

# **SandVault Group**

# **SmartVend Water Reload Manual**

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**Version 1.2**

### **Notice**

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| <p><b>SandVault Group</b> designs, manufactures and markets self-serve smart card solutions compatible with systems developed by major financial institutions and with proprietary card schemes.</p> |
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# Revision Log

| <b>Revision</b> | <b>Section</b> | <b>Description of Change</b>              | <b>Date</b> |
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| 2               | 5              | Add instructions for removing card hopper | AJL 8/2004  |
| 3               | 3              | Add instructions for Escrow               | GJW 1/2009  |
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## Limited Warranty

### Terms

**SandVault Group** warrants each new **SmartVend** and/or accessory to be free from defects in materials and workmanship to the original purchaser for a period of twelve (12) months from the date of shipment. Our responsibility is limited to repair or replacement of the **SmartVend** and/or accessory or part thereof at our option. Warranty coverage for repairs shall include both parts and labor.

This limited warranty does not extend to any defect, malfunction or failure caused by or resulting from improper service, repacking, maintenance or repair, abuse, neglect, problems with electrical power, accident or any other cause beyond the control of **SandVault Group** or to any product whose serial number has been removed, altered, replaced, defaced or rendered illegible. If, in our opinion, repairs, replacement or service are not covered by warranty, the customer will be billed at our standard rates in effect at that time.

**SandVault Group** shall not be liable to the purchaser or to any other person or firm for any specified or consequential damages of any kind which result from the use or misuse by any person or loss of profits or product resulting from any defect in, malfunction or failure of this product. No person, agent, distributor, service facility or company is authorized to change, modify or amend the terms of this limited warranty.

### Warranty Procedure

If common troubleshooting cannot resolve your equipment problem, notify **SandVault Group** by telephone, FAX or E-mail.

Describe the problem in detail. You may be asked to provide the make, model and software revision of the equipment interfaced to SmartVend Products.

If the trouble requires the return of the unit or components **SandVault Group** will issue a **Return Material Authorization number (RMA#)** and will fax an **RMA Report** to be completed and enclosed with the returning merchandise.

## Packing and Shipping

**Do not return a unit before contacting our Service Department. We will issue a Return Material Authorization number.** This number should be prominently displayed on the package and packing slip. Without an RMA#, shipments will be refused.

Complete and enclose the RMA Report with the returning merchandise. Be as specific as possible. Reference the unit's Model and Serial numbers. If non-warranty, specify whether an estimate of repairs is desired before work is performed and to whom this estimate should be sent.

Pack the unit in its original carton, using the original packing materials. If they are not available, be sure to pack the unit securely. Poor packaging may cause damage, adding cost and delay to repairs.

Ship prepaid to the address specified on the RMA report form. Collect shipments will be refused and returned. Customer must insure or accept all risk of loss or damage due to shipping. The customer is responsible for all shipping costs for warranty and non-warranty repairs or replacements.

## Items Repaired by Manufacturer or Authorized Service Centers

**SandVault Group** personnel do not repair the following items; rather, they are returned to the manufacturer or a designated service center for repair and return to **SandVault Group**. Additional time is required for this secondary servicing point.

### Bill Acceptors, Coin Mechs, UPSs, PCs & Printers

The most expedient and cost effective method of having bill acceptors, coin mechs, UPSs, PCs and printers repaired after the warranty period has expired is to have them serviced locally by a servicing center authorized by the manufacturer of the unit. If you need assistance in locating a service center, please contact **SandVault Group's** Customer Service Department.

## **Items Excluded from Repair Services**

The following items are non-repairable, and will probably need to be replaced if they become damaged after the 12-month limited warranty period has expired:

- All cables and harnesses (including comms link cable)
- Pinpads/Pinpad Assemblies
- Card connector in the card reader

Additionally, any unit that has been vandalized, or has been mistreated whether intentional or accidental, is exempt from the flat fees posted in this Repair Policy. Such items will be considered on a case-to-case basis, and, if determined repairable, you will be contacted with the repair costs prior to **SandVault Group** performing repairs.

## **Overnight Shipping Requests**

All repair prices include return shipping via ground collect. If you request return via overnight service, we will honor your request and will bill you the actual freight charges incurred in addition to the standard flat rate, plus an administration fee for 25% of the actual freight charges.



# Preface

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## About This Manual

This manual contains three chapters, three appendices, and an index. The title page, contact information, and revision page are presented at the beginning of the manual, and are not included in a section.

Chapter 1, **Introduction**, contains an overview of the document's subject matter and a glossary of Abbreviations, Acronyms, and Terms.

Chapter 2, **Setup**, describes the layout of the software, and summarizes the meaning and function of the various displays.

Chapter 3, **Changing The Settings**, steps through the process of configuring a CAD with this software.

Appendix A, **Troubleshooting**, lists solutions to some possible problems.

## Conventions

The following conventions are used in this manual.

Screen text

Arial

This font is used to represent all text printed to the screen.

This font is used in headings for text, figures, and tables, as well as inside tables, flowcharts, and component lists for figures.

[Key]

Characters in brackets indicate keyboard input.



**CAUTION!** PROVIDES AN ADVISORY WARNING REGARDING CERTAIN SAFETY PROCEDURES.



**NOTE:** *A note provides information that is, or may be, of special interest.*

# 1. Introduction

---

## 1.1 Purpose

This document is designed to let the first time user of the **SandVault Group** SmartVend Reload device easily set up and configure it. It is also meant to be a reference for using, configuring and troubleshooting the device.

## Abbreviations and Acronyms

|                   |   |
|-------------------|---|
| <b>CAD</b>        | Card Accepting Device, comprises the relevant components of the <b>SmartVend Reload</b> , allowing the dispensing machine to accept cash cards for revalue. |
| <b>Hopper</b>     | Enclosure which houses a stack of items, such as cards to be vended.  |
| <b>Bill Vault</b> | Locked enclosure which houses bills fed to the bill validator. Also known as a stacker.   |



## 2. Installation

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### 2.1 Required Hardware

The following components are needed to successfully operate SmartVend Reload:

- Card Hopper
- Bill Validator
- Bill Vault
- Power Supply
- Card Reader
- SmartVend Console
- Power Supply Mount
- Reload Enclosure
- LCD
- Red Push Button
- 12 Key Keypad

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### 2.2 Assembly

The SmartVend Reload unit comes pre-assembled. To start using the SmartVend Reload unit,

1. Plug the power cord into a standard 110VAC power source.
2. Wait until the top line of the display reads “INSERT CASH CARD OR PRESS BUTTON.” The unit is now ready to be configured.



## 3. Changing The Settings

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### 3.1 Configuring SmartVend Reload For First Use

SmartVend Reload needs to be configured before it can be used.

The administration menu structure appears in Appendix B.

To enter the administration menu system, press the [5] and [8] keys simultaneously. The LCD screen will display a “\_” character in the lower left of the screen. At this prompt, enter your password using the keys of the 12 button keypad. The underscore character will advance across the screen with each key press. The default (level 3) password is 7 7 5 8 9 9 8 8. Then press 9 to enter the menu. To exit the menu press the 7 key repeatedly the LCD displays “INSERT CASH CARD OR PRESS BUTTON.”

#### 3.1.1 Setting the Date & Time if equipped.

To set the SmartVend Reload’s internal date and time, navigate to the Set Date & Time menu in the administration menu system, and press [9]. The date and time will be displayed. Enter the current date and time using the numeric keypad.

To increment the currently selected value, press the [8] key. To decrement the currently selected value, press the [5] key. To advance to the next digit, press the [9] key.

### 3.1.2 Changing the Password (IMPORTANT!)



**CAUTION! IT IS *VERY* IMPORTANT THAT YOU CHOOSE A NEW ADMINISTRATION PASSWORD FOR YOUR SMARTVEND RELOAD BEFORE PEOPLE WITHOUT ADMINISTRATION PRIVILEGES HAVE ACCESS TO IT. OTHERWISE, THEY MAY USE THIS MANUAL TO MODIFY ANY OF THE SETTINGS DESCRIBED HEREIN.**

To change the administration access password, navigate to the Level 3 Password menu (see Appendix B), and press [9]. You will be prompted to enter and then re-enter a new 8 digit password using the 5 7 8 and 9 keys on the numeric keypad. Keep this password secure.

### 3.1.3 Setting the Card Price

To set the SmartVend Reload's card price, navigate to the Edit Card Price menu in the administration menu system, and press [9]. The current card price (in dollars) will be displayed. Use the [5] and [8] keys to lower and raise the card price in one dollar increments. Press [9] when done.



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## **3.2 Adjusting SmartVend Reload Features**

### **3.2.1 Escrow**

The SmartVend Water Reload device is equipped with an escrow feature that allows a customer to retrieve a value if the station has timed out. If a card is purchased at a station and the customer either collects the card and fails to insert it into the device or if the station fails to produce a card, the system will time out after approximately one minute. At this time it will record the value that was to be loaded onto the card in escrow. In order to collect the escrowed amount a brand new card with no previous balance must be inserted into the CAD on the station. The card will automatically be loaded with the value and the value will be removed from escrow.

The SmartVend Water Reload device will not compound escrows. If an event occurs in which a value is loaded into escrow, and before a new card with no previous balance can be brought to collect the amount another event occurs in which a value is loaded into escrow the new value will override the old value, and the old value will be recorded in the cancelled value, along with the cost of the card that was supposed to be purchased. The cancelled value is the sum of all cancelled escrows plus their respective card prices.

To display the escrowed amount navigate to the Display Summary menu (see Appendix B) and press [9]. The Transaction Count (CNT) and Cash Loaded (VAL) are displayed on the screen for three seconds, after which the Escrowed and Cancelled amounts are displayed for three seconds. The summary will automatically return to the Display Summary menu.

### **3.2.2 Displaying the Summary**

The SmartVend Water Reload device contains a counter that records the total number of transactions and associated value retrieved from the customer.

To display the transaction summary, navigate to the Display Summary menu (see Appendix B) and press [9]. The Transaction Count (CNT) and Cash Loaded (VAL) are displayed on the screen for three seconds, after which the Display Summary menu reappears.

### **3.2.3 Clearing the Summary**

Clearing the summary resets the summary counters in the SmartVend Reload. Clearing the Summary records resets the current transaction counter to zero.

To clear the summary, navigate to the Clear Summary menu (see appendix B), press [9], and press [9] once more to confirm. After a few seconds, the screen will display “Summary Cleared.” The Summary Transaction Count, Cash Loaded, Escrowed, and Cancelled amounts have all been reset to zero.

### **3.2.4 Clearing the Datastore**

Clearing the datastore clears all transaction records from the SmartVend Reload. This means that all previous transaction information will be lost. This data includes the Summary transaction data.

To clear the datastore, navigate to the Clear Datastore menu (see appendix B), press [9], and press [9] once more to confirm. After a few seconds, the screen will display “Datastore Empty.” All transaction data has now been cleared.

### **3.2.5 Restoring Defaults**

Restoring defaults resets all settings on the SmartVend Reload to their original settings. This means that the unit will be configured as it was prior to initial setup, and all previous setting modifications will be lost.

To restore defaults, navigate to the Restore Defaults menu (see appendix B), press [9], and press [9] once more to confirm. After a few seconds, the screen will display “Default Restored.” All settings now have their default values:

- Date & Time – will not change if equipped.
- Password – 7 7 5 8 9 9 8 8
- Card Price – 0
- Summary – not affected



## 4. Using SmartVend Reload

Keep the following details in mind while operating the Reload device:

- The user can end their current transaction at any time by pressing and releasing the cancel key.
- Messages which do not require user response are displayed from 1.5 to 3 seconds.
- Maximum card balance is 15000 units, although it may be set lower for specific sites.
- Cards with incorrect site codes are automatically declined.

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### 4.1 Loading Value on Reload Console

SmartKit Reload Console allows an authorized attendant to add value to a customer's smart card.

The following is a standard transaction sequence used for loading value with the Reload device.

INSERT CASH CARD  
OR PUSH BUTTON

*{ Customer presses the RED button, and the light goes green on the Bill Acceptor }*

INSERT BILL  
PLEASE

*{ \$5 bill is inserted in Bill Validator. \$1 is deducted for price of card }*

Insert Card

LOAD: \$4.00

*{ Card is dispensed, and customer retrieves card. }*

Insert Card  
LOAD: \$4.00

*{ Customer inserts card, and the light goes green on the Bill Acceptor }*

BAL: \$4.00  
INSERT BILL

*{ Customer inserts a \$20 bill in Bill Acceptor }*

BAL: \$4  
LOAD: \$20

BAL: \$24  
INSERT BILL

*{ Customer removes card. }*

CANCELLED

INSERT CASH CARD  
OR PUSH BUTTON

*{ Customer inserts card, and the light goes green on the Bill Acceptor }*

BAL: \$24.00  
INSERT BILL

*{ Customer inserts a \$1 bill in Bill Acceptor }*

BAL: \$24  
LOAD: \$1

BAL: \$25  
INSERT BILL

*{ Customer removes card. }*

CANCELLED

INSERT CASH CARD  
OR PUSH BUTTON

## 5. Maintenance

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### 5.1 What To Look For

Check regularly to ensure that:

- The card hopper is full
- The Bill Vault is not full.
- All buttons are readable.
- The display is readable and not cracked or faded.
- The cables are not frayed or torn.
- The plugs on the cables still attach securely at both ends.
- There is no visible damage to the SmartVend box.



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**NOTE:** *If any components are damaged, contact SandVault Group for replacements.*

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### 5.2 Reloading the Card Hopper

To add more cards to the Card Hopper, release the latch on the upper left corner of the hopper and pull the entire enclosure up, and tip it forward to draw it out of the Reload unit.

Draw the front gate up, and then swing it out and over the top of the Hopper. Next, remove the silver weight, and insert your stack of cards in the bottom of the hopper, print side up, gold contact facing the back.

After you have loaded your stack of cards, replace the weight (with the word “Front” at the front) on top of them, swing the gate closed again, and re-seat the enclosure in the Reload unit.

The latch should click closed when the hopper is seated correctly.

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## 5.3 Cleaning

To clean the outside of the SmartVend Reload case, wipe clean with a cloth dampened with a mild glass cleaner.



**CAUTION! DO NOT IMMERSE SMARTVEND RELOAD IN ANY LIQUID, AND DO NOT SPRAY WITH LIQUID, AS LIQUID MAY GET INSIDE THE DEVICE AND CAUSE DAMAGE.**

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## 5.4 Removing the Card Hopper

In certain situations, it may become necessary to remove the Card Hopper from the Reload unit.



**CAUTION! DO NOT REMOVE OR UNPLUG COMPONENTS IN THE RELOAD ENCLOSURE WITHOUT FIRST TURNING OFF THE 12 VOLT POWER SUPPLY!**

To remove the entire card hopper from the reload unit:

1. Turn off the 12 volt power supply.
2. Disconnect the power and signal cables from the hopper.
3. Unscrew the four screws under the hopper mounting bracket,
4. An 11/32" wrench and Phillips screw driver is required.
5. Lift it out of the box.

When replacing the card hopper in the reload unit, first ensure that the 12 volt power supply is turned off, and then reverse the procedure outlined above.

# Appendix A: Troubleshooting



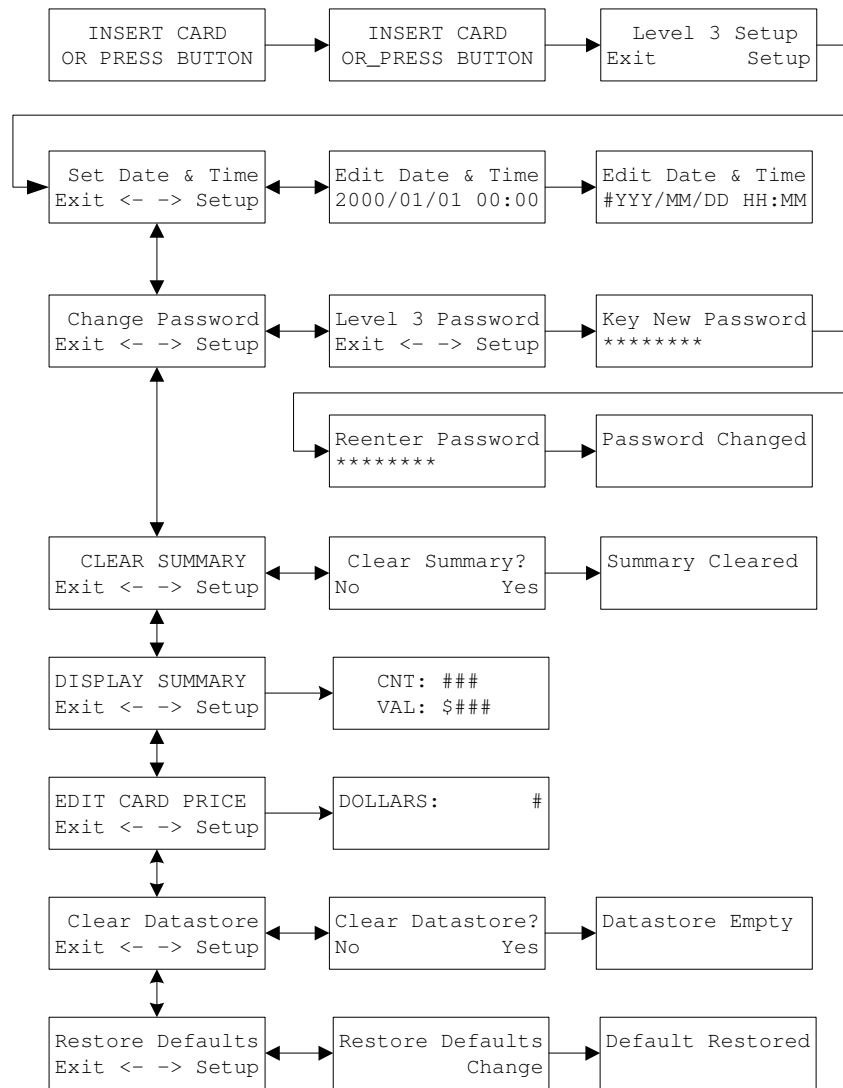
## Possible Problems and Solutions

**Table 1 Problems & Solutions**

|   |   |
|---|---|
| Screen does not light up.   | Verify that power supply is securely plugged into a live 110vAC power outlet, and the power cable is connected to the power supply  |
| Inserted cards are "Invalid".   | Verify that the cards are inserted with the gold contact up, and on the end inserted into the Console card accepting slot.<br><br>An "invalid card" response may also mean any of the following during standard POS/Reload transaction:<br>- incorrect site code<br>- invalid card                                |
| "Com error" occurs during operation.                                    | - Card chip is damaged.<br>- Card reader contacts in Console unit are damaged.<br>- Communications failed. Ensure all cables are firmly connected. If error persists, contact Sandvault's RMA department.   |
| No cards are dispensed.   | Check for a light amber light on the left side of the card hopper. If such a light is on or flashing, ensure that cards are loaded in the hopper below the metal weight. If button on front of unit is unlit and amber light remains on, turn off power to the unit, wait 10 seconds, and turn the power back on. |
| <b>Card Hopper Error Codes</b>  |   |
| The amber light on the left side of the card hopper is lit continuously | No cards are detected in the dispenser. Ensure the dispenser has cards in it, and the hopper is seated correctly.   |
| The amber light blinks evenly   | Feed sensor blocked unexpectedly. An object was detected in the feed path while the dispenser was idle.   |
| The amber light blinks twice, then pauses                               | Feed failed. The dispenser was unable to feed the next card off the stack.  |

|   |  |
|---|--|
| The amber light blinks three times, then pauses | Feed jam. The card began to feed but was not fully dispensed from the mechanism.   |
|   | These errors can be fixed in one of three ways: <ol style="list-style-type: none"><li>1. Turn the power off and back on again.</li><li>2. Press and hold the test feed button (yellow button located on the circuit board on the left side of the card hopper).</li><li>3. Pull the RESET pin low (located on the circuit board on the left side of the card Hopper) for approximately 1 second.</li></ol> |

# Appendix B: Administration Menu



**Figure 5-1 Administration Menu**



# Appendix C: Specifications

Source Materials Source Materials

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## Source Materials

The SmartVend Reload consists of:

- 120vAC to 125VDC power supply
- SmartVend Console
  - 12 key keypad
  - LCD screen
  - PCB
- Card Hopper
- Card Reader
- Bill Validator & Vault
- Reload Box



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