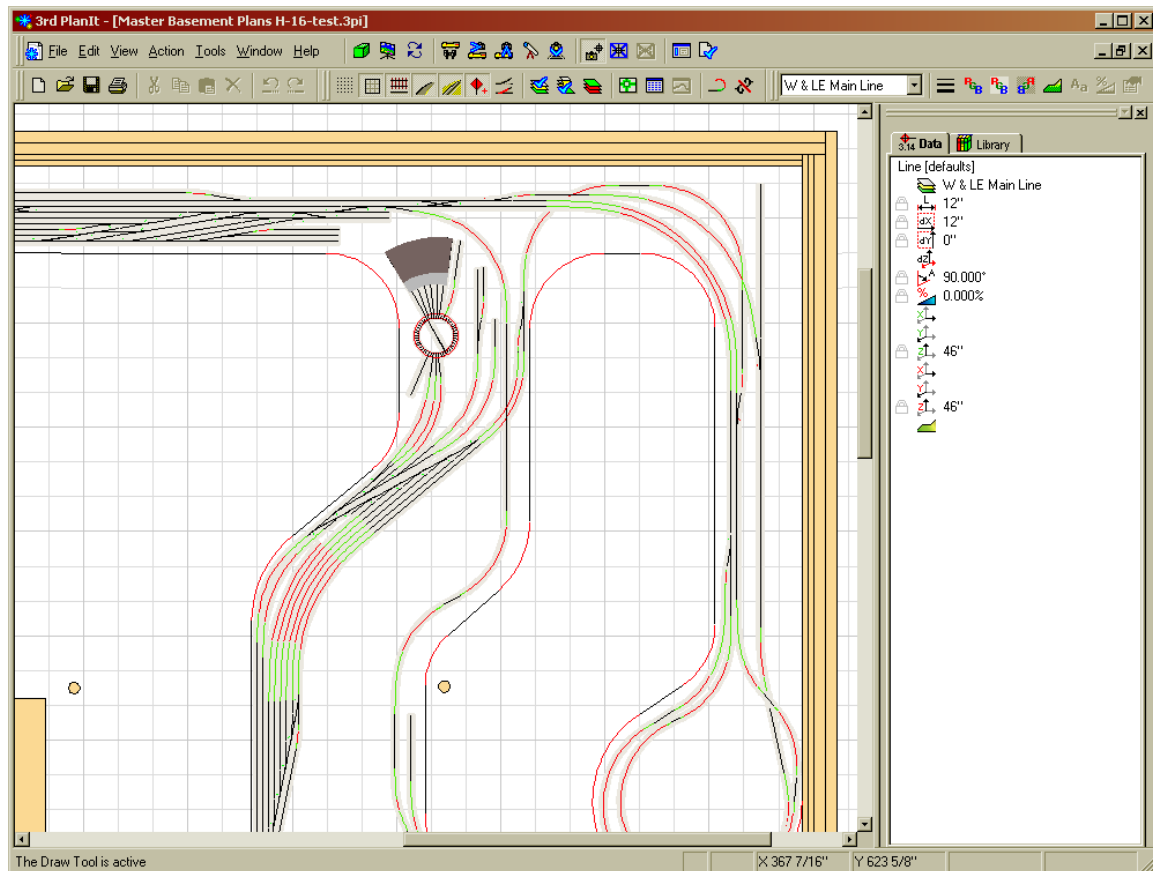


New features in 3rd PlanIt version 8

3rd PlanIt version 8 introduces new capabilities throughout, to make your track planning more productive, entertaining, and goal-driven. While introducing many powerful new features, version 8 is a logical, refined extension of version 7.



Overview

In this view of the 2D track-planning mode, you can see the typical 3rd PlanIt drawing area to the left. The right window has changed from version 7, and now has a tab for the Object Data Window and another tab for the Object Library. Now you can see all object data on almost any size display, and quickly change to a large, easier-to-use Object Library.

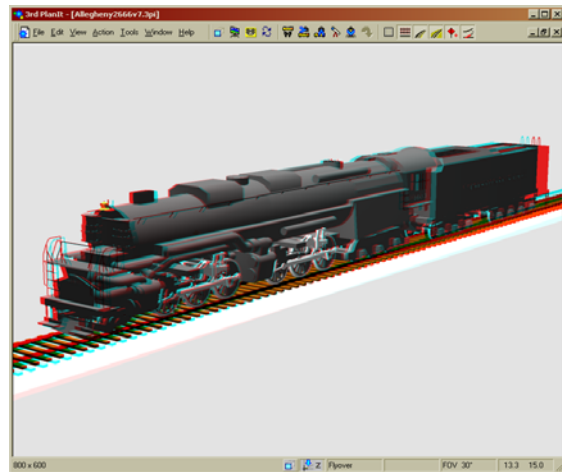
You can also see the menu bar contains toolbar buttons to the right of the menu selections. This handy feature reclaims unused space, giving you more customizable buttons to speed your editing. In fact, all off 3rd PlanIt's toolbars are now customizable, and you can add your own custom toolbars, as well (**Tools / Customize**). There are more functions assigned to hot-keys, and you can also change 3rd PlanIt's default assignments and create your own hot-key assignments (**Tools / Shortcuts**). 3rd PlanIt's icons have been updated for improved recognition and differentiation.

3D Viewing

3rd PlanIt now has a new, high-speed 3D rendering and simulation system. Its mathematics now take advantage of hardware resources on the computer's video subsystem to improve performance. You can use the new "Flyover" mode to explore the layout in 3D, easily and smoothly navigating just by moving your mouse. Just press and hold the left mouse button when you're in 3D and move the mouse away from you to advance. Left / Right and Forward / Back are available at the same time. To move Up / Down, press the Right Mouse Button while still holding the left.

You can now view 3D in both Anaglyphic and Stereographic displays to simulate a true "pops out of the screen" 3D effect. As shown to the right, anaglyphic 3D works with red/blue glasses (or green/magenta). You can reverse the display to match the left/right color arrangement of your glasses.

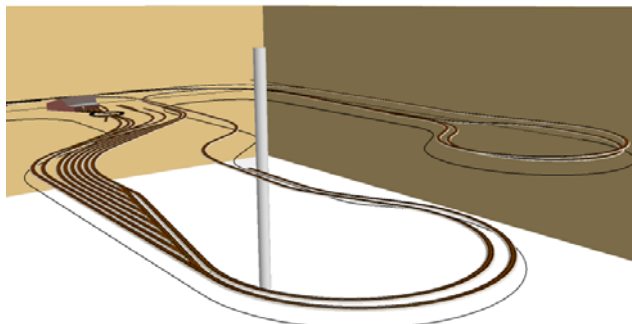
Anaglyphic 3D can be used while trains are running, as well. This can provide very compelling views as you follow your train around the layout.



You can also display a dual-image stereographic view of your plan. As shown below, two images appear side-by-side. You can print stereo views for viewing with a stereograph, or you can view the display real-time using selectable parallel or cross-eyed direct viewing.



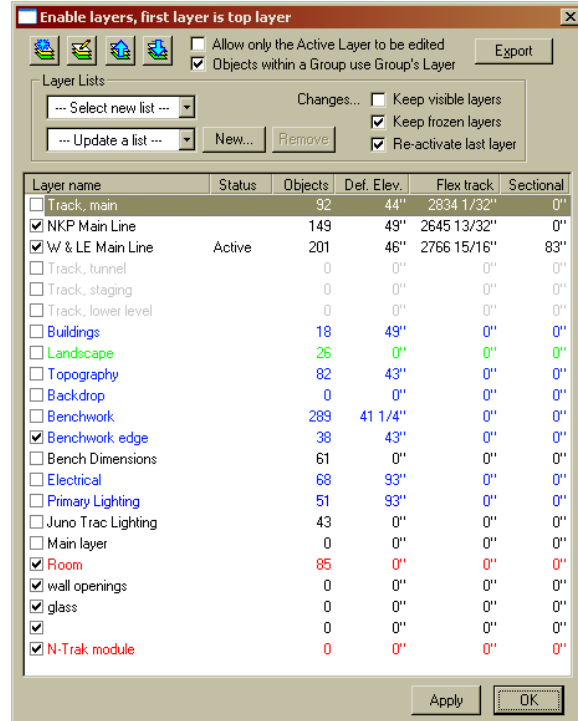
3D is also more pleasing to view, thanks to panning effects. If you right-click railroad car, the camera pans smoothly to the new object. Superelevation can be simulated, so the rolling stock tilts around corners in the same manner as the prototype. You can make animated AVIs of what you watch directly. Most importantly, 3rd PlanIt's fast, detailed rendering of your layout lets you check your results for clearance, esthetics and operations capability before you start to build it.



Enhanced Layer Capabilities

The new Layer Enable Dialog is shown at the right. **Layer Lists** let you control the visibility of several layers at the same time. This is important for multi-level designs, as each level requires several layers. Now you can conveniently turn more than one layer on or off with one command. The layer list can be exported in CSV format for evaluation in other programs.

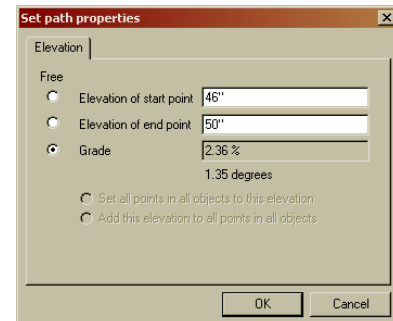
Each Layer now has more attributes. One important change is providing a default elevation for each layer. Using version 8, if you switch to the Staging Track layer and design some new track, it will be at the default staging track elevation. When you switch to the Branch Line layer, the default elevation will be appropriate for track in that layer.



In versions 7 and 8, **Ctrl+D** opens the Layer Enable Dialog. In version 8, **Ctrl+Shift+D** opens the Modify Layer dialog. Superelevation is controlled by layer, the maximum coupler angle and whether it should be observer or not, and whether track should be followed by rolling stock in simulation.

Elevation and Grades

Along with the ability to set default elevations by layer, version 8 has enhanced management of grades when connecting objects. Connecting track of differing elevation distributes the change in elevation smoothly along all the track objects affected by the connection. The elevation dialog now displays the grade in degrees as well as percent.



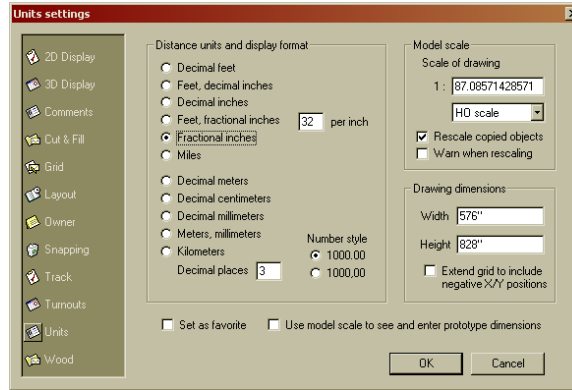
Quick Consist Building

Now it's fast and easy to create long consists, coupled and aligned to the track. Simply select the track to start on. In the object library, click the first locomotive to be added. It will be put onto the track at the location you clicked. To build the rest of the consist, click the back of the locomotive. Now, each time you click a piece of rolling stock in the library, it will be coupled to the end of the previously added piece. Each new piece will follow the track around bends, letting you build large, mixed consists easily.

Updated Settings and Options Consoles

The new Settings and Options consoles, a sample of which is shown to the right, are arranged for better visibility and improved layout.

Version 8 offers a greater number of options to customize its appearance and operation to your taste. This new layout is designed to provide easy, logical access to the option you're looking for.



File Import and Export



3rd PlanIt version 8 is fast enough to allow you to import and render in real-time, complex designs available for download via the Internet. You can import and export **DXF/DWG R13/14** files, and you can import **3DS** files. The F18 was a free 3DS download. Pivot points allowed it to become a locomotive traveling along invisible track. Superelevation creates a realistic banking effect. DXF/DWG and 3DS are included at no extra cost.

You can now e-mail and 3rd PlanIt files directly by selecting **File / Send**. CSV file imports now recognize the Z dimension.

Object Editing

Objects can now be aligned top/middle/bottom and left/center/right, and evenly spaced along each axis. Alignment can be based on first selected object or all objects. Objects can be mirrored along each axis. You can select objects with a qualifier: rolling stock, bitmap trees, and objects with errors. Unnecessary vertices can be removed from polygons. You can paste into the same location from which objects were originally cut/copied, and paste objects directly into groups (at their original locations).

Window Control

New window controls make the most out of your display space. You can switch to a true Full Screen display in both 2D and 3D, using every pixel for planning. You can set the window's view of your drawing to a specific size, as well as selecting from a list of common sizes such as 640x480 and 800x600. This helps you prepare an AVI that uses file space most effectively.

Color selection by Paint Type

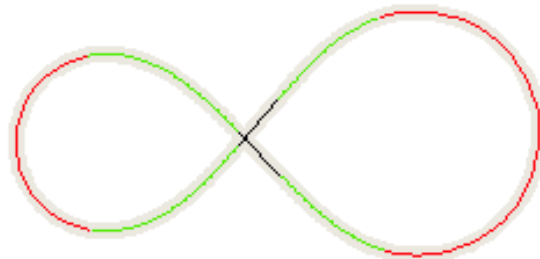
Now you can select colors based on the specific paint you'd like to simulate. Choose a color either by name and see the color, or by color and see the name of the color. Here are a few of the available selections:

- Accu+paint
- Badger Modelflex Railroad
- Floquil Classic Railroad Enamels
- Federal Standard colors
- Lifecolor Paints
- Model Master
- Pactra
- Pantone
- Tamiya
- Vallejo



More Flexible Transition Curves

Version 8 changes the mathematics of the transition curve from a Cubic Spiral to a Clothoid. The Clothoid matches the Cubic Spiral to 8+ digits of precision, yet can be calculated to greater lengths, more quickly and flexibly. The Clothoid is now the formula of choice when prototype railroads in the US, Europe, Japan and all over the world design their most modern, high-speed track.



Files created by earlier versions of 3rd PlanIt will have their easements changed to Clothoids when you open them. The resulting Clothoid-based easement will be exactly the same as in previous designs. However, it isn't possible to migrate Clothoids backwards to version 7 compatibility, as longer, more versatile easements can be drawn in version 8.

Faster, Smaller Files

Files now load and save faster and take less space due to improved storage techniques. Also, 3rd PlanIt now offers an Auto-Versioning system that optionally generates a version-numbered file name each time you save a file. It maintains an inventory of a specified number of versions of each file, removing older versions to keep the count proper.

Getting Started with Version 8

If you know version 7 of 3rd PlanIt, this review of the changes gives you what you need to be ready to enjoy version 8. If you're new to 3rd PlanIt, there's a new Tutorial for version 8 available now. Updates to the remainder of the manual will be posted as they are completed.

Everyone associated with the release of v8 wishes you happy planning and enjoyable model railroading!