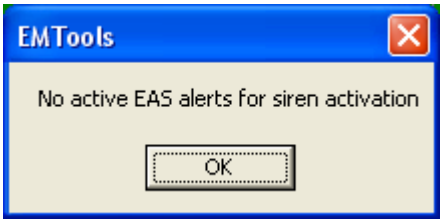
6.3 Activate sirens for all active EAS events

This option will reactivate sirens for all current non-expired EAS alerts (applies only for events and counties that have been previously configured to sound sirens).



After making this selection the following dialog will appear for each currently active EAS alert: *Caution: Clicking 'Yes' will activate sirens!*

If there are no currently active events configured for siren activation, the following dialog will be displayed:



7. Viewing Data

7.1 View Events for County

In EMTools, you may click within any County Boundary to retrieve all the Weather Statements for that County. Furthermore, you may also select a specific County to view Weather Statements for by clicking View Data from the main menu. Then click View Events For County. The Retrieve All Events for County dialog then displays.

On the Retrieve All Events for County dialog box, click your state on the left and then double click on the desired County. A dialog box showing all the current weather events for that County will display or a message saying there are no current Weather Events for that County.

7.2 View CAP Alerts for State

If you want to view that last retrieved CAP Alert data for your State(s), click View Data from the main menu. Then click View CAP Alerts for State. A dialog box then pops up with your states. Double click your state and Internet Explorer will launch showing the last retrieved CAP Alert from NOAA.

7.3 View Action History

EMTools also tracks all of its actions to its database. You may view these actions using Microsoft Excel 2003. To do this, click View Data from the main menu. Then click View Actions History. A message box then displays saying you must have Microsoft Excel 2003 to continue. If you do, click YES.

A spreadsheet then loads in Microsoft Excel. You will need to refresh the data by clicking the Refresh Data icon or menu item under the main menu Data pull-down. If a login box displays, enter 'sa' for Login ID and 'Federal1906' for the password. The spreadsheet should then update showing the most current data at the bottom.

8. Clear Data

8.1 Clear Radar Images

To clear radar images from the screen, select Clear Data from the main menu. Then, click on Clear All Radar Images. This will unload all radar images from your display.

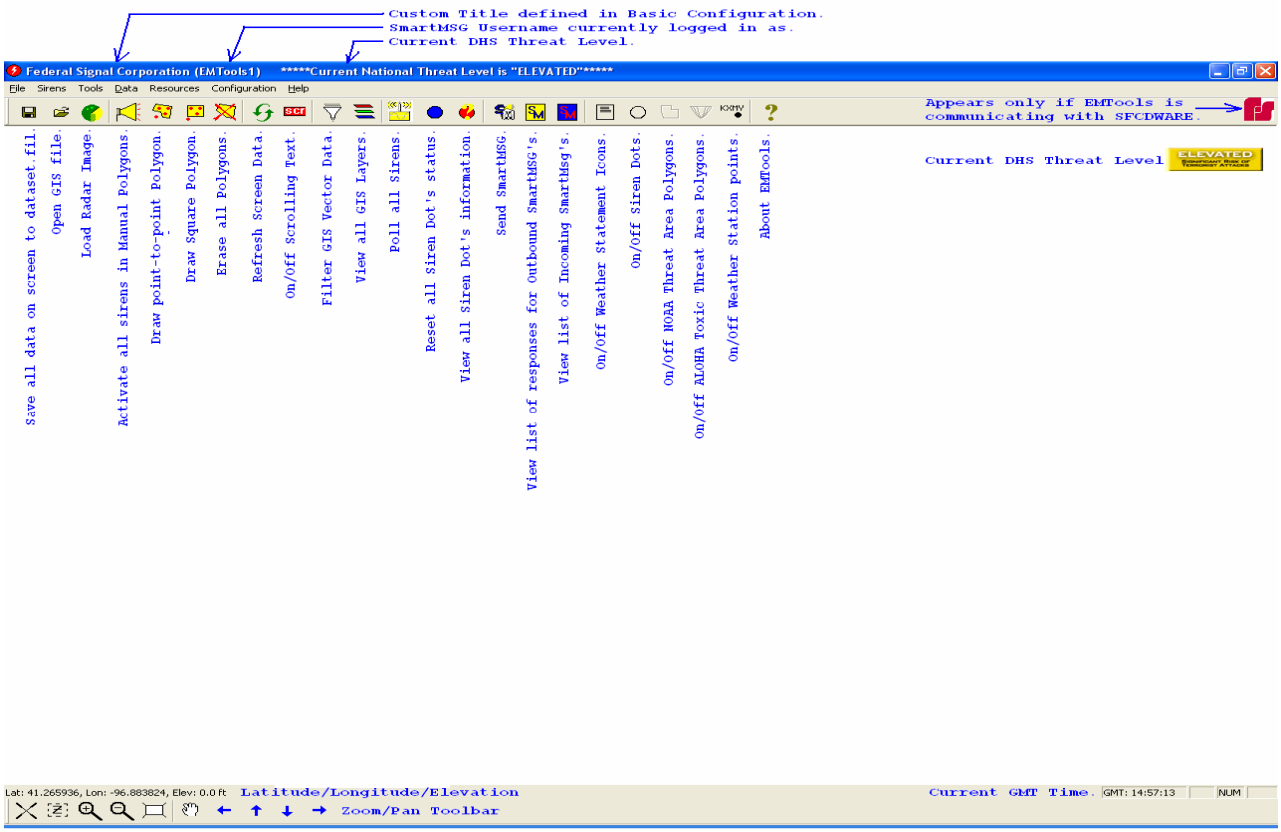
8.2 Clear All Event Actions

EMTools has a flag that it sets when a particular action occurs for a Weather Event. For example, if a Tornado Warning is received and you have selected Activate Sirens, a Siren Activation will be sent to SFCDWARE and EMTools will set a flag indicating this. If this same Tornado Warning is received again from NOAA, the Siren Activation will not occur since the Flag remains set. If you wish to have all of your Actions occur again, you must select Clear Data from the main menu. Then, select Clear All Event Actions. This will drop the flag in EMTools allowing for the Actions to occur again.

8.3 Clear Alert Counties List

If you want to clear out all your preset Alert Counties and start over, you may select Clear Data from the main menu and then click Clear Alert Counties List. This will permanently remove all your Alert Counties only. You should then reselect your new Alert Counties.

9. Main Screen Description



The image above shows a descriptive screenshot of EMTools.

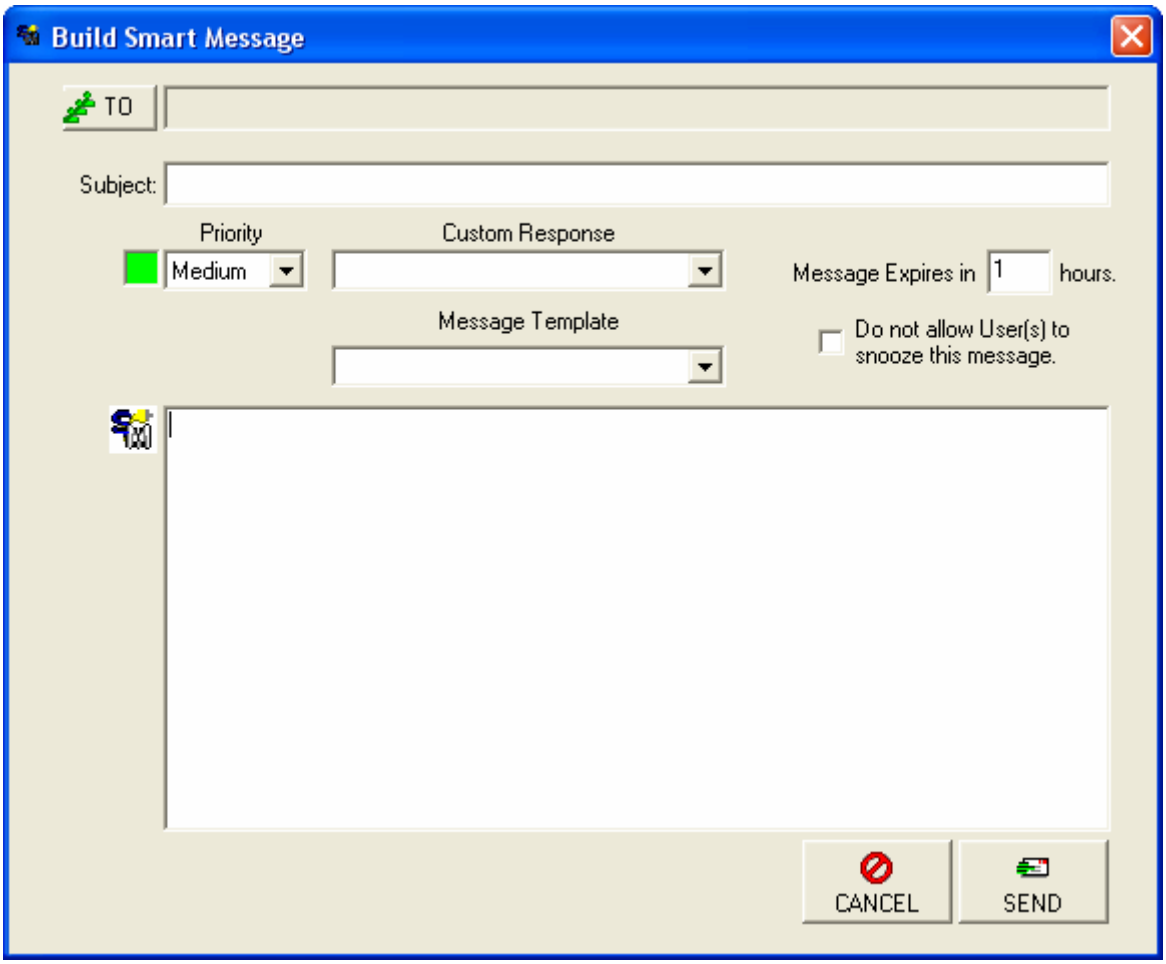
10. Importing MARPLOT Toxic Threat Zones

EMTools is capable of importing an ArcInfo generated file from MARPLOT®. In MARPLOT, you can select your Toxic Threat Zone and then export it to an ArcInfo GENERATED file. Once you create this file, you can import it directly into EMTools.

To do this, select File from the Main Menu and then select “Import MARPLOT generated ArcInfo File”. Then, select the POLYSn.TXT File to import where ‘n’ is the number. You must make sure that the POLYSn.DAT exists in the same folder as the POLYSn.TXT file.

11. Smart Message

The Smart Message feature in EMTools is an optional feature. You must have a Smart Message Server installed in order to use this feature. On the Main Menu, click the SmartMSG item. From the pull down menu, select Send SmartMSG. A popup dialog window will appear.

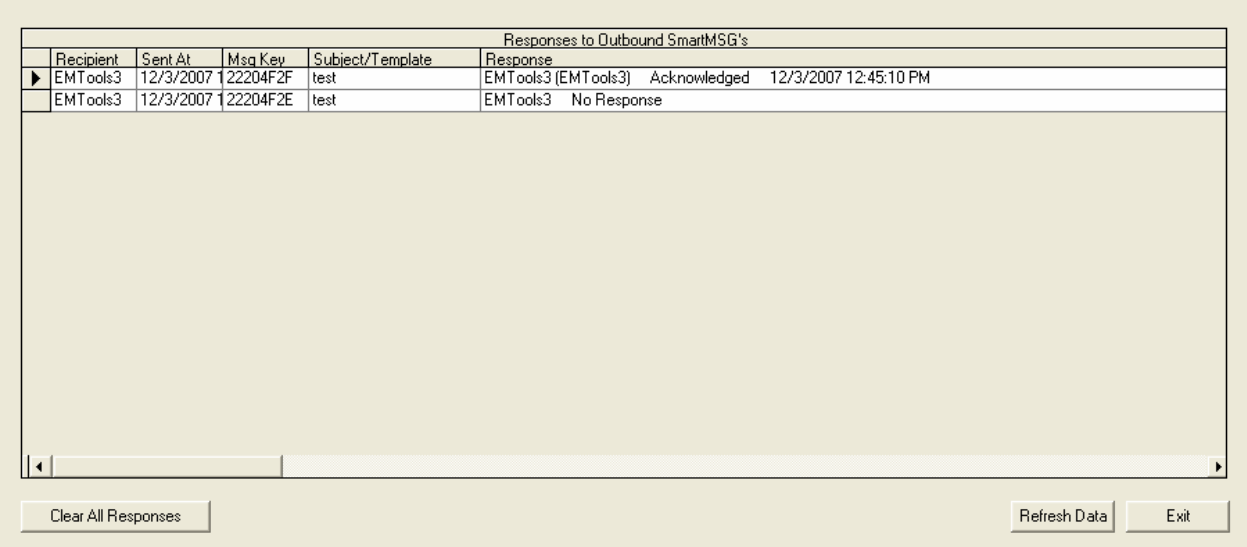


On this dialog, you must select who to send this SmartMSG to using the TO button. Then, enter a Subject for the message. You may also set the Priority to the desired level.

You may also select the Custom Response to send with this message. Custom Responses are configured using the SmartMSG Client application. Please see the SmartMSG Client User Manual for more information on creating a Custom Response.

If you select a Message Template, this will cause all the other message parameters to become disabled. This is because a Template has all the necessary parameters configured inside it. In order to create a Message Template, you must have the SmartMSG Client application.

After setting all your desired message parameters, enter in the message text. Then, click the SEND button to send the message. After clicking SEND, the Responses to Outbound SmartMSG's dialog will appear as shown below.



On this dialog, EMTools is showing you the response(s) to your message. The subject of the sent message and time it was sent is shown in the columns. The Msg Key is a unique value assigned to this message and used for identifying which Response is for which message. The Response column indicates the response, if any, to the message.

EMTools checks the SmartMSG Server every 30 seconds for message responses. When a user acknowledges the message, this will be indicated in the Response column as shown above. The Clear All Respones button will remove all the responses from the database. The Refresh Data will manually force EMTools to check the server for any responses.

On the SmartMSG Menu, the View Past Inbound SmartMSG's item will display a similar dialog showing all SmartMSG's that were received by EMTools. These are messages that were specifically sent to EMTools. Received messages are cleared out every hour unless they were not acknowledged. To acknowledge any past messages, double-click the row of the message.

12. Special Key Functions

From the main screen in EMTools, the following functions are performed using the indicated key combinations:

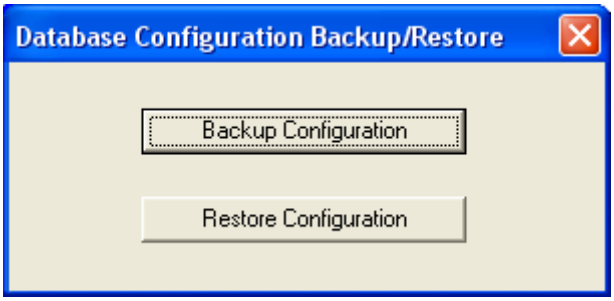
CTRL+ALT+A	This key function will empty all records completely from the database. The database will then be restored back to the state it was in when the software was first installed.
CTRL+ALT+B	Reconnects to SmartMsg Server.
CTRL+ALT+D	This key function removes all the Radar images from the database.
CTRL+ALT+P	This key function will perform a manual data update.

CTRL+ALT+U	This key function will retrieve the current list of Users and Groups from SmartMSG. You must have the SmartMSG feature installed for this function.
CTRL+ALT+W	This key function will cause EMTools to go out and seek all the Weather information for the NOAA Weather Station points.

13. Database Backup/Restore

After you have configured all your desired Weather Events and Alert Counties, it is recommended that you backup your current configuration. To do this, go to the Main Menu and select Tools.

Under the Tools menu, select Restore/Backup Database Configuration.



On this dialog, click the Backup Configuration button to save your Current Configuration. If you should ever need to restore your configuration, click the Restore Configuration button.

14. Importing Siren Dots

Siren dots are imported into EMTools using a simple comma-delimited file with the extension of CSV. These files can be created using any text editor including Microsoft Excel©. Also, Siren Dot List Files (CSV) created using SureWarn© can also be imported.

In the CSV file, each siren is listed on its own row. Starting with the first comma-delimited field, the fields are:

Units,	Must be either ENGLISH or METRIC. Not case-sensitive.
Siren Name,	Used to identify the Siren. Should be an Integer.
Model Name,	Used to identify the Siren's Model.
Frequency,	Siren's Frequency or Center Frequency. Can only be an integer.
Pole Height,	Height of Siren above ground. Can be any decimal number.
Reference Level,	Reference Level (SPL) in dB of Siren. Can be any decimal number.
Reference Distance,	Distance Reference Level measured at. Can be any decimal number.
Number Structures,	Can be 1,2 or 4 for DSA Sirens only.
Ref Angle,	Reference angle of DSA with respect to North.
Spacing Angle,	For 2-Structure DSA must be either 90 or 180.

Number Speakers,	Number of Speakers on each structure.
Longitude,	Longitude position of Siren. Can be any decimal number.
Latitude	Latitude position of Siren. Can be any decimal number.
Solar Power	Flag to indicate if this Siren is Solar Powered or not (1 or 0)

The first field, Units must be populated with the word ENGLISH in caps. The next field, Siren Name should be a number associated with the Siren. If you are creating the file from scratch, the remaining fields can have just a zero (0) in them except for the Latitude and Longitude fields. In these fields, enter the Latitude/Longitude using Decimal notation (i.e. 39.123456, -76.123456, etc.). Make sure that Longitude West is entered as a negative number and Latitude North is a positive number.

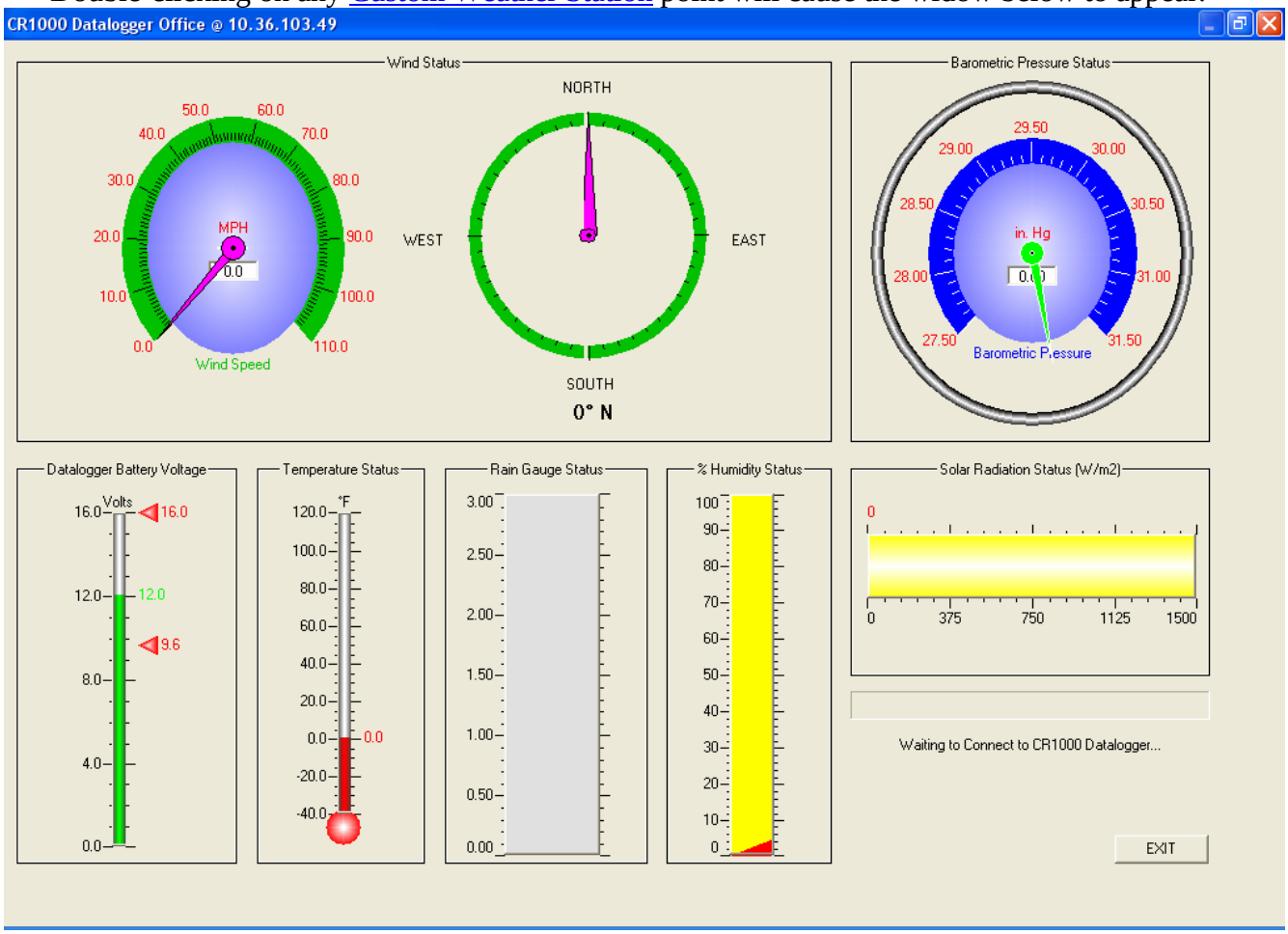
An example entry might look like:
ENGLISH,1,0,0,0,0,0,0,0,0,0,-96.80398333,32.78266667,0

Caution: When using EMTools with SFCDWARE, you should always add your siren dots using SFCDWARE. The Siren Dots in EMTools must match those in SFCDWARE in order for siren activations to properly occur.

15. Weather Station

You must have the Federal Signal Weather Station to use this feature.

Double-clicking on any Custom Weather Station point will cause the widow below to appear.

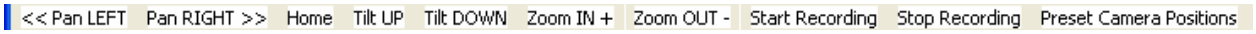


This dialog will immediately attempt to begin communicating with the CR1000 device associated with the Custom Weather Point.

On this dialog, the Wind Speed, Wind Direction, Barometric Pressure, Temperature, Rain Gauge, Humidity and Solar Radiation levels are all displayed. The Datalogger Battery Voltage indicates the current source Voltage of the CR1000 Datalogger. If this Voltage Level drops to 9.6V or lower, the CR1000 Datalogger will cease to function. This dialog will refresh its data about every 5 seconds.

16. Video Camera Feature

The video camera feature can only be used with Axis cameras. In order to use the Axis Video controls, the PC must have DirectX 9 installed on it. This is a free download from Microsoft. Once the Video Camera is set up in Basic Configuration, you can double click on the camera icon and the video window will appear. On the top of the window will display options to choose from. These include pan left, pan right, home, tilt up, tilt down, zoom in, zoom out, start recording, stop recording and preset camera positions.



When you record video, you will be given a dialog box asking for the Path/Filename for the file. The video file recorder will automatically create an .ASF file once you click on Stop Recording.

Note: You may have a Weather Station, Video Camera and Siren Dot all at the exact same Latitude/Longitude point. If you combine a Weather Station and/or Video Camera with a Siren Dot, the dot displayed will always be a Siren Dot. The Siren Dot will always take precedence over any other feature. In order for all features to combine into a single point (dot), their Latitude and Longitude values must be identical to within 6 decimal places.

17. Web Client Feature

EMTools is capable of generating its own special web page provided there is a Web Server running on the same machine. To enable this feature, check the *Using With Web Server* box on the Basic Configuration screen.

Once this feature is enable, you should now leave EMTools visible on the screen. About every 30 seconds, EMTools will make a snapshot of the screen and put it into a basic web page. In addition, web pages are created for showing a current list of EMTools Actions, Received Incoming SmartMSG's and all Weather Station's status' (if using). If you do not have EMTools visible on the screen, whatever is displayed on the monitor's screen at the time EMTools makes the snapshot, will be displayed on the webpage.

There are four web pages created by EMTools: Index.htm, Actions.htm, SmartMSG.htm and Weather.htm. The main page, Index.htm, will display the screenshot of EMTools along with links to the other pages at the top of the page.

The Actions.htm page will simply list all actions that EMTools has performed within the last 24 hours. This is the same as the Action History Report.

The SmartMSG.htm page will list all SmartMSG's that EMTools has received from the SmartMSG Server in the last 24 hours.

The Weather.htm page will list the status of all weather stations, if they are being used.

18. Screen Display Icons

EMTools uses several different Icons on its screen to indicate different types of information. The following shows all the available Icons in EMTools with their description.

Special Weather Statement (Watch). This Icon appears over a County to indicate that there is some type of Weather Watch or Statement issued for that County. You can double-click the Icon or County to get more information. You can also choose to enable or disable viewing these dots by selecting the Enable/Disable Weather Statement Points button on the main toolbar.

Special Weather Statement (Warning). This Icon appears over a County to indicate that there is some type of Weather Warning or Severe Weather Statement issued for that County. You can double-click the Icon or County to get more information. You can also choose to enable or disable viewing these dots by selecting the Enable/Disable Weather Statement Points button on the main toolbar.

NOAA Weather Station Point. This Icon is displayed at each NOAA Weather Station. You can double-click the Icon or County to get more information. You can choose to enable or disable viewing these dots by selecting the Enable/Disable Weather Station Points button on the main toolbar.

Custom Weather Station Point. This Icon is displayed at the location of a user defined Weather Station. These points are displayed based on the Lat/Long coordinates entered into the Basic Configuration dialog. You can choose to enable or disable viewing these dots by selecting the Enable/Disable Weather Station Points button on the main toolbar.

Custom Video Camera Point. This Icon is displayed at the location of a user defined Video Camera. These points are displayed based on the Lat/Long coordinates entered into the Basic Configuration dialog. If a siren or weather station is located at the same Lat/Long coordinates, this icon will change.

Amber Alert. This Icon is displayed over a County when an Amber Alert has been issued for that County.

Siren Dot. Indicates siren is in fault with no sound.

Siren Dot. Indicates siren is sounding.

Siren Dot. Indicates no fault conditions for siren.

Siren Dot. Indicates sounding with no fault conditions.


Siren Dot. Indicates no information is available for siren.


Siren Dot. Siren is in Comm-Fail.


Siren Dot. Local activation.

19. EMTools.INI Configuration File

In the folder that EMTools is installed in, there is a small INI configuration file called EMTOOLS.INI. The contents of this file are described below.

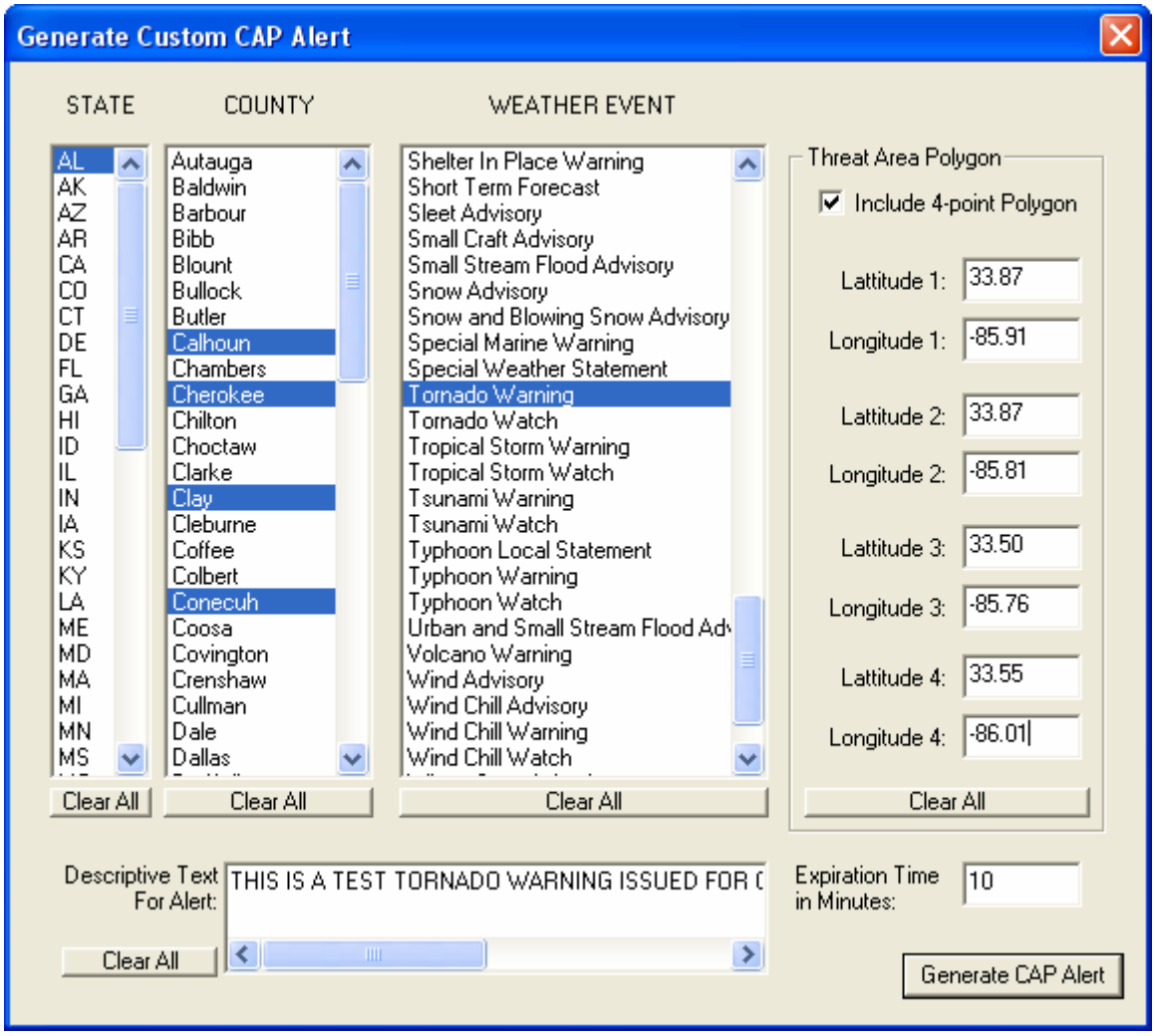
[EMTools]

TigerFilePath=C:\Tiger 2004\	Used to define the root folder for Tiger files.
SirenAlertDistance=1609.34	Distance to select sirens outside polygon.
TitleBarName=Federal Signal Corp.	Name to display in Title Bar.
SFCDWAREPath=C:\sfcdware\	Path to where SFCDWARE is installed.
UsingSFCDWARE=0	Determines if SFCDWARE is being used or not.
ShowDHSImage=1	Show the DHS graphic on the screen.
RetrieveICAOData=1	Retrieve NOAA Weather Station data.
SmartMessageUser=	Username to login to SmartMSG Server with.
SmartMessagePass=	Password to login to SmartMSG Server with.
SmartMessageIP=	IP Address of SmartMSG Server.
EnableSmartMessage=1	Enable SmartMSG features.
DoNotUseWeatherStations=1	Defines if the Campbell Scientific Weather Stations are being used.
WS_Temperature=AirTF	Field Name of CR1000 Temperature value.
WS_Humidity=RH	Field Name of CR1000 Humidity value.
WS_SunW=SlrW	Field Name of CR1000 Sun Watts value.
WS_SunkJ=SlrJ	Field Name of CR1000 Sun Joules value.
WS_WindSpeed=WS_mph	Field Name of CR1000 Wind speed value.
WS_Rain=Rain_in	Field Name of CR1000 Rain Gauge value.
WS_Pressure=BP_inHg	Field Name of CR1000 Barometric Pressure value.
WS_WindDir=WindDir	Field Name of CR1000 Wind Direction value.
WS_BattVolt=Batt_Volt	Field Name of CR1000 Battery Voltage value.
LicenseEmailAddress=	Email address to use for Key Registration.
LicenseUserName=	Name to use for Key Registration (can be anything).
EnableInboundSmartMSG=1	Enable displaying incoming SmartMSG's.
SoundIncomingSmartMSG=1	Play sound when SmartMSG is received.
WWWRootDirectory=C:\Inetpub\wwwroot\	Root folder for IIS.
UsingWebServer=	Defines if a Web Server is used with EMTools.

EMTools will manage the values for all these entries except for the LicenseEmailAddress, LicenseUserName and WWWRootDirectory values. If you are using the IIS Web Page feature for EMTools, you will need to set the WWWRootDirectory value to the path of the IIS Root Folder for the web page.

20. Generate Custom CAP Alert

The Generate Custom CAP Alert feature is primarily used for demonstrating, testing or troubleshooting EMTools and is not intended to be an actively used feature. Should you want to test or see the results of a particular CAP Alert message sent to EMTools, select this feature from the Tools menu.



To generate a CAP Alert, first select the desired state from the listbox shown on the dialog above. Then, select the desired counties for the alert. Next, select the type of Weather Event you want to generate the CAP Alert for. If you want a NOAA Threat Area Polygon to be generated with this CAP Alert, check the *Include 4-point Polygon* checkbox and fill in the four coordinates of each point in Clockwise Order. That is start with Point #1 and the next point should be the point to the right (clockwise) of Point #1 and so on. This is the order NOAA generates its polygon information in.

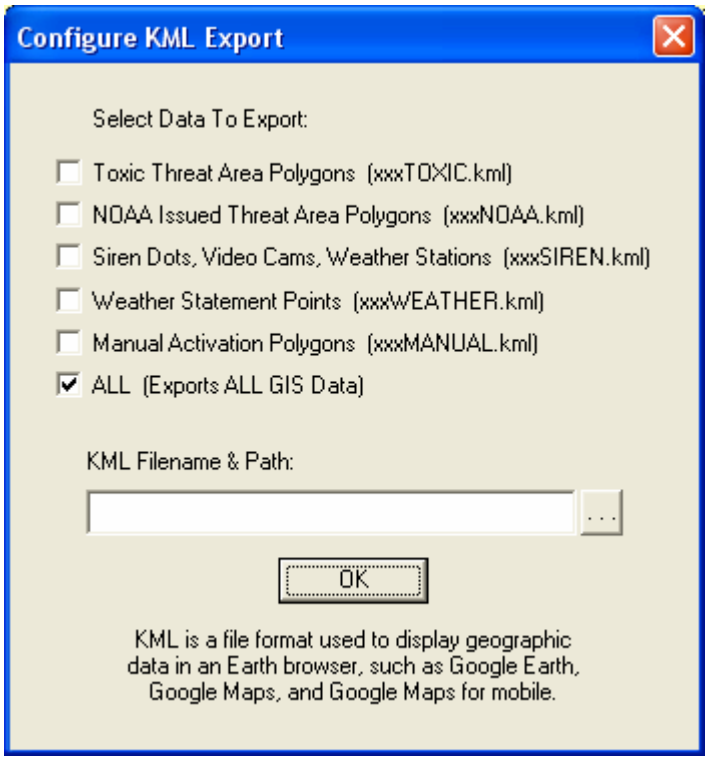
When you generate your CAP Alert, you can set the amount of time the alert should remain active by entering the time in minutes in the *Expiration Time in Minutes* box.

Lastly, your CAP Alert will require a description, therefore a generic description is created for you in the *Descriptive Text For Alerts* box but you can either modify this description, create your own or just leave it as is.

When you are satisfied with your selections and are ready to generate the CAP Alert, press the *Generate CAP Alert* button. After pressing this button, the dialog will insert your CAP Alerts into the EMTools database and then disappear.
Wait a few seconds for EMTools to fully update and when it is done, you will then see the actions of your newly generated CAP Alert. If you generated the CAP Alert for one of your Alert Counties, you should at least see it appear in the scrolling text. Otherwise, if you generated the alert for a county that is not one of your Alert Counties, nothing will happen because only Alert Counties are acted on.

21. Export to KML File

The Export to KML File feature is used to export Polygons and/or Points to a .KML file that can be imported into Google Earth©. When you select this feature, the dialog box shown below appears.



This dialog allows you to select what to export from your view. If you select ALL, then everything that is loaded on your screen including streets will be exported to the KML file. Once you have created your KML file, you can load it into Google Earth© by selecting File->Open from the main menu. This will display a File Load dialog box where you select your KML file.

22. Customer Care and Technical Support

Prior to calling, please have the model number of the equipment, order number, users manual and SMV number if applicable. Typically this information is on a sticker on the unit. The model number is also available from the manual.

Customer Care Department (non-technical): 1-800-548-7229

Technical support: 1-800-524-3021

Hours of Operation: Monday through Friday, 8 AM to 4:30 PM, Central Time

The factory is closed the following days:
New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and the day after, Christmas Eve, Christmas Day, New Years Eve.

2645 Federal Signal Drive University Park, IL 60466 (708) 534-3400