



Standard

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CC & RECEIPT PRINTER

Instruction Manual

Part #8M00472 Rev. 5

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The following instructions are for machines equipped with any of the following modules: Select Module, Credit Card Module, High Speed Card Processing Option, or a Receipt Printer Module. These instructions are organized based on the Module they reference. Each of these modules will have an associated Program Setup section in the EF Module instructions. It is important to have a firm understanding of the EF Module programming features prior to altering the configuration of the modules referenced in this manual. The EF Module instructions are referenced in this manual so be sure to have a copy available before proceeding.

TERMS USED IN THIS DOCUMENT:

Value = Price charged for the dispensed package of coins, tokens or tickets.

Dispense = Number of coins, tokens or tickets being dispensed.

1.0 SELECT MODULE

The “Select Module” consists of the Selection Buttons on the front of the machine, and the *Value & Dispense* amount(s) assigned to each button. The value and dispense assignments are managed through the EF Module. A detailed description for programming these amounts and dispenses can be found in the EF Module instructions.

PROGRAMMING THE SELECT MODULE: A firm understanding of the *Payout Programming Methods, Selection Modes, Payment Sequence* is strongly recommended before making any changes to the programming of the Select Module. These are discussed in the following paragraphs. Only attempt these changes while you are at the machine and have the EF Module instruction and these instructions with you. The help screens within the EF Module can also be used to provide additional explanation for each programming step.

Your machine was programmed at the factory to match the *Value* and corresponding *Dispense* of the ones you identified when placing the order. These were also used to setup the user placard(s) located on the front of the machine. The placard identifies the *value* (price) and *dispense* to the machine user so they know what they will receive for each Selection. Revised or additional placards can be ordered from the factory or created using readily available word processing or publishing software. Consult the factory for details.

PAYOUT PROGRAMMING METHODS: The *method* refers to the accounting method used at the location. There are two accounting methods available, each having their related payout programming. The available methods are: *Bonus* and *Variable*. It is important to know that either of these methods can be used to achieve the desired payouts for the items purchased from the machine. These two methods differ only in their meaning to the owner and in the way transactions are accounted for or *audited*. Again, either can be used as long as it meets your payout and accounting needs.

The **Bonus** method is typically used in arcades or carwashes where the owner uses a bonus accounting approach – an additional number of items (tokens, tickets, or cards...) are issued at no charge if enough items are purchased at the regular price. If this method is preferred, you will have two settings to make for each Select Button: a *forced dispense* amount or number of tokens equal in value to the *selection price*, and a *bonus dispense* amount or number of free tokens for this selection. Bonus tokens are audited separate since they have no value. The example below shows the *forced* and *bonus* dispense settings for a \$10 selection, a \$5 selection and a \$1 selection. The user receives the total of forced plus bonus tokens, while the accounting record (machine audit) actually separates them. This allows accounting to determine how many were issued at no charge and how many actually had value. In this example *Bonus* tokens are issued for the higher priced selections.

Example: Tokens have a value of 25¢ (quarter).

Selection Price	Forced Dispense	Bonus Dispense	Total Dispensed
\$10	40	3	43
\$5	20	1	21
\$1	4	0	4

The **Variable** method is typically used in locations where the items (tokens, tickets, cards...) sold are used to gain access to a ride or event. Ex: Carousel rides, go-kart tracks and batting cages. These locations typically use a discount sales accounting approach. The Selection Prices for this environment are usually not equal to an even bill denomination amounts, i.e., \$1.50 for one item, \$2.75 for two, \$4 for three, etc. In this situation the value of the item actually changes depending on how many are purchased. The items sold are simply discounted; they are not issued at zero cost as in the *bonus* method.

The programming for this method requires only that you set the *forced dispense* to match the number of items you wish to vend for each Selection. You do not set a bonus dispense. Any overpayment amount will be automatically refunded if you have activated the *Make Best Change* feature. The example below shows the forced dispense settings for the selection price example discussed in the previous paragraph.

Example: Tokens have a value of \$1.50.

Selection Price	Forced Dispense
\$4	3
\$2.75	2
\$1.50	1

SELECTION MODES: These refer to the method of payment required for the items (tickets, tokens, cards...). The options are *Package Select* or *Credit Select*.

- **Package Select** - The Package Select mode will allow the user to pay for the package with either cash or credit.
- **Credit Select** - The Credit Select mode will allow the user to pay for the available selections with credit card only. Cash deposits are not applied toward selection purchases. A cash deposit will result in an automatic dispense and the dispense amount will have been preset by you. This mode is useful if you want to charge a different price for credit purchases as opposed to cash purchases, or if you want to allow credit purchases only for certain packages while not offering them for cash purchases.

PAYMENT SEQUENCE: This refers to when the payment is required; before the product is selected or afterward. The options are Pre-Pay, Post-Pay or Both.

- Pre-Pay means that the user must pay before they make the Selection. This payment sequence is common in snack and soda machines.
- Post-Pay means that the user will be required to make the Selection prior to providing payment.
- Both means the user can go either way. This method will result in the least amount of user confusion since some users are used to paying first then selecting while others are used to selecting first and then paying.

SELECTION PRICE AND PAYOUT: There are up to four selection prices available, one for each button on the machine. Each has an associated dispense amount. These were identified at the time of order and programmed into the machine at the factory. These were also printed on the placard that the user will see on the front of the machine.

2.0 CREDIT CARD MODULE

The Credit Card Module is based on the same technology that is used in the credit card terminals found at the major super market store checkout lanes. A credit card terminal will include a *card reader*, a *modem* and a *display* for prompting the user with credit card related instructions such as “swipe card”, “card not read”, “card authorizing”, etc.

UNDERSTANDING CREDIT CARD PROCESSING: For a basic understanding of how any credit card processing systems work, refer to the publication that was provided with the sales literature. This publication provides a description of each step required to get an electronic transaction from the card terminal to the card processor for authorization, and then to get the electronic funds transferred from the card processor to your bank account. Consult the factory for details.

CARD PROCESSOR NETWORK TYPES: Terminal based processors – In a terminal based system, each transaction is stored locally on the DataTran modem controller after approval in a batch. At a preset time or upon request the changer system will cause the batch to be settled or uploaded to the processor for payment distribution. In this type of system it requires 2 phone calls to fully process a card. The first call, which is made every time a card is swiped, would be to get authorization of the amount to charge the card, the second call would be to settle the batch.

Host based processors – In a host based system, each transaction is recorded at the processing center at the time of initial approval. The settlement of the batch is usually automatic by the processor at a preset time it can be closed by the changer but is usually not required. In this type of system, only one phone would need to be made to the processing center process a card.

Standard Change-Makers recommends using host-based processors to eliminate extra phone calls, and the possibility of corrupted batch information if stored locally.

PROGRAMMING YOUR CREDIT CARD SYSTEM. All machines equipped with a Credit Card Module have been factory programmed to match the Machine Configuration Form that was submitted at the time of order. If it should become necessary to alter any of these program settings, please read the EF Module instructions prior to revising any of the settings. A complete list of all settings can be found in this document.

TESTING YOUR CREDIT CARD TERMINAL. All credit Card machines are equipped with a *Demo Mode* feature that allows the machine to be tested for proper credit card payout. The demo will simulate an authorization call thereby eliminating the need for the modem to make an outside (phone or high speed) connection. This operating mode is useful during the initial installation as well as for diagnosing issues that may be related to the phone line or High-Speed connection. For more information regarding this feature, see the Troubleshooting Section of this manual.



The credit card terminal is comprised of a card reader and a modem. The modem shown here is the DataTran 162SL. This is the box that connects to the phone line.

2.1 HIGH SPEED MODEM

HIGH SPEED CARD PROCESSING: Some credit card processors allow high speed card processing. If your machine was ordered with this capability, it will be equipped with an IP Tran module. This module will be located outside of the machine unless it has been mounted prior to shipping. NOTE: All DSL or Cable lines for the High Speed connection are to be supplied by the machine owner. When routing these cables, please route through the same hole as provided for the machine power cord.

A device capable of being set as a DHCP server (router or switch) must be present at the site. This device is not provided with the machine. The router or switch must be set to identify the Internet Service Provider (company providing the DSL or cable service) as the DNS source. It must also be set as the DHCP server. Both of these settings are configured in the device. Support questions for these settings should be directed to the company the device was purchased from. Example device is a Linksys router P/N – BEFSR41.

WIRELESS HIGH SPEED CARD PROCESSING: This option can be used in conjunction with a wireless modem / router to create a “wireless network”. Wireless networks are useful in locations where the machines are frequently moved around the building, where high-speed cable connections are not present or practical, or where multiple machines will share the same high-speed line connection.

A good working knowledge of routers and wireless modems is required for this type of connection. Support for questions related to high speed connections, wireless connections and networking should be directed to the company that is providing high speed connection and / or the company that is providing the related third party router or wireless modem hardware.



The *high-speed connection* is comprised of a high-speed modem and an Ethernet cable. The modem shown here is the IPTran. This box connects to the DataTran using the Ethernet cable.

2.2 WIRELESS INTERNET ACCESS

A wireless connection can be used in place of a wired Ethernet connection. The knowledge required to create a wireless connection is specialized and should be left up to only individuals who have the required knowledge, experience and security information needed to protect the information to be transmitted over the wireless connection. Security is very important when dealing with credit card information being transmitted over a wireless connection. The credit card terminal and Iptran (high speed data converter) supplied by Standard Change-Makers is independent of the connection method (wired or wireless) used to connect it to the internet. The technical expertise and support required to create a wireless connection is not included with the machine. Below is some basic information that will be useful to the individual who is supplying this technical support for the wireless connection you plan to use.

- A *Wireless Bridge* will be required to create a wireless connection point at the token machine. This bridge will plug directly into the Iptran ordered with your token machine.
- The *wireless bridge* will transmit information to a wireless access point or wireless router at the site. The person responsible for setting up or maintaining the *access point or router* used at your site should be the individual who will setup the wireless bridge. They have the security information and IP address that will be programmed into the wireless bridge.

- Antenna – mount the antenna of the wireless bridge external to the machine for maximum effectiveness. The cabinet will create a shield that will drastically reduce signal strength.
- Wireless Bridge Suggestions:
 - Use the same brand of wireless bridge as the brand of *access point or router* used at your site. This will reduce potential brand related compatibility issues.
 - In some situations the *access point or router* may not be compatible with the wireless bridge you plan to use. In this case a custom access point may need to be added to the *access point or router*. In this scenario the wireless bridge used at the machine would be used at the access point as well.
 - The network at the site must have DHCP enabled. Note - a static IP address cannot be entered into the IPtran.
 - Following some information on a popular (Linksys) wireless bridge. http://www.linksys.com/servlet/Satellite?c=L_Product_C2&childpage=US%2FLayout&cid=1134692497433&page=Linksys%2FCommon%2FVisitorWrapper&lid=9743306014B02

Below are hyperlinks to other sources for knowledge related to wireless internet connections.

http://www.ezlan.net/router_AP.html

www.dataq.com/applikat/articles/wireless1.htm

www.linksys.com

www.Digi.com

3.0 RECEIPT PRINTER MODULE

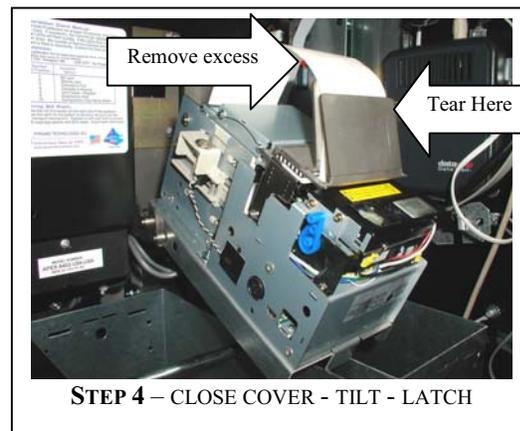
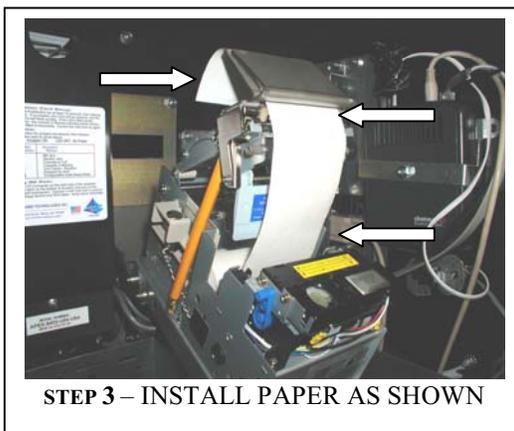
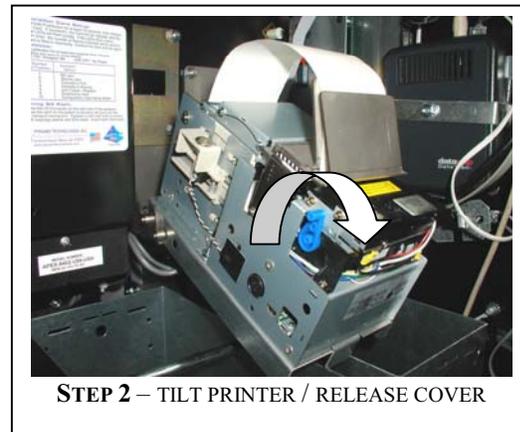
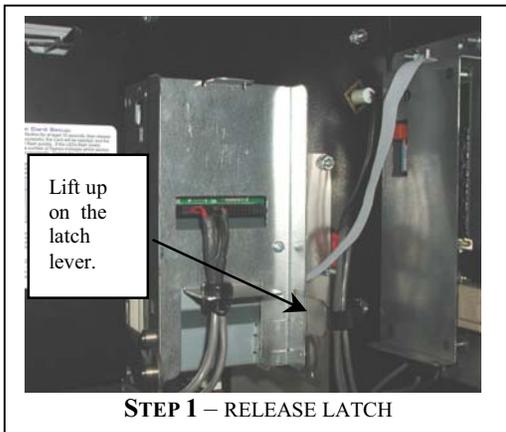
The Receipt Printer is used to provide a credit card transaction receipt to the machine user. This printer can also double as an audit printer. For a full explanation of the features and benefits of an audit printer, refer to the EF Module Basic Instructions and read the section pertaining to the Audit Printer.

LOADING THE PRINTER PAPER – The receipt printer uses standard off-the-shelf thermal printer paper. The roll must be 2-1/4” wide. We recommend a Thermal Calculator roll 2-1/4” x 165’. Larger diameter rolls can be used yet they are not readily available. Smaller diameter rolls will work as well.

Important – Replace the paper roll before the last 10’ of paper is issued. This will prevent the roll from curling up and jamming in the paper guides (see pictures) and it will prevent the paper from running out before the next service interval.

Load the paper using the following steps and pictures.

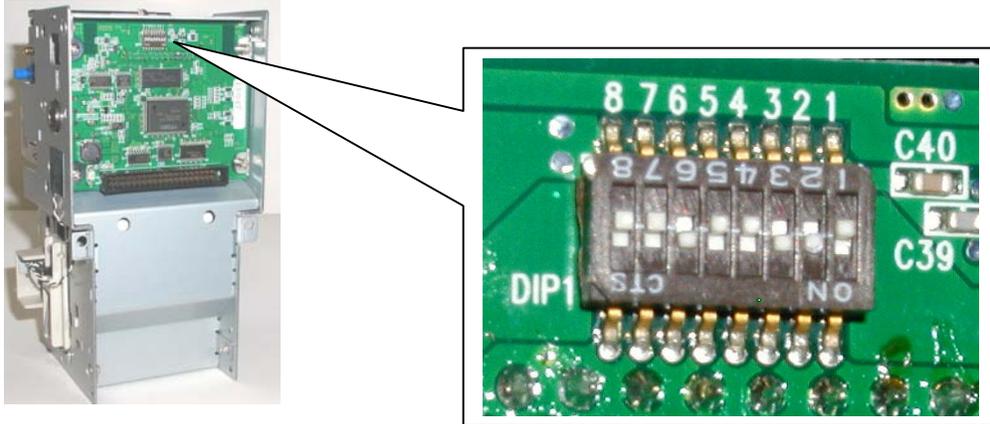
1. Release the printer latch by lifting up on the latch lever.
2. Tilt the printer back.
3. Release the printer cover by rotating the blue lever clockwise.
4. Remove the empty or near empty paper roll.
5. Install the paper roll as shown in the picture above.
6. Close the printer cover. Be sure it locks into place.
7. Remove any excess paper from the printer guides. The edge of the printer guide can be used for tearing the paper.
8. Return the printer to the upright position. Note – if an audit print out is desired, activate it prior to returning the printer to the upright position.
9. Latch the printer into position by pressing the latch lever down



3.1 SETTING THE PRINTER SWITCHES

The printer switches are factory set and should not require changes. See the picture below for the correct dipswitch settings.

Switches 2, 3, 6 set to ON and all other set to OFF.



4.0 TROUBLESHOOTING THE CREDIT CARD MODULES

ISOLATING THE FAILURE – Always attempt to isolate the module that is not functioning properly. To accomplish this you can use two basic troubleshooting tools present in the machine; the Version Number and the Demo operating mode.

CHECK THE VERSION NUMBERS: How to and why. Checking the version numbers will also indicate whether or not the system is detecting the presence of each module. For example- if a version number is not present for the credit card modem, then the system does not know one is connected. This in itself is a significant troubleshooting clue.

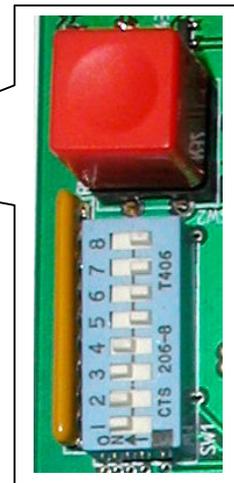
USING THE DEMO MODE FOR TROUBLESHOOTING: Once in this mode, the machine will operate as though it has been plugged into a phone line or high-speed connection even if is not plugged into it. If the machine processes credit card based transactions properly in this mode, yet fails when a live phone or high-speed connection is used, there is a high probability that the issue is in the phone line and not the machine.

The Demo Mode is initiated by setting the DIP switches as shown in the figure below and then pressing the Red button on the CC/Select mode. The red LED on the CC/Select module will be on solid during this mode. This led is flashing steady during normal operation.

The machine will operate in the demo mode for 5 minutes each time the red button is pressed. After the demo mode time has expired, the machine will return to the normal operating mode and all card transactions will request a genuine authorization through the phone line or high-speed connection. The switches should always be returned to the original (OFF) setting when you are finished using the Demo Mode.

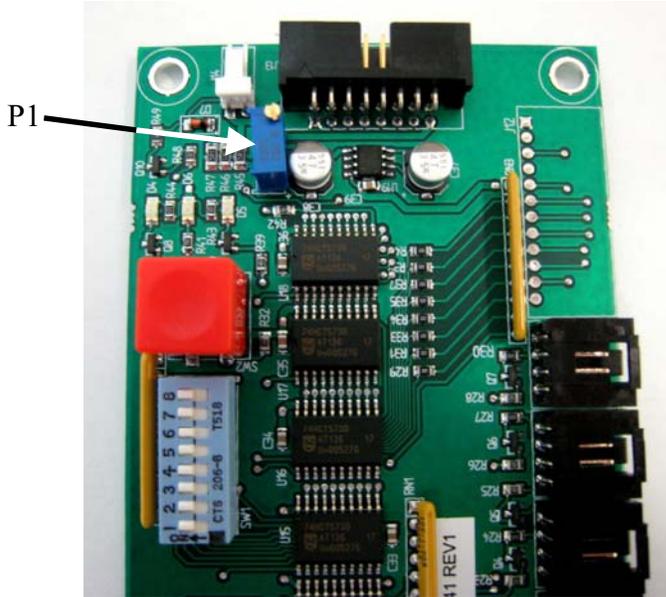
DEMO MODE WARNING

Do not leave the machine in this mode during normal operation. Anytime the machine is in the DEMO mode, it will payout for virtually any card with a magnetic strip. No credit will be deducted from the cardholder's account. This mode will allow the machine to issue tokens for free.



4.1 SELECT MODULE – DISPLAY CONTRAST ADJUSTMENT

For Machines Equipped With A User Display



(With Cover Removed)

You may find it necessary to adjust the user display contrast when replacing the select module or user display. Turning the screw on P1 will either lighten or darken the information being displayed.



4.2 RESTORING YOUR MERCHANT PROFILE

Your credit card terminal was factory programmed to include the Merchant Profile. The Merchant Profile consists of the routing information that was supplied on the Merchant ID forms you supplied when the machine was ordered. This information is stored in the credit card terminals volatile memory. Your machine is equipped with the ability to dial-up the processor and automatically reload (download) this information should it become necessary to do so. This feature is intended to reduce downtime in the event of a failure with the credit card modem box (black box). To reload your merchant:

- Using the EF Module, find the *Credit Settings* main menu item.
- Press the down arrow button until you come to the *Update Network Settings* menu item.
- Press *Yes* button.
- Press the *No* button when asked if you want to dial out.
- Press the *Yes* button when prompted with the touch-tone question, if you use a touch-tone connection. Most phone systems use this type.
- Press the *Down button* and enter the *Outside Line*. A zero indicates that a number is not needed for an outside line.
- Press the *Down button* and enter a "1" and the *Area Code* of the number to dial. Refer to your Processor Documentation that was shipped with your machine for the phone number and password information.
- Press the *Down button* and enter the 7-digit phone number.
- Press the *Down button* and enter your *Password*.
- Press *Yes* when you are prompted for "want to dial the database?"
- The machine will now automatically update. Be sure to test it for proper operation before placing the machine back into service.

4.3 ERROR CODES – USER DISPLAY

CARD IS SWIPED AND THE USER DISPLAY DOES NOT RESPOND WITH ANY "CARD" RELATED MESSAGE. In other words, the card was swiped yet the machine did not react in way to it. Try multiple known good credit cards to ensure it is not the card itself that is defective. Check all cable connection between the credit car reader and Select Module (module the card reader and user display is plugged into). Try multiple cards to ensure it is not the card itself that is defective. Contact your nearest service center for the next troubleshooting step.

CARD IS SWIPED AND THE USER DISPLAY SHOWS "**CARD NOT READ**". This indicates that the magnetic stripe on the card could not be read properly. This could indicate a defective card or a defective card reader. Try multiple cards to ensure it is not the card itself that is defective. Contact your nearest service center for the next troubleshooting step.

CARD IS SWIPED AND THE USER DISPLAY SHOWS "**NO DIAL TONE**". This means that the phone line not present. Check all phone connections. Contact your telecom service provider for service problems. Contact your nearest service center for the next troubleshooting step.

CARD IS SWIPED AND THE USER DISPLAY SHOWS "**LINE BUSY**". This means that the phone line to the processor is busy. Check all phone connections. Contact your card processor for service outage information. Contact your telecom service provider for service problems.

CARD IS SWIPED AND THE USER DISPLAY SHOWS " **NO ANSWER** ". This means that the modem on the processor side is not connecting. Check all phone connections. Contact your card processor for service outage information. Contact your telecom service provider for service problems.

CARD IS SWIPED AND THE USER DISPLAY SHOWS "**MODEM ERROR**". This means that a command to the DataTran modem could not be processed correctly or was invalid. View the EF Module display to see the most recent "authorization error code". Check all cable connections. Contact your nearest service center for the next troubleshooting step.

CARD IS SWIPED AND THE USER DISPLAY SHOWS "**CARD PROCESSOR ERROR**". This means that a communication error occurred while connecting to the card processor. View the EF Module display to see the most recent "authorization error code". Check all cable connections. Contact your nearest service center for the next troubleshooting step.

CARD IS SWIPED AND THE USER DISPLAY SHOWS "**LINE/PROCESSOR ERROR**". This means that a communication error occurred after connecting to the card processor. View the EF Module display to see the most recent "authorization error code". Check all cable connections. Contact your nearest service center for the next troubleshooting step.

CARD IS SWIPED AND THE USER DISPLAY SHOWS "**CARD NOT AUTHORIZED** ". This means that the credit card processing company would not approve the transaction for some reason. For more detail as to why the transaction was not approved view the EF Module display to see the most recent "authorization error code". Note - this error is issued by the credit card processing company and it will be erased as soon as a successful card transaction is made. The last authorization error encountered can be viewed by looking at the Credit Card Error Log. See instructions below for viewing this log. Also, check to make sure the card type is one that is supposed to be accepted, i.e., Discover, American Express...

IMPORTANT - This is not a failure of the credit card equipment, it is a failure of the card to be authorized by the credit card processor you selected. Contact your credit card processor for more details pertaining to this error message.

4.4 ERROR CODES - EF MODULE DISPLAY

The following text messages could be displayed on the EF module automatically as they occur or can be retrieved viewed by looking at the Credit Card Error Message. These messages are sent by the DataTran modem controller to indicate an error has occurred.

"**MODEM ERROR**" – indicates modem did not respond correct to a command sent to it. Re-initialize the modem and check cable connections.

"LINE DROP" – indicates modem lost the connection to the card processors modem. Re-initialize the modem and check cable connections.

"ERROR" – indicates modem report a command error. Re-initialize the modem and check cable connections.

"CONNECT 1200" – indicates the modem connected at the wrong baud rate. Re-initialize the modem and check cable connections.

"NO DIAL TONE" – indicates the modem did not detect a dial tone. Re-initialize the modem and check phone cable connections. Try connecting a regular phone to cable a check for dial tone.

"BUSY" – indicates modem attempted to connect but line was busy.

"NO ANSWER" – indicates modem attempted to communicate but card processor's modem did not answer.

"CONNECT 600" – indicates the modem connected at the wrong baud rate. Re-initialize the modem and check cable connections.

"CONNECT 2400" – indicates the modem connected at the wrong baud rate. Re-initialize the modem and check cable connections.

"CONNECT FAIL" – indicates modem attempted to connect but failed. Re-initialize the modem and check cable connections.

"TIME-OUT" – indicates modem attempted to communicate with the network and failed because time limit expired while waiting for network to answer. Re-initialize the modem and check cable connections. Contact your credit card processor.

"LOG ON ERROR"– indicates modem attempted to communicate with the network and failed. Re-initialize the modem and check cable connections. Contact your credit card processor.

"ENQ ERROR"– indicates modem encountered a protocol error with the network. Re-initialize the modem and check cable connections. Contact your credit card processor.

"RETRIES EXCEEDED" – indicates modem could not connect to the network within the number of programmed attempts. Re-initialize the modem and check cable connections. Contact your credit card processor.

"RECEIVE ERROR"– indicates modem encountered a protocol error with the network. Re-initialize the modem and check cable connections. Contact your credit card processor.

"LRC ERROR" – indicates modem encountered a protocol error with the network. Re-initialize the modem and check cable connections. Contact your credit card processor.

"NAK ERROR" – indicates modem attempted to connect but failed due to bad communication. Re-initialize the modem and check cable connections. Contact your credit card processor.

"SYNC ERROR" – indicates modem encountered a protocol error with the network. Re-initialize the modem and check cable connections. Contact your credit card processor.

"PARITY ERROR" – indicates modem attempted to connect but failed due to bad communication. Re-initialize the modem and check cable connections. Contact your credit card processor.

"COMMAND ERROR" – modem was expecting command data and received non "AT" data. Re-initialize the modem.

"202" – "206" – This is an authorization failure message from the card processor. Contact your credit card processor for information on how to handle this problems.

**Standard Change-Makers
Service Centers**

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WEB: www.standardchange.com

Record these numbers here for use when ordering parts.

Serial # _____

Model # _____