"ProGrids 2" Documentation

Helpful Links:

- **NEW:** Online, Always-Updated Documentation: www.procore3d.com/docs/progrids
- Tutorial Videos + Full Info: www.procore3d.com/progrids
- Support and Troubleshooting: www.procore3d.com/forum

> **Optional Registration:**
> If you would like to receive updates and info directly via email, please “Register” your purchase by sending the invoice # to contact@procore3d.com. Thank you!

Thanks for purchasing ProGrids, your support allows us to keep updating and developing all the ProCore tools!

Overview

Grid Snapping is fundamental to all major 3D tools, and ProGrids brings this functionality to Unity. Grid Snapping allows you to place objects with precision and speed, saving you time, cost, and sanity- while also enabling a much better final product.

ProGrids might be the least glamorous tool in the box, but is the one you will come to use in every, single, project!

Installation and Setup

1. If you haven't already, open Unity
2. If you have a pre-2.1 version of ProGrids installed, you will need to delete the “ProGrids” folder at “Assets/6by7/ProGrids”
3. Find the ProGrids package in your file browser, and double-click it
4. Unity will show an “import files” dialogue- just click “yes” and import all files
5. Open the ProGrids panel via "Tools > ProGrids > ProGrids Panel", from the top toolbar.

The ProGrids GUI Panel

The ProGrids Panel displays the following buttons and options:

- 0.25 **Snap Size:** Set the Grid Snap Size
  - You can change the Snap Size at any time, by typing a value here
  - Use the + and - keys to quickly change the Snap Size
  - Units are Meters by default, or you can choose inches, feet, etc. See the "Customizing ProGrids Section" for more details
- ON **Snapping:** Toggle Grid Snapping On or Off
  - With this set to "Off", grid snapping will not be active
- **Grid Visibility:** Toggle the visual Grid On or Off
  - This will show or hide the Grid, in ALL views
  - NOTE: The Grid will still snap, even when invisible
- **Angle Visibility:** Toggle the visual Angle Guide On or Off
  - The Angle Guide can be used to easily visualize angles from a point
  - Useful when building angled geometry with ProBuilder, or offsetting objects along an exact angle
- 25 **Angle Size:** Set the angle used for the Angle Guide
  - The Degrees used for the Angle Guideline visual
- **Push To Grid:** Push all selected objects/sub-objects to the grid, on all 3 axes
  - If you need to ensure multiple items are fully on the Grid, use this button

> Perspective View Only: The following buttons only effect how the Grid is displayed in Perspective views:

-  **X Grid:** Show the X Grid
  - Choose this mode to display a Grid perpindicular to the X axis, in the Perspective view
-  **Y Grid:** Show the Y Grid
  - Choose this mode to display a Grid perpindicular to the Y axis, in the Perspective view
-  **Z Grid:** Show the Z Grid
  - Choose this mode to display a Grid perpindicular to the Z axis, in the Perspective view
-  **Z Grid:** Show the full 3D Grid
  - Choose this mode to display the full 3D Grid, in the Perspective view
-  **Grid Lock/Follow:** Choose whether the Grid "follows" the selection, or is locked in place
  - See "Using the Perspective Grid" for more details

Using the Grid and Snapping

If you have used virtually any other 3D tool, you are probably already familiar with Grid Snapping, and how important it is for efficient, precise development. If you haven't, don't worry- all the important stuff happens on it's own, in the background.

Here's the basic idea: you have a "World Grid" (one that never, ever changes position or orientation), and any object you move in Unity will snap to that grid, while active. This means you always know exactly where items are placed, how far they are from each other, how far you are moving them, and so forth. Best of all, it means you can be 100% certain that objects are snapping together perfectly, aligning precisely, and never requiring tedious, time wasting, checks and adjustments.

Snapping Multiple Objects:

When you select and move a single item, it will snap to the grid exactly. However, when you have multiple items selected, and move them all at once, ONLY the active object will snap to the grid- all other items will simply "follow" the active object.

For example, if the active object moves 1 cm to the left, 2 cm down, and 8.5343843 cm forward- so will all the other selected objects, REGARDLESS of whether their new position is on the grid or not.

This is very useful for when you are moving many objects, but only want a certain one to snap.

> If you need to make sure all selected objects are snapped to the Grid, click the "Push to Grid" button (see "The ProGrids GUI Panel").

Axis Constraints:

ProGrids has 2 Axis Constraint modes: "No Constraints", and "Use Selected Axis". "No Constraints" is the default mode, and will automatically snap objects on ALL 3 axis, always. "Use Selected Axis" will constrain snapping to only the currently selected axis (ie, when you click and drag on just the X, Y, or Z arrow in Unity).

You can hold down the `S` key to swap into the alternate Constraint Mode- letting go of `S` will swap back into the default Constraint Mode.

> Note that you can choose which Axis Constraint Mode is the default, in the ProGrids Preferences- see "Customizing ProGrids", below.

Keyboard Shortcuts

Keyboard shortcuts are great- use them!

`+` *or* `-` : Hit the "plus" or "minus" key to make the grid larger/smaller by one increment (see "Customizing ProGrids")

`[` *or* `]` : Use the bracket keys to nudge the X, Y, or Z grids perpendicular to their facing direction, by one increment.

`S` : Hold `S` to swap between Axis Constraint Modes (see "Axis Constraints", above)

3D Perspective Grid (NEW)

New in ProGrids v2.1, is the ability to view, in Perspective or Isometric modes even, individual 3D Grid planes (X, Y, Z), or a full 3D Grid. If that sounds confusing, just jump into Unity, click each of the buttons, and it will make perfect sense!

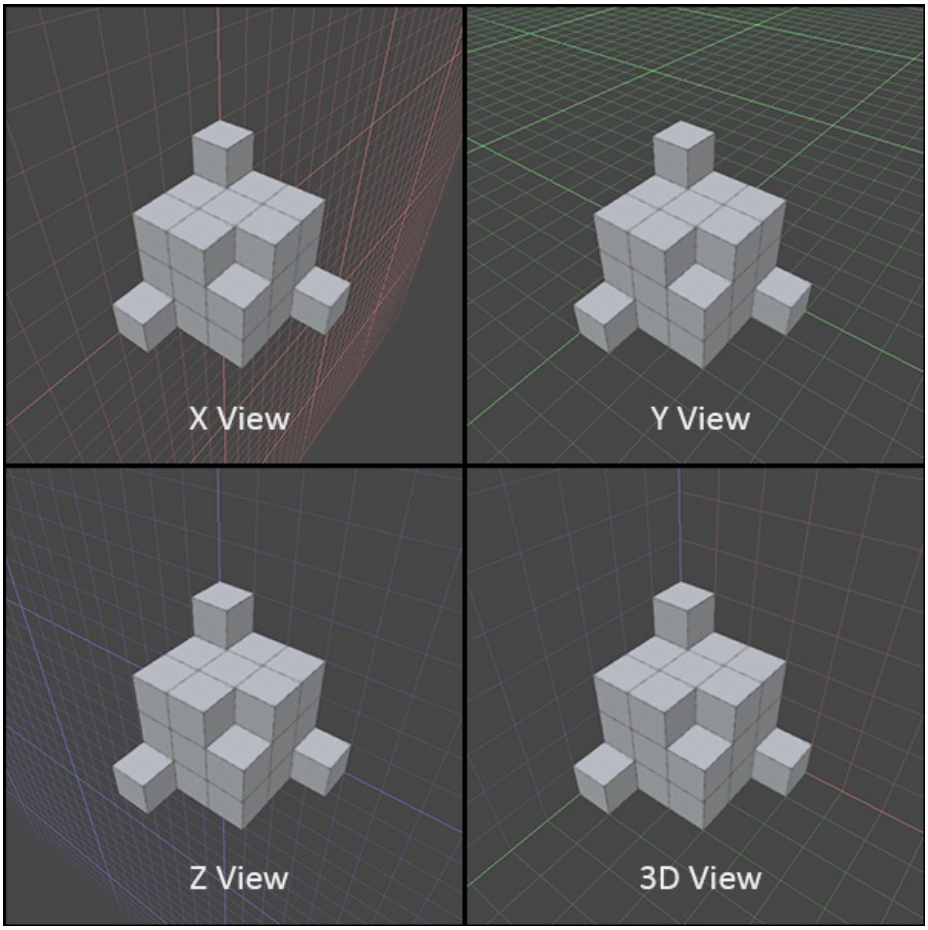
"Lock" vs "Follow" modes:

Use the "Grid Lock/Follow" button on the ProGrids GUI Panel, to choose whether the Grid is Locked at a set origin point, or Follows the selected object's pivot.

While **Locked**, you can "nudge" the X, Y, or Z Grid (not the 3D Grid) by using the bracket keys. This will move the Grid perpindicular to it's facing direction. That would be Left/Right for the X Grid, Up/Down for the Y Grid, and Forward/Backward for the Z Grid.

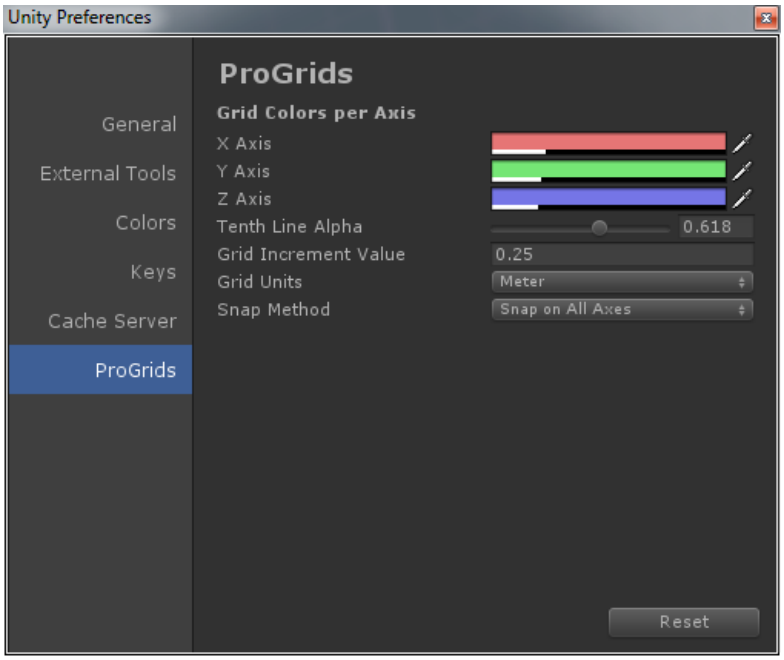
If you set the Grid to **Follow**, it will automatically set it's origin point to the pivot point of any object you select. You cannot "nudge" the Grid while it is in Follow mode- you must Lock it first.

3D Grid Views:



Customizing ProGrids

ProGrids has many options that you can customize, to better suit your needs/uses/habits:



Grid Colors: Here you can set the grid colors, and opacity, for each axis.
Tenth Line Alpha: Choose how much to highlight every tenth line on the Grid
Grid Increment Value: Set the value to increase/decrease the Snap size value, when using keyboard shortcuts
Grid Units: Set the units that ProGrids uses (Meters recommended)
Snap Method: Choose the default Axis Constraints mode

Extra

Documentation is great reference, but lousy teaching. To really get the most out of ProGrids, be sure to check out the videos and info at "www.procore3d.com/progrids".

Don't forget to join the ProCore Forum, where you can find all sorts of community help, advice, and inspiration: "www.procore3d.com/forum" Lastly, I always love to see how these tools help others- send my your own images or videos, and I will post them up on the official page as well!