
pt2-manual Documentation

Release 1.0.0

Sergey Kritskiy

May 18, 2020

Contents:

1	Interface and Settings	3
1.1	Using Photoshop Pen Tool	4
2	Create Grid	5
2.1	Basics	5
2.1.1	Pen Tool	5
2.1.2	Perspective Grid: VP from one point	6
2.1.3	Perspective Grid: Distant VP	6
2.1.4	Perspective Grid: Two distant VPs	6
2.1.5	Perspective Grid: Intersection with Horizon	6
2.1.6	Parallel Grid	7
2.1.7	Parallel Grid: Specific distance	7
2.2	Advanced	7
2.2.1	Additional options	7
2.2.2	Recreate grid	7
2.2.3	High Density area	7
3	Horizon	9
3.1	Pen Tool	9
3.2	Horizon from one point	10
3.3	Horizon from two points	10
3.4	Horizon from perspective grids	10
4	Recolor	11
5	Toggle Visibility	13
6	Warp	15
6.1	Pen Tool	15
6.2	Warping a layer	16
6.3	Aligning a quadrangle within grids	16
6.4	Aligning warped layer	16
6.5	Auto Warp	16
7	De-perspective	17
7.1	Pen Tool	17
7.2	Unwarping a layer	18

7.3	Aligning a quadrangle within grids	18
7.4	Unwarping a document	18
7.5	Converting a 3-points perspective to 2-points	18
8	Change Points Order	19
8.1	Reordering points CW	20
8.2	Reordering points CCW	20
8.3	Mirroring points	20
9	Fix Paths	21
9.1	Aligning 4-points quadrangle paths	21
9.2	Aligning 2-points linear paths	22
9.3	Restoring previous warp path	22
10	Reset Smart Object	23
11	Assigning functions to hotkeys	25
12	Release Log	27
12.1	18 May 2020: PT 2.4.3	27
12.2	19 Dec 2019: PT 2.4.2	27
12.3	9 May 2019: PT 2.4.1	27
12.4	25 Nov 2018: PT 2.4.0	27
12.5	22 Mar 2018: PT 2.3.0	28
12.6	16 Nov 2017: PT 2.2.3	28
12.7	24 May 2017: PT 2.2.2	28
12.8	14 Apr 2017: PT 2.2.1	28
12.9	28 Mar 2017: PT 2.2.0	28
12.10	26 Aug 2016: PT 2.1.0	29
12.11	18 Jul 2016: PT 2.0.2	29
12.12	18 Jul 2016: PT 2.0.1	29
12.13	10 Jul 2016: PT 2.0	29

Perspective Tools is an extension panel for Adobe Photoshop from CS6 to the latest, used for

- automatically creating perspective and parallel grids;
- managing them;
- warping layers to perspective;
- unwarping distorted layers to rectangles;
- and more!

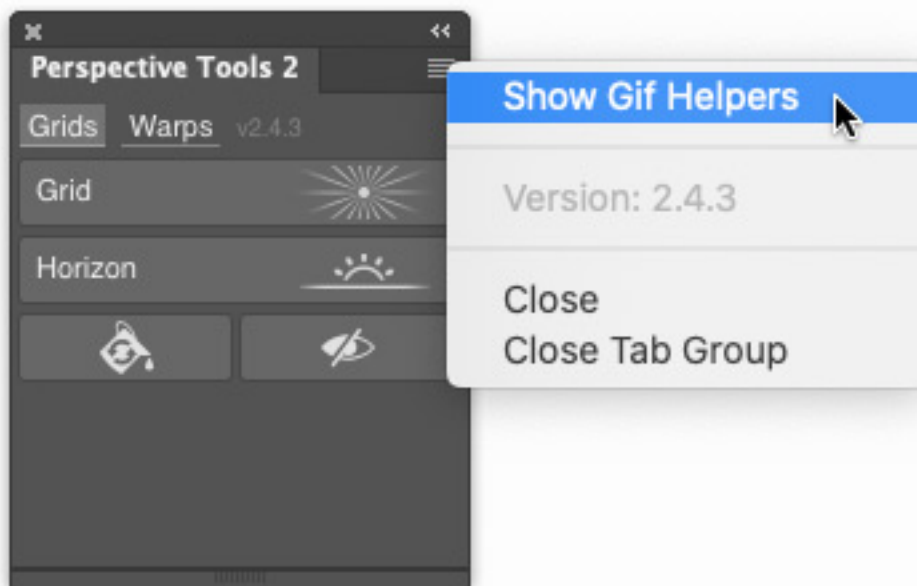
Contact me at kritskiy.sergey@gmail.com Twitter: [@ebanchiki](https://twitter.com/ebanchiki) Grab the extension on [Gumroad](#) or [Cubebrush](#).

Interface and Settings

Photoshop CC version of the panel consists of two tabs: **Grids** and **Warps**, with relevant functions. It can be resized into three different ways:

- larger window with little help-gifs on the bottom;
- smaller vertical window
- smaller horizontal window

Update 2.4.3 includes an option in Flyout menu to show/hide the gif helpers: this option is disabled by default:



CS6 version of the panel has all the functions but no tabs and non-resizable window



Alt+Click on any of the buttons will open a Help page for corresponding function.

1.1 Using Photoshop Pen Tool

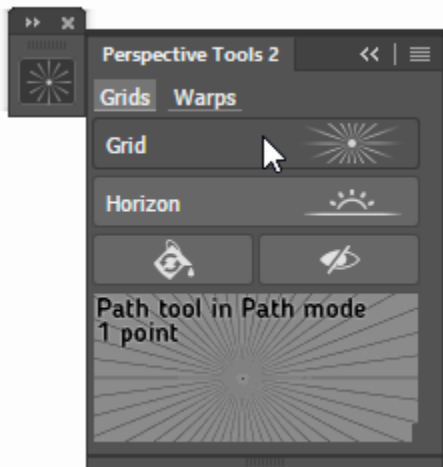
To define grids and rectangles mostly Pen Tool is used. Use it in Path mode. You can adjust points location with keyboard arrows.

To create disconnected paths, Cmd/Ctrl+Click on an empty space to deselect active path and start a new one.

To create path duplicate, hold Cmd/Ctrl+Alt and drag active path.

CHAPTER 2

Create Grid



Creating perspective and parallel grids is one of the main functions of PT2.

2.1 Basics

2.1.1 Pen Tool

To define grids, Pen Tool is used. Use it in Path mode. Learn more in [Interface and Settings](#) section.

There're several different ways grids can be created.

2.1.2 Perspective Grid: VP from one point

1. Make one path point
2. Hit `Grid` button

Resulting grid will have a vanishing point in the path point.

2.1.3 Perspective Grid: Distant VP

1. Make one path with two path points
2. Make a second path with two path points
3. Hit `Grid` button

Resulting grid will have a vanishing point in the intersection of two paths.

2.1.4 Perspective Grid: Two distant VPs

When reconstructing a perspective in a photo, quite often there're visible rectangular surfaces. In this case it could be easy to create two perspective grids in one go.

1. Make one path with four path points (quadrangle)
2. Hit `Grid` button

Resulting two grids will have vanishing points in the intersections of two pairs of the paths.

2.1.5 Perspective Grid: Intersection with Horizon

If *Horizon* layer is presented in the document, one path is enough for creating a perspective grid.

1. Make one path with two path points
2. Hit `Grid` button

Resulting grid will have a vanishing point in the intersection of the path and horizon line.

2.1.6 Parallel Grid

1. Make one path with two path points
2. Hit `Grid` button

Resulting grid will be a parallel lines grid.

2.1.7 Parallel Grid: Specific distance

1. Make one path with two path points
2. Copy-Paste the path or use `Ctrl/Cmd+Alt+Drag` to make a clone and move it to a desirable distance
3. Hit `Grid` button

Resulting grid will be a parallel lines grid with the same distance as between the clones.

2.2 Advanced

2.2.1 Additional options

Holding `Cmd/Ctrl` when clicking `Grid` will show a window with additional options like grid color, density, layer opacity and line width.

2.2.2 Recreate grid

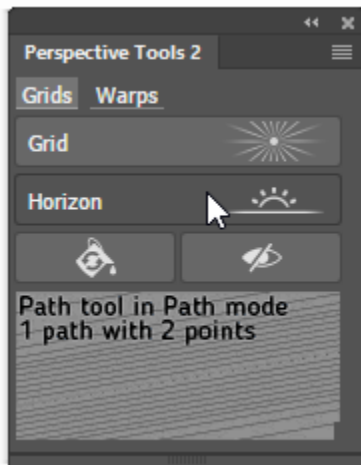
If you have a grid layer selected, hitting `Grid` button will recreate the grid. This is useful if canvas size or image size have changed or settings of an existing grid must be modified.

2.2.3 High Density area

If selection is present when clicking `Grid`, selected area will get x3 times more density. Recreate grid to get rid of high density area.

CHAPTER 3

Horizon



This function will allow you to define horizon line which can be sometimes helpful.

3.1 Pen Tool

To define grids, Pen Tool is used. Use it in Path mode. Learn more in [Interface and Settings](#) section.

3.2 Horizon from one point

1. Make one path point
2. Hit `Horizon` button

Resulting horizon line will be horizontal (ba dum tssss)

3.3 Horizon from two points

1. Make one path with two path points
2. Hit `Horizon` button

Resulting horizon line will be between two points

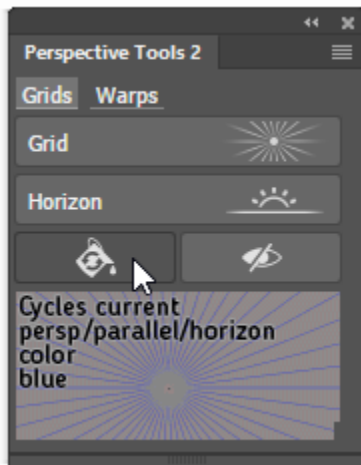
3.4 Horizon from perspective grids

1. Select one or two perspective grid layers
2. Hit `Horizon` button

Resulting horizon line will be on vanishing point if one perspective layer was selected or between two vanishing points, if there were two layers selected

CHAPTER 4

Recolor



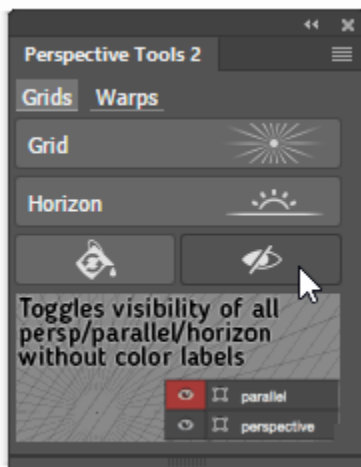
This function will cycle between several grid colors.

1. Select a grid or horizon layer
2. Hit Recolor

Grid color will cycle between black, red (with `_x` suffix), green (`_y`) and blue (`_z`);

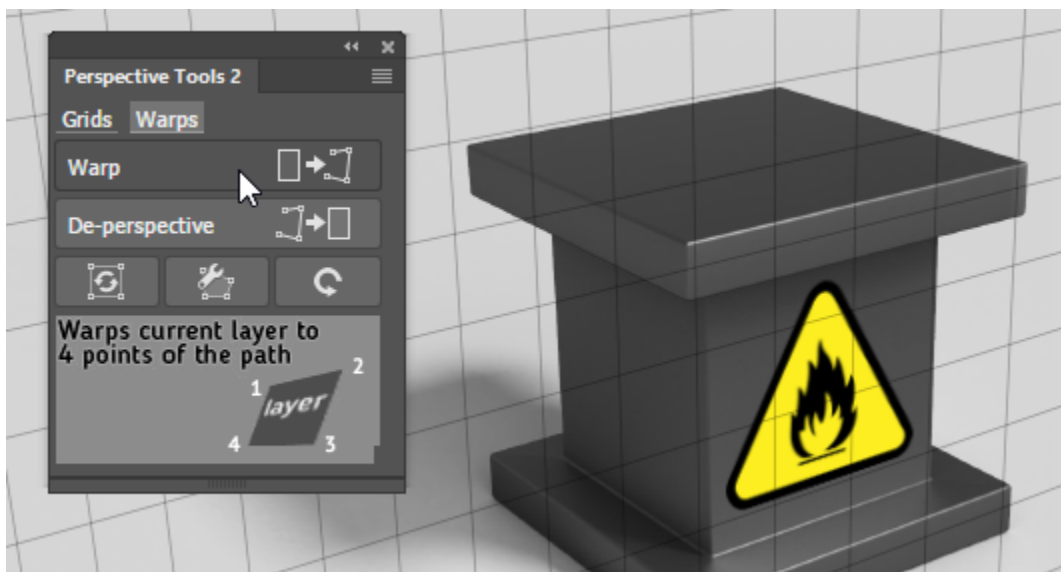
CHAPTER 5

Toggle Visibility



This function will toggle visibility of grid layers (perspective, parallel and horizon). This function works best when assigned to a hotkey.

If you want to disable Toggle Visibility for a layer, assign any color label to it.



This function will warp selected layer to a plane, defined by a quadrangle.

6.1 Pen Tool

To define grids, Pen Tool is used. Use it in Path mode. Learn more in *Interface and Settings* section.

6.2 Warping a layer

1. Make one or several quadrangle paths: note that point order is important, [read more](#)
 2. Realign them automatically if necessary (see below)
 3. Hit `Warp` button
 4. Resulting layer is a Smart Object, hitting `Ctrl/Cmd+T` for free transform will allow to further modify it in perspective.
-

6.3 Aligning a quadrangle within grids

Use a [Fix Paths](#) function to quickly align active quadrangle paths with existing perspective or parallel grids

6.4 Aligning warped layer

Warped layer will be made a smart object, which means that it can be further transformed in perspective and original layer can be changed

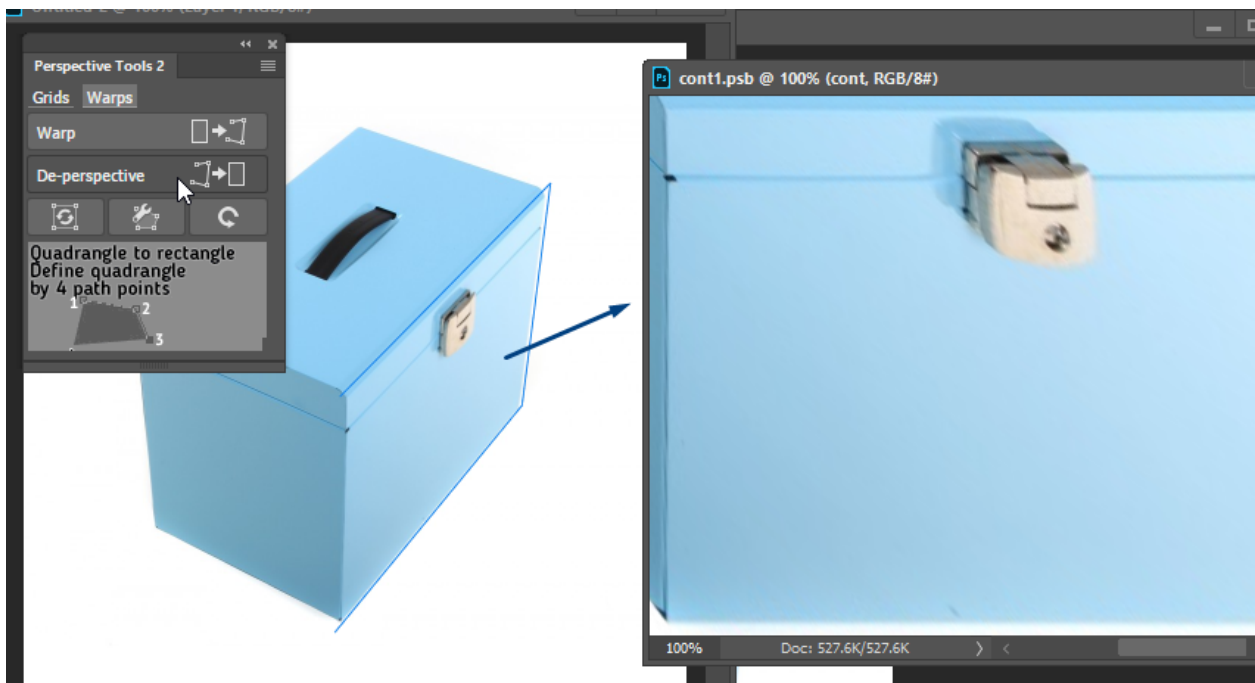
6.5 Auto Warp

If two grid layers are visible, it's possible to use `Warp` without making a quadrangle path. Note that it's usually necessary to modify a resulting layer.

- If you hold `Ctrl/Cmd` while using automatic `Warp`, only warp-path is created.

CHAPTER 7

De-perspective



This function will attempt to unwarp the current document or its portion, defined by a quadrangle path, to rectangular layer.

7.1 Pen Tool

To define grids, Pen Tool is used. Use it in Path mode. Learn more in *Interface and Settings* section.

7.2 Unwarping a layer

1. Make one quadrangle path: note that point order is important, [read more](#)
 2. Realign it automatically if necessary (see below)
 3. Hit `De-perspective` button
 4. Quadrangle portion of the image will be converted to rectangular Smart Object. Note that bottom layer (`cont`) may be quite blurry, it's best to be used for references only and it should be switched off if not needed
 5. Since resulting layer is a Smart Object, hitting `Ctrl/Cmd+T` for free transform will allow to further modify it in perspective.
-

7.3 Aligning a quadrangle within grids

Use a [Fix Paths](#) function to quickly align active quadrangle paths with existing perspective or parallel grids

7.4 Unwarping a document

If the current document has two visible perspective layers and no path for deperspective, the whole document will be unwarp. This can be useful to extract quadrangle details or textures for further modifying them without creating paths new smart objects.

7.5 Converting a 3-points perspective to 2-points

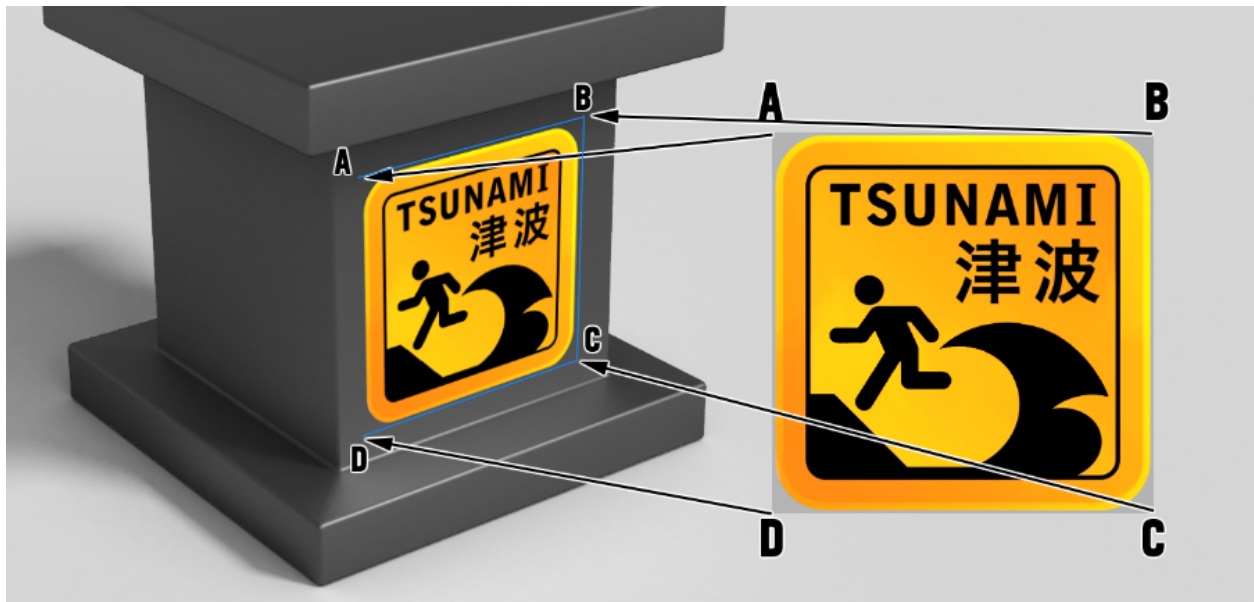
If the current document has a visible Y perspective layer and two visible perspective layers OR a [Horizon](#) layer, the document will be unwarp in a way so Y grid will become vertical, eliminating the vertical contraction.

Note that it's possible to restore the path that was used to unwarp the document (using [Fix Paths](#) function) and re-warp it to the original perspective

CHAPTER 8

Change Points Order

This function will change points order for active paths. Point order is important for `Wrap` and `De-perspective` functions: they define how warped image is going to be rotated in perspective. Points usually go clock-wise, from top left corner to bottom-left: first point is associated with top left corner of a layer, second — with top right corner, third is bottom right point and fourth is bottom left.



Notice how this sign is rotated depending on which point in quadrangle was placed first. Also notice that the last sign is mirrored: points were placed in counter-clock order.



8.1 Reordering points CW

1. Hit Change Order button
 2. Points order will shift clockwise
 3. New points order will be displayed for a moment
-

8.2 Reordering points CCW

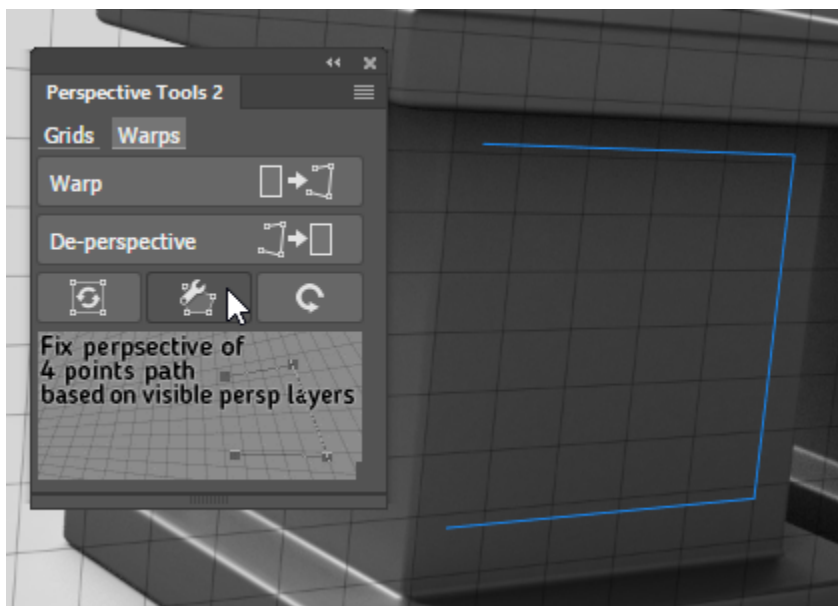
1. Hold Ctrl/Cmd when hitting Change Order button
 2. Points order will shift counter-clockwise
 3. New points order will be displayed for a moment
-

8.3 Mirroring points

1. Hold Shift when hitting Change Order button
 2. Points order will change direction
 3. New points order will be displayed for a moment
-

CHAPTER 9

Fix Paths



This function will align paths using visible perspective or parallel grids and will restore previous paths for existing Warp and Deperspective layers. Aligning quadrangle paths is useful for Warp and Deperspective functions, aligning linear paths is useful for further stroking.

9.1 Aligning 4-points quadrangle paths

1. Select a Path Object with one or more 4-points quadrangle paths
2. Make sure two grid layers of the same type are visible
3. Hit `Fix Paths` button

9.2 Aligning 2-points linear paths

1. Select a Path Object with one or more 2-points linear paths
 2. Make sure one or two grid layers are visible
 3. Hit `Fix Paths` button
-

9.3 Restoring previous warp path

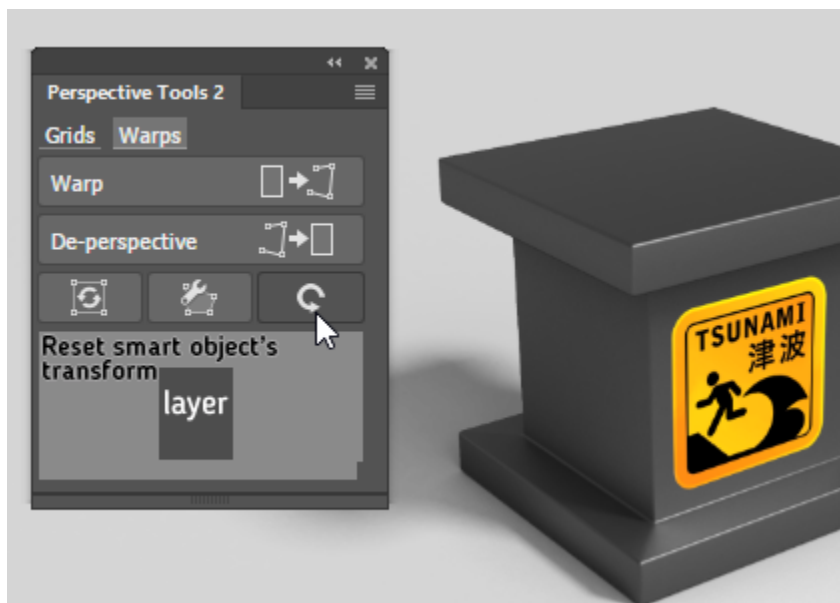
After update 2.4.0 `Fix Paths` can restore paths that were used to create Warp and Deperspective layers. Note that this will work only with layers created with 2.4.0 and newer.

1. Select a warped or deperspectified layer
2. Make sure no paths are selected
3. Hit `Fix Paths`

An example of restoring of a warp path of a deperspective layer and using it to create new grids:

CHAPTER 10

Reset Smart Object



This function will reset transformations of an active smart object layer.

1. Select one layer with smart object
2. Hit Reset Smart Object button

CHAPTER 11

Assigning functions to hotkeys

To assign functions to hotkeys

1. Go to `Edit > Keyboard Shortcuts Photoshop` menu
2. Make sure that `Shrotcuts For:` is set to `Applications Menu`
3. Find PT2 scripts under `File > Scripts`
4. And assign shortcuts

CHAPTER 12

Release Log

12.1 18 May 2020: PT 2.4.3

- CC: fixed a rare occurrence of the panel crashing PT2 on some Photoshops
- CC: an option to hide/show gif helpers in the flyout menu (CC2014+). Gifs were causing slowdowns on Mac Catalina

12.2 19 Dec 2019: PT 2.4.2

- CC: Installers were updated to work with Photoshop 2020
- CC: small fixes
- CS6: fixed de-perspective not working in some cases (again)
- Added EULA

12.3 9 May 2019: PT 2.4.1

- CS6: fixed de-perspective not working in some cases
- CC: slight changes in UI

12.4 25 Nov 2018: PT 2.4.0

- Possible to recreate paths for newly created Warp and Deperspective layers using Fix Paths command
- Deperspective can unwarp 2-points path
- When no paths and two grids are presented, Deperspective will unwarp the whole document

- When Horizon and Y grid are presented, Deperspective will unwarp the document to 2p perspective
- Installers updated for CC2019
- Some fixes

12.5 22 Mar 2018: PT 2.3.0

- Parallel and distant grids are more memory-efficient
- It's possible to create two grids from one 4-points quadrangle path
- Create High Density Grids from selection
- New manual: <http://pt2.readthedocs.io/>
- Some fixes

12.6 16 Nov 2017: PT 2.2.3

- Panel is resizable once again in PS CC2018

12.7 24 May 2017: PT 2.2.2

- New grids respect default grid color, set in `Ctrl/Cmd+Create Grid` menu
- Grid Width is a multiplier instead of absolute value
- Fixed broken tip-gif for `Change Points Order`

12.8 14 Apr 2017: PT 2.2.1

- fixed `Recolor` error in CS6 version

12.9 28 Mar 2017: PT 2.2.0

- New De-Perspective algorithm, works in CS6
- `Fix Paths` and `Autowarp` work with Parallel grids
- Create VPs on Horizon line with 1 path
- All functions are available as scripts, assign them to hotkeys or use on Brusherator
- Change new Horizon density with `Ctrl/Cmd-Click` on `Horizon` button
- Change grid color to custom with `Ctrl/Cmd-Click` on `Recolor` button
- Creating grids is 20-50% faster
- probably fixed something

12.10 26 Aug 2016: PT 2.1.0

- CS6 version
- New warp mode — Autowarp: use Warp with 2 visible Persp layers and no paths
- Fix Path now works with multiple paths
- Warp now works with multiple paths
- Fix Paths now can work with 2-points paths
- Change Points Order shows points order
- Mirroring paths (Shift+Change Points Order) works differently
- Warped layers keep opacity/blending modes
- Fixed Bezier Warp weird document canvas changes
- Fixed weird results with De-perspective when path points are outside of active document boundaries
- Fixed reset of perspective layer color when recreating a grid layer
- Alt+Click opens correct video link instead of ‘Never Gonna Give You Up’ by Rick Astley

12.11 18 Jul 2016: PT 2.0.2

- Fixed Fix Paths which I broke in 2.0.1

12.12 18 Jul 2016: PT 2.0.1

- Fixed Re-color for users of non-English Photoshop
- Remote VPs don’t create huge files (‘Can’t save .psd file because it’s larger than 2GB’ error)

12.13 10 Jul 2016: PT 2.0

- initial release