Palette Forge

Developed By Midlife Hobbies

Introduction

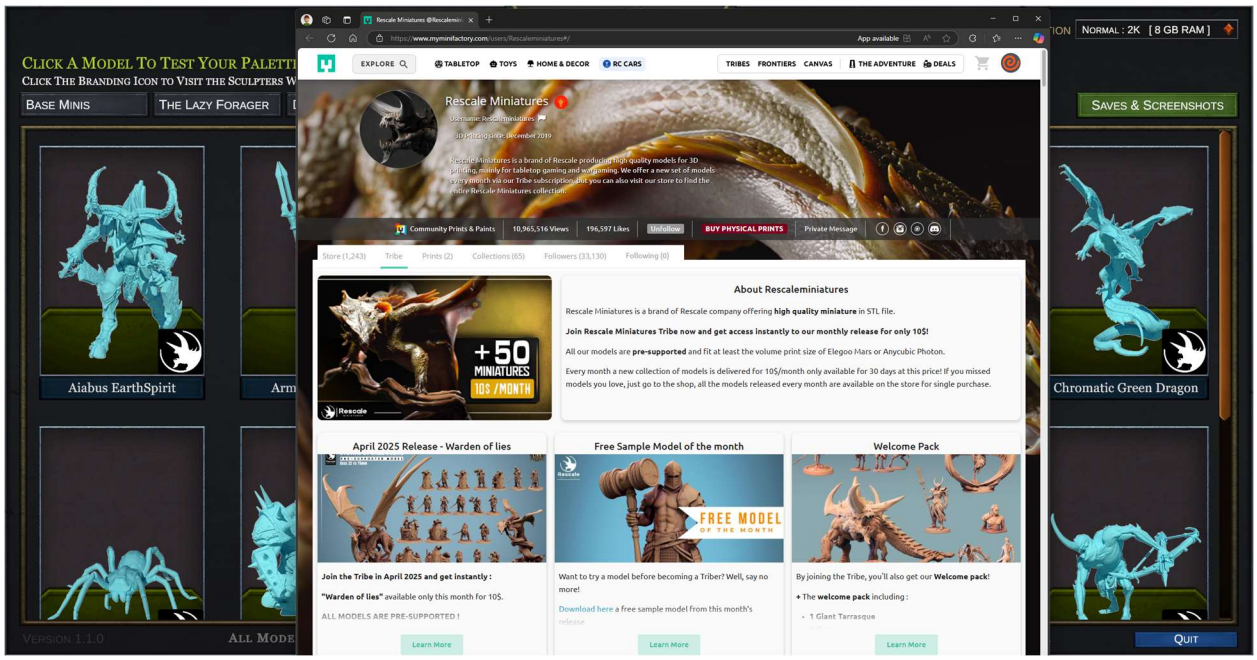
Thank you for choosing Palette Forge to test and perfect your palette ideas before picking up a real brush and miniature to bring your ideas to life!

Enjoying the hobby of Miniature Painting we discovered a need for a tool to help us plan color palettes before painting. Initially it was done by taking a picture of the miniature and loading it into a photo editing software. We would create layers and fill selected area with color to see how they looked, but it was a slow process that required a lot of preparation and it only helped with that one miniature. So, we mixed our hobbies of software development and miniature painting to build the tool we needed, Palette Forge.

Palette Forge is not a “Miniature Painting Simulator”. But it’s still fully capable of being a fun relaxing way to paint miniatures digitally, using built in features to share your masterpieces with everyone.

Please enjoy Palette Forge, and be creative!

Model Copyright Information



A wide assortment of models are available to test your color palette ideas. But those models do not belong to us, they belong to the original copyright holder we purchased them from.

We've included a logo on each model showing who the creator / copyright holder is and have included buttons that will take you to their website, so you can purchase the model for yourself if you're interested. We do not get a commission or kickback from these links. We respect these artists and want to help boost their success by giving them the credit they've earned.

Model Acquisition

We purchase all models presented in Palette Forge and follow the license terms at the time of adding them into Palette Forge. You are never paying for the model or right to use it, it's likeness is used to demonstrate palette colors.

We add or remove demonstration models as requested by the copyright holders as needed. Model availability can change at any time.

The Palette Forge software is what we offer and the demonstration models are available due to the good graces of the copyright holders.

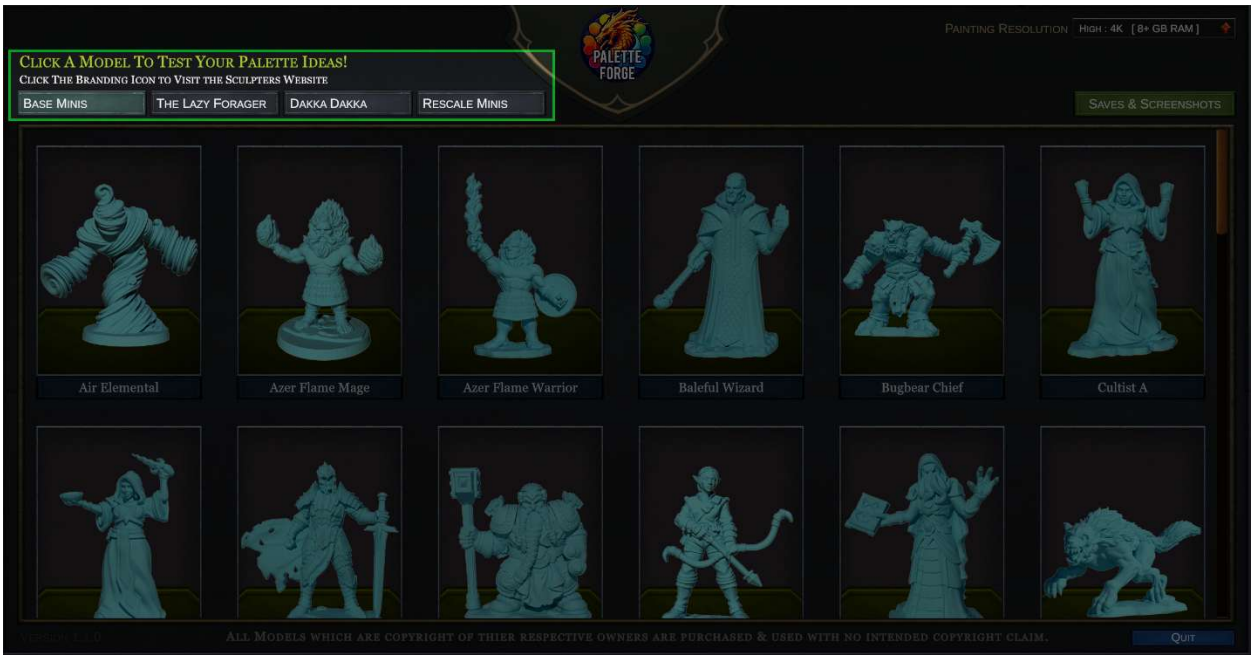
Thank You copyright holders!

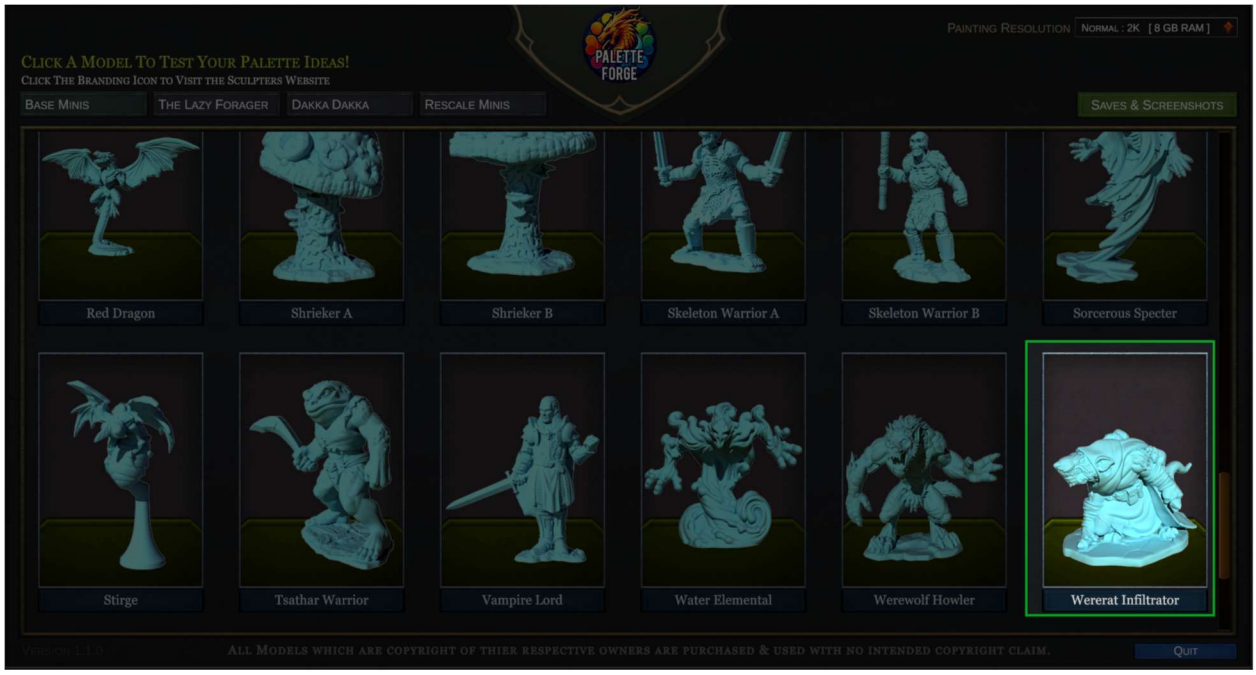
Getting Started

Let's look at the steps needed to use Palette Forge to get you up and painting and then explore all of the feature later in this manual.

Step 1: Choose a Demonstration Model

Choose from the Base Miniatures or use the Partner Tabs to choose a Miniature from one of our partners.





Click on the Tabs at the top left to view all of the available collections of demonstration models. Once you find one that you feel will help you visualize a palette for the real miniature you'll be painting, click on the picture of the model.

Step 2: Choose a Color to paint with.

Click on any color in the color picker to put that color on your brush. It will show up in the Currently Selected Color area shown below.

You can also click the Selected Color Area to add the color to the Preview Palette so you can select it again later as needed.

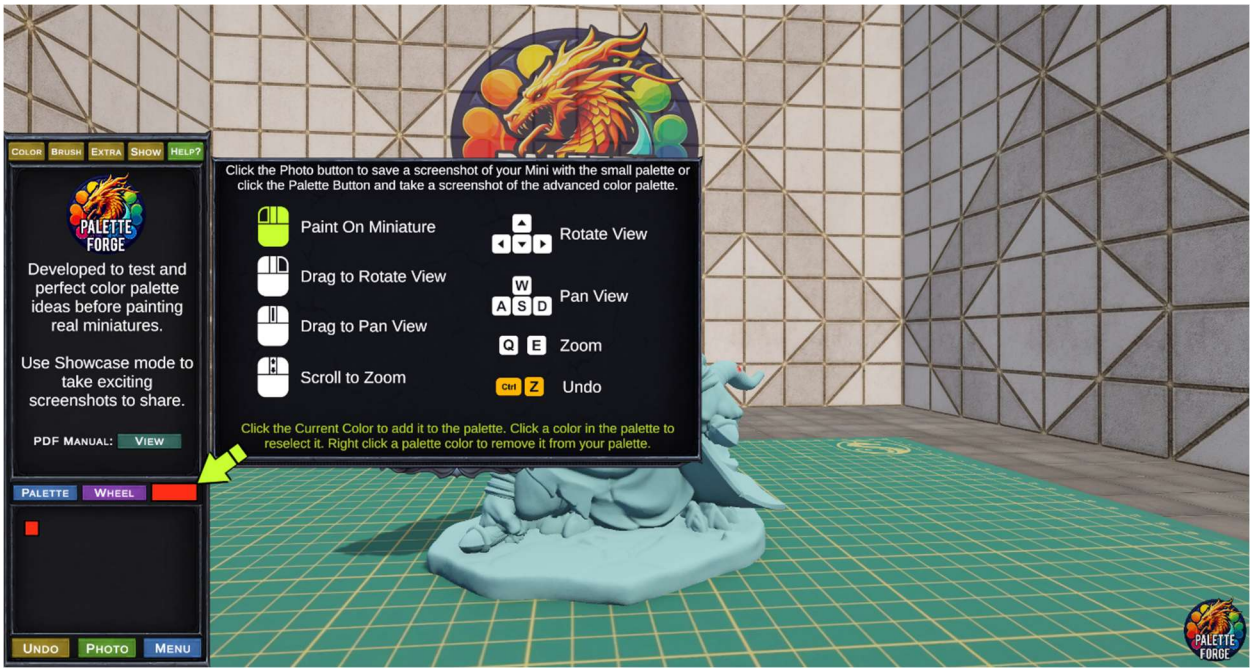
Note: Left click the color in the preview palette area to put it on your brush. Right click the color in the preview palette area to remove it from your palette.

Step 3: Paint!

You will see a preview of where the brush it touching the miniature when you move your mouse over the model. It shows the color, intensity, size and shape of the currently selected brush.

Use the Help Tab to learn how to move the camera around to help you see where you want to paint.


Color
Brush
Extra
Show
Help?
PALETTE FORGE
Palette
Wheel
Undo
Photo
Menu


Color
Brush
Extra
Show
Help?
PALETTE FORGE
Developed to test and perfect color palette ideas before painting real miniatures.
Use Showcase mode to take exciting screenshots to share.
PDF Manual:
View
Palette
Wheel
Undo
Photo
Menu
Click the Photo button to save a screenshot of your Mini with the small palette or click the Palette Button and take a screenshot of the advanced color palette.
Paint On Miniature
Drag to Rotate View
Drag to Pan View
Scroll to Zoom
Rotate View
W A S D
Pan View
Q E
Zoom
Ctrl Z
Undo
Click the Current Color to add it to the palette. Click a color in the palette to reselect it. Right click a palette color to remove it from your palette.

Click the Photo button to save a screenshot of your Mini with the small palette or click the Palette Button and take a screenshot of the advanced color palette.

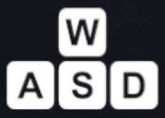
Paint On Miniature

Drag to Rotate View

Drag to Pan View

Scroll to Zoom

Rotate View



Pan View

Zoom

Undo

Click the Current Color to add it to the palette. Click a color in the palette to reselect it. Right click a palette color to remove it from your palette.

Step 4: Screenshots & Palettes

Once you're done painting you can use the Photo button to export a screenshot of the miniature and the palette preview for use as a reference when painting a physical miniature.

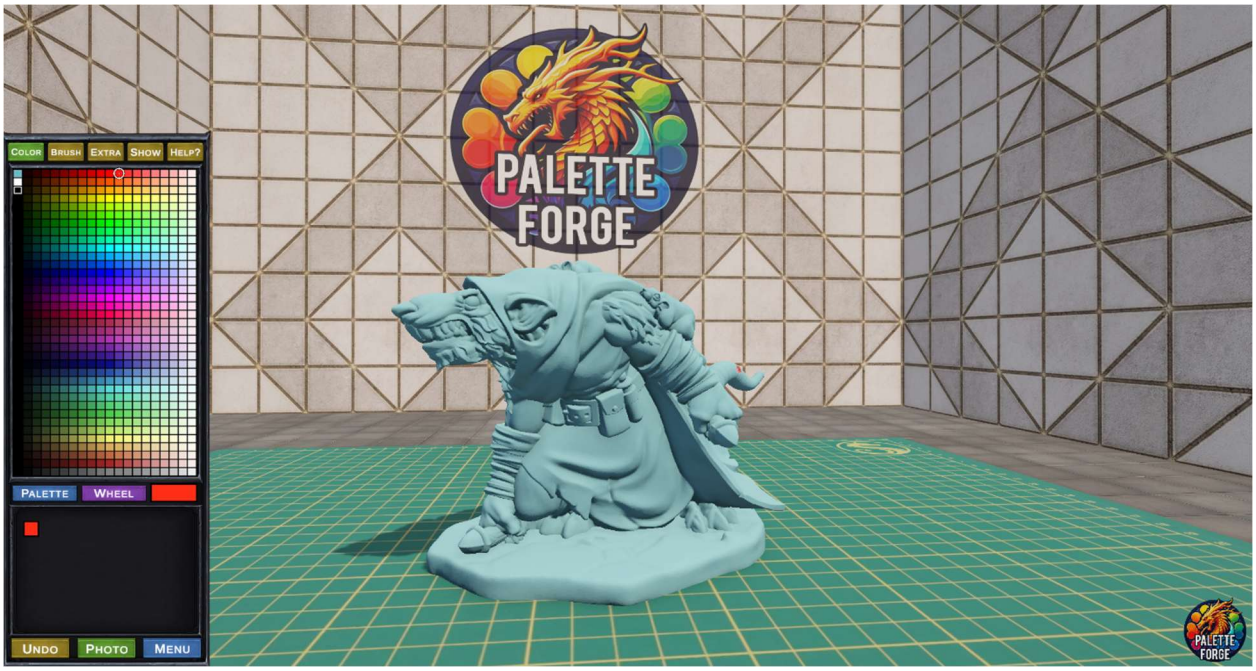
You can also click the Palette button before using the Photo button to capture a screenshot of the advanced palette view that lists the palette colors with RGB, Hex and paint mixing recipes for each.

Here is an example of the advanced palette view:

You can also use the Showcase feature to take a stylized screenshot of your digitally painted miniature to share.

Here is an example of each screenshot taken using each of these methods.

Normal Screenshot (Photo Button)



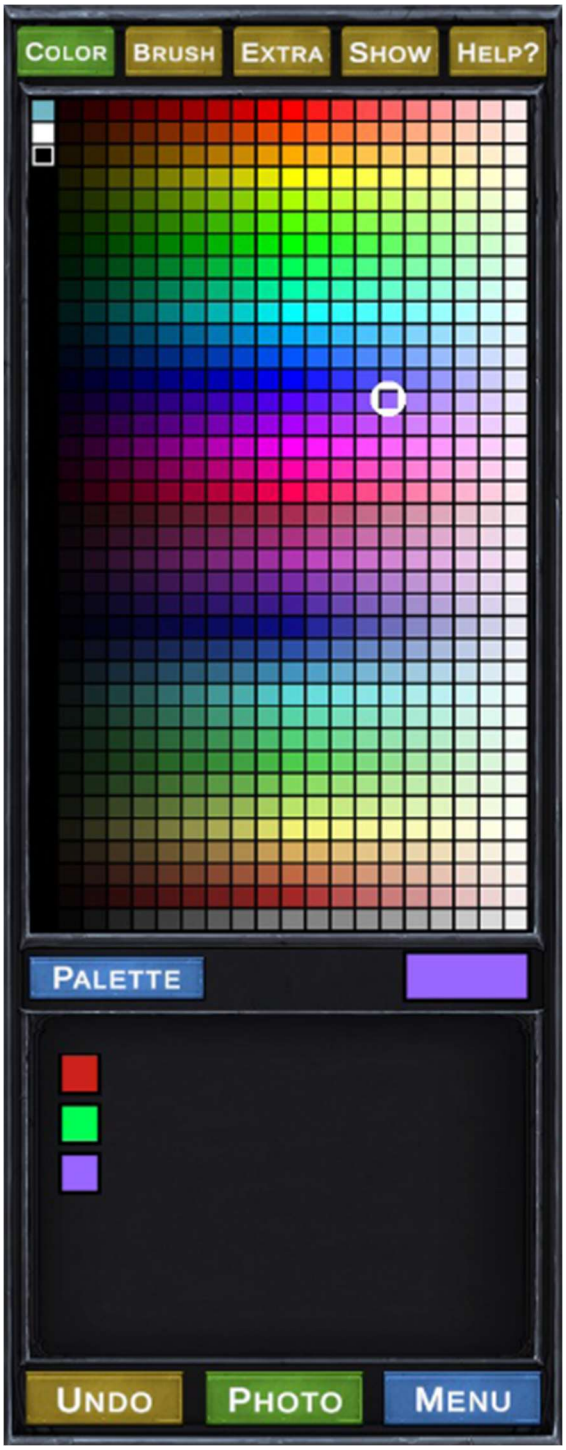
Advanced Palette Screenshot (Photo Button after opening the Advanced Palette)

Showcase Screenshot (Using the Showcase System)

Features Overview

Let’s go over the features offered in Palette Forge, by tool tab.

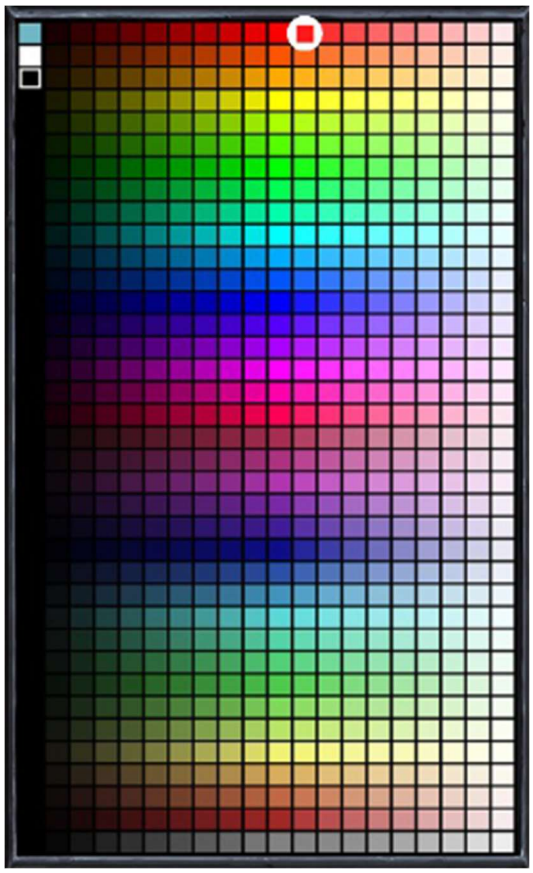
Color Tab



Features available on the Color Tab are:

- Color Picker
- Current Color Selected
- Preview Palette
- Palette Button
- Undo Button
- Photo Button
- Menu Button
- Color Theory & Random Palettes

Color Picker



Clicking on the color picker will choose the color used on your digital brush. It also assigns the color to the Current Color Selected area.

On the top left of the color picker are the special colors like Primer Blue, White and Black. The main color picking area is split into three sections. The top half is a collection of vibrant colors, the bottom half holds a selection of muted colors, and at the very bottom is a grey scale.

Current Color Selected

This area shows the currently selected color that the digital brush will paint with. You can also left click this area to add this color to your preview palette so you can select this color again easily in the future.

Preview Palette

The preview palette is used to store your chosen palette colors and it may be interacted with in the following ways.

Left click on a Paint Chip: Make this color the currently selected color, for painting.

Right Click on a Paint Chip: Remove the color from your preview palette.

This area also dictates the colors shown when you view the advanced palette.

Palette Button

Use the Palette button to show or hide the Advanced Palette screen.

Note: You may also use the Red X button on the top right side of the Advanced Palette to close the Advanced Palette screen.

Undo Button

Click to undo your last action. Saves up to 20 levels of Undo. Painting over mistakes is easy and mistakes can lead to some cool unintentional detail, but sometimes it's just easier to use Undo.

Photo Button

Click to take a basic screenshot of the miniature and the preview palette. But can also be used with the Advanced Palette window open to take a screenshot of your chosen palette colors and mixing recipes for each.

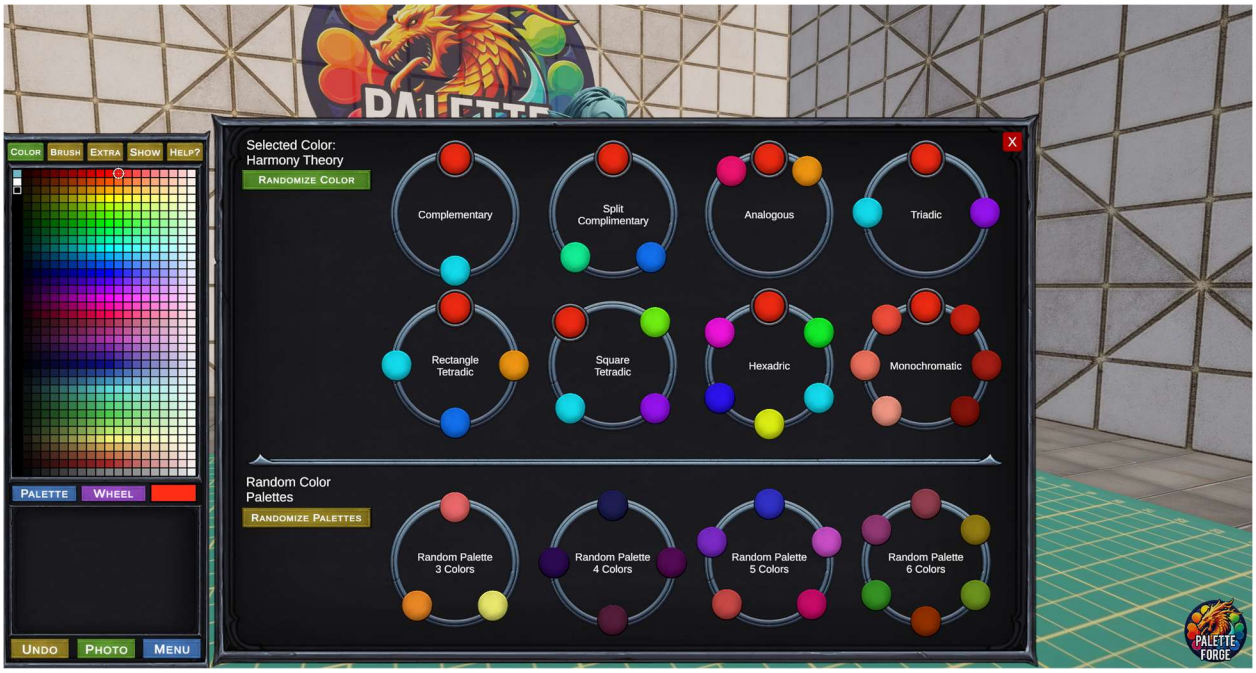
Menu Button

Takes you back to the miniature selection screen, saving your painting progress.

Note: Your painting progress and palette information are automatically saved when closing Palette Forge or returning to the miniature selection screen. We'll have more on this topic later in this manual.

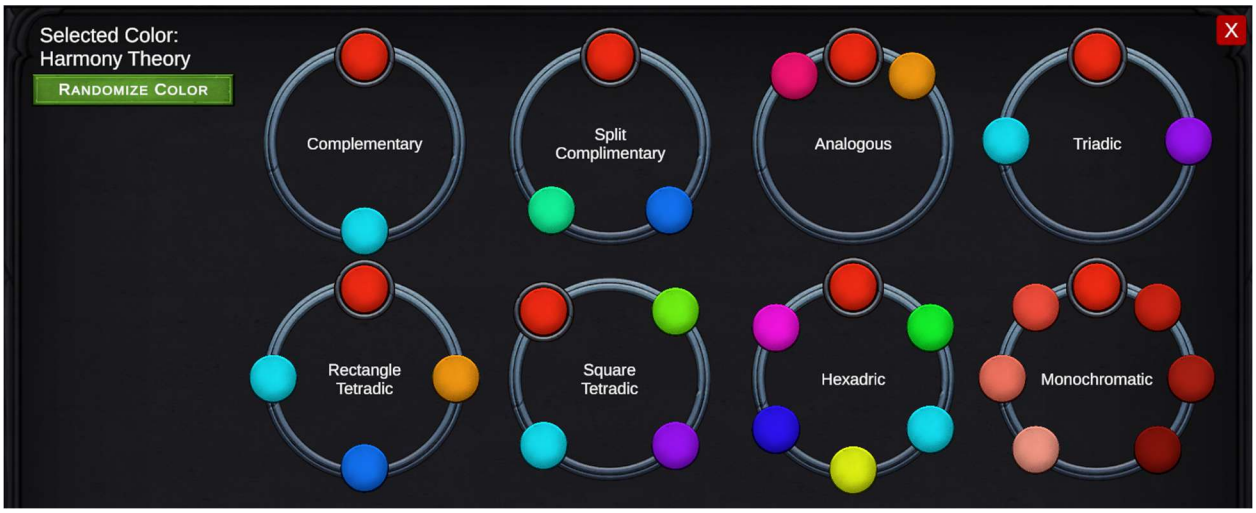
Wheel Button

The Wheel button opens a Window with an interactive color theory system and the ability to generate random palettes for inspiration. This blows the palette wide open while keeping the initial color selection simple!



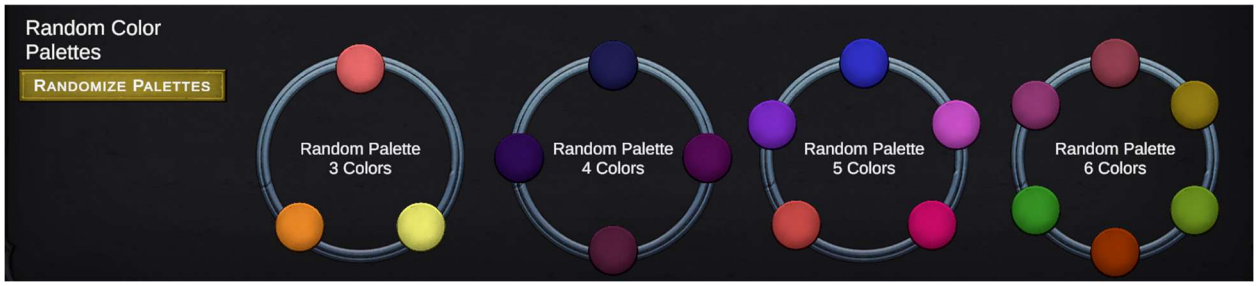
Clicking on any of these colors it will make it your selected color and can easily be added to your preview palette.

These color theory charts are based on the currently selected color and will update as new colors are selected.

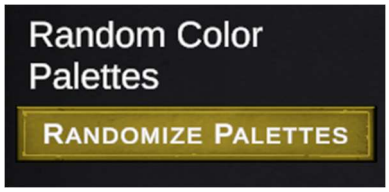


You can also use the Randomize Color button for inspiration.

The bottom part of this window is a collection of random palettes from three to six colors. This shows completely randomized palettes while adhering to color theory.



You can also use the Randomize Palettes button to create new random palettes for inspiration.



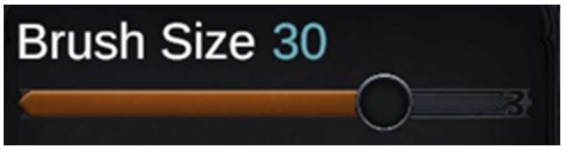
Note: When selecting a color from this window by clicking any of the colored dots will make this color your selected color and try to locate the color on the simple color selection area. Because some of these colors exist at multiple location on the simple color selection area, the location of the color may not look correct but it's due to how the image uses black lines to separate colors. This does not affect use but it's just something we though we would mention.

Brush Tab

Features available on the Brush Tab are:

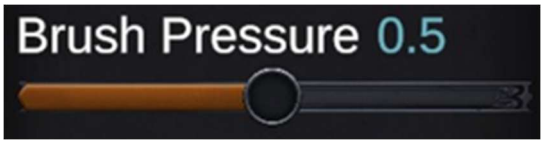
- Brush Size
- Brush Pressure
- Brush Rotation
- Currently Selected Brush Shape
- Brush Shape Selector

Brush Size



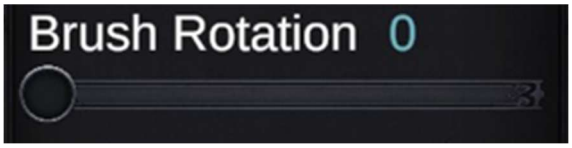
This slider sets the size of the brush you'll be using to paint on the digital miniature. A smaller number means a smaller brush tip. You can always see a preview of the brush size when you put the mouse over the miniature. 15 is the default setting.

Brush Pressure



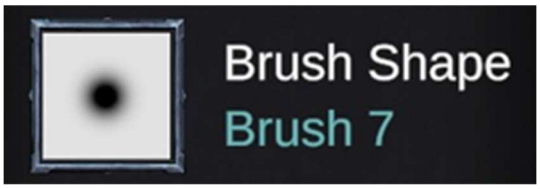
This slider sets the amount of paint that's applied to the miniature when painting with the chosen brush. The higher the number, the more paint will be applied. 0.5 is the default setting.

Brush Rotation



This slider sets the rotation of the selected brush shape. Changing this when you have a circular brush shape selected won't change much, but brush rotation helps to vary the painting of the shaped brushes, like claw scratches and dirt patterns. Default setting is 0.

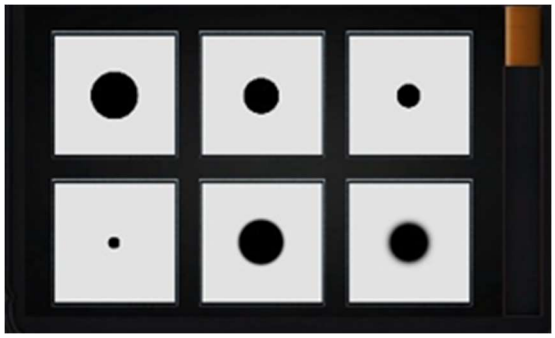
Currently Selected Brush



This area shows you the currently selected brush shape and the name of the brush. It will also visually show you the current rotation of the brush.

Note: Your brush rotation may not match this preview due to the directionality in 3D space. Always trust the preview on the miniature.

Brush Shape Selector



Click on any of the brush previews in this area to change the currently selected brush to the new chosen brush shape.

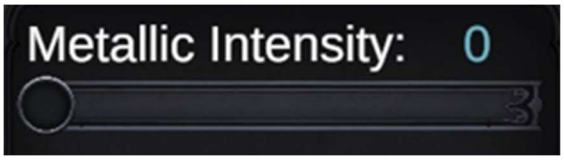
Note: Some brushes may seem pixelated in the preview on the miniature, this is due to the resolution of the texture you're painting on and how the 3D model was prepared. Some brush shapes work better on some models and that is up to how well the model converts for painting. More about this in the Limitations section of this manual.

Extra Tab

Features available on the Extra Tab are:

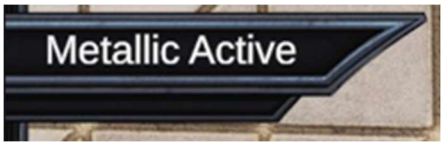
- Metallic Intensity
- Blending Intensity
- Mini Rotation
- Light Rotation
- Start Fresh

Metallic Intensity



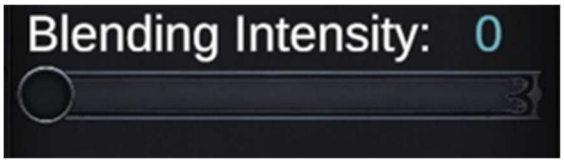
This slider enables the ability to paint glossy paint at low values and reflective metal paint at higher values. The higher the setting the more metallic the paint will be. Setting this slide to 0, it's default state, will disable the shine or metallic reflectiveness.

Because this can affect your normal painting there's a warning that the metallic intensity is enabled.



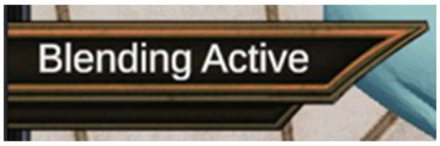
Note: You can preview the effect of this tool in the Visual Examples area of this manual.

Blending Intensity



This slider enables the ability to blend the colors of paint already painted on the miniature. This feature works best at a lower setting an intensity of 0.10 should be more than enough to blend small areas.

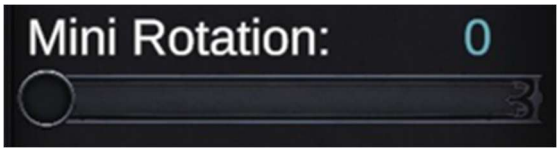
Because this affects your normal painting there's a warning that blending intensity is enabled.



Note: Blending with blend all colors under the brush preview on the miniature, including the base Primer Blue.

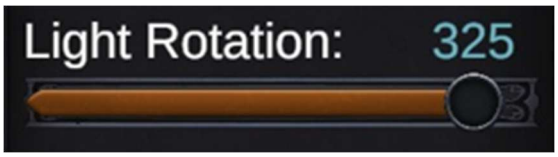
Note: You can preview the effect of this tool in the Visual Examples area of this manual.

Mini Rotation



This slider rotates the miniature. Because you have free movement around the painting area you don't really need to rotate the mini. However, this is a great tool to use when setting up the miniature for a showcase screenshot. The default rotation is 0.

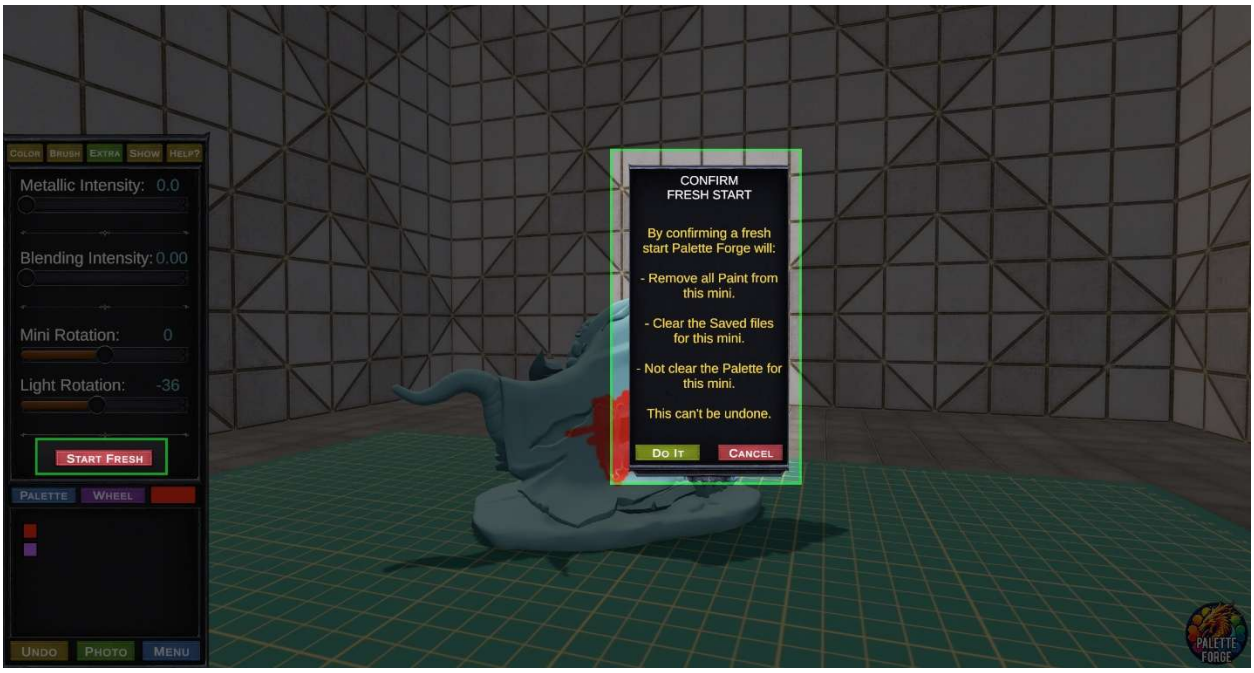
Light Rotation



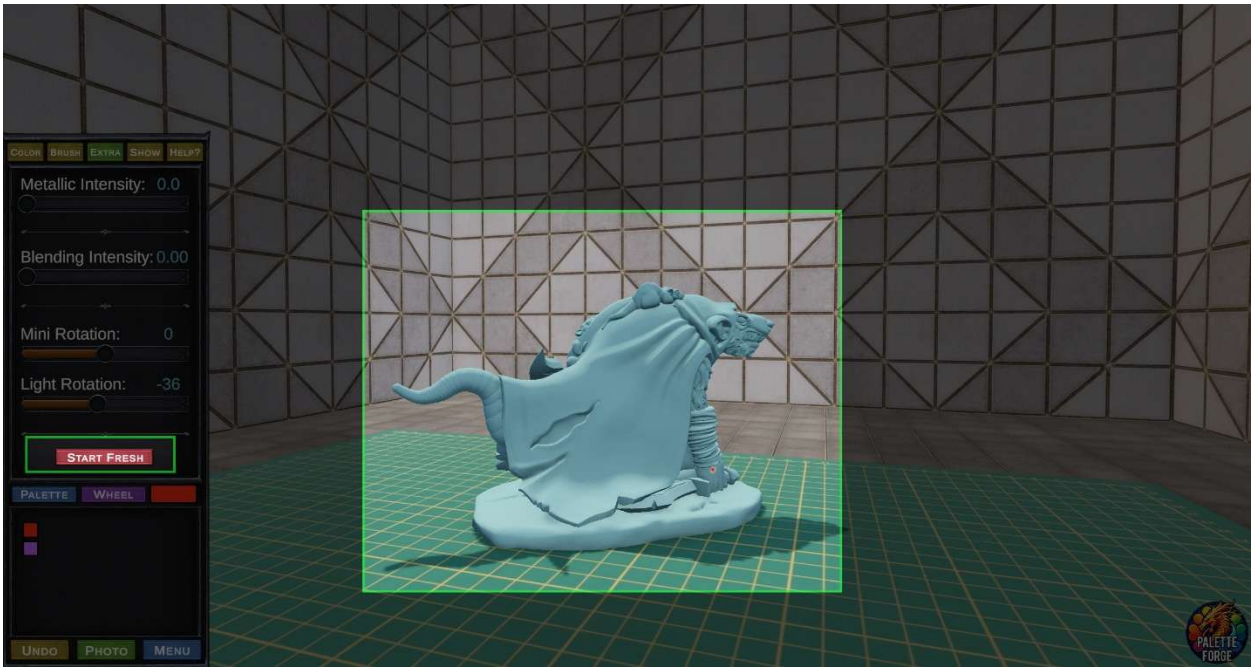
This slider rotates the main light source around the miniature. The lighting is setup to optimal vision while painting. However, this a great tool to use when setting up the lighting for a showcase screenshot. The default is 325.

Fresh Start Button

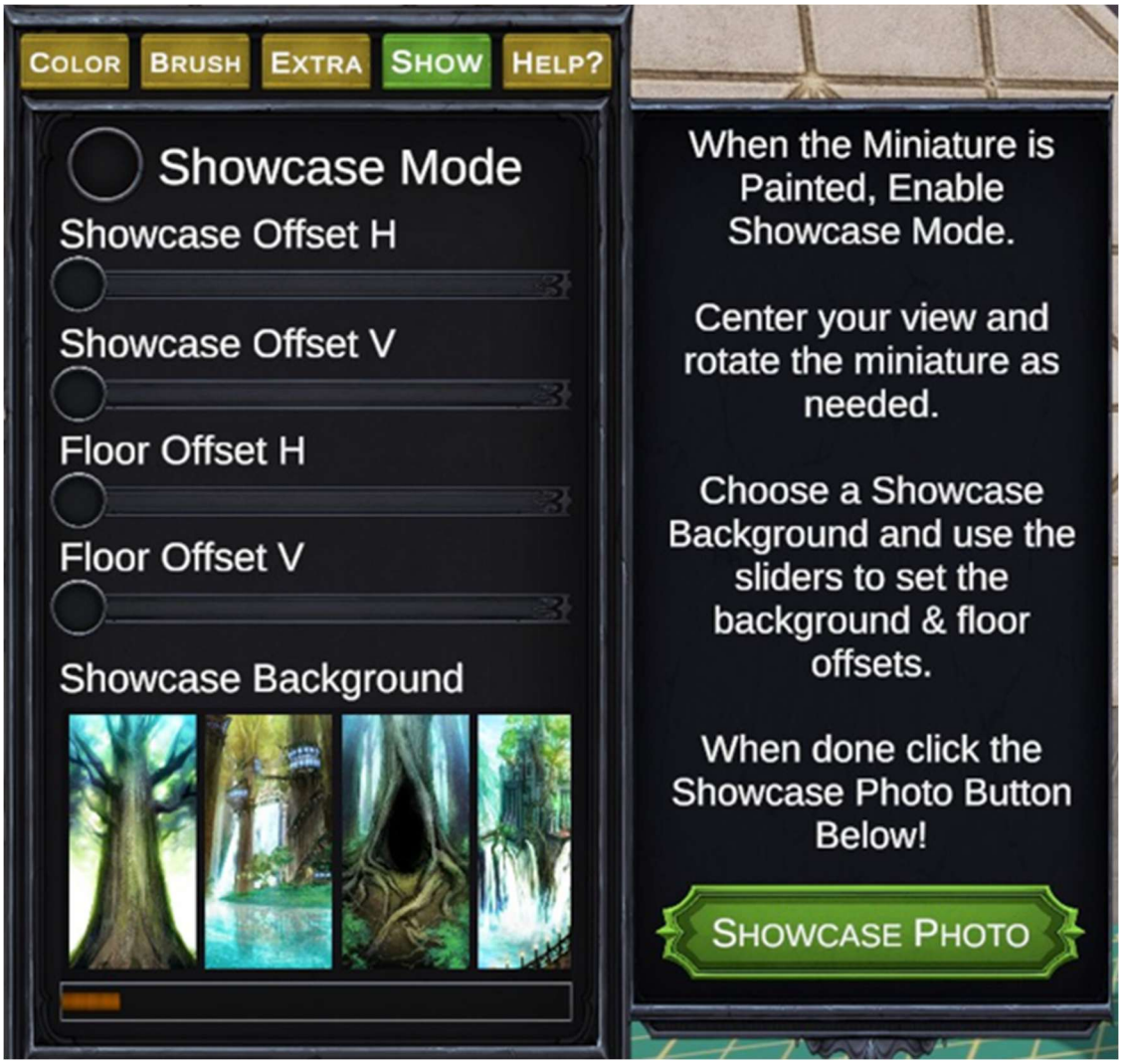
Clicking the Fresh Start button will bring up a confirmation window to make sure you wish to have a Fresh Start with the current Miniature



A fresh start is just as it sounds, it will remove all paint from the miniature and can't be undone. It will not remove the palette you have created, but it will remove the saved files for this miniature if you confirm that you want a fresh start.



Show Tab



Features available on the Show Tab are:

- Showcase Mode
- Showcase Offset H
- Showcase Offset V
- Floor Offset H
- Floor Offset V
- Showcase Background
- Showcase Photo

Showcase Mode

Enabling this feature turns on the Showcase mode.

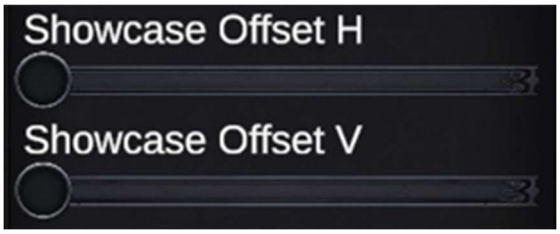
The showcase mode is a feature that puts a stylistic background and floor around the miniature so you can take really cool screenshots of your miniature after you're done painting it while testing out your color palette. Default setting is off.

Because this feature can impact your painting experience there is a warning that Showcase mode is active. You can paint in Showcase mode, but it may impact your perception of the colors being used.

Note: Showcase Mode isn't required to use Palette Forge. It's been added in to make sharing your cool paint jobs with others and have the background something more interesting than the painting stage.

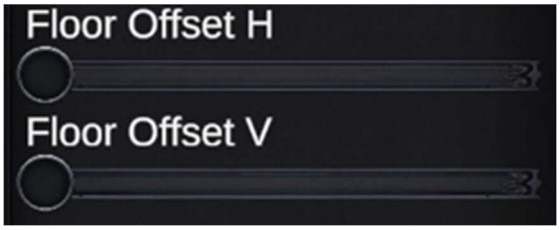
Note: You can preview the effect of this tool in the Visual Examples area of this manual.

Showcase Offset V&H



These sliders let you adjust the offset of the background image that showcase mode puts behind the miniature. Offset H lets you adjust the Horizontal offset and Offset V lets you adjust the Vertical offset.

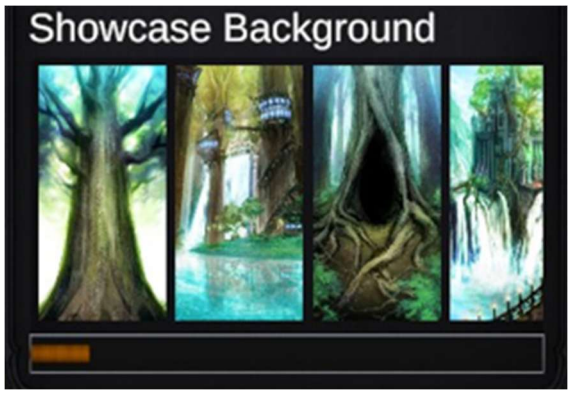
Floor Offset H&V



These sliders let you adjust the offset of the floor image that showcase mode puts under the miniature. Offset H lets you adjust the Horizontal offset and Offset V lets you adjust the Vertical offset.

Note: The background and Floor image are identical but it's very easy to align the images to compliment each other and make some really cool visuals around your painted miniature.

Showcase Background

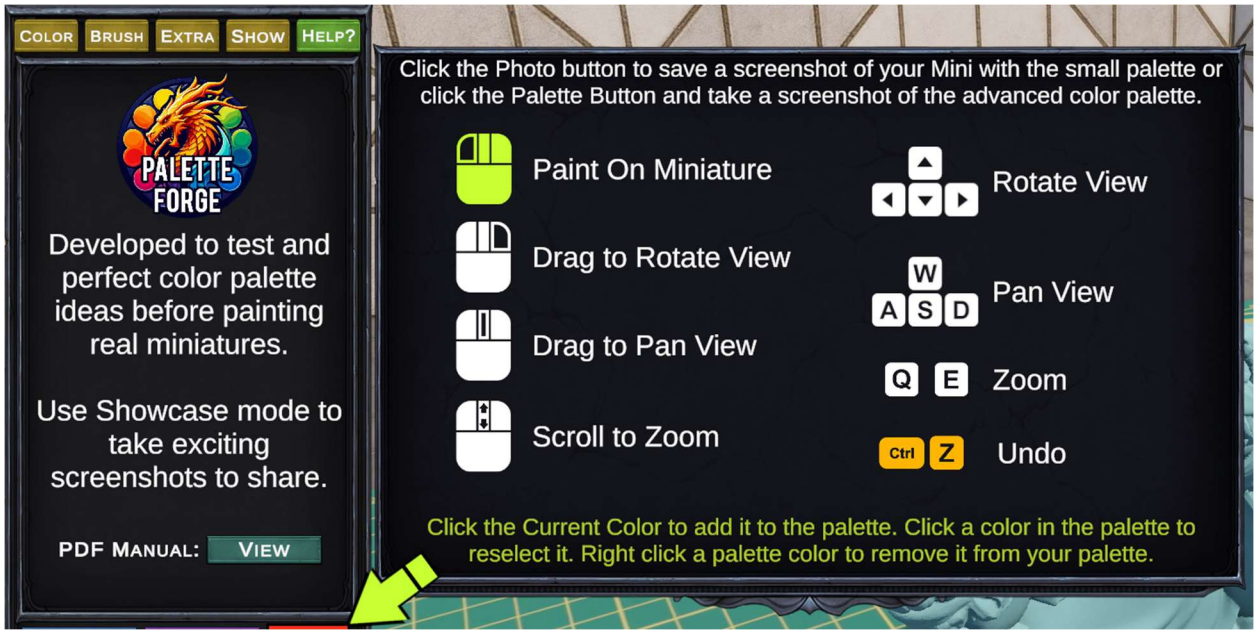


Click on any of these background image options to set the image shown in the background and on the floor when Showcase is enabled.

There are over 70 options. Find an image that best suits your vision for the miniature you've painted and adjust the offset until it looks great!

Note: These images have been stylized to not distract from the detail of the miniature, but to act more as an accent in your screenshots.

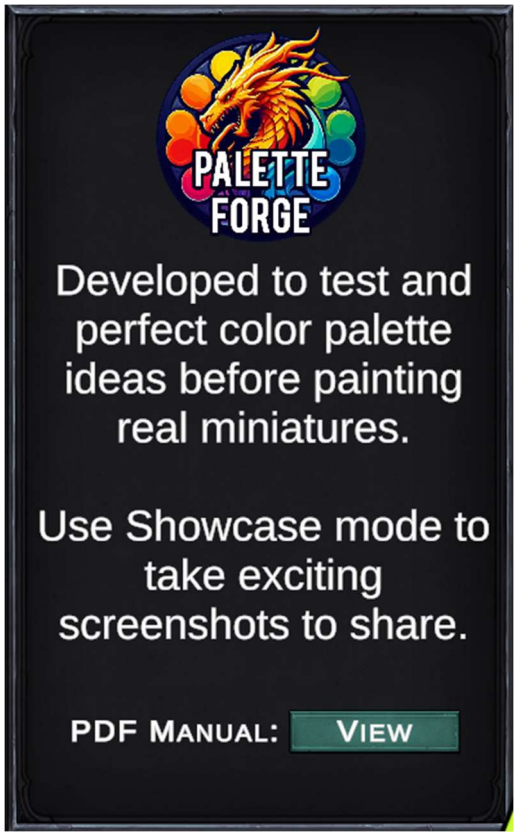
Help Tab



Features available on the Help Tab are:

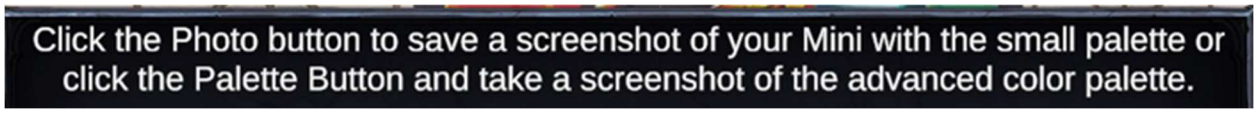
- Information about Palette Forge
- Information about Screenshots
- Keyboard & Mouse Controls
- Information about the Palette System

Information about Palette Forge



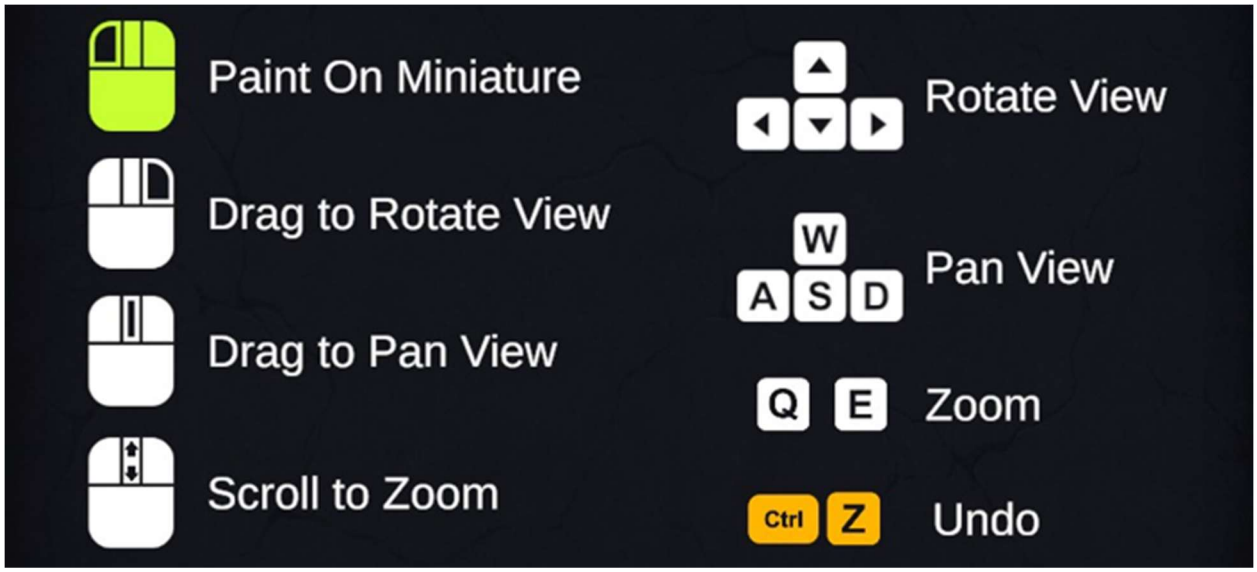
The information in this little box may change but it lets everyone know that this software was made by Midlife Hobbies and why we made it.

Information about Screenshots



We want this software to be easy to use so we included a bunch of information right in the user interface. Easy of use is also why we made this manual in an age where manuals are no longer included with software.

Keyboard and Mouse Controls



Knowing how to use the software is important and it may not always be easy to navigate in 3D space for someone who has had little experience moving a camera in a 3D environment.

Information about the Palette System

The most important feature of Palette Forge is the palette system so it’s important to quickly understand how it works.

Save Files & Screenshots

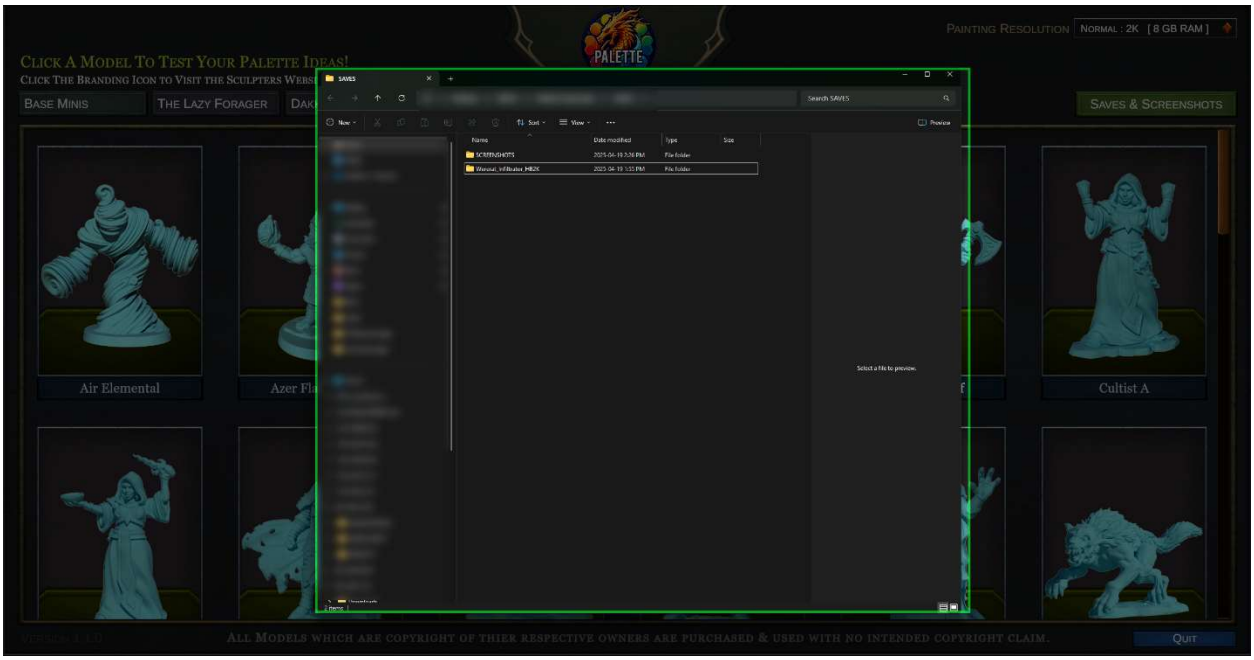
You can access the saves and screenshots created by Palette Forge from the main model selection screen. on the top right of the screen there's a button labeled Saves & Screenshots.

When clicked it will open the folder where Palette Forge saves the painting and palette information for each miniature you paint.

Folders

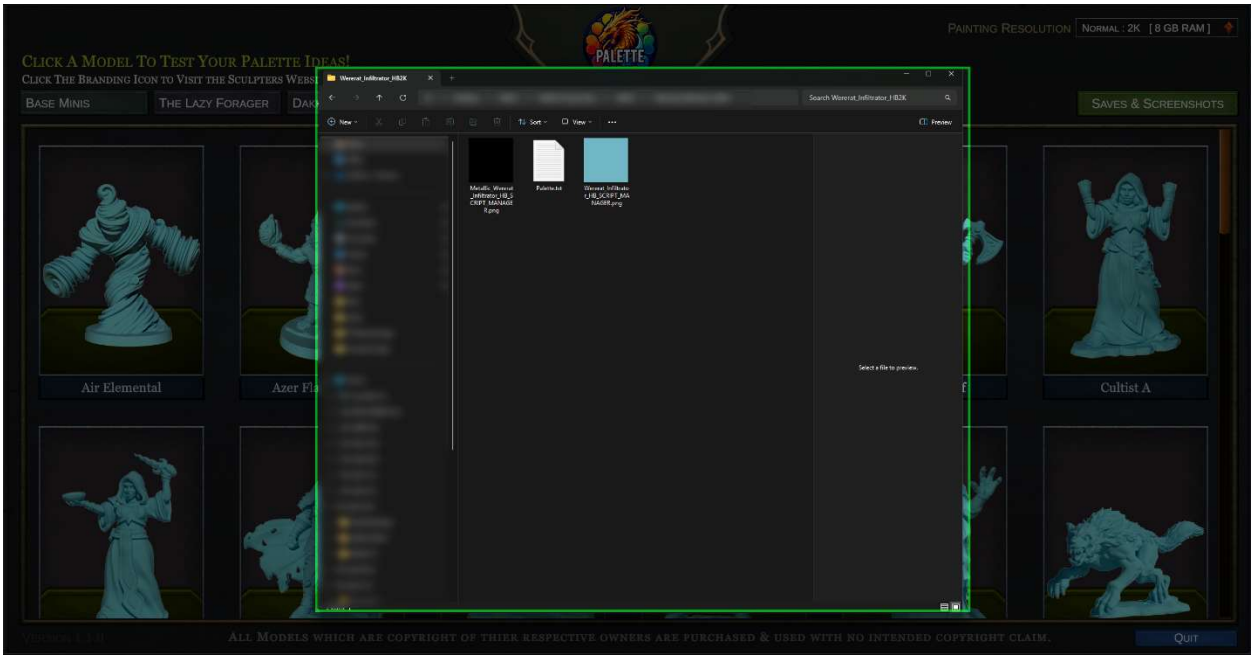
In this "saves" folder you'll find a Screenshot folder that holds all of the screenshots you've taken inside Palette Forge. Each miniature you've started painting will have a unique folder with the name of the miniature in the folders name, so it's easily identified.

Note: There will be folders for Each painting Resolution used, for each Mini. You will be able to tell what resolution they are as the final letters in the folder name will be either 1K, 2K or 4K.



Miniature Saves Folders

Each miniature's save folder contains the main texture image, metallic texture image and text file containing the color palette information that you've created for that miniature.



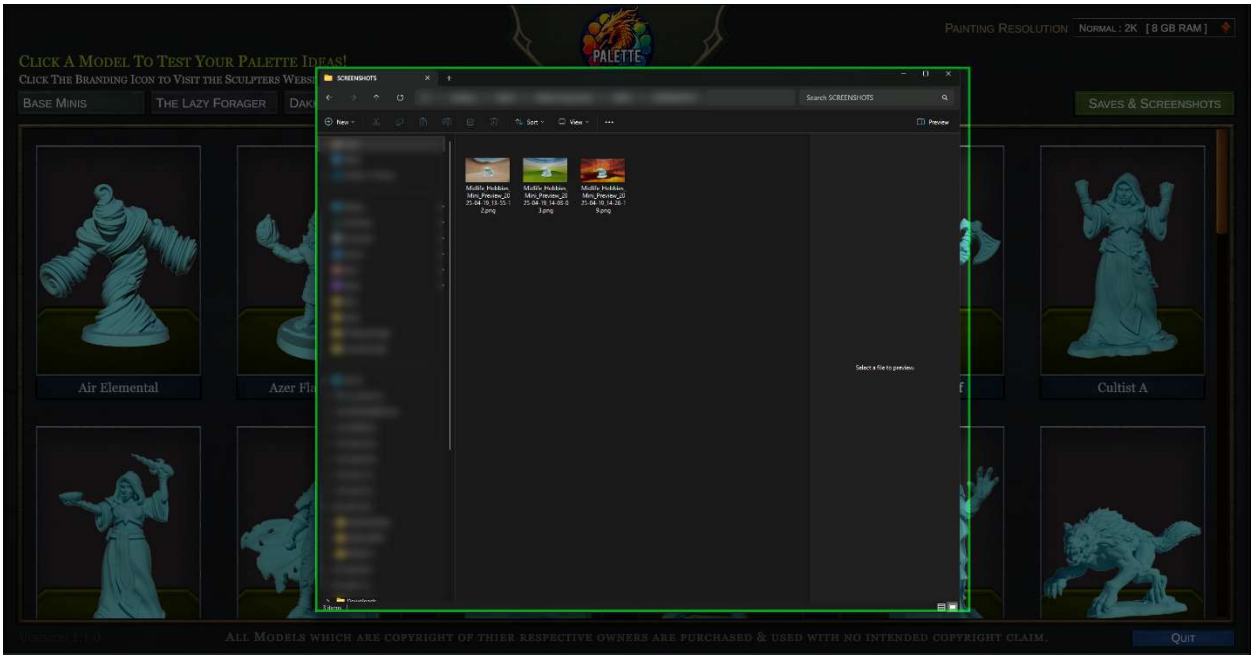
The two PNG image files are what Palette Forge saves as you paint and when you're done painting. The palette information is a list of colors in plain text as well as some internal information.

Cleaning a Model for Repainting

Note: Deleting these three files will clear any painting and palette information for this one miniature the next time you start Palette Forge. This lets you start painting a fresh miniature at any time. You can also backup these files if you want to save a specific paint while testing a new palette.

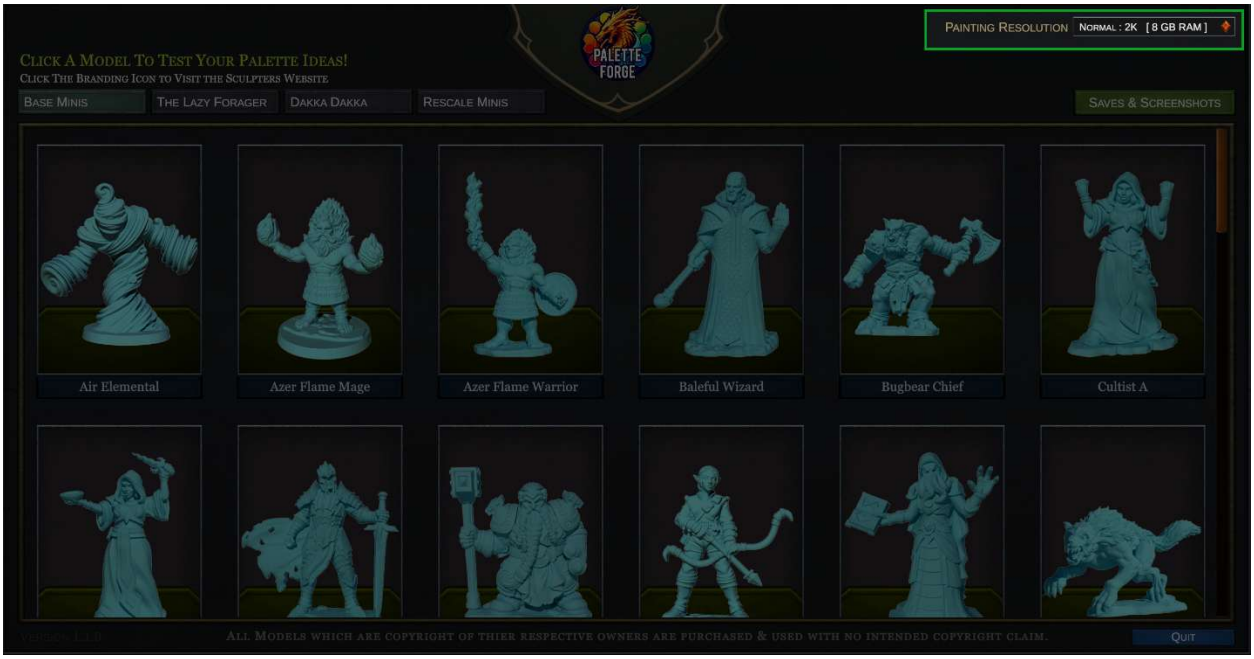
Note: Editing the palette information may cause the corruption of your palette on this miniature, so we suggest against it.

Screenshots Folder

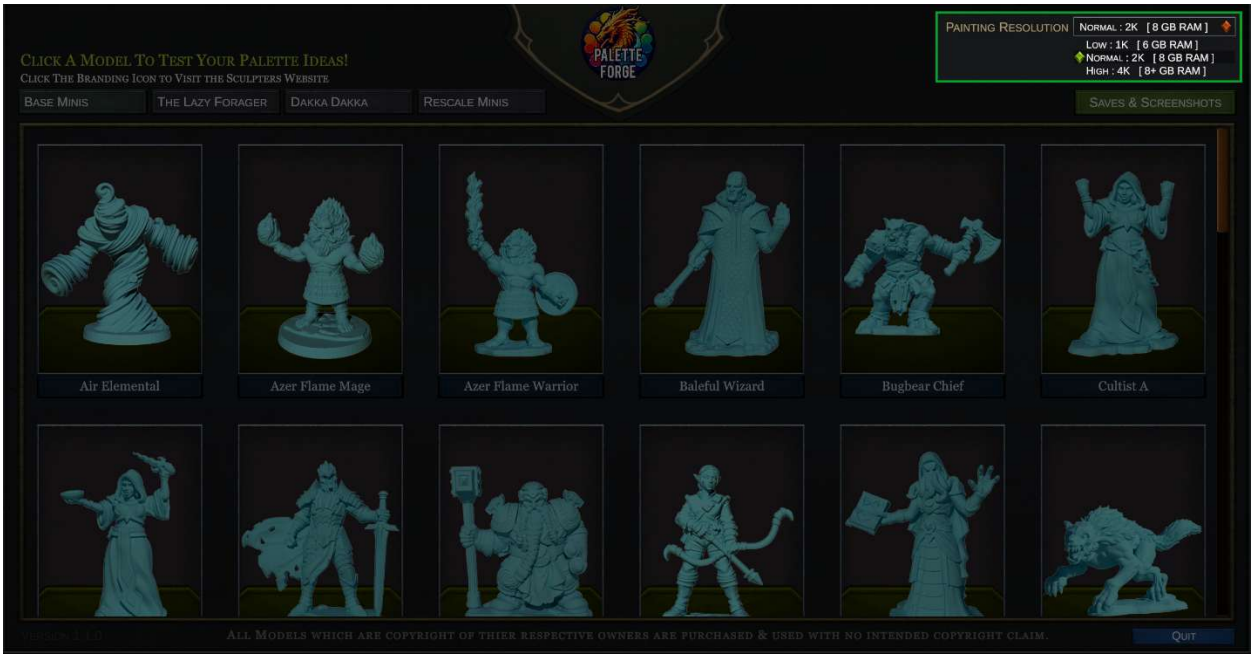


This folder is where you will find all screenshots taken from inside Palette Forge. Basic screenshots, Advanced Palette Screenshots and Showcase Screenshots all go into this folder so they are easy to find and use as reference, or share with your online community.

Painting Resolution Selection

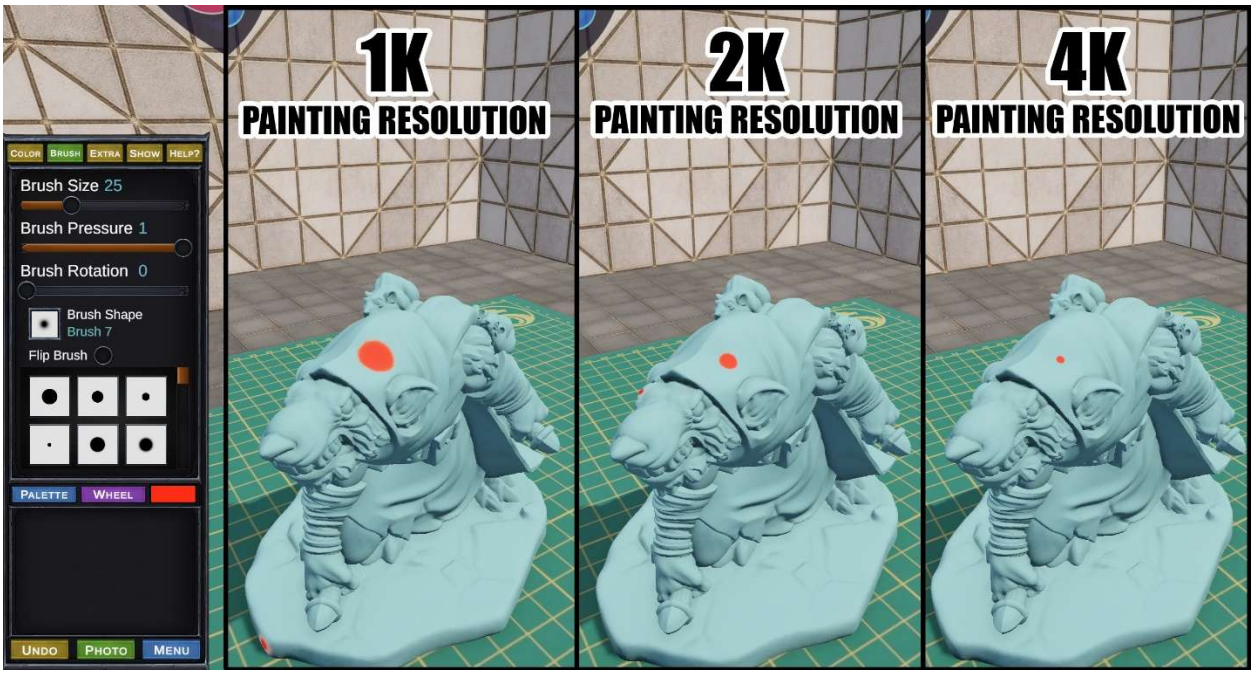


On the model selection screen you can click on the Painting Resolution Dropdown and change the resolution of the texture you will be painting for each individual miniature. Each miniature can be painted in all three options available for painting resolution.



You can choose from Low Normal and High. Normal is the default setting the painting texture resolution at 2k or 2045 pixels by 2048 pixels. This resolution is perfect more most miniatures however is you are finding that a miniature has fine detail that you have issues painting you may want to set the resolution higher, giving you more pixels to paint.

Here is a breakdown of what changing the painting resolution does.



The size or number of pixels being painted by a default brush size of 25 looks very different at the three resolution options. Even though the brush is the same size for each resolution the texture on the miniature is increased meaning there's more detail to paint. This will give you more control over the intricacy of the painting. However, it does take a more powerful computer to work at higher resolutions so if performance seems to be suffering try lowering the painting resolution.

Limitations

Due to the complexity of the models we use and features offered in Palette Forge there are some technical limitations we'd like to explain.

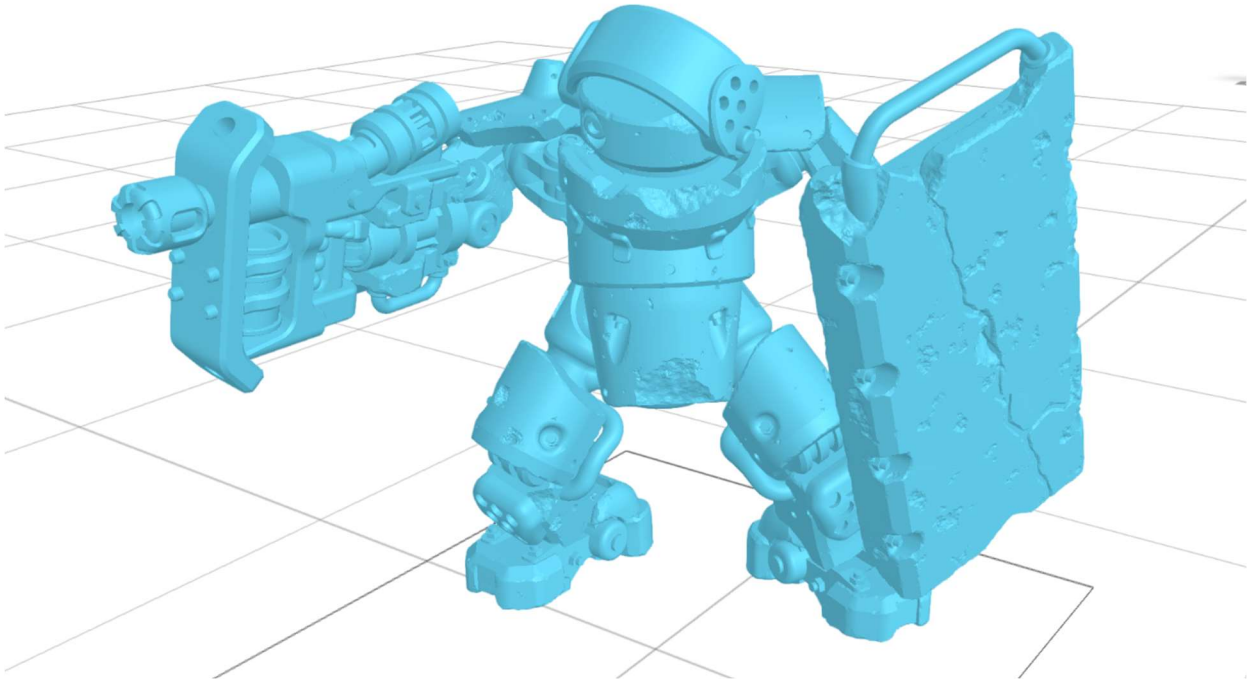
Model Quality & Simplification

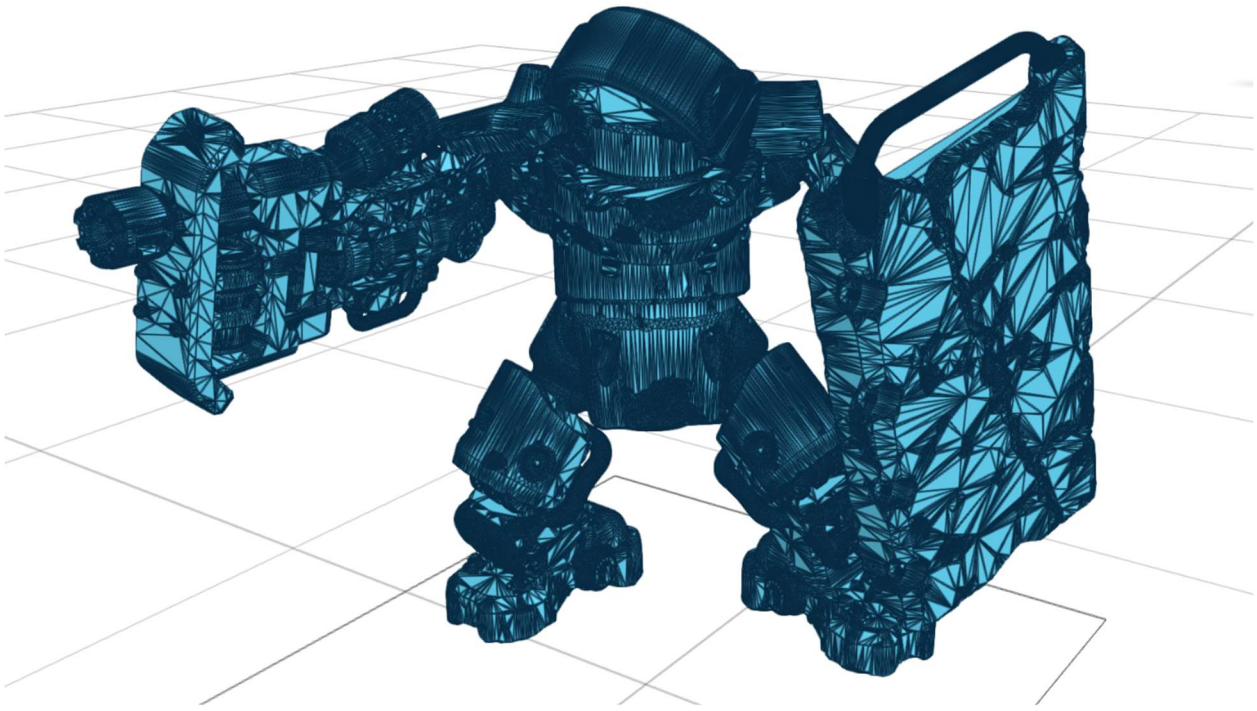
The models we use for Palette Forge are designed to be 3D printed so they incorporate every detail into the model itself, making for some really cool but very large / intricate model files.

We need to simplify the model to make it work in a 3D painting environment leading to edges that aren't as round or details that look a little blocky up close.

For example, a player model designed for a AAA quality game needs to be less than 60 thousand polygon faces to not cause performance issues. Where one 3D printable STL file has 500 thousand to a million polygon faces.

By simplifying the model, we can trade some detail for a smoother experience in Palette Forge and avoid any slow-down or lag that may mess up your painting experience.

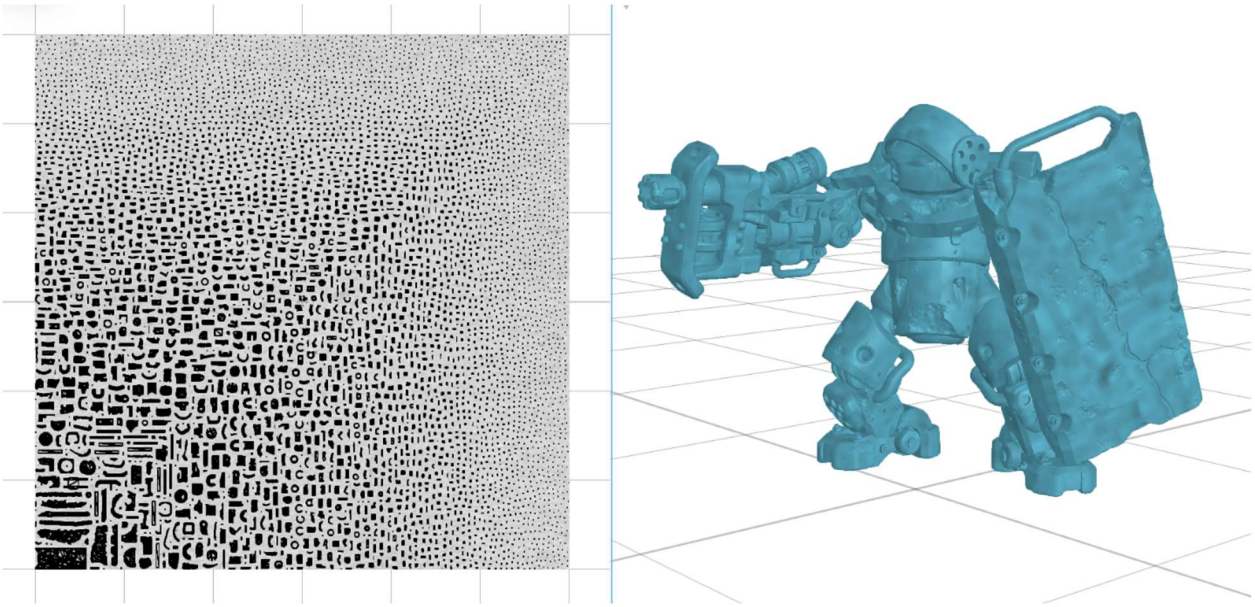




Note: Depending on the model we try to keep the polygon faces between 250 thousand and 325 thousand.

Model Texturing & UV Mapping

Game models have gone through a process to prepare them to show texture or image on them in game, this is where a lot of the detail comes from as the game models have fairly simple geometry. This makes the model more interesting than the boring single-color tone of a 3D printable STL file. This process is called UV Mapping and tells the model where to apply a texture image, how much texture to show and where. STL files don't have this information so we need to generate the UV Mapping information.



However, due to the high polygon face count and the intricacy of the models the UV-Maps are not always perfect leading to some odd behaviour while painting. They may hinder a smooth painting experience a bit but are easily mitigated by moving your brush directly over that location.

Note: We are always working on advanced ways to prepare the models for painting but for now these are some of the limitations of Painter Forge.

Brush Limitations

Due to the generation of these intricate UV maps, explained above, some parts of a model may not accurately react to the brush settings as expected.

Brush Rotation

The rotation of the brush in the tool tab may not match how it will be applied to the model when painting. However, the preview before you paint is always accurate so please trust the preview. The only affect of this is on your painting will be a need to adjust your brush rotation on some parts of the model before painting is using a shaped brush.

Brush Pixelization

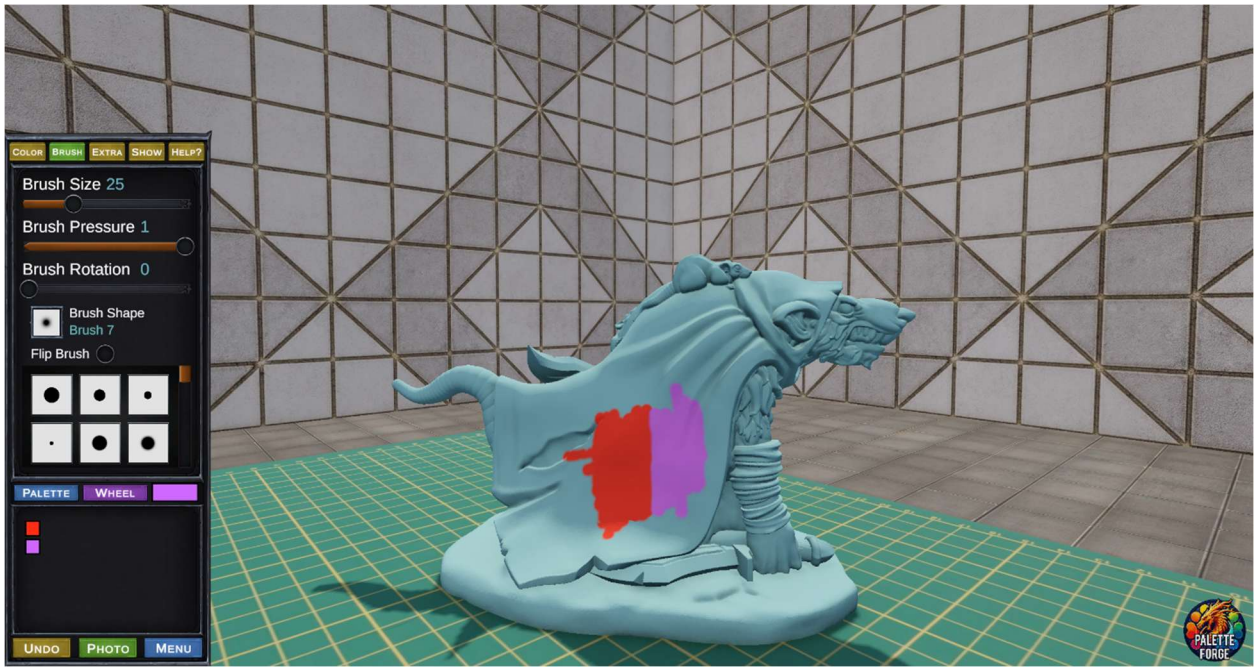
Some brushes may preview and paint more pixelated or lower quality on some models depending on the UV Mapping. This isn't ideal but it's a limitation of the models we are using as palette demonstration models. Palette Forge is designed as a tool to support color palette planning not simulate painting perfectly.

Note: Increasing the painting resolution as mentioned earlier in this manual can solve this issue to more intricate models.

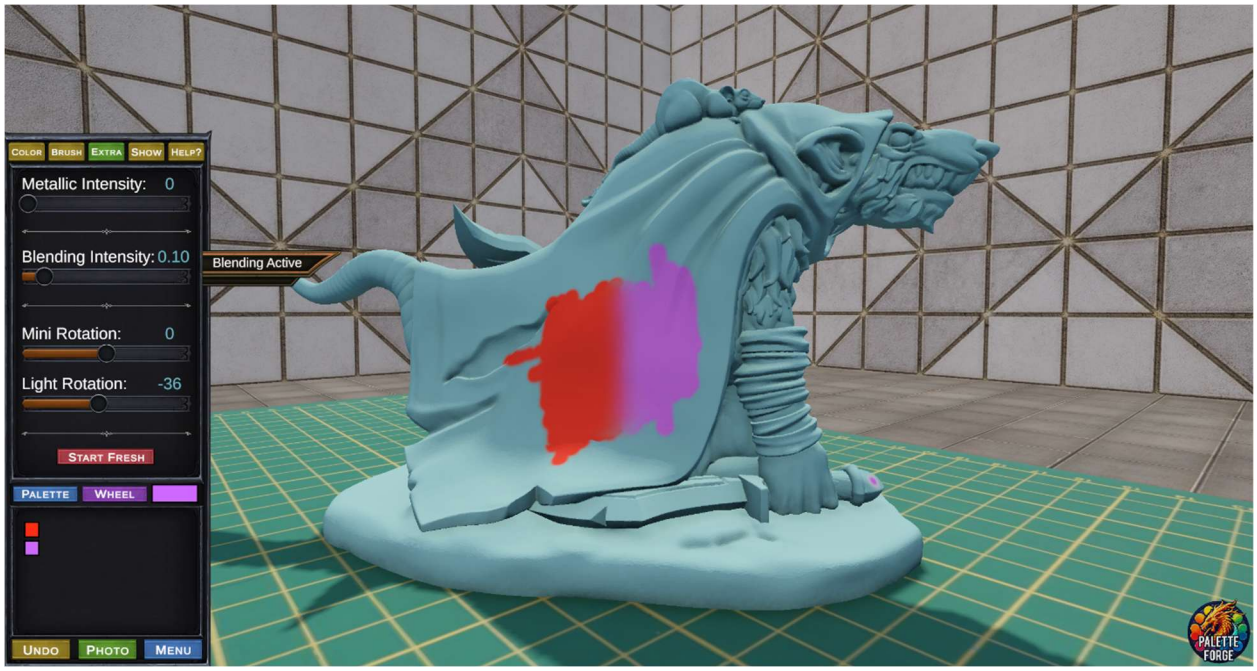
Visual Examples

Here are some visual examples of the feature in Palette Forge in no particular order.

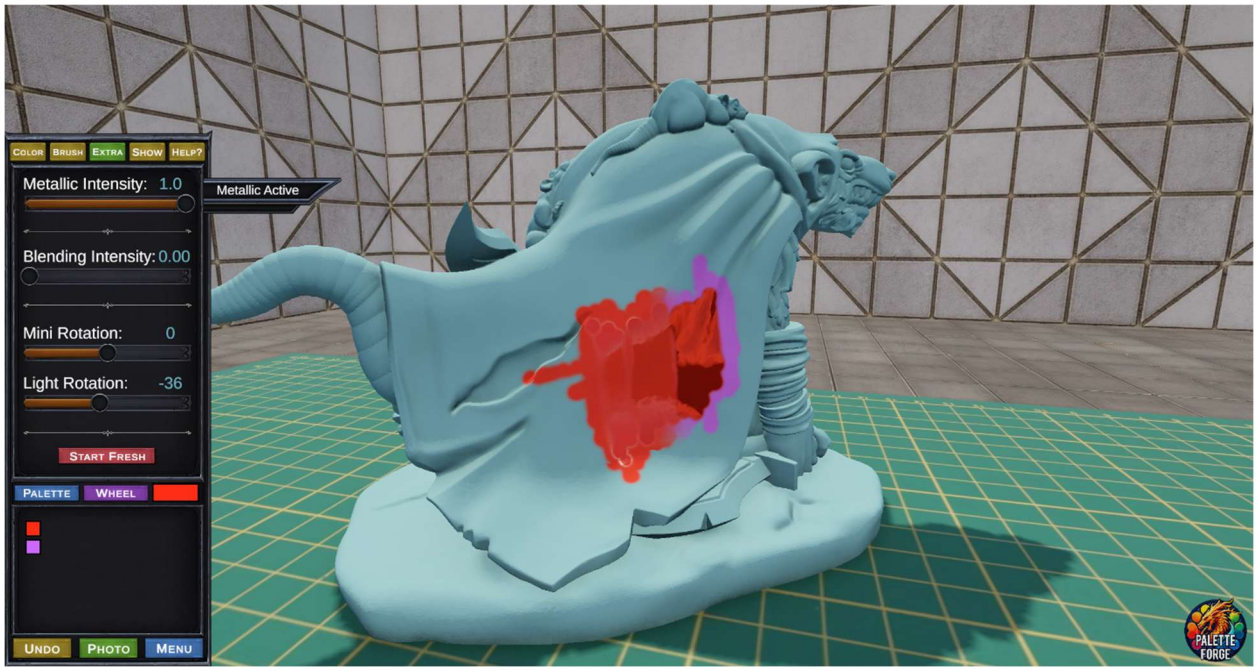
Painting



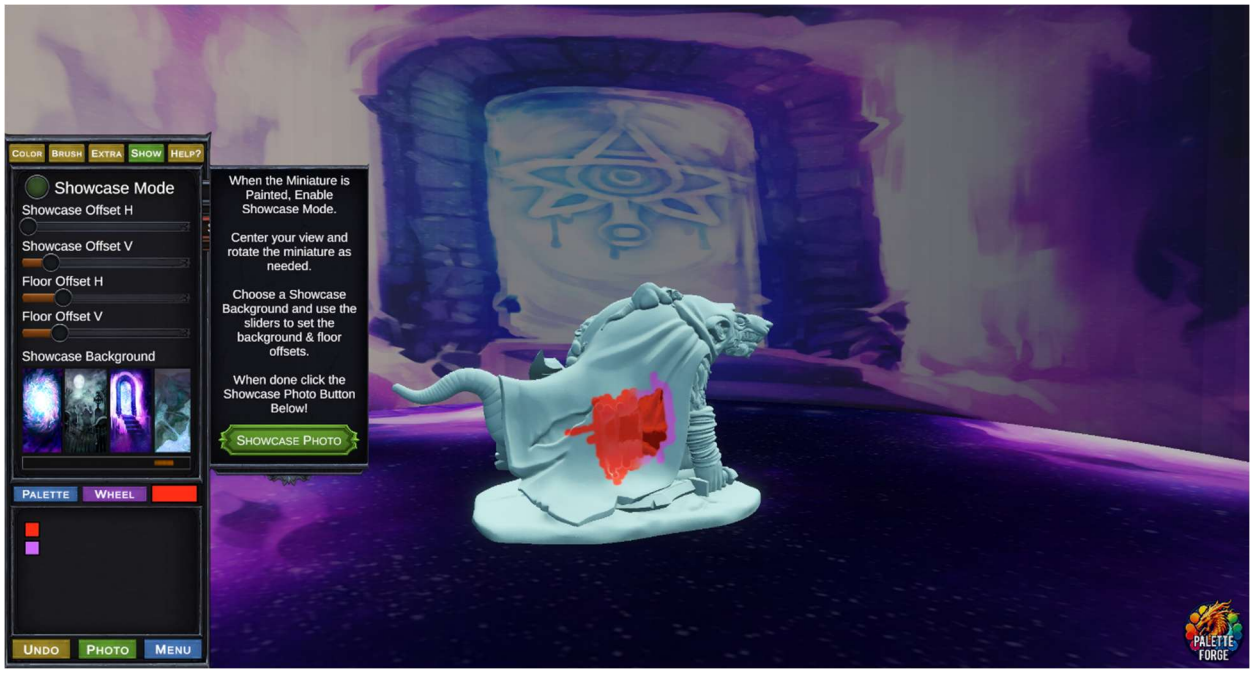
Blending Tool



Metallic Tool



Showcase System



This is the end of the manual.

Thank you!