

Mapping System

Setup

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Introduction



GIS / Mapping Icon

This manual describes how to setup the GIS Mapping System.

Work Station Setup

Copy the entire contents of the

`\\Server\RedNMXMap`

to

`C:\RedNMXMap`

where Server is the name of your server. For example, you map source could be

`\\ABCServer\Apps\RedNMXMap`

Please note there will be sub directories in the \REDNMXMAP directory. They include the \ICON directory, and your associated map files.

Mapping Setup

Access the mapping setup by pressing the down arrow to the right of the GIS Icon (Earth). Select the Setup menu choice. This brings up the list of mapping templates. The RedNMX System allows for an unlimited number of mapping themes. Press the new button to add a theme. Enter the following fields.

Field Name	Description	Requirement	Comments	Example
Map Data Code	Code utilized in .INI files.	Required.	Enter a unique code in the space provided.	CHESTER
Description	Description of the Theme.	Required.	Enter the description in the space provided.	Chester County Map Data.
Map Path	Location where ESRI shape files are saved.	Required.	Enter the location of the map data in the space provided.	The standard is C:\REDNMXMAP\ <directory>\ chester="" directory="" example.<="" in="" is="" td="" this="" where=""> </directory>\>
Icon Path	Location where the icons are saved.	Required.	Enter the location of the icons in the space provided.	It is always C:\REDNMXMAP\ICON\
Geo Code Path	Location where the ESRI geo codes are saved.	Optional	Enter the location of the Geo files in the space provided.	N/A
Mapping Type	Mapping Coordinate set.	Required.	Enter the mapping coordinate set in the space provided.	This is done by Alpine personnel.
Meter to Feet Conversion.	Decimal conversion used by coordinate set.	N/A	This is done by Alpine personnel.	This is done by Alpine personnel.
Rendering Layer	Rendering layers is used in the tracking layer to show where you are in the overall map.	Optional	This field is used if you want to use the tracking screen.	Press the button to pick from the directory.
Background Color	Background color of the map.	Optional	The background color is used to spruce up the map.	Press the select button to pick a color.
Starting Latitude and Longitude	Determines where the map will display when you click on the GIS icon.	Optional	Enter the latitude and longitude in the space provided.	To get these numbers, pull up the map and write down the latitude and longitude when you highlight the center of the map. These numbers are displayed on the bottom of the map screen.
Starting Size	Starting size height in miles.	Optional	Enter the height of the map in miles to start.	1.0.
Scale	Scale size for Dispatch, printing etc.	Optional	Enter the scale in miles to display when you select an address.	0.33

Mapping Layers

Select the layers tab to enter additional layers. Enter all layers here.

Field Name	Description	Requirement	Comments	Example
Shape File Setup				
Display Order	Determines when the layers is displayed.	Required	Enter the display order in base 10. This makes it easier to insert a new layers.	10, 20, 30 etc.
Shape File	Actual shape file minus the extension.	Required	Use the select button to access	STREETS
Alias Name	Alias is used if you are going to use the same shape file more than once.	Optional	Default to the shape file name.	STREETSIINNER STREETSOUSER
Description	Verbal description of the layer for displaying on the map.	Required	Also used in the scale on the main map.	Street Center Lines.
Shape Color	Color of the shape or line	Required	Use the pick box.	clblue
Show Range	Show this layer at this mileage.	> 0 and less 10000	Parcels should be shown at lower mileage.	0.5
Shape Width	Width of the line.	> 1	This is the number of screen bits	Enter 1, 2, 3 . .
Shape Label Setup				
Label Field	Field name that holds the label.	Required	Use the pick list.	N/A
Show Label At	Mileage point to display label.	Required	Measurement in decimal miles.	N/A
Label Color	Color of Label	Required	Use the color menu.	N/A
Font Name	Label Font	Required	Use the font menu.	N/A
Font Size	Size of Label	Required	Enter the size.	N/A
Duplicate Labels	Display duplicate labels.	Required	N/A	N/A
Bold Fonts	Display in Bold	Required	N/A	N/A
Labels Only	Display labels only.	Required	N/A	N/A
Rendering and Icon Setup				
Shape Layer Type	Line or point	Required	Select line or point.	Point
Icon Name	Name of the icon found in the icon directory.	Required	Do not put the extension on.	HYDRANT
Rendering Field	Conditional field.	Optional	This field is advanced feature used for showing only one section of the map, ie interstates in the centerline file.	12
Icon Size	Size of the icon in the display	Required	Enter the size or thickness in the space provided.	Recommended 16.

Adding a New Layer

Follow these steps to add a new layer.

1. Copy the map layer to mapping directory. Typically it is called
C:\REDNMXMAP\<Directory Name>
2. Access the mapping setup and select the active mapping template. Edit the appropriate record.
3. Select the **Layers Tab**.
4. Add a new layer. Enter in all of the appropriate fields. View another layer entry to see an example. Be aware of the Display Order. This determines when the layer is displayed. For example, point layers should be displayed last.

Mapping Setup Tips

This section outlines several tips on setting up your mapping system.

1. Display Order.

Map Plotting

This describes how to plot addresses or locations, intersections, and ranges. Accessing the GIS Plotting System is done by:

1. Logon as administrator that has access rights to the GIS Setup function.
2. Press the down arrow next to the Map Icon.
3. Select the **Plotting** choice.

There are five windows found in the plotting system:

Window Component	Description and Function
Query	Allows for the querying of your address database by type, street name and plot date.
Address Selection	Select address to plot.
Address Search	ESRI Search Engine. This window is only available if the ESRI Search option is turned on.
Main Map	Main Map used for local plotting.
Tracking Map	Big picture map to give you a general idea where you are in the area.

Follow these steps to plot an address.

1. Enter in the search criteria in the Query window
2. Select the **View** that you would like to use.
 - **Address View** will show the street number, street name and other address fields.
 - **Location View** will show the site name.
3. Press the Refresh button. This will bring all addresses and locations that match the query conditions.
4. Highlight the address that you want to plot in the property selection window.
5. Point to the Main Map and press the right mouse button. This will bring up a map menu The following table summarizes each function.

Window Component	Description and Function
Resize Mode	Click on Resize Mode to set the left mouse button to Resize Mode. Resize Mode allows access to the resize box by pressing the left mouse button.
Pan Mode	Click on Pan Mode to set the left mouse button to Pan Mode. Pan mode allows the left button to pan the map.
Zoom In	Click on zoom in to zoom in.
Zoom Out	Click on zoom out to zoom out.
Full Map	Click on Full Map to display the entire area.

Find the exact location on the map where you want to plot the address. Use the resize or zoom in function to get to the location.

ESRI Option: Refer to the Map Plotting: ESRI Search Engine for tips on finding a location.

6. Point to the Address Selection window and select the address to be plotted. Press the left mouse button and hold it down. Drag the image to the main map and point to the area that represents the best location of the address. Let go of the left mouse button. This places the address on the map and updates the location with the correct latitude and longitude. Notice how the latitude and longitude changes in the **Address Selection** window.

Removing an incorrect plot

1. Highlight the address in the address selection window
2. Right click and select **Delete Latitude and Longitude**.
3. The plot marker will be removed from the map and the coordinates will be cleared from the latitude and longitude fields of the address record.
4. The address can now be re-plotted, if desired.

Map Plotting: ESRI Search Engine

The Address Search box utilizes the ESRI Web Search Engine. Follow these steps to find an address quickly:

1. Enter the street number, street name, town name, state, and or zip. Town name or zip is usually enough. Or, while highlighting the address in the Address Search box, press the right mouse button. This will bring up the ESRI menu:

Window Component	Description and Function
Load ESRI Address	Select this choice to load the street number, street name, city, state, and zip in the search fields.
Load ESRI Intersection	Select this choice to load the primary street, cross street,
Delete Address	Select this choice to delete the address from the system. You must have deletion rights for addresses.

2. Press the Find button. The RedNMX system will query the ESRI web site for the location of the address. The approximate location will be in the center of the map. Zoom in or resize the map to better approximate the location of address.
3. Repeat the last step and plot the address in the appropriate location.

You can also plot ranges by entering a middle number for the address number. Place the icon in the middle of the range. This location will be used by the dispatch system for address records that are not in your address database, but are found in the range record.

You can also plot intersections by ignoring the ### field, and entering the Street Name and Cross Street fields. The map will display in the center.

Tips on Plotting

The following are tips on plotting addresses:

- Experiment with the **Reposition Map on Address Change** check box. This assists you in starting off where you left off on mapping for a specified street.
- Plot all ranges first.
- Modify the settings in the PROPPLOT to display all points. This will assist in the finding of data in the big picture.

Trouble Shooting Mapping System: Slow Mapping Refresh

This procedure is done if you map take a considerable long time to start or refresh. A long time is defined as more than 10 seconds.

1. Go to a DOS prompt. (Execute CMD in the run command in the windows start menu).
2. Run the UnInstallMap.Bat. This will delete the old mapping setup files.

3. Download the InstallMap.Exe from
Site: www.alpinesoftware.com/download/
User Name: download
Password: 1324
4. Execute InstallMap.Exe
5. Test the mapping system.
6. Delete the UnInstallMap.Bat and InstallMap.Exe files.

Verify if the mapping system operates quickly.

Trouble Shooting Mapping System: ESRI Service Test

Included with the RedNMX System is the ESRI Web Service for getting latitude and longitudes of addresses. This feature requires access to the internet through your firewall. Follow these steps to test the ESRI Web Service prior to utilizing it on your dispatch system:

1. Start the application ESRITEST.EXE found in your \\<SERVER>\REDNMX\UPDATE\ directory.
2. Enter the street number, street name, city and state. Press the Test ESRI Mapping System button. This will attempt to geo code the address you entered.
3. If you get a positive message, **Procedure Worked**, you are good to go. The latitude and longitude fields will be filled in.
4. If you get a negative message, you must start by temporary turning off all fire walls and virus protection software on your network and work station for a few moments. Keep turning services and devices off until steps 1 and 2 return 3. Then repeat steps 1 and 2 as you turn on each fire wall and virus protection service. At some point, you will get a warning or message from any number of products that is blocking the service. This is a very non scientific, yet rather systematic method for determining what is blocking the service.

Please note that there are dozens of fire walls, virus software and other products that can inhibit the operation of this service. The only method we have successfully used it trial and error as explained in this section.

H2M Data Installation

The RedNMX System utilizes ESRI mapping data that is provided to Alpine by either the fire department or a local mapping company. The map data is only as accurate as the mapping files provided. Alpine does not create or maintain the map files provided to us.

Because of the dire need for data, Alpine Software has formed a working relationship with H2M of Melville, NY. H2M provides mapping services to fire districts throughout the northeast. This relationship was developed as many of our customers contract directly with H2M to provide electronic map data that can be easily integrated into the RedNMX system.

Follow the steps below to install H2M map data:

1. Fire District receives most recent ESRI mapping files from H2M.
2. Load in newly corrected shape files onto RedAlert System. Map data should be found in this directory: \\<Server Name>\RedNMXMap. Where <Server Name> is the name of the fire district server on which RedNMX is installed.
3. Start the RedNMX program, click on the globe icon to launch the map.
4. Determine that the map functions properly and check for accuracy.

The following items pertain only to Alpine Software Personnel

5. Shift Parcel files.
6. Plot their addresses.
7. Alpine contacts H2M and get all available data for the selected district.
8. HTM submits files to Alpine.
9. Identify shape palette. This is the shape file that covers the entire district area that is managed by H2M.
10. Identify which shapes are to be management by H2M. Typically these include:
 - Roads.
 - Pavement edges and parking lots.
 - Street center lines with street labels.
 - Points of Interest.
 - Hydrants.
11. Test H2M data with Arcexplorer. Verify usability and accuracy.
12. Determine which shapes are going to be county maintained. Typically these include:
 - Roads.

- Street Labels.
 - Hydrants.
 - Water shapes. Ponds.
 - Water lines. Streams.
13. Copy all layers into the map directory.
14. Modify the setup to incorporate the H2M data. Display in the following order:
1. Display all county data that is going to be modified by H2M. This would include streets, street labels, and hydrants.
 2. Display H2M shape palette. This covers the entire district with one solid shape.
 3. Display H2M and other county files in order of placement. This means place the hydrants last. Typical placement:
 - Pavement Edges.
 - Railroads.
 - Building Shapes.
 - Points of Interest labels.
 - Hydrants.
 - Street Labels.
15. Test by displaying map.
16. Add set up information to Department User Manual.
- Include ordered list of shape display.
 - Identify agency responsible for maintaining each layer (H2M or County).