

# Props Placement Tool

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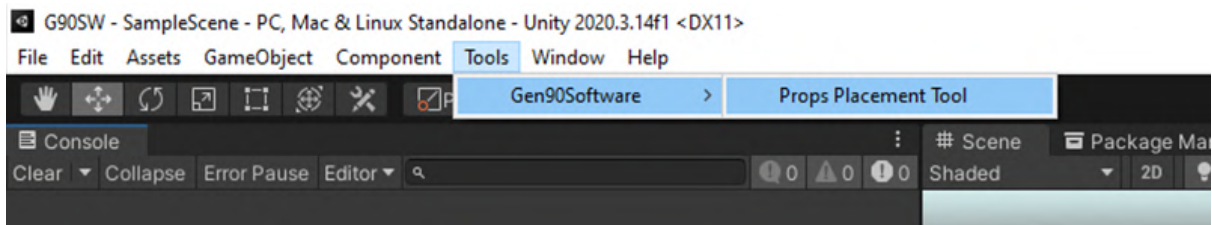
Thank you for purchasing this package, I hope it will be useful for your projects!  
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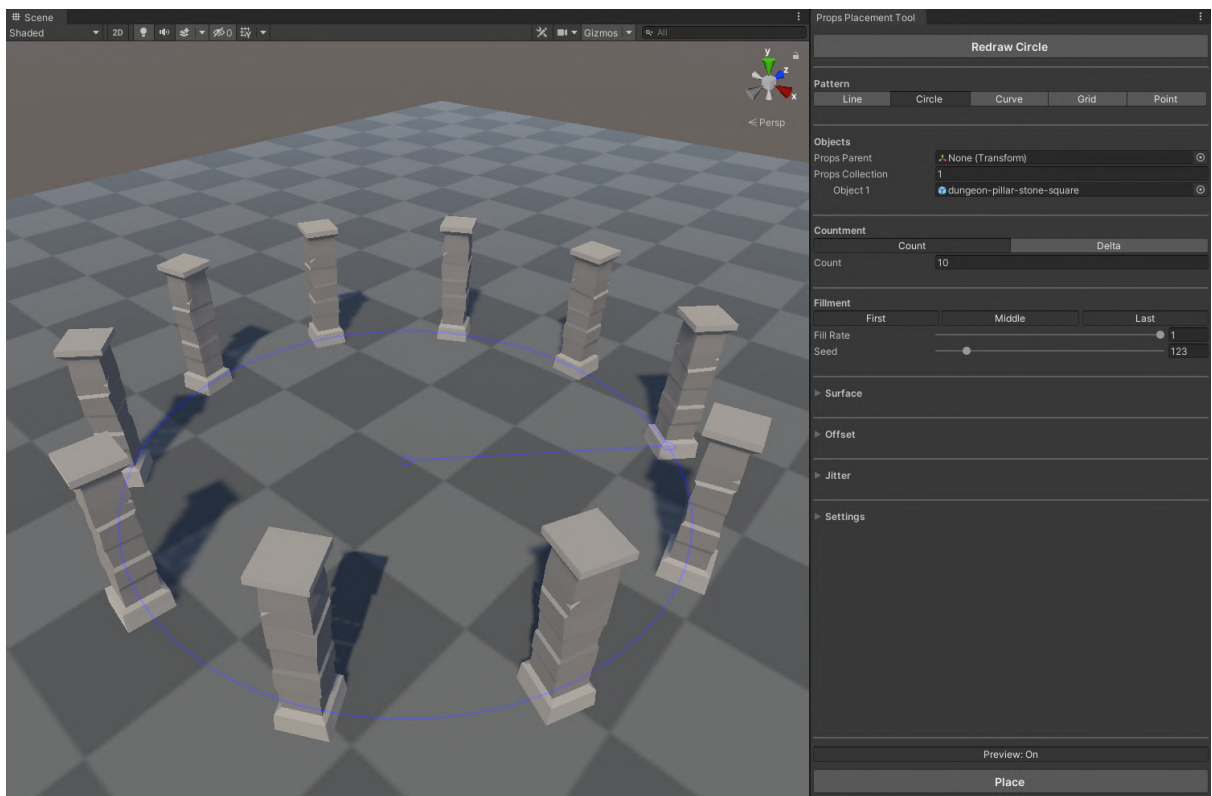
<https://gen90software.com/propsplacementtool-documentation.pdf>

# GETTING STARTED

Props Placement Tool editor window can be open from:  
**Tools** → **Gen90Software** → **Props Placement Tool**



Select the desired **Pattern**, then click the Draw **Line** button to place the control points on the **Scene view**. Add your placeable objects to the **Objects**, adjust the settings, then if everything looks good finalize it with the **Place** button.

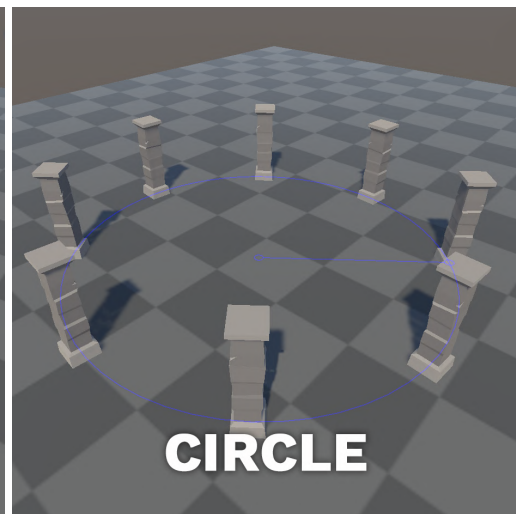
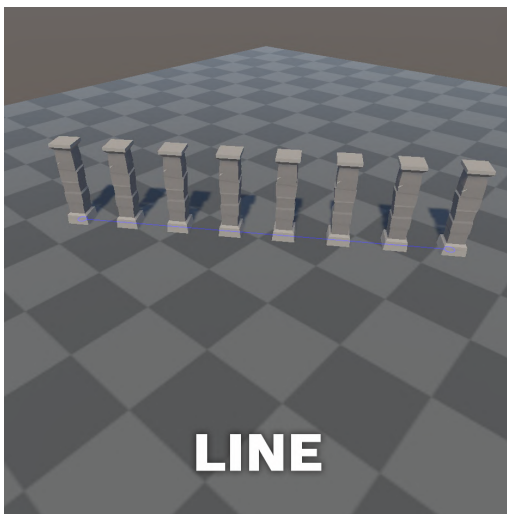


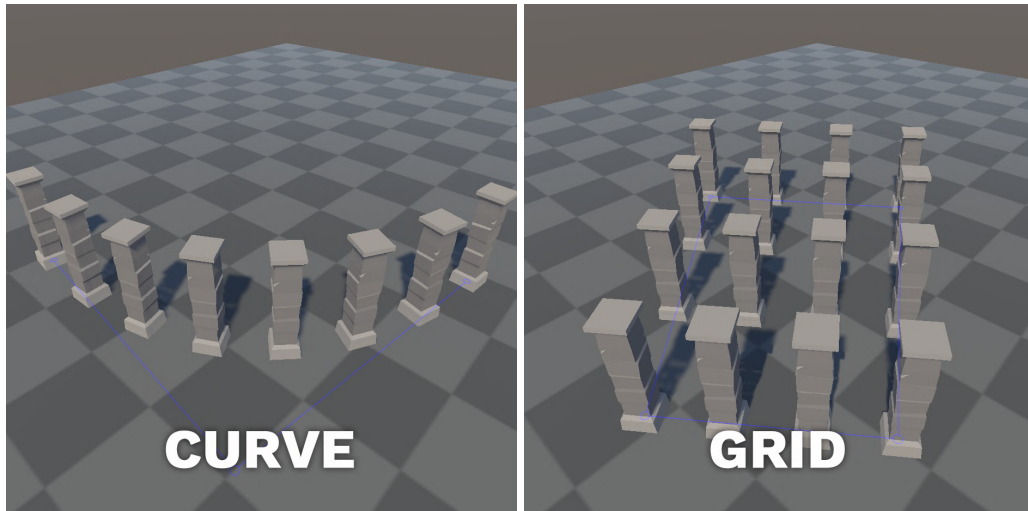
## TOOLBAR AND SETTINGS

- **Pattern**

Set the pattern of object placement.

- **Line**  
Place the objects along a line. Defined by 2 points.
- **Circle**  
Place the objects along a circle line. Defined by 2 points.
- **Curve**  
Place the objects along a curved line. Defined by 3 points.
- **Grid**  
Place the objects along a grid. Defined by 3 or 4 points, depending on the **Countment**.
- **Point**  
Place the objects individually. Not need to define points, the objects placed directly.

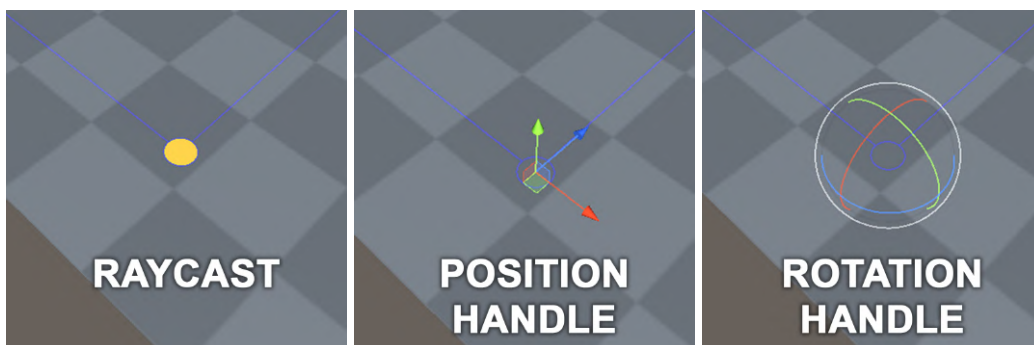




- **Draw**

Set the type of control point placement.

- **Raycast**  
Place or modify control points with raycast.
- **Position**  
Modify position with a transform handle.
- **Rotation**  
Modify rotation with a transform handle.
- **Group**  
Position all control points in a group.

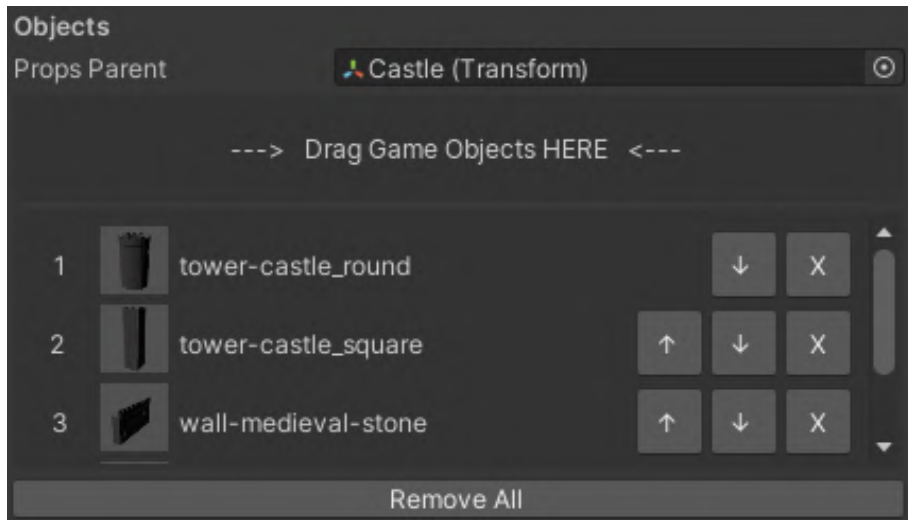


- **Props Parent**

Select a transform from the scene that you want to place the objects under.

- **Objects**

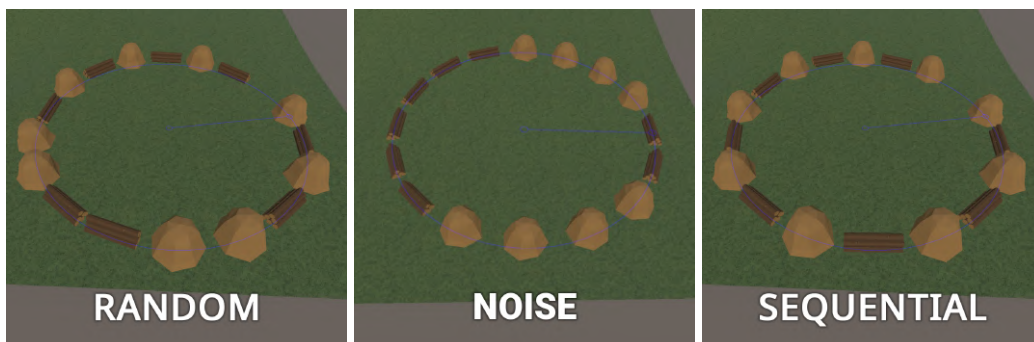
Drag your placeable objects onto the **Drag Game Objects HERE** box to add the objects collection. You can rearrange or remove items in the list that appears.



- **Order**

Set the objects ordering logic.

- **Random**  
Place the objects in random order.
- **Noise**  
Place the objects by perlin-noise.
- **Sequential**  
Place the objects in the order specified in the list.



- **Countment**

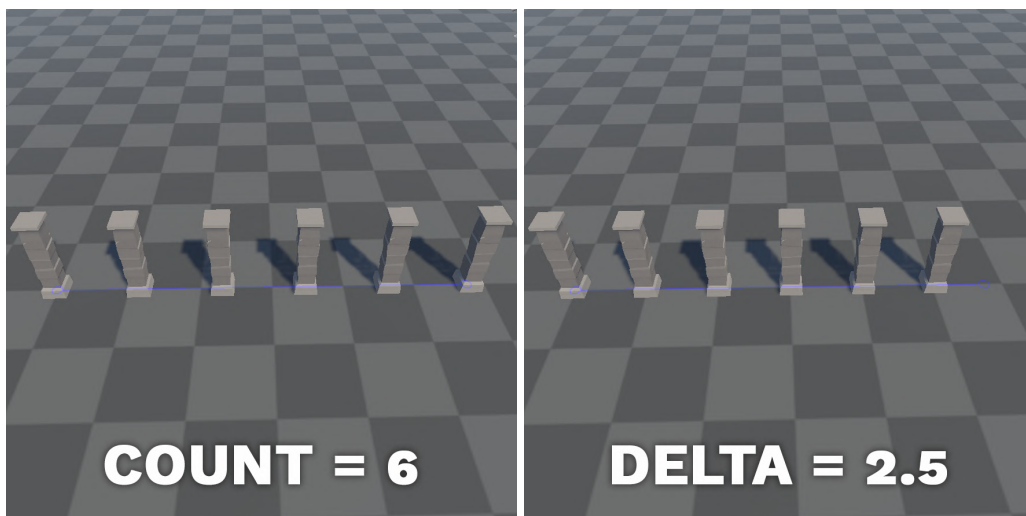
Set the object counting logic.

- **Count**

Place the objects by count. In the **Count** field, you can set how many objects you want to place. At the Grid Pattern you can set it per axis in the **Count X** and **Count Y** field.

- **Delta**

Place the objects by distance. In the **Distance** field, you can set how far you want to place the objects. At the Grid Pattern you can set it per axis in the **Distance X** and **Distance Y** field.



- **Normalize Positions**

Normalize the distance of curved placement. Only available at the curve pattern. Useful for asymmetric curves.

- **Pointing Rotations**

Point the object forward toward the next object. Only available at circle and curve patterns. Without this option the objects' forward direction follows the arc tangent.

- **Fillment**

Set the area fillment logic.

- **Random**

Fill the area by random.

- **Noise**

Fill the area by perlin-noise.

- **Sequential**

Fill the area in order.

- **Fill Rate**

Set the rate of placement. It randomizes the fill of the control pattern.

- **Seed**

Set the seed of fill randomization.

- **Border**

Set the border of placement.

- **First**

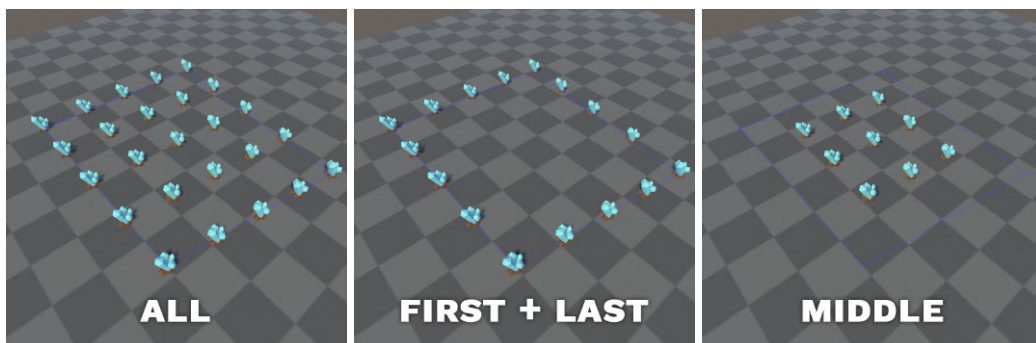
Place objects in the first position.

- **Middle**

Place objects in middle positions.

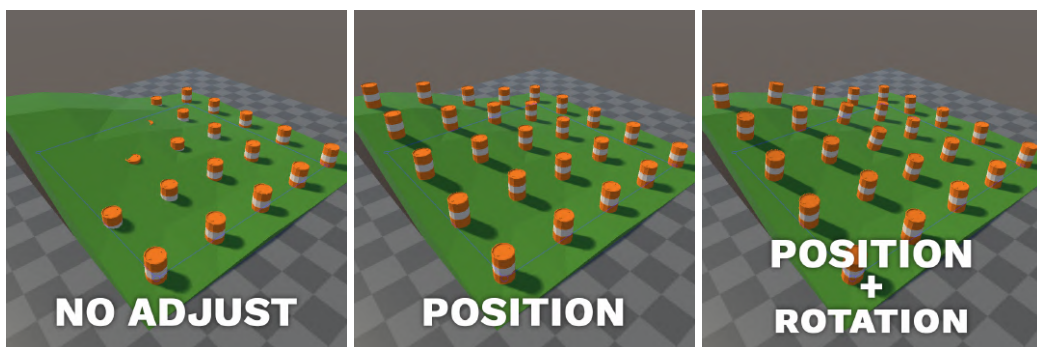
- **Last**

Place objects in the last position.

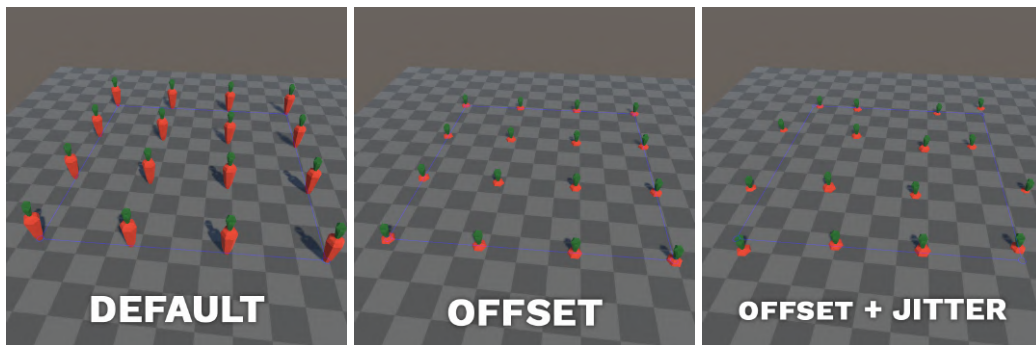




- **Upward**  
Set the objects' rotation logic.
  - **Surface**  
Place the objects with surface normal rotation.
  - **World**  
Place the objects with world rotation.
  
- **Place On Surface**  
Raycast to surface and adjust the objects transform. The raycast comes from the control pattern's normal direction.
  
- **Surface Mask**  
Masking the surface adjust raycast.
  
- **Surface Distance**  
Limit the distance of surface adjust raycast.
  
- **Adjust Position**  
Adjust object position to the surface that hit the raycast.
  
- **Adjust Rotation**  
Adjust object rotation to the surface's normal that hits the raycast.
  
- **Remove On Layer**  
Remove the objects if the raycast hits the surface with this layer.



- **Offset**  
Offset the placeable object's position, rotation or scale. The positioning space defined by Y=control pattern normal, Z=control pattern tangens. These applied after **Place On Surface** calculations if that enabled.
- **Jitter**  
Randomize the placeable object's position, rotation or scale. The positioning space defined by Y=control pattern normal, Z=control pattern tangens. These applied after **Place On Surface** calculations if that enabled.

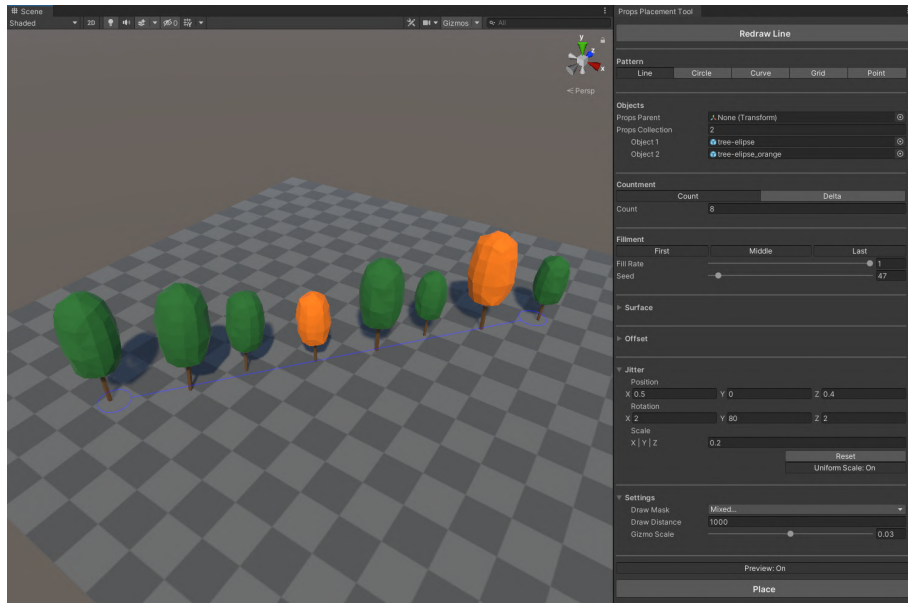


- **Draw Mask**  
Masking the control point selection.
- **Draw Distance**  
Limit the distance of control point selection.
- **Gizmo Scale**  
Set scale of gizmos.
- **Save**  
Save the current configuration of the tool. It will contain the object of the props collection list by references.
- **Load**  
Load a configuration of the tool. The Props Parent needs to reassign.

# BEST PRACTICES

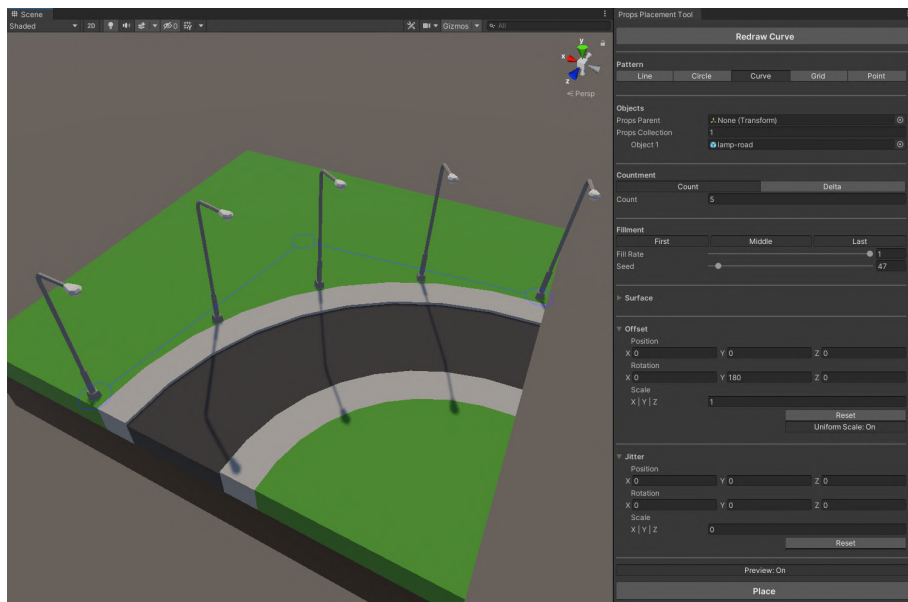
- **Vegetation**

Use jitter to randomize the size and rotation of trees.



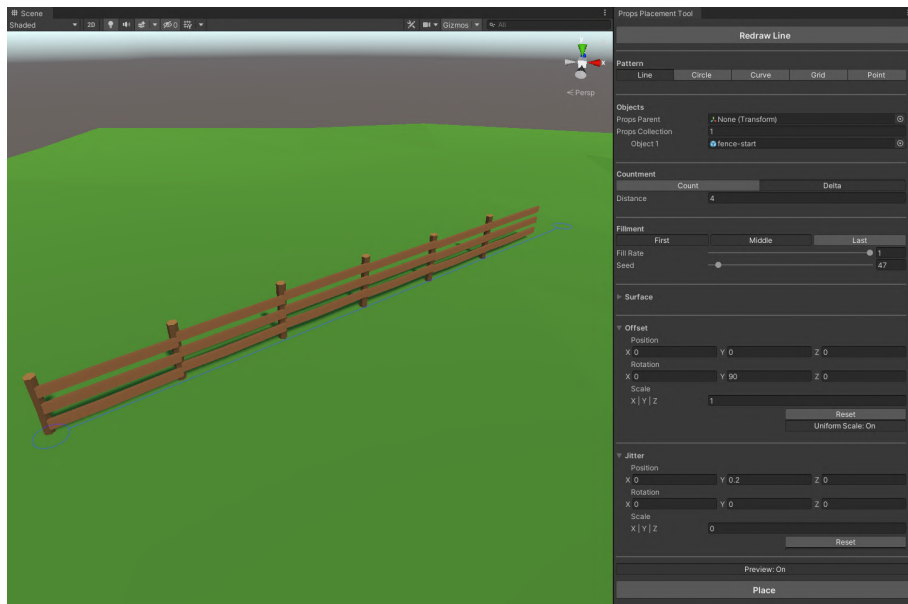
- **Lamp**

Use a curve pattern to place lamp posts along a curved road.



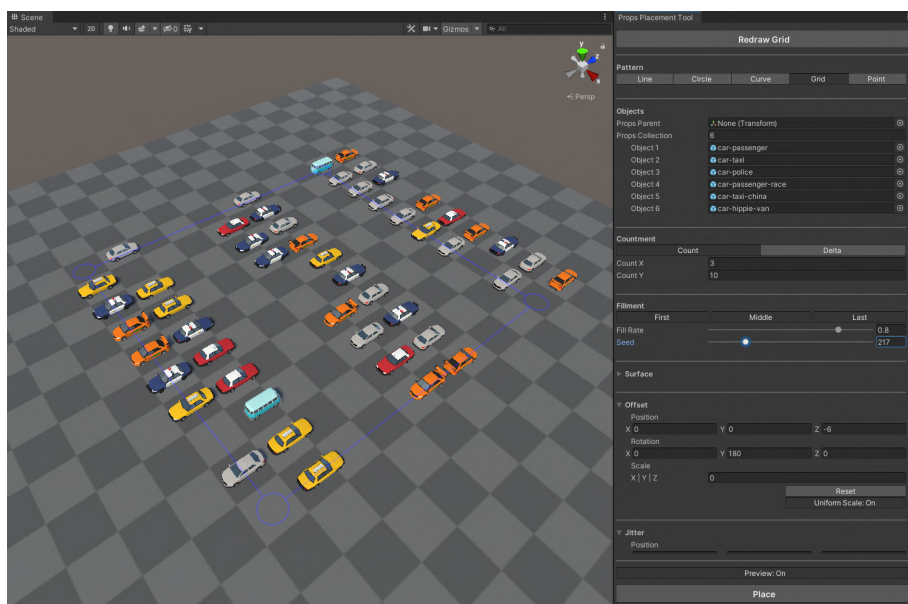
- **Fence**

Set the countment distance to the length of your fence piece.



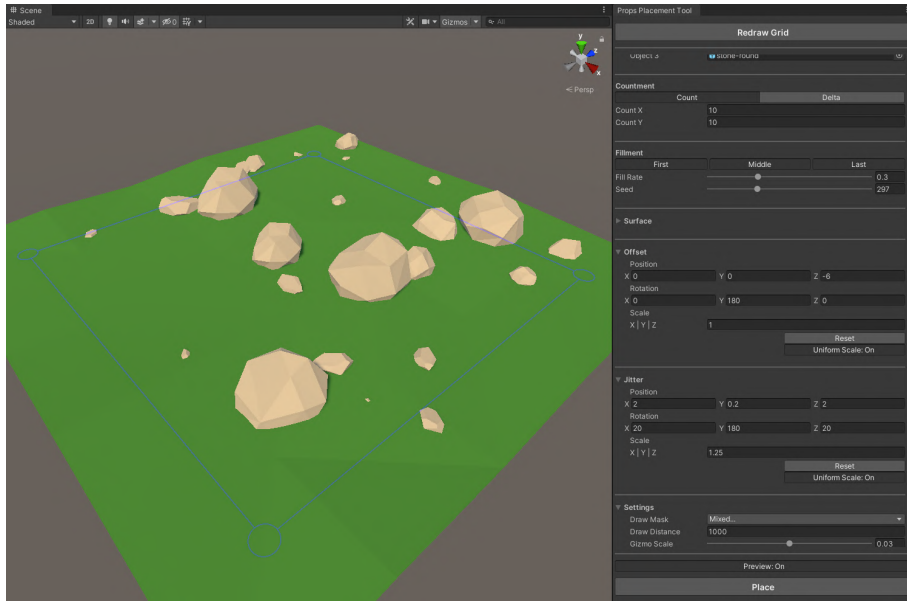
- **Car**

Place one side of parking cars with a grid pattern, then offset and rotate Y with 180° to place the other side. Use a lower fill rate to keep some empty places.



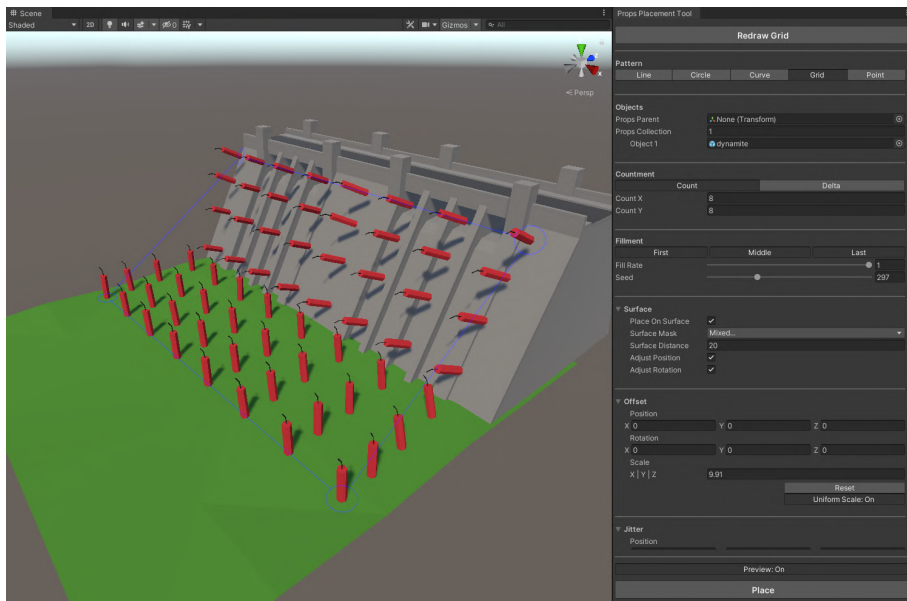
- **Rock**

Use lower fill rate, and a lot of randomization to create a rock field.



- **Place on every surface direction**

The alignment of objects inherit from control points direction. You can also use this tool to place objects on the wall or ceiling.



## RELEASE NOTES

- **Version 1.0.0**
  - Initial release
- **Version 1.0.1**
  - Fixed: Object parenting
  - Added: "Clear (control points)" button
  - Removed: Surface adjust at point placement
- **Version 1.1.0**
  - Fixed: Offset position issue at circle pattern
  - Fixed: Layer mask usage
  - Added: Display version number
  - Added: Normalize placement position at curve pattern
  - Added: Alternative rotation - option to circle and curve pattern
  - Added: Modify control points with transform handle
  - Added: Remove objects on a layer - option to surface settings
- **Version 1.1.1**
  - Fixed: Small bugs
  - Update: Documentation links

- **Version 1.2.0**

- Fixed: Fillment logic
- Fixed: Props Parent need to be a scene object
- Added: Drag&Drop objects to list
- Added: Modify all control points in group
- Added: Sequential placement
- Added: Undo/Redo support for inspector properties
- Update: Documentation email

- **Version 1.3.0**

- Fixed: Mouse position on DPI scaled displays
- Added: Save/Load the placement setup
- Added: Upward type settings
- Added: Enable/Disable objects in props collection
- Added: Placement by perlin noise

## CONTACTS

If you have any questions or you are interested in our other products, please contact us.

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