The

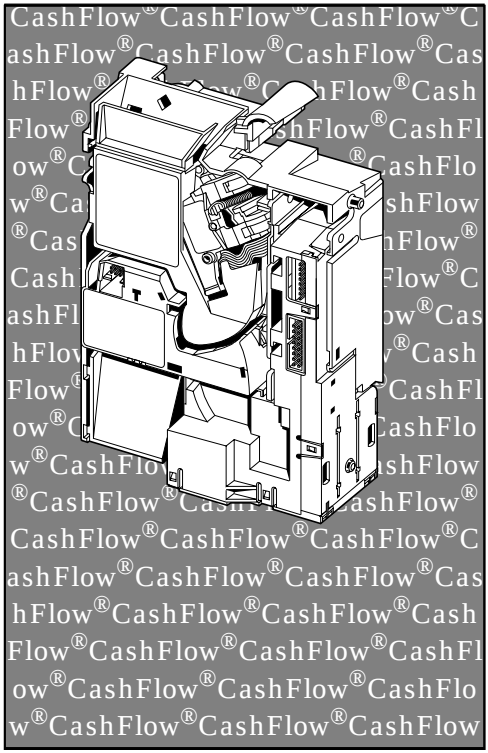
CASHFLOW® 450

REFERENCE SERIES

5 WAY SELECTOR

POCKET GUIDE

ROUTINE MAINTENANCE, SAFETY, INSTALLATION, & TROUBLESHOOTING



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CashFlow® 450 5 way selector Pocket Guide

Part Number : **143892044**

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User Safety Notices

WARNING

Before cleaning, servicing, removing or replacing CashFlow® units, **ALWAYS SWITCH OFF** or **ISOLATE** the **ELECTRICITY SUPPLY** to the host machine.

CAUTION

This guide is for use only by personnel trained to carry out electrical installation.

Maximum Operating Voltage

Do not apply more than the voltage specified on the unit.

Dangerous Environments

Do not operate the unit in the presence of flammable gases or fumes, or after the entry of fluid into the machine.

Disposal of Product

If necessary, always dispose of defective units according to local regulations.

Conformance to International Standards

When installed and operated according to the instructions provided for the particular unit, CashFlow® products meet the applicable international and national safety standards for any country in which they are used.

Routine Maintenance

WARNING

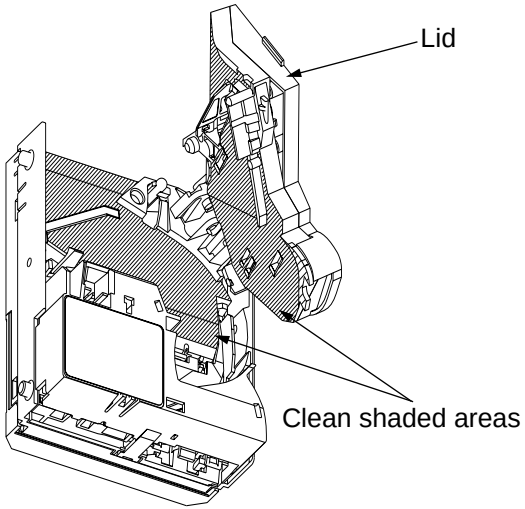
Always switch off power to the host machine *before* cleaning the unit

Clean the coin pathway (shaded in the figure below) regularly with a soft damp cloth. *Take care that the surfaces are dry before closing the lid of the unit.*

Take care that any cleaning fluid is kept clear of the PCB assembly during cleaning.

Never use solvents or abrasive creams to clean this product, as these will damage the surfaces.

Switch on power to the machine, then check that coins are being accepted.



NOTE: *If you switch the machine on when the lid of the unit is not fully closed, coins will be rejected,* ***even if you then close the lid*****.**

Switch off power to the host machine for at least 15 seconds, then close the lid and switch the power back on again. Check that coins are accepted.

Troubleshooting

Problem	Possible causes	Remedy
All coins or tokens rejected	No power from the machine.	Check the voltage supply. Power up again if necessary.
	Looms damaged or dislodged.	Check looms are installed correctly, and all connectors are making good contact.
	Build up of dirt in the coin path.	**Switch off power,** clean the acceptor unit, switch the power on again and retry.
	The acceptor is timing-out when switched on after opening lid.	Close lid firmly and switch machine **OFF**. Wait 15 seconds and switch **ON** again.
	Lid of acceptor unit not closed firmly.	Ensure the lid of the acceptor unit is closed correctly.
Poor coin acceptance	Modules not positioned correctly.	Check alignment of modules.
	Build up of dirt in the coin path.	**Switch off power to the machine**, clean the acceptor unit and retry.
	Lid of acceptor not closed firmly.	Close the lid firmly. Switch machine **OFF**. Wait 15 seconds and switch **ON** again.
Rejects only some coins or tokens	Coin/s or token/s inhibited.	Check that the individual coins or tokens are not **inhibited**.
Coins accepted but no credit given	Looms not fitted correctly.	**Switch off power to the machine** and check the installation of the looms.
Coins follow incorrect path	Parts not fitted correctly.	Check that the **accept gate** and **exit plates** are fitted correctly.
	Coin jam inside the acceptor unit.	Confirm that suitable separator for required routing is fitted.
	Host machine and entry/exit plates are not compatible.	Press the reject button on the front of the machine to open the front of acceptor unit, and remove any blockage.
		Check components with your MEI representative.
Coins not passing through the machine	Coin jam inside the acceptor unit.	Press the reject button on the front of machine to open the front of the acceptor unit, and remove any blockage. Close the lid of the acceptor firmly.

Setting Functions with the MMI Switches

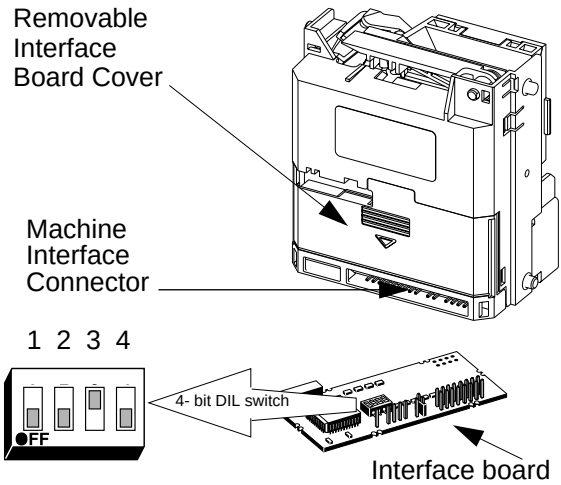
Always switch off power to the host machine *before* removing the unit

Use the Man Machine Interface (MMI) switches to change the functions of the unit.

Setting the MMI Switches

The MMI switches are on an interface PCB located behind a cover in the back of the acceptor unit.

According to which voltage and mode of operation is being used there are three variations of this PCB. The MMI switches are located in the same place on all three versions of the PCB's.



Follow these steps to adjust the switches

1. Switch off the power to the host machine.

2. Remove the selector, following the instructions in this guide.

Handle a unit with care when it is out of the machine

3. Remove the interface board cover by pressing it downward, then reconnect the looms.

4. Switch on power to the selector.

5. Adjust the positions of the MMI switches.

If the switches are already in the positions you want, change one switch, ***turn the power off and then on****, return that switch to its original position and press the reject lever.*

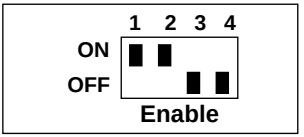
6. Perform the required function - these are detailed below.

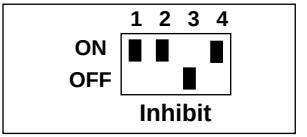
7. Switch off the power, disconnect the looms and put back the cover.

8. Reconnect the looms. Replace the unit in the machine. **Switch on the power to the machine**.

Enabling or Inhibiting a Coin

The selector can be set to *enable* or *inhibit* any coin or token from its coin set.





- Set the switches as shown to *enable* or to *inhibit*
- Press the reject lever
- Insert the coins or tokens you want to enable or inhibit
- Press the reject lever again

Check your settings by inserting the coin(s) you have enabled or inhibited.

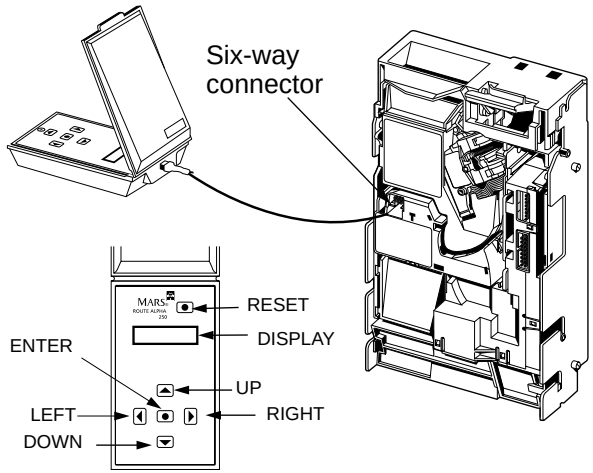
NOTE: *If more than one channel is used for the same coin (for example, the coin has both wide and narrow channels), use the* MEI® Route Alpha 250 *terminal to enable or inhibit each of the coin's channels.*

Setting a Unit's Functions with a MEI® Route Alpha 250 Terminal

Each piece of data which determines the unit's functions is stored in a separate address. Use the terminal to get access to an address to check or alter the way the unit operates.

Setting Functions

Insert the plug from the **Route Alpha 250** terminal into the six-way connector on the front of the unit.



A half-size zero appears on the display when the terminal powers up. The software version number is then displayed, followed by the first address number with a *dot*, or a *dot* and *dash* (**e.g. 1.** *or* **1.-**).

Every address value can be displayed, but the function for the address can be set only if there is a dash after the value.

Press the UP or the DOWN key slowly to display addresses one after the other.

Hold down a key to display addresses at an increasing speed.

Press a key twice quickly to make the display jump large blocks of addresses.

To set a function, press the ENTER key to show the current value in an address, then change the value by pressing the UP or the DOWN key.

NOTE: *If an error occurs, four half-size zeros appear*. Press RESET to clear this display and to return to the current address.

Troubleshooting the MEI® Route Alpha 250 Terminal

Symptom	Cause	Solution
Terminal displays an error message at power-up	Communications error	Press **RESET**
Terminal displays an error message when changing between address and data mode	Communications error between terminal and product, or the terminal does not recognise the product it has been connected to	Repeat last operation
Terminal powers up but addresses cannot be accessed	The product is not compatible with the terminal	Different terminal needed, or different software needed
Terminal does not power up	Bad connections or faulty cable	Check connections, replace lead if necessary.
Terminal powers up but one of the keys does not work	Faulty key	Use the terminal's self-test option. If the key is faulty, send the terminal for repair.
Non-standard characters printed on the display	Faulty unit	Send unit for repair

Address Settings for Use with the MEI® Route Alpha 250 Terminal

Address	Parameter	Range	Meaning	Notes
SERIAL INTERFACE PRODUCT ONLY				
1 - 12	Inhibits coins 1 - 12	**0 - 1**	**0** = Coin allowed **1** = Coin inhibited	
15	Accept direction	**0 - 1**	**0** = Left **1** = Right	
16	Strobes	**0 - 15**	Range value = Sum of codes **1** = Direction left **2** = Direction right **4** = Post gate left **8** = Post gate right	
21 - 32	Coin types 1- 12	**0 - 2**	**0** = Coin **1** = Value token **2** = Vend token	
100	Default Route	**1 - 5**	Default route number	
101 - 124	Coins 1 - 12 route maps Odd nos. = route maps part i Even nos.=route maps part ii	**0 - 15**	Odd nos. Value = sum of codes where 1/2/4/8 = route 1/2/3/4 Even nos. Value = sum of codes where 1/2/4/8 = route 5/6/7/8	
131 - 138	Solenoid activation map for routes 1 to 8	**0 - 15**	Value = Sum of codes where 1/2/4/8/ = solenoids 1/2/3/4 to be activated for routes 1 to 8	

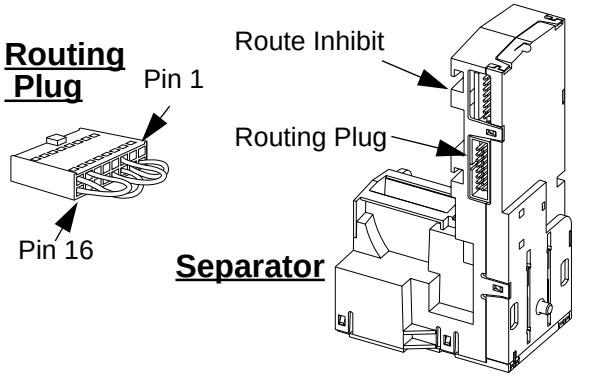
Address	Parameter	Range	Meaning	Notes
SELECTOR WITH CUSTOMER INTERFACE ONLY				
1 - 10	Inhibits coins 1 - 10	**0 - 1**	**0** = Coin allowed **1** = Coin inhibited	
15	Accept direction	**0 - 1**	**0** = Left **1** = Right	
16	Strobes	**0 - 15**	Range value = Sum of codes **1** = Direction left **2** = Direction right **4** = Post gate left **8** = Post gate right	
21 - 30	Coin types 1- 10	**0 - 2**	**0** = Coin **1** = Value token **2** = Vend token	
100	Default Route	**1 - 5**	Default route number	
101 - 120	Coins 1 - 10 route maps Odd nos. = route maps part i Even nos.=route maps part ii	**0 - 15**	Odd nos. Value = sum of codes where 1/2/4/8 = route 1/2/3/4 Even nos. Value = sum of codes where 1/2/4/8 = route 5/6/7/8	
131 - 138	Solenoid activation map for routes 1 to 8	**0 - 15**	Value = Sum of codes where 1/2/4/8/ = solenoids 1/2/3/4 to be activated for routes 1 to 8	
140, 143, 146, 149, 152, 155, 158, 161.	Inhibit line 1 - 8 coin inhibits map part i	**0 - 15**	Value = sum of codes where 1/2/4/8 = coins 1/2/3/4	

Address	Parameter	Range	Meaning	Notes
141, 144, 147, 150, 153, 156, 159, 162,	Inhibit line 1 - 8 coin inhibits map part ii	**0 - 15**	Value = sum of codes where 1/2/4/8 = coins 5/6/7/8	
142, 145, 148, 151, 154, 157, 160, 163,	Inhibit line 1 - 8 coin inhibits map part iii	**0 - 15**	Value = sum of codes where 1/2/4/8 = coins 9/10/11/12	
164 - 183	Coins 1 - 10 output maps Even nos.=route maps part i Odd nos.=route maps part ii	**0 - 15**	Even nos. Value = sum of codes where 1/2/4/8 = outputs a/b/c/d Odd nos. 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	
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	

Coin Routing Options

When the CashFlow® 450 leaves the factory it is programmed for coins to use specified exits from the separator.

A routing plug (available as an accessory) can be fitted to the front of the separator, which will allow for variations in the exits of coins. Shorting links are used to connect “coin lines” to “route lines” as required.



PIN 1	ROUTE 4	PIN 2	RESERVED
PIN 3	ROUTE 3	PIN 4	ROUTE 3
PIN 5	ROUTE 2	PIN 6	ROUTE 2
PIN 7	ROUTE 1	PIN 8	ROUTE 1
PIN 9	COIN A	PIN 10	COIN B
PIN 11	COIN C	PIN 12	COIN D
PIN 13	COIN E	PIN 14	COIN F
PIN 15	COIN G	PIN 16	COIN H

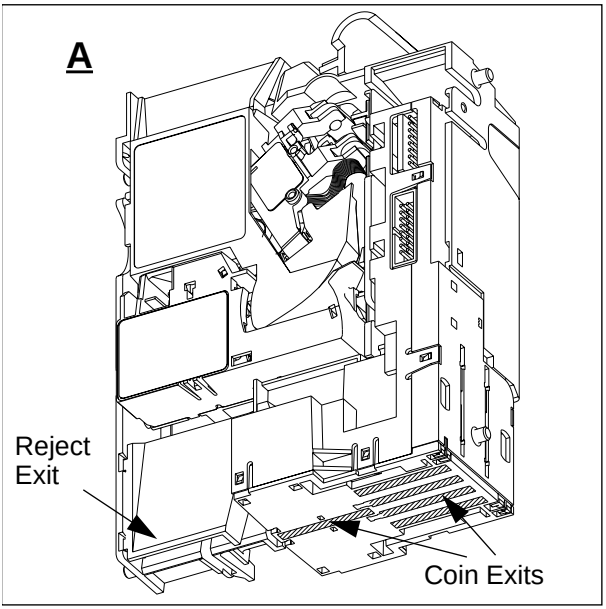
Routing Plug Configurations

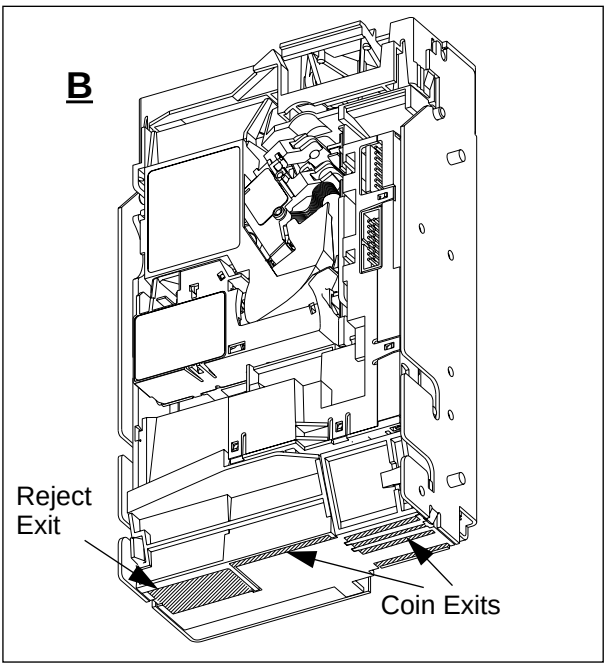
Route Inhibit Connections

A route inhibit connection from the machine to the separator can be made. If no connection is made to any pin then all routes are enabled.

PIN 1	GND
PIN 2	INH 1
PIN 3	GND
PIN 4	INH 2
PIN 5	GND
PIN 6	INH 3
PIN 7	GND
PIN 8	INH 4

The coin exits positions for the Macro version of the CashFlow® 450 are shown in (A) below and the Major version in (B).





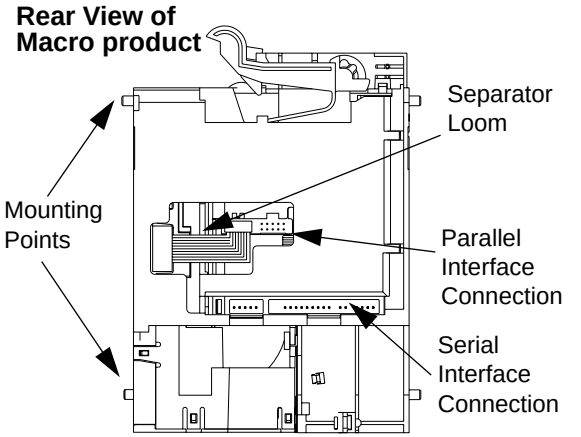
Installation / Dismantling

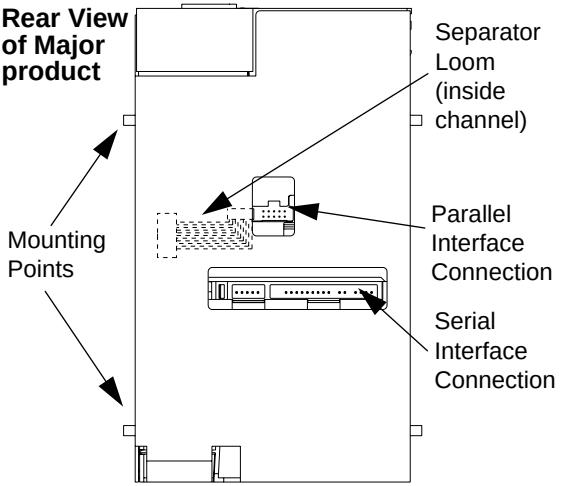
When installing the selector care must be taken to ensure that no looms are trapped or damaged:

Feed machine loom into the rear of the channel and attach to the acceptor.

Ensure that the loom between the separator and the acceptor is correctly and firmly engaged.

Attach the channel to the host machine by using the mounting points, located on the side of the channel.



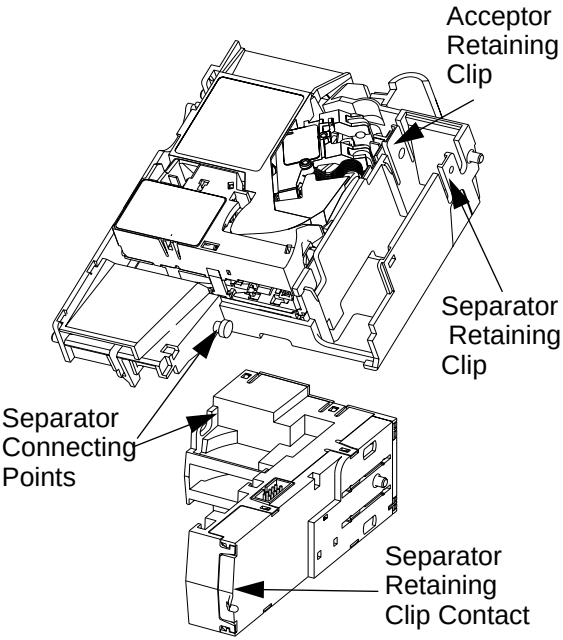


To remove the acceptor:

Release the acceptor retaining clip and tilt the acceptor forward.

Dis-connect the machine and the separator looms. Lift out acceptor from the mounting points at its base.

Reverse actions to refit, ensuring that the looms are firmly connected and the acceptor retaining clip is fully engaged.



Should it be necessary to remove the separator:

Release the acceptor retaining clip and tilt the acceptor forward. Dis-connect the separator loom and replace acceptor.

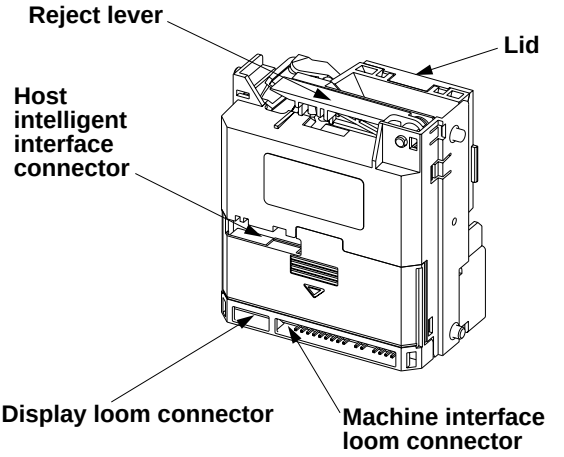
Release the separator retaining clip and roll the separator forward from the top.

To re-assemble reverse the above actions ensuring that the loom is firmly connected and that the retaining clip is engaged.

Testing and Starting a Unit After It is Installed

1. Check that the machine interface loom and the separator looms are inserted correctly in the back of the acceptor.

2. Check that the lid of the acceptor opens and closes fully when you press the reject button on the host machine.



3. Check that the mains power supply is connected correctly to the host machine.

4. Check that the power supply to the acceptor is at the correct voltage.

5. Switch on power to the host machine. Insert at least one of every coin or token from the acceptor's coin set, and confirm that they are all accepted and routed correctly.

6. Use the MMI switches to adjust the inhibit and enable if necessary.

7. Check that all the looms are free from kinks and obstructions, and close the door of the machine.

The unit is now ready for use

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