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Error Message: Limit Switch Triggered

James H. - 2019-06-24 - in Mach3

This error message indicates that Mach3 is receiving an active signal from one or more pins assigned as limit switches. To figure out which limit switches (and therefore, which pins) are affected, go to the Diagnostics tab in Mach3. M1++, M2++, etc are the positive limit switches for each motor and M1--, M2--, etc are the negative limit switches for each motor.

If you have *shared switches*, it can make troubleshooting confusing. Shared switches means that a you could have, for example, X+ limit, X- limit, and X home switches all wired to one pin. As far as Mach3 is concerned, that just means that an active signal from that pin is going to trigger all three switches whenever any one of them is pressed. Breaking this down a bit further, let's say you have all three X switches wired up to Port 1 Pin 11. In Config>Ports and Pins>Input Signals, each function (X++, X--, and X Home) would need to be assigned to Port 1 Pin 11. When ANY of those switches are pressed during machine operation (or manually by the user just pressing the button with their hand), Mach3 will see X++, X--, AND X Home as active. You can see this in the Diagnostics tab.

Back to troubleshooting, go to the Diagnostics tab and verify which LEDs are lit up in the 'Input signals current state' section. That will tell you which switches are showing as active. If none of those switches are actually being pressed, then you can change the ActiveLow setting for any involved inputs to correct the issue. This will need to be done for each input that is showing as active. Restart Mach3 to save changes and then test that your inputs are working correctly.