

# MEI CASHFLOW<sup>©</sup> 2612 NOTE VALIDATOR



# **ENGINEERS HANDBOOK**

#### MEI Cashflow<sup>©</sup> 2612 Note Validator Engineers Handbook

This edition (October 2009)

Internet: http://www.meigroup.com

For further information on editions in other languages please contact your regional sales representative.

©, MEI UK International Ltd., 2009. All rights reserved

Except as permitted under the relevant local legislation, no part of this publication may be copied, transmitted, transcribed, or distributed in any form or by any means, or stored in a database or retrieval system, or translated in any language (natural or computer), without the prior written permission of MEI.

MEI UK International Ltd©, MEI and the MEI device are registered trademarks.

MEI reserves the right to change the product or the product specifications at any time. While every effort has been made to ensure that the information in this publication is accurate, MEI disclaims any liability for any direct or indirect losses (howsoever caused) arising out of use or reliance on this information.

This document does not necessarily imply product availability.

Note: Your product may differ slightly from some of the illustrations in this document.

# **DECLARATION OF CONFORMITY**

# **National & International Standards Conformance**

Cashflow<sup>©</sup> 2612 products operate at Safety Extra Low Voltage Level (SELV) as defined in IEC335/EN60335 'Safety of Household and Similar Appliances'. They may be designed into equipment complying with IEC335/EN60335 or IEC950/EN60950 'Safety of Information Technology Equipment'.

 $Cashflow^{\odot}$  2612 products are of Class 3 construction.

# **Rated Operating Voltage**

The operating voltage of a Cashflow<sup>©</sup> 2612 is stated on the label attached to the product. It must not be used with any power source other than that indicated.

# **Dangerous Environments**

The Cashflow<sup>©</sup> 2612 must not be operated in the presence of flammable gasses, fumes or water.

# **ABOUT THIS HANDBOOK**

#### Overview

The Cashflow<sup>©</sup> 2612 Engineers Handbook contains important information on installing, operating, and maintaining MEI Cashflow<sup>®</sup> Note Acceptors. The Cashflow<sup>®</sup> 2612 Note Acceptors take currency at high acceptance rates and provide a superior level of resistance against specific cheats and frauds.

To obtain the best performance from your MEI Note Acceptor, read this manual and the Installation Guide before installing and using the note acceptor

#### **Product Summary**

The Cashflow<sup>©</sup> 2612 is designed for vending applications using a variety of notes from different countries. It offers enhanced security, one, two-way and four-way acceptance of notes.

# CONTENTS

DECLARATION OF CONFORMITY	
NATIONAL & INTERNATIONAL STANDARDS CONFORMANCE	
RATED OPERATING VOLTAGE	
DANGEROUS ENVIRONMENTS	
ABOUT THIS HANDBOOK	
GENERAL INFORMATION	5
Overview	
Product Summary	
CASHFLOW <sup>©</sup> 2612 Features	
POWER SPECIFICATIONS	5
MODEL NUMBER EXPLANATION	
SERIAL NUMBER EXPLANATION	7
BEZELS	
MAGAZINES	9
LOCKING HASP	
CABLES	
INSTALLATION	
UNDACKING THE NOTE ACCEPTOD	13
MOUNTING THE NOTE ACCEPTOR	
FIVING BDACKET	
DIMENSIONS	
CHANGER CONFIGURATION	
Highest Banknote Value	10
Software	
Payout	
Testing	
WARRANTY	
CONFIGURATION	
FACTORY CONFIGURATION	
SWITCH SETTINGS	
Cashflow <sup>©</sup> 2612 Switch Settings	
Coupon Configuration	
OPERATION	
Functional Overview	
INTERFACES	
General	
IHLP - Isolated High Level Pulse	
ILLP - Isolated Low Level Pulse	
MDB - Multi-Drop Bus (24VAC units only)	
MAINTENANCE	
CLEANING	
STATUS LED	
Exploded Views	
Chassis assembly	
LED HOUSING ASSEMDLY	
Stacker/drive assembly	
Magazine Assembly	
Gearbox Assembly	

# **GENERAL INFORMATION**

# Overview

The Cashflow<sup>©</sup> 2612 Engineers Guide contains important information on installing, operating, and maintaining MEI Note Acceptors. The Cashflow<sup>©</sup> 2612 Note Acceptors take currency at high acceptance rates and provide a superior level of resistance against specific cheats and frauds. To obtain the best performance from your MEI Note Acceptor, read this manual and the Installation Guide before installing and using the note acceptor.

# **Product Summary**

The Cashflow<sup>©</sup> 2612 is designed for vending applications in Europe. It offers enhanced security, and one, two-way, and four-way acceptance of notes.

# **CASHFLOW<sup>©</sup> 2612 Features**

- Currently available for Euro, Russia and Saudi notes.
- 1,2 and 4 way direction.
- Configuring available by option switches and coupon.
- MDB and Smart Serial Interface supported.
- Easy access to entire note path with unit installed in machine.
- High acceptance of currency.
- Returned or rejected notes held in note acceptor mouth until removed by customer.
- Choice of three different bezel styles
- Sealed optical sensors to enhance security and reduce effects of vandalism
- Status LED on back of unit to indicate current state of operation
- Designed for ease of maintenance

# **Power Specifications**

• 34 VDC at 2.0 amps (MDB mode)

## Model Number Explanation

Example:



# **Serial Number Explanation**

Example:



#### NOTE:

From week **09 2009** the number representing the **Manufacture Location** changed from an 8 to a 9.

This will allow the warranty serial number to continue into 2010 when the year code of 0 would be duplicated with units already manufactured in 2000.

ie	0988	=	manufactured in	Week 9	2008
1.0.	0300	-	manulactureu m	VVCCK 3	2000

- 0999 = manufactured in Week 9 2009
- 0908 = manufactured in Week 9 2000
- 0909 = manufactured in Week 9 2010

# **Bezels**

The Cashflow<sup>©</sup> 2612 offers three different bezel configurations: Compact, Armored, Anti-Vandal.

The Compact bezel allows for ease of note insertion with lighted arrows pointing to the place of insertion.

The Armored bezel is a stainless steel version of the compact bezel.

The Anti-Vandal bezel is a caste iron bezel that fits over a compact bezel.

#### **Bezel Kits**

Bezel Kits are available to convert from one bezel style to another. Part numbers for the bezel conversion kits are as follows:



**Compact Bezel Kit** 

**Part Nos:** 250063179 – Euro 250066181 – Saudi 250068180 – Russia



**Armored Bezel Kit** 

Part No: 250065178 – Euro



Anti-Vandal Bezel Kit

Part No: 250063174

# Magazines

Five different magazine sizes are available for the Cashflow<sup> $\odot$ </sup> 2612 note acceptors. Magazine capacities of 200, 300, 500, 700 and 1000 notes are available.

- 200,300 and 500 magazines are available on Euro Cashflow<sup>©</sup> 2612.
- 500 and 700 magazines are available on Saudi Cashflow<sup>©</sup> 2612.
- 500, 700 and 1000 magazines are available on Russia Cashflow<sup>©</sup> 2612.



- The 200 and 300 magazine styles feature a hinged *top* door for note removal.
- The 500,700 and 1000 magazine styles use hinged *side* doors for note removal.

		Euro		Saudi	Russia
200 Magazine (U2)	-	250	060184	-	-
300 Magazine (U3)	-	250	068185	-	-
500 Magazine (U5)	-	250	066186	250069017	250064187
700 Magazine (U7)	-		-	250068021	250062188
1000 Magazine (U10)	-	-		-	250060189

# Locking Hasp

A locking hasp kit is available that secures the side doors on the 500, 700 and 1000 note magazines.



# Cables

#### **MDB** Cable

Part Number 250071043C



WIRE CHART				
FROM	WIRE COLOUR	то	FUNCTION	
P1-21	-	N/C	KEY	
P1-23	WHITE	P2-1	34V DC	
P3-1	WHITE	P2-1		
P1-16	BROWN	P2-2	DC RETURN	
P3-2	BROWN	P2-2		
P1-6	BLACK	P2-4	MDB MASTER RECEIVE	
P3-4	BLACK	P2-4		
P1-14	RED	P2-5	MDB MASTER TRANSMIT	
P3-5	RED	P2-5		
P1-28	GREEN	P2-6	MDB COMMON GND	
P3-6	GREEN	P2-6		
P1-5	-	N/C	KEY	
P1-2	-	-	DI IMMY TERMINIALS IN THESE CAVITIES	
P1-17	-	-		
P1-15	-	-		
P1-30	-	-		

# Parallel Cable (24v AC) Part Number 250077084C



	WIRE CHART			
FROM	WIRE COLOUR	то	FUNCTION	
P1-3	RED	P2-8	24v AC LIVE	
P1-7	GREEN	P3-8	CREDIT 1	
P1-10	BROWN	P3-1	GROUND	
P1-20	GREY	P2-7	24V AC NEUTRAL	
P1-24	ORANGE	D1-1		
D1-2	ORANGE	P2-6		
P1-25	PURPLE	P3-9	CREDIT 2	
P1-5	-	N/C	KEY	
P1-21	-	N/C	KEY	
P3-7	-	N/C	KEY	

# Parallel Cable (24v DC) Part Number 250075085C



	WIRE CHART			
FROM	WIRE COLOUR	то	FUNCTION	
P1-7	GREEN	P2-5	CREDIT 1	
P1-9	GREY	P2-8	BUSY	
P1-16	BROWN	P2-10	24v DC RETURN	
P1-23	RED	P2-9	24v DC	
P1-24	ORANGE	P2-3	ACCEPT ENABLE	
P1-25	PURPLE	P2-6	CREDIT 2	
P1-5	-	N/C	KEY	
P1-21	-	N/C	KEY	
P3-1	YELLOW	P3-2	LINK	

# INSTALLATION

# **Unpacking the Note Acceptor**

Unpack the note acceptor and immediately inspect it for damage. If the unit is damaged, return it to its original carton along with packing materials.

Notify the delivering carrier of damages and request immediate inspection. Send a letter of intent to file a claim to the delivering carrier within 72 hours from the time of delivery. Send a copy of the letter to the shipper.

Only the consignee (the person or company receiving the note acceptor) can file a claim against the carrier for concealed damages.

Retain the original carton and packing materials for future use in shipping or transporting the note acceptor.

# Mounting the Note Acceptor

The Cashflow<sup>©</sup> 2612 has been designed for ease of mounting onto existing studs provided by Original Equipment Manufacturers (OEMs). Some machines may require brackets or faceplates to mount the unit. Refer to your machine operation manual or contact your distributor/OEM for more model-specific mounting information.

The Cashflow<sup>©</sup> 2612 has a tie-wrap included with each unit to secure its interface harness to the mounting area of the machine. Use the tie-wrap for every installation.

- 1. Disconnect all power to the machine.
- 2. Connect the interface harnesses from the machine to the unit.
- 3. Wrap the tie-wrap around the interface harness.
- 5. Secure the unit to the mounting studs with the appropriate hardware.



#### (OEM Machine with fixing studs)

## (OEM Machine requiring bracket)



# **Fixing Bracket**

Part Number 250067030



Kit Contains:

- Mounting Bracket
- 6 x NUT, HEX #8-32, LOCKING

# Dimensions



# **Changer Configuration**

The majority of Note Acceptors are fitted to a Changers MDB Peripheral loom. It is advisable that some options within the changer are adjusted when a Note Acceptor is fitted.

MDB Peripheral Loom



#### **Highest Banknote Value**

In the Service Mode Menu there is an option to set the highest value of Banknote. This is under Banknote Configuration. It is normally set at €20.

#### Software

Since MEI software release V1.18 the behaviour of a Note Acceptor connected to the MDB Peripheral loom is different. All the notes inserted will be held in escrow, which means not stacked until the user makes a selection on the vending machine. Then the note will be stacked in the magazine and the user will get the product and the change (in coins).

If the user inserts a note and presses the reject lever to get change, then the note will be returned.

This is to prevent users emptying the changer's tubes without buying anything. This option is only configurable with the STS tool.

#### Payout

If you are going to use a Note Acceptor it is recommended you change the payout of the Changer adding one tube of €1 or €2 depending on the needs of the site. CF7000 has a wide range of pre-programmed cassettes. Please contact your MEI technical support or local service center for further information on this.

#### Testing

- Apply power to the machine.
- Check the Status LED for the "Steady ON" condition. If another condition exists, refer to the **Maintenance** section for troubleshooting details.
- Insert a note to check acceptance. If enabled, the note should be accepted.
- Make a vend to ensure the proper credit is received and proper change is paid out for the note.

## Warranty

All Cashflow<sup>©</sup> 2612 Note Acceptors come with a Two Year Manufacturer's Warranty. Once the unit has been inspected, record the model and serial number from the label on the side of the note acceptor. Refer to these numbers when you contact an MEI Approved Service Center for service or information. The manufacturer's warranty is based upon the date of manufacture. Parts and labour are included in Warranty repairs.

The first four digits of the serial number contain the manufacturing date code (see Serial Number Configuration section). This code indicates the beginning of the warranty period.

# CONFIGURATION

The Cashlow<sup>©</sup> 2612 can be manually configured using a bank of eight option switches. The Cashflow<sup>©</sup> 2612 can also be configured using a configuration coupon.

# **Factory Configuration**

The Cashflow<sup>©</sup> 2612 Note Acceptor is factory configured with all switches in the OFF position.

The following configuration is programmed:

- Maximum directions for note acceptance (four-way)
- High acceptance
- €5; €10 Euro note enabled
- 1 pulse per Euro
- MDB Interface

The unit will default to these selections whenever all option switches are OFF. Placing any switch ON will override the factory settings and the note acceptor will operate according to the switch settings you choose.

If the Cashflow<sup>©</sup> 2612 is reprogrammed using a coupon with a different configuration, the new configuration will be the default. If any option switch is turned ON, the option switch settings will override the coupon setting. The coupon configuration will remain in memory.

# **Switch Settings**

The Cashflow<sup>®</sup> 2612 allows configuration of interface options through option switch selection.

The option switches are located on the right-hand side of the note acceptor. The following pages described how the option switches work for specific country variants.



## **Cashflow<sup>©</sup> 2612 Switch Settings**

#### Euro Cashflow<sup>©</sup> 2612

ę	Factory Default		
Switch 1	Switch 2		
ON	OFF	1 way note acceptance	
OFF	ON	2 way note acceptance	
ON	ON	4 way note acceptance	х
	Switch 3 *		
OFF	High Acceptan	се	X
ON	High Security		
	Switch 4		
ON	Accept 🛃 note	es	X
OFF	Reject <b>€5</b> note	S	
	Switch 5		
ON	Accept <b>€10</b> not	tes	X
OFF	Reject <b>€10</b> not	es	
	Switch 6		
	Unassigned		
S	witches 7 and	d 8 **	
Switch 7	Switch 8		
ON	OFF	Short Pulse	
OFF	ON	Long Pulse	
ON	ON	Credit Line	
OFF	OFF	Auto-Selected	X
* Switch 3 a Configura options.	affects all note de ation' for individe	anominations. See ual acceptance/sec	<b>'Coupon</b> urity enabling
** Short Puls Long Puls Credit Lin	se - 30ms se – 35ms ie – singl	s ON / 50ms OFF T s ON / 300ms OFF e 150ms pulse	ïming Timing
If you are connecting the unit to a Serial or MDB interface,			

(				
Note Acc	eptance			
Switch	1	2		
1 way	ON	0FF		
2 way	<b>OFF</b>	ON		
4 way	ON	ON		
Switch		3		
High Accep	tance	0FF		
High Secur	ity	ON		
Switch 4	5	6		
€	5 €10			
Accept = ON Reject = OFF				
	ON	1		
2				
		2		
		3		
		3 4 5		
	OFF	3 4 5 6 7		
	OFF	3 4 5 6 7 8		
	OFF	3 4 5 6 7 8		
Pulse	OFF	3 4 5 6 7 8		
Pulse Switch	OFF 7	3 4 5 6 7 8		
Pulse Switch Short	OFF 7 0N	3 4 5 6 7 8 8 0FF		
Pulse Switch Short Long	OFF 7 ON OFF	3 4 5 6 7 8 0FF 0FF		
Pulse Switch Short Long Credit Line	OFF ON OFF OFF	8 0FF 0FF 0N		
Pulse Switch Short Long Credit Line Serial	OFF ON OFF OFF Auto-Se	8 OFF OFF ON lected		

If you are connecting the unit to a Serial or MDB interface, turn switches 7 and 8 OFF before connecting the harness. Once power is applied, the unit will recognize the Serial or MDB interface and will ignore switches 7 and 8.

#### Russia Cashflow<sup>©</sup> 2612

ę	Factory Default		
Switch 1	Switch 2		
ON	OFF	1 way note acceptance	
OFF	ON	2 way note acceptance	
ON	ON	4 way note acceptance	x
	Switch 3 *	¢	
OFF	High Acceptan	.ce	X
ON	High Security		
	Switch 4		
ON	Accept 10Rb n	iotes	X
OFF	Reject 10Rb n	otes	
	Switch 5		
	Unassigned		
	Switch 6		
	Unassigned		
S	witches 7 and	d 8 **	
Switch 7	Switch 8		
ON	OFF	Short Pulse	
OFF	ON	Long Pulse	
ON	ON	Credit Line	
OFF	OFF	Auto-Selected	Х
* Switch 3 a Configuration options.	<ul> <li>* Switch 3 affects all note denominations. See Configuration' for individual acceptance/sec options.</li> </ul>		
** Short Puls Long Puls Credit Lin	se – 30ms se – 35ms .e – singl	s ON / 50ms OFF T s ON / 300ms OFF e 150ms pulse	iming Timing

If you are connecting the unit to a Serial or MDB interface, turn switches 7 and 8 OFF before connecting the harness. Once power is applied, the unit will recognize the Serial or MDB interface and will ignore switches 7 and 8.

Переключато приема банк	аль нот <b>1 2</b>
1-сторонний 2-сторонний 4-сторонний	Вкл. Выкл. Выкл. Вкл. Вкл. Вкл.
Переключате	ль З
Высокий уро приема	вень Выкл.
Высокий уро безопасности	вень Вкл. И
Переключате	аль 4 5 6
	10 50 100
Прием= Вкл.	Отказ = Выкл.
	ВКЛ. 2 3 4 5 ВЫКЛ- 6 7 8
переключате	ль 7 8
Короткий	Вкл. Выкл
Длинный	Выкл., Выкл.,
Кредитная линия	Выкл., Вкл.
Последовате (Автоматически	льный ий выбор)

#### Saudi Cashflow<sup>©</sup> 2612

Switches 1 and 2 Factory			
Switch 1	Switch 2		Default
Switch	Switch 2	1 way note	
ON	OFF	acceptance	
OFF	ON	2 way note acceptance	
ON	ON	4 way note acceptance	х
	Switch 3 *	ŧ	
OFF	High Acceptan	се	Х
ON	High Security		
	Switch 4		
ON	Accept 1R note	es	Х
OFF	Reject 1R note	es	
	Switch 5		
	Unassigned		
	Switch 6		
	Unassigned		
S	witches 7 and	d 8 **	
Switch 7	Switch 8		
ON	OFF	Short Pulse	
OFF	ON	Long Pulse	
ON	ON	Credit Line	
OFF	OFF	Auto-Selected	Х
* Switch 3 a Configura options.	affects all note de ation' for individ	enominations. See ual acceptance/sec	' <b>Coupon</b> urity enabling
** Short Puls Long Puls Credit Lin	se – 30m se – 35m e – singl	s ON / 50ms OFF T s ON / 300ms OFF e 150ms pulse	iming Timing
If you are turn switc Once pow MDB inter	connecting the hes 7 and 8 OFF ver is applied, the face and will ign	unit to a Serial or M - before connecting e unit will recognize ore switches 7 and	DB interface, the harness. the Serial or 8.

Bill Acc Switch	eptance 1	2
1 way	ON	0FF
2 way	OFF	ON
4 way	ON	ON
Switch		3
High Accep	otance	0FF
High Secu	rity	ON
Switch 4	5	6
1	R -	-
Accept = ON Reject = OFF		OFF
ON 1 2 3 4 OFF 6 7 8		
Pulse Switch	7	8
Short	ON	OFF
Long	OFF	OFF
Credit Line	OFF	ON
Serial	Auto-Sele	cted

#### Ukraine Cashflow<sup>®</sup> 2612

Switches 1 and 2		Factory Default			
Switch 1	Switch 2				
ON	OFF	1 way note acceptance			
OFF	ON	2 way note acceptance			
ON	ON	4 way note acceptance	Х		
	Switch 3 *	•			
OFF	High Acceptan	се	Х		
ON	High Security				
	Switch 4				
ON	Accept 2H note	es	Х		
OFF	Reject 2H note	es			
	Switch 5				
ON	Accept 5H note	es	Х		
OFF	Reject 5H note	es			
	Switch 6				
ON Accept <b>10H</b> notes		Х			
OFF Reject <b>10H</b> notes					
S	witches 7 and	d 8 **			
Switch 7	Switch 8				
ON	OFF	Short Pulse			
OFF	ON	Long Pulse			
ON	ON	Credit Line			
OFF	OFF	Auto-Selected	Х		
* Switch 3 a Configura options.	Switch 3 affects all note denominations. See 'Coupon Configuration' for individual acceptance/security enabling options.				
** Short Puls Long Puls Credit Lin	<ul> <li>* Short Pulse – 30ms ON / 50ms OFF Timing Long Pulse – 35ms ON / 300ms OFF Timing Credit Line – single 150ms pulse</li> </ul>				
If you are turn switc Once pow MDB inter	If you are connecting the unit to a Serial or MDB interface, turn switches 7 and 8 OFF before connecting the harness. Once power is applied, the unit will recognize the Serial or MDB interface and will ignore switches 7 and 8.				

Банкнотоприем	ник	
Включатель	1	2
В1 положении	ВКЛ	ВЫКЛ
В2 положениях	ВЫКЛ	ВКЛ
В4 положениях	ВКЛ	ВКЛ
Включатель		3
Высокий прием		ВЫКЛ
высокая безопасн	ЮСТЬ	ВКЛ
Включатель	4	56
Грн	2	5 10
Прием = ВКЛ	Возврат	= ВЫКЛ
	выкл	2 3 4 5 6 7 8
Пульс		
Выключатель	7	8
Короткий	ВКЛ	ВЫКЛ
Длинный	ВЫКЛ	выкл
Кредитная линия	ВЫКЛ	ВКЛ
Π	MA ADTO	Duban

<sup>©</sup>MEI 2009

#### **Coupon Configuration**

The Cashflow<sup>©</sup> 26212 may be configured using a coupon.

The coupon is included in the Cashflow<sup>©</sup> 2612 Series Installation Guide.

Carefully cut the coupon along the dotted-line edge to remove it from the installation guide. Copies of the original coupon may be produced with a standard, carbon-based, non-colour copier. Cut copies to match the size of the original coupon.

# All option switches must be in the OFF position for the coupon selections to be active.

The coupon selection will remain with the Cashflow<sup>©</sup> 2612 until the unit is reprogrammed, even if the power is removed.

When filling out the coupon, note the following:

- Use only a #2 pencil to fill in the blocks
- Fill in the entire block
- Do not mark the coupon outside the blocks or on the back of the coupon
- Fill in ONE block for EVERY line

USE #2 Penc Photocopy ca be used	insert thi		Complete sections 1-5 ONLY
#Of Bill Directions			<b>7</b> 1
€5	High Accept	Security Off	2
€ 10	$\bigcirc$	$\bigcirc \bigcirc$	
Pulsə	B hort	Long Credit i	
Pulse per Euro	QQ	$\bigcirc$	4
Bezel lights On/Flashing	<u></u> • •		5

(Note: - Coupon not to scale)

## Configuring with the Coupon

1. Fill out the coupon using the table below.

Section 1: # of Note Directions	One- and two-direction are face up only. Four-direction acceptance is available to maximize note handling.	
Section 2: Denomination Selection	<ul> <li>Select ONE of the following for each note denomination:</li> <li>High Accept enhances acceptance parameters for the particular denomination.</li> <li>High Security enhances security parameters for the particular denomination.</li> <li>OFF rejects all inserted notes for the particular denomination.</li> </ul>	
Section 3: Pulse	<ul> <li>The selection made in this section determines pulse timing.</li> <li>Short is 30 ms ON / 50 ms OFF</li> <li>Long is 35 ms ON / 300 ms OFF</li> <li>Credit Line is a single 150 ms pulse on an individual denomination output. This selection is also used for AC / High Level Interface.</li> <li>Serial and MDB users may mark any selection.</li> </ul>	
Section 4: Pulses per Euro	Select the required number of pulses per Euro. One pulse per Euro is standard for most interfaces.	
Section 5: Bezel Lights	Select ON or Flashing for the bezel lights (downward arrows). This section applies only to the Compact bezel style. Select Flashing if the unit has a VFM Retrofit or a Flush Mount bezel style.	

- 2. Locate the service button on the back of the unit (see below).
- 3. Press the button once to enter the coupon setup mode. Pressing again will exit the mode. The unit will automatically exit coupon setup mode upon acceptance of the coupon configuration.

The LED Status indicator (located to the left of the service button) will flash rapidly indicating that the unit is in coupon setup mode.

4. Insert the coupon marked-side up.

The Cashflow<sup>©</sup> 2612 will pull the coupon in, read it, and then return it to the user.

- A good coupon will be returned immediately. After the coupon is pulled from the note acceptor mouth, the unit will flash the Status LED ten times to confirm a good configuration.
- A bad coupon will be held for ten seconds before being returned. This delay is to make you aware that there is a problem with the coupon. When the coupon is pulled from the note acceptor mouth, the unit will flash the Status LED the number of times corresponding to the section of the coupon wherein a problem lies. For example, if the problem is in section five, the LED will flash five times. Section numbers are located to the far right of each section on the coupon.
- 5. If the configuration is rejected, check the coupon and repeat the process.



# **OPERATION**

# **Functional Overview**

The acceptance of a note in a MEI Note Acceptor proceeds through the following steps:

- Note Detection
- Note Transport
- Note Recognition
- Note Validation
- Credit or Return
- Note Storage

As a Note is inserted, the acceptor senses its presence and the drive motor is energized. Drive belts transport the note past electronic sensors that evaluate the note for authenticity.

When the unit determines that the note is authentic, it holds the note in an escrow position until the conditions of the transaction are determined. Conditions of the transaction include:

- Option selection
- Credit enabled by the controller
- Control system ready

When the conditions of the transaction are met, credit for the note is transferred and the unit transports the note to the end of the stacker where the actuator plate moves the note into the magazine.

If the note does not meet the criteria for authenticity or if the controller requests an escrow return, the note acceptor will reverse the direction of the accept motor and will return the note to the customer.

#### NOTE:

The 'note held in escrow' function in configurable on the Cashflow<sup>©</sup> 2612. Some build standards will automatically 'stack' the note before a selection has been made.

# Interfaces

#### General

The interface of a note acceptor refers to the transfer of electronic data to and from the note acceptor and the controlling device. The controlling device in a vending machine is either the machine controller or the coin mechanism (single or four price machines). The signals transferred to the note acceptor are control signals which may include:

- the control system is ready to accept money
- the denomination of note to accept
- whether or not notes should be returned from escrow

The following interfaces are available with the Cashflow<sup>©</sup> 2612 (24vAC).

#### **IHLP - Isolated High Level Pulse**

IHLP is also known as AC/High Level interface. Refer to diagram for switch settings.

This interface uses the application of AC voltages for enabling and inhibiting a note acceptor. Credit is established through single 150 ms "switch" closures (pulses).

Note escrow is not supported. IHLP only supports €5 notes.

A single coin tube is monitored for the presence of change in order to determine if an exact change condition exists. If such a condition exists, the exact change light will be turned ON and the note acceptor will be inhibited; it will not pull the note in.

#### **ILLP - Isolated Low Level Pulse**

ILLP is also known as Low Level interface. Refer to diagram for switch settings.

This interface uses the application of isolated DC voltages for enabling and inhibiting a note acceptor. Credit is established through *short* or long "switch" closures (pulses).

Note escrow is supported. ILLP supports €5 and €10.

All coin tubes are monitored to determine if an exact change condition exists. If an exact change condition exists, the exact change light will be turned ON after a note has been inserted.

#### MDB - Multi-Drop Bus (24VAC units only)

Refer to diagram for switch settings.

This interface uses the application of a specific bi-directional serial interface protocol for communication between a controller and a note acceptor.

MDB supports €5 and €10.

All coin tubes are monitored for the presence of change in order to determine if an exact change condition exists. If an exact change condition exists, the exact change light will be turned ON after a note has been inserted.







# MAINTENANCE

# Cleaning

You can clean the note acceptor while it is still mounted in the machine.

- 1. Remove power from the machine.
- 2. Unlatch the magazine by pushing the blue latch (located on the top of the unit) toward the front of the unit.
- 3. Unhook and remove the magazine by holding the latch and lifting up and then back on the magazine.
- 4. Unlatch the LED Housing by lifting up on the metal bar (located below the Status LED).
- 5. Remove the LED Housing by holding the metal bar and pulling back on the LED Housing.
- 6. Clean the note path with a soft cloth. You may use mild, non-abrasive, non-petroleum based cleaners if sprayed on the cloth.



# **Status LED**

A Status LED provides assistance in diagnosing the condition of the Cashflow<sup>©</sup> 2612. The following is a description of the LED codes, their meanings, and suggested remedial actions.

Signal	Meaning	Solution
LED ON	Indicates that the unit is enabled and ready to accept a note.	No action necessary.
LED OFF	Indicates that no power has been applied to the unit.	Check to ensure that power is applied.
1 Flash	Indicates that something is obstructing the note path.	Remove the magazine and LED housing; inspect for foreign material.
2 Flashes	Indicates that the unit is not enabled.	Verify configuration. Check the coin tube levels in the coin changer. Check the option switches in the coin changer. Note: Many machines disable the note acceptor if the machine door is open and the door switch is not activated or if the machine is out of product.
3 Flashes	Indicates that the note path needs cleaning for optimum performance.	Remove the magazine and LED housing and follow cleaning instructions (page 22) to clean the note path.
4 Flashes	Indicates that something is obstructing the note path.	Remove the LED housing and look at the note path on the housing and inside the unit for foreign material; clean as necessary.
5 Flashes	Indicates that the magazine is removed (the unit will not accept without the magazine attached).	Reinstall the magazine.
Continuou s Slow	Unit is defective.	Replace the unit.
Continuou s Fast	The magazine is full of money.	Remove the money from the magazine.

# **Exploded Views**

## Cashflow<sup>®</sup> 2612



	Part Description	
1	Chassis Assembly	
2	LED Housing Assembly	
3	Sensor Assembly	
4	Stacker/Drive Assembly	
5	Magazine Assembly	
6	Gearbox Assembly	

## Chassis assembly



	Part Description	Part Number	Qty per Assembly	Qty per Pack
1	Chassis	250027017	1	1
2	Magazine Latch	250029099P	1	50
3	Spring, Magazine Latch	250044003P	1	100
4	Spring, Lift Led Housing	250046002P	1	75
5	Screw 4 x .38 Type 25	203732001P	3	100
6	Screw 4 x .50 Type 25	203729001P	1	100
7	Cover, Control PCB	250022040P	1	25
8	PK1ASSY S2K 24V AE2800 CTL BD	250061193	1	1
9	Dip Switch Label - English	250051322P	1	20
9	Dip Switch Label - Spanish	250053343P	1	20
9	Dip Switch Label - Italian	250055342P	1	20
9	Dip Switch Label - German	250057341P	1	20
9	Dip Switch Label - French	250059340P	1	20

## LED Housing Assembly



	Part Description	Part Number	Qty per Assembly	Qty per Pack
1	LED Housing - Euro	250028209P	1	10
2	TRI-LED Board – Euro/Saudi	250065190	1	1
3	Spring, Pinch Roller	250040005P	6	100
4	Pinch Roller Housing	250025030P	2	75
5	Seal, LED Housing	250028069P	1	10
6	Torsion Spring	250048006P	2	75
7	Shaft, Cartridge Latch	250037005P	1	25
8	Pinch Roller Assembly	250015020P	6	75
9	Pinch Roller	250029011P	6	25
10	Loom Control PCA – LED PCA	250073003P	1	10
11	Cover, LED Housing	250023031P	2	25
12	Lens, LED – Euro	250028204P	2	15
12	Lens, LED – Russia/Saudi	250029033P	1	15
13	LED Housing – Russia/Saudi	250023195P	1	10
14	TRI-LED Board - Russia	250062063	1	1

## Sensor assembly



	Part Description	Part Number	Qty per Assembly	Qty per Pack
1	Gasket, Sensor Housing	250065156P	1	5
2	Sensor Board – Euro/Saudi	250063191	1	1
3	Sensor Board – Russia	250060047	1	1
4	Loom, Control PCA to Sensor PCA	250078053P	1	10
5	Sensor Housing (Complete)	250027056P	1	25

## Stacker/drive assembly



	Part Description	Part Number	Qty per Assembly	Qty per Pack
1	Stacker/Drive Assembly Euro	250010195P	1	1
1	Stacker/Drive Assembly Russia/Saudi	250016011P	1	1
2	Tensioner Assembly	250064067	2	10
3	Spring, Tensioner	250045016P	2	100
4	Pulley, Wheel	250021010P	2	25
5	Timing Belt 143T	250028162P	2	100
6	Pulley, Compound	250026009P	2	25
7	Shaft, Pulley	250033002P	2	100
8	Timing Belt 56T	250023014P	2	100
9	Tire(ORC)	250025013P	2	100

# Magazine Assembly



	Part Description	Part Number	Qty per Assembly	Qty per Pack
1	Magazine Prism	250027176P	1	5
2	Magazine Label - German	250050331P	1	15
2	Magazine Label - Spanish	250052330P	1	15
2	Magazine Label - French	250057329P	1	15
2	Magazine Label - Italian	250058332P	1	15
2	Magazine Label - English	250059328P	1	15

## **Gearbox Assembly**



	Part Description	Part Number	Qty per Assembly	Qty per Pack
1	Housing, Gearbox	250023019P	1	5
2	Stacker Shaft Assembly	250018015P	1	10
3	Transport Motor Kit	250085012P	1	5
4	Stacker Motor Kit	250087011P	1	5
5	Transport Shaft Assembly	250010019P	1	5
6	Compound Gear 48DP	250020002P	2	50
7	Compound Gear 38/48DP	250028003P	2	50
8	Worm 32DPN/13T	250026004P	2	50
9	Thrust Washer	250032011P	2	100
10	Shaft Gear	250035001P	2	50
11	Cover, Gearbox	250028020P	1	25
12	Push Ring	250029016P	8	100
13	Pusher Plate (Russia/Saudi)	250020024P	1	10
13	Friction Pusher Plate (Euro)	250028221P	1	10
14	Tach Disk	250020080P	1	25

Helping you deliver

YOUR REPRESENTATIVE

# mei.