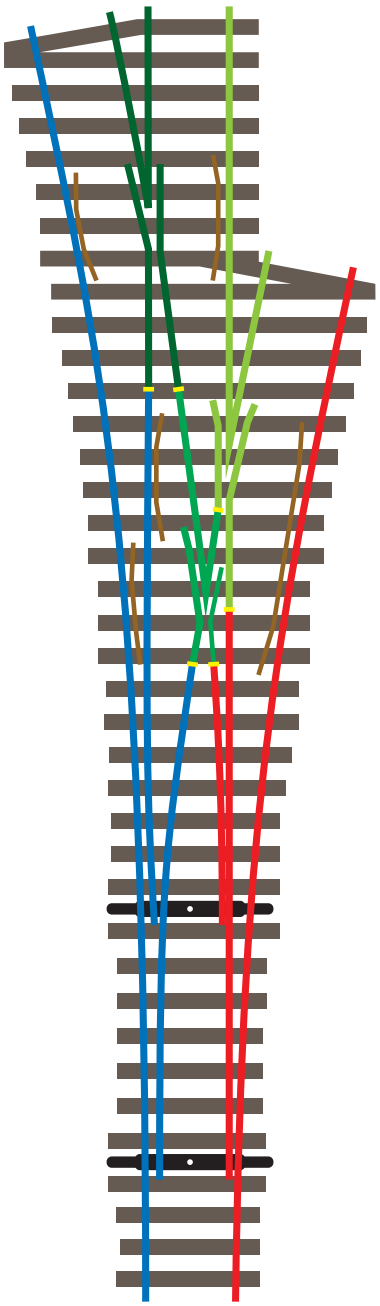
LAYOUT CONCEPTS

Cobalt iP Digital Point Motors & Controlling 3-Way Symmetrical Points - Page 01

Asymmetrical



The problem lies here where the blades are adjacent. With a Peco asymmetrical 3-way turnout, there is no fouling, although the bottom tiebar pointing the traffic to the right needs to point straight if the top tiebar is to be of any use.

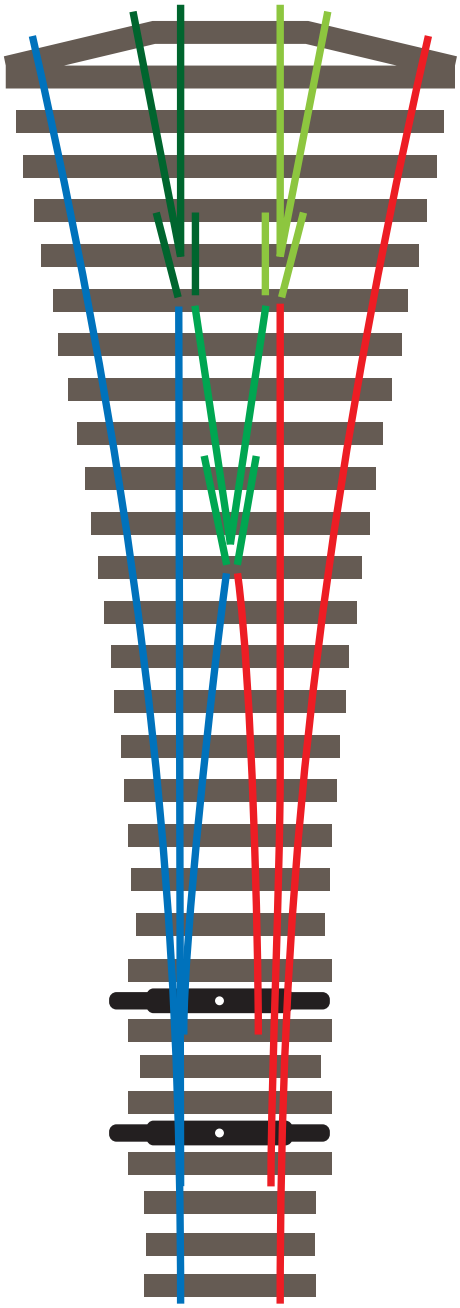
With the symmetrical 3-way turnout, the blades are adjacent so, if operated out of sequence, then the blades will foul.

By wiring the Cobalts so that one doesn't operate until the other one is correct, this illegal route is prevented.

Whist essential with a symmetrical 3-way, it is also useful with the more forgiving asymmetrical turnout.

The only drawback of this method is that the operator must remember that a silent Cobalt is just waiting for the go-ahead for its power from the other Cobalt - it is not a faulty motor or bad wiring!

Symmetrical



Note: From our experience, symmetrical 3-ways seem to cause a lot of running problems for the average modeller - if at all possible, avoid!

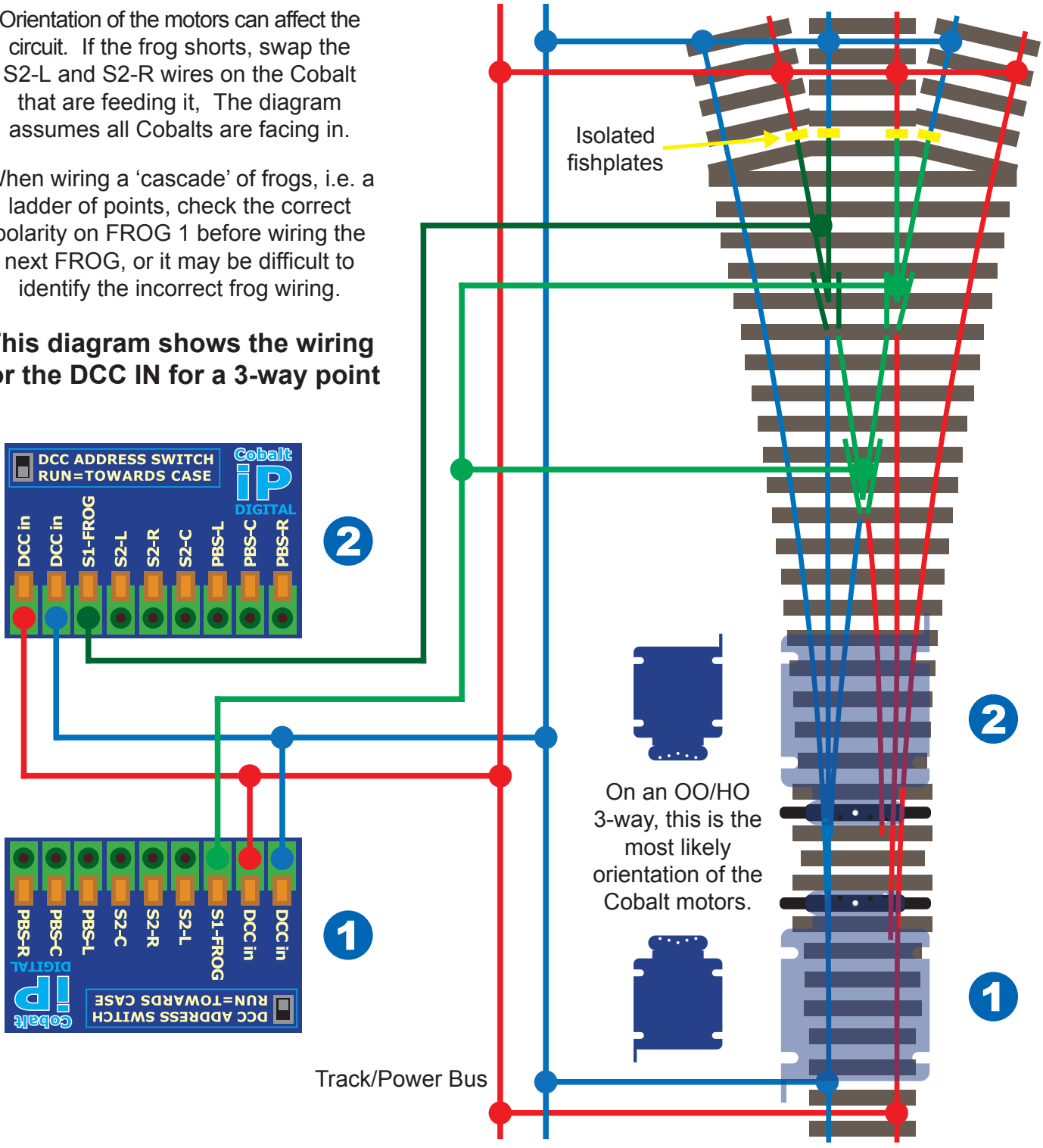
LAYOUT CONCEPTS

Cobalt iP Digital Point Motors & Controlling 3-Way Symmetrical Points - Page 02

Orientation of the motors can affect the circuit. If the frog shorts, swap the S2-L and S2-R wires on the Cobalt that are feeding it, The diagram assumes all Cobalts are facing in.

When wiring a 'cascade' of frogs, i.e. a ladder of points, check the correct polarity on FROG 1 before wiring the next FROG, or it may be difficult to identify the incorrect frog wiring.

This diagram shows the wiring for the DCC IN for a 3-way point

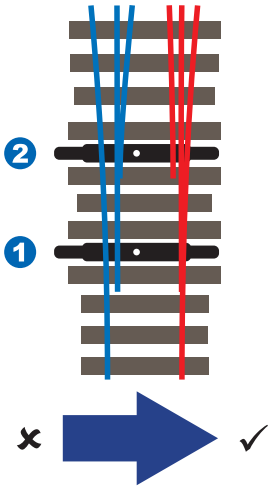


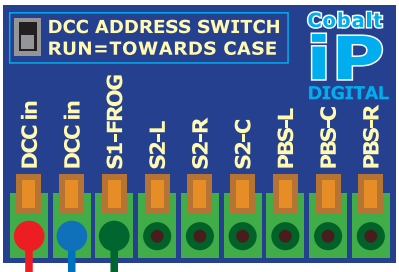
LAYOUT CONCEPTS

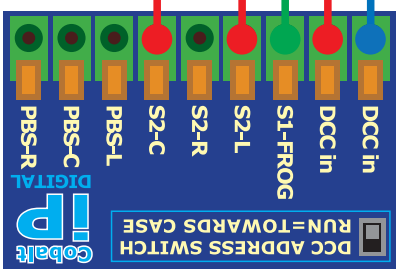
Cobalt iP Digital Point Motors & Controlling 3-Way Symmetrical Points - Page 03

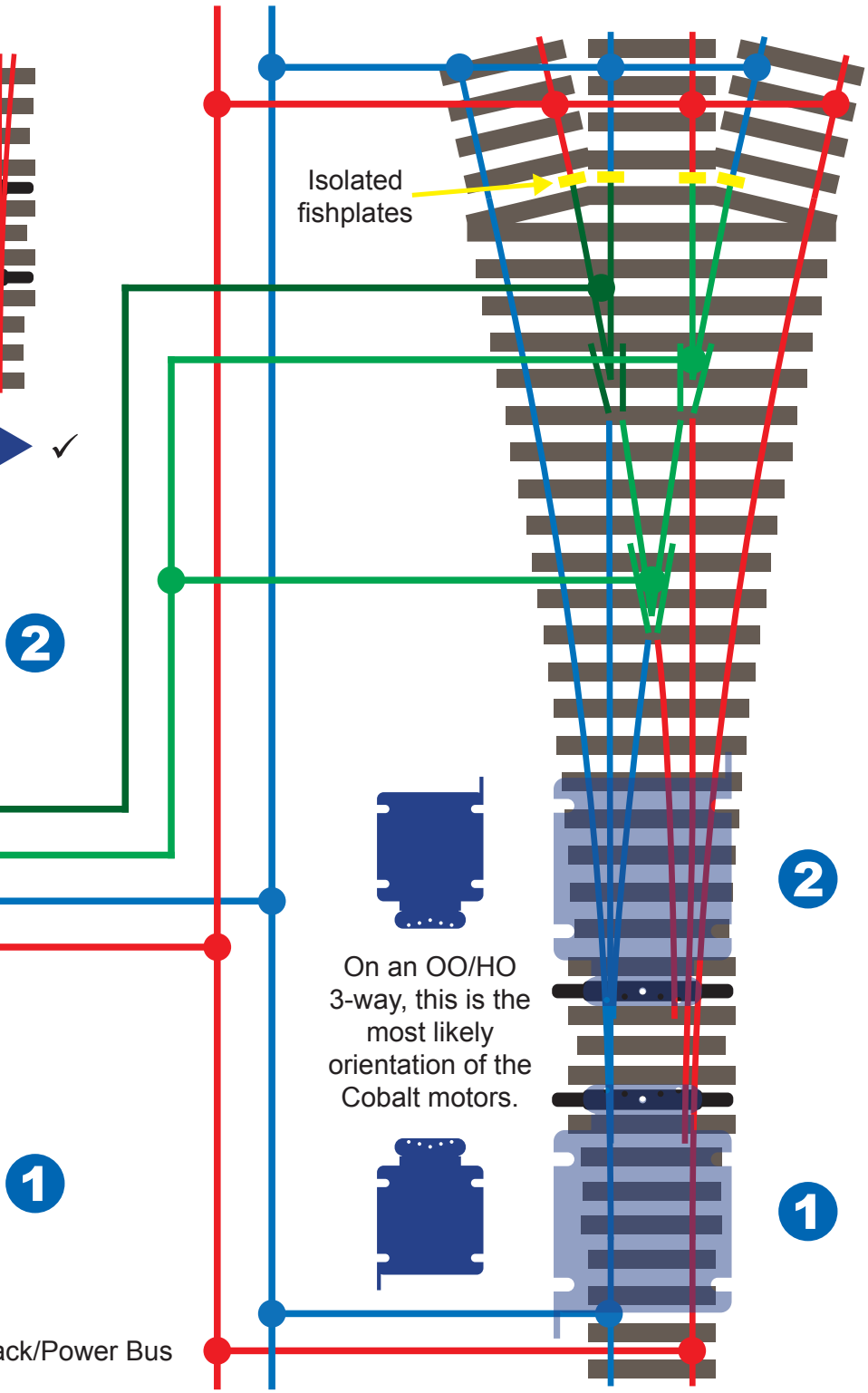
Rule 1:
Cobalt 1 must be **STRAIGHT** before Cobalt 2 can operate.

The SPDT switch on Cobalt 1 supplies one of the inputs to Cobalt 2 only when its direction is **STRAIGHT**.









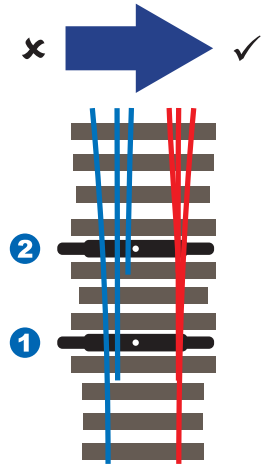
LAYOUT CONCEPTS

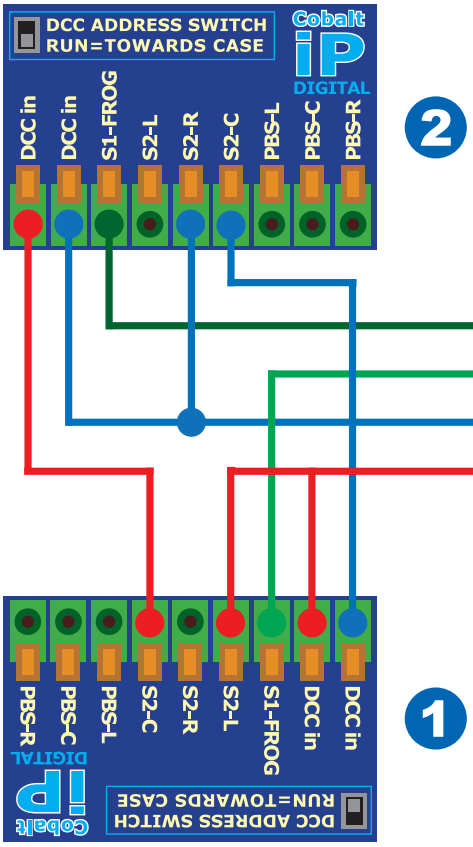
Cobalt iP Digital Point Motors & Controlling 3-Way Symmetrical Points - Page 04

Important: Test the operation as shown on Page 2 first. Then command both points to STRAIGHT before changing the wiring to enable this interlocking.

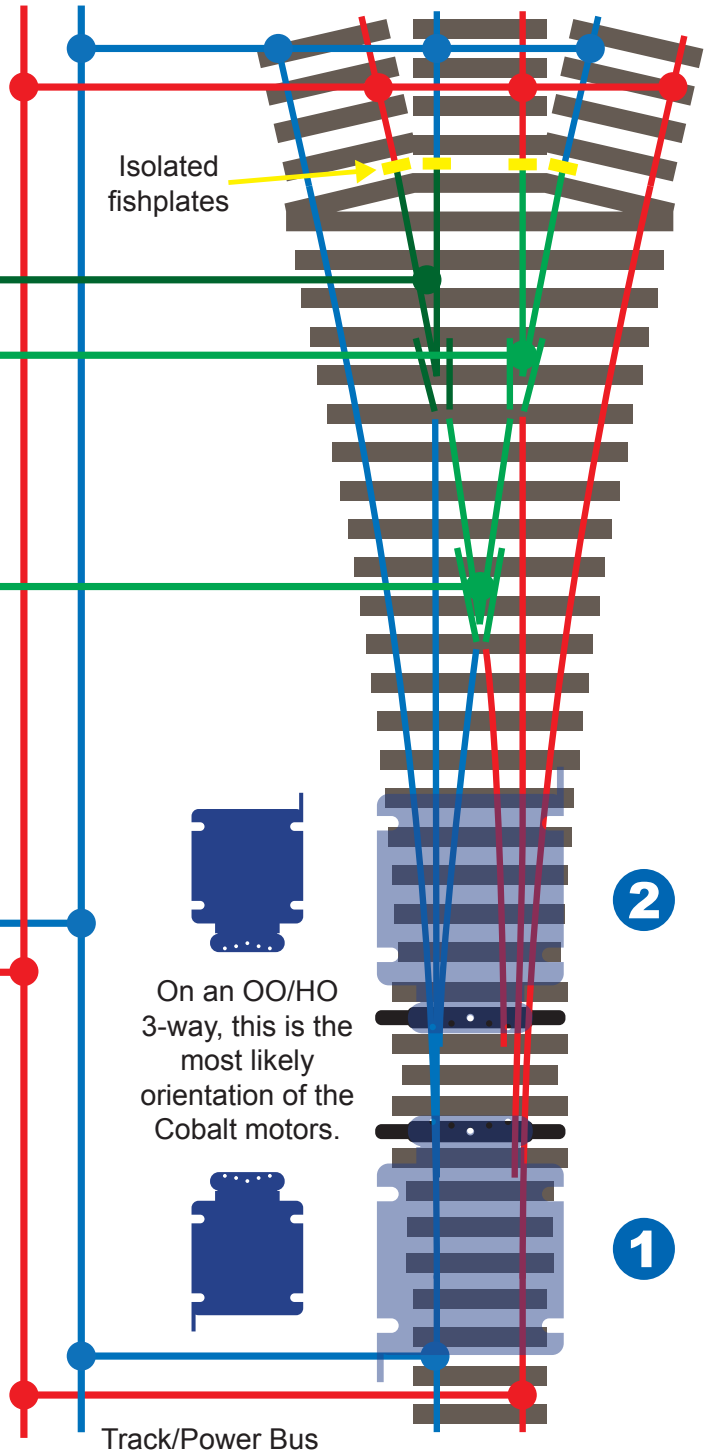
Rule 2:
Cobalt 2 must be **STRAIGHT** before Cobalt 1 can operate.

The SPDT switch on Cobalt 2 supplies one of the inputs to Cobalt 1 only when its direction is **STRAIGHT**.





Note: The wiring will work as shown if the Cobalts are facing each other as shown. If not, swap S2-L and S2-R connections.



On an OO/HO 3-way, this is the most likely orientation of the Cobalt motors.