

# Controlling the View

SpinFire Ultimate gives you several options for controlling how a model is viewed, but first it is important to distinguish between shifting your view of a scene and moving the contents of the scene itself. You can think of your view as looking at a model through a remote-controlled camera: rotating, panning, or zooming the point-of-view moves the camera, but the contents of the scene remain stationary. The focus point of your view and center of rotation will always be at the center of your viewport.

SpinFire Ultimate also has commands for moving a 3D assembly itself. See [Assemblies and Parts in a 3D Scene](#) for more information.

## View Features

### Rotate, Pan, and Zoom

The commands for manipulating your view of a 2D document are **Pan** and **Zoom**. **Pan** is the default mouse mode for 2D documents.

The basic commands for manipulating your view of a 3D model are **Rotate**, **Pan**, and **Zoom**. **Rotate** is the default mouse mode for 3D documents. The center of rotation is in the center of the viewport.

See also [Keyboard Shortcuts](#).

### Zoom Menu Commands

Located on the [zoom](#) menu (accessed from the 3D Document toolbar or by right-clicking the scene background), these commands give you flexibility in setting up and changing your view.

- **Zoom Fit** - Pans and zooms to fit the entire model within the viewport.
- **Zoom Window** - Pans and zooms to fit only the selected area within the viewport.
- **Preset Cameras** - Quick access to Standard View settings. (See below.)
- **Focus on Part** - Pans and zooms to fit only the selected part within the viewport.
- **Focus on Point** - Pans to position the selected point in the center of the viewport. The center of the view is also the center of rotation.
- **Surface Normal** - Pans and zooms to fit only the selected surface in the center of the viewport. Model is rotated so view is perpendicular to the surface.
- **PMI Annotation** - Pans and zooms to fit the selected PMI annotation in the center of the viewport.
- **Annotation Plane** - Pans and zooms to fit only the selected plane within the viewport.

### Standard Views

SpinFire Ultimate provides a set of Standard Views for a 3D scene. Preset camera views (Default, Front, Back, Top, Bottom, Right, Left, Top-Right, Bottom-Right, Bottom-Left, Top-Left) can be selected from the Zoom menu or the [Views](#) browser pane.

2D Standard and Cross-Section (if sectioning is enabled) views are accessible from the [Views](#) browser pane.

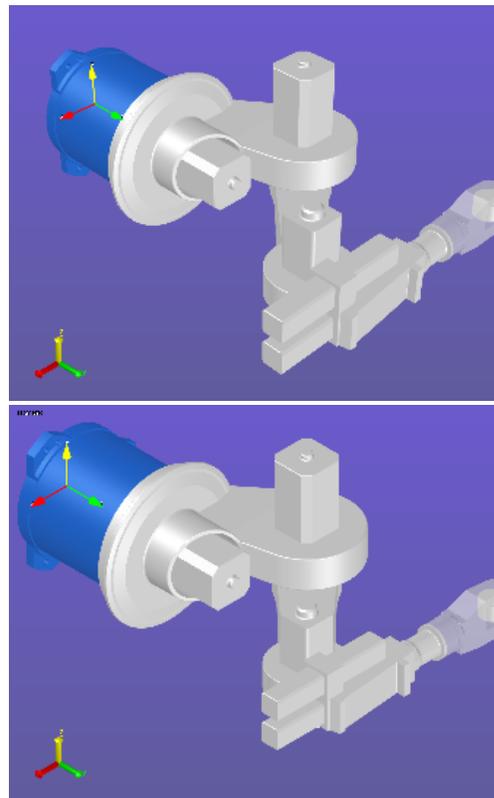
### User Views

#### Quick Links

[Working with Views](#)

## Perspective and Parallel Projection

SpinFire Ultimate uses two kinds of 3D projection to display an assembly: *perspective* and *parallel*. Perspective projection displays the model in a realistic manner, the way the object appears to the human eye. This way of drawing, however, can create distortions. Parallel projection maintains an accurate scale for the model—lines remain in proportion, parallel lines remain parallel. Parallel projection is very common in technical drawings and is widely used by mechanical draftsmen and engineers. You can switch between perspective and parallel projection by clicking the projection icon in the [3D Document Toolbar](#).



The default projection option can be set on the [3D Viewer](#) settings page.

## Multiple Viewports

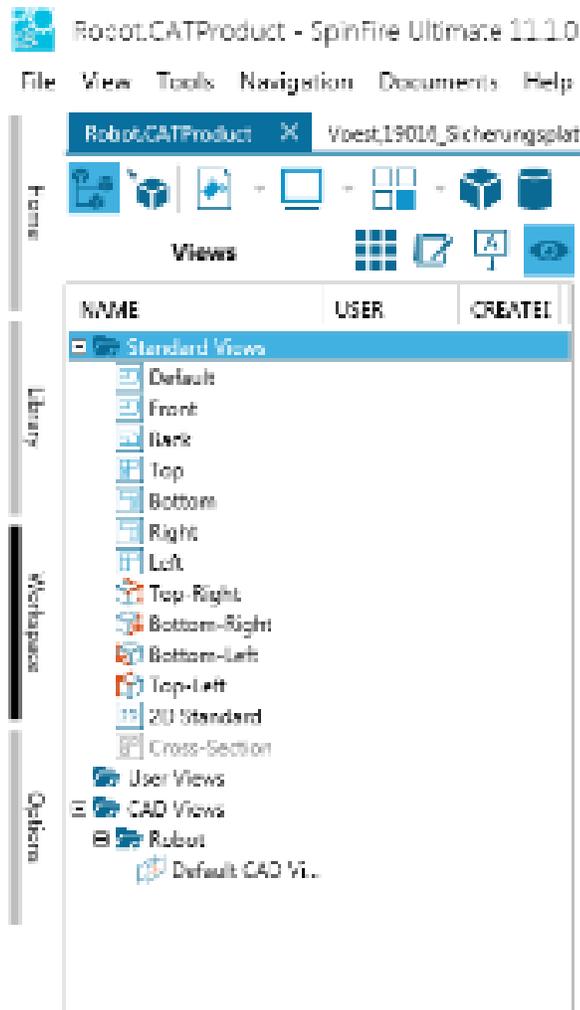
SpinFire Ultimate allows you to look at multiple views simultaneously. You can split your viewport into as many as four different viewports. A viewport configuration can be very useful when, for example, you want to look at your 3D assembly from a planar view and, at the same time, keep an eye on the whole 3D shape.

- **4 Viewports** - Four equal-sized viewports
- **2 Horizontal Viewports** - Two equal-sized viewports, side-by-side
- **2 Vertical Viewports** - Two equal-sized viewports, one above the other
- **3+1 Viewports** - Three small viewports on the left of the workspace, one large viewport on the right

A *user view* is a custom view of the 3D scene that has been (named and) saved by a user. User view information is saved in the Actify .ACT3D file. You can add a user view or access saved user views from the **Views** browser pane. A user view may be selected as the "startup view," which is displayed when the file is opened.

A user view may consist of just the camera position (user's point-of-view), or it can also include part rotations and translations that are specific to that particular view. For example, you might perform a rotate or translate command on a part in your assembly and apply that rotation or translation to one of the user views. The part transformation will not be included in the assembly, but will be saved as a named user view.

A user view can include the camera position, geometry information, markups, and cross-section position. (See [Working with Views](#).)



## CAD Views

Native CAD files may contain more than one view of the model. SpinFire Ultimate will import these views and allow you to use them, however, you cannot change or add a new CAD view.

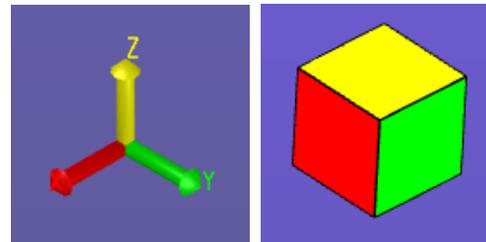
SpinFire Ultimate creates a Default CAD View that resets the camera to the view of the CAD model when it was initially opened.

You can work with the models in each of the viewports just as you normally would. By default, one of the viewports will contain the same view you were viewing, while the other viewports will contain standard views. You can easily resize the viewports by dragging the separation borders with the pointer.

You can set the default projection for the 4 Viewport layout (1st angle or 3rd angle) on the [3D Viewer Settings](#) page.

## Orientation and Navigation

In a 3D scene, a coordinate frame (or axis triad) indicates the origin point (0,0,0) of a coordinate system and the direction of the x-, y-, and z-axes. In SpinFire, every scene displays the *global coordinate system* and may contain user-defined coordinate systems as well.



In addition, the *navigation cube* can help you quickly determine from which perspective you are viewing the model: top, bottom, left, or right.

You can control the default settings for the global coordinate system and the navigation cube on the [3D Viewer Settings](#) page. You can show/hide coordinate systems in a particular scene on the [Markups Browser](#) pane.