

# Expresii Quick User Guide

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## INTRODUCTION

Expresii is a new paint program that brings the organic charm of Eastern ink painting to the digital art scene. It carries forward the ideas and vision of the MoXi system, which was unveiled in 2005 by the same author. One may find Expresii liberating when drawing and painting in a more Eastern way that celebrates serendipity.

## RECOMMENDED HARDWARE

Expresii belongs a new kind of software that makes use of the GPU (Graphical Processing Unit) for accelerated processing. GPU's found in today's computers vary a lot in terms of performance. We recommend that you have at least a lower-mid-range (~US\$100) discrete GPU for smooth running (150+ FPS<sup>1</sup>) of Expresii. We also recommend that you use a stylus that supports tilt sensing. For more information, please see our [online FAQ](#).

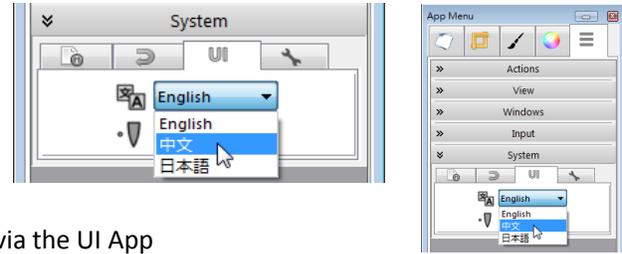
## USER-INTERFACE

Expresii's Tool Window shows you options categorized into five tabs: Paper Material, Paper Operation, Brush, Loading, and App Menu.



<sup>1</sup> FPS stands for Frames Per Second. Simulation FPS is shown in Main Window's Title Bar.

**Language.** You may switch the User Interface (UI) language between English, Chinese (中文) and Japanese (日本語), by going to App Menu>System>User Interface.

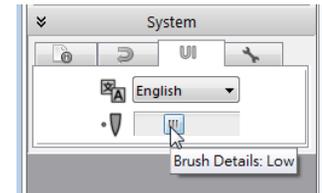
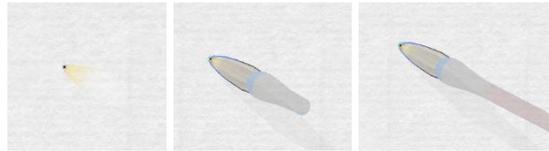


**Fullscreen.** You can go Full Screen via hotkey [F11] or via the UI App Menu>View>Fullscreen.

**Auto Rollup.** By default, the Tool Window is set to auto-rollup when it overlaps with the Main Window. If you don't want it to shrink, toggle this feature by pressing the wide button on the title bar.



**Virtual Brush Display.** You can opt to display the virtual brush in different levels of details, from a complete brush with handle to a dot cursor to nothing.



**Hints and Help.** Hover on UI controls to see their hints. If available for a particular control, hotkey would be displayed in brackets in the hints. Press [F1] for a list of hotkeys and this User Guide.

## STROKING

Expresii is designed with the stylus in mind primarily for the gestural or expressive way of stroking used in Eastern art.

### Stylus Tilt

Full wielding of the virtual brush is possible via stylus using both tilt and pressure readings. No other app actually shows the deforming virtual brush as you paint so that you can see exactly what mark the brush is making. A single brush can produce so much variety by just wielding it - please make good use of it!



If your stylus does not support tilt sensing, you can use mouse-right-button-drag to change the brush angle. Alternatively, you can use an Android device to control the tilt as [described below](#).

### Scratchiness

Scratchiness appears when your brush is dry enough (Wetness Level below 6). A faster motion or lower pressure would also increase the Scratchiness. Use hotkeys [A] [S] to quickly adjust how easy Scratchiness appears.





## Streakiness

The Streakiness controls if the scratchiness is more streaky or grainy. The difference is more visible when you do 'wipe strokes' (using the side of the brush).

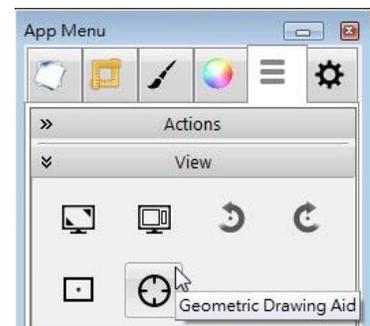
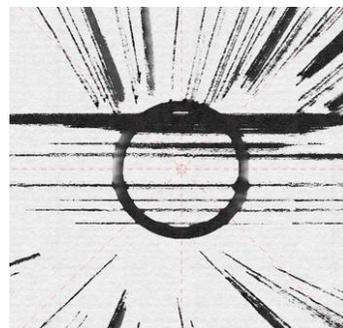


## Brush Presets

Currently we have two Brush Presets: **Flow** and **Needle**. The Flow deforms like an Eastern brush, while the Needle is non-deformable and thinner. The Flow is for more variety, the Needle more precision. You can quickly switch between brush presets via hotkey [B], or the on-screen 'Brush' icon in the Main Window.

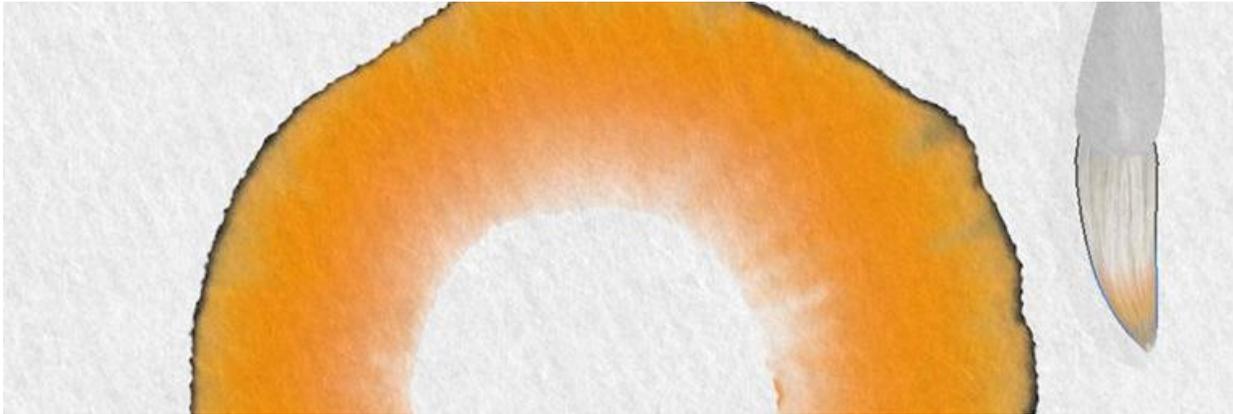
## Drawing Aid

The Geometric Aid can be used to draw straight lines and circles. Toggle it via App Menu>View->Geometric Drawing Aid button. When it is enabled, press [Shift] to constrain your stroke along a guide line. A guide circle helps you draw circles by having the brush down and press the hotkeys for view rotation ([PgUp],



[PgDn]). It's best to look at a [video demo](#) to see how it works. Note that even without this Geometric Aid enabled, you can still draw a circle via view rotation, but with the aid you will know exactly how the resultant circle would look like.

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For more complex geometry, you may try [Lazy Nezumi Pro](#), which also works with Expressii.

## LOADING

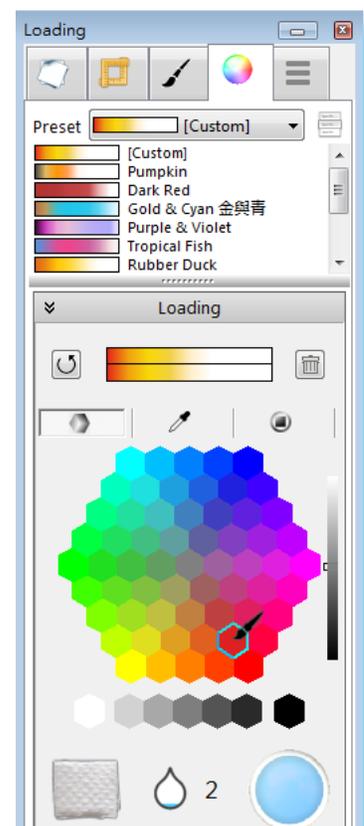
One major difference of Expressii from other painting apps is that you are painting with a gradient mapped onto the brush tuft instead of a single color. In addition to colors, a Loading also includes Water Level.

### Loading Colors

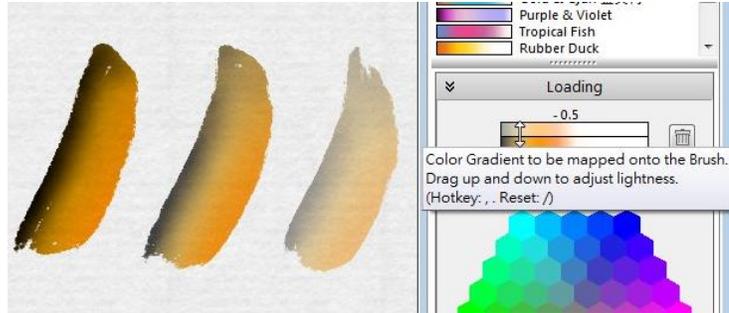
To load colors, dip your brush into the color swatches. Press harder to load color more into the tuft. With different pressure levels you can create a gradient. The current loading is shown in a bar that has a bin icon on its right (see right).

Probably you would want to make a new Loading Preset (press the icon on the right of the Preset selector and choose 'Add', which would copy your current Preset to a new one) and use the new one for your experimentation so that you can keep your previous loading presets. If you do want to get back the original presets, you can do a Reset by choosing in the Preset Menu> Whole Set> Factory Reset.

**Quick Access.** Right below the Preset dropdown selector is the Quick Access Panel, which shows you a list of presets. You can quickly switch the one of the first 10 presets via hotkeys [0]-[9]. You can reorder the presets via drag-and-drop in the Quick Access Panel.



**Quick Variants.** There is a quick way of getting a paler or a darker version of your current loading: drag the upper bar up or down (hotkeys [,] [.] ). To reset, click on the lower bar (hotkey [/]). You can also right-click on the lower bar and choose 'Flip' to flip the gradient (i.e. tip to base) is useful for laying down gradient transitions.



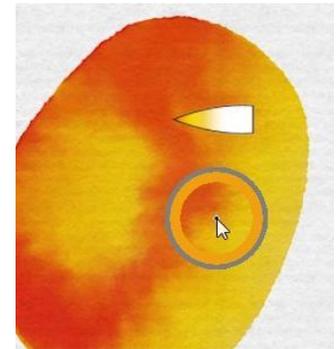
## Water Levels

Drag on the 'water drop' icon up and down to adjust water levels. Alternatively, you can also press the 'paper towel' and the 'water container' icons on the two sides to lower and raise the water level. For quicker operation, you may prefer using hotkeys [Q] and [W] instead.



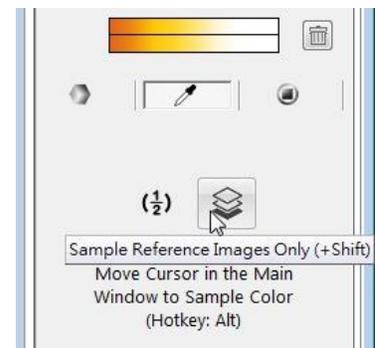
## Eyedropper

Press [Alt] to quickly switch to Eyedropper mode if you need to pick up a color that is already laid down on the paper. Alternatively, you can also press the Eyedropper icon in the Loading tab to switch to the Eyedropper mode. The sampling is also pressure-sensitive like you pick up color from the color swatches. There are a few options when you sample colors:



**Halfway.** Each stroke picks up color only up to halfway (Hotkey: +[Ctrl]). Useful if you want to creation transitions.

**Reference Image Only.** This option would only look up the Overlay and Underlay for sampling (Hotkey: +[Shift]). This is useful if need to paint e.g. background for manga where you use a reference photo loaded as Underlay. The nice thing is, the color you sampled can be used as wet ink so that you get dispersion. This way, although the color is sampled from a reference, the image you produce contain subtle ink dispersion that gives your work an organic appeal.



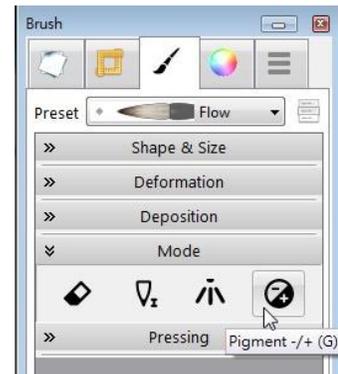
## BRUSH MODES

### Eraser

Eraser is one important tool in Expresii. Used alongside with Scratchiness, it's useful for tonal adjustment as well as adding texture to a painted area. You can quickly toggle it using hotkey [E]. Use [Q] and [W] adjust to adjust the eraser strength.

### Tip Only

In the 'Tip Only' mode, only the brush tip is used for deposition. It helps to draw thin lines.



### Sprayer

In the Sprayer mode, the brush is turned into a sprayer. A collapsible panel would appear showing various sprayer controls like radius and density. Eraser Mode can be used together with Sprayer Mode too.

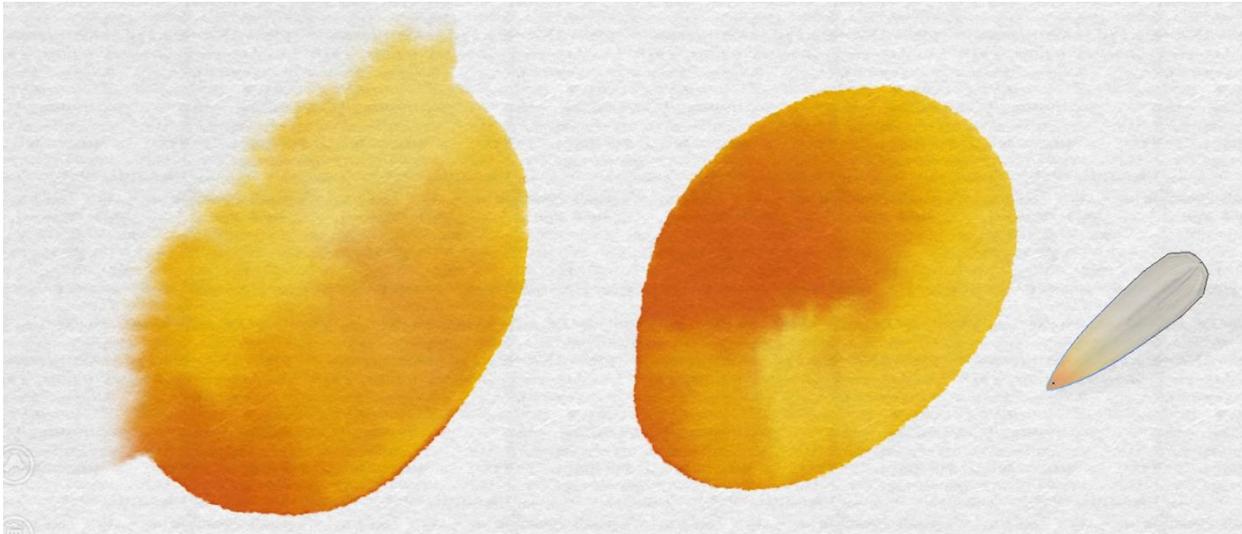


### Pigment Amount Adjuster

The Pigment Amount Adjuster mode is used to lighten or darken paint already on paper. Toggle lightening or darkening by clicking on the 'Pigment -/+' icon or via hotkey [G]. Tip: You can swiftly circle on the target area like you do polishing to get smooth transitions.

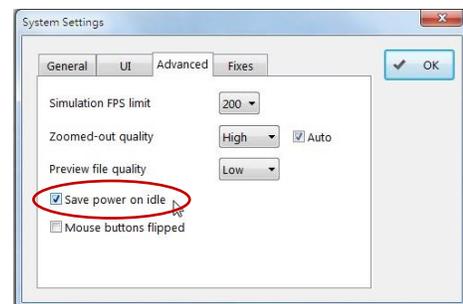
## WET PAINT

When your brush is wet enough (Wetness Level >6), you will see ink deposited on paper start to spread. Lay down more ink/moisture to see more flow and dispersion. You can try wetting the paper first with a water-only brush, and then add ink onto the wet area to get soft edges.



**Drying.** Press hotkey [D] once to dry the paper a bit. Double press to dry it all. However, note that even after drying, paint is NOT permanently fixed i.e. re-wetting would make it flow again. If you want your paint to be undisturbed, put it in a non-active layer. We will make it possible to create more layers later.

By default, the ink flow would pause when Expressii is in idle state - i.e. no user input for a while. This is for power saving and keeping the machine cool (good for tablets). However, if you don't mind consuming power and want to keep simulation running, you can click on App Menu > System > 'More Options' button to invoke the System Settings dialog. There, in the Advanced tab, uncheck 'Save power on idle'.



### Deposition Blending.

Newly deposited paint can be made to color-replace or darken already-deposited paint using the Deposition



Blend control in Loading Tab > Control. It's best to see [Demo Video: Deposition Blend](#) to understand how it works.



**Textured vs Smooth.** In Expressii, wet marks can have two

different looks: textured and smooth. You get 'textured' when wetness level is high enough (>6) so that the ink starts to flow. You get 'smooth' when wetness level (<6) is not enough for the ink to flow.



## Flows

**Flow and Eraser.** Sometimes it's useful to just let the ink flow freely in a larger area, and then erase the bit you don't want afterward. [Demo video: Flow Man.](#)

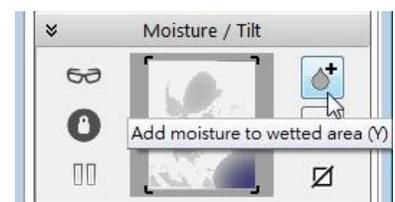
Also, you can use Eraser with a low eraser strength (adjust via hotkey [Q] [W]) to give



negative scratchiness, which gives a nice textured quality. Erased area would block the ink flow so you can also use this to direct the flow. [Demo video: Thunder Cat.](#)

**Plan your Flow.** Plan your flow with the gradient in your brush in mind to create interesting patterns. For example, in the [Thunder Cat demo](#), we deposit blue ink loaded in the brush tip multiple times to create bands that give the impression of cat fur.

**Other Controls.** You can add water to already-wet area by clicking on the 'add moisture' icon or via hotkey [Y] to make the ink flow again. Other controls are located on the left side of the 'Moisture / Tilt' panel:

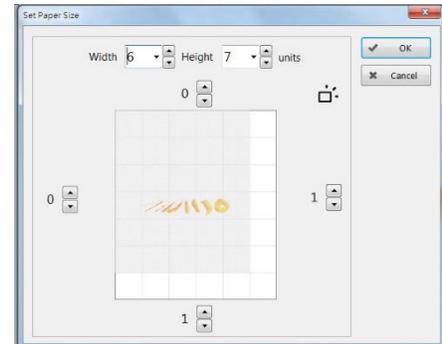
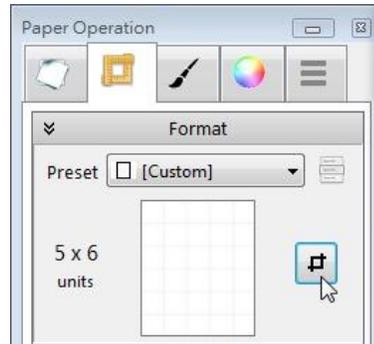


1. **Show Wet Area:** Wet area marked with checker pattern.
2. **Lock Wet Area Expansion:** Lock the wet area boundary. Useful when you want to confine the flow to a certain area. That certain area can be first defined by pre-wetting with a water-only brush. Eraser can also be used to craft the wet area.
3. **Freeze Flow:** Pause the flow (hotkey [F]) when you see a nice patterns when the paint is flowing. Water is still there and the flow resumes when you toggle back. If you want the flow to just stop, use the 'Dry' function (double press [D]).

## PAPER OPERATION

### Resizing

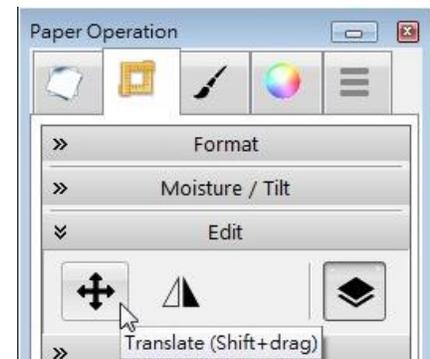
You can resize the paper by clicking on the Crop icon in Paper Operation>Format. In Expresii, paper is measured in units instead of pixels. If units are not precise enough, you still have the option to re-position of your artwork (described next).



### Translating & Flipping

In Setting Window>Paper-Operation>Edit, there are a few options for simple adjustment of the artwork:

- 1. Translating.** You can re-position your artwork within the paper by switching to the 'Translate' mode by clicking on the Translate icon, and then dragging with mouse or stylus. Alternatively, you can also quickly toggle the Translate Mode by holding the [Shift] key.
- 2. Flipping.** Currently we only support flipping horizontally as artists often e.g. need to see a mirror image to make sure their character look right, or if it's easier to draw a stroke in the mirror image.



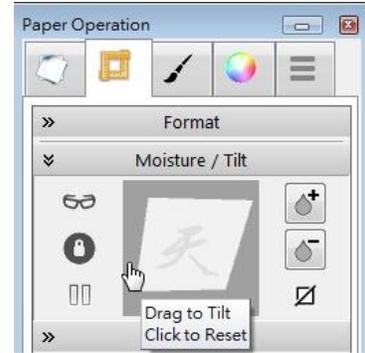
Finally, by default these operations apply to all layers (for translation, the bottom layer would follow the shift when you release the drag). If you like to only apply the operation to the active layer, uncheck the 'All Layers' icon on the right in the Edit panel.



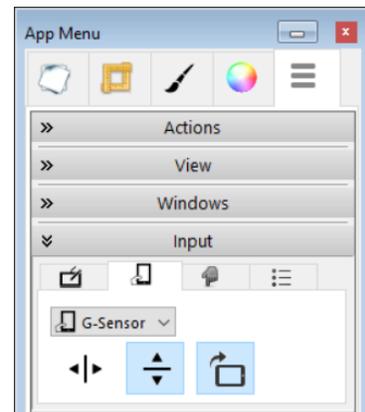
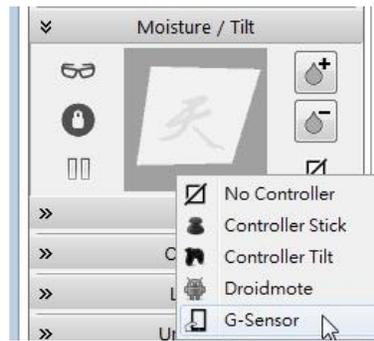
### Surface Tilt

Expresii support tilting the painting surface so that paint flow in the direction of tilt. There are multiple way to tilt the surface:

1. **UI.** In the UI Paper Operation>Moisture / Tilt, drag the surface displayed in the center. To reset the angle, click on the surface without dragging.



2. **G-Sensor.** Most modern tablet computers come with G-Sensors, which sense the tablet orientation. Note that because different makes could have some of the axis flipped, you may need to swap the x-y axis or flip the axis via App Menu> Input> Surface Tilt> flip icons.

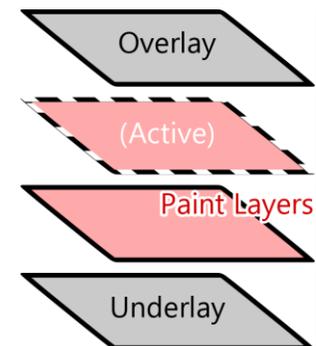


More controllers are described in [Extra Hardware](#) below. Note that once one of the tilt controllers are selected, clicking (with mouse left button) on the little icon again would just toggle the control on/off. To select another controller, right click on the little icon.

## LAYERS

Currently Expressii only supports two paint layers. The top layer is always the active one. You can quickly swap the two layer via hotkey [L].

In addition to paint layers, we also have a few auxiliary layers to help you with composition or tracing. The final image depends on which layers covering which so it's good to know their relationship, which is illustrated on the right.



When working with only two paint layers, it's often good to use one layer for 'brushwork' (bone strokes) and the other for 'inkwork' (flesh strokes).

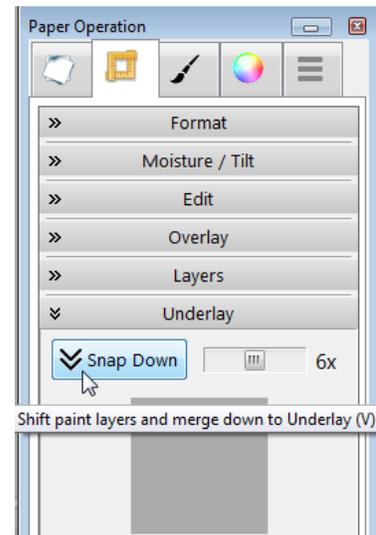


You can download the sample ['Monkey King' artwork file](#) to check it out.

## Merging

When paint layers are merged, note that sharpness in outstanding edges would be lost when there is overlapping of marks from the two layers. One might prefer using the **Snap Down** function, which is described next, instead of merging.

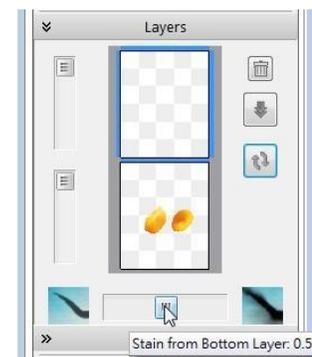
**Snap Down.** Snap Down (hotkey [V]) takes a snapshot of (rasterize) the bottom layer and merge it onto the Underlay image. The top paint layer is then shifted down. Strokes residing in the paint layers are still editable, while those snapped down to Underlay are not.



Note that the Underlay is treated as part of your artwork so it would be saved along in your Artwork File. The Overlay on the other hand is treated only as a reference to an external file.

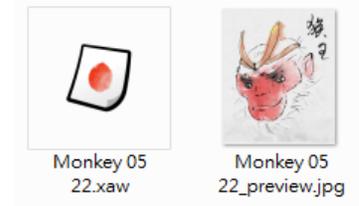
## Interaction

Currently there is only one way a layer can interact with another: Staining. You can adjust the 'Stain from Bottom Layer' slider to adjust how much the top (active) layer picks up ink from the bottom layer when you wet the top layer. Slide it all the way to the left to get no interaction at all.



## ARTWORK FILES

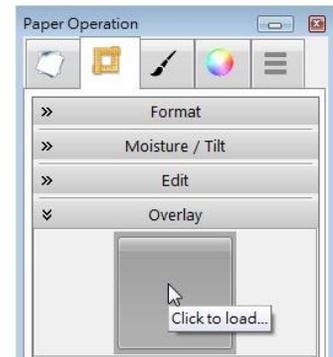
When you save an artwork, two files would be generated: a **.XAW** and a **.JPG** file. The **.XAW** (XAW stands for eXpresii ArtWork) is the actual artwork data file and the **.JPG** is only a preview file for your convenience. The size of the preview defaults to fit in 1440 pixels and can be changed in the Settings dialog page. From Expressii, loading the preview file (please leave its name matching the **.XAW**) would open the actual artwork file.



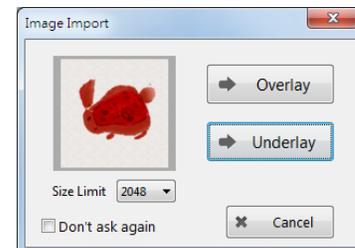
## IMPORT

Since Expressii artwork needs more information than just pixels to operate, there is no direct Image Import function in Expressii. You can, however, import an image as an Overlay or Underlay. You can then trace over them, or simply use them as a (raster) layer.

To load an image into Overlay or Underlay, you can click on the UI in Paper Operation>Overlay or >Underlay. You can also drag an image file (.JPG or .PNG) onto Expressii's main window and Expressii would ask if you want to load it into Overlay or Underlay.



Another way is to press [Ctrl]+[V] to paste an image from OS' Clipboard.



## EXPORT

There are two ways to export your Expressii artwork:

**1. Snapshot:** Click App Menu>Actions>Export icon. Snapshots can be saved with Alpha channel for composition in third-party image manipulation software. Supported formats are .BMP, .PNG, TIFF, and .PSD. The Photoshop .PSD format allow the export of layers (you may need to set the paint layers' blend option to 'multiply' to get the exact look from Expressii). The 'High Quality' option is needed primarily for relatively smaller outputs only - technically it does 'anti-aliasing' for you and it takes longer to process.



When you output is large enough (>6x), its effect is minimal.

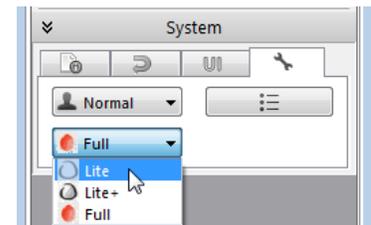
Note that Expresii is somewhat between bitmap-based and vector-based and you can output up to 12K x 12K pixels snapshots.

**2. Copy-and-Paste:** When Expresii's main window is active, you can press [Ctrl]+[C] to copy the current artwork to OS' Clipboard. You can then paste ([Ctrl]+[V]) it into another app for manipulation. The implicit snapshot zoom factor would be the same as last used in the Snapshot dialog.

## SYSTEM SETTINGS

### System Mode

In the Full version of Expresii, you can change the System Mode via App Menu> System> Advanced> System Mode. The available modes are: Lite, Lite+ and Full.

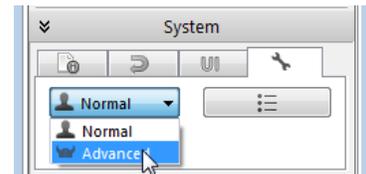


The Lite mode allows only one single layer and one ink color for the whole layer. The Lite+ mode is like Lite mode but with two layers. The Full mode allows full dispersion of colors. Switching to one of the Lite modes in Expresii Full version is the same as running Expresii Lite version.

The cut-down Lite Modes/Version is meant for older/slower machines so that users can at least do calligraphy or sketch.

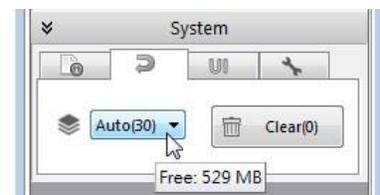
### User Mode

By default, Expresii's User Mode is set to Normal. Advanced Mode is for advanced users for more options revealed in the UI.



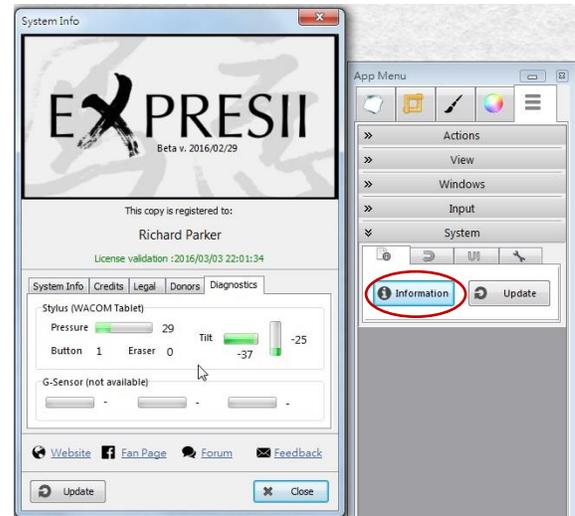
### Undo / Redo

Undo and redo levels are limited by the video memory available on your machine. On nvidia GPU's, we are able to read the memory amount available and so we can auto set the undo level accordingly. With other vendors' GPU, you have to manually increase the level if you know you have enough video memory. Default number of levels is 5. If you set undo level to higher than your video memory is enough for, there would be a delay at the start of a stroke as memory swapping occurs.



## System Info & Diagnostics

Click on App Menu>System>Info>Information, and a 'System Info' dialog would appear. There is also a tab for Diagnostics in the dialog, in which you can check stylus and G-Sensor reading if these hardware inputs are available.



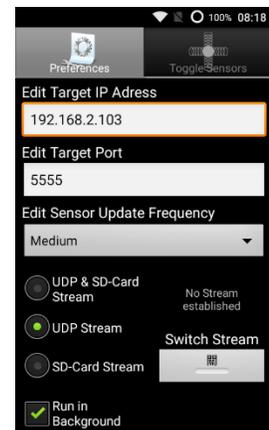
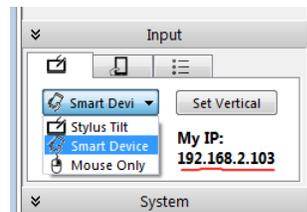
## EXTRA HARDWARE SUPPORT

### Stylus Tilt

Expresii allows the use of a Smart Device as an external stylus tilt sensor. This is useful when your stylus doesn't support tilt sensing.

Currently only Android devices are supported.

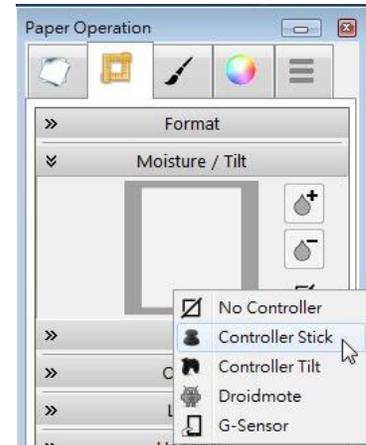
On your android device, run the app '[IMU+GPS Stream](#)' available from Google Play. Enter the IP address of your computer, which is displayed on Expresii's UI (in the example on the right, it was '192.168.2.103') when you choose Smart Device as your stylus tilt sensor. Leave the port as default '5555' and choose 'UDP Stream'. Hit the 'Switch Stream' button and the streaming of tilt data should start. More information and demo video [here](#).



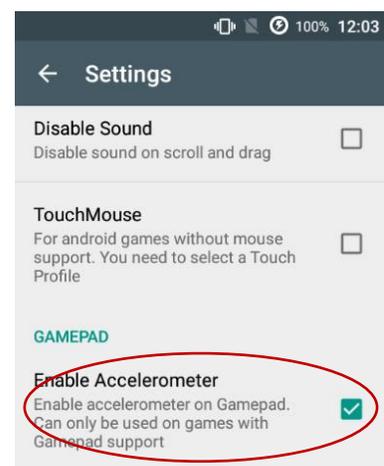
### Surface Tilt

In addition to using UI and built-in G-sensor in your Windows tablet, you can also use external hardware to control surface tilt:

**Gamer Controller.** You can use a game controller to control surface tilt. If your controller is equipped with a tilt sensor (e.g. Sony PS3's. [How to Connect](#)), you can also opt to use that. To do so, choose either 'Controller Stick' or 'Controller Tilt' when you press the icon on the lower-right corner of the 'Moisture / Tilt' panel.



**Android Device.** Most Android devices are equipped with accelerometer and you can use that for surface tilt via the (client) app [Droidmote](#). You need to run their [Server program](#) on the machine you run Expressii on. In the client app, enable accelerometer in their settings page (see right). In Expressii, choose the 'Droidmote' option in the 'Moisture / Tilt' panel.



- END -