

**Zeitschrift:** Swiss express : the Swiss Railways Society journal  
**Herausgeber:** Swiss Railways Society  
**Band:** - (2019)  
**Heft:** 139

**Artikel:** The Charstelenbach bridge. Part 2  
**Autor:** Engel, Martin  
**DOI:** <https://doi.org/10.5169/seals-853834>

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## The Charstelenbach Bridge - Part Two.

By Martin Engel



Following on from the September 2011 article, Amsteg the model railway has finally been started, with the first of two modules built and track ready to be laid. The first module is from the Windgallen tunnel portal to a small culvert under the main line prior to the signal gantry. If you take the path behind the transformer yard and head toward the power station water pipes you will see this little interesting feature under the main line.

Each module measures 1.4 metres x 4.5 metres with a spiral at each end to allow for a two-level storage section at the rear keeping the layout compact. The frame is made from 20 mm x 90 mm pine, interlocked for strength and the scenery structure is 12 mm MDF. I chose MDF as it is most importantly very flat, ideal for laying track! Strong, easy to work with, cheap and has very good water resistance qualities.

The spiral was relatively easy to construct with minimal tools, to help achieve a suitable grade in the space available. I found a free spiral calculator online at: <http://www.modelbuildings.org/free-helix-design-calculator.html>. You just enter the relevant measurements and it provides the detail. From this information I created a quarter circle pattern from 10 mm plywood, used that to mark out all the required pieces, cut them out with a jigsaw leaving about 3 mm around each piece. Then I used a router with a pattern cutter to tidy them up. Threaded rod is great for accurate support levels for the deck and you can add camber very easily if you like with this method. The quarter pieces are screwed and glued to the supports. With some good planning it all lines up nicely.

To cut the track beds before and after the bridge accurately I used cardboard templates to ensure a good fit to the contour frames already in place. This was also helpful when getting the shape of the road next to the river to look right. The slope of the contour spacings is a best guess from many pictures I have taken and generally being happy with the overall look.

I am using Peco code 75 track mainly for the appearance and electrofrog points for reliability. I will glue the track to

the road bed using clear liquid nails to see my markings, manoeuvred into the desired position and weighed down with 400g bean tins. Operation of the layout is to be as simple as possible - DCC with block sections, sidings and train routing, run automatically by Train Controller.

All the specifications are to NEM standards which are helpful if you are making your own tunnel portals and for clearance measurements, so you don't waste space and time.

The house kits used are Kibri and Busch. The little "Wartehaus" next to the line was scratch built from pictures and made by HR Modelbau in Switzerland. So far it is the only accurate building on the layout. I may change this later, but I do like the Kibri alpine houses.

The plan is to complete the second module from the culvert to the Bristen tunnel, which carries above it the power station water pipes and then start adding all the line side detail seen on this section of the Gotthard.

It is an interesting section of line to explore and watch the trains pass from many vantage points along the walking tracks, the best view and camera opportunity though is from the two log benches above the Windgallen portal while having lunch. The path starts between two buildings before the bus stop. See if you can find it! 

