



# **Emergency Managers Weather Information Network (EMWIN)**

## **Overview For the Denver Area**

**Skywarn Systems Inc.  
Raymond Bartik**



## *Frequently Asked Questions*

### **Q: What is EMWIN?**

EMWIN service is provided by the National Weather Service for Emergency Managers.

### **Q: How much does EMWIN service cost?**

EMWIN is distributed free. There is no monthly fee for its use.

### **Q: How can I receive EMWIN information?**

EMWIN can be received via satellite or by rebroadcast, if available in your area.

### **Q: Is VHF rebroadcast available in the Denver area?**

Not yet, but the Urban Drainage and Flood Control District and local Emergency Managers are working on a plan to implement it in the near future

### **Q: What do I need to receive EMWIN rebroadcast information?**

You will need a VHF receiver, a demodulator, software, and a Windows pc. You may also need an external antenna for proper reception.

### **Q: My computer is old. Will it work for EMWIN?**

EMWIN software uses a small amount of resources. A 100 MHz pentium class **Windows** pc with 128 MB of RAM will work



## *Frequently Asked Questions (cont'd)*

**Q: As an Emergency Manager, if I can receive EMWIN, is that all I need?**

EMWIN is a good source of information, but any source can fail during severe weather. Power can be interrupted, phone lines can go down, and internet connections can fail. EMWIN provides a reliable source of immediate information not dependent on local phone lines or the internet.

**Q: What do I need to be properly prepared for severe weather events?**

The National Weather Service recommends multiple sources of weather information. Weather Radio, EMWIN, internet, television, and radio are all good sources. See <http://www.stormready.noaa.gov/publications.htm> for further information on their StormReady program for cities and counties.

**Q: Who can receive EMWIN information?**

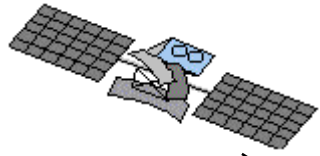
EMWIN is public information available to anyone with the necessary equipment to receive it.



For the techies...



# How EMWIN Data Is Distributed



Data is transmitted from GOES satellite

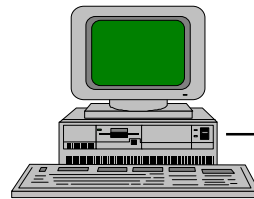


The signal is received using a 3 foot or larger dish antenna.

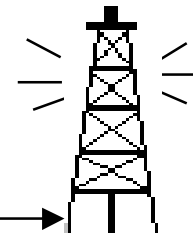
A receiver is connected to the dish antenna to convert the received data for computer use



Satellite Receiver



Transmitter



Output from the computer is applied to a transmitter for distribution throughout an area.



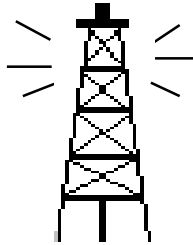
Modulator

A computer uses software to capture data, filter, insert local content and retransmit the data.



# How EMWIN Data Is Received From A Local Transmitter

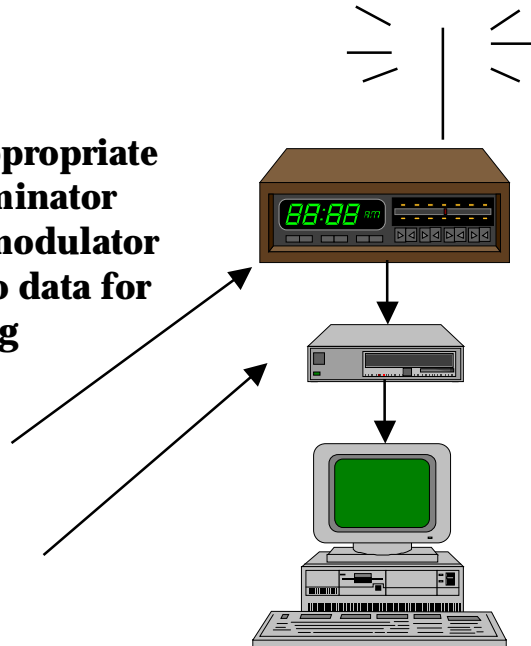
station transmits  
EMWIN data



A receiver is tuned to the appropriate frequency and the discriminator output is connected to a demodulator which converts the signal to data for computer processing

Receiver

Demodulator



EMWIN broadcast frequency:

Primary channel

163.3250 MHz

Your computer uses software to capture and display the data.



# *EMWIN Rebroadcast Advantages*

- **An information source independent of phone lines and the internet**
- **Content is tailored to fit your needs**
  - **Gives priority to local information**
    - **Zone Forecast ( 7 day outlook)**
    - **Hazardous Weather Outlook**
    - **Short Term Forecast**
    - **Tornado Watches / Warnings**
    - **Flash Flood Watches /Warnings**
    - **Winter Storm Warnings**
    - **Civil Emergency Messages (Homeland Security)**
    - **AMBER alerts**
  - **Adds local radar image at regular intervals**
  - **Adds UDFCD text and graphics**
  - **Removes unnecessary weather information from other regions of the country**
  - **Can add text and graphics from other sources**
  - **Emergency Managers may be able to insert their own messages / warnings for local events (gas leaks, derailments, etc.)**
- **Something missing? It can probably be added – just let us know**



# *User Software Capabilities*

*...or...what can I do with all this EMWIN information??*

- **Commonly Requested Features (Windows PC users)**
  - **Information Filtering (get what you need and avoid overload)**
  - **Flexible display of text products- font size and colors**
  - **Programmable alerts**
    - **Distinctive audible alerts when important information arrives**
    - **Pop-up text alerts**
  - **One-click buttons to access frequently-used information**
  - **Get alerts even when away from your desk**
    - **Send information to key users - email, pager, or cell phone**
  - **Extend to multiple users in your office\*\***
  - **Radar loop display**
  - **Zoom feature on graphics**
  
- **Several software packages are available for use**
  - **Prices range from free to \$95 per copy and higher**
  - **Software packages can be combined to provide wider array of features**

**\*\* may require additional software copies**





# **Advanced System Capabilities**

## **• Custom Products**

- Software configuration for your specific needs**
  - reduce start-up time and load on your IT group**
- Automated remote control of lights and audible alarms for:**
  - First responders – fire department, police, EMS**
  - Large buildings – public facilities, schools**
  - Outdoor activities – sports, city festivals**
  - Noisy areas – manufacturing, loading docks, gymnasiums**
- Lightning Detection and display**
- Alerts announced over two-way radio channel**
- Remote management / maintenance/support**
- Do you have a special need not listed? Just ask!**



# Local Text Products

RealEMWIN v1.7 - Custom software from Skywarn Systems Inc.

File Quick Bulletins Add-ins Edit Help

7DAY FCST HAZ OUTLK SHORT TRM SWO MCD WATCHES FLASH FLD SVR STRM TORNADO WNTR STM

Live Filter Log WFO REQUEST Received HWOBOU from KBOU

Local Alarm

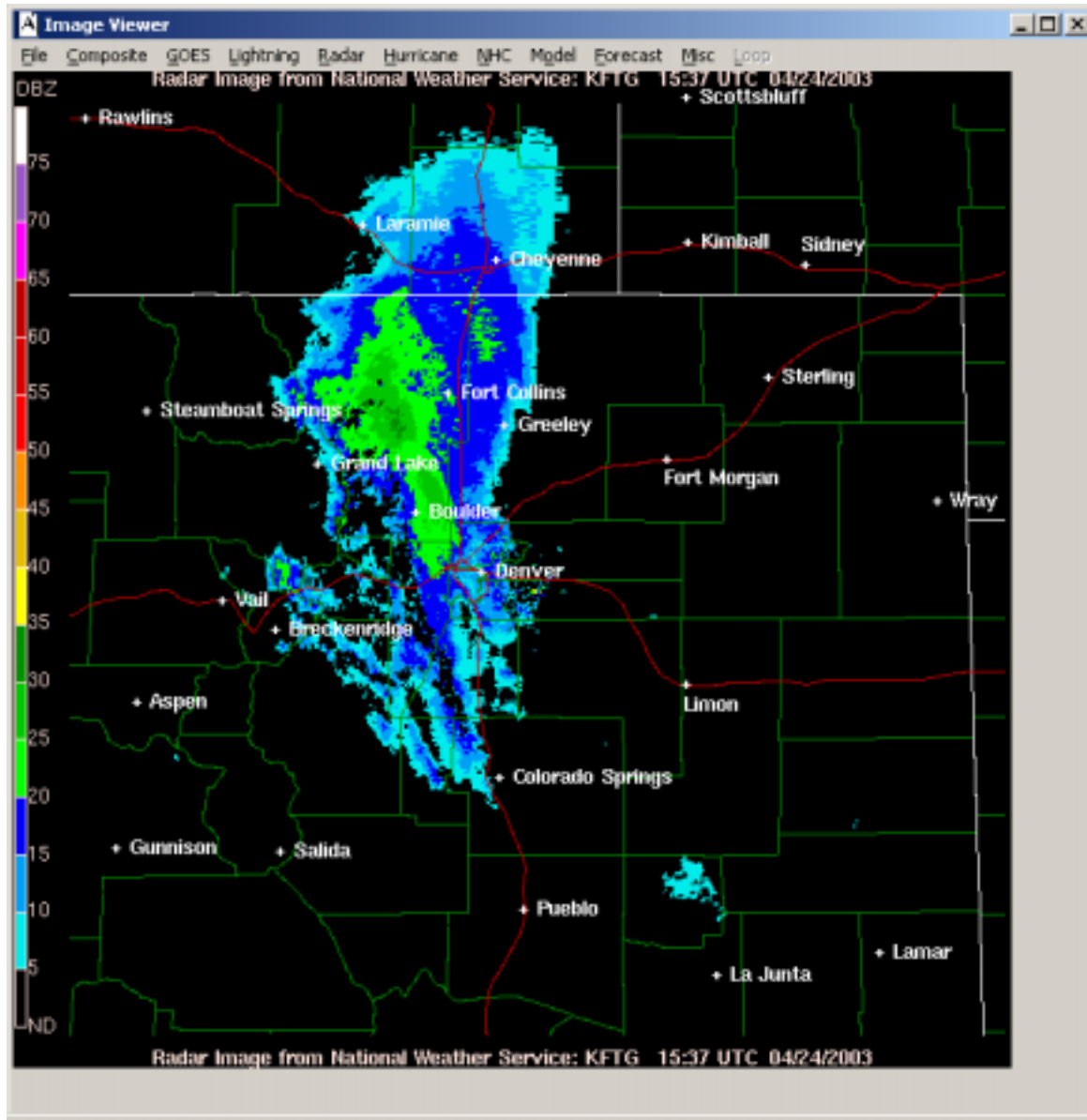
HWOBOU	-KBOU-CO	PLUS45 KBOU 241641
SWRTX	-KFMD-TX	HWOBOU
SWRTX	-KLUB-TX	COZ030>051-251200-
IMGWMAUS	-04241354.GII	
RADFTWIX	-04241354.GII	
RADFTGCO	-04241351.GII	HAZARDOUS WEATHER OUTLOOK
IMGWMAUS	-04241347.GII	NATIONAL WEATHER SERVICE DENVER CO
SVRSHV	-KSHV-IA	1040 AM MDT THU APR 24 2003
SVRSHV	-KSHV-IA	
SVRSHV	-KSHV-IA	
SVRSHV	-KSHV-IA	
RADFTWIX	-04241344.GII	THIS HAZARDOUS WEATHER OUTLOOK IS FOR NORTHEAST AND NORTH CENTRAL
RADFTGCO	-04241340.GII	COLORADO.
SWRTX	-KFMD-TX	.DAY ONE...TODAY AND TONIGHT
SVRSHV	-KSHV-IA	
SVRSHV	-KSHV-IA	
SVRSHV	-KSHV-IA	SNOW IN THE MOUNTAINS...FOOTHILLS...AND PALMER DIVIDE AREA WILL BE
SVRSHV	-KSHV-IA	DIMINISHING WHILE RAIN SHOWERS ON THE PLAINS ALSO TAPER OFF DURING
SVRSHV	-KSHV-IA	THE AFTERNOON. THIS WILL OCCUR AS THE SPRING STORM MOVES EASTWARD
SVRSHV	-KSHV-IA	THROUGH KANSAS. GRADUAL CLEARING CAN BE EXPECTED TONIGHT AS A RIDGE
SVRSHV	-KSHV-IA	OF HIGH PRESSURE BUILDS INTO THE STATE. THIS WILL BEGIN A WARMING
SWRTX	-KEMX-TX	AND DRYING TREND TO THE REGION.
SWRTX	-KEMX-TX	
SWRTX	-KLUB-TX	
SWRTX	-KFMD-TX	
RADFTWIX	-04241334.GII	.DAYS TWO THROUGH SEVEN...FRIDAY THROUGH WEDNESDAY
RADFTGCO	-04241330.GII	
SVRSHV	-KSHV-IA	NO HAZARDOUS WEATHER IS EXPECTED AT THIS TIME.
SVRSHV	-KSHV-IA	
SLSLA	-KLIK-IA	
SLSLA	-KLIK-IA	.SPOTTER INFORMATION STATEMENT...
SLSAP	-KLEK-AR	
SVRSHV	-KSHV-IA	SPOTTER ACTIVATION WILL NOT BE NEEDED TODAY OR TONIGHT.
SVRSHV	-KSHV-IA	
SWRTX	-KFMD-TX	
RADFTWIX	-04241324.GII	\$\$
RADFTGCO	-04241322.GII	
SWRTX	-KEMX-TX	
SWRTX	-KLUB-TX	BARJENBRUCH/046
SWRTX	-KLUB-TX	

Start

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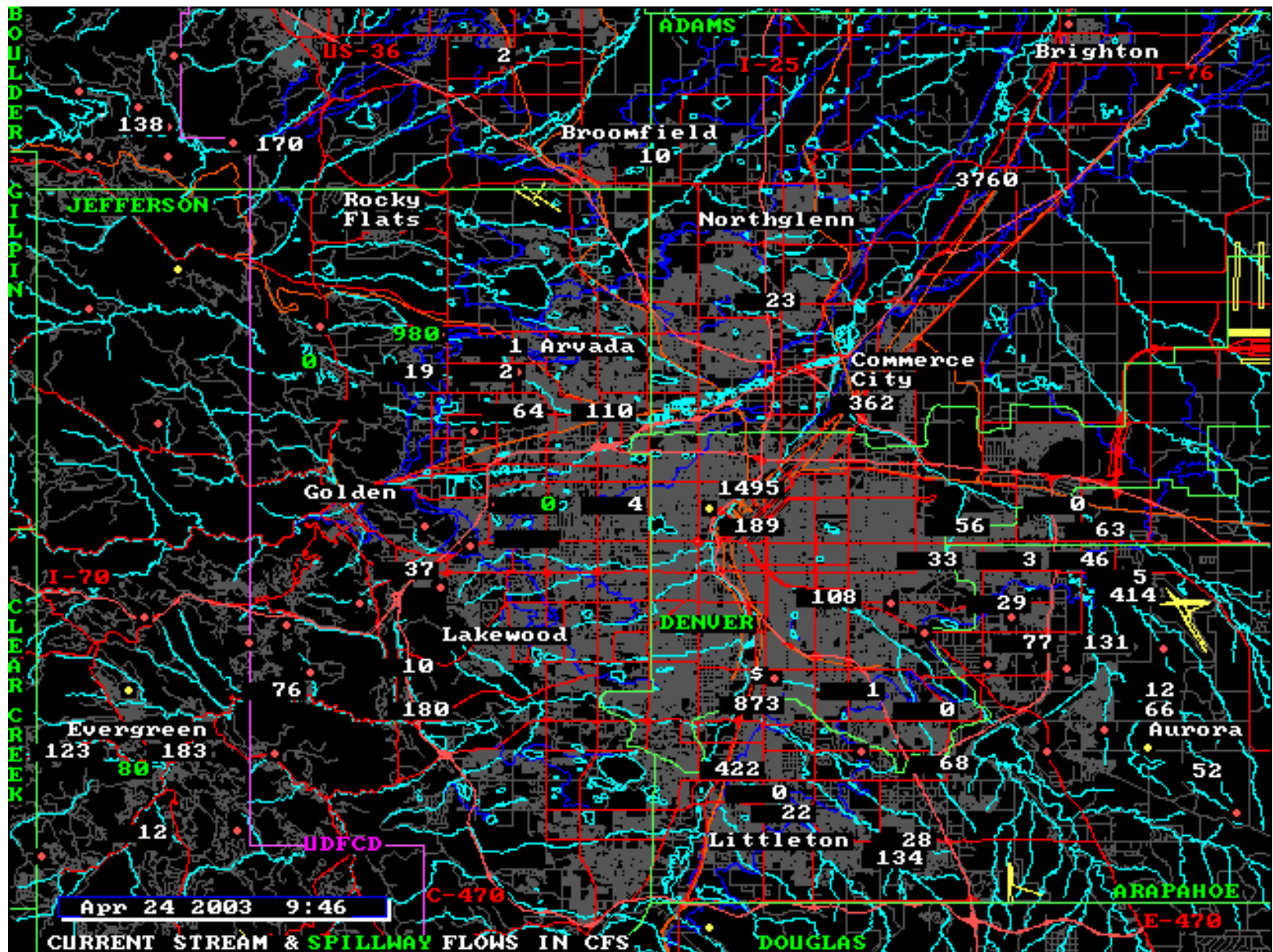


# Local Radar Image





# Local Rainfall /Flood Image





## **USEFUL INFORMATION LINKS**

**National Weather Service (NWS) Central Region EMWIN**

**<http://www.crh.noaa.gov/emwin/>**

**Fort Worth NWS Office EMWIN info page**

**<http://www.srh.noaa.gov/fwd/emwin.html>**

**EMWIN Radio Retransmission Site List**

**<http://iwin.nws.noaa.gov/emwin/winbca.htm>**

**Weathernode 4.0 Software - FREE**

**<http://www.emwin.org/software/WeatherNodeEZ40.zip>**