

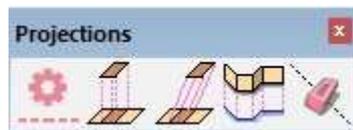
# Projections for SU2016+ (Free and Pro)

© D. Bur, June 2019

This is a reworked, simplified and enhanced part of my plugin "Projections", which has been split into to separate plugins (other part is now named "Guides Toys").

This set of 5 tools is intended to ease your modelling process, projecting various types of objects (guides, edges, faces...), and possibly creating guides between source and projected objects.

## 1. Tools:



1 2 3 4 5

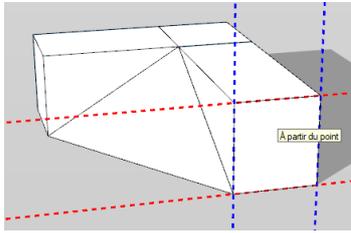
- 1 Plugin settings
- 2 Project objects perpendicularly on a face plane
- 3 Project objects on face plane, along a vector
- 4 Extrude lines along vector
- 5 Guides eraser

### **General notes about the tools:**

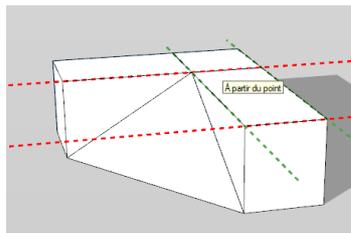
- *When it creates guides, the tools use the color you set for the guides in your current style*
- *All temporary displays that are parallel to XYZ axes are colored in red, green, blue respectively.*
- *Every tool uses inference (pressing the Shift key)*
- *All tools are working with lines, faces, guides, that are within groups and components (as well as at "model" level of course).*
- *All tools check that a selection exists (if needed) and filter the selection to ignore incorrect objects.*
- *An automatic "clean-up" routine erases all double guides (superimposed guides or points) each time you use a tool.*
- *All tools are "undoable".*

## Preview colors:

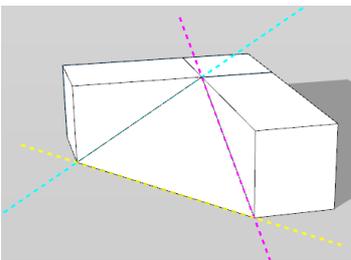
Each time a geometry is previewed, a simple color code is used:



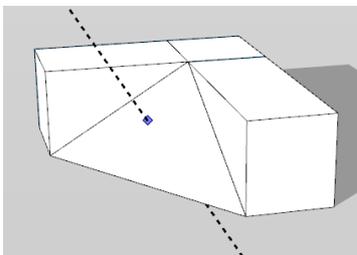
Red lines are parallel to X (red) axis  
Blue lines are parallel to Z (blue) axis



Green lines are parallel to Y (green) axis



Cyan lines are parallel to XZ (red-blue) plane  
Magenta lines are parallel to YZ (green-blue) plane  
Yellow lines are parallel to XY (red-green) plane

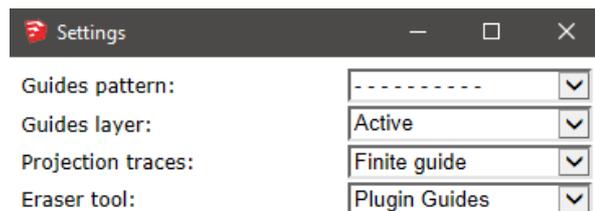


Other lines will be draw using the color of the guides you set in your style, while a face that is not in a particular plane will be draw in a grey color.

## Tool #1:



Select your settings for the plugin with this dialog:



OK Cancel Help

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- Select the line pattern for the guide that are possibly created when projecting
- Choose the layer to put the guides
- Select to "trace" the projection with finite guides, infinite guides, lines, or nothing
- Choose what to erase when using the eraser tool

### **Tool #2:**



This tool project objects perpendicularly on the geometric plane of a face.

Click on a face to select the projection plane

Click on a guide points, guide lines, edges, curves or faces to project them

Hit Enter to select another projection plane, or hit Escape to quit the tool.

Hit Escape at anytime to quit the tool.

### **Tool #3:**



This tool project objects along a vector, on the geometric plane of a face.

Click 2 points to define the vector of projection

Click on a face to select the projection plane

Click on a guide points, guide lines, edges, curves or faces to project them

Hit Enter to select another vector and projection plane, or hit Escape to quit the tool.

Hit Escape at anytime to quit the tool.

### **Tool #4:**



This tool extrudes edges or faces along a vector.

Click 2 points to define the vector of extrusion

Click on guide points, edges or faces to extrude them. The resulting entities are selected and ready for another extrusion.

Hit Ctrl key (toggle) before clicking on a face to get a "pushpull" effect.

Hit Enter to define another vector of extrusion.

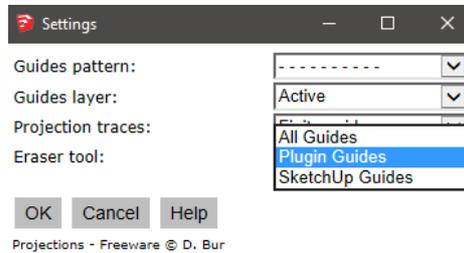
Hit Escape at anytime to quit the tool.

## Tool #5:



This tool erases the guides (lines and points).

Prior to using the tool, select what you want to erase in the settings:



The option is remembered during all the session.

- All guides: will erase all construction geometry
- Plugin guides: will erase all guides created by the plugin (leaving regular guides unchanged), this is the default option.
- SketchUp guides: will erase only guides created with the native tools of SketchUp.