Dear Customer:

Thank you for purchasing a Turnout Controller kit with Signal lamps.

Whether you are going to use a Stall Motor, Snap Bipolar or a Snap Twin Coil controller the installation of the fibers with the signals is identical for all - see page on “Signal Installation”.

Wiring: The 3 different offerings require different wiring.
Stall Motor Controller: Clip the wires onto lead 1 and 8 from the Tortoise motor.
Snap Twin Coil Controller: Take 3 wires from the ‘switch machine’ and instead of wiring directly to the switch, interpose the Controller in between. The 3 wires go into the left 3 screw connectors (when facing the label on the Controller right way up). The wire that would normally go directly to the center connector on the switch goes to the center of the 3 screw connectors.
Snap Bipolar Controller: Take 2 wires from the ‘switch machine’ and instead of wiring directly to the switch, interpose the Controller in between. The two wires go into the left 2 screw connectors (when facing the label on the Controller right way up).

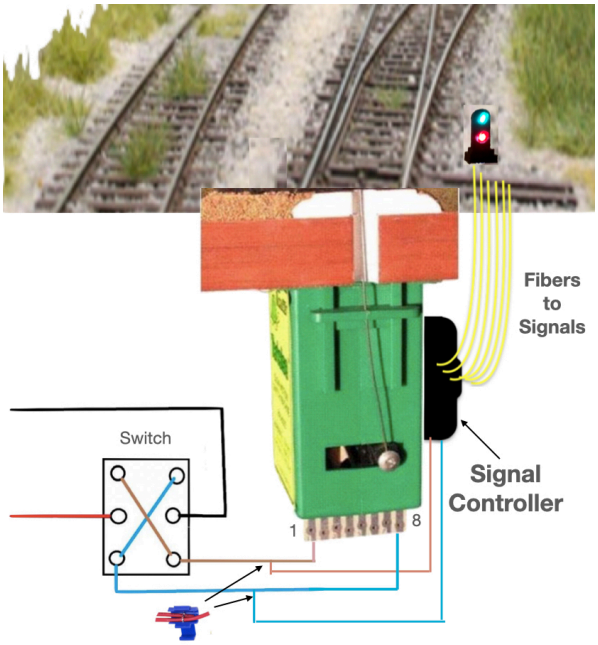
A unique feature of the Snap Controllers is they have 2 extra screw connectors on the right hand side. These will accept AC or DC voltage from your layout if a wall-wart is not used to power the Controller. Alternatively, if a wall-wart is used, the output from these 2 extra screw connectors can be used to connect to another Snap Controller to power it.

We hope that you will find this kit the easiest approach to adding signaling to your turnout switches on your layout.

Blessings

Dwarvin Enterprises Ltd.
CS@Dwarvin.com

Wiring up the Turnout Controllers



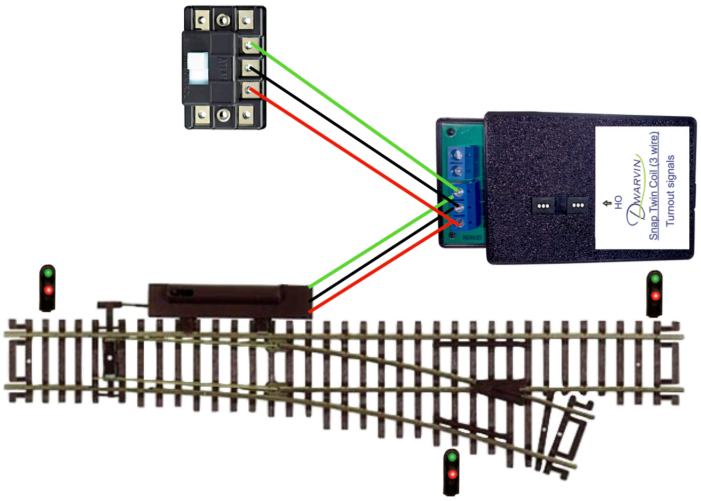
Snap Turnout Controller:

1.Attach the velcro piece provided to both the Turnout Controller and any of the 3 non-functioning surfaces of your switch machine.

2.Connect the wires from the Turnout Controller to the power supply wires on your switch machine somewhere between the Switch Machine and the Switch you have installed, using the suitcase connectors.

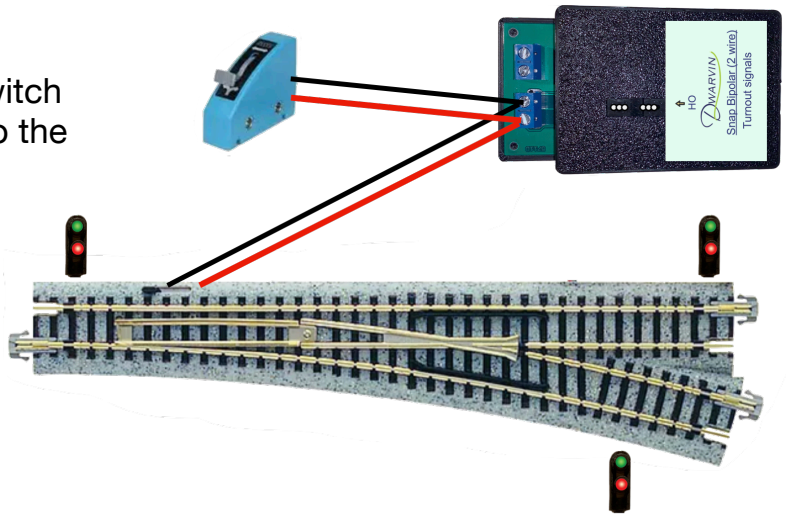
Snap Twin Coil Controller:

Connect the 3 wires from the Switch machine to the Controller then to the switch



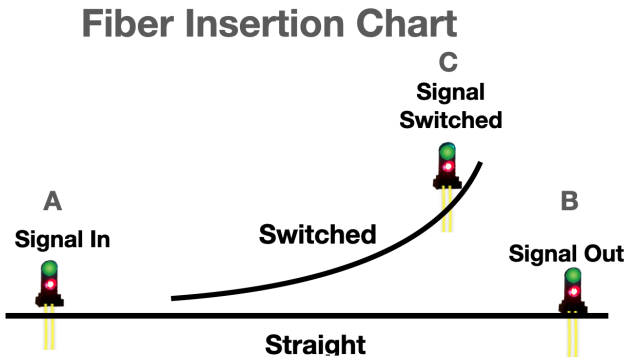
Snap Bipolar Controller:

Connect the 2 wires from the Switch machine to the Controller then to the switch



Signal Installation into Dwarvin Turnout Controllers

1. Check there is light from the Turnout Controller that gets switched when you throw the switch. If not, you have not connected to the correct wires or you have made an incomplete connection.
2. Drill 3 holes (5/32 drill) at the 3 approaches to the switch and mount the 3 signals into the layout, inserting the fibers through the holes first.
3. Selecting the correct fiber insertion: The following chart provides the insertion steps. Note that the end of the fibers corresponding to the red light on the signal are marked red. When the switch is set so that the locomotive goes straight through, the signals going into and out of that line should be Green for go, but the one coming in from the branch should be red for stop. Likewise, when the switch is thrown and it is in what we will call the "switched" mode, all the lights should be reversed.
4. Set the switch to be "straight", then insert the fibers as shown below into the part of the block that is lit - we will call that the "straight" section of the block. The individual signals will be lit according to the designation below. Now insert the remaining 3 fibers into the "Switched" section of the block that is lit.



	A Signal In	B Signal Out	C Signal Switched
Straight	Green	Green	Red
Switched	Red	Red	Green