Weather Message

Retransmission

Version 3.9

Weather Alerting Software for your network.

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Weather Message - EMWIN Retransmission

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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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1 Introduction

Enter topic text here.

1.1 Overview

Weather Message - WxReTran is an EMWIN data retransmission program. It is used to retransmit EMWIN data on a VHF or UHF frequency using a radio modem.

WxReTran features 10 priority message queues, message discarding, message duplication and message scheduling. In addition, it can be used to compress single or multiple messages.

A standard RS-232 connection to an external radio modem is used to transmit the EMWIN data at 1200, 2400 or 9600 baud. Radio modems, suitable for EMWIN retransmission can be purchased at Tigertronics <u>http://tigertronics.com</u> or Zephyrus Electronics <u>http://big-z.com</u>. See Appendix B for specifications.

An appropriate radio transmitter and FCC license are required to broadcast the EMWIN data. NOAA currently has frequencies available for EMWIN retransmission. They are 163.300, 163.325, 163.350, 168.7125, and 168.8125 MHz. Contact your local Warning Coordination Meteorologist (WCM) for information on applying for a frequency.

Transmitters certified for use on the NOAA frequencies can be purchased from Skywarn Systems, Inc. For information and pricing, send email to Ray Bartik – ray.bartik@skywarnsystems.com.

Weather Message – WxBBSrvr is an EMWIN data retransmission program for the internet. It is used to serve EMWIN data to a private or public network.

Weather Message – WxRadar can be used to retrieve weather radar images for inclusion in your retransmission.

Weather Message - WxReTran can be downloaded from the Internet at http://www.wxmesg.com



Weather Alerting Software

http://www.wxmesg.com

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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

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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@wxmesg.com.

Mail Support

You can reach the program author by mail to Weather Message Software, 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 Retransmission 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.

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 Retransmission 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.

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 Retransmission before installing an updated software version. Uninstalling the software will delete your operating setup information.



2 WxReTran - Serial Port Retransmission

2.1 Overview

WxRetran is used to retransmit EMWIN data using a modem connected to a VHF or UHF radio.

EMWIN ReTransmission Engine - By Weather Message							
File Help							
Sending FILLFILE.TXT Block 1 Of 1	Files Sent:						
Com Port Disabled Compression	n Ratio = 1:1 Throughput = 2400 BPS						
Priority 1	Priority 6						
Priority 2	Priority 7						
Priority 3	Priority 8						
Priority 4	Priority 9						
Priority 5	Sending FILLFILE. IXI: 1 of 1						
	FILLFILE. IXI						
1							

The main screen shows the status of each queue. WxReTran operates continuously sending received weather messages. In the event that no messages are available, the filler file, FillFile.txt, will be sent.

If your transmitting speed is slower than 9600 baud, you should use caution when selecting files for retransmission. At 1200 baud, you can only send a fraction of the files that are being transmitted by NOAA. The system log file, RtLog.txt, or Queue Status screen can be reviewed to determine if you are overloading your system.

Every six hours, the system writes statistics about program operation. These statistics will let you know how many files have been sent, the number of filler files that have been sent and the maximum number of files that had to wait in each queue. These statistics are reset at midnight.

The log file may also contain other messages. An entry will be made in the log file each time a message is overwritten. In addition, any files that have not been transmitted before the user specified purge-time, will be recorded.

You should review the log file periodically to see if your system is overload. When the log file reaches 100,000 bytes, it is copied to RtLog.old and a new log file is created.

Messages that are received for processing are listed in their respective priority queue on the screen. If you want to remove a file from the current queue, select the file and press the delete key. Note: You cannot remove a message that is currently being transmitted.

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

2.2 Menu Options

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🚛 EMWIN ReTransmission Engine - By Weather Message 📃 📃 📼							
File Help							
Sending FILLFILE.TXT Block Com Port Disabled	1 Of 1 Compression	Files Sent: 109 Ratio = 1:1	Throughput = 2400 BPS				
Priority 1			Priority 6				

The menu buttons on this screen 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.

Setup
Send Morse ID
View Logfile
Show Ingest
Queue Status
Export Settings
Import Settings
Exit

- The Setup option displays the setup window.
- The Send Morse ID causes the program to send morse code identification to the modem.
- The View Logfile displays the log file in notepad.
- The Show Ingest option shows the main window of each ingest program running the background.
- The Queue Status option displays the <u>queue status window</u>.
- The **Export Settings** option will export all of the registry settings for the Weather Message programs. They are exported to WxRegSet.txt. This allows a user to easily backup the weather message directory and save all of their settings.
- The **Import Settings** option will import the registry settings contained in the WxRegSet.txt file.

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• The Exit option exits the program.

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

Weather Message Help About
Weather Message on the Web E-Mail Program Support

2.3 Setup

2.3.1 System Tab

The System Tab is used to setup general program operating information.

Setup											- X
File											
Priority 4	Priority 5	Priority 6	Priority 7	7 Priority	8 Priority 9	Priori	ty 10				
System	Compress	Discard	Copies	Schedule	Morse P	ort	Priority	1 Prior	rity 2	Priority	3
Inges	t Path	C:\w	xmesgnet	\wxdata\o	diles2						
Inges	t Engine	Seria	al Ingest		Internet Ir	igest	1	Softwar	re Den	nod	
		Wea	ther Wire		NoaaPort						
UnZip	Received	Files			Show i	n Task	Bar	1			
Enabl	Enable Byte Blaster Server Support 📃 Auto Startup No 💌										
Purge directories after 2.5 hours.											
If all messages have been sent, send C:\WxMesgNet\FillFile.txt											
	by inserting it into: C:\wxmesgnet\WxData\RtPri10\FillFile.txt										
Log file size 100000											
✓ Log Sent Blocks Daily Log Files ✓ Show Errors											

Ingest Path – The directory that will contain the received files to be processed by WxRetran.

Ingest Engine – Select Serial Ingest for the serial port engine, Internet Ingest for the Internet engine, Software Demodulator for the software demodulator engine, Weather Wire for the weather wire engine, or NOAAPORT for the NOAAPORT engine.

UnZip Received Files – Check this box if you want compressed files to be unzipped before they are processed by WxRetran.

Enable Byte Blaster Server Support – Check this box if you want WxReTran to send data to WxBBSrvr (byte blaster server) for processing. (This allows for an Internet backup of your retransmission data.)

The **Show in Task Bar** option, when checked, will move the program from the system tray to the task bar.

The **Auto Startup** option allows you to specify whether WxReTran 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.

Purge directories after – Enter the amount of time, in hours, that the system should purge the directories used by the retransmission program. Note: Messages that have been queued, but not sent, will be purged after this amount of time.

If all message have been sent, send – Enter the name of the file to be sent when WxReTran does not have any weather messages to sent. The system defaults to "FillFile.txt". The file is located in the WxMesg directory and can be edited to contain your local information. **Insert into** – Enter the priority directory name and file name that this file should be copied. The filler file is normally copied to the \WxMesg\WxData\RtPri10 directory. Remember to put the file name on the destination path.

Log File Size – Enter the log file size in bytes.

Log Sent Blocks – Check this box to log all of the weather messages sent and the times that the morse identification is sent.

Daily Log File – Check this box to store log files for each day in the ..\WxMesg\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 this option disables the log file size option.

Show Errors – Check this box to have the program pop-up error conditions as they occur. Regardless of this setting, the program will write all errors to the log file.

2.3.2 Compress Tab

The Compress Tab is used to specify a group of files that should be compressed as a group before being transmitted.

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Setup
File
Priority 4 Priority 5 Priority 6 Priority 7 Priority 8 Priority 9 Priority 10
System Compress Discard Copies Schedule Morse Port Priority 1 Priority 2 Priority 3
To add an item
Type it here>
Then Press Enter
To remove an item Click the item here>
Then click here> Remove
Awaiting Compression
Send block compressed files priority = 10
Do block compression when files accumulated = 20

To add items to the compress queue, enter the weather message file name in the Type it here box and press enter. The file name will appear in the list box. You can use the wild card character ? to match any character in the received file name. The program requires that you enter at least two alpha characters.

The **Send block compressed files priority** field is used to enter the priority queue that will be used to send the files after they are compressed.

The **Do block compression when files accumulated** = is used to enter the number of files that should be received before compressing the files for transmission.

2.3.3 Discard Tab

The Discard Tab is used to enter the file names for messages that you do not want sent.

Setup	٢.						
File							
Priority 4 Priority 5 Priority 6 Priority 7 Priority 8 Priority 9 Priority 10							
System Compress Discard Copies Schedule Morse Port Priority 1 Priority 2 Priority 3	_						
To add an item							
Type it here>							
Then Press Enter							
To remove an item							
Click the item here>							
Then click here> Remove							

By default, WxReTran will discard all files that do not match any of the priority or compression queues. You however, can use this tab to catch specific files before they are processed by the priority or compression queues.

2.3.4 Copies Tab

The Copies Tab is used to setup message files that are to be transmitted more than once.

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Setup						
File						
Priority 4 Priority 5 Priority 6 Priority 7 Priority 8 Priority 9 Priority 10						
System Compress Discard Copies Schedule Morse Port Priority 1 Priority 2 Priority 3						
Use this tab to force messages to be sent more than once.						
To add an item						
Select The Number Of Copies> 2						
Enter A File Name>						
Then Press Enter						
To remove an item						
Click the item here>						
Then click here> Remove						

If you want to send a weather message more than once, enter the number of copies in the **Select The Number of Copies** field. Enter the file name in the **Enter a Keyword** field and press enter. When the entered file name is received, it will be duplicated the number of times you specify. You can duplicate a file up to 9 times.

2.3.5 Schedule Tab

The Schedule Tab is used to automatically insert an external message file into a priority queue.

Setup			
File			
Priority 4 Priority 5 Priority 6 Priority 7 Priority 8 Priority 9 Priority 10			
System Compress Discard Copies Schedule Morse Port Priority 1 Priority 2 Priority 3			
Type a schedule entry here, then press "Enter"			
More Information			
Example: 13:00,c:\\\/xMesg\FillFile.txt,c:\\/xMesg\\\/xData\RtPri6\FillFile.txt			
Scheduled Transmissions			
To remove an entry: 13:00,c:\wxmesgnet\fillfile.txt,c:\wxmesgnet\wxdata\rtpri6\fillfile.txt 13:10,c:\wxmesgnet\fillfile.txt,c:\wxmesgnet\wxdata\rtpri6\fillfile.txt			
Click the entry here>			
Then press "Delete" or click "Remove"			
Remove			

Using the example provided on the screen, enter the time that the message should be sent, in military time format. Followed by a space, then the source path and file name, followed by a space and the priority queue path and file name. After entering the schedule, press enter to place it in the scheduled transmissions list.

To delete multiple items from the list, select all of the items to be deleted and press the delete key.

2.3.6 Morse Tab

The Morse Tab is used to setup your morse code call sign (identification).

etup	×
File	
Priority 4 Priority 5 Priority 6 Priority 7 Priority 8 Priority 9 Priority 10	
System Compress Discard Copies Schedule Morse Port Priority 1 Priority 2 Priority	3
Morse Identity DE EMWIN TEST	
ID Frequency 10 Minutes	
Time To Next ID 6 Minutes	
Time Of Last ID	
Identifier Speed Factor 25	

Morse Identify – Enter your FCC issued call sign. If you don't require identification, leave this field blank.

ID Frequency – Enter the length of time you are required to send your call sign. This normally is 15 minutes for a business band frequency or 30 minutes for public safety. If you are in-doubt, check with your local two-radio dealer.

Identifier Speed – This field is the morse code speed factor. The default of 25 results in 20 word-per-minute morse code. You can increase or decrease this factor to change the speed.

2.3.7 Port Tab

The Port Tab is used to setup the comm port that is attached to your radio modem.

Setup	×
File	
Priority 4 Priority 5 Priority 6 Priori	ty 7 Priority 8 Priority 9 Priority 10
System Compress Discard Copies	s Schedule Morse Port Priority 1 Priority 2 Priority 3
Port 0	Transmitter Delay B00 milliseconds
	Transmit for 9 minutes, pause for
Data Rate 2400	10 seconds, then resume transmitting.
Data Bits 8	
Stop Bits 2	
Parity N	
Com Port Disabled	

Port – Click on the port field to change the comm port. Selecting Port 0 (zero) will disable the sending of data through the comm port.

Note: Selecting Port 0 (zero) may be desirable if you will only be using WxRetran to feed a private byte blaster server.

Data Rate – Click on the data rate field to change the data rate.

The **Data Bits**, **Stop Bits** and **Parity** cannot be changed with the setup program. If you need a different configuration, send an email to help@wxmesg.com

Transmitter Delay – Enter the time, in milliseconds, required to key up your transmitter.

Transmit For – These fields are used when you don't have a continuous duty transmitter. You can specify the number of minutes to transmit and the number of seconds to pause the transmitter. If you have a continuous duty transmitter, sent the "Transmit For" field to 0 (zero). See Appendix B for information on continuous duty.

2.3.8 Priority Tab

There are 10 Priority Tabs. The highest priority is 1 and the lowest 10. Each Tab operates the same. You will need to determine the priority of the weather messages that you intend to retransmit.

For example, Tornado Warnings, Severe Thunderstorm Warning, Flood Warnings, etc. are normally assigned to Priority 1. Watch products can be assigned to Priority 2. You can use the

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Setup											×
File											
Priority 4	Priority 5	Priority 6	Priority 7	Priority	B Priority	/ 9	Prio	rity 10			
System	Compress	Discard	Copies	Schedule	Morse	Po	rt	Priority 1	Priority 2	Priority 3	
То	add an item	1						WCNBI	MXAL		
	Type it he	ere>									
	The	n Press Ei	nter				-				
То	remove an	item									
			C	lick the ite	em here -	>					
		Then	click here	>	Remo	ve					
🔽 Ov 📰 Se	verwrite Pen nd Files Co	nding Files mpressed									

remaining priority queues for other weather products. Graphic files can be assigned to the lowest Priority 10.

To add items to this priority queue, enter the weather message file name in the Type it here box and press enter. The file name will appear in the list box. You can use the wild card character ? to match any single character in the received file name. The wild card character * can be used to match multiple characters in the received file name. The program requires that you enter at least two alpha characters.

For example, to send all messages from Alabama Priority 3, add ?????AL.TXT to the list on Priority tab 3. To send all weather roundups for Alabama priority 2, add RWR???AL.TXT to the list on Priority tab 2. To send tornado warnings for Alabama Priority 1, add TOR???AL.TXT to the list on Priority tab 1.

Graphic products can be included by adding ??????.JPG and ??????.GIF to Priority tab following your text products.

To remove a file from the list, click on the item and the click on the **Remove** button. The file will be remove from the list and will no longer be processed.

The **Overwrite Pending Files** option, if checked, tells the program to overwrite a pending file with a newer file, of the same name. This option can be used with a priority queue that will process graphics files. If a graphics file is waiting to be sent and a newer file arrives, the older file will be overwritten by the newer file. Note: This option should not be used with weather text files. It can cause messages with the same name to be overwritten, even though the message may contain different weather text.

The Send Files Compressed option allows you to specify if you want the files received in this

queue to be compressed before they are sent. Note: Compression of single files does not usually result in a lot of savings for some file formats. The Compress tab can be used to compress a group of files, which normally results in more savings.

2.4 Adding Local Data

Local data can be inserted into the retransmitted data stream. To insert your own products, copy the file to one of the priority directories. They are named C:\WxMesgNet\RtPri1 through C:\WxMesgNet\RtPri10.

If is recommended that you follow the NOAA file naming convention. A product file name should be in 8.3 format. That is 8 characters before the period and 3 characters afterwards. The extension for weather text files should be TXT. For graphic products, use the appropriate extension.

WxRadar can be used to include radar images. You can also use WxLocal to include local weather conditions. (For information on WxLocal, see the Weather Message website.)

2.5 Queue Status

The WxReTran Status window shows the status of each priority queue.

WxReTran Sta	tus	— ×-
Queue Statu	s	
Queue	Pending	Maximum Waiting
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	1
		Close

The Pending column shows the number of files that are currently pending. The Maximum Waiting column shows the maximum number of files that have been waiting at one time.



3 WxBBSrvr - Byte Blaster Server

3.1 Overview

WxBBSrvr is used to retransmit EMWIN data over the Internet or a private network. A computer retransmitting data over the Internet is referred to as a Byte Blaster Server. The EMWIN data network is designed to allow anyone to run a server. All that is required is available bandwidth.

🛃 ByteBlas	ter Server - by Wea	ather Message				×
File He	elp					
Server Ad	ddress 67.44.	83.80 Po	t	1000		
Allowed (Clients 10	Se	ver Type	Private		
Status	Receiving da	ta from Serial Inge	st Engine	Data Qua	ality 100%	6
Clients	Data F	Rate 0 kbp	S	Pending	Data 0	
Serving		RTPSTOC	A.ZIS - Block	:1 of 2		-

The main server window shows the servers activity.

In order for WxBBSrvr to receive data from the ingest engines, you must go into the setup screen on one of the ingest engines and check the **Enable Byte Blaster Server Support**. If you decide to not use the Byte Blaster server, you should uncheck this box.

WxBBSrvr uses TCP/IP port 999, 1000, 1001 and UDP port 9510 to communicate with the NOAA Host Master, Byte Blaster clients and the local ingest programs. If you have a firewall, port 1000 and 1001 must be open for WxBBSrvr to work.

Note: *WxBBSrvr* supports dynamic ip addresses. It will attempt to publish your public ip address based on information received from the Host Master. If the public ip address cannot be determined, you will see 192.192.192 for the ip address in the Server Address. Should this occur, stop and restart the program.

Note: If you want to use WxBBSrvr to retransmit data on a private network, send an email to help@wxmesg.com for information to enable this operation. The default configuration requires access to the NOAA host master for proper operation.

Note: *WxBBSrvr* can receive data from the retransmission software *WxReTran*. This can be useful if you want to provide a backup for your local retransmission system. If you want to use this option, enable "Byte Blaster Support" in the retransmission software. Using this option will make your server a private EMWIN server.

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

System Tray

When WxBBSrvr is minimized, you can restore the main screen by right clicking on the system

tray icon 🗱, then select open.

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3.2 Operation

WxBBSrvr waits for byte blaster client connections. After a client connects to the server, the client is required to identify itself at the time the connection is established and once every 12 minutes. If a client does not identify itself within the allotted amount of time, the byte blaster client is disconnected. Once the connection is established, the server begins to send the byte blaster client data.

The server maintains a 64K buffer for each connection. If a client's buffer reaches this maximum, the server will disconnect the client. A full client buffer indicates that the client is not capable of receiving data fast enough. This could be due to Internet congestion or other problems related to the Internet.

Should the server receive more connections than are allowed, the server will send the byte blaster client a list of the current byte blaster servers and disconnect. This will allow the disconnected byte blaster client to locate an available byte blaster server.

The server is in constant communication with the NWS host master. The host master maintains a list of private and public byte blaster servers. Every 15 seconds, the byte blaster server reports the number of connections and status of the server to the host master.

The host master sends a list of public servers to each byte blaster server every 10 minutes. This server list is passed along to each connected byte blaster client. This capability allows all of the byte blaster clients to have a current list of available byte blaster servers. It also allows the byte blaster network to be dynamically configured.

Every six minutes, the server requests its IP address from the host master. This serves as a keep-alive packet for the connection to the host master. It also serves to update the host master should a server's IP address change dynamically.

A connection to the host master is required for proper operation. Provisions have been made to run the server on a private network where an outside connection to the host master is not available. Contact Weather Message for setup details.

The server receives data from WxEmwin (serial port, software demodulator, and internet) or WxReTran (retransmission). The ingest programs broadcast their received data packets on the TCP/IP loop back. WxBBSrvr listens for this data on UDP port 9510. WxEmwin sends an error percentage to the byte blaster server. If the receive quality drops below 95 percent, the server will stop sending data to the byte blaster clients.

Note: If you use WxEmwin to supply data to WxBBSrvr, WxEmwin will only connect to servers listed in the WxSatus.txt file. This file is not automatically updated by the byte blaster system. Although provisions were made to keep this server list updated, they were never implemented in the NWS host master software. At the present time, this file contains a list of known servers at EMWIN headquarters.

3.3 Setup

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The setup window allows you to establish information about your server.

Settings Tab

WxBBSrvr Setup Settings Options	
Public EMWIN Server	✓ Weather Message Test Server
Email Address	danny@wxmesg.com
Maximum Users	10
Use Fixed Address	
Fixed TCP/IP Address	
Reporting Baud	9600 -
	Save Cancel

Public EMWIN Server - If checked, will allow any EMWIN user can access your server. Your server's address will be published to all byte blaster clients for public use. Uncheck this box if your server is for private use. In this case, your address will not be published for public use.

Note: If the Reporting Baud is 1200 or 2400, the NWS Host Master will not publish this server on the public network.

Note: If the program receives data from the retransmission software, it will automatically switch to a private server.

Enter location for your server in the **Server Location** field. For example, "Weather Message Server 1 – Dadeville, AL".

Enter the Email Address for the person that should be contacted regarding this server.

Enter the number of users/clients that can connect to your server in the **Maximum Users** field. This number can range from 1 to 900. Take your available Internet bandwidth into consideration when you set the number of users. Each connection will use approximately 19,200 kbs.

Enter the **TCP/IP Port** for your server. The default port is 1000. If this is not available use the IANA assigned EMWIN port 2211.

The program will automatically determine its TCP/IP address. In some cases, this address may

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not be correct because of a firewall or other settings. To specify an IP address for this server, check the **Use Fixed URL** box and enter your IP address in the **Enter Fixed URL** box.

The **Reporting Baud** displays the baud rate that will be reported to the NWS Host Master. Valid values are blank, 1200, 2400 and 9600. A blank entry is reported as 9600. Only 9600 baud servers can participate in the public EMWIN network.

Note: The Reporting Baud is determined by the baud rate setting in WxEmwin. Baud rates higher than 9600 baud are reported as 9600 baud. You can override this setting by adding a registry entry. Contact Weather Message for details.

Options Tab

WxBBSrvr Setup	
Settings Options	
Log File Size Daily Log Files Log Activity Show Errors Auto Startup	100000
	Save Cancel

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

The **Daily Log Files** 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.

Check the Log Activity box to have the program log connects and disconnects to the log file.

Check the **Show Errors** box to have the program pop-up error conditions as they occur. Regardless of this setting, the program will write all errors to the log file.

The Auto Startup option allows you to specify whether WxBBSrvr 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.

3.4 Server Status

You can see the status of the EMWIN Byte Blaster network by clicking on Help and selecting Server Status. The following window is displayed.

Ž₿ Server - Status	×
Host Master: On-Line	
Current Server List	Current Sat Server List
140.90.6.240:1000 140.90.6.245:1000 140.90.128.132:1000 216.248.137.10:1000	140.90.6.240:1000 140.90.6.245:1000 140.90.128.132:1000 216.248.137.10:1000
	Close

The Current Server List box lists the servers that are currently available for byte blaster client connections. The EMWIN Host Master maintains this list and updates each server automatically. The server sends this list to the connected clients.



4 WxEmwin - EMWIN Ingest

4.1 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.

WxEmwin - EMWIN Ingest Engine 📃 🗖 💌				
File Port Help				
Serial Ingest Software Demodulator TCP/IP Receiver/2 Internet Ingest				
Processing File Block File Size FLSJANMS.TXT Image: Control of the state of t				
Port Com4 Packet Length 0				
Total Blocks 4 Bad Header 0				
Bad Blocks 0 Check Sum 0				
Error Percent 0.0 Block Count 0				
IVER NEAR OFAHOMA. * AT 7:45 PM TUESDAY THE STAGE WAS 18.8 FEET AND FALLING. * FLOOD STAGE IS 19 FEET. * FORECASTTHE RIVER WILL CONTINUE TO FALL TO BELOW 18				
Starting Purge Cycle				

The main screen may contain up to four 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.

🔥 WxEmwin Status	×
Not receiving Serial data.	

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4.2 Menu Options

WxEmwin	- EMWIN	Ingest	Engine	
File Port	Help	J		
Serial Ingest	Software	Demod	ulator TCP/IP	Receiver Internet Ingest
Processir	ng File		Block	File Size

The menu buttons on this screen perform these functions:

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.

Setup	
Reset St	tats
View M	ain Logfile
View Se	rial Log
View Se	rial Files Received
View T	CP/IP RX 1 Log
View TO	CP/IP RX1 Files Received
View T(CP/IP RX 1 Statistics
View T(CP/IP RX 2 Log
View T(CP/IP RX 2 Files Received
View In	ternet Log
View In	ternet Files Received
Exit	

- The **Setup** option opens the <u>Setup window</u>.
- 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 Log displays the serial ingest log file, WiLog.txt, in notepad.
- The View Internet Files Received displays the received files log, WiFiles.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.

Demodulator Status Stop Data Source Service Stop Demodulator Service Launch Control Panel

- 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.

Weather Message Help
About
Weather Message on the Web
E-Mail Program Support

4.3 Serial Ingest Tab

The Serial Ingest tab, when selected, shows the option of the serial ingest engine.

Serial Ingest	Software Demodul	ator TCP/IP R	Receiver/2 Internet Ingest			
Processir TAFU31A	ig File AU.TXT 🛛	Block 1 of 1	File Size 1024			
Port	Com4	Packet L	ength 1			
Total Blocks	s 36	Bad Hea	der 0			
Bad Blocks	1	Check S	um 0			
Error Perce	nt 2.8	Block Co	ount 1			
SAAU31 AMMC 280100 METAR YBAS 280100Z 07009KT CAVOK 26/05 Q1019= METAR YBBN 280100Z 10010KT 9999 VCSH SCT030 SCT060 24/16 Q1019						

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.

Serial Blocks	X
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 **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.

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 try. If the <u>Send Data Alerts</u> 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 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 it's 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.

4.4 Software Demodulator Tab

The Software Demodulator tab, when selected, shows the option of the Software Demodulator ingest engine.

Serial Ingest	Software De	emodulator	TCP/IP Rece	eiver/2	Internet	Ingest
Processin STPTPT	ng File CN.TXT	BI	ock of 2	File 204	Size 8	
Total Block Bad Blocks	s	36	Packet Leng Bad Header	gth	(D D
Entir Perce	ant	0.0	Block Count	t		1
ABCN01 KWBC 280115 TPTCAN CANADIAN TEMPERATURE AND PRECIPITATION TABLE						•

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	23
Received Blocks	_
J	

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 <u>Software Demod Tab</u>.

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 <u>Send Data Alerts</u> 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.

4.5 TCP/IP Receiver Tab

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

Serial Ingest S	oftware Demodulator	TCP/IP Receiv	er/2 Internet Ing	jest
Processing RTPDLHMN	File E	Block	File Size 2048	
Total Blocks	67	Packet Length	0	
Error Percent	0.0	Bad Header Check Sum	0	
LM5 / 137	5.37/ / 0.005 :R	Block Count	0 RVOIR	*
SYLM5 / 1 BLHM5 / 1 DAM	176.99/ 1154.38/ 1. 1081.66/ 1037.36/ 3	543 :SYLVAN DA .665 :MISSISSIPP	M I - BLANCHARD	-

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.

Se	erial Blocks 🛛 🖾	
	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 <u>Software Demod Tab</u>.

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 <u>Send Data Alerts</u> 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.

4.6 Internet Ingest Tab

The Internet Ingest tab, when selected, shows the option of the Internet ingest engine.

Serial Ingest S	oftware Demodulator	TCP/IP Re	eceiver/2	Internet In	gest
Processing MWWPHIP/	File A.TXT • 2	Block 2 of 3	File 307	Size 72	
Server	71.162.95.119	Connect	Time	0:00:31	
Total Blocks	48	Bad Head	ler	0	
Bad Blocks	0	Check Su	um 🗌	0	
Error Percent	0.0	Block Co	unt	1	
5 TO 33 KNOTS AND/OR SEAS OF 5 FEET OR GREATER ARE ANTICIPATED. WINDS AND SEAS WITHIN THESE RANGES ARE EXPECTED TO PRODUCE					

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.

Serial Blocks	8
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 try. If the <u>Send Data Alerts</u> 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.

4.7 Receiver Status

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

4.7.1 Software Demodulator Status

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

Software Demodulator Status				×	
	– QPSK Receiver –				7
	Data Source Status	Started	Side Lobe Detected	No	
	Carrier Frequency	-37.240550	Symbol Track Freq	17968.505859	
	Carrier Track	Tracking	Duration	3428.272348	
	Symbol Track	Tracking	Input Signal Level	324.050633	
	Front End Signal	Present	Estimated EbNo	10.249109	
	Bit Processor				7
	Cosds Frames Seen	7499	Viterb Bits Decoded	61586344	
	Cosds Fill Frames	774	Viterbi Sync Errors	1	
	Uncorrectable Errors	25	Viterbi Symbol Errors	1254308	
	Correctable Errors	164	Viterbi Average EsNo	4.307311	

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.

4.7.2 WX-14 Status

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

WX-14 Status/1			×
Receiver			
Mode	Normal	Lost Frames	0
Level	1.71 v	Gain	23
Signal Quality	99 %	Frequency Error	39
Data Quality	100.00 %		
VCDU Status			
Received VCDU		Lost VCDU	
Ignored VCDU		Corrected Bytes	
L			
		Ver	sion 02.00.08 / 2.0.0.0

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 diplays the number of bytes that were automatically corrected.

4.8 Setup

4.8.1 Serial Ingest Tab

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

WxEmwin Setup Serial Ingest TCP/IP Ingest - 1 TCP/IP	Ingest - 2 Internet Ingest Common Ingest Paths	
Receiver Type Serial ▼ Enabled ▼ Comm Port 11 ▼ Baud Rate 19200,N,8,1 ▼	Backup Options None Comm Port None Baud Rate 19200,N,8 ▼ Switch Back Time 10 Internet Backup □ Error Rate Greater 10	
Save Cancel		

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.

4.8.2 TCP/IP Ingest - 1 Tab

The TCP/IP Ingest - 1 tab is used to define the first TCP/IP Receiption	eiver if used.
---	----------------

WxEmwin Setup Serial Ingest TCP/IF	Pingest - 1 TCP/IP Ingest - 2 Internet	Ingest Common Ingest Paths
Receiver Type Enabled Address Port Internet Backup Error Rate Greater Log Demod Stats	Software Demod	Not Installed.
		Save Cancel

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.

4.8.3 TCP/IP Ingest - 2 Tab

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

WxEmwin Setup	
Serial Ingest Softwa	re Demod TCP/IP Receiver Internet Ingest Common Ingest Paths
Receiver Type	Software Demod
Enabled	
Address	68.99.74.228
Port	7003
Internet Backup	
Error Rate Greater	50
Log Demod Stats	
	Save Cancel

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 contains 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.

4.8.4 Internet Ingest Tab

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

WxEmwin Setup	
Serial Ingest TCP/IP Ingest - 1 TCP/IP	Ingest - 2 Internet Ingest Common Ingest Paths
Enabled	
Auto-Reconnect on Server Disconnect	Enable Version 2
Auto-Update Server List	
Weather Wire Backup	
Use Fixed Address	
Fixed Server Address	67.108.86.91
Timeout (seconds) on loss of data	15
	Save Cancel

The **Enabled** option should be checked for the Internet Ingest 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 <u>Enable Byte Blaster Server Support</u> 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 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 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 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.

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

4.8.5 Common Tab

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

WxEmwin Setup
Serial Ingest TCP/IP Ingest - 1 TCP/IP Ingest - 2 Internet Ingest Common Ingest Paths
Ingest Path c:\WxMesgNet\WxData\RxFiles
Additional Distribution Paths
Save Cancel

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.

4.8.6 Ingest Paths Tab

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

WxEmwin Setup
Serial Ingest TCP/IP Ingest - 1 TCP/IP Ingest - 2 Internet Ingest Common Ingest Paths
Ingest Path c:\WxMesgNet\WxData\RxFiles
Additional Distribution Paths
Save Cancel

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.



5 WxWw2000 - Weather Wire Ingest

5.1 Overview

WxWW2000 is used by Weather Message for Internet or serial port Weather Wire data feeds. The ingest program can be started automatically by the Weather Message Server or manually.

💥 WxWw2000 - Weather Wire Ingest 📃 🗉 🗪					
File Source H	Help				
Status					
Data Source	Internet - Connec	cted			
Received File	RWROR	21:11:14			
Last File	RR3ACR	21:11:14			
Connected					
Connected					

The main screen shows the status of incoming messages.

The Data Source field shows type connection type; Internet or Serial Port.

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

Note: Before WxWw2000 will connect to an 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 go to this web address <u>https://oi.weatherwire.net</u>.

Note: If you are using the Internet ingest option, the program will alternate the program icon in the system tray to let you know that it is connected.

Note: If *WxWw2000* is stopped with the window minimized, the next time it is started, it will start minimized.

System Tray

When WxWw2000 is minimized, you can restore the main screen by right clicking on the system tray icon 2, then select open.

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5.2 Menu Options

💥 WxWw2000 - Weather Wire Ingest 💼 🔳 💌				
File Source	Help			
Status				
Data Source	Internet - Conn	ected		
Received File	AFDCTP	21:11:59		
Last File	ZFPOTX	21:11:59		

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
Setup
View Logfile
View Files Received Log
Exit

- The Connect option starts a connection to the Internet servers.
- The Setup option opens the <u>Setup window</u>.
- 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 **Source** menu allows you to toggle between the Internet servers and serial port connection.

The **Register** menu allows you to <u>register</u> WxWW2000. 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.

Weather Message Help About Weather Message on the Web E-Mail Program Support

5.3 Setup

5.3.1 Settings Tab

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

WxWw2000 Setup				
Settings Common Ing	jest Paths			
Weather Wire URL Weather Wire Port	oi.weatherwire.net	Ingest Type Serial Port O		
User Name Password	wxmesg			
Comm Port Baud Rate	1 • 9600,N,8,1 •	Name by AWIPS 🛛		
		Global Ingest Paths 🔽		
		Save Cancel		

Select the Ingest Type; Serial Port or Internet.

For Internet ingesting, you must specify the **Weather Wire URL**, **Weather Wire Port**, **User Name** and **Password**. The program will provide defaults for the URL and port. You will need to enter the User Name and Password that you supplied to DynaCorp when you signed up for this service. To register for a user name and password go to this web address https://oi.weatherwire.net.

For Serial Port ingesting, select the appropriate **Comm Port** and **Baud Rate**.

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 WxWw2000 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.

5.3.2 Common Tab

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

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WxWw2000 Setup				
Settings Common Ingest Paths				
Run in Background Image: Comparison of the second seco				
Save Cancel				

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.

5.3.3 Ingest Paths Tab

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

WxWw2000 Setup					
Settings Common Ingest Paths					
Ingest Path c:\WxMesgNet\WxData\RxFiles					
Additional Distribution Paths					
Save Cancel					

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.

5.4 Register Software

The Register menu option allows you to register your software.

🧏 Register Software		×
Registration Name Registration Code		
	Cancel	Register

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When you purchase WxWw2000, 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 <u>http://www.wxmesg.com/purchpay.htm</u>.



6 WxRadar

6.1 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.

🕆 WxRadar 📃 📼 💌
File Schedule Retrieve Now Help
State AL Radar Site KBMX - BIRMINGHAM - Alabaster Image Reflectivity 124 miles View
Layers ☐ Topo
National Weather Service WSR-88D Image from: BMX 10/31/2010 02:30 UTC (9:30 Lowrenceburg Porence Hurnisville Jupelo Cadisden Cadisden
9:35 PM - RADBMXAL.gif copied to ingest.

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 <u>Scheduling</u>.

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 **W**, then select open.

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6.2 Menu Options

WxRadar						_ 0
File Sch	edule	Retrieve Now	Help			
State AL	. •	Radar Site	KBMX - BIRM	IINGHAM - Ala	abaster	Ŧ
		Image	Reflectivity 12	24 miles	-	View
Layers	Topo Cities	✓ Radar ✓ Warnings	Countie	es 🔲 Rivers	s 🔽 Hig	hways

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
View Log
Print
Clear Cache
Exit

- The Setup option opens the Setup window.
- The View Logfile displays the radar log file in notepad.
- The Print option prints the current radar image on your default printer.
- The Clear Cache option clears the radar cache directory of all static image overlays.
- The Exit option shuts down WxRadar.

The **Schedule** menu allows you to establish a <u>schedule</u> 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.

Weather Message Help About Weather Message on the Web

E-Mail Program Support

6.3 Main Window



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.

Ð	<u>P</u> an
€	Zoom <u>I</u> n
Q	Zoom <u>O</u> ut
Q	Zoom <u>Wi</u> ndow
°°¢	Zoom <u>1</u> 00%
Q	Zoom <u>Fi</u> t
Q	<u>M</u> agnify
	Zoom <u>6</u> 00%
	Zoom <u>4</u> 00%
	Zoom <u>4</u> 00% Zoom <u>2</u> 00%
	Zoom <u>4</u> 00% Zoom <u>2</u> 00% Zoom <u>7</u> 5%
	Zoom <u>4</u> 00% Zoom <u>2</u> 00% Zoom <u>7</u> 5% Zoom <u>5</u> 0%
	Zoom <u>4</u> 00% Zoom <u>2</u> 00% Zoom <u>7</u> 5% Zoom <u>5</u> 0% Zoom <u>2</u> 5%

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.

6.4 Scheduling

To schedule radar images for automatic retrieval, click on the Schedule menu. The main window will change to allow you to setup schedules.

👕 WxRadar			
File Preview	Retrieve No	ow Help	
State AL -	RadarS	ite KBMX - BIRMINGHAM	M - Alabaster 🔹
Layers 📄 Topo 📝 Cities	Image ▼ Rad ▼ Wa	dar ♥ Counties ■ F rnings ♥ Legend	▼ Rivers ⊽ Highways
Radar Site	Interval	Image	File Name
КВМХ	5 Minutes	Reflectivity 124 miles	RADBMXAL
KMXX	4 Minutes	Reflectivity 124 miles	RADMXXAL
•			•
Interval 4	Minutes	File Name	Add Delete
9:36 PM - RADMXXAI	gif copied to	o ingest.	.::

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 <u>Main Window</u>.

6.5 Setup

6.5.1 Settings Tab

The Settings Tab is used to define general program operation.

Settings Ingest Paths	
Timeout (seconds) 240	Firewall / Proxy
Log File Size 50000	
Show Image	Map Background
Drop Duplicates	Image Type GIF 👻
Use Defined Ingest Paths	Auto Startup No 🗸
Send to Client Viewer	
	Save Cancel

The **Timeout** field allows you to specific 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 <u>Firewall / Proxy</u>.

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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.

6.5.1.1 Firewall / Proxy

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

Firewall / Proxy Settings						
Firewall Http Prox	Firewall Http Proxy					
Host Name						
Port	0					
User Name						
Password						
Туре	3 - Socks 5 🔻					
	Save Cancel					

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.

Firewall / Proxy	Settings Proxy	
Host Name Port User Name Password	192.168.0.1 87	HTTP Version 1.0
		Detect Proxy
		Save Cancel

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.

6.5.2 Ingest Paths Tab

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

WxRadar Setup
Settings Ingest Paths
Ingest Path c:\WxMesgnet\wxdata\xxfiles
Additional Distribution Paths
Save Cancel

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.



7 Supplemental

7.1 Upgrading from a Previous Version

If you are upgrading a version of retransmission software provided from Maryland Radio Center, Xenocode, or Emwin Pro, the following information will be helpful.

Upgrade from 16-bit version.

To upgrade from the 16-bit version, install WxReTran according to this manual. After installation, copy the following files to their corresponding WxReTran file.

C:\weather\mrcfiles.txt	c:\WxMesg\FillFile.txt
C:\weather\hipri.txt	c:\WxMesg\RtList1.txt
C:\weather\normal.txt	c:\WxMesg\RtList5.txt
$C:\weather\compress.txt$	c:\WxMesg\RtList9.txt
C:\weather\delete.txt	c:\WxMesg\RtList11.txt
C:\weather\txsked.txt	c:\WxMesg\RtSched.txt

Check all of the setup screens and enter information for your retransmission site.

Note: The 16-bit version processed all priority lists before checking the discard list. WxReTran processes the discard list first, because of this, you may need to change the file names that appear in the discard list.

Note: If you have ??????.TXT in your discard list, no text weather files will be transmitted.

If you use the scheduler, you will need to change the paths associated with the source file and destination priority directory. Failure to do so will cause your schedule to be ignored.

Note: The path "c:\WxMesg\" refers to the directory that you installed WxReTran. If you installed the program in a different directory, use your installation path.

Upgrade from 32-bit version.

To upgrade from the 32-bit version, install WxReTran according to this manual. After installation, copy the following files to their corresponding WxReTran file.

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C:\weather\fillfile.txt	c:\WxMesg\FillFile.txt
C:\weather\prilst0.txt	c:\WxMesg\RtList0.txt
C:\weather\prilst1.txt	c:\WxMesg\RtList1.txt
C:\weather\prilst2.txt	c:\WxMesg\RtList2.txt
C:\weather\prilst3.txt	c:\WxMesg\RtList3.txt
C:\weather\prilst4.txt	c:\WxMesg\RtList4.txt
C:\weather\prilst5.txt	c:\WxMesg\RtList5.txt
C:\weather\prilst6.txt	c:\WxMesg\RtList6.txt
C:\weather\prilst7.txt	c:\WxMesg\RtList7.txt
C:\weather\prilst8.txt	c:\WxMesg\RtList8.txt
C:\weather\prilst9.txt	c:\WxMesg\RtList9.txt
C:\weather\prilst10.txt	c:\WxMesg\RtList10.txt
C:\weather\prilst11.txt	c:\WxMesg\RtList11.txt
C:\weather\prilst12.txt	c:\WxMesg\RtList12.txt
C:\weather\schedule.txt	c:\WxMesg\RtSched.txt

Check all of the setup screens and enter information for your retransmission site.

If you use the scheduler, you will need to change the paths associated with the source file and destination priority directory. Failure to do so will cause your schedule to be ignored.

Note: The path "c:\WxMesg\" refers to the directory that you installed WxReTran. If you installed the program in a different directory, use your installation path.

7.2 Interface Specifications

WxReTran communicates with your external modulator/modem to send the EMWIN data. The following RS232 connections should be made, depending on your interface.

RS232 Pin	Description
2	Transmit data – Outgoing EMWIN data
4	Request to Send (RTS) – Push to Talk (PTT)
7	Ground
20	Data Terminal Ready – Power for modulator

WxRetran will set the DTR line high when the program starts. The DTR line can be used to supply power to the modulator. The RTS line goes high when the program wants to transmit data. The program will wait a user definable amount of time after switching the PTT on before transmitting data. This will insure that the transmitter has adequate time to come up.

Morse code, used for radio identification, is generated by turning the PTT on and off. If your modulator/modem does not support identification by this method, external circuitry will be required.

The modulator will need to be connected to your transmitted. See the modulator instructions for installation specifics.

Note: If you plan to transmit EMWIN data at all times, you will need a continuous duty transmitter. A continuous duty transmitter is rated for this type of service. Ordinary transmitters do not have adequate cooling for continuous service. Consult your local two-way radio dealer for information.



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