# **Setting Up a New Project**

# SPECTRA PRECISION SURVEY OFFICE

# TUTORIAL



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## About this tutorial

In this tutorial, you will set up a new project, select various project settings, and save the project as a template that can be used for other new projects.

**Note:** If you need additional help at any time you are using the software, press **F1** to display the online help.

## Step 1. Create a new project

 On the Spectra Precision Survey Office menu bar, select File > New Project. The New Project dialog displays.

ew	Project		
	Template /	Read Only	Default
•	<blank template=""></blank>	Read Only	Default
	International Foot	Read Only	
	Metric	Read Only	
	US Survey Foot	Read Only	

2. Ensure < Blank Template> is selected in the list, and click OK.

The **Plan View** displays in the **Spectra Precision Survey Office** window. You are now ready to select configuration settings for your project.



**Note:** This figure shows the **Plan View** with a white background. Your background may be black. If you want to change it to white, select **Tools > Options** and select **Background color: White** in the **Options** dialog.

## Step 2. Select project settings

You can select a large variety of settings for your new project. For this tutorial, you will specify various **Coordinate System**, **Unit**, **Baseline Processing**, and **View** project settings. For all other project settings, you will keep the defaults.

To open the **Project Settings** dialog, select **Project > Project Settings**. Or, click the **Project Settings** icon and the toolbar.

💾 Project Settings				
General Information	General Information			
User Information	File name:			
Coordinate System	Created:	09/30/2010 15:10:14		
🚞 Units	Last modified:			
📄 View	Using project folder:	Yes		
Computations Baseline Processing	Reference number:			
Network Adjustment	Description:	and and and the second		

### 2a. Select Coordinate System settings

In this step, you will select the coordinate system you want to use for your project.

- 1. In the navigation (left) pane in the **Project Settings** dialog, select **Coordinate System**.
- 2. Click the **Change** button.

If you have previously selected a coordinate system, the **Select Coordinate System** dialog displays showing a list of previously used systems. If this dialog displays, click the **New System** option and click the **Next** button.

Select Coordinate	Select Coordinate System				
	Select the coordinate system that you want to use from one of (up to) the last 10 systems used as shown below, then press Finish. Alternatively select 'New System' to choose a different coordinate system and then press Next to continue to the next page.				
⊘ New <u>S</u> ys	tem				
Recently	r Used System				
System N	umber 1				
Coordinat Zone Datum Tra	e System Group : US State Plane 1983 : Colorado North 0501 ansformation : NAD 1983 (Conus) (Molodensky)				
Geoid Mo	del : GEOID09 (Conus)				
4	Click on the left/right arrows (or use the Page Up/Down keys) to see up to the last 10 coordinate systems you have used.				
	< <u>B</u> ack <u>N</u> ext > Finish Cancel				

If no systems have been previously selected, or you clicked the **New System** option in the **Select Coordinate System** dialog, the **Select Coordinate System Type** dialog displays.

3. In the Select Coordinate System Type dialog, select the Coordinate System and Zone option. Then click the Next button.

The Select Coordinate System Zone dialog displays.

Select Coordinate System Zone			
Select the coordinate sys the list on the right. You	stem grou can scroll	o from the list on the left, then select the zon down the lists to see more options.	e from
Coordinate System Group	*	Zone	
Sweden (RT-90)		Arkansas North 0301	
Sweden (Sweref 99)		Arkansas South 0302	
Switzerland		California Zone 1 0401	1
Taiwan (TWD67)		California Zone 2 0402	
Laiwas (TMD97)		California Zona 3.0403	and the second

4. Do the following:

- a. In the Coordinate System Group list, select US State Plane 1983.
- b. In the **Zone** list, select Colorado North 0501.
- c. Click Next.

The Select Geoid Model dialog displays.

Select Geoid Model		
Select the geoid	model you want to use.	
No geoid model		
Predefined Geoid model		
GEOID03 (Hawaii) GEOID03 (Puerto Rico) GEOID09 (Alaska)	GEOID09 (Conus) GEOID09 (Hawaii) GEOID96 (Alaska)	GEOID GEOID GEOID
<b>۲</b>		4

- 5. Do the following:
  - a. Select the Predefined Geoid model option.
  - b. Select GEOID03 (Conus) in the list.

The **Coordinate System Manager** is a standalone utility that gives you access to your coordinate system database (*Current.csd*). In **Coordinate System Manager**, geoid models can be predefined. The predefined model is selected in the **Select Geoid Model** dialog.

c. Click the **Finish** button.

The **Project Settings** dialog displays showing the selected coordinate information in the **Summary** section of the **Coordinate System** pane.

#### **2b. Select Units settings**

You will use the **Units** settings to select the coordinate, distance, and GPS time unit settings you want to use for your project.

1. In the navigation (left) pane in the **Project Settings** dialog, select **Units** > **Coordinate**. Then, in the **Display Order** drop-down list, select *Northing, Easting, Elevation*.

Project Settings			
General Information	Coordinate		
Units	Display order:	Northing, Easting, [	
Coordinate	Relative:	@	
Distance	Expand horizontal standard errors:	No	
Angular Azimuth	□ Formatting		

- In the navigation pane in the Project Settings dialog, select Units > Distance. Then, in the Display drop-down list, select *Meter*. In the Foot definition drop-down list, select US survey foot.
- 3. In the navigation pane in the **Project Settings** dialog, select **Units > GPS Time**. Then, in the **Displa**y drop-down list, select **GPS**.

## **2c. Select Baseline Processing settings**

Next, you will enter horizontal and vertical values that, if exceeded, will cause processed baselines to be flagged or fail altogether.

1. In the navigation (left) pane in the **Project Settings** dialog, select **Baseline Processing > Quality**.

😬 Project Settings				
General Information Coordinate System	Acceptance criteria			
Units		Flag	₽	Fail
Computations	If horizontal precision >	0.050 m + 1.0 ppm		0.100 m + 1.0 ppm
Baseline Processing	V If vertical precision >	0.100 m + 1.0 ppm		0.200 m + 1.0 ppm
General	·			
Quality Use optional acceptance criteria.				
Satellites	Optional acceptance criteria —	. Andre die verscher some		with the section of the section

- 2. Enter Acceptance criteria properties as follows:
  - a. Check the If horizontal precision checkbox and enter the following values:
    - Flag: 0.020 m + 1.0 ppm
    - **Fail:** 0.050 *m* + 1.0 *ppm*
  - b. Check the If vertical precision checkbox and enter the following values:
    - Flag: 0.050 m + 1.0 ppm
    - Fail: 0.100 m + 1.0 ppm

### 2d. Select View settings

In this step, you will change the color of the grid lines displayed on the **Plan View**. You will also select to include grid/ground properties in the **Point Spreadsheet** and maximum PDOP values for post-processed vectors in the **Vector Spreadsheet**.

1. In the navigation (left) pane in the **Project Settings** dialog, select **View > Plan View > Grid Line Definition**.

😬 Project Settings			
🔁 View	*	🖃 Grid Line Definition	
3D Drive View Alignment Editor		Display type:	Fixed number of gr
🗄 Corridor Template V	E	Grid interval separation:	328.083 ft
Cross-Section View		Fixed grid line count:	5
Display Options		Line color:	Gray
Occupation Spreads		Line style:	Dash-Dot-Dot
Optical Spreadsheet		Annotation text:	Yes
Grid Line Definiti		Scale bar:	Short Scale Bar
Points Spreadsheet			

2. In the Line Color drop-down list, select Magenta.

This will change the grid lines displayed on the **Plan View** to magenta, making them easier to see if you are, for example, viewing photographs.

3. In the navigation pane in the **Project Settings** dialog, select **View > Points Spreadsheet**.

😤 Project Settings			2			
Image View	*	🖻 General				
Occupation Spreads		Point ID:	Show			
🖃 Plan View		Feature code:	Show			
Grid Line Definiti		Attributes	Hide			
Profile View	Profile View     Grid Coordinate					
Superelevation Diag		Easting:	Show			
Computations	Ξ	Northing:	Show			

4. Scroll to the **Grid/Ground Properties** section and select to show the **Combined** scale factor in the **Points Spreadsheet**.

5. In the navigation (left) pane in the **Project Settings** dialog, select **View > Vector Spreadsheet**.

🖀 Project Settings		
Grid Line Definiti 🔺	🖃 General	
Points Spreadsheet     Frofile View	Vector ID:	Show
E Superelevation Diag	From point ID:	Show
Computations	To point ID:	Show
Baseline Processing	Status:	Show
Network Adjustment Default Standard Err	Statistics	
📄 Feature Code Proce	H precision (confidence %)	Show

- 6. Scroll to the **Statistics** section and select to show the **Maximum PDOP** value in the **Vector Spreadsheet**.
- 7. Click OK.

You are done selecting project settings. Next you will take a look at some customization options.

## Step 3. Set display and customization options

When staring a new project, you should verify that display options are set appropriately.

1. Select **Tools > Options**.

The **Options** dialog displays.

Options			
<ul> <li>General</li> <li>Startup and Display File Locations Internet Download External Services Improvement Program</li> <li>Field Data</li> </ul>	Startup Options Starting state: Display of start page Start page: Recently-used file list:		Close start pages on project startup
	4 ← entries Graphics Window Options ♥ Display data tips Background color: High ● Black ● White Pick aperture: High 5 ← pixels 2	light color:	Cursor color:
	Fonts Gridline and scalebar labels: Microsoft Sans Serf Object labels: Microsoft Sans Serf Application Display Option	CAD text (fails: Microsoft San:	afe): s Senf
	Window display mode: Tabbed views (SDI)		OK Cancel

You can change any of the options in this dialog to enhance your view when working in the various displays in the program. Note that any changes you make will persist, regardless of the projects you open, until you change them again.

#### 2. Click the Advanced button to view the Advanced Graphics Options dialog.

This dialog allows you to control how graphics (for example, photographs) are displayed in your project. If a very large image file does not display correctly due to memory constraints, you might try using this dialog to select a down-sampled size that will enable it to display correctly. For this tutorial, you will not make any changes.

- 3. Click **Cancel** to close the **Advanced Graphics Options** dialog. Then click **Cancel** to close the **Options** dialog.
- 4. Select **Tools > Customize**.

The Customize dialog displays.

Customize	
Customize          Toolbars       Commands       Options       Custom To         Toolbars:       Image: Commands       Options       Custom To         Image: Commands       Image: Commands       Image: Commands       Image: Commands       Image: Commands         Image: Commands       Image: Comma	ols Save/Load <u>New</u> <u>Re</u> name <u>D</u> elete <u>R</u> eset
<u>K</u> eyb	oard Close

Take a moment to explore the various tabs and buttons in this dialog. (There is no need to make any changes at this time.)

- Toolbars tab Select this tab to specify which toolbars are displayed, and create new custom toolbars.
- **Commands** tab Select this tab to "drag and drop" commands directly into a menu or toolbar, and rearrange menu commands and toolbar buttons.
- Options tab Select this tab to personalize the look of menus and toolbars.
- Custom Tools tab Select this tab to create commands to open other tools installed on your computer.
- Save/Load tab Select this tab to create and save toolbar and menu layouts.
- **Keyboard** button Click this button to manage keyboard shortcuts.
- 5. Click Close to close the Customize dialog.

Now is a good time to save your new project and give it a name.

## Step 4. Save your project

- 1. Select **File > Save Project.** Or, click the **Save Project** icon **I** on the toolbar.
- 2. In the **Save As** dialog, navigate to *..\My Documents\Spectra Precision Survey Office*, which is the typical location for storing project files on your computer.

3. In the **File name** field, enter Setting Up a Project YourName.vce. Then click **Save**.

The **Spectra Precision Survey Office** window displays the new project name in the title bar.

The next procedure explains how to save your new project into a template that can be used for other projects.

## Step 5. Create a project template

If you expect to create future projects located within the same geographical area to be used for your new project, you can save your project settings as a project template.

1. Select File > Save Project As Template.

The Save Project As Template dialog displays.

Save Project As Template		
Name:		
Save project as default template		
	Template 🔿	Read Only L
•	<blank template=""></blank>	Read Only
	International Foot	Read Only
	Metric	Read Only
	US Survey Foot	Read Only

2. In the **Name** field, enter Setting Up Template.

You could select the **Save project as default template** checkbox to specify that new projects default to using this project template.

There is no need to save a project template based on this tutorial. So, in the next step, instead of clicking **Save** as you would normally do to save the template, you will click **Close**.

**Note:** After saving a template, you can continue to modify it as necessary (for example, change additional project settings). These modifications would be included in the template the next time you use it.

- 3. Click **Close** to close the dialog without saving the template.
- 4. Select File > Close Project.