



## Plastic Bag Phenomena

**Ever been in the supermarket and seen a debit/credit card, inside a plastic bag being swiped through a reader?**

We find this occurrence quite intriguing as to how the card was able to be read when plastic, or paper was placed around it. Normally if a card is reading inconsistently because of low amplitude, then placing a layer in-between the head and magnetic stripe will further lower the amplitude. Remember the read head generally requires intimate contact with the stripe to gain a successful read.

Possibly the read head in their reader is quite loose and by making the card “thicker” they increased the tension of the read head/stripe interface. This is unlikely, but still remotely possible.

In general, there may be the odd occasion where placing a thin layer in-between card and read head may increase the likelihood of a successful read. This includes the presence of baseline noise (poor tape), some vertical scratches/wear, and very poor track alignment cards. In these circumstances, a ‘bumpy’ waveform can result. This may confuse readers, and cause read failure. Essentially anything that creates very low amplitude ‘bumpy’ waveform can potentially be eliminated when a very thin spacer is placed between the card and read head. However, this would also have an effect of lowering the overall amplitude, in a kind of trade off situation.