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# VANTAGE<sup>®</sup>

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## OPERATION & SERVICE MANUAL





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## SECTION 1: GENERAL INFORMATION

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### Introduction

This manual contains information on installing, operating and maintaining Coinco Vantage™ Series bill acceptors. This manual is intended for owners, route operators and shop-level technicians as a primary source of information. Taking time to read this manual and become familiar with the information will help you obtain the best performance from your Vantage bill acceptor.

### Product Overview and Features

*The Vantage bill acceptor incorporates a wide range of benefits, including:*

- Quick-Release bezel speeds installation and removal.
- Optional FlexStack™ bill box expands from 200 bills to hold up to 500 bills. Fixed note bill boxes are available with between 300 and 1100 note capacities.
- Illuminated bezel and status indicators simplify setup and troubleshooting.
- Patented note path lockout provides high security Level Three stringing and fishing protection.
- Smart Bezel™ (optional) actively communicates ability to accept \$5 bills.

*Basic operational features include:*

- **Bill widths accepted:** 66mm (for Vantage Vx6 models) or 72mm (for Vx7 models).
- **Operating voltages:** 110VAC, 24VAC, 34VDC.
- **Communication Interface:** MDB, Pulse, Parallel, Vend Serial
- **Mounting:** Upstack or Downstack.
- **Bezels:** Basic, Slimline, or Downstack. All versions feature standard Impulse lighting. Smart Bezel™ option is available for Basic and Slimline versions.
- **Acceptance orientation:** four ways.
- **Coupons:** Teach-n-Go field teach capability.

### For Your Records

A label indicating the bill acceptors model number and serial number can be found on the left side of the Vantage bill acceptor. Refer to the model

number and serial number whenever you call your Coinco Service Center for information or service.

The first four digits of the bill acceptor serial number indicate when the unit was built, which is also the beginning of the warranty period:

- First two digits indicate week of manufacture.
- Third and fourth digits indicate the year.

For example, Serial number 1508000123 indicates the unit was manufactured in the 15th week of 2008.

### Icons

The following icons will guide you throughout the manual. Each icon highlights an area you may want to pay closer attention to.



Indicates a checklist type of process that you can readily “check” as you proceed to the next step.



Indicates a warning that you should adhere to. It is often accompanied by the words “DO NOT...”

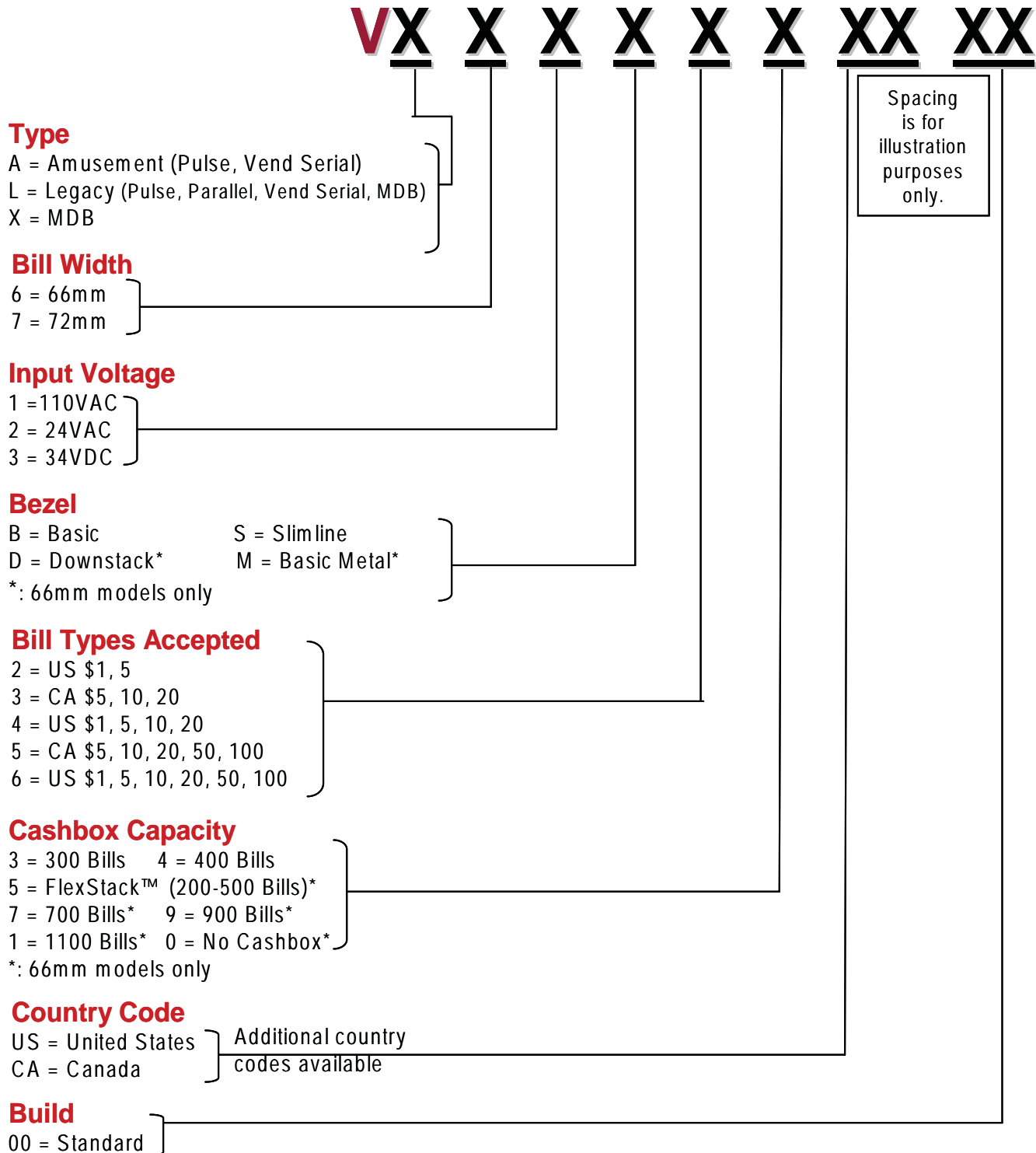


Indicates a helpful hint or shortcut to simplify the task.

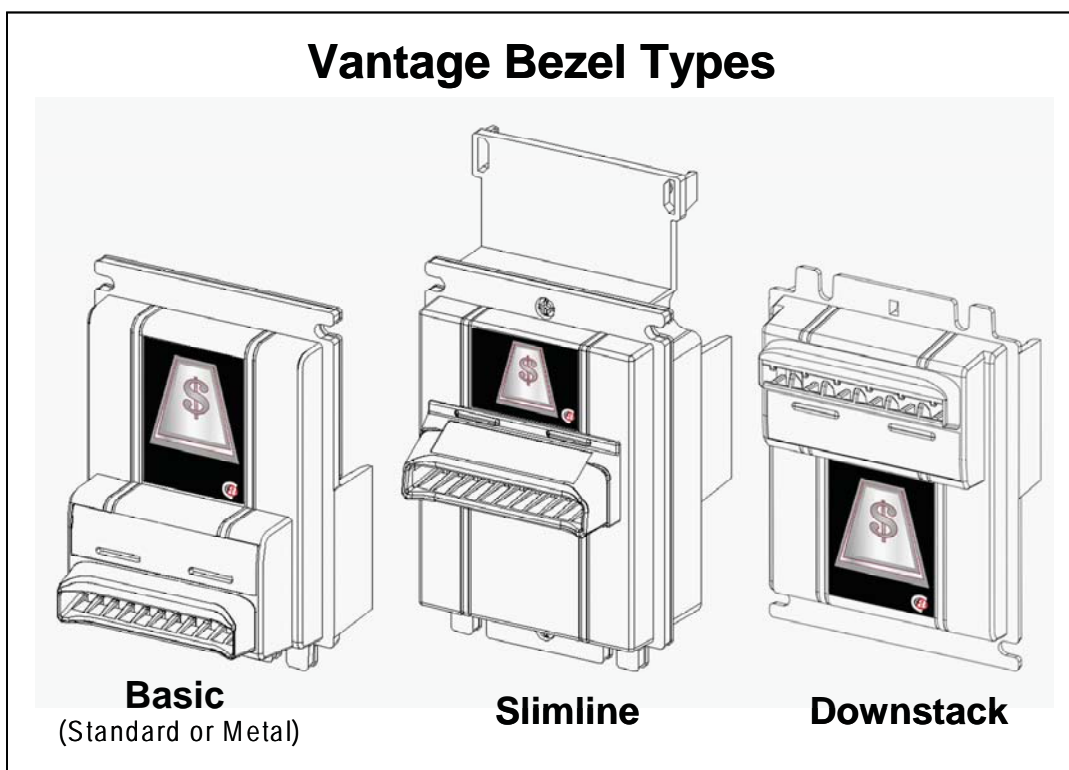


Indicates where you can find additional information regarding this specific topic.

# VANTAGE™ Naming Convention



## Vantage Bezel Types

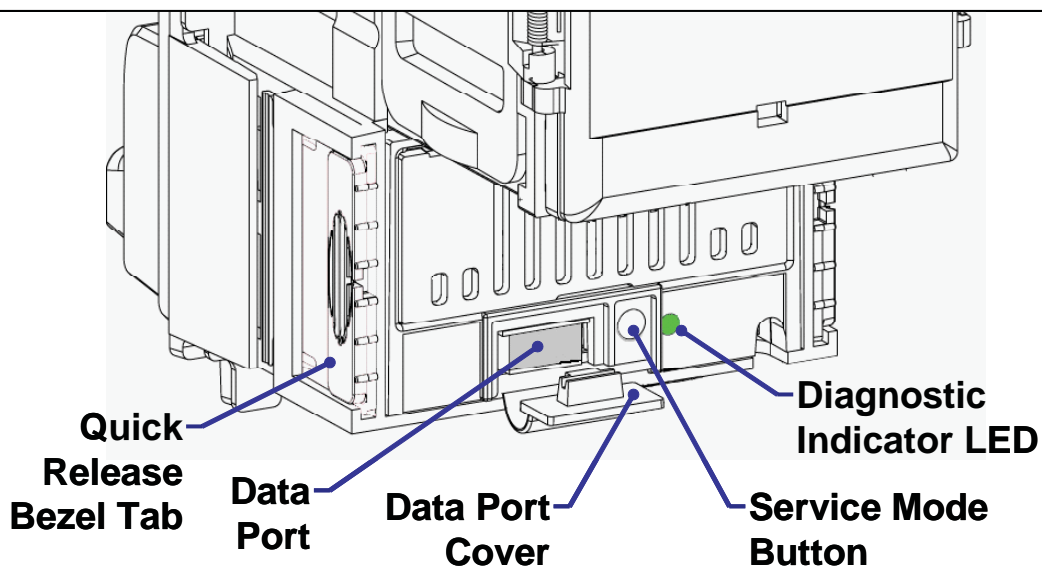
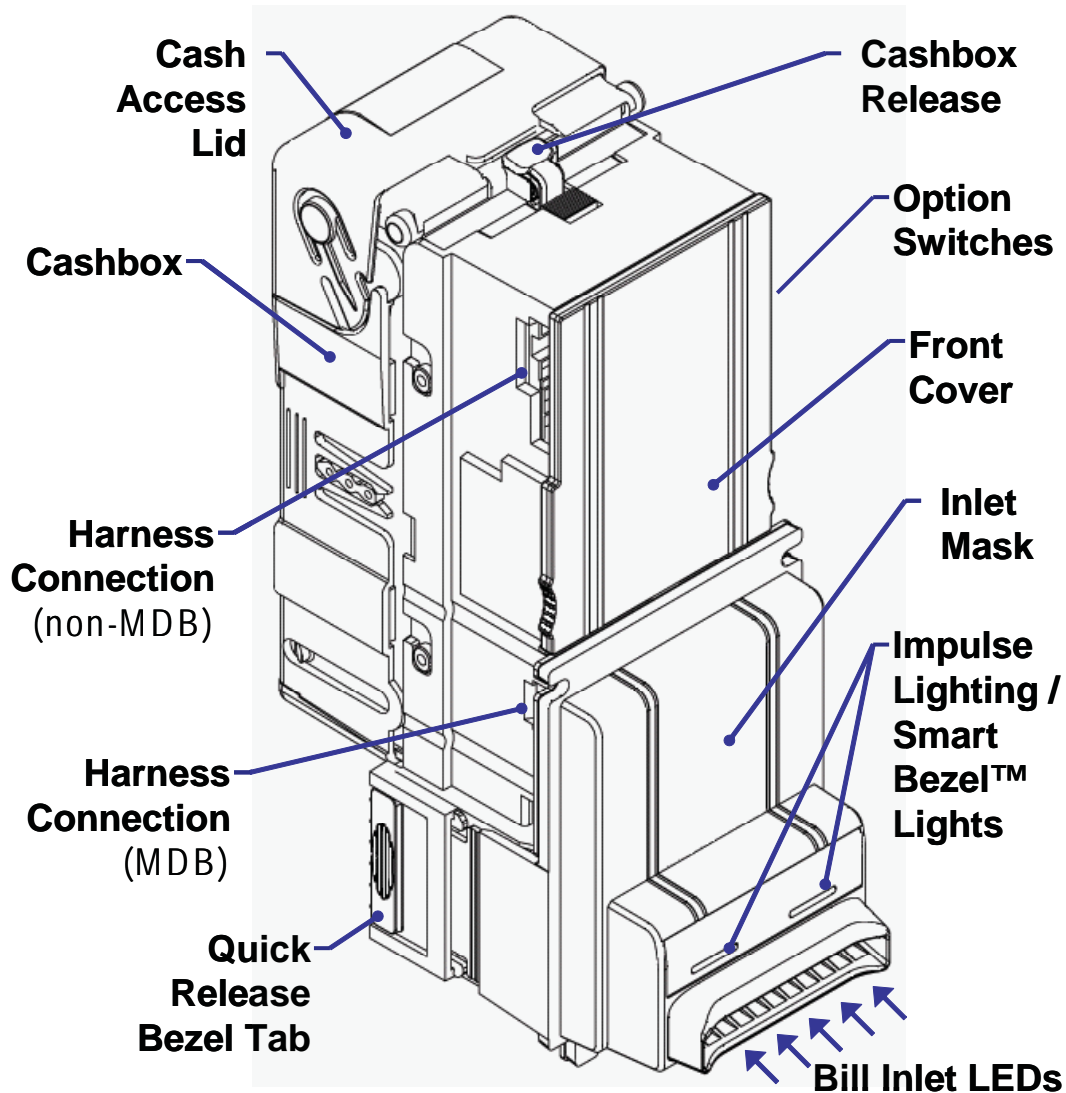


## Bill Acceptance

Model	Bill Width	\$1	\$5	\$10	\$20	\$50	\$100
Vx <b>6</b> xx <b>2</b> xUS	66mm	X	X				
Vx <b>6</b> xx <b>4</b> xUS		X	X	X	X		
Vx <b>6</b> xx <b>6</b> xUS		X	X	X	X	X	X
Vx <b>7</b> xx <b>3</b> xCA	72mm		X	X	X		
Vx <b>7</b> xx <b>5</b> xCA			X	X	X	X	X

Note: US \$2 bill acceptance is available. Please contact your Coinco Sales Representative for additional information.

# Vantage™ Components



## SECTION 2: INSTALLATION & SETUP

### Unpacking the Validator

After removing the bill acceptor from the shipping carton, inspect it for possible damage. If the unit is damaged, notify the shipping company immediately. The consignee (person or company receiving the unit) can file a claim against the carrier for shipping damage. We recommend you keep the original carton and packaging materials to reuse if you need to transport or ship the bill acceptor in the future.

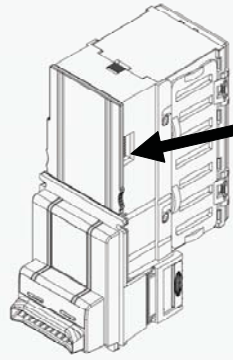
If the bill acceptor is being stored or used as a spare, always keep it in its shipping carton when not in use. This will keep it clean and offer the best protection for the unit.



### Option Switch Configuration

See Figure 1. Note this step is not necessary for MDB only models.

### Option / Dip Switch Settings

*Note: There are no switches on MDB only models.*



	ON	
1	X	
2	X	
3	X	
4	X	
5	X	
6	X	
7	X	
8	X	
	OFF	

Pulse Timing	Switch 1	Switch 2
50 / 50mS	ON	ON
150 / 150mS	ON	OFF
Custom	OFF	ON
Parallel (Credit Line)	OFF	OFF

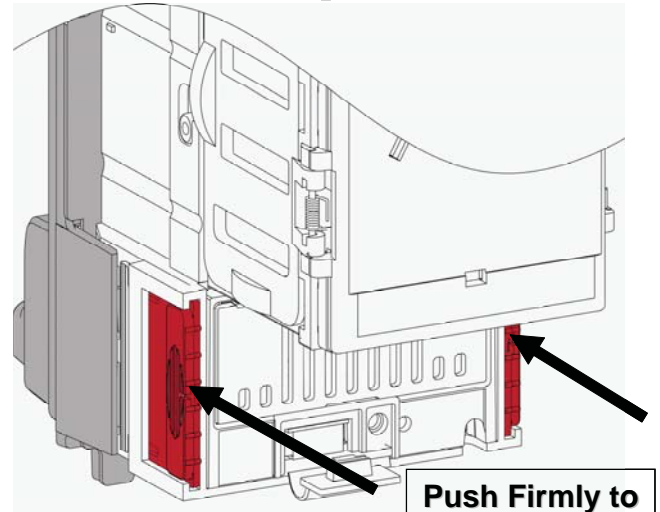
	ON	OFF
Switch 3	4 Pulse / \$	1 Pulse / \$
Switch 4	Always Enabled	Host Enabled
Switch 5	Serial	Pulse
Switches 6 - 8	Reserved	

**Notes:**

- Recycle power for switch settings to take effect.
- "Custom" has a default setting of 200 / 200mS but can be reconfigured for different timing. Please contact your Coinco Sales Rep for more information.

Figure 1


### Quick Release Bezel Operation



1. Push firmly on Quick Release Tabs using a screwdriver tip. Tabs will move towards bezel and latch.
2. Once both tabs are latched, the bill acceptor will separate from the bezel.
3. To reattach, push bill acceptor body firmly onto bezel until it locks.

Figure 2

### Installing the Bill Acceptor

1. Remove power from the host machine.
  -  DO NOT connect the bill validator harness to the machine with power connected.
2. Install the bill validator into the host machine using the mounting studs and hardware in the machine. To simplify installation, see Figure 2.
3. Install / connect the proper interface harness to the host machine.
4. Restore power to the machine.
5. The illuminated bill inlet will begin to flash and the stacker motor will cycle upon power-up. If this does not occur, check the wiring harness connections and make sure power is applied.
6. Check the Vantage diagnostic LED to verify it is green and ON continuously. If it is not, you can troubleshoot based on the status shown on the cashbox decal or see Figure 3.











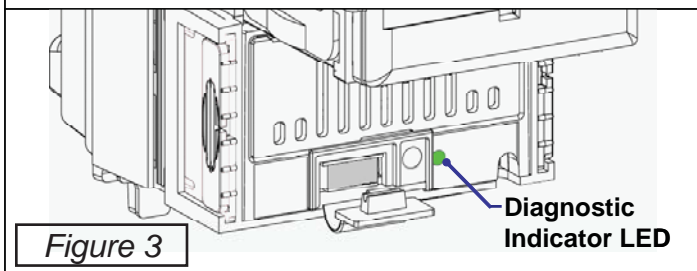
7. With the vend price set below one dollar, insert a one dollar bill.
8. Verify credit has been established.
9. Check the bill box to see that the one dollar bill was properly stacked.

Several of the configuration setting options bear further definition:

- **Coupon Acceptance:** Enables or disables acceptance of all user-loaded coupons. If this is set to “OFF”, no coupons will be accepted.
- **Smart Bezel™ (default setting for VLxxx2 and VXxxx2 models):** enables the ability to communicate in real time which bills are being accepted by the bill acceptor. If the user wants to use Impulse lighting instead, they will need to order the decal set as shown in the Parts List. If a user of the VA, VLxxx4, or VXxxx4 should wish to use this feature, they will also need the same decal.
- **Impulse Lighting (default setting for all VA, VLxxx4 and VXxxx4 models):** illuminates the upper blinking lights on the bezel. Turning off this option leaves only the lower inlet lights illuminated.
- **High Security vs. Standard Security Bill Acceptance:** the default Standard Security setting (OFF) accepts 95+% of genuine street-grade bills. High Security mode is recommended for locations with a higher risk of frauds. In High Security mode, the bill acceptor will still accept the same percentage of normal genuine street-grade bills, but it will become more restrictive in accepting “borderline” notes – those seen as having defects or at the broader fringes of being acceptable.
- **1-Way / 2-Way / 4-Way:** Defines the number of bill orientation directions that the bill acceptor will accept. The first two are face-up only, the last is all 4 possible orientations (default).
- **Level 3 Security:** Recommended for higher risk environments. Provides additional level of security against stringing and fishing attempts. With Level 3 Security, the rest position of the bill stack pushplate blocks access to the bill path.

# Diagnostic Flash Codes

	Flash Code	Validator Status
Operational	 (solid)	Sales Mode / OK
	 x 1	Coupon Teach
	 x 2	Service Mode
Warning	 x 1	Clean Unit
	 x 2	Service Unit
Out of Service	 x 1	Cashbox Full
	 x 2	Clear Bill Path
	 x 3	Out of Service



## Configuring Bill Acceptance and Other Acceptor Options

See Figure 4 for how to enter, navigate, and set bill acceptance and other options in Configuration mode. Figure 6 shows the four “pages” of bill acceptance options and Figure 7 shows two examples.

**?** Why doesn't the \$50 and \$100 bill acceptance option show up in options Mode 3 for my validator?  
 Not all options are available on all bill acceptors. If a model does not offer a certain option, it won't appear as an enabled option while scrolling through the option settings.

## To Configure Options

#	Action	Mode	Diagnostic Light
1.	Hold button until Diagnostic LED flashes.	Service	x 2
2.	Remove Lower Housing	Config	OFF
3.	Set Options As Desired (see Options Navigation and Configuration Settings figures)	Config	OFF
4.	Re-install Lower Housing. Inlet LEDs flash 5 times confirming options are saved.	Sales or Ready	GRN
5.	Test unit to ensure proper setup.		

## Options Navigation

Press once	Scrolls to <b>next set</b> of options within current Page. Each option should be configured properly before moving to the next Page.
Hold for next Page	Scrolls to <b>next Page</b> of options.

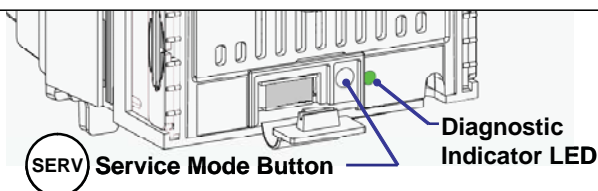
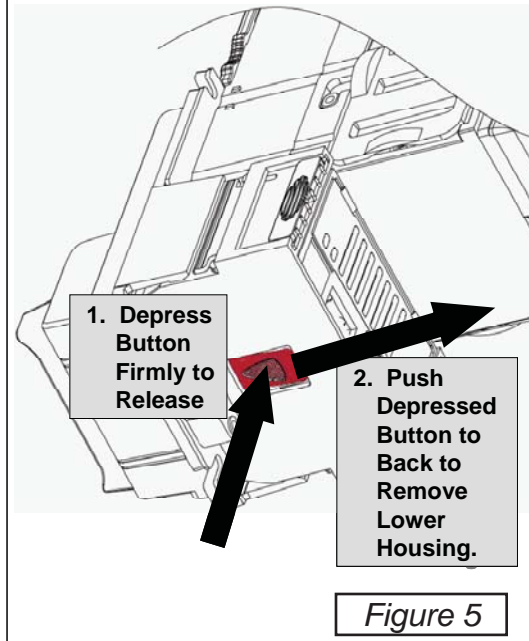


Figure 4

## Lower Housing Removal



## Configuration Settings

**ON** Inlet LED On: Option Enabled      **OFF** Inlet LED Off: Option Disabled

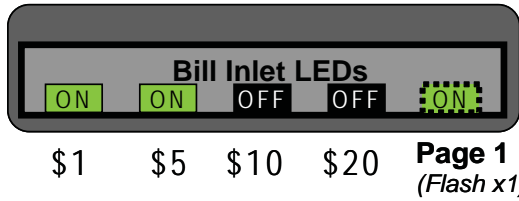
Page 1	<b>Bill Acceptance</b>  Bill Inlet LEDs \$1    \$5    \$10    \$20    Page 1 (Flash x1)
Page 2	<b>Coupons / Security / Bezel Lights</b>  Bill Inlet LEDs Coupons   High Impulse   Smart   Page 2 (Flash x2) Security      Bezel™
Page 3	<b>Bill Acceptance / Orientation</b>  Bill Inlet LEDs 1-Way   2-Way    \$50    \$100    Page 3 (Flash x3) ← 4-Way (both on) →
Page 4	<b>Level 3 Security</b>  Bill Inlet LEDs Level 3 Security   ← Reserved →    Page 4 (Flash x4)

Figure 6

## Configuration Examples

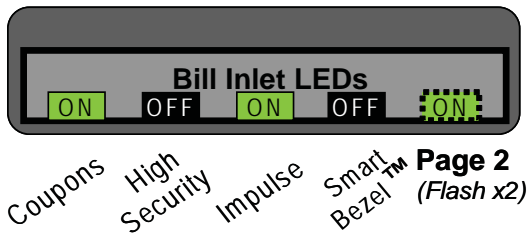
### Example 1

Page 1: \$1s and \$5s Enabled



### Example 2

Page 2: Coupons & Impulse Lighting Enabled



**ON** : Option Enabled    **OFF** : Disabled

Figure 7

## Add / Remove Coupons

#	Action	Mode	Diagnostic LED	Bill Inlet LEDs
1.	(SERV) Hold until Diagnostic LED flashes.	Service	GRN x 2	OFF
2.	(SERV) Hold button until Inlet LEDs flash.	Coupon Teach	GRN (flash)	GRN (flash)
3.	Insert Coupon to be <b>Added</b> or <b>Removed</b> .			
<b>ADD Coupon</b>				
4a.	Coupon accepted and returned.	Coupon Teach	GRN (fast rate)	GRN (fast rate)
5a.	Automatically returns to Sales Mode. Coupon <u>addition</u> complete.	Sales	GRN (solid)	GRN (cycle)
<b>REMOVE Coupon</b>				
4b.	Coupon disabled and returned.	Coupon Teach	GRN (fast rate)	GRN (fast rate)
5b.	Automatically returns to Sales Mode. Coupon <u>removal</u> complete.	Sales	GRN (solid)	GRN (cycle)
<b>Coupon NOT Recognized</b>				
4c.	Coupon returned. Inlet LEDs flash at original rate.	Coupon Teach	GRN (flash)	GRN (flash)
5c.	Insert another coupon (see Step 2 above)			
	(SERV) Hold button to return to Sales Mode (note unit returns automatically after 40 secs of inactivity).	- OR -		

Figure 8

### Returning to the Default Configuration Settings

The bill acceptor can be returned to the original factory default configuration by powering the unit on while the mode button is depressed. When this is done, all user-set configuration changes will be lost. Factory default settings can be found in Section 6 of this manual

### Adding / Removing Coupons

Coupons can be added or removed on site without the use of a Field Programmer. See Figure 8.

**?** I've successfully added a coupon, but the bill acceptor still will not accept it. Why?

The Coupon acceptance option must be set to "ON" in Page 2 of the configuration settings. This "global" setting allows (ON) or disallows (OFF) acceptance of all user-loaded coupons.

## SECTION 3: OPERATION

### System Operation

#### Bill Recognition

Sensors detect when a bill is inserted into the acceptor. These signal the transport motor to activate to pull the bill into the bill acceptor.

#### Bill Validation

From the time the transport motor begins to run until the trailing edge of the bill passes over them, the bill validation sensors scan the bill. This information is forwarded to the microprocessor to determine the validity of the bill.

#### Bill Stacking and Credit

If the bill is determined to be authentic, it is transported to the stack position. Once the bill is in the stacking position, the stacker motor runs and credit is given.

#### Bill Rejection

If the bill is determined to be invalid, the wrong denomination, or if some cheating method is sensed, the bill transport motor will reverse to return the bill to the customer.

#### Smart Bezel™

The Smart Bezel option is used to communicate in real time, the bill acceptors real-time acceptance of US \$5 bills (\$10 bills for Canada) to the customer. Under the default condition, the \$1 & \$5 light (\$5 & \$10 for Canada) will show acceptance of \$5 bills as long as there is enough change in the changer to make change for the \$5. See Figure 9.

#### Anti-Stringing / Anti-Fishing

Sensors detect when objects are inserted into the bill validator. If something is inserted and it is not seen as a bill, it will be rejected. If something is still seen in the path after a valid bill is transported and stacked, the stacker plate will extend as a means of keeping the valid bill from being withdrawn. With Level 3 Security, the rest position of the bill stacker pushplate completely blocks access to the bill path. Once a valid bill is inserted, the pushplate withdraws and the bill is pulled in. Level 3 Security provides an additional

level of security against stringing and fishing attempts.

#### Water Removal Cycling Feature

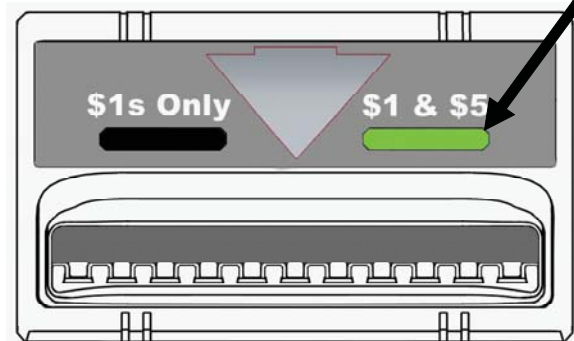
Vantage employs a patented water removal cycling technique. When certain sensors are blocked prior to a valid bill being inserted, the bill will then be cycled back-and-forth to wick off the water in the bill path. After the bill is quickly cycled several times, the bill is pulled in for validation and the system returns to normal operation.

## Smart Bezel™

### Communicates to Customer Which Bills Are Accepted

Feature not available on all models.

*Denotes acceptance of both \$1 and \$5 bills*



- **\$1 & \$5 Is Lit When:** *Both bills accepted and change made for either.*
- **\$1s Only Is Lit When:** *Change can only be made for \$1 bills.*

*Note: For correct operation, make sure \$1 and \$5 bills are enabled (see Configuration Settings).*

Figure 9

## SECTION 4: MAINTENANCE

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### Vantage™ Cleaning and Maintenance

*Note: Electrical power must be disconnected from the bill acceptor before performing any cleaning operations.*

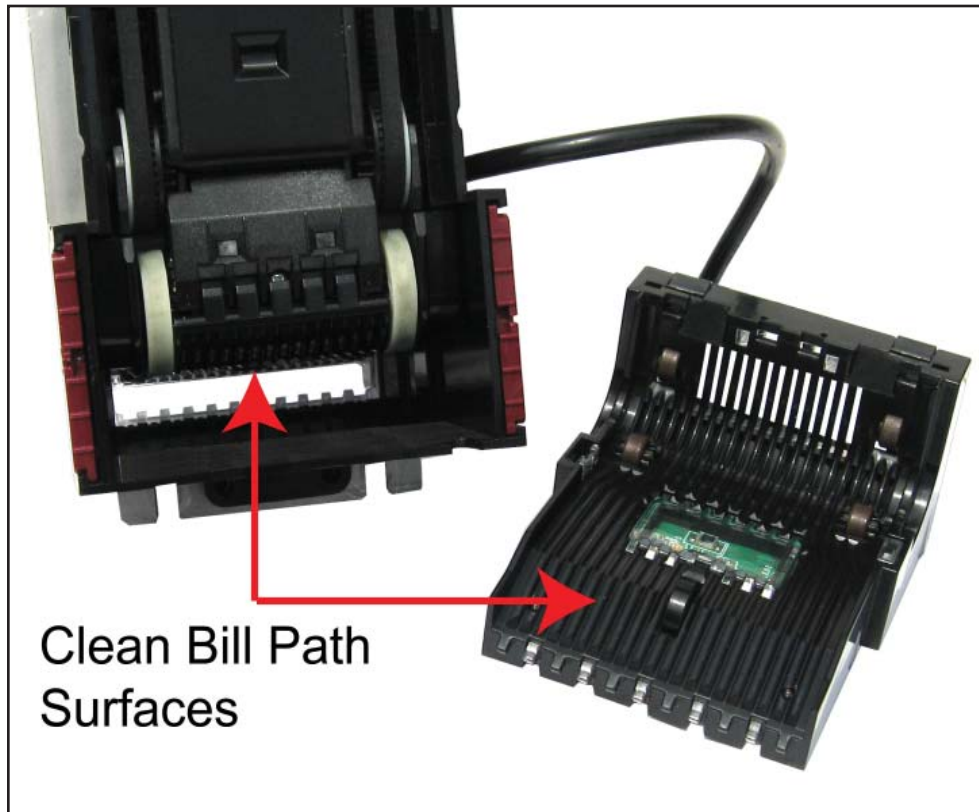
#### Recommended Cleaning Material

A mild solution of detergent can be used for cleaning the belts, bill path and sensor lenses, as well as for general cleaning of the bill acceptor. Beverages or other water-soluble liquids which have been spilled on or into the bill acceptor can usually be removed with warm soapy water. External surfaces can be cleaned with a damp cloth.

**Note:** *Petroleum-based cleaners and freon-based propellants can damage plastic and some electronic components. Scouring pads and stiff brushes may harm circuit boards and can mar the plastic. These items should never be used to clean the bill acceptor.*

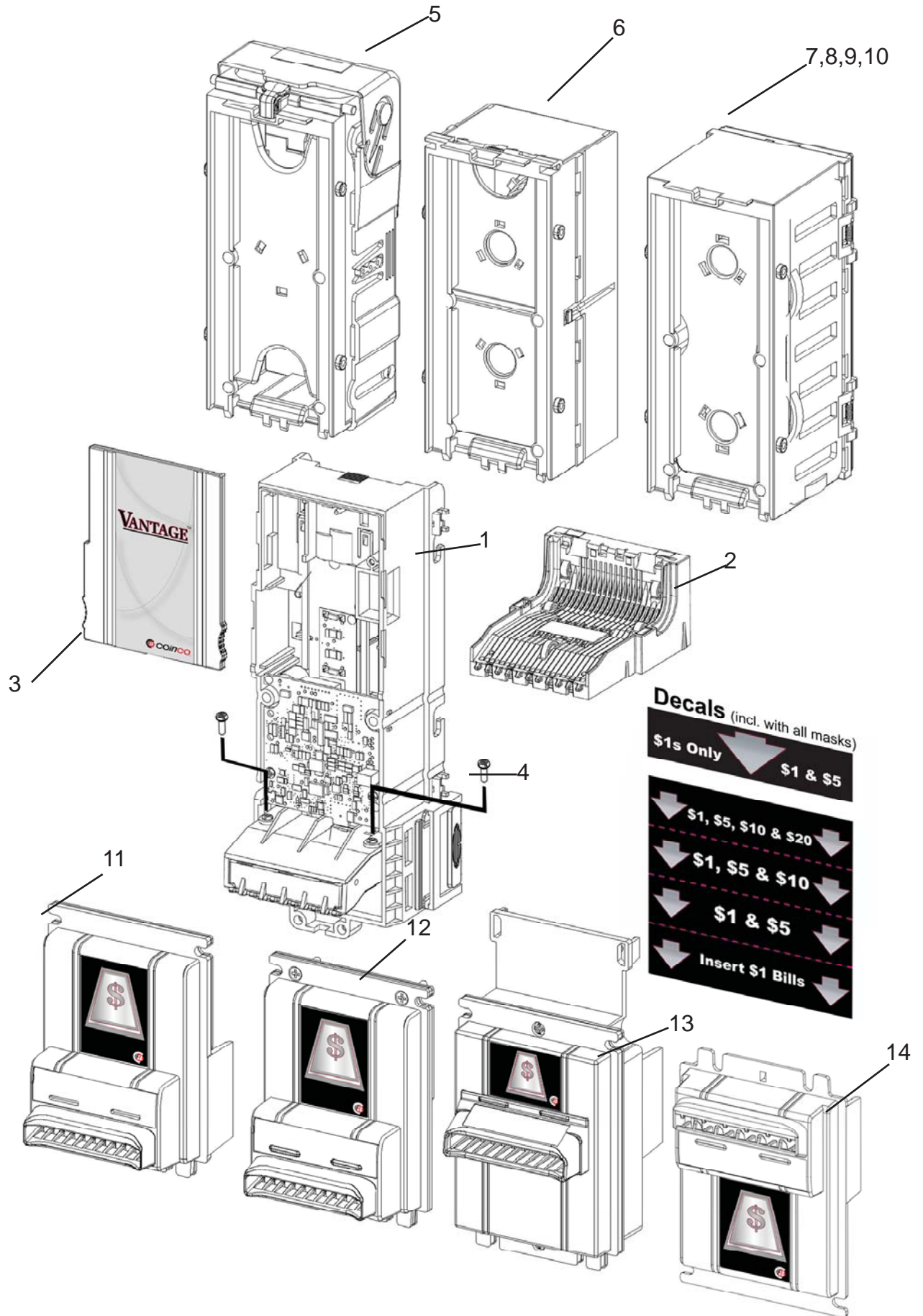
#### Cleaning the Vantage

The Vantage should be cleaned every 20,000 bills or every two years (or as needed, depending on the environmental conditions of the location). Dust can be removed with a soft brush or cloth or it can be blown out using compressed air.



# SECTION 5: PARTS LIST

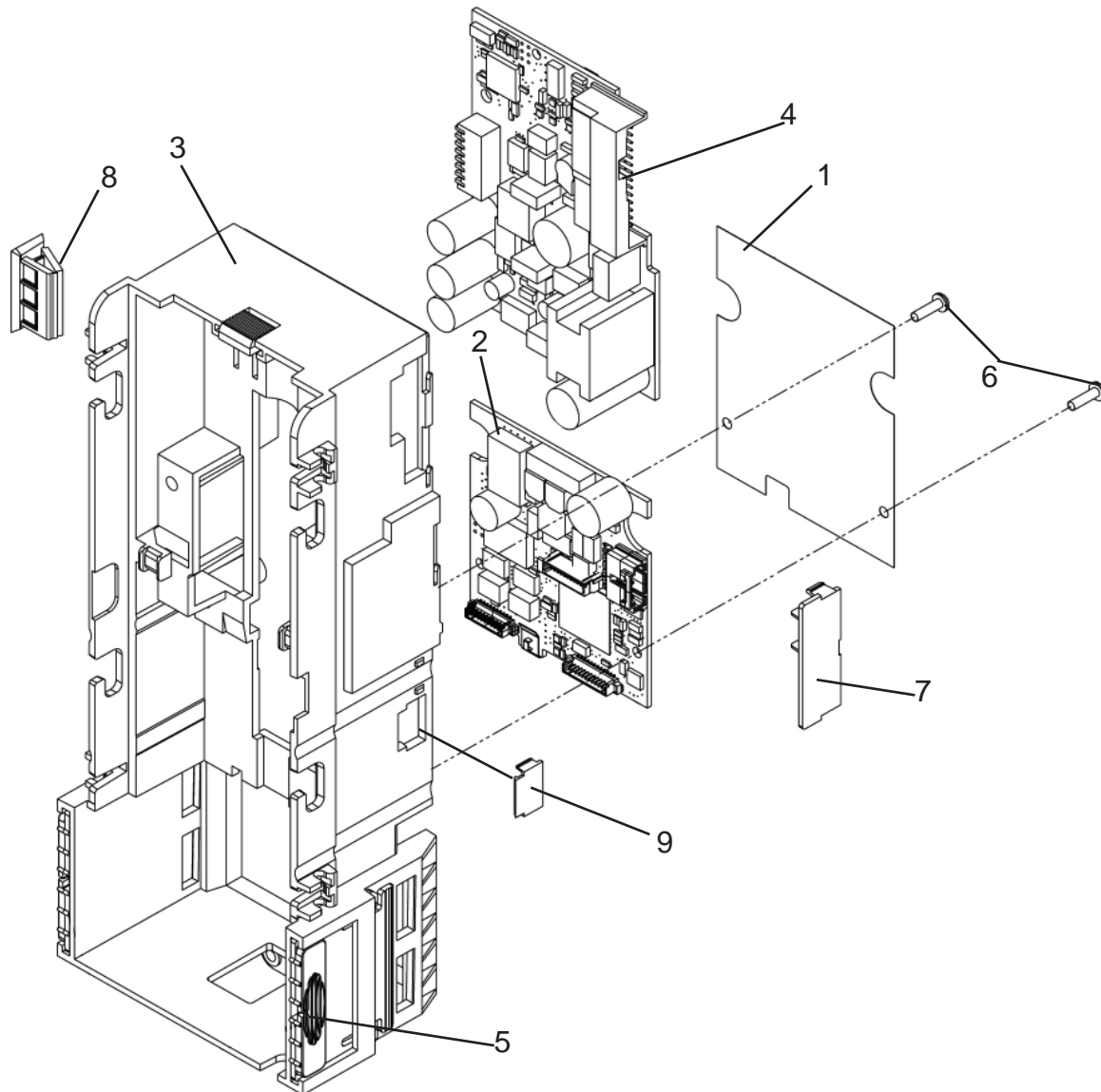
## MAINFRAME ASSEMBLY, CASHBOXES, & MASKS



## SECTION 5: PARTS LIST

ITEM #	PART #		DESCRIPTION	QTY	NOTES
	US	CAN			
1	410182 410182-1	410483 410183-1	Mainframe Assembly - MDB Mainframe Assembly - Amusement	1 1	Includes 409400 Includes 409400-1 & 409406-1
2	410035	410083	Lower Housing Assembly	1	
3	410159		Front Cover - Mainframe	1	
4	345-4R6		Screw	2	
5	410160	NA	<u>Cashbox Assembly</u> FlexStack™ (200 - 500 Note)	1	
6	410161	410816	300 Note		
7	410162	410815	400 Note		
8	410163	NA	700 Note		
9	410164	NA	900 Note		
10	410165	NA	1100 Note		
11	410166	410179	<u>Inlet Bezel Assembly</u> Basic	1	
12	410167	NA	Basic - Metal		
13	410168	410181	Slimline		
14	410169	NA	Downstack		

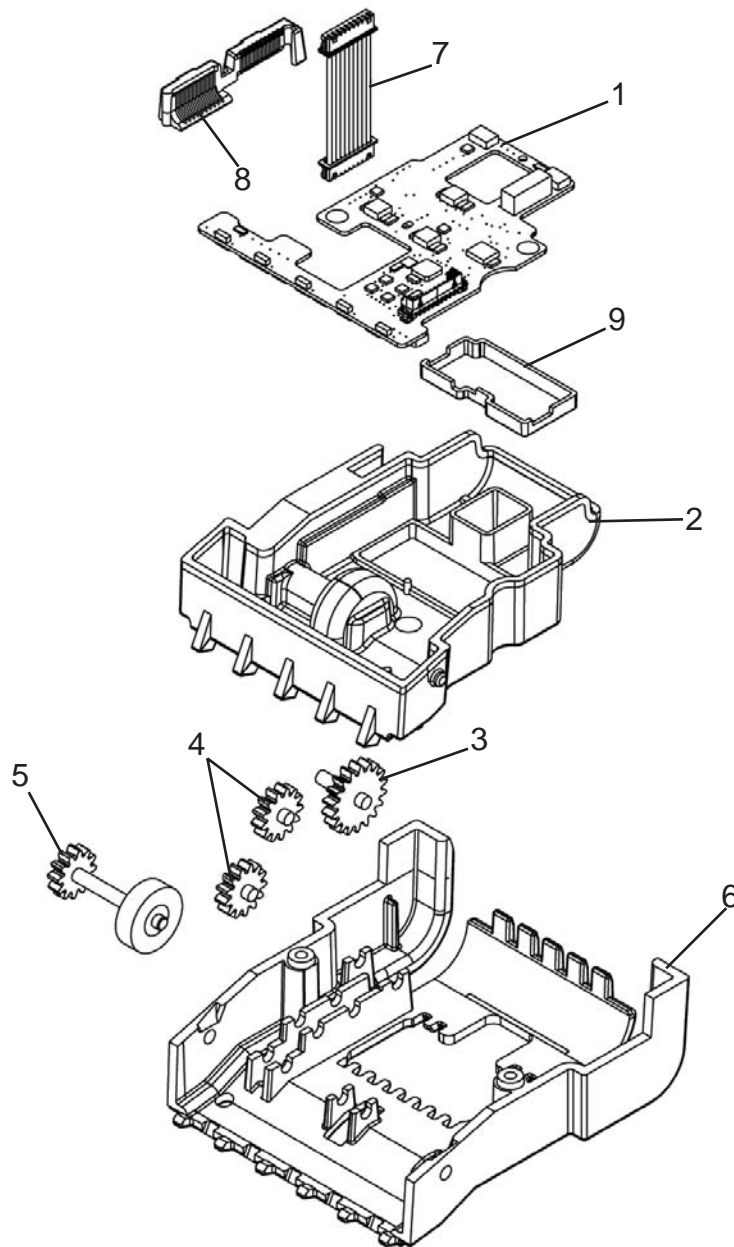
## MAINFRAME &amp; MAIN LOGIC BOARDS



ITEM #	PART #		DESCRIPTION	QTY	NOTES
	US	CAN			
1	926325		Main Logic Board Insulator - 110VAC	1	
	927494		Main Logic Board Insulator - All Others	1	
2	409400		Main Logic Board - MDB	1	MDB Only
	409400-1		Main Logic Board Amusement	1	Use with 409406-1
3	410042	410085	Mainframe	1	Includes Item #5
4	409405		24VAC Logic Board - Legacy	1	Use with 409400
	409406		110VAC Logic Board - Legacy	1	Use with 409400
	409406-1		110VAC Amusement Logic Board	1	Use with 409400-1
5	927905		Quick Release Finger	2	
6	345-4R6		Screw	2	
7	928032		30 Pin Cover	1	MDB Only
8	928031		Dip Switch Cover	1	MDB Only
9	928038		MDB Cover	1	Amusement Only

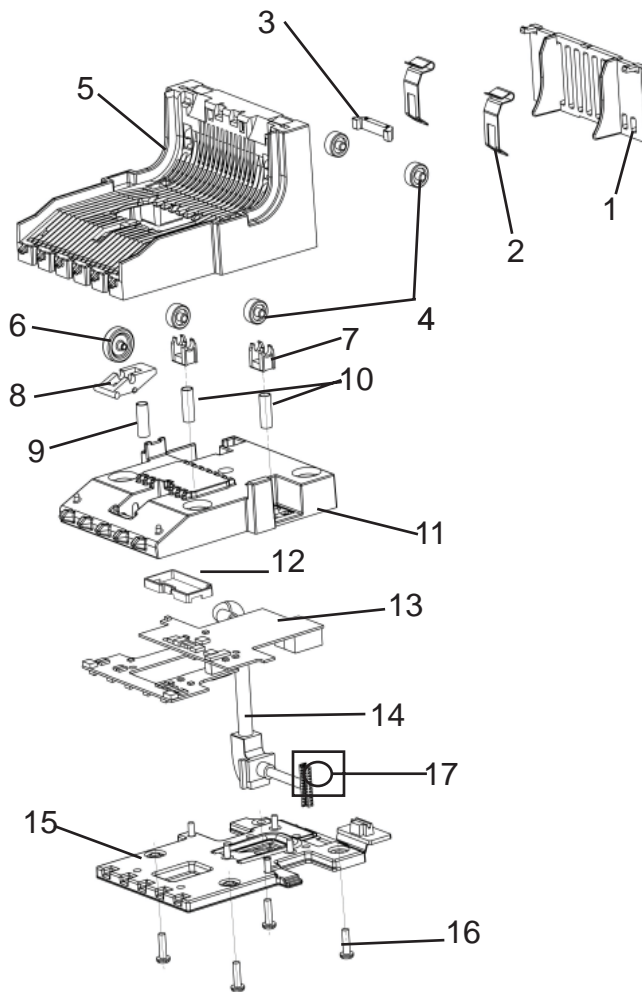


## UPPER SENSOR BOARD &amp; UPPER HOUSING ASSEMBLY



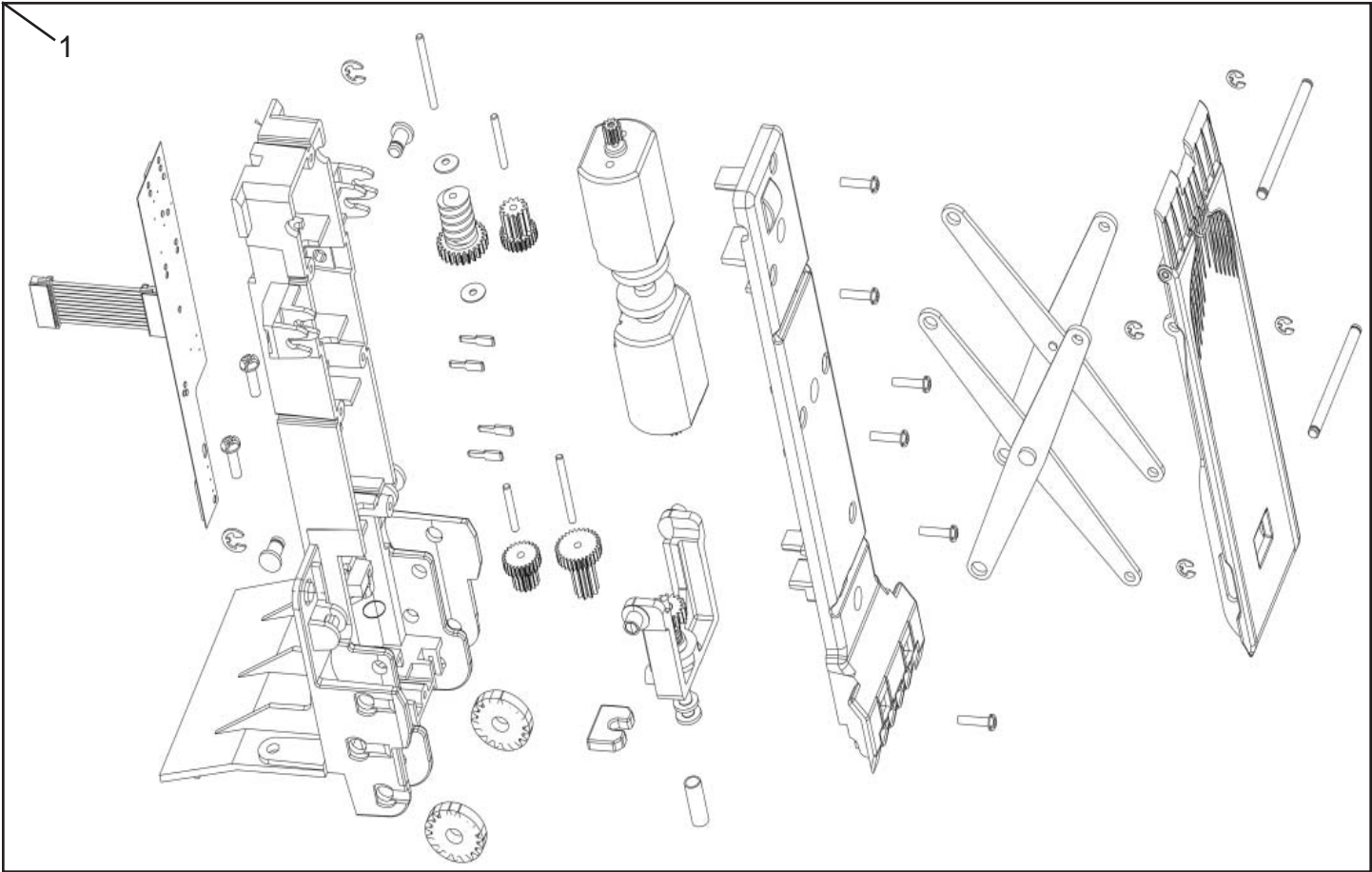
ITEM #	PART #		DESCRIPTION	QTY	NOTES
	US	CAN			
1	409401		Upper Sensor Board Assembly	1	
2	927230		Upper Enclosure	1	
3	927011		Inlet Gear, 18 tooth	1	
4	927012		Inlet Gear, 13 tooth	2	
5	410036		Inlet Roller Assembly	1	
6	927229	928000	Upper Housing	1	
7	409413		Upper Sensor Harness	1	
8	927924		Harness Grommet	1	
9	927511		Validation Shroud	1	

## LOWER HOUSING ASSEMBLY

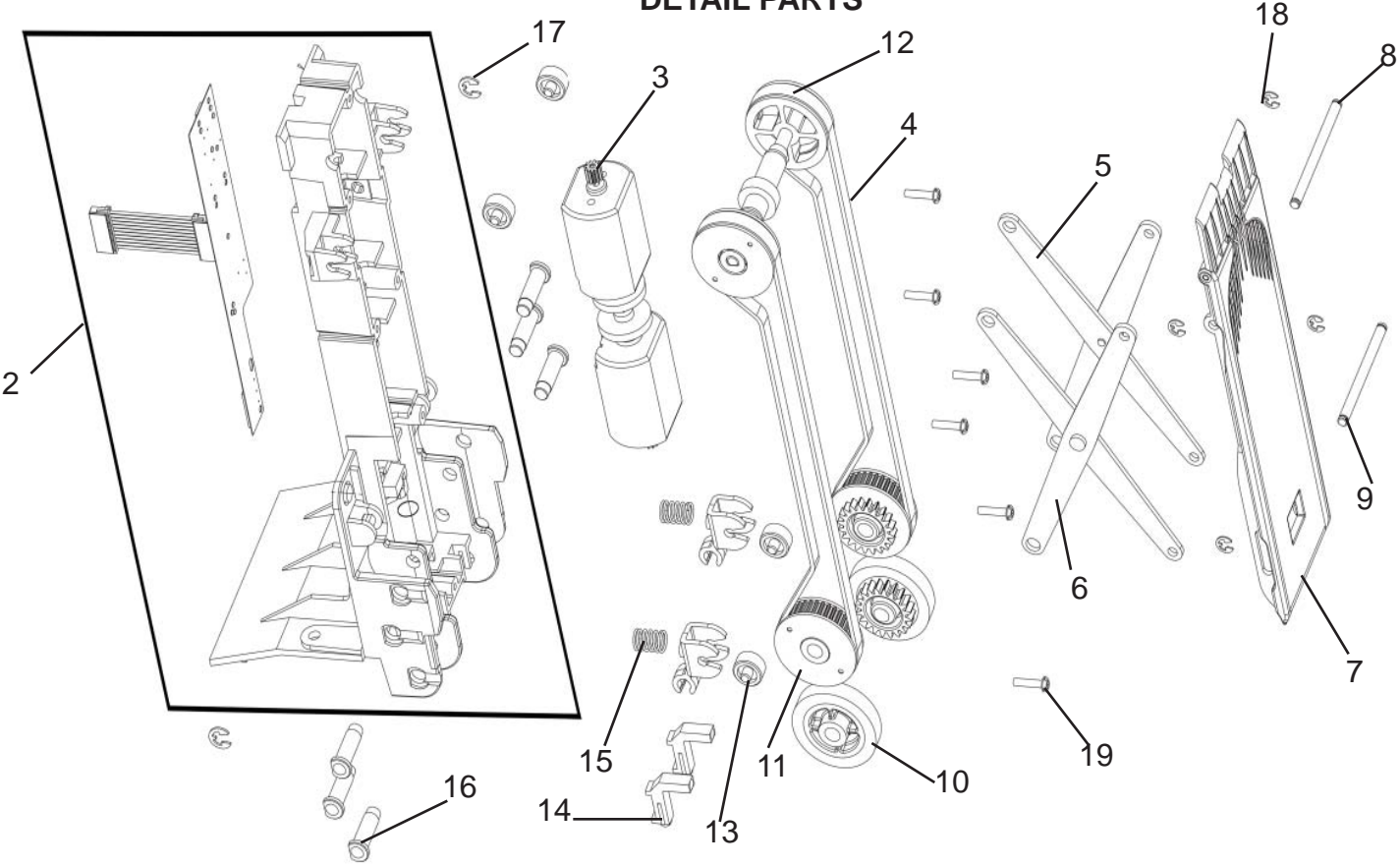


ITEM #	PART #		DESCRIPTION	QTY	NOTES
	US	CAN			
1	927916	927998	Lower Housing Back Cover	1	
2	927236		Flat Pinch Spring	2	
3	925594		Light Pipe	1	
4	171730		Pinch Roller	4	
5	927045	927995	Lower Housing	1	
6	927238		Inlet Roller	1	
7	927933		Roller Housing	2	
8	927239		Inlet Roller Retainer	1	
9	927237		Inlet Coil Spring	1	
10	927235		Coil Spring	2	
11	927046	927996	Lower Enclosure	1	
12	927511		Validation Shroud	1	
13	409402	409434	Lower Sensor Board Assembly	1	
14	409414		Lower Sensor Harness	1	
15	927234	927997	Bottom Cover	1	
16	345-4R6		Screw	4	
17	927272		Mode Button	1	

CHASSIS GEAR CASE ASSEMBLY - 410170



DETAIL PARTS



ITEM #	PART #		DESCRIPTION	QTY	NOTES
	US	CAN			
1	410170		Chassis Gear Case Assembly	1	
2	410003		Chassis Board Assembly	1	
3	410026		Motor Assembly	2	
4	927205		Belt	2	
5	410031		Right Scissors Assembly	1	
6	410031-1		Left Scissors Assembly	1	
7	410055		Push Plate Assembly	1	
8	927043		Top Push Plate Shaft	1	
9	927044		Bottom Push Plate Shaft	1	
10	927023		Transport Drive Roller	2	
11	410029		Pulley, Gear Assembly	2	
12	410028		Drive Pulley Assembly	2	
13	171730		Pinch Roller	4	
14	927202		Belt Tensioner	2	
15	927038		Belt Tension Spring	2	
16	927245		Pulley Shaft	6	
17	927223		E-Ring	2	
18	927222		E-Ring	4	
19	345-2R6		Screw	6	
20	TBD		Chassis Gear Case Assembly	1	Entire Assembly as Shown

## Vantage Series - PC Boards and Harnesses

PC Boards			Standard Interface Harness		
Boards	Model	Part No.	Application	Type	Part No.
<b>Main Logic + MDB</b>	All but VAx1	<b>409400</b>	MDB	MDB 6 pin	<b>409415</b>
	VAx1	<b>409400-1</b>	See 110VAC Amusement (below)		
<b>110VAC Legacy</b>	VLx1	<b>409406</b>	110VAC High Level Pulse	9 pin	<b>408732-1</b>
<b>24VAC Legacy</b>	VLx2	<b>409405</b>	24VAC High Level Pulse	9 pin	<b>408731-1</b>
<b>110VAC Amusement</b>	VAx1	<b>409406-1</b>	110VAC Pulse	9 pin	<b>408732-1</b>
<b>Upper Sensor</b>	All	<b>409401</b>	Not Applicable		
<b>Lower Sensor</b>	All	<b>409402</b>	Not Applicable		
<b>Chassis / Motor</b>	All	<b>409403</b>	Not Applicable		

## Vantage Series - Optional Harnesses

PC Boards			Optional Interface Harness		
Boards	Model	Part No.	Application	Type	Part No.
<b>110VAC Legacy</b>	VLx1	<b>409406</b>	110VAC High Level Pulse	<b>Jones</b> (single price)	<b>408737</b>
				<b>4 pin</b> (single price)	<b>408738</b>
			110VAC Low Lvl Pulse	12 pin	<b>408739</b>

## Vantage Series - Optional Kits & Accessories

Description	Part No.	Includes	Typical Application
<b>110V Adapter</b>	<b>410061</b>	Bracket, labels, hardware, and 110V harness with plug	For mounting in wooden amusement cabinets
<b>Amusement Adapter</b>	<b>410063</b>	Bracket	Adds outer lower side mounting attach points
<b>Mounting Adapter</b>	<b>406575</b>	Painted metal frame with mounting studs, nuts	For mounting in specialized applications
<b>Mounting Adapter</b>	<b>408752-1</b>	Painted metal frame with couplers and extension studs	For mounting 72mm Basic versions in snack models
<b>Metal Bezel</b>	<b>410167</b>	Metal bezel, upper decal, mounting plate + hardware, Smart Bezel™ & \$1-\$20 inlet decals	For higher risk locations
<b>Tamper Evident Locking Hasp</b>	<b>410002</b>	Two piece, snap-on assembly	Locking flanges restrict access for 300, 400, 700, 900, and 1100 cashboxes



**110V Adapter**  
Kit #410061



**Amusement Adapter**  
Kit #410063



**Mounting Adapter**  
Kit #406575



**Adapter Bracket**  
Kit #408752-1


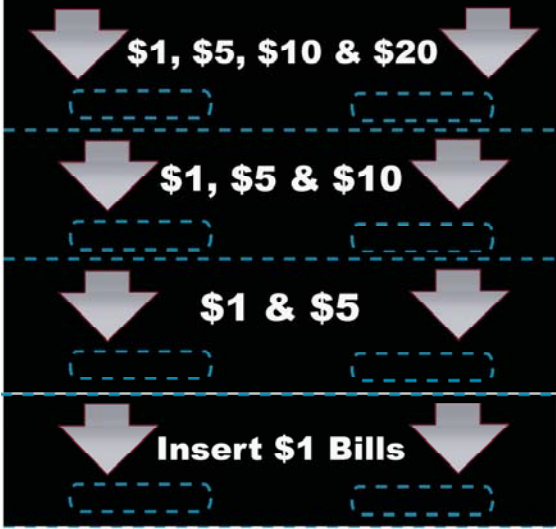



**Metal Bezel**  
Kit #410167





**Tamper Evident Locking Hasp**  
(lock not included)  
Kit #410002

# Vantage Mask Inlet Decals - US


Basic / Downstack	Slimline
 <p>Part # 928508 Basic Part # 928508-1 Downstack</p>	 <p>Part # 928507</p>
 <p>Part # 928509 Basic Part # 928509-1 Downstack</p>	 <p>Part # 928511</p>
 <p>Part # 928510 Basic Part # 928510-1 Downstack</p>	 <p>Part # 928512</p>

# Vantage Mask Inlet Decals - Canada

Basic	Slimline
 <p><b>Part # 928518</b></p>	 <p><b>Part # 928520</b></p>
 <p><b>Part # 928513</b></p>	 <p><b>Part # 928514</b></p>
 <p><b>Part # 928515</b></p>	 <p><b>Part # 928516</b></p>
 <p><b>Part # 928517</b></p>	 <p><b>Part # 928509</b></p>



# Vantage Decals - Other



**#928027**

**Diagnostic Flash Codes**

● Unit OK (Solid)	● x 1 Clean Unit
● x 1 Coupon Teach	● x 2 Service Unit
● x 2 Service Mode	● x 1 Cashbox Full
	● x 2 Clear Bill Path
	● x 3 Out of Service

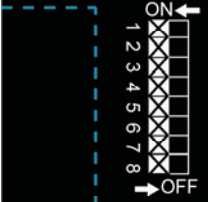
**Validator Status LED**

**#927503**

Pulse Timing	Sw 1	Sw 2
50 / 50mS	ON	ON
150 / 150mS	ON	OFF
Custom	OFF	ON
Parallel (credit line)	OFF	OFF

**Switch 3**

4 pulse per \$	ON
1 pulse per \$	OFF



**Switch 4**

Always Enabled	ON
Host Enabled	OFF

**Switch 5**

Serial	ON
Pulse	OFF

**Switch 6**

Reserved

**Switch 7**



Reserved

**Switch 8**

Reserved

**#927505**

# Vantage Decals – Upper Mask

Basic / Downstack	Slimline
 <p><b>#928023</b></p>	 <p><b>#928024</b></p>

## SECTION 6: TECHNICAL INFORMATION

### Input Power and Interfaces

Model #	Nominal Voltage	Minimum Requirement	Amps	Interface
V <sub>Ax1</sub>	110VAC	90-135VAC; 47-63Hz	12W / 0.1A rms (avg.) Idle; 25W / 0.4A rms (avg.) Operating; 40W / 0.7A rms (max) Stall / Full	Amusement Pulse, Vend Serial
V <sub>Lx1</sub>				Pulse, Parallel, Vend Serial
V <sub>Lx2</sub>	24VAC	18-30VAC; 47-63Hz	4W / 0.3A rms (avg.) Idle; 25W / 1.8A rms (avg.) Operating; 40W / 2.5A rms (max) Stall / Full	Pulse, Parallel, Vend Serial
V <sub>Xx3</sub>	34VDC	20-45VDC	4W / 0.2A (avg.) Idle; 25W / 1.2A (avg.) Operating; 40W / 1.8A (max) Stall / Full	MDB

### Specifications

#### Operating Temperature

0°F to 150°F  
-18°C to 65°C

#### Storage Temperature

-22°F to 160°F  
-30°C to 72°C

#### Relative Humidity

20% to 95% non-condensing

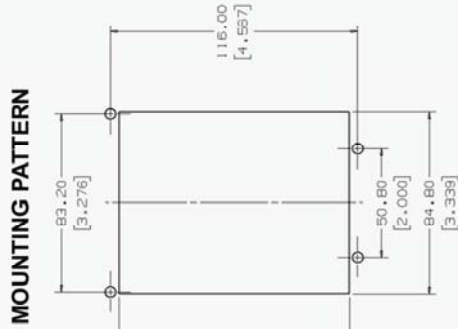
#### Shipping Weight in Carton

Approximately 4 lbs. or 1.81 kilograms

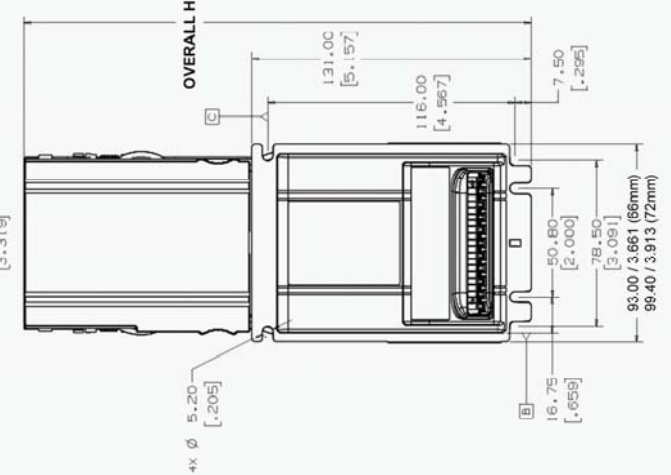
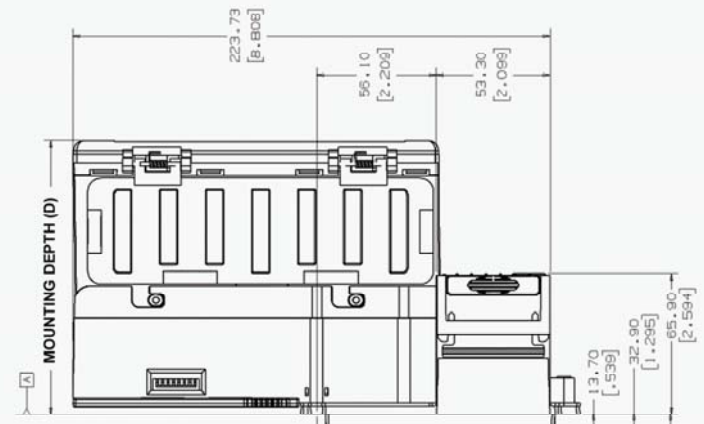
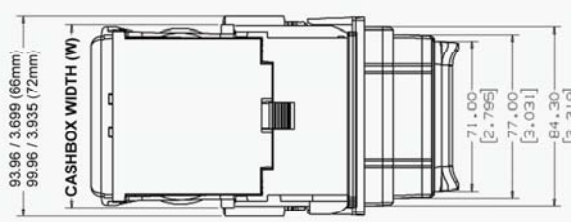
Dimensional Drawings

# Basic & Downstack Bezels

mm (inches)

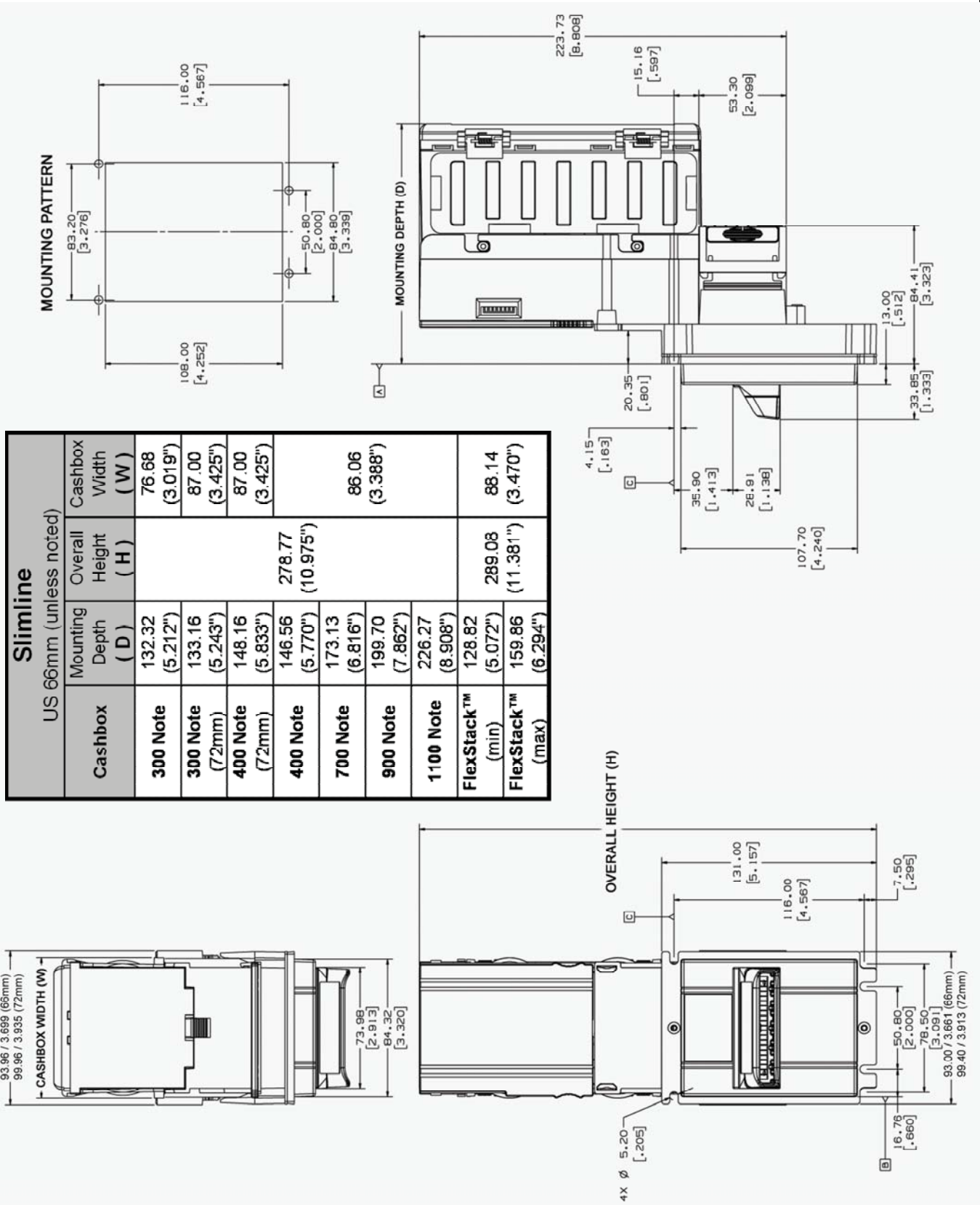


Basic & Downstack US 66mm (unless noted)		
Cashbox	Mounting Depth (D)	Overall Height (H)
300 Note	113.87 (4.483")	76.68 (3.019")
300 Note (72mm)	114.65 (4.514")	87.00 (3.425")
400 Note (72mm)	129.65 (5.104")	87.00 (3.425")
400 Note	128.06 (5.042")	237.83 (9.363")
700 Note	154.63 (6.088")	86.06 (3.388")
900 Note	181.20 (7.134")	
1100 Note	207.77 (8.180")	
FlexStack™ (min)	110.32 (4.343")	248.14 (9.769")
FlexStack™ (max)	141.36 (5.565")	88.14 (3.470")

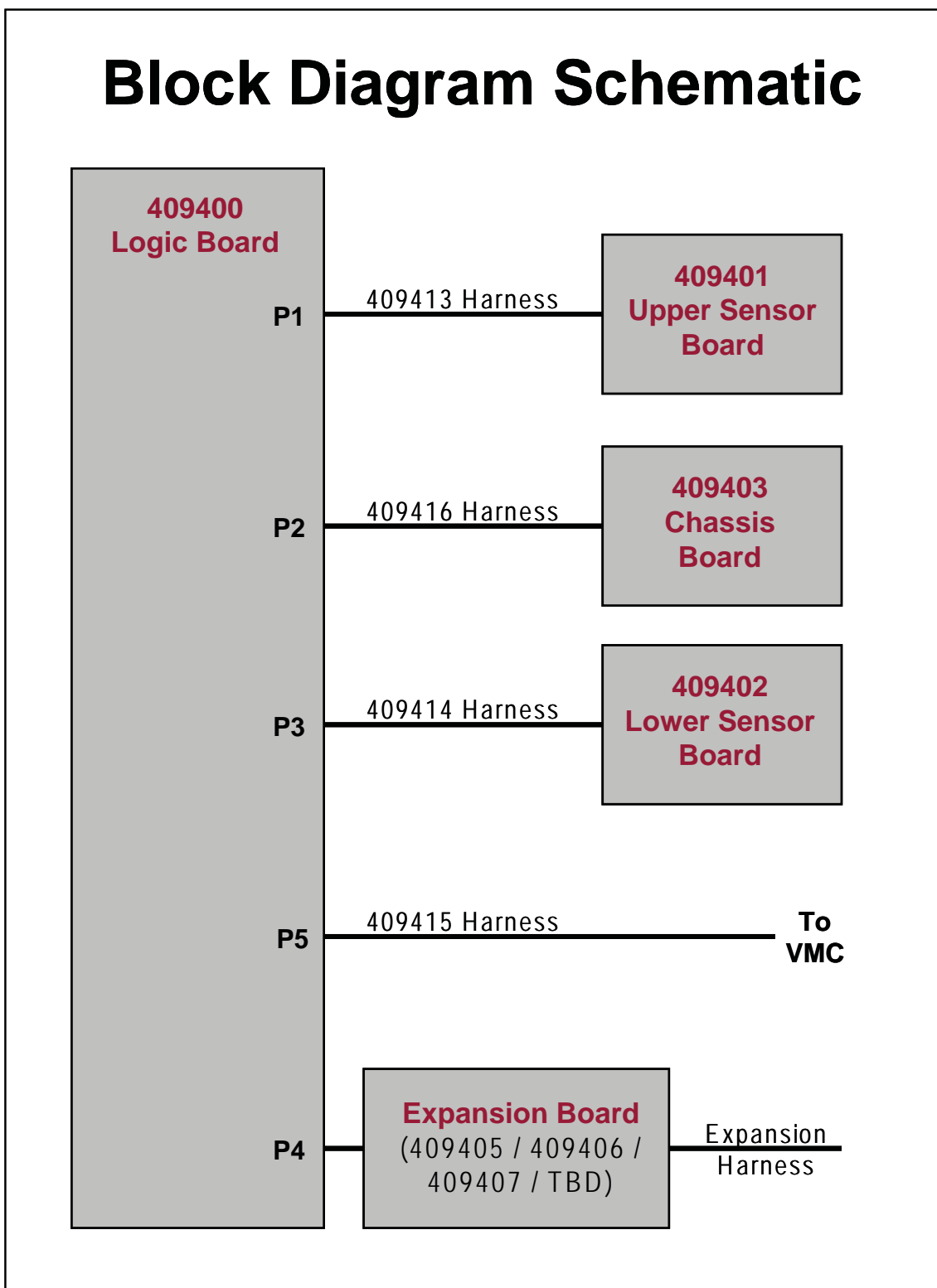


# Slimline Bezel

mm (inches)



# Block Diagram Schematic



## 30 Pin Mating Connector

Receptacle Housing: AMP 1-104482-3

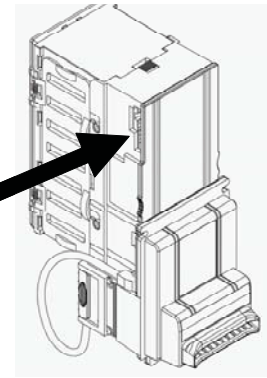
Receptacle Pins: AMP 104479-2

Receptacle Polarizing Pins: AMP 87077-2

Pin 15 Pin30



Pin 1 Pin16



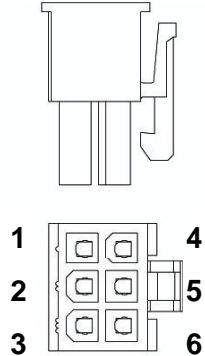
30 Pin #	18 Pin #	Models		
		VLx1 (110VAC)	VLx2 (24VAC)	VAx1 (110VAC)
1		CREDIT RELAY COM	CREDIT RELAY COM	CREDIT RELAY COM
2		<i>Not Used</i>	CREDIT RELAY HOT	<i>Not Used</i>
3		NEUTRAL ENABLE	24VAC HOT	<i>Not Used</i>
4		110VAC NEUTRAL	HOT ENABLE	110VAC NEUTRAL
5		NEUTRAL INHIBIT	KEY	<i>Not Used</i>
6		KEY	<i>Not Used</i>	KEY
7	1	CREDIT_1DOLLAR & CREDIT PULSE	Same	<i>Not Used</i>
8	2	INTERRUPT	Same	INTERRUPT
9	3	CREDIT_5DOLLAR & SERIAL/PULSE	Same	Same
10	4	SIGNAL GROUND	Same	Same
11	5	DATA & SERIAL TXD	Same	Same
12	6	ESCROW HIGH	Same	<i>Not Used</i>
13	7	ENABLE 5DOLLAR HIGH	Same	<i>Not Used</i>
14	8	ENABLE 2DOLLAR HIGH	Same	<i>Not Used</i>
15	9	ENABLE 1DOLLAR HIGH	Same	<i>Not Used</i>
16		CREDIT RELAY NO	DC RETURN	CREDIT RELAY NO
17		<i>Not Used</i>	NEUTRAL INHIBIT	<i>Not Used</i>
18		HOT ENABLE	NEUTRAL ENABLE	<i>Not Used</i>
19		KEY	<i>Not Used</i>	KEY
20		110VAC HOT	24VAC NEUTRAL	110VAC HOT
21		EARTH GROUND	KEY	EARTH GROUND
22	10	OUT OF SERVICE	Same	<i>Not Used</i>
23	11	<i>Not Used</i>	Same	<i>Not Used</i>
24	12	ACCEPT ENABLE	Same	Same
25	13	CREDIT_2DOLLAR & OUT_OF_SERV_POWER	Same	<i>Not Used</i>
26	14	SEND & SERIAL RXD	Same	Same
27	15	ENABLE 1DOLLAR LOW	Same	<i>Not Used</i>
28	16	ENABLE 2DOLLAR LOW	Same	<i>Not Used</i>
29	17	ENABLE 5DOLLAR LOW	Same	<i>Not Used</i>
30	18	ESCROW LOW	Same	<i>Not Used</i>

# Harness Connectors

## 6 Pin – 34VDC MDB

Molex 39-01-2060

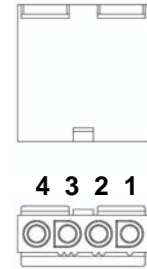
Pin #	MDB 6 Pin
1	MDB 34VDC
2	DC RETURN
3	-
4	MDB MASTER RX
5	MDB MASTER TX
6	MDB SIGNAL COM



## 4 Pin – 110VAC Single Price

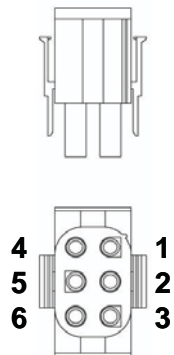
Molex 19-09-2049

Pin #	110VAC Single Price 4pin
1	110VAC HOT
2	110VAC NEUTRAL
3	HOT_ENABLE
4	NEUTRAL_INHIBIT



## 6 Pin – Single Price Pulse Credit

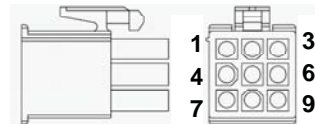
AMP 1-480704-0



Pin #	Single Price Pulse Credit 6pin
1	CREDIT_RELAY_NO
2	CREDIT_RELAY_COM
3	-
4	-
5	-
6	-

## 9 Pin – 24VAC / 110VAC High Level Pulse

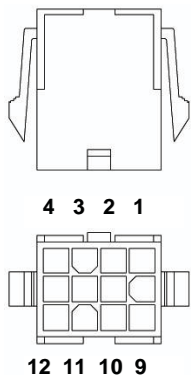
AMP / Tyco 172169-1



Pin #	24VAC Isolated High Level Pulse 9 Pin	110VAC Isolated High Level Pulse 9 Pin
1	NEUTRAL_INHIBIT	NEUTRAL_INHIBIT
2	NEUTRAL_ENABLE	NEUTRAL_ENABLE
3	HOT_ENABLE	HOT_ENABLE
4	-	110VAC_HOT
5	24VAC_HOT	-
6	24VAC_NEUTRAL	110VAC_NEUTRAL
7	CREDIT_RELAY_NO	CREDIT_RELAY_NO
8	CREDIT_RELAY_COM	CREDIT_RELAY_COM
9	-	-

## 12 Pin – 110VAC Low Level Pulse

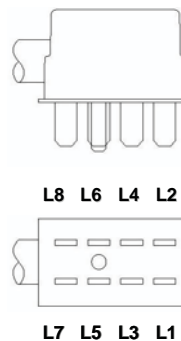
AMP 172162-1



Pin #	110VAC Isolated Low Level Pulse 12pin
1	110VAC_HOT
2	110VAC_NEUTRAL
3	ENABLE_5DOLLAR_HIGH
4	CREDIT_RELAY_NO
5	CREDIT_RELAY_COM
6	ESCROW_LOW
7	ENABLE_1DOLLAR_HIGH
8	ENABLE_1DOLLAR_LOW
9	ESCROW_HIGH
10	ENABLE_2DOLLAR_HIGH
11	ENABLE_2DOLLAR_LOW
12	ENABLE_5DOLLAR_LOW

## Single Price Jones Plug

Coinco #920327-1LF



Pin #	110VAC Single Price Jones Plug
1	110VAC_HOT
2	110VAC_NEUTRAL
3	-
4	-
5	NEUTRAL_INHIBIT
6	HOT_ENABLE
7	-
8	-

# Standard Cashboxes & Inlet Decals

Amusement	MDB	Legacy
<p><b>VA6XX 4 (\$1 - \$20)</b></p> <ul style="list-style-type: none"> <li>• Impulse Lighting enabled</li> <li>• 400 note cashbox</li> <li>• Decals in bag assembly</li> </ul> 	<p><b>VX6XX 2XUS (\$1 - \$5)</b></p> <ul style="list-style-type: none"> <li>• Smart Bezel™ enabled / decal</li> <li>• FlexStack™ cashbox</li> </ul>  <p>Defaults to enabled bills for non-vending applications.</p> <p>Decal in bag assembly</p>	<p><b>VL6XX 2XUS (\$1 - \$5)</b></p> <ul style="list-style-type: none"> <li>• Smart Bezel™ enabled / decal</li> <li>• FlexStack™ cashbox</li> </ul>  <p>Defaults to enabled bills for non-vending applications.</p> <p>Decal in bag assembly</p>
<p><b>VA6XX 6 (\$1 - \$100)</b></p> <ul style="list-style-type: none"> <li>• Impulse Lighting enabled</li> <li>• 400 note cashbox</li> <li>• Decals in bag assembly</li> </ul>  <p>Other decals available as Service Parts</p>	<p><b>VX6XX 4XUS (\$1 - \$20)</b></p> <ul style="list-style-type: none"> <li>• Impulse Lighting enabled</li> <li>• FlexStack™ cashbox</li> </ul> 	<p><b>VL6XX 4XUS (\$1 - \$20)</b></p> <ul style="list-style-type: none"> <li>• Impulse Lighting enabled</li> <li>• FlexStack™ cashbox</li> </ul> 
<p><b>VX7XX 3XCA (\$5 - \$20)</b></p> <ul style="list-style-type: none"> <li>• Smart Bezel™ enabled / decal</li> <li>• 400 note cashbox</li> </ul>  <p>Defaults to enabled bills for non-vending applications.</p> <p>Decal in bag assembly</p>	<p><b>VL7XX 3XCA (\$5 - \$20)</b></p> <ul style="list-style-type: none"> <li>• Impulse Lighting enabled</li> <li>• 400 note cashbox</li> </ul> 	

Note: Smart Bezel™ decal available as Service Part for all models



# Factory Default Settings

## Amusement 110VAC

VA61x4xUS (\$1-\$20)

Configuration				
\$1	\$5	\$10	\$20	
ON	ON	ON	ON	1
Coupons	High Security	Impulse Lighting	Smart Bezel™	2
ON	OFF	ON	OFF	
Acceptance:4 Way		\$50	\$100	3
1 Way	2 Way			
ON	ON	NA	NA	
Lvl 3 Security	Reserved			4
OFF	OFF	OFF	OFF	

VA61x6xUS (\$1-\$100)

Configuration				
\$1	\$5	\$10	\$20	
ON	ON	ON	ON	1
Coupons	High Security	Impulse Lighting	Smart Bezel™	2
ON	OFF	ON	OFF	
Acceptance:4 Way		\$50	\$100	3
1 Way	2 Way			
ON	ON	ON	ON	
Lvl 3 Security	Reserved			4
OFF	OFF	OFF	OFF	

Same for both

Dip Switch Setting		
Switch	ON	OFF
1	ON	
2	ON	
50 / 50 mS		
3	4 Pulse/\$	1 Pulse/\$
4	Always Enabled	Host Enabled
5	Serial	Pulse
6 - 8	Reserved	

## Legacy 110VAC

VL61x2xUS (\$1-\$5)

Configuration				
\$1	\$5	\$10	\$20	
ON	OFF	NA	NA	1
Coupons	High Security	Impulse Lighting	Smart Bezel™	2
ON	OFF	OFF	ON	
Acceptance:4 Way		\$50	\$100	3
1 Way	2 Way			
ON	ON	NA	NA	
Lvl 3 Security	Reserved			4
OFF	OFF	OFF	OFF	

VL61x4xUS (\$1-\$20)

Configuration				
\$1	\$5	\$10	\$20	
ON	OFF	OFF	OFF	1
Coupons	High Security	Impulse Lighting	Smart Bezel™	2
ON	OFF	ON	OFF	
Acceptance:4 Way		\$50	\$100	3
1 Way	2 Way			
ON	ON	NA	NA	
Lvl 3 Security	Reserved			4
OFF	OFF	OFF	OFF	

VL71x3xCA (\$5-\$20)

Configuration				
\$1	\$5	\$10	\$20	
OFF	ON	OFF	OFF	1
Coupons	High Security	Impulse Lighting	Smart Bezel™	2
ON	OFF	ON	OFF	
Acceptance:4 Way		\$50	\$100	3
1 Way	2 Way			
ON	ON	NA	NA	
Lvl 3 Security	Reserved			4
OFF	OFF	OFF	OFF	

Note: Dip switch settings same as Legacy 24VAC (show below).

## Legacy 24VAC

VL62x2xUS (\$1-\$5)

Configuration				
\$1	\$5	\$10	\$20	
ON	OFF	NA	NA	1
Coupons	High Security	Impulse Lighting	Smart Bezel™	2
ON	OFF	OFF	ON	
Acceptance:4 Way		\$50	\$100	3
1 Way	2 Way			
ON	ON	NA	NA	
Lvl 3 Security	Reserved			4
OFF	OFF	OFF	OFF	

VL62x4xUS (\$1-\$20)

Configuration				
\$1	\$5	\$10	\$20	
ON	OFF	OFF	OFF	1
Coupons	High Security	Impulse Lighting	Smart Bezel™	2
ON	OFF	ON	OFF	
Acceptance:4 Way		\$50	\$100	3
1 Way	2 Way			
ON	ON	NA	NA	
Lvl 3 Security	Reserved			4
OFF	OFF	OFF	OFF	

Same for both

Dip Switch Setting		
Switch	ON	OFF
1	ON	
2	ON	
50 / 50 mS		
3	4 Pulse/\$	1 Pulse/\$
4	Always Enabled	Host Enabled
5	Serial	Pulse
6 - 8	Reserved	

# Factory Default Settings

## MDB 34VDC

VX63x2xUS (\$1-\$5)

Configuration				
\$1	\$5	\$10	\$20	1
ON	OFF	NA	NA	
Coupons	High Security	Impulse Lighting	Smart Bezel™	2
ON	OFF	OFF	ON	
Acceptance:4 Way		\$50	\$100	3
1 Way	2 Way			
ON	ON	NA	NA	
Lvl 3 Security	Reserved			4
OFF	OFF	OFF	OFF	

VX63x4xUS (\$1-\$20)

Configuration				
\$1	\$5	\$10	\$20	1
ON	OFF	OFF	OFF	
Coupons	High Security	Impulse Lighting	Smart Bezel™	2
ON	OFF	ON	OFF	
Acceptance:4 Way		\$50	\$100	3
1 Way	2 Way			
ON	ON	NA	NA	
Lvl 3 Security	Reserved			4
OFF	OFF	OFF	OFF	

VX73x3xCA (\$5-\$20)

Configuration				
\$1	\$5	\$10	\$20	1
NA	ON	OFF	OFF	
Coupons	High Security	Impulse Lighting	Smart Bezel™	2
ON	OFF	OFF	ON	
Acceptance:4 Way		\$50	\$100	3
1 Way	2 Way			
ON	ON	NA	NA	
Lvl 3 Security	Reserved			4
OFF	OFF	OFF	OFF	

VX73x5xCA (\$5-\$100)

Configuration				
\$1	\$5	\$10	\$20	1
NA	ON	ON	ON	
Coupons	High Security	Impulse Lighting	Smart Bezel™	2
ON	OFF	ON	OFF	
Acceptance:4 Way		\$50	\$100	3
1 Way	2 Way			
ON	ON	ON	ON	
Lvl 3 Security	Reserved			4
OFF	OFF	OFF	OFF	

Note: MDB versions do not have dip switches.



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