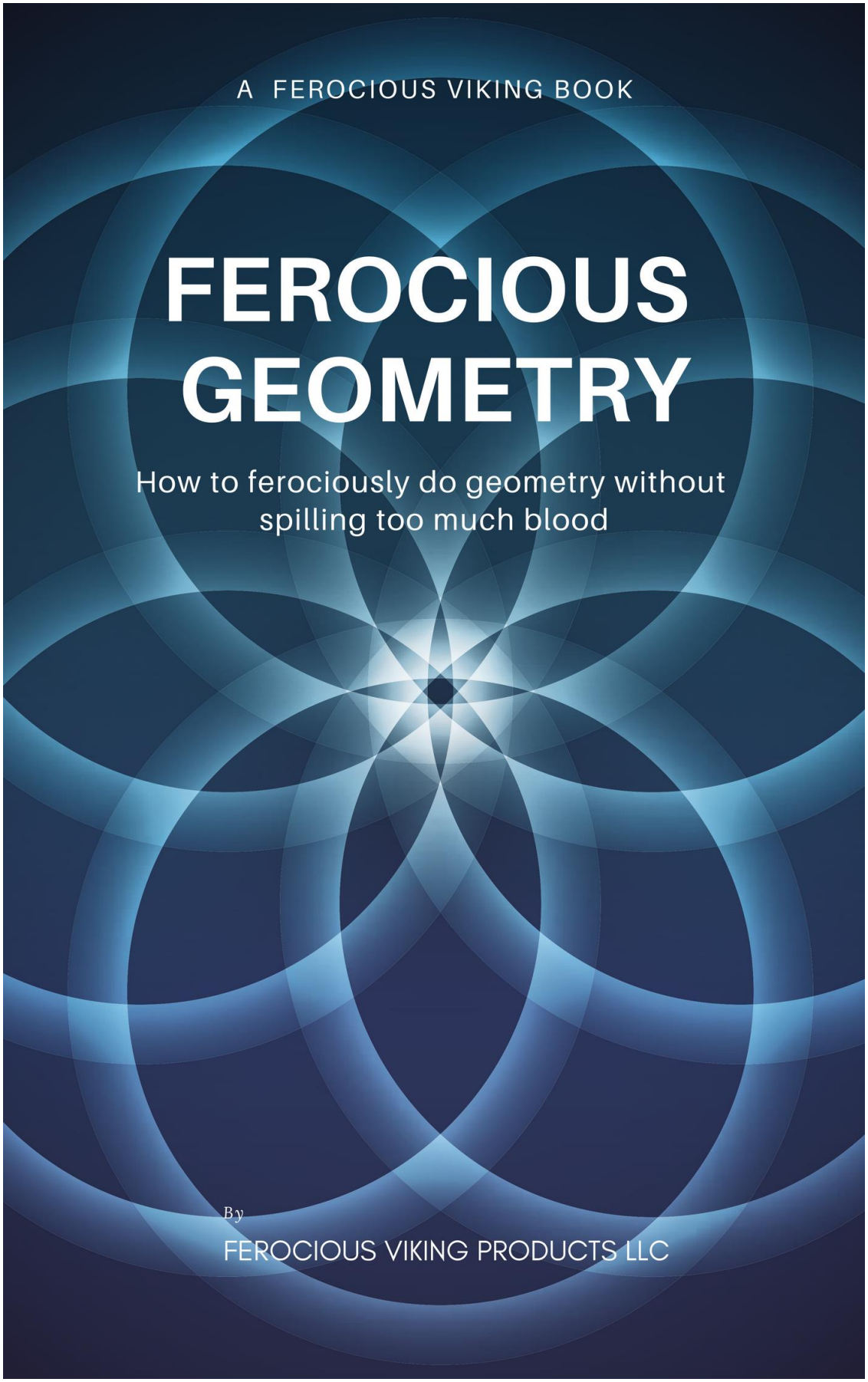
A FEROCIOUS VIKING BOOK

FEROCIOUS GEOMETRY

How to ferociously do geometry without spilling too much blood



By

FEROCIOUS VIKING PRODUCTS LLC

Welcome to

The Ferocious Viking Experience

and thank you for buying a

Ferocious Viking Compass.

First things first. You have obviously found the insert and have typed in the URL and downloaded this eBook. Well done! I hope that sometime in the future you can just touch the insert and it will take you to the eBook, but we are not quite there yet.

Okay, second things second.

Open the compass and inspect it to make sure all the parts are there. Sometimes the small set screws will rattle loose during transport, so go ahead and tighten them if they are loose. If they have fallen off then check the box or lift the grey insert to find them. They will usually be there somewhere. If one has been lost, send us an email at ferociousvikingproducts@gmail.com and we will send you a replacement part right away.

You have everything? Great!

Let's get started!

PS. You can always come back to FerociousViking.com/FerociousGeometry for more information or to download this eBook again.

Compass Manual

Let's have a look at what all the parts are and how they fit together.

Here is what you have:

A: The big compass

B: The small compass

1: The removable leg of the big compass. This leg can be removed and replaced with other parts as we will see later.

2: The removable leg of the small compass

3: The extension beam. This extension is used when you want to draw BIG circles.

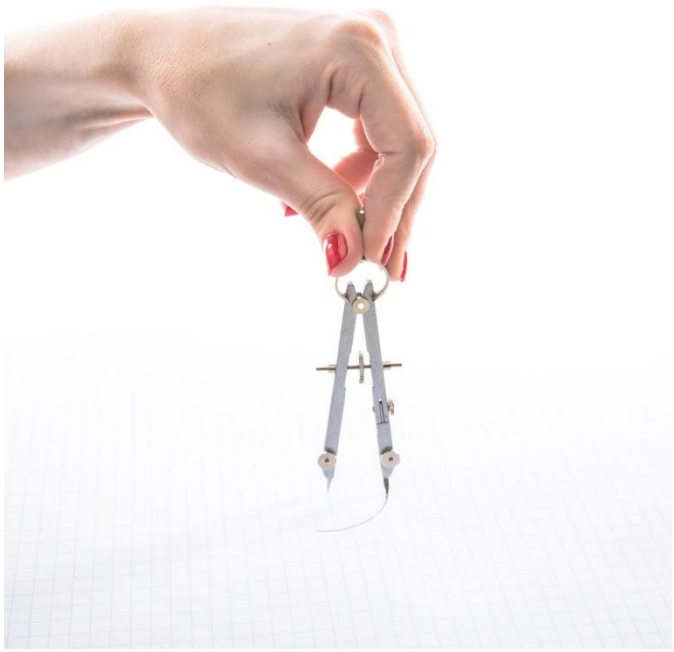
4: Leg holder of extension beam. The extension beam has a part where a leg or attachment like the pencil holder can be placed.

4b: The end of the extension beam that attaches to the compass after you remove the leg (parts 1 or 2 as mentioned above).

5: Stylus. The stylus can be used by itself or together with the pencil holder.

6: Pencil holder. (It can also hold pens)

As you can see the set has two compasses, labeled A and B in the picture. Most of the accessories are designed for use with the big compass, but also fit the small compass. Just in case you want to make big circles with a small compass. You never know.



Regular use:

Pick up the compass and make sure the small set screws are finger tight. Don't overtighten; this is not a battle axe but rather a precision instrument.

Get yourself a piece of paper that needs a circle on it. Stab the pointy leg of the compass in the paper where the center of the circle needs to be. Be careful that your fingers or your little sister's fingers are NOT at that location before you do this – this is very important to avoid blood on your drawings. As a note, blood on drawings will very often smear and be messy, which can make it hard to see what you are drawing – so be careful.

Decide how big the circle needs to be and rotate the wheel in the center of the compass until the desired radius[1] has been reached. The purpose of the wheel in the middle is to adjust the radius and then make sure that it doesn't change every time you use the compass. It can be a little annoying to have to turn the wheel every time you want to change the size of your circle, but the advantage is the ability to get consistent circles, which is brilliant. You can even duplicate the size of an existing circle by using the compass to measure the radius, turning the wheel until you have it matched up.

In order to make a circle, lean the compass a little in the direction you want to turn and turn the compass. Make sure the leg that is stabbed into the paper stays where it belongs.

Use the small compass for small circles and the big compass for big circles. You *can* do it the other way around, but that is just silly.

[1] Radius: The distance from the center of a circle to the circle edge part.

Fancy stuff: Changing out a leg:

If you get tired of just making plain old circles, you can replace the leg on the big compass (or small compass) with the pencil holder. This is #6 on the picture on page 3. This will allow you to draw circles with a pencil or a pen, even the stylus that came with the set or just about anything you like as long as it fits in the holder.

You do want to be careful when you tighten the screw. This is a plastic screw in a plastic holder, you just want it tight enough to hold the pencil (or whatever). You don't need to crush the pencil in place to hold it. I remember lending a compass to Bert the Barbarian (he is a big guy) for his experiment with drawing circles on the chest of dragons to make them easier to hit with a spear at a distance. It was pretty messy, especially because the dragons either didn't like the idea or found it rather ticklish. Anyway, Bert came back to me and told me that he accidentally had crushed the compass after overtightening the set screw on the pencil holder. I *told* him not to try to place a spear in the pencil holder.

Actually the pencil holder will only hold something that is smaller than the hole in the pencil holder. You may think that is pretty obvious, but it has to be said. For example, a regular Sharpie is actually pretty fat compared to a pencil, so it won't fit. Even a Fine Point Sharpie is a bit too fat, but the Ultra Fine Point Sharpie is perfect for the compass. So if you want to draw targets on dragons, you might want to go with an Ultra Fine Point Sharpie over a pencil, although – again, for the purpose of avoiding blood on your drawings – I wholeheartedly recommend avoiding drawing anything on dragons. By all means draw a dragon though.

But how do you change the leg?

Simple.

1) Loosen the set screw holding the leg in place.
2) Remove the leg by pulling on it. It can be a little tight the first time you do it, so if it doesn't come off easily, you can ask someone like Bert to help you pull or you can gently pry the part of the leg holding the other part open with a small screwdriver. But gently.
3) Once out, place it somewhere where you can find it again, like in the box for the compass set.
4) Then take the pencil holder and insert it on the leg. If it doesn't want to go in, then try to turn it around, it's the metal part that goes on the leg.
5) When inserted, tighten the set screw – gently.

If you want to use the stylus that came with the set, I recommend putting a piece of lead in it first. This set does come with a spare piece of lead in a cute small container. But only one piece. Fortunately, lead is easy to come by. Just search for '2mm compass lead' in your favorite search engine and you will find enough lead to sink a long boat. As a note, there isn't any actual lead in 'compass lead' anymore, it's mostly just graphite. That's the same stuff you find in the fireplace after a feast, or in a burned down village after a good pillage. However, it's far easier to order lead on Amazon than to burn down a village every time you run out of lead. (Although Bert might think differently).

As a note, the strange looking rectangular thing between the big compass and the extension beam in the box is a lead sharpener. It's dainty, but it does the job in a pinch. So when you need a sharp line on your circle, it's actually kind of handy.

Advanced Fancy stuff – Big Circles:

Every once in a while, you just can't help yourself and just *have* to draw a really Big Circle. It usually has something to do with the full moon or a type of genetic disturbance that befalls mathematicians. But either way, you are in luck because you have the right compass for the job.

The key to making Big Circles is to use the extension beam.

1) The first step is to remove the leg of the compass, like a pro. We covered that above, so you should be an expert by now.
2) Take the extension beam out of the box and place the end (labeled 4b on page 3) in the slot on the compass.
3) Tighten the set screw, finger tight as always. Unless you happen to be as big as Bert, in which case you are only allowed to tighten it with one finger, not two. '
4) Now look carefully at the other end of the extension beam. This part has a similar mechanism as the compass leg. You can stick something in it and tighten the screw to hold it there.
5) You have two choices for what to stick in that end, and only two: the pencil holder or the leg you removed from the compass in the first place.

6) On the picture shown here, the compass leg has been attached to the extension beam. You can instead attach the pencil holder to the extension beam if you like.

   Of course you are still free to add any pencil pen or other writing implement to the pencil holder. For example, if you are a wood worker, you could attach a scratching implement; if you are a glass worker, you could attach a diamond tool; if you are working with leather you could attach whatever the heck a leather worker uses to scratch, cut or draw on leather. Either way, you will get large beautiful circles.

The biggest circle or arc you can make with the extension beam fully extended is 22 inches diameter[2]. The compass is not easy to control of you make the circle that large, but 20 inch diameter is easily managed. That's large enough to put a small goat through.

That's it!

You are now a fully educated user of the Ferocious Viking Compass! Now it is time to go out and CONQUER THE WORLD!

Oops sorry, maybe that's a overdoing it a tiny bit. Just conquer your corner of the world and then get busy making circles!

Ferocious Circles!!

Like a Viking!!!

[2] Diameter: The distance from one curvy edge of the circle, through the center of the circle, to the edge on the other side.