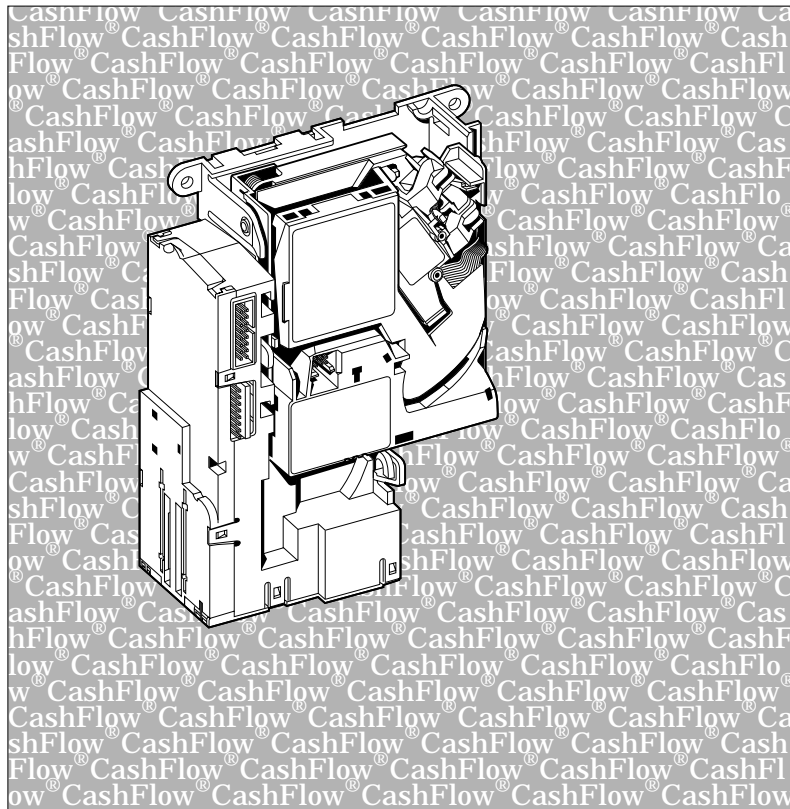




The
CASHFLOW 430
REFERENCE SERIES
MICRO 5-WAY SELECTOR
PRODUCT MAINTENANCE
HANDBOOK





CashFlow[®] 430 5-way selector Product Maintenance Handbook

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CashFlow® 430 5-way selector Product Maintenance Handbook

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CashFlow® 430 5-way selector Product Maintenance Handbook

SAFETY AND EMC

International & National Standards Conformance

When installed and operated according to the instructions for the particular unit, CashFlow® 430 products are designed to meet the applicable Safety and Electro Magnetic Compatibility standards for any country in which they are used.

Maximum Operating Voltages

Do not apply more than the indicated voltage.

Dangerous Environments

Do not operate in the presence of flammable gases, fumes or water.

Disposal of Product

Do not dispose of this product by incineration.

Warning: Before removing or replacing modules **SWITCH OFF or ISOLATE the ELECTRICITY SUPPLY** to the host machine.

THIS MANUAL IS PROVIDED FOR USE ONLY BY PERSONNEL TRAINED TO UNDERTAKE ELECTRICAL INSTALLATION.




CashFlow® 430 5-way selector Product Maintenance Handbook
GLOSSARY

Accept gate	A control gate that routes coins to either the accept or reject route.
Acceptor	Discriminator assembled together with an Accept Gate and Back Cover.
Back Cover	Moulding that provides varied mountings for the acceptor facilitating optional routing.
Coin entry	The point at which coins enter the throat of the acceptor.
Coin Exits	Routing from the Accept Gate or Separator.
Coin set	Defines the coin types that the acceptor will accept.
Coin type	Coin value, for example a 1 Pound coin.
Discriminator	A mechanism that accepts coins/tokens of different values and electronically compares their characteristics with a set of pre-programmed criteria. Those coins that meet the requirements are directed towards an accept route, and those that fail go to a reject route.
Flight deck	The main component of the Discriminator, providing the initial path to be taken by coins.
Front Plate	Accessory facilitating the mounting of the product to the front of the host machine.
HI²	Host Intelligent Interface. Fitted as standard but with considerable extension possibilities
Inhibit lines	A set of lines driven by the host machine that stops acceptance of one or more coins.
Interface	The electrical boundary between selector and host machine.
MMI	Stand-alone interface allowing frequently used functions to be adjusted using a 4-bit switch on the Customer Interface PCB.
Parallel Interface	Additional facilities and benefits accessed via range of Customer Interface PCB's
Reject route	The path followed by a non-accepted coin.
SELV	Safety Extra Low Voltage supply. Applicable only where the acceptor is used as a stand alone product.
Selector	Product offering an additional facility for separating coins of defined values to selected routes by using a Separator module.
Serial Interface	All standard interface functions made directly through the machine. Also called HI ² .





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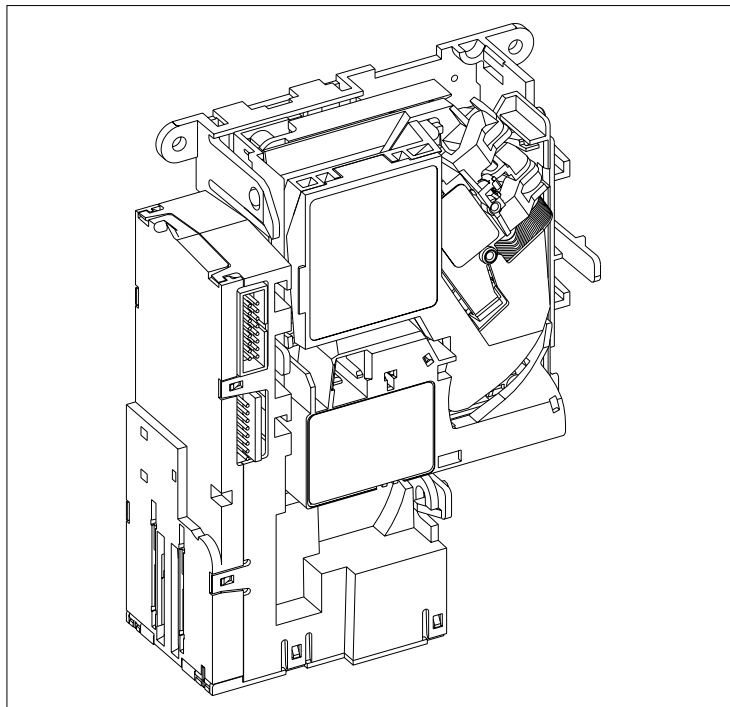
OVERVIEW

The CashFlow® 430 Micro selector product is mounted in a moulded 4"/100mm channel on the left side of which is attached a 5-way separator. The exits from the separator will be 3 down and 2 to the left side.

At the heart of the product is the acceptor module which controls the discrimination and coin routing functions.

The operating voltage would normally be 12 volt DC. A 24 volt DC option is available.

A remote reject system is available to allow remote and flexible mounting.

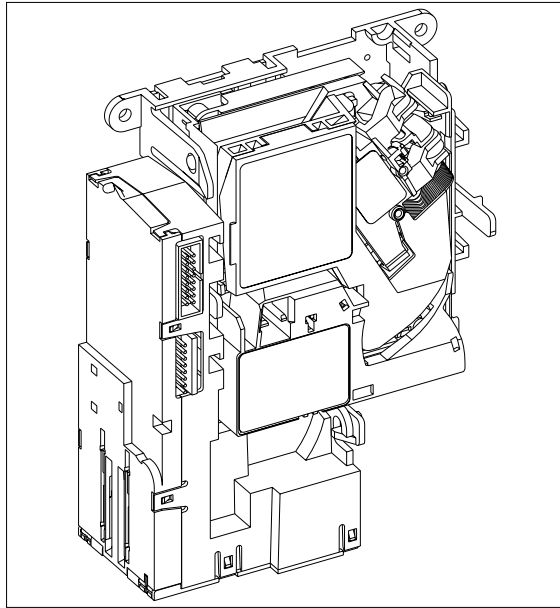




CashFlow® 430 5-way selector Product Maintenance Handbook

PRODUCT DETAILS

4"/100mm CHANNEL MOUNTED



INTERFACE VARIANTS

External Interface

Serial - Standard

Parallel - With interface PCB

Interface PCB

0 volt Common, 12 volt

0 volt Common, 24 volt (Optional)

SEPARATOR MODULE

12 volt

24 volt (Optional)

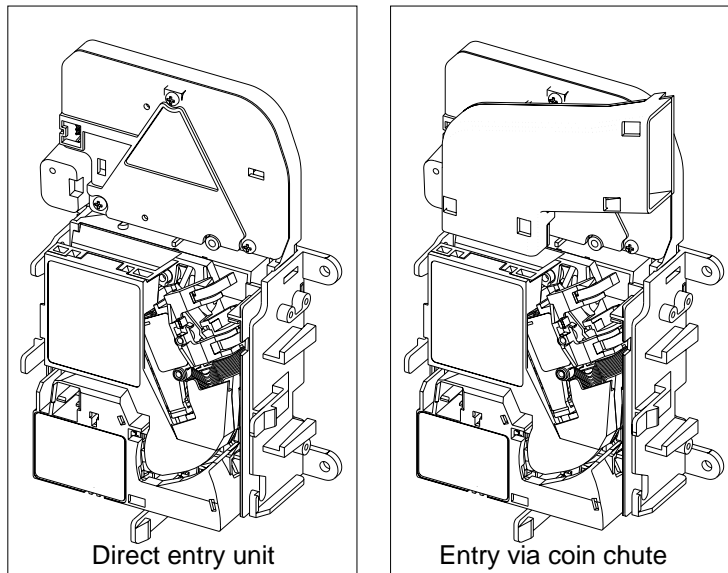
REMOTE REJECT UNIT

12 volt (Optional)



CashFlow® 430 5-way selector Product Maintenance Handbook

REMOTE REJECT UNIT



The remote reject unit enables the reject lever on the acceptor module to be actioned even if it is not located adjacent to the reject facility of the host machine.

An electrical impulse energised by the reject action of the host machine will drive a rotary action in the unit to depress the reject lever and open the flight deck lid of the acceptor module. This cycle will take 1 second to complete. The remote reject unit is available for 12 volt application.

This unit can be supplied as either direct entry from the host machine's coin chute or with an optional entry chute extension.

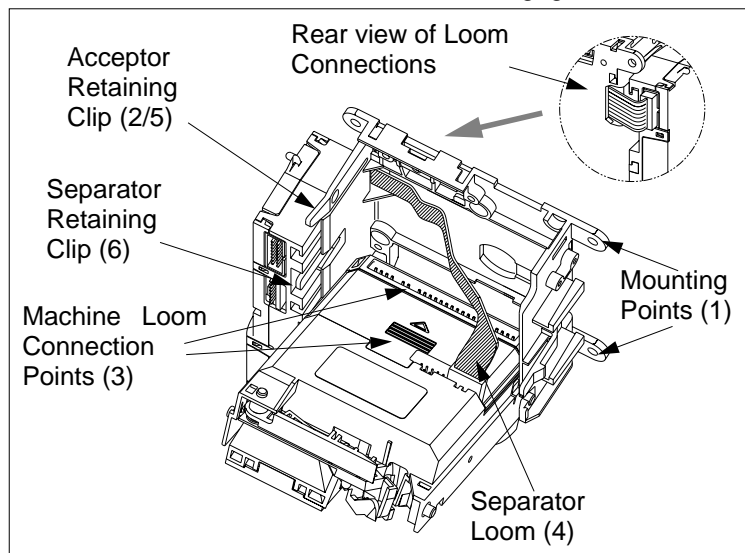
**CashFlow® 430 5-way selector Product Maintenance Handbook****INSTALLATION**

The product comprises of an acceptor module, a separator module and a 4"/100mm channel. These will be supplied assembled and ready to be fitted into the machine. To mount into the host machine it is necessary to utilise the three exposed lugs on the channel.

An optional module, the remote reject unit is also available.

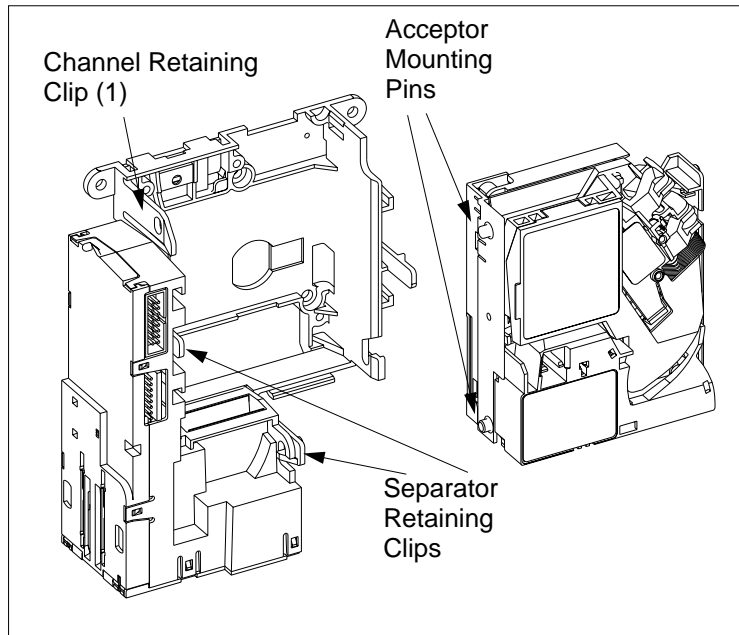
When installing the selector care must be taken that no looms are trapped or damaged.

- 1 Mount the channel using the lugs on the channel.
- 2 Release the acceptor retaining clip and tilt the acceptor forward.
- 3 The loom from the machine is fed into the channel from the bottom and attached to the acceptor.
- 4 Ensure that the loom between the acceptor and the separator are making good contact.
- 5 Tilt the acceptor upwards and confirm that the acceptor retaining clip is engaged
- 6 Ensure that the separator retaining clips at the left hand side and the bottom centre are engaged.





CashFlow® 430 5-way selector Product Maintenance Handbook
INSTALLATION (continued)



To disassemble the following process must be followed.

- 1 Release the retaining clip on the channel at the top left hand side of the 4"/100mm channel. Tilt the acceptor forward on the pivoting points at the bottom.
- 2 Disconnect the looms at the rear of the acceptor.
- 3 Lift the acceptor forward and upwards from the channel.
- 4 Release the retaining clips at the middle left hand side and the bottom centre of the channel and slide the separator forwards.





CashFlow® 430 5-way selector Product Maintenance Handbook

REMOTE REJECT UNIT INSTALLATION

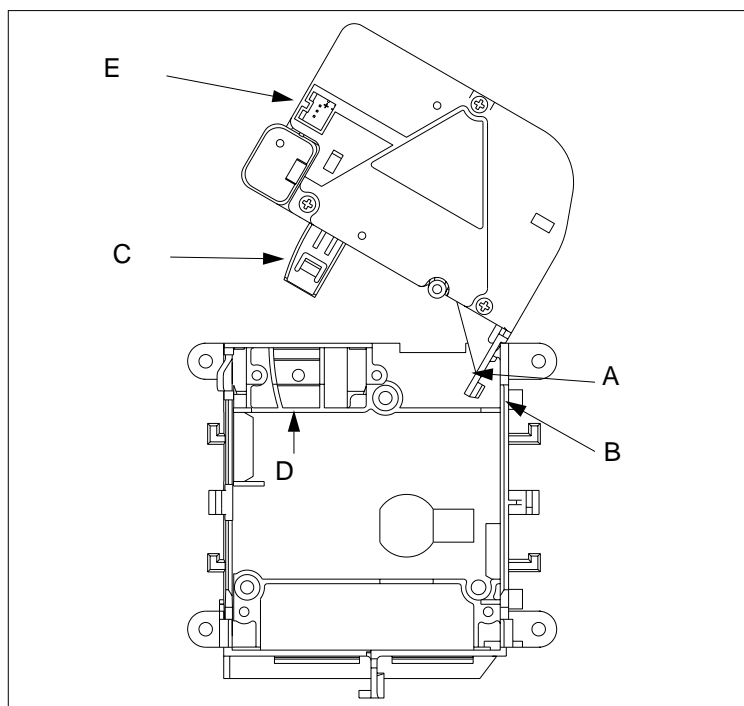
To install the remote reject unit

- 1 Hold the unit at an angle so that the lugs on the right bottom edge of the unit (A) can engage into the top of the channel (B).
- 2 Pivot the unit downwards and insert the bottom of the unit (C) into the rear of the channel (D) engaging retaining clip at (C).

Connect machine loom at point (E). Test to ensure correct fitting.

To remove the remote reject unit

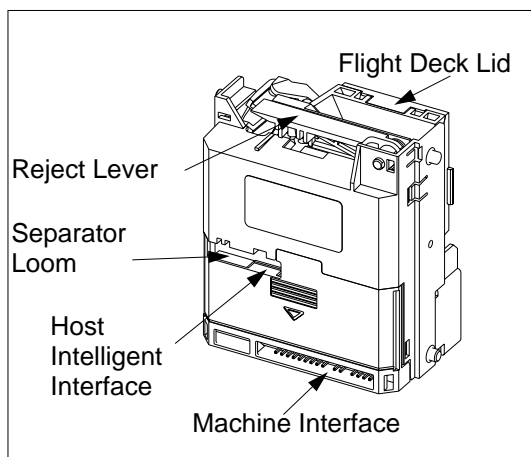
- 1 Disconnect the machine loom at point (E).
- 2 Insert a thin screwdriver into the point marked (D) at an upward angle. Gently press the top of the unit.
- 3 Press screwdriver firmly to disengage the retaining clip at point (C) and pull unit upwards.
- 4 Tilt the unit to the right and lift upwards.





CashFlow® 430 5-way selector Product Maintenance Handbook

INITIALISING



1 Testing the unit

Check that the looms are correctly connected.

Press the reject button on the host machine to ensure the reject lever moves freely, opening and closing flight deck lid. If fitted ensure that the remote reject unit is functioning.

2 Checking coin acceptance

Insert at least one of each coin/token that the selector is programmed to accept.

Confirm that all inserted coins/tokens are accepted and routed to the required exit path.

3 Coin selection

If changes are required adjust the coin enable or inhibit by using either the Man Machine Interface (MMI), or a MEI® Route Alpha 250 terminal, both of which are described in later sections of this book.

If the unit does not work refer to the Fault Finding section.




CashFlow® 430 5-way selector Product Maintenance Handbook
FAULT FINDING

Problem	Possible cause	Remedy
All coins/tokens rejected	Lack of power Damaged or incorrectly placed loom/s Time-out in operation after opening acceptor Accept gate not correctly mounted	Power up Ensure all connectors are in place and making good contact Firmly close lid Insert first coin (which may be rejected) Insert sample of correct coins/tokens to ensure correct flow Check accept gate is fitted firmly on
Selective in accepting coins or tokens	Incorrect coins or tokens being inserted Coin path dirty Front of acceptor not fully closed Specific coin/token not accepted	Check coin set label on front of acceptor module Clean acceptor and try again Ensure that the front is firmly closed Confirm coin/token is not inhibited
Coins or tokens not passing through product	Coin jam in acceptor	Open front of acceptor module by pressing machine reject button. Allow for time-out period Remove any blockage
Coins not routing correctly	Incorrect modules fitted	Check accept gate module Check that suitable separator is fitted to route as required



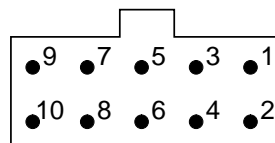
**CashFlow[®] 430 5-way selector Product Maintenance Handbook****ELECTRICAL INTERFACES****HOST INTELLIGENT INTERFACE (HI²)**

The HI² interface offers serial control of the following functions:

- Inhibiting
- Enabling
- Routing

The connections to the 10 way connector of the HI² are shown below.

1	DATA	2	GND
3	BUSY	4	GND
5	RESET	6	POWER FAIL
7	VIN	8	VNEG
9	RESERVED	10	VSOL



Viewed from loom end





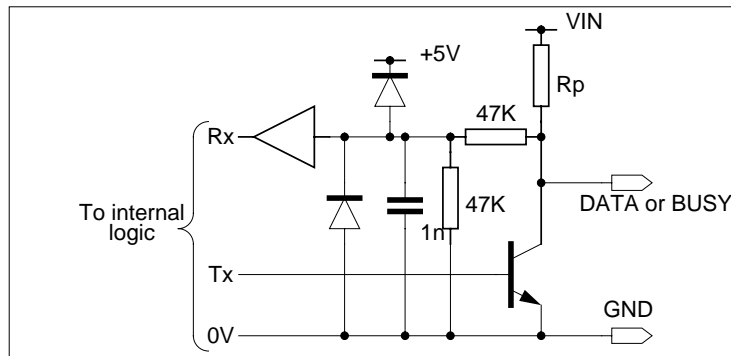
CashFlow[®] 430 5-way selector Product Maintenance Handbook

Electrical Specifications

I/O Ports

Data and Busy

Input high voltage	Vih	8.0V min.	VIN + 1.5V max
Input low voltage	Vil	GND - 1.5V min	1.3V max.
Input impedance	Rp	4.7K Ω nom.	to VIN
Output high voltage	Voh	9.0V/min.	VIN max.
Output low voltage	Vol	GND min.	0.5V max.
Output sink current	Iol	-----	25mA max.



Data and Busy line equivalent circuit

The Data and Busy lines are active low signals and are designed to be wire-ORed with other HI² nodes. The selector represents an HI² system load of 3 units.



CashFlow® 430 5-way selector Product Maintenance Handbook**Reset**

Input high voltage	Vih	Open circuit or > 3.5V (5.5V max.)
Input low voltage	Vil	(GND - 0.5V) min. 0.9Vmax.
Input impedance	Rp	47kΩ nom. to + 5V
Input capacitance	Cin	1.5μF nom.
Input series resist.	Rserl	56Ω nom.

In addition to the on-board power-on reset circuit, an external device may reset the system by pulling RESET low. The RESET line is active low and is intended to be driven by an open collector transistor referenced to 0V. A series resistor is provided to limit the peak current drawn when the on-board reset capacitor is discharged by an external device.

PF (Power Fail)

Input high voltage	Vih	3.7V min. 5.5V max.
Input low voltage	Vil	(GND - 0.5V) min. 0.9Vmax.
Input impedance	Rp	4.7kΩ nom. to + 5V

In addition to the on-board power fail circuit, there is an input on the host connector to allow an external device to warn of an impending power failure. The power fail input is active low and is intended to be driven by an open collector transistor referenced to 0V.

VIN (Power)

Input supply voltage	Vin	10V min. 15V max. (Abs.max. not operational 20V)
Supply voltage ripple	Vrip	Within Vin min. to max. up to 100Hz 250mV pk-pk frequencies > 100Hz
Supply rise time	Trise	75ms max.
Input current	Iin	500mA max.

**CashFlow[®] 430 5-way selector Product Maintenance Handbook****VSOL Specification****For 12V operation:**

Solenoid supply	VSOL	10Vmin. 15V max.
Supply voltage ripple	Vrip	Within Vin min. to max. up to 100Hz 250 mV pk-pk frequencies >100Hz
Input current	lin	940mA max

For 24V operation:

Solenoid supply	VSOL	20V min. 30V max.
Supply voltage ripple	Vrip	Within Vin min to max. up to 100Hz 250mV pk-pk frequencies >100Hz
Input current	lin	480mA max.



VIN is the input supply voltage referenced to the supply return, VNEG.

VNEG is connected to GND on the acceptor.

VSOL is the solenoid supply voltage for use in selector products and is not used by the base acceptor.





CashFlow® 430 5-way selector Product Maintenance Handbook

LOCAL EXPANSION INTERFACE

The local expansion interface is provided on the CashFlow® 430 Micro selector to allow an optional interface PCB to be added. The interface consists of two staked pin connectors along the lower edge of the discrimination PCB, behind the interface PCB cover. The interface can only be used for connection to MEI supplied interface PCB's.

REMOTE EXPANSION INTERFACE

The remote expansion interface is used on the CashFlow® 430 Micro selector to interface between the acceptor and separator modules. The interface consists of a dual row 10 way connector, accessible through the back of the selector. Pin 5 of the connector is not fitted to allow polarisation of the interface loom. The interface can only be used for connection to MEI supplied separator modules.

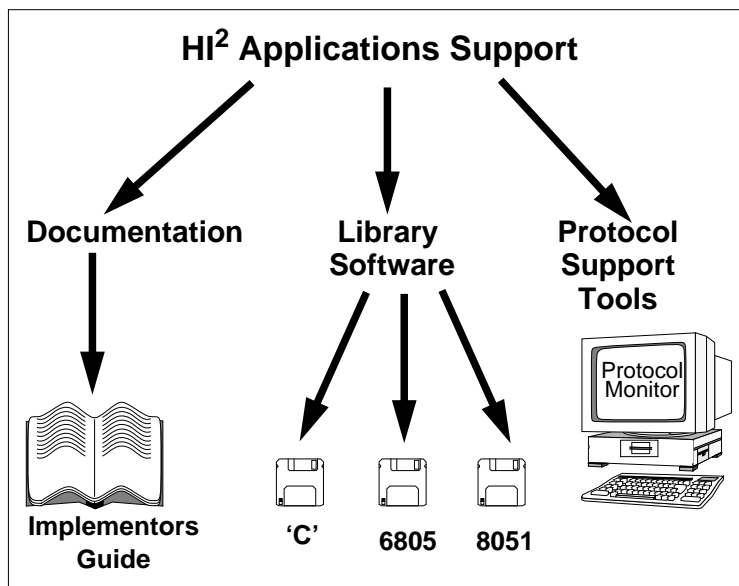


CashFlow[®] 430 5-way selector Product Maintenance Handbook**APPLICATIONS SUPPORT**

The host intelligent interface (HI²) is a high functionality interface for point to point or multi node systems.

It is currently only available under licence and confidentiality agreements.

Applications support for HI² is in the form of documentation, support tools and library software. These are all intended to make it straightforward to design-in the interface.

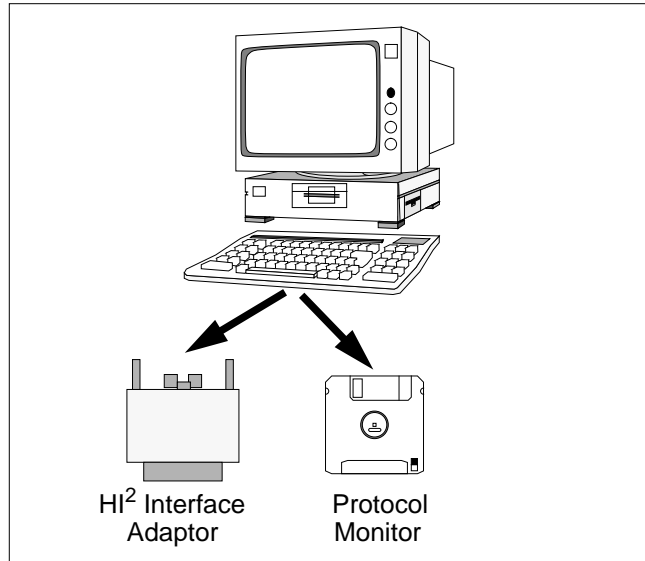


Library software routines that have been used by MEI are primarily available in the Microsoft 'C' high level language for the PC. Libraries will also be available in the future for the Motorola 6805 and Intel 8051/8052 microprocessors.

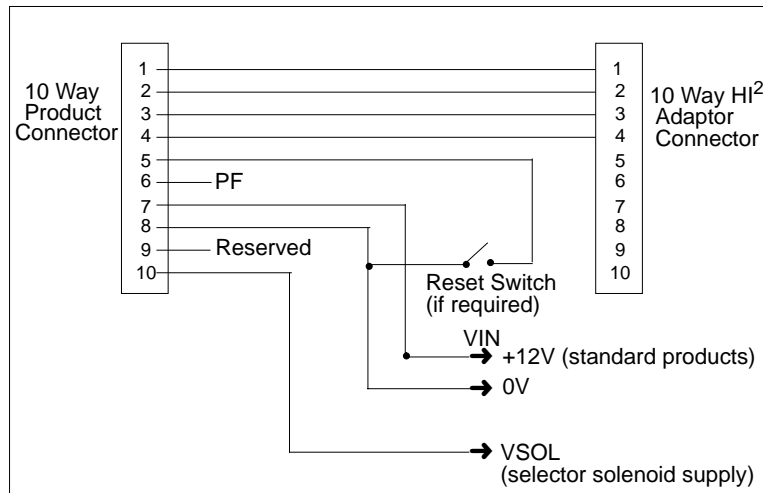
CashFlow® 430 5-way selector Product Maintenance Handbook

SUPPORT TOOLS

With the use of a HI² interface adaptor and with the aid of the special "Protocol Monitor" software application it is possible to connect a PC serial port to the HI² signals.



The adaptor should be plugged into the PC serial port and wired to the HI² bus as shown below.



CashFlow[®] 430 5-way selector Product Maintenance Handbook

MACHINE INTERFACE PCB's

All CashFlow[®] coin products incorporate a serial machine interface called HI² which offers maximum communication, flexibility and security.

These PCB's are used to provide compatibility industry standard interfaces. There are two different types available, these are:

- Standard version 112, (0V Common 12V)
- Standard version 312, (0V Common 12V)

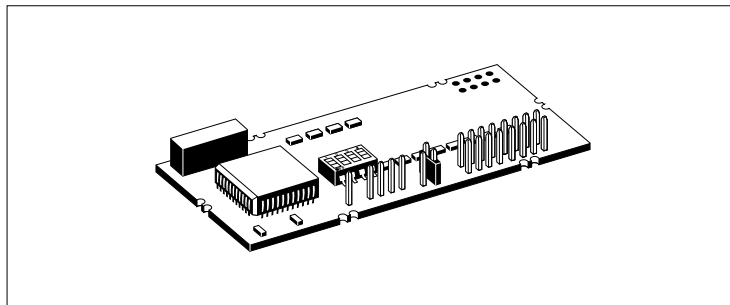
Please note: Not all interfaces are available for all product configurations. Please contact your Mars Electronics International representative for design guidance.

The interface PCB's are attached directly to the discrimination PCB and are enclosed within the back cover of the acceptor.

Both of the PCB's contain a four-bit DIL switch known as the Man Machine Interface (MMI). This switch can be used to configure certain aspects of the product.

STANDARD VERSION 112, (0V COMMON 12V)

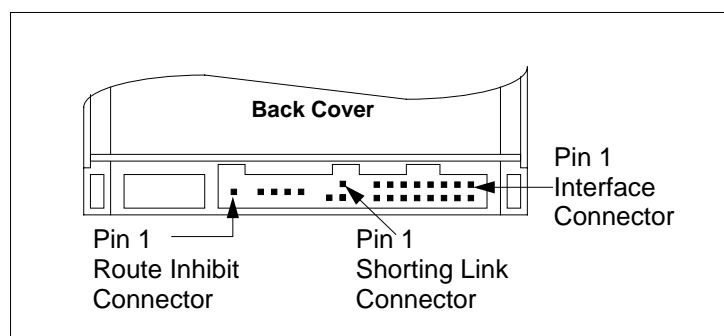
This PCB provides for 6 coin output lines and 6 individual inhibit inputs, an all-inhibit input, a flight deck open (ER) output and four route inhibit inputs.



Standard version 112 (0V Common 12V) interface PCB

CashFlow® 430 5-way selector Product Maintenance Handbook**PCB Connector - version 112**

The coin outputs are defined as outputs OPA to OPF, and the inhibit inputs are defined as inputs INHA to INHF. The all-inhibit input is defined as input ALLINHB, with the flight deck open output being ER. The route inhibits are defined as inputs INHR1 to INHR4.

**Connector locations - version 112**

The 6 coin outputs consist of open collector transistors referenced to 0V. The appropriate output becomes active for between 80ms to 120ms to indicate that a particular coin has been accepted

The 6 individual coin inhibit inputs consist of CMOS inputs with input protection and pull-down resistors. The inputs are active high to inhibit coins and if left open circuit will default to accepting coins.

The all-inhibit input consists of a CMOS input with input protection and pull-up resistor. The input is active low to inhibit coins and if left open circuit will default to accepting coins.

The flight deck open output consists of an open collector transistor referenced to 0V. The output is active low to indicate that the flight deck is open and will remain active for a maximum of 500ms

The four route inhibit inputs consist of CMOS inputs with input protection and pull-up resistors. The inputs are active low to inhibit a route and if left open circuit will default to route enabled.

CashFlow® 430 5-way selector Product Maintenance Handbook

Conn. Pin	Signal Name	Signal Name	Conn. Pin
1	INHC	INHE	2
3	INHD	INHF/ALARM	4
5	ER	ALLINHB	6
7	OPC	GND	8
9	OPF	OPD	10
11	OPE	OPB	12
13	OPA	INHB	14
15	INHA	VSUPPLY	16

Interface connector - version 112

Conn. Pin	Signal Name	Signal Name	Conn. Pin
		INHF	1
3	ALARM	IF/ALARM	2

Shorting Link Connector - version 112

Conn. Pin	Signal Name
1	GND
2	POLARISED
3	INHR4
4	INHR3
5	INHR2
6	INHR1

(Loom To Have Blanked Receptacle)

Route Inhibit Connector - version 112

CashFlow® 430 5-way selector Product Maintenance Handbook**Electrical Interfaces - version 112****Power**

For 12V operation, VSUPPLY (pin 16) referenced to GND (pin 8):

Input supply voltage	Vin	10V min. 15V max. (Abs.max. not operational 20V)
Supply voltage ripple	Vrip	Within Vin min. to max. up to 100Hz 250mV pk-pk frequencies >100Hz
Supply rise time	Trise	75ms max.
Input current	Iin	500mA max. Acceptor only

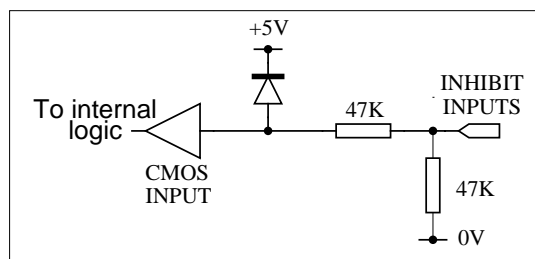
Outputs

Off State voltage	Voff	+30V max.
Leakage current	Iin	5 μ A
On state voltage	Vcesat	0.5V max.
On state current	Ic	30mA max.

Inputs (INHA - INHF)

Individual coin inhibit inputs - (INHA-INHF) Pins 1,2,3,4,14 and 15

Inhibit coins	Vin	> + 4V (+30V max)
Accept coins	Vin	between 0V and +1V or input open circuit
Input impedance		47k Ω nom. to 0V

**INHA-F Input Equivalent Circuit**

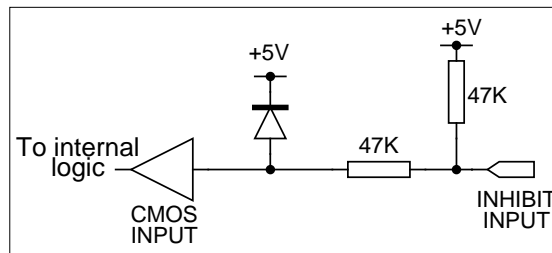
CashFlow[®] 430 5-way selector Product Maintenance Handbook

All-Inhibit Input: (ALLINH) Pin 6

Accept coins	V _{in}	> + 4V (+ 30V max.) or input open circuit
Inhibit coins	V _{in}	between 0V and + 1V
Input impedance		47k Ω nom. to + 5V

Route Inhibit inputs: (INHR 1-4) Pins 3, 4, 5, 6

Route enabled	V _{in}	> + 4V (30V max.) or input open circuit
Route inhibited	V _{in}	Between 0V and +1V
Input impedance:		47k Ω nom. to + 5V



All-inhibit and Route inhibit input equivalent circuit

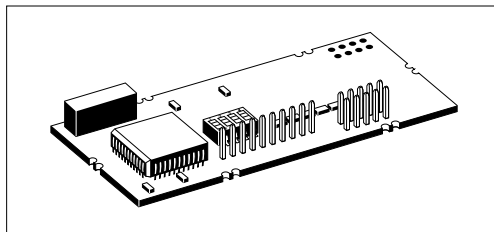
CashFlow[®] 430 5-way selector Product Maintenance Handbook

STANDARD VERSION 312, (0V COMMON 12V)

The interface PCB is attached directly to the discrimination PCB and enclosed within the back cover of the acceptor.

The PCB contains a four-bit DIL switch known as the Man Machine Interface (MMI). This switch can be used to configure certain aspects of the product.

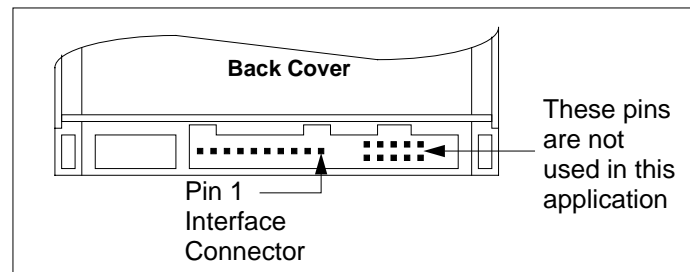
This PCB provides for 4 coin output lines, an all-inhibit input, an individual inhibit input and two route inhibit inputs.



Standard version 312 (0V Common 12V) interface PCB

PCB Connector - version 312

The coin outputs are defined as outputs OPA to OPD the inhibit input as INH, and the all-inhibit as ALLINH. The route inhibit inputs are defined as INHR1-2.



Connector locations - version 312

The 4 coin outputs consist of open collector transistors referenced to 0V. The appropriate output becomes active for between 80ms to 120ms to indicate that a particular coin has been accepted.

Both the inhibit and the all-inhibit inputs consist of CMOS inputs with input protection and pull-up resistor. The inputs are active high to inhibit some, or all, of the coins and if left open circuit will default to rejecting coins.

CashFlow[®] 430 5-way selector Product Maintenance Handbook

The route inhibit inputs consist of CMOS inputs with input protection and pull-up resistors. The inputs are active low to inhibit and if left open circuit will default to the inactive state.

Conn. Pin	Signal Name
1	VSUPPLY
2	GND
3	OPA
4	OPB
5	OPC
6	ALLINH
7	OPD
8	INHR1
9	INHR2
10	INH

Interface connector - version 312**Electrical Interfaces****Power**

VSUPPLY (pin 1) referenced to GND (pin 2):

Input supply voltage	V _{in}	10V min. 15V max. (Abs. max. not operational 20V)
Supply voltage ripple	V _{rip}	Within V _{in} min. to max. up to 100Hz 250mV pk-pk frequencies > 100Hz
Supply rise time	T _{rise}	75ms max.
Input current	I _{in}	500mA max. Acceptor only

CashFlow[®] 430 5-way selector Product Maintenance Handbook**Outputs****All outputs:**

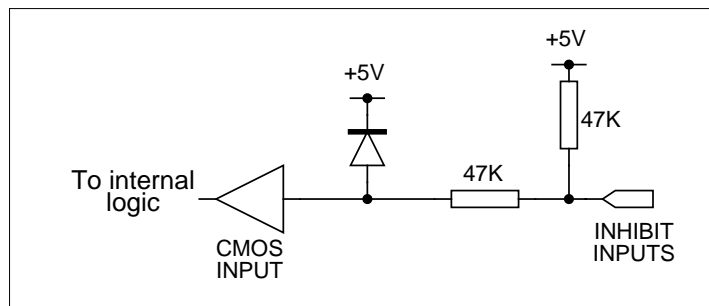
Off state voltage	V _{off}	+30V max..
Leakage current	I _{in}	5 μ A
On state voltage	V _{cesat}	0.5V max.
On state current	I _c	30mA max.

Inputs**Inhibit inputs (ALLINH,INH)**

Inhibit coins	V _{in}	>+4V (+30V max.)
Accept coins	V _{in}	between 0V and +1V
Input impedance		47k Ω nom. to +5V

Route inhibit inputs (INHR1-2)

Route enabled	V _{in}	>+4V (30V max.)
Route inhibited	V _{in}	between 0V and +1V
Input impedance		47k Ω nom. to +5V

**Inhibit inputs equivalent circuit**



CashFlow[®] 430 5-way selector Product Maintenance Handbook

CONFIGURATION

The configuration of the selector can be divided into two areas: factory configuration and field configuration. These are defined in the following sections.

The table below summarises which aspects are factory or field configurable.

Configuration item	Factory Configuration	Field Configuration			
		Mars [®] Route Alpha 250 Terminal	MMI Switches (when fitted)	Serial Interface	Routing Plug (when enabled)
Coin Parameters	✓				
Coin Enable/Inhibit	✓	✓	✓	✓	
Coin Output Map	✓	✓			
Coin Inhibit Map	✓	✓		✓	
Serial/Parallel Mode	✓			✓	
Customer Interface Setup	✓				
Coin Routing	✓	✓		✓	✓
Solenoid Activation Map	✓	✓		✓	

Coin parameters

Parameters are defined for each coin to determine the limits for the validation of a payment.

Coin enables/inhibits

Each of the coins may be individually enabled or inhibited. An enabled coin will be accepted unless it is inhibited by an individual inhibit or all-inhibit. (Applies to parallel interface selectors only).





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Coin output map

The coin output map defines which coin output lines are enabled. The coin output map allows any, or all, output lines to be enabled. Multiple coins may enable the same output lines. (Applies to parallel interface selectors only).

Coin inhibit map

The coin inhibit map defines which coins are inhibited when an inhibit input line becomes active. Any, or all, coins may be inhibited. (Applies to parallel interface selectors only)

Serial/parallel mode

The selector can be configured to communicate with the host machine via either the serial or a parallel interface.

Coin routing

Routing to any separator exit can be configured either in non-volatile memory, or by use of the routing plug. Multiple coins may be routed to multiple exits under control of the route inhibit inputs.

Solenoid activation map

The solenoid activation map defines which solenoids are activated when a particular route is selected.





CashFlow[®] 430 5-way selector Product Maintenance Handbook

FACTORY CONFIGURATION

The CashFlow[®] 430 Micro selector is configured for:

- Serial interface
and / or
- Parallel interface

The accept gate modules are factory configured for specific product types. It is therefore essential that if you need to change the accept gate you change like for like.

Specific Coinsets

The acceptor is pre-programmed to accept a specific range of coins and/or tokens of the following countries.

This list does not preclude any other coinsets not specifically listed.

Australia	Hungary	Singapore
Austria	India	South Africa
Bahrain	Israel	South Korea
Belgium	Italy	Spain
Canada	Japan	Sweden
Colombia	Kuwait	Switzerland
Cyprus	Malta	Taiwan
Denmark	Mexico	Turkey
Eire	Netherlands	UAE
Finland	New Zealand	UK
France	Norway	USA
Germany	Portugal	
Greece	Saudi Arabia	





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Coin Inhibit Map	✓	✓		✓	
Serial/Parallel Mode	✓			✓	
Customer Interface Setup	✓				
Coin Routing	✓	✓		✓	✓
Solenoid Activation Map	✓	✓		✓	

Coin parameters

Parameters are defined for each coin to determine the limits for the validation of a payment.

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CashFlow® 430 5-way selector Product Maintenance Handbook

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Belgium	Italy	Spain
Canada	Japan	Sweden
Colombia	Kuwait	Switzerland
Cyprus	Malta	Taiwan
Denmark	Mexico	Turkey
Eire	Netherlands	UAE
Finland	New Zealand	UK
France	Norway	USA
Germany	Portugal	
Greece	Saudi Arabia	



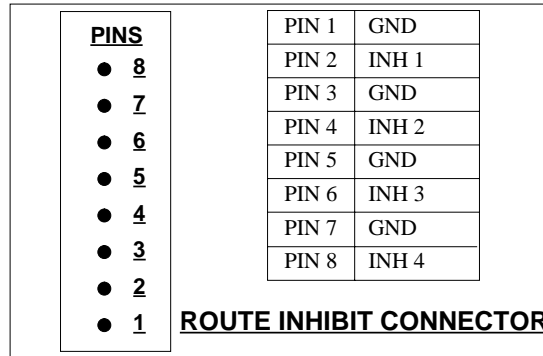


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VIA ROUTE INHIBIT

The route inhibit interface allows up to 4 routes to be inhibited using an 8 way single in line connector. If no connection is made from the machine to the route inhibit interface all routes will be enabled.

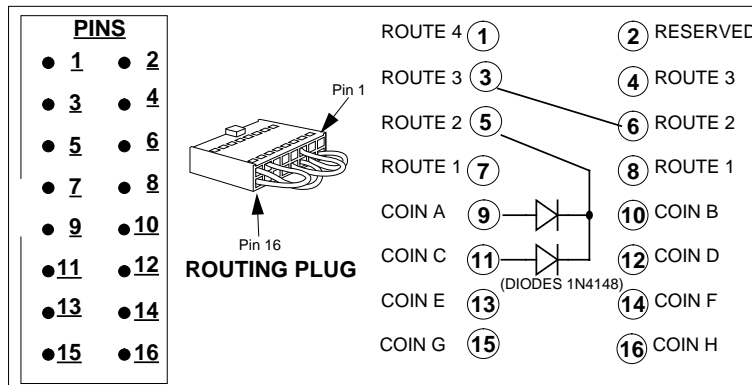
The route inhibit facility is an option for the operator to utilise or not, and is not provided with a socket at the time of manufacture.



VIA ROUTING PLUG

The routing plug interface allows for up to 8 coin values, each to be routed to up to 5 routes, using appropriate links.

It is possible to send multiple coins to single or multiple routes. This is achieved by using diodes rather than links on the routing plug. The following diagram shows how coins A and C would be sent to routes 2 or 3 on a 5 way separator.



The Routing Plug connection pins with the key-in on the left.

Wiring shown to route either coin A or coin C to route 2. If this is inhibited the coins are diverted to route 3.



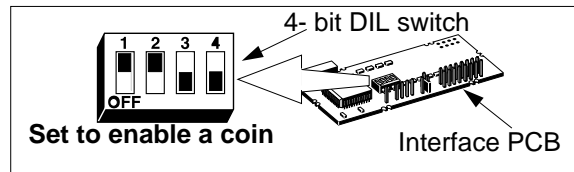
CashFlow[®] 430 5-way selector Product Maintenance Handbook**FIELD CONFIGURATION**

The CashFlow[®] 430 selector parallel interfaced product offers various field configuration options. Four methods are available; via an interface PCB (MMI), a MEI[®] Route Alpha 250 hand held terminal or, as described earlier, the machines route inhibit interface or the routing plug interface. (These do not apply with HI²).

VIA MAN MACHINE INTERFACE (MMI)

The Man Machine Interface is designed to provide a simple stand-alone interface which allows frequently used functions to be accessed and varied by an operator or route person without the use of a MEI[®] Route Alpha 250 terminal. The interface consists of a 4-bit DIL switch on the machine interface PCB. The following functions are available:

- Inhibit an individual coin
- Enable an individual coin



To change the function of the product there is a sequence of events that must be followed **in order**:

- 1 Switch off power and remove the acceptor module from the machine.
- 2 Disconnect the loom(s). Hold the interface PCB down firmly when pulling on the interface loom.
- 3 Remove the interface PCB cover by pressing downwards in the direction of the arrow on the cover.
- 4 Reconnect the loom(s).
- 5 Switch on power to the acceptor module.
- 6 Adjust the switch positions on the 4-bit DIL switch as shown in the following sections.
- 7 Replace the acceptor module back into machine.
- 8 Press the reject lever within a 4 minute timeout period.
- 9 Insert coins until desired function has been achieved.
- 10 Press the reject lever.



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Important points to remember

- The acceptor module must be powered up before changing the switch positions.
- The reject lever must be pressed within the 4 minute timeout period to return to the normal operational mode.

Care should be taken while the selector is not mounted in the Machine.

To Inhibit a Coin

- 1 Adjust slide switches to: 1=ON, 2=ON, 3=OFF, 4=ON.
- 2 Press the reject lever.
- 3 Insert coins to be inhibited until they all accept.
- 4 Press the reject lever to return to operational mode.

To Enable a Coin

- 1 Adjust slide switches to: 1=ON, 2=ON, 3=OFF, 4=OFF.
- 2 Press the reject lever.
- 3 Insert coins to be enabled until they all accept.
- 4 Press the reject lever to return to operational mode.

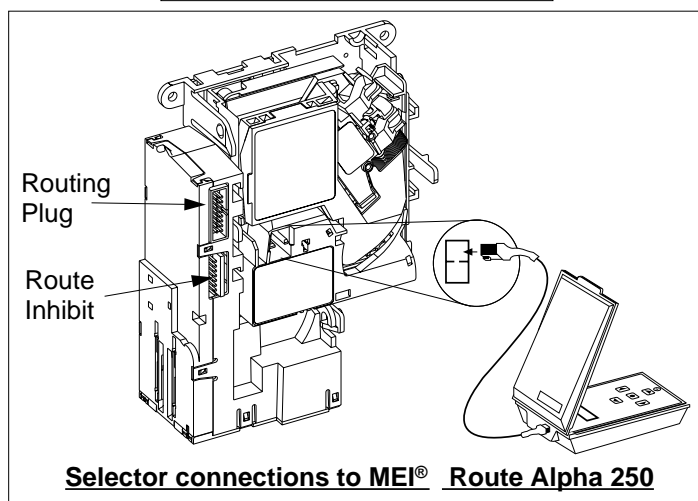
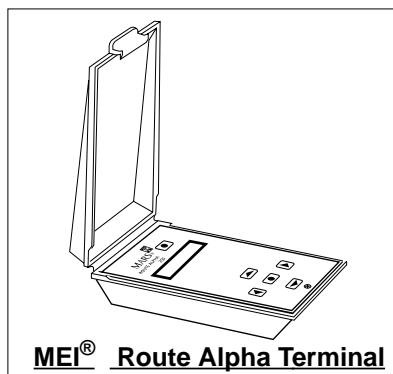


When you have completed configuring the acceptor module the interface PCB cover needs to be replaced. To do this follow the instructions below:

- 1 Switch off power and remove the acceptor module from the machine.
- 2 Disconnect the loom(s). Hold down the interface PCB before pulling on the interface loom.
- 3 Replace the interface PCB cover.
- 4 Re-connect the loom(s).
- 5 Place the acceptor module back into the machine.
- 6 Switch on power.
- 7 Test the unit to ensure it is working correctly.



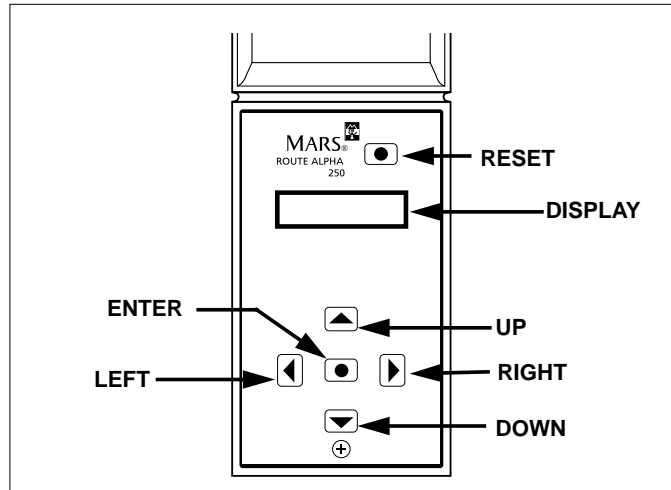
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VIA MEI[®] ROUTE ALPHA 250 TERMINAL



The MEI[®] Route Alpha 250 terminal is used to check or change certain data held at addresses which affect the way the selector operates. Each address has a unique number which identifies the feature you wish to read or change.

The following pages will explain how to access and change the data in certain addresses. At the end of this section there is a list of addresses and the allowed values.

The terminal is connected to the CashFlow[®] 430 selector via a six way terminal connector at the front of the acceptor module as shown in the above diagram.

CashFlow® 430 5-way selector Product Maintenance Handbook**Key Functions**

Reset Key: used to reset all modes and to initialise any settings that you have changed. If the reset key is pressed while an address is being updated then the address may not be updated. The reset key must be pressed to activate the changes that you have made.

Up Key: used to increase the value displayed on the screen.

Down Key: used to decrease the value displayed on the screen.

Left Key: used to scroll the display to the left when a large number is being accessed that cannot be fully displayed on the screen.

Right Key: used to scroll the display to the right when a large number is being accessed that cannot be fully displayed on the screen.

Enter Key: used to change between the address and data displays.

Other Features Of The Terminal

The terminal has built-in features to speed up its use, including the ability to scan at a higher speed with the keys auto repeating, to automatically roll over from its highest to lowest address and to inform the operator should a communication error occur.

Auto Repeating Keys

If either the UP or DOWN keys are kept pressed they automatically repeat. The repeat speed of the key increases the longer the key is held down.

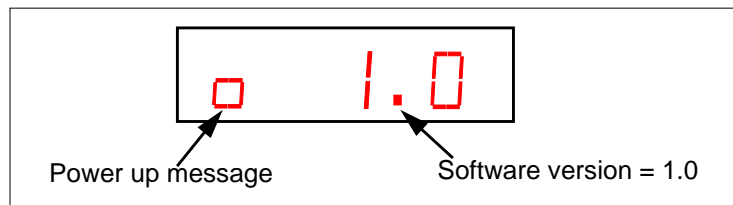
CashFlow® 430 5-way selector Product Maintenance Handbook**Double Click Hotkeying**

If a key is double clicked (pressed twice in quick succession) then this causes the address number to increment by a larger amount. e.g. if the user starts at address number 1 then double clicks the UP key, the address will jump to 40, double clicking again will cause it to jump to address 100 etc. You can also double click the DOWN key to decrement by larger amounts.

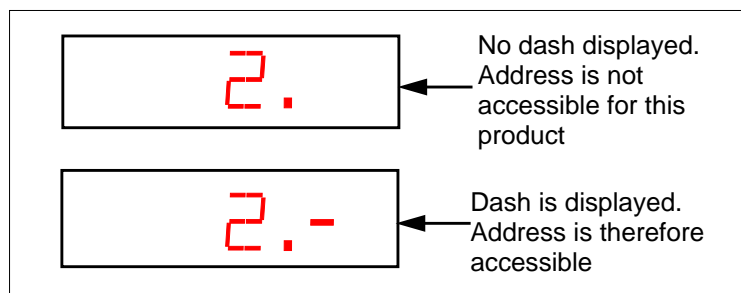
Using The Terminal

As soon as the terminal is connected to a selector it powers up and interrogates the product.

The terminal display will clear and briefly show a message that indicates the version of software in the terminal. A display of [0 1.0] means software with a version number of 1.0 is fitted in the terminal.



After a few seconds the display will show the number [1.] or [1.-]. Not all configuration items are applicable to every product but all the address values are shown on the display. If the value for the address is applicable to the product a dash will be present at the far right position on the display. The value can then be accessed and changed if required.



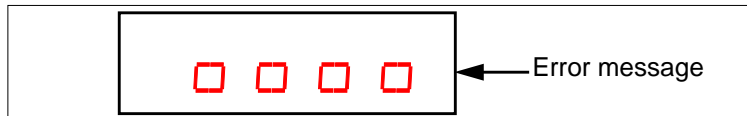
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The basic operation to alter the information held in an address is:

- 1 Connect the terminal to the powered-up CashFlow[®] acceptor module.
- 2 Wait for the terminal to power up correctly.
- 3 Select the address by using the UP and DOWN keys.
- 4 Examine the data by pressing the ENTER key.
- 5 Alter the data value by pressing the UP or DOWN keys until the new value has been reached.
- 6 Press the ENTER key to return to displaying addresses.
- 7 Press the RESET key to initialise the new value.

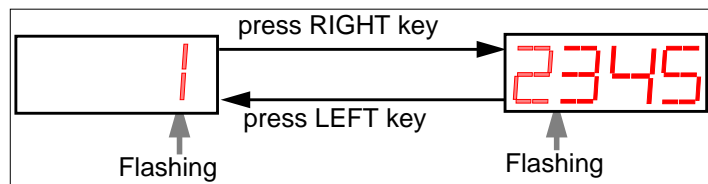
When the terminal is displaying values stored at addresses, no decimal point will be displayed.

If an error occurs with the communication between the terminal and the selector the display will show an error message of four half height zeroes.



This message will stay on the display. Pressing the RESET key will then revert the display to showing the current address. If the error occurred while updating an address then the value of that address should be checked as it may not have been updated correctly.

As the screen is capable of only displaying four digits at any one time the number displayed on the screen can be scrolled if it is greater than 9999 by using the LEFT and RIGHT keys. The extreme left or right digit will flash indicating an extra digit can be examined by use of the scrolling keys e.g. Value is 12345



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The tables below show you how the addresses for both the selector of the Serial Interface variety and that using a Customer Interface can be reconfigured and their possible values.

Address	Parameter	Range	Meaning
Serial selector address values			
1	Coin 1 inhibit	0-1	0 = coin allowed,1 = inhibited
2	Coin 2 inhibit	0-1	0 = coin allowed,1 = inhibited
3	Coin 3 inhibit	0-1	0 = coin allowed,1 = inhibited
4	Coin 4 inhibit	0-1	0 = coin allowed,1 = inhibited
5	Coin 5 inhibit	0-1	0 = coin allowed,1 = inhibited
6	Coin 6 inhibit	0-1	0 = coin allowed,1 = inhibited
7	Coin 7 inhibit	0-1	0 = coin allowed,1 = inhibited
8	Coin 8 inhibit	0-1	0 = coin allowed,1 = inhibited
9	Coin 9 inhibit	0-1	0 = coin allowed,1 = inhibited
10	Coin 10 inhibit	0-1	0 = coin allowed,1 = inhibited
11	Coin 11 inhibit	0-1	0 = coin allowed,1 = inhibited
12	Coin 12 inhibit	0-1	0 = coin allowed,1 = inhibited
15	Accept direction	0-1	0 = left,1 = right
16	Strobes	1/2/4/8	Value = sum of codes 1 = direction strobe left 2 = direction strobe right 4 = post gate left 8 = post gate right
21	Coin 1 type	0-2	0 = coin 1 = value token 2 = vend token
22	Coin 2 type	0-2	0 = coin 1 = value token 2 = vend token
23	Coin 3 type	0-2	0 = coin 1 = value token 2 = vend token

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Address	Parameter	Range	Meaning
24	Coin 4 type	0-2	0 = coin 1 = value token 2 = vend token
25	Coin 5 type	0-2	0 = coin 1 = value token 2 = vend token
26	Coin 6 type	0-2	0 = coin 1 = value token 2 = vend token
27	Coin 7 type	0-2	0 = coin 1 = value token 2 = vend token
28	Coin 8 type	0-2	0 = coin 1 = value token 2 = vend token
29	Coin 9 type	0-2	0 = coin 1 = value token 2 = vend token
30	Coin 10 type	0-2	0 = coin 1 = value token 2 = vend token
31	Coin 11 type	0-2	0 = coin 1 = value token 2 = vend token
32	Coin 12 type	0-2	0 = coin 1 = value token 2 = vend token
100	Default route	1 - 5	Default route number
101	Coin 1 route map part i	0-15	Value = sum of codes where 1/2/4/8 = route 1/2/3/4
102	Coin 1 route map part ii	0-15	Value = sum of codes where 1/2/4/8 = route 5/6/7/8
103	Coin 2 route map part i	0-15	Value = sum of codes where 1/2/4/8 = route 1/2/3/4
104	Coin 2 route map part ii	0-15	Value = sum of codes where 1/2/4/8 = route 5/6/7/8

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Address	Parameter	Range	Meaning
105	Coin 3 route map part i	0-15	Value = sum of codes where 1/2/4/8 = route 1/2/3/4
106	Coin 3 route map part ii	0-15	Value = sum of codes where 1/2/4/8 = route 5/6/7/8
107	Coin 4 route map part i	0-15	Value = sum of codes where 1/2/4/8 = route 1/2/3/4
108	Coin 4 route map part ii	0-15	Value = sum of codes where 1/2/4/8 = route 5/6/7/8
109	Coin 5 route map part i	0-15	Value = sum of codes where 1/2/4/8 = route 1/2/3/4
110	Coin 5 route map part ii	0-15	Value = sum of codes where 1/2/4/8 = route 5/6/7/8
111	Coin 6 route map part i	0-15	Value = sum of codes where 1/2/4/8 = route 1/2/3/4
112	Coin 6 route map part ii	0-15	Value = sum of codes where 1/2/4/8 = route 5/6/7/8
113	Coin 7 route map part i	0-15	Value = sum of codes where 1/2/4/8 = route 1/2/3/4
114	Coin 7 route map part ii	0-15	Value = sum of codes where 1/2/4/8 = route 5/6/7/8
115	Coin 8 route map part i	0-15	Value = sum of codes where 1/2/4/8 = route 1/2/3/4
116	Coin 8 route map part ii	0-15	Value = sum of codes where 1/2/4/8 = route 5/6/7/8
117	Coin 9 route map part i	0-15	Value = sum of codes where 1/2/4/8 = route 1/2/3/4
118	Coin 9 route map part ii	0-15	Value = sum of codes where 1/2/4/8 = route 5/6/7/8
119	Coin 10 route map part i	0-15	Value = sum of codes where 1/2/4/8 = route 1/2/3/4
120	Coin 10 route map part ii	0-15	Value = sum of codes where 1/2/4/8 = route 5/6/7/8
121	Coin 11 route map part i	0-15	Value = sum of codes where 1/2/4/8 = route 1/2/3/4

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Address	Parameter	Range	Meaning
122	Coin 11 route map part ii	0-15	Value = sum of codes where 1/2/4/8 = route 5/6/7/8
123	Coin 12 route map part i	0-15	Value = sum of codes where 1/2/4/8 = route 1/2/3/4
124	Coin 12 route map part ii	0-15	Value = sum of codes where 1/2/4/8 = route 5/6/7/8
131	Solenoid activation map for route 1	0-15	Value = sum of codes where 1/2/4/8/ = solenoids 1/2/3/4 to be activated for route 1
132	Solenoid activation map for route 2	0-15	Value = sum of codes where 1/2/4/8/ = solenoids 1/2/3/4 to be activated for route 2
133	Solenoid activation map for route 3	0-15	Value = sum of codes where 1/2/4/8/ = solenoids 1/2/3/4 to be activated for route 3
134	Solenoid activation map for route 4	0-15	Value = sum of codes where 1/2/4/8/ = solenoids 1/2/3/4 to be activated for route 4
135	Solenoid activation map for route 5	0-15	Value = sum of codes where 1/2/4/8/ = solenoids 1/2/3/4 to be activated for route 5

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Address	Parameter	Range	Meaning
Interfaced selector address values			
1	Coin 1 inhibit	0-1	0 = coin allowed, 1 = inhibited
2	Coin 2 inhibit	0-1	0 = coin allowed, 1 = inhibited
3	Coin 3 inhibit	0-1	0 = coin allowed, 1 = inhibited
4	Coin 4 inhibit	0-1	0 = coin allowed, 1 = inhibited
5	Coin 5 inhibit	0-1	0 = coin allowed, 1 = inhibited
6	Coin 6 inhibit	0-1	0 = coin allowed, 1 = inhibited
7	Coin 7 inhibit	0-1	0 = coin allowed, 1 = inhibited
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10	Coin 10 inhibit	0-1	0 = coin allowed, 1 = inhibited
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23	Coin 3 type	0-2	0 = coin 1 = value token 2 = vend token
24	Coin 4 type	0-2	0 = coin 1 = value token 2 = vend token
25	Coin 5 type	0-2	0 = coin 1 = value token 2 = vend token

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Address	Parameter	Range	Meaning
26	Coin 6 type	0-2	0 = coin 1 = value token 2 = vend token
27	Coin 7 type	0-2	0 = coin 1 = value token 2 = vend token
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103	Coin 2 route map part i	0-15	Value = sum of codes where 1/2/4/8 = route 1/2/3/4
104	Coin 2 route map part ii	0-15	Value = sum of codes where 1/2/4/8 = route 5/6/7/8
105	Coin 3 route map part i	0-15	Value = sum of codes where 1/2/4/8 = route 1/2/3/4
106	Coin 3 route map part ii	0-15	Value = sum of codes where 1/2/4/8 = route 5/6/7/8
107	Coin 4 route map part i	0-15	Value = sum of codes where 1/2/4/8 = route 1/2/3/4
108	Coin 4 route map part ii	0-15	Value = sum of codes where 1/2/4/8 = route 5/6/7/8
109	Coin 5 route map part i	0-15	Value = sum of codes where 1/2/4/8 = route 1/2/3/4

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Address	Parameter	Range	Meaning
110	Coin 5 route map part ii	0-15	Value = sum of codes where 1/2/4/8 = route 5/6/7/8
111	Coin 6 route map part i	0-15	Value = sum of codes where 1/2/4/8 = route 1/2/3/4
112	Coin 6 route map part ii	0-15	Value = sum of codes where 1/2/4/8 = route 5/6/7/8
113	Coin 7 route map part i	0-15	Value = sum of codes where 1/2/4/8 = route 1/2/3/4
114	Coin 7 route map part ii	0-15	Value = sum of codes where 1/2/4/8 = route 5/6/7/8
115	Coin 8 route map part i	0-15	Value = sum of codes where 1/2/4/8 = route 1/2/3/4
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132	Solenoid activation map for route 2	0-15	Value = sum of codes where 1/2/4/8/ = solenoids 1/2/3/4 to be activated for route 2
133	Solenoid activation map for route 3	0-15	Value = sum of codes where 1/2/4/8/ = solenoids 1/2/3/4 to be activated for route 3
134	Solenoid activation map for route 4	0-15	Value = sum of codes where 1/2/4/8/ = solenoids 1/2/3/4 to be activated for route 4

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Address	Parameter	Range	Meaning
135	Solenoid activation map for route 5	0-15	Value = sum of codes where 1/2/4/8/ = solenoids 1/2/3/4 to be activated for route 5
136	Solenoid activation map for route 6	0-15	Value = sum of codes where 1/2/4/8/ = solenoids 1/2/3/4 to be activated for route 6
137	Solenoid activation map for route 7	0-15	Value = sum of codes where 1/2/4/8/ = solenoids 1/2/3/4 to be activated for route 7
138	Solenoid activation map for route 8	0-15	Value = sum of codes where 1/2/4/8/ = solenoids 1/2/3/4 to be activated for route 8
140	Inhibit line 1 coin inhibits map part i	0-15	Value = sum of codes where 1/2/4/8 = coins 1/2/3/4
141	Inhibit line 1 coin inhibits map part ii	0-15	Value = sum of codes where 1/2/4/8 = coins 5/6/7/8
142	Inhibit line 1 coin inhibits map part iii	0-15	Value = sum of codes where 1/2/4/8 = coins 9/10/11/12
143	Inhibit line 2 coin inhibits map part i	0-15	Value = sum of codes where 1/2/4/8 = coins 1/2/3/4
144	Inhibit line 2 coin inhibits map part ii	0-15	Value = sum of codes where 1/2/4/8 = coins 5/6/7/8
145	Inhibit line 2 coin inhibits map part iii	0-15	Value = sum of codes where 1/2/4/8 = coins 9/10/11/12
146	Inhibit line 3 coin inhibits map part i	0-15	Value = sum of codes where 1/2/4/8 = coins 1/2/3/4
147	Inhibit line 3 coin inhibits map part ii	0-15	Value = sum of codes where 1/2/4/8 = coins 5/6/7/8
148	Inhibit line 3 coin inhibits map part iii	0-15	Value = sum of codes where 1/2/4/8 = coins 9/10/11/12
149	Inhibit line 4 coin inhibits map part i	0-15	Value = sum of codes where 1/2/4/8 = coins 1/2/3/4
150	Inhibit line 4 coin inhibits map part ii	0-15	Value = sum of codes where 1/2/4/8 = coins 5/6/7/8

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Address	Parameter	Range	Meaning
151	Inhibit line 4 coin inhibits map part iii	0-15	Value = sum of codes where 1/2/4/8 = coins 9/10/11/12
152	Inhibit line 5 coin inhibits map part i	0-15	Value = sum of codes where 1/2/4/8 = coins 1/2/3/4
153	Inhibit line 5 coin inhibits map part ii	0-15	Value = sum of codes where 1/2/4/8 = coins 5/6/7/8
154	Inhibit line 5 coin inhibits map part iii	0-15	Value = sum of codes where 1/2/4/8 = coins 9/10/11/12
155	Inhibit line 6 coin inhibits map part i	0-15	Value = sum of codes where 1/2/4/8 = coins 1/2/3/4
156	Inhibit line 6 coin inhibits map part ii	0-15	Value = sum of codes where 1/2/4/8 = coins 5/6/7/8
157	Inhibit line 6 coin inhibits map part iii	0-15	Value = sum of codes where 1/2/4/8 = coins 9/10/11/12
158	Inhibit line 7 coin inhibits map part i	0-15	Value = sum of codes where 1/2/4/8 = coins 1/2/3/4
159	Inhibit line 7 coin inhibits map part ii	0-15	Value = sum of codes where 1/2/4/8 = coins 5/6/7/8
160	Inhibit line 7 coin inhibits map part iii	0-15	Value = sum of codes where 1/2/4/8 = coins 9/10/11/12
161	Inhibit line 8 coin inhibits map part i	0-15	Value = sum of codes where 1/2/4/8 = coins 1/2/3/4
162	Inhibit line 8 coin inhibits map part ii	0-15	Value = sum of codes where 1/2/4/8 = coins 5/6/7/8
163	Inhibit line 8 coin inhibits map part iii	0-15	Value = sum of codes where 1/2/4/8 = coins 9/10/11/12
164	Coin 1 output map part i	0-15	Value = sum of codes where 1/2/4/8 = outputs a/b/c/d
165	Coin 1 output map part ii	0-15	Value = sum of codes where 1/2/4/8/ = outputs e/f/g/h
166	Coin 2 output map part i	0-15	Value = sum of codes where 1/2/4/8 = outputs a/b/c/d
167	Coin 2 output map part ii	0-15	Value = sum of codes where 1/2/4/8/ = outputs e/f/g/h

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Address	Parameter	Range	Meaning
168	Coin 3 output map part i	0-15	Value = sum of codes where 1/2/4/8 = outputs a/b/c/d
169	Coin 3 output map part ii	0-15	Value = sum of codes where 1/2/4/8/ = outputs e/f/g/h
170	Coin 4 output map part i	0-15	Value = sum of codes where 1/2/4/8 = outputs a/b/c/d
171	Coin 4 output map part ii	0-15	Value = sum of codes where 1/2/4/8/ = outputs e/f/g/h
172	Coin 5 output map part i	0-15	Value = sum of codes where 1/2/4/8 = outputs a/b/c/d
173	Coin 5 output map part ii	0-15	Value = sum of codes where 1/2/4/8/ = outputs e/f/g/h
174	Coin 6 output map part i	0-15	Value = sum of codes where 1/2/4/8 = outputs a/b/c/d
175	Coin 6 output map part ii	0-15	Value = sum of codes where 1/2/4/8/ = outputs e/f/g/h
176	Coin 7 output map part i	0-15	Value = sum of codes where 1/2/4/8 = outputs a/b/c/d
177	Coin 7 output map part ii	0-15	Value = sum of codes where 1/2/4/8/ = outputs e/f/g/h
178	Coin 8 output map part i	0-15	Value = sum of codes where 1/2/4/8 = outputs a/b/c/d
179	Coin 8 output map part ii	0-15	Value = sum of codes where 1/2/4/8/ = outputs e/f/g/h
180	Coin 9 output map part i	0-15	Value = sum of codes where 1/2/4/8 = outputs a/b/c/d
181	Coin 9 output map part ii	0-15	Value = sum of codes where 1/2/4/8/ = outputs e/f/g/h
182	Coin 10 output map part i	0-15	Value = sum of codes where 1/2/4/8 = outputs a/b/c/d
183	Coin 10 output map part ii	0-15	Value = sum of codes where 1/2/4/8/ = outputs e/f/g/h
188	Inhibit pull up polarity	0-1	0 = pull down 1 = pull up

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Address	Parameter	Range	Meaning
189	Master inhibit polarity	0-1	0 = active high 1 = active low
190	External inhibit enable	0-1	0 = disabled 1 = enabled
191	Interface enable	0-1	0 = disabled 1 = enabled



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CLEANING THE ACCEPTOR

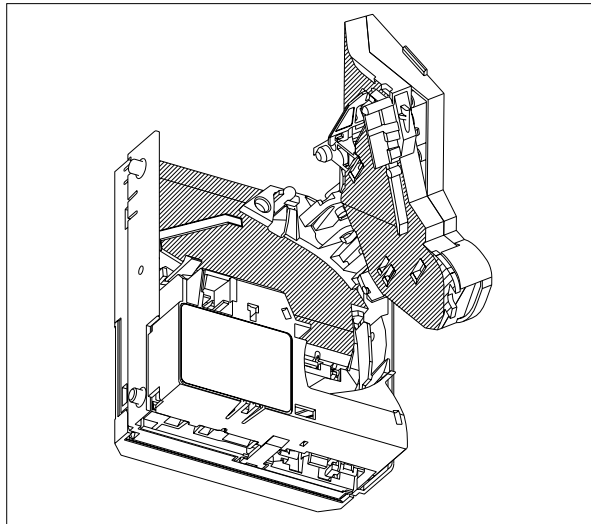
In order to ensure maximum efficiency from this product it is essential to pay regular attention to the cleaning of the coin pathway. Before attempting to clean or remove the acceptor the machine should be **switched off**. The shaded areas shown in the diagram below should always be kept free from dirt, grease, etc. Any cleaning should be carried out by using a soft damp cloth. The surface should always be left clean and dry after any such cleaning.

Should any drops of water enter the product leave machine switched off for sufficient time to dry out before switching on again.

Never use solvents to clean this product as this will damage the surfaces.

Note: Failure to switch the machine off before cleaning could result in a possible delay in accepting coins.

The acceptor calibrates itself at power up and re-calibrates every 4 minutes, 5 seconds after a coin has been rejected, or 5 seconds after the deck is closed. If you switch on with the lid open it will calibrate itself incorrectly and, if a coin is inserted within 5 seconds of the deck being closed, it will be rejected. Subsequent coins will follow the normal process of validation provided that the lid is firmly closed.





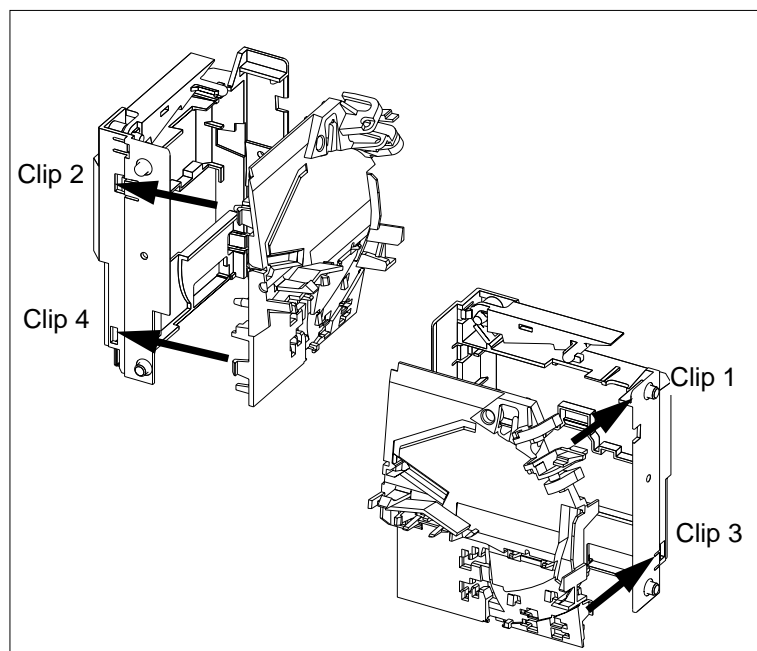
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REPLACING MODULES

REPLACING THE BACK COVER

- 1 Remove the Interface PCB cover.
- 2 Remove the customer interface PCB if fitted.
- 3 Release the retaining clips where shown on diagram. You will find it easier if you use a small screwdriver.
- 4 Gently ease out the discriminator module from the back cover.

For re-assembly reverse the above instructions.



Left and Right Hand Clip Positions

Please note: While the above diagram shows the detail for the top entry version, the same procedure is followed for the front entry version.

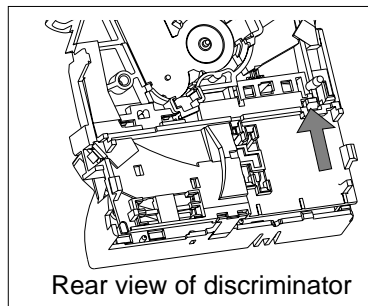


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REMOVING THE ACCEPT GATE

- 1 Remove the acceptor module.
- 2 Remove the back cover, observing the earlier instructions on removing the discriminator, from the back cover.
- 3 Dis-engage the PCB at the rear by releasing the retaining clip on the upper left hand side of it. Extreme care should be taken not to damage the flexi-circuit leading to the PCB while it is dis-engaged.

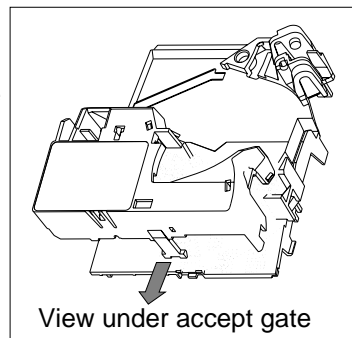
The accept gate is held in the discriminator via three clips



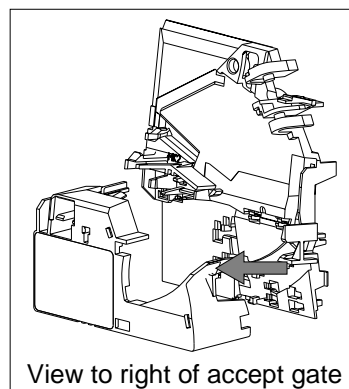
Rear view of discriminator

Release the clip at the point shown in direction of arrow. Gently ease accept gate module outwards away from discriminator.

Dis-engage the clip at the base of the accept gate and separate gently the two parts in the direction of the arrow.



View under accept gate



View to right of accept gate

Pressing the side of the accept gate at the point indicated, and keeping the accept gate parallel to the discriminator, pull it free from its electrical connections, taking care not to bend the pins.

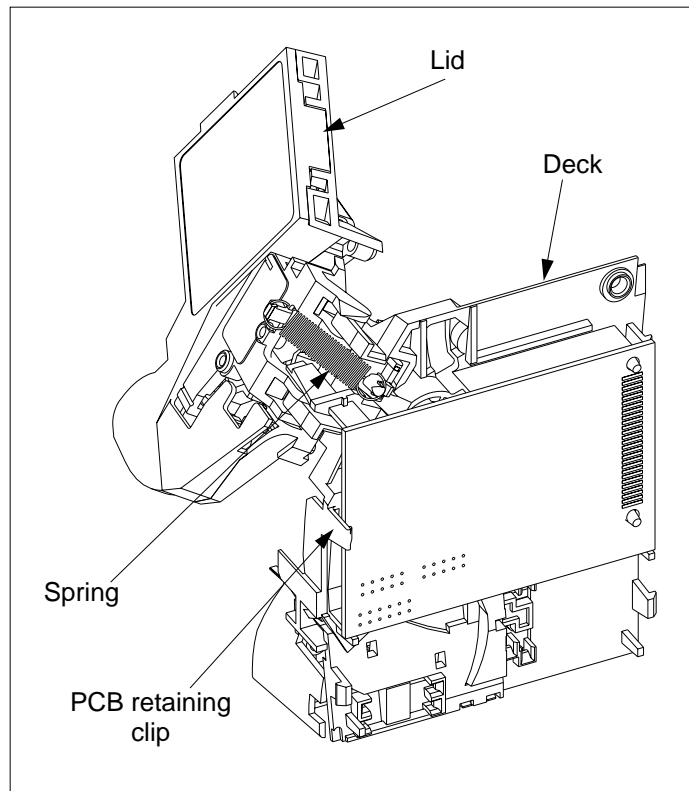
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To replace the accept gate the discriminator lid must be opened. Great care must be taken because the spring will become disengaged if the lid, (which is normally restrained by the back cover), is taken further back than 100°.

When replacing the accept gate make sure that all three clips are correctly aligned before pushing back into place. At all times the flexi-circuit must be treated with care to ensure no damage results from rough handling.

Should the spring require re-fitting the guides and pivot points forming the physical link between the deck and lid must be first be correctly located, and the spring connected at both ends. The two parts should be pulled apart and pivoted into the correct position. At no time should undue force be used as this will cause irreparable damage to the mouldings and make the discriminator unusable.

Check for correct functionality after re-assembling.

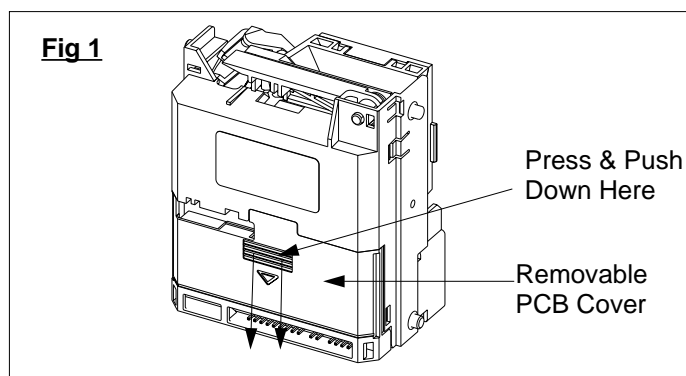




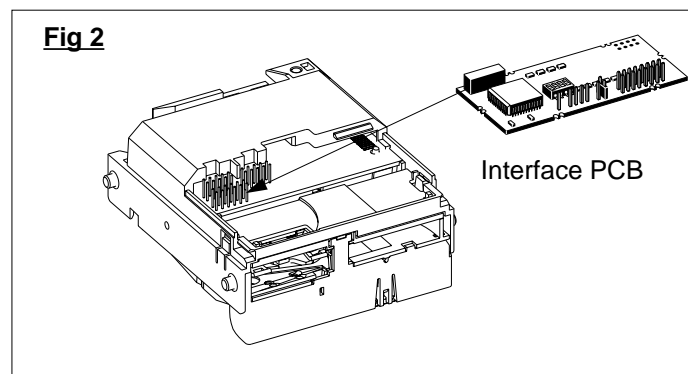
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CHANGING THE INTERFACE PCB

- 1 Unplug the acceptor module from any looms that are attached.
- 2 Remove the acceptor module from the front plate.
- 3 Slide off the removable back cover by pressing and pushing downwards in direction of arrows (Fig 1).



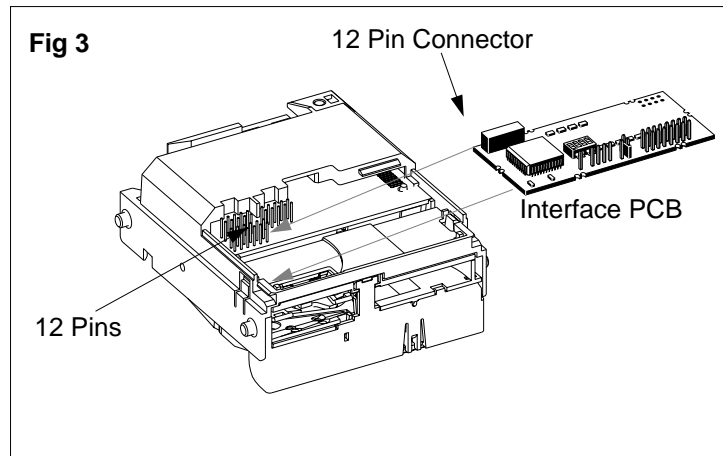
- 4 Carefully lift and remove the Interface PCB (fig.2) taking care not to bend the connector pins.





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- 5 Place the new interface PCB on to the correct pin connections and push gently but firmly home (fig.3).



- 6 Replace the PCB cover.
- 7 Fit the acceptor module back into the front plate.
- 8 Replace any loom/s, ensuring a firm connection.
- 9 Switch on mains power and follow the initialisation procedure to check the unit is working and pricing as required.



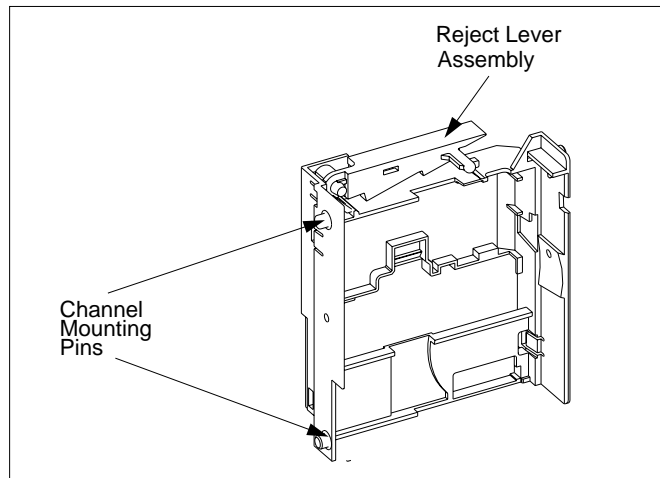


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SPARE PARTS

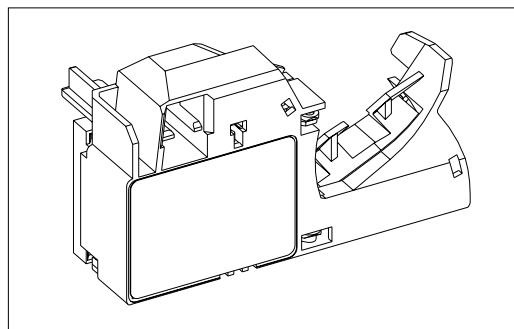
BACK COVER

The reject lever assembly forms part of the back cover assembly and is located at the top. Mounting pins at each side provide the points at which it is located in the channel.



ACCEPT GATE MODULE

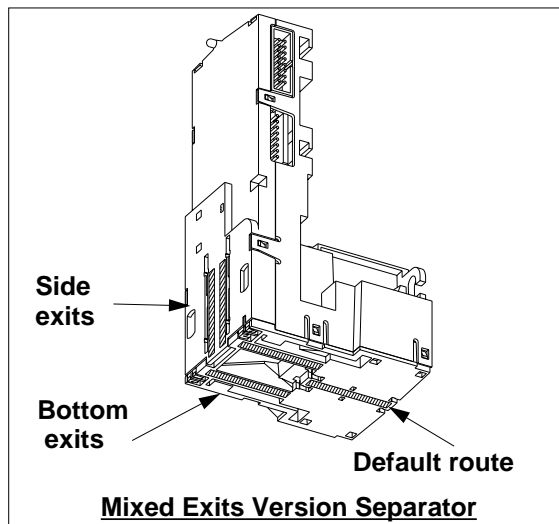
The accept gate module contains a solenoid-operated gate, optical coin strobes and coin routing components. The module clips and plugs onto the flight deck. The coin exits for both accepted and rejected coins are defined by the accept gate.





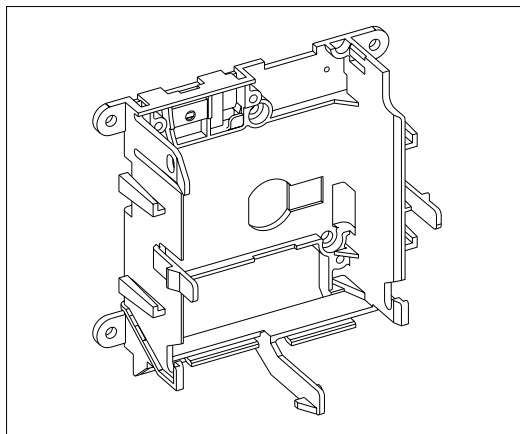
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SEPARATOR

The exits for the separator allow for 3 down and 2 to the side.



4"/100mm CHANNEL

When fixed to the host machine the 4"/100mm channel provides the mounting facility for the acceptor module and the separator module.



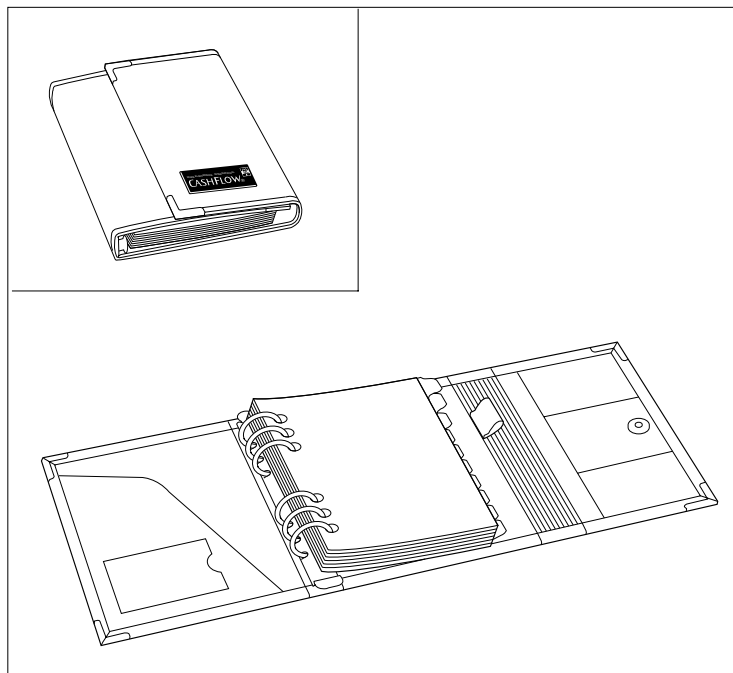


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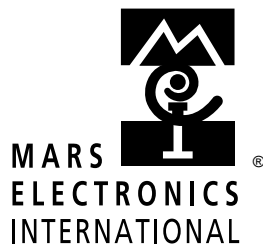
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