Props Placement Tool

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Thank you for purchasing this package, I hope it will be useful for your projects! If you like it or have a suggestion, please leave a review on the store page. **The reviews really help a lot!**
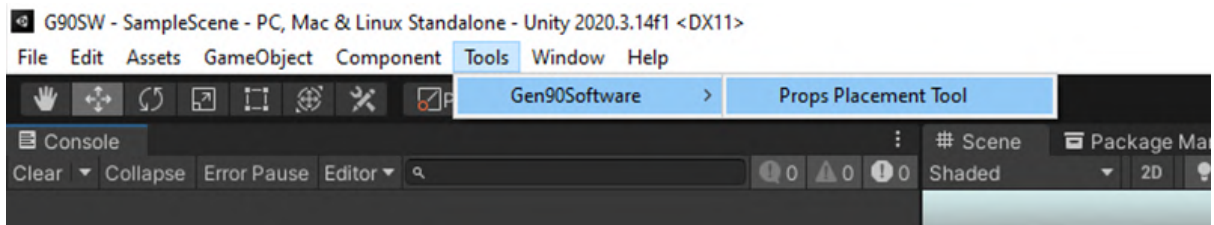
You can access the latest version of this documentation here:
https://gen90software.com/propsplacementtool-documentation.pdf

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.
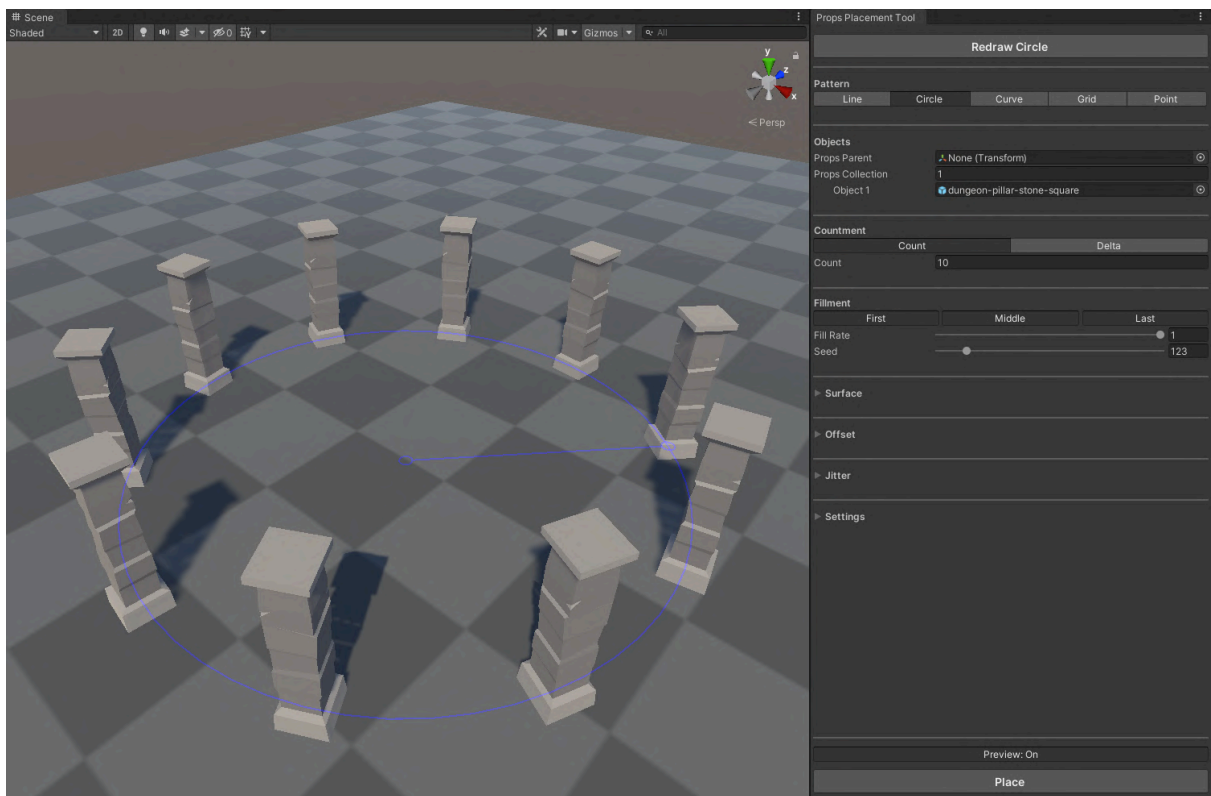
TOOLBAR AND SETTINGS

- **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.
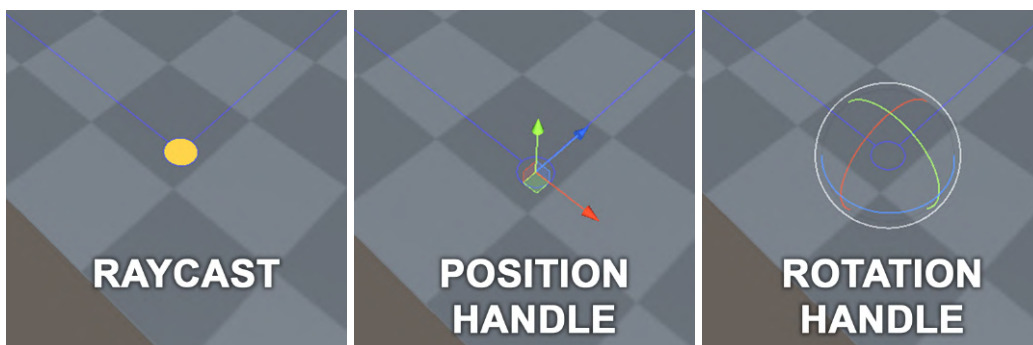
CURVE   GRID
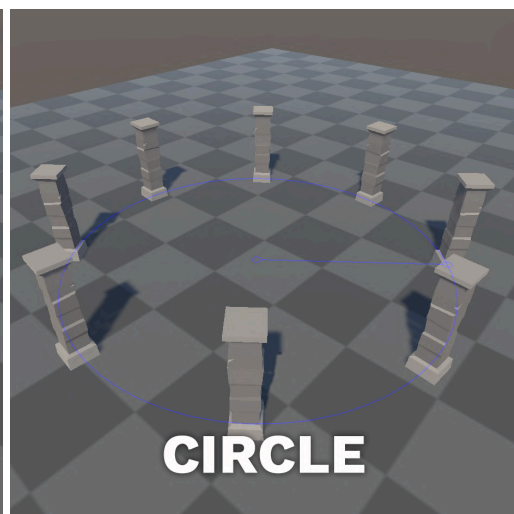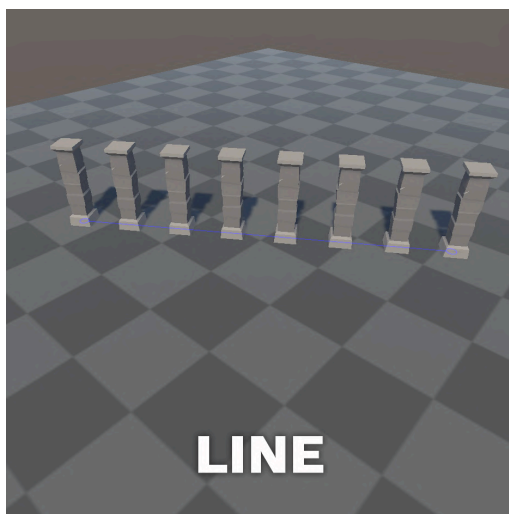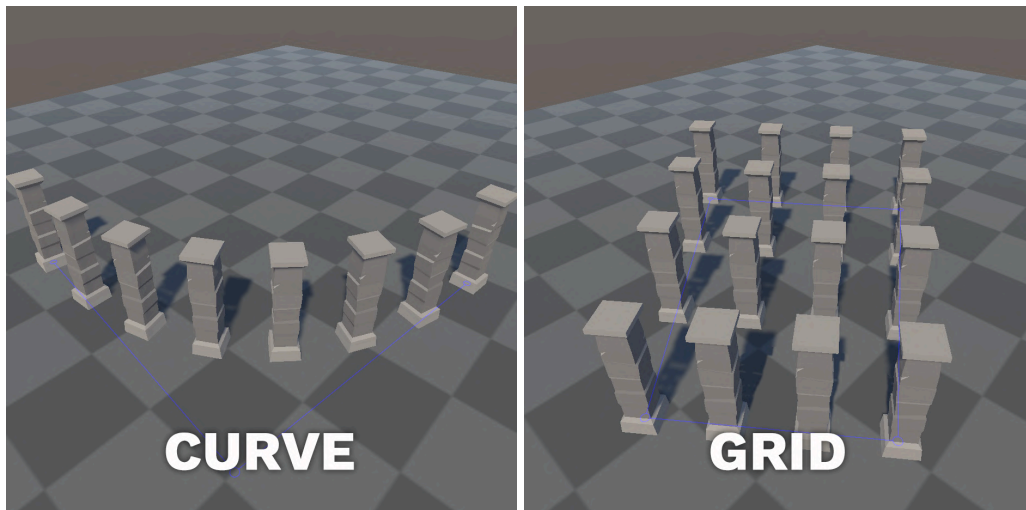
- **Draw**
  Set the type of control point placement.

  - **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.

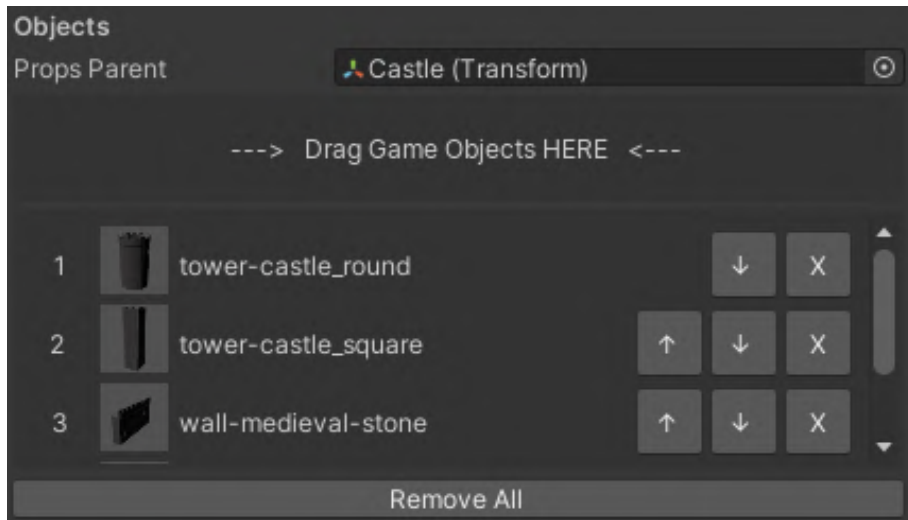RAYCAST   POSITION HANDLE   ROTATION HANDLE

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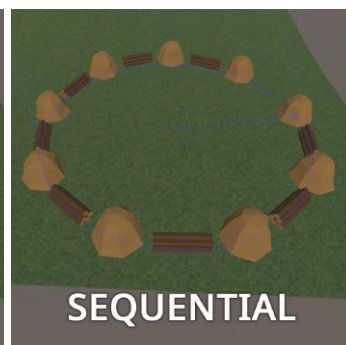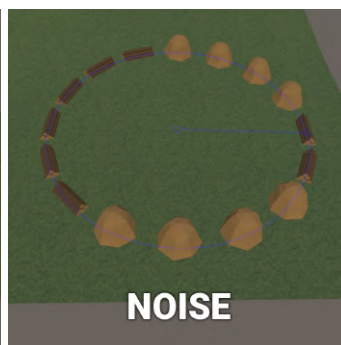
  - **Random**
    Place the objects in random order.
  - **Noise**
    Place the objects by perlin-noise.
  - **Sequential**
    Place the objects in the order specified in the list.

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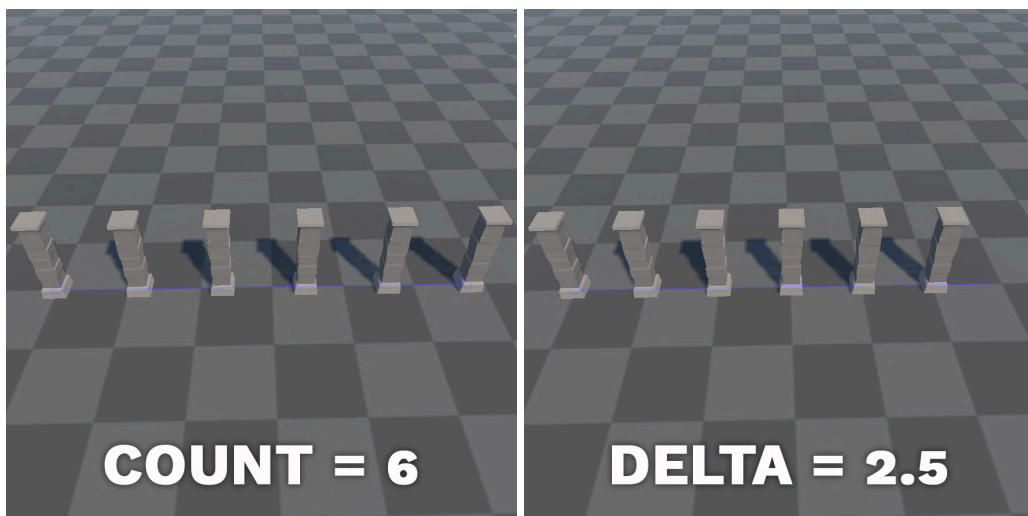
- **Normalize Positions**
  Normalize the distance of curved placement. Only available at the curve pattern. Useful for asymmetric curves.

- **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**
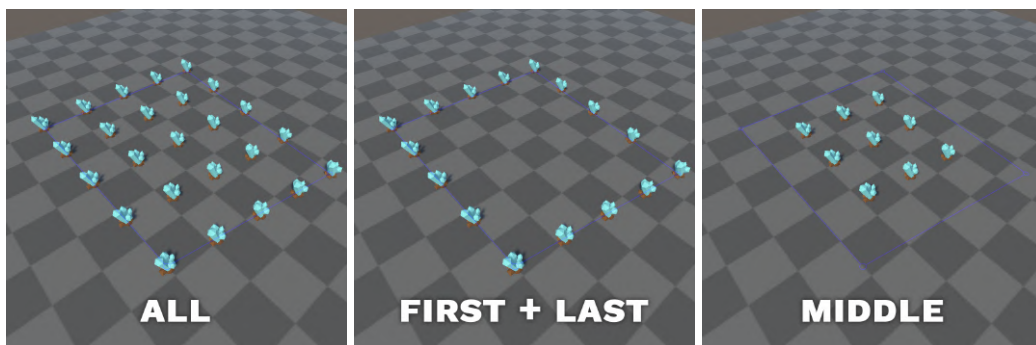 Set the border of placement.

  - **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.
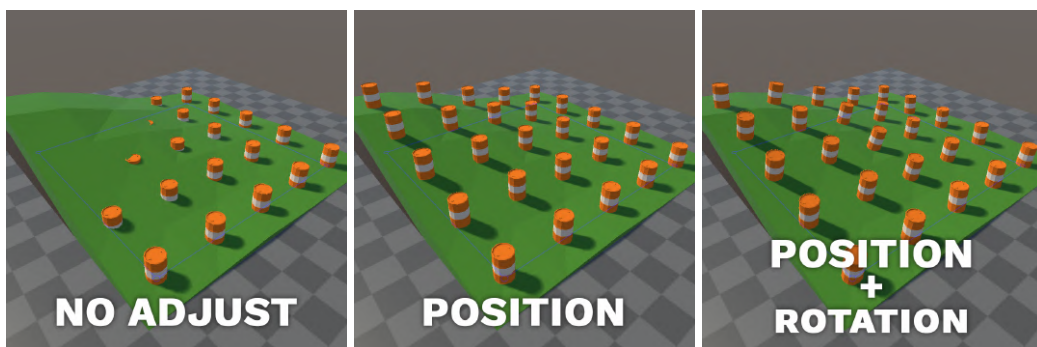
- **Offset**

  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.
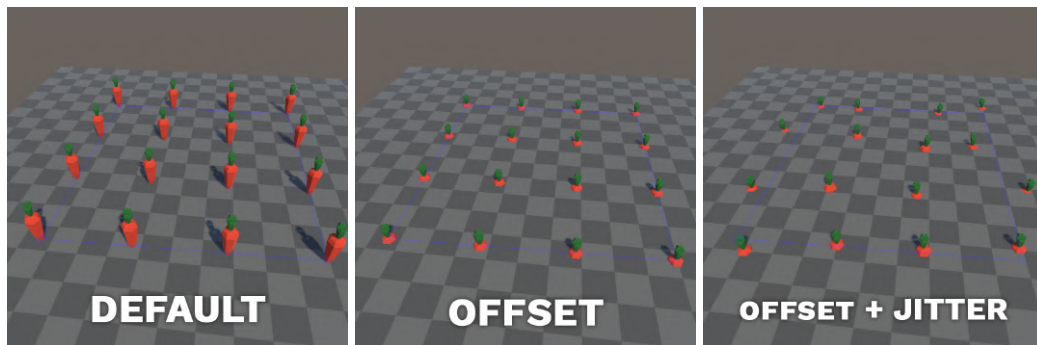
- **Draw Mask**

  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.
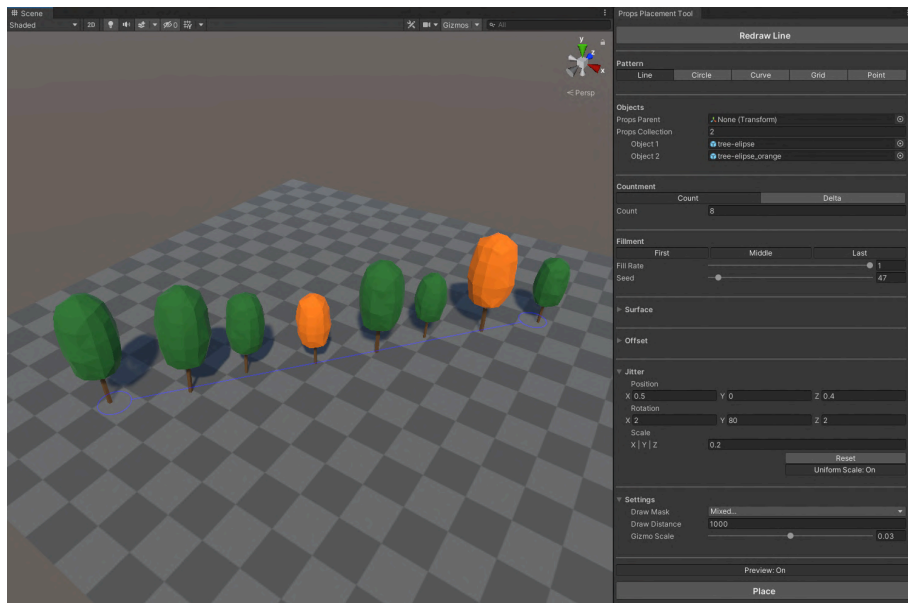
- **Load**

  Load a configuration of the tool. The Props Parent needs to reassign.
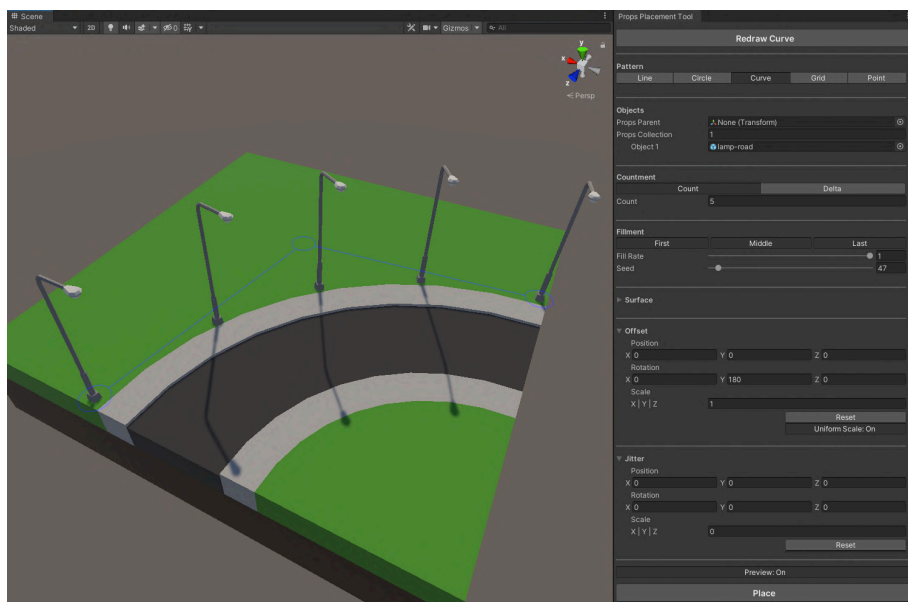
BEST PRACTICES

- **Vegetation**
  Use jitter to randomize the size and rotation of trees.
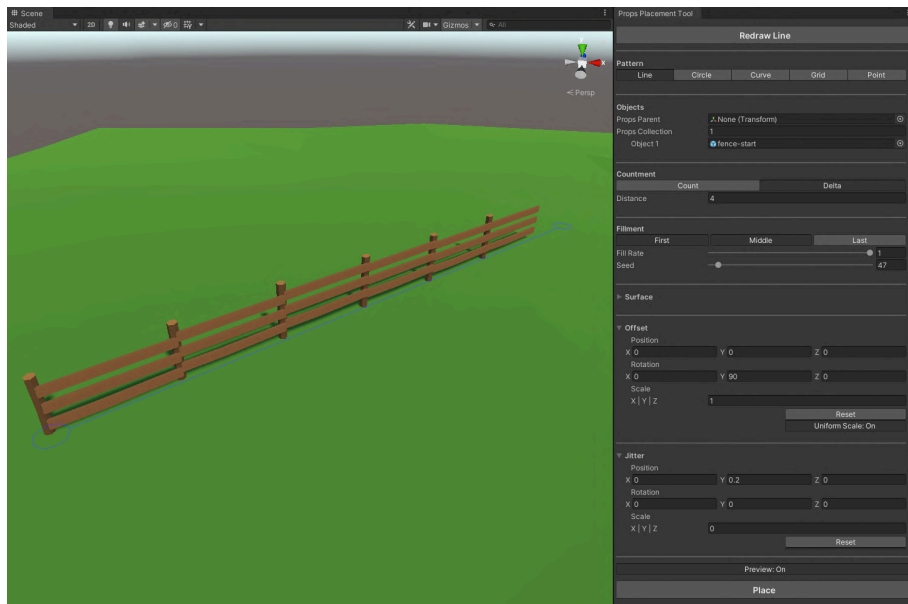

- **Lamp**
  Use a curve pattern to place lamp posts along a curved road.
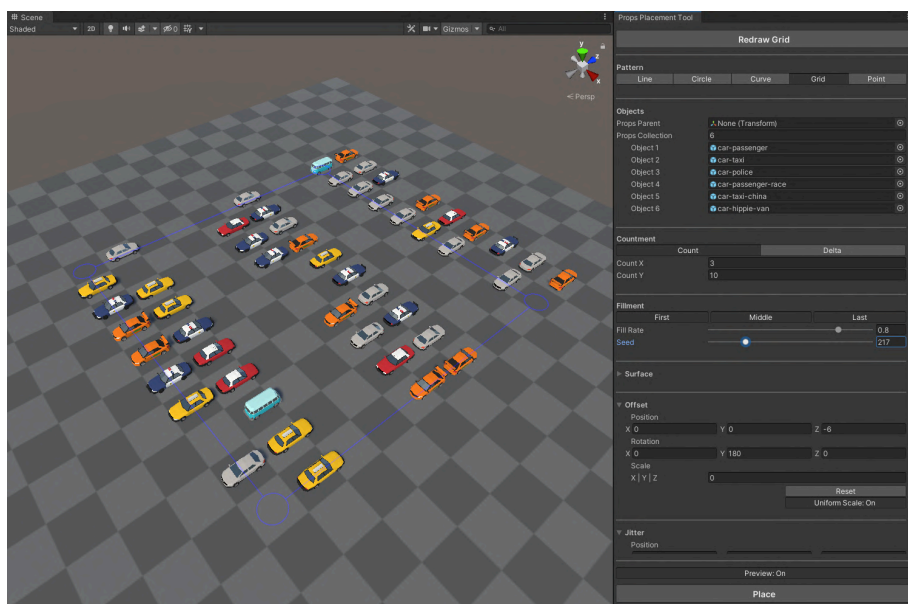
- **Fence**
  Set the countment distance to the length of your fence piece.

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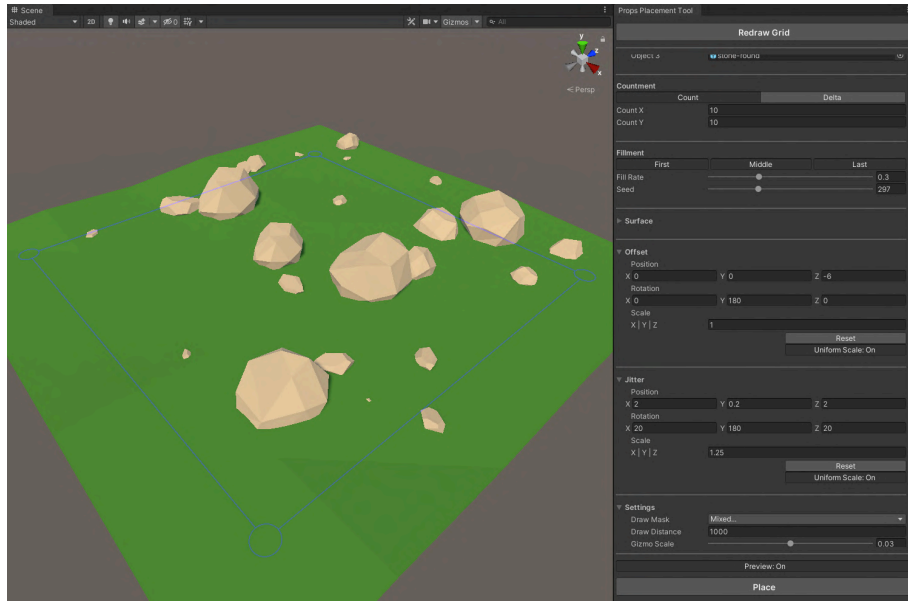 then offset and rotate Y with 180° to place the other side.
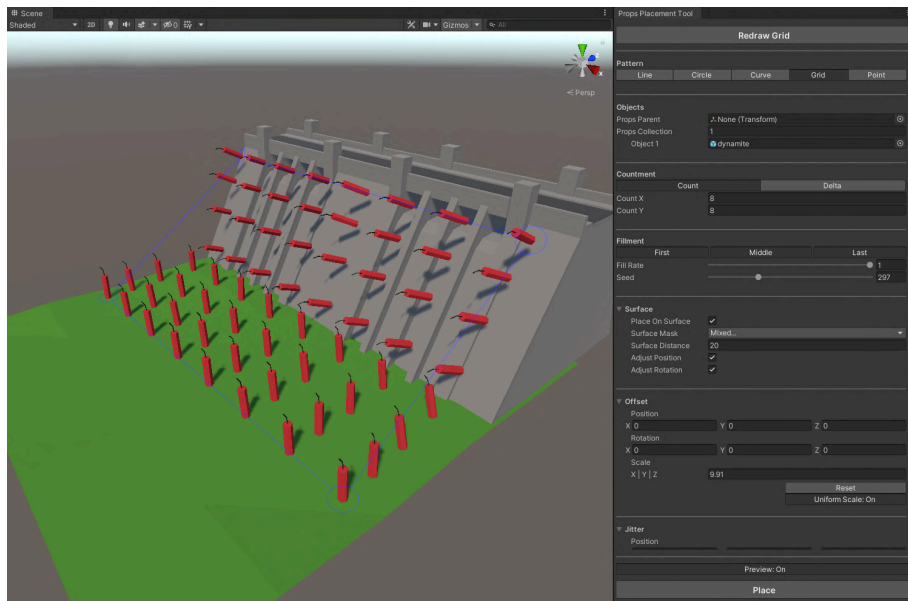 Use a lower fill rate to keep some empty places.

- **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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