**TrackViewer/RaceTools Track Map Instructions**

The map portion has been rewritten in the off-season at the request of the IRL for them to use in Race Control. The same code is used for the RaceTools product. The new track map code is a little cleaner and more efficient, but functions similarly to the old version. There is a little optimization and some cosmetic changes. Here is the information on the mapping portion of the software.

You can obtain trackmaps at:
http://www.rtsoftdev.com/maps/

Please download the maps and unzip them before starting the application. When the program launches for the first time, it will prompt you for the map to load. The software will save this information for subsequent launches. The next thing to do is connect to the MLP data stream. Access the File/Connect T&S menu item and it will prompt you for the Timing and Scoring IP Address and Port Number. This will also be stored for future reference and the software will automatically try to reconnect when it is launched.
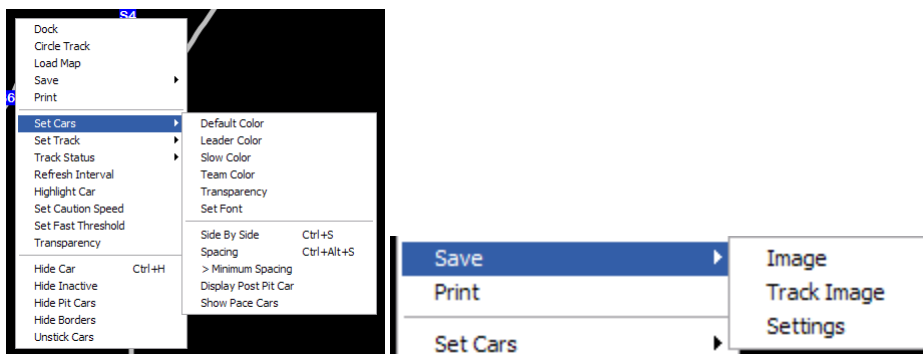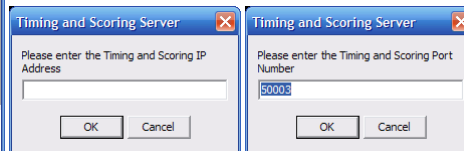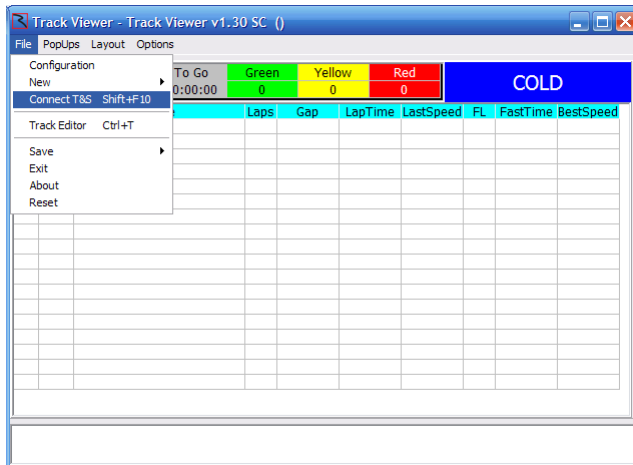
Dock/UnDock will dock or undock the track map to the main program window. The TrackViewer program will always launch in undocked mode.

Circle Track will replace the track map with a circle, useful when no trackmap is available but you still want to have a relative reference to where cars are in the lap.

Load Map will replace the existing map with the map selected. You can select either the *.csv or *_Pit.csv file. The '_Pit' portion will be ignored. The two files represent the on-track and in-pit versions of the track map. There may be one set for Practice and Qualifying and one set for Race layouts, depending on the venue.

Save Image will save the track map as is. Save Track Image will save just the track map (background).

Save Settings will save the current program configuration. This automatically occurs when you exit the program.

Print will print the current track map.

Set Cars/Default Color sets the default background color for the cars (dots) on track.

S**et Cars/Leader Color** sets the session leaders color.

Set Cars/Slow Color sets the background color for cars on outlaps during non-race sessions and lapped cars during race sessions.

Set Cars/Team Car sets the background of the 'Team' or Highlight Car. This is useful it you wish to monitor a specific car.

Set Cars/Transparency sets the transparency of the dots. I recommend a setting of 75% to be able to see behind the dots but keep the dots highly visible.

Set Cars/Set Font sets the Car Number font, including size and color.

Set Cars/Side By Side toggles whether to render the cars in side-by-side mode, which offsets cars in three rows. P1 is track center, P2 is to the right, P3 is to the left, P4 is track center, etc. This helps if cars are running close together to space them out so that they are legible.

Set Cars/Spacing toggles whether to keep cars from completely overlapping each other, especially at timelines where they might stack up.

Set Cars/> Minimum Spacing sets the space to keep cars apart.
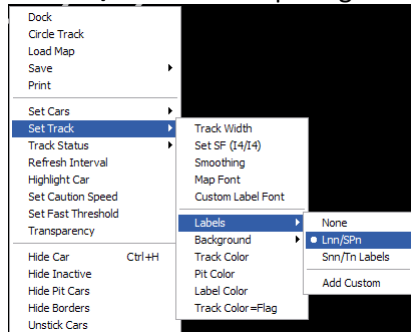
Set Track/Track Width sets the how wide to draw the track map. The pit lane will be half this width.

Set Track/Set SF sets the Control Lines to use. This information is stored in the track map but may be overridden if necessary. Normally this would be SF/SFP except for when an alternate SF line is used, as in the example where it is I4/I4.

Set Track/Smoothing sets the number of meters to between polygon points. I usually use 10-20 for a smoother track. This maybe changed in the future to tag the appropriate control points in the track map file instead of using fixed distances.
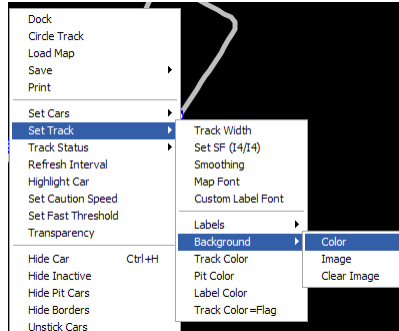
Set Track/Map Font sets the font use to render timeline and section labels.

Set Track/Custom Label Font sets the font to use to render the custom labels.

Set Track/Labels/None removes both timeline and section labels.

Set Track/Labels/Lnn/SPn renders the logical sections and traps (sections) labels

Set Track/Labels/Snn/Tn Labels renders the timeline labels

Set Track/Background Color sets the track map's background color.

Set Track/Background Image loads and sets the track map to use that image.

Set Track/Background Clear Image clears the background image, using just the Background Color.

Set Track/Track Color sets the default color to render the track.

Set Track/Pit Color sets the default color to render pit lane.

Set Track/Label Color sets the color to render the track labels.

Set Track/Track Color=Flag toggles whether to replace the default Track Color with the flag color. The track color will always change when the track is Red or Yellow.
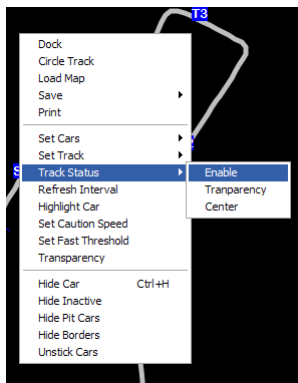
Track Status/Enable enables the track flag on the popup track map.

Track Status/Transparency (not working yet)

Track Status/Center centers the track flag in the window. You move the flag by dragging it in which case you will not want it to be centered.

Refresh Interval is the number of milliseconds between updates. I recommend 100ms to create smooth path. More than 100ms and the animation becomes jerky and less than 100 ms does not produce a substantial difference and less than 50 ms tends to create jitters.

Highlight Car selects the car to highlight. The Highlight Car (or Team Car) is rendered with the Team Car **Color** and is always rendered on top of the other cars to ensure it's visibility.

Set Caution Speed sets in mph the default speed to use for caution periods.

Transparency sets the popup window's transparency in case you want to overlay it on top of another window.

Hide Car allows you to manually remove a car from being displayed. The car will be reinserted if it crosses a timeline so you don't have to unhide a car that re-enters the race.

Hide Inactive toggles whether to automatically hide cars that have not crossed a timeline in more than one laptime. Cars will be re-enabled once they hit a timeline.

Hide Pit Cars toggles whether to render cars in pit lane. This may be useful during practice and qualifying to keep the display cleaner.

Hide Borders toggles the window border for full frame mode.

Unstick Cars resets the car's position in case the software becomes confused with where to render the car and locks them in a specific location. It may take a lap for this to be resolved.

To rotate the map, hold down the CTRL key and click-drag the map. You can rotate the map by 45 degrees by double clicking the trackmap.