

Stacked Circles, Take 2

Stacked circles have two additional attributes that are worth mentioning. We will continue to focus on the three concentric circles version discussed in *Stacked Circles*, $(S, P, J, n) = (6, 35, 11, 23)$, reproduced below. Concentric circles are created by having an S -segment looping circuit move in or out one level at a time.

1) Stacked circles involve adjacent points that are no more than one level removed from one another.

Consider *Level 0* to be the vertices of the outer polygon. *Level 1* is one subdivision in from either end of lines on the vertex frame, *Level 2* is two subdivisions in from either end, and *Level 3* is the midpoint of the vertex frame lines. In terms of levels, the first six lines annotated on Stacked Circles went from Level 0 to 1 to 2 to 3 to 2 to 1 to 0. Adjacent image segment endpoints move by one level in and out.

Change P to $P = 63$ to create the ultra-sunburst shown in the top right. This image jumps from Level 0 to Level 3 to Level 0 ... completely bypassing Levels 1 and 2.

2) Each stacked circle layer has the simple cross-hatched design found in File 1 Stars.

The three images to the right are 23 point stars with J determined by the closest value to the one implied by the **red lines** shown on the stacked star image. These lines are laid over the segments beginning at the **Outer 0**, **Middle 0**, and **Inner 0** points, and extended across to the outer polygonal vertices on the other side (recall how each part is created with a kink so lines do not extend through exact J values). The first layer is a bit more than $J = 6$. The middle layer is a bit less than $J = 8$ and the inner layer is between $J = 10$ and $J = 11$. $J = 10$ is shown.

Note that sometimes the tips of the star image are cut off as with the middle layer.

