

Modular Trees

Trunk Node

- **Seed** - Random variable determining the growth of the trunk.
- **Length** - Determines the height of the trunk.
- **Radius** - Thickness of the trunk starting at the base.
- **End Radius** - End size thickness of the trunk, averaged with the Radius setting to define the overall tapered shape of the tree
- **Resolution** - Mesh density of the trunk?
- **Shape** - Seems to be redundant override for Radius and End Radius. Setting it to 0.01 makes the trunk perfectly uniform in size, and anything over 1.0 seems to make the trunk thinner overall, and taper more aggressively?
- **Randomness** - Adds small twists and curves to the trunk. 0.0 is perfectly straight, up and down, 0.5 gives it slight undulations.
- **Axis Attraction** - Bends the top of the trunk in a random X,Y direction. 0.0 is the extreme, giving the trunk a heavy, though still realistic bend. 1.0 is no influence at all.

Branch Node

- **Seed** - Random variable determining the placement of your various branches.
- **Amount** - Determines the (median?) amount of branches that will be added to the tree. Seems to set by plane rather than a point on the trunk, as two branches that share the same height on the tree, coming out of opposite ends of the trunk look to be counted as one. The end result is that you'll always end up with slightly more branches than what you've inputted.
- **Split Angle** - The angle the branches grow from the trunk, exerting slightly less influence the farther up the trunk you go. From the bottommost point, 0.0 is a sharp angle, setting the branches almost perfectly parallel to the trunk itself, growing sharply upwards. 0.1, 0.2, etc. angle the branches farther away. 1.0 grows the branches nearly perpendicular to the trunk, 1.1 starts angling the branches in the opposite direction, maximizing at a gentle downward thrust at 1.5.
- **Max Split Number** - Sets the amount of smaller branches breaking off from the main. It's determined by the length of the branch and the Split Probability listed below, rather than an absolute, as in the number you input defines the amount of splits per so many inches/feet (or centimeters/meters if you're into that whole metric thing) depending on the size of the limb, rather than ONLY X amount of splits per branch. Also seems to influence sub-branches as well, as very long limbs with long sub-branches will have sub-sub-branches, which themselves can have sub-sub-sub-branches if there's enough room to squeeze one in.
- **Radius** - Works much the same as it does on the Trunk Node, determining the starting radius of the base branch. Though unlike the trunk node, the setting here acts more as a percentage than an absolute, as going back to the trunk node, and playing with the radius settings there will further influence the base size of the branches here.

- **End Radius** - Ditto. Sets the ending size of the branch, determining the overall size of the branch as averaged with the Radius setting above.
- **Start** - Sets where the first branch begins growing on the trunk. No branches will grow below this. 0.0 allows branches to grow practically from the base of the trunk on, and any number above that moves them upwards from there.
- **Length** - Determines an average length of your branches, working in conjunction with the Shape settings below. This can be heavily influenced by the starting point of your branches, as in a setting of 5.0 will be longer if your first branches are set to grow from the very base of your trunk than branches set to begin growing halfway up the tree.
- **Shape Start & Shape End** - Shape Start sets the length of your first branches. Shape End does the opposite, determining the length of your last branches on the tree. The size of the rest are averaged between these two. This allows you to, yup, set the overall shape of your tree (hence the name). If you want something like, say, a tapered Christmas Tree, make Shape Start considerably larger than Shape End, and the branches will taper upwards from there. A trimmed cylindrical tree? Make Shape Start and Shape End roughly the same size. An upside down wedge shaped tree? Set Shape End to a larger number than Shape Start. Pretty self explanatory once you play with it a bit. When combined with Split Angle, this allows you to hone the overall basic shape of your tree.
- **Shape Convexity** - Allows you to play with the taper or bulge of the branches between Shape Start or Shape End, growing the overall length of the branches there to determine the new shape. No influence is 0.0, allowing Shape Start and End to determine the taper. If you want your tree to have something of a concave profile, set to a small negative number. Positive for a bushier convex shape.
- **Resolution** - Like the same setting in the Trunk node, I'm assuming it sets the mesh density of your branches?
- **Randomness** - Sets the angles and undulations of your various branches. If you want perfectly straight, sharp angled branches that jut out directly from the trunk? Set this to 0.0. Want spooky trees with gnarled branches that twist into themselves? Set this fairly high.
- **Split Proba(bility)** - This is what determines the locations that a branch can split along its length, with the maximum amount of offshoots per probable point being defined by the Max Split Number above. If you want long branches that split rarely, set this somewhat low. For dense trees and foliage, set this high.
- **Split Flatten** - Seems to act as a further adjustment for the Split Angle setting above. If you believe some branches growing too close to your trunk or parent branches, you can use this to tweak them slightly, dragging them downwards slightly.
- **Can Grow Leafs** - Should be Can Grow Leaves, but I ain't gonna say nuttin... Self explanatory. Tells the addon to add particle points to grow leaves from these branches.
- **Gravity Strength** - Sets the influence of gravity on the branches, with heavier, longer branches being more likely to be influenced on lower settings. 0.0 is as if your tree has grown in zero gravity, with branches that only slightly drag downwards. Positive numbers influence higher gravity, dragging your limbs down further. Negative numbers do the opposite, repelling your limbs upwards away from the ground. You can get some interesting shapes by playing with this.
- **Floor Avoidance** - Not vastly different from Gravity Strength above, though it seems to focus its influence on the lower half of the tree more strongly, only barely effecting the upper branches.