



Help File: After Effects Automatic Whiteboard

Quick overview:

- This After Effects template uses a custom script to generate “whiteboard” style write-on animations from text layers and masks.
- Just type in text using ordinary After Effects text layers, or draw artwork using masks.
- The script creates the layers and keyframes in your composition for you, automatically.
- The script has many options to customise the result, from filling in closed masks, compositing the animation onto alternative backgrounds, adding a wiggle, and adding a hand to “draw” the animation on.
- It has preliminary support for right-to-left text, as well as left-to-right.
- The download includes two separate bonus scripts to help get better results. One separates masks to multiple layers, the other sorts masks by their distance from a nominated corner.

Project Details:

This After Effects template was created using version CC 2020, however it works and has been tested with versions CS 6 and above.

The custom script has not been extensively tested with non-English installs. If you experience any problems with the script please contact me ASAP and let me know what language you are using.

A number of video tutorials are available online, please check the aescrpts & aeplugins sites for the latest links, or click on the script’s “?” icon to bring up the help palette with a direct link.

Installation:

There is a separate help document for installation of the script.

The “Automatic Whiteboard” script needs to be installed so that it appears in the After Effects “Window” menu. You can manually copy the script to the After Effects “**ScriptUI Panels**” folder, or the newer versions of AE allow you to choose “**Install ScriptUI Panel**” from the file menu.

Once the script has been installed, you should see the “Automatic Whiteboard” script appear at the bottom of the “Window” menu. When you run it, the palette might appear as a floating window. Grab the top and dock it to your workspace.

A video tutorial has been included with the download to guide you through this process.

Using the template:

Automatic Whiteboard is unusual as far as motion graphics templates go, because it doesn't come with a finished After Effects composition. Instead, you create a new After Effects composition yourself, add some text layers or masks, and then click "Apply" in the script panel. It makes the animation for you – adding layers and keyframes as required.

Automatic Whiteboard *does* come with an After Effects project for you to load, and this contains the supporting assets such as background options and hand images. If you try to run the Automatic Whiteboard script without this project loaded, then you'll get an error message and the only option is for basic outline strokes. You need to open the Automatic Whiteboard project when running the script in order to use all the advanced options such as background textures and hands.

If the results aren't exactly what you want, just "undo", tweak the settings, and run the script again.

I recommend keeping a copy of the original After Effects project for safe-keeping. Each time you open it to begin a new animation, you should "save-as" with a new name, so the original project template isn't overwritten.

Script panel options:

The Automatic Whiteboard script panel has several settings for you to adjust. This is how they work.

Duration.

This is easy to understand. It's the overall duration, in seconds, that you'd like the animation to take.

It's important to know that it might not be possible to fit your entire animation into this duration. The animation that the script creates requires a minimum of 3 frames per mask. If you have lots of masks – and masks created from text layers can quickly add up – then the animation might need longer than the time you've nominated. If this happens, you'll see a warning message asking if you want to proceed. If you choose to continue, Automatic Whiteboard will make the animation as short as possible, you'll just have to adjust your composition to match once it's finished.

If Automatic Whiteboard generates an animation that is longer than you need, you can always speed up the result – either pre-render or pre-compose.

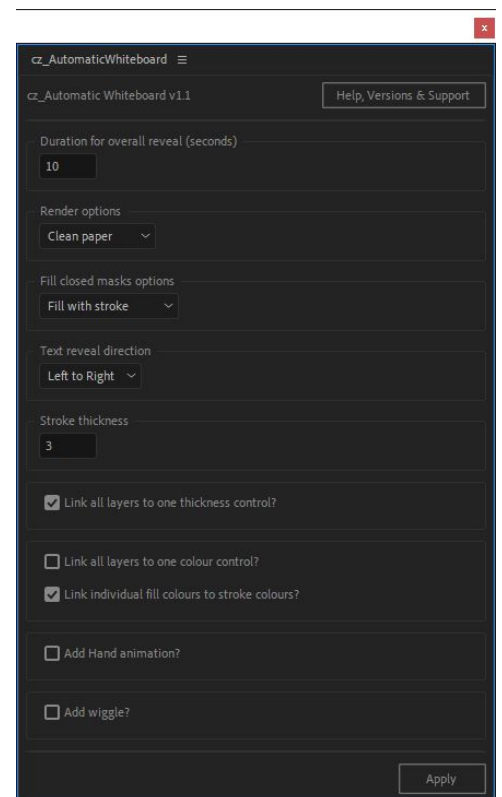
Render options:

The Render options determine how your animation will look. At the simplest level, you can create animations that simply have a stroke on a transparent background. This is fast to generate and lets you take care of any additional compositing yourself. But you can also choose from 7 different types of backgrounds and styles.

Fill closed masks:

This option lets you choose what to do with closed masks. *If your masks are closed*, then this option determines how they are filled in.

You can choose not to have them filled, so the result is just an outline stroke. You can choose to have them filled in *at the same time* as the outline stroke is drawn, or afterwards. "Fill with stroke" means



that closed masks are filled in while the outlines are being drawn. "Fill after stroke" means the outlines are drawn first, and then they are filled in separately.

Automatic Whiteboard uses text layers, as well as masks you can draw yourself, as the source artwork. Text layers are automatically converted to masks in order for them to be drawn on. Text layers will always be converted to closed masks, but if you are drawing elements yourself then your masks may be open or closed.

The main reason the fill options exist is to give you some ability to adjust the synchronisation of the stroke and scribble effects. The video tutorials demonstrate this in more detail.

Because of the way that the stroke and scribble plugins work, it is not possible to always automatically generate a stroke and a fill that is perfectly in sync. The scribble plugin will behave differently depending on what mask modes are used in the artwork.

If you are only using text layers as your source, then the stroke and fill should be reasonably in sync. However if you are combining text layers with additional masks, and especially if those masks are a combination of open and closed, then the stroke and scribble effects will not perfectly synchronise.

Outline strokes are always drawn in the order that the source layers were selected, while the scribble (fill) effect always starts at the top left corner* of the screen, and fills towards the bottom right.
**or top right, if the direction selected is right to left*

If you choose to add a hand animation, then the hand should be reasonably synchronised with the outline stroke. However it is simply not possible to have the hand animation in sync with the scribble effect, hence these different options for filling closed masks.

If you are using masks as a source for the animation, and there's a mixture of open and closed masks, then the sync between the outline stroke and the fill will vary because the stroke effect has to render every single outline, while the scribble effect (fill) will skip any open masks.

Text Direction

New with version 1.1, this option offers preliminary support for right-to-left text reveals. If you need right-to-left text animation and you're experiencing problems with this script, please contact me with details so I can improve the results.

Stroke Thickness & Link all layers to one thickness control

Both the stroke and the scribble effect can have their thickness adjusted. The "stroke thickness" is the default value for when the animation is created. This value can always be adjusted after the script has built the animation.

If you also choose "Link all thicknesses to one control" then the composition will link all the stroke and scribble effects to a single thickness slider, allowing you to adjust every layer in the animation together. While this makes it much easier to adjust the look of the final animation, depending on your artwork you may prefer to go through each layer individually.

Link all layers to one colour control?

Link individual fill colours to stroke colours?

These options offer control over how you alter the colour of elements once the Automatic Whiteboard script has created your composition.

If neither checkbox is selected, then each individual effect on both the stroke and fill layers has a default colour applied, but without anything linking the colours. You can always change these colours yourself, however you will need to change the colours for multiple effects, potentially on two separate layers (stroke and fill).

If you select “Link all layers to one colour control” then all colour settings across all layers are linked to a single control. Linking everything to one colour control enables you to adjust all the colours of every element at once, however this results in a monochrome animation.

If you select “Link individual fill colours to stroke colours”, then an expression link is set up between the stroke and fill layers. This enables you to individually set the colour for each element with one click – the stroke, fill and any compositing effects are all changed together. This is the new default behaviour from version 1.1.

It’s important to know that this method relies on the fill layer (dark green in the timeline) being directly underneath the stroke layer (light green in the timeline). Adding new layers in-between the stroke and fill layers, or shuffling their order around in the timeline will break the expression.

Add hand animation?

This checkbox determines if a hand animation is added to the composition, to create the appearance that the animation is being drawn on. If you add a hand animation, you can choose from 20 different hands, *after the composition has been generated*. You can also adjust the speed of the hand movements.

Add Wiggle?

This checkbox determines if a wiggle animation is added to the elements being drawn on. If you add a wiggle, the speed of the wiggle can be adjusted after the composition has been generated.

If the animations being generated are a longer duration than you want (*see duration notes above*), then you can always speed up the animations once they’ve been rendered. However you’ll need to adjust the wiggle speed accordingly, so the final result doesn’t wiggle faster than expected.

What’s going on:

To help you create animations that work for you, here’s a brief outline of how the process works.

It is recommended that you begin with an empty composition. The script is resolution independent, up to 4K. This means you are not limited to a single size, such as 1920 x 1080, but instead you can work at any resolution you need.

Create text layers, or add solids with masks. Lay out the text and masks as required.

Any layers with masks need to be 100% size, and not rotated or 3D.
Text layers can be scaled and rotated, but they cannot be 3D.

Currently, artwork can be drawn using masks (preferably on solids), but not shape layers. If the masks are animating, then the script uses the mask shape at the frame on which you run the script.

Once you have your text and masks, ***select the layers in the order you want them to be drawn on.***

The timings of the layers in the composition do not have any effect on the whiteboard animation. One of the main functions of the Automatic Whiteboard script is to calculate the timing of each individual element to be drawn, based on their size and length, so existing layer in and out points don’t make any difference.

Set the options you want in the script palette and hit “apply”.

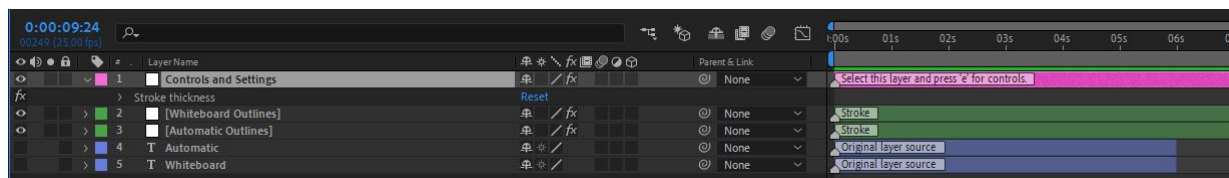
Firstly, the script will check that you have selected appropriate layers. If you have selected 3D layers, or layers that have been scaled or rotated, you will get an error. If you are running the script without the Automatic Whiteboard project loaded, then you'll receive a message that you will only get plain outlines.

Automatic Whiteboard will convert all of your selected layers into new layers. **Your original layers will not be affected.** The script will count all masks and work out the minimum amount of time it will take to draw them on. If this is longer than the duration you have specified, then you will be asked if you want to proceed and extend the animation as required.

The script has been tested with up to 256 layers, although that's **very** slow. To guarantee reliability, the script will not work with more than 256 layers.

The script will then build the animation based on the options you have chosen. The stroke and fill effects will be on separate layers, and you can adjust the keyframes to suit.

A layer with all controls and settings will be added to the top of the composition. Select it and press 'e' to see the options.



Select the top layer and press 'e' to reveal the controls and settings you can adjust.

Once the animation has been created, you can adjust any of the controls to suit and remember – you can still slide keyframes around and adjust timings after the script has finished running.

If you need to change any of the original animation settings, just “undo” and then run the script again.

Please Note:

Depending on what options you choose in the script menu, the script can take a while to run. If you only have a few layers and only want a simple outline, then it runs pretty fast. If you have more than a hundred layers, and you want a stroke, fill and hand animation, then it will take a long time to process everything.

Please be patient!

If you do have hundreds of layers that need to be animated in a single composition, a better approach is to split your source layers into several compositions, with less than 100 layers in each one. After the script has run, you can copy & paste the layers together.

In order to maintain compatibility with older versions of After Effects, the “Hand” selector is a simple slider, allowing you to choose between 20 different types of hand. These 20 options are made up of a few basic combinations: adult male with & without sleeves, adult female with & without sleeves, and a child's hand. Each of these then has the option of holding a pen, pencil, sharpie and a piece of chalk.

If you run the script more than once on the same composition, then you'll receive a warning that the results might not work. It's recommended that you run the script on a new, clean composition each time you need to create an animation.

Maximum Tweakage:

Automatic Whiteboard is designed to automate the process of creating write-on and whiteboard-style animations, but it doesn't have to be a one-click solution. Remember that you can always tweak and refine the keyframes after the script has set up the basic composition.

If you're adding a hand animation, you can experiment with turning motion-blur on for the hand, this can be effective for very short duration reveals.

You may want to scale the hand animation up or down, depending on what area of the screen your artwork is being drawn onto – the script will scale the hand images according to the composition size, but you can always refine this afterwards.

The download includes a number of hands with extra poses, and a few wipe-off mattes for you to use in your animations.

Bonus scripts:

The Automatic Whiteboard download includes two bonus scripts that help to improve the results. Both scripts need to be installed into the "ScriptUI Panels" folder, however they do not require a license.

Please check the aescrpts & aeplugins site for video tutorials on how these scripts work.

The "Masks to Separate Layers" script takes 1 layer with many masks and separates them out to multiple layers. This helps with synchronisation between outline strokes and fills, and also with the animations and the hand (if you are using one).

In general, the more layers you have, the better the synchronisation between strokes, fills and the hand animation.

The "Sort masks from top left" script re-orders all of the masks on a single layer based on their distance from the selected corner of the composition. This can make the reveal animation seem smoother, as masks that are closer to each other are drawn on together. If you're using a hand animation then it can also reduce unnecessary movements between objects that are on different parts of the screen.

Sorting masks is especially useful when pasting masks from Illustrator, as the pasted vectors may be in an order completely unrelated to their position on screen.

Support:

For any support issues please open a ticket through the aescrpts & aeplugins website.