

Super SmartFrog™ Manual

1. Product Introduction

The Super SmartFrog is the derived product of the SmartFrog designed for the Servo Driver Board to also control the power to the rails. The new Super SmartFrog does not only keep the automatic power cut-off/supply function, but also provides the new “Auto switch” function which enables your locomotives to easily move as you desire. Even if you forget to switch the turnout, with the Super SmartFrog, your locomotive will still move smoothly. The Super SmartFrog is also designed for Reversing Loop Activation to reduce the bother of turnout control.

2. How to Install the Super SmartFrog™ for Power Routing

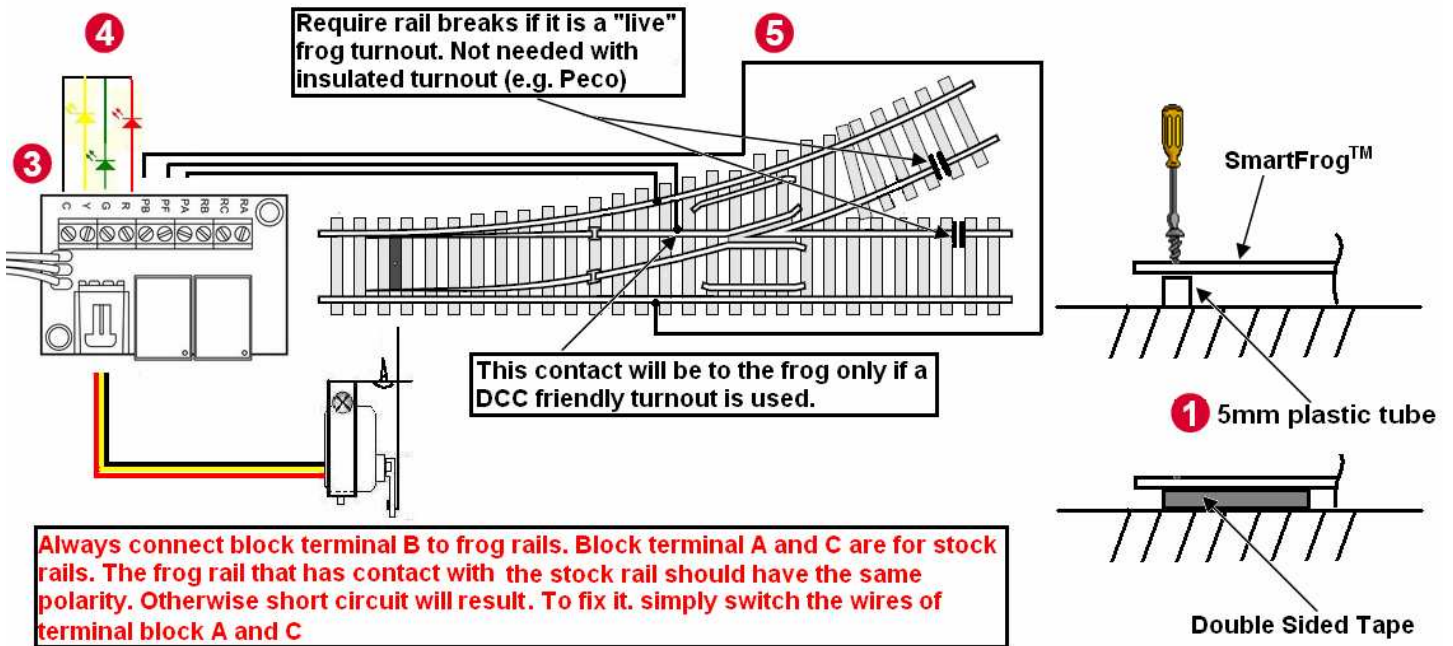


Figure 2 The Super SmartFrog™ Installation + DC Power Routing

Note: the Super SmartFrog™ simply takes power from a track through terminals A and C and routes it through to terminal B as required. It does not supply power to the track.

2.1 Installing the Super SmartFrog™

The easiest way to install the SmartFrog™ is to have the servo mounted properly (see SmartSwitch™ manual section 4), the servo cable connected to the SmartSwitch™ (see SmartSwitch™ manual section 1.1), and the servo working properly (see SmartSwitch™ manual section 1.3).

1. Secure the Super SmartFrog™ board. You can either use screws or double sided tape. See SmartSwitch™ manual figure 1.
2. Connect the servo cable to the Super SmartFrog™.
3. Connect the Super SmartFrog™ cable to the SmartSwitch™ control board. Use the extension cable if required.
4. Install the signal or indication light. **This step is optional but helpful when it comes to configuring the Super SmartFrog™ for the short circuit free power routing (see SmartSwitch™ manual section 6.2).**
5. Wire a turnout as shown in figure 2 for the DC power routing. Refer to SmartSwitch™ manual Figure 1.1 for the DCC friendly power routing.

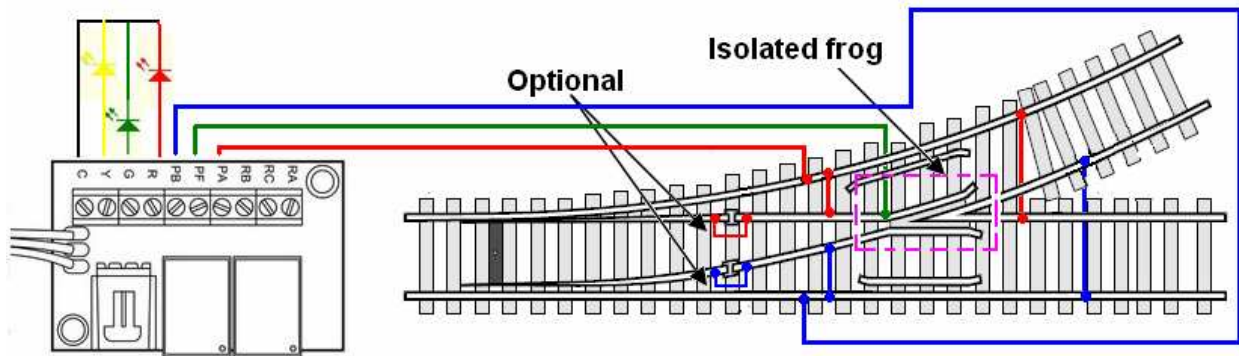


Figure 6.1 The DCC Friendly Power Routing.

2.2 Configure the Super SmartFrog™ for the Short Circuit Free Power Routing

This section assumes you have finished installing the Super SmartFrog™ as shown in section 1.1.

1. Flip or push on the corresponding toggle switch or push button to trigger the servo movement and then wait for more than 5 seconds. You should hear a clicking sound from the relay. The corresponding indication/signal lights (if installed) will light up and change color.
2. Repeat step 1 to switch a turnout to other direction.

You are done! The reason to wait for 5 seconds was for the Super SmartFrog™ to register the servo's start and end positions. Now every time a turnout is thrown, the Super SmartFrog™ will cut off current flow to the frog and change the frog polarity **only** when it finishes switching as shown in figure 1.2. **Therefore it effectively eliminates the problem of a short circuit.**

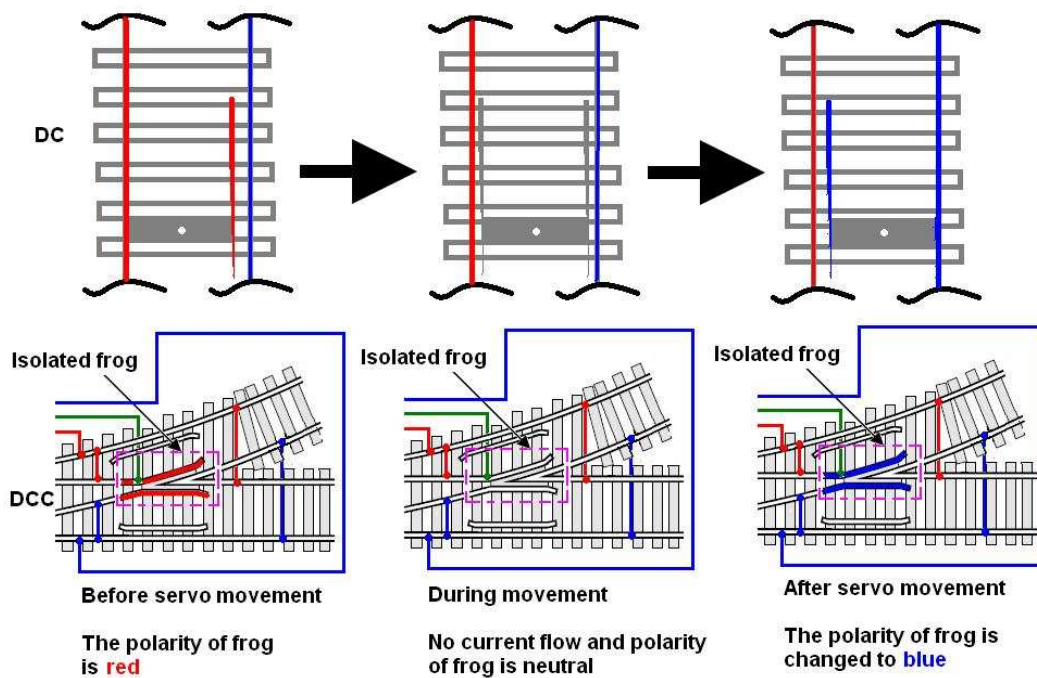
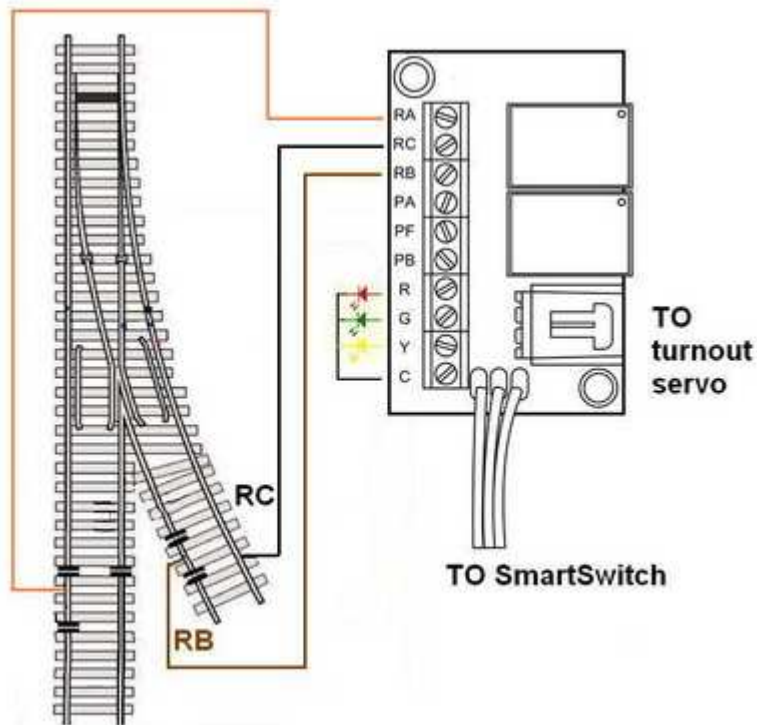


Figure 1.2 How a Super SmartFrog™ Works for Both DC and DCC Power Routing.

3. How to install the Super SmartFrog™ for “Auto switch”

Before installing the “Auto switch” function, you have to set two sections of trigger rail (as the A & B section trigger rail of the figure below). Then connect RA to RA and RB to RB. Finally, connect RC to the rail without trigger rail (as RC of the figure below).

How to detect the “Auto switch” to see if it is installed properly? When the locomotive is coming from the closed direction (for example, the turnout is set to clear and the locomotive is coming from throw direction), at this time the “Auto switch” will take effect and automatically switch the turnout to throw setting. If the turnout does not switch automatically, the RA and RB may be wrongly connected. Try to exchange the two connections



How to decide the trigger rail positions? The SmartSwitch enables the “Auto switch” function to operate at its highest speed. It is not necessary to reserve space for waiting. You may choose the positions in the front of Isolate frog or Electric Frog.

The switch speed of the “Auto switch” will not change the speed set by SmartSwitch. For example, the “Auto switch” switches the turnout at the highest speed though you switch the turnout at the lowest speed of the SmartSwitch.

Only using metal wheels will make the “Auto switch” function. Non-metal wheels cannot enable the “Auto switch” function. In addition, the SmartSwitch™ will automatically switch to its original turnout position if there is no touch to the trigger rail by metal wheels within 10 seconds after wheels touch the trigger rail.

4. How to install Super SmartFrog™ LED indicate light

1. Connect the G point of the screw terminal to the green LED positive pole, the Y point to the yellow LED positive pole, the R point to the red LED positive pole, and the C point is the common negative pole.
2. When you switch turnout under the normal status of the SmartSwitch™, the Super SmartFrog™ shows the yellow light (the yellow LED lights up) at the start of the turnout moving. It shows the corresponding light (the green or red LED lights up) after the turnout moves to the position.
3. When the “Auto switch” function of the Super SmartFrog™ is enabled to switch the turnout automatically, the yellow LED lights up for 1 second then the other LED lights up (for example, during the switching of green to red, the yellow LED will light up for 1 second before becoming red).

If the LED light do not light up as they should (the memory chip on SmartFrog™ may not register the servo’s start and end positions properly), repeat step 1 and 2.

If you encounter any problems after installing the product, please directly contact us through the email: service@mail.anemodel.com