# 1ˢᵗ 10 min script: Illustrator Pathfinder Effects: Create a Two-Color Shape and Type Blends

Description: *Using type and shapes with Live pathfinder effects to create two color blends.*

Hi there welcome to "Illustrator Pathfinder Effects: Create a Two-Color Shape and Type Blends" My name is Jennifer Harder and I am a book and video author for Apress and an instructor at a Local college in Vancouver, BC. In this video we are going to be looking at a fun effect that you can apply to shapes and type. In the past when people did screen printing or used the offset press to print two or more colors over top of one another, it was known as overprinting. One color runs over the other and where they overlay they blend. However, today with modern software and laser printers, when you lay type or a graphic over top of another what is underneath may by default disappear or is "knocked out" so you only see the top color. Using Pathfinder effects, we can recreate this retro overprinting and make it part of a graphic design. So before we do that let me give you a short overview of a few things to be aware of while we work in Illustrator. Currently I am in the "Essentials Classic" Workspace so you can pause the video if you need to set your workspace the same as mine. In the file "two_blends.ai" in CMYK mode that I have open check out the "Pathfinder Panel examples" Layer in the Layers panel, you may need to unlock it. Make sure that you have the Window > Pathfinder panel and Properties panel visible, we will look at the Effects menu shortly.

Normally when I work with two shapes and I want manipulate them in order to cut them out or merge them. First you will see this when I use the Window > Pathfinder panel.
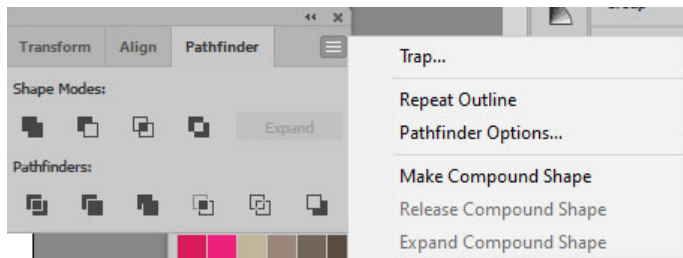
 This panel has 10 cutting or merging options that you can use for separation or combining of shapes. I have demonstrated the final result of: (Slide)

- Unite
- Minus Front
- Intersect
- Exclude
- Divide
- Trim
- Merge *
- Crop
- Outline
- Minus Back

> * Merge becomes like Unite instead of Trim when the shapes' Fill colors are the same.

To recreate any of these options, (I'll demonstrate with the Original shapes) select the two shapes by mouse dragging a marque with Selection tool and then click a button on the Pathfinder panel to see what happens. Here I demonstrate Unite.

In some examples, I moved the one shape away so that you can see how the cut out appears.

I'll Edit>undo that last step a few times as I demonstrate here.

Some of the Pathfinder panel choices in "Shape Modes" can remain non destructive.

- Unite
- Minus Front
- Intersect
- Exclude

When you select the two shapes hold down the Alt/OPtion-key and click on those buttons in the Panel this creates a Compound Shape. You can move the two shapes around with the Selection tool and still see the path of both. Only when you click the "Expand" button in the panel will the two shapes be united or divided permanently.

Pathfinders buttons in the panel:

- Divide
- Trim
- Merge
- Crop
- Outline
- Minus Back

do not have this Alt-click option to become compound shapes and therefore the choice is destructive and permanent.

So lets consider this, depending on the type of artwork I am creating, the Pathfinder panel for me presents two problems. (*Slides*)

1. If I want to use the Pathfinders which are destructive, I can't go back and move my shapes around when I feel they're not in the position. I have expanded and committed the cut out shapes. This wastes time if need to redraw the shape again for a client.
2. Live Type will not work in the same manner as a shape because it is not a path. While selected I must first go to Type > Create Outlines to make the type or shape a path. Only then can I manipulate it with the Pathfinder panel. This presents a problem if the client wants to alter the text or the style of it. The text must be retyped and then created as an outline again. (*Slides End*)

So how do you get around these two issues and keep your shapes and text editable? Instead use the Effect > Illustrator Effects> Pathfinder

To see the difference turn off and lock the "Pathfinder Panel examples" layer, turn on and unlock at the layer "Pathfinder Effects examples". And Select it.
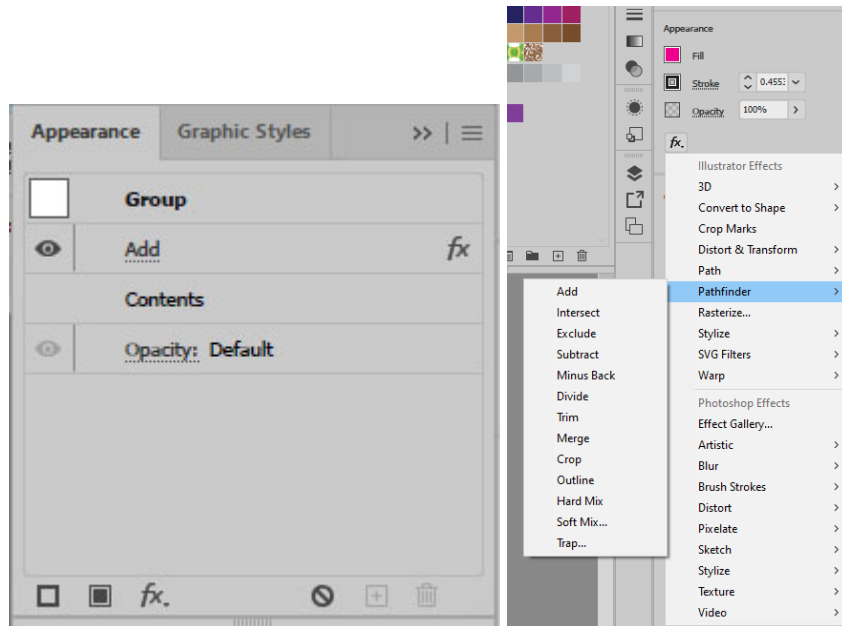
These effects whether for shapes, or type remain live and you can move the shapes or type around and even alter the effect any time using the Window> Appearance panel or the Appearance area of your Properties panel.

You can see some examples here:

- Add (Unite)
- Subtract (Minus Front)
- Intersect
- Exclude
- Divide
- Trim
- Merge
- Crop
- Outline
- Minus Back

Note: Add is the same as Unite on the Pathfinder panel and Subtract is the same as Minus Front. Otherwise all the other names match the Pathfinder panel and do the exact same thing but are now non-destructive. To work with the Pathfinder Live Effects (I'll demonstrate with the Original) you need to with the Selection tool, marque select both shapes and then Object>Group them. Then when you apply the effect from the drop-down Effect menu like Pathfinder >Add you will see how similar it is to the pathfinder panel's Unite.

Observe some effects like:

- Divide
- Trim
- Merge

These will show little division change, even when you move the shapes around with the Direct Selection Tool. You can't use the Selection tool to move shapes individually because the are grouped. So for these and all Effect options that you want to commit the shape to their final destructive shapes, select the grouped shape with the Selection tool and choose Object > Expand Appearance. I am separating with the Direct Selection tool so you can see. This step will even work with live type without having to go through the step of Type > Create Outlines. It is automatically done. (I'll edit > undo those steps). Likewise in the Properties panel these effects (fx) can be removed (trash can) or edited at any time by clicking on the Effect dropdown menu and choose a different effect.

OK so lets now get to the topic of the video creating a two color blend. In the drop down menu Effect > Illustrator Effects> Pathfinder you will see a few more options:

- Hard Mix
- Soft Mix
- Trap

(Slide)**Trap** is generally used to create a thin line to blend two shapes into one another when the shapes have no common colors. This is used to compensate for mis-registration when working with offset presses. So we will not go into any lengthy discussion on this effect. (Slide End)

The ones of interest to create the overprint or blend of two-color are Hard Mix and Soft Mix. Here you can see first on the layer "Effect on Type" how it is applied to live-type and next on the Layer "Effect on Shapes" how it is applied to shapes. You can even use more than two shapes or colors if you want, if they are grouped the effect will work.

I'll demonstrate on the "Effect on Type" layer with the Original text. First marque select with the selection Tool. Now Object >Group then Effect menu select the Pathfinder effect of either Hard Mix or Soft Mix. Here I used Hard Mix. (*Slide follow*)

- **Hard Mix** is a direct or pure blend. Choosing the highest value of each color component, Magenta and Yellow make orange red, Yellow and Cyan make a green and so on.
- **Soft Mix** is more of a greyed or softened blend. It can be altered if you need to by clicking on the (fx) in the properties panel. And you can alter the Mixing Rate if require from its default of 50%. This will alter the color of the blend you see.
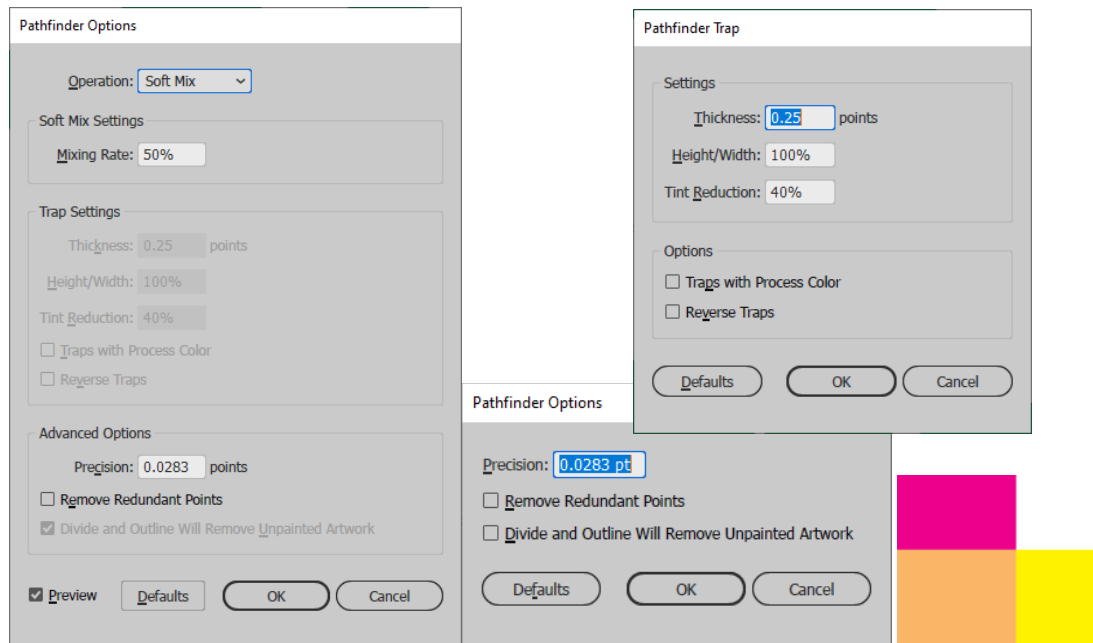
In the Pathfinder Options Dialog box, Advanced Options which are available to all Operation options will effect how shapes will divide and the exact precision options, along with removal of points or unpainted artwork. Similarly, these options are present in the destructive Pathfinder panel pop-out menu. However, in Pathfinder Options dialog box depending on the Operation selected from the drop-down menu, Soft Mix Settings and Trap settings will be greyed out even if you switch to another Operation in the dropdown menu. Trap Settings are not discussing in this video and you should consult with a prepress person if you need to alter these settings in your project. Any changes you make in this dialog box can be previewed if the Preview checkbox is enabled. Click to Confirm or Cancel to exit this Pathfinder Options dialog box and not save changes.

One final important note: Whether you apply the Hard Mix or Soft Mix pathfinder effect any shape or text you applied the stroke to, the stroke will disappear so that the fill can blend with the other fill. (*Slides End*)

Continuing on, on the layer "Effect on Shapes" at this point you can continue to alter the colors of your shapes and type by selecting them with Direct Selection tool and using the Swatches panel to select colors for the fill. Remember to create the final vector graphic artwork that is permanent select with the selection Tool and choose Object > Expand Appearance and this will clip the shapes with distinct colors down into individual segments. Or Edit>Undo those steps and keep the text and shapes effects live so that you can continue to move and alter them any time.

This concludes my video, I hope that you enjoyed learning about how to alter your shapes and text using the Pathfinder Panel, Pathfinder Effects and looking at two color blends like Hard and Soft Mix to create the retro overprint effect. If you want to further explore other Transparency Blend modes for fills, strokes and patterns in Illustrator make sure to check out my book Graphics and Multimedia for the Web with Adobe Creative Cloud.