DP1 DCC Controlled Switch Motor Quick Start Guide:

Thanks for trying a DP1 switch motor! Here are a couple of things to remember:

1. DP1 Motors are essentially MP1 motors with internal accessory decoders. They draw power and control information from a DCC bus. We recommend you use a separate power station (booster) or at least a separate circuit breaker bus so that a locomotive running a switch won't short out the motor power, preventing you from clearing the short. Since they're powered by the DCC bus, **you can't put a bicolor LED in series with the motor, and there is NO general purpose aux contact on a DP1, so DP1 is not a good choice if you want LED position indicators: consider a DP4/10 or 16!**
2. You can use the AUX1 output to power the switch frog, but then you are vulnerable to a short shutting the motor down. It's probably safest to use dead frogs and keep-alives if you're using DP1s.
3. The rigid actuating pin requires very precise alignment and, in many cases, moving the cam travel adjustment pin (factory setting is 6mm). I strongly recommend using music wire (0.039 or 0.047) in place of the supplied rigid "rod-needle" pin. (See the one-sheet instructions or the back of our brochure on MP4 and MP10). K&S Metals sells music wire and it is available at most hobby shops and hardware stores. https://ksmetals.com/collections/music-wire
4. The "ears" on the DP1 are sized for metric M2.5 screws. These are available from specialty hardware vendors and major online marketplaces.
5. Your shipment should include a "goodie bag" that includes the "rod needle", and a spare cam pin(s). MTB only supplies us with 3 spare pins per 5 motors, so unless you bought a single you will get less than one per motor, I don't have any spares to sell, so be careful and don't lose them! These may be included in the bag with the switch motor. Do not lose the goodie bag: it has been very difficult to get extras. Note the cam pins must be gripped carefully or they will fly off into Kadee-coupler-spring land or get eaten by the "carpet monster" <g>.
6. There is no "center off" position on MP/DP Motors, so when mounting the motor, check which end you're aligned with and position the motor so it's at one rail or the other. Using music wire (see 3 above) will make this easier. We also make mounting adapters with slots to aid this process. These adapters can be used as rigid drilling templates.
7. If you can position the motor so that you can get at the screw in the middle of the slider (that is: NOT up against a joist), you can finish alignment and then drop the pin to the desired height without having to cut anything. You can also adjust the side-to-side position by loosening and then tightening the two outboard screws on the slider.
8. There are lots of wiring examples and questions answered in the MP Motor Wiring and Control Application Note which can be found on any of the MP Motor product pages on our website or directly at https://www.modelrailroadcontrolsystems.com/content/MP%20Motor%20Wiring%20Application%20Note.pdf
9. If you have more questions, please contact us at sales@modelrailroadcontrolsystems.com
10. If you encounter a DCC control failure with a DP Motor please let us know what DCC system you are using, how far from the booster the motor is and anything that you feel may be impacting the DP's ability to respond to DCC commands.