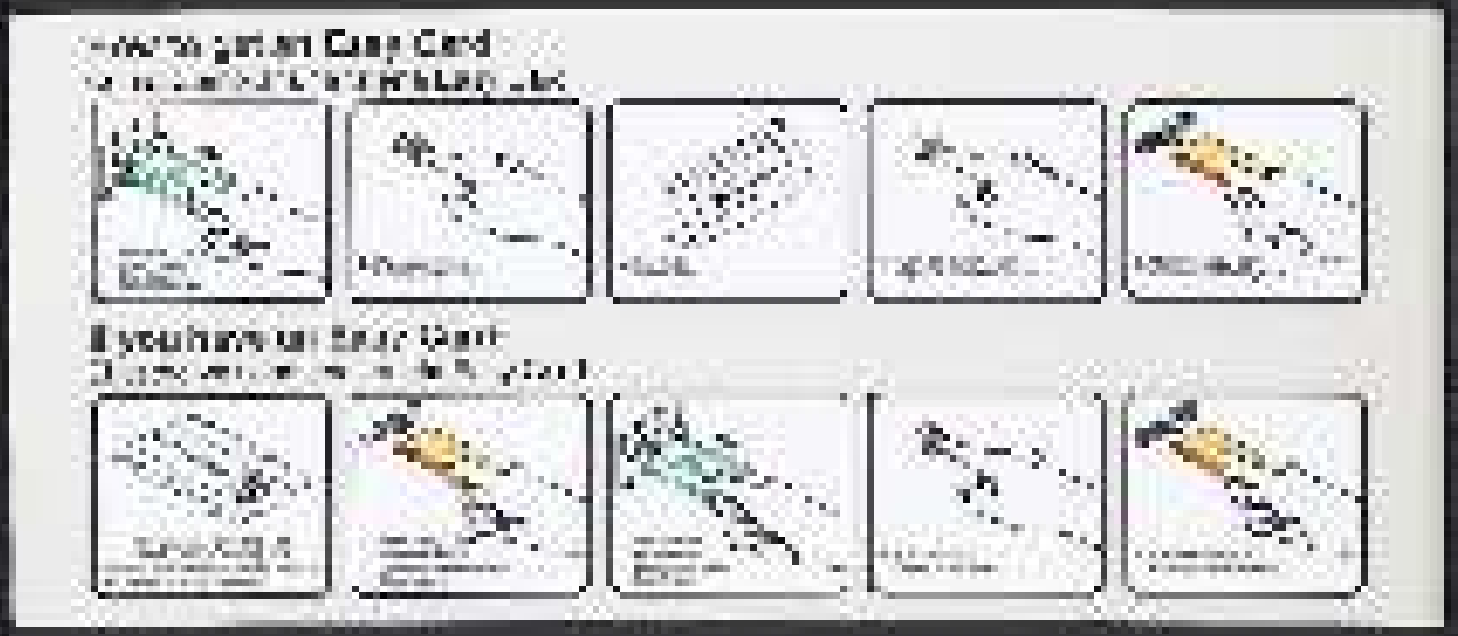

Easy Card™ Parts & Service Manual

DEXTER LAUNDRY

Easy Card Warranty

Limited Parts Warranty
The Dexter Company warrants all Easy Card System parts that fail under normal use under the limitations further described below. Dexter's obligation under this warranty shall be limited to repairing, or, at our option to exchange any part of said product that in the judgement of Dexter, shows evidence of failure, provided said part shall be returned to Dexer through an Authorized Dexter Distributor (F.O.B. Factory) within 2 months from the expiration of the specific parts warranty period listed.

Two Year Limited Parts Warranty
Dexter Easy Card Systems have a two year warranty, from the date of purchase, on all parts.

Dexter assumes no responsibility for labor costs, transportation charges, local duties or taxes.

This warranty sall not apply to any product on which has been repaired or altered in any way so as, in our judgement, to affect its performance, or which has been subject to any abuse, misuse, negilgence, faulty installation or any other occurrence, beyond the control of Dexter.

This warranty shall not apply to any product on which the serial numbers have been altered, defaced or removed.

This warranty is for the sole benefit of the original purchaser.

The Dexter Company reserves the right to make changes in design or to make additions to or improvements upon this product without incurring any obligations to install the same on products previously manufactured.

The warranty provided hereunder and the obligations and liabilities of The Dexter Company as set forth herein are exclusive and purchaser hereby waives all other remedies, warranties, guarantees, or liabilities, expressed or implied, arising by law or otherwise (including without limitation any obligations of The Dexter Company with respect to fitness, merchantability and consequential damages) or whether or not occasioned by The Dexter Company's negilgence. This warranty shall not be extended or altered unless specifically agreed to by The Dexter Company in Fairfield, Iowa and the purchaser.

The selling disttributor must register this product with The Dexter Company so the original purchaser will recieve the benefits of this warranty. Customers' copy of this registration will be furnished by the selling agent.

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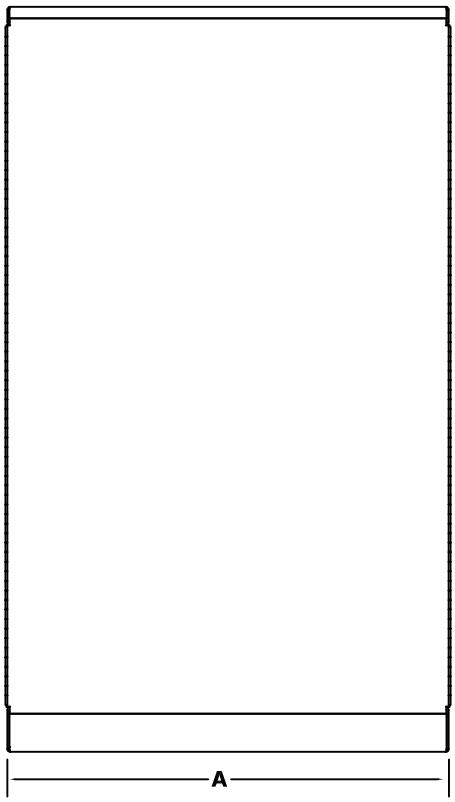
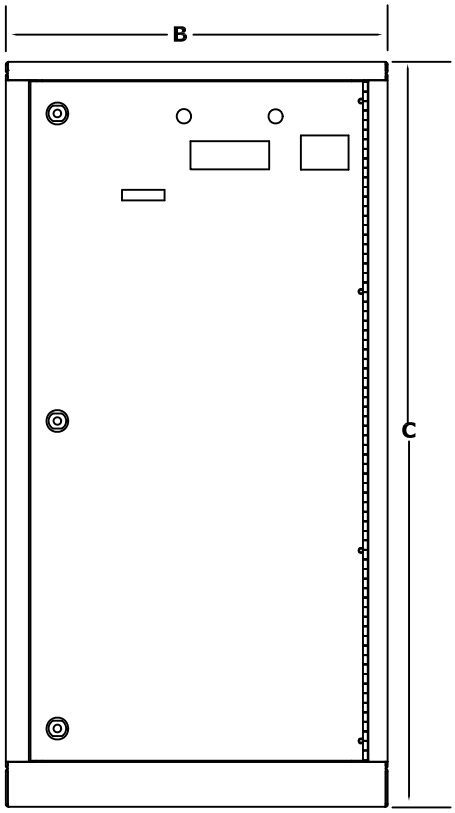
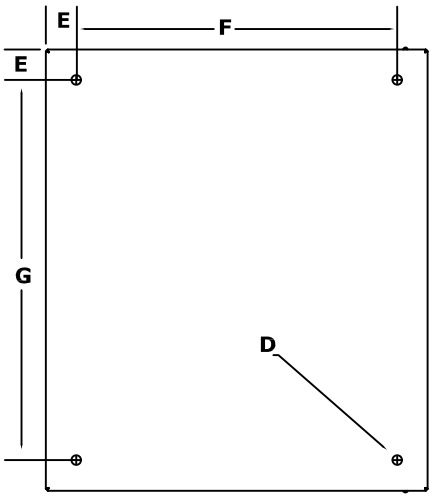
EASY CARD CABINET DIMENSIONS







A - 28 7/8 inches
B - 25 inches
C - 48 3/4 inches
D - 5/8ths hole diameter
E - 2 inches
F - 21 inches
G - 24 7/8 inches

Cabinet to be hard wired to 120v/60hz/15amp

Section 1: Installation Procedures

Installation Procedures

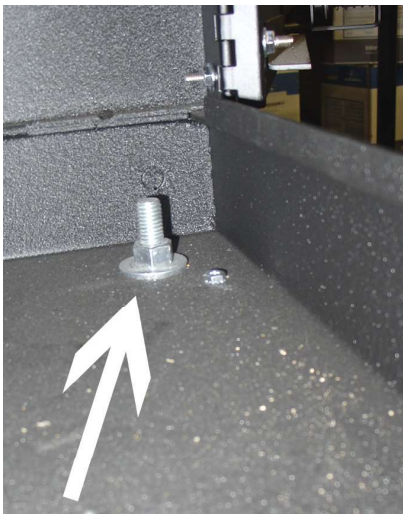
Stage 1: Recommended Tools

• Laptop or other computer with an Ethernet networking port. (this must be used to set up the system servers and add all of the readers in the system)
- Socket set with sizes up to ¾
- Pliers (needle nose and adjustable)
- Fish tape (for running overhead cables)
- Volt meter (for testing)
- Screwdrivers (phillips and standard –various sizes)
- ¼ inch driver to accommodate provided torx bit
- Tin snips (for cutting metal palate bands)
- Utility knife
- Cordless screwdriver (optional)

It is recommended that all Easy Card pallets be delivered to the store location intact. This helps to prevent the misplacement of components.

Stage 2: Unpackaging Your Easy Card™ System

Step 1) The Easy Card™ cabinet(s) are shipped attached to wooden pallets. These pallets can be removed using a ¾ inch deep well socket or a ¾ wrench and a pair of pliers.



Step 2) Once removed from the pallet, these holes will be used to fasten the cabinet directly to the concrete floor or to a raised base. (For ADA compliance, base sizes should be limited to 6” or less)

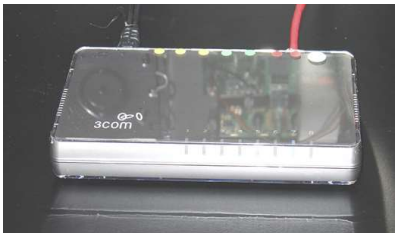
Step 3) You should plan ahead to have the electrician power the outlets inside of the cabinet(s) and also have a phone jack run to the cabinet before the rest of the installation begins.

In the large cardboard box you will find the following components:

• Rack Server

• Battery Backup

• Printer and cables



• Ethernet switch

• Phone modem and cables

Inside of the large box you will also find a smaller box containing the following components:

• Easy Card™ manuals
• Your personalized store layouts
•Management Software Installation Tool (on CD)
• Cabinet crank handle
• Cabinet locks and keys
• Cleaning cards
• USB flash memory device
• t-10 security torx bit
• 40’ s/s white cat5 cable
• Wire ties
• Extra printer roll
• Surge suppressor strips

The network hub assemblies are packaged in with the Easy Card™ large parts box. The single cabinet system will ship with (1) network hub assembly and the dual cabinet system will ship standard with (3) network hub assemblies. More network hub assemblies can be added if the number of pieces exceeds the 32 readers per hub maximum. The assembly includes:

• (5) data hubs
• (1) 75’ s/s cat5 cable (green tips)
• (1) Ethernet Wired Hub
• (1) 40’ s/s cat5 cable (yellow tips)
• (3) 20’ s/s cat5 cables (metal tips)

Depending on the equipment mix in your store, you may have independent reader kits shipped with your system. These kits include harnesses, mounting hardware, cat5 cables and instructions.

Your Easy Cards™ will also be packaged along with the system components.

(1000) cards with the single cabinet system

(5000) cards with the dual cabinet system

Stage 3: Cabinet Installation

These instructions should be followed to install the Easy Card™ cabinet with one main server. Optional backup server instructions are also shown.
The Cabinet Unit Components Used For This Stage Include:

- Easy Card™ Cabinets
- Battery Backup (UPS)
- Printer Supply
- Cabinet Door Assemblies
- Server(s)
- Surge Suppressor
- Network Power
- Ethernet Switch
- Cat5 cables
- External Modem

Cabinet Installation (continued)

Step 1) Mount the Main Cabinet, and hard wire the 115 V outlet in the bottom of the cabinet to an independent 15 amp breaker. Also run the phone lines into the Main Cabinet.
Step 1A) If a dual cabinet setup is used, mount the Secondary Cabinet and hard wire the 115 V outlet in the bottom of the cabinet to an independent 15 amp breaker.

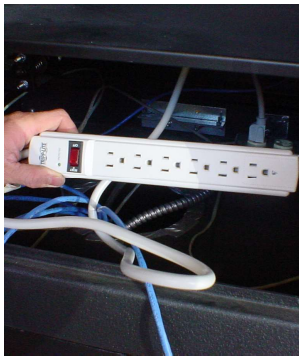
Step 2) Plug in the surge suppressor to the outlet in the bottom of the main cabinet unit.

Step 3) Connect the battery inside of the UPS battery backup and connect the (included) USB cable to the port on the back of the battery backup. The battery backup is then plugged into the surge suppressor in one of the “Always On” outlets, and the USB cable is run to the location of the server.

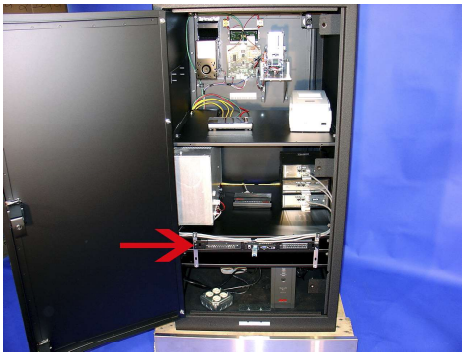
Step 4) The Main server is placed in the top slot of the Main Easy Card cabinet. This example shows a front loading cabinet. For rear load access, simply face all components to the back of the cabinet.

Step 1

Step 1A



Step 2



Step 4

Step 3

Step 3

Cabinet Installation (continued)

Important Safety Precaution: During steps 5 & 6 it is important to make sure the UPS Battery Backup is turned OFF.

Step 5) The USB connection from the battery goes into the top USB port of the Easy Card™ Main server.

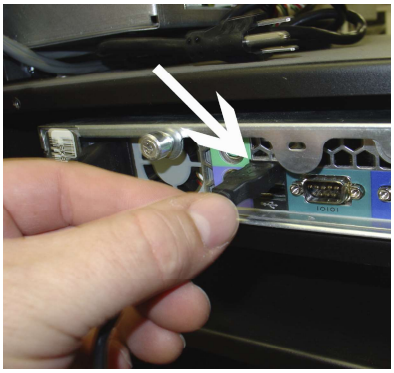
Step 6) Attach the included power cord to the back of the main server. Connect the other end to the top left outlet on the rear of the battery backup. The outlets on the left hand side are the only outlets which are backed up by the battery.

***DO NOT TURN POWER ON TO THE SERVER AT THIS TIME**

The server must be the last component to be powered and you will be instructed when to do this.

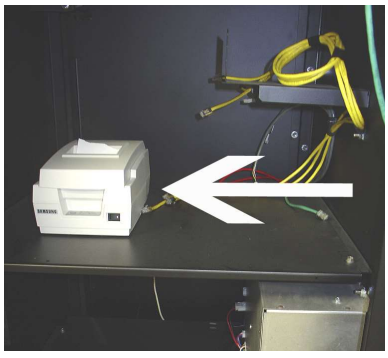
Step 7) The printer can be located on the top or middle shelf of the Main Cabinet. The black power cord should be connected into the surge suppressor. The USB cable will connect into the bottom USB port on the back of the server.

Step 5

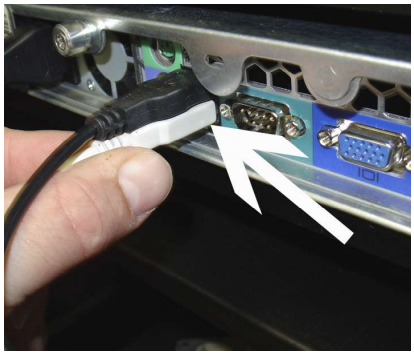


Step 6

Step 7



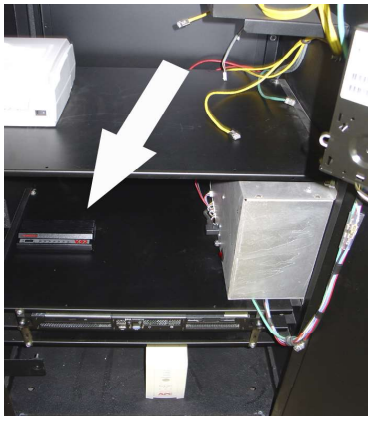
Step 7



Step 8) The modem will be placed on the middle shelf of the Main Cabinet. The 9 pin serial cable will be connected to the only serial port on the back of the Main Server. The power pack will plug into the surge suppressor in the bottom of the cabinet. The phone cable will run from the modem to the modem connection on the battery backup and then the second phone cable will run from the output of the battery backup to a dedicated phone jack.

Step 9) The Ethernet Switch will be located on the top shelf inside of the Easy Card cabinet and the power pack will attach to one of the battery protected outlets on the rear of the battery backup. (These outlets are on the left hand side)

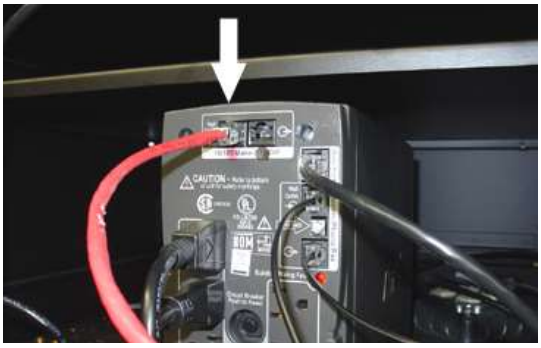
Connect the red Cat 5 cable located inside of the cabinet from the Red port of the Ethernet switch. The other red cable end will connect to the Red port on the rear of the battery backup. Use the Ethernet cable included with the battery backup to make a connection between the black port on the battery backup and the #1 Ethernet port on the back of the Main server.



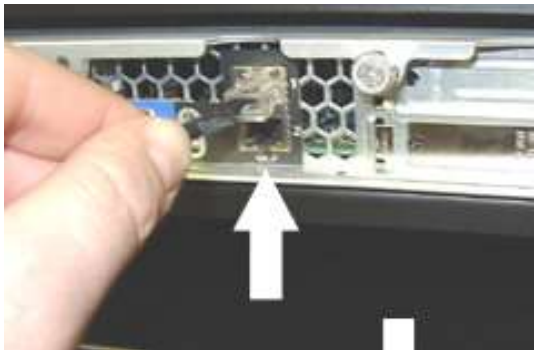
Step 8

Step 8

Step 9

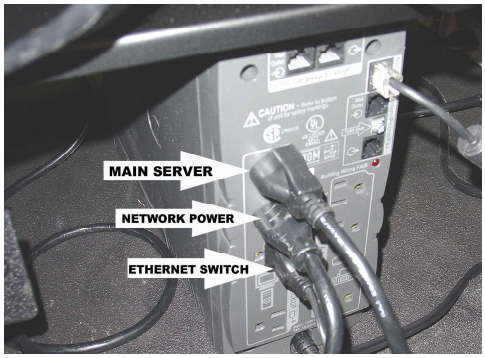


Step 9



Step 9

Cabinet Installation (continued)



Step 10

Step 10) The power cord for the network power supply in the Main Cabinet will connect to one of the battery protected outlets on the Battery backup. The power cord for the Secondary Cabinet power supply will connect into the outlet in the bottom of the Secondary Cabinet. (Leave the network power supplies in the off position.)

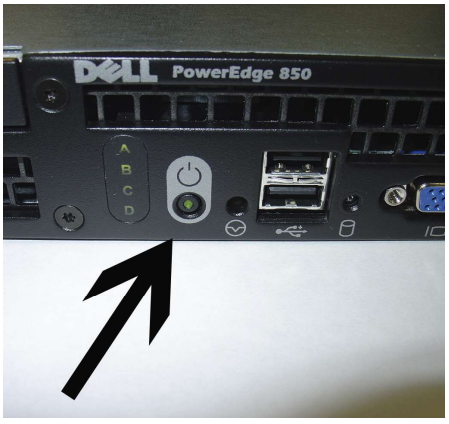
Step 11) Turn on the surge suppressor. Then turn on the printer, and the modem.

Step 12) Turn on the Main Server by pushing the power button on the UPS and then pushing the power button on the Main Server.

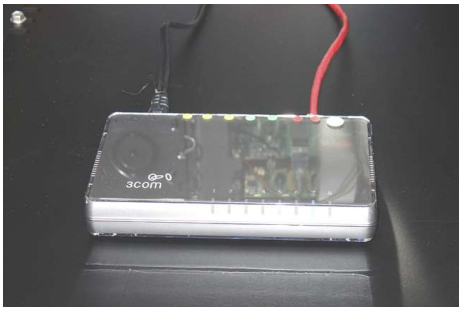
Step 12

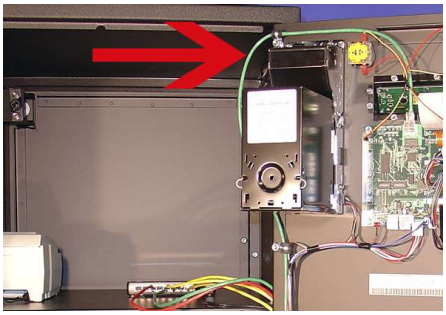
The main server will light the A, B, C, D lights up when you first turn it on. You should also see that the Ethernet switch will have a lit up indicator light on the red port where you have connected the Main Server. After several minutes the printer will react when the system comes up by printing the “header” information

Step 13) Connect the Cat 5 Cables running from each cabinet door into the Ethernet switch at the GREEN ports. Turn on the Network Power Supplies and the cabinet doors should initialize and scroll messages.



Step 12





Step 13

Setting up a Windows XP Computer for System Programming (Direct Connection)

The Components Used For This Stage Include:

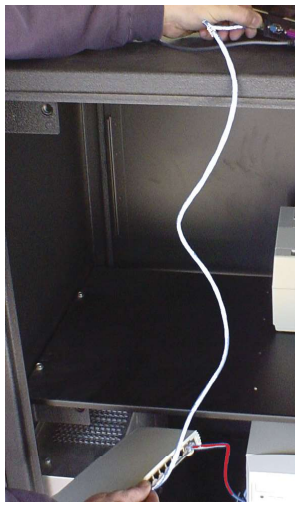
- Windows Computer
- Cat 5 cables

*It may be necessary to disable your Windows firewall or any anti-virus software installed on your computer

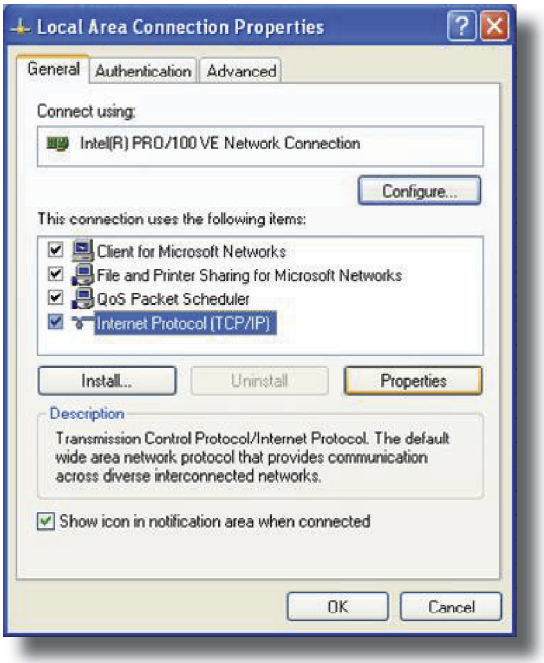
Step 1) The IP address of the Windows connecting computer must be set before it is connected to the system.

(A). Left click on “START”.
(**B).** Left click on “My Network Places”.
(C). Left click on “View Network Connections”.
(D). RIGHT click on “Local Area Connection” and select “Properties”.
(E). Highlight “Internet Protocol (TCP/IP)” and left click “Properties”.
(F). Select “Use the following IP address” and input the following: IP address: 192.168.0.4
Subnet Mask: 255.255.255.0
Default Gateway and DNS Server will be left blank.
(G). Connect the Cat 5 cable fromthe computer `
Ethernet port to the available port of the Ethernet switch.

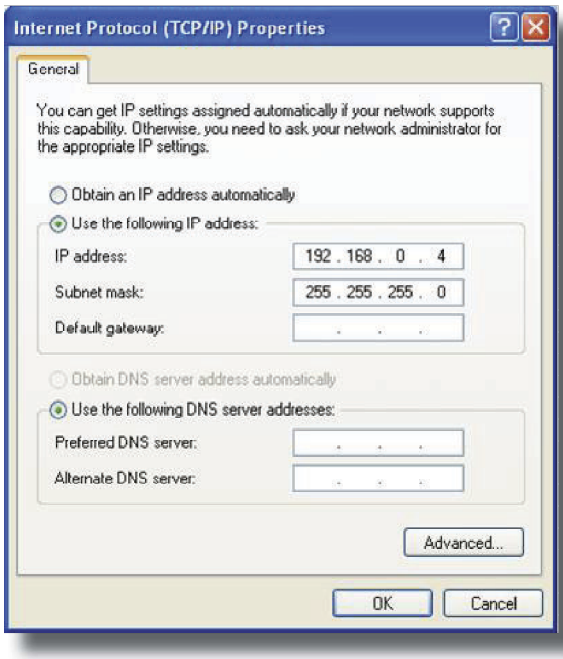
G.



E.



F.



Connecting the Windows XP Computer for System Programing (Direct Connection) (continued)

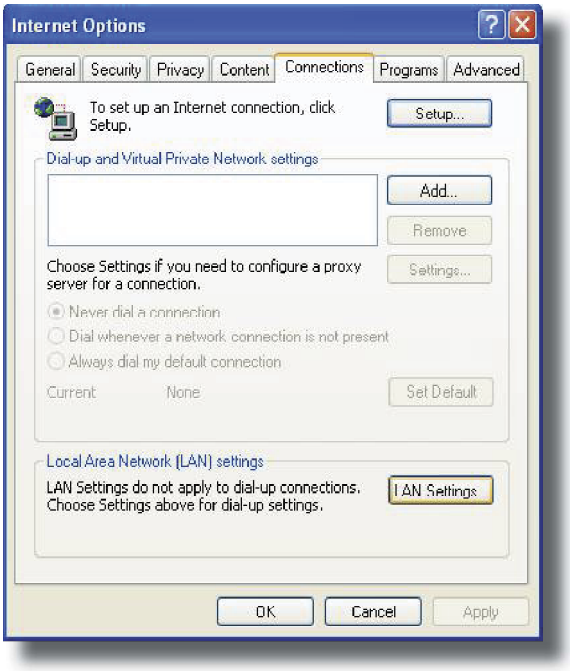
Step 2) From your Internet Explorer icon:

(G). Right click on the Internet Explorer icon and go to “Properties”.

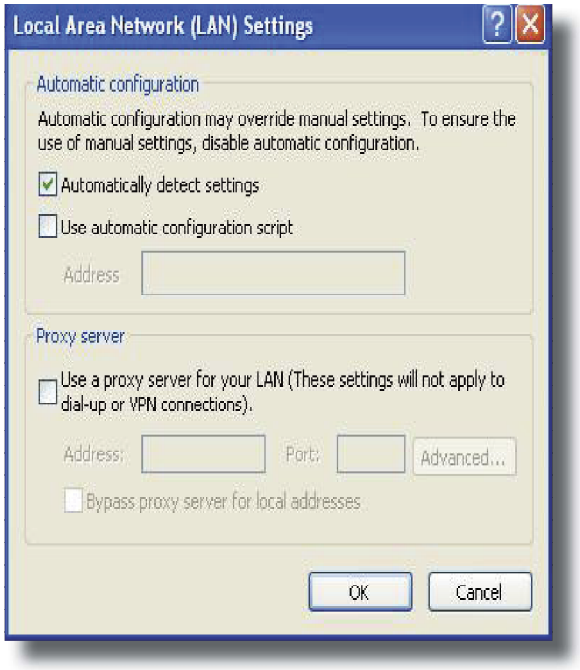
(H). Highlight the “Connections” tab and select “LAN Settings”.

(I). Select “Automatically Detect Settings”.

H.



I.



(J). To connect, open the internet explorer and use one of the following address:

http://192.168.0.2 or **http://dexter**.

Step 3) Double click the Internet explorer icon. This should bring up the startup page in the software. When this screen appears, type the user name “admin “. There is NO password. Click OK.

Step 3

Step 4) You are now in the browser software to configure your computer. Refer to the Easy Card™ software manual for further instructions. End of Stage 2 – Remote computer is connected and ready for programming the server.

Setting up a Windows Vista or Windows 7 Computer for System Programming

Cautions about Windows Vista and Windows 7:

64bit versions are not supported!

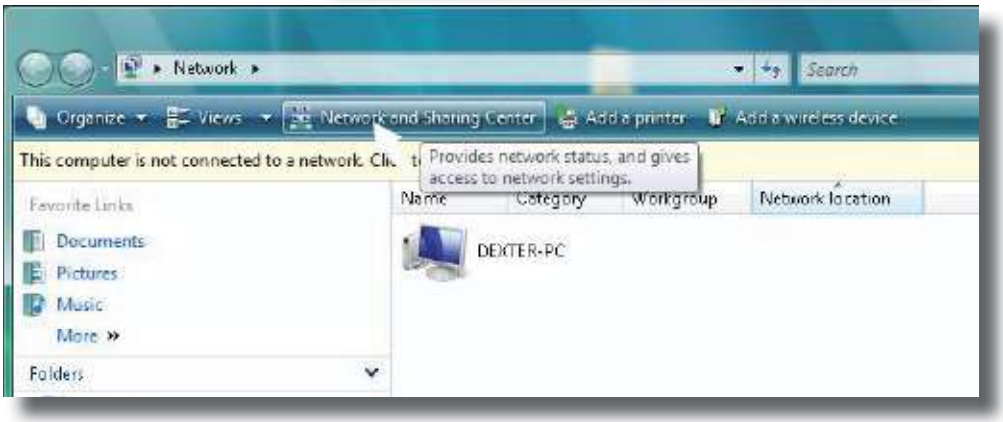
Although it is possible to use a 32 bit version of Windows Vista and Windows 7, for support reasons Dexter Laundry recommends Windows XP if possible. Certain "Home" versions of Windows Vista and 7 do not include the Microsoft Access supporting files which are needed to run the Easy Manage software. Even if you are using XP, Dexter Laundry recommends to turn off Windows Firewalls and disable any virus protetions for the first few times you connect your computer to the Easy Card™ System.

Step 1)The IP address of the Windows connecting computer must be set before it is connected to the system.

(A) Left click on the Start Menu

(B) Left click on "Network

(C) In the tool bar, left click on "Network and Sharing Center"



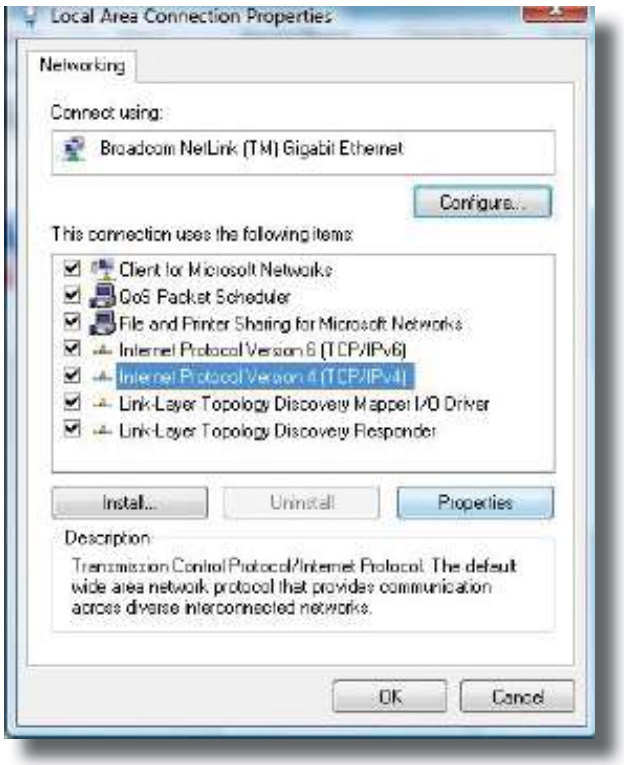
Setting up a Windows Vista or Windows 7 Computer for System Programming (continued)

(D) On the left side of the screen, left click on “Manage Network Connections”

(E) Right click on the “Local Area Connection” Icon and left click on “Properties” in the drop down menu. (A Microsoft Vista warning screen may come up at this point, click on “Continue”)

Setting up a Windows Vista or Windows 7 Computer for System Programming (continued)

(F) Select “Internet Protocol Version 4 (TCP/IP v4)” and then left click on the “Properties” tab.

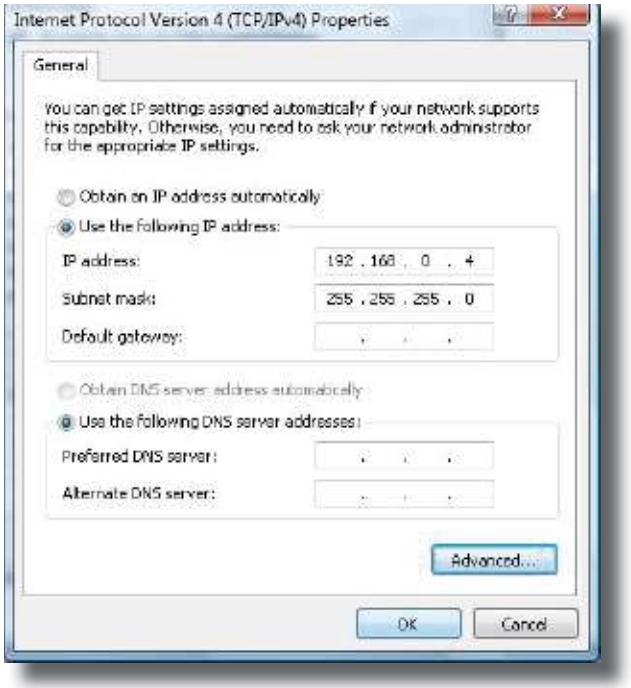


(G) Select “Use the following IP address “

(H) On the IP address line type “192.168.0.4”

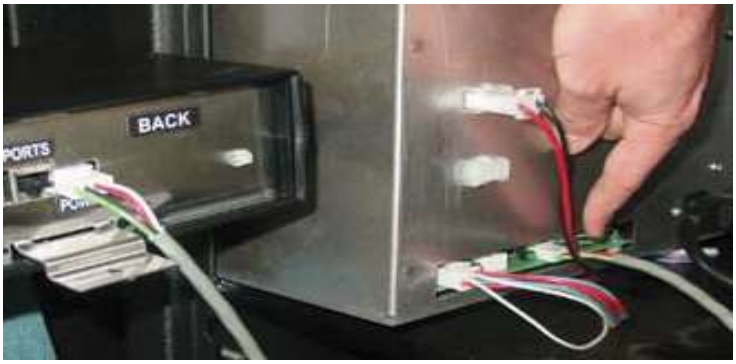
(I) Click on the “Subnet Mask” line and the following address should appear 255.255.255.0

(J) Click “OK” and close the remaining open programs. (refer to page 14 for the Internet Explorer settings)



Network Cabling

The Components Used For This Stage Include: Cables, Wired Hubs & Data Boxes



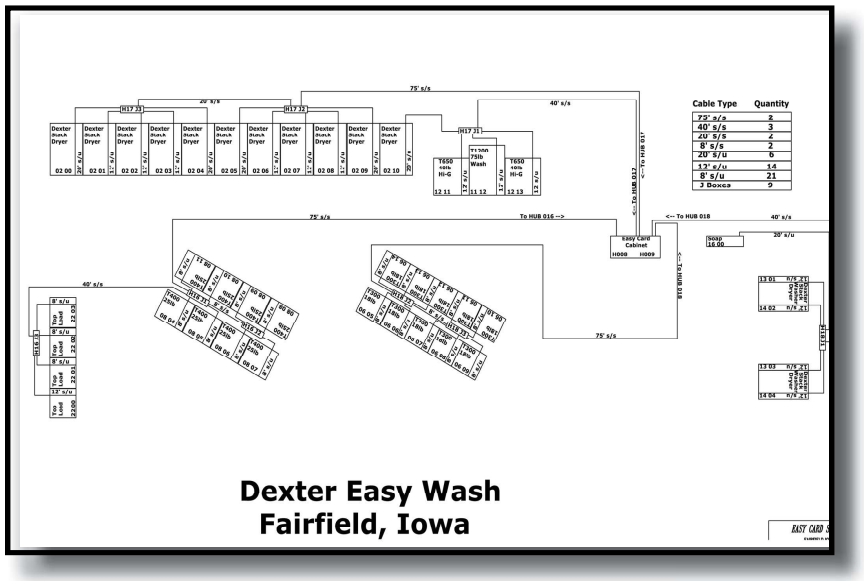
Step 1) Turn off the Main network power supply.

Step 2) Connect the Ethernet Wired Hubs to the network power supply using the gray power cables attached to the inside of the cabinet. Next, connect all of the Ethernet Wired Hub boxes to the Ethernet Switch in the cabinet unit. The port marked “ETHERNET PORT” will connect to the YELLOW connection points at the Ethernet switch using the YELLOW cat 5 cables attached to the inside of the cabinet.

Step 3) Turn the Network Power Supply back on.

Step 4) Following the supplied Easy Card™ store schematic, run all of the cabling and data boxes for each Wired Hub branch without connecting the final reader cables.

*Be sure to follow the layout precisely, substituting cables will leave you short somewhere else.



NOTE: When running the cables through the machines, keep them away from moving parts, extreme heat sources, and capacitors. Integrated Easy Card™ machines will have the reader cable already connected and located on the back of the Washer or Dryer.

Step 5) Turn off the Main network power supply. Connect the main Hub branch cables coming back to the cabinet unit into the proper Wired Hub assembly.The Branch cables will connect at the ports marked “RS485”. **DO NOT MIX UP CABLES FROM HUB TO HUB!!!**

Reader Installation

The Components Used For This Stage Include: Store Layout, Windows Computer, Easy Card™ Software, Readers, Harnesses

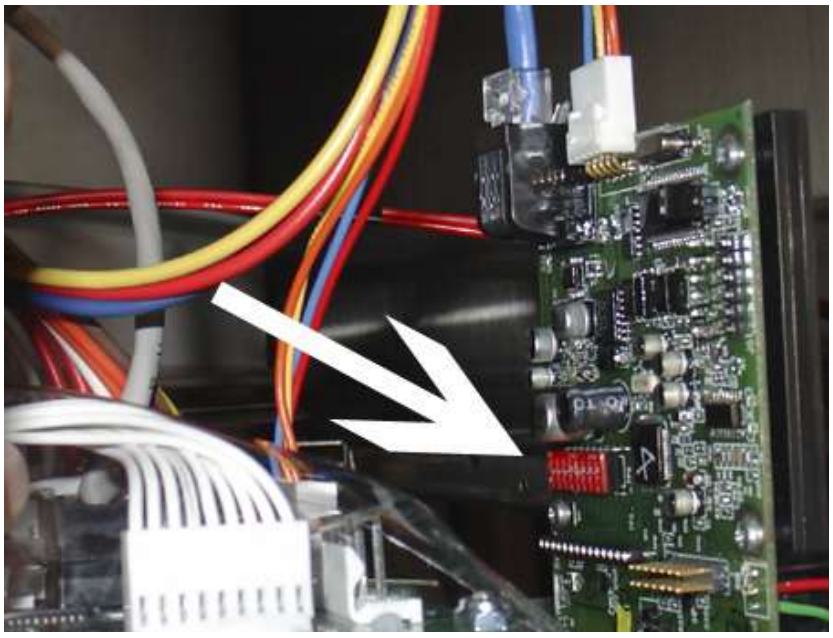
Important Note: Each Easy Card™ reader must be entered into the system individually using the Windows Computer Connection and the store layout. The system will not recognize readers that have not been entered into the system first. Refer to section 5-115 through 5-117 of the Easy Card™ Software Manual.

Step 1) ALL reader address switches should be set according to the switch setting guide located on page 17 and the store layout, which shows each machines reader address

.*DO NOT CONNECT THE READER NETWORK CABLES AT THIS TIME !!!

NOTE: It is recommended That the Hub and Address of each machine which is shown on the store layout is written inside of each machine for future servicability.

It is also recommended that all of the Data hubs be labeled with the same addressing as shown on the layout.



Step 1A) When setting Integrated Easy Card™ machines, do not connect the cables to the junction boxes until all readers have been set!

To set the switches on the Integrated Easy Card™ washers, remove the washer tops and set the switches while the readers are mounted in the machines.

To set the switches on the Integrated Easy Card™ dryers, simply loosen, (it is not necessary to fully remove), the (4) T-10 torx screws which hold the assembly in.Slide the reader out, set the switches, and replace the reader.

Easy Card Reader Switch Settings

Step 2) Before connecting to the network, All readers must be entered into the system through the Windows computer connection. Refer to section 5-111 through 5-115 of the Easy Card™ software manual. Using the store layout, enter each reader by Wired Hub Branch, Reader Address, Reader Version, and Type of reader.

Note: When setting the reader version for each machine,
Dexter V series and A series washers will be set for "Dexter Washer I2C2".
All other machines and vending will be set as "Standard".

Step 3) After readers are entered into the server through the Easy Card™ software, turn on the network power supply and begin connecting the readers to the network one by one.

The address will flash on the reader when it is connected. The yellow lights represent the number of tens and the red lights represent the number of ones. ex. (2) yellow lights and (7) red lights = address 27

CHECK EACH ADDRESS AS THE READER IS CONNECTED to verify that it is correct. Refer to the layouts for the address of the reader.

Step 4) Activate all standard readers with a card and listen for the relay clicking before making all harness connections from each reader to the machine. End of Stage 4 - Reader network is active.

Programming the Machine Information

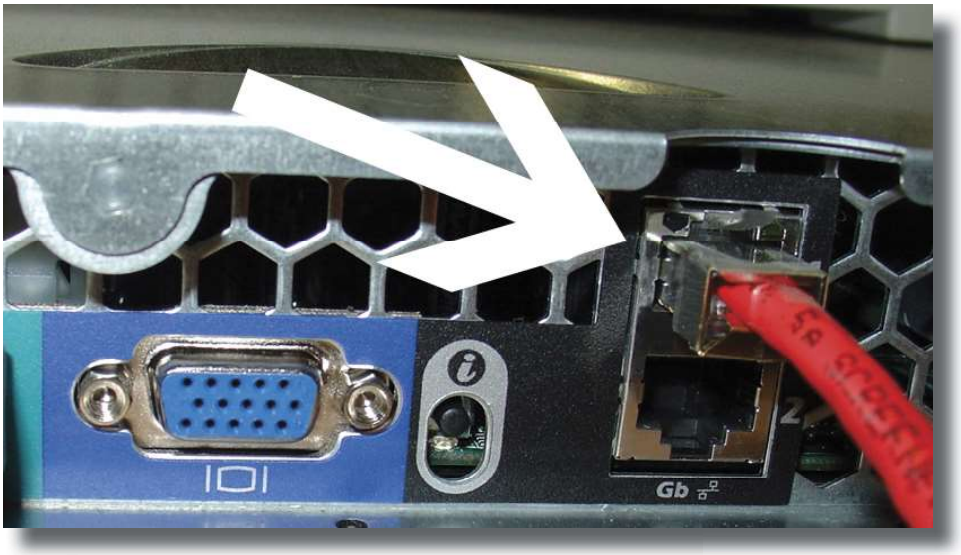
All Machine information and pricing will be programmed using The Easy Card™ connection software. Refer to Chapter 5 located on page 5 – 1 of your Easy Card™ software manual.

Connect the Optional Backup Server

After all machines have been set, connected and tested, the optional backup server can be connected.

Step 1) Connect the second RED cat5 cable from the backup server unit to the Ethernet switch at the second RED port.

Step 2) Once the backup server is connected to the Ethernet switch, connect the power cord to the backup server. The backup should only be powered if the main server is already up and running the system. The Backup Server lights will come on and this should also give a green light on the Ethernet switch at the second red port. The backup server should begin exchanging information after 5 - 6 minutes.



The Components Used For This Stage Include:

- Store Layout
- Windows Computer
- Easy Card™ Software
- Easy Card™ Software
- Optional Back Up Server

Multiple Store Rules With Easy Connect

When connecting to multiple stores, the Easy Connect software must use a different number for each store that you are connecting to. The store numbers in the store server must be changed during the set up of the laundry. The procedure is as follows:

1) Connect to the store computer
2) Go to the Modify System tab and select “System Parameters” below
3) Change the store number to a number which doesn’t conflict with an existing store that you have already set up.
4) Click SAVE at the bottom of the screen
5) Go to the Utilities tab and select “run status” below
6) Click “STOP LAUNDROMAT” and wait for indication of laundry stop
7) Click “ START LAUNDROMAT” and wait for the store to come back up
8) Disconnect and install your other connection software.

NOTE: The Transfer program must see the new store designation at the top of the log file. You must wait one day for Transfer to be able to download the files from the new location.

Easy Card Reports and Set Up

These procedures are followed after the store system is set up and the Windows computer is connected either through the cat 5 data cable or through a dial up connection. Instructions for connection to the system are found in the Easy Card™ System Installation Guide. You will need:

- **A Windows computer or laptop (Preferably running the Windows XP software)**
- **The“Management Software Installation Tool” CD included with your manuals.**

Step 1) Install Transfer.exe as follows:

(A) Insert the provided “Management Software Installation Tool” CD. The CD should autorun after a few seconds. If not, go to “My Computer” and select the CD drive.

(B) The disk will open to the Main Menu screen.

(C) Go to “Install Easy Card™ Communications and Management Software”.

(D) Select Step #1 SAVE “Transfer.exe” from the list. This needs to be saved not opened.
Save it to the “Desktop” of the windows computer.

NOTE: Step 2 and 3 only need to be done if the connecting Windows computer is making the connection over a phone line through the modem.
If the Windows connecting computer is connected directly to the Ethernet switch at the location, skip ahead to Step 4, installing Easy Comm.

Step 2) Install EasyConnect.exe as follows:

(A) Go to “Install Easy Card™ Communications and Management Software”.

(B) Select Step #2 SAVE “EasyConnect.exe” in the list. This needs to be SAVED, not opened. Save it to the “Desktop”of the windows computer.

(C) Continue to Step 3 to add the Easy Card store using the Easy Connect software. For more detaield descriptions of Easy Connect and it’s capabilities, refer to section 3-48 through 3-50 of the “Easy Card™ Software Manual”.

Step 3) Setting Up Easy Connect

(A) Open the Easy Connect software located on the Computer Desktop. Click on “Store” and “Select”.

(B) Click on the “New Store” tab.

(C) Enter the Store Name, The Dialup Phone Number, and enter “default” as the Password.

(D) Click “OK” and close the program.

(E) From the start menu, right click on “My Network Places” and left click on “Properties”.

(F) By clicking on the new shortcut for the store, you will be brought to the dial-up connection screen.

(G) Left click on the properties tab.

E.

F.

(H) If you have multiple modems you may change which one you are dialing with.

(I) Check the “Use dialing rules” box.

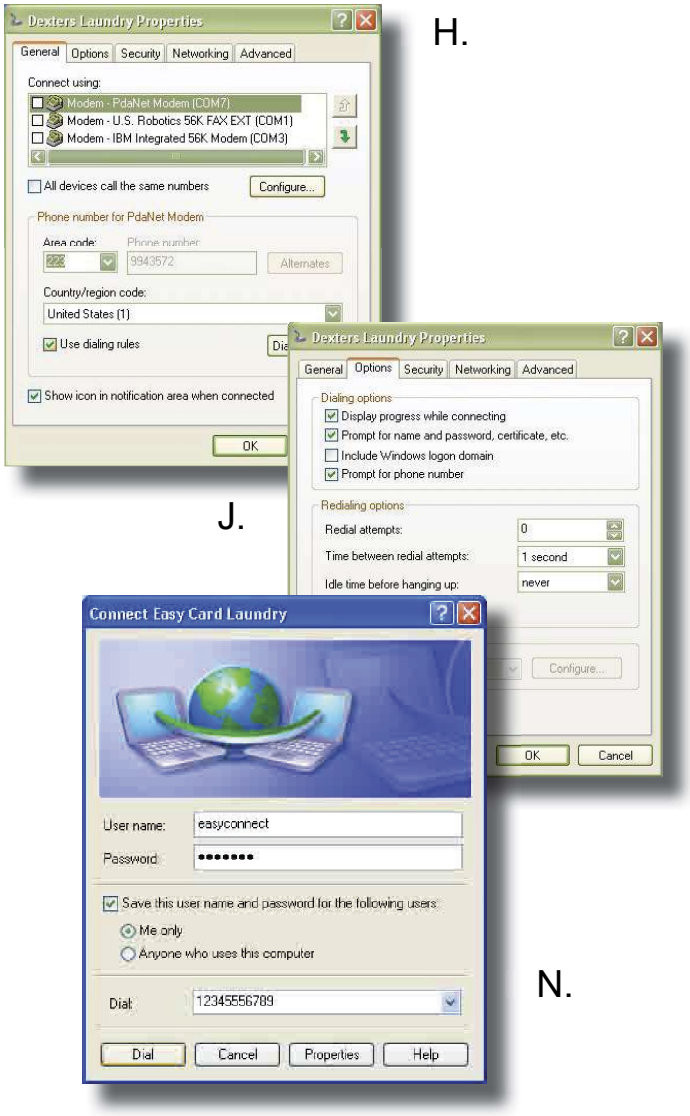
(J) Click on the “Options” tab.

(K) Check the boxes to “Display progress while connecting”, “Prompt for name and password” and “Prompt for phone number”.

(L) Click on the “Advanced” tab and go to “Windows Firewall” . Make sure that it is set for “Off”. (**NOTE:** when connecting to the Easy Card store location through the dial up, all anti virus software must also be turned off.)

(M) Click on “OK” to return to the original screen.

(N) The user name to enter is “easyconnect” and the password is “connect”. You can check for the system to save this name and password. Check that your dial up number is correct and click “Dial”. This saves the information in your dial up networking settings. Once the connection is made, disconnect and use the EasyConnect software for all future connections



H.

J.

N.

A.

B.

C.

Step 4) Install EasyComm as follows:

Following the initial installation, the EasyComm software will be used only to create store folders for the logfiles which you are downloading from the store.

(A) Click on Step #3 RUN the Installation of the EasyComm software.

(B) At the security warning for the Setup EXE. file, click “RUN”.

(C) This will bring you to the Installation Wizard for Easy Comm. At the welcome screen click “Next” and then click “Next” again at the Choose Destination Location screen.

(D) The EasyComm installation is complete.

NOTE: During the installation of Easy Comm and Easy Manage, your computer may not recognize the software publisher and will send an message prompting whether or not you wish to run the software. Click "Run"

Step 5) Install EasyManage as follows:

(A) Click on Step #4 RUN the Installation of the EasyManage software.

A.

(B) At the security warning for the Setup EXE. file, click "RUN".

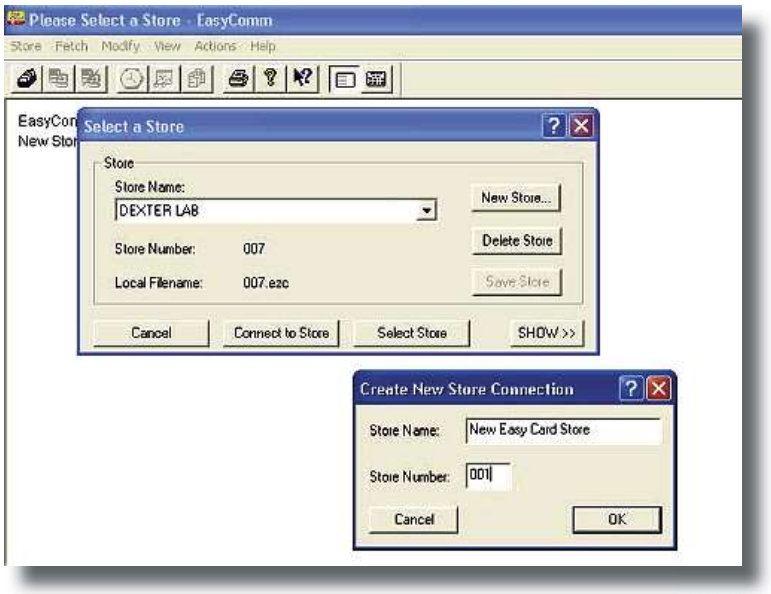
B.

C.

(C) This will bring you to the Installation Wizard for Easy Manage. At the welcome screen click "Next" and then click "Next" again at the Choose Destination Location screen.

(D) The EasyManage installation is complete.

Step 6) Create your store information in EasyComm to be used by EasyManage.



(A) Open EasyComm.

(B) Go to “Store” / “Select” / and click on “New Store”.

(C) Enter the name and Store number for your store. (The number must match the store number set up in your main server).

(D) Click OK and exit the software.

You will not use Easy Comm to connect to your store. Close the program.

Step 7) Verify that Easy Manage matches your “Log File Home Directory”.

(A) Open Easy Manage.

(B) Go to “Program” and down to “Preferences”.

(C) The “Log File Home Directory” should be set to match this example.

C:\Program Files\EasyCard\EasyComm

If not, Click on “Change Location” and set the logfile home location to match the following.
C:\Program Files\EasyCard\EasyComm

(D) Click Save.

Steps 1-7 are only done once during the initial Windows computer setup.

NOTE:
Before Transferring Log Files, make sure that the original testing information files have been deleted.

The following steps 8 and 9 will be taken each time you want to download files and create EasyManage reports

Step 8) Transfer Log Files from the store server

A) If using dial up, connect to the store using "EasyConnect". If you are using a direct connection, go to step 2.

(B) Open the Transfer.exe program on the "Desktop" of your windows computer.

(C) Select to transfer all Account Files, all Log Files and all all Xlog files.

(D) "Click Start Transfer".

(E) Close window when finished.

Step 9) Transfer Files into EasyManage.

(A) Open your EasyManage Software.

(B) Click on the yellow lightning bolt on the tool bar.

(C) The files have been transferred and reports can now be generated.

(NOTE) The yellow lightning bolt must be clicked after every transfer to move the files into EasyManage for use. Reports can only be generated for complete log files that have been downloaded. For today's sales and account information, you must wait until after the daily log flip.

A.

B.

Step 10) Install the "Putty" software to the desktop.

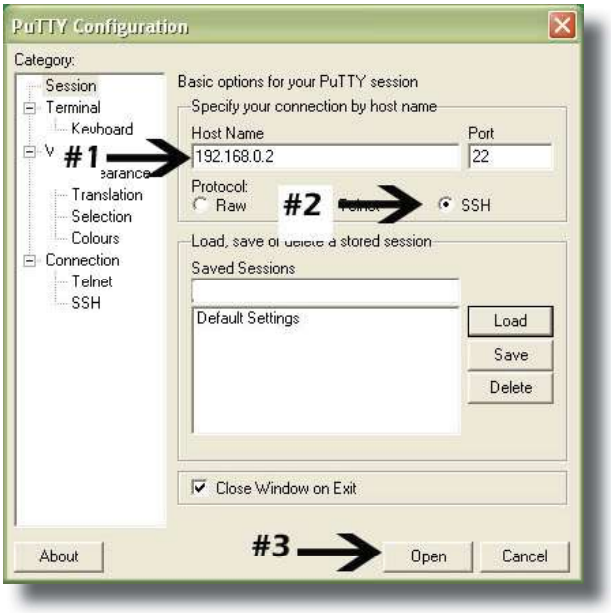
For future troubleshooting purposes we will download the "Putty" software to the desktop screen of the Windows computer. Once connected to the internet explorer screen, this software will need to be downloaded.

(A) Go to "Install Easy Card Communications and Management Software".

(B) Select Step #5 SAVE "Putty".

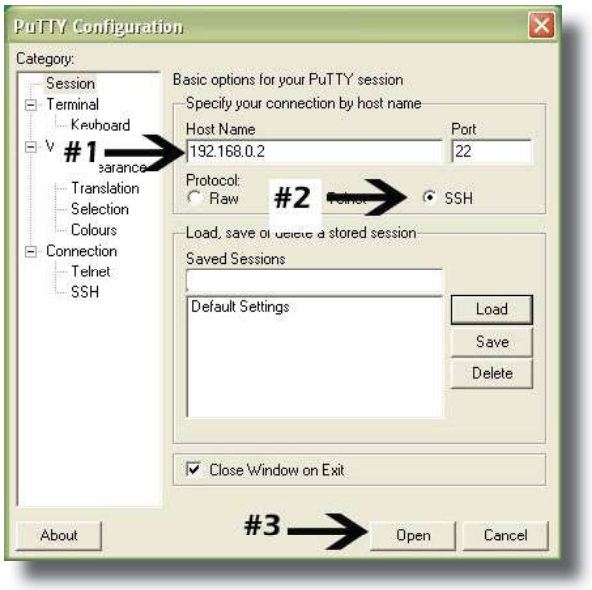
To enter the Putty software:

1) Enter the IP address of the main server "192.168.0.2"
2) Click on "SSH"
3) Click on "OPEN"
   (There may be a "security breach" message that comes up. Ignore this and click "yes" to move on. You should be at a black login screen)
4) At the login, type: "dexter" and press enter
5) At the password, type: "default" and press enter
6) To exit, close the program or type exit and press enter



Before Your Store Opens:

Getting into PUTTY to remove existing data before store opens



1) Enter the IP address of the main server “192.168.0.2”
2) Click on “SSH”
3) Click on “OPEN”
4) At the login, type: “dexter” and press enter
5) At the password, type: “default” and press enter

G) At the “dexter” prompt, type “logs” and press Enter

H) Type “rm log.dat” and press Enter

I) Type “rm xlog.dat” and press Enter

J) Type “exit” and press Enter to exit putty

K) In the Internet Explorer software Go back to the UTILTIES tab and then choose RUN STATUS

L) Click on “Laundromat Start” to restart the system

Instructions to Remove All Active Accounts

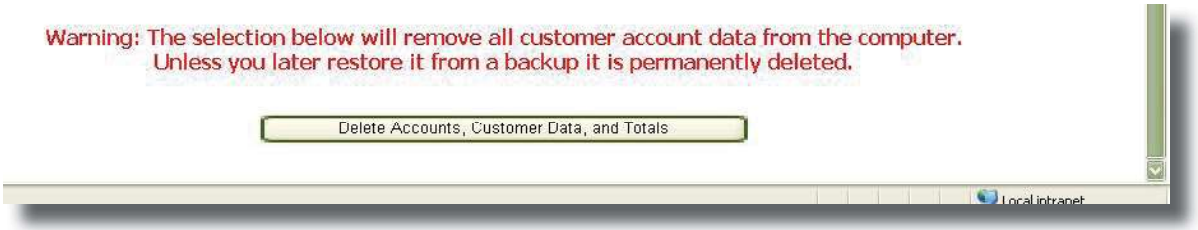
This will not remove any of the machine type information.

Before store information can be transferred into the off site computer, we want to make sure that the prior testing information has been removed. This will prevent irrelevant information and testing accounts from permanently entering your Easy Card accounting information.
To clean out unwanted testing information and accounts:

A) Next go into the Windows Internet Explorer software and click on the “Utilities” Tab

B) From here click on “Database”

C) If you scroll all the way to the bottom of this page, There is a button to click to “Remove all accounts “. This will remove all active accounts in your system. If you have created manager cards for testing, these will need to be re-entered.



Easy Card Post-Installation Check List

This list should be reviewed by the installer and store owner together to make sure that the new Easy Card owner understands the basics of the system. These items may not be checked off specifically in this order.

- ❑ All equipment is powered up and working with the card
- ❑ All components (backup, touch screen, doors) “pinged” through the “putty” software are responding and working
- ❑ Cables and junction boxes have been tied up safely
- ❑ Locks are installed on Easy Card cabinet and owner has keys
- ❑ The USB flash memory is inserted and Owner understands how to use it
- ❑ Owner understands the preventative maintenance schedule (what to clean, how to clean it, and how often)
- ❑ Owner has copies of all manuals and software
- ❑ Owner has been shown and reviewed the emergency procedures located in the Easy Card manual
- ❑ Owner has been left at least 1 copy of the Easy Card layout for their store which is to remain in the store
- ❑ Owner understands how to read their store layout to locate a machine
- ❑ Installed the Easy Connect software on owners home computer to get the dial up connection settings correct OR connections have been made directly to the system at the store allowing the owner to access the Internet Browser software and the Transfer program
- ❑ Easy Manage and correlating software have been installed on the owners computer (at home or on-site)
- ❑ Owner has been trained how to download log files, transfer them into Easy Manage and create a report.
- ❑ Owner has been trained how to collect money from their Easy Card system using the courier card
- ❑ Owner knows how to create and modify an account card
- ❑ Previous testing accounts have been cleared from the computer before store opening

Both parties can sign below to agree that proper training has been administered and received. This form can be filed with the owner and distributor records.

INSTALLER _____ Date_____

OWNER_____ Date_____

Section 2: Promotional Tools

Easy Card Promotional Ideas

The Easy Card system was designed with several tools to promote your business and reward your loyal customers for their patronage. By using one or a combination of these tools, you can help to dictate customers' patterns in your store. Some of the capabilities are:

99 different levels of customer discounts:

Specific discount percentages can be set up for any number of accounts either as a promotion or as a way to manage your industrial accounts.

Ex: You give the local Good Will Store a 15% discount card to use on all laundry done at your facility. Each time they bring in items, the discount comes off automatically, and at the end of the year you can print a report to give to your accountant for charitable giving. Ex.2 Senior Citizens 10% discount

Customer usage bonuses:

These bonuses can be set up several ways. Essentially, the customer gets bonus money back on their account after a certain amount is spent at the machines, or inserted into the cabinet. The availability of the bonus is also designated by machine type. This means that the owner can choose which types of machines will be included in the bonus.

Promotional cards:

These are a range of cards which are created in the system for the sole purpose of being distributed to potential customers either by hand or by mass mailing. These cards can be set up with a specific balance or bonus amount so that the new customer already has a valid account when they arrive at the store. These cards can also tie into the 99 different levels of customer discounts.

Time of day discounts:

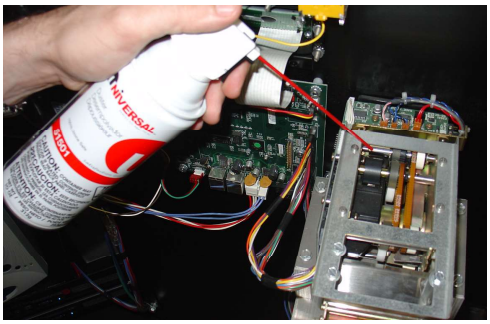
These are discounts to the equipment prices which can be inmplemented on particular days or times of day when your store is not as busy. Using these features helps you to encourage your customers to come into the laundry during slower periods. This helps even out the traffic flow through your store during peak demand times.

Off peak discount :

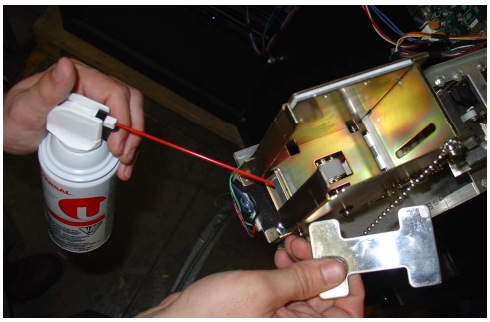
To encourage customers to come into your store during the off peak days or time of day. (Example – Value Days :Tuesday through Thursday receive a 10 percent discount on your laundry) This is set up under the rate tables for each machine type. There is an hourly chart listed for each day of the week. Simply type in what you want the discount from the standard price to be and enter the letter "D" in place of the "S" during all of the hourly time blocks that you wish to have included in the discount time.

Section 3: Preventative Maintenance

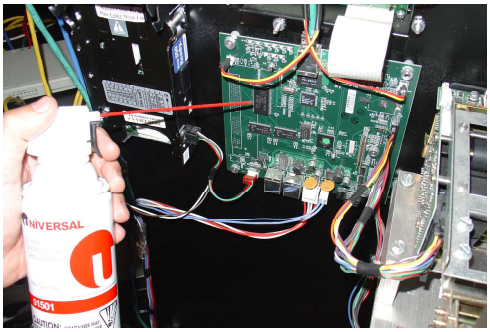
Easy Card Preventative Maintenance



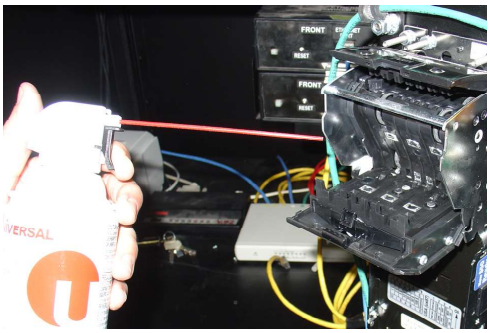
Step 1: Reader Card Path



Step 2: Stacker Card Path



Step 3: Acceptor Dispenser Board



Step 4: Open Verifier

Regularly Scheduled Maintenance and Cleaning
To ensure that your Easy Card system functions properly for you and your customers, you will want to do some scheduled cleaning on a regular basis.

Items needed for cleaning
- Cleaning Cards
- Compressed air
- Denatured alcohol

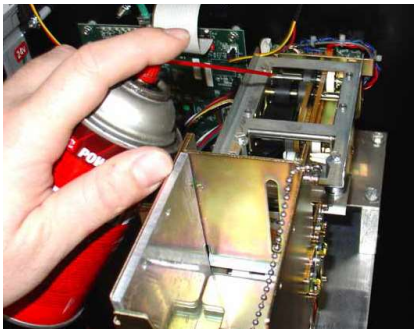
Cleaning Cards
A packet of cleaning cards is sent with each Easy Card system. These should be used to clean the magnetic heads which read the stripe on the Easy Cards.

Compressed Air (Canned)
Use canned air when blowing out electronics. Air compressors many times will have water and oil droplets in the lines which will damage components.

Monthly Maintenance – Cabinets – Compressed Air

Using the nozzle of a compressed air can, blow all excess lint and dirt away from the following components. (Be careful not to physically touch the electronic boards!)

- Motorized Reader,
- Card Stacker,
- Control Board
- Bill verifier

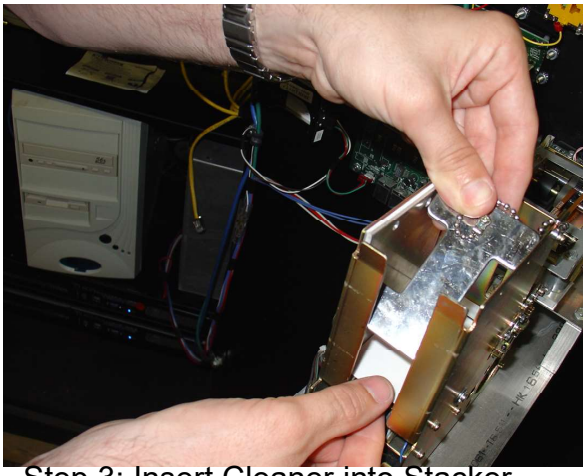


Monthly Maintenance – Cabinets – Cleaning Cards

Remove the cards from the card stacking unit
Insert the fresh cleaning card into the card stacker and place the silver weight on top of it.

Step 1: Remove Cards

Step 2: Open Cleaning Cards



Step 3: Insert Cleaner into Stacker

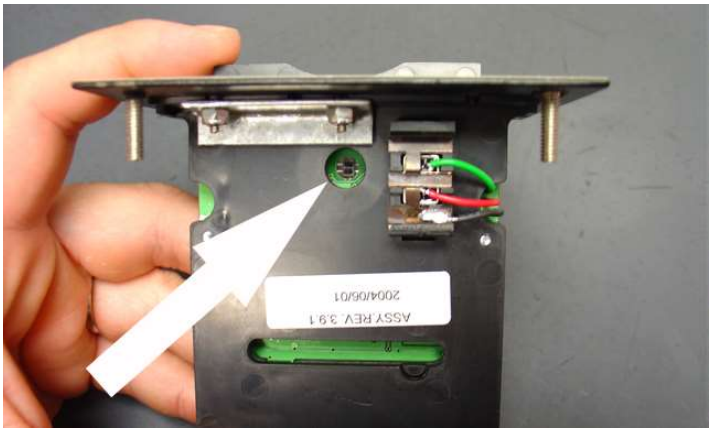
Step 4: Insert a dollar bill from the front side of the cabinet and press the red button.

Step 5:

The card will be dispensed through the mechanisms and be dispensed from the front of the cabinet. Repeat this procedure 6-7 times for each door. If the card dries out, re-wet the card with denatured alcohol.

Monthly Maintenance – Readers – Compressed Air and Cleaning Cards

Step 1: Using Canned Air, insert the nozzle into the center of all the readers and give each a quick shot of air.



Step 2: This helps to clear lint from in front of the optical sensor.

Step 3: (Shown right)
Use a cleaning card in a scrubbing motion on each appliance reader.

1 card should handle 10-12 machines before it begins to dry out. If the card dries out, re-wet the card with denatured alcohol.

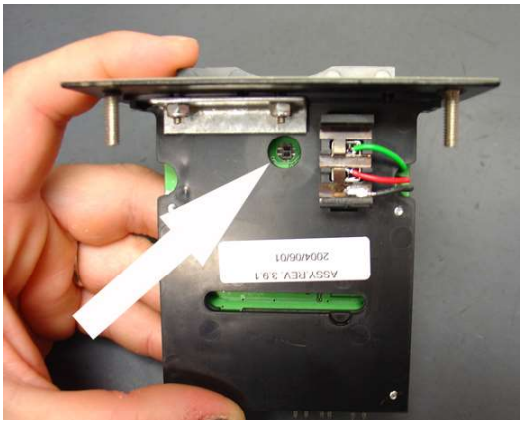
6 Month Maintenance – Cabinet – USB Memory

The daily backup of your accounts is sent to the USB Memory Drive once each day. This database file MUST BE PROTECTED!

The USB Storage media on the main server is good for about 6 to 8 months in most stores. Remove the USB Memory Drive from the server and delete older files from the device. Re-insert the USB Memory Drive.

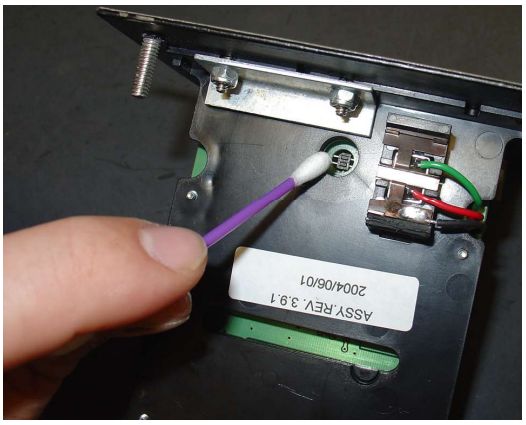
12 Month Maintenance – Readers – Optical Sensor

Remove the card readers or remove the machine lids so that you can access the Easy Card Reader.
Using the compressed air, blow air directly into the hole in the bottom of the card reader.
Use a dry q-tip to gently wipe away any dust or lint from the optical sensor chip.



It is also recommended at this time to use the q-tips and alcohol to clean the ports of the junction boxes, ports of the readers, and the cable tips before re-installing the readers.

Re-install the readers and or machine tops.



TSI Tower Server Linux System

Information and Database Backup Using the "System Storage Diskettes

The (3) database storage diskettes that are included with the software package are used as one of the backups of customer information. In the unexpected event of a system failure, system information and customer account balances can easily be restored using these disks.

A storage diskette should be in the drive of the main server at all times to back up this crucial information. This disk will fill up over time and it is highly recommended that the disks be changed regularly to prevent any loss of information. The frequency will depend on the sales volume of the store.

To ensure that all data is preserved, Easy Card recommends that every week to ten days the disk in the drive be taken out and replaced with a clean storage disk. The disk that was removed can then be viewed on a separate Windows™ computer and the files that have been written to the disk can be highlighted and deleted to free up space on the disk. This storage disk can now be reused in the system.

Rack Server Linux System

Information and database backup using the "USB flash memory"

The daily backup of your accounts is sent to the USB Memory Drive once each day.
This database file MUST BE PROTECTED!

In the new Easy Card System with the rack mounted servers, there will be a USB flash memory card provided for your data backup. When the servers are installed and the store is operational, this USB device should be inserted into the front of the Dell server. In most cases these will store several months of information. At the end of 3-4 months, This device should be inserted into the Windows computer and the files located on the USB device should be backed up on the4 unit and then deleted from the USB device to clear up space for the next several months.

Section 4: In-Depth Cabinet Maintenance

Issues at the Easy Card Cabinet

Most issues experienced at the Easy Card cabinet can be avoided by routine maintenance and cleaning in the cabinet unit components. Should there be a problem at the cabinet unit it will usually be one of the following issues:

Issue: The cards are dispensing as damaged
Action: Replace Easy Cards or clean the motorized reader

To test the cards, insert the supposed damaged card into the cabinet reader or a machine reader with a display (such as a vending reader).

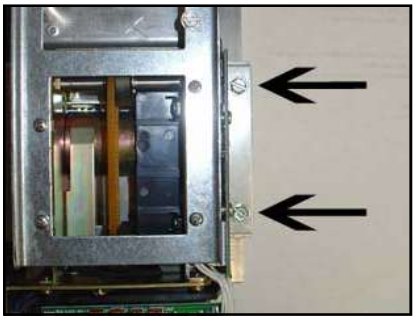
If the display does not react at all or repeatedly comes up at “re-insert card”, then the stripe on the card is actually damaged and the card is BAD.

If the reader display shows “Invalid Card”, then the card is GOOD. The reader was able to read the number on the stripe but that number was not in the system.
If the card is good, then the reader may not be reading the cards.

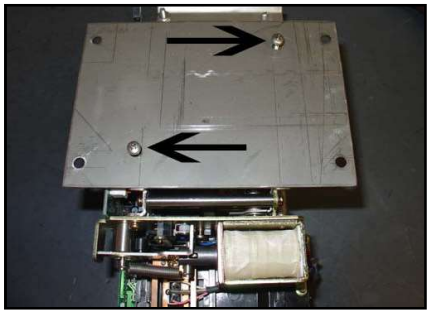
Issue: The cards are not being read by the card reader heads

Action: The reader needs a deep cleaning

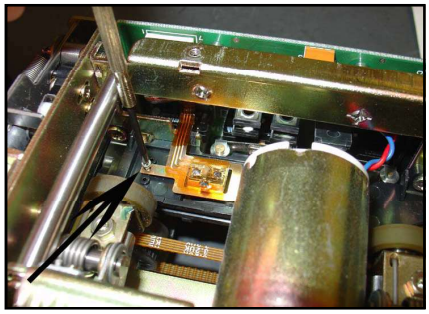
Start by removing the power and data harness from the back of the reader.



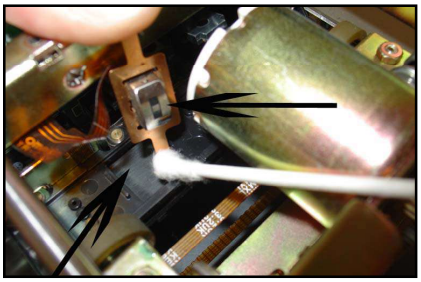
1. Remove the reader from the door by removing the four 5/16 nuts from the sides of the reader plate.



2. Turn the reader over and remove the two phillips head screws that hold the plate on the bottom of the reader.



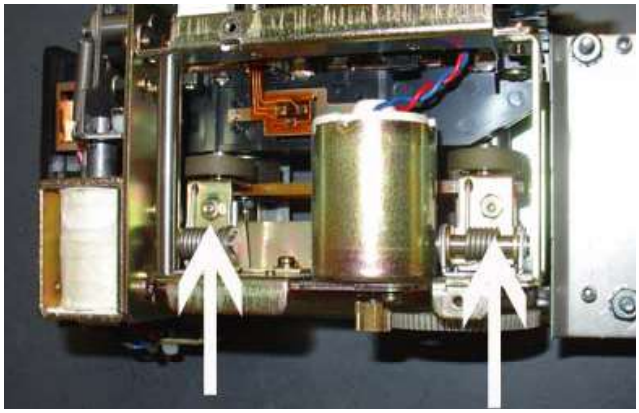
3. Remove the small Phillips screw which holds in the reader head. Check the reader for any foreign objects caught in the reader.



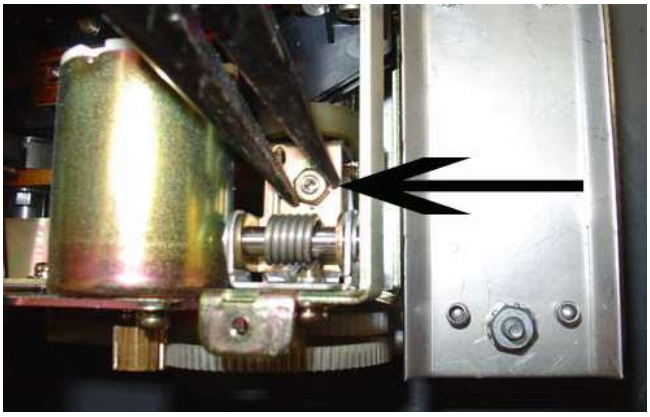
4. Using a cotton swab and denatured alcohol, clean the reader head and the socket which it sits in.

Re-install the reader head.

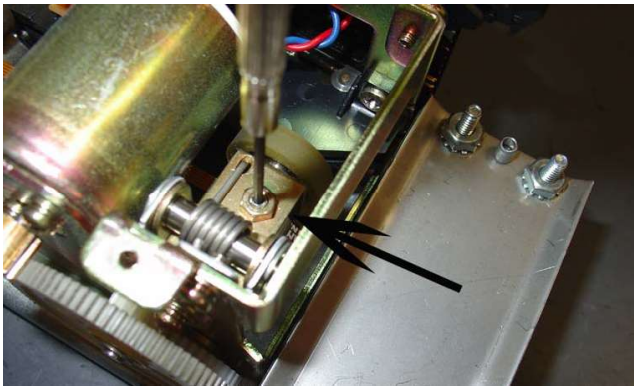
Issue: The cards are slipping inside of the motorized reader
Action: The tension wheels need to be adjusted.



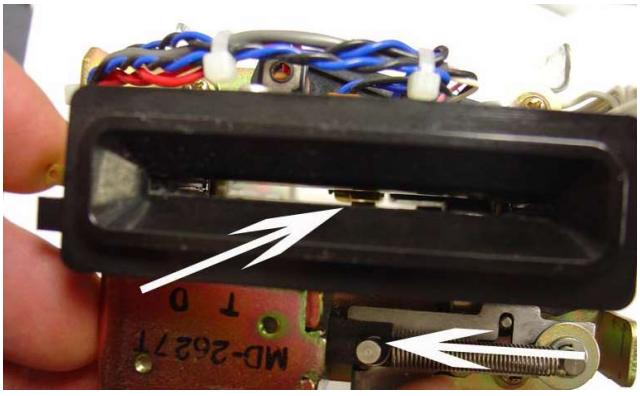
Step 1: Locate the lower tension wheel adjustments from the bottom of the reader.



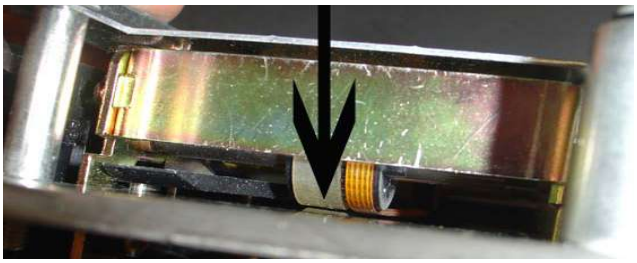
Step 2: Using a needle nose pliers, loosen the locktight on the nut.



Step 3: Using a 1/16 Allen wrench. Adjust the tension. Clockwise will decrease tension, counter-clockwise will increase tension.



Step 4: There should be tension on the card, but the upper and lower wheels ABSOLUTELY CANNOT TOUCH.



Repeat the same process for the opposite wheels. The upper and lower wheels ABSOLUTELY CANNOT TOUCH. Re-tighten the lock nuts to secure the adjustment. Re-install the reader

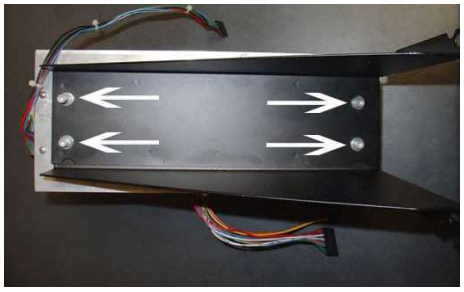
The Reader is Damaged.
If these corrections, cleaning and adjustments do not resolve the issue of “Damaged Cards” being dispensed, it is possible that the reader is damaged and needs to be replaced. New replacement rollers can be ordered from your Easy Card distributor.

Issue: The cards are not feeding from the dispenser to the reader

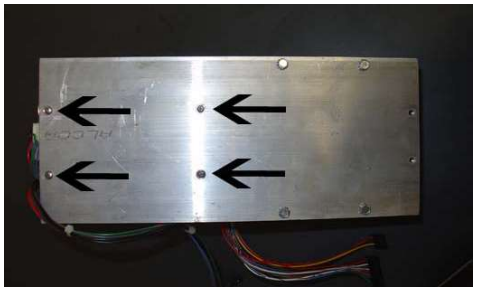
POSSIBLE CAUSES

- **Rubber Rollers are not clean**
- **Card path is being obstructed (blocked)**
- **Reader is preventing the cards from being taken in**

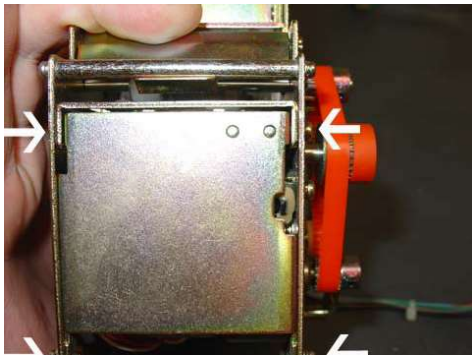
Issue: Dispenser rollers are not clean
Action: Deep clean the dispenser unit



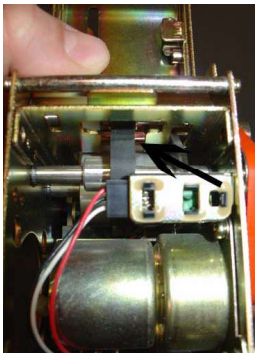
Remove the dispense/ read unit from the shelf assembly by removing the Allen screws on the bottom of the shelf.



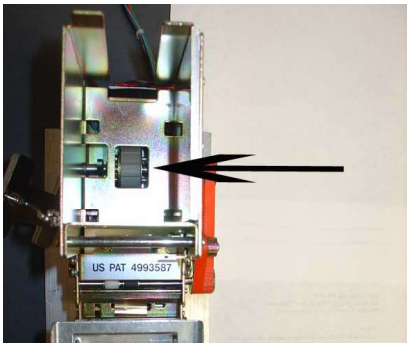
Remove the four Phillips head screws from the bottom of the plate assembly to remove the dispenser.



Remove the four Phillips head screws that secure the frontplate. Use compressed air to blow out the inside of the dispenser.



Use a soft cotton cloth and some denatured alcohol to clean the rubber dispensing wheels.

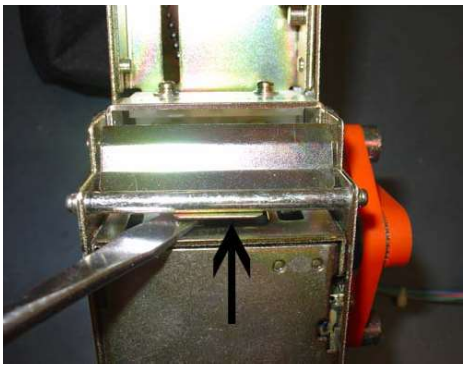


Use the cotton cloth and denatured alcohol to clean the large grey “kicker” wheel in the bottom of the card stacker.

Issue: If the card path is being obstructed (blocked)
Action: Adjust to clear card path

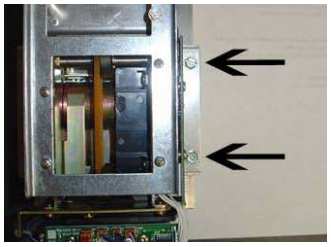
Check the spacing of the metal flap in the front of the dispenser. The cards roll out under this plate.

Using a flat screw driver, pry up on the flap that the card passes under. This will flatten out the plate and allow more space for the card to pass. Re-install the dispenser and shelf assembly.

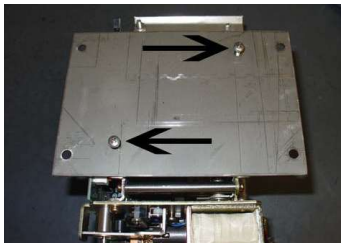


Issue: The reader is preventing the cards from being taken in
Action: Adjust the rear roller assembly of the card reader

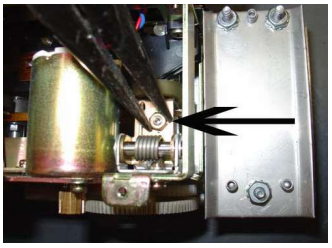
If the leading edge of the card moves forward and stops at the rear wheels of the reader. The rear wheels of the reader are adjusted too tightly for the card to pass under and trip the switch



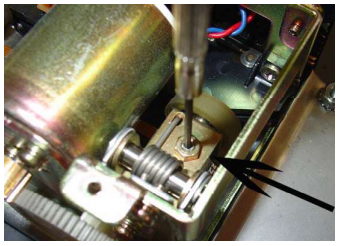
Start by removing the reader form the shelf assembly



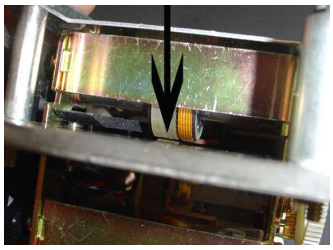
Remove the plate from the bottom of the reader



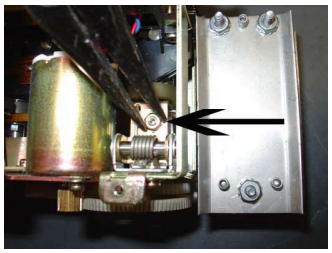
Using a needle nose pliers, loosen the locktight on the nut.



Using a 1/16 Allen wrench. Adjust the tension. Clockwise will decrease tension, counter-clockwise will increase tension.



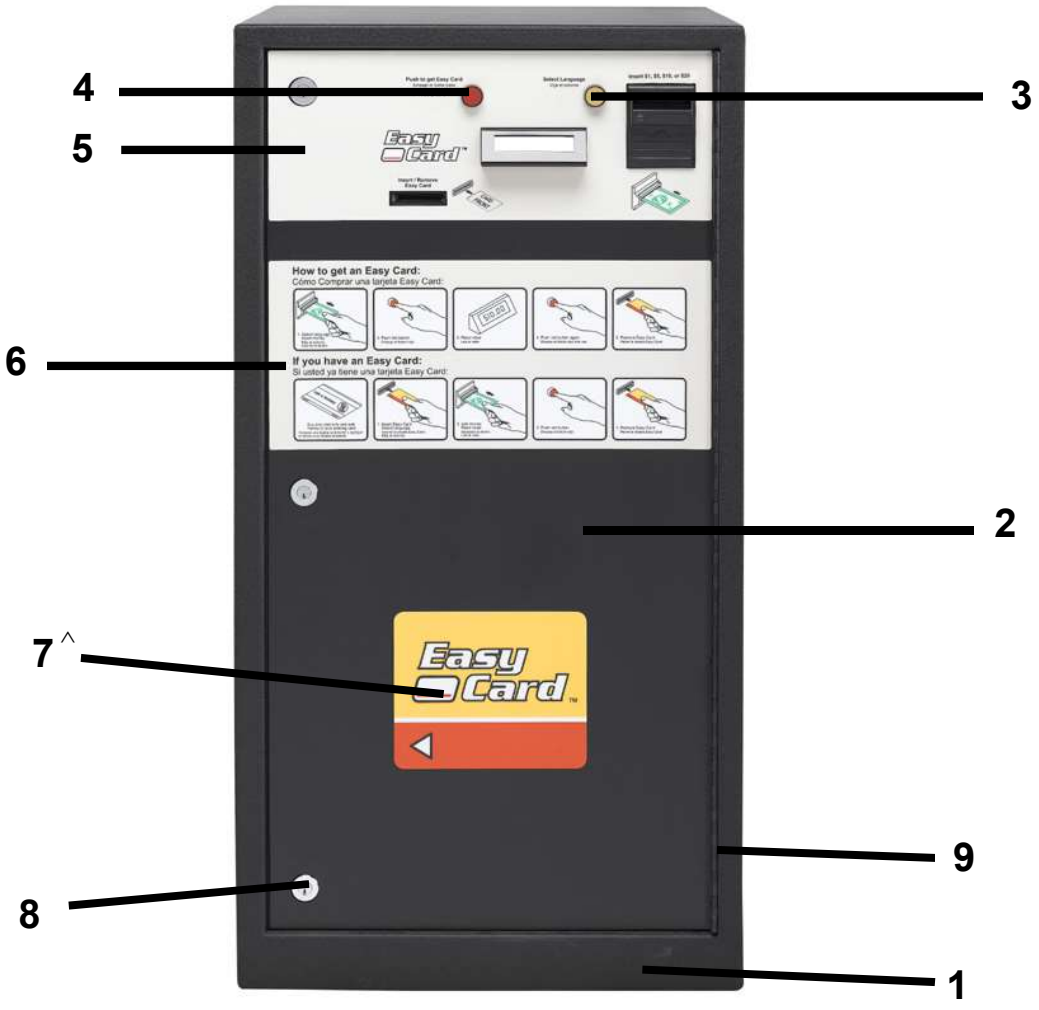
Adjust the back wheels with enough tension that the card can be drawn in yet still slide under the wheels easily. The upper and lower wheels ABSOLUTELY CANNOT TOUCH.



Re-tighten the lock nuts to secure the adjustment. Re-install the reader

Section 5:
Parts Breakdown

Main Cabinet Front View

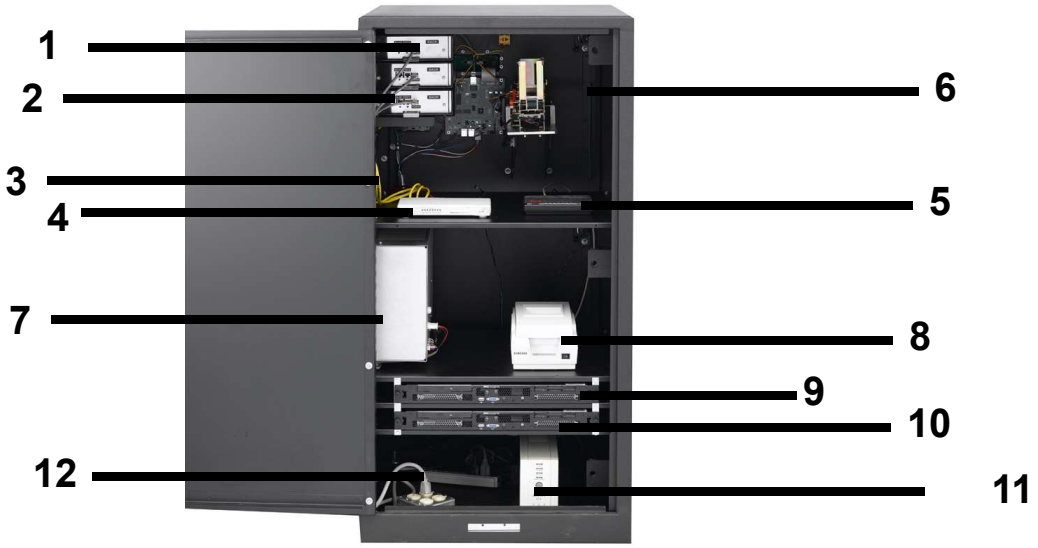


Key	Part Number	QTY	Description
1)	9924-086-002	1	Easy Card Cabinet (painted)
2)	9960-283-002	1	Door Assembly (front)
*)	9960-278-002	1	Door Assembly (Rear)
3)	9035-059-002	1	Switch Cap only (yellow)
4)	9035-059-001	1	Switch Cap only (red)
*)	9486-148-001	1	Black Plastic Retaining Ring
5)	9412-109-001	1	Nameplate –Easy Card Door (top) - For Mars Verifier
*)	9412-153-001	1	For Cash Code
6)	9412-107-002	1	Nameplate –Easy Card Door (instructions)
7^)	9412-108-001	1	Nameplate –Easy Card Door (Logo)
8)	8650-025-001	1	Cabinet Locks and Keys (set of 6)
9)	9243-078-003	2	Hinge Assembly (painted)

^ Not used after 3/2006

Inside Cabinet Components Dell Rack New System (Main Cabinet)

(Be sure to verify which system you have)



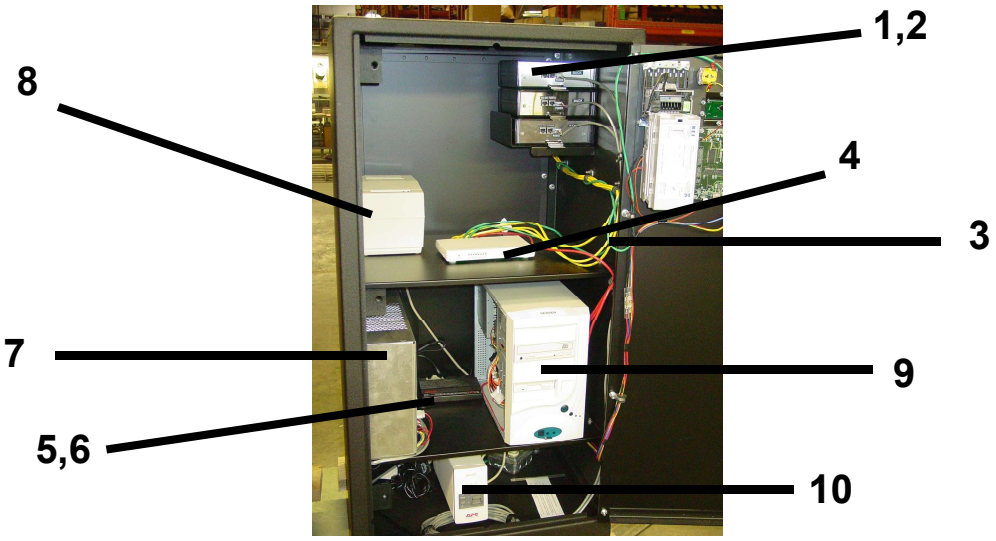
Key	Part Number	QTY	Description
1)	9795-002-001	3	Ethernet Wired Hub (Address 16 – 22)
2)	9806-014-001	3	Grey Power Cables (Ethernet wired hub to network power supply)
3)	9806-012-009	3	Yellow Cat 5 cables (Ethernet wired hub to Ethernet Switch)
4)	9150-020-001	1	Ethernet Switch
5)	9150-003-002	1	External phone modem
6)	9802-047-001	1	Phone modem Serial Cable
7)	9798-001-002	1	Network Power Supply (Main Cabinet)
*)	8636-018-003	1	External Fuse for network power supply
*)	8636-025-001	3	Internal Fuse for network power supply
7)	9798-002-001	1	Power Supply small (secondary cabinet)
8)	9150-029-001	1	USB Journal Printer
*)	9150-013-002	1	Replacement Paper Roll for USB printer
9)	9738-012-001	1	(MAIN) Rack Mount Server
*)	9806-012-008	2	Red Cat 5 Data Cable from Server(s) to Ethernet Switch
10)	9738-006-001	1	(BACKUP) Rack Mount Server Kit
*)	9150-034-001	1	USB Memory Stick for log file storage
11)	9150-030-001	1	USB Battery Backup
12)	9150-011-001	2	Surge Protector Strip
*)	9627-829-001	2	AC Bill Verifier Harness
*)	9627-814-001	1	DC Harness Main Cabinet
*)	9627-834-001	1	AC/DC Power Harness Secondary Cabinet

Software Packages

Key	Part Number	Description
*)	9504-023-001	FEDORA/ MAIN (Dell 860) CD w/ Fedora Core OS
*)	9504-014-005	BACKUP (Dell 860) CD w/ Fedora Core OS
*)	9504-021-001	Management software installation Tool for **Linux** system owners

Inside Cabinet Components
TSI Server Systems (Main Cabinet)

(Be sure to verify which system you have)

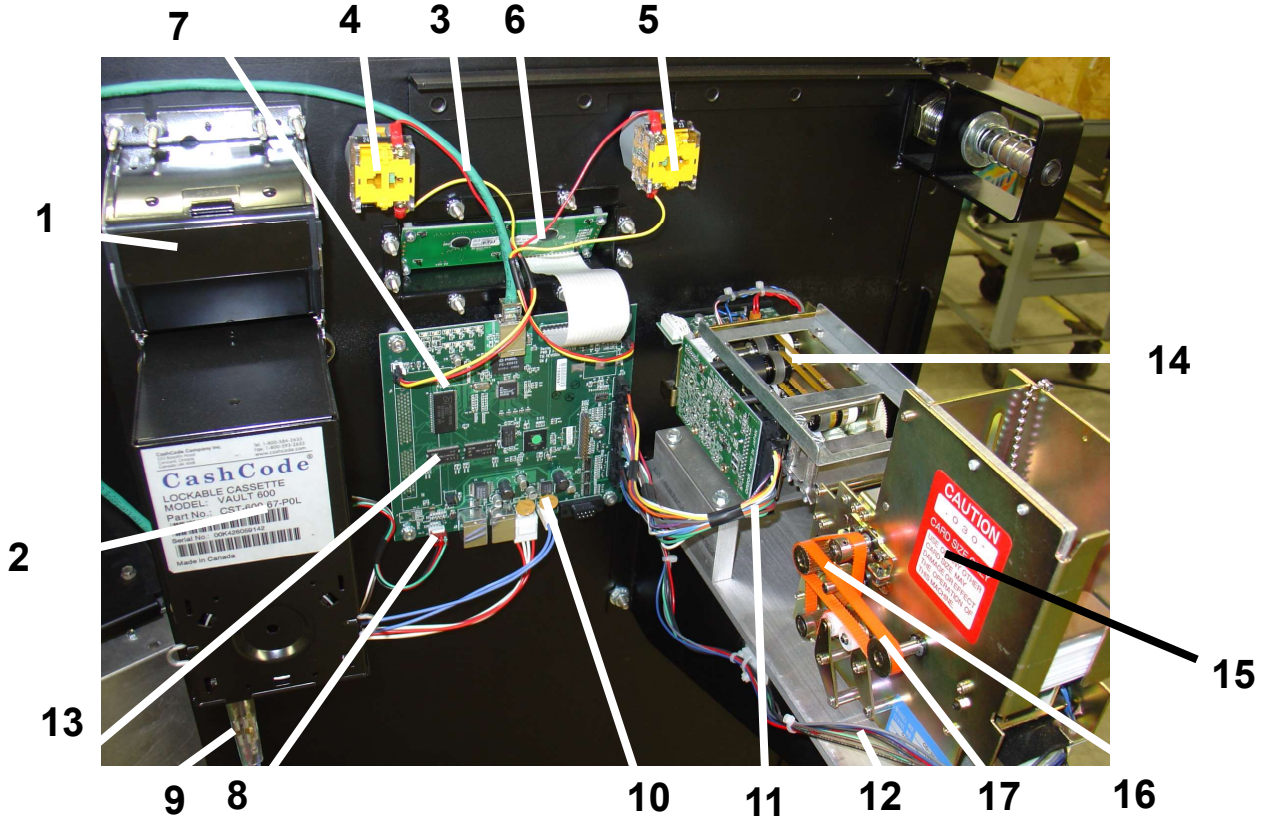


Key	Part Number	QTY	Description
1)	9795-002-001	1	Ethernet Wired Hub (Address 16 – 22)
2)	9806-014-001	1	Grey Power Cables (Ethernet wired hub to network power supply)
3)	9806-012-009	1	Yellow Cat 5 cables (Ethernet wired hub to Ethernet Switch)
4)	9150-020-001	1	Ethernet Switch
5)	9150-003-002	1	External phone modem
6)	9802-047-001	1	Phone modem Serial Cable
7)	9798-001-002	1	Network Power Supply (Main Cabinet)
*)	8636-018-003	1	External Fuse for network power supply
*)	8636-025-001	3	Internal Fuse for network power supply
7)	9798-002-001	1	Power Supply small (secondary cabinet)
8)	9150-001-001	1	Serial Journal Printer
*)	9150-013-001	1	Printer Ribbon
*)	9150-012-001	1	Paper Roll
9)	9732-263-001	1	(MAIN) TSI 630 tower server is no longer available. It is replaced by the rack server conversion kit. part #9732-263-001
*)	9806-012-008	1	Red Cat 5 Data Cable from Server(s) to Ethernet Switch
*)	9150-021-001	1	(OPTIONAL BACKUP) TSI 630 tower server
10)	9150-008-001	1	Serial Battery Backup
11)	9150-011-001	1	Surge Protector Strip

Software Packages

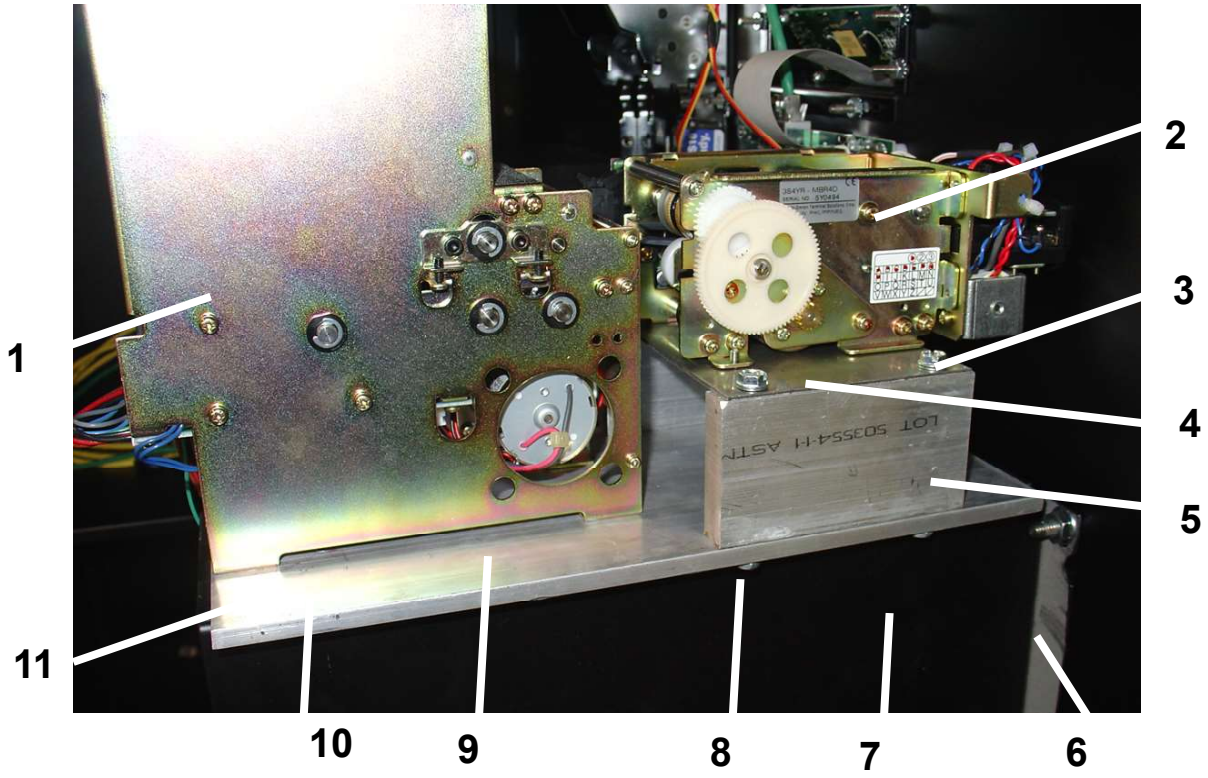
Key	Part Number	Description
*)	9504-014-003	Software set : Main, Backup, Floppy (For TSI tower servers only)
*)	9504-012-001	Floppy Disks for log file storage (For TSI tower servers only)
*)	9504-003-002	Easy Comm (2 floppy disks)
*)	9504-004-002	Easy Manage (7 floppy disks)

Components Cabinet Door



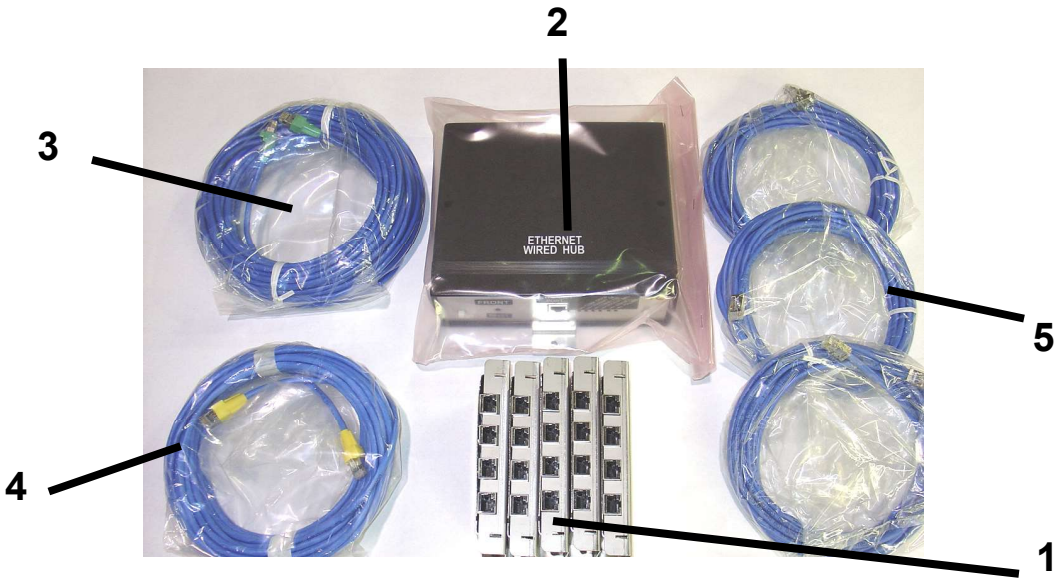
Key	Part Number	QTY	Description
1)	9150-024-001	1	Cash Code Bill Verifier (MDB)
1)	9150-040-001	1	Cash Code Verifier (Autralian Currency)
1A)	9150-022-001	1	MARS MDB Bill Verifier (OPTIONAL)
2)	9150-039-001	1	Cash Code Bill Stacker (1000 bills)
3)	9806-012-011	1	Green Cat 5 cable (Main Cabinet)
*)	9806-012-012	1	40’ Green Cat 5 cable (Secondary Cabinet)
4)	9801-066-002	1	Yellow Push Button Assbly
5)	9801-066-001	1	Red Push Button Assbly
*)	9486-148-001	1	Black plastic vanity ring on cabinet front
6)	9799-007-001	1	Cabinet LCD Display PCB board
*)	9635-019-003	1	PVC display protection window
7)	9627-713-001	2	Harness Assembly (Push Buttons)
8)	9627-850-001	1	Harness Assembly (Cash Code Bill Verifier)
8A)	9627-830-001	1	Harness Assembly MARS Bill Verifier (OPTIONAL)
9)	9627-829-001	1	Harness Assembly (Bill Verifier Power to network power supply)
10)	9627-814-001	1	Harness Assembly (Main Door to network power supply)
11)	9627-752-002	1	Harness Assembly (Omron Reader to door board - NOT FOR DOS)
12)	9627-763-001	1	Harness Assembly (Asahi Seiko Card Dispenser to door board)
13)	9799-018-002	1	Accepter/Dispenser PCB Board
14)	9732-293-001	1	Motorized Reader (Neuron) Replacement Kit
*)	9908-044-001	1	Replacement rubber rollers for Omron Reader
15)	9122-007-004	1	Asahi Seiko Card Dispenser
16)	9040-080-002	1	Dispenser Belt (vertical)
17)	9040-080-001	1	Dispenser Belt (horizontal)

Cabinet Dispensing/Reader Shelf



Key	Part Number	QTY	Description
1)	9122-007-004	1	Card Dispenser
*)	9913-135-001	1	Grey Dispenser Wheel
*)	9833-010-001	1	Large Black Dispenser Wheel
*)	9499-002-001	1	Small Black Dispenser Wheel
*)	9799-024-001	1	Asahi/Seiko Dispenser Control Board
2)	9732-293-001	1	Neuron Motorized Card Reader Kit Replacement
*)	9908-044-001	1	Replacement Rollers
3)	9545-012-001	4	5/16 Machine Screw
4)	9452-661-001	1	Reader Mounting Plate
5)	9488-009-001	2	Aluminum Block (Rail)
6)	8640-414-007	4	Flange Nut (Shelf Mounting)
7)	9029-089-004	1	Shelf Assembly (Left Bracket from rear)
7)	9029-089-003	1	Shelf Assembly (Right Bracket from rear)
8)	9545-012-009	4	Mounting Screw Aluminum Block (Rail)
9)	9452-660-002	1	Aluminum Bottom Plate
10)	9545-012-024	1	Hex bolt for Aluminum Bottom Plate
*)	8641-582-010	4	Lockwasher
*)	8641-581-004	4	Flatwasher

Network Assembly for (32 reader addresses)



Key	Part Number	QTY	Description
1)	9795-003-001	5	Data Hub (Cat5 8pin junction box)
2)	9795-002-001	1	Ethernet Wired Hub
3)	9806-012-005	1	75’ s/s Cat5 cable (green tip)
4)	9806-012-004	1	40’ s/s Cat5 cable (yellow tip)
5)	9806-012-003	3	20’ s/s Cat 5 cable (metal tip)
*)	9806-012-006	0	150’ s/s Cat5 cable (red tip)
*)	9806-012-007	0	110’ s/s Cat5 cable (blue tip)
*)	9795-001-001	1	Expansion Kit All components shown
*)	9806-012-009	1	5” Cat 5 S/S Cable (yellow)
*)	9806-014-001	1	DC Power Cable

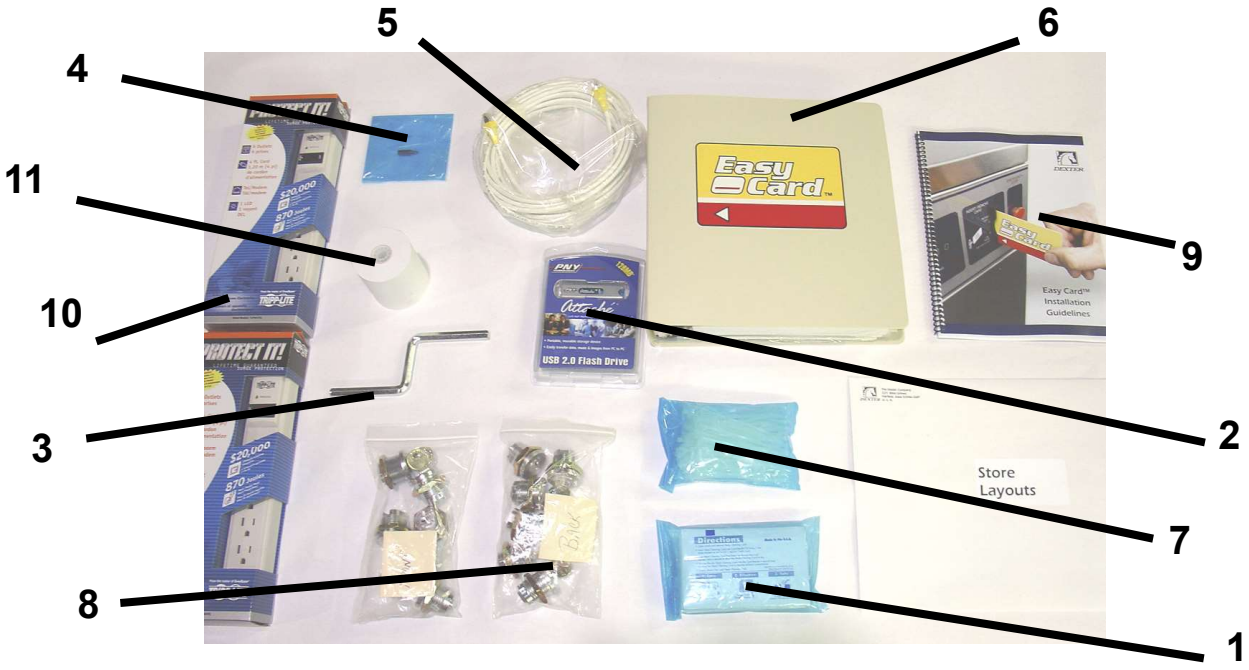
Ethernet Switch Kit

*)	9738-003-001	Ethernet Switch Kit Includes switch & connecting cable
1)	9150-020-001	Ethernet Switch
2)	9806-012-014	Cat 5 Cable 40’ feet (white)

Power Hub Kit

*)	9738-002-001	Power Hub Kit Contains all items below
1)	9795-004-001	Power Hub Splitter
2)	9806-014-003	DC Power Cable 110’ Feet

Extra Boxed Components

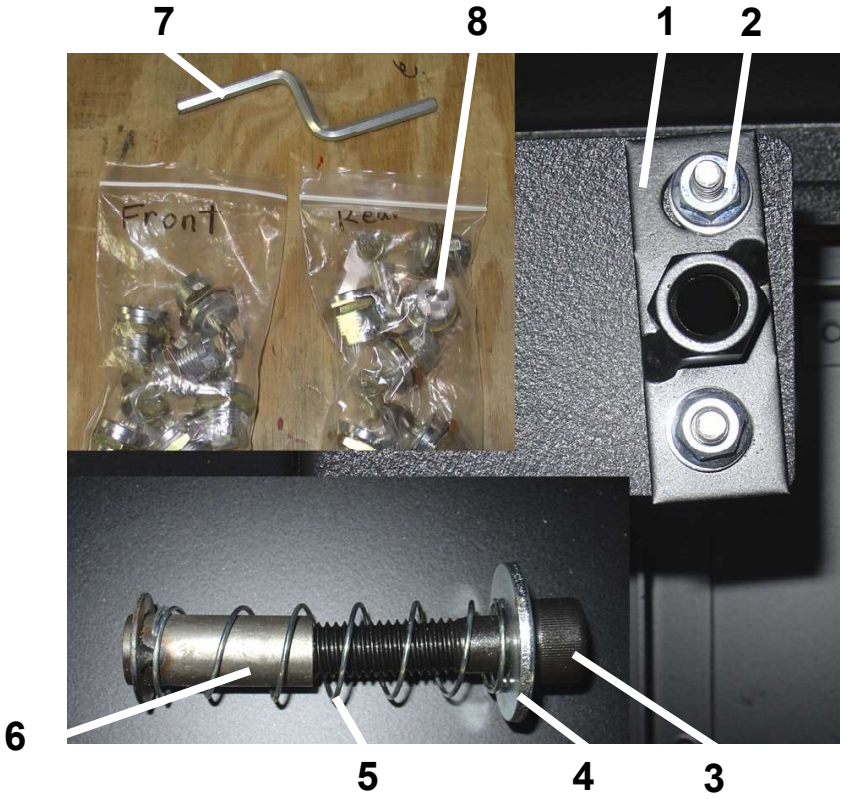


Key	Part Number	Description
(1)	9151-002-003	Cleaning Cards (sold individually)
(2)	9150-034-001	Flash Memory Drive 2GB
(3)	9073-009-001	Crank Handle
(4)	8545-051-004	T-10 Security Torx Bit
(5)	9806-012-014	40’ Cat 5 Cable (white)
(6)	9796-006-001	Easy Card Owners Manual Assembly
*)	8514-083-001	Easy Card Software Manual (Linux System)
*)	8514-037-001	Easy Manage Manual
(7)	9544-040-002	Wire Ties
(8)	8650-025-001	Easy Card Cabinet Locks and Keys (6)
(9)	8514-088-001	Easy Card Installation Guide
(10)	9150-011-001	Surge Protector Strip
(11)	9150-013-002	Replacement Paper Roll (USB printer)

Easy Card Management Software Installation Tool
(CD includes management software, installation instructions, troubleshooting and general maintenance information)

*	9504-021-001	1	Tool for **Linux** system owners
*	9504-021-002	1	Tool for **DOS** system owners

Door Lock Components



Key	Part Number	QTY	Description
1)	9982-307-002	6	Door Locking Plate Nut
*)	9982-328-001	6	Door Lock Plate (welded to cabinet)
2)	8640-414-007	12	Flange Nut
3)	9545-017-014	6	Hex Door Locking Bolt
4)	8641-581-001	6	½ Washer
5)	9534-364-003	6	Door Lock Tube Spring
6)	9915-121-001	6	Door Lock Tube
7)	9073-009-001	1	Crank Handle

Easy Cards are Sold in Boxes of 500

*)	9151-001-004	Red and Yellow Easy Card Logo
*)	9151-031-002	Dexter Logo Cards (blue on white)

Easy Card Touch Screen Option

Key	Part Number	QTY	Description
*)	9738-001-001	1	Touch screen assembly (Includes everything below)
(1)	9924-085-002	1	Cabinet touch screen
(2)	9454-764-002	1	Front Panel of touch screen cabinet
(3)	9454-765-002	1	Rear panel of touch screen cabinet
(4)	9150-023-001	1	Touch screen monitor
(5)	9206-426-002	1	Touch screen gasket seal
(6)	8650-012-003	2	Lock and key for touch screen cabinet (2)
(7)	9545-008-014	1	Panel Screw (4)
(8)	8641-585-001	1	Finish washer (4)
*)	9150-021-001	1	Touch screen server
*)	9806-012-008	1	Cat5 cable assembly
*)	9504-014-003	1	Software Assembly for Touchscreen, Main, Backup

New owners kits include all installation, software, and maintenance manuals along with the binders which were shipped with the Easy Card system originally. New copies of all of the operating software, management software and file backup media are also included.

Part Number	Description
9738-009-001	Original Dos system owners kit
9738-010-001	Tower server Linux system owners kit
9738-011-001	Dell rack mounted Linux system owners kit

Easy Card Reader Board Identification

9797-011-001 (All older DOS systems)
This is the only reader for the original DOS Easy Card system. It is identified by the two sets of red dip switches. This reader will replace all black switch readers in the original DOS system.

9797-006-001 (Linux system) red and green lights
Original Linux standard readers with green and red lights.

9797-006-003 (Linux system) red and yellow lights
This is the standard Easy Card reader for the new Dell server Linux system. The reader is identified by a single set of red dip switches and the 6 large pins coming off of the back of the reader. The software will change over time, but each new version replaces the older version. Currently we are at 4.0.6.

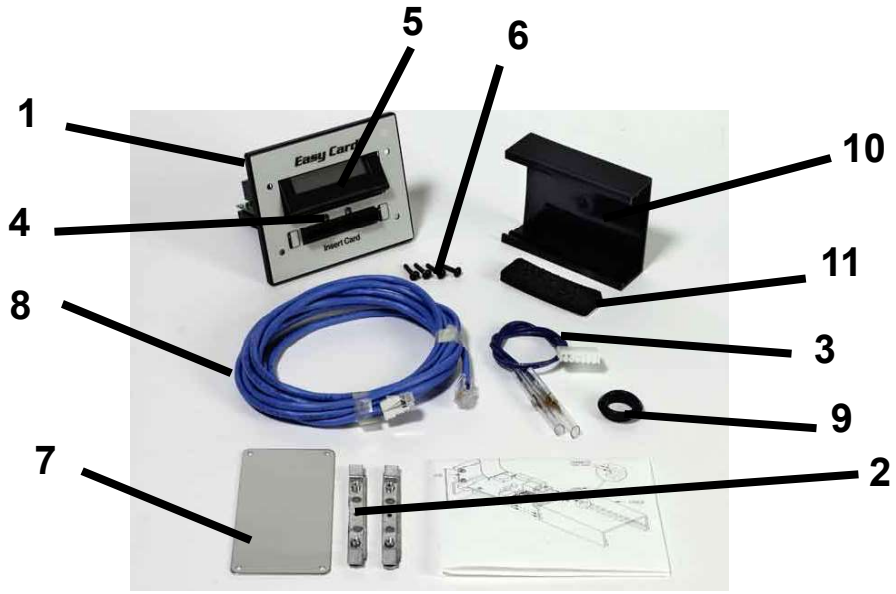
9797-006-004 (Linux System) MDB Vending
Used for all vending (soap) machine replacements.

Version 4.0.0
SW1 = Vend One Price SW2 = .25 cent scale
SW3 = .05 cent scale SW4 = .01 cent scale

9797-007-001 (Linux system) red and green lights
All version 3.9.1 readers (V-series readers only, DO NOT USE ON WCAD SERIES)

9797-007-003 (Linux system) red and yellow lights
This reader can be used for all V and A series Dexter Washers, standard and integrated. This is identified by the single set of red switches and the small set of 4 pins coming off of the back of the reader. The software will change over time, but each new version replaces the older version. Currently we are at 4.0.6.

Linux System Easy Card Dexter Appliance Readers



Key	Part Number	Description
1)	9982-309-002	Dexter Washer Readers Faceplate
1)	9982-363-002	Dexter LARGE VAULT Faceplate
*)	8502-713-001	Dexter Washer Faceplate Label
*)	8502-718-003	Dexter LARGE VAULT Faceplate Label
2)	9928-015-001	Dexter Washer Faceplate Retaining clips (2)
2)	9928-015-002	Dexter LARGE VAULT Retaining Clips (2)
3)	9627-827-001	Dexter washer reader harness (V and A series)
3)	9627-731-001	Dexter washer reader harness (wcn series without coin block)
3)	9627-844-003	Dexter washer reader relay harness (wcn series with coin block)
4)	9351-099-001	Lite Pipe lens used in Reader faceplates (2)
*)	9209-088-001	Lite pipe grommets (2)
1)	9982-310-002	Dexter stack dryer Reader Faceplate
*)	8502-714-001	Dexter Dryer Faceplate Label
2)	9928-016-001	Dexter Dryer Faceplate Retaining clips (2)
3)	9627-731-001	Dexter dryer harness
5)	9799-006-001	Pcb display (long leads)
5)	9799-006-002	Pcb assembly (short leads)
*)	8640-428-001	¼ inch lock nut for display
*)	9527-003-001	Standoff for display mounting
*)	8641-589-002	white inslulating washers(4)
*)	9635-019-004	Plastic window protector (bezel)
*)	9635-019-001	Plastic window protector (straight for long plates)
6)	9545-044-007	Torx Screws (4)
*)	8545-051-004	T-10 security torx bit
7)	9452-658-001	Chrome coin drop cover plate
8)	9806-013-002	12’ cat5 cable (Washer)
8)	9806-013-003	20’ cat5 cable (dryer)
9)	9053-067-002	Bushing for Cable 7/8”
10)	9074-291-001	Easy Card reader cover
11)	9206-423-002	Gasket for Easy Card reader cover

Easy Card Reader Kit Ordering List

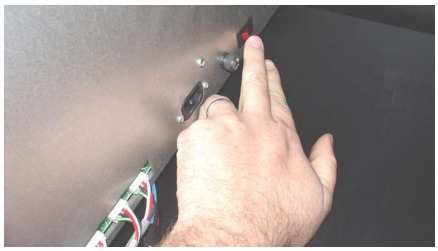
Kit Number	Description	Models Designed For
9737-001-003	Dexter WCN without Coin Blocking	Dexter w/o coinblocking, New Ipso
9737-001-004	Dexter WCN with Coin Blocking Solenoid	
9737-002-002	American Dryer Single Pocket (not solaris)	(not solaris)
9737-003-002	American Dryer Stack	(330,336 square plate)
9737-004-002	Dexter I2C2	Dexter V Series Washer
9737-004-003	Dexter LARGE VAULT Reader Kit	
9737-005-002	SetoMatic Timer Box Kit	Bock Extractor
9737-006-002	Dexter Stack Washer Dryer	SWD with V-series Washer
9737-008-002	Square Steel Box Kit	Gold Medal Soap
9737-009-002	Vendrite Soap MDB	MDB equipment
9737-018-002	Milnor Washer Kit	30015CWE
9737-020-004	Speed Queen Horizon (CPU,Optical)	SQ,Heubsh
9737-020-007	Speed Queen Top Load (Mechanincal)	EA112 SQ, Heubsch
9737-020-006	Speed Queen Horizon (Mechanical)	SQ,Heubsh
9737-020-005	Speed Queen Top Load (CPU,Optical Drop)	SQ,Heubs
9737-025-002	Dexter Stack Dryer	Dexter / Continental Stack Dryers
9737-025-003	Dexter Stack Dryer LARGE VAULT	Dexter Stack Dryers
9737-026-003	Dexter Single Pocket (BLUE)	Dexter Single pocket Dryers
9737-026-004	Continental Single Pocket (BLACK)	Continental Single Pocket Dryers
9737-028-002	G.E. Top Load (Mechanical)	1030
9737-029-002	Vendrite Royal 200(Mechanical)	VR200
9737-030-002	Whirlpool Top Load	
9737-032-002	Wascomat Front Load	GEN 4 through GEN 6
9737-034-002	Maytag Computrac and Neptune	Newer style w/ less angle in the plate
9737-037-005	Alliance Stack Dryer SQ,Heubsch	Older Harness (Pre 2003)
9737-037-006	Alliance Stack Dryer SQ,Heubsch	Newer Harness (Post 2003)
9737-037-004	Alliance Single Pocket SQ,Heubsch	Newer Harness (Post 2003)
9737-043-002	Continental Mechanical Timer (Older) washer	
9737-044-002	Continental Frontload hard mount (Computer)	
9737-044-003	Continental Aurora (Special Harness)	
9737-045-003	Whirlpool Top Load w/ Feature Connect Harness	CA 2762
9737-047-004	Alliance SQ/Huebsch Frontload Washer (Mechanical Timer)	
9737-047-003	Alliance SQ/Huebsch Frontload Washer (Bseries Computer)	
9737-053-002	Maytag Large Capacity Washer	MFR series
9737-054-002	MDB Vending Reader	
9737-055-001	Dexter Dryer Kit (Coin Drop Vertical-No Display)	
9737-055-002	Dexter Washer Kit (Coin Drop Vertical-No Display)	
9732-118-001	Dexter Coin Vault Cover Standard	
9732-118-002	Dexter Coin Vault Cover Large	

Section 6: Emergency Corrections

Emergency Corrections

My Readers are Displaying “Out of Service” or they are flashing the red and yellow lights. How should I reset them?

(1) The easiest way to reset all of the readers at once is to turn off the illuminated red power switch on the front of the network power supply, leave it off for 10 seconds and turn it back on again. This will only stop the communication to the readers. The machines that are operating during this time will continue to operate. **NOTE!! If you have a backup server in your system, power it down before continuing to steps 2 or 3.**



2) If this fails to work, locate the Ethernet switch and disconnect the black power plug that runs to the back of this device. Re-connect the plug to re-establish communications.

(3) If these procedures have not reset your readers, it may be that your main server has stopped communicating and needs to be reset. Turn off the lighted green switch on the UPS and leave off for about ten seconds. This will power down your main server. Turn the switch back on again. After the system is restored, you may now re-power the backup server.

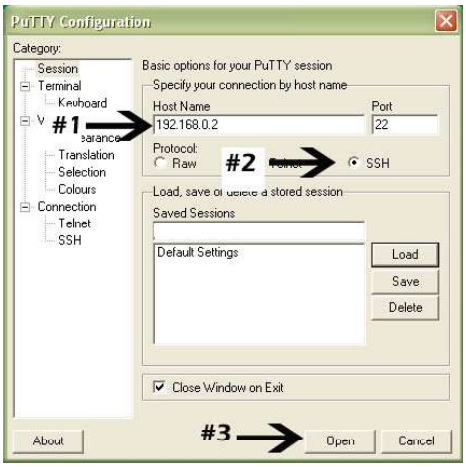
Emergency Correction Procedures

Emergency corrrrection procedures will involve using the supplied PUTTY software. It is located on the Management Software Installation Tool CD. This software is also located in the cabinet system and must be down loaded onto your Windows operating computer.

To download it from the system directly,

1) Goto the “Download Tab”
2) Select “Windows Tools” in the list below
3) Select “PUTTY.exe” from the list
4) When you double click a new screen will pop up with selections to Save or to Run the file. Click on “Save” an put this PUTTY.exe file on you desktop, which can be selected at this point.

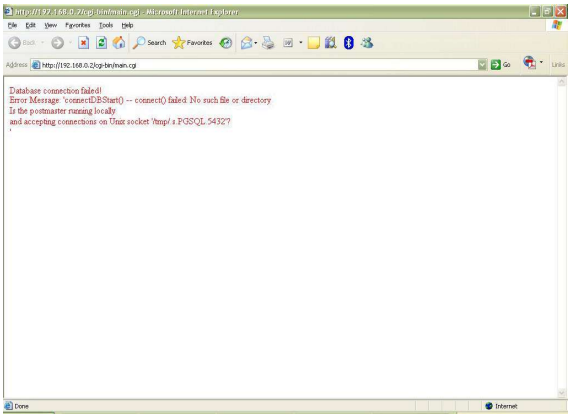
The software will download to your Windows connecting computer and give you an icon on your desktop.



To use the putty software:

1) Enter the IP address of the main server “192.168.0.2”
2) Click on “SSH”
3) Click on “OPEN”
4) At the login, type: “dexter” and press enter
5) At the password, type: “default” and press enter

Symptom: System is down and when you open the internet explorer software brings up a red text message reading "Database Connection Failed"



1) Open putty and under host name type 192.168.0.2
Under protocol select SSH

2) Click "Open" - This will get you to the linux software in the main server.

3) Type dexter for the user name and press ENTER

4) Type default for the password and press ENTER

5) This should leave you at the dexter@dexter.dexter prompt. From this point, type "cd backup" and press ENTER to get to the backup directory.

6) From here type restore.database and press ENTER

6) The database will now be restored. This usually takes 30 to 45 seconds before it brings the store back up. You can now exit and close putty.

Symptom: The system is down and when you open the internet explorer software, the top of the main screen has text similar to: C:Sysparams = 0 : relation does not exist

1) Open Putty and under host name type 192.168.0.2. Under protocol select SSH

2) Click "Open" - This will get you to the linux software in the main server.

3) Type dexter for the user name and press ENTER

4) Type default for the password and press ENTER

5) This should leave you at the dexter@dexter.dexter prompt. From this point, type cd backup and press ENTER to get to the backup directory.

6) Type ls –l (which is LS –L in lower case: there is a space between s and -) and press ENTER

7) This will show you a list of files including database.dat.gz which is the running database file. Also listed are all of the backups (listed 1-9)

The structure should look like 123456 Feb 5 00:05 database.dat.gz . The 123456 represents the size of this file.

The problem is that the size of the database file is very small compared to what it should be. (rather than 123456 you may only have 33 or 67).

8) The backups are listed in order 1 though 9 from the most recent to the oldest. Look for the most recent backup that has the larger 123456 file size and this will be the file we will restore as our database. For this example, we will use database.dat.3.gz

9) To make the 3 database our new database, type:

cp database.dat.3.gz database.dat.gz and press ENTER

10) Type ls –l (which is LS –L in lower case) and press ENTER to check that the database.dat.gz file now has the larger size again.

11) From here type restore.database and press ENTER

12) The database will now be restored. This usually takes 30 to 45 seconds before it brings the store back up. You can now exit and close putty.

Symptom: Due to corrections in the bonus parameters, the system has locked into a bonus loopand is shutting down.

A) Go to UTILTIES tab and then choose RUN STATUS. (The Spooler will be at “Not Running”)

B) Click on “Laundromat Stop”

C) Go to the MODIFY SYSTEM tab and then choose SYSTEM PARAMETERS

D) Go to page two of SYSTEM PARAMETERS: If “No Bonus” is selected in the “Bonus Method” field, change the “Award bonus at” field from “Acceptor/Dispenser” to “Appliance”.

E) Go to the bottom of the page and select SAVE

F) Go to putty and log in.

To get into Putty follow steps 1-5 below

1) Enter the IP address of the main server “192.168.0.2”

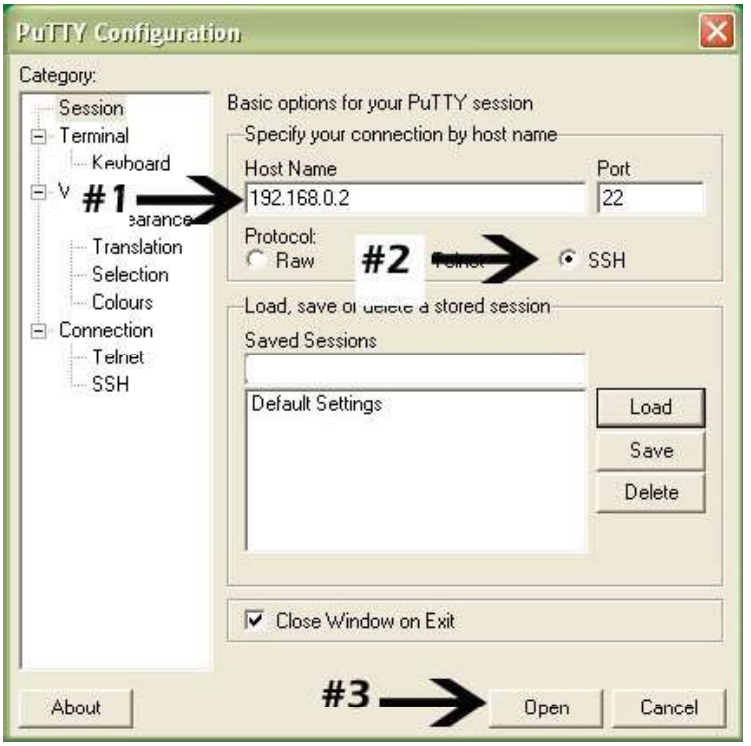
2) Click on “SSH”

3) Click on “OPEN”

(There may be a “security breach” message that comes up. Ignore this and click “yes” to move on. You should be at a black login screen)

4) At the login, type: “dexter” and press enter

5) At the password, type: “default” and press enter



G) At the “dexter” prompt, type “logs” and press enter

H) Type “rm log.dat” and press Enter

I) Type “rm xlog.dat” and press Enter

J) Type “exit” and press Enter to exit Putty

K) In the Internet Explorer software, go back to the Utilities tab and then chose Run Status.

L) Click on “Laundromat Start” to restart the system.

Section 7:
Troubleshooting

EASY CARD SYSTEM TROUBLESHOOTING GUIDE

GENERAL

The EasyCard system is an interactive Ethernet system. The main server communicates with the Local Area Network (LAN) devices on a regular interval through the Ethernet Switch. The Basic system LAN devices include the Main server, the dispenser PCB's on the cabinet doors, the Network Assemblies, and any customer provided remote computer. Expanded system LAN devices include Backup server, touchscreen servers, additional Network assemblies or additional dispenser PCB's.

This guide is separated into 3 section – System, Cabinet hardware and Readers. To use this guide, find in the left-hand column the problem description which matches the observed system problem. Then read and follow the instruction for that problem.

CONTENTS

SYSTEM

The machines can be started with a manager's card while you troubleshoot the system. Do not turn off the power supply to the readers unless instructed to this guide.

Description	Possible Problem	Troubleshooting & Possible Solutions
The System is down. The readers all say "system down", the cabinet doors say "system down". Basic System: Main Server, no backup Server, no touch-screens.	Ethernet switch not operating correctly	1. Unplug the AC power from the Ethernet switch. (Small black cord on the back) Wait ten seconds and reconnect. Watch the indicator lights on the switch….they should flicker for each port that a data cable is connected. Wait 1-2 minutes for the system to return to normal. 2. If system does not return to normal, continue below.
	Main Server software not operating	1. Connect remote computer to system via open port on the Ethernet switch. Log into system. From Welcome page, select Utilities tab, then Run Status text. Observe the run status of the three software packages. Select "Stop Laundromat", wait until status is updated. Now select "Start Laundromat". Wait 3-4 minutes for status to update. Check system operation. 2. Unable to connect to the system via remote computer. Unplug the AC power from the main server. Wait 20-30 seconds and reconnect. When the power is first returned, there should be one beep. Wait 3-4 minutes and the server should beep three times. Check the system for normal operation. 3. If system does not return to normal, continue below.

Description	Possible Problem	Troubleshooting & Possible Solutions
The System is down. The readers all say “system down”, the cabinet doors say “system down”. Basic System: Main Server, no backup Server, no touch-screens.	Total System Isolation	Complete system troubleshooting steps: 1) Verify that power is applied to all components of the system. 2) At the Ethernet switch, disconnect the Yellow data cables (EWH/Readers). Disconnect the Green data cables (both Dispensers). 3) Connect remote computer to system via open port on the Ethernet switch. At this point, there should be two cable to the Ethernet switch – one to the Main Server and one to the remote computer. This is the minimum components to operate the Main Server. 4) Using the remote computer, Log into the system. a) If unable to log into the system, unplug the AC power from the Ethernet switch. (Small black cord on the back) Wait ten seconds and reconnect. Watch the indicator lights on the switch….they should flicker for each port that a data cable is connected. Re-attempt to Log into the system. b) If still unable to log into the system, unplug the AC power from the main server. Wait 20-30 seconds and reconnect. When the power is first returned, there should be one beep. Wait 3-4 minutes and the server should beep three times. Check the system for normal operation.

Description	Possible Problem	Troubleshooting & Possible Solutions
(Continued) The System is down. The readers all say “system down”, the cabinet doors say “system down”. Basic System: Main Server, no backup Server, no touchscreens.	(Continued) Total System Isolation	c) If still unable to log into the system, switch data cable between the Ethernet switch and the main server with a know good cable. (All Cat5 cables in the system are interchangeable). Re-attempt to Log into the system. d) If still unable to log into the system, switch data cable between the Ethernet switch and the remote computer with a know good cable. (All Cat5 cables in the system are interchangeable). Re-attempt to Log into the system. e) If still unable to log into the system, either the Ethernet switch has failed or the Main server has failed. Replace the Ethernet switch and retest. f) If still unable to log into the system, replace the Main server. 5) Using the remote computer, Log into system. From Welcome page, select Utilities tab, then Run Status text. Verify the run status of the three software packages. If the three software packages are not all running then, Select “Stop Laundromat”, wait until status is updated. Now select “Start Laundromat”. Wait 3-4 minutes for status to update. Check system operation. 6) Wait several minutes to ensure the main serve is going to continue to operate correctly. Monitor the system run status during this time.

Description	Possible Problem	Troubleshooting & Possible Solutions
(Continued) The System is down. The readers all say “system down”, the cabinet doors say “system down”. Basic System: Main Server, no backup Server, no touchscreens.	(Continued) Total System Isolation	7) Begin to reconnect the other components of the system. Connect only one component at a time. Wait several minutes between each component to verify the system is still operating correctly by monitoring the run status via the remote computer. If the component operates correctly when added to the system, leave that component active on the system and connect the next component. Reconnect in this order: a) Connect the green data cable for the main cabinet dispenser. Verify correct operation. If the dispenser or system does not operate properly, disconnect the dispenser and return the system to a correct operating condition. b) Connect the green data cable for the secondary cabinet dispenser. Verify correct operation. If the dispenser or system does not operate properly, disconnect the dispenser and return the system to a correct operating condition. c) At the first Ethernet Wired Hub (EWH), disconnect the Blue data cables going to the readers from the back of the assembly. Connect one yellow data cable for the Ethernet Wired Hub (EWH) to the switch. Verify the system is operating correctly. Verify the reader connected to that EWH are operating correctly. Wait several minutes. If the EWH or system does not operate properly, disconnect the EWH and return the system to a correct operating condition. Re-connect the Blue data cables for the readers to the back of the EWH. Wait for the readers to show the store messages and test the readers. Wait several minutes to ensure the system is operating correctly. If the Reader or EWH or system does not operate properly, disconnect the Blue data cables going to the readers from the back of the EWH. Continue to reconnect the remainder of the system per this instructions. Then follow the Isolate Reader section. Repeat c) for each EWH in the system.

Description	Possible Problem	Troubleshooting & Possible Solutions
(Continued) The System is down. The readers all say “system down”, the cabinet doors say “system down”. Basic System: Main Server, no backup Server, no touchscreens.	(Continued) Total System Isolation	8) At this point the system should be operating correctly less the components that caused a problem on the system. Verify the system run status via the remote computer. Below are isolation instructions for each major component. **Dispenser**: a) Visually inspect the Dispenser PCB and all other components on the cabinet door. Ensure that all the harnesses are properly connected. b) Connect the Green data cable to the dispenser PCB. Wait for dispenser PCB to start-up. c) Check system run status via remote computer. If one of the system software packages is no longer running, then disconnect the green data cable from the dispenser PCB. Get the system back up to a correct operating status. Replace the Green data cable with a temporary known good data cable. Connect the temporary data cable to the dispenser PCB. Wait for the dispenser PCB to start-up. Check the system run status via remote computer. If the system software is operating correctly with the dispenser PCB connected using the temporary data cable then replace the Green Data cable. If the system software is no longer running with the dispenser PCB connected via the temporary data cable, then replace the dispenser PCB. If the system software is operating correctly (check via remote computer) with the dispenser PCB connected, but the dispenser display is showing a problem. Then move down to the Cabinet Section of this guide. Dispenser issues are explained there.

Description	Possible Problem	Troubleshooting & Possible Solutions
(Continued) The System is down. The readers all say “system down”, the cabinet doors say “system down”. Basic System: Main Server, no backup Server, no touchscreens.	(Continued) Total System Isolation	**Ethernet Wired Hub (EWH)** a) Visually inspect the EWH for broken, burned or charred components. (The box can be opened by loosening two small Phillips screws located in the top of the box. Remove top carefully. Touching the PCB can cause component damage.) Visually inspect the connection points. The data cable connect wires can be bent within the housing. Replace as required. b) Replace box cover and secure with cover screws. c) Ensure the Blue data cables are disconnected from the back of the EWH. Connect the Yellow data cable to the front of the EWH. Wait for the EWH to start-up. d) Check system run status via remote computer. If one of the system software packages is no longer running, then disconnect the yellow data cable from the EWH. Get the system back up to a correct operating status. Replace the Yellow data cable with a temporary known good data cable. Connect the temporary data cable to the EWH. Wait for the EWH to start-up. Check the system run status via remote computer. If the system software is operating correctly with the EWH connected using the temporary data cable then replace the Yellow data cable. If the system software is no longer running with the EWH connected via the temporary data cable, then replace the EWH. If the system software is operating correctly (check via remote computer) with the EWH connected, then move to the next section on Reader.

Description	Possible Problem	Troubleshooting & Possible Solutions
(Continued) The System is down. The readers all say “system down”, the cabinet doors say “system down”. Basic System: Main Server, no backup Server, no touchscreens.	(Continued) Total System Isolation	**Readers** The readers should be disconnected from the EWH by removing the Blue data cables from the back of the EWH. (This can be up to 32 readers disconnected) The system should be running normally with all other components including the EWH connected. At the remote computer, go to “Modify System”, then “Hub/Reader Definition”. This will list the EWH’s on the system. Locate the EWH address we are troubleshooting and select “View Stats” in the right-hand column. For each reader on the list, compare the “Timeouts” column. “Timeouts” is the count for the number of times the reader did not answer when the system tried to talk with the reader. This is a good indication of which readers are not operating correctly. If the Timeouts number is very high compared to other readers, locate the reader(s) in question and disconnect the Blue data cable from the reader(s). At the bottom of this screen is a “zero stats”. Click on this, then exit the screen. Do not use the back button or the stats will return. a) Connect the two Blue data cables to the back of the EWH. Wait for the readers to start up. Verify that an INITIAL message is printed for each reader. Check the system run status via the remote computer. b) Wait an additional 2-3 minutes, then check the “Timeouts” column of the connected readers. The readers that have been removed should have zero “NAKs”. The readers that are connected should have near zero “Timeouts”. Test the operation of each reader on the EWH. c) If there is a reader with a high “Timeouts” count, then remove this reader from the system. d) For each removed reader, visually inspect the Blue data cable and connections at the reader and at each data hub.

Description	Possible Problem	Troubleshooting & Possible Solutions
(Continued) The System is down. The readers all say “system down”, the cabinet doors say “system down”. Basic System: Main Server, no backup Server, no touchscreens.	(Continued) Total System Isolation	(Continued) e) Retest the reader. View the “Timeouts” for the reader when it is connected to the system. f) If the reader still does not operate correctly, try each of these actions listed and retest. Reset the reader address (move all the switch to ON, then OFF ,then set the address). Move the reader another location on the same EWH. If the reader is still not communicating with the EWH, replace the reader.
The System is down. The readers all say “system down”, the cabinet doors say “system down”. Expanded System: Main Server and Backup Server with or without Touch-screens and Touch-screen Servers.	Ethernet switch not operating correctly. (System with only one Ethernet switch.)	1. Unplug the AC power from the Ethernet switch. (Small black cord on the back) Wait ten seconds and reconnect. Watch the indicator lights on the switch….they should flicker for each port that a data cable is connected. Wait 1-2 minutes for the system to return to normal. 2. If system does not return to normal, continue below.
	Ethernet switch not operating correctly. (System with two Ethernet switches.)	1. Unplug the AC power from both Ethernet switches. (Small black cord on the back) Wait ten seconds the switch in the main cabinet (the switch with the main server connected). Watch the indicator lights on the switch….they should flicker for each port that a data cable is connected. Wait 1-2 minutes for this section of the system to return to normal. 2. Plug in the second Ethernet switch. Watch the indicator lights on the switch….they should flicker for each port that a data cable is connected. Wait 1-2 minutes for this section of the system to return to normal. 3. If system does not return to normal, continue below.

Description	Possible Problem	Troubleshooting & Possible Solutions
The System is down. The readers all say “system down”, the cabinet doors say “system down”. Expanded System: Main Server and Backup Server with or without Touch-screens and Touch-screen Servers.	Main Server software not operating and Backup Server software not operating.	1. Connect remote computer to system via open port on the Ethernet switch. (For systems with two Ethernet switches, the open port can be on either switch.) Log into the system. From Welcome page, select Utilities tab, then Run Status text. Observe the run status of the three software packages. Select “Stop Laundromat”, wait until status is updated. Now select “Start Laundromat”. Wait 3-4 minutes for status to update. Check system operation. 2. Unable to connect to the system via remote computer. Log into Putty using the remote computer. After log in, the Putty directory will show “[dexter@dexter dexter]$” (if the system is operating on the main server) or “[dexter@dexterback dexter]$” (if the system is operating on the backup server). This will identify which server is presently operating the system. 3. At the Ethernet switch, disconnect the Red data cable coming from the Backup Server. Leave the Backup server plugged in and running. 4 Unplug the AC power from the main server. Wait 20-30 seconds and reconnect. When the power is first returned, there should be one beep. Wait 3-4 minutes and the server should beep three times. Check the system for normal operation. (Check this by observing the Run status of the system. See step 1.) 5 After several minutes of normal operation, reconnect the Red data cable from the Backup Server to the Ethernet switch. Wait several minutes while monitoring the Run status to ensure the system is operating correctly. 6. If system does not return to normal, continue below.

Description	Possible Problem	Troubleshooting & Possible Solutions
The System is down. The readers all say “system down”, the cabinet doors say “system down”. Expanded System: Main Server and Backup Server with or without Touch-screens and Touch-screen Servers.	Total System Isolation Note: Before beginning to isolate system problems, verify the latest system accounts database is stored on floppy or on remote computer. Review the printed log data. Check for log flip and database copy sent to the A drive. Was the copy error free? Attempt to copy the database to the floppy disc or force a log flip. This may not be possible if the system has a major fault.	Complete system troubleshooting steps: 1) Verify that power is applied to all components of the system. Verify that all components of the system are connected properly. 2) The first step is to reduce the system down to a basic system, then get that basic system operating correctly. Finally, reconnect the pieces of the system identifying each problem area as the system grows. 3) At the Ethernet(s) switch, disconnect the Yellow data cables (EWH/Readers). Disconnect the Green data cables (both Dispensers). Leave the White data cables connected. Leave the Red data cables connected. At this point, there should be Red and White cables to the Ethernet switch(s). 4) If the system has touch screens, disconnect the Red data cable at the Ethernet switch(s) from each Touch-screen Server. 5) a) Unplug the AC power from one or all Ethernet switches. (Small black cord on the back) Wait ten seconds the switch in the main cabinet (the switch with the main server connected). Watch the indicator lights on the switch….they should flicker for each port that a data cable is connected. Wait 1-2 minutes for this section of the system to return to normal. b) Plug in the second Ethernet switch. Watch the indicator lights on the switch….they should flicker for each port that a data cable is connected. Wait 1-2 minutes for this section of the system to return to normal. c) If system does not return to normal, continue below. 6) Connect a remote computer to the system via an open port on the Ethernet switch that the Main server is connected into. Attempt to log into the system software. If log-in is successful, go to step 7.

Description	Possible Problem	Troubleshooting & Possible Solutions
(Continued) The System is down. The readers all say “system down”, the cabinet doors say “system down”. Expanded System: Main Server and Backup Server with or without Touch-screens and Touch-screen Servers.	(Continued) Total System Isolation Note: Before beginning to isolate system problems, verify the latest system accounts database is stored on floppy or on remote computer. Review the printed log data. Check for log flip and database copy sent to the A drive. Was the copy error free? Attempt to copy the database to the floppy disc or force a log flip. This may not be possible if the system has a major fault.	(Continued) If unable to log into the system software, then attempt to log into Putty. If unable to log into Putty, then first review the remaining system connection to the Ethernet switch(s). There maybe one switch with the Main server and the Backup server connected. Or, there is more then one switch with the Main server connected to one and the Backup server connected to another. At the proper Ethernet Switch, disconnect the Red data cable from the Backup server. Then disconnect the White data cable between Ethernet Switches. This should leave the Main server and the remote computer as the only connections to the Ethernet Switch (minimum basic system). Attempt to log-in to the system software again. If log-in is successful, go to step 7. If still unable to log into the system software, then attempt to log into Putty. If still unable to log into Putty, unplug the AC power from the main server. Wait 20-30 seconds and reconnect. When the power is first returned, there should be one beep. Wait 3-4 minutes and the server should beep three times. Check the system for normal operation. Attempt to log-in to the system software again. If log-in is successful, go to step 7. If still unable to log into the system software, one of the following items has failed: the red data cable from Ethernet switch to main server or Ethernet switch or Main server. a) If still unable to log into the system, switch data cable between the Ethernet switch and the main server with a know good cable. (All Cat5 cables in the system are interchangeable). Re-attempt to Log into the system.

Description	Possible Problem	Troubleshooting & Possible Solutions
(Continued) The System is down. The readers all say “system down”, the cabinet doors say “system down”. Expanded System: Main Server and Backup Server with or without Touch-screens and Touch-screen Servers.	(Continued) Total System Isolation Note: Before beginning to isolate system problems, verify the latest system accounts database is stored on floppy or on remote computer. Review the printed log data. Check for log flip and database copy sent to the A drive. Was the copy error free? Attempt to copy the database to the floppy disc or force a log flip. This may not be possible if the system has a major fault.	(Continued) b) If still unable to log into the system, switch data cable between the Ethernet switch and the remote computer with a know good cable. (All Cat5 cables in the system are interchangeable). Re-attempt to Log into the system. c) If still unable to log into the system, either the Ethernet switch has failed or the Main server has failed. Replace the Ethernet switch and retest. d) If still unable to log into the system, replace the Main server. 7) Attempt to log-in to the system software via a remote computer connected to an open port on the Ethernet switch. a) Now, log-in to Putty using the remote computer. b) After log-in, the Putty directory will show “[dexter@dexter dexter]$” (if the system is operating on the main server) or “[dexter@dexterback dexter]$” (if the system is operating on the backup server). This will identify which server is presently operating the system. If “[dexter@dexter dexter]$”, do step c. If “[dexter@dexterback dexter]$”, do step d. c) The system is operating on the main server “[dexter@dexter dexter]$”. Disconnect the Red data cable from the Backup server at the Ethernet switch. Leave the AC power connected to the Backup server. If the system has two Ethernet switches, disconnect the White data cable going to the second Ethernet switch. At this point, there should be only two connections to the Ethernet switch – one to the Main server and one to the remote computer. Move down to step 8. (Continued)

Description	Possible Problem	Troubleshooting & Possible Solutions
(Continued) The System is down. The readers all say “system down”, the cabinet doors say “system down”. Expanded System: Main Server and Backup Server with or without Touch-screens and Touch-screen Servers.	(Continued) Total System Isolation Note: Before beginning to isolate system problems, verify the latest system accounts database is stored on floppy or on remote computer. Review the printed log data. Check for log flip and database copy sent to the A drive. Was the copy error free? Attempt to copy the database to the floppy disc or force a log flip. This may not be possible if the system has a major fault.	d) The system is operating on the Backup server “[dexter@dexterback dexter]$”. Disconnect the Red data cable from the Main server at the Ethernet switch. Leave the AC power connected to the Main server. If the system has two Ethernet switches, disconnect the White data cable going to the second Ethernet switch. Ensure the remote computer is connected to the same Ethernet switch as the Backup server. At this point, there should be only two connections to the Ethernet switch – one to the Backup server and one to the remote computer. Move down to step 8. 8) The system should be now down to the minimum components – one server and one Ethernet switch and one data cable. (The remote computer and connecting cable are not considered part of the system.) 9) Using the remote computer, Log into system. From Welcome page, select Utilities tab, then Run Status text. Verify the run status of the three software packages. If the three software packages are not all running then, Select “Stop Laundromat”, wait until status is updated. Now select “Start Laundromat”. Wait 3-4 minutes for status to update. Check system operation. 10) Wait several minutes to ensure the main serve is going to continue to operate correctly. Monitor the system run status during this time. 11) Begin to reconnect the other components of the system. Connect only one component at a time. Wait several minutes between each component to verify the system is still operating correctly by monitoring the run status via the remote computer. If the component operates correctly when added to the system, leave that component active on the system and connect the next component. Reconnect in this order: (Continued)

Description	Possible Problem	Troubleshooting & Possible Solutions
(Continued) The System is down. The readers all say “system down”, the cabinet doors say “system down”. Expanded System: Main Server and Backup Server with or without Touch-screens and Touch-screen Servers.	(Continued) Total System Isolation Note: Before beginning to isolate system problems, verify the latest system accounts database is stored on floppy or on remote computer. Review the printed log data. Check for log flip and database copy sent to the A drive. Was the copy error free? Attempt to copy the database to the floppy disc or force a log flip. This may not be possible if the system has a major fault.	a) Connect in the second Ethernet switch(s) if part of the system. b) Connect the green data cable for the main cabinet dispenser. Verify correct operation. If the dispenser or system does not operate properly, disconnect the dispenser and return the system to a correct operating condition. c) Connect the green data cable for the secondary cabinet dispenser. Verify correct operation. If the dispenser or system does not operate properly, disconnect the dispenser and return the system to a correct operating condition. d) At the first Ethernet Wired Hub (EWH), disconnect the Blue data cables going to the readers from the back of the assembly. Connect one yellow data cable for the Ethernet Wired Hub (EWH) to the switch. Verify the system is operating correctly. Verify the reader connected to that EWH are operating correctly. Wait several minutes. If the EWH or system does not operate properly, disconnect the EWH and return the system to a correct operating condition. Re-connect the Blue data cables for the readers to the back of the EWH. Wait for the readers to show the store messages and test the readers. Wait several minutes to ensure the system is operating correctly. If the Reader or EWH or system does not operate properly, disconnect the Blue data cables going to the readers from the back of the EWH. Continue to reconnect the remainder of the system per this instructions. Then follow the Isolate Reader section. Repeat d) for each EWH in the system. (Continued)

Description	Possible Problem	Troubleshooting & Possible Solutions
(Continued) The System is down. The readers all say “system down”, the cabinet doors say “system down”. Expanded System: Main Server and Backup Server with or without Touch-screens and Touch-screen Servers.	(Continued) Total System Isolation Note: Before beginning to isolate system problems, verify the latest system accounts database is stored on floppy or on remote computer. Review the printed log data. Check for log flip and database copy sent to the A drive. Was the copy error free? Attempt to copy the database to the floppy disc or force a log flip. This may not be possible if the system has a major fault.	12) At this point, the system is operating on one server with no Touchscreens or Touchscreen servers. Also any component that caused a problem during troubleshooting has been left out. Let the system operate for 5-10 minutes to verify that it’s operating correctly. 13) Monitor the operation of the system via the remote computer as each component is reconnected. Below are isolation instructions for each major component. Dispenser: a) Visually inspect the Dispenser PCB and all other components on the cabinet door. Ensure that all the harnesses are properly connected. b) Connect the Green data cable to the dispenser PCB. Wait for dispenser PCB to start-up. c) Check system run status via remote computer. If one of the system software packages is no longer running, then disconnect the green data cable from the dispenser PCB. Get the system back up to a correct operating status. Replace the Green data cable with a temporary known good data cable. Connect the temporary data cable to the dispenser PCB. Wait for the dispenser PCB to start-up. Check the system run status via remote computer. If the system software is operating correctly with the dispenser PCB connected using the temporary data cable then replace the Green Data cable. If the system software is no longer running with the dispenser PCB connected via the temporary data cable, then replace the dispenser PCB. If the system software is operating correctly (check via remote computer) with the dispenser PCB connected, but the dispenser display is showing a problem. Then move down to the Cabinet Section of this guide. Dispenser issues are explained there. (Continued)

Description	Possible Problem	Troubleshooting & Possible Solutions
(Continued) The System is down. The readers all say “system down”, the cabinet doors say “system down”. Expanded System: Main Server and Backup Server with or without Touch-screens and Touch-screen Servers.	(Continued) Total System Isolation Note: Before beginning to isolate system problems, verify the latest system accounts database is stored on floppy or on remote computer. Review the printed log data. Check for log flip and database copy sent to the A drive. Was the copy error free? Attempt to copy the database to the floppy disc or force a log flip. This may not be possible if the system has a major fault.	Ethernet Wired Hub (EWH) a) Visually inspect the EWH for broken, burned or charred components. (The box can be opened by loosening two small Phillips screws located in the top of the box. Remove top carefully. Touching the PCB can cause component damage.) Visually inspect the connection points. The data cable connect wires can be bent within the housing. Replace as required. b) Replace box cover and secure with cover screws. c) Ensure the Blue data cables are disconnected from the back of the EWH. Connect the Yellow data cable to the front of the EWH. Wait for the EWH to start-up. d) Check system run status via remote computer. If one of the system software packages is no longer running, then disconnect the yellow data cable from the EWH. Get the system back up to a correct operating status. Replace the Yellow data cable with a temporary known good data cable. Connect the temporary data cable to the EWH. Wait for the EWH to start-up. Check the system run status via remote computer. If the system software is operating correctly with the EWH connected using the temporary data cable then replace the Yellow data cable. If the system software is no longer running with the EWH connected via the temporary data cable, then replace the EWH. If the system software is operating correctly (check via remote computer) with the EWH connected, then move to the next section on Reader. Readers The readers should be disconnected from the EWH by removing the Blue data cables from the back of the EWH. (This can be up to 32 readers disconnected) The system should be running (Continued)

Description	Possible Problem	Troubleshooting & Possible Solutions
(Continued) The System is down. The readers all say “system down”, the cabinet doors say “system down”. Expanded System: Main Server and Backup Server with or without Touch-screens and Touch-screen Servers.	(Continued) Total System Isolation Note: Before beginning to isolate system problems, verify the latest system accounts database is stored on floppy or on remote computer. Review the printed log data. Check for log flip and database copy sent to the A drive. Was the copy error free? Attempt to copy the database to the floppy disc or force a log flip. This may not be possible if the system has a major fault.	normally with all other components including the EWH connected. At the remote computer, go to “Modify System”, then “Hub/Reader Definition”. This will list the EWH’s on the system. Locate the EWH address we are troubleshooting and select “View Stats” in the right-hand column. For each reader on the list, compare the “Timeouts” column. “Timeouts” is the count for the number of times the reader did not answer when the system tried to talk with the reader. This is a good indication of which readers are not operating correctly. If the Timeouts number is very high compared to other readers, locate the reader(s) in question and disconnect the Blue data cable from the reader(s). At the bottom of this screen is a “zero stats”. Click on this, then exit the screen. Do not use the back button or the stats will return. a) Connect the two Blue data cables to the back of the EWH. Wait for the readers to start up. Verify that an INITIAL message is printed for each reader. Check the system run status via the remote computer. b) Wait an additional 2-3 minutes, then check the “Timeouts” column of the connected readers. The readers that have been removed should have zero “NAKs”. The readers that are connected should have near zero “Timeouts”. Test the operation of each reader on the EWH. c) If there is a reader with a high “Timeouts” count, then remove this reader from the system. d) For each removed reader, visually inspect the Blue data cable and connections at the reader and at each data hub. e) Retest the reader. View the “Timeouts” for the reader when it is connected to the system. (Continued)

Description	Possible Problem	Troubleshooting & Possible Solutions
(Continued) The System is down. The readers all say “system down”, the cabinet doors say “system down”. Expanded System: Main Server and Backup Server with or without Touch-screens and Touch-screen Servers.	(Continued) Total System Isolation Note: Before beginning to isolate system problems, verify the latest system accounts database is stored on floppy or on remote computer. Review the printed log data. Check for log flip and database copy sent to the A drive. Was the copy error free? Attempt to copy the database to the floppy disc or force a log flip. This may not be possible if the system has a major fault.	f) If the reader still does not operate correctly, try each of these actions listed and retest. Reset the reader address (move all the switch to ON, then OFF ,then set the address). Move the reader another location on the same EWH. If the reader is still not communicating with the EWH, replace the reader. Connecting the Second Server 14) If the system is operating on the backup server, then go to step 15. If the system is operating on the main server, then: Connect the Red data cable from the Backup server to the Ethernet switch. (The Backup server should never have been powered down.) Monitor the system via the remote computer for 5-10 minutes to ensure the Backup server is operating correctly. If the system starts to have problems, disconnect the Red data cable to the Backup serve and return the system to a normal operating condition. The Red data cable or the Backup server has failed. Replace the Red data cable with a known good data cable and reconnect the cable to the Ethernet switch. If the system starts to have problems again, disconnect the AC power to the Backup server. Reinstall the Red data cable. Wait 20-30 seconds, then reconnect the AC power to the Backup server. When the power is first returned, there should be one beep. Wait 3-4 minutes and the server should beep three times. Check the system for normal operation. If the system starts to have problems, then disconnect the AC power to the Backup server. Replace the Backup server. 15) The system is operating correctly with the Backup server controlling the system. Monitor the system for at least 10 minutes for correct operation. Connect the Red data cable from the Main server to the Ethernet switch. Connect the AC power to the Main server. Wait 3-4 minutes and the server

Description	Possible Problem	Troubleshooting & Possible Solutions
(Continued) The System is down. The readers all say “system down”, the cabinet doors say “system down”. Expanded System: Main Server and Backup Server with or without Touch-screens and Touch-screen Servers.	(Continued) Total System Isolation Note: Before beginning to isolate system problems, verify the latest system accounts database is stored on floppy or on remote computer. Review the printed log data. Check for log flip and database copy sent to the A drive. Was the copy error free? Attempt to copy the database to the floppy disc or force a log flip. This may not be possible if the system has a major fault.	(Continued) should beep three times. Check the system for normal operation. Monitor the system via the remote computer for 5-10 minutes to ensure the Main server is operating correctly. If the system starts to have problems, disconnect the Red data cable to the Main serve and return the system to a normal operating condition. The Red data cable or the Main server has failed. Replace the Red data cable with a known good data cable and reconnect the cable to the Ethernet switch. If the system starts to have problems again, disconnect the AC power to the Main server. Reinstall the Red data cable. Replace the Main server. 16) Touchscreens and Touchscreen servers Monitor the system for at least 10 minutes for correct operation before continuing. Remove the AC power from the Touchscreen servers. Connect the Red data cable to the Ethernet switch. Wait 20-30 seconds and reconnect the AC power to one of the Touchscreen server. Wait 3-4 minutes and the server should beep three times. Check the system for normal operation. Monitor the system via the remote computer for 5-10 minutes to ensure the Touchscreen and Touchscreen server is operating correctly. If the system starts to have problems, disconnect the Red data cable to the Touchscreen serve and return the system to a normal operating condition. The Red data cable or the Touchscreen server has failed. Replace the Red data cable with a known good data cable and reconnect the cable to the Ethernet switch. If the system starts to have problems again, disconnect the AC power to the Touchscreen server. Reinstall the Red data cable. Replace the Touchscreen server.

Description	Possible Problem	Troubleshooting & Possible Solutions
(Continued) The System is down. The readers all say “system down”, the cabinet doors say “system down”. Expanded System: Main Server and Backup Server with or without Touch-screens and Touch-screen Servers.	(Continued) Total System Isolation Note: Before beginning to isolate system problems, verify the latest system accounts database is stored on floppy or on remote computer. Review the printed log data. Check for log flip and database copy sent to the A drive. Was the copy error free? Attempt to copy the database to the floppy disc or force a log flip. This may not be possible if the system has a major fault.	(Continued) Connect the Red data cable for the second Touchscreen server to the Ethernet switch. The AC power has been removed. Reconnect the AC power to the second Touchscreen server. Wait 3-4 minutes and the server should beep three times. Check the system for normal operation. Monitor the system via the remote computer for 5-10 minutes to ensure the Touchscreen and Touchscreen server is operating correctly. If the system starts to have problems, disconnect the Red data cable to the Touchscreen serve and return the system to a normal operating condition. The Red data cable or the Touchscreen server has failed. Replace the Red data cable with a known good data cable and reconnect the cable to the Ethernet switch. If the system starts to have problems again, disconnect the AC power to the Touchscreen server. Reinstall the Red data cable. Replace the Touchscreen server.
Cabinet Hardware		
Door Display reads “See Management”	Jammed Card or Bill - Check printer log for message “Jammed Card” or “Jammed Bill”. Verify no cards are stuck in the motorized dispenser / card reader. Verify on other object is in the card path or stuck in the front of the reader. (Paper, coins, etc.)	1. Remove any stuck card in the motorized dispenser / read reader. 2. Remove any objects in the card path. Once object is removed, allow up to one minute for the display to return to normal. If not, reset the dispenser PCB by depressing the white button in the upper right hand corner of the PCB. Allow one minute for system to return to normal. If not, disconnect power harness at the power supply. Wait 20 seconds and reconnect power. The PCB, Motorized card reader and dispenser

Description	Possible Problem	Troubleshooting & Possible Solutions
Door Display reads "See Management"	Observe the red light on the back of the bill verifier. When the red light on the back of the Bill verifier is on solid the Bill verifier is operating correctly. If the read light is flashing, read the table on the side of the verifier for problem identification.	1. Remove jammed bill. 2. Remove any objects inserted into the verifier (paper, coins, cards, etc). 3. Remove and reinstall the bill stacker. 4. Check harness connections on the PCB and verifier. Once problem is resolved, allow up to one minute for the display to return to normal. The bill verifier red light should stay on solid. If not, unplug power to the bill verifier. Wait 20 seconds and reconnect the power. Allow up to one minute for the display to return to normal. If not, reset the dispenser PCB by depressing the white button in the upper right hand corner of the PCB.
	If no red light is observed on the bill verifier, the bill verifier maybe missing power.	1. Check harness connections to the door equipment at both ends. 2. Using a voltmeter, measure the voltage at the cabinet power supply that goes to the verifier. Should read 24-30 VAC. (Voltage not present move to power supply section for more details.) Once problem is resolved, allow up to one minute for the display to return to normal. The bill verifier red light should stay on solid. If not, unplug power to the bill verifier. Wait 20 seconds and reconnect the power. Allow up to one minute for the display to return to normal. If not, reset the dispenser PCB by depressing the white button in the upper right hand corner of the PCB.

Description	Possible Problem	Troubleshooting & Possible Solutions
Door Display reads "See Management"	"Card Stuck or Card Error" on display. Verify no cards are stuck in the motorized dispenser / card reader. Verify on other object is in the card path or stuck in the front of the reader. (Paper, coins, etc.) The +24 VDC is missing to the dispenser PCB	1. Remove any stuck card in the motorized dispenser / read reader. 2. Remove any objects in the card path. Once object is removed, allow up to one minute for the display to return to normal. If not, reset the dispenser PCB by depressing the white button in the upper right hand corner of the PCB. Allow one minute for system to return to normal. If not, disconnect power harness at the power supply. Wait 20 seconds and reconnect power. The PCB, Motorized card reader and dispenser. 3. Verify the Blue harness is properly connected to the dispenser. 4. Verify the Yellow indicator on the power supply is lit. If not see troubleshooting steps below in the Power Supply section.
Door Display reads "System Down" This is the only part of the system on operating.	Dispenser address not properly entered in the system. System D_server software not running.	Using a remote computer, log into the system. Click on "Modify System", then "Dispenser Definitions". Assign the proper dispenser address to the system. Wait one minute for the system to update. See Manual for more details. Using a remote computer, log into the system. Click on "Utilities", then "Run Status". Observe the status of the three software packages. If any are "not running", then click on "Stop Laundromat". Wait until laundromat has stopped (1-2 minutes possible), then click on "Start Laundromat". Wait for Laundromat to start. (1-2 minutes).

Description	Possible Problem	Troubleshooting & Possible Solutions
Door Display reads “System Down” This is the only part of the system on operating.	Dispenser has possible fault.	1. Check to ensure all the harnesses and cables are properly connected to the PCB. 2. Observe the LED’s in the top left of the PCB. Look at the top row, left end. This is the communications error indicator. If the LED is on, there is a communications error. A) Check data cable (green) on both ends for proper connection. B) Reset the dispenser PCB by depressing the white button in the upper right hand corner of the PCB. Allow one minute for system to return to normal. C) Test Dispenser with other data cable for proper operations. D) Replace PCB. 3. Observe the LED’s in the top left of the PCB. Look at the top row, second from the right end. This is the error indicator. If the LED is on, there is a error. A) Check data cable (green) on both ends for proper connection. B) Reset the dispenser PCB by depressing the white button in the upper right hand corner of the PCB. Allow one minute for system to return to normal. C) Test Dispenser with other data cable for proper operations. D) Replace PCB.

Description	Possible Problem	Troubleshooting & Possible Solutions
The dispenser on the cabinet continues to reset every few seconds.	The Dispenser PCB is not communicating with the server. (Green data cable)	1. Unplug the Ethernet Switch power (small black cord on the back), wait 20 seconds and plug back in. Wait one minute for the dispenser to reset. Verify the Dispenser is operating correctly. 2. Verify the main server is operating. Check to ensure the small red light inside the server on the main PCB. Ensure the server fan is running. Using a remote computer, log into the system, click on the UTILITIES tab then the Run Status text. (see chapter 6 of the system manual). Verify the three software packages are running. If not, click on Stop Laundromat. Wait for the system to stop and update the screen. Then click on Start Laundromat. Wait for the system to start and update the screen. Verify the Dispenser is operating correctly. 3. Check all the green and red data cables to ensure they are correctly connected.
Printer not printing, green printer light (s) flashing.	Printer out of paper, paper not properly installed or connection to server loose.	1. Verify the printer has paper. After replacing the roll, press the button on the top front of the printer to reset. 2. Verify the printer paper is properly installed. Look closely to ensure the paper roll is activating the low paper switch located right by the roll. 3. Check the harness connection to the printer at both ends of the cable.
Printer not printing, paper advancing.	Printer ribbon not properly installed or dried out.	1. Replace the printer ribbon. Test printer.
Printer not printing, Everything looks OK.(Backup server on the system)	The system backup server is operating the system.	1. Using a remote computer, connect to the system via an eithernet port. Connect using the putty program. After login, the directory is shown. If dexterbackup appears, the backup server is operating the system. Need to troubleshoot main server.

Description	Possible Problem	Troubleshooting & Possible Solutions
Part of the equipment in the main cabinet is off.	Powerstrip not on or overloaded. Power strip not working.	1. Check the reset on the Power strip. Reset if needed. 2. Verify the equipment is connected as shown in the system block diagram. 3. Verify the power strip(s) for the equipment is operating correctly and turned on. 4. Verify the power cords for the equipment is properly plugged in. Check both ends of the cord.
All the equipment in the main cabinet is off	No Power to the cabinet.	Check the circuit breaker for the cabinet and ensure it is turned on.
System Power Supply: The Red on/off switch indicator light is not lit. All Other PS lights are also off.	Power Supply is not turned on.	Turn on the power supply using the Red switch on the front of the enclosure.
	Power Supply is not plugged into the outlet at the bottom of the cabinet.	Verify the power supply cord is properly connected to the front of the enclosure and plugged into the outlet at the bottom of the cabinet.
	Power Supply has a blown fuse for in AC power.	Turn the switch off and remove the fuse located on the front of the enclosure. Verify the fuse is not open. Replace as required.

Description	Possible Problem	Troubleshooting & Possible Solutions
System Power Supply: The Red on/off switch indicator light is not lit. All Other PS lights are also off.	Power Supply component has failed.	1. Turn off and unplug the power supply. Unbolt the power supply enclosure and place the enclosure so that voltage measurements can be made inside. View the internal components and wiring to ensure there is no damage. Ensure all the siring is connected. **WARNING – ELECTRICAL SHOCK IS POSSIBLE. USE CAUTION WHILE MAKING VOLTAGE MEASUREMENTS.** 2. Plug in and turn on the power supply. Measure the voltage on the AC line filter terminals located in the center of the enclosure where the power cord is plugged in. The voltage from the Yellow wire to the White wire should be 115Vac. 3. If the voltage is not present, the AC line filter has failed. Replace the line filter. If the voltage is present, measure the voltage from the Red wire on the fuse to the White wire on the AC line filter. The voltage should be 115Vac. 4. If the voltage is not present, the fuse or fuse holder or connecting wires have failed. Replace as required. If the voltage is present, measure the voltage from the Blue wire on the On/Off switch to the White wire on the AC line filter. Verify the On/Off switch is on when making the measurement. The voltage should be 115Vac. 5. If the voltage is not present, the On/Off switch has failed. Replace the On/Off switch.

Description	Possible Problem	Troubleshooting & Possible Solutions
System PS: The Red on/off switch indicator light is not lit. Other PS lights are on.	The PS on/off switch indicator has failed, however the switch is operating. Power is present in the PS.	The Green and Yellow indicators are lit, but the Red indicator in the On/Off switch is not lit. The Red Indicator in the On/Off switch has failed. The switch assembly should be replaced as soon as possible. The system should operate correctly until the switch can be replaced.
System PS: The Yellow indicator is not lit when the PS is on. (Red indicator light is lit.)	The Yellow indicator light is off but the motorized card reader and card dispenser are operating correctly.	Verify the voltage is present by: At the PS, unplug the power harness which goes to the dispenser PCB. Measure the voltage on the PS 6 pin connector between center pin top (black lead) and center pin bottom (red lead). The voltage should be +24Vdc +/- 0.25V. Adjust as needed. If the voltage is present, the PS is operating correctly, but the indicator has failed. Replace power supply PCB as soon as available.
	The Yellow indicator light is off. The motorized card reader and card dispenser are not operating. The display has “Card Stuck or Card Error” on the top and “See Management” on the bottom.	Measure the voltage at the PS 6 pin connector between center pin top (black lead) and center pin bottom (red lead). The voltage should be +24Vdc +/- 0.25V. If the voltage is not present follow the isolation steps on the next page. +24 Vdc Isolation: 1). Turn off and unplug the PS enclosure. Remove the PS enclosure from the cabinet wall and place the enclosure so that voltage measurements can be made. 2) View the internal components and wiring to ensure there is no damage. Ensure all wires are connected. The +24Vdc PS is the small unit in the bottom left-hand corner. Unplug the wire harness at the PCB (one red wire, one black wire) which comes from the +24Vdc PS. WARNING – ELECTRCIAL SHOCK IS POSSIBLE. USE CAUTION WHILE MAKING VOLTAGE MEASUREMENTS.

Description	Possible Problem	Troubleshooting & Possible Solutions
(Continued) System PS: The Yellow indicator is not lit when the PS is on. (Red indicator light is lit.)	(Continued) The Yellow indicator light is off. The motorized card reader and card dispenser are not operating. The display has “Card Stuck or Card Error” on the top and “See Management” on the bottom.	(Continued) 3) Plug in and turn on the PS enclosure. Measure the voltage on the disconnected harness plug – Red to Black. The voltage should be +24Vdc +/- 0.25 v. 4) a) If the voltage is present, the harness was not properly connected or the contacts are damaged or the PCB has failed. b) Inspect the harness connections closely. If problem is found, repair the harness if possible. Replace +24Vdc PS if harness can not be repaired. b) Reconnect the harness to the PCB and measure the voltage at the front outside of the PS enclosure. (6 pin connector between center pin top (black lead) and center pin bottom (red lead)). The voltage should be +24Vdc +/- 0.25V. c) If the voltage is not present, replace the PCB. 5) a) Measure the voltage on the disconnected harness plug – Red to Black. The voltage should be +24Vdc +/- 0.25 v. If voltage is not present, measure the voltage at the PS terminals. b) If voltage is present, the harness has failed. Inspect the harness connections closely. If problem is found, repair the harness if possible. Replace +24Vdc PS if harness can not be repaired. c) If voltage is not present, the +24Vdc PS has failed. Replace +24Vdc PS.

Description	Possible Problem	Troubleshooting & Possible Solutions
System PS: All four Green indicators are not lit when the PS is on. (Red indicator light is lit.)	The Green indicator lights are off. All the appliance readers are blank, both dispensers are blank.	Verify the voltage is present by: At the PS, unplug the power harness which goes to the dispenser PCB. Measure the voltage on the PS 6 pin connector between top row, left pin (black lead) and top row, right pin (red lead). The voltage should be +15Vdc +/- 0.25V. Adjust as needed. If the voltage is present, the PS is operating correctly, but the indicators have failed. Replace power supply PCB as soon as available. Measure the +15Vdc as instructed above. If the voltage is not present, follow the isolation steps on the next page. +15 Vdc Isolation: 1). Turn off and unplug the PS enclosure. Remove the PS enclosure from the cabinet wall and place the enclosure so that voltage measurements can be made. 2) View the internal components and wiring to ensure there is no damage. Ensure all wires are connected. The +15Vdc PS is the large unit along the top of the enclosure. Unplug the wire harness at the PCB (two red wires, two black wires) which comes from the +15Vdc PS. **WARNING – ELECTRCIAL SHOCK IS POSSIBLE. USE CAUTION WHILE MAKING VOLTAGE MEASUREMENTS.** 3) Plug in and turn on the PS enclosure. Measure the voltage on the disconnected harness plug – Red to Black. The voltage should be +15Vdc +/- 0.25 v. 4) a) If the voltage is present, the harness was not properly connected or the contacts are damaged or the PCB has failed. b) Inspect the harness connections closely. If problem is found, repair the harness if possible. Replace +15Vdc PS if harness can not be repaired.

Description	Possible Problem	Troubleshooting & Possible Solutions
(Continued) System PS: All four Green indicators are not lit when the PS is on. (Red indicator light is lit.)	(Continued) The Green indicator lights are off. All the appliance readers are blank, both dispensers are blank.	(Continued) b) Reconnect the harness to the PCB and measure the voltage at the front outside of the PS enclosure. (PS 6 pin connector between top row, left pin (black lead) and top row, right pin (red lead)). The voltage should be +15Vdc +/- 0.25V. c) If the voltage is not present, replace the PCB. 5) a) Measure the voltage on the disconnected harness plug – Red to Black. The voltage should be +15Vdc +/- 0.25 v. If voltage is not present, measure the voltage at the PS terminals. b) If voltage is present, the harness has failed. Inspect the harness connections closely. If problem is found, repair the harness if possible. Replace +15Vdc PS if harness can not be repaired. c) If voltage is not present, the +15Vdc PS has failed. Replace +15Vdc PS.
System PS: One or more Green indicators are not lit when the PS is on. (Red indicator light is lit.)	The one or more Green indicator light for the Ethernet Wire Hubs are out. The appliance readers for that hub(s) are blank, both dispensers are working correctly.	Verify the voltage is present by: At the PS, unplug the power harness which goes to the Ethernet Wired Hub (EWH). Measure the voltage on the PS 4 pin connector between left-hand pin and one of the two middle pins. The voltage should be +15Vdc +/- 0.25V. Adjust as needed. If the voltage is present, the PS is operating correctly, but the indicators have failed. Replace power supply PCB as soon as available. If the voltage is not present, follow the isolation steps below. +15 Vdc Isolation: 1). Turn off and unplug the PS enclosure. Disconnect the power harness for the EWH that is not operating. Remove the PS enclosure from the cabinet wall and place the enclosure so that voltage measurements can be made.

Description	Possible Problem	Troubleshooting & Possible Solutions
System PS: One or more Green indicators are not lit when the PS is on. (Red indicator light is lit.)	The one or more Green indicator light for the Ethernet Wire Hubs are out. The appliance readers for that hub(s) are blank, both dispensers are working correctly.	2) View the internal components and wiring to ensure there is no damage. Ensure all wires are connected. The +15Vdc PS is the large unit along the top of the enclosure. Verify that all three fuses are good and properly inserted. If one of the fuses is blown, remove and replace with the correct replacement fuse. **WARNING – ELECTRCIAL SHOCK IS POSSIBLE. USE CAUTION WHILE MAKING VOLTAGE MEASUREMENTS.** Plug in the main power cord and turn one the PS enclosure. Leave the power harness to the EWH disconnected. Verify that the Green light is on. Measure the voltage on the PS 4 pin connector between left-hand pin and one of the two middle pins. The voltage should be +15Vdc +/- 0.25V. Adjust as needed. Turn off and unplug the PS enclosure. Before reinstalling the PS enclosure, inspect all the system connections and components from the PS enclosure to the EWH and then from the EWH out to the readers. The blown fuse is probably not the cause of the problem. Another component on the line has a failure that has caused the fuse to blow. Correct any problems. After correctly all component problems and replacing the fuse, plug in the power harness to the EWH. Then, plug in and turn on the PS enclosure. Verify that the EWH and connected readers are operating correctly.

Description	Possible Problem	Troubleshooting & Possible Solutions
System PS: Bill Verifier power missing.	The bill verifier is not operating. The display shows “See management”.	1. Verify the voltage is present by: At the PS, unplug the harness which goes to the 3 pin connector. Measure the voltage on the PS 3 pin connector between left and right pins. The voltage should be 24Vac +/- 4.0V. If the voltage is present, the PS is operating correctly. Check the wiring and connections between the PS enclosure and the bill verifier. Repair is possible, replace as needed. 2. If the voltage is not present, then turn off and unplug the power supply. Unbolt the power supply enclosure and place the enclosure so that voltage measurements can be made inside. View the internal components and wiring to ensure there is no damage. Ensure all the wiring is connected. View the wiring to the transformer located in the center of the enclosure. **WARNING – ELECTRICAL SHOCK IS POSSIBLE. USE CAUTION WHILE MAKING VOLTAGE MEASUREMENTS.** 3. Plug in and turn on the PS enclosure. Measure the voltage on the load terminals of the transformer (measure Violet to Violet wire) The voltage should be 24Vac +/- 4.0V. If the voltage is not present, measure the voltage on the input terminals for the transformer (measure Black to White wire) The voltage should be 115Vac. If the voltage is not present, check the wiring and connections between the transformer and the fuse holder. Repair as need.
Secondary Power Supply: The Orange AC power indicator light is not lit. All Other PS lights are also off.	Power Supply is not turned on.	Turn on the power supply using the switch directly above the power cord plug-in.
	Power Supply is not plugged into the outlet at the bottom of the cabinet	Verify the power supply cord is properly connected to the front of the enclosure and plugged into the outlet at the bottom of the cabinet.

Description	Possible Problem	Troubleshooting & Possible Solutions
(Continued) Secondary Power Supply: The Orange AC power indicator light is not lit. All Other PS lights are also off.	Power Supply has a blown fuse for in AC power.	Turn the switch off and remove the fuse located on the front of the enclosure. Verify the fuse is not open. Replace as required.
	Power Supply component has failed.	1. Turn off and unplug the power supply. Unbolt the power supply enclosure and place the enclosure so that voltage measurements can be made inside. View the internal components and wiring to ensure there is no damage. Ensure all the wiring is connected. WARNING – ELECTRICAL SHOCK IS POSSIBLE. USE CAUTION WHILE MAKING VOLTAGE MEASUREMENTS. 2. Plug in and turn on the power supply. Measure the voltage on the AC line filter terminals (filter is part of the outlet and power switch assembly located in the bottom right as looking into the enclosure). The voltage from the Yellow wire to the White wire should be 115Vac. 3. If the voltage is not present, the AC line filter/ switch assembly has failed. Replace the assembly. If the voltage is present, measure the voltage from the Black wire on the fuse holder to the White wire on the AC line filter/switch assembly. The voltage should be 115Vac. 4. If the voltage is not present, the fuse or fuse holder or connecting wires have failed. Replace as required.
Secondary PS: Orange AC power indicator light is not lit. All Other PS lights are on.	The PS AC power indicator (Orange) has failed, however the PS is operating.	1. Turn off and unplug the power supply. Unbolt the power supply enclosure and place the enclosure so that voltage measurements can be made inside. View the internal components and wiring to ensure there is no damage. Ensure all the wiring is connected. View the wiring and wire nuts to the orange indicator to ensure they are properly connected. 2. Replace the AC power indicator.

Description	Possible Problem	Troubleshooting & Possible Solutions
Secondary PS: Yellow indicator light is not lit. All Other PS lights are on.	The Yellow indicator light is off but the motorized card reader and card dispenser are operating correctly.	Verify the voltage is present by: At the PS, unplug the harness which goes to the dispenser PCB. Measure the voltage on the PS 6 pin connector between left-center pin and left-bottom pin. The voltage should be +24Vdc +/- 0.25V. Adjust as needed. If the voltage is present, the PS is operating correctly, but the indicator has failed. Replace the Yellow indicator as soon as available.
	The Yellow indicator light is off. The motorized card reader and card dispenser are not operating. The display has “Card Stuck or Card Error” on the top and “See Management” on the bottom.	1. Measure the voltage on the PS 6 pin connector between left-center pin and left-bottom pin. The voltage should be +24Vdc +/- 0.25V. Adjust as needed. 2. Turn off and unplug the power supply. Unbolt the power supply enclosure and place the enclosure so that voltage measurements can be made inside. View the internal components and wiring to ensure there is no damage. Ensure all the wiring is connected. View the wiring and wire nuts to the yellow indicator to ensure they are properly connected. **WARNING – ELECTRICAL SHOCK IS POSSIBLE. USE CAUTION WHILE MAKING VOLTAGE MEASUREMENTS.** 3. Plug in and turn on the PS enclosure. Measure the voltage on the terminals of the +24Vdc power supply assembly. The +24 Vdc PS assembly is located on the right side near the top as looking into the enclosure. Measure between the terminal with the Black and Violet wires soldered on it to the terminal with the White and Violet wires soldered on it. The voltage should be +24 Vdc +/- 0.25V. If the voltage is present, check the wiring and wire nuts for damage. Repair as need. 4. If the voltage is not present, measure the incoming 115Vac power to the PS assembly. Measure on the PS assembly transformer between pins 1 and 4. If the voltage is present, then the PS assembly has failed. Replace +24Vdc PS assembly. 5. If the voltage is not present check the wiring and connections between the PS assembly and the fuse holder. Repair as need.

Description	Possible Problem	Troubleshooting & Possible Solutions
Secondary PS: Green indicator light is not lit. All Other PS lights are on.	The Green indicator light is off but the motorized card reader and card dispenser are operating correctly.	Verify the voltage is present by: At the PS, unplug the harness which goes to the dispenser PCB. Measure the voltage on the PS 6 pin connector between top left pin and bottom right pin. The voltage should be +15Vdc +/- 0.25V. Adjust as needed. If the voltage is present, the PS is operating correctly, but the indicator has failed. Replace the Green indicator as soon as available.
	The Green indicator light is off. The motorized card reader and card dispenser are not operating. The display is blank.	1. Measure the voltage on the PS 6 pin connector between top left pin and bottom right pin. The voltage should be +15Vdc +/- 0.25V. Adjust as needed. 2. Turn off and unplug the power supply. Unbolt the power supply enclosure and place the enclosure so that voltage measurements can be made inside. View the internal components and wiring to ensure there is no damage. Ensure all the wiring is connected. View the wiring and wire nuts to the green indicator to ensure they are properly connected. WARNING – ELECTRICAL SHOCK IS POSSIBLE. USE CAUTION WHILE MAKING VOLTAGE MEASUREMENTS. 3. Plug in and turn on the PS enclosure. Measure the voltage on the terminals of the +15Vdc power supply assembly. The +15 Vdc PS assembly is located along the top as looking into the enclosure. Measure between the terminal with the Black wire soldered on it to the terminal with the White wire soldered on it. The voltage should be +15 Vdc +/- 0.25V. If the voltage is present, check the wiring and wire nuts for damage. Repair as needed. 4. If the voltage is not present, measure the incoming 115Vac power to the PS assembly. Measure on the PS assembly transformer between pins 1 and 4. If the voltage is present, then the PS assembly has failed. Replace +24Vdc PS assembly. 5. If the voltage is not present check the wiring and connections between the PS assembly and the fuse holder. Repair as needed.

Description	Possible Problem	Troubleshooting & Possible Solutions
Secondary PS: Bill Verifier power missing.	The bill verifier is not operating. The display shows “See management”.	1. Verify the voltage is present by: At the PS, unplug the harness which goes to the dispenser PCB. Measure the voltage on the PS 6 pin connector between top right pin and middle right pin. The voltage should be 24Vac +/- 4.0V. If the voltage is present, the PS is operating correctly. Check the wiring and connections between the PS enclosure and the bill verifier. Repair is possible, replace as needed. 2. If the voltage is not present, then turn off and unplug the power supply. Unbolt the power supply enclosure and place the enclosure so that voltage measurements can be made inside. View the internal components and wiring to ensure there is no damage. Ensure all the wiring is connected. View the wiring to the transformer located in the center of the enclosure.**WARNING – ELECTRICAL SHOCK IS POSSIBLE. USE CAUTION WHILE MAKING VOLTAGE MEASUREMENTS.** 3. Plug in and turn on the PS enclosure. Measure the voltage on the load terminals of the transformer (measure Violet to Violet wire) The voltage should be 24Vac +/- 4.0V. If the voltage is not present, measure the voltage on the input terminals for the transformer (measure Black to White wire) The voltage should be 115Vac. If the voltage is not present, check the wiring and connections between the transformer and the fuse holder. Repair as needed.
Appliance Readers		
No Start up messages on the display	Display ribbon cable not properly connected to the reader PCB	Check to ensure the reader display is connected to the reader PCB.
	No power to the reader. Blue data cable not properly connected.	Check data cable (blue) on both ends for proper connection.
	Damaged data cable	Verify the reader operates correctly on a known good data connection. Replace the data cable.
	Failed display or reader	Verify the reader does not operate on a known good data connection. Connect a new display to the reader and retest. Replace as needed.

Description	Possible Problem	Troubleshooting & Possible Solutions
The display showed the version and then displayed EASYCARD and stopped.	There are no communications with the system. (STANDARD READER)	1. Check data cable (blue) on both ends for proper connection. 2. Check data cables back to the EWH. Verify the EWH is operating correctly. 3. Verify the reader operates correctly on a known good data connection. Replace the data cable. 4. Verify the reader does not operate on a known good data connection. Replace reader.
	There are no communications with the system or no communications with the washer.. (V SERIES READER)	1. Check data cable (blue) on both ends for proper connection. 2. Check the reader harness from reader to washer controller on both ends for proper connection. 3. Check data cables back to the EWH. Verify the EWH is operating correctly. 4. Verify the reader operates correctly on a known good data connection and washer. 5. Verify the washer is operating properly. 6. Verify the reader does not operate on a known good data connection and washer. Replace reader.
	There are no communications with the system or no communications with the vending machine. (MDB READER)	1. Check data cable (blue) on both ends for proper connection. 2. Check the reader harness from reader to vending controller on both ends for proper connection. 3. Check to ensure the reader address switches are set for both an address and vending machine. 4. Check data cables back to the EWH. Verify the EWH is operating correctly. 5. Verify the reader operates correctly on a known good data connection and vending machine. 6. Verify the vending machine is operating properly. 7. Verify the reader does not operate on a known good data connection and vending machine. Replace reader.

Description	Possible Problem	Troubleshooting & Possible Solutions
Display message is faded.	Reader Green or Red LED's light and the reader operates the equipment, then an intensity adjustment is needed. WARNING: Not using the proper tool to make this adjustment will damage the reader components.	1. Using the proper Dexter provided tool, adjust the intensity of the display by turning the small component directly behind the reader display connection. 2. If adjustment does not increase intensity, disconnect the data cable from the reader, then reconnect. If display continues to fade over time, replace the display.
Incorrect custom message appears on all the same type machine.	The message settings / text are not correct in the server.	Using a remote computer, log into the system, click on the MODIFY SYSTEM tab then the Machine Type text. (see chapter 6 of the system manual). Use the tab key to move to the desired type and make corrections to the displayed messages.
The reader does not start the machine when the card is inserted.	When card is inserted, the green or red LED's do not light. When card is inserted, the green or red LED light. But the display message stops. (STANDARD READER)	Disconnect the blue data cable from the reader, then reconnect. Wait for reader to show store messages. Insert a card. Replace reader if no green or red LED's appear. Communication between the reader and the server is not present. 1. Check data cable (blue) on both ends for proper connection. 2. Check data cables back to the EWH. Verify the EWH is operating correctly. 3. Check other readers on same hub for similar issue. If present, reset the EWH. (See EasyCard Manual for details.) 4. Verify the reader operates correctly on a known good data connection and equipment 5. Disconnect the blue data cable from the reader, then reconnect. Wait for reader to show store messages. Test reader. Replace as needed.

Description	Possible Problem	Troubleshooting & Possible Solutions
(continued) The reader does not start the machine when the card is inserted.	When card is inserted, the green or red LED light. But the display message stops. (V SERIES READER) (MDB READER)	Communication between the reader and the server is not present. Or communications between the reader and the equipment is not present. 1. Check data cable (blue) on both ends for proper connection. 2. Check the reader harness from reader to washer controller/vending machine on both ends for proper connection. 3. Check data cables back to the EWH. Verify the EWH is operating correctly. 4. Check other readers on same hub for similar issue. If present, reset the EWH. (See EasyCard Manual for details.) 5. Verify the reader operates correctly on a known good data connection and washer / vending machine. 6. Verify the washer is operating properly….Verify the vending machine is operating properly. Remove power from the equipment, then reconnect. Wait for reader to show store messages. Test reader. Replace as needed.
	When card is inserted, the green LED lights. The start amount is removed from the card, but equipment did not start. (STANDARD READER) (V SERIES READER) (MDB READER)	1. Check the reader harness from the reader to the equipment. Ensure both ends are properly connected. 2. Verify settings in the Machine Type settings are proper for this machine type. (See EasyCard Manual for details) 3. Verify the equipment is operating properly…. Verify the vending machine is operating properly. Remove power from the equipment, then reconnect. Wait for reader to show store messages. Test. 4. Disconnect the blue data cable from the reader, then reconnect. Wait for reader to show store messages. Test reader. Replace as needed.

Description	Possible Problem	Troubleshooting & Possible Solutions
Reader not reading the card, red light on all the time, display shows “Remove Card”	Optical sense at the front of the reader housing is seeing a card inserted.	1. Verify the optical sense at the front of the reader housing is clear of lint and dirt. (This can be blown clear using compressed air from the front without removing the reader.) 2. Disconnect the blue data cable from the reader, then reconnect. Wait for reader to show store messages. Test reader. Replace as needed.
A group of readers don’t start the machine when the card is inserted.	Type settings not proper.	Verify settings in the Machine Type settings are proper for this machine type. (See EasyCard Manual for details). Adjust as needed.
	EWH not operating properly	1. Verify the EWH for this group of readers is operating properly. 2. Reset the EWH. Wait for store messages to appear on the readers. Test. 3. Disconnect power to the EWH. Reconnect the power. Wait for store messages to appear on the readers. Test. 4. Verify the EWH settings are proper in the system. Using a remote computer, log into the system, click on the MODIFY SYSTEM tab then the Hub/Reader Definitions text. (see chapter 6 of the system manual). 5. Remove one reader and connect to different EWH. Take care not to have duplicate addresses during this test. Verify reader operates properly. Replace EWH as needed.

Notes & Comments

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Dexter Laundry reserves the right to change procedures and/or specifications without notice.

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