

MAKERS MANUAL #42

Daan Veerman



DOODLING BAUBLES

INTRODUCTION

This manual offers a playful way to make your own baubles. It invites makers to invent their own techniques to then implement this in making unique decorations by using a 3D-pen, some simple tools and ordinary objects. This manual pushes the maker to really think about and look at the plastic products that are part of daily life. It is not only about making something new, but also about becoming aware of the shapes, sizes and wonderful textures of the objects that surround us everyday.

STEP 1

Before you start printing and doodling, it is wise to practice a bit first. To do so, cover a sturdy flat surface (sheet of wood, cutting mat etc.) in paper tape. Then, take the time to figure out the functions of the 3D-pen, such as extruding or pausing the PLA material from the pen. If you feel like you have explored the pen's functions then hold it as you would hold any other pen, and start doodling on the flat surface.

> Practice with varying distance from the surface you're printing on and see what kind of structures this produces.

> Practice with filling or completely covering certain parts of the surface.

When you feel comfortable with using the 3D-pen on flat surfaces, it's time to switch to doodling on simple shapes.



STEP 2

Decide what shape or form you wish your bauble to be. It is possible to make the bauble out of one single shape, or to combine multiple shapes. With the concept of Digital Craft in mind, you could look around you for plastic objects that possess intriguing shapes or textures. These could be the lids of containers, but also small bottles or even just parts of objects. These objects will serve as molds for your work.

STEP 3

Cover the chosen objects in paper tape. This will make it easier to remove your 3D

print from its mold later on, as it will not stick to it.

—> When constructing a sphere, make sure to first construct two half-spheres, take out the mold(s) and then attach them to one another. It is important to think about how you are going to print on the molds in such a way that the mold itself can be taken out at one point.

> If you want certain patterns in your design, it is handy to first draw with a pencil on the mold when covered with paper tape. This gives you the possibility to easily trace more difficult shapes on the mold.



3.1

STEP 4

Start doodling on the mold of your choice. Make sure to check from time to time if you can still remove your print from the shape. When you doodle really dense structures, sometimes the print can not be taken off the mold anymore. Therefore, it is important to remove the print from your mold every now and then before finishing it completely. The doodled print can be taken off by wiggling it or using a knife, scissors or



3.2



LIST OF THINGS

MATERIALS

– Filament fit for the 3D-pen (1.75 mm is the desired thickness)

TOOLS

– 3D-pen
– Paper tape for covering objects
– Scissors (for removing any excess filament)
– Molds to draw on top of, these can be any shape, size or material (such as leftover packaging material, empty cans, but also look for lids featuring strange shapes and silhouettes)

BIO OF THE DESIGNER

Daan Veerman is a Dutch designer interested in (re)developing production techniques, turning them into crafts. Currently, he is working on a series of work called "Digital Craft" which explores the opportunities of 3D-printing as a (re)developed craft. Within this series, Veerman copies archetypical mass-produced plastic items, such as crates, by using a 3D-pen in a laborious process, placing crafts and industry production side by side.

FURTHER READING

– Grammar of the Ornament, Owen Jones
– Rollable Ramblings, Koen Taselaar
– Weaving as a Metaphor, Sheila Hicks & Irma Boom

Makers Manual is a collaborative project between exciting makers and STORE STORE. This is a collection of manuals encouraging people to make objects from what is around them. These manuals are both a practical guide to making for beginners and experts, and a journey into the designers' practice. You can share your creations using #makersmanual.

This project is supported by G.F Smith.

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your nails.

> Be careful when you use some force to separate the print from the mold.

> Make sure to remove the print from the mold completely, and then place it back on and continue doodling.



4.1

STEP 5

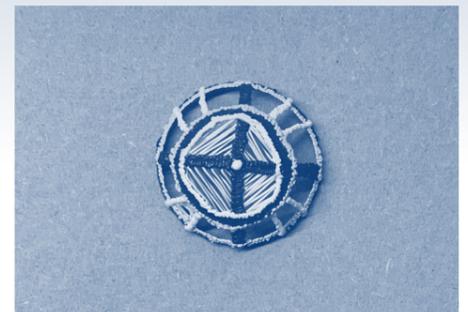
You can attach shapes by doodling lines which connect the two shapes. If you want to be precise, it is also possible to connect the shapes at a few points first and later completely connect them. When making baubles, this is the best technique. First fix the two half-spheres together in 4-6 places by printing lines which connect the two half-spheres. Then, go around the entire shape and cover the connecting parts completely.



4.2

STEP 6

If you wish to construct your baubles from multiple smaller shapes, do the same as described above. Start with making the largest shape, and always make sure to check whether you can still take the mold out of the



4.3

print. Other smaller shapes can be made by using smaller objects, e.g. lids or small containers. Also cover these in paper tape to make it easy to remove the print. Or, alternatively one can also doodle "freehand" on the flat sheet used for try-outs and connect these to the baubles.



5

STEP 7

Last but not least: once you finish the shape of your bauble, make sure to think of a hook or loop that can be used to hang the bauble. This can either be a small hole in the print, or a specific shape added to the bauble.

Enjoy decorating your home with your own creations!

