VENDAPIN LLC

Priority #1 Quality and Customer Satisfaction

DATATRON III SERIES

MODELS 5882 and 5885

Datatron III Series Operator's Manual

Printed in the U.S.A. (revised: 01/08)
5885 Keypad with 1000 PIN accounts and dual counters: Part number 945885-002
5882 Keypad with 2000 PIN accounts and single counter: Part number 945882-002
See firmware version table for full list of features including standard or steering functions.
This manual is applicable to firmware versions 4.11-1 and higher.
VendaCard® is a registered trademark of VENDAPIN LLC.

Notice

FCC Warning

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions in this manual may cause interference to radio communications.

Operation of this equipment in a residential area is likely to cause interference, in which case the user at her/his own expense will be required to take whatever measures may be required to correct the interference.

Information to User

This equipment must be installed and used in strict accordance with the manufacturer's instructions.

VENDAPIN LLC is not responsible for any radio or television interference caused by unauthorized modification of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by VENDAPIN LLC. The correction of interference caused by such unauthorized modification, substitution or attachment will be the responsibility of the user.

Two-Year Warranty and Service Policy

VENDAPIN LLC warrants to the purchaser that this VENDAPIN product, hereinafter called “the unit,” is free from defects in materials and the workmanship for a period of two (2) years from the date of purchase. If any such defect is discovered within the two-year warranty period, VENDAPIN LLC will repair the unit free of charge. All warranty repair and replacement actions are contingent on verification of the defect(s) or malfunction(s) and upon prepaid delivery of the unit to VENDAPIN LLC’s service center location by parcel post, common carrier, UPS or other commercial means. This warranty does not apply to normal wear, to tampering or alterations resulting in cracked or broken components, or to units damaged by excessive heat, cold, or moisture.

To preserve your rights under the warranty, you must provide proof of purchase for the returned unit. Returning the Warranty Registration card shipped with the new unit will register the warranty. Otherwise, a copy of the sales invoice showing the serial number of the returned unit must accompany the unit as proof of purchase.

If your unit is delivered to VENDAPIN LLC lacking proof of purchase, and we are unable to otherwise verify date of purchase, we will assume the purchase date of the unit was prior to the one-year warranty period. In such instances, the unit will then be serviced under the terms of VENDAPIN LLC's Service Policy.

Our sole and exclusive liability for defects in materials and workmanship shall be limited to repair or replacement of the unit at our service center and we shall not be liable for incidental, contingent, or consequential damages.

This warranty does not obligate us to bear any of the costs of transportation charges in connection with repair or replacement of the unit or any defective parts of the unit.

This warranty is invalid if the damage or defect to the unit is caused by accident, Acts of God, customer abuse, misuse, unauthorized alteration or repair, or vandalism by third parties.

This warranty is made in lieu of any other expressed warranty and except for the foregoing warranty, which is exclusive, there is no other expressed warranty being made.

This warranty gives you specific legal rights. You may have other rights, which vary according to the state, or country in which the unit was sold.

Disclaimer

This equipment is serviceable by a trained and qualified technician.

Parts and Service Policy

This policy requires you to ship prepaid to us, the unit and/or major components of the unit, under a Return Authorization for repair. **VENDAPIN LLC shall not be obligated to service or supply parts for any unit after seven years from date of purchase.**

Charges for return shipping, parts, and service will be incurred, as applicable, at the prevailing rates.

VENDAPIN LLC will enclose a copy of the completed return authorization (RA) with your unit. This authorization details the work performed and the costs incurred. Please refer to the RA number in future communications with VENDAPIN LLC about this unit.

This policy is for coverage within the continental U.S. only.

Return Authorizations

All units returned to VENDAPIN LLC must be shipped with a return authorization number (RA) affixed to the outside of the shipping container and addressed to the Technical Service Department of VENDAPIN LLC. as listed on the website at http://www.vendapin.com/warranty.html

VENDAPIN LLC reserves the right to refuse any incoming shipment not marked with an RA number on the outside of the shipping container.

VENDAPIN LLC will issue a Return Authorization Number upon receiving a written request at the above address or a request by phone at +1.352.678.3021 (customers should ask for the Technical Service Hotline). Please provide the **model number** and **serial number** of the unit or the unit that contained the component(s) you wish to return.

For non-warranty service, please be prepared to supply a purchase order, VISA, MasterCard, or American Express authorization, or make other payment arrangements as required. Within the continental United States you may request that your serviced unit be returned to you on a C.O.D. basis.

Preface

Models covered in this manual

This manual applies to firmware versions 4.11-1 and higher. This manual covers the models shown in the following table.

Model number	Card type	Part number		
5882	CR-80 card reader	945882-002	2000 PIN	Single count
5885	CR-80 card reader	945885-002	1000 PIN	Dual count

An optional Model 5884 portable printer (945884-001) may be used to print out an account audit.

- This is a plain paper printer. Replacement paper may be ordered from VENDAPIN LLC.
- A replacement ribbon is also available. See Parts List.

What's new in this release

Normal and Steering mode Operation

The firmware installed in your device determines the mode of operation you will be running. The firmware version usually displays at power-up. You can also read it in idle state (ENTER DATATRON PIN CODE) by simply pressing *. Your firmware version will display briefly. Make a note of this in your manual, as you will need it if you need to call for support. The table below shows how the firmware version relates to the features in your unit, which is chosen to match your copier.

Version	Displayed Count/Price	Accounts
4.11-1	(One) Count/Price	2000
4.12-1	(Two) M-1 Master, P-1 Print	1000
4.13-1A	(Two) C-1 count, C-2 count	1000
4.14-1A	(Two) M-1 Master, P-1 Print	1000
4.11-2	(One) Count/Price - STEERING MODE	2000
4.13-2	(Two) C-1, C-2 – STEERING MODE	1000

Standard Mode uses

- An enable relay closure to allow the copy process to begin.
- A pulse back on Opto 1 from the copier indicates that a Price 1 copy has been completed.
- A pulse back on Opto 2 from the copier indicates that a Price 2 copy has been completed.

Steering Mode uses

- An enable relay closure to allow the copy process to begin.
- A pulse back on Opto 1 from the copier indicates that a copy has been completed.
- A steady low level on Opto 2 line indicates the copy is Price 1.
- A steady high level on Opto 2 line indicates the copy is Price 2.

About the Product

A **Datatron III Series** product is a dual-mode device that controls access to printers, copiers, duplicators, or any other device controllable with a relay closure. Customers use PIN accounts to pay for products or services.

Vend price structure

The Datatron III supports pricing based on patrons paying for services using PIN numbers entered on the keypad. The device allows up to two prices.

Copy mode

Patrons are charged for each transaction. Prices are set in the VENDAPIN device.

Cards accepted

The unit will accept only **program cards** for administrative use.

Dual print/copy operation

The Datatron III was designed to simultaneously control the print and copy modes of multifunction copiers networked to PCs.

Transaction history

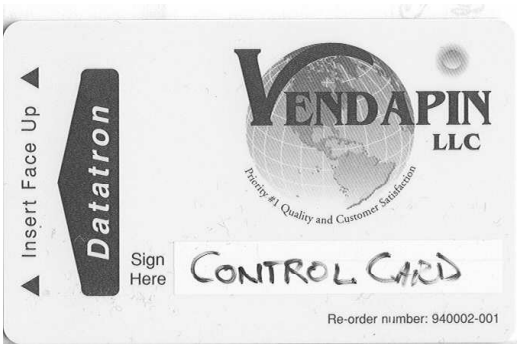
The Datatron III has an extensive capability for tracking vending activity. History meters are viewed on the display, printed out, or uploaded to a PC and imported into a spreadsheet.

Licenses and Program cards

Before a unit leaves the factory, it is configured with a license, facility or site code (which you can’t change), and up to 2000 programmable PIN codes. You will receive a set of program cards with your Datatron III system. These program cards contain license codes that match the codes programmed into your unit(s).

There are no user cards. Users enter PIN numbers on the keypad to activate the Datatron III.

The utility software CD you received with your Datatron III activates computer communications, not this card.

	**The Control Card** Adds or deletes PIN accounts. Sets the total value of each PIN Account. The site administrator assigns each user a PIN code, which is entered on the keypad by users when they want to make a copy. Audits or clears individual counters, or the master total counter. Sets Price 1 and Price 2. Sends audit data to a printer. Enables or disables the beep when each key is pressed.

Getting Started

Setting up the unit

Connecting the unit to the host device

Installation instructions tailored to the product you ordered should have been included with the shipment of your unit(s).

Vending from a copier

If you're connecting to a copier, a machine harness, specific to the make and model of your copier, will be required.

Vending reports to a computer

If you are using a computer to track activity:

- Attach the serial cable you received with your Datatron III from the RJ-11 port on the back of the Datatron III to a spare DB-9 COM port on your computer. Do not substitute data cables designed for other device as improper operation or damage may result
- Once the unit is powered up (see below), make sure the baud rate of the computer is set to the baud rate of the Datatron III. The software (contained on the Datatron III CD you received) running on the host PC should help you set the baud rate to achieve optimal performance.
- Install the print vend software and monitored printers according to the instructions provided on the software CD.

Powering up the Print/Datatron III

Plug the Datatron III into a 3-prong, grounded wall outlet. The unit will cycle through its boot-up sequence, displaying the firmware version. If you ever need to call or email VENDAPIN LLC customer service, you may be asked to provide this boot-up information. Please note the displayed version numbers and write them in the spaces provided on the last page of this manual.

Firmware version

This is the version of the firmware issued with your unit.

Site Code

The unit is programmed with a site code unique to the customer site. It matches your Control Card(s).

Programming the unit

Modifying parameters

The unit must be in program mode to modify parameter values. Values can include PIN numbers for users, and the authorized number of copies for two prices.

Insert the **Control Card** that came with your unit to enter program mode. You will find that it works best if you insert it with a quick, smooth motion.

Note: A computer cannot be used for changing parameter settings on the Datatron III.

Configuring the unit for print or copy vending

When you first turn on the unit, it will be in standby mode, ready for user input, and display:

ENTER DATATRON PIN CODE

Insert the **Control Card**. The display will change to

MACHINE
LOAD COMMAND:

Enter the **Menu Parameters** as shown in the following table to control the features and prices.

Control Card Menu Selections and Parameters

NOTE: TO EXIT PROGRAM MODE AT ANY TIME, **PRESS C** TO GET TO MAIN MENU, AND **REMOVE THE CONTROL CARD**. This returns the machine to a normal User Mode idle condition

Parameter	Description	Default	Range
Menu	Provides keypad-only access to the maintenance menu.		
To **Add PIN Numbers,** Press 1	Enter the first PIN number. For PV1 (or print value 1) enter the number of copies authorized for Price 1. For PV2, enter the number of copies authorized for Price 2. Press **A** to confirm values for this PIN. **If you do not press A**, no change or entry is made. Continue for as many PIN numbers as you wish. Press **C** to cancel and return to main program mode menu at any time.	None	PIN: 0-2000 PV: 0-999999.99
To **Delete a Specific PIN account number**, Press 2	Enter PIN number. Press **A** to confirm each PIN. Continue for as many PIN numbers as you wish to delete. Press **C** to cancel and return to main program menu.	None	0 – 2000
To **Delete All PIN** Number accounts, Press 3 **(See caution on Deleting all PIN accounts)**	Deletes all PIN number accounts as if you were setting up a new machine. Press **A** to confirm. Press **C** to cancel and return to program mode main menu.	None	Note: Deleting all PIN numbers can take a considerable time. **Caution: You will have to reload all PIN accounts after performing this operation.**

To **Reset individual COUNTERS of All PINS,** Press 4 **(See caution on Deleting all PIN accounts)**	**Clear ONE (PIN) count.** Enter the PIN you wish to reset. Press **A** to confirm each PIN. When done, press **C** to return to program menu. **-OR-** **Clear ALL Counts.** Press **A** to confirm. Display shows: Clear all PIN? (counters, not accounts). Press **A** to activate counter clear. Then display shows: Delete all PIN? Press **C** to return to program menu. **Caution**: if you press A (**not** recommended), you will delete all accounts and have to reload them all as if you were initializing.	None	Note: Deleting ALL PIN Numbers can take considerable time. **Caution: You will have to reload all PIN accounts after performing this operation, just as in Press 3 above.**
To **View Counts for ONE PIN,** Press 5	Enter the PIN you wish to audit, followed by the **A** key. Display will show: PV1: XXXXXX.XX M: XXXXXX.XX Press **S** to advance to next screen: PV2: XXXXXX.XX P: XXXXXX.XX Press **C** to exit program mode to main menu.	None	PIN: 0 – 2000 PV: 0 - 999999.99

To **Audit or Clear Master Counters,** Press 6	Display shows: 1. Total count 2. Total copies Select and press your choice 1 or 2. Read meter. Select ***** to clear count to zero. Select **C** to quit without resetting.	None	0 – 999999.99
To **Set PRICE ONE** Press 7	Display shows: #1 PRICE O: (Original Price) N: XX.XX To exit without changing, Press **C**. Enter the new price and Press **A** to change. Press **C** to return to Program mode	None	0 – 99.99
To **Set PRICE TWO** Press 8	Display shows: #2 PRICE O: (Original Price) N: XX.XX To exit without changing, Press **C**. Enter the new price and Press **A** to change. Press **C** when finished to return to Program mode menu.	None	0 – 99.99
To **Send Data to a Printer** connected to the RJ11 port Press 9	Display shows: Print Data? **A**= YES **C**= NO Press **A** and wait for printer to finish	None	See Printer Troubleshooting if you have problems.
To toggle the **Beep when a key** is pressed Press 0	Display shows: Set Counter Beep ON Press **A** to toggle it ON or OFF. Press **C** to return to Program mode menu.	ON	N/A

No Activity timer

The amount of time the Datatron will remain active after the last transaction. Factory default is 60 seconds.

PIN Codes

What are PIN codes?

A PIN code is a number encoded in the Datatron III unit that identifies the user. For example, in a university setting, each group of freshmen, sophomores, juniors, seniors, and staff could each be assigned a distinct personal or group access PIN. VENDAPIN offers up to 2000 access PIN numbers, depending on model and firmware.

The unit logs every transaction made by each PIN code. If the PIN code entered on the keypad doesn't match one of those programmed onto the unit, the display shows: "PIN code illegal" and the Datatron III will not permit the transaction.

Purpose of PIN numbers

- PIN numbers provide a way to track usage patterns of different user groups.
- You can factor PIN numbers into your pricing structure, and set transaction prices and access to more costly features such as color printing.
- PIN numbers provide a security mechanism. PIN numbers will work at your location only if they match an authorized PIN stored in your Datatron III.

Reasons for changing PIN numbers

When you receive new units from the factory, you will need to create accounts and the authorized value in each account. Existing customers might need to set their unit's PIN numbers for the following reasons:

- If you're adding new access codes, in addition to the existing ones, or changing the values authorized to each user.
- If you're purging old access codes, and then replacing them with new ones.

Setting Copy Prices

Using the Price Menus

You can set two prices on a Datatron III.

When you first turn on the unit, it will be in standby mode, ready for user input, and display:

ENTER DATATRON PIN CODE

Insert the **Control Card**. The display will change to:

MACHINE
LOAD COMMAND:

Enter the menu Parameters as shown in the following table to control the prices.

Parameter listing

The table below lists the parameters in the order in which they appear on the display, and gives the acceptable range of values and corresponding default setting for each parameter.

NOTE: TO **EXIT PROGRAM MODE** AT ANY TIME, **PRESS C** TO GET TO MAIN MENU, AND REMOVE THE CONTROL CARD. This returns the machine to a normal User Mode idle condition.

Parameter	Description	Default	Range
Menu	Provides keypad-only access to the maintenance menu.		
To **Set PRICE ONE** Press 7	Display shows: #1 PRICE O: (Original Price) N: XX.XX To exit without changing, Press **C**. Enter the new price and Press **A** to change. Press **C** when done to return to Program mode menu.	None	0 – 99.99
To **Set PRICE TWO** Press 8	Display shows: #2 PRICE O: (Original Price) N: XX.XX To exit without changing, Press **C**. Enter the new price and press **A** to change. Press **C** when done to return to Program mode menu.	None	0 – 99.99

Using Meters

About meters

All vending activity is recorded by an extensive set of internal electronic meters.

- **Master Count meter.** Provides a tamper-proof record of **all** the counts made on the unit.
- **Individual meters**. Allow for periodic recording of transactions. All PIN accounts come with one (or generally) two individual meters. Depending on your firmware, they may be a Master or Copy pair or a Print Value 1 and Print Value 2 type count. They are usually viewed, then reset with value on a regular basis.

1. Viewing and resetting meters on the Datatron LCD display

You can view both total and individual meters directly on the display or upload them to a PC using VENDAPIN's Datatron III CD. The manual keypad meter-reading technique is shown in the table below.

When you first turn on the unit, it will be in standby mode, ready for user input, and display:

ENTER DATATRON PIN CODE

Insert the **Control Card**. The display will change to:

MACHINE
LOAD COMMAND:

Enter the menu Parameters as shown in the following table to control meters.

Parameter listing

The table below lists the parameters in the order in which they appear on the display, the acceptable range of values, and the default setting for each parameter.

NOTE: TO EXIT PROGRAM MODE AT ANY TIME, **PRESS C** TO GET TO MAIN MENU, AND **REMOVE THE CONTROL CARD**. This returns the machine to normal User Mode idle condition.

Parameter	Description	Default	Range
Menu	Provides keypad-only access to the maintenance menu.		
To **Reset individual Counters of All PINS,** Press 4 **(See caution on Deleting all PIN accounts)**	**Clear ONE (PIN) count.** Enter the one Pin you wish to reset. Press **A** to confirm each PIN. When done, press **C** to return to program menu. **-OR-** **Clear ALL Counts.** Press **A** to confirm. Display shows: Clear all PIN? (counters, not accounts). Press **A** to activate counter clear. Then display shows: Delete all PIN? Press **C** to return to program menu. **Caution**: if you press A (**not** recommended), you will delete all accounts and have to reload them all as if you were initializing.	None	Note: Delete ALL PIN numbers can take considerable time. **Caution: You will have to reload all PIN accounts after performing this operation, just as in Press 3 above.**

To **View Counts for ONE PIN,** Press 5	Enter the one PIN you wish to audit, followed by the A key. Display will show: PV1: XXXXXX.XX M: XXXXXX.XX Press **S** to advance to next screen: PV2: XXXXXX.XX P: XXXXXX.XX Press **C** to exit program mode to main menu.	None	PIN: 0 – 2000 PV: 0 - 999999.99
To **Audit or Clear Master Counters,** Press 6	Display shows: 1. Total count 2. Total copies Select and press your choice 1 or 2. Read meter. Select ***** to clear count to zero. Select **C** to quit without resetting.	None	0 – 999999.99
To **Send Data to a Printer** connected to the RJ11 port Press 9	Display shows: Print Data? **A**= YES **C**= NO Press A and wait for printer to finish	None	N/A

2. Printing meters

To print out meters to a portable serial printer:

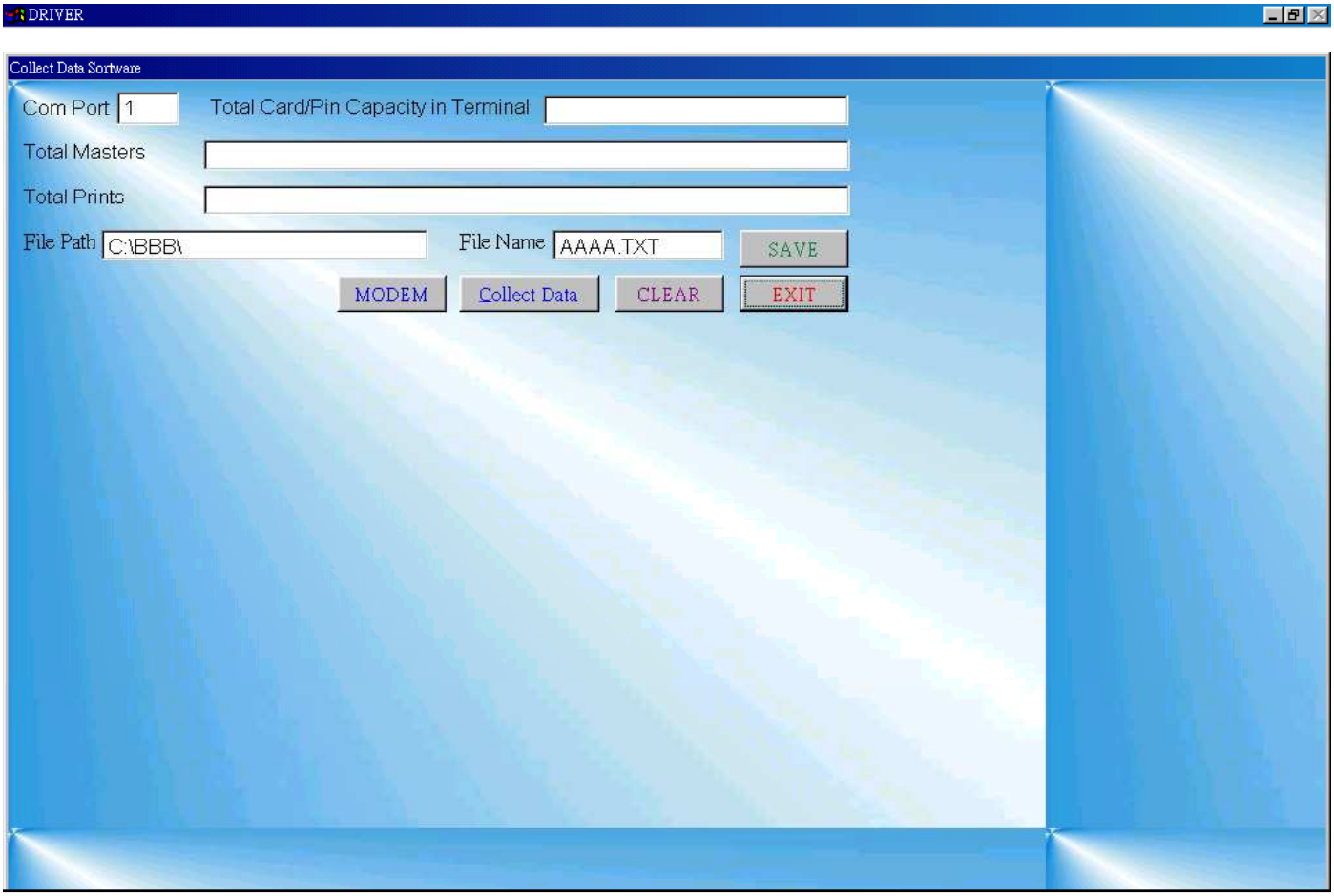
- Insert the Control Card as described above.
- Be sure the printer-style serial cable is attached correctly to both devices.
- Press **9** on the keypad as described above.
- The resettable meters will print first, followed by the non-resettable meters.
- When printing **meter totals**, all categories are printed, even if they are valued at $0.00.
- **Individual meters** print only if they contain a value.
- You can send the data to a computer installed with the software on the CD that came with your unit.

Sample Datatron Meters Printout

```
PIN:000000
PV1:000100.00
PV2:000050.00
Masters:000000.00
Prints: 000000.00
PIN:000001
PV1:000060.00
PV2:000025.00
Masters:000000.00
Prints: 000000.00
PIN:000003
PV1:000200.00
PV2:000100.00
Masters:000000.00
Prints: 000000.00
PIN:000004
PV1:000050.00
PV2:000000.00
Masters:000000.00
Prints: 000000.00
PIN:000005
PV1:000020.00
PV2:000005.00
Masters:000000.00
Prints: 000000.00
Total Masters: 000000.00
Total Prints: 000000.00
```

3. Downloading Meters to a Computer Database

Datatron III Download Software CD



- Follow the instructions on the CD to properly set up the computer to receive data from the Datatron III unit.
- Be sure the Com Port number, baud rate, and parity are correct.
- Be sure the computer style serial cable is correctly attached and not damaged.

PIN Accounts

PIN account basics

The Datatron III supports account numbers ranging from 0 to 999999, and each Datatron III can store up to 2000 accounts at one time, depending on the firmware.

PIN numbers behave like credit cards. Unlike debit cards, which store an actual value that is decreased each time the card is used, PIN accounts invoke an account number stored on the Datatron, which is tied to one or two print meters (depending on firmware). Every time the PIN is used, Datatron III records the number of vends made to the PIN account by incrementing an internal counter (or meter). After each transaction, the unit compares the copy meter against the account's vend limit. When the vend limit is reached, the PIN code is locked out and can't be used in that machine until the administrator resets the counter.

The Datatron III employs up to two internal copy meters to track the number of copies made by a PIN account. Each meter is assigned to a different type of copy or print (e.g., black & white, color, size). We've provided parameters you can set to limit the total number of copies or prints a customer can charge to an account. When the limit is reached, a message is momentarily flashed on the display and vending is terminated. The user cannot use the PIN account in that machine until the account's meters are reset.

The Datatron III allows you to impose different vend limits on each account number. When a new account created, you must determine the limit on each meter. The PIN account will be locked out when the vend limit is reached.

Creating PIN accounts

The table below gives an example of how to set these parameters.

Parameter listing

The table below lists the parameters in the order they appear on the display, the acceptable range of values, and the default setting for each parameter.

When you first turn on the unit, it will be in standby mode, ready for user input, and display:

ENTER DATATRON PIN CODE

Insert the Control Card in a swift smooth motion. The display will change to

MACHINE
LOAD COMMAND:

Enter the menu Parameters as shown in the following table to control the prices.

Parameter	Description	Default	Range
Menu	Provides keypad-only access to the maintenance menu.		
To **Add PIN Numbers,** Press 1	Enter the first Pin Number. For PV1 (or print value 1) enter the number of copies authorized for Price 1. For PV2, enter the number of copies authorized for Price 2. Press **A** to confirm values for this PIN. If you do not press A, no change or entry is made. Continue for as many PIN Numbers as you wish. Press **C** to cancel and return to main program mode menu at any time.	None	PIN: 0-2000 PV: 0-999999.99
To **Delete a Specified PIN account number**, Press 2	Enter PIN number. Press **A** to confirm each PIN. Continue for as many PIN numbers as you wish to delete. Press **C** to cancel and return to main program menu.	None	0 – 2000
To **Delete All PIN** Number accounts, Press 3 **(See caution on Deleting all PIN accounts)**	Deletes all PIN number accounts as if you were setting up a new machine. Press **A** to confirm. Press **C** to cancel and return to program mode main menu.	None	

To **Reset individual Counters of All PINS,** Press 4 **(See caution on Deleting all PIN accounts)**	**Clear ONE (PIN) count at a time.** Enter the PIN number you wish to reset. Press **A** to confirm each PIN. When done, press **C** to return to program menu. **-OR-** **Clear ALL Counts.** Press **A** to confirm. Display shows: Clear all PIN? (counters, not accounts). Press **A** to activate counter clear. Then display shows: Delete all PIN? Press **C** to return to program menu. **(Caution**: if you press A (**not** recommended), you will delete all accounts and have to reload them all.)	None	Note: Delete ALL PIN numbers can take considerable time. **Caution: You will have to reload all PIN accounts after performing this operation, just as in Press 3 above.**

To **View Counts for ONE PIN,** Press 5	Enter the PIN you wish to audit. Press **A**. Display will show: PV1: XXXXXX.XX M: XXXXXX.XX Press **S** to advance to next screen: PV2: XXXXXX.XX P: XXXXXX.XX Press **C** to exit program mode to main menu.	None	PIN: 0 – 2000 PV: 0 – 999999.99

Vending Interface

How the Datatron III and Copier communicate

Every time a customer makes a selection on a copier, pulses (signals) are detected by the Datatron III through an optical isolator or opto. Optos allow the unit to see a particular signal condition inside the copier. Based on the customer's selection, individual optos are turned on or off. The debit price is determined by the collective state of the optos. The firmware determines whether there is enough money to cover the vend, and if so, turns on a relay (switch) that enables the device to make the vend.

Pulse detection in standard and steering modes

The Datatron III connects to the host device via a machine harness, which plugs into the 9-pin white, AMP Mate-n-Lok connector. The Datatron uses either a standard or steering pulse detection to intercept signals it receives over that connection.

- Configuring the terminal to operate in standard or steering mode requires proper selection of a Datatron III model and firmware.
- **Note: Incorrectly wiring machine harness will result in equipment malfunction and/or damage. Pay careful attention to the instructions that come with your machine-specific machine harness. Optos are polarity sensitive.**

Normal and Steering mode Operation

The firmware installed in your device determines the mode of operation you will be running. The firmware version normally displays on power-up. You can also read it in idle mode (ENTER DATATRON PIN CODE) by simply pressing *. Your firmware version will display briefly. Make a note of this in your manual, as you will need it if you need to call for support. The table below shows how the firmware version relates to features in your Datatron III.

Version	Displayed Count/Price	Accounts
4.11-1	(One) Count/Price	2000
4.12-1	(Two) M-1 Master, P-1 Print	1000
4.13-1	(Two) C-1 count, C-2 count	1000
4.14-1	(Two) M-1 Master, P-1 Print	1000
4.11-2	(One) Count/Price - STEERING MODE	2000
4.13-2	(Two) C-1, C-2 – STEERING MODE	1000

Standard Mode uses

- An enable relay closure to allow the copy process to begin.
- A pulse back on Opto 1 from the copier indicates a Price-1 copy has been completed.
- A pulse back on Opto 2 from the copier indicates a Price-2 copy has been completed.

<u>Steering Mode</u> uses

- An enable relay closure to allow the copy process to begin.
- A pulse back on Opto 1 from the copier indicates a copy has been completed.
- A steady low level on Opto 2 line indicates the copy is Price-1.
- A steady high level on Opto 2 line indicates the copy is Price-2.

Advantages and Disadvantages of the two methods

	Standard mode	Steering mode
Advantages:	• Fewer wires • Easier setup • Time vending available	• More prices available • Fewer relay settings
Disadvantages:	• Fewer prices available • More relay settings	• More complicated pricing structure • More complicated setup • More wires

Standard mode

In standard mode, the vending device offers only two price selections. Each selection transmits its own vend pulse, which is registered in the Datatron III by an opto dedicated to that pulse. Two corresponding relays enable the vending device at the appropriate price level.

For this scenario, let's assume the vending device is a copier and that the price-2 selection costs more than the price-1 selection.

1. The customer enters his PIN number on the Datatron III keypad.

2. The value in the PIN account is compared with both price-1 and price-2.
   - If the value in the account is greater than or equal to price-1, relay 1 is enabled.
   - If the value in the account is greater than or equal to price-2, both relay 1 and relay 2 are enabled.

3. The customer makes a selection and presses the copy button.

4. The incoming vend pulse is detected by the corresponding opto. If the appropriate relay for that price level was enabled (i.e., there was enough remaining value in the account), the account is credited and the copy is made.
   - If a price-1 debit pulse was detected by opto 1, the unit credits price 1.
   - If a price-2 debit pulse was detected by opto 2, the unit credits price 2.

5. The customer continues making copies. When the remaining value in the account falls below a price level, the corresponding relay is disabled, and subsequent vend pulses for that selection are ignored. The relays are also disabled if the user presses D on the keypad, ending the transaction.

Steering mode

The Datatron III monitors two different pulses from the vending device. One of the signals carries information about the selection made by the patron. The other signal is the vend pulse for any price.

Sequence of events

1. When the patron enters a PIN code, an opto (opto 2) in the Datatron III registers the size & color selection in the vending device to determine the vend price.

2. If the remaining value in the PIN account is enough to cover the price level selected, then the relay enables the vending device.

3. When a vend is made, a pulse is sent from the vending device to the Datatron III. This pulse is registered by opto 1, and the appropriate price is logged to the customer's PIN account. When the remaining value falls below the selected price level or the patron ends the vend operation by pressing D, the relay is disabled until a lower price level is selected.

STEERING MODE RELAY ACTION

If the value in the PIN account	Then relay is
Is greater than the selected price	**Enabled**
Is less than the selected price	**Disabled**

Note: * *Opto1 registers the vend pulse and does not affect pricing.*

How steering optos determine price

Think of an opto as a switch that is either ON or OFF, depending on the information it receives from the copier signal it monitors. The selections made by the user are registered by two optos in the Datatron III. The table below shows that, by using every unique ON/OFF combination of optos 1 and 2, two price levels are possible.

Opto 2	Price Level
OFF	1
ON	2

Notes:

- *Opto1 registers the vend pulse and does not affect pricing.*

Notes: (for both modes)

- *Either or both Opto1 and Opto2 are used by Standard Mode.*
- *In steering mode, Opto1 is used for vend pulse and does not affect pricing.*

Typical Print/Datatron III Configuration:

Standard Mode Configuration Example

Typical Copier Configuration:

Paper Sizes (in copier trays):

- Letter
- Legal

Copier Interface Signals:

- Vend pulse 1 from copier when letter size copy is being made (Pins 3 & 4)
- Vend pulse 2 from copier when legal size copy is being made (Pins 5 & 6)
- Input enable relay line to copier to allow copier to run (Pins 1 & 2)

Typical Print/Datatron III Configuration:

Steering Mode Configuration #1 Example

Typical Copier Configuration: (i.e.: Black & White multi-functional copier/printer)

Paper Sizes (in copier trays):

- Letter
- Legal

Toner Types

- Black & White

Copier Interface Signals:

Enable Signal from Datatron to Copier

- Input enable line to copier to allow the copier to run (normally open relay contact closure)

Price Data Signals from Copier to Datatron

- Vend pulse from copier to Datatron for all prices to Opto 1, indicating a copy has been made.

- Paper size selection is based on copier signal level to Datatron Opto 2.
  - Letter size selection (Pin 5 - 6 LOW or OFF)
  - Legal size selection (Pin 5 - 6 HIGH or ON)

9-Pin AMP Mate-n-Lok white connector pins on cable from back of Datatron III unit – connected to copier interface paper size selection lines:

Enable Pins 1 & 2
Opto 1 Pins 3 & 4 – connected to vend pulse line
Opto 2 Pins 5 & 6 – connected to selection 1 line

Build matrix based on known selections as shown here for **B & W** copies only:

Opto 2	Paper	Price Level	Prices	Notes
OFF	Letter	1	0.10	Default to Letter
ON	Legal	2	0.15	Legal

<u>Steering Mode</u> Configuration #2 Example

Typical Copier Configuration: (i.e.: Color & Black/White multi-functional copier/printer)

Paper Sizes (in copier trays):

- Letter
- Legal
- 11x17

Toner Types

- Color
- Black &White

Copier Interface AMP Mate-n-Lok connector on back of unit**:**

Vend Pulse

- Vend pulse 1 for count - Opto 1 Pins 3 & 4 – indicating B & W copy has been made
- Vend level 2 for color - Opto 2 Pins 5 & 6 –indicating color selection

Enable

- Input enable line to activate/deactivate the copier - relay pin 1 & 2
- Relay is normally open

Price will be credited based on the following logic levels:

Opto 2	Price Level	Prices	Notes
OFF	1	0.10 (ex)	Black & White
ON	2	0.50 (ex)	Color

Copier Interface Connector

Interface Connector and Settings

The white AMP Mate-n-Lok connector on the Datatron III interfaces with third-party vending devices, such as copiers, duplicators, and printers. Pre-assembled machine-specific harnesses with installation instructions from VENDAPIN are available for most devices. Please have your copier type ready when you call to order.

Note: Incorrectly wiring your machine harness will result in equipment malfunction and/or damage. Pay careful attention to the instructions that came with your machine specific machine harness. Optos are polarity sensitive.

Pinout for 9 Pin AMP Interface Connector		
PIN and Color	**Standard Mode**	**Steering Mode**
1 - Blue	Normally Open (Enable)	Normally Open (Enable)
2 - Green	Common (Enable)	Common (Enable)
3 - Purple	(-) Count Signal {3V-24V} – (Price 1)	(-) Opto 1
4 - Gray	(+) Count Signal {3V-24V} – (Price 1)	(+) Opto 1
5 - White	(+) Count Signal {3V-24V} – (Price 2)	(+) Opto 2
6 - Yellow	(-) Count Signal {3V-24V} – (Price 2)	(-) Opto 2
7 - Not Used		
8 - Not Used		
9 - Not Used		

Mode Operation

Standard Mode uses

- An enable relay closure to allow the copy process to begin.
- A pulse back on Opto 1 from the copier indicates that a Price-1 copy has been completed.
- A pulse back on Opto 2 from the copier indicates that a Price-2 copy has been completed.

Steering Mode uses

- An enable relay closure to allow the copy process to begin.
- A pulse back on Opto 1 from the copier indicates that a copy has been completed.
- A steady low level on Opto 2 line indicates the copy is Price-1.
- A steady high level on Opto 2 line indicates the copy is Price-2.

Setting up a Printer

Configuring a serial printer

A portable printer connected to a Datatron III can print out history meters and PIN account information. Follow the instructions below to connect the printer to the Datatron III and troubleshoot the printer interface.

Installation

Connect the serial printer to the RJ-12 port on the back of the Datatron III controller, using the cable furnished with your printer. (Using a cable other than the one supplied with the printer usually will not work, and may cause damage.) Connect the DB-25 connector to the back of the printer.

Use only the power adapter supplied with your printer. (Other power adapters may be the wrong voltage or polarity, and can cause damage to your printer.)

Make sure the power adapter is plugged into an AC outlet with good power.

Make sure the other end of the DC cable is correctly plugged into the printer.

The power adapter has a Green LED on it, which will light up if it is working. If the Green LED does not light up, either the AC power is not working, or the power adapter is damaged. If those two items are OK, the Red LED labeled ‘P’ on the top of the printer should light up indicating the printer is receiving power.

If the Green SEL light is not ON, press the SEL pushbutton on the top of the printer. Normally it comes up in Select mode, ready to operate.

To print from the Datatron III, insert your Control Card into the Datatron III. Then, enter parameter “**9**” as shown in the table below, and follow the instructions to print.

Parameter	Description	Default	Range
Menu	Provides keypad-only access to the maintenance menu.		
Press 9 on the Datatron III to send data to a Printer connected to the RJ11 port	Display shows: Print Data? **A**= YES **C**= NO Press **A** and wait for printer to finish	None	N/A

You should see a complete printout of PIN account records for auditing.

If your printer does not operate correctly at this point, see the *Troubleshooting* section, which follows later.

Error Messages Troubleshooting & Misc.

LCD Message	Cause	Solution
Control Card Facility Error	Inserted card is wrong format.	This card belongs to a different system or has become corrupted. Contact support for card replacement. Exercise care to protect cards from magnetic fields or heat.
Nonmember JCM Card	This card does not belong to this system.	This may happen with a Control Card that has become corrupted. Possibly improper storage or handling. Contact support for a replacement control card.
Control Card Error	Control Card Error.	This may happen with a Control Card that has become corrupted. Possibly improper storage or handling. Contact support for a replacement control card.
Speed Abnormality	Control Cards have to be inserted smoothly and quickly. The Datatron is not reading the card correctly.	Try inserting the card again, until you have a feel for the correct speed. If problem persists, card reader may be failing. Contact support.
PIN CODE Illegal	The PIN Code does not match any authorized users.	Enter a new PIN code using Control card and the standard menu number 1 as described in the manual.
Error	Card was inserted before the Datatron was finished with power up reset procedures.	Turn power off to unit. Power back up and wait until display says ENTER DATATRON PIN CODE. Then insert Control Card correctly.

Troubleshooting guide

Datatron III problems

The following table lists problems that may occur in the Datatron III, and provides steps to take to resolve the behavior.

Problem	Cause	Solution
No letters on LCD display screen	No power to unit.	Check that the AC adapter is plugged in to an AC outlet with GOOD power. Power down for few seconds, then power up again (unplug & replug the unit power cord from electrical outlet). Contact VENDAPIN technical support.
Copier not running	Interface cable unplugged or damaged.	• Check that the cable from the back of the Datatron unit is plugged into the connections to the copier. Check for cut or broken wires. • Try plugging the test plug jumper connector into the machine specific interface harness 9-pin AMP connector. This should allow you to run the copier without the Datatron III to verify the copier is OK. Contact VENDAPIN technical support.
Insert Control Card, Press 9 but no Printing	Printer malfunction; Serial Cable failure; bad Datatron III unit.	Make sure the printer is turned on and plugged in to a good AC source. Check the printer connections and that the serial cable is good. Check the Datatron III to see if other functions are working. Contact VENDAPIN technical support.

Copier problems

There are no timing parameters in the Datatron III Print/Datatron III to synchronize with the timing of the copier. The interconnect instructions for your particular machine came with the interface cable you ordered. Be sure to carefully check wiring before applying power to prevent damage.

Note:

- Please ensure that you tested the copy vend using various paper sizes and copies on copier to verify that all functions are operating correctly, BEFORE you install the Datatron III or its wiring harness.

- Be sure that the correct selection of steering or standard mode is selected by the internal firmware in your Datatron III unit.

Problem	Cause	Solution
Only one price charged.	Datatron III unit is 'standard', but your copier is 'steering' mode.	Obtain the correct Datatron III firmware.
Only one price charged. Perhaps free copies on Price-2.	Datatron III unit is 'steering' but your copier is 'standard' mode.	Obtain the correct Datatron III firmware.

If your copier does not operate at all, after it has been successfully in service with the Datatron III:

- Unplug the machine-specific harness 9-pin AMP connector, and attach the white 9-pin test plug jumper in place of the Datatron III. We provide this test connector so you can efficiently track down problems.

- If your copier runs, check the Datatron III's settings and connections described in Troubleshooting. Contact VENDAPIN support for help.

- If your copier does not run, the copier has failed. The test plug jumper eliminates the external control signal enable functions from the copier, and should restore it to its original operation. Repair the copier.

Troubleshooting printer operation and cables

1. Recheck the power adapter operation as described in installation above. If the power adapter is damaged, contact VENDAPIN Support for a replacement.

2. If the noises indicate print head and paper feed motors are trying to operate, but the printing is very light or not at all, or no paper is coming out of the printer, make sure paper and ink ribbons are installed correctly.

See printer manual for details on paper or ribbon replacement.

Be sure to follow precautions in manual for cover removal.

Also be sure to follow warning instructions to **NEVER LIFT THE RIBBON BY THE LEFT SIDE FIRST** - permanent print head and ribbon damage may result.

If the printer or power adapter is determined to be bad, contact VENDAPIN Support. We can also furnish paper or ribbons.

3. Using printer standalone self-test mode:

This is a standalone self-test mode for the Model 5884

Use this test if nothing happens when pressing **9** to print from the control card menu on the Datatron III keypad.

No cable or Datatron needs to be attached for this printer-only test.

- The power adapter should be unplugged from the AC for 10 seconds.

- Press and HOLD the SEL button on the printer during the following operations. This puts the printer into self-test mode.

- Plug in the power adapter, still holding the SEL button down. Continue to hold the SEL button.

- Some alphanumeric characters will continue to print out, usually two lines with an ABCDE sequence.

Release the SEL button on the printer when the test is over.

- This test verifies that the internal circuitry of the printer, the ribbon, the paper feed, and the power adapter are OK.

- It eliminates everything except the Datatron III, the interconnect cable, and the communications port settings on the printer.

4. Troubleshooting Interconnect wiring and hardware:

- First try the printer self-test, ribbon, paper, and power supply checks above.

- If you have other Datatron III installations at your facility, borrow a serial cable to substitute for the suspected bad one.

- NOTE: Do not use another device's RS-232 cable. It is probably not properly configured to function in this system. It will not operate and may cause damage.

- If you substitute a known-good Datatron III cable, and operation is restored, contact VENDAPIN Support for a replacement cable.

- If you swap out the printer, and the good printer works on this Datatron and cable, the suspect printer has failed. Contact VENDAPIN Support for a replacement printer.

Troubleshooting Printer Interface Settings and Firmware

Do not start here. Verify first all the previous printer tests have been performed, and all other problems are resolved. It is *very unlikely* your failure is related to these settings, unless tampering has occurred.

- The Datatron III unit has no printer configuration settings. They are set permanently in the firmware.

- The printer should be configured to operate with the parameters listed below, factory defined in the Datatron III. Read the SH-42 printer user's manual to find out how to set them.

Printer Serial Settings	
Baud Rate:	9600
Parity:	None
Data Bits:	8
Stop bits:	1
Flow Control:	None

- The Model 5884 printer's internal DIP switches should be set to match the Datatron III parameters. These are factory default settings and are provided for convenience so you may check them in case of trouble. They normally should not need to be changed.

- Gain access to these switches by pressing the arrows on either side of the paper cover toward the REAR of the printer. Then look inside to the right on the PC board. Compare the settings to the table below.

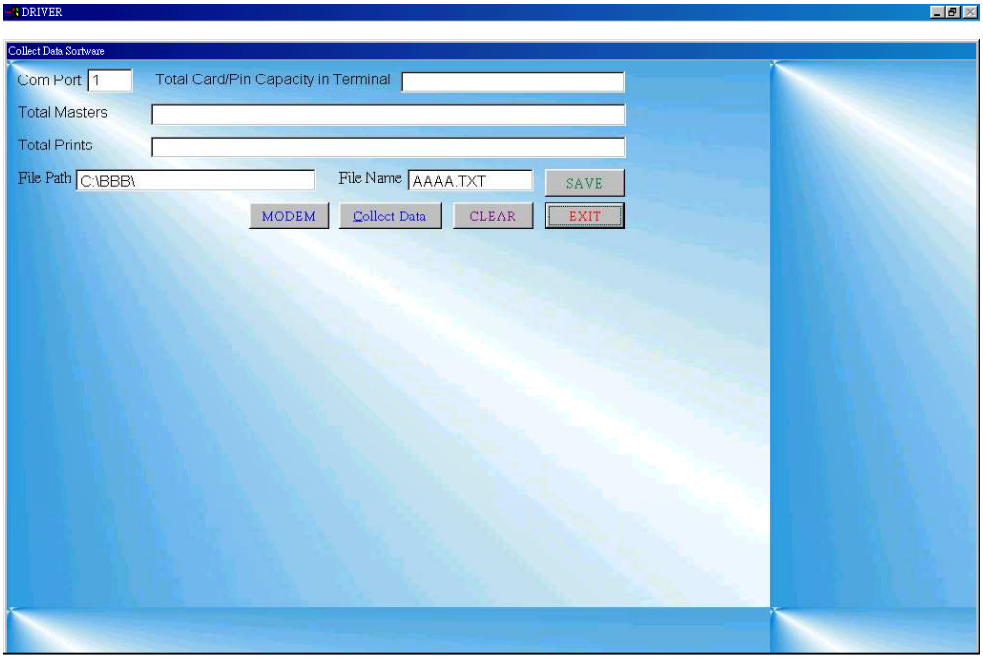
- Unless you are very sure of how to do it properly, contact VENDAPIN Support if you think the settings are incorrect before attempting to change them. Just one switch in the wrong position can stop all printing data communication between the two devices.

Printer Switch Settings

1	2	3	4	5	6	LEVEL
ON				ON	ON	ON
	OFF	OFF	OFF			OFF

Computer Upload Problems

Datatron III Download Software



Follow the instructions on the CD to properly set up the computer to receive data from the Datatron III unit.

- Be sure the Com port number, baud rate, and parity are correct, as shown in the screen shot above.

- Be sure the computer-style serial cable is correctly attached and not damaged.

- If problems persist after you try this, call VENDAPIN Support.

Parts and Accessories

Replacement parts

The following is a list of replaceable parts for all Datatron III-based products from VENDAPIN.

Part number	Description
945884-001	Model 5884 Portable Serial Printer
Call	DB-25M To RJ-11 Serial Printer Cable for Model 5884 Portable Printer
900001	Printer Ribbon for Model 5884 Portable Printer
900002	Paper for Model 5884 Portable Printer
770003	Test jumper plug for 9-Pin AMP interface Connector
645884-002	DB-9F to RJ-12 Serial Data Cable for Datatron III to Computer
Call	CD - Datatron III ASCII Download (For attachment to a computer)
Call	Replacement Control Card – Specific to YOUR system (Country and Location Code)
Call	Machine Harness – Specific to each copier – Call VENDAPIN Support for correct interface

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Contact

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