

# Layout Assembly Tips



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Our goal is for you to enjoy the hobby of model railroading. We developed these instructions to ensure every modeler is comfortable using NOCH products.

The following instructions covers the basic electrical wiring, landscaping, track laying and accessories installation. Your layout creation may challenge your modeling abilities, but the results and enjoyment are worth the effort. Remember, this is not only an individual

hobby, invite your family or friends to help you develop and create the scene you wish to see.

We hope you find using NOCH products a rewarding and fun experience.

It's time to start the construction. Relax and let's begin with illustration 1.

Your NOCH Team

## Tunnel Underlay Preparation

NOCH layouts traditionally appear with tunnels. It is very important that the layout frame is properly prepared before starting the landscaping. Depending on the selected layout, the tunnel underlays are secured at the factory or sold with the layout as a separate layout. Examine illustration 1 and secure the tunnel underlays with contact cement. Glue and nail down the additional wood sections (if available) to the existing frame (Illustration 1).

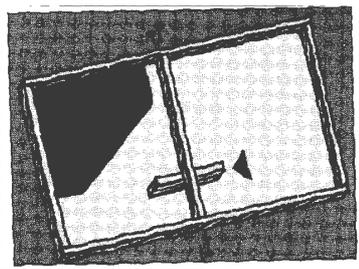


Illustration 1

## Table Height (Optional)

If you wish to raise your layout to table top height, we have the solution.

The aluminum frame system offers the best stability for the layout. Please check the NOCH catalog for the proper frame section sizes for your layout.

Additionally, we offer leg supports made of wood for the smaller layouts. We do not recommend the

wooden supports for the larger and heavier layouts (Illustration 2).

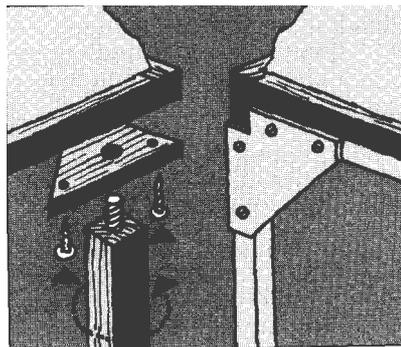


Illustration 2

## Landscaping

Before we begin the landscaping phase, we highly recommend selecting the areas that you would like to see as mountains, valleys, flat land or water bodies. We have plenty of NOCH landscaping materials to select from.

## Mountains and Rocks

To change the form of the mountain, we recommend using the NOCH Spray Glue to create a base for the NOCH Rock Compound surface you wish to change. Allow the glue to dry, which will create a rough surface for the compound adhere to. (Illustration 3)



Apply the rock compound to the prepared area. Shape and form the rock compound to your desired shape. After the rock compound is dry, you may change the colors with the NOCH water base color kits (Illustration 4).

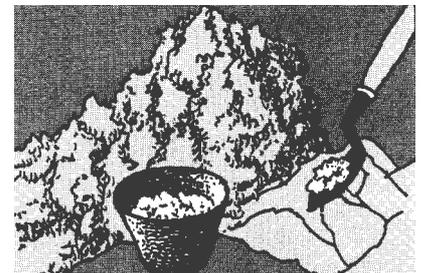


Illustration 4

Adding boulders to your scene is another option. We offer a variety of colors and sizes. If you decide to perform this task, we recommend using white glue to secure the boulders (Illustration 5).



Illustration 5

## Grass

The NOCH Squeeze Flock Applicator (#08100) is ideal for applying NOCH Static Grass to small and narrow areas such as paths or growths in rocky areas.

Before you start spreading grass, apply the transparent NOCH Grass Glue (#61130) to the desired area. Apply grass by simply pressing the sides of the applicator. Because of the electrostatic rubbing of the grass in the NOCH Squeeze Flock Applicator, the fibers will “stand” on the surface, resulting in a very dense carpet. For larger areas, it may be easier to use the NOCH Turbostat (#50180) Flock Applicator. (Illustration 6)



Illustration 6

**Track Planning**

If you have one of the HO layouts, it will include several track plans for different makes of track. Please select one of the track manufacturers and follow the correct track plan. Additionally, we offer several items to enhance your track plans. (Illustration 7)



Illustration 7

For an HO layout the MOSSMER track bed is a ready made track bed with ballast. This light weight and flexible foam material is an ideal solution for track with ballast.

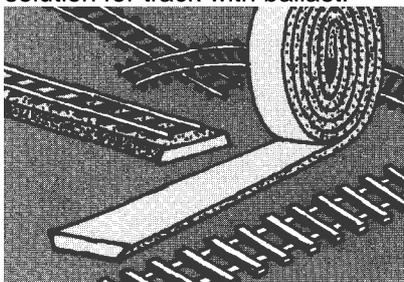


Illustration 8

Additionally, we are offering sound insulation material for the Märklin C Track System. (Illustration 9)

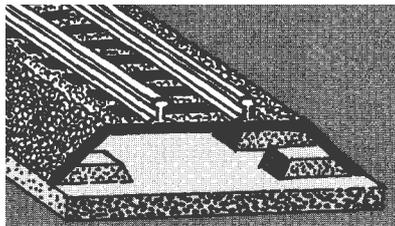


Illustration 9

**Bridges**

The layout kit includes a bridge set. Assemble the bridge by following the bridge instruction sheet. DO NOT GLUE THE PIERS TO THE BRIDGE AT THIS POINT. (Illustration 10)

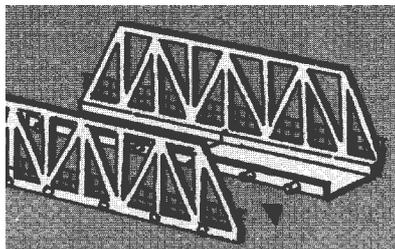


Illustration 10

Some of the layouts may come with a pre-assembled stone bridge. Measure the pier heights and make sure the bridge is level. Be careful when adjusting the piers, you may have to cut them to the correct height. (Illustration 11)

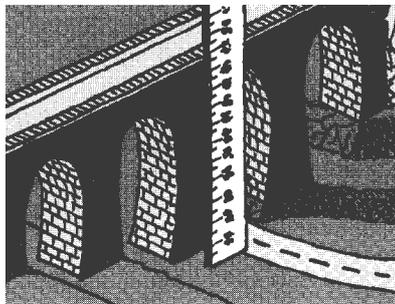


Illustration 11

Place the bridge(s) with piers on the layout. Place the track sections on the bridges and in the tunnels with double-faced adhesive tape on the previously marked positions on the tunnel underlay. (Illustration 12)

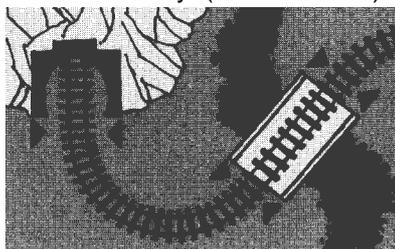


Illustration 12

Assemble the track sections according to the plan and place them loosely on your layout. DO NOT SECURE THE TRACK AT THIS POINT.

Check and adjust all the track sections for proper alignment. Slowly roll your longest car on the entire layout to check tunnel and bridge clearances. After arranging the track, you can secure the track at the tunnel entrances and bridges with screws. Position the track and drill through the ties with a 1 mm drill bit. One hole at each end is sufficient to secure the track. Some of the track manufacturers include a pre-designated point for drilling. (Illustration 13)

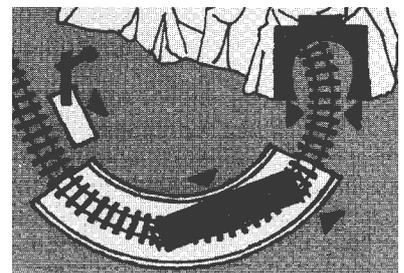


Illustration 13

Mark the exact location for each bridge pier. Remove the track and proceed to attach the bridge piers to the terrain with glue. When the bridge(s) are installed, secure the track sections on the bridge(s) again. (Illustration 14)

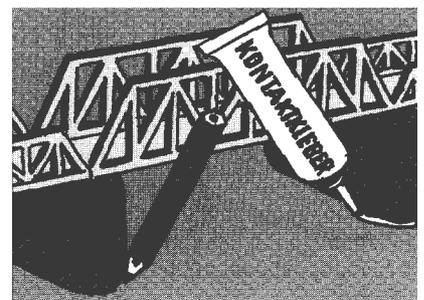


Illustration 14

**Grass Removal**

If you decide to place additional track, roads or buildings on the layout, simply moisten the grass area and gently scrape to remove the grass. (Illustration 15)

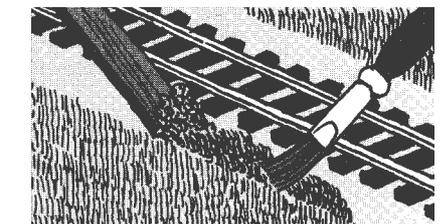


Illustration 15

### Track Laying

Position the track sections on the layout and drill through the ties and landscape with a 1 mm drill bit. One hole at each of the track is usually sufficient to secure the track. Use screws to secure the tracks to the layout. For electrically operated turnouts, the hole size will depend on the wire or connector size. The same applies for signal systems. (Illustration 16)

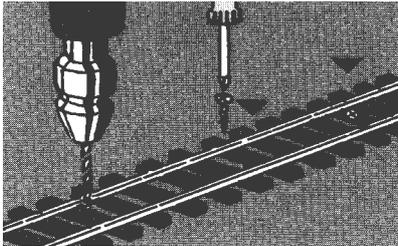


Illustration 16

### Optional Tunnel

Some of the layouts are designed for several scales. We offer a wide variety of tunnel portals, if the tunnel portals do not match the scale you wish to use. (Illustration 17)

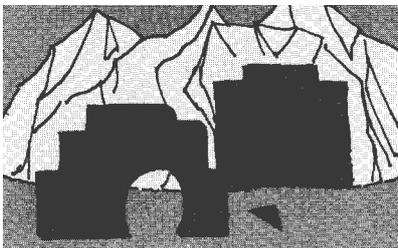
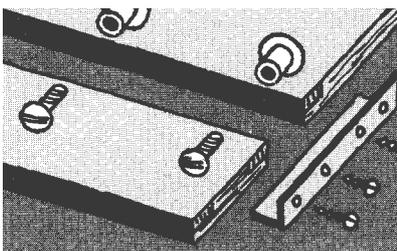


Illustration 17

### Transformer Panel

We have an optional Transformer Panel to support the transformer / power packs and control boxes. This item can be screw mounted to most of our layout designs. We recommend using screws when securing the transformer / power packs and control boxes to the panel.



(Illustration 18)

Illustration 18

### Lights and Lamps

Light up your layout! There are plenty of lamp styles to select for your scene. Simply mark the spot for the lamp and drill a hole large enough for the wire to pass through. We recommend using screws to secure the lamps. (Illustration 19)

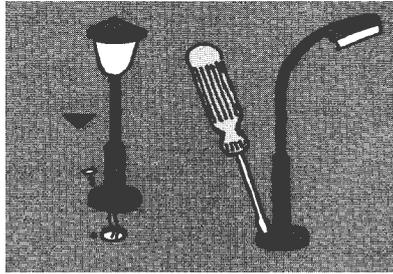


Illustration 19

### Structures and Buildings

Assemble all the structures and buildings and place them on the layout, but do not permanently secure them at this point. Mark the positions for the structures. If you wish to use interior lighting, proceed to drill the holes for the lighting fixtures. Some of the structures appear with a ground piece. Please consider the option to remove this piece from the structure kits before securing the structures to the layout. It may improve the overall appearance of the layout. Glue the structures to the layout. (Illustration 20)

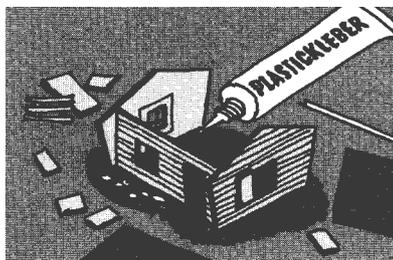


Illustration 20

### Electrical Systems

It is easier to wire the electrical system by supporting the layout with screw clamps. When installing the lights for the structures, we do not recommend using glue. If the lightbulb burns out, it will be easier to replace. Simply push the lightbulb through the layout from the bottom side. Complete the electrical accessories installation. Organize the wires under the layout and number each point in reference to the component on the surface of the layout. (i.e. Turnout 3 is „T3“.) After you have numbered the various electrical components, we recommend organizing the wires with wire holders. Make an attempt to

organize the wires in straight and right angles. (Illustration 21)

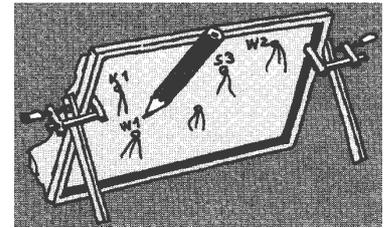


Illustration 21

### Test Run

Connect all the electrical wires to the correct terminals. Slowly run a train around the layout and test all electrical functions. (Illustration 22)

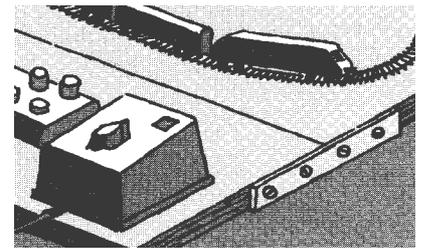


Illustration 22

If you encounter an electrical „dead spot“ or short, use a voltage tester to determine the location of the problem. (Illustration 23)

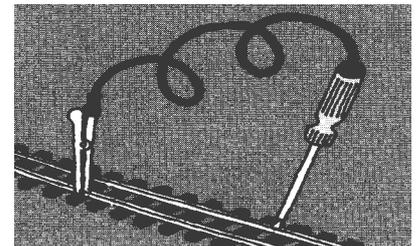


Illustration 23

### Water Pump

To enhance your layout, we developed a small water pump. However, we do not recommend using the water pump on the rock compound, glued stones or areas that are not supported by the plastic layout form. (Illustration 24)

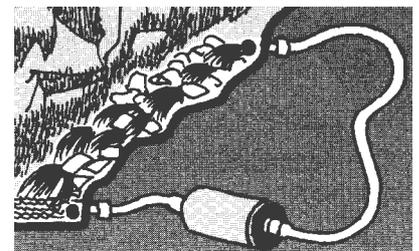


Illustration 24

### Signs and Road Accessories

Enhance your layout's appearance with a full line of NOCH roads and accessories. All NOCH highways, roads, parking places, pavement and paths are self-adhesive and

flexible. Complete the road network with traffic signs, crash barriers and other road accessories. (Illustration 25)

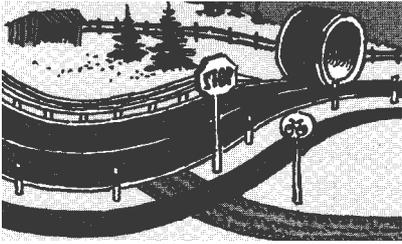


Illustration 25

### Scenery

Allow your creativity to carry you through the decoration process. We offer a wide selection of highly detailed mini scenes, figures, trees, autos and more.

Give life to your layout with a wide assortment realistic trees, bushes, lichen, and hedges. Secure them with contact or hot glue.

Create the colors for your landscape by selecting a variety of foliage and flock. White glue or spray glue are recommend to secure these items to the layout.

As you progress through the scenery steps, you will always find a place for a tree, auto or small garden house. Just make sure the scenery items do not interfere with the overall operation of the train.

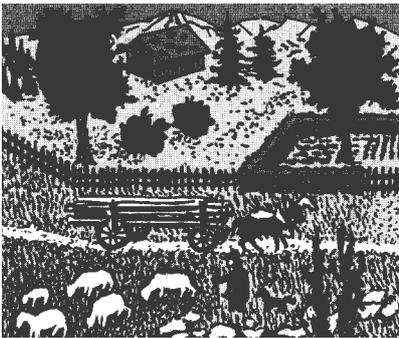


Illustration 26

Let the fun start! However, you will see future expansion possibilities. We offer a whole line of expansion pieces to increase the overall activity on the layout.

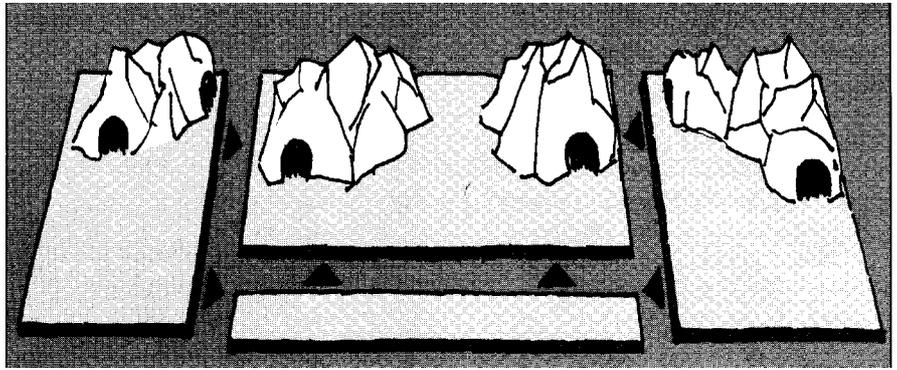


Illustration 27

The expansion pieces are easy to install. Combined with the Aluminum Frame, these items are simply screwed together. The Laggies Helix system is another integral component when constructing the storage yard under the layout. The Aluminum Frame System, Laggies Helix and expansion pieces present another dimension for your layout ideas.

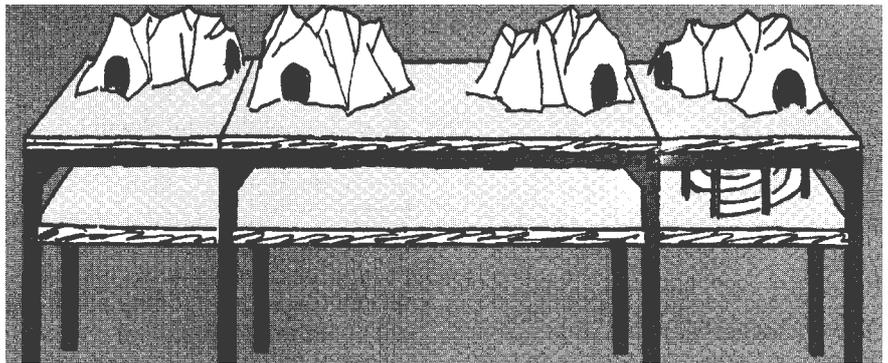


Illustration 28