

AV Bros. Puzzle Pro 2.0

for **Windows** and **Mac OS X**

We are proud to introduce AV Bros. Puzzle Pro 2.0, the filter plug-in (8bf) for Adobe® Photoshop® and compatible hosts.

AV Bros. Puzzle Pro 2.0 is targeted to help you create a jig-saw puzzle effect, but it also produces a whole bunch of various high quality image effects, thanks to its superb engine.

We believe that we have developed so professional, powerful and convenient product that if you invest some time to learn how to make its power obedient, you will get a tool, which is not only enjoyable to use, but almost “force” you to generate new ideas by mobilizing all your creativity!



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Overview of AV Bros. Puzzle Pro 2.0

AV Bros. Puzzle Pro 2.0 provides you with an almost absolute freedom in creation of a puzzle's shapes, a large number of built-in effects for modifying the content of a puzzle's pieces, a possibility not only to split an image into pieces, but to draw the splitter's shape too, an option to save shapes as .EPS or .AI formats for using them in such applications as Adobe® Illustrator®, Macromedia® Flash™, Corel® CorelDRAW® and many other features. See the complete List of Features below.

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List of Features

Knives and Layout of Knives (the Splitter):

- Using a Splitter not only as a shape for cutting an image, but as an object to be drawn.
- Fast and convenient creation (including a multi-level undo) of an almost unlimited range of the shapes of the knife.
- The convenient management of the shapes previously added to the presets.
- Saving the knife's shape as .EPS (Encapsulated PostScript), .AI (Adobe Illustrator) or .AVPH (AV Bros. Knife Shape 2.0 - internal Puzzle Pro 2.0 format) files.
- Loading the knife previously saved as .AVPH file, back into the plug-in.
- The option to mutate the knife while cloning it for constructing the Splitter.
- Saving the selected knives as EPS (Encapsulated PostScript) or .AI (Adobe Illustrator) files or saving the entire Splitter (with the states of each knife) as .AVPD (an internal AV Bros. Puzzle Pro 2.0 format) file.
- Loading the Splitter previously saved as .AVPD file, back into the plug-in.
- Specifying the number of rows and columns.
- Inserting, deleting and moving the splitters of the columns or rows (groups of the knives between two neighbor columns or rows.)
- Specifying the thickness of the Splitter.
- Scaling the knives' knobs size.
- Turning ON/OFF the anti-aliasing of the Splitter.
- Randomizing knots.
- The manual adjustment of the position of the knots.
- Wide range of knife's flipping operations.
- Turning ON/OFF (showing/hiding) any knife.
- Wide range of select operations including the random selection of the group of the knives.
- Using the channels of the document (document's current selection, RGB, CMYK or Gray channels, alpha channels and layer transparency) as a source for selection.
- Copying the knife for further pasting it instead of other knives.

Puzzle Pieces and Effects:

- Wide range of select operations including the random selection of the group of the pieces.

- Using the channels of the document (document's current selection, RGB, CMYK or Gray channels, alpha channels and layer transparency) as a source for selection.
- Turning ON/OFF (showing/hiding) any piece.
- Using seven (7) of piece effects (Bevel, Gaussian Blur, Motion Blur, Opacity, Color Overlay, Hue/Saturation and Brightness/Contrast) with possibility to specify the range of each effect's distribution among selected pieces.
- The possibility to enable/disable any of the piece effect.
- Copying the effects of any piece for further pasting them instead of other pieces' effects.
- Saving the cut image (the Puzzle), including states and effects of each piece as .AVPD (an internal AV Bros. Puzzle Pro 2.0 format) file.
- Loading the Puzzle previously saved as .AVPD file, back into plug-in.
- Saving the selected pieces as a multilayer .PSD (Photoshop Document) file.
- Supporting Color Profiles for the document saved in .PSD

Common features:

- Wide using of keyboard shortcuts.
 - Fast and high quality previewing in all modes.
 - Specifying the units of measurement for the Ruler (inches, mm, cm, pixels and percents).
 - Customizing the settings of the plug-in.
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Getting started

We recommend you to read this User Guide. The product is so versatile that it is really worth to invest some time for being able to use all its power. We recommend also visit both the Gallery of AV Bros. Puzzle Pro 2.0 and FAQ page on our web-site: <http://www.avbros.com>

Installing

AV Bros. Puzzle Pro 2.0 is a filter plug-in (8bf) for Adobe Photoshop and compatible hosts (such as: Jasc® Paint Shop™ Pro®, Macromedia® Fireworks®, Corel® Photo Paint®, Ulead® PhotoImpact™ and others.) Please check the list of hosts on our web-site.

Below you will find instructions of how to install AV Bros. Puzzle Pro 2.0 in Adobe® Photoshop®.

Note! Taking into account the fact that each host has its own location it requires the plug-in to be installed to, we recommend you to read the host's manual on how and where to install the plug-in.

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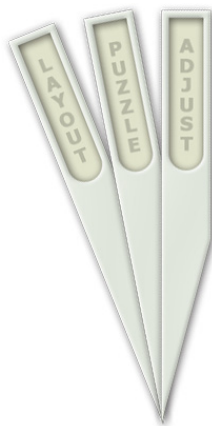
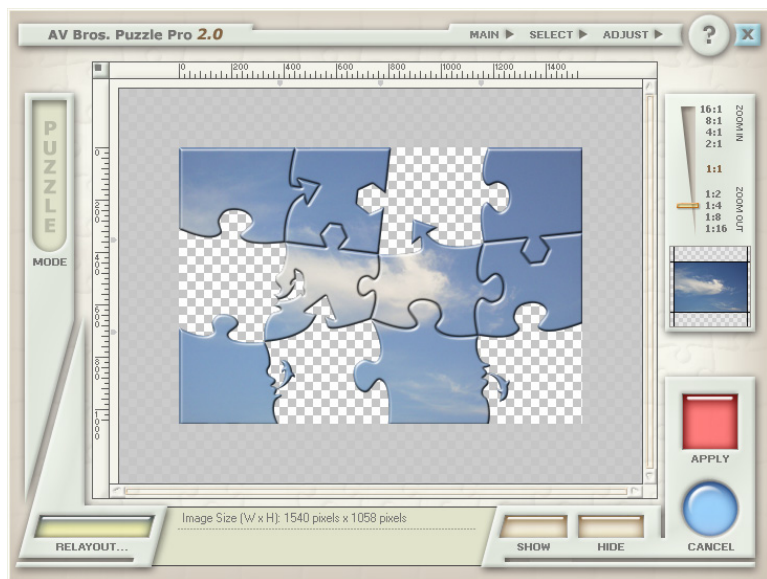
How to install in Photoshop for **Windows**:

- Close Photoshop.
 - Run setup application - **avpuzzlep20.exe** (**avpuzzlep20d.exe** for demo version.)
 - Select the path to install. You can do it manually or by using the "Browse" button.
 - If you install the plug-in under Photoshop 5.0 and up, the setup of the plug-in automatically determines the plug-in path. Simply check it.
 - Click 'Install' button.
 - Start Photoshop. **"AV Bros. Puzzle Pro 2.0"** (**"DEMO - AV Bros. Puzzle Pro 2.0"** for demo version) will appear under menu **Filter > AV Bros.**
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How to install in Photoshop for **Mac OS X**:

- Close Photoshop.
- Unpack and mount the **avpuzzlep20.dmg.bin** (**avpuzzlep20d.dmg.bin** for demo version) image.
- Drag and drop the **"AV Bros. Puzzle Pro 2.0"** (**"AV Bros. Puzzle Pro 2.0 DEMO"** for demo version) folder to Photoshop plug-ins folder.
- Start your host. **"AV Bros. Puzzle Pro 2.0"** (**"DEMO - AV Bros. Puzzle Pro 2.0"** for demo version) will appear under menu **Filter > AV Bros.**

Main Window



The Main Window operates in three (3) modes: in the Layout Mode, in the Puzzle Mode and in the Adjust Mode.

In the Layout Mode you can do the following:

1. Preview (using Zoom and Navigator options) the layout of knives (hereafter, Splitter.)
2. Select (using a number of Select Options, including the Add Random to Selection and the Load Selection options) any knife which the Splitter consists of or all knives (the Splitter.)
3. Operate with the selected knife (knives) or with the entire Splitter if there is no selection. There are the following operations: Show (to turn the knife (knives) ON), Hide (to turn the knife (knives) OFF) and a number of the Flip operations. You can also manually adjust the position of the knots (Knots Manual Adjustment.)
4. Adjust the shape of any knife (hereafter: Shape) and/or the entire Splitter by using the Cutter window's (hereafter: Cutter) controls at any time.
5. Copy any knife and then, paste it instead of any number of other knives.

6. Adjust the number and the position of the groups of knives between two neighbor columns or rows (hereafter: splitters of the columns or rows.)
7. Specify the units of measurement for the Ruler.
8. Save the Splitter in the following file formats: the AV Bros. Puzzle Pro 2.0 internal file format (.AVPD) and two vector graphics file formats - .EPS (Encapsulated PostScript) or .AI (Adobe® Illustrator® format).
9. Load the Splitter, previously saved in .AVPD, back into AV Bros. Puzzle Pro 2.0 plug-in.
10. Apply the current Splitter to the image in your image editing host application (Adobe® Photoshop®, Jasc® Pain Shop™ Pro®, etc.) This means that you will see the Splitter as is (as the lines), rather than the image cut into pieces using this Splitter (as if you are in the Puzzle Mode.) We call this feature – Draw Splitter.
11. Undo the last action.

In the Puzzle Mode you can do the following:

1. Preview (using Zoom and Navigator options) an image, which you have cut into pieces (hereafter: Puzzle.)
2. Select (using a number of Select Options, including the Add Random to Selection and the Load Selection options) any piece of the cut image (including the Splitter, if presence.)
3. Operate with the selected piece (pieces), including the Splitter (if presence), or with the entire Puzzle. There are the following operations: Show (to turn the piece (pieces) ON), Hide (to turn the piece (pieces) OFF) and seven (7) Adjustments (such as Bevel, Gaussian Blur, etc.)
4. Copy an effect, applied to any piece and then, use this effect for any number of pieces.
5. Call the Cutter if you want to cut the image using another Splitter.
6. Specify the units of measurement for the Ruler.
7. Save the Puzzle in the following file formats: the AV Bros. Puzzle Pro 2.0 internal file format (.AVPD) and in the layered Adobe Photoshop document - .PSD.
8. Load the Puzzle, previously saved in .AVPD, back into AV Bros. Puzzle Pro 2.0 plug-in.
9. Apply the current Puzzle to the image in your image editing host application (Adobe® Photoshop®, Jasc® Pain Shop™ Pro®, etc.)
10. Undo the last action.

In the Adjust Mode you can do the following:

Apply to any selected piece (pieces), including the Splitter (if presence), or to the entire Puzzle one or more of the following adjustments: Bevel, Gaussian Blur, etc. Motion Blur, Brightness/Contrast, Color Overlay, Hue/Saturation and Opacity.

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Howtos in the Layout Mode

How to use Zoom?

You have several options to zoom IN or OUT the Splitter in the Main Window's Preview (hereafter: Main Preview):



1. Drag the slider in the Zoom/Navigator panel. Value 1:1 means that the actual size of the image is displayed in the Main Window. For zoom IN use values from 2:1 to 16:1 and for zoom OUT use values from 1:2 to 1:16.
2. Place the cursor over the Main Preview and hold down the following buttons on your keyboard: **Spacebar** and **Ctrl** (Windows) or **Command** (Mac OS X), for zoom IN; **Spacebar** and **Alt** (Windows) or **Option** (Mac OS X) for zoom OUT. Then the cursor becomes a magnifying glass with a plus sign in its center ("Cursor A"), if you chose the zoom IN operation, or minus sign ("Cursor B"), if you chose the zoom OUT. Click the center of the area of the image you want to enlarge or reduce (still holding the appropriate combination of the keyboard's buttons.) Each click enlarges or reduces the view of the image, depending on the combination of the keyboard's buttons.
3. Hold down the **Ctrl** (Windows) or **Command** (Mac OS X) button and then press "+" or "-" buttons on the keyboard. Each time you press the "+" button you will enlarge the view of the image. In the other hand, each time you press the "-" button you will reduce the view of the image.
4. Use the Mouse Wheel (if presence) to enlarge or reduce the view of the image.



Cursor A



Cursor B

How to navigate the view area?

You have the possibility to navigate the view area, if the image does not fit on the Main Preview. To navigate do one of the following:

1. Use the Main Preview scroll bars.
2. Place the cursor over the image in the Main Preview and hold down the **Spacebar** button. The cursor changes its view to "Cursor C" - if you can pan the image only up/down; to "Cursor D" - if you can pan the image only left/right and to "Cursor E" - if you can pan the image all directions. To pan, click the image (still holding down the **spacebar** button) and grad.



Cursor C



Cursor D



Cursor E

3. Use the Navigator on the Zoom/Navigator panel. There are two ways you can use it:
 - Drag the view box in the thumbnail of the image, which represents the boundaries of the image window.
 - Click in the thumbnail of the image. The new view includes the area you click.

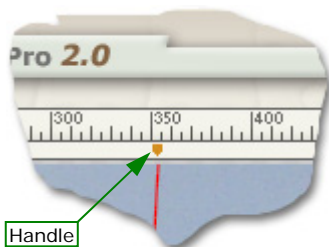
How to select the knife?

Click any knife to select it. If the knife is shown it will be colored with red. If the knife is hidden it will colored with pale red.

How to select/deselect the group of knives?

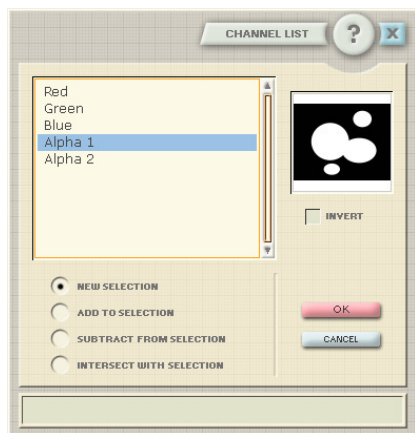
There are several ways how you can select or deselect knives of the Splitter. Here they are:

1. Hold down the **Ctrl** (*Windows*) or **Command** (*Mac OS X*) button and click knives you want to select or deselect. Selected knife will become unselected and vice-versa. For adding the single knife to the already selected group of knives make a mouse right-click on the knife you want to add to the selection and choose from the popup menu, which will appear, "Add to Selection" menu item. To deselect the knife, choose "Deselect" menu item from the same popup menu. Each time you click the particular knife, while holding the **Ctrl** (*Windows*) or **Command** (*Mac OS X*) button, this knife switches its state (select/unselect.)
2. Click any knife and then, holding down the **Shift** button, click the other knife. A number of knives will be selected. If you click one more knife, still holding the **Shift**, another group of knives will be added to the previously selected group of knives. To subtract from the existing selection hold down both the **Alt+Shift** (*Windows*) or **Option+Shift** (*Mac OS X*) buttons and click the already selected knife. A group of knives will be deselected.
3. For selecting the splitter of the columns and/or rows, hold down the **Ctrl** (*Windows*) or **Command** (*Mac OS X*) button and click the handle of the desired splitter. If you keep holding the **Ctrl** (*Windows*) or **Command** (*Mac OS X*) button, each click the other handle will add its splitter to the selected splitters. To subtract the selected splitter, hold down the **Alt** (*Windows*) or **Option** (*Mac OS X*) button and click the appropriate handle. You can also select all the splitters of the columns or of the rows. Just choose the "Select all vertical" or "Select all horizontal" menu items under menu "Select".
4. To select a group of the random knives go under menu "Select" and choose the "Add random to selection" menu item. Some of the knives will be selected and added to the existing selection. You can also deselect the group of the random knives. To do this, go under menu "Select" and choose the "Deselect random" menu item.



5. There are some additional commands under menu "Select": "Select All Hidden", "Select All Shown", "Inverse Selection", "Select All" and "Load Selection". The first command selects all hidden knives, second – selects all shown, third - inverses selection of the knives and the forth – selects all knives, in other words – selects the Splitter. As for the "Load Selection" command, it will be described below.

How to load the selection?



Under menu "Select" you will find the "Load Selection" command. Use it to call the "Channel List" window. In this window you will find the list of your document's channels, including R, G, B (RGB color mode), C, M, Y, K (CMYK color mode) or Gray (Grayscale mode) channels of the current layer, the layer's transparency and all other alpha-channels that you have created in this document (this holds only for Adobe® Photoshop®.) The selected channel will be displayed in the special preview window. Before choosing the way how the channel will be loaded into plug-in you can invert the channel using

"Invert" check-box. There are the following ways of loading the channel:

1. To load the channel as a new selection, click "New Selection" radio-button.
2. To add the channel to current selection (enabled only if selection already available), click "Add to Selection" radio-button.
3. To subtract the channel from the current selection (enabled only if selection already available), click "Subtract from Selection" radio-button.
4. To intersect the channel with the current selection (enabled only if selection already available), click "Intersect with Selection" radio-button.

Click the OK button to load the selection into the plug-in, or the Cancel button to close the window without loading the channel.

How to turn ON/OFF the knives (Show/Hide operations)?

To turn OFF (hide) the knife (knives) you should select it (them) first. Only in case you want to hide all knives (the entire Splitter) it is not necessary to select them before. Then you can do one of the following:

1. Click the "Hide" button.
2. Go under menu "Adjust" and choose the "Hide" menu item.
3. Go under menu "Adjust" and choose the "Reverse Shown-Hidden" menu item. In this case all shown knives will be hidden and vice-versa.

4. Press the **Delete** button on the keyboard.
5. If you want to hide only one knife from a group of selected, you should make a mouse right-click on the desired knife and choose from the popup menu, which will appear, the "Hide" menu item.

To turn ON (show) the particular hidden knife (knives) you should select it (them) before. In case you want to show all hidden knives they may be unselected. Then you can do one of the following:

1. Click the "Show" button.
2. Go under menu "Adjust" and choose the "Show" menu item.
3. Go under menu "Adjust" and choose the "Reverse Shown-Hidden" menu item. In this case all shown knives will be hidden and vice-versa.
4. Press the **Backspace** button on the keyboard.
5. If you want to show only one knife from a group of hidden, you should make a mouse right-click on the desired knife and choose from the popup menu, which will appear, the "Show" menu item.

How to flip the knife (knives)?

To flip by H and/or U axis (see the Shaper part of the Cutter to learn about U and H axis) the particular knife (knives), regardless of whether it (they) is (are) shown or hidden you should (in almost all cases) select it (them) before. In case you want to flip all knives (the entire Splitter) they may be unselect. Then you can do one of the following:

1. Go under menu "Adjust" and choose one of the direct flipping commands: "Flip U", "Flip H" or "Flip HU".
2. For randomizing the process of knives' flipping, go under menu "Adjust" and choose the "Random U", "Random H" or "Random HU" menu items.
3. For flipping each other knife by H, U axes, or both H and U axes simultaneously, go under menu "Adjust" and choose the "Interleaved U", "Interleaved H" or "Interleaved HU" menu items.
4. If you want that the knobs of the columns' and rows' splitters looked on one side (of course, these sides differ from each other), do under menu "Adjust" and choose the "Non-Interleaved U", "Non-Interleaved H" and "Non-Interleaved HU" menu items.
5. There is one more option for flipping the single knife by H and/or U axes, even without necessity to select it. Hold down the **Ctrl+Shift** (*Windows*) or **Command+Shift** (*Mac OS X*) buttons and click the desired knife. It will flip by H axe. Clicking the knife while holding down **Ctrl+Alt+Shift** (*Windows*) or **Command+Option+Shift** (*Mac OS X*), buttons will flip the knife by U axe.

How to copy the knife's shape?

Do one of the following:

1. Make a mouse right-click on the knife, regardless whether it is selected or not. The popup menu will appear. Then choose the "Copy Knife's Shape" menu item.
2. Go under menu "Adjust" and choose the "Copy Knife's Shape" menu item. If only one knife is selected, you will copy its shape. If there is a group of selected knives, only one (random) knife's shape will be copied.

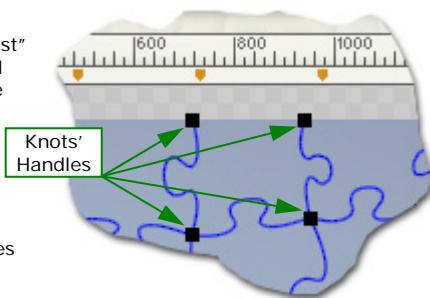
How to paste the knife's shape?

Do one of the following:

1. You can paste the knife's shape instead of a single knife. To do this, make a mouse right-click on the knife you want to change. The popup menu will appear. Then choose the "Paste Knife's Shape" menu item.
2. You can paste the knife's shape instead of the group of knives. To do this, first select the group of knives you want to change. Then go under menu "Adjust" and choose the "Paste Knife's Shape" menu item. If you choose this menu item and there is no selection at all, then the shape of the entire Splitter will be changed.

How to manually adjust the position of the knots?

For manual adjusting the position of the knots of the Splitter, go under menu "Adjust" and choose the "Knots Manual Adjustment" menu item. Once the menu item is chosen, the Main Preview switches to a special mode: the Splitter is colored with blue and knots' handles (square black dots) appear in the knots' positions. Then drag any of these handles to adjust the position of the appropriate knot.



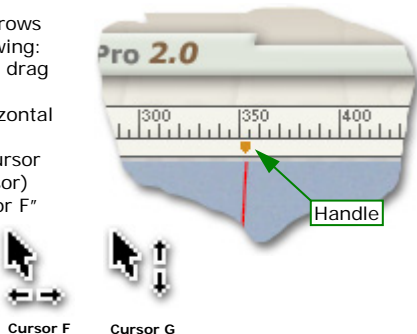
How to adjust the shape of the knife, or of the entire Splitter?

You can adjust the shape of the single knife, of the group of knives or of the entire Splitter by using the controls of the [Cutter](#).

How to adjust the position of the splitters of columns and/or rows?

To adjust the position of the splitter of the columns and/or rows you should do one of the following:

1. For free adjusting, simply drag the handle of the desired splitter: up/down for horizontal splitters and left/right for vertical ones. Once the cursor is over the handle it (cursor) changes its look to "Cursor F" for columns' splitters and to "Cursor G" for rows' ones.



2. For arranging the splitters of the columns or the rows, place the cursor over the free area, between the handles of the splitters you want to arrange. After the mouse right-click the popup menu will appear. Choose the "Arrange" menu item to arrange the desired splitters. As a result you will get the equal size of the columns or rows, depending on which splitters have been arranged.
3. For centering the desired columns or rows splitter, between to neighbor splitters, right-click the splitter's handle and choose "Center" menu item from the popup menu.

How to change the number of the splitters of columns and/or rows?

The possibility of changing the number of the splitters of columns and/or rows means that you can add the splitter (splitters) between the existing ones, or remove the existing splitter (splitters.)

For adding the splitter, do one of the following:

1. Place the cursor over the free area between the handles of the splitters, where you want to add the new splitter and hold down the **Ctrl+Shift** (Windows) or **Command+Shift** (Mac OS X) buttons. The cursor will change its look to "Cursor H". Now click the mouse and the splitter will be added to the desired place.
2. Place the cursor over the free area, between the handles of the splitters, where you want to add the new splitter. After the mouse right-click the popup menu will appear. Choose the "Insert" menu item to add the splitter.



For removing the existing splitter do one of the following:

1. Place the cursor over the handle of the splitter you want to remove and hold down the **Ctrl+Alt** (Windows) or **Command+Option** (Mac OS X) buttons. The cursor will change its look to "Cursor I". Now click the mouse and the splitter will be removed.
2. Place the cursor over the handle of the splitter you want to remove. After the mouse right-click the popup menu will appear. Choose the "Delete" menu item to remove the splitter.



How to change the units of measurement for the Ruler?

If your image editing host application provides the plug-in with the unit of measurement, this unit is set as default after starting the plug-in. If the host does not provide the plug-in with such information, the pixels are set as default unit of measurement.

For changing the units of measurement for the Ruler place the cursor over the Ruler. After the mouse right-click the popup menu will appear, so you can choose the desired unit.

How to use the Save operations in Layout mode?

There are several Save operations in the Layout mode:

1. Save as .AVPD (an internal AV Bros. Puzzle Pro 2.0 file format) file. In this case, you save both the Splitter, including the states of knives (shown or hidden) and the selection (selected knives of the Splitter.) To use this save operation go under menu "Main" and choose the "Save" menu item.
2. Save as vector file formats (.EPS, or .AI) file. You can save selected knives as .EPS (Encapsulated PostScript) or .AI (Adobe® Illustrator®.) Go under menu "Main" and chose the desired menu item: "Save selected knives as .EPS" or "Save selected knives as .AI". If there are no knives selected, the entire Splitter will be saved.

How to use the Load operation in Layout mode?

For loading the Splitter, previously saved as .AVPD format, go under menu "Main" and choose "Load" menu item.

How to "Draw" the Splitter?

To "Draw" the Splitter, do one of the following:

1. Click the "Apply" button in the Main Window.
2. Go under menu "Main" and choose the "Apply [Draw Splitter]" menu item.

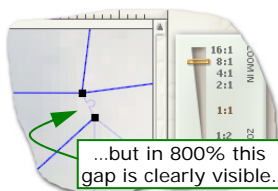
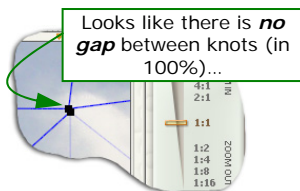
How to undo the last action?

To undo the last action, go under "Main" menu and choose the "Undo" menu item.

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Layout Mode's Details:

1. Clicking the knot will select all the knives which intersect in this knot.
2. All adjustments of the knife's shape in the Shaper affect all selected knives (or the Splitter, if there is no selection), regardless of whether these knives are hidden or shown.
3. Details about the "Knots Manual Adjustment" mode:
 - If you set two (2) or more knots in one point, then be sure that they are in this point indeed, especially if the Splitter's thickness is set to zero (0.) You may need to use a Zoom In operation to check whether there is no any gap between these knots, otherwise the pieces which you probably want to separate may still remain united.



- One very useful operation in this mode is an option to place the knot back to its place after any number of changing of the knot position. Just hold down the **Ctrl** (Windows) or **Command** (Mac OS X) button and click the knot's handle. The combination of the Undo option and this one lets you "step back" in almost all cases during manual adjusting the knots' position.
 - When this mode (Knots Manual Adjustment) is active you cannot change selection and all menu items under menu "Select" are disabled. The "Save as .EPS" and "Save as .AI" menu items under menu "Main" are disabled too.
 - Despite you cannot select the knife in this mode you can make a mouse right-click on the knife and by choosing the "Copy Knife's Shape" and "Paste Knife's Shape" menu items from the popup menu (which will appear), transfer the knife's shape from knife to knife.
 - You can use the Hide/Show and Flip U, Flip H and Flip HU operations for single knife by making a mouse right-click on this knife and by choosing the appropriate menu item from the popup menu, or use the Hide/Show and all flipping operations from the menu "Adjust", but only for the entire Splitter. There is one more option for flipping the single knife by H and/or U axes in this mode. Hold down the **Ctrl+Shift** (Windows) or **Command+Shift** (Mac OS X) buttons and click the desired knife. It will flip by H axe. Clicking the knife while holding down **Ctrl+Alt+Shift** (Windows) or **Command+Option+Shift** (Mac OS X), buttons will flip the knife by U axe.
 - You can change the number and/or position of the splitters of columns and/or rows just like you are in the "regular" Layout Mode.
 - You can click the "Apply" button to Draw the Splitter, or click the "Cut" button to cut the image while this mode is active.
4. While panning, or using the Navigator the Splitter temporary hides. As soon as you release the mouse button the Splitter reveals.
 5. The Splitter that you can see in the Main Preview is a vector image and thanks to this fact is a size independent. In particular, you can see this while zooming.
 6. The look of the Splitter in case you "drew" it (means that you clicked the "Apply" button while you were in the Layout Mode), depends on the following:
 - In case you applied the Splitter to the background layer or to the layer with locked transparency, the Splitter will be drawn with your host's current foreground color and on the host's current background color.
 - In case you applied the Splitter to the regular layer, the Splitter will be drawn with your host's current foreground color and with the transparency under it.
 7. The Undo operation works the non-common way for some actions (e.g., deleting the splitters of the columns and/or rows). For these actions using the Undo operation will undo not just the last action (as usual), but the whole series of these actions (not interleaved with other actions.) For instance: if you deleted a column's splitter, then deleted one more and then used the Undo operation, you would get both deleted splitters back, not just the last one.
 8. If the Splitter's thickness set to zero (0) and all piece effects are disabled, chances are that the look of the image will not change after cutting. This "trick" is available thanks to the precise engine of Cutter:

there is no anti-aliasing gaps (only if knife thickness is zero.) The image *is* cut, but looks like it *is not*.

.....

Howtos in the Puzzle Mode

How to use Zoom?

To learn how to use the zoom operation, see the same topic in the Layout mode howtos.

How to navigate the view area?

To learn how to use the zoom operation, see the same topic in the Layout mode howtos.

How to select the piece?

Click any piece to select it. Ones selected the piece is covered with vertical thin red lines.

How to select/deselect the group of the pieces?

For selection the group of the pieces, do one of the following:

1. Hold down the **Ctrl** (*Windows*) or **Command** (*Mac OS X*) button and click pieces you want to select or deselect. Unselected piece will become selected and vice-versa. For adding the single piece to the already selected group of pieces make a mouse right-click on the piece you want to add to the selection and choose from the popup menu, which will appear, "Add to Selection" menu item. To deselect the piece, choose "Deselect" menu item from the same popup menu. Each time you click the particular piece, while holding the **Ctrl** (*Windows*) or **Command** (*Mac OS X*) button, this piece switches its state (select/unselect.)
2. Click any piece and then, holding down the **Shift** button, click the other piece. A group of pieces will be selected. If you click one more piece, still holding the **Shift**, another group of pieces will be added to the previously selected group. To subtract from the selection use the combination of the **Alt+Shift** (*Windows*) or **Option+Shift** (*Mac OS X*) buttons. Hold both buttons down and click already selected piece. A group of pieces will be deselected.
3. To select a group of pieces using the block-selection operation, click on any space within Main Preview, regardless of whether it is an image or an area outside the image and drag. A part of the image bounded by the rectangle, which is drawn with a line and appears as soon as you start dragging, will be selected. Using the block-selection operation while holding down the **Shift** button will add the new block of selected pieces to the existed selection. In the other hand holding down the **Alt** (*Windows*) or **Option** (*Mac OS X*) button lets you to subtract from the existed selection.

4. To add the group of pieces to selection using the free-selection operation, or just select this group, if there is no selection, hold down the **Ctrl+Shift** (*Windows*) or **Command+Shift** (*Mac OS X*) buttons and click on any space within Main Preview, regardless of whether it is an image or an area outside the image and drag. A part of the image bounded by the free shaped line, which appears as soon as you start dragging, will be added to selection. Holding down the **Ctrl+Alt+Shift** (*Windows*) or **Command+Option+Shift** (*Mac OS X*) button lets you to subtract from the existing selection.
5. To select a group of the random pieces go under menu "Select" and choose the "Add random to selection" menu item. Some of the pieces will add to the existing selection. You can also deselect the group of the random pieces. To do this, go under menu "Select" and choose the "Deselect random" menu item.
6. There are some additional commands under menu "Select": "Select All Hidden", "Select All Shown", "Inverse Selection", "Select All" and "Load Selection". The first command selects all hidden pieces, second – selects all shown, third - inverses selection of the pieces and the forth – selects all the pieces. As for the "Load Selection" command, it will be described below.

How to select the Splitter?

If you cut the image into pieces and will specify (in the Cutter) the thickness of the Splitter different from the 0 (zero), you will be able to select the Splitter as a regular piece after cutting. To make the selection of the Splitter more convenient (it may be very thin), there is a special menu item – "Add Splitter to Selection" under menu "Select". You can also deselect the Splitter using the "Deselect Splitter" menu item under the same menu.

How to load the selection?

To learn how to load the selection, see the same topic in the Layout mode howtos.

How to hide the selection?

If you can see the selection (pieces are covered with vertical thin red lines), this means that the Extras mode is enabled and if you go under menu "Select" you will see a check mark next to the "Extras" menu item. The check mark indicates whether the mode is enabled or not. To hide the selection, just click the "Extras" menu item. This will disable it and check mark will disappear. To reveal selection, click this item again.

How to turn ON/OFF the pieces (Show/Hide operations)?

To turn OFF (hide) the piece (pieces) you should select it (them) first. Only in case you want to hide all the pieces (the entire Puzzle) it is not necessary to select them before. Then you can do one of the following:

1. Click the "Hide" button.
2. Go under menu "Adjust" and choose the "Hide" menu item.

3. Go under menu "Adjust" and choose the "Reverse Shown-Hidden" menu item. In this case all shown pieces will be hidden and vice-versa.
4. Press the **Delete** button on the keyboard.
5. If you want to hide only one piece from a group of selected, you should make a mouse right-click on the desired piece and choose from the popup menu, which will appear, the "Hide" menu item.

To turn ON (show) the particular hidden piece (pieces) you should select it (them) before. In case you want to show all hidden pieces they may be unselected. Then you can do one of the following:

1. Click the "Show" button.
2. Go under menu "Adjust" and choose the "Show" menu item.
3. Go under menu "Adjust" and choose the "Reverse Shown-Hidden" menu item. In this case all shown pieces will be hidden and vice-versa.
4. Press the **Backspace** button on the keyboard.
5. If you want to show only one piece from a group of hidden, you should make a mouse right-click on the desired piece and choose from the popup menu, which will appear, the "Show" menu item.

How to use the effects' commands (blur, opacity, etc.)?

There are seven effects (Bevel, Gaussian Blur, Motion Blur, Opacity, Color Overlay, Brightness/Contrast and Hue/Saturation) in the AV Bros. Puzzle Pro 2.0. To call any of them, go under menu "Adjust" and choose the desired effect. Once the effect's window appears you can use the controls in this window to get the desired effect.

You can disable the particular effect applied to any number of pieces. Do one of the following:

1. To disable the effects of the single piece, make a mouse right-click on the piece, which effects you want to disable. The popup menu will appear. There are menu items: "Enable Bevel", "Enable Blur", etc. in the popup menu. Depending on which effects are applied to the piece, the appropriate menu items are check marked. To disable the particular effect, choose the appropriate menu item. For example, to disable (turn off) the bevel, click the check marked "Enable Bevel" menu item and the bevel effect will be turned off.
2. To disable the effects of the group of the pieces, you should select these pieces, first. Then, go under menu "Adjust" and chose the check marked menu item of the effect you want to disable, for instance - Blur: "Enable Blur".

How to copy the effects applied to the piece?

Do one of the following:

1. Make a mouse right-click on the piece, regardless whether it is selected or not. The popup menu will appear. Then choose the "Copy Effects" menu item.
2. Go under menu "Adjust" and choose the "Copy Effects" menu item. If only one piece is selected, you will copy its effects. If there is a group of selected pieces, only one (random) piece's effects will be copied.

How to paste the piece's effects?

Do one of the following:

1. You can paste the piece's effects instead of a single piece's effects. To do this, make a mouse right-click on the piece, which effects you want to change. The popup menu will appear. Then choose the "Paste Effects" menu item.
2. You can paste the piece's effects instead of the effects of the group of pieces or all pieces. To do this, first select the group of pieces, which effects you want to change or Then go under menu "Adjust" and choose the "Paste Effects" menu item.
3. You can paste the piece's effects instead of the effects of the group of pieces. To do this, first select the group of pieces, which effects you want to change. Then go under menu "Adjust" and choose the "Paste Effects" menu item. If you choose this menu item and there is no selection at all, then the effects of all pieces will be changed.

How to re-cut the image?

If you want to change the Splitter and re-cut the image, you should call the Cutter window. Do one of the following:

1. Click the "Relayout" button.
2. Go under menu "Main" and choose the "Relayout" menu item.

How to change the units of measurement for the Ruler?

To learn how to change the units of measurement, see the same topic in the Layout mode howtos.

How to use the Save operations in Puzzle mode?

There are two (2) save operations in the Puzzle mode:

1. Save as .AVPD (an internal AV Bros. Puzzle Pro 2.0 file format) file. You save both the Puzzle, including the states of the pieces (shown or hidden) and all the effects applied to each piece. To use this save operation go under menu "Main" and choose the "Save" menu item.
2. You can also save pieces (only selected pieces) as layered .PSD (Adobe® Photoshop® document) file. To do this, go under menu "Main" and chose "Save Selected Pieces as PSD" menu item.

How to use the Load operation in Puzzle mode?

For loading the Puzzle, previously saved as .AVPD format, go under menu "Main" and choose "Load" menu item. The Main Window will be switched to the Layout mode and Cutter will appear. Then, you have two (2) possibilities: you can immediately click the "Cut" button in the Cutter or you can first adjust the Splitter in the Cutter and only then click the "Cut" button.

How to get my image “puzzled” in the host application?

If you are satisfied with what you see in the Main Preview, it's time to get your image “puzzled” in your image editing application. Do one of the following:

1. Click the “Apply” button in the Main Window.
2. Go under menu “Main” and choose the “Apply” menu item.

How to undo the last action?

To undo the last action, go under “Main” menu and choose the “Undo” menu item.

Puzzle Mode's Details:

1. In the Main Preview the cursor changes its look, depending on the content under it, to the following:
 - To “Cursor J”, if the cursor is over the area there is no image (frame around the image or completely transparent part of the image.)
 - To “Cursor K”, if the cursor is over the hidden piece.
 - To “Cursor L”, if the cursor is over the piece with the opacity different from 100%.



Cursor J



Cursor K



Cursor L

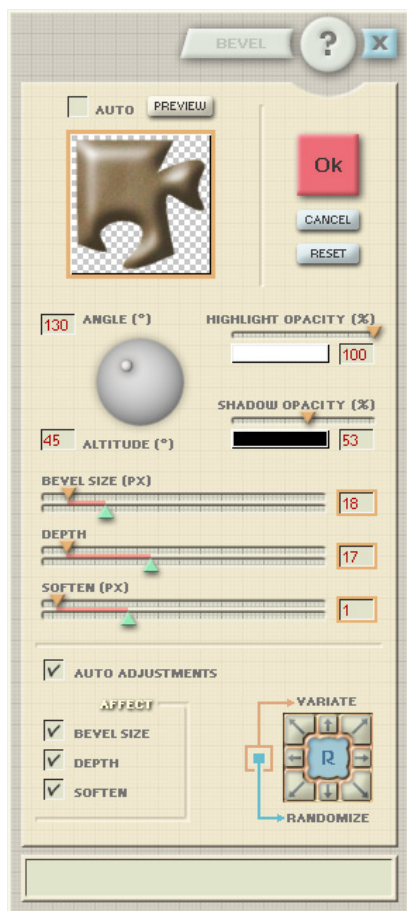
2. There may be a slight difference between the original image and how it looks on the Main Preview, if the image is in CMYK color mode or your image is tagged with a color profile. But, when you apply the plug-in and get the image cut, the color “content” of your image will not change, if, of course, you did not use the internal color modifying effects of AV Bros. Puzzle Pro 2.0, while preparing the image for cutting.
 3. The Hue/Saturation effect is disabled if the image is in CMYK color mode.
 4. The result of Color Overlay and Bevel (in its “color part”, if the colors of Shadow and Highlight differ from the black and white colors) effects, might be different for images in CMYK and RGB color modes.
 5. If you are in the Puzzle mode and there are an effects applied to the pieces of your cut image and then you make any adjustment (by calling the Cutter), which change the layout of the pieces (e.g., you hide a knife), the “map” of the effects will change.
-

Howtos in the Adjust Mode

As soon as you call any effect window, the Main Window switches to the “Adjust” mode. To learn more about effects, see the chapter Effects. In this mode all buttons of the Main Window, except “?” button, are disabled. After applying the desired effect, or quitting, the Main Window switches back to the Puzzle Mode.

Bevel

Lets you produce high quality bevel effect for the selected pieces or for all pieces, if there is no selection.



Bevel Size Slider

This slider is a Dual Slider Control, which lets you adjust the size of the bevel or specify the range of the bevel sizes while producing the bevel effect.

Details:

The range of the values for bevel size is between 0 and 200 pixels.

Depth Slider

This slider is a Dual Slider Control, which lets you adjust the depth of the bevel or specify the range of the depths while producing the bevel effect.

Details:

The range of the values of the bevel's depth is between 0 and 999.

Soften Slider

This slider is a Dual Slider Control, which lets you adjust the soften of the bevel or specify the range of softens while producing the bevel effect.

Details:

The range of the values of the bevel's depth is between 0 and 20.

3D Light Control

The control lets you specify the direction of the light while producing the bevel effect by adjusting the light's Angle and Altitude. You can click and drag the handle (the small "ball") over the large sphere to adjust the light's Angle and Altitude, or simply enter the desired values of the angle and altitude into the appropriate edit-boxes.

Details:

The range of the values of the angle is between 0 and 360 degree. The range of the values of the altitude is between 0 and 90 degree.

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Highlight Control

The control consists of "Highlight Opacity" slider and "Highlight Color" swatch. The control lets you choose the color of the highlight and adjust its opacity while producing the bevel effect.

You can click the "Highlight Color" swatch to call your graphic host's color picker and then choose the desired color of the highlight. For adjusting the opacity of the highlight drag the "Highlight Opacity" slider or simply enter the desired value into the edit-box.

Details:

The range of the values of the highlight's opacity is between 0 and 100%.

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Shadow Control

The control consists of "Shadow Opacity" slider and "Shadow Color" swatch. The control lets you choose the color of the shadow and adjust its opacity while producing the bevel effect.

You can click the "Shadow Color" swatch to call your graphic host's color picker and then choose the desired color of the shadow. For adjusting shadow's opacity drag the "Shadow Opacity" slider or simply enter the desired value into the edit-box.

Details:

The range of the values of the shadow's opacity is between 0 and 100%.

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Auto Adjustments Mode

Select Auto Adjustments check-box to enable the "Auto Adjustments Mode". In this mode you can, using the Variate/Randomize Control, the Dual Slider Controls and "Affect..." check-boxes (see below), variate the desired bevel's parameter from piece to piece for selected pieces or for all pieces, if there is no selection.

.....

Affect Bevel Size check-box

Turns ON/OFF the option, which lets you specify whether the “Bevel Size” slider takes part in the adjustments while the Auto Adjustments check-box is selected.

A check mark indicates that the option is selected (turned ON.)

.....

Affect Depth check-box

Turns ON/OFF the option, which lets you specify whether the “Depth” slider takes part in the adjustments while the Auto Adjustments check-box is selected.

A check mark indicates that the option is selected (turned ON.)

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Affect Soften check-box

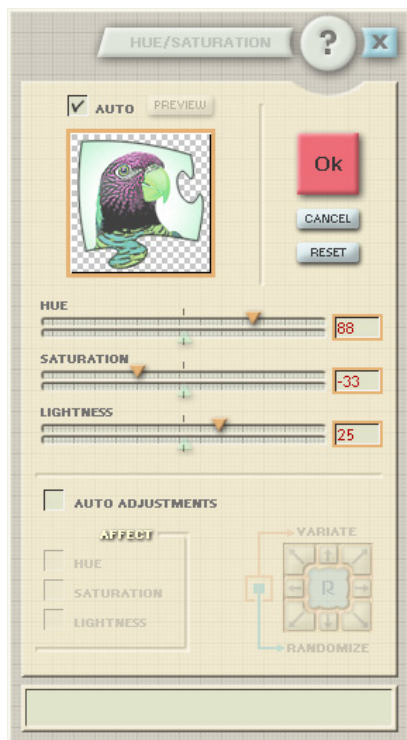
Turns ON/OFF the option, which lets you specify whether the “Soften” slider takes part in the adjustments while the Auto Adjustments check-box is selected.

A check mark indicates that the option is selected (turned ON.)

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Hue/Saturation

Lets you adjust the hue, saturation and/or lightness of the selected pieces or all pieces, if there is no selection.



Hue Slider

This slider is a Dual Slider Control, which lets you adjust the hue or specify the range of the values of the hue.

Details:

The range of the hue's values is between -180 and 180.

Saturation Slider

This slider is a Dual Slider Control, which lets you adjust the saturation or specify the range of the values of the saturation.

Details:

The range of the saturation's values is between -100 and 100.

Lightness Slider

This slider is a Dual Slider Control, which lets you adjust the lightness or specify the range of the values of the lightness.

Details:

The range of the lightness's values is between -100 and 100.

Auto Adjustments Mode

Select Auto Adjustments check-box to enable the "Auto Adjustments Mode". In this mode you can, using the Variate/Randomize Control, the Dual Slider Controls and "Affect..." check-boxes (see below), variate the desired

parameter from piece to piece for selected pieces or for all pieces, if there is no selection.

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Affect Hue check-box

Turns ON/OFF the option, which lets you specify whether the "Hue" slider takes part in the adjustments while the Auto Adjustments check-box is selected.

A check mark indicates that the option is selected (turned ON.)

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Affect Saturation check-box

Turns ON/OFF the option, which lets you specify whether the "Saturation" slider takes part in the adjustments while the Auto Adjustments check-box is selected.

A check mark indicates that the option is selected (turned ON.)

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Affect Lightness check-box

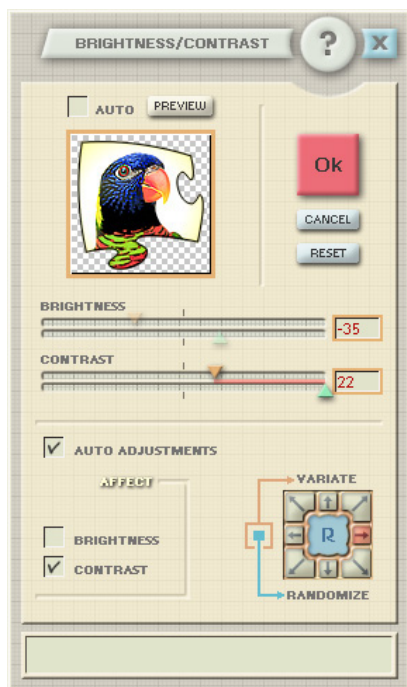
Turns ON/OFF the option, which lets you specify whether the "Lightness" slider takes part in the adjustments while the Auto Adjustments check-box is selected.

A check mark indicates that the option is selected (turned ON.)

.....

Brightness/Contrast

Lets you adjust the brightness and/or the contrast of the selected pieces or all pieces, if there is no selection.



Brightness Slider

This slider is a Dual Slider Control, which lets you adjust the brightness or specify the range of the values of the brightness.

Details:

The range of the brightness's values is between -100 and 100.

Contrast Slider

This slider is a Dual Slider Control, which lets you adjust the contrast or specify the range of the values of the contrast.

Details:

The range of the contrast's values is between -100 and 100.

Auto Adjustments Mode

Select Auto Adjustments check-box to enable the "Auto Adjustments Mode". In this mode you can, using the Variate/Randomize Control, the Dual Slider Controls and "Affect..." check-boxes (see below), variate the desired parameter from piece to piece for selected pieces or for all pieces, if there is no selection.

Affect Brightness check-box

Turns ON/OFF the option, which lets you specify whether the "Brightness" slider takes part in the adjustments while the Auto Adjustments check-box is selected.

A check mark indicates that the option is selected (turned ON.)

.....

Affect Contrast check-box

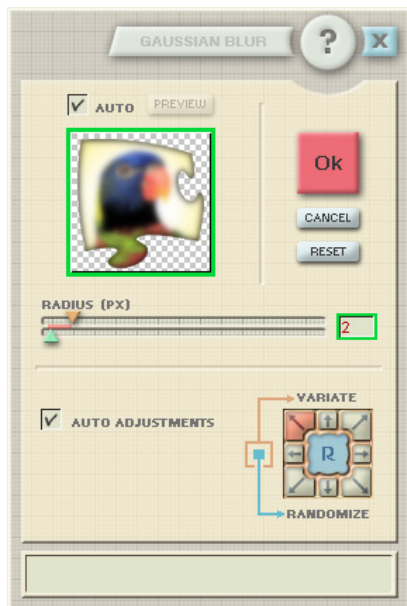
Turns ON/OFF the option, which lets you specify whether the "Contrast" slider takes part in the adjustments while the Auto Adjustments check-box is selected.

A check mark indicates that the option is selected (turned ON.)

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Gaussian Blur

Lets you adjust the Gaussian blur of the selected pieces or all pieces, if there is no selection.



Radius Slider

This slider is a Dual Slider Control, which lets you adjust the radius of the Gaussian blur or specify the range of the Gaussian blurs' radiuses.

Details:

The range of the values of the Gaussian blur's radius is between 0 and 100 pixels.

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Auto Adjustments Mode

Select Auto Adjustments check-box to enable the "Auto Adjustments Mode". In this mode you can, using the Variate/Randomize Control and the Dual Slider Control, variate the Gaussian blur from piece to piece for selected pieces or for all pieces, if there is no selection.

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Motion Blur

Lets you adjust the motion blur of the selected pieces or all pieces, if there is no selection.



Radius Slider

This slider is a Dual Slider Control, which lets you adjust the radius of the motion blur or specify the range of the motion blurs' radiuses.

Details:

The range of the values of the motion blur's radius is between 0 and 100 pixels.

Angle 1 and 2

This control lets you specify the direction (Angle 1) or the range of the directions (Angle 1 and Angle 2) of the motion blur. Click and drag the orange (Angle 1) and/or green (Angle 2) diameter-line to specify the desired value of the motion blur's angle or the range of the angles.

Details:

The idea of this control is close to the idea of the Dual Slider Control.

Both controls: Angle 1 and Angle 2 are in use only if Auto Adjustments check-box is selected (turned ON.) If Auto Adjustments option is turned off only Angle 1 is in use. The range of the values for each control is between 0 and 360 degree.

Auto Adjustments Mode

Select Auto Adjustments check-box to enable the "Auto Adjustments Mode". In this mode you can, using the Variate/Randomize Control, the Dual Slider Controls and "Affect..." check-boxes (see below), varyate the desired parameter from piece to piece for selected pieces or for all pieces, if there is no selection.

Affect Angle check-box

Turns ON/OFF the option, which lets you specify whether "Angle 1" and "Angle 2" controls takes part in the adjustments while the Auto Adjustments check-box is selected.

A check mark indicates that the option is selected (turned ON.)

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Affect Radius check-box

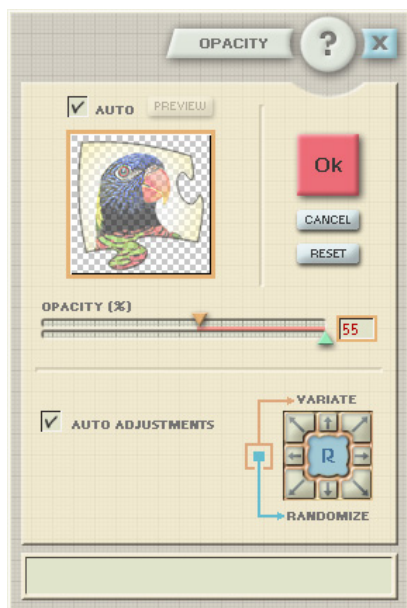
Turns ON/OFF the option, which lets you specify whether "Radius" slider takes part in the adjustments while the Auto Adjustments check-box is selected.

A check mark indicates that the option is selected (turned ON.)

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Opacity

Lets you adjust the opacity of the selected pieces or all pieces, if there is no selection.



Opacity Slider

This slider is a Dual Slider Control, which lets you adjust the opacity or specify the range of the values of the opacity.

Details:

The range of the opacity's values is between 0 and 100%.

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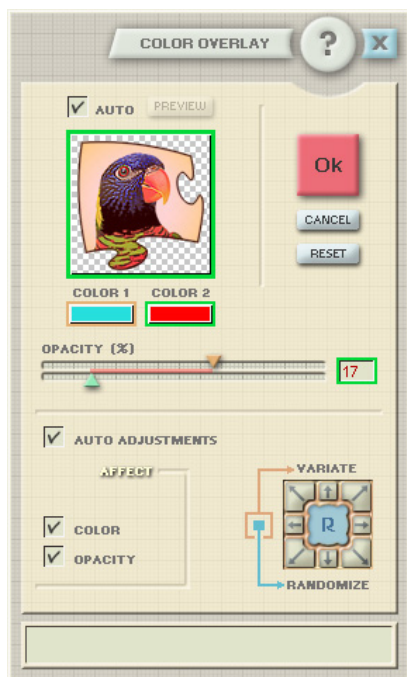
Auto Adjustments Mode

Select Auto Adjustments check-box to enable the "Auto Adjustments Mode". In this mode you can, using the Variate/Randomize Control and the Dual Slider Control, variate the Opacity from piece to piece for selected pieces or for all pieces, if there is no selection.

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Color Overlay

Lets you specify the color of the selected pieces or all pieces, if there is no selection.



Opacity Slider

This slider is a Dual Slider Control, which lets you adjust the opacity or specify the range of the values of the opacity.

Details:

The range of the opacity's values is between 0 and 100%.

Choose Color Swatches

This control lets you specify the color to overlay the selected pieces or all pieces, if there is no selection.

Click the swatch and the default Color Picker of your graphic host application will appear. Then, choose the desired color and click "OK" button of the Color Picker.

Auto Adjustments Mode

Select Auto Adjustments check-box to enable the "Auto Adjustments Mode". In this mode you can, using the Variate/Randomize Control, the Dual Slider Control and "Affect..." check-boxes (see below), specify the range of the colors to overlay selected pieces or all pieces, if there is no selection.

Affect Color check-box

Turns ON/OFF the option, which lets you specify whether the colors specified by "Color1" and "Color2" swatches, take part in the adjustments while the Auto Adjustments check-box is selected.

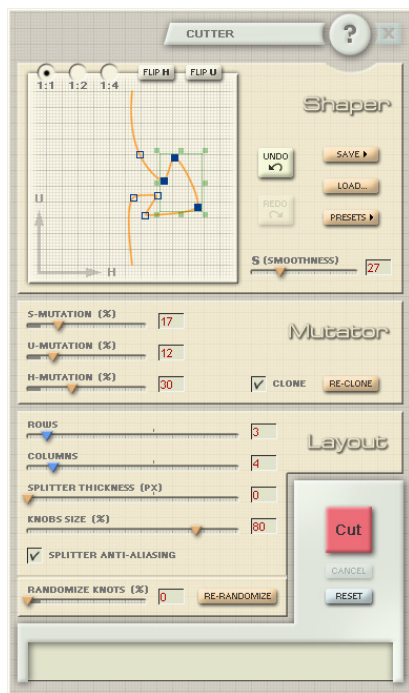
A check mark indicates that the option is selected (turned ON.)

***Affect Opacity* check-box**

Turns ON/OFF the option, which lets you specify whether the “Opacity” slider takes part in the adjustments while the Auto Adjustments check-box is selected.

A check mark indicates that the option is selected (turned ON.)

Cutter Window



The Cutter Window (hereafter: Cutter) consists of the three main parts: Shaper, Mutator and Layout.

You can create a wide range of the shapes of the knife (hereafter: Shape) in the Shaper part of the Cutter, which can be cloned afterwards with mutations or as is (see Mutator) to construct the Splitter (the layout of the knives) for cutting the image into pieces in the Main Window. The Splitter is highly adjustable thanks to the controls located in the Layout part of the Cutter. Once you are satisfied with the Splitter you can do the following: cut your image into pieces (see Cut) and/or draw this Splitter (see Main Window.) And, of course, if you want to use the Shape afterwards, you can save it using an internal AV Bros. format: .AVPH (AV Bros. Knife Shape 2.0), or save it as a vector using the following file formats: .EPS (Encapsulated PostScript) and .AI (Adobe® Illustrator®.) You can also add the Shape to the Presets.

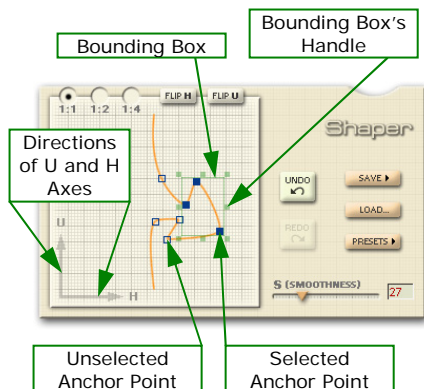
Cut button

Lets you cut the image (in the Main Window) into the pieces using the Splitter, created in the Cutter as a knife.

Details:

1. After clicking the Cut button a semitransparent panel covers the Cutter. The progress bar located on the panel indicates the cutting process. As soon as the cutting process is over the Cutter closes up.
2. You can stop the cutting process at almost any time by clicking the Abort button located on the panel or **Esc** button on the keyboard.
3. Each time you call the Cutter (by clicking the Relayout button in the Main Window) the mutations' sliders (S, U and H-Mutations) and Randomize Knots slider reset to zero (0.)

Shaper



This part of the Cutter is designed for a Shape creation, saving and loading the created Shape and adding the Shape to the presets.

For creation or adjusting the Shape you should operate with an Anchor Points or/and a Bounding Box, both are specially created for this purpose.

How to operate with an Anchor Points?

You can add an Anchor Point by clicking on the free space of the orange line, or you can remove any unnecessary Anchor Point(s) (they should be selected for this operation) by right-clicking in the Shaper Preview and choosing the "Delete Selected" menu item or simply by pressing the **Delete** button on the keyboard. If you click on any free space of Shaper Preview outside the orange line, the Anchor Points will lose their selection and will convert into unselected Anchor Points. The Bounding Box will also disappear.

If you want to get the Anchor Points selected back you should do one of the following:

1. Click any unselected Anchor Point;
2. Click any unselected Anchor Point holding the **Ctrl** (Windows) or **Command** (Mac OS X) button down. In this case you will add this Anchor Point to the selected Anchor Points and as soon as at least two Anchor Points are selected the Bounding Box will appear. If you click the selected Anchor Point one more time (still holding the **Ctrl** (Windows) or **Command** (Mac OS X) button down) the Anchor Point will lose its selection and become unselected.
3. Click on any free space of the Shaper Preview and without releasing the mouse drag the cursor. In this case the yellow rectangle will appear. Use it for covering as many Anchor Points as you wish. After releasing the mouse the Anchor Points which you have covered become selected with Bounding Box around them.

You can hide only Anchor Points or hide both the Anchor Points and the Bounding Box by right-clicking in the Shaper Preview and checking off "Show Anchor Points" or "Extras" menu items. To reveal them back use the same menu items.

How to create or adjust the Shape?

There are different situations while adjusting the Shape, depending on the number of the Anchor Points and their states:

1. There is only one Anchor Point on the Shape. In this case click this Anchor Point and drag it as desired.
2. There is more than one Anchor Point on the Shape, but only one is selected. This case is equal to the case [1.] except that unselected Anchor Point(s) will stay as is.
3. There is more than one Anchor Point on the Shape and all of them are selected. In this case you will see a Bounding Box around Anchor Points. Two (2) options are available for adjusting the Shape:
 - You can click any of the Anchor Point and drag it without releasing the mouse. In this case both the Anchor Points and the Bounding Box will move all together.
 - You can click any of the Bounding Box's handle and drag it. In this case you will scale the Bounding Box and the Shape at once. Use **Shift** and **Alt** (*Windows*) or **Option** (*Mac OS X*) keyboard's buttons separately or together for scaling the Bounding Box proportionately.
4. There is a few Anchor Points on the Shape and at least two of them are selected. You will see a Bounding Box only around the selected Anchor Points. This case is equal to case [3.] except that unselected Anchor Point(s) will stay as is.

How to adjust the smoothness of the Shape?

For adjusting the Shape's smoothness you should use the "S" (Smoothness) slider. It changes the smoothness of the Shape only in the selected Anchor Point(s). Drag the slider to specify the desired value of the parameter, or enter the value into the edit-box.

How to flip the Shape?

Use Flip U and Flip H buttons. Each click on the buttons will flip the entire Shape by U or H axis regardless of the number of Anchor Points.

How to Save the Shape?

Click the Save button and popup menu will appear.

- If you want to save the Shape as a vector for further use in applications like Adobe® Illustrator®, Corel® CorelDRAW®, Macromedia® Flash™, etc. (although, even raster graphics applications like Adobe® Photoshop®, Corel® Photo Paint®, Jasc® Paint Shop™ Pro® and some others are absolutely suitable for vector based graphic work) choose the following file formats from the menu: .EPS (Encapsulated PostScript) or .AI (Adobe® Illustrator® format).
- Choose the "...As AV Bros. Knife Shape 2.0..." menu item under menu Save (the internal AV Bros. Puzzle Pro 2.0 format (.AVPH) for saving the Shapes) if you are about to use the created Shape in AV Bros. Puzzle Pro 2.0 afterwards, because .AVPH is the only format

available in AV Bros Puzzle Pro 2.0 for loading previously saved Shapes.

How to Load the Shape?

Click the Load button and standard open file dialog will appear. Choose the desired file with .AVPH extension to load the appropriate Shape in the Shaper.

How to Add the Shape to Presets?

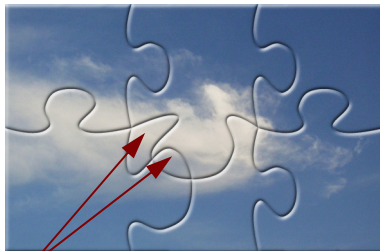
There is a quick way to store your favorite Shapes - to use "Add to Presets" menu item by clicking the Presets button. These presets can be used afterwards by calling the Preset Manager (the menu item under the same button.)

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Shaper Details:

1. As was mentioned above, a Shape (shape of the single knife) is a basic element for constructing a Splitter which you can see in the Main Window. The look of the Splitter depends on the Shape, created in the Shaper, the states of Mutator controls, the Layout controls and selected (in the Main Window) knives. Unlike the Layout controls which affect the entire Splitter, the process of cloning the Shape, which depends on the Mutator controls, affects only the selected (in the Main Window) knives or affects all knives (the entire Splitter) if there is NO selected knives at all.
2. The orange line represents you the current Shape in the Shaper Preview.
3. Each time you start the Cutter the last used Shape is displaying. Only the very first start of the plug-in will display the default Shape.
4. In almost all cases (there is an exception described in the next Details' item) after starting the Cutter along with the Shape you will see the selected Anchor Points on the Shape and the Bounding Box around them.
5. The Bounding Box appears if only more than one Anchor Point is selected on the Shape.
6. **64** is the maximum number of the Anchor Points you can place on the Shape.
7. Taking into account the fact that the Shape may be cloned with mutations (see Mutator) or you can choose any number of knives from the Splitter and then change their shape in the Shaper there is NO direct relation between the Shape displaying in the Shaper Preview and Splitter's shape displaying in the Main Window.
8. The shaper has multi-level (up to 200 levels) Undo/Redo command.
9. If, while creation the Shape, the size of the Shaper Preview become too short (by H-axis) for the Shape you can use Scale Preview radio-buttons 1:2 and 1:4, which let you scale the Shape.
10. There is NO any connection between the thickness of the orange line which represents the Shape in the Shaper Preview and the Splitter's real thickness specified in the Layout. You will see the real thickness of the Splitter in Main Window.

11. Despite that the orange line which represents the Shape is oriented vertically in the Shaper Preview and associated, at first glance, only with the knives for Columns, the *same* Shape is used for the Rows' knives too (of course, depends on the mutation level (see Mutator) while cloning.) Therefore, the relative orientation of U and H axis is the same for all knives' knobs: the knob's width variate by U-axis and the knob's height variate by H-axis.
12. While creation the Shape, please keep in mind that some created Shapes may be cut into the puzzle, which look is far away from the regular puzzle look. One of the effects of this "flexibility of the Shape" is that the real number of pieces, of the cut image, may NOT be a result of multiplication of the number of Columns and Rows that you specified in the Layout.



Looks like this puzzle should be the 6 pieces puzzle, but there are 8 pieces! We have 2 extra pieces because of knobs' intersection.

13. The purpose of both saving a Shape as AV Bros. Knife Shape 2.0 (.AVPH) and adding a Shape to Presets operations is almost the same: storing a Shape for further usage in the plug-in. But there are some nuances: saving a Shape as .AVPH file lets you not only load the Shape into the plug-in, but provide you with a possibility to share the Shape with everyone who has AV Bros Puzzle Pro 2.0 installed. The bad news is that you cannot see the Shape until you load it in the plug-in. On the other hand adding a Shape to the Presets lets you not only use the Shape in the plug-in afterwards, but review the thumbnails with Shapes with the help of the Preset Manager. But it should be said that for sharing the Shape stored as the Preset you have to make some extra operations in the Preset Manager.

Mutator

This part of the Cutter is designed for cloning the Shape, created in the Shaper, for further constructing the Splitter (based on this Shape) in the Main Window. You can clone the Shape with or without mutations.

How to turn ON the Mutator?

For turning ON the Mutator, select the "Clone" check-box. In this case any adjustment of the Shape, which you have made in the Shaper, is automatically displayed in the Main Window, changing the look of the Splitter.

How to specify the mutation's level?

Drag the mutation sliders (S, U and H Mutations) to specify the desired value of the mutations, or enter the desired values into appropriate edit-boxes.

How to use the Re-Clone button?

Click the "Re-Clone" button if you are not satisfied with the Splitter's look after cloning with mutation. Each click will re-clone the Shape, changing the look of the Splitter (if at least one of the mutations value (S, U or H) are above the zero.)

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Mutator Details:

1. Each time you call the Cutter (by clicking the "Relayout" button in the Main Window) the mutations' sliders (S, U and H-Mutations) reset to zero (0.)
 2. The Mutator is disabled if the "Clone" check-box is deselected.
 3. The "Re-Clone" button is disabled if there is NO selected Anchor Points in the Shaper, but the "Re-Clone" button is enabled if there is NO Anchor Points at all (the Shape is the straight line.)
 4. If the "Clone" check-box is selected and all sliders of the Mutator (S-Mutation, U-Mutation and H-mutation) are set to the zero (0) the Shape will be cloned As Is (without mutation.)
 5. If you want the Splitter to consist of different knives you have the following possibilities:
 - Manually select the knife in the Main Window (this will send the knife into the Shaper.) Then you can adjust the knife, using Shaper's tools.
 - Drag S-Mutation, U-Mutation and H-mutation sliders to specify the desired level of mutation by Smoothness, U and H axis.
 6. If the level of mutations is high (usually more than 50-60%, although depends on the Shape and layout), then not only the knives, which construct the Splitter, will be highly different, but there may be an intersection of knives.
 7. The range of all Mutations' sliders is between 0 and 100%.
-

Layout

This part of the Cutter lets you specify the general parameters of the Splitter (layout of the knives) such as number of Columns and Rows, Thickness of the Splitter, etc.

How to set parameters of the Layout?

To specify the desired number of the rows and columns, the thickness of the Splitter and the size of the knives' knobs you should drag the appropriate slider or enter the desired value into the suitable edit box.

How to avoid jagged edges of the Splitter?

Select the "Splitter Anti-Aliasing" check-box if you want the Splitter to look smoothly.

How to adjust the position of the Splitter's knots?

There are two (2) possibilities to adjust the position of the Splitter's knots: auto and manual adjustments.

- For auto adjustment you can use the "Randomize Knots" control. Drag the "Randomize Knots" slider to specify the level of knots' displacement and click the "Re-Randomize" button, if you are not satisfied with the current position of the Splitter's knots.
 - For manual adjustment you can use a special option "Knots Manual Adjustment" under menu Adjust in the Main Window. See the Main Window to learn more.
-

Layout Details:

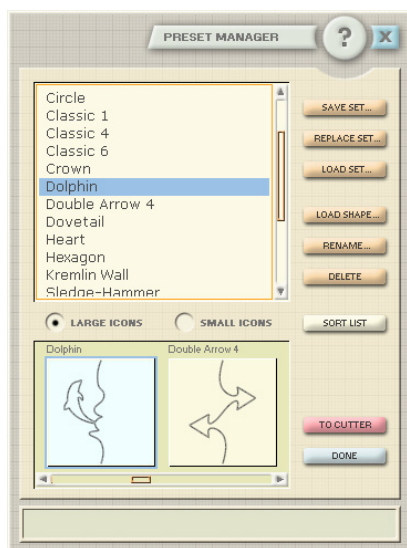
1. All controls (except "Randomize Knots" slider) in the Layout part of the Cutter affect the whole Splitter regardless of selected (in the Main Window) knives of the Splitter.
2. The "Randomize Knots" slider affects knots of selected in the Main Window knives or all knots if there is no selection.
3. Deselecting the "Splitter Anti-Aliasing" check-box lets you speed up the previewing in the Main Window and the process of Drawing of the Splitter for large images especially if the Splitter consist of very many (thousands) thick (more than 20 pixels) knives.
4. Each time you call the Cutter (by clicking the "Relayout" button in the Main Window) the "Randomize Knots" slider resets to zero (0.)
5. If the level of the knots' randomization is high (usually more than 50-60%, although this depends on the Shape and layout), then not only the knives, which construct the Splitter, will be highly different, but there may be an intersection of knives.
6. The range of "Randomize Knots" slider is between 0 and 100%

Preset Manager Window

Lets you operate with a knives' shapes (further: Shapes) created in the Shaper part (further: Shaper) of the Cutter window.

You can:

1. Review the Shape using two types of the thumbnails: small and large ones (we call them: Small Icons and Large Icons.)
2. Sort list of the Shapes.
3. Rename and delete the Shapes.
4. Load the Shape (previously saved) into the Preset Manger.
5. Save any number of Shapes as a Set.
6. Operate with the Sets: Load the Set and Replace the current Set with another one.



How to review the Shape?

For reviewing the Shape you have two options: the "Large Icons" mode and the "Small Icons" mode. Click the desired radio-button and the Shapes will be displayed on the thumbnails.

How to sort Shapes?

Click the "Sort List" button to sort the list of Shapes ascending (from A to Z.)

How to rename the Shape?

To rename the Shape click the "Rename" button and a special "Shape Name" window will appear. Type in the desired name of the Shape and click OK.

How to delete the Shape?

In the Shapes list select one or more Shapes (use **Ctrl** (Windows) or **Command** (Mac OS X) and **Shift** buttons for multi-select option) you are about to delete. Then click the "Delete" button.

How to load the Shape?

Use the "Load Shape" button for loading previously saved Shape. After clicking the "Load" button the standard open file dialog will appear. Choose the desired Shape and click OK.

How to save the Set?

You can unite any number of Shapes into the Set. Select one or more Shapes you are about to save as the Set and click the "Save Set" button. The standard save file dialog will appear. Type in the desired name of the Set, then choose the path and click OK.

How to load the Set?

For loading the previously saved Set into the Preset Manager click the "Load Set" button. The standard open file dialog will appear. Choose the desired Set and click OK.

How to replace the Set?

For replacing the current list of Shapes with the previously saved Set, click "Replace Set" button. The standard open file dialog will appear. Choose the desired Set and click OK.

How to use the Shape from the list?

You can use the Shape from the list in the Shaper for further usage as a Shape for constructing the Splitter. Once the Shape is chosen, click the "To Cutter" button, or press the **Enter** (*Windows*) or **Return** (*Mac OS X*) button on the keyboard for sending the Shape into the Cutter (Shaper.)

How to finish working with the Preset Manager?

Click the "Done" button or simply the "Close" button to close the Preset Manager window.

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Details:

1. As soon as you select the Shape in the list, the appropriate thumbnail (icon) is selected too. If you select more than one Shape in the list, the appropriate icons are selected. And this process is reversible: if you select one or more icons the appropriate names of Shapes will be selected in the list.
 2. You can try different Shapes from the list by sending them to the Shaper without closing the Preset Manager.
-

Common Controls



Close button

Closes an active window and cancels all your recent activity in the window.

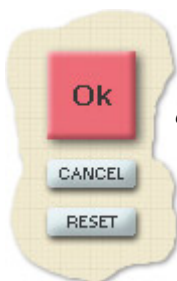


Help button

Lets you reach the "Help" and "About" menu items.

Ok button

Use this button if you want to confirm that you are satisfied with your actions (shape, effects, corrections, etc.) in the current window.



Cancel button

Closes an active window and cancels all your recent activity in the window.

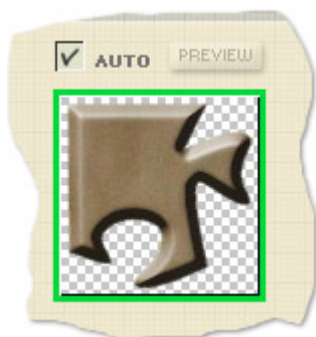
Reset button

Cancels all changes (without closing an active window) to the values you had prior to your changes.



Status Bar

Displays you the brief information about the controls of the plug-in. Place the cursor over the control and the information regarding this control will appear.



Auto check-box

The control locates only in the effects' windows ("Opacity", "Blur", etc.) By selecting this option, you let any adjustment that you have made in the current Effects' Window to be displayed in the Main Preview Window. Each click switches the control's state. A check mark indicates that the option is selected.

Details:

The previewing will be started as soon as an activity of any control (slider, button, etc.) is finished.

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Preview button

The control locates only in effects' windows ("Opacity", "Blur", etc.) and lets you to preview in the *Main Preview Window* all adjustments that you have made in the current Effects' Window, when "Auto" check-box is deselected.

Details:

- i. Suitable for slow computers or very large images.
 - ii. The button is disabled if "Auto" check-box is selected.
-

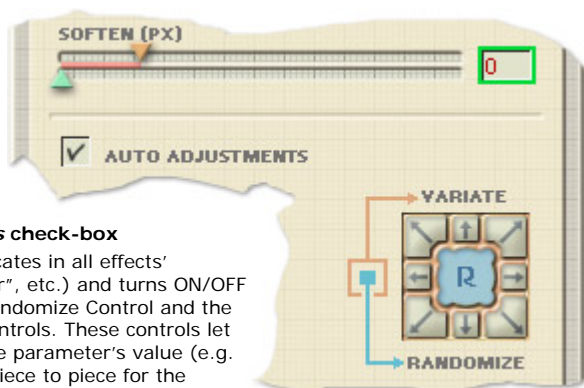
Local Preview

The control locates only in effects' windows ("Opacity", "Blur", etc.) and displays you the result of the adjustments on the built in image.

Details:

Although the Local Preview allows you an online previewing, unlike the previewing in the Main Window, it is recommended for fast and non-precise previewing.

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Auto Adjustments check-box

The control locates in all effects' windows ("Blur", etc.) and turns ON/OFF the Variate/Randomize Control and the Dual Slider Controls. These controls let you varyate the parameter's value (e.g. soften) from piece to piece for the selected pieces or for all pieces, if there is no selection. Each next click will switch the control's state. A check mark indicates that the option is selected (turned ON.)

Details:

This option is enabled if only at least two (2) pieces of the cut image are selected. If only one piece or Splitter is selected the control is disabled.

Dual Slider Control (DSC)

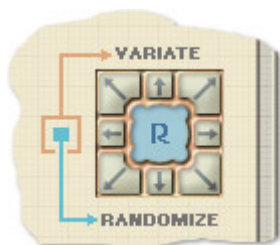
The control locates only in effects' windows ("Opacity", "Blur", etc.) and lets you specify both the value and the range of the values of the parameter (e.g., of the opacity) for selected pieces of the image or for all pieces, if there is no selection.

DSC has two (2) modes:

- *The Dual Slider mode* lets you specify the range of the values of the parameter for selected pieces of the cut image or for all pieces if there is no selection and available only if Auto Adjustments option is turned on (this means that the check-box is selected.) For using DSC in the Dual Slider mode drag any slider to specify the desired minimum parameter's value and drag the other slider to specify the maximum one or enter these values into edit-boxes.
- *The Single Slider mode* is in use if Auto Adjustments option is turned off. In this case the Dual Slider mode switches to the Single Slider mode and the lower slider is disabled and only upper slider is enabled. For using DSC in this mode, drag upper slider to specify the desired parameter's value or simply enter it into edit-box.

Details:

1. In the Dual Slider mode the range of the values will be distributed according to the states of Variate/Randomize Control.
 2. The following user interface's feature helps you to determine which slider's value is displaying in the edit-box: while dragging or, even, clicking the slider, the edit-box strokes with the thin colored line. The color of the line coincides with the color of the active slider.
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Variate/Randomize Control (VRC)

The control locates in all effects' windows ("Blur", etc.).

The "Variate" part of the VRC (the buttons with arrows) lets you specify the direction of the parameter values' variation for selected pieces or for all pieces, if there is no selection.

Randomize part of the VRC (the "R" button) lets you randomize the parameter's value from piece to piece for selected pieces or for all pieces, if there is no selection.

Be sure that Auto Adjustments check-box is selected (otherwise, the VRC will be disabled.)

Details:

1. The range of the parameter's values you are about to variate or randomize should be specified by the DSC of the parameter.
2. If you use the "Direction Button", the parameter (for selected pieces or for all pieces if there is no selection) is always distributed (according to the range specified with the help of DSC) from the value specified by the orange slider of DSC to the value specified by the green one, according to the direction set by the "Direction button".

Keyboard Shortcuts

Apple Mac OS X keyboard abbreviations:

Command – Cmd

Option – Opt

Shift – Shift

PC Windows keyboard abbreviations:

Control – Ctrl

Shift – Shift

Layout Mode Shortcuts

Command	Keyboard Shortcut	
	Mac OS X	Windows
Undo	Cmd+ Z	Ctrl+ Z
Paste Shape	Cmd+ V	Ctrl+ V
Copy Shape	Cmd+ C	Ctrl+ C
Add random knives to selection	Cmd+[Ctrl+[
Deselect random knives	Cmd+]	Ctrl+]
Deselect all knives	Cmd+ D	Ctrl+ D
Select All knives	Cmd+ A	Ctrl+ A
Invert selection	Cmd+Shift+ I	Ctrl+Shift+ I
Manual Knots Adjustment	Cmd+ K	Ctrl+ K
Save Layout	Cmd+ S	Ctrl+ S
Load Layout	Cmd+ L	Ctrl+ L
Randomize by H and U	Cmd+Opt+Shift+ M	Ctrl+Alt+Shift+ M
Randomize by H	Cmd+ M	Ctrl+ M
Randomize by U	Cmd+Shift+ M	Ctrl+Shift+ M
Flip by H and U	Cmd+Opt+Shift+ F	Ctrl+Alt+Shift+ F
Flip by H	Cmd+ F	Ctrl+ F
Flip by U	Cmd+Shift+ F	Ctrl+Shift+ F
Zoom out	Cmd+ "-"	Ctrl+ "-"
Zoom in	Cmd+ "+"	Ctrl+ "+"
Fits image in preview	Cmd+ 0(Zero)	Ctrl+ 0(Zero)
Zoom 100% (1:1)	Cmd+Opt+ 0(Zero)	Ctrl+Alt+ 0(Zero)
Hide/Show Extras	Cmd+ H or F9	Ctrl+ H or F9
Hide/Show Nodes	Shift+ H or Shift+ F9	Shift+ H or Shift+ F9

Puzzle Mode Shortcuts

Command	Keyboard Shortcut	
	Mac OS X	Windows
Undo	Cmd+ Z	Ctrl+ Z
Paste Effects	Cmd+ V	Ctrl+ V
Copy Effects	Cmd+ C	Ctrl+ C
Add Splitter To Selection	Cmd+ P	Ctrl+ P
Deselect Splitter	Cmd+Opt + P	Ctrl+Alt+ P
Add random pieces to selection	Cmd+[Ctrl+[
Deselect random pieces	Cmd+]	Ctrl+]
Save selected pieces in PSD	Cmd+Opt + S	Ctrl+Shift+ S
Save Layout and Effects	Cmd+ S	Ctrl+ S
Load Layout and Effects	Cmd+ L	Ctrl+ L
Effect: Brightness/Contrast	Cmd+Shft+ U	Ctrl+Shft+ U
Effect: Motion Blur	Cmd+Shft+ R	Ctrl+Shft+ R
Effect: Color Overlay	Cmd+ E	Ctrl+ E
Effect: Hue/Saturation	Cmd+ U	Ctrl+ U
Effect: Gaussian Blur	Cmd+ R	Ctrl+ R
Effect: Opacity	Cmd+ O	Ctrl+ O
Effect: Bevel	Cmd+ B	Ctrl+ B
Zoom out	Cmd+ "-"	Ctrl+ "-"
Zoom in	Cmd+ "+"	Ctrl+ "+"
Fits image in preview	Cmd+ 0(Zero)	Ctrl+ 0(Zero)
Zoom 100% (1:1)	Cmd+Opt+ 0(Zero)	Ctrl+Alt+ 0(Zero)
Hide/Show Selection	Cmd+ H or F9	Ctrl+ H or F9

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**AV Bros. Puzzle Pro 2.0
for Windows and Mac OS X**