



Convective Warning Improvement Project

CINWA 2024 Radar Workshop

The Radar Workshop will feature presentations on near storm environments and warning strategies by the NWS Central Region Convective Warning Improvement Project (CWIP). The Radar Workshop will then place YOU into "the hot seat" where you will issue severe weather warnings for a two hour period of radar data from an archived severe weather event that will be sped up 1.5x and condensed into a 90 minute warning session. The radar data is selected from an event located somewhere in the U.S. The event is transposed to the NWS Des Moines, IA (DMX) County Warning Area (CWA) and the time/date is changed to that of the workshop to conceal the case's identity. Instructions and situational awareness including near-storm environment data will be given prior to warning operations. Immediately following the warning session, we will review the event and we will provide you with your statistics, such as POD, FAR, and CSI courtesy of the [Iowa Environmental Mesonet](#).

We will use the program [GR2Analyst](#) (GR2A) to view radar data and a special program called WarnGen (named after the program used by the NWS) to issue warnings.

Point of Contact Information

- Rod Donavon (DMX) - rodney.donavon@noaa.gov

Setup and Install Assistance

- **If you need assistance, please come to the front of the conference room between noon and 1 pm on March 27th!**

Available Support Materials

- [Radar Workshop and GR2AE V3 Support Materials](#)

Guide to GR2Analyst Version 3.xx

- [Complete CWIP guide to GR2Analyst Version 3.xx](#)

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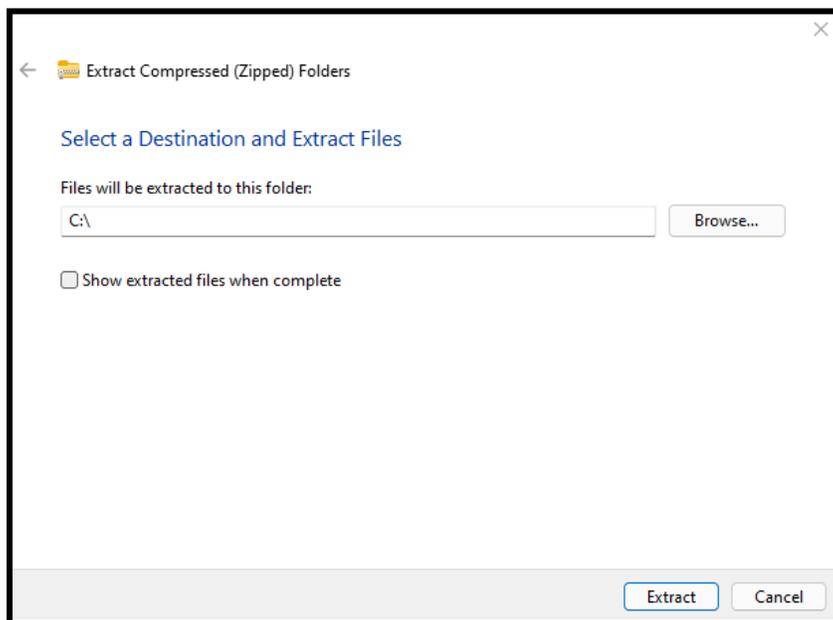
GR2Analyst Version 3 Install: (if needed)

- A 21-day free trial of the program is available at [GR2 Analyst Version 3](#)
- After install, be sure to update GR to the latest version using this update patch
 - [GR2 Analyst Version 3 Update Version 3.2.12](#)
- **Thank you to Mike Gibson for providing a 14 day temporary key**
000020-KWV816-T8G4A0-E2QVK2-58T3HF-AAYBXB-44QN1H-JP2FUJ-5VT1WZ-JGDTNB-0TKM
KD

GR2Analyst Version 3 SetUp for the Radar Workshop

Download the [RadarWorkshop_CINWA.zip file](#).

- 1) Extract the zip file after downloading by right clicking on the file and selecting Extract All...
- 2) Select the Destination as C:\ (this will ensure the setup process works correctly)



“C:\RadarWorkshop_CINWA” which allows for mobility that will not rely on a connection to the office LAN. This structure is designed to support both severe weather operations and external IDSS events. The selected directory location will be available to all users on the laptop/workstation and will allow for user customization without the need for administrative access.

Color Tables	3/24/2024 11:43 PM	File folder	
CWA_Placefile	3/24/2024 11:48 PM	File folder	
GR_WarnGEN	3/26/2024 1:13 AM	File folder	
NSE	3/25/2024 4:36 AM	File folder	
Quick Start File	3/25/2024 5:56 AM	File folder	
Severe Weather Reference Sheets	3/25/2024 5:02 AM	File folder	
User Defined Product Files (UDP)	3/24/2024 11:44 PM	File folder	
customradars.gis	8/28/2023 2:35 PM	GIS File	2 KB
Introduction to GR2A (CWIP).pdf	3/25/2024 5:04 AM	Chrome HTML Do...	8,691 KB
RadarWorkshop WarnGen for GR Quick S...	3/25/2024 5:10 AM	Chrome HTML Do...	1,407 KB

This directory includes:

- **A Quick Setup Registration Files.** Registry “.reg” file for Gibson Ridge GR2AE V3
 - **Note** If you already have GR2AE V3 installed on your laptop and have personalized settings already, DO NOT RUN the **CINWA_RadarWorkshop_Config.reg** file before saving your current .reg file. Please come up to the front for help to do this or proceed to [this section below](#) for instructions on how to create your backup.reg file before proceeding..
 - What does the **CINWA_RadarWorkshop_Config.reg** file do?
 - The .reg file will quickly set up GR2AE settings for new users or new installs of GR2AE.
 - Placefiles needed for the Workshop will be added to the Placefile Manager including Near Storm Environment files, the NWS DMX CWA placefile and placefiles required for the GR_WarnGEN program.
 - KDMX will become the default radar
 - It will also install the “**customradars.gis**” file which includes all radars available including university radars such as Missouri and Western Illinois.
 - What the **CINWA_RadarWorkshop_Config.reg** file does not do
 - Does not set up or overwrite color tables or user defined products.

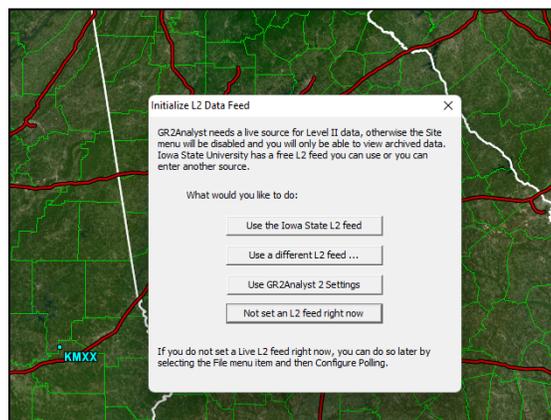
- These files are available in the C:\RadarWorkshop_CINWA directory but GR2AE V3 does not store this information in the .reg files.
- **Color Tables** (Developed by NWS CR CWIP for Convective Use)
- **User Defined Product Files** (see section below)

User Defined Product Files

- The addition of User Defined Products (UDPs) is one of the biggest updates included with GR2Analyst V3.
- These products allow for viewing of data not previously available in GR2Analyst and in some cases, allows for viewing of data not available in AWIPS. A couple examples of UPDs include viewing 65 dBZ at 30 kft, TDS detection and viewing max ZDR at 0 C.
- Limitations:
 - Thermal calculations for the entire area are based on RAP data at a single location only, which is the RDA site. The data may not be representative of the entire area.
 - Due to thermal limitations, the data may not be available for the entire CWA. An example, the lowest radar elevation slice is above the selected thermal layer.
 - The data is single radar and is subject to model data errors and beam height errors due to any refraction.

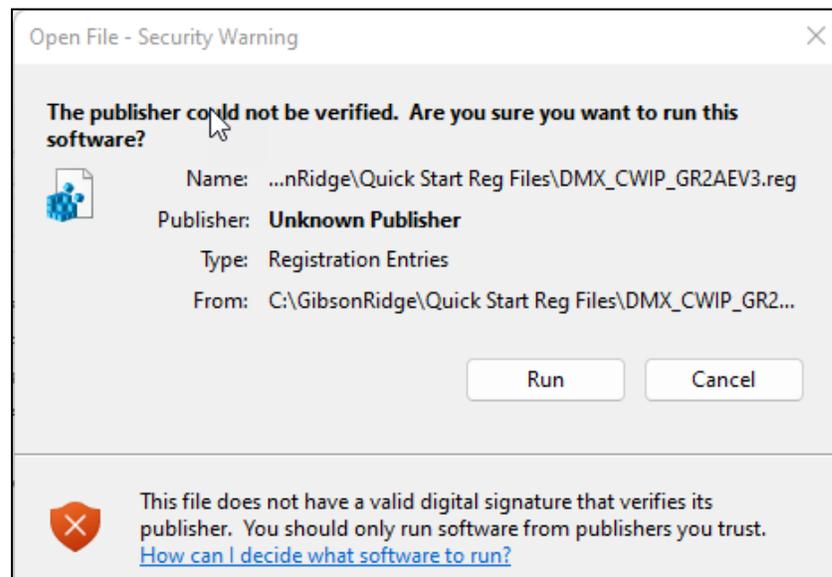
Initial Setup of GR2Analyst Version 3

1. Open **GR2Analyst V3**
2. Setup polling of radar data:
 - a. Open GR2Analyst V3
 - b. Click “Not set an L2 feed right now”

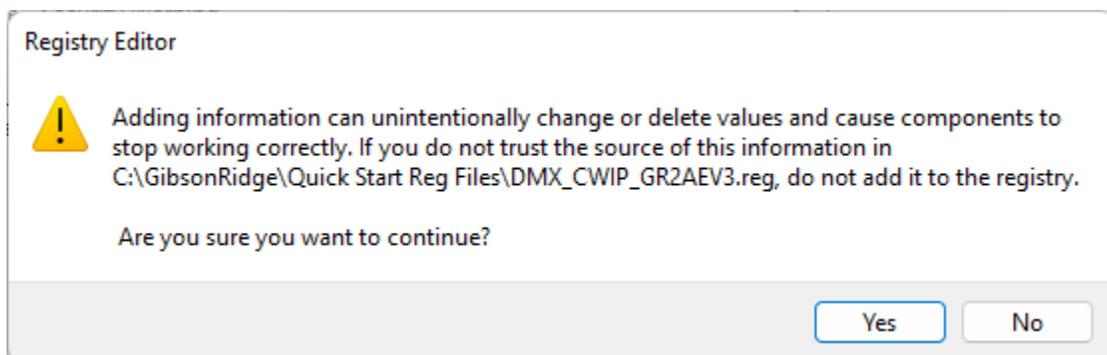


- c. Select “File->Configure Polling”

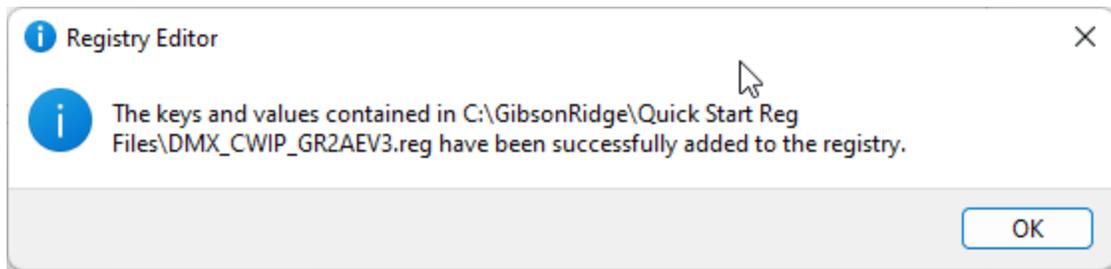
- i. Click “Add”:
 - ii. enter <https://workshop.agron.iastate.edu/level2/>
 - iii. Click “OK”
 - d. Optional for personal use:
 - i. !Click “Add”
 - ii. Click “Use Iowa State Server”
 - iii. Click “OK”
3. Close GR2Analyst V3 - **Make sure you do this before proceeding**
4. Open the Quick Start Reg File Folder at “C:\RadarWorkshop_CINWA”
Please read these steps first before performing



- a. Find the .reg file and double click it, you'll get the prompt below:
- b. Select “Run” - this will cause your screen to change and ask for permission to run



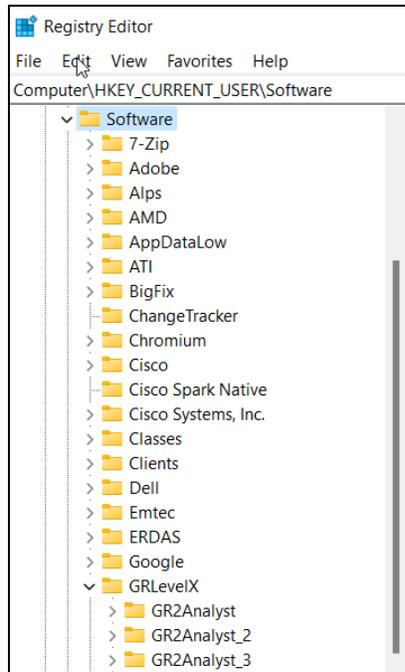
- c. Select Yes



- d. Click OK
5. Optional: **Change radar color tables.** It is recommended to use color tables supplied in the "C:\RadarWorkshop\Color Tables" folder. For example to set up Base Reflectivity:
 - a. You can drag and drop Color Tables from the directory folder into GR2AE V3
 - b. You can also add Color Tables in GR2AE V3 by:
 - i. Under "View -> Color Table Settings"
 - ii. Make sure BR is highlighted and click Change
 - iii. Switch directory location to C:\GibsonRidge\TWIP Color Tables
 - iv. Load in "TWIP_BR.pal"

Creating a Local Registry (.reg) file If you would like to use the quick setup but already have GR2AE V3 settings set.

- 1) Open a Command Prompt
- 2) Type "regedit"
- 3) Proceed to "HKEY_CURRENT_USER\Software\GRLevelX"



- 4) Right click on the file you would like to save GR2Analyst_2 to grab old settings or GR2Analyst_3 to save a current configuration of the new software.
- 5) Select Export and save the “.reg” file
- 6) To run this .reg file, see the reference above [here](#)
- 7) Note, when GR2Analyst is closed/exited, any updates are automatically written to the user registry file (.reg)

Placefile Links to add manually if not using the .reg file

General Site with Everything: <https://workshop.agron.iastate.edu/>
Radar Polling Site: <https://workshop.agron.iastate.edu/level2/>
LSR Placefile URL: <https://workshop.agron.iastate.edu/lsr.php>
Colors Tables: <https://workshop.agron.iastate.edu/tables/>
NSE Placefiles: <https://workshop.agron.iastate.edu/NSE/>

WarnGen Placefile Link:

C:\WarnGEN\placefiles\vertices.txt
C:\WarnGEN\placefiles\warnings.txt

GR_WarnGEN (required for participation in the warning simulation)

- **GR_Warngen:** Is the program we will use to issue simulated warnings
 - [GR_WarnGEN Quick Start Guide](#)
 - There are 2 options to access GR_WarnGEN..
 - The [RadarWorkshop_CINWA.zip file](#) contains a folder with GR_WarnGEN
 - Install instructions are included.
 - GR_WarnGEN Download the latest version of Warngen from: https://www.iowa-nwa.com/conference/files/radar_wkshop/warngen/WarnGENv1.5.5_Setup.exe
 - Instructions for how to install and run Warngen can be found on our webpage at: <http://www.iowa-nwa.com/conference/warngen.php>
 - **PLEASE NOTE:** Several anti-virus programs have been known to flag WarnGEN as malicious software. This is due to the very limited number of users that have installed the program and the small amount of time it is used (one week out of the year). Because anti-virus vendors don't have this program in their database (or enough instances of it to call the program "trustworthy"), it automatically assumes it is a virus.

If you have the option to override your anti-virus program and install WarnGEN, it is recommended you do so. Otherwise, if you can't or don't wish to do so, there will be several physical copies of the WarnGen program on CD for you to install at the radar workshop.