Please make sure that the switch wire is put through the switch-rod hole properly* (fig. 14) (*if no hole is available, please drill a hole with a diameter of 0,8 to 1,2 mm).
At this point we suggest to place the switch-rod centered (switch "half open") as it makes the later programming with PIKO decoder for servo machines #55274 more easy. But it willl not be a problem if the switch rod already touches the left or right track.
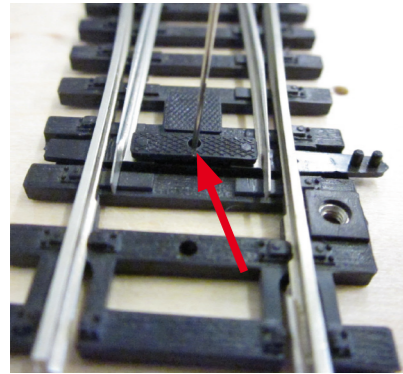

fig. 14 Cut the excessive wire ca. 1-1,5 mm above the switch rod

5. Startup:

As following step the setup for the PIKO decoder for servo machines willl follow. The exact description can be found in the instruction of #55274 then.

As suggested in point 4 / fig. 14 it's an advantage to place the switch rod centered, as the programming for left and right positions in #55274 starts from the center-position. If the switch rod already touches the left or right track you should take care during later programming then.

You can also find a "how to" video tutorial in our webshop (www.piko-shop.de) or on our YouTube channel, that shows the assembly and programming in analogue and digital*.

*by the help of the PIKO decoder for servo machines #55274
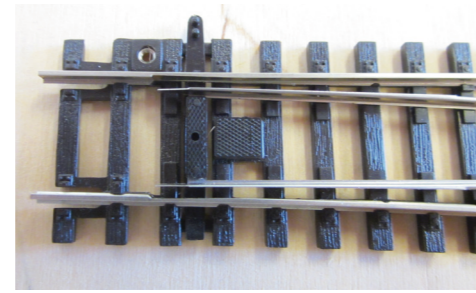
Appendix:

fig. 15
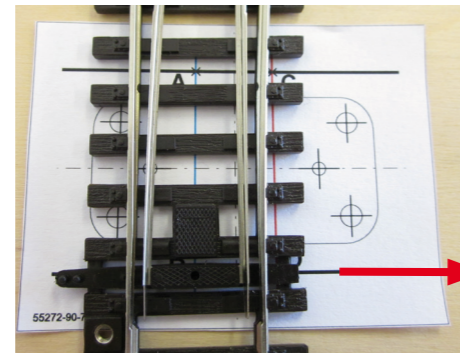Place the switch rod centered ("half open").

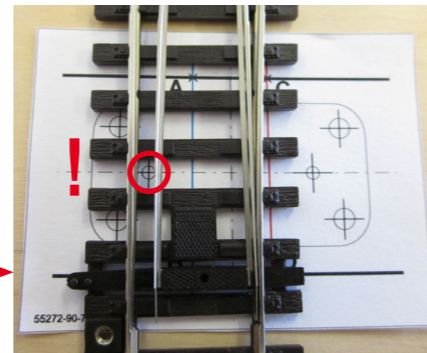
fig. 16
Drilling template under switch

fig. 17
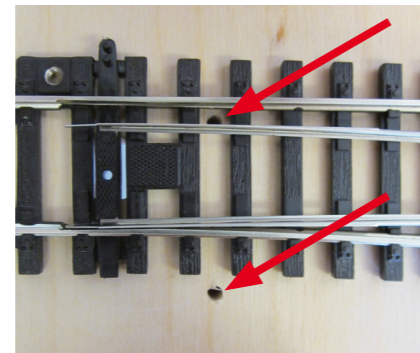Move switch rod to the right to find the second mark ③.

fig. 18
After marking position ③ 2x, remove drilling template and drill hole for switch-wire.
From here go on with point 4 of this instruction.

If neccessary the holes can be closed after assembly to avoid any leakage if glue is used there.

6. Safety instructions:

The PIKO Under-Table Servo Switch Machine is exclusively designed for use with electrical model railroad layouts. The use is only allowed with the components described in this instruction. Other use than described here is not allowed.
• During assembly and connection always switch off the power.
• Connected power supplies must have a protection against short circuit to avoid fire.
• Never leave the components without supervision during usage. The PIKO Under Table Switch Machine is not a toy.
• The PIKO Under-Table Switch Machine is not water proof. It's only designed for indoor use.
• Do not try to open the switch machine, otherwise the guarantee is lossed and damages may appear.

A proper function of the PIKO Under-Table Switch Machine can only be ensured in combination with PIKO Switch Decoder for Servo Machines.

Otherwise negative effects may appear, for example a uncontrolled shivering.
Most Important after assembly is that the Servo Machine must not turn further than necessary anymore! This "overturning" may cause problems like a bended switch wire, or switch wire may fall out of it's fixation hole or even worse.

Following we only can point out some basic rules to avoid problems during setup:

1. Basically all functional features should be checked before final assembly under the table
2. The servo machine must not be connected to a powered decoder! Otherwise negative effects may appear, f.e. the decoder doesn't know the servo's position and willl cause "overturning" by checking left and right end-positions.
3. Check the moving-distances (left/right) before assembly under the table. We suggest to start the programming for left and right position "from the center"
4. The decoder must not loose the reference of the zero-position at the servo from any reason, otherwise "overturning" may appear, too.
5. The signal lines between servo and decoder should be as short as possible. Long signal lines may cause interferences and functional problems. Twisting the signal lines already may help.

We suggest only to use the PIKO provided servo machine In case of replacement. Other servo machine types must be checked for correct function before re-assembly.

#55272
Under-Table
Servo Switch Machine
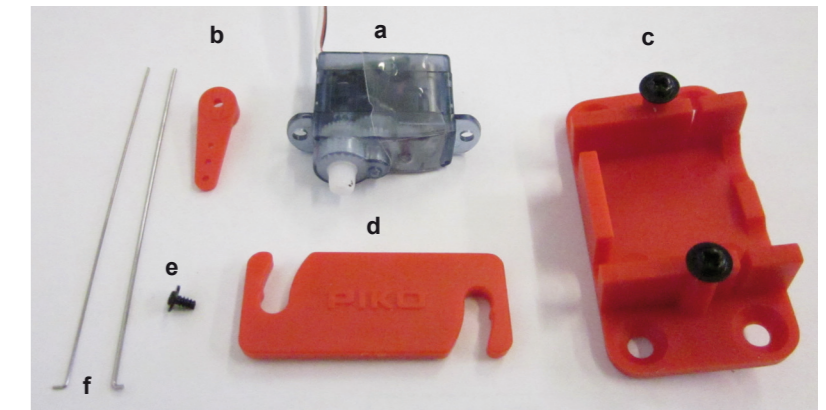
PIKO
MODELLBAHNEN & GEBÄUDEMODELLE H0

Description:
The special features of the PIKO Under-Table Servo Switch Machine are the compact dimensions and the very easy assembly.
With the help of a drilling template it's very simple to find the correct position under the table and within a few minutes everything is assembled and setup.
With only a few working steps and in combination with PIKO Decoder for Switch Machines #55274, whos programming is specially setup for #55272, the servo machine can be adjusted quickly.

Technical datas:
• total dimensions (including servo) ca. 42 x 22,6 x 15 mm
• compact long-life servo machine with little noise
• servo machine with servo-lever, screw and two wires in different diameters
• servo machine with standard plug, 3pole type (f.e. JST, Futuba and others)
• power consumption during movement ca. 80 mA / blocked max. 200 mA
• 2 pcs. wire included: 1pcs. 0,4 mm x 50 mm, 1pcs. 0,6 x 50 mm (for table thicknesses up to 32 mm)

a servo machine	**d locking plate**
b servo lever	**e flange head screw**
c base plate	**f switch wires**

WL/WR · BWL/BWR · Y-Switch

WL/WR · BWL/BWR · Y-Switch

Double Slip Switch

Double Slip Switch

Mark B

switch rod

track/switch end

track center

fig. 3 assembly position "right"

Mark D

switch rod

track/switch end

track center

fig. 4 assembly position "left"

track center

switch rod

fig. 7

track center

switch rod

fig. 8

3-Way-Switch

3-Way-Switch

switch rod 1

switch rod 2

track/switch end

track center

fig. 5

switch rod 1

switch rod 2

track/switch end
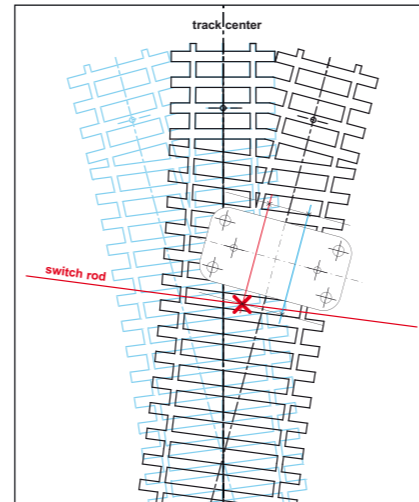
track center
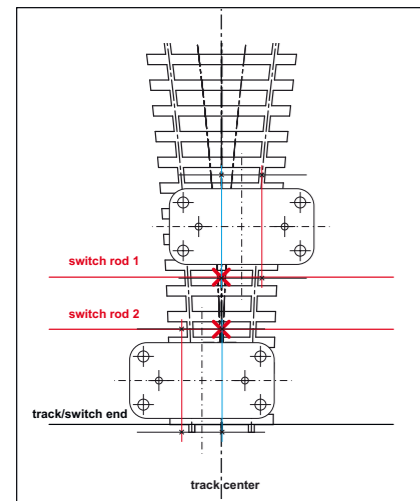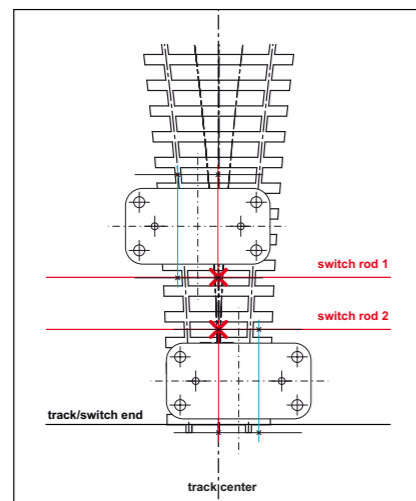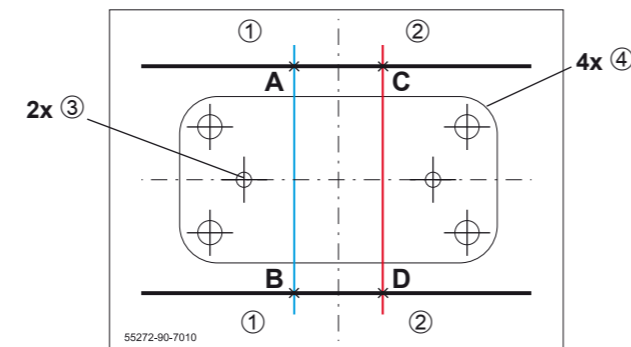
fig. 6

Assembly with the help of the drilling template:

• place the switch arm rod centered (make switch "half open")
• place point A,B,C or D centered under the switch arm rod
  and align red or blue line with the track-center
• mark position ③ and drill with Ø 2,0 - 2,5 mm

① ②
A   C   4x ④
2x ③
B   D
① ②
55272-90-7010

Assembly and Startup:

1. Defining assembly position under the table and pre-assembly of the base-plate

Firstly, please define the position of the servo machine under the switch. It's possible to mount the servo "right" or "left" from a switch because the servo-lever-center is not in the middle of the housing. The center lines on fig. 1 + 2 show the servo-lever-center. This center line must match with the track-center-line during assembly, depending on assembly position "right" or "left". (see step 2)
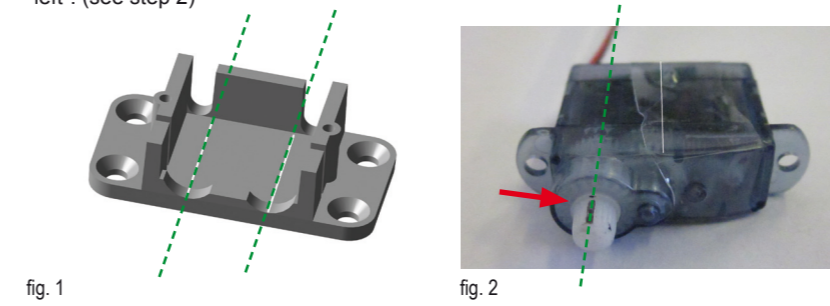
fig. 1   fig. 2

2. Define assembly position "right" or "left"

Figures 3 to 8 show the possible assembly position under different PIKO A-Track switches. These graphics show the positions "right" or "left" under a switch.

With that you can choose if the track-center must be aligned with line A-B or line C-D of the drilling template.

3. Starting the Pre-Assembly

3.1 Mount base plate:

a) Put the drilling template under the switch, depending on the choosen assembly position "right" or "left". Now mark the two positions ③ to the table (f.e. pierce trough with sharp pin or pen) and drill these holes with a diameter of 2,1 mm to (max.) 3 mm completely through (base-plate pin diameter is 2,0 mm). These holes now act as a guiding for the base-plate pins (fig. 9).
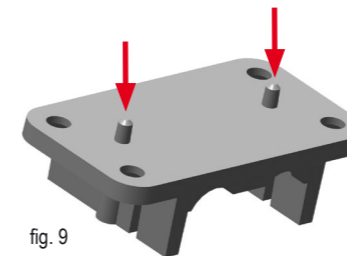
fig. 9

b) Drill the hole for the switch-wire (positions A,B,C or D) centered under the switch-rod. The diameter depends on the plate thickness and the moving distance in the switch. We suggest a diameter of 8 to 10 mm.

c) Place the base-plate into position and fix it with screws (④). The screw diameter should be 3,0 mm, type "sunk head screw". The length depends on your plate thickness. Please see fig. 12.

For better imagination please also check fig.'s 15 to 18.

3.2 Pre-Assembly of the servo machine:

To ensure the easiest assembly, we suggest to do following pre-assembly at the servo machine:

a) At the servo-lever-arm is a marking for "zero position" (arrow in fig. 2). Mount the servo-lever aligned with that marking "away from the table". The arms direction depends on the choosen assembly position (see fig. 10).

fig. 10 assembly position "left"   fig. 10 assembly position "right"

b) Now please choose a desired switch wire. Hook it into a hole if the servo-lever with it's short leg and place it into one of the gaps left and right from the screw

c) Please fix the servo-lever and the wire with the flange-head screw (fig. 11 / example shows assembly position "right").
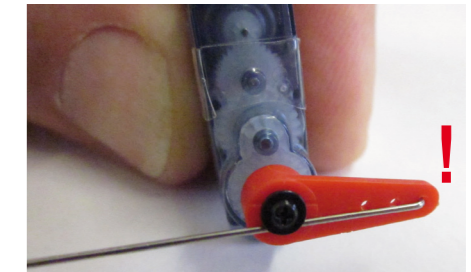
fig. 11

4. Final assembly under the table

Now you can put the pre-assembled servo-machine into the pre-assembled base plate and fix it with the locking plate (see fig. 12 + 13).
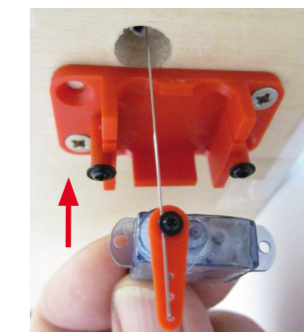
fig. 12   fig. 13