

Company Intranet Article

Preventing demagnetization of credit cards, hotel key cards and other cards with magnetic strips



Nowadays, plastic magnetized cards rule! Credit cards, along with many other identity cards and access passes, such as hotel key cards, gift cards, transit tickets, boarding passes, debit cards, drivers licenses, retail reward cards, stored-value cards, company and student IDs, membership passes and security access badges are necessary for operating in today's society.

These cards have magnetic strips that contain important information about the card and cardholder. When a person swipes or inserts a magnetized card into a reader, the reader picks up information from the tiny iron particles in the magnetic strip. This information could include the cardholder's name, account number, card expiration date, PIN number, security code, employee ID number, monetary balance, hotel room number, flight information or other data, depending upon the type of card.

The information is contained in binary form, meaning each particle aligns along a north/south axis with some facing up and some facing down. When a magnetized card is swiped in a terminal, this information is exchanged with a central server, which authorizes or accepts the transaction. A card is considered demagnetized when the information stored in the card is magnetically altered in some way, rendering the information on the card unreadable.

How do cards get demagnetized?

Cards can be demagnetized at the most inconvenient times if not handled properly, and demagnetized cards are useless in a card reader. So how do you prevent it from happening?

Since the information contained in data strips is magnetic, it's vulnerable to anything else that's magnetic. Anything with a magnetic field can erase the stored information by realigning the iron particles.

You can prevent untimely demagnetization mishaps if you know how to handle your cards with care. Some common demagnetizing causes include:

- Pads used to deactivate security devices in new books

- CDs and movies
- Some security screening machines
- Small magnets, like those used on the refrigerator
- Speakers
- Cell phones
- Magnetic clasps on wallets and purses
- MRI machines
- Storing credit cards or other magnetized cards back-to-back, with the magnetic strips touching
- Magnetic jewelry
- Strong electrical charges

Although not a form of demagnetization, another reason your card may not work is due to physical damage. Excessive scratches, or leaving your card in a car on a hot day, can also cause a card to stop working. In short, anything that alters the configuration of the iron particles contained in the strip can prevent a magnetic card from working properly.

Ron Motiram, Director, IT HIPAA Privacy & Security Compliance at Sentry offers this advice: “Always store your credit cards in a wallet compartment that holds one card at a time. And never store them in your wallet or purse back-to-back, or strip-to-strip.”

Identity theft protection

While card demagnetization can be an inconvenient experience, it does have one advantage—it can be used to keep you safe from identity theft. If an expired card is demagnetized before being discarded, thieves cannot extract encoded information and use it to steal your identity or other vital information. You should still take proper steps to destroy the card, such as cutting it up, but demagnetizing can offer you an extra layer of protection.

When the worst happens: dealing with a demagnetized card

If your credit card becomes demagnetized, and you need to make a purchase, there are three alternative means of using your credit card:

- “If your card is demagnetized, ask the cashier to try entering your 16- or 21-digit card manually, along with its expiration date,” says Ron. “The same information can be transferred to the processing company by using this method.”
- If there’s no option to manually enter a credit card number, ask the cashier to call the company that processes the card transactions and read the card information to a representative, who will then process the payment on the merchant's behalf.
- Or, since demagnetized cards don’t affect online purchases, make your purchase online instead.

If you find your card has been demagnetized and no longer works, you will need to contact your card issuer and have it replaced. If it’s your debit or credit card that’s been demagnetized, you should

immediately contact your card issuer to get a new one. Many banks, will issue you a temporary debit card at a branch location while you wait for your permanent card to be mailed to you.