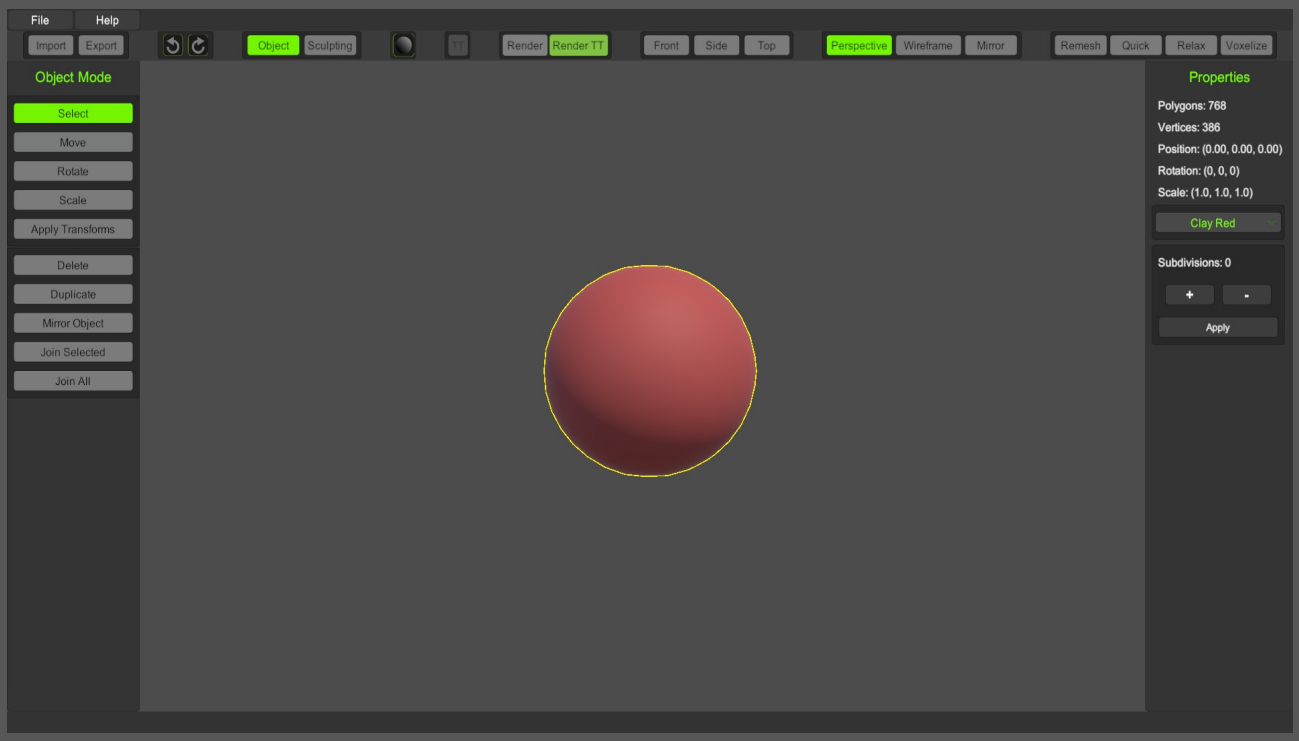
DigiKlay

DigiKlay Documentation - Version 1.2

Table of Contents

1. Introduction

Welcome to the documentation for DigiKlay v1.2, an innovative digital sculpting software designed for artists of all levels. Whether you're a beginner or an experienced professional, DigiKlay provides a user-friendly and powerful platform for digital sculpting.



DigiKlay supports the import and export of `.obj` files for compatibility with other 3D applications and features a proprietary `.dkm` file format for saving and reloading projects.

With v1.2, DigiKlay introduces new functionalities such as **Quick Remesh**, **Render Image**, and **Turntable Mode**, along with performance improvements and enhanced material management.

Unleash your creativity and bring your digital sculptures to life!

2. System Requirements

DigiKlay v1.2 maintains the same system requirements as previous versions:

Minimum Requirements:

- OS: Windows 10 (64-bit)
- CPU: Dual-core, 2.0 GHz or faster
- RAM: 4 GB
- GPU: DirectX 11 compatible with 1 GB VRAM
- Storage: 500 MB free space
- Additional: Microsoft .NET Framework 4.7.2 or later

Recommended Requirements:

- OS: Windows 11 (64-bit)
- CPU: Quad-core, 3.0 GHz or faster
- RAM: 8 GB or more
- GPU: Dedicated 2 GB VRAM or more (e.g., NVIDIA GTX 1050+)
- Storage: 1 GB free space
- Additional: Microsoft Visual C++ Redistributable (2015-2022)

3. Installation

Installing DigiKlay is quick and easy! Follow these steps:

1. **Download DigiKlay**
   Visit the official DigiKlay page on Gumroad. After purchasing the software, download the .zip folder containing the file `DigiKlay.exe`.

2. **Run DigiKlay**
   Locate the downloaded file and double-click `DigiKlay.exe` to launch the software.

3. **First-Time Setup**
   On the first launch, DigiKlay may perform a quick initialization process to ensure optimal performance. Ensure your system is connected to the internet during this step to activate your license.

4. **Optional: Create a Shortcut**
   For easier access, you can right-click on `DigiKlay.exe`, select "Create Shortcut," and move the shortcut to your desktop or Start Menu.

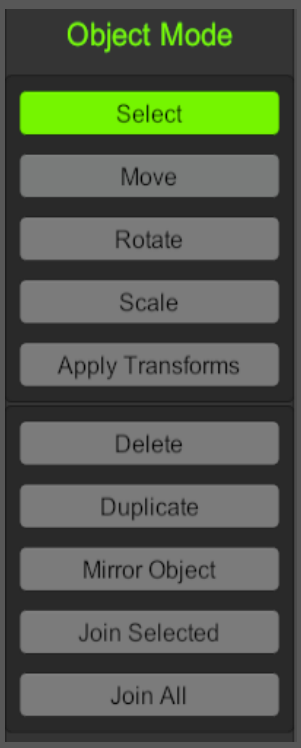
4. User Interface Overview

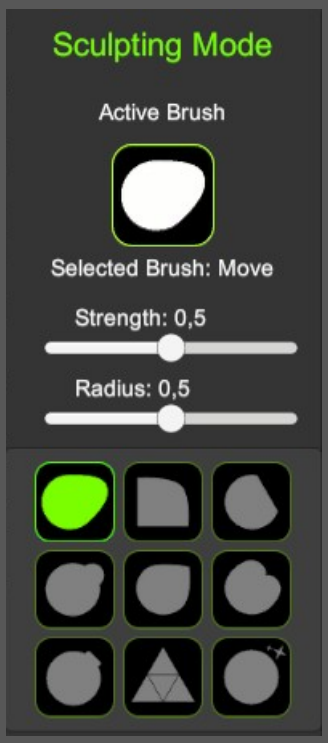
Main Menu

- Provides access to file operations such as **New**, **Open**, **Save**, **Import** and **Export**.

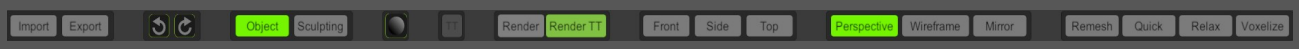
Tools

- **Object Mode Tools:** Move, Rotate, Scale, Mirror Object, Join Selected, Join All, Duplicate.
- **Sculpting Mode Tools:** Various brushes such as Move, Smooth, Inflate/Deflate, Flatten, Pinch, Crease, Clay, Polish, Tessellate.





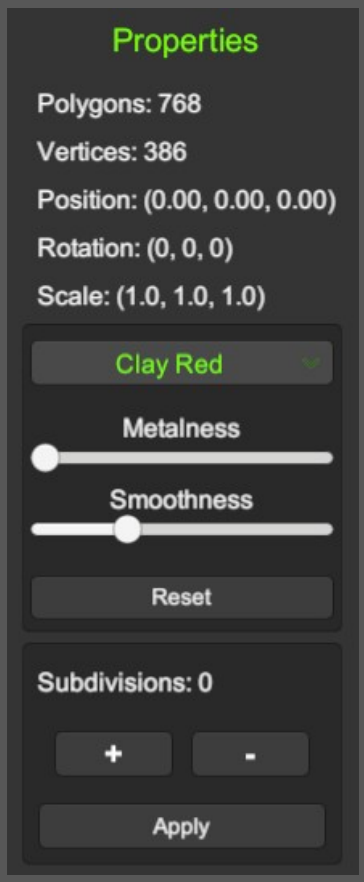
- **Additional Functions:** Quick Remesh, Remesh, Relax, Voxelize.



Brush Control Panel

- Located on the left panel in **Sculpting Mode**.
- Adjust **brush radius** and **intensity** using sliders.
- Select and apply different brushes.

Information Tab (Properties)



- Displays details of the selected object:
    - Number of polygons and vertices
    - Position, rotation, and scale
    - Material selection
    - Material metalness and smoothness (only in Sculpting Mode)
    - Number of subdivisions

5. Key Features

DigiKlay offers a range of powerful features to make digital sculpting intuitive and efficient. Below is an overview of the key functionalities:

Working Modes

DigiKlay operates in two main modes:

1. **Object Mode:**
    - This is the default mode when the software is launched. A sphere is placed at the center of the scene.
    - In this mode, you can perform transformations such as position, rotation, and scaling of selected objects.
    - To finalize transformations, use the **Apply Transforms** button in the left panel. This is essential to prevent errors when applying remeshing or other functions.
    - Additional actions include deleting, duplicating, and combining selected objects.
2. **Sculpting Mode:**
    - This mode is used for shaping and detailing objects.
    - Access a variety of brushes in the left panel, including:
        - Move
        - Smooth
        - Inflate/Deflate
        - Flatten
        - Pinch
        - Crease
        - Clay
        - Polish
        - Tessellate
    - Adjust brush size and intensity using the sliders in the left panel.

Interface Overview

1. **Toolbar (Top):**
    - Switch between **Object Mode** and **Sculpting Mode.**
    - Add new spheres to the scene.
    - Toggle features such as:
        - **Perspective View**
        - **Mirroring**
        - **Wireframe View**
    - Access key functions:
        - **Remesh**
        - **Relax**
        - **Voxelize**

2. **Left Panel:**
    - In **Object Mode:**
        - Perform transformations (Position, Rotation, Scale).
        - Apply transforms to finalize changes.
        - Delete, duplicate, or combine objects.
    - In **Sculpting Mode:**
        - Select brushes and adjust their radius and intensity.
3. **Right Panel:**
    - Displays object properties, including:
        - Polygon and vertex count
        - Position, rotation, and scale
        - Material
    - Change the material of the selected object using the dropdown menu.

DigiKlay's streamlined interface ensures that both beginners and experienced users can navigate and utilize these features with ease, making sculpting a seamless and enjoyable experience.

New in Version 1.2

Quick Remesh

- A new **QRemesh** button is added to the toolbar for instant remeshing.
- Improves mesh consistency and eliminates surface artifacts efficiently.

Render Image

- Allows users to render their sculpture as an image with a single click.
- The **Render** button has been added to the toolbar.

Turntable Mode

- Enables automatic rotation of the model for previewing.
- The **TT** button in the toolbar activates/deactivates Turntable Mode.

Mirror Object in Object Mode

- Users can now apply mirroring directly in Object Mode.
- Works on entire objects before entering Sculpting Mode.

Support for High-Resolution Meshes

- DigiKlay now efficiently handles meshes with millions of polygons, improving sculpting precision and performance.

Shortcut Set

- New keyboard shortcuts have been introduced to speed up workflows.
- Shortcut mappings are available in the settings panel.

6. Navigation Controls

- **Zoom:** Use the mouse wheel to zoom in and out.
- **Rotate View:** Press and hold the right mouse button while moving the mouse.
- **Pan View:** Hold `Shift` + mouse wheel while moving the mouse.

7. Practical Usage

This section will guide you through creating and managing your first project in DigiKlay and provide practical tips for efficient sculpting workflows.

Creating Your First Project

1. **Launch DigiKlay**
   Open DigiKlay to start a new project. By default, a sphere is placed at the center of the scene in **Object Mode**.
2. **Modify the Base Object**
   - If you want to reposition or scale the sphere, use the **Object Mode** tools in the left panel to adjust its position, rotation, or scale.
   - Once satisfied, click **Apply Transforms** to finalize these adjustments. This ensures other tools, such as remeshing, work without issues.
3. **Rapid Prototyping Workflow**
   - Use the toolbar to add multiple spheres to the scene, each representing different parts of your desired shape (e.g., head, body, arms, and legs for a character).
   - Position and scale each sphere to roughly match the proportions of the final design.
   - Once the layout is complete, use the **Join Objects** tool in the left panel to merge all the spheres into a single object.
   - Apply **Remesh** to unify the geometry and prepare it for detailed sculpting.
4. **Switch to Sculpting Mode**
   - Click the **Sculpting Mode** button in the toolbar to begin sculpting.
   - Select a brush from the left panel and adjust the **Radius** and **Intensity** sliders to suit your needs.
5. **Start Sculpting**
   - Use brushes like **Move** to refine the shape, **Smooth** to blend seams between merged objects, and **Inflate/Deflate** to add or remove volume.
   - Experiment with other brushes such as **Flatten**, **Pinch**, and **Clay** to explore different effects.
6. **Refine Details**
   - Use **Remesh**, **QRemesh**, **Relax**, or **Voxelize** from the toolbar as needed to maintain smooth geometry or add fine details.

Saving and Loading Projects

1. **Saving Your Work**
   - Go to the top toolbar and click **Save** (you can also use the Ctrl+S shortcut).
   - Choose a location and save your project as a `.dkm` file, DigiKlay's proprietary format. This ensures all your progress and settings are preserved for future editing.

2. **Loading a Saved Project**
    - To continue working on a saved project, click **Open** in the toolbar.
    - Select a `.dkm` file to load it into the scene.
3. **Exporting Models**
    - When your project is ready for use in other applications, click **Export** in the toolbar.
    - Save your file in `.obj` format for compatibility with other 3D software.
4. **Importing Models**
    - To import an `.obj` mesh you can click **Import** in the Toolbar Menu or File → Import in the Main Menu.

Sculpting Tips

- **Start Simple:** Begin with broad shapes and transitions using larger brushes before refining with smaller ones.
- **Rapid Prototyping:** Use multiple spheres to block out the basic shape of your design. Combine them, remesh, and sculpt for efficient workflows.
- **Adjust Brush Settings:** Experiment with the **Radius** and **Intensity** sliders to find the perfect balance for different sculpting tasks.
- **Use Mirroring:** Enable the **Mirroring** feature from the toolbar to create symmetrical designs effortlessly.
- **Regularly Remesh:** If the geometry becomes stretched or uneven, use the **Remesh** tool to redistribute polygons evenly.
- **Save Frequently:** To avoid losing progress, save your project regularly, especially before applying major changes like remeshing or voxelization.
- **Practice with Brushes:** Each brush has a unique effect. Spend some time experimenting to understand how each tool works.

By integrating these techniques and workflows, you can efficiently create and refine detailed 3D models in DigiKlay.

8. Shortcut List

Shortcut	Action
F	Front View
B	Back View
T	Top View
V	Bottom View
L	Left View
R	Right View
X	Wireframe Toggle
P	Perspective Toggle
M	Mirror Toggle
Ctrl + Z	Undo
Ctrl + Y	Redo
Ctrl + M	Mirror Object
Shift + D	Duplicate Object
Ctrl + J	Join Selected
Tab	Toggle Between Object and Sculpting Modes
Home	Reset View
I or / (Numpad)	Isolate Selected Object
Ctrl + R	Quick Remeshing
Ctrl + S	Save

9. Troubleshooting

1. Mesh Issues During Tessellation

Cause: Tessellation may not behave as expected if applied to a complex or irregular surface.
Solution:

- Ensure that the mesh is uniformly scaled and transformed by using the **Apply Transforms** button in **Object Mode** before tessellating.
- If artifacts persist, apply **Remesh** to create a more uniform geometry before tessellation.

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2. Remesh or Other Tools Not Working

Cause: Transformations (position, rotation, or scale) have not been applied.
Solution:

- In **Object Mode**, use the **Apply Transforms** button in the left panel to finalize changes before using tools like **Remesh**, **Relax**, or **Voxelize**.

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3. Brush Effects Not Visible

Cause: The brush radius or intensity is too low, or the camera is zoomed out too far.
Solution:

- Check the **Radius** and **Intensity** sliders in the left panel and increase their values.
- Ensure the object is close enough to the camera for the brush effects to be visible.

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4. High Polygon Count Slows Down Performance

Cause: The mesh has too many polygons, especially after extensive remeshing or voxelization.
Solution:

- Use the **Relax** function to simplify the mesh without losing details.
- Avoid excessive tessellation, and consider reducing brush intensity for smoother performance.

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5. Exported Models Appear Deformed in Other Applications

Cause: The transformations were not applied before exporting.
Solution:

- In **Object Mode**, use **Apply Transforms** before exporting the model.
- Ensure the export settings match the requirements of the target application.

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6. Quick Remesh Doesn't Work

Cause: Object transformations not applied.
Solution: Apply Transforms in Object Mode before remeshing.

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7. Model Appears Jagged After Remesh

Cause: Inconsistent topology.
Solution: Use `Relax` or `Voxelize` after remeshing.

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8. Turntable Mode is Not Rotating

Cause: Model is not centered properly.
Solution: Reset object position before enabling Turntable Mode.

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9. Exported Model Has Artifacts

Cause: Mesh not properly processed before export.
Solution: Run `Quick Remesh` before exporting.

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10. Render Image Doesn't Save

Cause: Permission issues.
Solution: Run DigiKlay as administrator and retry.

10. Final Notes & Support

Thank you for choosing DigiKlay! We hope you enjoy using our software to bring your creative ideas to life.

If you have any questions, encounter issues, or want to provide feedback, we're here to help. You can reach out to us through the following channels:

1. **Gumroad**
   Visit the DigiKlay page on Gumroad to access support, updates, and announcements.
2. **Official Website**
   Explore additional resources, tutorials, and documentation at digiklay.com.

We are committed to ensuring you have a smooth and enjoyable experience with DigiKlay. Happy sculpting!