

Topo USA[®] RacerMate[®] Edition

Building Routes For Use With RacerMate Topo Course Creator

Welcome to Topo USA RacerMate Edition's Simplified User Guide. This document shows CompuTrainer™ or Velotron™ users how to use Topo USA RacerMate Edition to create, profile, and export routes for use with their systems.

This document has been created to outline the functions needed to create a route in Topo USA RacerMate Edition which can then be converted to a course using RacerMate Topo Course Creator. The Topo USA RacerMate Edition Help system and User Guide provide explanations for all of the features and functions of Topo USA RacerMate Edition.

- To access the Topo USA Help system, click the **Help** button  on the title bar and then click **Help Topics**, or press the F1 key on your keyboard.
- To access the Topo USA User Guide, click the **Help** button  on the title bar and then click **User Guide**.

Document Overview

In general, the procedure to create a route for use with RacerMate Topo Course Creator consists of a) selecting the state/region your course will be created from (CD-ROM users need to insert the correct regional disc), b) search for the city or road to begin the route, c) add markers (Start, Finish, Vias) that will direct the route in the direction you need it to go, d) create a profile and bridges if needed, then e) export the data for use with RacerMate Topo Course Creator. Simple, one-way courses may need nothing more than a Start and a Finish, whereas out and back courses that follow more than one type of roadway may need Vias and restrictions added to the road.

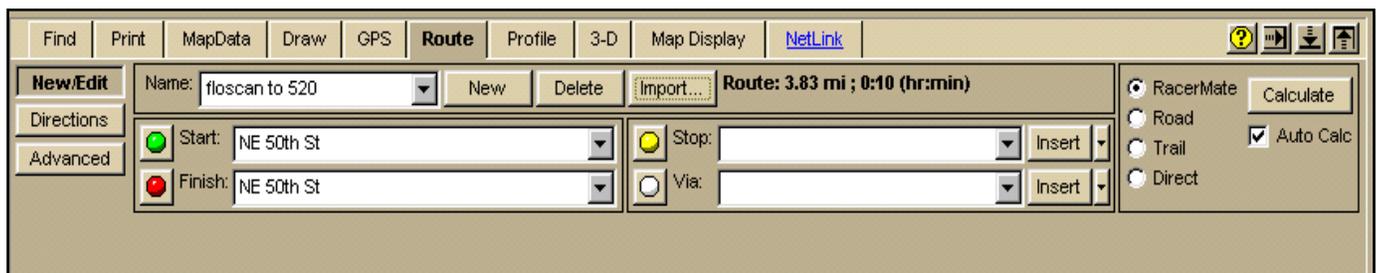
Once a route is completed and profiled, you can export the route data in a format that is used by the RacerMate Topo Course Creator software. The RacerMate Topo Course Creator software is what converts the route data into a course to be used with the RacerMate training systems.

Step 1 - Insert the Correct Data Disc for Your Specific Route Location

Before creating or opening a route, CD-ROM customers will need to insert the appropriate regional data disc into their CD-ROM drive. The states included in each disc display on the front of each data disc. DVD-ROM customers can insert their single DVD-ROM data disc into their DVD-ROM drive for access to all 50 states.

Once the desired disc is inserted, you can either create a new route or open an existing route. Note: If the incorrect regional disc is inserted into your CD-ROM drive, the route may display, but there will be no topography information. Insert the appropriate disc to correct this situation

To create a new route or open an existing route, click the Route tab and then click on the New/Edit button found on the left side of the tab area (see figure below). If this is a new route, click the New button, type in the name for your route, and then skip to the next section. If you want to open an existing route, click the Import... button and select the route from the list (by default these are located in the DeLorme Docs\Navigation folder). Once selected, the pre-existing route will display in the map window. Routes have RTD file extensions.



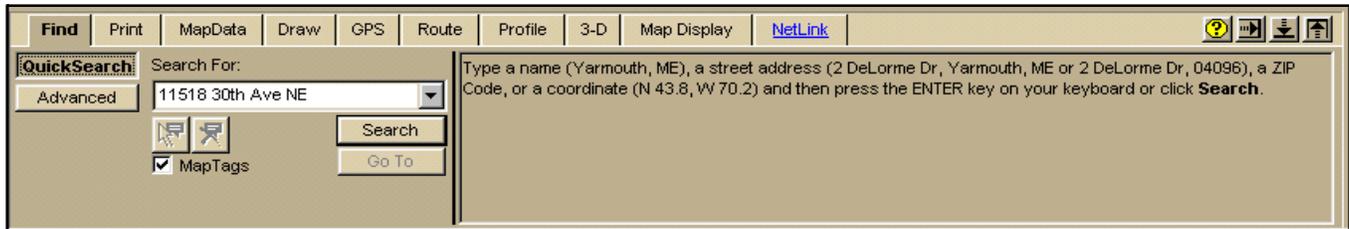
Route Tab

- The Route tab is where 75% of the work is done in creating new routes, or accessing routes already created. Three main areas are found in the Route tab area can be selected by clicking the New/Edit, Directions, or Advanced buttons found to the left of the Route tab screen. Of these three, only the New/Edit and Advanced screens will be needed for routing a course for use with RacerMate products.

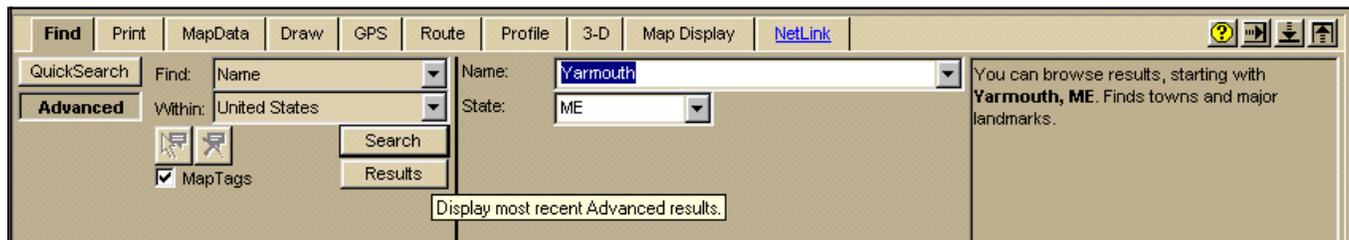
Step 2 - Finding a Specific Location

There are two Find options (QuickSearch and Advanced) you can use to search for locations and other map items in Topo USA RacerMate Edition.

- **QuickSearch** – Searches for places, addresses, Zip Codes, and coordinate positions.
- **Advanced** - Control *what* you are looking for using the **Find** field, and *where* you are looking for it using the **Within** field.



QuickSearch Menu



Advanced Menu

If the QuickSearch menu does not return any results that match your inquiry, the Advanced menu will automatically display. The Advanced menu allows you to perform more detailed searches by controlling *what* you are looking for, via the Find field, and *where* you are looking for it, via the Within field. For more information, see the Find section in the Topo USA RacerMate Edition Help topics/User Guide.

Step 3 - Laying Out Your Route

When you have located the spot you want to start your route from using the Find tab, click the Route tab to begin laying out the “track” that will become your route. Topo USA RacerMate Edition lets you lay out the track in various ways. In general, if you are following roads, you should use the RacerMate Route type as shown in the Route tab. This route type is the most accurate routing tool for following the center of the known roadway.

In some cases, you may want to divert from a roadway and go off-road, or there may be changes (added roads, trails turned into roads, etc.) that you will need to account for in your route and for these you would use the other road types, or the Draw tools to accomplish this. For information on using these advanced features, see the Topo USA RacerMate Edition Help System/User Guide.

Step 4 - Creating a Route Using the Route Tab

By now you should know the route you plan to make. If this route is known to you from having driven or ridden the course, then make sure you know where to start and where to end.

As we continue, you will be asked to insert or add markers throughout the route to direct the route in a direction you want it to go. The DeLorme software automatically calculates the route using these markers, and other advanced features to keep the route on course. Certain roadways may be selected by the software (using the auto-calculate feature) that you would prefer to avoid. We will address this issue in Step 5.

Important: When creating a route, it is important to zoom into the map as closely as possible (15-0) to ensure that your start, finish, stop, or via points are in the location you intended. You can zoom in to the map using the Compass Rose (see image) or the drag and zoom tools (for more information on drag and zoom, see the Help system or User Guide). You can zoom out when needed, but stay zoomed in for adding markers.



Compass Rose

Creating a Route Using the Route Tab - *continued*

1. Click the Start tool  and click the spot on the map where you want to begin your route.
OR
(Advanced users) Type the start location in the Start text box or use the right-click Create Route feature.
2. Click the Finish tool  and click the spot on the map where you want to end your route.
OR
(Advanced users) Type the finish location in the Finish text box or use the right-click Create Route feature.
3. To add a stop, click the stop tool  and click the point on the map where you want to add a stop. The stop, along with a sequence number, is added or inserted at the item location.
OR
(Advanced users) Type the stop location in the stop text box or use the right-click Create Route feature.
4. To add a via, click the Via tool  and click the point on the map where you want to add a via.
OR
(Advanced users) Type the via location in the Via text box or use the right-click Create Route feature.

Notes:

- **Adding** a Via or Stop between the Start and Finish point causes the route to follow the vias in the order they were added to the route causing the route to perhaps double back on itself, adding distance. You would use the Add option when a turn-around is needed when the Start and Finish markers are at the same point. For building “out and back” RacerMate courses, this is the most common Via or Stop to use.
 - **Inserting** a Via or Stop between the Start and Finish point inserts a new point for the route to follow. When you insert a via, it is arranged geographically in the route. For building “looped” RacerMate courses, this will be the most common type of Via or Stop to use.
 - When using Vias or Stops, they should not be placed in the middle of street intersections, but instead should be placed directly in the center of the road past the intersection in the direction of travel.
 - Before using the Via and Stop buttons, make sure the Insert/Add button shown to the right of the text box is set to the desired type.
 - You can place Start, Finish, Stop, and Via markers by right-clicking the map where you want them to be placed, click Create Route, and then select the appropriate action (see figure at right).
 - Stops, if used, are more for the mapping portion of Topo USA than the course building function. With RacerMate courses, you need a Stop at least once every 75 miles. Stops are added to the Directions list, whereas Via's are not.
5. Select the type of route you want to calculate (draw) between your Start and Finish points.
 - **RacerMate**—Calculates your route following the exact shape of the road (paying special attention to hills and valleys).
 - **Road**—Calculates your route for optimized speed.
 - **Trail**—Calculates your route along the closest trail(s).
 - **Direct**—Calculates a straight-line route.
 6. Click **Calculate**. Your route displays as a yellow line, outlined in red. It remains active until you add another route.
OR



Right-click feature set

Note: Inactive routes (old routes located near the current, active route) display as gold lines with a dark red outline.

Tip: See the Route section in the Help system or User Guide for information on editing roads and setting routing preferences.

Step 5 - Making the Route Go the Way You Want It To.

Some routes may go down a road you'd prefer to avoid. For instance, the route may choose to send your route down a road that happens to be a freeway (and you'd likely never ride your bike on the freeway), or you are trying to follow the exact route of a bike race. Topo USA RacerMate Edition includes a few ways to modify your route when it goes astray. These include:

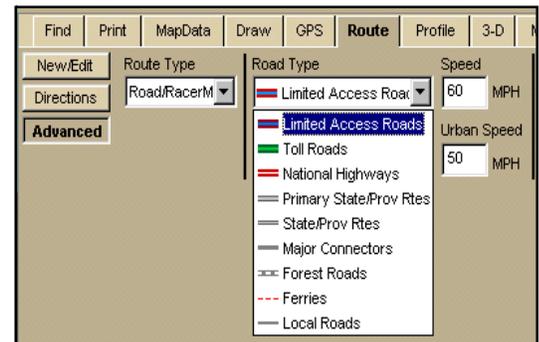
- Via placement
- Road Types and Road Type Exclusions
- Road Section Exclusions

Via Placement

Via Placement is the most common method of directing a route. You can use as many Vias as you'd like to tell the route to go *this way* and not *that way*. Vias operate one of two ways, so be sure to experiment with "adding" a Via as opposed to "inserting" a Via to see how each react. The difference between Insert and Add is described on the previous page and in the glossary.

Road Types and Road Type Exclusions

There are many Road Types stored in Topo USA RacerMate Edition software (see figures at right). Each of these road types have a speed and preference (level) that can be applied to them. To access these Road Types, click the **Advanced** button in the Route tab and then click the **Route Prefs...** button. If you know your routes will never take you onto an Interstate Highway (Limited Access Roads), you can tell the software to "Avoid" this type of road. If you plan to use only local roads, you can set this type of road to Preferred, and set all others to "Avoid", or some to "Avoid" and some to "Standard." The road types are displayed on the Map in the same way as shown here.

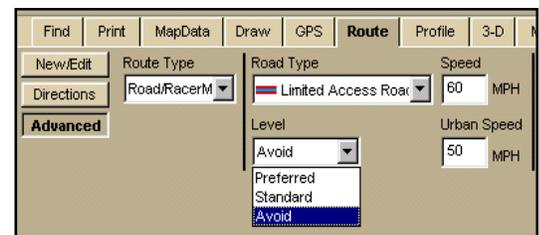


Road Types

Road Section Exclusions

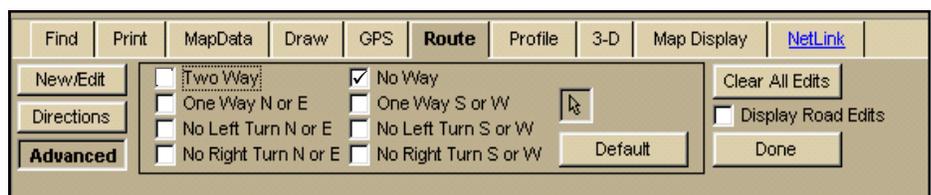
Placing Vias and designating Road Type Exclusions may still include a road you want to avoid. For cases such as this you can use the "No Way" option to select a road section and tell the software to avoid that section of road at all costs. In other words, tell the software in "No Way" will you ever use that road section.

To use Road Section Exclusions, click the **Advanced** button on the Route tab and then click on **Edit Roads**. This will open the Edit Roads display (see figure at lower right).



Road Type Exclusions

To exclude a section of road, click the select tool  and then move the mouse pointer over the map. The mouse pointer will turn into a section of road with two dots on the ends. Click the section of road to highlight it (it will change color) then select the **No Way** check box. Then, click



No Way!

Done. Other advanced functions are available, as shown, but for routing courses this will likely be the only one you'll use. Exceptions to this might be to change a roadway that is a one way street (for cars) into a two way street to allow the route to go in either direction. This would apply to races that allow bikes to go opposite the "One Way" direction.

Please Note: If everything listed above fails to provide you with an accurate route, refer to the Topo USA RacerMate Edition Help system or User Guide for more detail, or contact DeLorme for further assistance.

Step 6 - Create a Profile of the Route

Use the following steps to create a profile.

1. Center the route you want to profile on the map.
2. Click the **Profile** tab. With no current profile, the Profile dialog area displays text containing tips on using the Profile feature.
3. Move your pointer over the map. The pointer changes from a  to a  when it passes over an object that can be profiled.
4. Select the route on the map to generate its profile. When the object is selected, it is highlighted and the Profile graph is calculated and displays in the Profile dialog area.

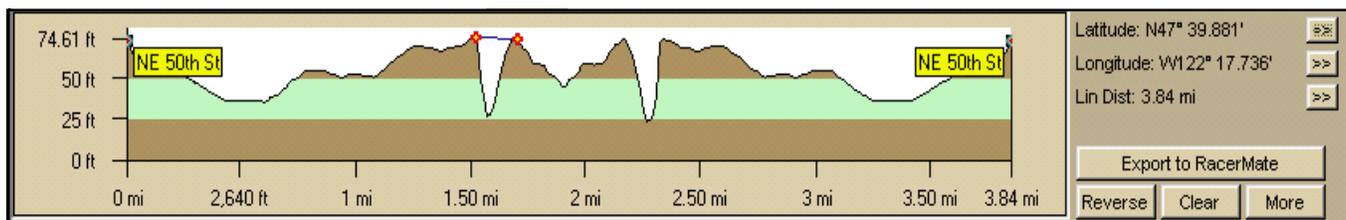
Notes:

- You can move your pointer along the elevation profile in the Profile graph. You will notice the intersection of the vertical and horizontal blue lines travels along the top of the terrain profile. These lines indicate the height (as shown below the Compass Rose) and distance (as shown in the Profile tab) of the particular location. A small crosshair follows along the corresponding object on the map.
- By selecting the More button in the bottom right corner, this will open a second profile display that can be used to zoom in on the profile to better add bridges or to select an Export zone. To change the zoom level, grab (right-click and hold) the purple bars and drag them toward the center of the profile.

Step 7 - Adding Bridges to Your Profiled Route

Use the following steps to adjust the incline/decline of a section of your profiled route.

1. Create a route.
2. Create a profile.
3. Move your pointer along the elevation profile. The intersection of the vertical and horizontal blue lines travels along the top of the terrain profile. These lines indicate the height and distance of the particular location as you move along the graph.
4. Find the location on the profile graph where you want to place the start point for your bridge. Right-click that point and select **Mark Bridge Start** from the shortcut menu. The start point displays as a yellow diamond, outlined in red, on the profile graph. **Note:** Once you have allocated a start point for your bridge, the **Clear Bridge** option is available from the right-click shortcut menu.
5. Find the location on the profile graph where you want to place the finish point for your bridge. Right-click that point and select **Mark Bridge Finish** from the shortcut menu. The finish point displays as a yellow diamond, outlined in red, on the profile graph. The bridge displays as a thin, dark-blue line between the start and finish points on the profile graph.



Bridge Added

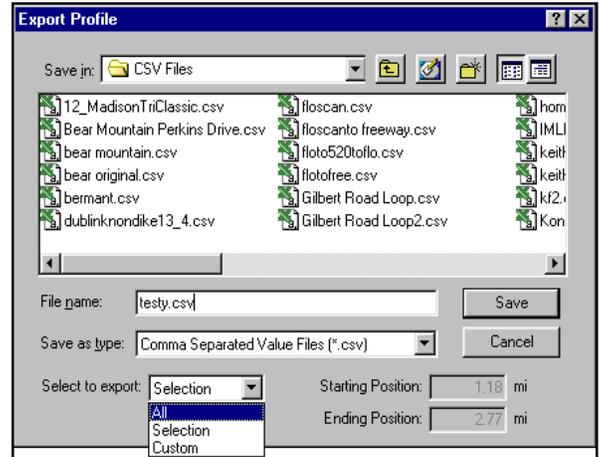
Important Notes on Bridges:

- Bridges are real time markers, which means when you exit the Profile tab area the bridge markers will disappear. There is no way to save Bridge Markers with the course.
- The best way to add bridges is to put them in **AFTER** you have analyzed the course once without them in the RacerMate training software. Run this bridgeless course in Demo Mode (in the 3D software) and start making a list exactly where bridges need to be -- based upon both graphic display as well as the grade display. After you have a list that says between miles x.x and x.x and between miles y.y and y.y (etc.) bridges should be inserted, you can reload and re-profile the route, moving the cursor over the profile at exactly these mileage points to add the bridges. This will assure you will not miss any bridges causing you to have to redo the whole course just because you forgot one bridge.

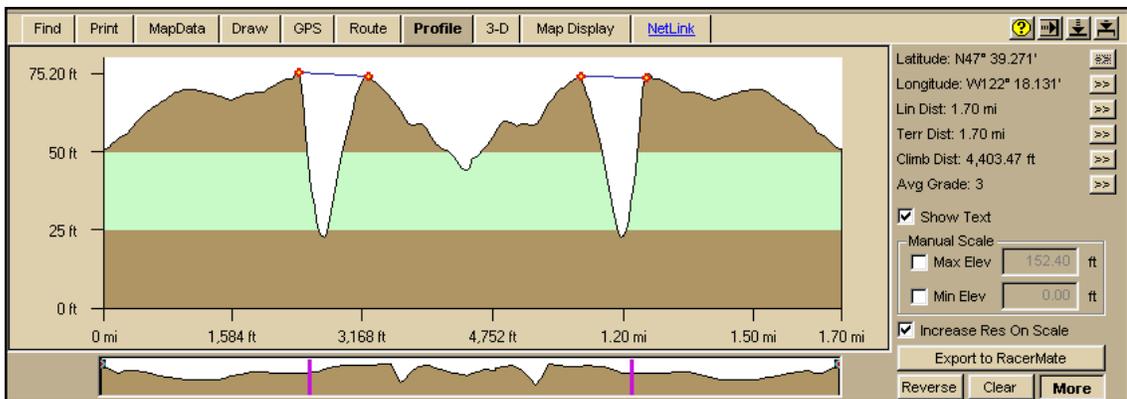
Step 8 - To Export a Profile

Use the following steps to export a profile.

1. Create a profile and add bridges if necessary.
2. Click **Export to RacerMate**. The Save As dialog box displays.
3. Select the location where you want to export the file to (the default location is set using the RacerMate Topo Course Creator software Preferences Menu and should be set to *C:\Program Files\TopoCC\CSV Files*).
4. Type a name for your .csv file in the File Name text box.
5. Verify that the “Save as type” is Comma Separated Value Files (*.csv).
6. Choose the *Select to export* type as follows:
 - **All** selects the entire profile as shown.
 - **Selection** exports the area between the purple bars in the Zoom profile as shown in the image below (using the More button, zoom function).
 - **Custom** activates the Starting and Ending Position requestor boxes to allow you to choose a Starting and Ending Position (see the Export Dialog image).
7. When your selections are made, click **Save**. The .csv file can now be opened by the RacerMate Topo Course Creator software.



Export Dialog



Profile with “More” and “zoom” selection enabled

Notes:

- The setting that determines where the DeLorme software will export the .csv file (used to create either the .crs or .3dc file used within training RacerMate software) is changed in the Preferences menu of the RacerMate Topo Course Creator software. Select Edit Preferences within Topo Course Creator main menu and for the Delorme Export Option type the path *C:\Program Files\TopoCC\CSV Files*.
- The RacerMate Topo Course Creator software is needed to convert the CSV files into either CRS files for Challenge PC1 or 3DP files for CompuTrainer or Velotron 3D. Please refer to the user guide found on the Topo Course Creator CD-ROM for step-by-step instructions for converting CSV files into courses.
- The advanced Export features (shown in step 6 above) are available only with the latest version of the Topo USA RacerMate Edition. If your version does not contain this feature, you can download it from computrainer.com. The update patch is also found on the latest copies of the Topo Course Creator software installation CD.

Other Important Functions...

To Display only Certain Route(s) on the Map

Topo USA automatically displays all of the routes you create in the current project. However, you can choose to display only certain routes.

1. In the Route tab, click **Directions**. The Route Directions dialog area displays.
2. In the Route window on the left, select the check box of the route you want to display and then click **Go To**.

OR

Double-click a route in the window on the left.

- There are projects and there are routes. These are not the same. A project can contain many routes and these routes -- if selected -- will display on the map. These can clutter the map when adding new routes within a project.

To Save a Route Without Exiting the Application

When you change the project you are currently viewing, by adding a new one or opening an existing one, you are prompted to save the route(s) on the current project. Click **Yes** to save your route(s).

To Save a Route When Exiting the Application

When you exit Topo USA, one of the following dialog boxes displays.

A **Save Changes** dialog box displays if only one item was edited, such as Project1.

- Click **Yes** to save any changes to the item.
- Click **No** to discard changes to the item.
- Click **Cancel** to return to Topo USA. Changes are not saved.

An **Exit** dialog box displays if more than one item has been updated. All updated files are listed and are selected by default.

- Click **Save and Exit** to save any changes for the selected files and close the program. Clear the check box of any item you do not want saved prior to using this option.
- Click **Exit without Saving** to close the program without saving any file changes.
- Click **Cancel** to return to Topo USA. No files are saved.

Glossary

Auto Calc - A setting to automatically calculate the route as changes are made. See Calculate for further information.

Bridge - Feature added to the Profile tab to bridge a canal or river, or to be used as a means to fill in or take away from the profile. Can also be used as a tunnel to plow through the side of a mountain to the other side.

Calculate - The action used to plot the route based upon the placement of road markers (Stops, Vias, etc.).

CD-ROM customer - Topo USA RacerMate Edition user who has 6 CD-ROM discs to cover the 50 U.S. states.

Compass Rose - Tool used to zoom in, out, and about within the map. Consists of zoom buttons and movement buttons.

Draw Item - Information added by the end user to allow Topo USA to route over areas not previously shown. Examples would be new roads not yet shown on a DeLorme map, or off-road bike trails created by the end user.

DVD-ROM customer - Topo USA RacerMate Edition customer who has 1 DVD-ROM disc to cover the 50 U.S. states

Export Path - The setting that determines where the Topo USA RacerMate Edition CSV file is exported to. This is set within the RacerMate Topo Course Creator software Preference menu.

Finish - Marker that determines the ending point of the route. When added to the same location as the Start marker, the route will either be a loop or an out and back course.

Profile - The side profile view of the route data.

Profile tab - This area is used to create the profile. Adding Bridges and Exporting to RacerMate occurs on this screen also.

RacerMate Topo Course Creator - Software used to create courses from exported profiled routes created in the Topo USA RacerMate Edition Software.

Regional Disc - Disc containing information for one or more of the 50 states in America. Either 6 CD-ROM or 1 DVD-ROM disc is used with Topo USA RacerMate Edition.

Road Type - Examples are Interstate highways (Limited Access Roads), Toll Roads, Local Roads, Etc. Any variety of road types can be found in any route, but certain road types can be excluded from a route forcing the route to use a different type of road if possible to reach the Finish marker.

Route - The information used to create a profile used to make a course. Can include draw items or actual road information.

Route type - Determines the type of route that will be used for the course. These include, RacerMate, Road, Trail, and Direct. RacerMate should be used for most, if not all, RacerMate courses.

Start - marker that determines the beginning point of the route.

Stop - used to direct the route. A marker that when *inserted* will send the route though it toward the next VIA, STOP, or FINISH marker. When *added* will follow in the order placed to possibly send the route back on itself for use as a turn around. Stops are added to the Directions list, whereas Vias are not.

Topo USA RacerMate Edition - Software developed by DeLorme for use with RacerMate products to generate data needed to create courses. New features added to accomplish this are exclusive to this product and RacerMate was given exclusive rights to sell this product.

VIA - used to direct the route. A marker that when *inserted* will send the route though it toward the next VIA, STOP, or FINISH marker. When *added* will follow in the order placed to possibly send the route back on itself for use as a turn around.

Zoom Level - There are two zoom functions. One is found in the Compass Rose and is used to zoom in on a map for ease of marker placement. The second is found on the secondary profile.

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Topo USA RacerMate Edition by DeLorme
Topo Course Creator by RacerMate

