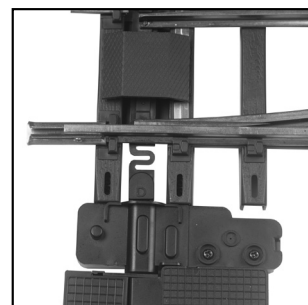


BACHMANN®

LARGE SCALE SLOW MOTION SWITCH MACHINE

ITEM NO. 92429

The Bachmann Large Scale Slow Motion Switch Machine is designed to add realism to railroad operations by allowing the user full control of the throw speed for most commercial turnouts available to Large Scale modelers.



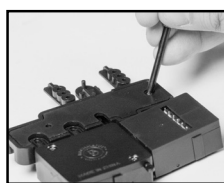
INSTALLING THE ADAPTOR ARMS

The throw length required to change the direction of your turnout may vary depending on the manufacturer of the turnout. Bachmann's Slow Motion Switch Machine comes with 4 adaptors, labeled A, B, C, and D. Adaptor D is factory-installed. This is designed for throw bars with a single hole such as on turnouts manufactured by Bachmann, and many other aftermarket throw bars. Adaptors A-C are included in the parts bag. These are designed for turnouts with slotted holes on each end of the throw-bar, such as those manufactured by Aristocraft, Piko, and LGB. Adaptor A provides the greatest length of throw distance and is the same length as Adaptor D. Adaptor B is shorter than A by about 0.6mm and Adaptor C is shorter than Adaptor A by about 2mm. When installing on your railroad, choose the adaptor that best matches the throw distance of your turnout points.

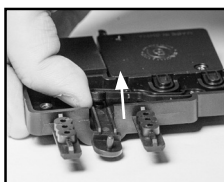


To replace the installed adaptor with the appropriate adaptor for your track type, make sure that the throw arm is first in the retracted position.

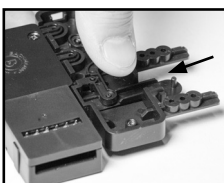
- 1) Turn the switch machine over and remove the single screw under the adaptor assembly to remove the adaptor cover.



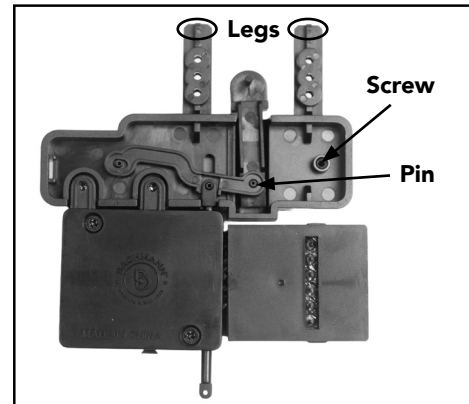
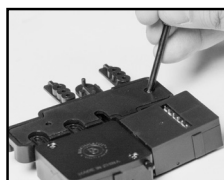
- 2) Gently lift the arm inside the adaptor assembly so that it disconnects with the adaptor and remove the adaptor from the Switch Machine.



- 3) Place the desired replacement adaptor in the same slot from which the previous adaptor was removed and gently lift the arm once again to attach the adaptor's pin to the connection point on the arm.

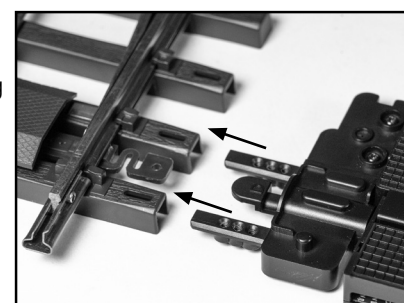


- 4) Reinstall the cover and secure it with the same screw that was removed in Step 2.



CONNECTING THE SWITCH MACHINE TO YOUR TURNOUT

To install the Slow Motion Switch Machine, place it next to the diverging point on your turnout and align the legs with the ties on each side of the throw bar on the turnout. The Switch Machine can be installed on either side of the track depending on available space. Insert the legs of the Switch Machine into the ends of the ties to align the adaptor with the throw bar on the turnout and connect the pin on the adaptor to the connection point on the throw bar. This is best achieved if the turnout is thrown in the direction opposing the Switch Machine, thus bringing the throw bar closer to the Switch Machine.



If you wish to fasten the Switch Machine to the ties, there are three screw holes provided on each leg. Use the hole that offers the most even pressure to the turnout points when it is in either throw position. Screws for this step are not included.

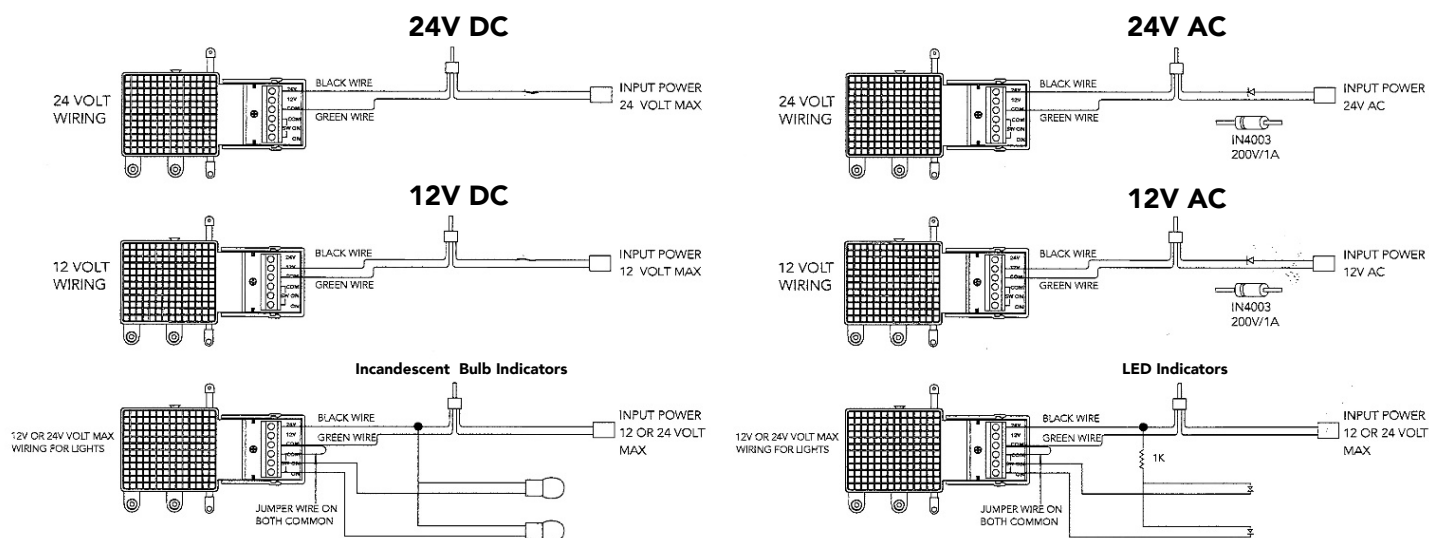
ELECTRICAL HOOKUP

Bachmann's Slow Motion Switch Machine is designed to work best at voltages between 9-12V DC or between 18-24V DC using batteries or the auxiliary output on a power supply. The higher the voltage in each range, the faster the turnout will throw. The throw of the Switch Machine is managed by changing the polarity of the common and voltage terminals (see the wiring diagram). Changing the polarity of the wires causes the switch machine motor to move to the opposite position. Once in that position, the motor turns off. **If AC voltage is desired, a diode must be inserted in one input line before the control switch (see the following wiring diagram).**



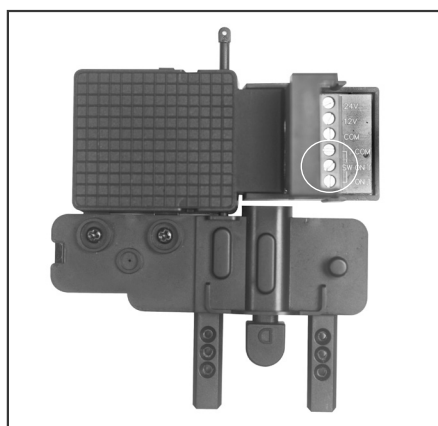
Note: The supplied switch comes with a plug at one end for attaching to your power source. If your power supply or battery does not have a compatible plug socket, simply cut off the plug and attach the wires directly to your power source.

Note: The Bachmann Slow Motion Switch Machine is compatible with most aftermarket control devices that produce the proper output voltage and can switch the polarity of the two lines connected to the Switch Machine. For optimal performance, and to complete each throw, the throw time for the control device should be set for longer than is needed for the turnout motor to turn off before the control device shuts off power. Please refer to your control device instructions for setting information.



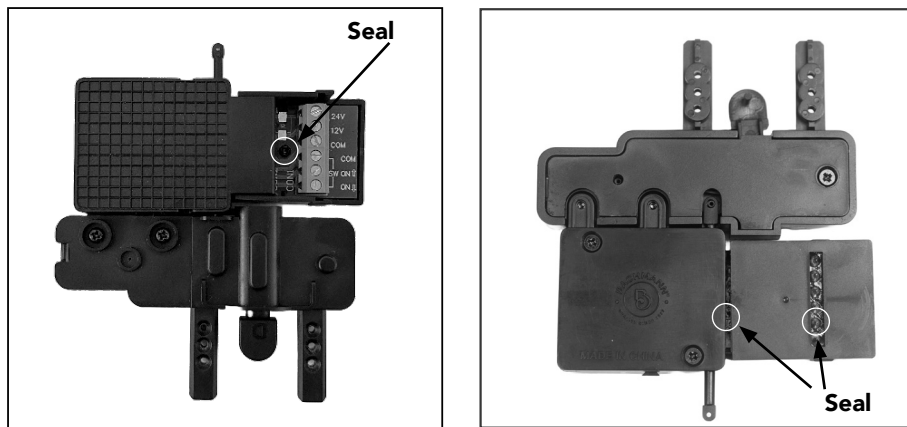
AUXILIARY OUTPUTS

Bachmann's Slow Motion Switch Machine also features outputs to control one of two auxiliary outputs, such as panel lights or railroad signals. The maximum load for these outputs is 0.5 amps. See the above wiring diagram for hookup instructions.



OUTDOOR USE

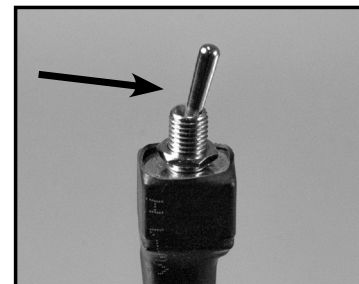
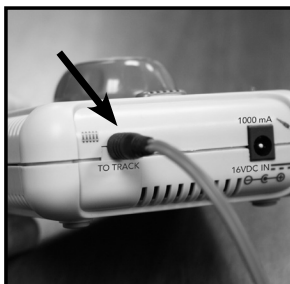
Bachmann's Slow Motion Switch Machine is water and dust-resistant, featuring two "O" rings in the motor case, **but it is not waterproof**. The Switch Machine can be protected from the weather as shown below. It is recommended that any openings be sealed with silicone caulk if the Switch Machine is to be used in a wet environment. **Please be reminded, however, that the Switch Machine is NOT waterproof.**



OPERATION

To control the speed at which your turnout operates, connect the included power wire with toggle switch to any speed controller that can adjust the voltage, and can also match one of the connection specifications as shown in the diagram on the previous page. If using a Bachmann Speed Controller, ensure that the plug on the Switch Machine power wire is removed and connect the exposed wire ends to a Bachmann Red Power Wire (Item No. 44477). [The flat plug on the Red Power Wire will also need to be removed to make the connection.] Once this has been completed, plug the jack end of the Red Power Wire into the Speed Controller. If you are using a speed controller with an accessory terminal, the Bachmann Red Power Wire will not be needed. Simply remove the plug from the included power wire and connect the wire ends onto the terminal.

Once the power wire is connected, set the position of your control dial to choose the turnout speed. The further the dial is turned, the faster the throw speed will be. The toggle switch on the power wire will control the direction of throw for the turnout. If an interruption in power occurs, you can manually throw the turnout using the tab on the rear side of the Switch Machine.





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