Weather Message

Version 4.3

Weather Alerting Software for your network.

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Special thanks to:

All of the Weather Message users that have helped with the development of this software. I have listened carefully to your requests. Without your continued devotion, this version would not be possible.

Also to the people that make reporting and responding to severe weather a priority. Your dedication saves lives.

Our Goal:

"To provide users with software that can help save lives. If one life is saved through our combined efforts the value is immeasurable."
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Part I
Introduction

1.1 Overview

Weather Message 4.3 is a full-featured weather alerting software package. Utilizing data streams from the National Weather Services, Weather Message provides the ability to view weather text and weather graphics on computers connected to a network with audible alerts for severe weather; provides a map for seeing a visual representation of weather alerts; can send abbreviated or full text weather messages to pagers, e-mail addresses, fax machines, and social networks; archives weather products locally or to a website; retrieves radar images; and has the ability to activate electrical devices using X10 control.

Weather Message operates as a server for connected clients. The Weather Message Server can be run as a standalone application or as a Windows service. The message viewer, image viewer and map are considered clients. These clients can be run on the same computer as the server or located on a number of computers on your network.

Weather Message works by receiving weather products from the National Weather Service EMWIN data stream, Weather Wire Service, or NOAAPort. For additional information, see What is EMWIN, What is Weather Wire, and What is NOAAPORT. Weather Message can receive weather products from satellite, radio modem, or Internet. The received weather products are processed against alarms you setup in Weather Message.

Weather Message is CAP compliant and can be used to process CAP version 1.2 messages. CAP weather products appear on the NOAAPort and IPAWS data streams. For additional information, see What is IPAWS.

Why use Weather Message? It allows you to send abbreviated messages to pagers and cellular phones, in addition, it allows you to send weather products to other computers on your network and even ftp weather messages and warning maps to a website. It includes support for posting weather alerts on Facebook and Twitter. Weather Message Server, Message Client and Weather Message Map run in the background on the client computers.

Weather Message can be downloaded from the Internet and has a 30-day evaluation period. You can download it at http://www.weathermessage.com.

1.2 Data Warning

Warning

Due to the nature of the EMWIN, Weather Wire, and NOAAPORT data streams, it is possible, on rare occasions, for weather messages to be missed or not processed. This
can be caused by satellite black out, technical problems, weather conditions, poor Internet connections or corrupted messages. Weather Message makes deliberate attempts to process all received messages, even those that may have been corrupted. Because of this, the expiration times of some messages may be set to a default of 30 minutes or 72 hours. With any watch or warning, you should read the text of the message to validate the expiration time.

1.3 Obtaining Help

Email Support
If you need help with Weather Message, send an email to help@weathermessage.com.

Mail Support
You can reach program support by mail to Weather Message Software, LLC, 203 Old Shepard Road, Dadeville, Alabama 36853.

Weather Message Website
You can check for software updates and information on the Weather Message Website.

Discussion Group
A Yahoo Discussion Group has also been established for users to exchange ideas and help each other. You can join this group at http://groups.yahoo.com/group/WxMesg/join.

1.4 Installation

Weather Message can be purchased on CD or downloaded from the website. The CD will automatically load the installation program. If you download the software from the Internet, you will need the full installation executable. It contains all of the files necessary for a full installation. A Quick Start guide can be downloaded from the website to assist you with installation and initial setup.

Updates to the software can also be downloaded from the Internet. The program updates only contain changes to the Weather Message programs. It cannot be used for a full installation.

Weather Message can be uninstalled using the standard Windows Add/Remove Programs facility. The uninstaller will not delete files created while running Weather Message. After uninstalling the software, you can safely remove the WxMesgNet directory.

Weather Message features a full 30 day fully functional evaluation. During the evaluation period, all aspects of the software function normally. At the end of the 30 day evaluation, the software will display an message, asking you to register the software.

Note: If your installation will use multiple user login names/profiles, we recommend that you install Weather Message using the administrator login. This will insure that all users have access to the programs.

Note: It is not necessary to uninstall a previous version of Weather Message before installing an updated software version. Uninstalling the software will delete your operating setup information.
2 Weather Message Server Setup

2.1 Overview

The Weather Message Setup program is used to configure the operation of Weather Message. It has a number of options that are detailed in this manual. The default installation is pre-configured to work immediately and alarm all received weather products.

Weather Message processes received weather products based on alarms that you configure. Only products that match your alarms will be processed.

2.2 Menu Options
The menu buttons perform these functions:

The **File** menu allows you to export and import the program registry values, print the alarm and group settings and exit the program.

- The **Export Settings** option will export all of the registry settings for the Weather Message programs. They are exported to WxRegSet.txt. By exporting the registry settings, you can easily backup the weather message directory and save all of your settings.
- The **Import Settings** option will import the registry settings contained in the WxRegSet.txt file. After the registry entries have been imported, the setup program will exit. When you restart the setup program, the imported registry values will be used. You should stop all of the weather applications before importing settings.
- The **Print Settings** option will print the alarm, email, fax, and paging group setup information.
- The **View Audit Log** displays the audit log in notepad. The audit log contains information about changes made to the key operating settings in the system.
- The **Utilities** option opens another menu with the following option.
  - **Change Archive Password** - This option will mass change all archive passwords.
- The **Exit and Save** option saves any changed data and exits the program.
- The **Exit** option exits the program without saving any alarm changes.

The **Support Setup** menu allows you to change the systems settings.
The Fax Groups option allows you to setup fax groups and fax associated settings.
The E-Mail Groups option allows you to setup email groups and fax associated settings.
The Paging Groups option allows you to setup fax groups and fax associated settings.
The Options option allows you to specify general program operation settings.
The Printer option opens another menu with the following options.
  • Default Printer - Allows you to select the default printer used by Weather Message.
  • Default Font - Allows you to select the default font used to print text products.
The Special Prefix option allows you to establish prefixes that can be used to alarm more than one product per alarm.
The Product Specifications option allows you to establish and maintain short message formats by product.
The User Products option allows you to create custom product identifiers.
The WxWords option allows you to edit the word replacement file.

The Register menu allows you to register Weather Message. This button does not appear if the software is registered. Note: If the software is not registered after 30 days, it will stop functioning.

The Help menu allows you to see this manual, and display information about the program.

The About option displays the program registration and version information.
The Weather Message on the Web option opens the browser to the Weather Message Website.
The E-Mail Program Support option opens an email to Weather Message support.
The Send Support Files option opens a window to send your configuration and log files to Weather Message support.
The Reset Window Size/Position option resets all of the Weather Message window sizes. This option can be used to restore a screen has been lost when the monitor resolution is changed.

2.3 Main Window

The main setup window allows you to configure the general program operation, along with product alarms.

![Weather Message Setup](image)

The main screen is used to setup the TCP/IP Port address that the clients will use to access the Weather Message Server. Weather Message uses the port specified plus the next sequential port number. If you specify port 9501, the program will also use port 9502.

The Ingest Path field contains the directory path where received weather files are initially stored. Weather Message Server looks in this directory for incoming files to process. This path is used by the EMWIN ingest (WxEmwin), weather wire ingest (WxWw2000), and NOAAPort (WxPort) programs to store received weather files.

The Data Path field contains the directory path to store processed text weather messages. The Graphics Path field contains the directory path to store processed graphic products.

The Alarm File # field allows you to select from 1 to 9 different alarm files. Only one alarm file is active at a time. This option is useful if you want to define a different set of alarms for different times of the year.

Select the Ingest Engine(s) to be automatically started when Weather Message Server is
Weather Message Server Setup

loaded. Check Emwin Serial to start the EMWIN serial port ingest program. Check Emwin Internet to start the EMWIN Internet ingest program. Check Emwin So/De to start the EMWIN Software Demodulator ingest. Check Weather Wire to start the Weather Wire ingest program. Check NOAAPort to start the NOAAPort ingest program. Check IPAWS to start the IPAWS ingest program.

Note: Weather Message supports simultaneous ingesting from all data sources. If you want to receive data from multiple sources, select each source as appropriate. Weather Message will filter duplicate messages so they will not be alarmed twice. Simultaneous ingesting provides a level of redundancy.

This screen contains a grid for entering alarms. The alarms displayed in the grid are from the alarm file selected in the Alarm File # field. The alarm grid can be sort by clicking on the column header. Click once for descending order, click again for ascending order.

Hint: The widths of the alarm columns can be changed. To change a column width, position your cursor over the column line, hold down the left mouse button and drag the column line.

Hint: The location of a column can be changed by dragging the column to another location.

Hint: Inactive alarms are shown in the alarm grid with a yellow background.

Weather Message 50 connections supports 1000 alarms, 500 e-mail groups, 500 fax groups and 500 pager groups. Weather Message 100 and 250 connections support 5000 alarms, 2500 e-mail groups, 2500 fax groups and 2500 pager groups.

When the Apply button is clicked, the Ingest, Data and Graphics paths are validated. If they do not exist, a message box will appear asking you if they should be created. All of the settings are saved and the program remains open for further changes.

When the Save button is clicked, the Ingest, Data and Graphics paths are validated. If they do not exist, a message box will appear asking you if they should be created. All of the settings are saved and the program exits.

Note: Changing any of the alarms will cause the setup program to notify Weather Message Server that changes have occurred. The Server will reload the current alarm file. You will see the message "Loaded Alarm Table" on the Weather Message Server status screen. If you change the TCP/IP port, you must stop and restart Weather Message Server.

2.4 Support Setup

2.4.1 Fax Groups

2.4.1.1 Fax Settings

The Fax Setup window allows you to set the faxing program to use along with your fax groups.
Enter your name in the **Fax Name From** field. Enter your fax telephone number in the **Fax Telephone #** field.

The **Create Fax Header/Trailer** button allows you to create text that will be added to the beginning and end of “selected” and “full” fax messages. See Message Header/Trailer for an example. When you click on this button, a screen will be displayed to enter the header and trailer. If you only want a head/trailer message for certain groups, see the Fax Group section.

**Hint:** Clicking on one of the column headers will sort the list for that column.

**Note:** WinFax Pro is not provided with Weather Message. This third party software can be purchased directly from Symantec.

**Note:** For faxing to work properly, you must have your faxing software setup properly. It is recommended that you test your faxing software setup before instructing Weather Message to send faxes.

To edit an existing group, double click the group. For other options, select the group and right click to see these menu options.

- The **Add** option will add a new group.
- The **Edit** option will edit the selected group.
- The **Delete** option will delete the selected group.
- The **Copy** option will copy the selected group.
• The Paste option will paste the last copied group as a new group.

2.4.1.2 Fax Group

The Edit Fax Group window allows to setup a group to receive faxes.

Enter the name of the group to be setup in the Group Name field. This name will appear in the alarm setup window as an available fax group.

Select the Style of fax to send. Select Selected for selected text from the alarmed UGC group; Selected No Head for selected text from the alarmed UGC group without the header; Full for Full Text; Full No Head for Full Text without header

Hint: The No Head style option removes the heading lines from the messages. This option removes all of the heading text from the first line in the message or UGC group down to the issued date/time line.

The Subject Style allows you to specify how the fax subject line is formatted. Full gives you the description, for example, “Tornado Warning”. Product gives you just the product (AWIPS) code, for example, “TORBHM”. The None option causes the faxing program to not include a subject line.

The Subject Override allows you to override the default subject line with one of your choosing. You can enter any text and embed the variable described below.

$Subject$ The original subject description based on the subject style.
$WFO$ The 3 character office designator extracted from the product identifier.
$Productld$ The 6 character product identifier.
$IssueTimeZ$ The product issue time in UTC followed by the letter Z.
$ExpireTimeZ$ The product expiration time in UTC followed by the letter Z. (May be
The Parse option can be used to reduce the size of the fax messages sent. Selecting “Y” tells the system to parse the messages, for this group, against the WxWords word substitution file.

Enter the fax telephone numbers in the Fax List box. Put one fax number per line. You can also enter a name associated with each address by following the fax number with a single space, then the name. Entering a name will help you identify the person associated with the fax number. The Import button can be used to import a list of email addresses. See the Importing Addresses section for more information.

Hint: If you are required to dial a nine to obtain an outside line, you can insert a "P" after the 9 to cause the modem to pause for a second dial tone. For example: 9P3292952.

Hint: To temporarily disable a telephone number, insert a # before the number.

The Create Group Fax Header/Trailer button allows you to create text that will be added to the beginning and end of “selected” and “full” fax messages for this group. When you click on this button, a screen will be displayed for you to enter the header and trailer. See Message Header/Trailer for an example.

2.4.2 Email Group

2.4.2.1 Email Settings

The Email Setup window allows you to set the email server information along with your email groups.

Enter the name of your SMTP Server and your E-mail Address. The E-Mail From field can be used to attach your agency name and/or abbreviation. This field will be shown in the e-mail From field.
Note: Weather Message does not natively support secure SMTP connections. If your ISP requires a secure SMTP connection using SSL or TLS, download this [document] for details.

The **Email Options** button is used to setup SMTP port, authentication, retries, and backup e-mail servers. See [Email Options](#).

The **Create E-Mail Header/Trailer** button allows you to create text that will be added to the beginning and end of all "selected" and "full" email messages. See [Message Header/Trailer](#) for an example. When you click on this button, a screen will be displayed for you to enter the header and trailer. If you only want a header/trailer message for certain groups, see the [Email Group](#) section.

**Hint:** *Clicking on one of the column headers will sort the list for that column.*

**Note:** *When you are ingesting from the Internet, WxEmwin uses the email address entered on this screen to validate you as a user.*

To edit an existing group, double click the group. For other options, select the group and right click to see these menu options.

- **Add** option will add a new group.
- **Edit** option will edit the selected group.
- **Delete** option will delete the selected group.
- **Copy** option will copy the selected group.
- **Paste** option will paste the last copied group as a new group.

### 2.4.2.2 Email Options

The Email Options window allows you to set SMTP port, authentication, retries and backup e-mail servers.
The **SMTP Port** defaults to port 25. If your ISP uses a different port, enter that port number in this field.

**Hint:** **SSL (secure) connections use port 465 or 587.**

If your email server requires a secure connection, set the **SSL Required** field to Auto, Implicit or Explicit. The Auto setting will work for most secure email servers.

**Hint:** The Implicit setting starts the connection to the server with a secure channel. The Explicit settings starts the connection to the server with an unsecured channel, then uses the STARTTLS command to switch to a secure channel. Google’s port 465 uses Auto or Implicit. Google’s port 587 uses Explicit.

The **Send Using** field allows you to select the email field that will be populated with the email address. Select **To** for the To field. Select **Bcc** (Blind Carbon Copy) for the Bcc field. Select **Individual** to send an individual email to each recipient using the To field.

**Hint:** Using the BCC email field prevents each email address that you entered for a group from appearing in each email. The To address field will be displayed as undisclosed recipients.

**Note:** The Individual option will cause one email to be generated for each recipient. This option is not recommended if you have a large number of email addresses in a group.

The **Priority Flag** option should be checked if you want the recipients email to be flagged as
priority.

**Hint:** Some spam filters may flag messages with priority flags as spam. If you run into a problem with a spam filter, uncheck this option.

The **Append Time** check box is used to add a date and time to the email subject. This option can be used with email forwarding software that does not forward email messages with duplicate subject lines.

The **Threads** field specifies the number of background threads used to send emails. The number of threads can be set from 1 to the maximum number of cpu's available on the computer.

**Note:** If more than one thread is specified, the system will allocate another thread to send any pending emails. In general one thread is used per email group. If you have more than one email group that receives alerts at the same time, specifying additional threads can spend delivery of emails.

Some ISPs require that you authenticate your connection when you connect to their SMTP servers. If your ISP has this requirement, enter your **User Name**, **Password** and select the authentication **Method** in the Primary SMTP Authentication fields.

**Hint:** Use the SMTP authentication fields if they are required, otherwise leave them blank. If your ISP does not require authentication and you enter a user name and password, connection attempts to your email server will fail.

**Hint:** The default authentication method is Password. This setting is used by most servers. You can optionally select CRAM or NTLM based on your servers requirements.

In the event that an email message cannot be delivered, you can specify the number of times the software will attempt to deliver the message. Enter the number of retries in the **Failure Retries** field. Enter the number of minutes between retries in the **Retry Minutes** field.

Clicking the **Test Server** option will open a window that will test your Email Server settings.

The **Backup Server** and **Backup SMTP Authentication** fields can be used for a backup email server. In the event that the primary server fails to respond, the software will automatically switch to the backup server.

2.4.2.2.1 Test Email Settings

The Test Server option will display this window. Use this option to test your email settings.
Click the **Test** button to test your Email Server. The text box will show the responses from your email server. If you have your Email Server settings correct, you will see the Email Succeeded message, otherwise an error message will be displayed.

### 2.4.2.3 Email Group

The Edit Email Group window allows to setup a group to receive emails.
Enter the name of the group that you are creating in the **Group Name** field. This name will appear in the alarm setup window as an available email group.

Select the **Style** of email to send. Select **Short** for a short message; **Selected** for selected text from the alarmed UGC group; **Selected No Head** for selected text from the alarmed UGC group without the header; **Full** for Full Text; **Full No Head** for Full Text without header.

**Hint:** *The No Head style option removes the heading lines from the messages. It removes all of the heading text from the first line in the message or UGC group down to the issued date/time line.*

The **Subject Override** allows you to override the default subject line with one of your choosing. You can enter any text and embed the variable described below.

- $Subject$ The original subject description based on the subject style.
- $WFO$ The 3 character office designator extracted from the product identifier.
- $ProductId$ The 6 character product identifier.
- $IssueTimeZ$ The product issue time in UTC followed by the letter Z.
- $ExpireTimeZ$ The product expiration time in UTC followed by the letter Z. (May be blank.)
- $Message$ The text that is included in the body of the message. (Can be used for FaceBook updates.)

E-mail messages can be broken down into small packets to be sent to cellular phones and pagers. These devices normally cannot receive a large email message. Entering 0 (zero) for **Size** will tell the system to not break the message down into packets. In addition, you can limit the number of these packets you want to send, by specifying that number in the **Maximum** field. Entering 0 (zero) for Maximum will tell the system to send all of the packets.

**Hint:** *For regular email accounts, the Size and Maximum fields should be set to 0 (zero).*

The **Subject Override** allows you to override the default subject line with one of your choosing. You can enter any text and embed the variable $Subject$ to include the original subject description. The variable $WFO$ can be used to include the 3 character WFO.

The **Parse** option can be used to reduce the size of email messages sent. Selecting "Y" tells the system to parse the messages, for this group, against the WxWords word substitution file.

The **Time Zone** option allows you to select the time zone for this group. This option is used when the Style is set to Short. The system will adjust the received message to the selected time zone.

Enter the email addresses in the **E-mail List** box. Put one e-mail address per line. You can also enter a name associated with each address by following the email address with a single space, then the name. Entering a name will help you identify the person associated with the email address. The Import button can be used to import a list of email addresses. See the importing addresses section for more information.

**Hint:** *If you do not know the domain name for a cell phone provider, click the @ button to see a list of cell phone provider formats.*

**Hint:** *To temporarily disable an email address, insert a # before the number.*

The **Create Group E-Mail Header/Trailer** button allows you to create text that will be added to the beginning and end of "selected" and "full" e-mail messages for this group. When you click on this button, a screen will be displayed for you to enter the header and trailer.
Message Header/Trailer for an example.

The Create Group Short Message button allows you to create a short message for this group. This option allows you to modify the system short message format for this group. See Short Message for additional information.

Note: If you enter a short message for a group, it overrides the default and product specific specifications.

2.4.2.3.1 Phone Provider Formats

The Phone Provider Formats window displays a list of cell phone providers along with the format for sending messages to their phones.

If you have updated information for your cell phone provider, please forward the information to support@weathermessage.com.

2.4.3 Paging Groups

2.4.3.1 Paging Settings

The Paging Setup window allows you to set the paging information along with your paging groups.
The **Paging Options** button is used to setup the paging subsystem. See [Paging Options](#).

The **Paging Services** button is used to setup paging service providers. Paging services must be established before adding paging groups. See [Paging Services](#).

The **Create Pager Header/Trailer** button allows you to create text that will be added to the beginning and end of "selected" and "full" pager messages. See [Message Header/Trailer](#) for an example. When you click on this button, a screen will be displayed for you to enter the header/trailer. If you only want a header/trailer message for specific groups, see the Editing Paging Groups section.

**Note:** *Weather Message removes all control characters from messages sent to a pager. Most paging companies do not allow embedded control characters.*

**Hint:** *Clicking on one of the column headers will sort the list for that column.*

To edit an existing group, double click the group. For other options, select the group and right click to see these menu options:

- The **Add** option will add a new group.
- The **Edit** option will edit the selected group.
- The **Delete** option will delete the selected group.
- The **Copy** option will copy the selected group.
- The **Paste** option will paste the last copied group as a new group.
2.4.3.2 Paging Options

The Paging Options window allows you to set modem, SNPP and WCTP information.

Select the **Serial Port** that is attached to your modem. The **Modem Initialization** box is used to enter the initialization string needed for your modem.

For SNPP Paging, enter the **Default SNPP Port** number. Most paging companies use port 444 for SNPP connections. The **Connect Mode** option, when check, causes the software to remain connected to the SNPP server when sending a group of messages.

For WCTP Paging, enter the **Default WCTP Port** number.

**Modem Initialization Strings**

Modem initialization strings can be different for each modem manufacturer and in most cases are different. The following generic strings can be used with most modems.

- **Generic**
  - `14.4 & 28.8`: `AT&F0Q0V1X4&D2&B1&K0&M0&N2`
  - `US Robotics`: `AT&F0Q0V1X4&D2&B1&K0&M0&N2`

Some US Robotic modems will not communicate with computers at slow baud rates. If you encounter problems with your US Robotics modem, use the above initialization string and set the baud rate for your users and groups to 19200.

In general your initialization string should do the following.
- Send the attention command: `AT`
- Load factory defaults: `&F`
- Turn echo off: `E0`
- Enable result codes: `Q0`
- Display result codes as words: `V1`
Enable extended result codes \( X4 \) (could be \( X0 \))
Enable modem hang up DTR change \( &D2 \)

In addition, these options should be specified – they vary by manufacturer.
- Turn off data compression
- Turn off error correction
- Turn off flow control

If these codes do not work with your modem, send e-mail to help@weathermessage.com. Include your modem model number and we will try to send you an initialization string that will work.

### 2.4.3.3 Paging Services

The Paging Services window allows you to setup different paging services.

![Paging Services Setup](image)

To add a new service, click the **New Service** button and enter a new **Service** name. To delete a service, select the service from the drop down list and click the **Delete** button. To change a service, select the service from the drop down list.

**Service Type**

The **Service Type** field allows you to specify the type of paging service. The following services are available:
<table>
<thead>
<tr>
<th>Service</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAP</td>
<td>Used for modem dial-up paging.</td>
</tr>
<tr>
<td>SNPP</td>
<td>Used for internet based direct paging to a carrier's server.</td>
</tr>
<tr>
<td>WCTP</td>
<td>Used for internet based direct paging to a carrier's server.</td>
</tr>
<tr>
<td>HTTP Post</td>
<td>Used to interface with a web page or web server using the HTTP post method.</td>
</tr>
<tr>
<td>HTTP Get</td>
<td>Used to interface with a web page or web server using the HTTP get method.</td>
</tr>
<tr>
<td>TCP</td>
<td>Used to interface with another program using the TCP protocol.</td>
</tr>
<tr>
<td>PageGate</td>
<td>Used to interface with the PageGate application.</td>
</tr>
<tr>
<td>Twitter</td>
<td>Used to send messages to Twitter.</td>
</tr>
<tr>
<td>Facebook</td>
<td>Used to send messages to Facebook.</td>
</tr>
<tr>
<td>XMPP</td>
<td>XMPP</td>
</tr>
<tr>
<td>TRBO</td>
<td>Used to interface with a Mototrbo® network</td>
</tr>
</tbody>
</table>

**Note:** The PageGate option will cause the software to create messages named “Page#.asc” in the “C:\Program Files\WxMesgNet\WxData\PageGate” directory. You should configure PageGate to scan this folder for messages.

The fields on the screen change based on the service type selected. For TAP paging, enter the service Telephone Number, Baud Rate and Parity/Bits. For SNPP, WCTP, HTTP, TCP, or XMPP paging, enter the service Address and SNPP Port, WCTP Port, HTTP Port, TCP Port, or XMPP Port.

**Note:** The default port for SNPP is 444, HTTP is 80, and XMPP is 5222.

**Note:** HTTP Post and HTTP Get support secure connections using port 443.

**Page Size**

Most paging devices have a limitation on the number of characters they can receive in one page. If your provider has a limit on the size of messages, this limit is should be entered in the **Maximum Page Size** field. Entering 0 (zero) for **Size** will tell the system to not break the message down into packets.

**Hint:** Some paging companies restrict the message size that can be sent to their pagers. If you exceed the size limitation the page request may be refused or rejected by the paging company. If your page requests are being rejected, try a shorter message length.

**Note:** Due to message size limitations for the TAP protocol, you will be required to enter a maximum page size between 1 and 1000 characters.

**Retry Times**

In the event that a page cannot be delivered, you can specify the number of times the software will attempt to deliver the message. Enter the number of retries in the **Failure Retries** field. Enter the number of minutes between retries in the **Retry Minutes** field.

**Note:** For the TAP protocol, the Failure Retries field is used to specify the number of times that the program will attempt to connect to your paging provider when their modem line number is...
HTTP Post / GET

The HTTP Post and HTTP Get option allows you to interface directly with a web page or web server. The Post option posts variables to the web server. The Get option URL encodes the variables before appending them to the http address. These option requires a good understanding of posting data to web servers and the paging providers webpage. It is beyond the scope of this manual to describe these requirements. If you have questions contact Weather Message Support.

For HTTP, you must enter the information and variables to be posted or URL encoded to the HTTP server. Enter the required information in the HTTP Post Variables field. They are entered in the format variable=value. The following variables are available:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$Pin$</td>
<td>Individual pager pin number</td>
</tr>
<tr>
<td>$AllPins$</td>
<td>All pager pins separated by commas</td>
</tr>
<tr>
<td>$Group$</td>
<td>Group name</td>
</tr>
<tr>
<td>$Message$</td>
<td>Message to send</td>
</tr>
<tr>
<td>$TimeStamp$</td>
<td>Current time in ISO 8601 format</td>
</tr>
<tr>
<td>$UniqueId$</td>
<td>A unique number</td>
</tr>
</tbody>
</table>

The following is an example of the variables needed for the SouthernLinc HTTP server.

```
PageArea1=
PageNum1=$Pin$
From=EMWIN
PageMsg=$Message$
NumChars=
Page=Send Message
```

**Hint:** Some paging providers allow all of the pager pin numbers to be sent with one request to their server. If your service supports this capability, using the $AllPins$ variable instead of $Pin$.

**Note:** If the HTTP Post Variables field starts with `<soap`, the system will post it as a SOAP message.

The **Per Page Delay** can be used to insert a delay between requests to the paging server. Specify any delay in milliseconds.

**TCP Paging**

The TCP option supports simple paging using the TCP protocol. The application will connect to a specified TCP/IP address and port. It will send the group name followed by the message. The group name appears in the first 20 characters. The message starts at position 21. The message is terminated with a carriage return/line feed. After the message is sent, the application disconnects.

**Twitter**

The Twitter option requires you to authorize Weather Message to post status updates. When
you select the Twitter option, an authorize button will appear in the window. Click this option to display a browser window. You will need to log into your account and authorize Weather Message. The web page will give you the instructions for authorizing Weather Message.

When you authorize Weather Message, the browser window will close. Twitter will give Weather Message an access token to send updates to Twitter.

For more information see Sending Tweets using Twitter in the Supplement.

Facebook

In order to post status messages to Facebook, you will need to setup a developer account with Facebook. See the Facebook Status Updates section for instructions on setting up a developer account. You will be assigned a Consumer Key and Consumer Secret. These will be needed to setup the paging service. The Facebook option requires you to authorize Weather Message to post status updates. When you select the Facebook option, an authorize button will appear in the window. Click this option to display a browser window. You will need to log into your account and authorize Weather Message. The web page will give you the instructions for authorizing Weather Message.

When you authorize Weather Message, the browser window will close. Facebook will give Weather Message an access token to send updates to Twitter or Facebook.

Note: The access token issued by Facebook may expire after 60 days. This may require you to reauthorize Weather Message.

For more information see Facebook Status Updates in the Supplement.

XMPP

XMPP requires an existing user name and password. You will need to sign up for a user name dedicated for Weather Message.

For more information see Instant Messaging Using XMPP in the Supplement.

2.4.3.4 Paging Group

The Edit Paging Group window allows to setup a group to receive pages.
Enter the name of the group to be setup in the **Group Name** field. This name will appear in the alarm setup window as an available paging group.

Select the **Style** of page to send. Select **Short** for a short message; **Selected** for selected text from the alarmed UGC group; **Selected No Head** for selected text from the alarmed UGC group without the header; **Full** for Full Text; **Full No Head** for Full Text without header.

**Hint:** The No Head style option removes the heading lines from the messages. This option removes all of the heading text from the first line in the message or UGC group down to the issued date/time line.

The pager messages can be broken down into small packets to be sent to cellular phones and pagers. These devices normally cannot receive a large email message. Entering 0 (zero) for **Size** will tell the system to not break the message down into packets. In addition, you can limit the number of these packets you want to send, by specifying that number in the **Maximum** field. Entering 0 (zero) for Maximum will tell the system to send all of the packets.

**Hint:** Some paging companies restrict the message size that can be sent to their pagers. If you exceed the size limitation the page request will be refused or rejected by the paging company. If your page requests are being rejected, try a shorter message length.

The **Parse** option can be used to reduce the size of email messages sent. Selecting "Y" tells the system to parse the messages, for this group, against the WxWords word substitution file.

The **Time Zone** option allows you to select the time zone for this group. This option is used when the Style is set to Short. The system will adjust the received message to the selected time zone.

Select a paging service provider from the **Service Name** drop down list. See
Paging Services to add a new service.

**Hint:** If the selected service is Facebook, a question mark button will appear to the right of the Service Name. This button can be used to display the Facebook page numbers for the authorized user.

Enter the pager pins in the Pager Pin List box. Put one pin per line. You can also enter a name associated with each pin by following the pin with a single space, then the name. Entering a name will help you identify the person associated with the pager. The Import button can be used to import a list of email addresses. See the Importing Addresses section for more information.

**Note:** The information entered into the Pager Pin List varies depending on the paging service. The Supplement contains additional information for Facebook, Twitter, and XMPP.

**Note:** For Mototrbo® providers, the PIN should be entered as CAI.RadioId. For example 12.668 or 225.668, where 12 is the radio network and 225 is the group CAI. If no acknowledgement is required, append N to the radio identifier. For example 12.668N. Multiple identifiers can be entered separated by commas.

**Hint:** To temporarily disable a paging pin, insert a # before the number.

The Create Group Pager Header/Trailer button allows you to create text that will be added to the beginning and end of "selected" and "full" pager messages for this group. When you click on this button, a screen will be displayed for you to enter the header and trailer. See Message Header/Trailer for an example.

The Create Group Short Message button allows you to create a short message for this group. This option allows you to modify the system short message format for this group. See Short Message for additional information.

**Note:** If you enter a short message for a group, it overrides the default and product specific specifications.

### 2.4.4 Data Alerts

The Data Alerts window allows you to configure the software to notify a group of people if it does not receive data for a specific period of time.
To activate data alerting, set the number of minutes that the program should wait, without receiving data, before sending an alert. You can specify a Pager Group, Email Group, Message Client to receive the message. The program will send a brief message indicating it is no longer receiving data. The message will also include the name of the computer. When data resumes, you will get a second message indicating that it has resumed.

In addition to sending Pager and Email alerts, you can also execute an external program. Enter the external program, including the full path, in the Execute Program field. This program will be executed when data stops. It will not execute the program when data resumes.

**Hint:** Loss of data occurs when Weather Message server does not find any files in the Ingest Directory for the period specified.

### 2.4.5 Options

#### 2.4.5.1 General Tab

The Option's General Tab contains general settings for the server.
The **Show Errors** check box, when checked, will cause the software to pop-up an error box when a problem is encountered during program operation. Regardless of this setting, all errors are logged to the log file.

The **UnZip Files** check box, when checked, will cause the software unzip received compressed files. Files with the extensions "zis" and "zip" will be uncompressed when this option is enabled. This option is checked by default.

The **Show Message Decode** option, when checked, will cause Weather Message Server to show detailed information in the server window about each message as it is decoded. This option is only used for debugging and should not be used for normal operation.

The **Email/Page Use Upper Case** option, when checked, will cause all email and paged messages to be sent in upper case.

The **Email/Page Add Delimiter** option, when checked, will cause the program to add a comma between county names when using the short message option.

The **Setup/Shutdown Password**, if entered, will cause the Weather Message Server, WxEmwin and WxRadar programs to prompt the user for a password before stopping the respective program. The Weather Message Server Setup program will also require this password before allowing setup options to be changed.

**Hint:** Entering a password will prevent the server and ingest programs from being accidentally shutdown.

The **Server Name** field is used to record a name for your Weather Message Server. The server name is transmitted to each connected client.

The **Auto Startup** option allows you to specify whether Weather Message Server is
automatically started when Windows starts. The options are No; Yes, for the current user; and Everyone, for any user.

Note: The options available for Auto Startup are based on your user permissions. Administrator and Power users will have all of the options. Other users may only have the Yes option.

The Client Pass Code field contains the password or pass code used to validate messages sent from the Message Creator or Siren Controller. The Pass Code entered in the Message Creator and Siren Controller must match this Pass Code, otherwise, the received messages will be ignored.

2.4.5.2 Product Tab

The Product Tab allows you to specify validation options for received products.

The Maximum expiration time limits the expiration date and time of a received product to the number of hours entered. If the product expiration time, as compared to the product issue time, exceeds the number of hours entered, the expiration time is reset to the number of hours entered.

The Defective UGC expires field sets the number of minutes that should be used for the expiration time should a received product have a defective UGC line. If a received product has a defective UGC line, these minutes will be added to the product issue time to establish the product expiration time.

The Log defective products option, when checked, will cause the software to log all defective products in the log file.
2.4.5.3 Log Files Tab

The Log Files Tab allows you to specify options for the log files.

The Log File Size field allows you to specify this size of your Weather Message log files. The default is 50,000 bytes.

The Daily Logs option, when checked, causes the program to store the log files for each day in the ..\WxMesgNet\WxLogs directory. The logs for each day are copied to this directory. The log file name is appended with the day number. These logs will be overwritten with the next month's logs. After enabling this option, you must restart all Weather Message programs.

Note: Enabling the Daily Logs option disables the log file size option.

The Send Logs option, when checked, causes the program to send the log files listed in the list box to the email address entered in Send to Email Address. The log files are sent at the Send at Time each day.

Enter a list of log files to send in the list box. Click in the Log File Name field to enter the log file name. There is no need to enter a directory name if the log is stored in the Weather Message directory. A path can be entered for files in other directories. The Error Only option, when checked, will cause the program to scan the log file to see if it contains the word "Error". If the word "Error" is not found, the log is not emailed.

To delete an entry, click the line and press delete or right click and select delete.

The log file name can contain replacement variables for the current month day and year.
The following variables can be used for the prior day.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$LMM$</td>
<td>Month - two digits</td>
</tr>
<tr>
<td>$LM$</td>
<td>Month - without leading zero</td>
</tr>
<tr>
<td>$LDD$</td>
<td>Day - two digits</td>
</tr>
<tr>
<td>$LD$</td>
<td>Day - without leading zero</td>
</tr>
<tr>
<td>$LY$</td>
<td>Year - two digits</td>
</tr>
<tr>
<td>$LYYYY$</td>
<td>Year - four digits</td>
</tr>
</tbody>
</table>

2.4.5.4 Collectives Tab

The Option's Collectives Tab allows you to optionally store collectives in a user defined directory.
The software currently supports the SAHOURLY collective. Enter the directory path to store this file.

### 2.4.5.5 FTP Ingest Tab

The Option's FTP Ingest Tab allows you to configure FTP ingesting of EMWIN data.

![FTP Ingest Tab](image)

The **FTP Ingest on Startup**, when checked, will cause Weather Message to automatically request the three hour file when the program is first launched.

**Hint:** This option pre-loads the system with the last three hours of EMWIN data. This can be used when Weather Message is not run continuously.

The **FTP Ingest Interval** allows you to specify whether you want the software to automatically request FTP files for ingesting. You can select these options: None for no FTP Ingesting, 15 Minutes for FTP Ingesting every 15 minutes, 1 Hour for FTP Ingesting every hour, and 3 Hour for FTP Ingesting every 3 hours.

**Note:** FTP Ingesting requires an Internet connection.

The **FTP User Name** and **FTP Password** are the user name and password assigned to you by the National Weather Service. The National Weather Service requires FTP users to register for access. Send an email to robert.wagner@noaa.gov requesting access to the FTP server. You will need to provide you current TCP/IP address in the request.
2.4.5.6 Protocols Tab

The Option’s Protocol Tab allows you to configure the protocols used by Weather Message.

The **FTP – Use Passive Mode** option, when checked, will cause the ftp program to use the passive mode. This option may be needed for firewalls that restrict incoming connections.

The **FTP Timeout** field allows you to specify the maximum amount of time the program will wait for responses from ftp servers.

The **FTP – Absolute Timeouts** option, when checked, will cause the ftp program to use absolute timeouts. An absolute timeout requires the ftp software to complete a ftp command within the timeout seconds specified. When unchecked, the ftp software will use normal timeouts. Normal timeouts are based on communication activity between the ftp software and the ftp server.

The **HTTP Timeout** field allows you to specify the maximum amount of time the program will wait for responses from http servers.

The **TCP Timeout** field allows you to specify the maximum amount of time the program will wait for responses from clients connected to the Weather Message Server. The default is 0 (zero), wait indefinitely. Use caution when changing this value. If a value is entered, the Server will disconnect clients that have not received data stored in the internal buffer within the specified time. The minimum time value allowed is 30 seconds.

The **X10 Port** field allows you to specify the serial port that is connected to X10 interface hardware. If X10 is not used, select an unused port.

The **X10 Device** field is used to select the type of X10 interface device connected to your system. The valid options are CM17 and CM11.
The Short URL Address field is used to specify the address of the server proving short message URL support.

The Firewall / Proxy button allows you to configure Firewall and Proxy settings for your computer. See Firewall / Proxy.

2.4.5.6.1 Firewall / Proxy

The Firewall / Proxy window allows you to configure firewall / proxy information for your computer.

For a FTP firewall, enter the domain name or TCP/IP address of the firewall in the Host Name field.

Enter the Port number for the firewall.

If required, enter a User Name and Password. This should be a user name and password setup in the firewall.

Select the Type of firewall. Valid entries are 1-Tunnel, 2-Socks version 4, or 3-Socks version 5.
For a HTTP firewall, enter the domain name or TCP/IP address of the firewall in the **Host Name** field.

Enter the **Port** number for the firewall.

If required, enter a **User Name** and **Password**. This should be a user name and password setup in the firewall.

Select the **Type** of firewall. Valid entries are 1-Tunnel, 2-Socks version 4, or 3-Socks version 5.

For a Proxy access, enter the domain name or TCP/IP address of the proxy in the **Host Name** field.

Enter the **Port** number for the firewall.

If required, enter a **User Name** and **Password**. This should be a user name and password setup for the proxy.

If **HTTP version 1.0** is required for the proxy server, check this box.
The **Detect Proxy** button will automatically detect the proxy settings for your computer and populate the host name and port fields.

**Note:** The Firewall / Proxy settings are common to all Weather Message applications. Changing these settings will automatically change them for the other applications.

### 2.4.5.7 Purge Tab

The Option’s Purge Tab allows you to configure the purge interval and product count for received products.

![Program Options](image)

The **Global Purge Time** field specifies the number of hours to keep expired weather and graphic products, before deleting them from the directories entered in Data Path and Graphics Path.

The **Global Purge Count** allows you specify the minimum number of products to keep on file after the Global Purge Time as elapsed.

**Individual Product Purging**

Purge options can also be specified for individual products or wildcard patterns. These options override the global options. To enter a new product identifier, click in the **Product Id** field on the row that has the “*”. Enter the **Hours** and **Count** for this product.

The **Product Id** field supports the wildcard “?” and “***” characters.

To change an entry, click in the cell to be changed. To delete an entry, select the row and press the delete key.

**Purge Option Combinations**
Product purging give you three options:

- **Hours > 0 and Count = 0**
  This purges the product based on the expiration time.

- **Hours > 0 and Count > 0**
  This purges the product based on expiration time and product count. The program favors the hours parameter first. That is it will always keep a product until the hours elapses, then it will honor the count setting.

- **Hours = 0 and Count > 0**
  This purges the product based on the count of products. If you set the count to 2 and 4 product have been received in the last 30 minutes, the purge cycle will keep the last 2 product received and the previously received products will be deleted.

**Note:** *Weather Message starts a product purge cycle every 30 minutes.*

### 2.4.5.8 Service Tab

The Option's Service Tab allows you to configure Weather Message Server to run as a Windows service.

To run Weather Message Server as a Windows service, you need to click the **Install Service** button. This will perform the steps to install Weather Message Server as a service. After the installation completes, the **Install Service** button will change to **Uninstall Service**. You can click **Uninstall Service** to return to normal operation.

If Weather Message is installed as a service, the **Start Service** button will be enabled. Click
Start Service to start Weather Message Server in the background. After the service starts, the Start Service button will change to Stop Service. You can stop the service by clicking Stop Service.

**Hint:** After installing Weather Message Server as a service, the user interface and system tray icon for the server will not be visible. Use Weather Message Controller to monitor the server.

**Note:** When Weather Message Server is running as a service, it will run as the user Local System. Any directories that the server accesses will need to allow Local System to have full control.

**Note:** When Weather Message Server is running as a service, Weather Message Server will automatically start in the background when your computer is started. You do not have to log into the computer for the server to start.

### 2.4.5.9 Cap Receiver Tab

The Option’s CAP Receiver Tab allows you to configure the CAP Receiver. The CAP Receiver is a listener service that can receive CAP message from a third-party source.

Enter the **Listener Prefix**, **User Name**, and **Password** agreed upon with the third-party provider. For more information on this feature, contact Weather Message support.

**Note:** When these options are changed, you must stop and restart Weather Message Server.
2.4.6 Printer

The Printer menu allows you to select a default printer and font size.

Click the Default Printer menu item to select a default printer.

Click the Default Font menu item to select a default font.

2.4.7 Special Prefix

The Special Prefix window allows you select products to be serviced by the WRN, WRO, WRP, WRQ, WRR, and WRS prefixes. These special prefixes are designed to assist you in alarming a group of messages. These prefixes can be used to reduce the number of alarms needed for commonly alarmed products.

The prefix WRN defaults to the products FFW, SVR and TOR. Enter additional products by typing them into the list.

Note: All of the products in this list must use the same UGC coding sequence - zone or FIPS.
The prefixes WRO, WRP and WRQ have no assigned default values. Select one of these prefixes and enter products by typing them into the list.

**Note:** All of the products assigned to each list must use the same UGC coding sequence - zone or FIPS.

2.4.8 Product Specifications

The Product Specifications window allows you to establish short message formats for products. These specifications are used to create a short message for email, paging, and archive operations.

The **Default** product specification is used for any short message that does not match a product in the list.
Note: You cannot delete the Default product.

To edit an existing Product, double click the product. For other options, select the Product and right click to see these menu options.

- The Add option will add a new product specification.
- The Edit option will edit the selected product.
- The Delete option will delete the select product specification.

When adding, or editing, the Product Specification window is displayed.

Hint: Product Specifications can be entered for a three character product identifier, or a complete 6 character product plus WFO identifier.

2.4.8.1 Short Message Tab

The Short Message Tab allows you to establish a short message.

The Product field allows you to enter a product identifier. This field is disabled for the Default product. The description of the product entered is displayed to the right of the product field.

The format of the message is established by typing words and codes in the first text box. To the
right of the first text box, you will see a list of codes that can be used in the message. The text box at the bottom of the window shows a sample of the decoded format.

**Hint:** Pressing the F2 function key will toggle between Issued and Expired/Cancelled mode. This will allow you to see how the message will be formatted when it is expired/cancelled.

The following is a list of the codes available and their meaning:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$WFO$</td>
<td>Weather Forecast Office from AWIPS ID, 3 characters.</td>
</tr>
<tr>
<td>$Action$</td>
<td>The word Issued or appropriate VTEC Action.</td>
</tr>
<tr>
<td>$Amended$</td>
<td>The words Amended, Corrected, Delayed or nothing.</td>
</tr>
<tr>
<td>$MsgType$</td>
<td>Description of the message.</td>
</tr>
<tr>
<td>$HeadLine$</td>
<td>Paragraphs that start with … and end with …</td>
</tr>
<tr>
<td>$BulletAT$</td>
<td>Paragraphs that start with &quot;* AT&quot; or &quot;AT ###&quot;.</td>
</tr>
<tr>
<td>$Bullet$</td>
<td>Paragraphs that start with &quot;* &quot;.</td>
</tr>
<tr>
<td>$Issued$</td>
<td>Time message issued in local AM/PM format.</td>
</tr>
<tr>
<td>$Issued24$</td>
<td>Time message issued in local 24 hour format.</td>
</tr>
<tr>
<td>$IssDay$</td>
<td>Day name when the message was issued.</td>
</tr>
<tr>
<td>$IssDayAbr$</td>
<td>Abbreviated day name when the message was issued.</td>
</tr>
<tr>
<td>$IssDayNbr$</td>
<td>Day number when the message was issued.</td>
</tr>
<tr>
<td>$IssMonthName$</td>
<td>Month name when the message was issued.</td>
</tr>
<tr>
<td>$IssMonthNameAbr$</td>
<td>Abbreviated month name when the message was issued.</td>
</tr>
<tr>
<td>$IssMonthNbr$</td>
<td>Month number when the message was issued.</td>
</tr>
<tr>
<td>$IssYear$</td>
<td>Year when the message was issued.</td>
</tr>
<tr>
<td>$Expire$</td>
<td>Time message expires in local AM/PM format.</td>
</tr>
<tr>
<td>$Expire24$</td>
<td>Time message expires in local 24 hour format.</td>
</tr>
<tr>
<td>$ExpDay$</td>
<td>Day name when the message expires.</td>
</tr>
<tr>
<td>$ExpDayAbr$</td>
<td>Abbreviated day name when the message expires.</td>
</tr>
<tr>
<td>$ExpDayNbr$</td>
<td>Day number when the message expires.</td>
</tr>
<tr>
<td>$ExpMonthName$</td>
<td>Month name when the message expires.</td>
</tr>
<tr>
<td>$ExpMonthNameAbr$</td>
<td>Abbreviated month name when the message expires.</td>
</tr>
<tr>
<td>$ExpMonthNbr$</td>
<td>Month number when the message expires.</td>
</tr>
<tr>
<td>$ExpYear$</td>
<td>Year when the message expires.</td>
</tr>
<tr>
<td>$TimeZone$</td>
<td>Time zone selected for the email or paging group.</td>
</tr>
<tr>
<td>$Start$</td>
<td>Time event starts in local AM/PM format.</td>
</tr>
<tr>
<td>$Start24$</td>
<td>Time event starts in local 24 hour format.</td>
</tr>
<tr>
<td>$StartDay$</td>
<td>Day name when the event starts.</td>
</tr>
<tr>
<td>$StartDayAbr$</td>
<td>Abbreviated day name when the event starts.</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>$Today$</td>
<td>For Zone Forecasts – insert the today line.</td>
</tr>
<tr>
<td>$Tonight$</td>
<td>For Zone Forecasts – insert the tonight line.</td>
</tr>
<tr>
<td>$Forecast$</td>
<td>For Zone Forecasts - insert the first forecast line.</td>
</tr>
<tr>
<td>$DayOne$</td>
<td>For Hazardous Weather Outlook – insert day one line.</td>
</tr>
<tr>
<td>$Spotter$</td>
<td>For Hazardous Weather Outlook – insert spotter line.</td>
</tr>
<tr>
<td>$Counties$</td>
<td>A list of the counties alarmed.</td>
</tr>
<tr>
<td>$CountiesState$</td>
<td>A list of the counties alarmed followed by their state.</td>
</tr>
<tr>
<td>$IfCounty:word$</td>
<td>If county names are available, include &quot;word&quot;.</td>
</tr>
<tr>
<td>$IfExpire:word$</td>
<td>If expiration time is available, include &quot;word&quot;.</td>
</tr>
<tr>
<td>$IfExpires:word$</td>
<td>If expiration time is available and not VTEC cancellation, include &quot;word&quot;.</td>
</tr>
<tr>
<td>$UserDef1$</td>
<td>Paragraphs that start with a user defined string.</td>
</tr>
<tr>
<td>$Lines:x,y$</td>
<td>Include 'y' lines starting at line 'x'.</td>
</tr>
<tr>
<td>$Now$</td>
<td>For Now product - insert the now statement</td>
</tr>
<tr>
<td>$Concerning$</td>
<td>For SWOMCD product - insert the concerning statement</td>
</tr>
<tr>
<td>$AreasAffected$</td>
<td>Depreciated - Use the $Location$ variable</td>
</tr>
<tr>
<td>$Location$</td>
<td>Paragraphs starting with &quot;* LOCATION ...&quot; or &quot;LOCATION ...&quot; or &quot;AREAS AFFECTED...&quot; or &quot;IMPACT...&quot; or &quot;NEAR...&quot;</td>
</tr>
<tr>
<td>$Hazard$</td>
<td>For TOR and SVR products - inserts hazard line</td>
</tr>
<tr>
<td>$Source$</td>
<td>For TOR and SVR products - inserts source line</td>
</tr>
<tr>
<td>$Impact$</td>
<td>For TOR and SVR products - inserts impact line</td>
</tr>
<tr>
<td>$Tornado$</td>
<td>For TOR and SVR products - inserts tornado line</td>
</tr>
<tr>
<td>$TornadoThreat$</td>
<td>For TOR and SVR products - inserts tornado threat line</td>
</tr>
<tr>
<td>$Body$</td>
<td>Includes the body of the received message.</td>
</tr>
<tr>
<td>$ShortUrl$</td>
<td>Includes a URL address to display the product text.</td>
</tr>
<tr>
<td>$HvSiteId$</td>
<td>HVTEC site identifier.</td>
</tr>
<tr>
<td>$HvSiteDesc$</td>
<td>HVTEC site identifier description.</td>
</tr>
<tr>
<td>$HvSeverity$</td>
<td>HVTEC Flood Severity.</td>
</tr>
<tr>
<td>$HvCause$</td>
<td>HVTEC Cause.</td>
</tr>
<tr>
<td>$HvBegin$</td>
<td>HVTEC Event Beginning Time AM/PM.</td>
</tr>
<tr>
<td>$HvBegin24$</td>
<td>HVTEC Event Beginning Time 24 hour.</td>
</tr>
<tr>
<td>$HvCrest$</td>
<td>HVTEC Crest Time AM/PM.</td>
</tr>
<tr>
<td>$HvCrest24$</td>
<td>HVTEC Crest Time 24 hour.</td>
</tr>
<tr>
<td>$HvEnd$</td>
<td>HVTEC Event Ending Time AM/PM.</td>
</tr>
<tr>
<td>$HvEnd24$</td>
<td>HVTEC Event Ending Time 24 hour.</td>
</tr>
<tr>
<td>$WindSpeed$</td>
<td>Wind speed in miles per hour.</td>
</tr>
<tr>
<td>$HailSize$</td>
<td>Hail size in inches.</td>
</tr>
</tbody>
</table>

The $IfCounty:word$, $IfExpire:word$ and $IfExpires:word$ codes can be used to insert words if the message will include county names and/or an expiration time. In the example shown above, the code "$IfCounty: for $", means to include the word "for", if county names are available, otherwise do not include the word. The "$IfCounty: County $", does the same, to include the
word "County", if county names are available.

**Hint:** Use $IfCounty: Parish $ to use Parish instead of County.

**Note:** When $IfCounty: County $ or $IfCounty: Parish $ is used, the system will automatically make County and Parish plural when there are more than one county.

Using these codes you could construct a message that reads: From Lee County EMA: At 13:30 NWS BHM issued a Tornado Warning for Lee County expiring at 14:00. This flexibility allows you to have a shorter or longer message, based on your requirements.

The $IfExpire:word$ and $IfExpires:word$ variables support the conditional instruction $Else$. The value to the left of $Else$ will be populated when there is an expiration time. The value to the right of $Else$ will be populated when there is no expiration time. In the case of $IfExpires:…$ variable, a cancellation will use the value to the right of $Else$.

**Example:** NWS has $Action$ a $MesgType$$IfCounty: for $$Counties$$IfCounty: County$$IfExpires: until $Expire$$Else$ at $Issued$$

The $HeadLines$ code will include any headlines found in the alarmed message. Headlines are lines that begin with "..." and end with "...". Headlines are not present in every weather message.

The $BulletAT$ code will include any text found in the alarmed message after the text "* AT" or "AT ###". This code is useful with TOR (tornado), SVR (severe thunderstorm) and SVS (severe weather statement) messages. It captures the location of the weather system causing the alarm.

The $Bullet$ code will include any text found in the alarmed message after the text "* " . This code is useful with several types of messages. It captures the location of the weather system or event causing the alarm.

The $Today$ and $Tonight$ codes will include the today and/or tonight information from the Zone Forecast product. Specifically, $Today$ will pull all of the text associated with a line that starts with ".TODAY", ".REST OF TODAY" or ".THIS". $Tonight$ will pull all of the text associated with a line that starts with ".TONIGHT", ".REMAINING" and ".REST OF TONIGHT".

The $DayOne$ and $Spotter$ codes will include the day one and spotter attention lines from the Hazardous Weather Outlook. Specifically, $DayOne$ will pull the first paragraph after the ".DAY ONE" header. $Spotter$ will pull the first paragraph after the ".SPOTTER" header.

The $Now$ code will include all text that follows the .NOW heading.

The $Concerning$ code will include the text that follows the CONCERNING... line in the SWOMCD product.

The $Location$ code will include the text that follows the "LOCATION...", "LOCATION...", "* IMPACT...", or "* NEAR..." line in the Tornado, Severe Thunderstorm, Severe Weather Statement and Flash Flood products. It also includes text that follows the AREAS AFFECTED... line in the SWOMCD product.

The $Hazard$ code will include the text that follows the "HAZARD..." line in TOR, SVR and SVS products.

The $Source$ code will include the text that follows the "SOURCE..." line in TOR, SVR and SVS products.

The $Impact$ code will include the text that follows the "IMPACT..." line in TOR, SVR and SVS products.
products.

The $UserDef1$ code will include a paragraph of text, starting at the point where a user definable string is found. See the Options tab to setup the user definable string.

The $Lines:x,y$ code will include a fixed number of lines from a specified starting line in the message. X is the starting line in the message and Y is the number of lines to include.

\textbf{Note:} The $Start$, $Start24$, $vEventStart$, and $vEventStart24$ variables will contain the word "now" if the incoming message is coded with a blank event start time. A blank event start time generally indicates that the event has already started.

\textbf{Note:} The HVTEC variables are only populated when the alarmed message contains HVTEC encoding.

\textbf{Note:} When the message contains the words TORNADO EMERGENCY, the $MesgType$ variable will contain the words Tornado Warning/Tornado Emergency.

\subsection{2.4.8.2 VTEC Message Tab}

The VTEC Tab allows you specify a format for the description associated with VTEC coded messages.

![Product Specification](image)

The format of the $MesgType$ code is established by typing words and codes in the first text box. To the right of the first text box, you will see a list of codes that can be used. The text box at the bottom of the window shows a sample of the decoded format.

The following is a list of the codes available and their meaning:
$vProduct$

Product type – Operational, Test, Experimental, Experimental VTEC, System Test

$Action$

Action – New, Cancelled, Extended, etc.

$Phenomena$

Phenomena – Severe Thunderstorm, Tornado, etc.

$Significance$

Significance – Watch, Warning, etc.

$Event$

Event number used to track this message.

$EventStart$

Event start time in local AM/PM format.

$EventStart24$

Event start time in 24 hour format.

**Note:** The $EventStart$ variables can be blank if the incoming message is coded with no event start time.

**Note:** The $Product$ variable will be blank for Operational products. The variable will be populated for the remaining product types.

### 2.4.8.3 Options Tab

The Options Tab allows you to setup user definable text that will be used to populate the $UserDef1$ short message code.

![Product Specification](image)

Enter the starting string sequence in the **Start Sequence** field and the stopping string sequence in the **Stop Sequence** field.

These sequences must match the text exactly. In the example above, the program will look for a
line that begins with ".Discussion" and is followed by any number of characters. The "***" character is used to indicate any number of characters. Since the stop sequence is not defined, it will stop capturing text from the message when a blank line is encountered.

**Note:** The system will capture the line that contains the start sequence and stop sequence.

**Hint:** If you want to find text that is in the middle of a line use the "***" character before and after the text that you want to find.

### 2.4.9 User Products

The User Product Definitions window is used to create user defined products and/or override the information for existing products.

The layout for the ProductUser.dat file follows:

- 3 character product id followed by a comma
- 2 character wmo prefix followed by a comma
- 1 digit has ugc 0=no, 1=yes followed by a comma
- 1 digit has vtec 0=no, 1=yes followed by a comma
- bit mask for product specifics followed by a comma
  - None = 0
  - Has Both CZ = 1
  - Has Lat Long = 2
  - Has Time Mot Loc = 4
  - Has Wind Hail = 8
- multiple characters for description

**example:**

```
SVR,WU,1,1,14,Severe Thunderstorm Warning
```

Products defined here will override any product already defined in Product.dat.
2.4.10 WxWords

The WxWords Window is used to establish word substitutions. These entries are used when the Parse option is enabled on Fax, Email and Paging groups. This capability is specifically designed to reduce the size of paged messages.

The format for WxWords is original word(s), replacement word. There must be a comma between the original word and replacement word. You will notice that the comma is shown in a different color.

Note: The words are not case sensitive, however the program will replace the words in the case that you use in WxWords.


Since the format for WxWords uses a comma to separate the original word(s) and replacement word(s), a special procedure should be used to replace a comma. To replace a comma, you must enclose the comma character with single quotes. For example – to replace the comma with a semicolon, your entry in WxWords would be ",;". To replace a semicolon with a comma, your entry in WxWords would be ";,".

In order to remove carriage return and line feed characters, enter the line \n , . The \n string will match any carriage return line feed characters, which can be replaced with nothing or any other character string, include a blank space.

2.4.11 Message Header/Trailer

The Edit Header / Trailer window allows you to enter text that will be added to the beginning and
ending of a fax, email or pager message.

The Header and Trailer are optional.

2.5 Register Software

The Register menu option allows you to register your software.

When you purchase Weather Message, you will be supplied with a Registration Name and Registration Code. Enter these exactly as they are printed. These fields are case sensitive.

After the software is registered, we recommend that you stop and restart the software.

To purchase the software go to http://www.weathermessage.com/Purchase.aspx.

2.6 Maintaining Alarms

2.6.1 The Alarm Grid

The alarm grid allows you to add, edit, delete, copy, paste and set alarms inactive.
Hint: Alarms that appear with a yellow background are inactive.

To edit an exiting alarm, double click the alarm. For other options, select the alarm and right click to see these menu options.

- The Add option will add a new alarm.
- The Edit option will edit the selected alarm.
- The Delete option will delete the select alarm.
- The Copy option will copy the selected option.
- The Paste option will paste the last copied alarm as a new alarm.
- The Set InActive option will disable an alarm. You can also set and alarm inactive on the alarm screen.
- The Test Alarm option will generate a test message that matches your alarm.

Note: The Test Alarm option may not work for alarms that have wild card characters.

2.6.2 Alarm Tab

When adding or editing an alarm, this window is displayed. The alarm tab contains the information for selecting the weather products to alarm.
The Product field contains the product identifier that you want to alarm. The product identifier is assigned by the National Weather Service. It is commonly referred to as an AWIPS identifier. Weather product codes / AWIPS identifiers are listed in Text Product Abbreviations. You can also create user define products identifiers. See User Defined Products for more information.

Text message product codes are generally composed of a three-character message type, followed by a three-character weather forecast office code. There are some product identifiers are four or five characters in length. For example, the regional weather round up for Alabama is RWRAL. If you do not know whether a product uses four, five or six characters, look up the weather forecast office’s products using this Internet address http://www.weathermessage.com/Support/EMWINProductSearch.aspx.

**Hint:** The product code can be an actual product code, or can contain question mark(s) (?) or asterisk (*) for wildcard operation.

**Hint:** The special prefix, WRN, can be entered in the product code field to catch all of the standard warnings. It includes SVR, TOR and FFW. This can be a time saver when establishing your alarms. Three additional special prefixes, WRO, WRP and WRQ, can also be used. These prefixes are not defined and can be setup using the Support Setup, Special Prefix menu option.

**Hint:** To alarm METAR products, enter MTR as the first three letters of the product identifier, followed by the four-letter station identifier. For example to alarm the METAR for KALX, enter MTRKALX for the product identifier.

**Note:** If a message does not contain a valid Product identifier, the program will use the first six characters of the WMO header. This allows you to alarm products that do not have Product identifiers.

In addition to text products, you can setup alarms for graphic products. Graphic products cannot
be sent to the map, or paged. They can be sent to the message client, emailed, archived and passed to an external exe program. To alarm a graphic product, use its 8-character EMWIN file name.

**Hint:** The product identifier GRAPHI will match all graphic products.

To aid you with the entry of product identifiers, you can click on **List Products** to view and select a product. To view or select a weather forecast office, click on **List Forecast Offices**.

**Note:** The product and forecast office list may not include all products or forecast offices distributed by EMWIN, NWWS or NOAAPort. The National Weather Service routinely updates these lists. As they are updated, they are incorporated into the next Weather Message software release. Check the Weather Message website for updates to these lists.

### State / County / Marine Zone Selection

To select a specific state(s) or marine zone(s), select the state or marine zone from the state list. To aid you with the state or marine zone abbreviations, you can click on **List States** to view and select a state or marine zone.

**Note:** When using state or county selections, the weather text must contain the appropriate Universal Generic Code (UGC) lines. If you select a specific state or county and the message does not contain a UGC line, it will be not be alarmed. The only exception is the SAW product. Weather Message decodes the text in the SAW product so it can be alarmed by state.

**Hint:** When you enter the product identifier for a product that does not contain a UGC line, the state and county list box will have a light gray background color.

You can select any number of counties to be matched, for the selected state(s). If no counties are selected, the message will be alarmed if the state abbreviation is found in the message UGC lines.

**Hint:** A warning message will be displayed if you attempt to enter state or county information for a message that does not normally contain UGC lines.

**Hint:** Pressing F5 after selecting a state or county will resort the state or county list based on the selections.

**Note:** If you want to alarm fire weather products for the midwest states, you will need to install the fire zones file. The default installation does not contain the midwest fire zones. To install the fire zones file, navigate to c:\program files\wxmesgnet directory. Rename County_Z.dat to County_Z.dat.org. Rename County_FZ_Z.dat to County_Z.dat. Restart the Weather Message programs. You will now see the fire zones in the county selection box.

### Text Matching

In addition to state and county preferences, you can require a message to have a specified text phrase before it is alarmed. The **Match Text** field allows you to enter a word or phrase that should be found in the message before it is alarmed.

This feature can be used with messages that contain different content. For example, the SPS (Special Weather Statement) is used for different purposes. One use of this message is to announce thunderstorm advisories. Entering ""THUNDERSTORM ADVISORY"" in this field, for an SPS alarm, will require it to contain these words before it would be alarmed.

The **Exclude Text** field allows you to enter a word or phase that if found, would cause the message to not be alarmed. This feature can be used to prevent the alarming of test messages.
For example entering the word "**TEST**" in this field would prevent any message containing the word "TEST" from being alarmed.

**Hint:** The *Match* and *Exclude* fields use wildcards for matching. Be sure to prepend and append an "**". The matching mechanism supports ? to match any single character, * to match Zero or more characters, # to match any single digit (0–9), [charlist] to match any single character in charlist and [!charlist] to match any single character not in charlist.

The default matching mechanism is fast, but is limited to one set of matching criteria. Checking the *RegEx* box to the right of the *Match Text* and *Exclude Text* boxes allows you to enter regular expressions. Regular expressions allow you to compose complex matching patterns. For more information on regular expressions, visit Regular-Expressions.info. You can test regular expressions at this RegExLib.com, or RegExr: Online Regular Expression Testing Tool.

Here is an example using regular expressions:

Severe Thunderstorm products normally contain the text "WINDS IN EXCESS OF XX MPH". If you want to alarm this product when the winds are 65 MPH to 99 MPH use this regular expression in the Match Text Field

```
(?s)^.*WINDS\s*IN\s*EXCESS\s*OF\s*([6-9]\s*\[7-9]\s*\[0-9])\.*$
```

Remember to check the RegEx box.

For Hazardous Weather Outlook products, it is common to prevent the alarming of the message when storm spotters are not needed. Enter this regular expression in the Exclude Text field

```
(?s)^.*(IS\s*NOT\s*\ANTICIPATED)|(WILL\s*\BE\s*\NEEDED)|(NO\s*HAZARDOUS\s*WEATHER\s*\IS\s*\EXPECTED).*$
```

Remember to check the RegEx box.

**Alarm Active Option**

The Alarm Active option is used to enable / disable an alarm. When an alarm is disabled, it is shown in the main alarm grid with a yellow background.

**Set VTEC – Valid Time Event Code**

The *Set VTEC* button is used to setup specific VTEC events, primary and hydrologic, to be matched for this product. The color of the Set VTEC button indicates the status of this option.

If the background color is light green, VTEC has been setup for this alarm. If the background color is white, VTEC is available but not set. If the background color is light gray, VTEC is not available for this product.

**Set Area**

The *Set Area* button is used to establish a geographic area for the alarm. This geographic area is based on a location's latitude and longitude and a radius in miles.

The color of the Set Area button indicates the status of this option. If the background color is light green, Area has been setup for this alarm. If the background color is white, Area is available but not set. If the background color is light gray, Area is not available for this product.

**Note:** Caution should be used when enabling the Area option. This option requires the weather text to contain a LAT...LON information line. This is associated with polygon watch / warnings.
Set Wind - Wind Speed and Hail Size

The Set Wind button is used to establish wind speed and/or hail size for the alarm. Wind Speed and Hail size is included in Severe Thunderstorm and Severe Weather Statements.

The color of the Set Wind button indicates the status of this option. If the background color is light green, Wind and/or Hail has been setup for this alarm. If the background color is white, Wind and Hail are available but not set. If the background color is light gray, Wind and Hail is not available for this product.

Note: The Set Wind option is now being tested by the NWS Central Region forecast products. Users in other areas of the country should not use this option until your local weather service office implements the WIND...HAIL line in their Severe Thunderstorm products.

Set CAP - Common Alerting Protocol

The Set CAP button is used to set Common Alerting Protocol options. Common Alerting Protocol elements are present in properly coded XML products.

The color of the Set CAP button indicates the status of this option. If the background color is light green, CAP options have been setup for this alarm. If the background color is white, Wind and Hail are available but not set.

Note: These options are evaluated when the received message is a valid CAP 1.1 or 1.2 message.

Alarm Validation

When the alarm is saved, the program performs a number of validations to insure that the alarm will work properly. Any errors or warning messages are displayed to let you know about potential problems.

2.6.2.1 VTEC Settings

The VTEC Settings window allows you to further define your alarm requirements for the product. If the product identifier associated with the alarm is VTEC enabled, this window will be initially populated with all of the Phenomena and Significance supported by the product.
Primary VTEC

In order to use Primary VTEC, you must select at least one item from Products, Actions, Phenomena and Significance. You can select multiple items from each category.

The Select All Actions button will select all action items. The Select All Significance button will select all significance items. The Clear Selections button will reset all selections for both Primary and Hydrologic.

**Note:** You can select Phenomena that may not be included in the message that is being alarmed. You need to verify that the message you are alarming can contain the Phenomena that you select.

**Note:** When you use the Primary VTEC option, the received message must contain the Primary VTEC items you select, otherwise the message will not be alarmed.

**Note:** The System Test product type is not issued by the National Weather Service. Code 'L' is reserved for local system testing.

Hydrologic VTEC
Enter **Site Identifier(s)** for the flood area. Select **Flood Severity(ies)** from the drop down list.

**Note:** Hydrologic VTEC is only found in hydrologic products.

**Note:** These settings are optional. If they are left blank, the software will alarm all products that match your other alarm criteria.

**Note:** When you use the Hydrologic VTEC option, the received message must contain the Hydrologic VTEC items you select, otherwise the message will not be alarmed.

### 2.6.2.2 Area Settings

The Area Settings window allows you to further define the geographic area for your alarm. This area is defined by entering the coordinates and radius for your area.
Enter the **Latitude**, **Longitude** and **Radius** for the alarmed area. The Look Up Address Latitude/Longitude length can be clicked to launch a browser window that will allow you to lookup the latitude and longitude for an address.

**Note:** Caution should be used when enabling the Area option. This option requires the weather text to contain a LAT...LON information line. Incorrect settings can cause your alarm to fail.

### 2.6.2.3 Wind Hail Settings

The Wind Hail Settings window allows you to define a minimum speed and/or Hail Size for the alarm.

![Wind Speed and Hail Size Settings](image)

Wind Speed and Hail Size specify the minimum Wind Speed and/or Hail Size that the message must contain to be alarmed. Entering zero for either value disables the check for that item.

Enter a **Wind Speed** ranging from 60 miles-per-hour to 100 miles-per-hour. A value of zero disables the check for wind speed.

Enter a **Hail Size** ranging from .75 inches to 4.00 inches. A value of zero disables the check for hail size.

**Note:** If both values are entered, the system will attempt to match at least one of the criteria.

**Note:** Caution should be used when enabling the Wind Speed and Hail Size option. This option requires the weather text to contain a WIND...HAIL information line. Incorrect settings can cause your alarm to fail.

### 2.6.2.4 Cap Settings

The CAP Settings window allows you to define alarm criteria based on the Common Alerting protocol.

**Alert Settings**
Check the items that should match the received message to be alarmed. If no items are checked, the system will not check for the received message for that criteria.

Info Settings

Check the items that should match the received message to be alarmed. If no items are checked, the system will not check for the received message for that criteria.

Filter
The XML XPath Filter is used to further filter the received CAP message. A valid XPath statement must be entered based on the CAP protocol. See the CAP 1.2 specification for more information on the CAP protocol.

### 2.6.3 Client / Map / X10 Tab

The Client/ Map/ X10 tab is used to specify an alarm action for these categories.
Message Client

The **To Client** field is used to indicate whether you want this alarm sent to the Message Client(s) connected to the server. Select "Yes" to send the alarm to all Message Clients, or select an individual Message Client identifier. Each Message Client can be set to a different identifier. This allows you to send different alarms to individual Message Clients.

Map Client

The **To Map** field is used to indicate whether you want this alarm sent to the Map Client computers connected to the server. Select "Yes" to send the alarm to all Map Clients, or select an individual Map Client identifier. Each Map Client can be set to a different identifier. This will allow you to send different alarms to individual Map Clients.

**Note:** *Only messages with UGC lines will be sent to the map client.*

Alarm Types

The **Alarm Type** field designates an alarm number for this alarm. The Message Client and Map Client use the Alarm Type to determine the sound, message, or text-to-speech option that is used when the alarm arrives. The Message Client and Map Client will also use this Alarm Type to determine if their windows should be made visible, if they are hidden. Select your choice in the Alarm Type field.

You can establish 40 different alarm type settings in the Message and Map clients. For example: You could assign alarm type 1 to tornado warnings, type 2 to tornado watches, type 3 to severe thunderstorm warnings, 4 to severe thunderstorm watches, etc. The actual wave files that will be played and window popup options are setup in each Weather Message Client.

Leaving the Alarm Type blank will cause the Message Client to show the message in it's text box, however, if the screen is minimized, it will not popup the window to display the message. For types 1 through 20, the Message Client will popup it's window, based on the client settings, if the program is minimized. See the Message Client and Map Client sections for additional information on Alarm Types.

X10 Settings

The **X10 Settings**, along with the associated X10 hardware, can be used to activate electrical devices when an alarm occurs. Select a **House Code**, **Command**, **Duration** and appropriate **Units** to activate.

The software supports the commands On, Off, All On, All Off, and Blink.

**Hint:** *The Blink option is implemented in software and works best with the CM11a controller.*

The **Duration** field allows you to specify the number of minutes that a device should remain activated. Enter 0 (zero) for it to remain active until turned off.

**Hint:** *With VTEC coded messages; it is possible to turn on a device when a watch is issued and off when the watch expires.*

**Note:** *You should set the X10 Port and X10 Device in Support Setup Options before entering alarms for X10 devices.*

See the Weather Message website for additional [X10 information](#) and sources for X10 hardware.
2.6.4 Email Tab

The Email tab is used to specify an alarm action for this category.

E-Mail

To Email a message, you first have to establish your e-mail groups. See the section on setting up email groups. After the groups have been established, select one or more of the groups from the list.

Upon receiving a valid alarm for an e-mail group(s), Weather Message will send a message to the e-mail group(s) based on the style you selected for the group.

Hint: Graphic products can be alarm to an Email group. The graphic is attached to the Email as an in-line file.

If you selected the short message format and a "TORBHM" was issued with counties, ALC123 and ALC037, the paging message will read "NWS has issued a Tornado Warning for Tallapoosa Coosa County until 07:00 PM". Examples of the message formats can be seen in Paging / E-Mail Formats.

Note: If the alarm was only for Tallapoosa County, only the name Tallapoosa will appear. The same goes for Coosa. If both counties are in the weather message, then both will appear. The format of this short message format can be changed from the Support Setup menu.

Note: It is possible for you to select counties that may be in different groups in the alarmed message. Some weather products contain multiple groups that each contains counties. In the
event that you select multiple counties and they are in different groups, you will get one message for each group that contains a matching county.

If you use the Any County code, for example "ALC000", the short message will contain a list of every county appearing in the weather message. This can make the short message longer than what will fit on a pager's display.

**Note:** It is not recommended to use the all county code when you are sending "Selected" or "Full" message text. Doing so will result in an email/page being generated for each UGC line in the weather message.

The file Product.dat, in the WxMesgNet directory, contains the descriptions of all weather products. This description appears in the short message and on the Message Client screen. To change a product description, copy the line from Product.dat to ProductUser.dat and make your modifications. The Product.dat file should not be modified. It is replaced during software updates. See [User Products](#) for more information on defining your own products.

**Time Restrict or Delaying Paging / E-Mail / Fax**

The **Time Restrict**, **Time Begin**, **Time End**, and **Days of Week** fields are used to limit or delay the times and days that a page, e-mail or fax can be sent for a particular alarm. To restrict a message to a defined time period, set the Time Restrict field to **Yes**. Enter the beginning time you want to send the page, e-mail or fax. Enter the time to stop sending the page, email or fax. Select the days of the week that you want the page, e-mail or fax sent.

For example, you may not want an alarm paged or emailed from 22:00 hours through 07:00 hours. The Time Begin field should be the time that you want paging/emailing started, in this example 07:00. The Time End field should be the time that you want paging, emailing or faxing stopped, in this example 22:00. Check all of the days of the week to receive that you want the message sent. From 22:00 through 07:00, messages will not be paged or emailed.

To delay a message until a later time, set the Time Restrict field to **Hold**. Using the above example, you want all messages received from 22:00 through 07:00 to be delayed until 07:00. The Time Begin field should be the time that you want paging/emailing started, in this example 07:00. The Time Begin time is also the time that any held messages would be sent. The Time End field should be the time that you want paging, emailing or faxing stopped, in this example 22:00. From 22:00 through 07:00 messages will be held until 07:00. At 07:00 any held messages will be sent. Any messages that arrive from 07:00 through 22:00 it will be paged, emailed or faxed as soon as they arrive.

To delay a message and only send the last one received for a group, set the Time Restrict field to **Hold Last**. Using the above example, you want all messages received from 22:00 through 07:00 to be delayed until 07:00 and only the last message received to be sent. The Time Begin field should be the time that you want paging/emailing started, in this example 07:00. The Time Begin time is also the time that any held messages would be sent. The Time End field should be the time that you want paging, emailing or faxing stopped, in this example 22:00. From 22:00 through 07:00 messages will be held until 07:00. At 07:00 any held messages will be evaluated and the last one received for a product will be sent. Any messages that arrive from 07:00 through 22:00 it will be paged, emailed or faxed as soon as they arrive.

**Note:** For **Hold Last** restriction, the system groups the held messages using the original product identifier and group name. It sends the last message received for the product and group.

When the Time Restrict option is used, you must select the Days of Week that you want the message sent. Check the days that you want the message sent. If a day is unchecked, the
message will not be sent.

2.6.5 Paging/Fax Tab

The Paging/Fax tab is used to specify an alarm action for these categories.

Paging

To send a message to a pager, you first have to establish your paging groups. Weather Message supports TAP, SNPP, WCTP protocols, along with a number of other speciality formats. See the section on setting up paging groups. After the groups have been established, select one or more of the groups from the list.

Upon receiving a valid alarm for a pager group, Weather Message will send a message to the pager group(s) based on the style you selected for the group.

If you selected the short message format and a "TORBHM" was issued with counties, ALC123 and ALC037, the paging message will read "NWS has issued a Tornado Warning for Tallapoosa Coosa County until 07:00 PM". Examples of the message formats can be seen in Paging / E-Mail Formats.

Note: If the alarm was only for Tallapoosa County, only the name Tallapoosa will appear. The same goes for Coosa. If both counties are in the weather message, then both will appear. The format of this short message format can be changed from the Support Setup menu.

Note: It is possible for you to select counties that may be in different groups in the alarmed message. Some weather products contain multiple groups that each contains counties. In the event that you select multiple counties and they are in different groups, you will get one
message for each group that contains a matching county.

If you use the Any County code, for example "ALC000", the short message will contain a list of every county appearing in the weather message. This can make the short message longer than what will fit on a pager’s display.

**Note:** It is not recommended to use the all county code when you are sending "Selected" or "Full" message text. Doing so will result in an email/page being generated for each UGC line in the weather message.

The file Product.dat, in the WxMesgNet directory, contains the descriptions of all weather products. This description appears in the short message and on the Message Client screen. To change a product description, copy the line from Product.dat to ProductUser.dat and make your modifications. The Product.dat file should not be modified. It is replaced during software updates.

**Fax**

To fax a message, you first have to establish your fax groups. See the section on setting up fax groups. After the groups have been established, select one or more of the group(s) from the list. Fax alarms work just like the pager and have the same format options. Upon receiving a valid alarm for a fax group, Weather Message will send a message to the fax group based on the style you selected for the group.

### 2.6.6 Archive/Html/Exe/Print Tab

The Archive/Html/Exe/Print tab is used to specify an alarm action for these categories.
The **Archive Action** field indicates the style of message to archive. Select **No** for no archiving; **Short** for a short message; **Selected** for selected text from the alarmed UGC group; **Selected No Head** for selected text from the alarmed UGC group without the header; **Full** for Full Text; **Full No Head** for Full Text without header; or **Raw** for raw data.

**Hint:** The **No Head** style option removes the heading lines from the messages. This option removes all of the heading text from the first line in the message or UGC group down to the issued date/time line.

**Hint:** For graphic products, use the **Full** option.

**Note:** The **Raw** option is used by WxLoader to reconstruct a message from the individual parts of a message.

The **Archive Type** field is automatically selected by the software based on the protocols selected on the HTML Template window. This field can be blank or one of these options: Local, HTTP, FTP, FTPS, SFTP Password, or SFTP Certificate.

The **Archive Path** field contains the directory and file name to save. The default archive type is Local. To save a file to a local directory, simply enter the directory path and file name to save in the Archive Path field. To use the FTP, FTPS, SFTP or HTTP protocols, press the HTML Template button.

An example of archiving to a local directory using the original EMWIN file name along with the message expiration date/time would be "c:\weather\$FileName$$Expire$$FileExt$". This would result in a file with a eight character EMWIN file name appended with the expiration date/time in the format MMDDYYHHMM followed by the extension for the file.

**Path / File Name Variables**

The following variables are supported in the path / file name.

- $MM$ for the current two digit month.
- $DD$ for the current two digit day.
- $YY$ for the current two digit year.
- $YYYY$ for the current four digit year.
- $UTCHOUR$ for the current UTC two digit hour.
- $UTCMM$ for the current UTC two digit month.
- $UTCDD$ for the current UTC two digit day.
- $UTCYYYY$ for the current UTC four digit year.
- $FileName$ for the EMWIN base file name.
- $Wfo$ for the 3 character forecast office.
- $ProductId$ for the 4 to 6 character product identifier.
- $FileExt$ for the file extension.
- $Expire$ for the message expiration date and time.
- $ExpireUTC$ for the message expiration date and time in UTC.
- $Issued$ for the message issued date and time.
- $IssuedUTC$ for the message issued date and time in UTC.

**Hint:** The $MM$, $DD$, and $YY$ variables can be used to archive files to a directory structure that includes one of the numeric date variables. The variables are two digits in all cases and have a leading zero when single digit is encountered.

**Note:** The software does not create directories. You will need to create the directory structure prior to setting up the alarm.
Hint: The program normally overwrites duplicate files. You can use the No Overwrite Archive Option to add a sequential number between the file name and extension.

The Archive Option indicates whether the resulting message is appended, overwritten or made unique if it already exists. Selecting the Append option will cause the program to append the an exiting file with the archived data. The Overwrite option will overwrite any existing message. The No Overwrite option will cause the program to insert a sequential number to the message to make the file name unique.

Note: The Append option works with FTP, FTPS, SFTP and Local.

FTP / HTTP / HTML Button

The FTP / HTTP / HTML button will launch the FTP / HTTP / HTML Setup window. It can be used to create html templates, select upload protocols and set your server options.

Execute External Program

The Exe Program field is used to start a third-party program when an alarm occurs. Enter the full path and program name for the third-party program. Weather Message can pass the file name of the message that caused the alarm. To do this put one space after the program name and enter the characters "$1". For example, to start Notepad each time an alarm is triggered, enter "Notepad.exe $1" in the Exe Program field.

Hint: If the path to the executable contains a space, you should enclose the path and program name in quotes. For example: "c:\program files\myprogram.exe" $1

Print Action

To print a text or graphic product to a printer setup on the computer running Weather Message Server, select one of these print options. Select No for no printing; Short for a short message; Selected for selected text from the alarmed UGC group; Selected No Head for selected text from the alarmed UGC group without the header; Full for Full Text; or Full No Head for Full Text without header.

2.6.7 Notes

The Archive/Html/Exe/Print tab is used to specify an alarm action for these categories.
Optionally enter any information about this alarm.

2.6.8 FTP / HTTP / Html Setup

The Html Setup is used to select upload protocols and associate an optional html template for merging weather text.
The **Template File Name** is the name of the html file that contains your template. The **Browse** button can be used to locate the template file. The program automatically defaults to `..\WxMesgNet\WxData\Template` for template files. You can place templates in any directory. The Template File Name is not required. Leave this blank if you want to send the weather text without html encoding.

If you have not established a template file, enter a name for a new template file. This file will be created, using the html code you specify when the **Save** button is clicked.

The **Destination File Name** is the name you want the resulting message to be named on your server. This field is required. You can use variables in the path and file name, see **Path / File Name Variables**.

Select the **Save To** type, Local, FTP, FTPS, SFTP with Password, SFTP with Certificate, or HTTP. If one of the FTP options or HTTP is selected, the program will allow you to enter information about your FTP or HTTP server. Enter the FTP Server address, Port number, User Name and Password. These settings will be used to log into your server.

**Note:** When using the SFTP with Certificate option, you should enter your private key password in the password field. Your private certificate must be saved in `c:\Program Files\WxMesgNet\SSHKeys` directory. The file should be named as follows: server name plus underscore character plus user name with the extension .pem. For example `wxmesg.com_danny.pem`.

The **HTML Code** box is used to enter the html code to encapsulate the weather text. Remember to use the variable `$MESSAGES` in this code as a place marker for your text.

The **Save** button will save your html template and update the Archive Path field.
Note: If a html template is specified, the program will change any html reserved-characters in the weather text to their corresponding html abbreviation. This prevents html browsers from misinterpreting the weather text as html code.

Note: The http PUT command requires write access to the directory specified in the command.

Note: See Publishing Data to a Web Page for examples.

2.7 Print Settings

The Print Settings window allows you to print you print Alarms, Email Groups, Fax Groups, and Pager Groups.

Select the items to print and click the Print button.

2.8 Utilities

The Utilities menu has the following option.

Change Archive Password

The Change Archive Password window allows you to change the password entered in alarms used to archive products.
Enter the old archive password and new archive password. When change it clicked, this utility will search through your alarms and change the archive passwords on the alarms that match the old password.

2.9 Sending Support Files

You can send your configuration and support files to Weather Message for analysis.

When instructed by Weather Message Support, click the Help option, then Send Support Files. Click the Send option to send your configuration and support files.

Note: You may be prompted to allow Registry Editor to make changes to your computer. Click Yes to allow Registry Editor to export your settings.

Note: If you do not have a email server setup in Weather Message, your support files cannot be sent. Manually email c:\Program Files\WxMesgNet\SupportFiles.zip to support@weathermessage.com.

2.10 Importing Addresses

The Fax, Email and Paging group setup windows have the option to import a list of telephone numbers, email addresses, or paging pins using the Import button.

The system can open a standard CSV (comma delimited) file. The file must contain one column that has the title "Address", optionally you can include a "Name" column to specify a name for
each address. The locations or order of these columns is not important.

When the Import button is clicked, the following screen will appear.

Use the **Browse** button to locate the file to be imported. When the file is selected, it will be automatically be parsed and displayed in the File Results window. Any errors will be displayed.

Select "**Append to Current List**" or "**Overwrite the Current List**". Click the **Import** button to import the list.

**Note:** If you build this list using Excel, you will need to save the spreadsheet as a CSV file.
Part III
3 Weather Message Server

3.1 Overview

Weather Message Server is the heart of the Weather Message applications. When you start the Weather Message Server as an application, it runs from the system tray. When it starts, it will automatically start the ingest program(s) that you selected in Weather Message Setup.

Processing

The left pane contains the current processing information. The last decoded message information is displayed. This file currently being processed is displayed in the Processing File Name box.

The Processed box displays the number of alarms or messages that have been received since the server was started. The number to the right of the slash is the number of messages that are queued for processing, but have not been processed.

The Alarm File box displays the number of the alarm file current loaded. See Alarm File in Weather Message Server Setup for information on selecting alarm files.

The Message Clients box contains the number of connected message clients. The Map Clients box contains the number of connected map clients.

Note: Weather Message currently allows for 50 client connections. This can be increased to
100 or 250 by purchasing a 100 or 250-user license.

**Note:** If Weather Message is stopped with the window minimized, the next time it is started, it will start minimized.

**Note:** Weather Message will process files with the extensions txt, gif, jpg, zis, zip, bmp, png, tif and bin. Other extensions will be handled as a regular text file.

**Note:** If Weather Message is running as a service, you will not see this window or the system tray icon. Use Weather Message Controller to monitor the operation of the server. Service setup information can be found in Weather Message Server Setup, Support Setup, Options, Service Tab.

**Status**

The right pane contains status messages from the subsystems. Each subsystem displays status messages as they process messages that meet your alarm criteria.

Note: If the email, fax or page subsystems encounters errors in delivering messages, the background color of the associated subsystem will change to red. To reset the error indication, click on the Clear Errors menu option.

**Hint:** The left and right pane can be resized by dragging the white separator line between the panes.

**System Tray**

When Weather Message Server is minimized, you can restore the main screen by right clicking on the system tray icon, then select open.

**Special Keys**

Pressing control-u while the main window has focus causes the program to start a file purge cycle.

### 3.2 Menu Options

The menu buttons on this screen perform these functions:

The **File** menu allows you to setup the server, view connections, log files, show the active ingest programs and exit the program.
The Setup option launches the Weather Message Server Setup application.

The View Connections option displays a window with the Active Connections.

The Clear Errors option clears the email, fax and page error indicators.

The View Logfile displays the server log file in notepad.

The View Email Log displays the email log in notepad.

The View Pager Log displays the pager log in notepad.

The View Fax Log displays the fax log in notepad.

The FTP Ingest option displays a window to manually request a FTP file ingest.

The Show Ingest option shows the main window of each ingest program running in the background.

The Exit option shuts down Weather Message Server.

The Help menu allows you to see this manual, and display information about the program.

### 3.3 FTP Ingest

The FTP Ingest window is used to manually request a FTP ingest of weather products. This option requires an Internet connection. NOAA currently offers text and image products for these durations; fifteen minutes, one hour and three hours.
Note: Access to the NWS FTP Servers requires registration. See the FTP Ingest setup for more information.

The NOAA Server address is fixed and can only be changed by modifying a registry value. Select the file type and duration that you want to retrieve and click on the Retrieve button.

The Server's Archive / FTP status line is updated as the file is downloaded.

Note: Since the one and three hour files can be quite large, it may take some time for them to be retrieved and uncompressed.

Note: On occasion, you may see a "permission denied" message when you attempt to retrieve products. This error message is returned by the NWS ftp server when it is updating files. If this occurs, wait a few minutes and try again.

3.4 Active Connections

The Active Connections window displays a list of clients connected to the server.

The Address column contains the TCP/IP address of the connected client. The Computer Name column contains the computer name. The Socket column contains the internal socket
number associated with the client. The Type column contains a C for message clients or a M for map clients. The Id column contains the client's client identifier. The Version column contains the version number of the client software being used. The Date column contains the date and time that the client connected.

This window automatically updates every 15 seconds. The Refresh button can be used to force a refresh immediately.

Clicking on a column header will sort the list alphabetically based on that column.

### 3.5 Testing Alarms

In order to test your alarms, a message that matches your alarms must be received. There are two methods for creating a test message. Use the Test Alarm option from the main alarm grid, or Weather Message Text Creator. See the section on WxMesgText Message Creator for specific program operation.

### 3.6 Data Files

Weather Message uses a number of data files to translate the codes used in the weather products. In some cases, users may want to modify the descriptions contained in these files. The following files are located in the WxMesgNet directory.

<table>
<thead>
<tr>
<th>File Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>County_F.dat</td>
<td>Contains the county FIPS code, county name, longitude and latitude.</td>
</tr>
<tr>
<td>County_FZ_Z.dat</td>
<td>Contains the county fire zone code, county name, longitude and latitude.</td>
</tr>
<tr>
<td>County_Z.dat</td>
<td>Contains the county zone code, county name, longitude and latitude.</td>
</tr>
<tr>
<td>FipsZone.dat</td>
<td>Contains a cross reference between the county FIPS code to county Zone code.</td>
</tr>
<tr>
<td>Nwsli.dat</td>
<td>Contains the NWS Location Identifier for rivers.</td>
</tr>
<tr>
<td>Product.dat</td>
<td>Contains the product identifiers and descriptions.</td>
</tr>
<tr>
<td>ProductUser.dat</td>
<td>Contains user defined product identifiers and descriptions.</td>
</tr>
<tr>
<td>States.dat</td>
<td>Contains the state identifiers and descriptions.</td>
</tr>
<tr>
<td>VtAction.dat</td>
<td>Contains the VTEC action identifiers and descriptions.</td>
</tr>
<tr>
<td>VtCross.dat</td>
<td>Contains the VTEC phenomena cross reference to product identifiers.</td>
</tr>
<tr>
<td>VtPhenom.dat</td>
<td>Contains the VTEC phenomena identifiers and descriptions.</td>
</tr>
<tr>
<td>WfoSites.dat</td>
<td>Contains the WFO identifiers and descriptions.</td>
</tr>
<tr>
<td>WxCType.dat</td>
<td>Contains a list of product identifiers that are coded with FIPS codes.</td>
</tr>
</tbody>
</table>

**Note:** These files are routinely overwritten during upgrades. The installer will backup the files to c:\Program Files\WxMesgNet\Backup. If you changed the files, you can restore or compare your old version with the new version.

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Warning: Use caution when editing any of these files. If the files are not properly formatted, the software may not start or will display error messages. We recommend that you backup the current file before making any modifications.

3.7 Log Files

Weather Message creates a number of log files to record the operation of the software. For Weather Message Server, the main log file is named LogFile.txt. This log file records alarms activated for pagers, emails, faxes, clients, archives and print requests. This file is located in the WxMesgNet directory. It also contains connection requests from clients and disconnect request from clients. You will also find any program error messages encountered, when processing weather messages.

If you send messages to an email, paging or fax group, a log file is created for these operations. Email activity is recorded in EmailLog.txt; pager activity is recorded in PagerLog.txt; fax activity is recorded in FaxLog.txt.

The Weather Message Server Setup screen allows you to change the log file size. The default size is 50,000 bytes. Once it reaches this limit, it is copied to the file LogFile.old and a new log file is created. This prevents your hard drive from filling up with large log files. If you have the Daily Logs option enabled, the log files are stored in the WxLogs directory.

3.8 Debug Files

Weather Message creates a number of debug files to assist users when they encounter trouble with Email, Paging, Faxing, Archiving and X10 control. The following debug files are located in the WxMesgNet directory.
<table>
<thead>
<tr>
<th>File Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DebugEm.txt</td>
<td>This file contains the communications between Weather Message and your SMTP (email) server. If you encounter trouble with delivery of emails, this file can be used to help diagnose the problem.</td>
</tr>
<tr>
<td>DebugFt.txt</td>
<td>This file contains entries for archive operations. You will find different entries depending on the protocol used for archiving. For HTTP and FTP, it contains the communications between Weather Message and your server. If you encounter trouble with archiving operations, this file can be used to help diagnose the problem.</td>
</tr>
<tr>
<td>DebugFx.txt</td>
<td>This file contains the communications between Weather Message and your Fax server. If you encounter trouble with faxing operations, this file can be used to help diagnose the problem.</td>
</tr>
<tr>
<td>DebugPg.txt</td>
<td>This file contains entries for paging operations. You will find different entries depending on the protocol used for paging. For each protocol, it contains the communications between Weather Message and the paging server. If you encounter trouble with paging operations, this file can be used to help diagnose the problem.</td>
</tr>
<tr>
<td>DebugX1.txt</td>
<td>This file contains the communications between Weather Message and your X10 controller. If you encounter trouble with X10 operation, this file can be used to help diagnose the problem.</td>
</tr>
</tbody>
</table>

These debug files are limited in size to 50,000 bytes. Once they reach this limit the original file is renamed with the extension .old and new debug file is created.

**Note:** Should you need to increase the size of these debug files, you can add the following registry key HKEY_LOCAL_MACHINE\Software\Weather Message Net\WxMesg\Shared\DebugLogSize and set the log file size in bytes.

This is accomplished by using RegEdit and navigating to HKEY_LOCAL_MACHINE\Software\Weather Message Net\WxMesg\Shared. Then right clicking on Share and selecting New String Value. Enter the name DebugLogSize then right click on DebugLogSize and enter the size of the logfile in bytes.
Part IV
4 Weather Message Controller

4.1 Overview

Weather Message Server Controller is used to monitor Weather Message Server when it is running as a service. When you start Weather Message Server Controller, it runs from the system tray. This screen is almost identical to Weather Message Server. See Weather Message Server for field level details. It includes a status bar that shows when you are connected to Weather Message Server and the name of the server.
4.2 Menu Options

The menu buttons on this screen perform these functions:

The **File** menu allows you to setup the controller, server, view connections, log files and exit the program.

- The **Setup** option displays the setup options for Weather Message Server Controller.
- The **Setup Server** option launches the **Weather Message Server Setup** application.
- The **View Connections** option displays a window with the **Active Connections**.
- The **Clear Errors** option clears the email, fax and page error indicators.
- The **Connect Server 1** option starts a connection to the address defined for Weather Message Server 1.
- The **Connect Server 2** option starts a connection to the address defined for Weather Message Server 2. This option will only appear if an address has been defined for a second Weather Message Server.
- The **Start Service** option will appear if Weather Message is running as a service and needs to be started. This option will change to **Stop Service** if the service is presently running.
- The **View Logfile** displays the server log file in notepad.
- The **View Email Log** displays the email log in notepad.
- The **View Pager Log** displays the pager log in notepad.
- The **View Fax Log** displays the fax log in notepad.
- The **Exit** option shuts down Weather Message Server Controller.

**Note:** The **View Logfile**, **Email Log**, **Pager Log** and **Fax log** options will only be displayed when
there is a log file to view.

The Help menu allows you to see this manual, and display information about the program.

### 4.3 Setup

The Setup window allows you to set general program operations.

The **Server 1 Address** field is normally left blank. When it is blank, the program will attempt to connect to Weather Message Server running on the local computer. If Weather Message Server is not running on the local computer, enter the TCP/IP address of the server in this field.

The Server 2 Address field can be used to monitor a second Weather Message Server. Enter the address for the second server.

The **Auto Startup** option allows you to specify whether Weather Message Server Controller is automatically started when Windows starts. The options are No; Yes, for the current user; and Everyone, for any user.

**Note:** The options available for **Auto Startup** are based on your user permissions. Administrator and Power users will have all of the options. Other users may only have the Yes option.
5 Third-party Applications

Weather Message can be setup to provide data for use by other third-party programs. The ingest programs have the ability to copy received files to multiple directories. This ability allows third-party programs to have their own dedicated ingest directory.

To setup the Weather Message Ingest programs for multiple directory support, see the section on WxEmwin, WxWw2000, or WxPort. The Paths tab in the ingest programs allows you to specify additional distribution paths for third-party programs to pick up the arriving files.
6 WxEmwin - EMWIN Ingest

6.1 Overview

WxEmwin is used by Weather Message to receive EMWIN data. EMWIN data can be received from a serial port, software demodulator or Internet. The ingest program can be started automatically by the Weather Message Server or manually.

The main screen may contain up to five tabs that show the status of the serial, software demodulator, TCP/IP Receiver and internet ingest subsystems.

The status bar at the bottom of the window contains status message indicating the operation of the application. Should the program stop receiving data, you will see a red Data Alert message indicating the data failure.

Note: The software demodulator and TCP/IP Receiver tab names will reflect the type of receiver selected in setup.

Note: If WxEmwin is stopped with the window minimized, the next time it is started, it will start minimized.

Note: You can have one or more ingest engines running at the same time. It is common to have both the Serial Ingest and Internet Ingest running at the same time for dual ingesting of EMWIN data.

System Tray

When WxEmwin is minimized, you can restore the main screen by right clicking on the system
tray icon, then select open.

**Data Alert Notification**

Should the program stop receiving data, you will see a notification message above the system tray icon. This message will indicate the data stream that has failed.

---

**6.2 Menu Options**

The menu buttons on this screen perform these functions:

- **File**
- **Receiver Status**
- **Help**

**Note:** The Port menu option only appears when the Serial Ingest tab is selected. The Demodulator menu option only appears when the Software Demodulator tab is selected. The Receiver Status menu option only appears when the receiver associated with the selected tab is a Zephyrus WX-14. The Connect menu option only appears when the Internet Ingest tab is selected.

The **File** menu allows you to setup this program, view logfiles, and exit the program.
The **Setup** option opens the **Setup window**.

The **View Main Logfile** displays the main log file, WeLog.txt, in notepad.

The **View Serial Log** displays the serial ingest log file, WsLog.txt, in notepad.

The **View Serial Files Received** displays the received files log, WsFiles.txt, in notepad.

The **View TCP/IP RX 1 Log** displays the TCP/IP Receiver 1 ingest log file, WdLog.txt, in notepad.

The **View TCP/IP RX 1 Files Received** displays the TCP/IP Receiver 1 received files log, WdFiles.txt, in notepad.

The **View TCP/IP RX 1 Statistics** displays the TCP/IP Receiver 1 statistics log, WdStatus.txt, in notepad.

The **View TCP/IP RX 2 Log** displays the TCP/IP Receiver 2 ingest log file, WpLog.txt, in notepad.

The **View TCP/IP RX 2 Files Received** displays the TCP/IP Receiver 2 received files log, WpFiles.txt, in notepad.

The **View Internet 1 Log** displays the serial ingest log file, WiLog.txt, in notepad.

The **View Internet 1 Files Received** displays the received files log, WiFiles.txt, in notepad.

The **View Internet 2 Log** displays the serial ingest log file, WjLog.txt, in notepad.

The **View Internet 2 Files Received** displays the received files log, WjFiles.txt, in notepad.

The **Exit** option shuts down WxEmwin.

**Note:** *In order to view the Files Received Log, the Log Received Files option must be enabled.*

The **Port** menu, when present, allows you to switch between the main serial port and a backup serial port.

The **Demodulator menu**, when present allows you to interact with the EMWIN Software.
Demodulator provided by the National Weather Service.

- The **Demodulator Status** opens the software demodulator status window.
- The **Stop Data Source Service** or **Start Data Source Service** option stops or starts the software demodulator data source service.
- The **Stop Demodulator Service** or **Start Demodulator Service** option stops or starts the software demodulator data source service.
- The **Launch Control Panel** option launches the software demodulator control panel.

**Note:** When using the EMWIN Software Demodulator, both the EMWIN Data Source and Demodulator service must be running.

**Note:** The Demodulator Status screen requires the Weather Message Demodulator service to be installed. The Demodulator service distributed by the National Weather Service does not output statistics.

The **Receiver Status** menu, when present, opens the WX-14 receiver status window.

The **Connect** or **Disconnect** menu, when present allows you to force the Internet Ingest engine to disconnect and connect to the next available Internet EMWIN server.

The **Help** menu allows you to see this manual, and display information about the program.

### 6.3 Serial Ingest Tab

The Serial Ingest tab, when selected, shows the option of the serial ingest engine.
The **Processing File**, **Block** and **File Size** fields show information about the received file. A **green** or **red** led appears to the right of the Processing File field. This led will normally appear green. If any of the blocks received for this message are defective, the led will change to red.

To monitor the received blocks, click on the **green** or **red** led. The following window will appear displaying the received blocks.

The **Port** field displays the serial port that is receiving the data. If you have a second receiver, you can switch to the backup port by clicking on the **Port** menu option. The background of the **Port** field is white when connected to the primary serial port. The background changes to yellow when connected to the backup serial port. The background will be red when not connected to the serial ports.

The **Total Blocks** field shows the total number of blocks received for a one-hour period, the **Bad Blocks** field shows how many of the total blocks received were defective. The bad blocks field is a total of the **Packet Length**, **Bad Header** and **Check Sum** fields. The **Block Count** field counts the number of messages that any blocks missing.

The **Error Percent** field shows the error percentage of the blocks received verses bad blocks. You want this field as low as possible. The background color of this field will change based on the quality of the received data. If the background is white, the received data has 10% or fewer errors. If the background is yellow, the received data has between 10% and 20% errors. If the background is red, the received data has an error rate greater than 20%.

If the received message is text, you will see the text associated with the packet being processed in the text box.

The ingest program will attempt to repair defective messages, if a duplicate message is sent.
through the EMWIN data stream.

WxEmwin Serial Ingest supports a backup satellite system, retransmission receiver and/or backup by Internet. This option is enabled on the Setup Serial Ingest Tab in the Serial Ingest Tab.

Should the Serial Ingest engine stop receiving data, the status bar will display a message in red indicating that data has stopped. A notification icon will also appear in the system tray. If the Send Data Alerts option is enabled, a text message is generated and placed in the ingest directory for processing by Weather Message. You can alarm the product ADMWX to receive notifications of data loss.

**Note:** It is recommended that you run the ingest program on a computer that will not be used for normal user programs. The processing of serial data can be interrupted by other software programs, which can result in lost weather products.

**Note:** While the program is using Internet Ingest as a backup data source, the fields on the screen may not be updated. They will resume showing data when the main serial port begins to receive data.

**Note:** The program supports a second log file. The second format uses a fixed field size for easy analysis. This log file is never purged and remains until the user deletes the log files. To enable this logging option, create the directory "NwsLogs" in the c:\program files\WxMesgNet directory.

**Note:** Some computers may detect your satellite receiver as a serial mouse. This generally occurs when the satellite receiver is turned on when booting the computer. If this occurs, your mouse will begin to move on its own. To correct this problem, turn off the satellite receiver. Download the comdisable tool from Microsoft at this web address http://support.microsoft.com/default.aspx?scid=kb:en-us;819036.

### 6.4 Software Demodulator Tab

The Software Demodulator tab, when selected, shows the option of the Software Demodulator ingest engine.
The **Processing File**, **Block** and **File Size** fields show information about the received file. A **green** or **red** led appears to the right of the Processing File field. This led will normally appear green. If any of the blocks received for this message are defective, the led will change to red.

**Note:** The software demodulator tab name will reflect the type of receiver selected in setup.

**Note:** In order to process data, the EMWIN Data Source service and EMWIN Demodulator service must be running. Use the Demodulator menu to start and stop these services.

To monitor the received blocks, click on the **green** or **red** led. The following window will appear displaying the received blocks.

![Serial Blocks](image)

The **Total Blocks** field shows the total number of blocks received for a one-hour period, the **Bad Blocks** field shows how many of the total blocks received were defective. The bad blocks field is a total of the **Packet Length**, **Bad Header** and **Check Sum** fields. The **Block Count** field counts the number of messages that any blocks missing.

The **Error Percent** field shows the error percentage of the blocks received verses bad blocks. You want this field as low as possible. The background color of this field will change based on the quality of the received data. If the background is white, the received data has 10% or fewer errors. If the background is yellow, the received data has between 10% and 20% errors. If the background is red, the received data has an error rate greater than 20%.

If the received message is text, you will see the text associated with the packet being processed in the text box.

The ingest program will attempt to repair defective messages, if a duplicate message is sent through the EMWIN data stream.

**WxEmwin Software Demodulator ingest supports a backup satellite system, retransmission receiver and/or backup by Internet.** This option is enabled on the **Setup Software Demod Tab**.

Should the Software Demodulator ingest engine stop receiving data, the status bar will display a message in red indicating that data has stopped. A notification icon will also appear in the system try. If the **Send Data Alerts** option is enabled, a text message is generated and placed in the ingest directory for processing by Weather Message. You can alarm the product ADMWXM to receive notifications of data loss.

**Note:** It is recommended that you run the ingest program on a computer that will not be used for normal user programs. The software demodulator requires a large percentage of your computer processor in order to decode the data. This process can be interrupted by other software programs, which can result in lost weather products.

**Note:** While the program is using Internet Ingest as a backup data source, the fields on the screen may not be updated. They will resume showing data when the main serial port begins to receive data.
Note: The program supports a second log file. The second format uses a fixed field size for easy analysis. This log file is never purged and remains until the user deletes the log files. To enable this logging option, create the directory "NwsLogs" in the c:\program files\WxMesgNet directory.

6.5 TCP/IP Receiver Tab

The TCP/IP Receiver tab, when selected, shows the option of the TCP/IP Receiver ingest engine.

The Processing File, Block and File Size fields show information about the received file. A green or red led appears to the right of the Processing File field. This led will normally appear green. If any of the blocks received for this message are defective, the led will change to red.

Note: The TCP/IP Receiver tab name will reflect the type of receiver selected in setup.

To monitor the received blocks, click on the green or red led. The following window will appear displaying the received blocks.

The Total Blocks field shows the total number of blocks received for a one-hour period, the Bad Blocks field shows how many of the total blocks received were defective. The bad blocks field is a total of the Packet Length, Bad Header and Check Sum fields. The Block Count field counts the number of messages that any blocks missing.

The Error Percent field shows the error percentage of the blocks received verses bad blocks. You want this field as low as possible. The background color of this field will change based on
the quality of the received data. If the background is white, the received data has 10% or fewer errors. If the background is yellow, the received data has between 10% and 20% errors. If the background is red, the received data has an error rate greater than 20%.

If the received message is text, you will see the text associated with the packet being processed in the text box.

The ingest program will attempt to repair defective messages, if a duplicate message is sent through the EMWIN data stream.

WxEmwin Software Demodulator ingest supports a backup satellite system, retransmission receiver and/or backup by Internet. This option is enabled on the Setup Software Demod Tab.

Should the TCP/IP Receiver ingest engine stop receiving data, the status bar will display a message in red indicating that data has stopped. A notification icon will also appear in the system try. If the Send Data Alerts option is enabled, a text message is generated and placed in the ingest directory for processing by Weather Message. You can alarm the product ADMWX to receive notifications of data loss.

Note: It is recommended that you run the ingest program on a computer that will not be used for normal user programs. The software demodulator requires a large percentage of your computer processor in order to decode the data. This process can be interrupted by other software programs, which can result in lost weather products.

Note: While the program is using Internet Ingest as a backup data source, the fields on the screen may not be updated. They will resume showing data when the main serial port begins to receive data.

Note: The program supports a second log file. The second format uses a fixed field size for easy analysis. This log file is never purged and remains until the user deletes the log files. To enable this logging option, create the directory “NwsLogs” in the c:\program files\WxMesgNet directory.

### 6.6 Internet Ingest 1 Tab

The Internet Ingest 1 tab, when selected, shows the option of the Internet ingest engine.
Internet Ingest uses information from EMWIN Byte Blaster Servers to maintain a list of public servers. It attempts to connect to the first available server. Should a server stop functioning, the Internet Ingest engine will attempt to contact the next available server. Every 10 minutes the internal list of servers are updated.

Internet Ingest uses TCP/IP port 1000 or 2211 to communication with the servers. If you have a firewall, port 1000 and 2211 must be open for outbound connections.

The **Processing File**, **Block** and **File Size** fields show information about the received file. A green or red led appears to the right of the Processing File field. This led will normally appear green. If any of the blocks received for this message are defective, the led will change to red.

To monitor the received blocks, click on the green or red led. The following window will appear displaying the received blocks.

The **Server** field displays the address of the current Byte Blaster Server in use. You can force the program to connect to the next available server by clicking on the **Disconnect** or **Connect** menu option.

The **Total Blocks** field shows the total number of blocks received for a one-hour period, the **Bad Blocks** field shows how many of the total blocks received were defective. The bad blocks field is a total of the **Packet Length**, **Bad Header** and **Check Sum** fields. The **Block Count** field counts the number of messages that any blocks missing.

The **Error Percent** field shows the error percentage of the blocks received verses bad blocks. You want this field as low as possible. The background color of this field will change based on the quality of the received data. If the background is white, the received data has 10% or fewer errors. If the background is yellow, the received data has between 10% and 20% errors. If the
background is red, the received data has an error rate greater than 20%.

If the received message is text, you will see the text associated with the packet being processed in the text box.

The ingest program will attempt to repair defective messages, if a duplicate message is sent through the EMWIN data stream.

WxEmwin Internet Ingest supports backup with the Weather Wire Ingest program. This option is enabled on the Setup Internet Ingest Tab.

**Note:** To use Weather Wire Ingest as a backup, you must have an active subscription for Weather Wire and have purchased a license from Weather Message for that ingest engine.

Should the Internet Ingest engine stop receiving data, the status bar will display a message in red indicating that data has stopped. A notification icon will also appear in the system tray. If the Send Data Alerts option is enabled, a text message is generated and placed in the ingest directory for processing by Weather Message. You can alarm the product ADMWXM to receive notifications of data loss.

**Note:** While the program is using Weather Wire Ingest as a backup data source, the fields on the screen may not be updated. They will resume showing data when a Byte Blaster Server begins to send data.

**Note:** The program supports a second log file. The second format uses a fixed field size for easy analysis. This log file is never purged and remains until the user deletes the log files. To enable this logging option, create the directory "NwsLogs" in the c:\program files\WxMesgNet directory.

**Note:** The Internet Ingest engine has the ability to block a user defined list of EMWIN Byte Blaster servers. To enable this option, create the file WxSvrBlock.txt in the application directory. Enter the server addresses to block exactly as they appear in the WxSvrus.txt file. This option should only be used in special situations.

6.7 **Internet Ingest 2 Tab**

The Internet Ingest 2 tab, when selected, shows the option of the Internet ingest engine. This tab appears when you have purchased the dual Internet ingest option.
The second Internet ingest works like the first one. It however will not connect to the same server used by the first Internet ingest engine. This allows for some level of redundancy.

The **Processing File**, **Block** and **File Size** fields show information about the received file. A **green** or **red** led appears to the right of the Processing File field. This led will normally appear green. If any of the blocks received for this message are defective, the led will change to red.

To monitor the received blocks, click on the **green** or **red** led. The following window will appear displaying the received blocks.

The **Server** field displays the address of the current Byte Blaster Server in use. You can force the program to connect to the next available server by clicking on the **Disconnect** or **Connect** menu option.

The **Total Blocks** field shows the total number of blocks received for a one-hour period, the **Bad Blocks** field shows how many of the total blocks received were defective. The bad blocks field is a total of the **Packet Length**, **Bad Header** and **Check Sum** fields. The **Block Count** field counts the number of messages that any blocks missing.

The **Error Percent** field shows the error percentage of the blocks received verses bad blocks. You want this field as low as possible. The background color of this field will change based on the quality of the received data. If the background is white, the received data has 10% or fewer errors. If the background is yellow, the received data has between 10% and 20% errors. If the background is red, the received data has an error rate greater than 20%.

If the received message is text, you will see the text associated with the packet being processed in the text box.
The ingest program will attempt to repair defective messages, if a duplicate message is sent through the EMWIN data stream.

Should the Internet Ingest engine stop receiving data, the status bar will display a message in red indicating that data has stopped. A notification icon will also appear in the system tray. If the Send Data Alerts option is enabled, a text message is generated and placed in the ingest directory for processing by Weather Message. You can alarm the product ADMWXM to receive notifications of data loss.

**Note:** The Internet Ingest engine has the ability to block a user defined list of EMWIN Byte Blaster servers. To enable this option, create the file WxSvrBlock.txt in the application directory. Enter the server addresses to block exactly as they appear in the WxSvrus.txt file. This option should only be used in special situations.

### 6.8 Receiver Status

Weather Message can display status information for the Software Demodulator and Zephyrus WX-14 Receivers.

#### 6.8.1 Software Demodulator Status

The Software Demodulator Status screen can be displayed by opening the Demodulator menu option and clicking on Demodulator Status. This window displays status information from the software demodulator.

**Note:** The Demodulator Status screen requires the Weather Message Demodulator service to be installed. The Demodulator service distributed by the National Weather Service does not output statistics.
Depending on the EMWIN signal being decoded, the first group will display FSK Receiver or QPSK Receiver. When the FSK Receiver is being used, the Bit Processor will not display any data.

The following information is a brief and non-technical explanation of the fields.

**QPSK / FSK Receiver**

Data Source Status - Display the state of the software demodulator. These status messages may appear: Not Configured, Not Connected, Connected, Opened, Started, Retry, Unknown. The operating status is Started.

Carrier Frequency - Displays the current frequency being tracked by the software demodulator. This value will normally be zero, however, it may appear as plus or minus numbers based on your receiver hardware.

Carrier Track - Displays the state of the internal carrier tracking software. These status messages may appear: Acquire, Verify, False Lock, Tracking, Unknown. The operating status is Tracking.

Symbol Track - Displays the state of the internal symbol tracking software. These status messages may appear: Acquire, Verify, False Lock, Tracking, Unknown. The operating status is Tracking.

Front End Signal - Indicates whether the software demodulator has detected a signal. This field will display Present or Absent. The operating status is Present.

Side Lobe Detected - Indicates whether a side lobe has been detected. The operating status is No.

Symbol Track Frequency - Displays the current symbol frequency being tracked by the software demodulator. This value will vary between the limits entered in the Software Demodulator Control Panel.

Duration - Displays the time, in seconds, that the software demodulator has been running.

Input Signal Level - Displays the internal received signal level.

Estimated EbNo - For QPSK, displays the estimated energy per bit to noise power spectral density ratio. It is a normalized signal to noise ratio.

Low / High Signal - For FSK, indicates whether the low and high signals are present.

**Bit Processor**

CCSDS Frames Seen - Displays the number of received packets. CCSDS formatted packets represents a standard established by the Consultative Committee for Space Data Systems.

CCSDS Fill Frames - Displays the number of received packets that do not contain any data.

Uncorrectable Errors - Displays the number of received packets that could not be corrected. This number should remain zero or close to zero. Numbers here indicated lost packets.

Correctable Errors - Displays the number of received packets that could be corrected.

Viterbi Bits Decoded - Displays the number of viterbi bits decoded. The QPSK receiver uses a viterbi decoder. A viterbi decoder uses the Viterbi algorithm for decoding a bitstream that has
been encoded using Forward error correction based on a Convolutional code.

Viterbi Sync Errors - Displays the number of viterbi synchronization errors.

Viterbi Symbol Errors - Displays the number of viterbi symbols errors.

Viterbi Average EsNo - Displays the average energy per symbol to noise power spectral density.

### 6.8.2 WX-14 Status

The WX-14 Status screen can be displayed by clicking on the Receiver Status menu option. This window displays status information from the Zephyrus WX-14 receiver.

![WX-14 Status Screen](image)

#### Receiver Section

The Mode field indicates the status of the receiver. These modes are displayed: Normal and Align (alignment).
The Level field displays the internal voltage level applied to the gain circuits.
The Signal Quality field displays the quality of the incoming signal.
The Data Quality field displays the quality of the received data.
The Lost Frames field displays the number of received frames that could not be decoded.
The Gain field displays the internal RF gain number.
The Frequency Error field displays the internal oscillator setting.

#### VCDU Status

VCDU stands for Virtual Channel Data Unit. This section displays information about the low level protocol used to transport the EMWIN data.
The Received VCDU field displays the count of VCDU packets received. The Ignored VCDU field displays the count of VCDU packets ignored. The Lost VCDU field displays the count of VCDU packets that could not be decoded. The Corrected Bytes field displays the number of bytes that were automatically corrected.

6.9 Setup

6.9.1 Serial Ingest Tab

The Serial Ingest Tab is used to define the communication port, backup options and other general operations.

![WxEmwin Setup](image)

The **Receiver Type** field selects the type of receiver connected to the serial port. Valid options are Serial or WX-14.

**Note:** The WX-14 receiver has a USB port and serial port. If you connect your computer to the WX-14’s serial port, the receiver type should be set to Serial. If you connect your computer to the WX-14’s USB port, the receiver type should be set to WX-14. When the WX-14 is connected by USB, it creates a standard serial port that WxEmwin uses to receive data. That port should be selected in the Comm Port field.

The **Enabled** option should be checked if you want the Serial Ingest engine to automatically start when WxEmwin is started.

**Primary Receiver**

Select the **Comm Port** (communications port or serial port) for your satellite receiver, along with the **Baud Rate** for that device. For EMWIN satellite reception, select a baud rate of 19200,N,8,1.

**Secondary Receiver / Backup Options**
If you have a second satellite system or retransmission receiver, enter the Comm Port and Baud Rate under the backup options. Also, if you want to use Internet Ingest as a backup, check that option. The Switch Back Time is used to specify the number of minutes that the program should check back to see if the main port is functioning, when using a second serial port. If the Switch Back Time is set to zero, the program will not attempt to switch back to the main port.

The Error Rate Greater field sets the error rate percentage for switch over to backup. This field can be set from 5 to 95 percent. Should the error rate, of the received data, exceed the set amount, the program will switch over to the backup port or Internet Ingest.

If the main port stops sending data for 15 seconds, the program will switch to the backup port, if one is specified. If the backup port does not send data for 15 seconds, it will switch to Internet Ingest, if Internet Backup is enabled. If the backup port is not specified, it will switch from the main port directly to Internet Ingest.

Based on the Switch Back Time specified, it will change back over to the main port. The process will start all over again. If no data is received in 15 seconds, it will switch to the backup port and/or Internet Ingest.

**Note:** Once Internet Ingest is started, it will not be stopped until Serial Ingest begins to receive valid data from one of the serial ports.

When the program switches from Serial Ingest to Internet Ingest, it will create a notification message in each ingest directory. The product identifier for this message is ADMWXM. If you want to be alerted when the program switches between ingest sources, alarm the product ADMWXM, with no state or county selected. The notification message contains the current ingest method and computer name.

Should the serial port stop sending data and no backup source is selected, a data loss notification message is created in each ingest directory. The product identifier for this message is ADMWXM. If you want to be alerted when the program loses data, alarm the product ADMWXM, with no state or county selected.

**Note:** This program communicates with WxBBSrvr using UDP port 9510 on the local loop back address.

### 6.9.2 TCP/IP Ingest - 1 Tab

The TCP/IP Ingest - 1 tab is used to define the first TCP/IP Receiver if used.
The **Receiver Type** field selects the type of receiver. Valid options are Software Demod, WX-14, and TCP/IP.

**Note:** *If you are using the NWS Software Demodulator, select Software Demod for the Receiver Type. The Software Demodulator should be assigned on this tab.*

The **Enabled** option should be checked if you want the first TCP/IP Ingest engine to automatically start when WxEmwin is started.

The **Address** field should contain the address of the first TCP/IP Receiver. The default setting is 127.0.0.1. The **Port** field should contain the port for this receiver. The default port for the EWMWIN Demodulator service is 18000. The default port for the WX-14 receiver is 50.

The **Error Rate Greater** field sets the error rate percentage for switch over to Internet Ingest backup. This field can be set from 5 to 95 percent. Should the error rate, of the received data, exceed the set amount, the program will switch over to Internet Ingest, if **Internet Backup** is enabled.

If the first TCP/IP Receiver stops sending data for 8 seconds, the program will switch to Internet Ingest, if **Internet Backup** is enabled.

**Note:** *Once Internet Ingest is started, it will not be stopped until the first TCP/IP Receiver begins to receive valid data.*

When the program switches to Internet Ingest, it will create a notification message in each ingest directory. The product identifier for this message is ADMWXM. If you want to be alerted when the program switches between ingest sources, alarm the product ADMWXM, with no state or county selected. The notification message contains the current ingest method and computer name.

Should the tcp/ip port associated with the first TCP/IP Receiver stop sending data and no backup source is selected, a data loss notification message is created in each ingest directory. The product identifier for this message is ADMWXM. If you want to be alerted when the program...
loses data, alarm the product ADMWXM, with no state or county selected.

The **Log Demod Status**, when checked, will cause the program to log the software demodulator statistics every three seconds.

*Note:* This program communicates with WxBBSrvr using UDP port 9510 on the local loop back address.

### 6.9.3 TCP/IP Ingest - 2 Tab

The TCP/IP Ingest - 2 tab is used to define the second TCP/IP Receiver if used.

![WxEmwin Setup](image)

The **Receiver Type** field selects the type of receiver. Valid options are Software Demod, WX-14, and TCP/IP.

The **Enabled** option should be checked if you want the second TCP/IP Ingest engine to automatically start when WxEmwin is started.

The **Address** field should contain the address of the second TCP/IP Receiver. The default setting is 127.0.0.1. The **Port** field should contain the port of the TCP/IP Receiver. The default port for the WX-14 receiver is 50.

The **Error Rate Greater** field sets the error rate percentage for switch over to Internet Ingest backup. This field can be set from 5 to 95 percent. Should the error rate, of the received data, exceed the set amount, the program will switch over to Internet Ingest, if **Internet Backup** is enabled.

If the second TCP/IP Receiver stops sending data for 8 seconds, the program will switch to Internet Ingest, if **Internet Backup** is enabled.
Note: Once Internet Ingest is started, it will not be stopped until the second TCP/IP Receiver Ingest begins to receive valid data.

When the program switches to Internet Ingest, it will create a notification message in each ingest directory. The product identifier for this message is ADMWXM. If you want to be alerted when the program switches between ingest sources, alarm the product ADMWXM, with no state or county selected. The notification message contains the current ingest method and computer name.

Should the tcp/ip port associated with the second TCP/IP Receiver stop sending data and no backup source is selected, a data loss notification message is created in each ingest directory. The product identifier for this message is ADMWXM. If you want to be alerted when the program loses data, alarm the product ADMWXM, with no state or county selected.

The Log Demod Status, when checked, will cause the program to log the software demodulator statistics every three seconds.

Note: This program communicates with WxBBSrvr using UDP port 9510 on the local loop back address.

6.9.4 Internet Ingest 1 Tab

The Internet Ingest 1 Tab is used to define the Internet ingest options.

![Internet Ingest 1 Tab](image)

The Enabled option should be checked for the Internet Ingest 1 engine to automatically start when WxEmwin is started.

The Auto-Reconnect on Server Disconnect option, when checked, will cause the Internet
Ingest engine to try to connect to another server if it is disconnected from the current server. This option is enabled by default and is the recommended setting.

The **Auto-Update Server List** option, when checked, will enable automatic maintenance of the available internet servers. If Internet Ingest does not maintain this list, you will need to manually update the WxSvrus.txt file to include the servers that you want it to use.

**Note:** When the **Enable Byte Blaster Server Support** option is checked, the program uses a fixed list of NWS Byte Blaster Servers. These servers are configured in WxSatus.txt. The servers listed in this file are Byte Blaster servers that are connected directly to a satellite.

The **Weather Wire Backup** check box allows you to use Weather Wire as a backup for EMWIN. Checking this box will cause the program to automatically start WxWW2000 when EMWIN data is not available. This requires subscription and license for Weather Wire. See the Weather Wire help for details.

When the program switches from Internet Ingest to WxWW2000, it will create a notification message in each ingest directory. The product identifier for this message is ADMWX. If you want to be alerted when the program switches between ingest sources, alarm the product ADMWX, with no state or county selected. The notification message contains the current ingest method and computer name.

Should the Internet Ingest engine stop receiving data for 49 seconds and no backup source is selected, a data loss notification message is created in each ingest directory. The product identifier for this message is ADMWX. If you want to be alerted when the program loses data, alarm the product ADMWX, with no state or county selected.

A fixed TCP/IP server address can be used. Enter the fixed TCP/IP address in the **Enter Fixed Address** field. Click on **Use Fixed Address**, to only connect to that specific server.

The **Timeout seconds on loss of data** is set by default to 15 seconds. The timeout can range from 10 to 600 seconds. Setting this option to zero will disable the data loss timeout.

The **Enable Version 2** option, when checked, will enable support for version 2 EMWIN packets. This option is enabled by default and is the recommended setting.

**Note:** This program communicates with WxBBSrvr using UDP port 9510 on the local loop back address.

### 6.9.5 Internet Ingest 2 Tab

The Internet Ingest 2 Tab is used to define the Internet ingest options. This tab appears if you have purchased the dual internet ingest option.
The **Enabled** option should be checked for the Internet Ingest 2 engine to automatically start when WxEmwin is started.

The **Auto-Reconnect on Server Disconnect** option, when checked, will cause the Internet Ingest engine to try to connect to another server if it is disconnected from the current server. This option is enabled by default and is the recommended setting.

The **Auto-Update Server List** option, when checked, will enable automatic maintenance of the available internet servers. If Internet Ingest does not maintain this list, you will need to manually update the WxSvrus2.txt file to include the servers that you want it to use.

**Note:** When the **Enable Byte Blaster Server Support** option is checked, the program uses a fixed list of NWS Byte Blaster Servers. These servers are configured in WxSatus2.txt. The servers listed in this file are Byte Blaster servers that are connected directly to a satellite.

Should the Internet Ingest engine stop receiving data for 49 seconds, a data loss notification message is created in each ingest directory. The product identifier for this message is ADMWXM. If you want to be alerted when the program loses data, alarm the product ADMWXM, with no state or county selected.

A fixed TCP/IP server address can be used. Enter the fixed TCP/IP address in the **Enter Fixed Address** field. Click on **Use Fixed Address**, to only connect to that specific server.

The **Timeout seconds on loss of data** is set by default to 15 seconds. The timeout can range from 10 to 600 seconds. Setting this option to zero will disable the data loss timeout.

The **Enable Version 2** option, when checked, will enable support for version 2 EMWIN packets. This option is enabled by default and is the recommended setting.
6.9.6 Common Tab

The Common Tab is used to define options common or shared by all ingest programs.

The Run in Background check box allows you to specify whether you want the ingest programs to run in the background. When this box is checked, the ingest programs will not show in the system tray. Once this option is enabled, you will not see the ingest programs running. In order to see the ingest screen, you will need to use the Show Ingest menu option in Weather Message Server.

Note: Changing this option does not take effect until the next time the ingest programs are started.

The Log Received Files option causes the program to record the name of each weather file received. The names are recorded in WsFiles.txt.

The UnZip Received Files option, when checked, will cause the program to unzip any compressed files. This option is normally left unchecked as the Weather Message programs automatically unzip compressed files. In some applications it may be desirable to unzip the files before they are copied to the ingest directory(s).

The Purge Ingest Directories option, when checked, will cause the program to automatically purge the ingest directories after 24 hours.

The Enable Byte Blaster Server Support option, when checked, will cause the program to output data for use by WxBBSrvr. If you intend on running the Byte Blaster server software, this option must be enabled.

The Log File Size field allows you to specify this size of your ingest log files. The default is 50,000 bytes.

The Global Ingest Paths option controls whether WxEmwin uses global ingest paths. Global
Ingest paths are shared between all of the ingest programs. Unchecking this box will allow you to define ingest paths that are different from the global ingest paths.

The **Log Bad Blocks** option, when checked, will cause the program to log bad block information in the associated ingest engine’s log file.

The **Send Data Loss Alerts** option, when checked, will cause the program to generate data loss and com port switch messages. To receive these notifications, an alarm for the product ADMWXM must be setup in Weather Message Setup.

### 6.9.7 Ingest Paths Tab

The Ingest Paths Tab is used to define the directories that will store the received weather products for processing.

![Ingest Paths Tab](image)

The **Ingest Path** is defined in the Weather Message Server setup screen and would not normally be entered here.

**Note:** The Ingest Path can be changed if you want to deposit the received messages in a directory other than the one established for Weather Message Server.

The **Additional Distribution Paths** can be used to place a copy of the received weather text in different directories for processing by other programs. For example, if you use Weather Message to receive your weather data, you can put a copy of the received messages in a second or third directory for processing by RealEMWIN or the Weather Message Retransmission program.

**Note:** Changing the Ingest and Additional Distribution Paths on this screen will automatically change them for WxPort, WxCap and WxWW2000.
7  WxWw2 - Weather Wire Ingest

7.1  Overview

WxWw2 is used by Weather Message to receive the National Weather Service Weather Wire Internet data feed. The ingest program can be started automatically by the Weather Message Server or manually.

The main screen shows the status of incoming messages.

The Received File and Last File fields display the product identifier of the current and last files received along with their respective received times.

**Note:** Before WxWw2 will connect to the NWS Internet server you must enter your user name and password in the setup screen. For more information about Weather Wire and registering, see What is Weather Wire. To obtain a user name and password send an email to gregory.zwicker@noaa.gov.

**Note:** The program will alternate the program icon in the system tray to let you know that it is connected.

**Note:** If WxWw2 is stopped with the window minimized, the next time it is started, it will start minimized.

**System Tray**

When WxWw2 is minimized, you can restore the main screen by right clicking on the system tray icon, then select open.
7.2 Menu Options

The menu buttons on this screen perform these functions:

The **File** menu allows you to setup this program, show details, view logfiles, and exit the program.

- **Connect** option starts a connection to the Internet server.
- The **Setup** option opens the Setup window.
- The **View Logfile** displays the ingest log file in notepad.
- The **View Files Received Log** displays the received files log in notepad.
- The **Exit** option shuts down WxIngest.

**Note:** In order to view the Files Received Log, the Log Received Files option must be enabled.

The **Register** menu allows you to register WxWW2. This button does not appear if the software is registered. **Note:** If the software is not registered after 60 days, it will stop functioning.

The **Help** menu allows you to see this manual, and display information about the program.
7.3 Setup

7.3.1 Settings Tab

The Settings Tab is used to define the Internet settings, user name, password, communications port and other general operations.

You must enter your User Name and Password. The program will provide defaults for the Weather Wire URL and Weather Wire Port. You will need to enter the User Name and Password that was provided to you by the National Weather Service. To obtain a user name and password send an email to gregory.zwicker@noaa.gov.

The Name by AWIPS option, when checked, causes the program to name the received files using the AWIPS identifier found in the message, followed by the originating station's state abbreviation. When it is not checked, the received files are named using the first 3 characters of the AWIPS identifier, followed by the originating station's 3 character abbreviation, followed by the originating station's state abbreviation.

The Global Ingest Paths option controls whether WxWw2 uses global ingest paths. Global ingest paths are shared between all of the ingest programs. Unchecking this box will allow you to define ingest paths that are different from the global ingest paths.

7.3.2 Common Tab

The Common Tab is used to define options common or shared by all ingest programs.
The **Run in Background** check box allows you to specify whether you want the ingest programs to run in the background. When this box is checked, the ingest programs will not show in the system tray. Once this option is enabled, you will not see the ingest programs running. In order to see the ingest screen, you will need to use the Show Ingest menu option in Weather Message Server.

**Note:** Changing this option does not take effect until the next time the ingest programs are started.

The **Log Received Files** option causes the program to record the name of each weather file received. The names are recorded in IBFiles.txt.

The **Purge Ingest Directories** option, when checked, will cause the program to automatically purge the ingest directories after 24 hours.

The **Log File Size** field allows you to specify this size of your ingest log file, WwLog.txt. The default is 50,000 bytes.

### 7.3.3 Ingest Paths Tab

The Ingest Paths Tab is used to define the directories that will store the received weather products for processing.
The Ingest Path is defined in the Weather Message Server setup screen and would not normally be entered here.

**Note:** The Ingest Path can be changed if you want to deposit the received messages in a directory other than the one established for Weather Message Server.

The Additional Distribution Paths can be used to place a copy of the received weather text in different directories for processing by other programs. For example, if you use Weather Message to receive your weather data, you can put a copy of the received messages in a second or third directory for processing by RealEMWIN or the Weather Message Retransmission program.

**Note:** Changing the Ingest and Additional Distribution Paths on this screen will automatically change them for WxEMWIN, WxCap, and WxPort.

### 7.4 Register Software

The Register menu option allows you to register your software.
When you purchase WxWw2, you will be supplied with a **Registration Name** and **Registration Code**. Enter these exactly as they are printed. These fields are case sensitive.

After the software is registered, we recommend that you stop and restart the software.

To purchase the software go to [http://www.weathermessage.com/Purchase.aspx](http://www.weathermessage.com/Purchase.aspx).
8 WxPort - NOAAPort Ingest

8.1 Overview

WxPort is used by Weather Message to receive NOAAPort data. WxPort can process all four multicast channels from the NOAAPort data stream. The ingest program can be started automatically by the Weather Message Server or manually.

The main screen shows the status of incoming messages for each channel.

The **Sequence** field displays the last sequence number received.

The **Received File** and **Last File** fields displays the current and last file received.

**Note:** If WxPort is stopped with the window minimized, the next time it is started, it will start minimized.

**System Tray**

When WxPort is minimized, you can restore the main screen by right clicking on the system tray icon, then select open.

**NoaaPort Channels**

WxPort implements the following NoaaPort channels:

<table>
<thead>
<tr>
<th>Channel</th>
<th>Address</th>
<th>Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>NWSTG</td>
<td>224.0.1.1</td>
<td>1201</td>
</tr>
<tr>
<td>GOES</td>
<td>224.0.1.2</td>
<td>1202</td>
</tr>
<tr>
<td>NWSTG2</td>
<td>224.0.1.3</td>
<td>1203</td>
</tr>
<tr>
<td>OCONUS</td>
<td>224.0.1.4</td>
<td>1204</td>
</tr>
</tbody>
</table>
8.2 Menu Options

The menu buttons on this screen perform these functions:

The **File** menu allows you to setup this program, view logfiles, and exit the program.

- The **Setup** option opens the **Setup window**.
- The **Logfiles** option displays a list of logfiles to review. A logfile is maintained for the application and each NoaaPort channel.
- The **Received Files** option displays a list of received files to review. A received files list is maintained for each NoaaPort channel.
- The **Exit** option shuts down WxPort.

**Note:** *In order to view the Files Received Log, the Log Received Files option must be enabled.*

The **Register** menu allows you to register the WxPort software. This button does not appear if the software is registered. Note: If the software is not registered after 60 days, it will stop functioning.

The **Channels** menu allows you to enable or disable a NoaaPort channel.
Check a channel to activate that channel. Uncheck a channel to disable that channel.

The **Help** menu allows you to see this manual, and display information about the program.

8.3  **Setup**

8.3.1  **Settings Tab**

The Settings Tab is used to define the communication port, backup options and other general operations.
The **Interface Address** is the TCP/IP address of the network device that will be providing the multicast packets. This field can be left blank to default to the local network interface card.

The **Global Ingest Paths** option controls whether WxPort uses global ingest paths. Global ingest paths are shared between all of the ingest programs. Unchecking this box will allow you to define ingest paths that are different from the global ingest paths.

The **Binary Files** option allows you to specify how WxPort processes messages that contain binary data. They can be saved with the extension txt, bin, or dropped.

The **Save GOES Images** option indicates how you want the GOES images saved. The options are No, BMP, JPG, PNG, and TIF.

The **Name by AWIPS** option, when checked, causes the program to name the received files using the AWIPS identifier found in the message, followed by the originating station's state abbreviation. When it is not checked, the received files are named using the first 3 characters of the AWIPS identifier, followed by the originating station's 3 character abbreviation, followed by the originating station's state abbreviation.

### 8.3.2 Common Tab

The Common Tab is used to define options common or shared by all ingest programs.
The Run in Background check box allows you to specify whether you want the ingest programs to run in the background. When this box is checked, the ingest programs will not show in the system tray. Once this option is enabled, you will not see the ingest programs running. In order to see the ingest screen, you will need to use the Show Ingest menu option in Weather Message Server.

**Note:** Changing this option does not take effect until the next time the ingest programs are started.

The Log Received Files option causes the program to record the name of each weather file received. The names are recorded in IBFiles.txt.

The Purge Ingest Directories option, when checked, will cause the program to automatically purge the ingest directories after 24 hours.

The Log File Size field allows you to specify this size of your ingest log file, IBLog.txt. The default is 50,000 bytes.

### 8.3.3 Filters Tab

The Filters Tab is used to establish product filters for each NoaaPort channel.
The filter option can be used to filter each channel. The filter is a regular expression. If a filter is specified, the program will used the AWIPS identifier or WMO identifier for comparison. Only products that match the regular expression are stored for processing. For more information on regular expressions, visit Regular-Expressions.info. You can test regular expressions at this RegExLib.com.

8.3.4 Ingest Paths Tab

The Ingest Paths Tab is used to define the directories that will store the received weather products for processing.
The **Ingest Path** is defined in the Weather Message Server setup screen and would not normally be entered here.

**Note:** The Ingest Path can be changed if you want to deposit the received messages in a directory other than the one established for Weather Message Server.

The **Additional Distribution Paths** can be used to place a copy of the received weather text in different directories for processing by other programs. For example, if you use Weather Message to receive your weather data, you can put a copy of the received messages in a second or third directory for processing by RealEMWIN or the Weather Message Retransmission program.

**Note:** Changing the Ingest and Additional Distribution Paths on this screen will automatically change them for WxEmwin, WxCap, and WxWW2000.

### 8.4 Register Software

The Register menu option allows you to register your software.
When you purchase WxPort, you will be supplied with a **Registration Name** and **Registration Code**. Enter these exactly as they are printed. These fields are case sensitive.

After the software is registered, we recommend that you stop and restart the software.

To purchase the software go to [http://www.weathermessage.com/Purchase.aspx](http://www.weathermessage.com/Purchase.aspx).
9 WxIpaws - Ingest

9.1 Overview

WxIpaws is used by Weather Message for processing the FEMA Integrated Public Alert and Warning System (IPAWS) CAP feed. The ingest program can be started automatically by the Weather Message Server or manually.

The main screen shows the processing of the CAP data feed.

**Note:** If WxIpaws is stopped with the window minimized, the next time it is started, it will start minimized.

System Tray

When WxIpaws is minimized, you can restore the main screen by right clicking on the system tray icon, then select open.

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9.2 Menu Options

The menu buttons on this screen perform these functions:

The **File** menu allows you to setup this program, view logfiles, start a processing cycle, and exit the program.

- The **Setup** option opens the Setup window.
- The **View Logfile** displays the ingest log file in notepad.
- The **View Files Received Log** displays the received files log in notepad.
- The **Process Now** option resets the internal message cache and starts a processing cycle.
- The **Exit** option shuts down WxIngest.

**Note:** In order to view the Files Received Log, the Log Received Files option must be enabled.

The **Register** menu allows you to register WxIpaws. This button does not appear if the software is registered. Note: If the software is not registered after 60 days, it will stop functioning.

The **Help** menu allows you to see this manual, and display information about the program.
9.3 Setup

9.3.1 Settings Tab

The Settings Tab is used to set your user pin, FIPS codes to process along with other general settings.

The IPAWS Pin is your access code for IPAWS. The pin is assigned by FEMA. You must register with FEMA and sign the appropriate documents before a pin will be issued. WxIpaws will not process any data without a valid pin.

The FIPS to Process field allows you to enter the states that you want processed. Multiple states can be entered by separating each state's FIPS code with a comma.

**Hint:** The system automatically processes FIPS code 000 (United States).

The Processing Interval specifies the amount of time in seconds before polling the IPAWS servers. The default value is 60 seconds.

**Note:** The ingest timer is disabled during the polling/processing cycle. After polling and processing, the timer is reset for another cycle.

The Global Ingest Paths option controls whether WxIpaws uses global ingest paths. Global
ingest paths are shared between all of the ingest programs. Unchecking this box will allow you to define ingest paths that are different from the global ingest paths.

The **EAS Feed Only**, when checked, will instruct the program to download products from the EAS feed. When this option is unchecked, the program will download products from the EAS and Non-EAS feed.

*Note:* The Non-EAS feed contains EAS and Non-EAS products. The Non-EAS products include weather products that should not activate the EAS system.

The **Log CAP Exceptions** option controls whether WxIpaws logs exceptions it finds in CAP messages. This can be used to diagnose problems with received CAP messages.

### 9.3.2 Common Tab

The Common Tab is used to define options common or shared by all ingest programs.

The **Run in Background** check box allows you to specify whether you want the ingest programs to run in the background. When this box is checked, the ingest programs will not show in the system tray. Once this option is enabled, you will not see the ingest programs running. In order to see the ingest screen, you will need to use the Show Ingest menu option in Weather Message Server.

*Note:* Changing this option does not take effect until the next time the ingest programs are started.

The **Log Received Files** option causes the program to record the name of each weather file received. The names are recorded in IBFiles.txt.

The **Purge Ingest Directories** option, when checked, will cause the program to automatically purge the ingest directories after 24 hours.

The **Log File Size** field allows you to specify this size of your ingest log file, WcLog.txt. The default is 50,000 bytes.
9.3.3 Ingest Paths Tab

The Ingest Paths Tab is used to define the directories that will store the received weather products for processing.

The **Ingest Path** is defined in the Weather Message Server setup screen and would not normally be entered here.

**Note:** The Ingest Path can be changed if you want to deposit the received messages in a directory other than the one established for Weather Message Server.

The **Additional Distribution Paths** can be used to place a copy of the received weather text in different directories for processing by other programs. For example, if you use Weather Message to receive your weather data, you can put a copy of the received messages in a second or third directory for processing by other CAP compliant applications.

**Note:** Changing the Ingest and Additional Distribution Paths on this screen will automatically change them for WxEmwin, WxWW2000, and WxPort.

9.4 Register Software

The Register menu option allows you to register your software.
When you purchase Wxlpaws, you will be supplied with a **Registration Name** and **Registration Code**. Enter these exactly as they are printed. These fields are case sensitive.

After the software is registered, we recommend that you stop and restart the software.

To purchase the software go to [http://www.weathermessage.com/Purchase.aspx](http://www.weathermessage.com/Purchase.aspx).
Part X
10   Message Client

10.1  Overview

The Weather Message Message Client, WxMcli, is used to receive processed text and graphic products from Weather Message Server. The Message Client can be installed on any computer attached to a TCP/IP network. Based on your alarms and settings, the Message Client can popup a window, play different sounds, and read the alarm using text-to-speech.

The Message Client should be automatically started when your computer is started. The Message Client runs from the system tray.

Hint: If the Password for Setup/Exit option has been enabled, this program cannot be terminated with the X button, without a password. This feature insures that the user does not accidentally stop weather alerts.

Hint: If the system tray icon is outlined with a red circle or a red led appears in the status bar, the program is not communicating with the Weather Message Server.

Note: A Silence button appears in the status bar when a one-minute or continuous sound plays. It disappears when the sound finishes or Silence is clicked.

Note: If WxMcli is stopped with the window minimized, the next time it is started, it will start minimized.

System Tray
When WxMcli is minimized, you can restore the main screen by right clicking on the system tray icon, then select open.

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10.2 Main Window Options

10.2.1 Menu Options

The menu buttons on this screen perform these functions:

The File menu allows you to setup this program, select the default printer, connect to the Weather Message Server, and exit the program.

- The Setup option opens the Setup Window.
- The Printer option selects the default printer and font size.
- The Connect option forces the application to attempt a connection to the server.
- The Exit option shuts down the Message Client.

Note: If you enable the Password for Setup/Exit, you will have to enter the a password to access the setup screen or exit the program.

The Silence menu option allows you to stop a sound that is playing. The option can also be activated by pressing the F12 function key or clicking the Silence button in the status bar.

The Text menu allows you to clear the main window and search for a word or phrase.

The Quick List menu allows you to quickly request defined products.
· See Quick List setup tab.

**Note:** Function keys can be assigned to Quick List items for fast access.

The Image Viewer menu allows you to select from 1 to 10 image viewers. The menu shows the last image viewed with each viewer.

· See Image Viewer.

The Windows menu provides access to additional windows for retrieving products, product lists and viewing the floating product window.

· See Request Product.
· See Request Product List.
· The Floating Product List option opens a floating product list window.

The Product List menu option opens the floating product list.

The Help menu allows you to see this manual, and display information about the program.
10.2.2 Quick Buttons

Quick Buttons, when enabled, appear below the menu. Quick Buttons allow fast access to products. Quick Buttons work in conjunction with Quick Lists. Products that are defined in a Quick List can be selected to appear as quick buttons. See the [Quick List](#) setup tab for the steps to enable quick buttons.

If the Request Tab is selected, the requested product will appear in the [Request](#) Tab. If another tab is selected, the [Request Product](#) window will be opened to display the product.
10.3 MainWindow

10.3.1 Live Monitor

The Product List, when enabled, displays a scrolling list of received products. The most recent product appears at the top of the list. You can click on any of the received products to see the text or image associated with the product name.

**Hint:** Clicking on a text product will automatically launch the message viewing window. It also copies the displayed text to the windows clipboard.

To see a list of products received with the same product identifier, hold down the shift key before clicking on the received product. The Request Product List window will be displayed.

The Product List, by default, is split into text and graphic products. Text products appear in the top list, while graphic products appear in the bottom list. You can change to one list by right clicking in the Product List and clicking the Split List option. The Product List can also be cleared by right clicking in the Product List and selecting Clear List.

The Live Tab displays a scrolling text box of received weather products. The last message received is at the top. The size of the scrolling buffer can be change in Setup. To view an incoming message in a separate window, click on the message and a new window will open.
The status bar at the bottom of the window display connection information. Normally you will see a green led, which indicates you are connected to Weather Message Server. If the program is not connected, you will see a red led and the system tray icon will show a red circle.

**Note:** When you shutdown Message Client, the application will store the items in the product list. The next time you start Message Client, the product list will be populated with the items it contained the last time it was shutdown.

10.3.2 Request

The **Request** Tab is used to request a specific product. The product codes are composed of a 3-character weather product code and either a 2-character state or forecast office code. See Weather Forecast Offices for a list of the forecast office codes. See Text Product Abbreviations for a list of weather product codes. For example a Hazardous Weather Outlook for Birmingham, Alabama is coded HWOBMX. This code can be entered in the **Product Code** field to get the last Hazardous Weather Outlook issued.

The **Read Text** button will read the displayed message using Windows text-to-speech processor. When the text-to-speech processor starts, the button will change to **Cancel Reading**. Clicking **Cancel Reading** will stop the text-to-speech processor. See Text to Speech for more details.

The **E-Mail Message** button opens your email application and inserts the message text in the body of the message.

The **Print Message** button prints the message text to your default printer.

Right clicking in the text window displays the following menu options that allow you to copy, paste, print and speak selected text.
Alarms

The Alarms Tab contains a list of active alarms. It displays the message description, counties, issued and expiration information. When an alarm is received, the system tray icon changes to the color red, until all alarms have expired. When alarms expire, the time remaining field changes to "expired". Expired items remain in this list for a default time of 15 minutes.

Hint: The length of time that products remain in the list can be changed in Setup, Settings Tab 2, Text Product Purge Time.

Click on a row in the list to read the message that caused the alarm.

Hint: For weather products to appear in this grid, you must have an alarm that has state and county selections.

Hint: Clicking on a row will automatically launch the message viewing window. It also copies the displayed text to the windows clipboard.
10.4 Floating Product List

The Message Client features a floating received products window. You can minimize the main window and keep this small window open to monitor received products. It displays a scrolling list of received products. The most recent product appears at the top of the list. You can click on any of the received products to see the text or image associated with the product name.

**Hint:** Clicking on a text product will automatically launch the message viewing window. It also copies the displayed text to the windows clipboard.

To see a list of products received with the same product identifier, hold down the shift key before clicking on the received product.

**Note:** For products to appear in this list, an alarm must be established in Weather Message Server.

The default product list has several options. To see a list of options, right click to see this menu.
The default option is to show all products in a single list. If you only want to see text products in your list, click the **Text Only** option. To only want to see graphic products, click the **Graphic Only** option.

The **Wild Card** option allows you filter the list using a wildcard. Enter a wildcard expression in the menu text box, then click on the **Wild Card** option.

The **Split List** option changes the standard product list into two lists. The top list contains text products and the bottom list the graphic products.

The **Refresh List** option sends a request to the server to refresh the text product received during the last two hours. The graphic products are refreshed from the clients local cache.

The **Clear List** option clears the received products list.

**Note:** When you shutdown Message Client, the application will store the items in the product list. The next time you start Message Client, the product list will be populated with the items it contained the last time it was shutdown.

### 10.5 Request Product

The Request Product window allows you to request a product by identifier, **Quick List** selection or by clicking a **Quick Button**. The Request Product window operates like the **Request** Tab in the main window.
The product codes are composed of a 3-character weather product code and either a 2-character state or forecast office code. See Weather Forecast Offices for a list of the forecast office codes. See Text Product Abbreviations for a list of weather product codes. For example a special weather statement for Birmingham, Alabama is coded SPSBMX. This code can be entered in the Product Code field to get the last special weather statement issued.

**Hint:** Requesting a product will automatically copy the product's text to the windows clipboard.

The Product Code field also contains a list of the last 20 products received. To view and/or select an item from this list, click on the down arrow in the Product Code field.

The Read Text button will read the displayed message using Windows text-to-speech processor. When the text-to-speech processor starts, the button will change to Cancel Reading. Clicking Cancel Reading will stop the text-to-speech processor. See Text to Speech for more details.

The E-Mail Message button opens your email application and inserts the message text in the body of the message.

The Print Message button prints the message text to your default printer.

The Close button closes this window.

Right clicking in the text window displays the following menu options that allow you to copy, paste, print and speak selected text.
10.6 Request Product List

The Request File List window allows you to request a list of products by identifier.

The product codes are composed of a 3-character weather product code and either a 2-character state or forecast office code. See Weather Forecast Offices for a list of the forecast office codes. See Text Product Abbreviations for a list of weather product codes. For example a special weather statement for Birmingham, Alabama is coded SPSBMX. This code can be entered in the request field to get a list of the special weather statements for Birmingham currently stored in Weather Message.

To view one of the listed messages, click on the message identifier in the product column. Clicking on the expiration date column will sort the list in ascending or descending order.

10.7 Setup

10.7.1 Server Tab

The Server Tab is used to define the communication settings for your Weather Message Server.
The **Host TCP/IP Address** is the address of the Weather Message Server. Enter the address of your primary server in this field.

**Note:** When the Host TCP/IP Address field is left blank, the Message Client will try to discover the address and port of the Weather Message Server. If your server is on the same local network as the client, it will automatically obtain the address and port. If the client is running on a different network, you will need to enter the address and port of the server.

The **Host TCP/IP Port** is the port defined by Weather Message Server for connections. The default is 9501.

The **Backup Address** is the TCP/IP address of your backup Weather Message Server. Do not enter an address in this field if you do not have a backup Weather Message Server. This address is used when the program cannot contact your primary Weather Message Server.

The **Backup Port** is the port defined for use by the backup Weather Message Server. The default is 9501.

The **Client Identifier** field allows you to assign each Message Client a different identification number. This identifier can be used to send a specific alarm to a specific client or group of clients.

### 10.7.2 Settings Tab 1

The Settings 1 Tab is used to set operational information for the Message Client.
The **Password for Setup/Exit** option allows you to require a password to access the Setup menu or exit the program.

The **Enable Popup Selection**, when checked, will give the user the capability to enable or disable the applications popup operation. The Enable/Disable option will appear on the system tray menu.

The **Receive Graphics** field should be checked, if you want to receive weather graphics.

**Note:** *Weather Message Server would also have to be setup to send graphic files.*

The **Graphics Purge Time** field defines the amount of time, in hours, to retain graphic images. After an image exceeds this time, it is deleted.

The **Text Product Purge Time** field defined the amount of time, in minutes, to retain expired products in the alarm grid. When a product exceeds this time, it is removed from the alarm grid.

The **Start Up Wave File** allows you to specify a wave file to play or read a text-to-speech message when the program is started. Use the **Browse** button to locate a wave file. To hear the wave file, click **Play**. If you do not want a wave file to play at startup, enter **None** in this field. For a text-to-speech message enter TTS: followed by the message to speak. For example: **TTS:Weather Message Starting**

The **Password** field allows you to set the password that will be used for the Password for Setup/Exit option.

The **Auto Startup** option allows you to specify whether the Message Client is automatically started when Windows starts. The options are No; Yes, for the current user; and Everyone, for any user.

**Note:** *The options available for Auto Startup are based on your user permissions. Administrator and Power users will have all of the options. Other users may only have the Yes option.*
The **Show in Task Bar** option, when checked, will move the program from the system tray to the task bar.

The **Single Instance** option, when checked, will only allow one copy of the Message Client to start.

The **Show Product List** field controls whether the Product List appears on the main window. Check this option to display the main window Product List, uncheck this option to remove the Product List.

### 10.7.3 Settings Tab 2

The Settings 2 Tab is used to set operational information for the Message Client.

![Weather Message Client Setup](image)

The **Scroll Buffer Size** defines the number of characters to keep in the main text window.

The **Product List On Top** field causes the product list, when shown, to appear on top of all other windows.

The **Product List Opacity** allows you to setting the opacity or transparency of the product list. 100 represents a normal window. The lower the value the more transparent the product list becomes. This allows you to see through the product list when it is positioned on top of other windows.

The **Product List Size** allows you to determine the number of products that are contained in the product list.

The **Main Viewer Font** sets the font family that is used for the main viewer and request boxes.

The **Main Viewer Font Size** sets the font size that is used for the main viewer and request
boxes.

The **Product List Font** sets the font family that is used for the main viewer product list and floating product list.

The **Product List Font Size** sets the font size that is used for the main viewer product list and floating product list.

### 10.7.4 Alarms Tab

The Alarms Tab is used to set sounds, colors, print and popup options for 40 alarm types.

The Weather Message Server Setup program allows you to associate an **Alarm Type** for each alarm that is sent to the Message Client. This **Alarm Type** causes the Message Client to play a wave file and pop-up a minimized screen, based on your settings. In addition, it uses the color associated with the alarm type to display the message description on the status line and in the Product List window.

Message Client supports up to 40 different alarm types. To select a specific alarm type, click on the up or down buttons adjacent to the Type # field. Click on the **Browse** button to select a wave file. Each wave file can be played, **Once**, for **1 minute**, or **Continuous**. To hear the sound associated with the alarm, click the **Play Wave File** button. Alarms can be silenced, by clicking on the **Silence** button. The number of the alarm to be played is determined when the Alarm is established in Weather Message Server Setup.
The **Wave Option** controls how the message client plays sounds for matching alarms. For standard wave files select **Play Wave**; to play sounds based on product identifier select **AWIPS to Wave**; to announce the product using text-to-speech select **Read Short**; and to read the received message using text-to-speech select the **Read Text** option.

**Note:** The text to speech options work on Windows XP and later operating systems.

The **Awips to Wave** option is used when you want a specific sound to be played based on the product identifier. When using this option, you will create a wave file that has the same name as the product identifier. This wave file should be saved in the "Sounds" directory located in the WxMesgNet directory.

When this option is enabled, the program will look for a wave file in the "Sounds" directory that is named like the product being received. It will first look for the complete 6 character product identifier and play that file. If the 6 character product identifier is not found, it will look for a file with the first 3 characters of the product identifier and play that file. If neither are found, it will play the default wave file associated with this alarm.

Here are some examples of using the Product to Wave option. The following files are stored in the "Sounds" directory; "TORBHM.wav", "TOR.wav". With the Product to Wave enabled for Alarm Type 1, the program will look at each received product associated with Alarm Type 1. If the incoming message contains the product identifier "TORBHM", the program will play the file "TORBHM.wav". If it receives "TORHUN", it will play the file "TOR.wav" since it cannot locate a file labeled "TORHUN.wav".

The **Read Short** option will announce the received product using text-to-speech. The software will attempt to create a short message describing the received product. The short message will generally include the product type, counties effected and the expiration time. See **Text to Speech** for more details.

The **Read Text** option will read the text of the received message using text-to-speech.

The **Print** option, if checked, will print out the received weather product to your default printer.

The **Execute Program** option allows you to start a third-party program when an alarm occurs. Enter the full path and program name for the third-party program. The Message Client can create a temporary file with the text so that it can be passed to the external program as a command line argument. To do this, put one space after the program name and enter the characters "$1". For example, to start Notepad each time an alarm is triggered, enter "Notepad.exe $1" in the Execute Program field.

**Hint:** *If the path to the executable contains a space, you should enclose the path and program name in quotes. For example: "c:\program files\myprogram.exe" $1*

The **Color** button, allows you to select a foreground and background color for the weather product description. Left click to change the background color. Right click to change the foreground color.

The **Pop Up Client** option specifies whether Message Client pops up a minimized window when this alarm arrives.

The **Client On Top** setting can be used to make the Message Client window the window that appears on top of all other windows. If you use this option, an alarm will cause Message Client to appear on top of all other running programs.
10.7.5 Product Colors Tab

The Product Colors Tab is used to setup colors for specific products.

![Weather Message Client Setup](Image)

The Product ID column contains the first three letters of the AWIPS identifier to be colored. To add a new product identifier, scroll down to a blank cell and click in the cell. Enter the product identifier and press enter. Then right click in the corresponding color cell to change the foreground (text) color or left click to change the background color.

The colors associated with the alarms, established under the Alarms tab, will override these default colors.

10.7.6 Quick List Tab

The Quick List Tab is used to define products for quick access. Quick List products appear on the Quick List menu and by selection as a Quick Button.
To add a category, enter the category description to the right of the * symbol. To change a category description, click on the description. To delete a category, click on the category and press the Delete button or right click and select Delete on the context menu.

After a category has been established, you can add, change or delete products. To add a product, first select the category. To the right of the * symbol, enter the category item description and product description. To change a product, first select the category, then the product. Make the changes desired. To delete a product, first select the category, then the product and press the Delete button.

For each product you can define a Quick Button and/or a Function Key to quickly access the product. To define a Quick Button, check the Show Button field and enter the Button Text that should appear in the button. To associate a function key with the product, select a Function Key in the drop down box.

The order that the Quick Buttons appear in the menu can be changed by entering position numbers in the Button Order column. By default the buttons are ordered based on their position in the Quick List. Enter a 0 (zero) to place the button first in the list, 1 (one) to place the button after the first, etc.

The color of the Quick Button can be set by right and left clicking in the corresponding color cell. Right click in color cell to change the foreground (text) color or left click to change the background color.

**Hint:** To request a specific zone or county, append an "!" and the zone number after the product identifier. For example, to request only Tallapoosa County from the current zone forecast product, use: ZFPBMX!ALZ037.

**Hint:** To request a list of received products, append an "+" after the product identifier. The default option of the quick list is similar to the Request Product option. When the product ends with an "+", it operates similar to the Request List option.

### 10.8 Text to Speech

The Message Client now has limited support for text-to-speech using Microsoft's text-to-speech
processor on Windows XP and later operating systems. The Sam voice that is installed with Microsoft XP is very poor. Windows Vista's Anna voice is more natural.

Microsoft released two additional voices for Windows XP that are better than the default voice. You can download them from this link [http://www.text-speech.com/voices/Sp5TTIntXP.msi](http://www.text-speech.com/voices/Sp5TTIntXP.msi). After they are installed, you will find Mike and Mary available in the speech control panel. These two are much better than the default SAM voice.

The voice used by the Message Client is the default one selected in the speech control panel. Using the speech control panel, you can change the voice and set the speaking speed.

There are several commercial TTS (text to speech) engine providers. Cepstral has good voices. You can demo them at [http://www.cepstral.com/demos/](http://www.cepstral.com/demos/) Their voices are around $30.00. Nextup has demos of the AT&T voices at [http://www.nextup.com/attnv.html](http://www.nextup.com/attnv.html) The AT&T voices cost $35.00.
Part XI
11  Image Viewer

11.1  Overview

The Image Viewer allows you to view received weather graphics and locally processed radar images. The Image Viewer is started by clicking on the Image Viewer menu option in Message Client and selecting one of the 10 viewers.

Each Image Viewer instance (1 to 10) remembers the last image you viewed, along with the size of the viewer window and the last position of the scroll bars. When you access that viewer again, it will automatically display the last image viewed.

11.2  Menu Options
The **File** menu allows you to save the displayed image, print the image, setup this program, retrieve previously viewed images, and exit the program.

- **Save Image** option is used to save the currently displayed image. Images can be saved in GIF, JPG, PNG, TIF and BMP format.
- **Print Full Image** option will print the entire image to your default printer.
- **Print Displayed Image** option will print the image visible in the Image Viewer window to your default printer.
- **Setup** option opens the **Setup Window**.
- Items 1 through 4 act as a recent image viewed list. Select a previously viewed image to see it again.
- **Exit** option shuts down the Message Client.

**Note:** *If you enable the Password for Setup/Exit, you will have to enter the a password to access the setup screen or exit the program.*

The **Select Image** menu launches the **Select Image** window.

The **Browse** menu launches the **Image Browser**. It is used to see a thumbnail of the images recently received.

The **Image** menu allows you to alter the sizing and resizing behavior of the displayed image.

- **Fit to Window** option, when checked, will cause the displayed image to fit the size of
The image viewer.

- The **Keep Aspect Ratio**, when checked, will cause the viewer to retain the aspect ratio of the displayed imaging. Un-checking this option can cause the image to be distorted.

The **Animate** menu will start an animation of images. The button only appears if more than one image is available for animation.

<table>
<thead>
<tr>
<th>Option</th>
<th>Key</th>
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<tbody>
<tr>
<td>Start</td>
<td>F8</td>
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<td>Stop</td>
<td>F9</td>
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<tr>
<td>Increase Speed</td>
<td>F11</td>
</tr>
<tr>
<td>Decrease Speed</td>
<td>F12</td>
</tr>
</tbody>
</table>

- The **Start** option or F8 function key starts the animation.
- The **Stop** option or F9 function key stops the animation.
- The **Increase Speed** option or F11 function key increases the animation speed.
- The **Decrease Speed** option or F12 function key decreases the animation speed.

The **Help** menu allows you to see this manual.

### 11.3 Image Options

The displayed image can automatically be resize by selecting on of the **Image** menu options.
There are also a number of zoom options available by right clicking on the image. Right click on the image to see this menu.

<table>
<thead>
<tr>
<th>Option</th>
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<tbody>
<tr>
<td>Pen</td>
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<tr>
<td>Zoom In</td>
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<tr>
<td>Zoom Out</td>
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<tr>
<td>Zoom Window</td>
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<tr>
<td>Zoom 100%</td>
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<tr>
<td>Zoom Fit</td>
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<tr>
<td>Magnify</td>
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<tr>
<td>Zoom 500%</td>
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<td>Zoom 200%</td>
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<td>Zoom 75%</td>
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<tr>
<td>Zoom 25%</td>
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<tr>
<td>Zoom 10%</td>
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</tbody>
</table>

The default view is Zoom 100%.

### 11.4 Selecting Images

Images are selected by either clicking on a graphics product in the Product List, selecting a recently viewed image from the File menu, browsing for an image using the Image Browser or using the Select Image window.
Images are broken down into six categories. Click on one of the categories to see a list of images available. When an image is selected, the program will display the image, if it is available. If the Auto Animate option is enabled, the image will automatically begin animation.

The Miscellaneous category contains a slide show option. This can be used with the animate option to show all images.

11.5 Image Browser

The Image Browser allows you to browser received images.

Click on a image to load it into the Image Viewer.

**Note:** If you have received a large number of images, it make take several seconds for this screen to populate.

11.6 Setup

11.6.1 Program Tab

The Program Tab is used to set the graphics directory and other program defaults.
The **Graphics Directory** is automatically setup by the system. This directory should not have to be changed under normal situations.

The **Auto Animate** option, when checked, will make the program automatically start image animation when an image is selected.

The **Default Zoom** field allows you to specify the zoom factor that is used when the image viewer is initially loaded.

**Note:** If you are running the Message Client on the same computer as Weather Message Server, the graphic products will be stored in two different directories. One directory is used for the Server and another for the Message Client. You can eliminate the double storage on the server by disabling the “Receive Graphics” option on the message client. Then change the graphic directory path on the Image Viewer to the Server’s graphic directory. This should not be an issue for most users, unless disk space is limited.

### 11.6.2 Images Tab

The Images Tab is used to
To add a category, enter the category description and click Add. To change a category, click on the category, make any changes and click on Change. To delete a category, click on the category and press the keyboard delete key or click on the Delete button.

To add a category item, first select the category. Enter the category item description, file name and count (images to animate), then click Add. To change a category item, first select the category, then the category item. Make any changes and click on Change. To delete a category item, first select the category, then the category item and press the keyboard delete key or click on the Delete button.

**Note:** The program will not allow you to enter a duplicate file name.
Part XII
12 WxMap Client

12.1 Overview

The Weather Message Mapping application, WxMap, is used to visually plot received weather products from Weather Message Server on a graphical map. WxMap uses GIS technology to allow you to view any part of the United States map and its possessions. WxMap can be installed on any computer attached to a TCP/IP network. Based on your alarms and settings, WxMap can popup a window, play different sounds, and read the alarm using text-to-speech.

WxMap should be automatically started when your computer is started. WxMap runs from the system tray.

The map included with the default installation does not show interstate roads, forecast zones or marine zones. To add these optional map layers, download and install the optional map layers from your CD or the Weather Message downloads page. If an Internet connection is available, you can enable OpenStreetMaps.

Hint: If the Password for Setup/Exit option has been enabled, this program cannot be terminated with the X button, without a password. This feature insures that the user does not accidentally stop weather alerts.
Weather Message Server

**Hint:** If the system tray icon is outlined with a red circle or a red led appears in the status bar, the program is not communicating with the Weather Message Server.

**Note:** If WxMap is stopped with the window minimized, the next time it is started, it will start minimized.

**System Tray**

When WxMap is minimized, you can restore the main screen by right clicking on the system tray icon, then select open.

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**12.2 Menu Options**

The menu buttons on this screen perform these functions:

The File menu allows you to setup this program, show details, view logfiles, and exit the program.

- The Setup option opens the Setup Window.
- The Printer option selects the default printer and font size.
- The Map Landmarks option opens the Landmarks Window.
- The Connect option forces the application to attempt a connection to the server.
- The Refresh Map option clears the map of any active alarms and sends a refresh request to Weather Message Server.
- The Print option prints an image of the map window.
- The **Exit** option shuts down the Message Client.

**Note:** If you enable the Password for Setup/Exit, you will have to enter the a password to access the setup screen or exit the program.

The **Silence** menu option allows you to stop a sound that is playing.

The **Map** menu allows you to make adjustments to the displayed map and see the active alarms.

<table>
<thead>
<tr>
<th>Option</th>
<th>Function</th>
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<tbody>
<tr>
<td>Zoom In</td>
<td>F11</td>
</tr>
<tr>
<td>Zoom Out</td>
<td>F12</td>
</tr>
<tr>
<td>Select Mode</td>
<td></td>
</tr>
<tr>
<td>Drag Mode</td>
<td></td>
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<tr>
<td>Zoom Mode</td>
<td></td>
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<tr>
<td>Lock Map</td>
<td></td>
</tr>
<tr>
<td>Reset Map</td>
<td></td>
</tr>
<tr>
<td>Show Polygons</td>
<td></td>
</tr>
<tr>
<td>Label Counties</td>
<td></td>
</tr>
<tr>
<td>Dock Map</td>
<td></td>
</tr>
<tr>
<td>Active Alarms</td>
<td></td>
</tr>
</tbody>
</table>

- The **Zoom In** option or F11 function key zooms in the map.
- The **Zoom Out** option or F12 function key zooms out the map.
- The **Label Counties** option, when checked will label each county with their name. The program attempts to fit the county name inside the county boundary. If this is not possible, the county name is not displayed. Zooming in and out will effect whether a county name is displayed.
- The **Select Mode** is the default mode. This mode allows you to click on counties to see active weather products.
- The **Drag Mode** changes the cursor to a hand and allows you to drag the map.
- The **Zoom Mode** changes the cursor to a hand with a pointing finger. This mode allows you to draw a box around an area and zoom in or out the drawn area. To Zoom In, draw the box down and to the right. To Zoom Out, draw the box up and to the left.
- The **Lock Map** option, when checked, locks the map. When locked, the map cannot be zoomed, or moved.
- The **Reset Map** option, resizes the map showing all of the United States.
- The **Show Polygons** option, when checked will display polygons for messages that include the effected area.
- The **Label Counties** option, when checked will display names for the counties. See the [Map Base Tab](#) for additional settings for labels.
- The **Active Alarms** option displays the [Active Alarms](#) window.

**Note:** If you are in the drag or zoom mode, you will not be able to click on a county to see the county’s information.

**Hint:** Pressing the ESC key will return the map to Select Mode.

The Views menu allows you to quickly change and save the map view to one of ten user defined
areas.

- See [Views](#).

The **Save Image** option saves the current map image to `.\WxMesgNet\MapImage.jpg`.

The **Help** menu allows you to see this manual, and display information about the program.

### 12.3 Toolbar Options

The toolbar provides quick access to common menu functions.

- ![Select Mode](#) Places the map in the **Select Mode**. This mode allows you to click on counties to see active weather products.

- ![Drag Mode](#) Places the map in the **Drag Mode**. This mode allows you to drag the map around using the cursor.

- ![Zoom Mode](#) Places the map in the **Zoom Mode**. This mode allows you to draw a box around an area and zoom in or out the drawn area. To Zoom In, draw the box down and to the right. To Zoom Out, draw the box up and to the left.

- ![Zoom In](#) Click this icon to **Zoom In** the map.

- ![Zoom Out](#) Click this icon to **Zoom Out** the map.

- ![Select](#) Click this icon to select the first saved view. See [Views](#) for more information about
saving a view.

**Hint:** The mouse wheel can be used to zoom in and out on the map when the cursor is over the map.

# 12.4 Main Window

You can click in the map legend, on any of the weather type buttons, to see a list of active warnings or watches for that weather type. You can also identify a county's name and current alarms by moving the mouse pointer over the county and pausing. After a short pause, the county name and state will appear, along with a list of active alarms.

Left Click once on a county and a window will be displayed showing the actual weather text that caused the alarm. If more than one alarm is active, you will see each message associated with the active alarms.

**Note:** Received warnings and watches color the map based on the map legend priority. The first item in the legend, Tornado Warning, has the highest priority. To change the priority, see the Setup section.

**Note:** In order for weather products to be displayed on the map, they must be setup in Weather Message server. WxMap recognizes these products: TOR, FFW, SVR, WSW, WOU and FFA. Other products can be sent to WxMap and associated with a color, see the setup
To assist you with identifying counties that have been recently placed under a watch or warning, the application will draw a highlighted line around the county. This line will remain for 5 minutes. When there are many counties under watches or warnings, you will be able to easily see which ones were just placed under a watch or warning.

The application will also draw a dark blue line around counties that have alarms which are about to expire. Five minutes before the alarm is to expire, the program will outline the county. This will assist you with identifying counties that have alarms about to expire.

**Status Line**

The status line displays the operational status of the program and map information. The first status area displays the name of the Weather Message server that is providing data.

The status area, when present, displays the latitude and longitude of the mouse pointer, when moved through the map. The latitude and longitude status can be enabled and disabled in Setup.

The latitude/longitude status is followed by the map zoom scale.

A green LED indicates that the program is connected to a Weather Message Server. A yellow LED indicates that the program is attempting to connect to a server. A red LED indicates that the program is not connected to a server.

The current time is displayed in the last status box.

**Special Keys**

Pressing control-s while the main window has focus causes the program to save the map image using the information setup for saving images.

**12.5 Map Legend**

The Map Legend buttons allow you to quickly get a list of counties included in a specific weather type.
Click on one of the weather type buttons to see the active counties.

This window displays the county name and state, along with the expiration date and time. Click on a county name to read the weather text associated with the county.

### 12.6 County Information

Left clicking on a county displays a window showing the messages associated with the current alarms.
Weather Message Text - Vermilion to Avon Point OH, LE

WHIS71 KCLE 311934
MWWCLE

URGENT - MARINE WEATHER MESSAGE
NATIONAL WEATHER SERVICE CLEVELAND OH
334 PM EDT SUN OCT 31 2010

LEZ144>149-010345-
/O.CON.KCLE.SC.Y.0061.000000T0000Z-101101T0000Z/
THE ISLANDS TO VERMILION OH-VERMILION TO AVON POINT OH-
AVON POINT TO WILLOWICK OH-WILLOWICK TO GENEVA-ON-THE LAKE OH-
GENEA-ON-THE-LAKE TO CONNEAUT OH-CONNEAUT OH TO RIPLEY NY-
334 PM EDT SUN OCT 31 2010

Hint: The text displayed is automatically copied to the windows clipboard.

The Zoom to County button will reposition the map to show the county associated with the text. The button's text will change to Restore Zoom. Clicking the Restore Zoom button will restore the original map view.

The Read Text button will read the displayed message using Windows text-to-speech processor. When the text-to-speech processor starts, the button will change to Cancel Reading. Clicking Cancel Reading will stop the text-to-speech processor. See Text to Speech for more details.

The E-Mail Message button opens your email application and inserts the message text in the body of the message.

The Print Message button prints the message text to your default printer.

The Close button closes this window.

Right clicking in the text window displays the following menu options that allow you to copy, paste, print and speak selected text.

<table>
<thead>
<tr>
<th>Option</th>
<th>Key Combination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undo</td>
<td>Ctrl+Z</td>
</tr>
<tr>
<td>Cut</td>
<td>Ctrl+X</td>
</tr>
<tr>
<td>Copy</td>
<td>Ctrl+C</td>
</tr>
<tr>
<td>Paste</td>
<td>Ctrl+V</td>
</tr>
<tr>
<td>Delete</td>
<td>Del</td>
</tr>
<tr>
<td>Print</td>
<td>Ctrl+P</td>
</tr>
<tr>
<td>Speak</td>
<td>Ctrl+S</td>
</tr>
</tbody>
</table>

Right Clicking on a county displays this menu.
Select **Show County Information** to display National Weather Service information about the county.

**Hint:** This screen can help you identify the Forecast Office assigned to your county.

The **Show Notes** option opens a window that allow you to record information about that county.

The **Print Notes** button prints the displayed notes to your default printer. Click **Save** to save any changes and **Close** to close this window.

**Note:** The notes for each county are stored in the ..\WxMesgNet\Map\Notes directory. They are stored as rich text (RTF) files and can be edited with any RTF editor. Fonts and colors can be included when using an external editor.
The **Label County Toggle On/Off**, when On for a county, causes the county's name to be displayed on the map.

### 12.7 Views

The Views Menu option allows you to preset different map views. This capability allows you to establish ten different views to quickly reposition the map to the defined areas.

To preset one of the four views, position the map for the area to be included in the view. Click on the Save View menu option. You will be prompted to select one of the ten view and to enter a name for this view.

The name you entered will now be displayed in the View menu.

To delete a view, click on the Delete View menu option. You will be prompted to select a view to delete.

### 12.8 Active Alarms

The Active Alarms Menu option allows you to view the current alarms.
The alarm grid display information about each active alarm. The columns and rows can be expanded to show hidden information. The columns and rows can be extended by clicking a row or column line and dragging the line. You can also sort the information by clicking on the column identifier.

Right click an entry to expire a product or click the **Expire All** button to expire all active alarms.

The **Refresh** button will refresh the alarm grid.

**Note:** *The alarm grid will automatically refresh every 30 seconds.*

### 12.9 Setup

#### 12.9.1 Server Tab

The Server Tab is used to define the communication settings for your Weather Message Server.
The **Host TCP/IP Address** is the address of the Weather Message Server. Enter the address of your primary server in this field.

**Note:** When the Host TCP/IP Address field is left blank, WxMap will try to discover the address and port of the Weather Message Server. If your server is on the same local network as the client, it will automatically obtain the address and port. If the client is running on a different network, you will need to enter the address and port of the server.

The **Host TCP/IP Port** is the port defined by Weather Message Server for connections. The default is 9501.

The **Backup Address** is the TCP/IP address of your backup Weather Message Server. Do not enter an address in this field if you do not have a backup Weather Message Server. This address is used when the program cannot contact your primary Weather Message Server.

The **Backup Port** is the port defined for use by the backup Weather Message Server. The default is 9501.

The **Client Identifier** field allows you to assign each Message or Map Client a different identification number. This identifier can be used to send a specific alarm to a specific client or group of clients.

### 12.9.2 Settings 1 Tab

The Settings 1 Tab is used to set operational information for WxMap.
The **Password for Setup/Exit** option allows you to require a password to access the Setup menu or exit the program.

The **Enable Popup Selection**, when checked, will give the user the capability to enable or disable the applications popup operation. The Enable/Disable option will appear on the system tray menu.

The **Show Lat/Long**, when checked, displays the latitude and longitude for the mouse cursor in the status bar.

The **Small Map Legend**, when checked, will reduce the size of the buttons that appear in the map legend.

The **Map Legend Style** determines the style of the map legend. Static displays all products in the legend that have the Include In Legend option checked. Dynamic 1 only displays active products in the legend that have the Include In Legend option checked. Dynamic 2 displays all active products in the legend.

The **Status Message Style** allows you to select the color scheme used for the status message box. The status message shows new alarms as they are received. You can select whether to show these messages in the color of the type of alarm that is being received. Messages not related to arriving alarms are displayed with a white background and black text. The Status Message Style can be set to Default – background is white, text is black; Map Color – background is text color, text is map color; or Text Color – background is map color, text is text color.

The **Pop Up Style** allows you to determine how WxMap window reacts to arriving alarms. The settings are All, All On Top, Alarms and Never. The All setting causes WxMap to popup the main window if it minimized. The All On Top setting causes WxMap to popup the main window if it is minimized and makes the WxMap window the window that appears on top of all other open windows. If you use this option, any alarm will cause WxMap to appear on top of all other running programs and be the active program. The Alarms setting uses the popup and on top
option on the Alarm tab to determine when the main window should be displayed. The Never setting causes WxMap to not popup a minimized window when an alarm arrives.

The Outline Line Size field specifies the size of the line used to outline counties that have newly issued products or expiring products.

The Password field allows you to set the password that will be used for the Password for Setup/Exit option.

The Auto Startup option allows you to specify whether WxMap is automatically started when Windows starts. The options are No; Yes, for the current user; and Everyone, for any user.

**Note:** The options available for Auto Startup are based on your user permissions. Administrator and Power users will have all of the options. Other users may only have the Yes option.

The Single Instance option, when checked, will only allow one copy of the Map to start.

The Show in Task Bar option, when checked, will move the program from the system tray to the task bar.

### 12.9.3 Settings 2 Tab

The Settings 2 Tab is used to set additional operational information for WxMap.

The Viewer Font sets the font family that is used for the text viewer.

The Viewer Font Size sets the font size that is used for the text viewer.


12.9.4 Alarms Tab

The Alarms Tab is used to set sounds, colors, print and popup options for 40 alarm types.

The Weather Message Server Setup program allows you to associate an **Alarm Type** for each alarm that is sent to the Message Client. This **Alarm Type** causes WxMap to play a wave file and pop-up a minimized screen, based on your settings.

**Note:** *The Message Client and WxMap use the same alarm type.*

WxMap supports up to 40 different alarm types. To select a specific alarm type, click on the up or down buttons adjacent to the Type # field. Click on the **Browse** button to select a wave file. Each wave file can be played, **Once**, for **1 minute**, or **Continuous**. To hear the sound associated with the alarm, click the **Play Wave File** button. Alarms can be silenced, by clicking on the Silence button. The number of the alarm to be played is determined when the Alarm is established in Weather Message Server Setup.

The **Wave Option** controls how WxMap plays sounds for matching alarms. For standard wave files select **Play Wave**; to play sounds based on product identifier select **AWIPS to Wave**; to announce the product using text-to-speech select **Read Short**; and to read the received message using text-to-speech select the **Read Text** option.

**Note:** *The text to speech options work on Windows XP and later operating systems.*

The **Product to Wave** option is used when you want a specific sound to be played based on the product identifier. When using this option, you will create a wave file that has the same name as the product identifier. This wave file should be saved in the "Sounds" directory located in the WxMesgNet directory.

When this option is enabled, the program will look for a wave file in the "Sounds" directory that is named like the product being received. It will first look for the complete 6 character product
identifier and play that file. If the 6 character product identifier is not found, it will look for a file with the first 3 characters of the product identifier and play that file. If neither are found, it will play the default wave file associated with this alarm.

Here are some examples of using the Product to Wave option. The following files are stored in the “Sounds” directory; “TORBHM.wav”, “TOR.wav”. With the Product to Wave enabled for Alarm Type 1, the program will look at each received product associated with Alarm Type 1. If the incoming message contains the product identifier “TORBHM”, the program will play the file “TORBHM.wav”. If it receives “TORHUN”, it will play the file “TOR.wav” since it cannot locate a file labeled “TORHUN.wav”.

The Read Short option will announce the received product using text-to-speech. The software will attempt to create a short message describing the received product. The short message will generally include the product type, counties effected and the expiration time. See Text to Speech for more details.

The Read Text option will read the text of the received message using text-to-speech.

The Pop Up Map option specifies whether WxMap pops up a minimized window when this alarm arrives. The Map On Top setting can be used to make the WxMap window the window that appears on top of all other windows. If you use this option, an alarm will cause WxMap to appear on top of all other running programs.

The Print option, if checked, will print out the received weather product to your default printer.

12.9.5 Product Colors Tab

The Product Colors Tab is used to establish colors for products listed in the map and map legend.
The Product column contains a two letter VTEC phenomena followed by a one-letter significance or the first three letters of the AWIPS identifier to be colored. To add a new VTEC code or product identifier, click the Add Product button (see Product Setup) or scroll down to a blank cell and click in the cell.

If manually entering a product, enter the product identifier and press enter. Then right click in the color column to change the foreground (text) color or left click to change the background color. Check the box in the Legend column to have this product displayed in the map legend.

The order of products in this list controls the priority. Items at the top of the list have a higher priority than products at the bottom of the list. To change the order, select a product and use the up and down arrows to the right of the legend column or grid scroll bars.

To change or delete a product select the row and right click. Select the Change or Delete option. You can also manually change the items by selecting the row and typing directly in the grid.

The Reset Colors button will delete all of the existing product colors and load default colors based on the NWS web based warning map.

12.9.5.1 Product Setup

The Product Setup window allows you to easily add or change a product.

Select the Phenomena and Significance associated with the product.

To change a background color, left click on the Color button. To change the text color, right click on the Color button.

Check the Show in Legend box to display this product in the map legend.

12.9.6 Other Colors Tab

The Other Colors Tab is used to set miscellaneous colors.
Products sent to WxMap, with no associated color, will be colored in the Default Product Color. To change the background color of the default product, left click on the Color button. To change the text color, right click on the Color button.

The New Alarm Outline color specifies the border color for new products. Click on the Color button to change this color.

The Expiring Alarm Outline color specifies the border color for expiring products. Click on the Color button to change this color.

12.9.7 Map Base Tab

The Map Base Tab is used to set colors and options for the base map.
The **Viewer Color** button allows you to change the color of the areas outside of the map. This is normally the color of the oceans.

The **Outline Color** button allows you to change the outline color of the counties.

The **Line Size** field specifies the size of the line used to draw the county outline.

The **Background Color** button allows you to change the background of the counties.

The **Transparency** field allows you to control how the base layer is painted over the viewer. One hundred ("100") is non-transparent background, while zero ("0") is a complete transparent background.

The **Label Smart Size** value is used with the Label Counties option. This value sets the minimum size of a county before the county name label is displayed.

Check the **Enable Internet Maps** option to enable OpenStreetMaps or a similar provider. This option requires an Internet connection. When this option is enabled, Transparency should be set to 50 or 60.

Check the **Enable County Zones** option to enable the county zone layer. This layer is optional, see the [optional map layer note](#).

Check the **Enable Marine Zones** option to enable the marine zone layer. This layer is optional, see the [optional map layer note](#).

The **Polygon Style** selects the style used to draw polygon lines. The options are Pattern, Area and Outline. The Pattern option draws an outline using a pattern based on the color of the alarm. The Area option draws an outline around the polygon and paints it the color of the alarm. The Outline option draws a single outline based on the color of the alarm. The Outline option does not paint the county.
The **Polygon Line Size** field specifies the size of the line used to draw the polygon outline.

The **Polygon Pattern** selects the pattern that is used to fill a polygon set to style Outline. The options are blank, Dot, Cross, Diagonal Cross, Left slanting Diagonal, Right slanting Diagonal, Horizontal, Vertical, and Fill. The Dot pattern draws small dots that same color of the alarm. The Cross, Diagonal Cross, Left Diagonal, Right Diagonal, Horizontal and Vertical patterns draw fill lines based on the pattern selected. The Fill option completely fills the interior of the polygon.

**Hint:** If you change the Polygon Style, Polygon Line Size, or Polygon Pattern, any existing polygons are not redrawn. To redraw existing polygons, refresh the map.

The **Map Zoom Factor** sets the step rate in which the map zooms in and out. Default value is (5) five. The larger the number the faster the map will zoom in and out. The current zoom level is displayed in the **Status Line**.

**Optional Map Layer Note:** The map included with the default installation does not include the map layers for interstate roads, forecast zones or marine zones. To add these optional map layers, download and install the optional map layers from your CD or the Weather Message downloads page.

### 12.9.8 Map Layers Tab

The Map Layers Tab is used to setup additional map layers.

The default installation includes the state map layer. This layer is used to outline the states. The Weather Message website has an optional map layer download that contains interstate forecast zones, marine zones, roads and rivers.

**Hint:** User provided shape layers would be setup here.
The **File Name** field contains the name of the map layer.

The **Line Size** field specifies the size of the lines in the layer.

The **Line Color** button allows you to select the color for the layer lines.

The **Transparency** field allows you to control how the layer is painted over the county map layer. One hundred ("100") is a completely transparent background, while zero ("0") is no transparent background.

**Hint:** The optional map layers must be located in the ..\WxMesgNet\Maps directory.

### 12.9.9 Save Map Options Tab

The Save Map Options Tab is used to set options for saving the map image to a local directory or website.

![Weather Message Map - Setup](image)

The **Save Map Image** option will instruct the program to save an image of the map each time it changes. This option can be used with the **Map Save Interval** to continuously save the map image when there are active watch/warnings.

The **Map Save Interval** field sets the amount of time in minutes that the program will automatically save the map image when the **Save Map Image** option or **Interval Always Active** option is enabled. If the interval is set to zero, the image will only be saved when the map changes if the **Save Map Image** option is enabled.

The **Interval Always Active** instructs the program to save the map image, at the specified interval, even if there are no active watch/warnings. When this option is unchecked, the program will only save the map image if the **Save Map Image** option is enabled.
The **Image Type** field allows you to select the format of the saved image. Select JPG, PNG, BMP or TIF.

The **Image Quality** field allows you to specify the quality of the saved image. For JPG images, zero ("0") represents the lowest quality, while one hundred ("100") represents the highest quality. For PNG images, zero ("0") represents no compression, while one hundred ("100") represents full compression. You can enter a number in the range of zero to one hundred.

The **Logo Position** option allows you to add a user defined logo to the saved map image. The combo box allows you to enable logo insertion by selecting the position for the logo on the map image. The logo should be saved in c:\Program Files\WxMesgNet directory with the file name WxMapLogo.png.

The **Map Image Path**, for a locally saved image, is the local directory where the map image should be stored. The program will automatically add the name, "MapImage.xxx", when it saves the image. For FTP and HTTP, the Map Image Path should be the full path including the name of the map image.

Select the **Save To** type, Local, FTP, FTPS, SFTP with Password, SFTP with Certificate or HTTP. If one of the FTP options or HTTP is selected, the program will allow you to enter information about your FTP or HTTP server. Enter the FTP **Server address**, **Port number**, **UserName** and **Password**. These settings will be used to log into your server.

**Note:** When using the SFTP with Certificate option, you should enter your private key password in the password field. Your private certificate must be saved in c:\Program Files\WxMesgNet\SSHKeys directory. The file should be named as follows: server name plus underscore character plus user name with the extension .pem. For example wxmesg.com_danny.pem.

### 12.9.10 Save Legend Options Tab

The Save Legend Options Tab is used to set options for saving the map legend to a directory or website.
The Save Legend Options can be used in conjunction with Save Map Options to save the map legend to a directory or website. The Save Map Options must be enabled before the Save Legend Options will be honored.

The **Save Legend** option, when checked, will instruct the program to save the map legend.

The **Legend Style** option selects the legend style. Option 1 draws solid legend markers. Option 2 draws outlined legend markers for polygon products.

The **Background Color** selection specifies the color for the map legend background.

The **Foreground Color** selection specifies the color for the text printed in the map legend.

The **Border Color** selection specifies the color for the border drawn around the individual legend items and the map legend.

The **Font** button allows you to select different fonts and font sizes for the legend text.

The **Map Image Path**, for a locally saved image, is the local directory where the map image should be stored. The application will automatically add the name, “MapLegend.xxx”, when it saves the image. For FTP and HTTP, the Map Image Path should be the full path including the name of the map legend image.

The **Number of Columns** specified the number of horizontal columns that should appear in the legend.

The **Minimum Width** specifies the minimum width, in pixels, of the map legend. The **Maximum Width** specifies the maximum width, in pixels, of the map legend. A maximum width of 0 (zero) indicates no width limit.

The **Minimum Height** specifies the minimum height, in pixels, of the map legend. The **Maximum Height** specifies the maximum height, in pixels, of the map legend. A maximum
12.10 Text to Speech

The Message Client now has limited support for text-to-speech using Microsoft's text-to-speech processor on Windows XP and later operating systems. The Sam voice that is installed with Microsoft XP is very poor. Windows Vista's Anna voice is more natural.

Microsoft released two additional voices for Windows XP that are better than the default voice. You can download them from this link [http://www.text-speech.com/voices/Sp5TTIntXP.msi](http://www.text-speech.com/voices/Sp5TTIntXP.msi). After they are installed, you will find Mike and Mary available in the speech control panel. These two are much better than the default SAM voice.

The voice used by the Message Client is the default one selected in the speech control panel. Using the speech control panel, you can change the voice and set the speaking speed.

There are several commercial TTS (text to speech) engine providers. Cepstral has good voices. You can demo them at [http://www.cepstral.com/demos/](http://www.cepstral.com/demos/) Their voices are around $30.00. Nextup has demos of the AT&T voices at [http://www.nextup.com/attnv.html](http://www.nextup.com/attnv.html) The AT&T voices cost $35.00.

12.11 Map Landmarks

12.11.1 Overview

You can setup landmarks to be displayed on the map. These landmarks can be a simple point, a name, or the current date and time.

To add, change or delete a landmark, click on the line that you want to modify and right click, then select the appropriate function, Add, Edit or Delete.
When adding or editing a landmark, the Edit Landmark window is displayed.

12.11.2 Landmark

Enter the Latitude and Longitude for the landmark. This coordinate will be the center position for the landmark. The Map Text field contains the text to be displayed on the map. This field supports two special codes. Enter a . (period) to display a point (appears as a small square) on the map, or a # (pound sign) to display the current date and time.

The Map Range field allows you to specify the range at which the landmark should be displayed. The program determines the number of miles the currently displayed map is in width. This is the map range. If the range you specify, for this landmark, is greater than or equal to the current map range, it will be shown.

The Show Label option indicates whether you want a box drawn around the text. Check this box to draw an outline.

The Notes field allows you to enter comments about this landmark. This field is not otherwise used by the software.

The font for the landmark can be selected by clicking on the Font button. Although each font field can be manually changed, the recommended method is to use the Font button to select the font. The color of the font can be selected by clicking on the color shown next to the Font Color label.

The Label Background and Label Outline buttons allow you to establish colors for these respective items.
Part XIII
13 WxMesgText

13.1 Overview

Weather Message - Message Creator is a support application that can be used to create test weather messages. These messages can be used to test your alarms, or create local messages for other alerting purposes.

Message Creator has two modes of operation: Expert and Simple. The Expert mode allows you the most flexibility in creating a message. The Simple mode is more suited for first time users.

Message Creator can create messages in a specific directory, referred to as the **ingest path**, or send them directly to the **Weather Message Server** using TCP/IP.

**Hint:** The ability to send a message to Weather Message Server using a TCP/IP connection allows the message client to be located across the internet or on another computer on the same network.

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13.2 Menu Options

The menu buttons on this screen perform these functions:

The **File** menu allows you to setup this program, show details, view logfiles, and exit the program.

- The **Open** option opens a file dialog box for you to select a message template.
- The **Save** option saves the message that you open with the original file name.
- The **Save As** option saves the message that you entered and allows you to enter a file name.
- The Setup option opens the Setup window.
- The Exit option shuts down the Message Creator.

**Note:** The Open option defaults to the ..\WxMesgNet\WxData\WxLocal directory. This is the suggested directory for storing message templates.

The **Clear Counties** menu, clears any counties selected in the County Selection box.

The **Help** menu allows you to see this manual, and display information about the program.
13.3 Expert Mode

In the Expert mode, the application attempts to load the default message template file WxProd.txt from the directory ..\WxMesgNet\WxData\WxLocal. This directory is used when Opening and Saving message templates.

The message must be formatted like a standard National Weather Service Message. You can view actual NWS products at http://www.weathermessage.com/Support/EMWINProductSearch.aspx. The actual messages can be used as examples for formatting.

The following special codes can be used in the message:

- $WxUTC$  Current UTC time, in the format ddhhmm
- $WxExpire$  Expiration time, in the format ddhhmm
- $WxDate$  Current local date and time.
- $WxVtecIssue$  Issue time for the VTEC line.
- $WxVtecExpire$  Expiration time for the VTEC line.
- $WxCounties$  The counties selected for this message.

By using these codes, the program will automatically substitute the current UTC time, message expiration time and the current local date and time in the test message. This keeps you from
having to manually enter those parameters. The expiration time is set to 15 minutes after the current time. Look at the screen shot above for the proper location of these variables.

You can change the AWIPS ID and other information to agree with the alarm that you want to test. To test an alarm, the AWIPS identifier and associated counties must match your alarm in Weather Message.

The Select All button will select all of the listed counties. The Clear button will clear the county selections.

After you have the test message formatted and worded properly, you can now save the message for future reference by clicking the Save button.

After entering the information for your message, click the Send button to send the message to Weather Message Server for processing. The following screen will be displayed to confirm sending this message.

The operator has 30 seconds to confirm the message. If it is not confirmed, the message will not be sent.

### 13.4 Simple Mode
The Simple mode, as the name implies, is easier to use than the expert mode. The program builds the message based on the information that you select or enter on this screen.

**Note:** If the product selected does not support VTEC encoding, the VTEC related boxes will be disabled.

The **Select All** button will select all of the listed counties. The **Clear** button will clear the county selections.

After entering the information for your message, click the **Send** button to send the message to Weather Message Server for processing. The following screen will be displayed to confirm sending this message.
The operator has 30 seconds to confirm the message. If it is not confirmed, the message will not be sent.

13.5  Setup

Enter topic text here.

13.5.1  Settings Tab

The Settings Tab is used to set operational information for the Message Creator.

The **Expire Minutes** field allows you to specify the default number of minutes for the message expiration. These minutes are added to the current time to calculated the message expiration date/time.

Enter your WFO designator in the **WFO** field.

The **Expert Mode**, when checked, puts the application in Expert mode. When it is unchecked, the application operates in the Simple mode.

Check the **Use Local Time** box to use local time. When checked, the program will automatically convert local time to universal time in the created message.

For simple messages, you can specify the **Agency Name** to use in the created message. The default is National Weather Service.

In order to select counties on the State / Counties Tab, you must enter one or more states in the **State** field. If you enter multiple states, they must be delimited by commas.

The **Ingest Path** should contain the path to the Weather Message Server received files directory. This field should be populated by default.
13.5.2 State / Counties Tab

The Settings Tab is used to select the counties that appear in the County Selection list box.

Place a check mark next to each county that you want to appear in the County Selection list box.

13.5.3 Server Tab

The Server Tab is used to define the communication settings for your Weather Message Server.
The **Host TCP/IP Address** is the address of the Weather Message Server. Enter the address of your server in this field.

The **Host TCP/IP Port** is the port defined by Weather Message Server for connections. The default is 9501.

The **Client Identifier** field allows you to assign each Message Client, Map and Message Creator a different identification number. The default setting for all clients is one.

The **Pass Code** field contains the password or pass code used to validate the Message Creator. The Pass Code must agree with the one setup for Weather Message Server, otherwise, the message will be ignored.

The **Send to Server** option, when checked, will cause the Message Creator to send messages through a tcp/ip connection to the server. When the option is unchecked, the Message Creator will create messages in the ingest directory(ies).
Part XIV
14 WxScheduler

14.1 Overview

The Weather Message Scheduling application, WxScheduler, is used to schedule user-defined messages or retrieve internet products. WxScheduler can be run as a standalone application or as a Windows service.

WxScheduler is generally used for two purposes: to schedule monthly tests of the software and/or download weather text or graphics from the Internet. By allowing text and graphics to be downloaded from the Internet, weather products not available from EMWIN or Weather Wire can still be obtained for local use and processing.

You can establish schedules to retrieve messages or graphics from local directories, or from the Internet using the FTP or HTTP protocol. The retrieved products are automatically copied to the ingest directory at the user defined time or interval.

The main processing window shows the current status of WxScheduler. When it is processing a message, you will see information about the message scroll in the text box.

To establish schedules see the Schedule Tab.

**Note:** If WxScheduler is stopped with the window minimized, the next time it is started, it will start minimized.

System Tray

When WxScheduler is minimized, you can restore the main screen by right clicking on the system tray icon, then select open.

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14.2 Menu Options

The menu buttons on this screen perform these functions:

The File menu allows you to setup this program, view logfiles, launch notepad and exit the program.

- The Setup option opens the Setup Window.
- The View Log menu displays the log file in notepad.
- The Notepad menu opens notepad. This can be used to edit message templates.
- The Exit option shuts down WxScheduler.

The Pause option stops the scheduler. When stopped, the status bar flashes the word “Paused”. The menu option changes to Start. Clicking Start, restarts the scheduler.

Note: When the scheduler is started after a pause, any items scheduled to occur at times prior to the restart will not be processed.

The Help menu allows you to see this manual, and display information about the program.

14.3 Creating Text Messages

Before you can begin scheduling user-defined text messages, you must create the messages. First select or create a directory to store your messages. You can use C:\Program Files\WxMesgNet\WxData\WxLocal to store your user-defined messages. This directory is
automatically created for use by Message Text Creator and can be shared by WxScheduler. You can use the Notepad menu option to launch Notepad to create the message.

**Hint:** *WxMsgText and WxScheduler use the same text message format. Messages created can be used by both programs.*

**Sample Message**

The following screen shows a sample message being created for a monthly system test.

![Sample Message Image]

The file name for the message must end with the extension ".txt". You will also notice that some special program codes are used in the message. These special codes tell WxScheduler where to put special text in the message.

The message must be formatted like a standard National Weather Service Message. You can view actual NWS products at [http://www.weathermessage.com/Support/EMWINProductSearch.aspx](http://www.weathermessage.com/Support/EMWINProductSearch.aspx). The actual messages can be used as examples for formatting.

The following special codes can be used in the message:

- `$WxUTC$` Current UTC time, in the format ddhhmm
- `$WxExpire$` Expiration time, in the format ddhhmm
- `$WxDate$` Current local date and time.
- `$WxVtecIssue$` Issue time for the VTEC line.
- `$WxVtecExpire$` Expiration time for the VTEC line.

**14.4 Setup**

**14.4.1 Schedule Tab**

The Schedule Tab is used to establish schedules.
To change an entry, click on the item. For other options, right click on an entry and select from the following menu options. When changing an entry, the **Edit Scheduled Item** window is displayed.

- The **Add** option will add a new entry.
- The **Edit** option will edit the selected entry.
- The **Delete** option will delete the select entry.
- The **Copy** option will copy the selected entry.
- The **Paste** option will paste the last copied entry as a new entry.
- The **Send Now** option will cause the selected entry to be processed when you click the Save button.

**Hint:** *To send the message immediately, right click and select the Send Now option.*

**Hint:** *Items displayed with a yellow background are disabled and will not be processed.*

### 14.4.1.1 Edit Scheduled Item

The Edit Scheduled Item window allows you to enter the specifics about the item being scheduled.
Enter a **Schedule Name** for this scheduled item. Select the **Server Type** for this scheduled item: Local, HTTP or FTP. In the above example, the message will be obtained locally.

The **Server Address**, **Port**, **User Name** and **Password** fields are used when you select the server type HTTP or FTP. When using HTTP or FTP, enter the appropriate Server Address, Port, User Name and Password.

Enter the path and name of the file in the **File Name** field. For local files, you can use the **Browse** button to locate the file. For HTTP or FTP files, enter the location of the file.

In the **Ingest File Name** field, enter the name of the file as it should appear when it is copied to the ingest directory. The base name of the file should not exceed eight characters. The total file name length, including the extension, should be no longer than 12 characters.

The **Drop Duplicates** check box, when checked, will create a CRC32 checksum for each processed file. If the next file processed, for a scheduled item, is a duplicate, the program will not process the file. This option is useful if you are using WxScheduler to retrieve graphics from web sites. In most cases, you do not know when a web site file will change. This option will allow you to retrieve a file on a schedule and only process the file when it has changed.

The **Disabled** field is used to temporarily disable a scheduled item. When this option is checked, the scheduled item will not be processed.

**Hint:** The **Disabled option** is useful when you want to send a message on demand. You can setup the message with a schedule and then disable the message. When you want to send the message, you can right click on the schedule grid and select Send Now.

The **Send Now** field is used to send this scheduled item immediately. Placing a check mark in this field and saving the item will cause the scheduler to immediately send this item.
Note: You must exit back to the main screen before it will be sent. The scheduler does not work while you are editing items.

Schedule

The Schedule tab allows you to enter the processing schedule for this item.

Now enter the scheduling information for this message. The **Day of Month**, **Day of Week**, **Week of Month** and **Month** fields can be left blank to indicate "Any". In the above example, for a weekly test, the Day of Month, Week of Month and Month fields are left blank. The Day of Week is specified.

**Hint:** Make sure that the combinations of Day of Month, Day of Week, Week of Month and Month will occur. If you select the first day of the month and the second week of the month, the criteria for this alarm will never occur.

**Hint:** Specifying both Week of Month and Day of Week will instruct the program to check for the Xth Day of Week in a month. If you want to schedule an item for the first Wednesday of every month, enter 1 for the Week of Month and select Wednesday for the Day of Week.

Before entering a time, select the **At This Time**, **Every Time** or **Between Time** to indicate if this item should be processed at a specific time, time interval or an interval between two times. Then enter the **Time** or **Time Interval** for this item. The Time must be in 24-hour notation and in the format HH:MM.

The **Duration** field is used to establish an expiration time for text messages that contain UGC lines. It is used to populate the $WxExpire$ variable. Enter the length of time for this message. The Duration field must be in the format HH:MM.

When the **Between Time** option is selected, enter the **Time Begin** and **Time End**.
scheduled item will be evaluated when the current time falls between the begin and ending time.

**Script**

The Script tab allows you to enter visual basic code to manipulate the received data before it is copied to the ingest path.

The script used by WxScheduler is based on the programming syntax for Visual Basic .Net 2005. The script is implemented as a function. The function definition is `Private Sub OnDataReceived(ByVal ReceivedData as String, ByRef ScriptStore as Object) as String`.

User scripts can access the received data using the variable "ReceivedData". It is the responsibility of the user script to return the data using the "Return" command or if no processing is desired return String.Empty. This function also passes the global variable ScriptStore. This global variable can make data available to all of your scripts.

WxScheduler will attempt to download the file requested on the Item tab. It will pass the received data to the user script in the variable "ReceivedData". In the event that no file could be downloaded, ReceivedData will contain String.Empty.

When this item is saved, WxScheduler will attempt to compile the script. If an error occurs, you will be prompted with the error message and allowed to correct the script.

**Notes**

The Notes tab allows you to information about this scheduled item.
14.4.2 Settings Tab

The Settings Tab is used to establish general program options.

The Use Defined Ingest Paths check box, when checked, will cause the program to use the
ingest paths defined in the ingest programs. If you want to define your own ingest paths for the scheduler, uncheck this box.

The **Timeout** field allows you to specify the maximum amount of time the program will wait for the HTTP or FTP servers to respond.

The **Log File Size** field allows you to specify this size of your log file, SchedLog.txt. The default is 50,000 bytes.

The **FTP – Use Passive Mode** option, when checked, will cause the ftp program to use the passive mode. This option may be needed for firewalls that restrict incoming connections.

The **Auto Startup** option allows you to specify whether WxSched is automatically started when Windows starts. The options are No; Yes, for the current user; and Everyone, for any user.

**Note:** The options available for **Auto Startup** are based on your user permissions. Administrator and Power users will have all of the options. Other users may only have the Yes option.

The **Run as a service** option, when checked, will set up WxSched to run as a Windows service. When this option is selected, WxSched will be automatically started as a service when the WxSched application is exited. When WxSched is started again, the service will be stopped so that you can change the programs settings.

**Note:** WxSched will continue to process your schedule regardless of whether it is running as a service or an application.

The **Firewall / Proxy** button allows you to configure Firewall and Proxy settings for your computer. See [Firewall / Proxy](#).

### 14.4.2.1 Firewall / Proxy

The Firewall / Proxy window allows you to configure firewall / proxy information for your computer.

![Firewall / Proxy Settings](image)

For a FTP firewall, enter the domain name or TCP/IP address of the firewall in the Host Name field.
Enter the **Port** number for the firewall.

If required, enter a **User Name** and **Password**. This should be a user name and password setup in the firewall.

Select the **Type** of firewall. Valid entries are 1-Tunnel, 2-Socks version 4, or 3-Socks version 5.

For a HTTP firewall, enter the domain name or TCP/IP address of the firewall in the **Host Name** field.

Enter the **Port** number for the firewall.

If required, enter a **User Name** and **Password**. This should be a user name and password setup in the firewall.

Select the **Type** of firewall. Valid entries are 1-Tunnel, 2-Socks version 4, or 3-Socks version 5.

For a Proxy access, enter the domain name or TCP/IP address of the proxy in the **Host Name** field.
Enter the **Port** number for the firewall.

If required, enter a **User Name** and **Password**. This should be a user name and password setup for the proxy.

If **HTTP version 1.0** is required for the proxy server, check this box.

The **Detect Proxy** button will automatically detect the proxy settings for your computer and populate the host name and port fields.

**Note:** *The Firewall / Proxy settings are common to all Weather Message applications. Changing these settings will automatically change them for the other applications.*

### 14.4.3 Ingest Paths Tab

The Ingest Paths Tab is used to define the directories that will store the received weather products for processing.

The **Ingest Path** is defined in the Weather Message Server setup screen and would not normally be entered here.

The **Additional Distribution Paths** can be used to place a copy of the received weather text in different directories for processing by other programs. For example, if you use Weather Message to receive your weather data, you can put a copy of the received messages in a second or third directory for processing by RealEMWIN or the Weather Message Retransmission program.

**Note:** *If the Use Defined Ingest Paths setting is checked, you will not be able to change the paths listed.*
14.5 Examples

14.5.1 Hurricane Graphic

The following screen shows how to receive a tracking graphic from the National Hurricane Center.

This graphic is received using the Internet every 15 minutes, using HTTP.
14.5.2 Script Example

The following screen shots demonstrate a script used to process a text file. WxScheduler downloads Lamp data and the script extracts the information for KSBN.

![Script Example Screen Shots]

- **Server Type**: Local, HTTP, FTP
- **Server Address**: weather.noaa.gov
- **User Name**: Blank
- **Password**: Blank
- **File Name**: pub/data/raw/to/louis11.kwno lav. usa
- **Ingest File Name**: LAMP.TXT
- **Drop Duplicates**: Blank
- **Disabled**: Blank
- **Send Now**: Blank

- **Schedule Details**
  - **Day of Month**: Blank
  - **Week of Month**: Blank
  - **Day of Week**: Blank
  - **Month**: Blank
  - **Time Interval**: 00:05
  - **Message Duration**: 00:00

- **Options**
  - At This Time
  - Every Time
  - Blank
The full text of the script is shown below

```vbnet
If ReceivedData.Length = 0 Then
    Return String.Empty
End If
'split the data into an array
Dim wsData() As String = Split(ReceivedData, vbLf)
'loop through the data looking for our call sign
Dim wsResults As New System.Text.StringBuilder
For wiResultIndex As Int32 = 0 To wsData.GetUpperBound(0)
    'trim the spaces
    wsData(wiResultIndex) = wsData(wiResultIndex).TrimEnd(" ")
    'find our call sign
    If wsData(wiResultIndex).IndexOf("KSBN") <> -1 Then
        'remove that invalid character
        wsData(wiResultIndex) = wsData(wiResultIndex).Replace(ChrW(30), String.Empty)
        'copy the data to our results
        For wiCopyIndex As Int32 = wiResultIndex To wsData.GetUpperBound(0)
            'copy until we find a blank line
            If wsData(wiCopyIndex).Length = 0 OrElse wsData(wiCopyIndex).Substring(0, 1) = "
```

The full text of the script is shown below

```vbnet
If ReceivedData.Length = 0 Then
    Return String.Empty
End If
'split the data into an array
Dim wsData() As String = Split(ReceivedData, vbLf)
'loop through the data looking for our call sign
Dim wsResults As New System.Text.StringBuilder
For wiResultIndex As Int32 = 0 To wsData.GetUpperBound(0)
    'trim the spaces
    wsData(wiResultIndex) = wsData(wiResultIndex).TrimEnd(" ")
    'find our call sign
    If wsData(wiResultIndex).IndexOf("KSBN") <> -1 Then
        'remove that invalid character
        wsData(wiResultIndex) = wsData(wiResultIndex).Replace(ChrW(30), String.Empty)
        'copy the data to our results
        For wiCopyIndex As Int32 = wiResultIndex To wsData.GetUpperBound(0)
            'copy until we find a blank line
            If wsData(wiCopyIndex).Length = 0 OrElse wsData(wiCopyIndex).Substring(0, 1) = "
```
" Then
    Exit For
End If
wsResults.Append(wsData(wiCopyIndex) & vbCrLf)
Next
Exit For
End If
Next
'
'if we have data add a header
'
If wsResults.Length > 0 Then
    wsResults.Insert(0, wsData(0) & vbCrLf & vbCrLf & vbCrLf)
End If

Return wsResults.ToString

Explanation of this script is beyond the scope of this manual. If you want to write scripts, we suggest that you review programming manuals written for Visual Basic .Net 2005, 2008, and 2010.
15 WxRadar

15.1 Overview

WxRadar is a support application that can be used to automatically retrieve radar images. It can retrieve a specific radar site for viewing on the screen, or schedule single or multiple radar sites for ingesting by Weather Message or other programs. WxRadar requires Internet access.

If you plan to use WxRadar to retrieve images on a schedule, it should be placed in the startup box in Windows. This will insure that the program is automatically started each time the computer is booted.

When scheduling radar images, the images that are received will be copied to directories for other programs to process. You can use it in conjunction with Weather Message to FTP images to a website or WxReTran for EMWIN retransmission. See Scheduling.

Images processed by Weather Message Server can be made available to the Weather Message Client Image Viewer. The Image Viewer can then be used to animate the received radar images.

Note: If WxRadar is stopped with the window minimized, the next time it is started, it will start minimized.

System Tray
When WxRadar is minimized, you can restore the main screen by right clicking on the system tray icon, then select open.

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15.2 Menu Options

The menu buttons on this screen perform these functions:

The **File** menu allows you to setup this program, view logfile, print the current radar image and exit the program.

- **Setup** option opens the Setup window.
- **View Logfile** displays the radar log file in notepad.
- **Print** option prints the current radar image on your default printer.
- **Clear Cache** option clears the radar cache directory of all static image overlays.
- **Exit** option shuts down WxRadar.

The **Schedule** menu allows you to establish a schedule to retrieve radar images.

The **Retrieve Now** menu forces the application to start a retrieve cycle.

The **Help** menu allows you to see this manual, and display information about the program.
The main window allows you to quickly retrieve a radar image. Select the State, Radar Site, Image type and Layers. Click the View button to retrieve the image selected.

**Hint:** To receive national radar products, select the state abbreviation NA.

The image can be resized to fit the display window or zoomed for closer inspection. To activate these features, right click on the image and select one of the displayed options.
The default view is Zoom 100%.

To print the displayed image, click on the File menu and select Print. The image will be printed to your default printer.

**Note:** If WxRadar cannot download the requested radar image, a “Radar Unavailable” image will be displayed. The “Radar Unavailable” image can be customized by changing the “RadUnavl.gif” file.

### 15.4 Scheduling

To schedule radar images for automatic retrieval, click on the Schedule menu. The main window will change to allow you to setup schedules.
Select the **State**, **Radar Site**, **Image**, **Layers**, **File Name** for ingest and **Interval** to retrieve. Click on the **Add** button to schedule that radar site. To remove a site, click on the site in the list and click the **Delete** button.

**Hint:** To receive national radar products, select the state abbreviation NA.

**Note:** If you do not enter a file name, WxRadar will create the radar file name in the format, "RAD" plus the last three letters of the radar site plus the 2 digit state abbreviation plus ".gif". For example, the file name for KMXX would be RADMXXAL.gif.

The scheduled radar images will be retrieved based on the interval period specified. Valid intervals are 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 20, 25, 30, 35, 40, 45, 50, 55 and 60 minutes.

The results of each scheduled retrieve is logged to the file RadLog.txt. To view this log file, click on File and View Log. The log file will contain an entry for each time it attempts to retrieve a radar image. It will also contain any error conditions.

**Hint:** The scheduled images will be retrieved according to the schedule you establish. If you want to retrieve all images immediately, click on the Retrieve Now menu button.

When you are finished entering your schedule, click on the Preview menu. This returns you to the **Main Window**.
15.5 Setup

15.5.1 Settings Tab

The Settings Tab is used to define general program operation.

The **Timeout** field allows you to specify the maximum amount of time the program will wait on the NOAA servers to respond.

The **Log File Size** field allows you to specify this size of your log file, RadLog.txt. The default is 50,000 bytes.

When the program retrieves images from the defined schedule, it does not display these images in the preview window. The **Show Image** check box, when checked, causes the program to show each image as it is received.

The **Drop Duplicates** check box, when checked, will create a CRC32 checksum on each received image. If the next image received is a duplicate, the program will not process the image.

The **Use Defined Ingest Paths** check box, when checked, will cause the program to use the ingest paths defined in the ingest programs, WxByte and WxIngest. If you want to define your own ingest paths for WxRadar, remove this check.

The **Send to Client Viewer** option, when checked, will cause the program to store a copy of the image for viewing by the image viewer built into the Message Client. This option can be used in special situations where radar images are not being processed by Weather Message Server. The user can configure WxRadar to process radar images and place them in the local WxImages directory for viewing in the Message Client.

The **Firewall / Proxy** button allows you to configure Firewall and Proxy settings for your computer. See [Firewall / Proxy](#).
The **Map Background** button allows you to set the color of the radar image background.

The **Image Type** list allows you to select an image format for the received image. Radar images are received by default in GIF format. You can select GIF, JPG, PNG, BMP, and TIF formats.

The **Auto Startup** option allows you to specify whether WxRadar is automatically started when Windows starts. The options are No; Yes, for the current user; and Everyone, for any user.

**Note:** The options available for **Auto Startup** are based on your user permissions. Administrator and Power users will have all of the options. Other users may only have the Yes option.

### 15.5.1.1 Firewall / Proxy

The Firewall / Proxy window allows you to configure firewall / proxy information for your computer.

![Firewall / Proxy Settings](image)

For a HTTP firewall, enter the domain name or TCP/IP address of the firewall in the **Host Name** field.

Enter the **Port** number for the firewall.

If required, enter a **User Name** and **Password**. This should be a user name and password setup in the firewall.

Select the **Type** of firewall. Valid entries are 1-Tunnel, 2-Socks version 4, or 3-Socks version 5.
For a Proxy access, enter the domain name or TCP/IP address of the proxy in the Host Name field.

Enter the Port number for the firewall.

If required, enter a User Name and Password. This should be a user name and password setup for the proxy.

If HTTP version 1.0 is required for the proxy server, check this box.

The Detect Proxy button will automatically detect the proxy settings for your computer and populate the host name and port fields.

Note: The Firewall / Proxy settings are common to all Weather Message applications. Changing these settings will automatically change them for the other applications.

15.5.2 Ingest Paths Tab

The Ingest Paths Tab is used to define the directories that will store the received weather products for processing.
The **Ingest Path** is defined in the Weather Message Server setup screen and would not normally be entered here.

The **Additional Distribution Paths** can be used to place a copy of the received weather text in different directories for processing by other programs. For example, if you use Weather Message to receive your weather data, you can put a copy of the received messages in a second or third directory for processing by RealEMWIN or the Weather Message Retransmission program.

**Note:** If the *Use Defined Ingest Paths* setting is checked, you will not be able to change the paths listed.
Part XVI
16 WxLoader

16.1 Overview

WxLoader is a support application that can be used to manage weather content for websites, provide data for other third-party applications, or control Pro-Lite LED Signs.

If you plan to use WxLoader, it should be placed in the startup box in Windows. This will insure that the program is automatically started each time the computer is booted.

Although Weather Message has provisions for uploading weather text and graphics, it does not monitor expiration dates/times for the uploaded products. WxLoader, working in conjunction with Weather Message Server, has the ability to upload text products and monitor the expiration date/times of these products. This allows WxLoader to remove expired products and/or replace the message with user defined text.

WxLoader connects to Weather Message server using TCP/IP and processes the same products sent to the map client.

**Hint:** If the system tray icon is outlined with a red circle or a red led appears in the status bar, the program is not communicating with the Weather Message Server.

**Note:** If WxLoader is stopped with the window minimized, the next time it is started, it will start minimized.

**System Tray**

When WxLoader is minimized, you can restore the main screen by right clicking on the system tray icon, then select open.
16.2 Menu Options

The menu buttons on this screen perform these functions:

The **File** menu allows you to setup this program, start a processing cycle and exit the program.

- The **Setup** option opens the *Setup window*.
- The **Connect** option forces the application to attempt a connection to the server.
- The **Refresh Alarm** option clears any active alarms and sends a refresh request to Weather Message Server.
- The **Process Now** forces the program to start a processing cycle.
- The **View Logfile** option displays the log file in notepad.
- The **Exit** option shuts down WxLoader.

The **Alarms** option displays the *Active Alarms* window.

The **Help** menu allows you to see this manual, and display information about the program.
16.3 Main Window

The main processing window shows the status of WxLoader. When it is processing tasks, you will see status messages in the status bar.

WxLoader works by processing products that have been alarmed to the map client. This allows Weather Message Server to handle the alarms and message content while WxLoader handles uploads and message expirations.

16.4 Alarms

The Active Alarms Menu option allows you to view the current alarms.

The alarm grid display information about each active alarm. The columns and rows can be expanded to show hidden information. The columns and rows can be extended by clicking a row or column line and dragging the line. You can also sort the information by clicking on the column
identifier.

Right click an entry to expire a product or click the **Expire All** button to expire all active alarms.

The **Refresh** button will refresh the alarm grid.

**Note:** The alarm grid will automatically refresh every 30 seconds.

## 16.5 Setup

### 16.5.1 Server Tab

The Server Tab is used to define the communication settings for your Weather Message Server.

The **Host TCP/IP Address** is the address of the Weather Message Server. Enter the address of your primary server in this field.

**Note:** When the Host TCP/IP Address field is left blank, WxLoader will try to discover the address and port of the Weather Message Server. If your server is on the same local network as the client, it will automatically obtain the address and port. If the client is running on a different network, you will need to enter the address and port of the server.

The **Host TCP/IP Port** is the port defined by Weather Message Server for connections. The default is 9501.

The **Backup Address** is the TCP/IP address of your backup Weather Message Server. Do not enter an address in this field if you do not have a backup Weather Message Server. This address is used when the program cannot contact your primary Weather Message Server.

The **Backup Port** is the port defined for use by the backup Weather Message Server. The
default is 9501.

The **Client Identifier** field allows you to assign an identification number to WxLoader. This identifier can be used, when setting up your alarms[^1], to send a specific product to WxLoader.

### 16.5.2 Program Options Tab

The Settings Tab is used to set operational information for WxLoader.

![Program Options Tab](image)

The **Upload On Change** option indicates whether WxLoader should process tasks when a new file arrives or a product expires. Check this option if you want the program to process tasks when a new file arrives or a product expires. If this option is not checked, the process task cycle will occur based on the **Update Every Minutes** setting.

The **Update Every Minutes** option establishes the amount of time, in minutes, to process tasks. The task processing cycle time can be set from 0 to 60 minutes. If you set this field to zero minutes, you must check the **Upload On Change** option. Care should be used when setting this value. When the specified amount of time lapses, the program will process and upload each task.

**Note:** Setting this value too low can cause the program to get behind when you have a slow internet connection.

The **Log File Size** field allows you to specify this size of your log file, LoadLog.txt. The default is 50,000 bytes.

The **Timeout** field allows you to specify the maximum amount of time the program will wait on the HTTP or FTP servers to respond.

The **FTP – Use Passive Mode** option, when checked, will cause the ftp program to use the passive mode. This option may be needed for firewalls that restrict incoming connections.
The **Auto Startup** option allows you to specify whether WxLoader is automatically started when Windows starts. The options are No; Yes, for the current user; and Everyone, for any user.

**Note:** The options available for **Auto Startup** are based on your user permissions. Administrator and Power users will have all of the options. Other users may only have the Yes option.

The **Auto Refresh** option, when checked, will cause the program to request a list of current products when it initially connects or reconnects to Weather Message.

The **Firewall / Proxy** button allows you to configure Firewall and Proxy settings for your computer. See [Firewall / Proxy](#).

### 16.5.2.1 Firewall / Proxy

The Firewall / Proxy window allows you to configure firewall / proxy information for your computer.

![Firewall / Proxy Settings](Image)

For a FTP firewall, enter the domain name or TCP/IP address of the firewall in the **Host Name** field.

Enter the **Port** number for the firewall.

If required, enter a **User Name** and **Password**. This should be a user name and password setup in the firewall.

Select the **Type** of firewall. Valid entries are 1-Tunnel, 2-Socks version 4, or 3-Socks version 5.
For a HTTP firewall, enter the domain name or TCP/IP address of the firewall in the **Host Name** field.

Enter the **Port** number for the firewall.

If required, enter a **User Name** and **Password**. This should be a user name and password setup in the firewall.

Select the **Type** of firewall. Valid entries are 1-Tunnel, 2-Socks version 4, or 3-Socks version 5.

For a Proxy access, enter the domain name or TCP/IP address of the proxy in the **Host Name** field.

Enter the **Port** number for the firewall.

If required, enter a **User Name** and **Password**. This should be a user name and password setup for the proxy.

If **HTTP version 1.0** is required for the proxy server, check this box.
The **Detect Proxy** button will automatically detect the proxy settings for your computer and populate the host name and port fields.

**Note:** The Firewall / Proxy settings are common to all Weather Message applications. Changing these settings will automatically change them for the other applications.

### 16.5.3 Tasks Tab

The Tasks Tab is used to maintain WxLoader tasks.

![Tasks Tab Image](image)

The **Add**, **Edit** and **Delete** Task buttons are used to create, change and remove tasks. You can also edit tasks by double clicking on the listed task.

#### 16.5.3.1 Editing a Task

16.5.3.1.1 Task Tab

The Edit Task window is used to setup information for a new or selected task.
The **Task Name** field describes this task. Use short descriptive names to identify your tasks.

The **Style** option is used to specify the type of message to create. Select **Short** for a short message with the county names, **Short with State** for a short message with the county names suffixed with the state abbreviation, **Short by State** for a short message that includes the state name followed by the counties, **Full** for a full text message, or **Full - No Head** for the full text excluding the first 3 lines of the message.

Here is an example message created with the Short option.

A Tornado Warning has been issued for Tallapoosa county until 9:20 PM. A Severe Thunderstorm Watch has been issued for Tallapoosa county until 9:20 PM.

Here is an example message created with the Short with State option.

A Tornado Warning has been issued for Tallapoosa-AL county until 9:20 PM. A Severe Thunderstorm Watch has been issued for Tallapoosa-AL county until 9:20 PM.

Here is an example message created with the Short by State option.

A Tornado Warning has been issued for the following county in Alabama: Tallapoosa county until 9:20 PM. A Severe Thunderstorm Watch has been issued for the following county in Alabama: Tallapoosa county until 9:20 PM.

The **Issue Time Style** allows you to include the start time and day for a message that will begin in the future. The options are **None**, **Time** and **Time/Day**. The None option does not insert the issue time. The Time option insert the issue time if the issue time is in the future. The Time/Day option inserts the issue time and day of week if the issue time is in the future.

**Hint:** The **Issue Time Style** is not available if the **Full** style is selected.
**Hint:** The Issue Time Style option is deactivated when the Combine Like Products options is checked.

The **Expire Time Style** allows you to select different styles for the expiration time. The options are **Time**, **Time/Day** and **Time/Day Next**. The Time option inserts the expiration time. The Time/Day option inserts the expiration time and day of week. The Time/Day Next option inserts the expiration time and inserts the day of week if the current day and expiration day are different.

**Hint:** The **Expire Time Style** is not available if the Full style is selected.

The **Combine Like Products** option is used with the short format. It causes the program to combine like messages into one sentence.

The **Delete Inactive** option, when checked, will cause the program to remove the destination file when the message to upload is empty.

The **Expire Adjustment** field allows you to modify the expiration times of received products. For example you could specify –10 or +10 minutes. In some applications, you may want the message to remain active longer than the actual expiration time. In other applications, you may want the message to expire before the actual expiration time.

The **Expire After Minutes** option is used to expire products that do not contain an expiration date/time. Products that do not contain UGC lines do not have an expiration date/time. The amount of time specified for this option will be added to the product issue date/time to determine the expiration date/time. This value does not effect products that contain UGC lines.

**Hint:** If you alarm products that do not contain UGC lines, you should enter a value in the **Expire After Minutes** field. Failing to do so will result in the message expiring immediately.

16.5.3.1.2 Destination Tab

The Destination window is used to set destination path and method for the task.
The **Destination File Name** is the path and file name that you want the created message to be named on your server or directory. This field is required.

Select the type of save, **Local**, **FTP**, **HTTP**, or **Pro-Lite Sign**. If FTP or HTTP is selected, the program will allow you to enter information about your FTP or HTTP server. Enter the FTP Server address, Port number, User Name and Password. These settings will be used to log into your server. For Pro-Lite Signs, select the **Sign Serial Port** and enter the **Sign Identifier**.

**Hint:** Setting the Sign Identifier to 00 will address all Pro-Lite signs connected to the serial port.

16.5.3.1.3 Products - AWIPS Tab

The Products - AWIPS Tab allows you to specify the products that should be processed for this task based on the AWIPS identifier.
Enter an AWIPS identifier to process in the **Product Identifier** field. Click the **Add Product** button to add this product to the list.

**Note:** This product must be alarmed to the map client.

**Hint:** Product identifiers can contain the wild card characters * and ?.

**Hint:** AWIPS identifiers can include WFO abbreviations as shown above.

To delete a product, highlight the product and click **Delete Product** or press the Delete key.

16.5.3.1.4 Products - VTEC Tab

The Products - VTEC Tab allows you to specify the products that should be processed for this task based on the VTEC identifier.
Enter a VTEC phenomena and significance to process in the **Product Identifier** field. Click the **Add Product** button to add this product to the list.

**Note:**  *This product must be alarmed to the map client.*

**Hint:**  *VTEC phenomena and significance codes do not allow WFO identifiers.*

To delete a product, highlight the product and click **Delete Product** or press the Delete key.

16.5.3.1.5 Counties Tab

The Counties Tab allows you to specify the counties that should be processed for this task.
Most users will not enter any counties. WxLoader will process all counties that are associated with the received message. In some situations, you may want to restrict the counties associated with a task. In these situations, you will entered the county designator(s) that you want processed.

The county designator is in the format XXYZZZ. Where XX is the two letter state abbreviation, Y is C for a FIPS county code or Z for a zone county code, and ZZZ is the three digit county code.

Enter a county identifier in the **County Identifier** field. Click the **Add County** button to add this county to the list.

To delete a county, highlight the county and click **Delete County** or press the Delete key.

**16.5.3.1.6 HTML Tab**

The HTML Tab allows you to enter HTML code to be included when processing this task. Normally, HTML code is used to encapsulate the message.
If you will be using HTML code, enter the HTML code in the text box. Remember to use the variable $MESSAGES$ in this code as a place marker for your text. The **Load Template** button can be used to load a template file or a file containing html code. When loading templates, the program automatically looks for templates in ..\WxMesgNet\WxData\Template.

**Note:** If a html template is specified, the program will change any html reserved-characters in the weather text to their corresponding html abbreviation. This prevents html browsers from misinterpreting the weather text as html code.

**Note:** See Publishing Data to a Web Page for examples.

16.5.3.1.7 File Separator Tab

The File Separator Tab allows you to enter text to be inserted between each product.
If you want text inserted between each product, enter it in the text box. This field is not required and can be left blank.

16.5.3.1.8 Default Message Tab

The Default Message Tab allows you to specify text to be uploaded when there are no active messages for this task.
Enter the default message text in the text box. This field is not required and can be left blank.

16.6 Alarm Setup

In order for WxLoader to have products to process, the desired products must be alarmed in Weather Message Server. This is accomplished by setting up an alarm in Weather Message and sending the product to the map client.
If you only want to alarm a product to WxLoader, select the client identifier in the To Map box. This is the same client identifier selected on the Server Tab.
17 WxWire - Weather Wire Utility

17.1 Overview

WxWire is a support application that can be used to send messages to a serial port in weather wire format.

The Ingest Path is the directory path where WxWire should pickup the files archived by Weather Message Server. This path is initially empty. You will need to decide on a common directory path that will be used by WxWire to receive files and Weather Message Server to store files. The suggested path, "C:\Program Files\WxMesgNet\WxWire", can be used for this purpose.

Set the Comm Port and Baud Rate as required by your external equipment or software.

The Add Header option, when selected, will add an expanded header to the first line of the message. This option expands the AWIPS identifier and makes it the first line in the message.

The Remove Return option, when selected, will remove the extra return character from processed messages.

Click on PIL Format to send messages in PIL format. Click on WMO Format to send messages in WMO format. This setting depends on the application that will be receiving the data.

The Stop button can be used to pause the file that is currently being sent. This button will toggle between Stop and Start.

Note: You must click the Stop button to make changes to the Settings.

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Part XVIII
18 Supplement

18.1 Weather Forecast Office Abbreviations

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### 18.3 State / Marine Zone Abbreviations

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| AL  | Alabama      |</p>
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© 2017 Weather Message Software LLC
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Weather Message comes packaged with a list of weather products that are distributed on the Emergency Managers Weather Information Network (EMWIN). This list of products is contained in the file Product.dat in the WxMesgNet directory. From time-to-time, new products are added to the data stream. Software updates from Weather Message will automatically update this file with new products.

Some users have the need to change the name of products or create unique product identifiers for their specific applications. User defined products could be used for locally generated products or with the Weather Message Message Creator application. User defined products are supported by updating the file ProductUser.dat located in the WxMesgNet directory. The ProductUser.dat file contains a list of user defined products or products that override the default products in Product.dat. For example, you could define the product identifier LWS as Local Weather Statement. You could also override the AQA, Air Quality Message, to change the description to simply Air Quality.

Changes and/or addition of products should be made by updating the ProductUser.dat file. This insures that future software updates will not overwrite your unique product identifiers or product changes.

**Note:** For products to alarm properly, the product identifier must exist in the Product.dat or ProductUser.dat file. Entering an alarm for a non-existant product identifier will cause the alarm to not work.

The ProductUser.dat file has the following layout.

3 character product id,
2 character wmo prefix,
1 digit has UGC line - values 0=no, 1=yes,
1 digit has VTEC line - values 0=no, 1=yes,
Bit mask for product specifics,
None = 0
Has Both CZ = 1
Has Latitude Longitude = 2
Has Time Mot Loc = 4
Has Wind Hail = 8
Description (The description should not contain a comma)

Here are example entries.

LWS,XX,0,0,0,Local Weather Statement
SIR,NO,0,0,0,Siren Activation Statement
SVR,WU,1,1,14,Severe Thunderstorm Warning

In the last example, the product identifier is **SVR**. The WMO identifier is **WU**. The product has a UGC line (1). The product has a VTEC line (1). For product specifics, it has 14. Fourteen comes from the addition of Has Latitude Longitude (2), Has Time Mot Loc (4) and Has Wind Hail (8). The description of the product is **Severe Thunderstorm Warning**.

Each of the values for this product identifier are separated by a comma. Each product should appear on a individual line. There should not be any blank lines in the file.

To deactivate an entry, without deleting the line, prefix the line with a single quote ('). Lines that start with a single quote are considered comments.

Any products that appear in ProductUser.dat are automatically added to the internal Product.dat when the Weather Message applications start. Products defined in ProductUser.dat will override any product that already exists in Product.dat.

### 18.6 Paging / E-Mail Formats

Weather Message supports a number of paging and e-mail formats, ranging from the full message text to a short message for pagers/cell-phones. This section gives examples of the different formats.

The following paging / e-mail formats are available: Full, Full No Head, Selected, Selected No Head and Short. In addition, the message can be broken down into a number of packets for distribution to pagers / cell-phones. The system will allow you to specify the size of these packets and the number of packets to send.

For messages sent via e-mail, you can specify the type of subject line sent. You can send no subject line, the product identifier, or a text description of the product.

Regardless of the format selected, the system has a parse option that allows you to abbreviate or remove words from the paged / e-mailed message.

The following tornado warning will be used in the examples.

```
WFUS54 KBMX 192255
TORBHN
ALC113-192330-

BULLETIN - EAS ACTIVATION REQUESTED
TORNADO WARNING
NATIONAL WEATHER SERVICE BIRMINGHAM AL
455 PM CST WED MAR 19 2003

THE NATIONAL WEATHER SERVICE IN BIRMINGHAM HAS ISSUED A
```
* TORNADO WARNING FOR...
  RUSSELL COUNTY IN SOUTHEAST ALABAMA
* UNTIL 530 PM CST
* AT 455 PM CST...NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED A
TORNADO NEAR FORT MITCHELL...MOVING NORTHEAST AT 25 MPH. THIS STORM
WILL AFFECT RURAL EASTERN RUSSELL COUNTY.

IF YOU ARE NEAR THE PATH OF THIS TORNADO...TAKE COVER IN AN INTERIOR
ROOM ON THE LOWEST FLOOR...OR A BASEMENT. ABANDON MOBILE HOMES AND
VEHICLES FOR MORE SUBSTANTIAL SHELTER.

CALL 1-800-856-0758 TO REPORT SEVERE WEATHER.

LAT...LON 3229 8514 3213 8504 3226 8492 3247 8499

$$

The Full option will send the message above exactly as printed.

The Full No Head option will be sent without the heading information. Here is an example.

THE NATIONAL WEATHER SERVICE IN BIRMINGHAM HAS ISSUED A
* TORNADO WARNING FOR...
  RUSSELL COUNTY IN SOUTHEAST ALABAMA
* UNTIL 530 PM CST
* AT 455 PM CST...NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED A
TORNADO NEAR FORT MITCHELL...MOVING NORTHEAST AT 25 MPH. THIS STORM
WILL AFFECT RURAL EASTERN RUSSELL COUNTY.

IF YOU ARE NEAR THE PATH OF THIS TORNADO...TAKE COVER IN AN INTERIOR
ROOM ON THE LOWEST FLOOR...OR A BASEMENT. ABANDON MOBILE HOMES AND
VEHICLES FOR MORE SUBSTANTIAL SHELTER.

CALL 1-800-856-0758 TO REPORT SEVERE WEATHER.

LAT...LON 3229 8514 3213 8504 3226 8492 3247 8499

$$

The Short format allows you to select certain elements of the message to send. For example, if
you set up your short message format as follows:

NWS $WFO$ has issued a $MesgType$ $HeadLine$$IfCounty: for $$Counties$$IfCounty:
County$$IfExpire: Until $$Expire$ - $BulletAT$

Results in a message like this:

NWS BHM has issued a Tornado Warning for Russell County Until 05:30 PM - AT
455 PM CST...NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED A TORNADO NEAR
FORT MITCHELL...MOVING NORTHEAST AT 25 MPH. THIS STORM WILL AFFECT RURAL
EASTERN RUSSELL COUNTY.

The Selected option only sends the text associated with the UGC group associated with the
county that was alarmed. Some messages contain multiple groups. A good example is the zone
forecast. It contains multiple groups

FPUS54 KBMX 052153
ZFPBHM
ZONE FORECAST PRODUCT
NATIONAL WEATHER SERVICE BIRMINGHAM AL
405 PM CST SAT APR 5 2003

ALZ011>015-017-060930-
BLOUNT-FAYETTE-LAMAR-MARION-WALKER-WINSTON-
INCLUDING THE CITIES OF...DOUBLE SPRINGS...FAYETTE...HAMILTON...
JASPER...ONEONTA...VERNON
405 PM CST SAT APR 5 2003

.TONIGHT...INCREASING CLOUDS. A SLIGHT CHANCE OF A SHOWER AFTER
MIDNIGHT. LOWS IN THE LOWER 50S. NORTHEAST WINDS 5 TO 10 MPH.
CHANCE OF RAIN 20 PERCENT.
.SUNDAY...MOSTLY CLOUDY WITH SHOWERS AND THUNDERSTORMS LIKELY BY
AFTERNOON. STORMS POSSIBLY SEVERE IN THE AFTERNOON. HIGHS IN
THE LOWER 70S. EAST WINDS 10 TO 15 MPH...BECOMING SOUTHEAST IN THE
AFTERNOON. CHANCE OF RAIN 70 PERCENT.
.SUNDAY NIGHT...SHOWERS AND THUNDERSTORMS. STORMS POSSIBLY SEVERE.
LOWS IN THE LOWER 60S. SOUTHEAST WINDS 10 TO 15 MPH. CHANCE OF RAIN
80 PERCENT.
.MONDAY...VARIABLE CLOUDINESS WITH A CHANCE OF THUNDERSTORMS. HIGHS
IN THE UPPER 70S. CHANCE OF RAIN 30 PERCENT.
.MONDAY NIGHT...PARTLY CLOUDY WITH A SLIGHT CHANCE OF SHOWERS.
LOWS IN THE MID 50S. CHANCE OF RAIN 20 PERCENT.
.TUESDAY...MOSTLY CLOUDY AND COOLER WITH A CHANCE OF SHOWERS. HIGHS
60 TO 65. CHANCE OF RAIN 30 PERCENT.
.WEDNESDAY AND THURSDAY...MOSTLY CLOUDY WITH A CHANCE OF SHOWERS
EACH DAY. LOWS IN THE MID 40S. HIGHS 60 TO 65.
.FRIDAY...PARTLY CLOUDY. LOWS IN THE MID 40S. HIGHS 65 TO 70.
.SATURDAY...PARTLY CLOUDY. LOWS NEAR 50. HIGHS IN THE MID 70S.

$$

ALZ018>020-022>024-026-060930-
CALHOUN-CHEROKEE-ETOWAH-JEFFERSON-PICKENS-ST CLAIR-TUSCALOOSA-
INCLUDING THE CITIES OF...ANNISTON-JACKSONVILLE...
BIRMINGHAM-HOOVER...CARROLLTON...CENTRE...GADSDEN...
PELL CITY-ASHVILLE...TUSCALOOSA
405 PM CST SAT APR 5 2003

.TONIGHT...VARIABLE CLOUDINESS WITH A SLIGHT CHANCE OF A
SHOWER. LOWS IN THE MID 50S. LIGHT WINDS. CHANCE OF RAIN 20
PERCENT.
.SUNDAY...MOSTLY CLOUDY WITH SHOWERS AND THUNDERSTORMS LIKELY BY
AFTERNOON. STORMS POSSIBLY SEVERE IN THE AFTERNOON. HIGHS 73 TO
77. EAST WINDS 10 TO 15 MPH...BECOMING SOUTHEAST IN THE AFTERNOON.
CHANCE OF RAIN 70 PERCENT.
.SUNDAY NIGHT...SHOWERS AND THUNDERSTORMS. STORMS POSSIBLY SEVERE.
LOWS IN THE MID 60S. SOUTHEAST WINDS 10 TO 15 MPH. CHANCE OF
RAIN 80 PERCENT.
.MONDAY...VARIABLE CLOUDINESS WITH A CHANCE OF THUNDERSTORMS. HIGHS
IN THE UPPER 70S. CHANCE OF RAIN 30 PERCENT.
.MONDAY NIGHT...PARTLY CLOUDY WITH A SLIGHT CHANCE OF SHOWERS.
LOWS IN THE MID 50S. CHANCE OF RAIN 20 PERCENT.
.TUESDAY...MOSTLY CLOUDY AND COOLER WITH A CHANCE OF SHOWERS. HIGHS
IN THE MID 60S. CHANCE OF RAIN 30 PERCENT.
.WEDNESDAY AND THURSDAY...MOSTLY CLOUDY WITH A CHANCE OF SHOWERS
EACH DAY. LOWS IN THE MID 40S. HIGHS 60 TO 65.
.FRIDAY...PARTLY CLOUDY. LOWS IN THE MID 40S. HIGHS 65 TO 70.
.SATURDAY...PARTLY CLOUDY. LOWS NEAR 50. HIGHS IN THE MID 70S.

$$

You will notice that this message contains two groups. Each group starts with the code "ALZ".
Using the Selected option and alarming for ALZ011, Blount County, you will receive the following
BLOUNT-FAYETTE-LAMAR-MARION-WALKER-WINSTON-
INCLUDING THE CITIES OF...DOUBLE SPRINGS...FAYETTE...HAMILTON...JASPER...ONEONTA...VERNON
405 PM CST SAT APR 5 2003
.TONIGHT...INCREASING CLOUDS. A SLIGHT CHANCE OF A SHOWER AFTER MIDNIGHT. LOWS IN THE LOWER 50S. NORTHEAST WINDS 5 TO 10 MPH. CHANCE OF RAIN 20 PERCENT.
.SUNDAY...MOSTLY CLOUDY WITH SHOWERS AND THUNDERSTORMS LIKELY BY AFTERNOON. STORMS POSSIBLY SEVERE IN THE AFTERNOON. HIGHS IN THE LOWER 70S. EAST WINDS 10 TO 15 MPH...BECOMING SOUTHEAST IN THE AFTERNOON. CHANCE OF RAIN 70 PERCENT.
.SUNDAY NIGHT...SHOWERS AND THUNDERSTORMS. STORMS POSSIBLY SEVERE. LOWS IN THE LOWER 60S. SOUTHEAST WINDS 10 TO 15 MPH. CHANCE OF RAIN 80 PERCENT.
.MONDAY...VARIABLE CLOUDINESS WITH A CHANCE OF THUNDERSTORMS. HIGHS IN THE UPPER 70S. CHANCE OF RAIN 30 PERCENT.
.MONDAY NIGHT...PARTLY CLOUDY WITH A SLIGHT CHANCE OF SHOWERS. LOWS IN THE MID 50S. CHANCE OF RAIN 20 PERCENT.
.TUESDAY...MOSTLY CLOUDY AND COOLER WITH A CHANCE OF SHOWERS. HIGHS 60 TO 65. CHANCE OF RAIN 30 PERCENT.
.WEDNESDAY AND THURSDAY...MOSTLY CLOUDY WITH A CHANCE OF SHOWERS EACH DAY. LOWS IN THE MID 40S. HIGHS 60 TO 65.
.FRIDAY...PARTLY CLOUDY. LOWS IN THE MID 40S. HIGHS 65 TO 70.
.SATURDAY...PARTLY CLOUDY. LOWS NEAR 50. HIGHs IN THE MID 70S.
The Selected No Head will result in:
.TONIGHT...INCREASING CLOUDS. A SLIGHT CHANCE OF A SHOWER AFTER MIDNIGHT. LOWS IN THE LOWER 50S. NORTHEAST WINDS 5 TO 10 MPH. CHANCE OF RAIN 20 PERCENT.
.SUNDAY...MOSTLY CLOUDY WITH SHOWERS AND THUNDERSTORMS LIKELY BY AFTERNOON. STORMS POSSIBLY SEVERE IN THE AFTERNOON. HIGHs IN THE LOWER 70S. EAST WINDS 10 TO 15 MPH...BECOMING SOUTHEAST IN THE AFTERNOON. CHANCE OF RAIN 70 PERCENT.
.SUNDAY NIGHT...SHOWERS AND THUNDERSTORMS. STORMS POSSIBLY SEVERE. LOWs IN THE LOWER 60S. SOUTHEAST WINDS 10 TO 15 MPH. CHANCE OF RAIN 80 PERCENT.
.MONDAY...VARIABLE CLOUDINESS WITH A CHANCE OF THUNDERSTORMS. HIGHs IN THE UPPER 70S. CHANCE OF RAIN 30 PERCENT.
.MONDAY NIGHT...PARTLY CLOUDY WITH A SLIGHT CHANCE OF SHOWERS. LOWs IN THE MID 50S. CHANCE OF RAIN 20 PERCENT.
.TUESDAY...MOSTLY CLOUDY AND COOLER WITH A CHANCE OF SHOWERS. HIGHs 60 TO 65. CHANCE OF RAIN 30 PERCENT.
.WEDNESDAY AND THURSDAY...MOSTLY CLOUDY WITH A CHANCE OF SHOWERS EACH DAY. LOWs IN THE MID 40S. HIGHs 60 TO 65.
.FRIDAY...PARTLY CLOUDY. LOWs IN THE MID 40S. HIGHs 65 TO 70.
.SATURDAY...PARTLY CLOUDY. LOWs NEAR 50. HIGHs IN THE MID 70S.

With each of the above messages, the parse option can be used to remove and shorten some of the words in the weather text. Replacement words are entered in the WxWords.dat file. For example to replace "NATIONAL WEATHER SERVICE" with "NWS", you would enter "NATIONAL WEATHER SERVICE,NWS" in your WxWords file.

Using our short message format from above:
NWS BHM has issued a Tornado Warning for Russell County Until 05:30 PM - AT 455 PM CST...NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED A TORNADO NEAR FORT MITCHELL...MOVING NORTHEAST AT 25 MPH. THIS STORM WILL AFFECT RURAL EASTERN RUSSELL COUNTY.
This message could be changed to.

NWS BHM has issued a Tornado Warning for Russell County Until 05:30 PM - AT 455 PM ...NWS RADAR INDICATED A TORNADO NEAR FT MITCHELL...MOVING NE AT 25 MPH. STORM WILL AFFECT RURAL E RUSSELL COUNTY.

The parser is case sensitive, so consider this as you setup your WxWords. COUNTY will not match County.

Several Weather Message users have already created extensive WxWords.dat libraries. If you want a file that is pre-loaded with words, check the Weather Message Miscellaneous Downloads or send e-mail to the Weather Message Yahoo group.

18.7 Publishing Data to a Web Page

You can send files or html to a website by putting a ftp command in the Archive Path field on the alarm setup screen. Here are the steps to ftp weather messages.

1. Setup an alarm for the product to be sent to the website.

2. Select the type of archive, Selected or Full. (Full sends the complete weather message).

3. On this alarm, select the HTML Template option and enter your ftp server information.

To send a HTML file, you will need to create a template file and place it in the WxMesgNet\WxData\Template directory. In your html template, enter the code $MESSAGE$ where you want the weather text to be inserted. You will change the HTML Template option to include the name of your template file.

Here is some additional information on creating a web page with Weather Message.

Server Side Includes

The sample weather page, on the Weather Message website was created by using server-side includes (SSI). If your web server supports this capability, it can help you make a nice page. Feel free to use the html code on the WxMesg sample page, http://www.weathermessage.com/Support/SampleWebWeather.aspx

Basically SSI allows you to copy (include) text files into a web page. Here is some of the html code used to show the state weather round up.

<textarea rows="5" name="SWRAL" cols="74">
<!--#include file="swral"-->
</textarea>

The <!--#include file="swral"--> statement actually copies the swral file into the web page, when a user requests the page. By including the file when the user requests the web page, they will always get the latest messages.

HTML Templates

A html template is a web page that will be used by Weather Message to insert the weather text. Weather Message takes your html template and searches for the code $MESSAGE$ and replaces that code with the weather text.
I use FrontPage to create a blank page, or one with some text/formatting and put the code \$MESSAGE\$ where I want the weather text to appear. This "template" is stored in the WxMesg directory. The ftp command will need to include the template name. Weather Message will take this template, insert the weather text and then ftp that html file to the server. You will need to have a main web page that has a link to this uploaded html file.

Note: If you use the html tags <PRE> </PRE> around the weather text, the text will be properly formatted.

Here is a sample template.

```html
<html>
<head>
<meta http-equiv="Content-Language" content="en-us">
<meta http-equiv="Content-Type" content="text/html; charset=windows-1252">
<title>Weather Message Sample Template</title>
</head>
<body>
<p align="center">Weather Message Sample Template</p>
<p align="center">Weather Text Follows</p>
<p align="center">&nbsp;</p>
<p align="left"><PRE>$MESSAGE$</PRE></p>
</body>
</html>
```

When you use the template option, you only get one message per template. For this reason, most people will want to use server side includes. With server side includes, you are not limited.

**Note:** The first line of the template should begin with <html>. When a template begins with <html>, Weather Message will replace any HTML reserved-characters, found in the weather text, with their appropriate HTML abbreviation. This prevents html browsers from misinterpreting the weather text as html code.

### 18.8 Sending HTML Email

Weather Message allows you to send HTML encoded email. This is accomplished by setting up a Header and Trailer for the email group.

Enter the HTML code that should precede the weather text. Here is some sample code:

```html
<html>
<head>
<META http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<META content="MSHTML" name="GENERATOR">
</head>
<body bgColor=#ffffff>
<p align="center">Test Weather Message</p>
<p align="center">&nbsp;</p>
<p align="left"><PRE></PRE>$MESSAGE$</PRE></p>
</body>
</html>
```

Next enter the HTML code that should follow the weather text. Here is some sample code:

```html
</PRE>
</body>
</html>
```

HTML coding allows you to include links to other websites and format the message with different fonts and colors.
Note: The first line of the Header should begin with <html>. When a Header begins with <html>, Weather Message will replace any HTML reserved-characters, found in the weather text, with their appropriate HTML abbreviation. This prevents html browsers from misinterpreting the weather text as html code.

18.9 Sending Tweets using Twitter

Weather Message supports sending tweets to Twitter™. This ability is possible by using the dedicated Twitter service option in the paging setup.

To setup Weather Message for Twitter, you need to setup a Twitter service provider, establish a Twitter paging group, and associate this group with your alarms. The following procedure outlines these steps.

Create a Twitter Service Provider

Start Weather Message Server Setup, Click Support Setup then Paging Groups. Click Paging Services, the Paging Services window will appear. Click the New Button and fill out the screen as shown below.

![Paging Services Setup]

After selecting the Twitter Service Type, click the Authorize button. The following screen will appear.
Enter your Username or Email address, password and click Allow. The browser window will work for a few minutes then close. Twitter will send Weather Message an access token that will be used to post updates.

Click Save and then Exit.

**Create a Twitter Paging Group**

On the Paging Setup window, right click in the grid and select Add. Fill out the screen as shown below.
Enter a **Group Name** for your Twitter group. You can use any of the available styles, see [Paging / E-Mail Formats](#) for a description of each style.

The **Size** field must be set to 140 characters. Twitter only allows 140 characters and will reject any posts that exceed that limit. The **Maximum** field can be set to zero to send multiple posts, should the message exceed 140 characters.

Set the **Time Zone** field to your time zone.

Set the **Service Name** to the Twitter Service.

The **Pager Pin List** should be empty. The Pin is not used by Twitter.

After entering the above information, click Save. Click Save again to save the paging groups.

**Associate an Alarm**

On the main window, select the alarm that you want sent to Twitter. On the Paging/Email/Faxing tab, select your Twitter group in the Paging list box.

Do this for each alarm that you want sent to Twitter.
18.10 Facebook Status Updates

Weather Message supports posting status updates on Facebook™. This ability is possible by using the dedicated Facebook service option in the paging setup.

Facebook Developer Account Setup


When the next screen appears, click the Advanced setup option at the bottom of the window.

Enter the name for your Weather Alerts. In this example, I have named it My Weather Alerts. Select the category Weather. Click the Create New Facebook App ID.

The following screen will appear.
This screen shows your Application ID and Application Secret. The Application ID is your Weather Message App Id and the App Secret is your Weather Message Secret. They will be needed to setup your paging service in Weather Message. Click the Show button to show your App Secret. Record these values, they will be needed to setup your Weather Message paging service.

Click the Settings option on the left of the screen.

Scroll down to the bottom of the screen and click Save.

Click the Advanced tab at the top of the page.

Change the Native or desktop app option to Yes. Scroll down to Embedded browser Oauth Login and set that option to Yes.
Scroll down to the bottom of the screen and click Save.

Click the Status and Review option on the left of the screen.

This completes the basic setup for a new application in Facebook. We do recommend that you click the App Details option on the left and enter some basic information about your weather feed. If you want an icon to appear, you will need to upload an icon.

Note: You can allow other users/facebook logins to use this application. Click on Roles and scroll down to developers. You can add other users access to your application.

Weather Message Setup

To setup Weather Message for Facebook, you need to setup a Facebook service provider, establish a Facebook paging group, and associate this group with your alarms. The following procedure outlines these steps.

Create a Facebook Service Provider

Start Weather Message Server Setup, Click Support Setup then Paging Groups. Click Paging Services, the Paging Services window will appear. Click the New Button and fill out the screen as shown below.
Enter your assigned developer Consumer Secret in the **Secret** field. Enter your assigned Consumer Key in the **Key** field.

After selecting the Facebook Service Type, click the Authorize button. The following screen will appear.
Enter your Email address, Password and click Log In. The following screen will appear.
Click Okay to start the authorization process. The following screen will appear.
If you want public posting, change the Friends option to Public. Click the Okay button to continue.
Click the Okay button to allow this permission. Facebook will then send Weather Message an access token that will be used to post updates.

The browser window will close. Click Save and then Exit.

**Create a Facebook Paging Group**

On the Paging Setup window, right click in the grid and select Add. Fill out the screen as shown below.
Enter a **Group Name** for your Facebook group. You can use any of the available styles, see [Paging / E-Mail Formats](#) for a description of each style.

The **Size** field must be set to 5000 characters. Facebook only allows 5000 characters and will truncate any posts that exceed that limit. The **Maximum** field can be set to zero to send multiple posts, should the message exceed 5000 characters.

Set the **Time Zone** field to your time zone.

Set the **Service Name** to the Facebook Service.

The **Pager Pin List** should be blank to post updates to your personal Facebook page. To post updates to another page that you administer, enter the name of the page or the page number.

**Hint:** To determine the Facebook page name or number click on the question mark button. The following window will be displayed:

```
In the above example, the page number is 141041125937554.
```
After entering the above information, click Save. Click Save again to save the paging groups.

**Associate an Alarm**

On the main window, select the alarm that you want sent to Facebook. On the Paging/Email/Faxing tab, select your Facebook group in the Paging list box.

Do this for each alarm that you want sent to Facebook.

---

### 18.11 Instant Messaging Using XMPP

Weather Message supports posting instant messages using the XMPP Protocol. The XMPP protocol is used by Jabber and Google talk™. This ability is possible by using the dedicated XMPP service option in the paging setup.

Before setting up XMPP support, you will need a user name and password. This can be accomplished using one of the free instant messaging XMPP clients.

To setup Weather Message for XMPP, you need to setup a XMPP service provider, establish a XMPP paging group, and associate this group with your alarms. The following procedure outlines these steps.

**Create a XMPP Service Provider**

Start Weather Message Server Setup, Click Support Setup then Paging Groups. Click Paging Services, the Paging Services window will appear. Click the New Button and fill out the screen as shown below.
Note: The Address is the actual TCP/IP address or fully qualified domain name of the XMPP server. This may or may not be the domain name associated with a JID (jabber identifier).

Click Save and then Exit.

Create a XMPP Paging Group

On the Paging Setup window, right click in the grid and select Add. Fill out the screen as shown below.
Enter a **Group Name** for your XMPP group. You can use any of the available styles, see [Paging / E-Mail Formats](#) for a description of each style.

The **Size** field will normally be set to 0 characters. The **Maximum** field will normally be set to 0.

Set the **Time Zone** field to your time zone.

Set the **Service Name** to the XMPP Service.

The **Pager Pin List** should contain the individuals and/or chat groups that you want to send alerts. To send to individuals, enter their JID (jabber identifier), for example: `wxmesg@jabber.org`, `kb4mdd@gmail.com`.

Chat groups require a slightly different format. Enter the chat room JID (jabber identifier), followed by a `:` (colon), followed by the chat room password, if required. For example, enter `tallapoosawx@conference.jabber.org:mypassword`. If no password is needed, you must still enter the `:` colon. The colon is used to indicate that the jabber identifier is for a multiple user conference room.

**Note:** Some XMPP servers allow broadcasting to all users using the command `all@broadcast.domain.org`.

After entering the above information, click Save. Click Save again to save the paging groups.

**Associate an Alarm**

On the main window, select the alarm that you want sent using XMPP. On the Paging/Email/Faxing tab, select your XMPP group in the Paging list box.
Do this for each alarm that you want sent using XMPP.

### 18.12 What is EMWIN

EMWIN stands for the Emergency Managers Weather Information Network. It is a service provided free by the National Weather Service. EMWIN is a data stream broadcasted by the National Weather Service for use by emergency managers and others. This data stream contains current weather warnings, watches, images, advisories and forecasts issued by the National Weather Service.

The information present in the EMWIN data stream originates from local weather service offices and other sources. This information is collected at the National Weather Service office in Silver Spring, Maryland. From there, it is up-linked to the GOES weather satellites from a transmission site in Wallops Island, Virginia.

There are three methods to receive EMWIN data. You can obtain it directly from the GOES weather satellites with a satellite receiver. If the EMWIN signal is being broadcasted on a VHF or UHF frequency in your area, you can receive it using a low cost scanner and decoder. It is also available through an Internet connection. Each method requires different hardware and/or software combinations. A list of hardware vendors is available from the National Weather Service EMWIN Vendors web page.

**Who can benefit from EMWIN?**

- Emergency Management Directors
- Public Safety Officials
- Amateur Radio Operators
- Business Owners
- Media Outlets
- Weather Hobbyists
- Schools
- Hospitals

Anyone who has a need for up-to-date weather information can benefit from EMWIN.

For additional information on EMWIN, visit the National Weather Service’s EMWIN Information web page.

Weather Message uses this data stream to provide desktop alerts of impending weather situations.

### 18.13 What is Weather Wire

The National Oceanic and Atmospheric Administration Weather Wire Service, NWWS, is a satellite and Internet broadcast system that delivers critical National Weather Service information. This system routinely delivers 99 percent of all messages within six seconds. There is no recurring costs associated with the data provided by this service.
NWWS, version 2, was established in April 2015, the system collects data from 141 U.S. Weather Centers and special centers around the country and broadcasts a continuous stream of alphanumeric information. Users may receive as much of the information as they want, for a low, fixed annual fee. Current customers include radio, television and cable stations; universities; state and federal emergency management services; and many other government agencies.

The Internet data feed requires a user name and password. To obtain a user name and password send an email to the NWWS program manager, gregory.zwicker@noaa.gov.

For more information on NWWS visit NOAA's website at http://www.nws.noaa.gov/nwws/.

18.14 What is NOAAPort

The National Oceanic and Atmospheric Administration's NOAAPORT broadcast system provides a one-way broadcast of NOAA environmental data and information in near-real time to NOAA and external users. This broadcast service is implemented by communications utilizing C-band.

The NOAAPORT data stream is located on Satellite AMC-4, transponder 13C. It is broadcast using DBV formatting, allowing inexpensive equipment to be used to demodulate the data.

This transponder presently has 8 logical channels, NCEP/NWSTG, GOES, NCEP/NWSTG2, OCONUS, POLAR SAT, Experimental, GOES WEST, and GOES EAST. The NCEP/NWSTG, GOES, and NCEP/NWSTG2 channels have a data rate of 1.536 Mbps.


18.15 What is IPAWS

IPAWS is FEMA's Integrated Public Alert and Warning System. This Internet based system is used by Federal, State, territorial, tribal, and local authorities to issued critical public alerts and warnings. It contains EAS and National Weather Service messages. These messages are delivered in Common Alerting Protocol (CAP) format.

In order to receive the IPAWS data stream, you must sign a Memorandum of Agreement with FEMA. See How to Sign Up for IPAWS for more information.
19 Software License

LICENSE AGREEMENT

I. LICENSE GRANT.
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