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JCM TRAINING OVERVIEW

OPTIPAY® BV

DBV-30X Bill Validator



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DBV-30X BILL VALIDATOR

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DBV-30X PARTS LIST

Part Number - Description

- 960-000104 - RC-10 Bill Recycler
- 400-100219 - Palm Dongle interface cable assembly
- 450-100181 - CAT 5E, RJ-45 F/F Adapter
- 701-000174 - Both of the above 2 items (Dongle cable + adapter) as a kit
- 400-100218-C- 8 inch blue CAT 5E extender cable RJ-45 M/M
- 900-100164 - WINMDB Kit with MDB simulator, power sup, software, cables
- 960-000128 - OPTIPAY System 'quick reference' Flip Book.

Thank You for choosing JCM products

Lecture Notes

FUNCTIONAL TEST 11

Test #11 — Bill Acceptance Test

1. Set SW1-8 to ON and then apply/recycle power to the DBV. DBV in Test Mode with the R-Y-G LEDs Lit and Bezel LEDs flashing.
2. Set SW1-1 to ON, SW1-2 to ON, SW1-3 to ON, SW1-4 to ON, SW1-8 to OFF.
3. DBV will initialize itself, and both Bezel and Status LEDs will indicate a steady Green. The DBV is now ready to accept bills.
4. While in the Bill Acceptance Mode, the DBV will accept, validate, and stack bills to the Cash Box. The Bezel LEDs will flash to indicate the denomination of accepted bills as follows:
 - 1 flash = \$1
 - 2 flashes = \$5
 - 3 flashes = \$10
 - 4 flashes = \$20.
5. To return to the Test Mode, set SW1-1 to OFF, SW1-2 to OFF, SW1-3 to OFF, SW1-4 to OFF, SW1-8 to ON, and recycle power to the DBV.

OVERVIEW

This training course addresses the following JCM DBV-30X versions:

Table 1 DBV-30X Versions

Device	Version Difference
DBV-300	12V DC Version
DBV-301	24V DC Version
DBV-302	115V AC Version



Figure 1 Bottle Mask Fitted DBV-30x Bill Validator

Lecture Notes

Lecture Notes

DBV-30X FEATURES

DBV-30X BOTTLE & SNACK MASK UNIT FEATURES

Optipay DBV-30X Series of Bill Validators have the following features:

- Works as a stand alone Bill Validator, or with optional equipment
- The DBV-301 works together with both the JCM A-66 Coin Changer and the optional JCM RC-10 Bill Recycler for use in MDB based vending systems
- Can communicate using MDB, Serial, or Pulse protocols
- Can be mounted in an 'Up Stack' or 'Down Stack' position
- Accepts foreign or U.S. bills (65 to 72 mm in width)
- Accepts up to 16 bill denominations with 4 way acceptance
- Currently programmed for \$1, \$5, \$10, and \$20 US currency
- Can be configured to accept Bar-Code tickets and coupons
- Bill validation process is approximately 2 seconds; 3 to stack
- Validation accomplished by an array of magnetic and optical sensors (IR, Red, Green, Magneto Resistive, LED-PT, Bar-Code)
- Scanning process measures 128 data points across the bill
- Examines printed patterns, magnetic patterns, bill material content, bill length, and overall bill condition
- Contains a bill auditing function that tracks reliability rate, acceptance rate, diagnostic data, etc.
- Operating Program updates are accomplished easily via application download from a Palm Pilot® PDA to the 8-Megabit Flash Memory located on the DBV CPU Board. Download time is 5 to 8 minutes via Palm PDA and 2 to 3 minutes via available PC Serial Port.

Lecture Notes

FUNCTIONAL TESTS 8, 9 & 10

Test #8 — Stacker Motor Forward Rotation

1. Set SW1-8 to ON and Recycle Power. DBV in Test Mode (R-Y-G LEDs Lit).
2. Set SW1-1 to ON, SW1-3 to ON, SW1-8 to OFF.
3. Stacker Motor will run in forward direction.
4. R-Y-G LEDs flash 1x = Normal, 2x = Fast; 3x = Slow; 6x = Abnormal.
5. Set SW1-8 to ON, SW1-1 to OFF, SW1-3 to OFF. DBV returns to Test Mode.

Test #9 — Stacker Motor Reverse Rotation

1. Set SW1-8 ON and Recycle Power. DBV in Test Mode (R-Y-G LEDs Lit).
2. Set SW1-2 to ON, SW1-3 to ON, SW1-8 to OFF.
3. Stacker Motor will run in reverse direction.
4. R-Y-G LEDs flash 1x = Normal, 2x = Fast, 3x = Slow, 6x = Abnormal.
5. Set SW1-8 to ON, SW1-2 to OFF, SW1-3 to OFF. DBV returns to Test Mode.

Test #10 — DIP Switch Test

1. Set SW1-8 ON and Recycle Power. DBV in Test Mode (R-Y-G LEDs Lit).
2. Refer to Table 7 - DIP Switch Test Settings Chart.
3. For each STEP, change the Dip Switch settings ON / OFF as indicated, and verify that the R-Y-G Status LEDs flash as indicated.
4. Set SW1-8 ON. DBV returns to Test Mode.

Table 7 DBV-30X DIP Switch Test Switch Settings

STEP	DIP Switch Block #2								DIP Switch Block #1								LED Indicator Status	
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8		
Initial	X	X	X	X	X	X	X	X*	†	1	1	1	1	1	1	1	‡	Status LED blinks once
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	Status LED blinks twice	
2	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	Status LED blinks 3 times	
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Status LED No blinks	

* X = ON/OFF does not matter.

† 1 = ON


‡ 0 = OFF

Lecture Notes

FUNCTIONAL TEST 7

Test #7 — Stacker Sensor Test


1. Set SW1-8 to ON and Recycle Power. DBV in Test Mode (R-Y-G LEDs Lit).
2. Set SW1-7 to ON, SW1-8 to OFF. DBV in the Stacker Sensor Test Mode.
3. Set SW1-x to ON where “x” = desired sensor test as selected from Table 6.
4. Set SW1-7 to OFF to activate the selected test.
5. For Tests 1, 3, 4, 6, and 7, both the R-Y-G LEDs and the Bezel LEDs will turn ON when the associated sensor path is blocked.
6. For Test 5, both the R-Y-G LEDs and the Bezel LEDs will turn ON when the Cash Box is seated in the DBV.

 **NOTE:** Multiple sensor testing is not supported. Test each sensor individually.

7. Set SW1-8 to ON and SW1-1, 2, 3, 4, 5, 6, & 7 to OFF. DBV returns to Test Mode.

Table 6 DBV-30X Stacker Sensor Test DIP Switch Setting Chart

DIP Switch Setting								Sensor Being Tested
1	2	3	4	5	6	7	8	
X*								Left Transport Sensor
	X							Reserved
		X						Right Transport Sensor
			X					Stacker Home Sensor
				X				Cash Box Sensor
					X			Stacker Motor Encoder Sensor
						X		Feed Motor Encoder Sensor

 **NOTE:** When Sensor is blocked, the Bezel LED and Status LEDs (G/Y/R) turn ON.

* X = ON

Lecture Notes

COMPONENT LOCATIONS

Figure 2 illustrates the locations of the various primary component parts of a DBV-30X Unit.

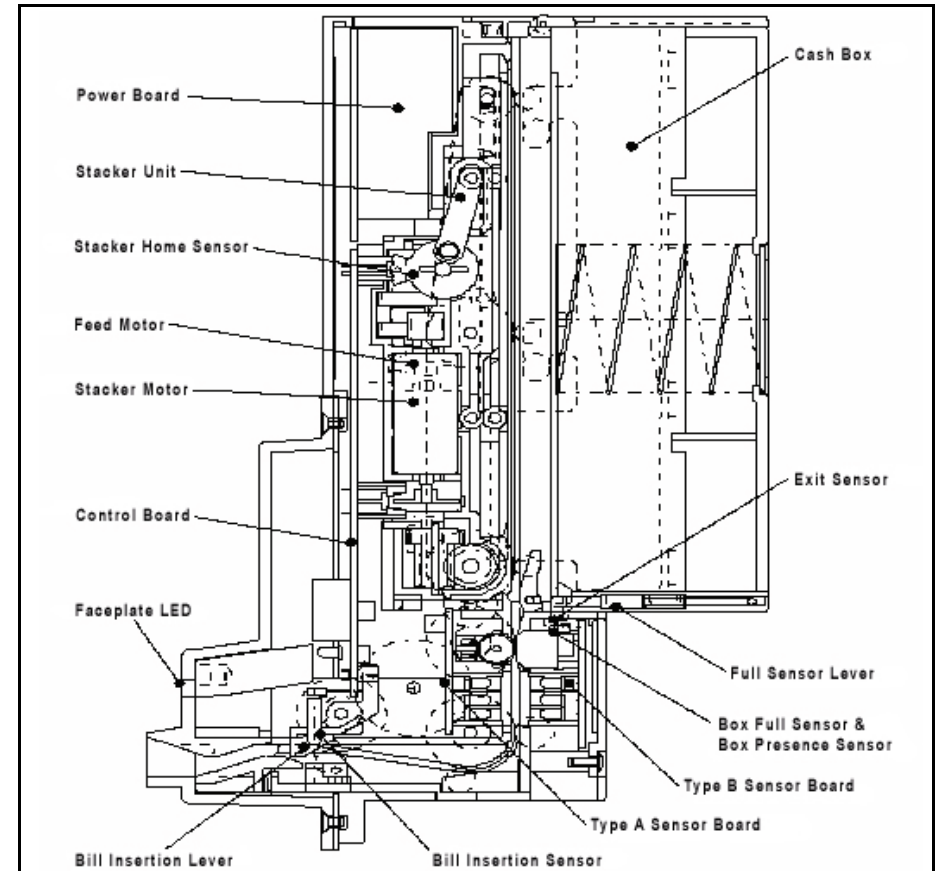



Figure 2 DBV-30X Component Part Locations

Lecture Notes

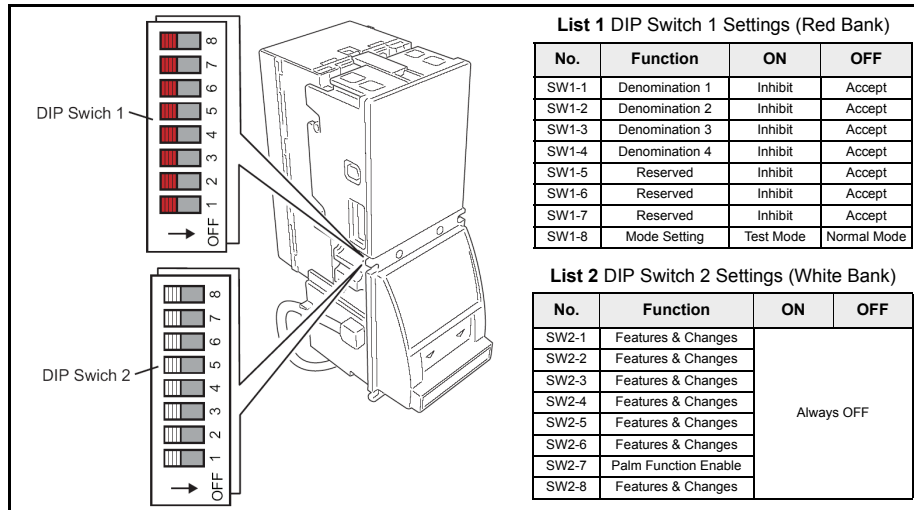
DIP SWITCH SETTINGS

The Bill Validator contains two DIP Switches, SW1 and SW2. They are located through an opening on the left side of the unit. Individual switch functions are determined by the installed operating software (See Figure 3 for DIP Switch location and settings).

- DIP SW1 is colored Red, and is used for enabling/disabling acceptance of various bill denominations, and also for determining the operating mode of the unit (i.e.: Test, Download, Normal operation)

 **NOTE:** In older units this Dip Switch is larger and White in color.

- DIP SW2 is colored White and is used for setting timing/additional features. See the associated Software Information Sheet for more details.



List 1 DIP Switch 1 Settings (Red Bank)

No.	Function	ON	OFF
SW1-1	Denomination 1	Inhibit	Accept
SW1-2	Denomination 2	Inhibit	Accept
SW1-3	Denomination 3	Inhibit	Accept
SW1-4	Denomination 4	Inhibit	Accept
SW1-5	Reserved	Inhibit	Accept
SW1-6	Reserved	Inhibit	Accept
SW1-7	Reserved	Inhibit	Accept
SW1-8	Mode Setting	Test Mode	Normal Mode

List 2 DIP Switch 2 Settings (White Bank)

No.	Function	ON	OFF
SW2-1	Features & Changes	Always OFF	
SW2-2	Features & Changes		
SW2-3	Features & Changes		
SW2-4	Features & Changes		
SW2-5	Features & Changes		
SW2-6	Features & Changes		
SW2-7	Palm Function Enable		
SW2-8	Features & Changes		

Figure 3 DBV-30X DIP Switch Settings

Lecture Notes

FUNCTIONAL TESTS 5 & 6

Test #5 — Serial Insertion Prevention Lever Test


- Set SW1-8 to ON and Recycle Power. DBV in Test Mode (R-Y-G LEDs Lit).
- Set SW1-5 to ON, SW1-8 to OFF.
- Serial Insertion Prevent Lever will operate continuously.
- R-Y-G LEDs OFF and Bezel LEDs flash = Normal; R-Y-G LEDs flash 6x = Motor Lock-Up; 9x = Sensor Abnormal.
- Set SW1-8 to ON, SW1-5 to OFF. DBV returns to Test Mode.

Test #6 — Acceptor Sensor Tests

- Set SW1-8 to ON and Recycle Power. DBV in Test Mode (R-Y-G LEDs Lit).
- Set SW1-6 to ON, SW1-8 to OFF. DBV in the Acceptor Sensor Test Mode.
- Set SW1-x to ON where “x” = the desired sensor test as selected from Table 5.
- The selected test is now active. While active, both the R-Y-G LEDs and the Bezel LEDs will turn ON when the associated sensor path is blocked.
- Multiple sensors can be tested at the same time.
- Set SW1-8 to ON and SW1-1, 2, 3, 4, 5, 6 & 7 OFF. DBV returns to Test Mode.

Table 5 DBV-30X Acceptor Sensor Test DIP Switch Setting Chart

DIP Switch Setting								Sensor Being Tested
1	2	3	4	5	6	7	8	
X*								LEV (Serial Insertion Prevention Lever)
	X							PSF (Entrance Sensor)
		X						PSML (Left Red Sensor)
			X					PSMR (Right Red Sensor)
				X				PSL (Left IR Sensors 3)
					X			PSLR (Right IR Sensors 3)
						X		PSE (Exit Sensor)

 **NOTE:** When Sensor is blocked, the Bezel LED and Status LEDs (G/Y/R) turn ON.

* X = ON

Lecture Notes

FUNCTIONAL TESTS

FUNCTIONAL TESTS 1, 2, 3 & 4

Functional Tests may be performed sequentially or independently.

Test #1 — Feed Motor Forward Rotation

1. Set SW1-8 to ON and Recycle Power. DBV in Test Mode (R-Y-G LEDs Lit).
2. Set SW1-1 to ON and SW1-8 to OFF.
3. Feed Motor will run in the forward direction.
4. R-Y-G LEDs flash 1x = Normal; 2x = Fast; 3x = Slow; 6x = Abnormal.
5. Set SW1-8 to ON, SW1-1 to OFF. DBV returns to Test Mode.

Test #2 — Feed Motor Reverse Rotation

1. Set SW1-8 to ON and Recycle Power. DBV in Test Mode (R-Y-G LEDs Lit).
2. Set SW1-2 to ON and SW1-8 to OFF.
3. Feed Motor will run in the reverse direction.
4. R-Y-G LEDs flash 1x = Normal; 2x = Fast; 3x = Slow; 6x = Abnormal.
5. Set SW1-8 to ON, SW1-2 to OFF. DBV returns to Test Mode.

Test #3 — Stacker Test

1. Set SW1-8 to ON and Recycle Power. DBV in Test Mode (R-Y-G LEDs Lit).
2. Set SW1-3 to ON, SW1-8 to OFF.
3. Pusher mechanism operates continuously.
4. R-Y-G LEDs OFF = Normal; Yellow 1x = Stacker Full; Red 2x = Stacker Jam; Yellow 10x = Cash Box Not Set.
5. Set SW1-8 to ON, SW1-3 to OFF. DBV returns to Test Mode.

Test #4 — Running Test

1. Set SW1-8 to ON and Recycle Power. DBV in Test Mode (R-Y-G LEDs Lit).
2. Set SW1-4 to ON, SW1-8 to OFF.
3. Bill Transfer and Stacker operations operate continuously.
4. R-Y-G LEDs OFF = Normal, Yellow 1x = Stacker Full; Red 2x = Stacker Jam; Yellow 4x = Acceptor Jam; Red 5x = Motor Speed; Red 6x = Motor Lock; Yellow 10x = Cash Box Not Set; Yellow 11x = Cash Box Sensor Error; Yellow 13x = Lower Sensor Assembly Not Locked.
5. Set SW1-8 to ON, SW1-4 to OFF. DBV returns to Test Mode.

Lecture Notes

PRECAUTIONS

IMPORTANT SAFETY PRECAUTIONS

- Remember to turn system power OFF before plugging or unplugging connectors. 'Hot Switching' of MDB Connectors can cause damage to internal circuit components, and is not recommended
- Keep water and other liquids away from the Bill Validator. Although it is splash proof and made of durable plastic, the chassis has several access points where liquids could inadvertently enter and cause damage to internal electronic components
- If possible, avoid installing the units into dusty/dirty environments. Dust buildup can/will affect sensor performance
- When using the DBV Bill Validator together with an RC-10 Bill Recycler, ensure that both units are connected correctly and properly seated. This will help avoid a bill jam during bill recycling operations
- The CPU Circuit Board inside the Bill Validator contains ESD sensitive components that may be damaged by electrostatic discharge. Please observe proper handling instructions when working around/with these static sensitive components
- When performing maintenance on the Bill Validator, do not use alcohol, solvents or citric based solutions of any kind. A damp lint free cloth with a mild detergent is all that is required for cleaning the belts and rollers. Dust buildup can be blown out with compressed air.

Lecture Notes


INSTALLATION


DBV-30X INSTALLATION INSTRUCTIONS

Proceed as follows to install a DBV-30X Unit:

1. Ensure that system power is OFF.
2. Remove the Cash Box and release the Lower Sensor Assembly as shown in Figure 4 a① and a②.
3. Mount the Bill Validator into the equipment using four # 8-32 nuts. Mounting nut locations are shown in Figure 4 b ① to ④. Tighten the mounting nuts until snug. Do not over tighten!
4. Reinstall both the Lower Sensor Assembly, and the Cash Box.
5. Reapply power to the system.

 **NOTE 1:** General installation instructions may be found in Section 2 of the DBV-30X Bill Validator Operation and Maintenance Manual # 960-000103R.

 **NOTE 2:** For most Vending applications, mounting and interconnect instructions can be found in the Optipay BV DBV-301 Bill Validator Installation Guide # 960-000106R.

 **NOTE 3:** Some vending machine installation instructions will require relocation of the VMC controller and/or other internal modifications. DBV-30X retrofit instruction guides for specific vending machines are available for download at: http://www.jcm-american.com/support/vending_kits.asp.

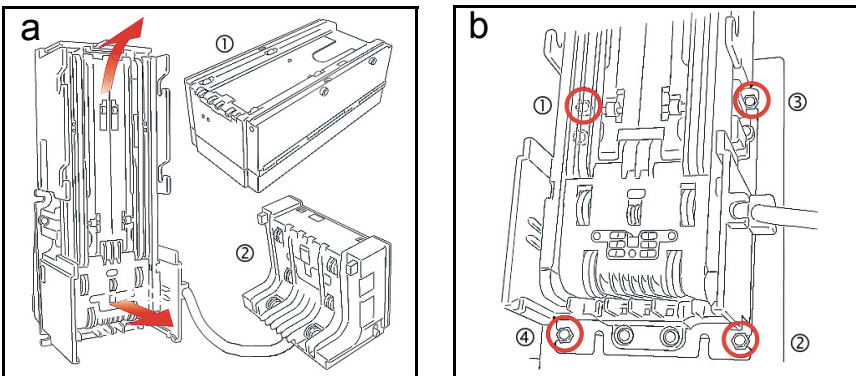


Figure 4 Cash Box Removal & Mounting Nut Tightening Diagrams

Lecture Notes

FUNCTIONAL TESTING WITH DIP SWITCHES

Table 4 provides a DIP Switch settings chart for performing DBV-30X functional tests. The tests can be run when the DBV is in the 'Test' Mode.

Table 4 DBV-30X Functional Test DIP Switch Settings

DIP Switch Block #1 Positions								Functional Test
1	2	3	4	5	6	7	8	
X*								E/D† Feed Motor Forward Rotation Test
	X							E/D Feed Motor Reverse Rotation Test
		X						E/D Stacker Test (Box Set)
			X					E/D Running Test (Box Set)
				X				E/D Serial Insertion Prevention Lever Test
					X			E/D Acceptor Sensor Test
						X		E/D Stacker Sensor Test
X		X						E/D Stacker Motor Forward Rotation Test
	X	X						E/D Stacker Motor Reverse Rotation Test
X	X	X	X	X	X	X		E/D Dip Switch Test
X	X	X	X					E/D Acceptance Test (Box Set)

* X = ON

† E/D = Enable/Disable

To initiate the 'Test' mode, perform the following steps:

1. Set DIP Switch SW1-8 to ON, and set DIP Switches SW1-1 to 7 OFF.
2. Apply power to the DBV. The Bezel LEDs will flash, and the (Red, Yellow, and Green Diagnostic LEDs will light, indicating that the DBV is in the 'Test' mode.
3. Set DIP Switches SW1-1 through SW1-7 to ON or OFF according to the specific test you wish to perform (See Table 4).
4. To start a test, set switch SW1-8 to OFF.
5. To end a test, set switch SW1-8 back to ON.

Refer to Appendix A of the DBV-30X Operation & Maintenance Manual (JCM 960-000103R) for troubleshooting flowcharts and additional detailed test information.

Lecture Notes

PALM PILOT® APPLICATIONS - FORCED DOWNLOAD

DWN-03 Forced Program Download

From time to time, a situation may arise where the DBV-30X may encounter problems with, or refuse to do, a program download when using PSP04. In these cases, a forced download may be necessary.

Perform the following steps to initiate a forced download:

1. On the left side of the DBV, set DIP Switch 1, switches 1, 6, 7 & 8 to ON.
2. Recycle power to the DBV. Upon power up, the Green/Yellow/Red LEDs should begin flashing consecutively, indicating that 'Download Mode' has been entered.
3. Click on the DWN-03 program Icon (See Figure 21 a).
4. Select the desired Software file to download. Note that the DWN-03 download program screen is identical to, and operates exactly the same as, the PSP-04 version (review Figure 11).

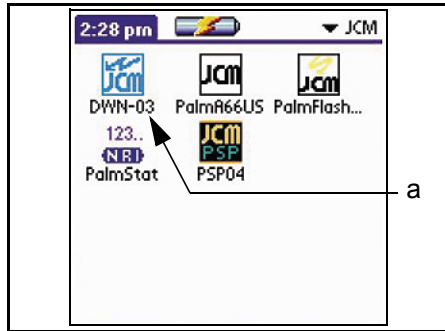


Figure 21 Palm Aps Main Menu

5. Select 'Send' to start a forced download.
6. When the transfer is complete, set Dip Switch 1, switches 1, 6, 7 & 8 to OFF, and recycle power to the DBV. The unit is now operational.

Lecture Notes

CALIBRATION, PREVENTIVE MAINTENANCE & CLEANING INSTRUCTIONS

CALIBRATION:

Calibration is preset at the factory. Field calibration **is not required** unless bill acceptance drops dramatically, or a Sensor assembly or CPU Circuit Board has been replaced.

PREVENTIVE MAINTENANCE:

Liquids, dust build-up and other foreign materials that inadvertently find their way into the unit can interfere with sensor detection, cause bill path problems, and/or have other detrimental effects on system operation.

- Inspect the unit on a regular basis for dirt build-up and/or signs of wear and tear of moving parts
- If timing marks are visible through the belts, or if they have developed frayed edges, it/they should be replaced
- If a lens condition is altered in any way (scratched, clouded, mispositioned, etc.), it should be replaced
- If 'O-Rings' are found cracked or worn ... replace them.

CLEANING THE BILL VALIDATOR:

Proceed as follows to clean the Bill Validator section of a DBV-30X:

- Use a soft lint-free cloth with a mild soap and water solution
- Wipe the lenses, belts, rollers, and the bill path until clean
- Use compressed air to blow out dust and loose debris.



NOTE: When cleaning the Bill Validator, do not use alcohol, solvents or citric based chemical solutions of any kind. Scouring agents, which can harm the plastic surfaces of the unit, should also be avoided. The use of cleaning cards or cleaning pads is also not recommended for this product line.

Lecture Notes

FAILURE ERROR CODES

HARD FAILURE ERROR CODES

- The Red or Yellow Diagnostic LEDs located on the DBV rear panel will flash when a hardware malfunction occurs.
 - Count the number of flashes between pauses to obtain the associated error code.
 - Refer to Table 2 below for a list of hardware error codes and their solutions.

Table 2 DBV-30X Error Codes - Hard Failure

Number of Flashes	LED Color	Failure Condition	Solution
1	Yellow	Stacker Full	Cash Box is full. Empty Cash Box.
2	Red	Stacker Jam (Pusher Mechanism Zone)	Remove jammed bill(s).
3	Red	Acceptor Jam (When RC-10 is operational)	
4	Yellow	Acceptor Jam (Sensor Zone)	
5	Red	Feed Motor Speed Error	Perform diagnostics listed in Appendix A of the DBV-30X Operations Manual.
6	Red	Feed Motor Lock-up	
7	Yellow	Host instruction's waiting when bill is in escrow	
8	OFF	Reserved	
9	Yellow	Continuous Insertion Protection Lever Jam	Remove jammed bill(s)
10	Yellow	Cash Box not in set position	Remove the Cash Box and reseal it properly into position.
11	Yellow	Cash Box Sensor error	
12	Yellow	Tampering (Bill fishing [stringing] detected)	A bill tampering (stringing) attempt possibly occurred. Remove and reinstall the Cash Box to reset the error.
13	Yellow	Lower Guide not set	Set the Lower Guide properly.
14	OFF	Reserved	
15	Red	EEPROM Read/Write Error	A EEPROM Read Error has occurred. Reset the error by removing and reinstall the Cash Box.

Lecture Notes

PALM PILOT® APPLICATIONS - ACCEPTING LOG (CONTINUED)

Accepting Log continued:

5. Select an Acceptance Log to view by highlighting it.
6. Accepting Log Page 1 will appear (See Figure 18) providing the log transfer date, DBV Serial Number, and other specific identification data.
7. Select 'Next'. Accepting Log Page 2 will appear (See Figure 19). This page shows the last 16 bills accepted, their denomination, and the direction in which the bill was inserted.
8. Select 'Next'. Accepting Log Page 3 will appear (See Figure 20). This page shows logged data by denomination, including the total number of bills accepted and rejected. The date that the DBV was last initialized is also shown.

Accepting Log (2)					
Bills in Recycler: 8					
No	Denomi	Dir	No	Denomi	Dir
1	1	FB	9	20	FB
2	1	FA	10	10	FB
3	1	FA	11	5	FB
4	1	FA	12	1	FA
5	1	FA	13	1	FB
6	1	FA	14	1	FB
7	1	FA	15	1	BB
8	1	FA	16	1	BB

Figure 19 Accepting Log 2 Screen

Accepting Log (3)				
Date Last Cleared: 00/00/0000				
No	Denomi	Accept	Reject	
1	1(--)	40	1	
2	5(--)	3	0	
3	10(--)	2	0	
4	20(--)	2	0	

Figure 20 Accepting Log 3 Screen

Lecture Notes

PALM PILOT® APPLICATIONS - ACCEPTING LOG (CONTINUED)

Accepting Log continued:

The bottom of the Figure 16 screen provides the following button selection options:

- **Rec** - allows downloading of data currently in the DBV
 - **Init** - initializes/clears the Validator memory
 - **Del** - clears all downloaded acceptance logs on the Palm Pilot® PDA
 - **Back** - returns user to the PSP-04 main menu.
3. Select 'Rec' to start a new Acceptance Log. The Figure 17 Select/Enter Identifiers Screen will appear, allowing modification of the following identifiers:
- **Location:** - the machines location
 - **Asset ID:** - the machines asset/serial number
 - **Technician:** - the servicing technicians name/ID
 - **Restrictions:** - any operating restrictions
 - **Manufacturer:** - the machine manufacturers name
 - **Product:** - the type of product/service being vended.



Figure 17 Select/Enter Identifiers Screen



Figure 18 Accepting Log 1 Screen

4. After filling the Identifiers ID fields, select 'OK'. The DBV will then transfer its current data, and create a new Acceptance Log on the PDA. The user will then be returned to the primary Accepting Log Screen previously shown in Figure 16.

Lecture Notes

BILL REJECT ERROR CODES

- The Green Diagnostic LED on the DBV rear panel will flash when a Bill Rejection Error occurs
- Count the number of flashes between pauses to obtain the associated error code
- Refer to Table 3 for a list of reject error codes.

For further details and/or solutions refer to Appendix A of the DBV-30X Operation and Maintenance Manual (Part #960-000103R).

Table 3 Reject Error Codes

Condition LED Blink No.			Reject Description
R	Y	G	
		1	Insertion Error
		2	Magnetic Read Error
		3	Paper detected inside acceptor at standby
		4	Adjustment/Magnification Error
		5	Reject from a Feed Error
		6	Denomination Select Error
		7	Photo Pattern Error (Type 1)
		8	Photo Level Error
		9	Inhibited Bill
		10	Return directed from the host machine
		11	Foreign substances detected at the exit sensor
		12	Escrow Position Error
		13	Bill Length Error
		14	Photo Pattern Error (Type 2)
		15	Incompatible Bill Error

Lecture Notes

PALM PILOT APPLICATION DOWNLOADING

PSP04:

- An application used to configure, run diagnostics on, download operating software to, and retrieve statistical data from a DBV-30X Bill Validator
- Software file required: **PSP-04**
- Firmware file required: **DBV-301 SU (USA-2) ID: OD3***.

DWN-03:

- An application used to force download operating software into a DBV-30X Bill Validator
- Software file needed: **DWN-03**
- Firmware file needed: **DBV-301 SU (USA-2) ID: OD3***.



**NOTE: The JCM website is updated frequently so that the most recent Firmware files are always available there. The Firmware filename shown is representative of the required software.*

What you will need:

- An M100 series, M500 series, or Tungsten Hand Held Palm Pilot PDA.
- A Palm Pilot® Hot Sync Cradle assembly for connecting the PDA to a PC
- A Palm Pilot® Dongle interface cable assembly (JCM Part No. 400-100219R)
- A Desktop or Laptop PC system with internet access capabilities.

Downloading software to a PC and PDA:

Perform the following steps to download a copy of the Palm Pilot applications:

1. Select 'Product Support' at the JCM Website (www.jcm-american.com).
2. Select 'Software' in the 'Product Support' pull down menu.
3. In the 'Software' pull-down menu select either 'Software Applications' or 'Firmware Downloads'; then download the required Palm PDA Application file(s) mentioned above to your PC.
4. Connect the Palm PDA to the PC using a Palm Hot Sync Cradle.
5. Using the applicable Palm Desktop software, Hot Sync the PDA to the PC to download and install the necessary files onto the PDA.

Lecture Notes

PALM PILOT® APPLICATIONS - PROGRAM DOWNLOAD (CONTINUED)

Program Application Download Continued:

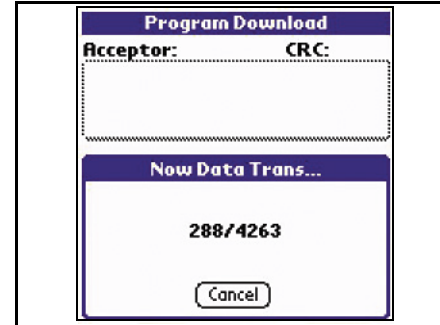


Figure 13 Download Progress Screen

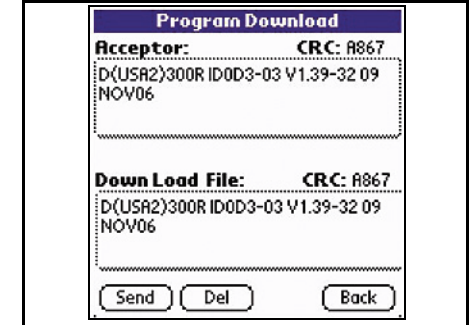


Figure 14 Download Verify Screen

PALM PILOT® APPLICATIONS - ACCEPTING LOG

1. Select the 'Accepting Log' Screen Button from the PSP04 Main Menu (See Figure 15 b).
2. The screen shown in See Figure 16 will appear. Acceptance Log data files available for viewing are listed by date and DBV serial number.

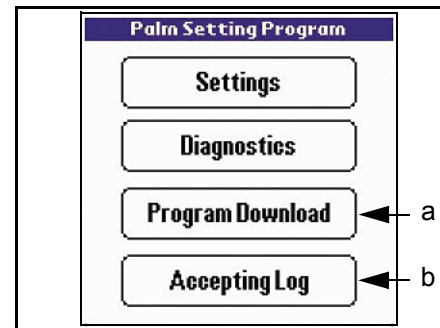


Figure 15 PSP04 Main Menu Screen

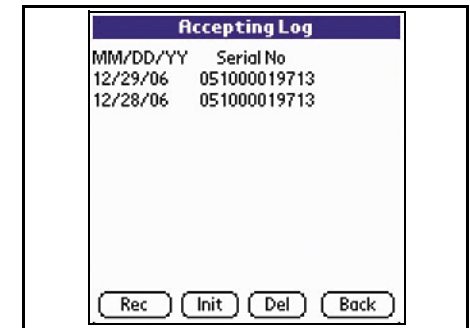


Figure 16 Acceptance Log Screen

Lecture Notes

PALM PILOT® APPLICATIONS - PROGRAM DOWNLOAD

Program Download:

Perform the following steps to download DBV operating software:

1. Select the 'Program Download' Screen Button from the PSP04 Main Menu (See Figure 15 a on page 17).
2. The Program Download Screen depicted in Figure 11 will appear.

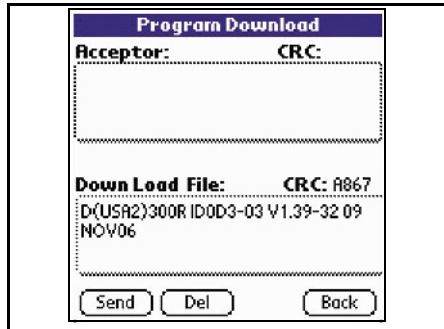


Figure 11 Program Download Screen

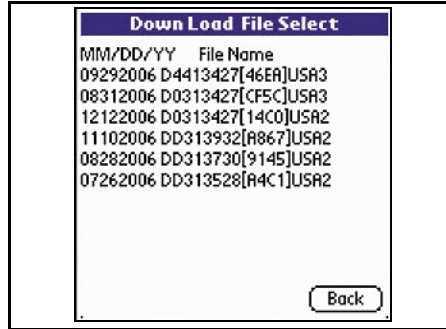


Figure 12 Download Files Screen

3. The **Download File:** Box shows the version of software currently scheduled for download to the DBV. To send a different version, select any open area inside the **Download File:** Box, and a list of available files will appear (See Figure 12). Highlighting the desired software file will automatically transfer the selected file name to the **Download File:** Box.
4. Select 'Send' to transmit the selected software file into the Bill Validator.
5. During transfer, the status box shown in Figure 13 on page 17 will indicate the software download progress.
6. Once the download is complete, click on any area of the **Acceptor:** Box. The program will check the DBV and report the version of software currently installed (See Figure 14 on page 17). Verify that the version listed in the **Acceptor:** Box agrees with the version listed in the **Download File:** Box.

Lecture Notes

PALM PILOT® APPLICATIONS

PSP-04 PALM SETTING PROGRAM

PSP-04 is used to configure, run diagnostics on, download operating software to, and retrieve statistical data from a DBV-30X Bill Validator.

Configuration information and options:

Perform the following steps:

1. Connect the Palm Pilot® PDA to the RJ-45 Connector Port on the DBV right side using a Palm Dongle cable.
2. Run the PSP-04 program by Clicking on the PSP04 Icon (See Figure 5 a). The PSP-04 Main Menu Screen will appear (See Figure 6 a).
3. Select the 'Settings' Screen Button. The 'Settings' Sub-menu will appear.

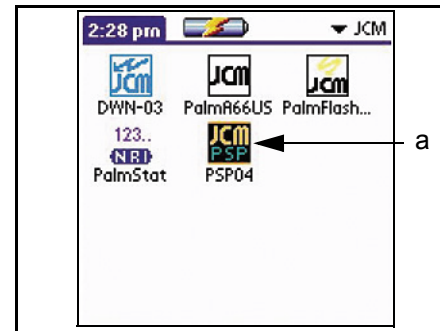


Figure 5 Palm Aps Main Menu

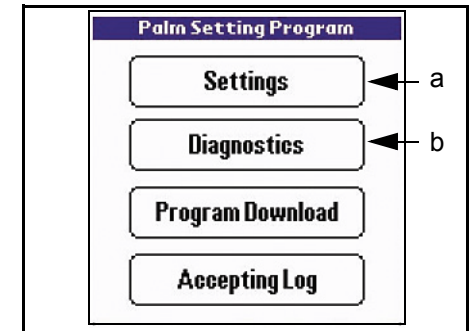


Figure 6 PSP04 Main Menu Screen

4. Select the 'Information' Screen Button (See Figure 7 a on page 14).
5. The screen shown in Figure 8 on page 14 will appear with the following information:
 - a). The Firmware version currently loaded in memory.
 - b). Lists the bill denominations which can be accepted.
 - c). Indicates whether bill acceptance is enabled or disabled.
 - d). 'Rec' is used to refresh the page with updated data.
 - e). 'Back' will return the user to the 'Settings' Sub-menu.

Lecture Notes

PALM PILOT® APPLICATIONS - PSP-04 (CONTINUED)

PSP-04 continued:

6. Select 'Back', and then select the 'Acceptor' Screen Button (See Figure 7 b). The Figure 9 Acceptor Menu Screen will appear displaying the following choices:
 - a). **Enable** - allows the user to enable or disable bill acceptance on selected channels.
 - b). **Hi Secu** - High Security mode is set by default. User control of this function is reserved for future use.
 - c). **Comm** - reserved for future use.
 - d). **Inhibit** - allows the user to enable or disable the DBV
 - e). **Direction** - allows the user to specify in which directions bills can be accepted into the DBV.
 - f). **Option** - reserved for future use.

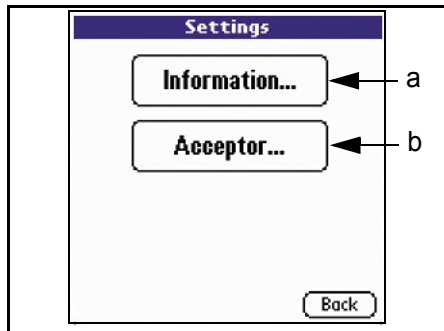


Figure 7 Settings Sub-Menu Screen

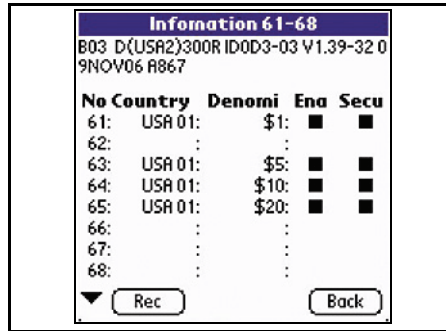


Figure 8 Information Screen

7. Select the 'Back' Screen Button twice to return to the PSP04 Main Menu Screen.
8. Select the 'Diagnostics' Screen Button (review Figure 6 b).
9. The Diagnostics Screen shown in Figure 10 on page 15 tests the following functions:
 - a). **FWD** - runs the Feed Motor in the forward direction.
 - b). **REV** - runs the Feed Motor in the reverse direction.
 - c). **STK** - tests the DBV for a proper Stacker function.

Lecture Notes

PALM PILOT® APPLICATIONS - PSP-04 (CONTINUED)

PSP-04 continued:

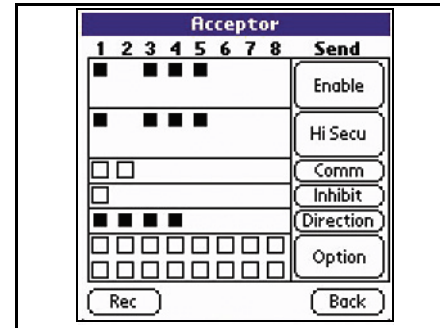


Figure 9 Acceptor Menu Screen

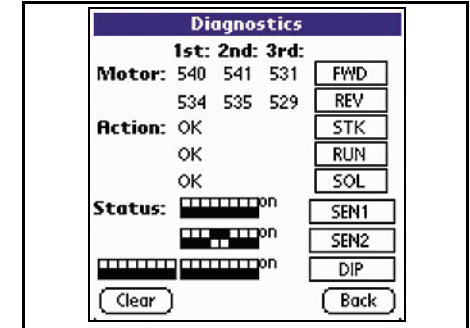


Figure 10 Diagnostics Screen

- d). **RUN** - a combination Feed Motor and Stacker function test.
 - e). **SOL** - exercises the continuous insertion lever prevention switch.
 - f). **SEN1** - sensor 1 transmit/receive test.
 - g). **SEN2** - sensor 2 transmit/receive test.
 - h). **DIP** - DIP Switch 1 and 2 settings test.
9. Select the 'Back' Screen Button again to return to the PSP04 Main Menu.

Lecture Notes
