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Overview of Credit Card Processing and EMV

As you've undoubtedly heard, increasing counterfeit card fraud has led the financial industry to move to "smart chip" technology for bank cards and to develop global specifications for bank cards based on "chip card" technology. **EMV**—which stands for **E**uropay, **M**asterCard and **V**isa—is a global standard for authenticating credit and debit card transactions. The standard involves cards with built-in electronic circuits, or chips, and POS terminals and ATMs capable of accessing those chips.

EMVCo, the organization that manages, maintains and enhances the specifications, is owned by the major card companies—American Express, Discover, JCB, MasterCard, UnionPay, and Visa—and includes other organizations from the payments industry participating as technical and business associates.

Card systems based on the EMV specification are being phased in across the world, under various names, but the most popular name for them in the U.S. is "Chip and PIN".The chips embedded in the cards are actually microprocessors that provide security features and other application capabilities not possible with magnetic stripe cards.

For example, the use of a PIN and cryptographic algorithms to provide authentication of the card greatly improves security against fraud compared to magnetic stripe card transactions that rely on the cashier verifying the cardholder's signature and visual inspection of the card to check for features such as holograms.

Most EMV cards and terminals confirm the identity of the cardholder by requiring a personal identification number (PIN) rather than signing a paper receipt. An additional goal of EMV is to allow cards to securely host multiple applications, for example, enabling a single card to act as both a credit card and a debit card.

In summary, there are two major benefits to moving to smartcard-based credit card payment systems:

1. Improved security (with associated fraud reduction); and
2. The possibility for finer control of "offline" credit-card transaction approvals.

This increased protection from fraud has allowed banks and credit card issuers to shift liability to merchants such that *merchants will be liable, as of October 2015, for any fraud that results from transactions on systems that are not EMV-capable.*

For further reading: http://www.emvco.com/faq.aspx

Summary for WordStock Users

To accept EMV payments, you will need to purchase an EMV-capable PIN pad device for each register where you wish to accept EMV payments. Each POS register will need its own unit. These devices communicate via your store's network, and will need to be plugged into your network near the registers, and your WordStock computer will need to be connected to the Internet. We are currently evaluating Verifone 915 payment terminals. Current pricing for EMV-compliant terminals is in the $600+ range, per terminal.

Because of the shift in liability to the merchant, if you accept a card that is chip-enabled but you do not have chip-enabled terminals (meaning you swiped the card, rather than having the customer entering a PIN) and the cardholder claims the transaction is fraudulent, you will be liable. *There is no avenue for appeal or redress.*

This shift in liability to the merchant applies only to transactions in which the customer and card are physically present; liability for customer-not-present transactions, such as mail/phone transactions (or "MOTO" sales), are the same as today.

If the majority of your store's primary transaction count are card-present, with a only few mail/phone transactions, you probably do not need a separate account to handle 'MOTO' transactions. Bear in mind that you send a different authorization and settlement indicator for MOTO transactions vs. card-present transactions.

If your store has very few 'chargebacks' it may be worth it for you not to use EMV terminals and to stick with your current swipe technology on the assumption that your risk for fraudulent card usage will be minimal.