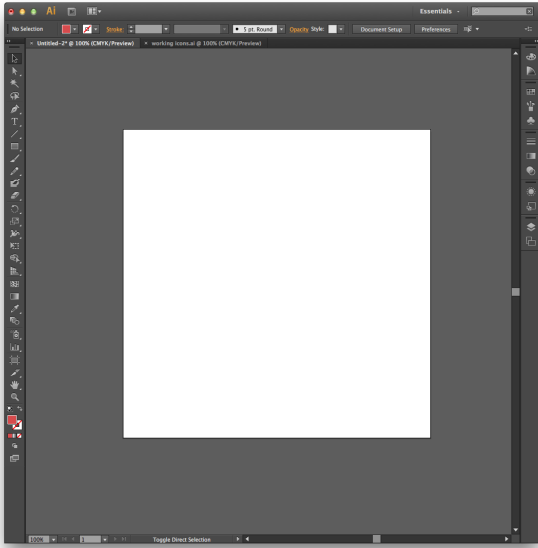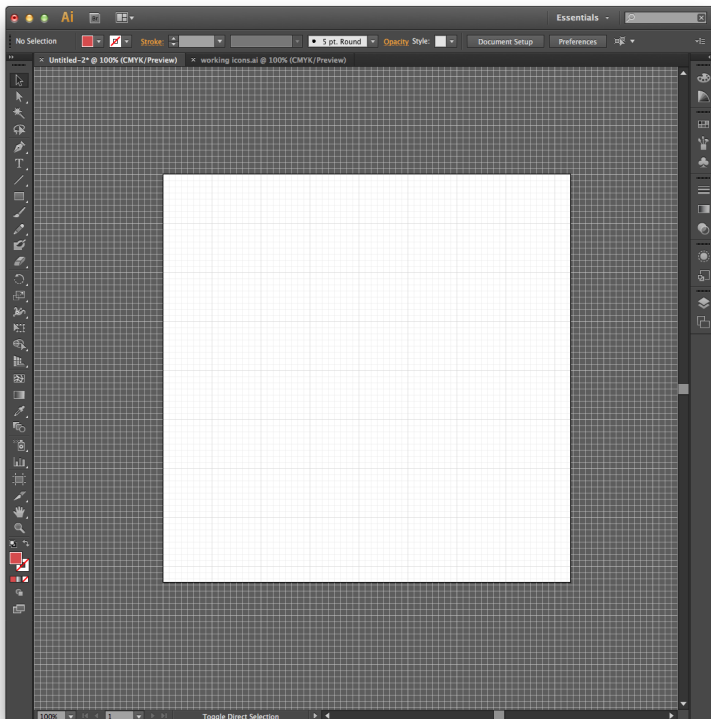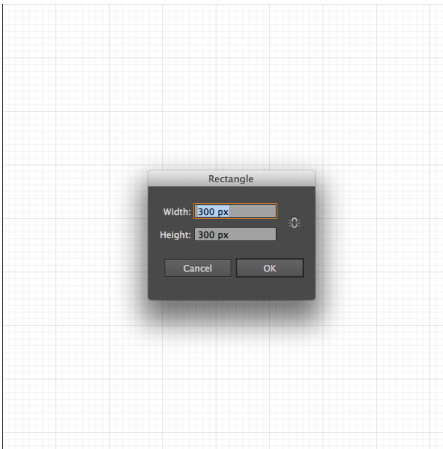To start off, lets create a new document in illustrator that is 600x600px.
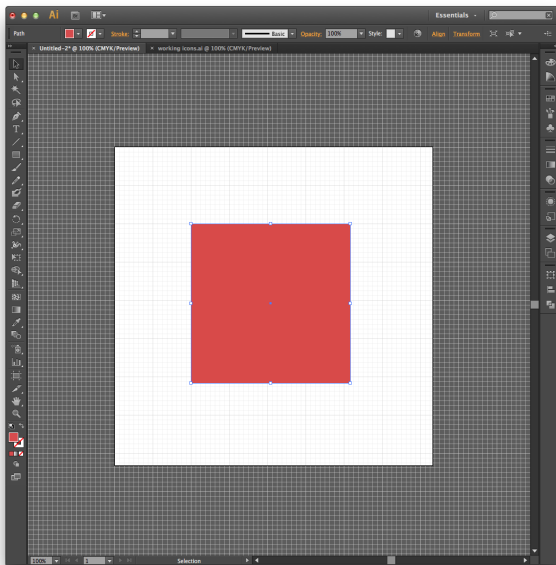
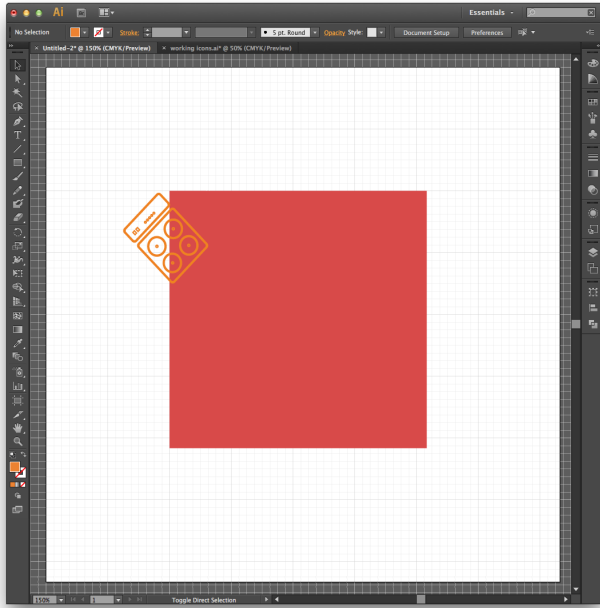The grid makes this whole process easier, so lets enable that by going to View > Show > Grid.

Now, create a rectangle that is exactly 1/2 the size of our canvas. To do this, select the shape tool (M), make sure rectangle is selected, and click once inside your document. From the parameters menu that comes up, enter 300px for both fields.
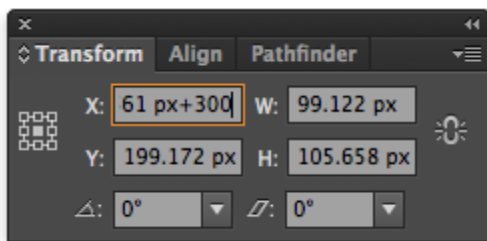

Center the shape, assign a fill color and then lock the layer so it doesn't get in the way.
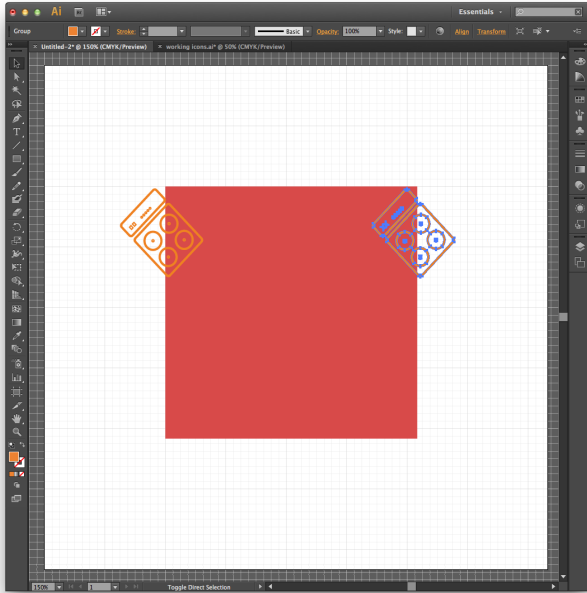

The first thing we need to do when creating this type of pattern is to align our icons to the outer edge. In this case, I brought in my amplifier icon and positioned the halfway point on the left side of the square.
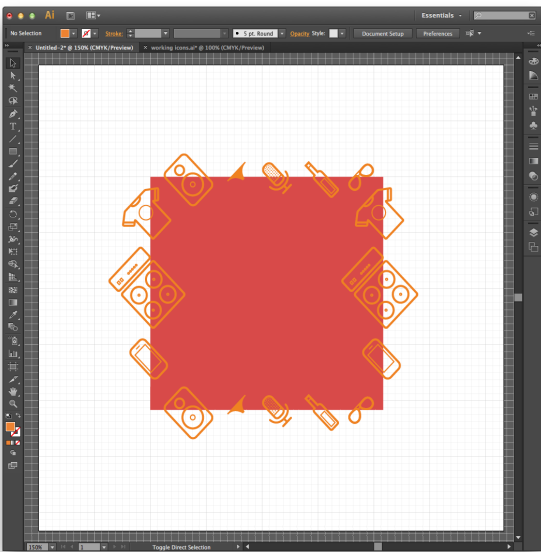
The most important thing to note, is that each shape on the edge of our square needs to have a duplicate icon exactly in the same position on the other side. This is super easy to do since our pattern is 300x300px, as all we need to do is open the transform window (Window > Transform), and type in +300 after the value in the X field. Adding 300 pixels will move our icon over to the right, while subtracting 300 pixels will move it to the left. The same can be said for the Y axis, only adding pixels will move the object down, and subtracting pixels will move it up.
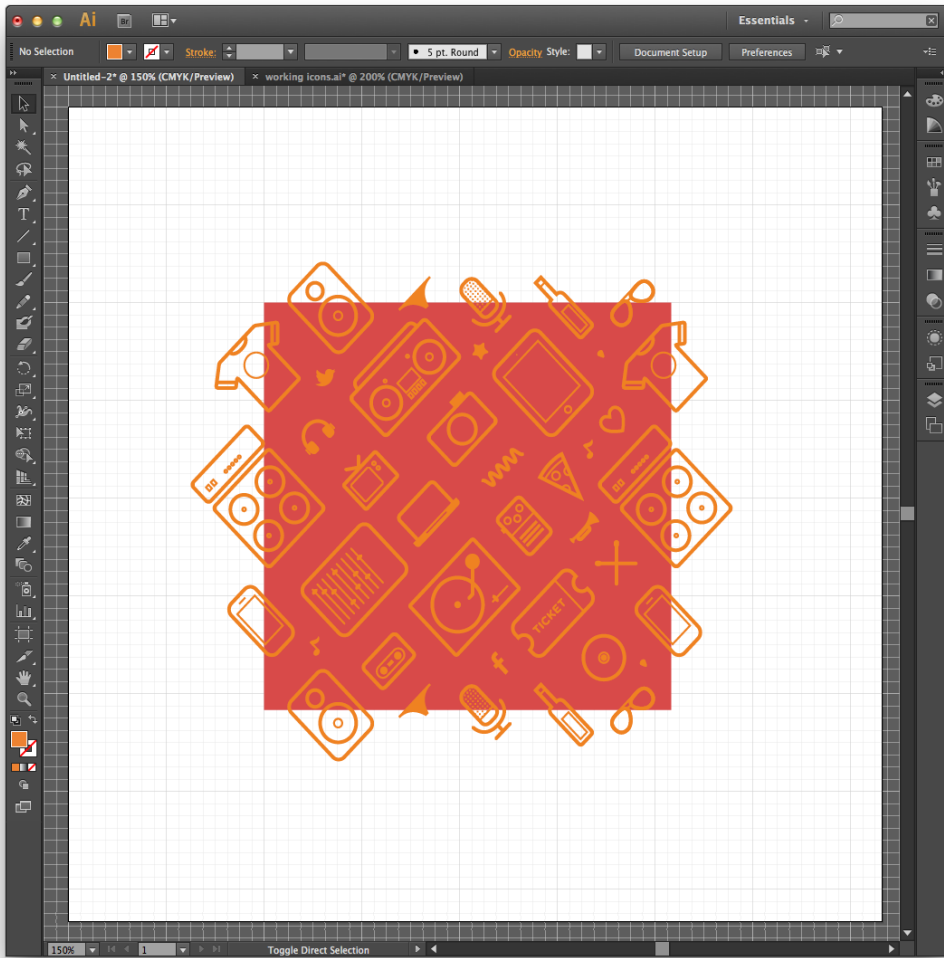

Now we have our icons exactly where they need to be for it to repeat seamlessly.
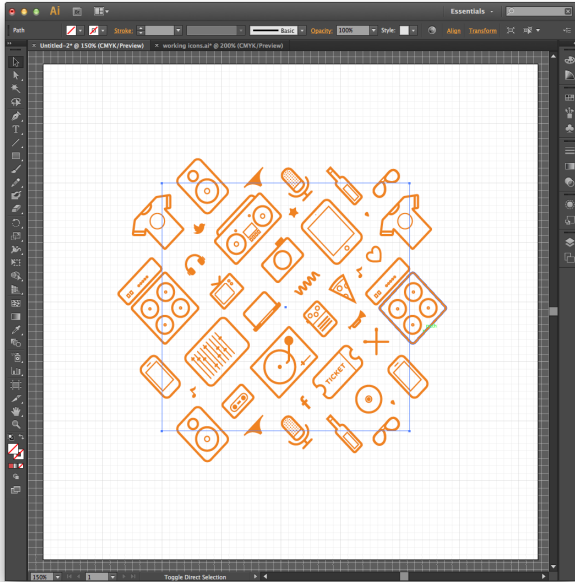
Follow the steps above to place your icons around the outside perimeter of our shape.
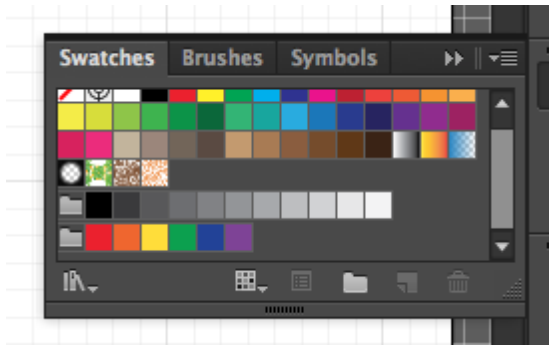

Next, start placing the rest of your icons inside the shape. The trick here is to try to keep it visually balanced as much as possible, because once the pattern gets repeated, it's very easy to see any spacing irregularities.
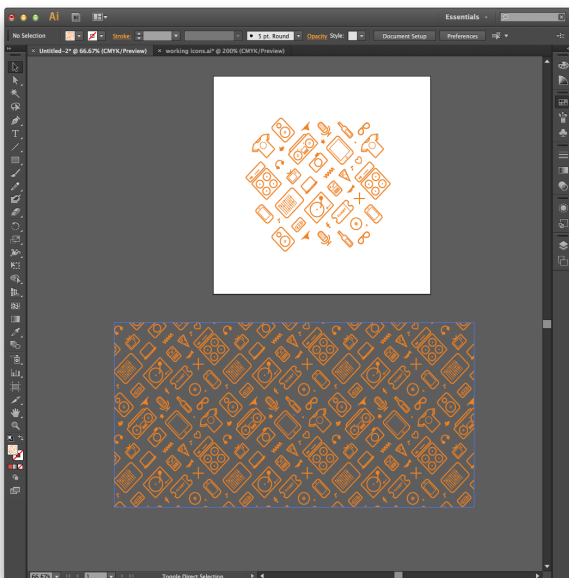
That looks like a decent start. Now let's unlock our bottom square layer, and remove the fill.

With the selection tool, highlight all the elements of the pattern (including the square unfilled shape) and drag it into your swatches panel (Window > Swatches). In the dialogue window that pops up, select 'Pattern brush".

That's it! Let's test out our pattern by creating a new shape (U) and filling with our pattern by selecting our new swatch in the panel.

Add a complimentary background color, and you're good to go!