Viking Helmet Manual

Difficulty: medium to difficult **Tools needed: basic to advanced**

Recommended materials

> 3,5 mm (9 oz) veg. tanned leather
> 2,5 mm (6 oz) veg. tanned leather (only 2 straps)
> 7 x 10 cm (3 x 4 inch) of soft leather or strong fabric of any kind
> 6x Screw rivets

Tools: edge trimmer, cutting knife, burnisher, hole punch, leather carving tools, bone folder, clamps, sewing material, diamond shaped chisel, wing divider, glue, rivets, dremel like tool

Video tutorial:
Leather Crafting Tutorial - Viking Helmet
https://youtu.be/cYz9h6IKgjQ

Note:
> Black lines show you where to cut.
> Red dots with numbers show where to punch holes with a hole punch. The diameter is written in mm on the dots.
> Red dotted lines show where to punch stitching holes with diamond shaped chisel. Keep a minimum of 3 mm distance from the edges.
> Red squares show where to punch 4 mm thick holes for edge weaving
> Dots in green show where punching holes is **estimated**! Mark them but do not punch them yet, they can differ depending on your molding. Hole areas in green show where other pieces are **estimated**, in white it is written which piece fits here.
> The grey line shows where to leather carve and put on ornaments, use pictures as reference.
> The blue areas show you roughly where to thin out the leather on the **flesh side**.
> On every piece is written the name and from what material it should be.

Hat Size

Printing Size of the PDF	Europa [cm]	Worldwide	Great Britain [inch]	Amerika [inch]	France
86.4%	51	XXS	6 1/4	6 3/8	2
88.1%	52	XXS	6 3/8	6 1/2	2 1/2
89.8%	53	XS	6 1/2	6 5/8	3
91.5%	54	XS	6 5/8	6 3/4	3 1/2
93.2%	55	S	6 3/4	6 7/8	4
94.9%	56	S	6 7/8	7	4 1/2
96.6%	57	M	7	7 1/8	5
98.3%	58	M	7 1/8	7 1/4	5 1/2
100.0%	59	L	7 1/4	7 3/8	6
101.7%	60	L	7 3/8	7 1/2	6 1/2
103.4%	61	XL	7 1/2	7 5/8	7
105.1%	62	XL	7 5/8	7 3/4	7 1/2
106.8%	63	XXL	7 3/4	7 7/8	8
108.5%	64	XXL	7 7/8	8	8 1/2

britan inch; 1 cm = 0,0254 inch
american inch; 1 cm = 0,025400051 inch

Manual

Step 1
Printing and cutting out on paper. I highly recommend a rough cardboard or paper model first. Change the printout in scale if needed. Note that the pattern is designed to wear a cushion underneath.

Note: You can print a large formats document such as a poster, banner or this pattern by splitting the page over several sheets (tile / poster function). This calculates how many sheets of paper are needed. You can adjust the size of the original to fit the paper size and specify how much the parts overlap. After that you want to cut away the edges and tape them together**.**

Step 2
Draw all the lines on the leather and cut out.

Step 3
- Moisten the leather and put on all ornaments on the grey lines
- Bevel and polish all the edges that will stand for them self.
- Thin out the blue areas on the flesh side, be careful not to cut through.
- Punch the holes on the red dots.

Step 4
Moisten the pieces and bring them into their rough shape.

Step 5
Apply dye, paint, resist, antique gel and finish in that order.

Step 6
On the top side of the blue marked edge rough up the leather.

Step 7
Punch the sowing holes along the red dotted lines and sow them. Start with the 'Base' and sow together the two long middle pieces. Next bend the piece round and sow it together at the back of the head and sow the tip of the first two sown things on there edge to edge. This will make it easier in the next step.

Step 8
Put contact cement along the top side of the blue marked edge and along the flesh side of corresponding edge and glue it together. Cut the sowing holes all the way through and sow them

Step 9
Water hardening: Harden the leather within about 50°C (122° F) hot water for about 5-10 minutes. The Leather will need up to 10 hours to dry, use this time to shape it into its final form.
Shaping: For a good outward bent, use a bone folder to stretch the leather from the inside out. To do so by grabbing an edge, put the leather on the table. Then press one side of the bone folder on the leather and pull it away from your hand towards your body, while pulling the leather up with your other hand. This way the leather gets stretched and give an outwards bend.

Oven hardening: If it is not hard enough put it in water for about 1 minute, let it set for about 30 minutes and put it into the oven for 30 min at 50°C. Make sure the shape you want is maintained. I recommend a test piece.

With the shape you want to aim for a round shape and the nose bend to give room for yours.

Step 10
Glue and sow on the ‘Nose’, note that at the back of the head there will be some excess leather you have to cut to length. Do so in the same manner to the ‘Forehead’.
Cut away any excess leather along the edge and in the eyes, use knife, sandpaper and dremel for that. Then bevel the edge, redye it and burnish it.

Step 11
Craft the ‘Cheeks’ and ‘Face’ in the same manner. For the ‘Cheeks’ you want chin straps sown on and with the soft leather joint where it is attached to the main helmet. Sow on the ‘Cheeks’

Step 12
For the ‘Face’, the attachment holes you need to position by yourself, the shaping of the helmet can make a lot of differences here. Check the rough position of the holes and start with the two in the eye area, put in the screw rivets to hold it in position and from there mark and punch the other holes. Then attach the ‘Face’ with rivets and pull the straps through the 5 mm holes on the face to hold them close.

Enjoy!
I would love to hear your feedback!