

# Assembly Instructions for 53501 Pylon Bridge “Rhein“

## 1. Package Contents

We recommend taking an inventory of the contents. If something is missing, please contact us for assistance. The following items should be enclosed:

### Package Contents

2 top side bridge bases	plywood, 500 x 145 mm
2 underside bridge bases	plywood, 360 x 125 mm
1 underside bridge base	plywood, 280 x 125 mm
2 stringboard bridge bases	plywood, 500 x 15 mm
4 stringboard bridge bases	plywood, 250 x 15 mm

### Bridgehead

2 inside parts	plywood, 133 x 105 mm
4 side parts	plywood, 127 x 60 mm
2 base parts	plywood, 133 x 56 mm

### Pylon plastic parts

Bag A	pylon top	10 parts
Bag B	upper pylon kink	4 parts
Bag C	bottom pylon kink	8 parts
Bag D	pylon bottom	8 parts
Bag E	short section holder	8 parts
Bag F	piers without hole	16 parts
Bag I	counter bearings	8 parts
Bag J	(3x) bridge caps	60 parts
Bag J1	bridge caps	4 parts
Bag K	(2x) assembly aids	10 parts    20 parts
Bag L	(2x) bridge railings red	12 parts
Bag L1	(2x) bridge railings red	8 parts
Bag M	suspension rope, 1 rope, 2 terminal strips,	10 screws
Sheet	(2x) cardboard wall plates	2 pieces

## 2. Base

The base of a model railroad layout should be of low vibration and without deformations. We recommend a blockboard that is mounted on a stable frame (for example a NOCH aluminium frame).

## 3. Tools and materials

In order to properly assemble the bridge, we recommend the following tools and materials:

- Small crosstip screwdriver
- Hand or electric drill with 1 mm and 2,5 mm drill bits
- Small water-lever
- Side cutter
- Small iron rasp
- Small angle with approximately 8 cm brackets

- Cutter for deflashing the cut angle parts and bridge caps
- Grey paint and paintbrush for painting the visible wooden parts

#### 4. Glue

We recommend a plastic safe model glue for the plastic parts. Apply white glue for the wooden parts. When you assemble wood and plastic parts, use all purpose glue or contact glue. Please visit your local hobby shop to purchase the glue.

#### 5. Assembly

Note: Take enough time for assembling the bridge. The different glued parts need sufficient time to dry. Please keep to the given time and profit from our experience. In this way the bridge will give you satisfaction and enrich your layout.

The bridge is planned with a modern Y-pylon in the middle. But you can also share the bridge 1/2 to 1/3 if your model landscape requires (e.g. 2/3 water and 1/3 track or road). To avoid mistakes we first recommend to stick the parts together without glue. Your work will be easier if you mark the parts with the letters when taking them out of the bags. So you will not mix up the parts.

Start with the gluing of the plastic parts from bag A (illustration 1). Make the fork A9 longer attaching 6 pier parts from bag F on both Y-sides and then the parts from bag B.

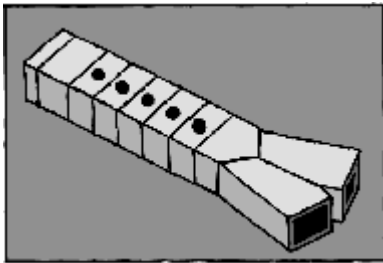


illustration 1

After gluing line up both Y sides so that there are 151 mm distance between the B2 parts.

Now (after sticking the parts together without glue and marking the parts with the letters) you can glue the pylon bottom part together.

Glue the parts from bag C together and make both sides longer with 2 pier parts F (illustration 2).

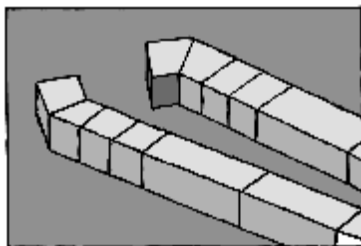
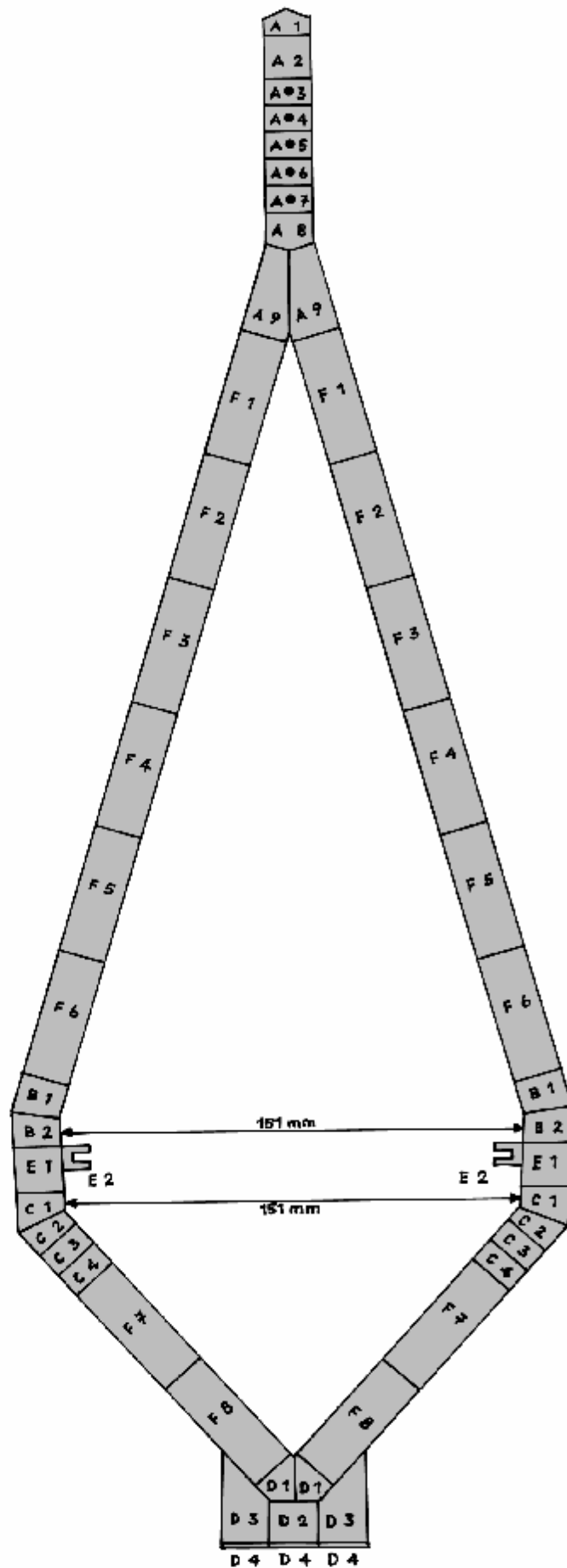


illustration 2

# Pylon-Brücke »Rhein«

Die Abbildung zeigt den Aufbau des y-förmigen Pylons.



The two D1 parts bring the two Y-sides together and lead to the part D2. Glue the two parts D3 on the sides of D2. Glue the D4 parts as end parts into D2 and D3. When you line up, see to it that the two C1 parts have a distance of 151 mm. Take from bag E both pillars and two section holders. Apply some glue on the back of the section holders and clip them into the holes on the pillar parts. Then line up the parts (right angle).

It is very important that all parts are well glued and that they can dry 24 hours. Lay down all parts on a smooth and even underlay (e. g. glass) and check their position again.

Now you have enough time to assembly the route. Take the two top side bridge bases (500 x 145 mm) and apply some white glue on two short sides (illustration 3).

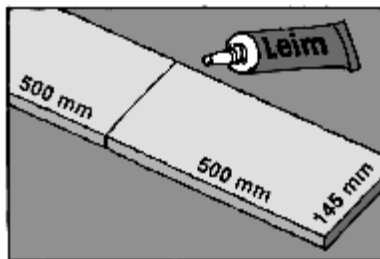


illustration 3

Glue them together on a smooth and even underlay making a 1 m long route. Also this should dry 24 hours. If this joint is dry, stick the two section holders on to the middle of the joint with contact glue (illustration 4).

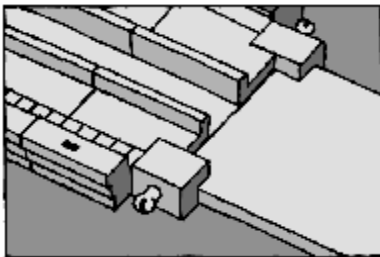


illustration 4

Then glue the U-shaped bridge caps to the right and to the left of the section holders and then all other bridge caps until the end of the route.

The bridge caps at the ends of the bridge jut out about 1 cm which will be integrated later in the landscape. If the bridge has to be shortened because of the track plan or the form of the landscape, make sure that you cut all routes and stringboard bases to the same length before assembling it.

After having glued all bridge caps, you have to drill holes for the suspension ropes using the 2.5 mm bit on the drilling machine. First mark the position of the drill holes on the surface of the bridge caps directly next to the inner edge with a pencil. Start in the middle of the bridge (joint) and arrange them regularly in both directions. Start

with the first hole at 13.5 cm. The next 4 holes have a distance of 6 cm each (illustration 5).

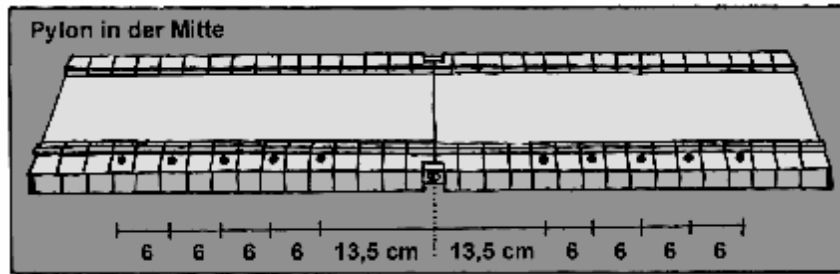


illustration 5

**Important:** When drilling the holes hold the drilling machine slightly at an angle in order not to touch the stringboard bases (illustration 6).

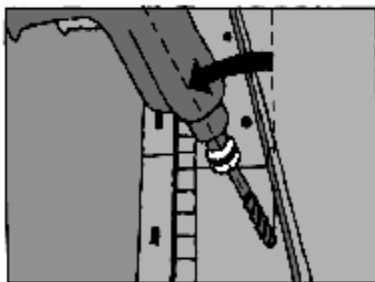


illustration 6

If you want to install the pylon asymmetrically on the bridge ( $\frac{2}{3}$  to  $\frac{1}{3}$ ), the short top side of the bridge would be 36 cm long and the long one would be 64 cm. According to this you will have to stick the section holders and the U-shaped bridge caps at both sides of the pylon (as explained before). The drill holes of an asymmetric pylon installation start on the short side of the route 5.5 cm from the middle of the pylon. The next 4 holes have a distance of 5 cm each. On the long side of the route make the first hole at 11.5 cm from the middle of the pylon. The next 4 holes have a distance of 10 cm each (illustration 7).

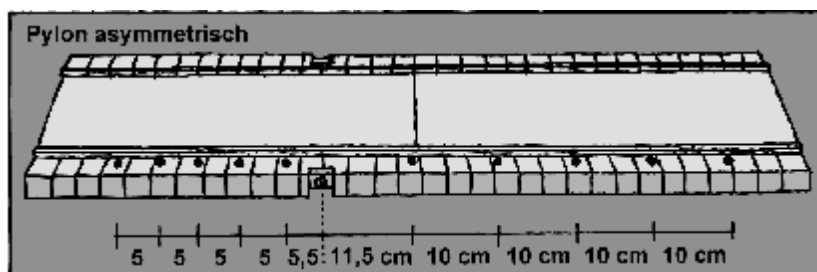


Illustration 7

Now turn the bridge base (bottom to the top). Then stick on the stringboard bases. Start again from the middle of the bridge. First mark the middle on both long 500 x 15 mm boards. Next apply white glue to the long side of the stringboard and put it on the bottom of the bridge base, directly beside the bridge caps. Both short stringboard bases will be installed in the same way on the right and the left to the middle part. Make it in the same way on the other side. To support the stringboard bases put the assembly aids from bag K behind them to avoid that the stringboards fall over (illustration 8).

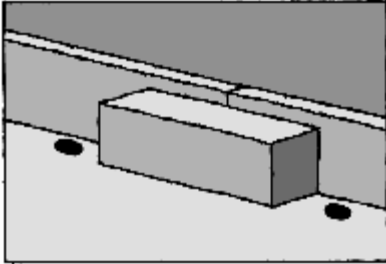
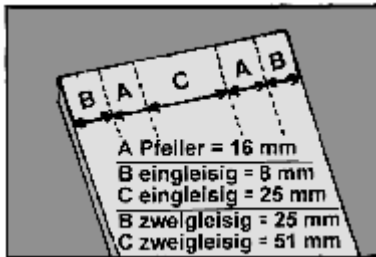


illustration 8

Put the assembly aids in the middle, at the joints and at the ends of the stringboard bases (on both sides). After having tightened the red rope, stick the remaining assembly aids on the free stringboard base areas. It is important that the glued parts dry well. Finally stick the three underside bridge bases on the assembly aids from bag K.

Then assemble the bridge heads with glue. First mark the position of the counter bearing on the inner side of both inside parts (133 x 105 mm) (illustration 9).



A pier = 16 mm  
 B single track = 8 mm  
 C single track = 25 mm  
 B double track = 25 mm  
 C double track = 51 mm

illustration 9

Now stick each 3 assembly aids on both base parts (133 x 56 mm) and each two glue parts on both inside parts (133 x 105 mm) so that they are aligned to the outside edges (illustration 10).

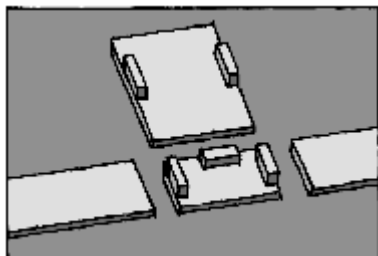


illustration 10

When the assembly aids are dry, apply glue on them and on all edges where you have used the assembly aids. First put the inside part to the base part and then both side parts to the inside and base part. Make sure that the parts fit exactly. After drying, the three outside parts of the bridge heads can be covered with the cardboard wall plates using NOCH spray glue "Haftfix" (ref. 61150). Apply the spray glue to wood and to cardboard.

Put the ready assembled bridge heads on the ends of the bridge bases and test if their position is correct. Then fix them with glue.

Next fix the bottom part of the pylon to the section holders with plastic glue.

Now you can turn up the bridge and put it on its "feet". Stick on the upper part of the pylon and let it dry for about 24 hours (very important).

## 6. Suspension rope

Take the end of the red rope where the knot is and arrest it in the following way: Screw one of the two short terminal strips with 2 screws parallel to and in a distance of 2.5-3 cm from the stringboard bridge base in front of a hole that is next to the middle of the bridge (illustration 11).

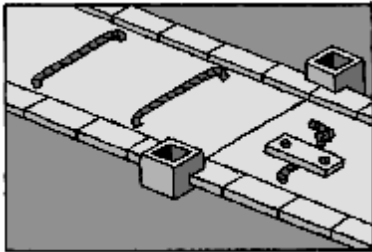


illustration 11

Now pull the rope with the thread aid through this first hole, then through the lowest hole of the pylon top and then down to the first hole on the same side of the bridge. Then pull the rope from the bottom through the hole that lies right-angled opposite, high to the lowest hole of the pylon top and then down to the 4th hole that is next to the middle of the bridge. So you have pulled the rope through the first four holes and can work in the same way with the second holes (illustration 12 shows the scheme of the rope on the bottom of the bridge base).

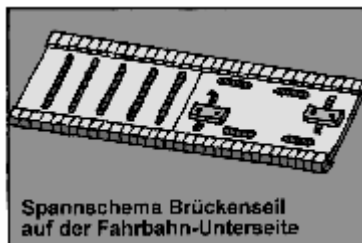


illustration 12

Here the rope leads to the second hole on the pylon top. After you have pulled the rope through the remaining holes, screw the second short terminal strip in the middle of the bridge base and lead the end of the rope through it but don't arrest it, don't tighten the screws. Now start to tighten the rope. Begin at the first hole and tighten the rope so that it is not very strongly tightened. Work on in the same order as you did when you were threading the rope. Then pull the rope tight under the terminal strip and tighten the screws. So the end of the rope cannot slip through. Check the rope tension again. Then make a knot in the end of the rope and cut off the remaining rope (illustration 13).

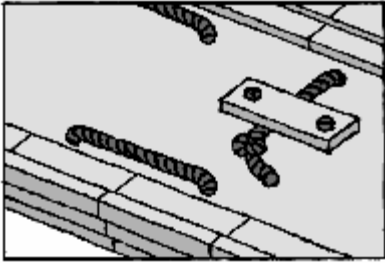


illustration 13

Cut off the screws that are jutting out on the top side bridge bases with a side cutter and smooth them with a rasp. After you have checked everything again you can glue the remaining assembly aids to the inside of the stringboard bridge bases. Then glue the 3 underside bridge bases on the assembly aids (the short part in the middle and the two long parts to the outside). Apply grey paint to the visible wooden sections. The grey colour should be similar to the plastic parts of the bridge.

Now glue the 4 counter bearings and fix them with contact glue to the inside of the two bridge heads and of the underside bridge base at the position that was marked at the beginning.

Now the bridge is ready and can be installed into the landscape. You can create the scenery at the ends of the bridge. Put the tracks on the bridge and apply ballast on the bridge base. Finally fix the bridge railings with glue.

If the pylon foot is too short for your landscape, you can purchase fitting plastic parts at your local dealer. The NOCH catalogue will inform you.