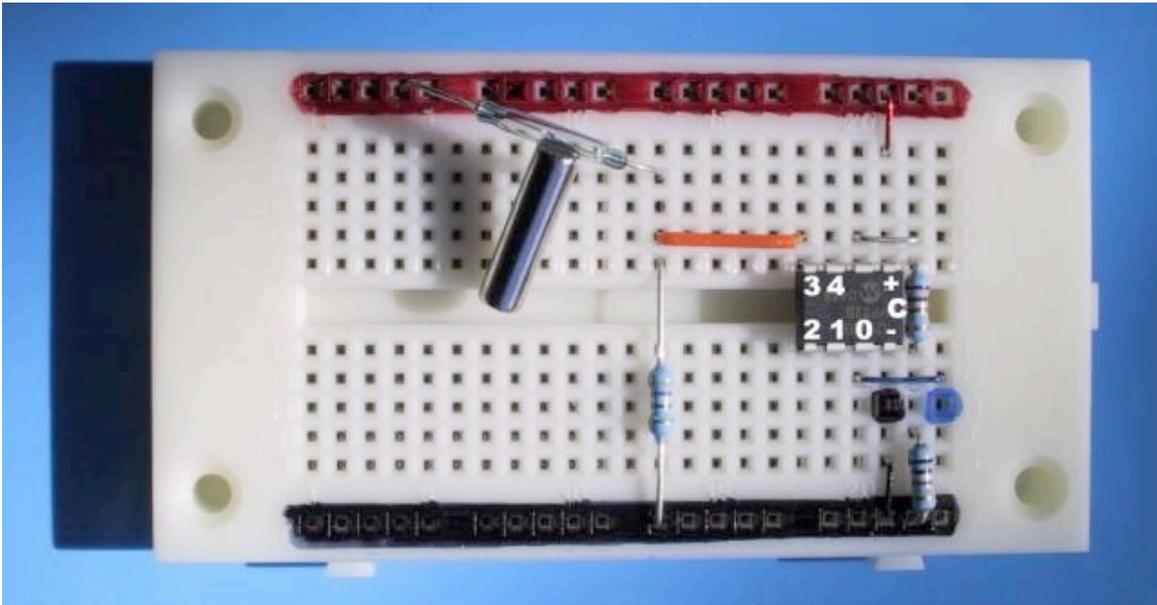# Magnetic Reed Switch ~ Tips

If you have figured out the basics of this type of circuit there are a few ideas and commands you might like to play with:

1/. The Pusin command. Please read up on the command in Manual II FIRST !

* This can detect the speed at which a magnet is moving past.

* The pulsin command can be used to sense the high (1) or the low (0) state of any digital input pin

* When starting out use a w'n' variable as the pulse duration is measured in 10uS units (at 4MHz) so it is very easy to roll over 10uS x 255 where-as 10 x 65525 = .655 of a second so you are more likely to 'catch' a pulse as someone waves a magnet past your reed switch

* There are still a a few traps however… Make sure you have a contact bounce snubbing circuit as shown. You may even need to choose the value of pull-up and C though 10 to 100nF are typical. C can not be too big or else contact welding and arcing can occur every time the switch contacts close (in the example here)

* If NO pulse is detected after a bn of 255 x 10uS OR wn of 65525 x10uS then a zero is returned

* To 'catch' a magnet being waved past the reed switch you will need to think of a few tricks with your programming.
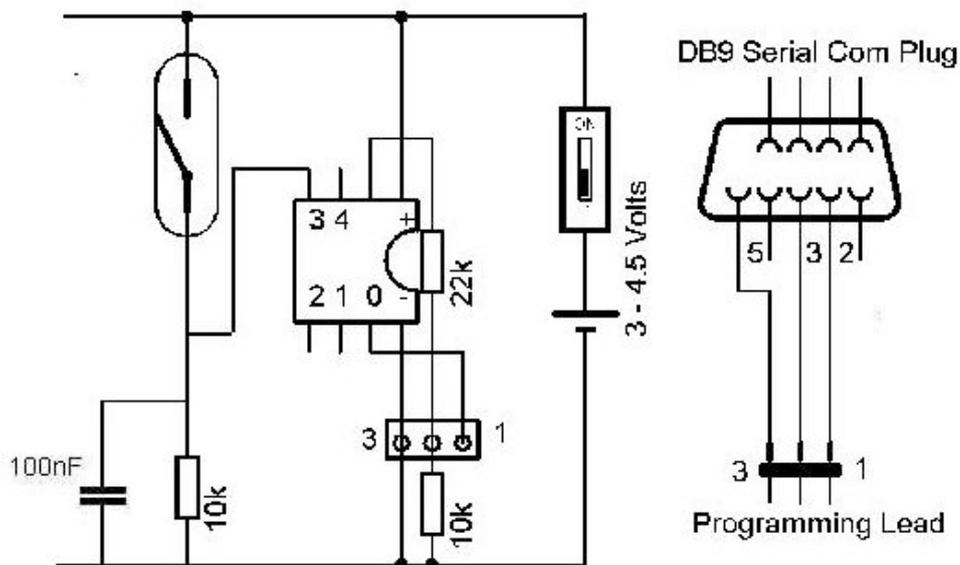
2/. The Count command. Please read up on the command in Manual II FIRST !

* This is used to detect the Total Number of cycles of a square wave of an input pin within x mS

* This will give you the frequency of a signal if 1000 is used as the time base

* If 1000 is used then the code will look 'sluggish' as the picaxe is sitting there counting for the 1000 mS

* Think about using say 10mS or 100mS and scaling the math if a high frequency signal is being measured