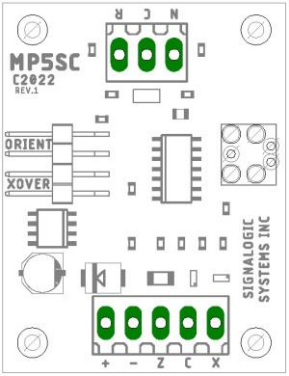
MP5SC

MP5™ Switch Controller

For use with MTB MP1, MP5 & MP10™ Switch Machines



Introduction to the MP5SC

The MP5SC is a direct interface switch control module for MTB MP1, MP5, & MP10™ switch machines. A four-wire interface provides control and indication of switch position for simplified local/remote switch control and feedback.

Installing the MP5SC

Signalogic Systems recommends a good quality 12VDC accessory power supply and 18-24 AWG solid wire for all devices including the MP5SC. Solid wire telephone and network cabling is a cost-effective solution. Ensure that track power and the 12VDC power are off during installation and check wiring prior to turning power back on.

The MPx terminal strip provides three connections to the motor which are then connected to the output connector of the MP5SC.

- N Normal Motor Drive. Connect to MPx poz1.
- C Common motor connection. Connect to COM.
- R Reverse Motor Drive. Connect to MPx poz2.

The MP5SC has a five-pin terminal for powering and interfacing the MP5SC:

- \+ 12VDC positive power input
- \- GND / negative power input
- Z Switch Throw Request
- C Switch Position Indication (Correspondence)
- X Crossover Link

See Figure 1 for details.

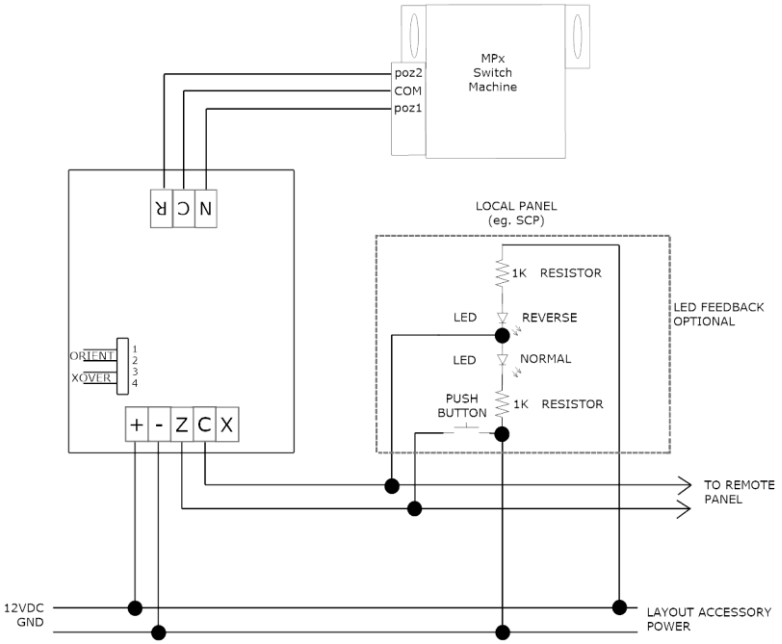


Figure 1

Switch Control

Local or Remote Control

Switch control is achieved with a single wire run from the MP5SC 'Z' terminal to the control location. To initiate switch throwing, momentarily connect the 'Z' terminal to the '–' (GND) terminal or any other convenient access to the accessory power supply GND. This can be via a pushbutton or transistor output. See Figure 1. Multiple pushbutton/transistor controls may be used allowing control of the switch from multiple locations. Each time the control is activated, the switch will be thrown to the opposite position.

Switch Indication

The position of the switch or full crossover is provided by the C terminal. The C terminal will output the following states according to switch position:

- 12V Switch Normal
- 0V Switch Reverse
- Open Switch in neither position

Wire the LEDs as shown in Figure 1. The ‘C’ indication terminal can support a maximum of two LED indication circuits.

If the MP5SC reports that the switch is in the normal position and it is in fact in the reverse position, install one of the provided jumpers between the ORIENT pins. This will force the MP5SC to report the opposite positions after the next power-up cycle.

Crossover Operation

The MP5SC can be connected to another MP5SC, TSMSC or TCSC to handle a full crossover with one control interface. To enable a crossover application, one module needs to be the master. The master will have the control and indication interface attached to it. The master module must also have one of the provided jumpers installed over the XOVER pins as shown below. A single wire connected between the master and slave MP5SC ‘X’ terminals will allow communications between the two modules as shown in Figure 2.

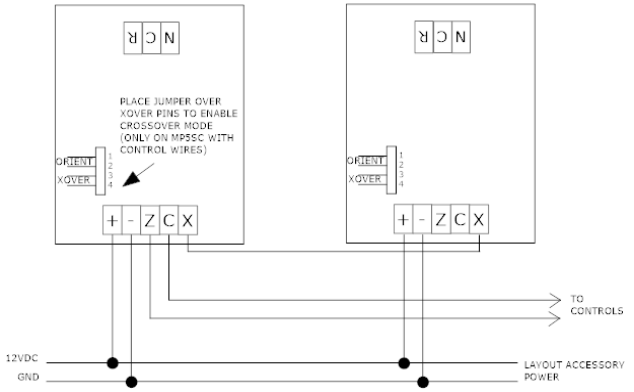
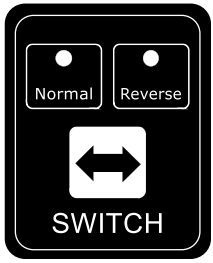


Figure 2

Both switches must be in the same position for the indication output to output a valid position. If a mismatch occurs between switch positions prior to a throw request, the master module will attempt to move its switch only to match the slave position.

SCP Fascia Control Panel

The Switch Control Panel (SCP) is available from Signalogic Systems as an easy to install and attractive fascia-mount operator switch control. A simple four-wire telephone cable can be used to connect the SCP to the MP5SC terminals.



Maximum Specifications

Minimum Power Voltage	10 VDC
Maximum Power Voltage	16 VDC
Maximum Indication Current	25 mA

Signalogic Systems
15623 112 Avenue NW
Edmonton, AB T5M 2V8
Canada

Ph: 587-520-5390
Email: support@signalogicsystems.com