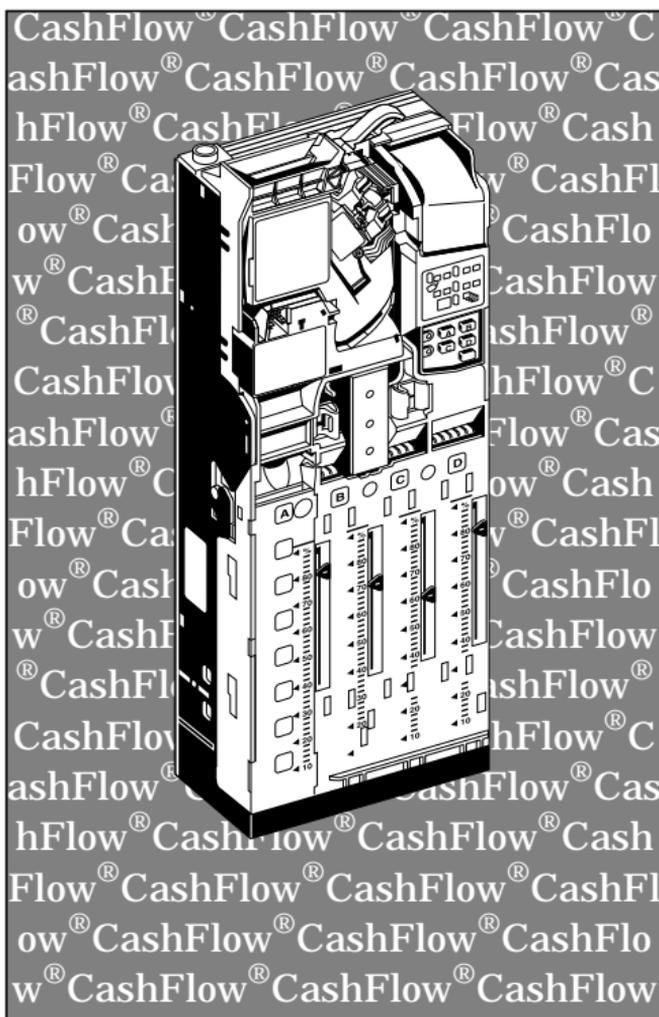The

CASHFLOW 550/560

REFERENCE SERIES

6 PRICE CHANGEGIVER

POCKET GUIDE

ROUTINE MAINTENANCE, SAFETY, INSTALLATION & TROUBLESHOOTING

CashFlow®CashFlow®CashFlow®C ashFlow®CashFlow®CashFlow®Cas hFlow®CashFlow®CashFlow®Cash Flow®CashFlow®CashFlow®CashFl ow®CashFlow®CashFlow®CashFlo w®CashFlow®CashFlow®CashFlow ®CashFlow®CashFlow®CashFlow® CashFlow®CashFlow®CashFlow®C ashFlow®CashFlow®CashFlow®Cas hFlow®CashFlow®CashFlow®Cash Flow®CashFlow®CashFlow®CashFl ow®CashFlow®CashFlow®CashFlo w®CashFlow®CashFlow®CashFlow ®CashFlow®CashFlow®CashFlow® CashFlow®CashFlow®CashFlow®C ashFlow®CashFlow®CashFlow®Cas hFlow®CashFlow®CashFlow®Cash Flow®CashFlow®CashFlow®CashFl ow®CashFlow®CashFlow®CashFlo w®CashFlow®CashFlow®CashFlow

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MEI

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Part Number: **143863044**

This Edition (October 1994)

CONTENTS

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 and Electro Mechanical Conformance standards for any country in which they are used.

CashFlow® 550/560

- Reject lever
- Acceptor and separator assembly release clip
- Top cover flap
- Label showing keypad functions and operating voltage of unit
- Keypad and LEDs
- Coin storage cassette release catches
- Coin slots for manual filling
- Coin flap for manual filling
- Coin storage cassette
- Movable float indicator
- Exit at rear for cashbox coins
- Parked dispenser arms show here

- Interface loom
- Coin entry cup
- Acceptor module
- Acceptor opening tab
- Connection port for the MEI® Route Alpha 250 terminal
- Hinge pin of acceptor and separator assembly
- Labels showing the coin tube positions
- Model number and serial number of unit
- Dispenser base
- Exit for rejected coins

©, MEI., 1994

Routine Maintenance
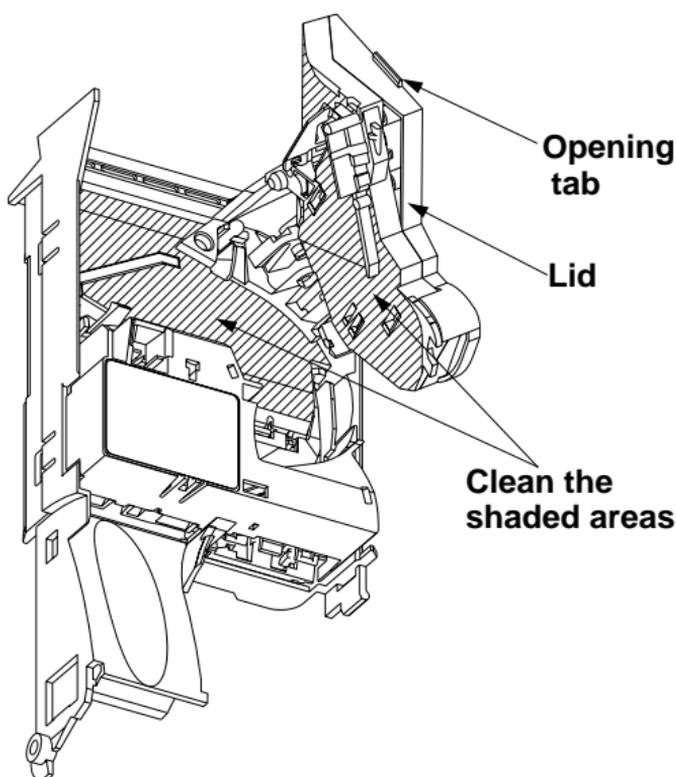## WARNING

Switch off the power to the host machine *before* cleaning the unit

Clean the coin pathway (shown shaded in the figure) regularly with a soft cloth moistened with water. Take care that all the surfaces are dry before you close the lid of the unit, particularly if you have had to clean the unit after the entry of dirt or fluid.

Opening tab

Lid

Clean the shaded areas

Take care that no drops of water enter the unit during cleaning.

Never use solvents or abrasive creams to clean the unit. These will damage the surfaces. Ensure that the lid is fully closed after cleaning.

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

If this happens, **switch off the power to the machine for at least 15 seconds**, then close the lid again. Make sure the lid snaps shut.

Switch the power on. Check that coins are accepted.

Cleaning the Dispenser Arms

Switch off the power to the host machine *before* cleaning the unit

Squeeze together the two release catches of the coin storage cassette and lift out the cassette.

Clean the dispenser arms and their paths in the dispenser base with a soft cloth moistened with water.

Switch on power to the machine, press the mode button twice to park the dispenser arms, and replace the coin cassette.

Check that the two release catches snap shut.

Clean the arms and their paths

Dispenser arms in parked position

You should only **remove** the dispenser and the dispenser arms for cleaning if there is a heavy build up of dirt or other matter in the dispenser.

Always refer to the *Product Maintenance Handbook* before removing these parts.
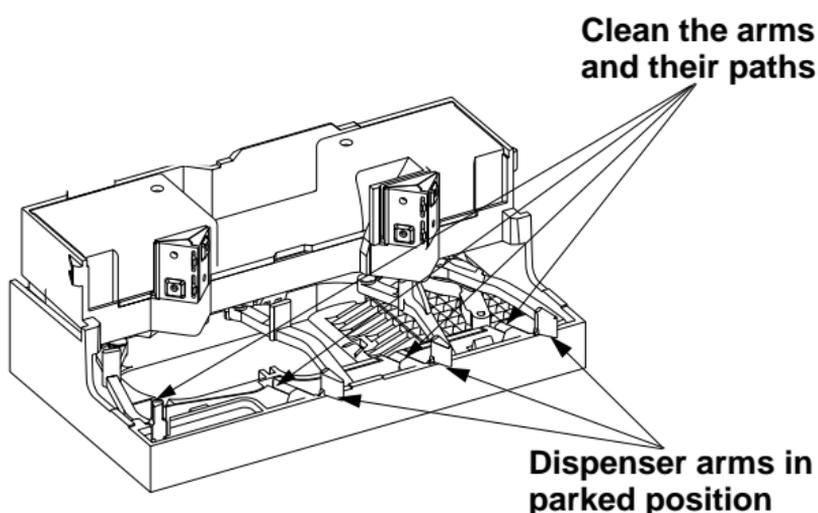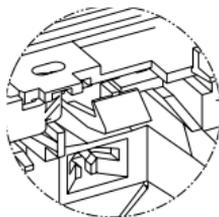
Checking and Replacing a Fuse

Switch off the power to the host machine *before* checking a fuse

Squeeze together the two release catches of the coin storage cassette and lift out the cassette.

Acceptor release catch

Fuse box cover located under the acceptor
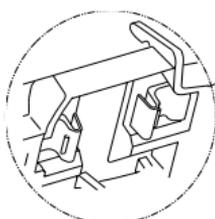
Coin cassette release catches
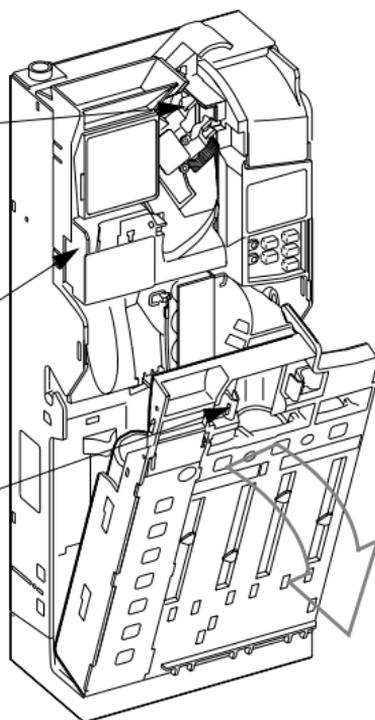
Press down the blue release catch above the acceptor with a small screwdriver. Pull the top of the acceptor forward and downwards. Unplug the exposed ribbon cable and lift out the acceptor.

The fuse is under a cover in the left hand side of the unit.

Always replace a blown fuse with one of the same rating.

Replace the acceptor, reconnect the ribbon cable and press the acceptor into place.

Park the dispenser arms and replace the coin cassette.

Make sure that the release catches of the creditor and of the cassette snap shut firmly.

Switch on power to the machine. Check that the red LED comes on.

Using the Keypad

Use the keypad to park the dispenser arms, dispense coins, set prices, float the coin tubes up or down, and to re-set the tube counts to their pre-set levels.

The keypad label summarises keypad functions.

Float up tube

Set vend prices

Correct voltage for unit

Re-set tubes automatically to pre-set level

No function

Dispense coins

Voltage _V

Tube A dispense

Yellow LED

Red LED

Tube C dispense

Tube B dispense

Tube D dispense

Mode button (YELLOW)
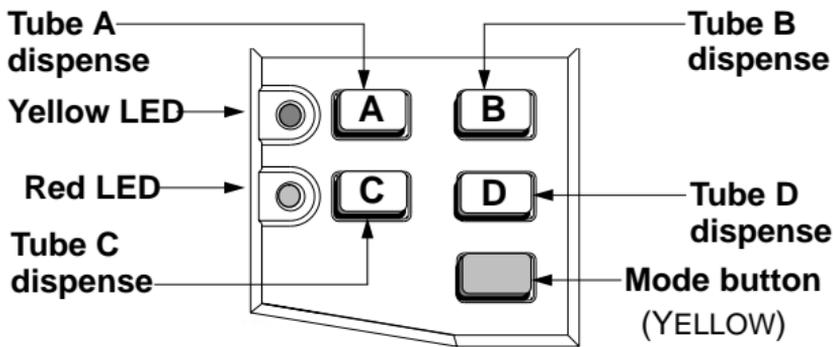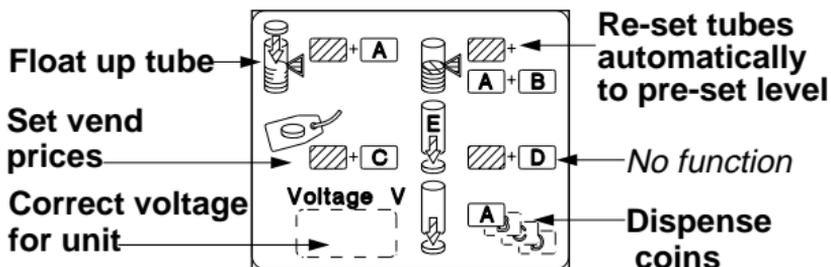
Function	**Buttons**
Dispense coins from tubes ▲	A , B , C or D ▲
Park the dispenser arms	☐ + ☐
Float up tubes automatically	☐ + A
Float down tube automatically	☐ + A + C
Reset tubes to pre-set levels★	☐ + A + B ★
Set the vend prices ◆	☐ + C ◆
Cancel the accumulated credit	☐ + A + A

▲ Not applicable with BDV product.

★ If an audit FEM is fitted, **Mode+A+B** is *not* available to reset tubes to pre-set levels.

◆ Not applicable with MDB product.

Using the Keypad

Dispense Coins / Empty Tubes
$$\boxed{A}, \boxed{B}, \boxed{C} \text{ or } \boxed{D}$$

Press a button once to dispense a coin from a corresponding tube. If you press and hold for more than three seconds, coins are dispensed automatically until only a sufficient minimum *(the safe count)* are left to operate the dispense mechanism. To empty a tube or a cassette, you may have to take out the last coins by hand.

Float-Up Tube Counts Automatically
$$\boxed{} + \boxed{A}$$

Press the buttons, then feed tube coins through the acceptor to refill the tubes to their pre-set float level. When float levels are reached, further coins are rejected. If automatic float is left by pressing **B**, tube counts re-set to pre-programmed float levels.

Re-set the Tube Counts
$$\boxed{} + \boxed{A} + \boxed{B} \qquad \bigstar$$

Press the buttons to force tube counts to re-set to pre-set float levels. If there are not enough tube coins to meet the pre-set levels, coin counts remain incorrect until recalibration takes place. ★ *If an audit FEM is fitted, reset via* **Mode+A+B** *is **not** available*.

Automatic Float Down to Pre-set Levels
$$\boxed{} + \boxed{A} + \boxed{C}$$

If the unit is programmed for this function, press the buttons to dispense coins until tube counts reach their pre-set float levels. If the numbers of coins already in the tubes are equal to or below the float levels, no coins are dispensed.

Set the Vend Prices ◆
$$\boxed{} + \boxed{C}$$
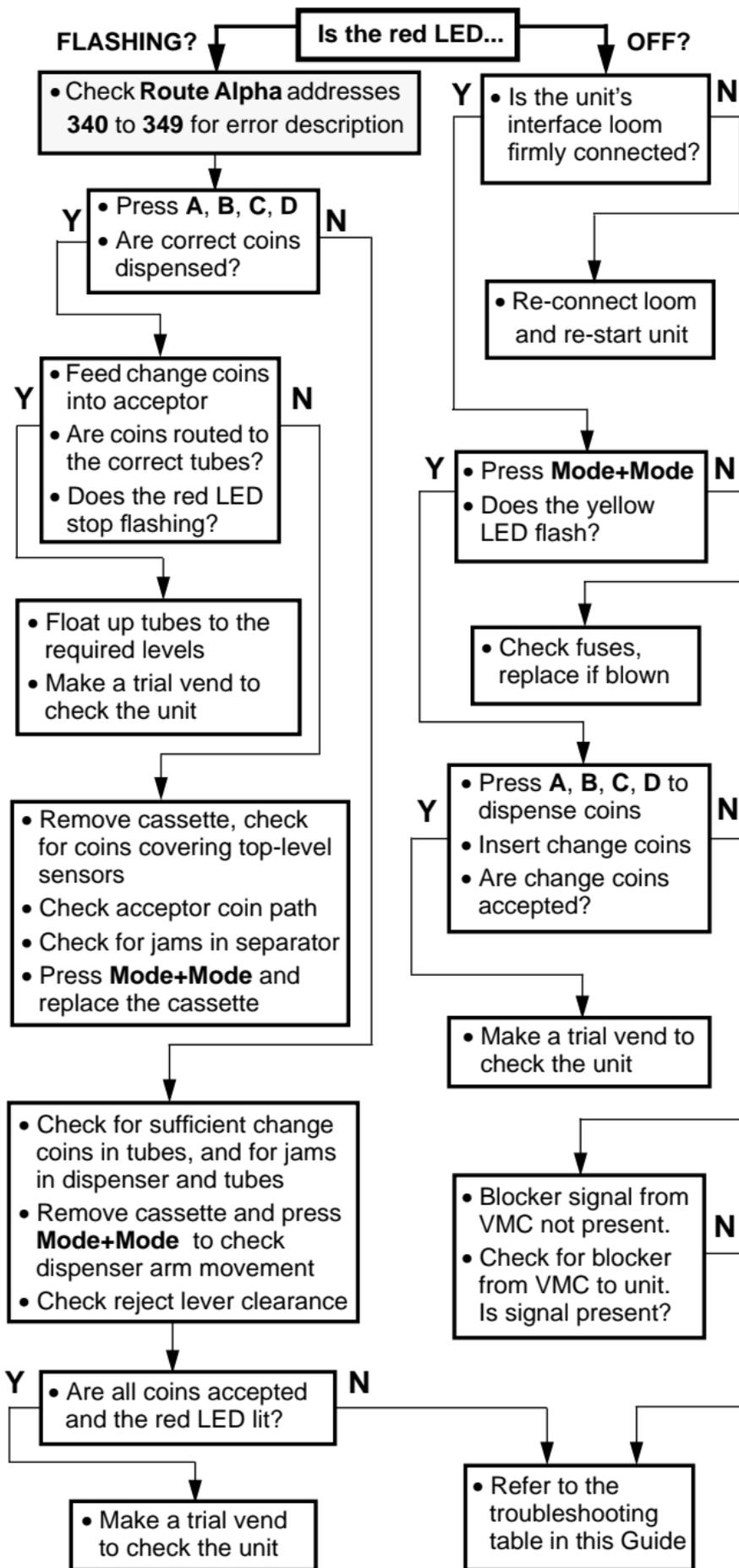
Press the buttons. Insert coins equal to the lowest price. Make a selection. A 45-second time-out starts after each coin. *More selections at the same price can be made without inserting extra coins.*

Add coins for the next highest price, and make a selection. Continue until all prices are set. Press **C** to cancel credit and to exit price teach.

◆ Not applicable with MDB product.

Troubleshooting the CashFlow® Unit

Is the red LED...

FLASHING? | **OFF?**

FLASHING? path:

- Check **Route Alpha** addresses **340** to **349** for error description

Y → **N**
- Press **A**, **B**, **C**, **D**
- Are correct coins dispensed?

Y → **N**
- Feed change coins into acceptor
- Are coins routed to the correct tubes?
- Does the red LED stop flashing?

- Float up tubes to the required levels
- Make a trial vend to check the unit

- Remove cassette, check for coins covering top-level sensors
- Check acceptor coin path
- Check for jams in separator
- Press **Mode+Mode** and replace the cassette

- Check for sufficient change coins in tubes, and for jams in dispenser and tubes
- Remove cassette and press **Mode+Mode** to check dispenser arm movement
- Check reject lever clearance

Y → **N**
- Are all coins accepted and the red LED lit?

- Make a trial vend to check the unit

OFF? path:

Y → **N**
- Is the unit's interface loom firmly connected?

- Re-connect loom and re-start unit

Y → **N**
- Press **Mode+Mode**
- Does the yellow LED flash?

- Check fuses, replace if blown

Y → **N**
- Press **A**, **B**, **C**, **D** to dispense coins
- Insert change coins
- Are change coins accepted?

- Make a trial vend to check the unit

- Blocker signal from VMC not present.
- Check for blocker from VMC to unit. Is signal present? **N**

- Refer to the troubleshooting table in this Guide

Troubleshooting the CashFlow® Unit

Problem	Causes	Actions
No coins accepted	Blocked accept gate opto's, or build up of dirt in the unit	**Switch off power to machine,** check if the opto's are blocked, and clean the unit. Refer to the *Product Maintenance Handbook*'s cleaning section before cleaning the opto's.
	Power loom not inserted correctly	**Switch off power to the machine,** and check the loom.
Poor coin acceptance	Changegiver unit is not level	Check and re-level the unit if necessary.
	Modules are not mounted and aligned correctly	Check that the coin entry and exit chutes of the machine are aligned with the coin entry cup on the unit and the cashbox on the machine.
		Adjust the modules until they are aligned accurately.
	Build-up of dirt in the acceptor	**Switch off power to machine,** check and clean acceptor.
Coins are accepted but no credit is given	Power loom is not inserted correctly	**Switch off power to the machine,** and check the loom.
	Coin jam in the separator module *(post gate strobes are covered)*	**Switch off power to the machine,** and check the separator for jams.
	Accept gate strobes mechanism blocked or dirty	Refer to the *Product Maintenance Handbook* before attempting to clean the strobes or the opto's.

Problem	Causes	Actions
Unit rejects one type of coin or token	Coin or token is inhibited	Check the coin/token is in the coin set, and has been enabled. Use the **Route Alpha 250** terminal to enable the coin
N.B. With MDB applications the coin mechanism is controlled by the vending machine controller.	Coin or token is damaged or worn	Discard the worn or damaged coin/token.
		Press **A** to leave *float mode* and to clear any credit.
	A tube has reached pre-set float level, further coins are rejected because the unit is in *float mode*	Check the tube levels, then make a vend to check that the correct change is dispensed.
Coins are not routing correctly	The level of coins in a tube is covering a top-level sensor	Check tube counts. If they are above the pre-set float levels and **automatic tube inventory** is set, press **Mode+A+C** to float-down the coins in the tubes.
	The top-level sensor loom or the separator loom is not connected correctly	**Switch off the power,** remove the cassette and release the acceptor. Check that the top-level sensor and separator looms are fitted correctly. Replace the acceptor and cassette. Switch on power to the unit, insert coins and check routing.
	Wrong acceptor or separator is fitted	Check that the acceptor and separator are the correct versions. Refer to your authorised MEI distributor.
	A tube is disabled	Use the **Route Alpha 250** terminal to enable the tube.

Problem	Causes	Actions
High-value coins are rejected and exact change light is ON	Too few coins in the change tubes, leaving the low-level sensors uncovered	Re-float the coin tubes through the acceptor until the low-level sensor mirrors are covered.
	Unit is in *No overpay* mode. **N.B.** Does not apply to MDB applications	Check **Route Alpha 250** address 242.
Incorrect change is dispensed	Insufficient change coins are available	If required, float up through acceptor with correct change coins.
	Incorrect coin values are set. Incorrect prices are set for required selections. **N.B.** Price control is held in the vending machine in MDB applications, and are <u>normally</u> held in the vending machine in Executive and BDV applications.	Check coin values and prices, reset if necessary using the **Route Alpha 250** terminal. Press **A**, **B**, **C** and **D** to check if change coins are dispensed.
		Check that coins are being routed to the tubes correctly.

Problem	Causes	Actions
No coins are dispensed	Levels of coins in the tubes are below the safe count	Check that change coins are available in the tubes. If necessary, float up the tubes with the correct change coins.
	Dispenser loom not connected, or loose	**Switch off power to the machine** and check that the dispenser loom is fitted correctly. Refer to the *Product Maintenance Handbook.*
	Faulty dispenser module	Check that the dispenser module is operating correctly. Refer to *Maintenance Handbook's* module replacement section before you attempt to service or to replace the dispenser.
Red LED is ON, except when a vend is made	Normal operation	No action
Red LED is ON but coins are not accepted	Coin jam in the changer mechanism	Check for jams in the acceptor and in the tubes. Clear the jams.
		Press **Mode+Mode** to park the dispenser arms before replacing the cassette, then dispense a coin from each tube to check operation.
	Lid of the acceptor is open	**Switch off the power to the machine**. Open and close the lid of the acceptor, **wait at least 15 seconds,** then switch on again.
	Not enough reject lever clearance	Check clearance is between 2 - 3mm, and adjust if necessary.

Problem	Causes	Actions
Red LED stays OFF	No power to the unit, or voltage not correct	Check that the power supply to the changegiver is at the voltage shown in the window on the keypad label.
		Test the power supply by pressing the **Mode** button.
		If the yellow LED flashes, the power is ON.
	No power to the unit - loose loom or blown fuse	If yellow LED stays off, **switch off power to the machine**, and check all power looms and fuses.
		Replace any blown fuses.
		Restart the machine and check that the red LED is on.

Problem	Causes	Actions
Red LED is *FLASHING*	Fault with the changegiver unit	Check **Route Alpha 250** addresses **340 - 349**. Press **A, B, C & D** to check if coins are dispensed. If the red LED is still flashing, **switch off the power to the machine**, wait at least 15 seconds and switch on again. Check that coins are dispensed.
	A coin has covered the top-level sensor mirrors	Remove the coin cassette and check the tops of the coin tubes.
	A coin is jammed in the dispenser module	**Switch off the power to the machine**, remove the cassette and check the dispenser for jams.
		Clear any blockages and check for damaged coins.
	Fault with the audit module	Check the **Route Alpha 250** audit addresses.
		Return the unit to your MEI distributor for repair if necessary.
	Coin cassette is unclipped	Press coin cassette into place **firmly**, ensure clips snap shut.

Problem	Causes	Actions
Red LED stays OFF and all coins are rejected	No stock available for vending	Restock machine if necessary.
	No blocker signal from the machine No polling by VNC - MDB only	Check for a full waste bucket. Check if machine is paused halfway through a vend cycle. Complete the cycle if necessary.
	Faulty transformer	Check the transformer. If faulty, refer to your MEI distributor.
Red LED *permanently* OFF. No other problems.	Faulty LED or keypad module	Check the keypad module.
		If it is faulty, refer to your authorised MEI distributor.
Red LED is *flashing* and no coins are accepted	Check **Route Alpha** addresses 340 to 349 for a description of the error	Use the table of **Route Alpha** 250 error addresses in this manual
	The lid of the acceptor is not closed firmly	**Switch off power to the machine** and open and close the lid of the unit. Make sure the lid snaps shut firmly. **Wait at least 15 seconds** and switch the power on again.
	The acceptor loom is not connected	Check the acceptor loom and reconnect it if necessary.
	The coin path in the acceptor is dirty	**Switch off power to the machine** and clean the acceptor.
Yellow LED is OFF	Normal operation	No action

Problem	Causes	Actions
Yellow LED *flashes* when coins are accepted	Normal operation	No action
Yellow LED remains OFF when Mode button is pressed	No power supply to the vending machine	**Switch off power to the machine,** check all looms and check all fuses. Replace blown fuses, following the instructions in this manual.
Yellow LED is *flashing*	The changegiver is in *shifted mode* because the **Mode** button has been pressed	The keypad is available to change the functions of the unit. (*To exit from shifted mode, press* **Mode** *or wait for 45 seconds*)
Yellow LED is OFF *permanently.* No other problems.	Faulty LED or faulty keypad module	Check the keypad module. If faulty, refer to your MEI distributor.
Problems in handling coins persist after all solutions have been tried	Faulty unit, or faulty modules	Contact your MEI distributor. *To help diagnosis, note the symptoms, and the model and serial number of the unit for reference.* These numbers are on a label on the side of the unit.

Troubleshooting the Unit with the MEI® Route Alpha Terminal

Address	Parameter	Range	Meaning and Actions	Notes
340	Full tube sensor errors on tube position **A**, **B**, **C** or **D**	**0 - 255**	Range value = the sum of the codes, where: **1 / 2 / 4 / 8** = tube **A** / **B** / **C** / **D** **128** = post gate strobe error. Values are additive - for example, a value of 6 means faults on tubes B & C. **Switch off power to the machine.** Check the tops of the tubes for coins covering the sensors. Check and clear any jams in the acceptor. Close the lid of the acceptor **firmly**, power up and insert a coin to test the unit.	*READ ONLY*
341	Disabled tube at position **A**, **B**, **C** or **D**	**0 - 31**	Range value = the sum of the codes, where: **1 / 2 / 4 / 8** = tube **A** / **B** / **C** / **D** *If necessary, use the* **Route Alpha 250** *terminal to enable the tube.*	*READ ONLY*

Address	Parameter	Range	Meaning and Actions	Notes
342	EEPROM errors - i	**0 - 15**	Range value = the sum of the codes, where:	*READ ONLY*
			1 = page 0 EEPROM error	
			Fatal error. Contact your MEI *distributor.*	
			2 = page 1 EEPROM error	
			Fatal error. Contact your MEI *distributor.*	
			4 = audit FEM corrupt	
			Fatal error. Contact your MEI *distributor.*	
	CAUTION		**8** = audit FEM removed	
	Switch off the power to the changegiver for *at least* 2 minutes before inserting or removing the audit FEM. Failure to do this can cause corruption of the FEM and loss of audit data.		**Switch off power to the machine.**	
			Check that audit FEM is inserted firmly in the board.	
			Contact your MEI *distributor if the error persists.*	

Address	Parameter	Range	Meaning and Actions	Notes
343	EEPROM errors - **ii**	**0 - 15**	Range value = the sum of the codes, where: **1** = incorrect configuration version *Contact your MEI distributor.* **2** = audit FEM not initialised *Initialise FEM, if fitted.* *Refer to the **Product Maintenance Handbook** before attempting to initialise the FEM.* *Contact your MEI distributor if the error persists.* **4** = *not used* **8** = internal EEPROM write error *Contact your MEI distributor.*	*READ ONLY*

Address	Parameter	Range	Meaning and Actions	Notes
344	Operational errors - **i**	**0 - 15**	Range value = the sum of the codes, where: **1** = *not used* **2** = acceptor initialisation error ***Switch off power to the machine.*** Open the lid of the acceptor then close it again firmly. Wait for 15 seconds, then power up the unit. *Contact your MEI distributor if the error persists* **4** = HI² hardware error *Set* **Route Alpha** *address 349 to* **1**. *Contact your MEI distributor if the error persists.* **8** = HI² transmission error *Set* **Route Alpha** *address 349 to* **1**. *Contact your MEI distributor if the error persists.*	*READ ONLY*

Address	Parameter	Range	Meaning and Actions	Notes
345	Operational errors - **ii**	**0 - 15**	Range value = the sum of the codes,where: **1** = cassette removed, or top level sensors covered *Switch off power to the machine. Remove coin cassette, check for coins covering the top level sensors.* *Check acceptor coin path, check for jams in separator. Close lid of acceptor firmly. Power up.* Press **Mode+Mode** *to park the dispenser arms. Replace the cassette, ensuring the retaining clips snap shut.* **2** =protocol A (interface controller) transmission error *Check the serial interface loom.* **4** =protocol A (interface controller) transmission error *Check the serial interface loom.* **8** = cashbox full	*READ ONLY*

Address	Parameter	Range	Meaning and Actions	Notes
346	BDV errors (i) options	0 - 15	1 = audit timed out 2 = vmc timed out 4 = cpc timed out	BDV only
347	BDV errors (ii) options	0 -15	1 = audit incompatible 2 = vmc incompatible 4 = cpc incompatible	BDV only
349	Reset error flags	**0 - 1**	**0** = do not reset error flags **1** = reset error flags	

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 read an address and to check or set the unit's functions.

Setting Functions

Insert the plug on the **Route Alpha 250** terminal into the six-way connector in the acceptor unit.
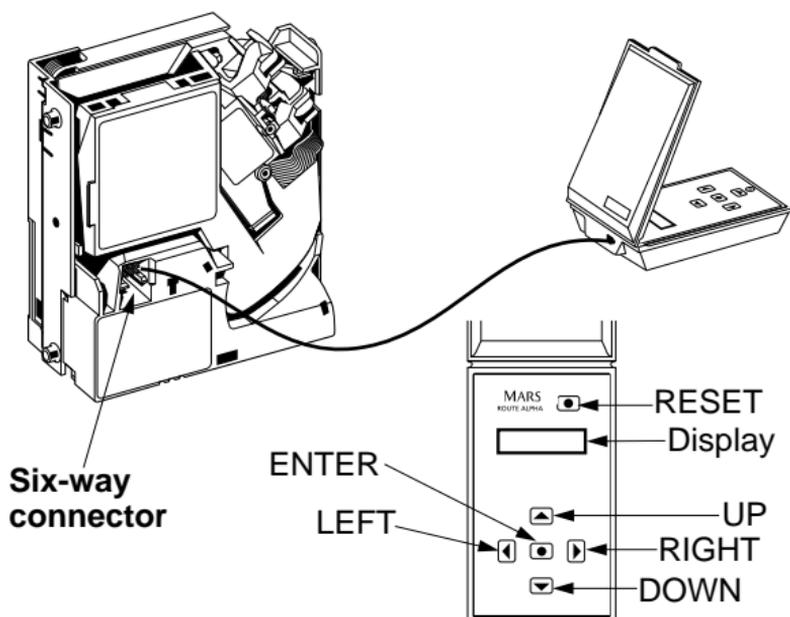
The acceptor must be powered up, as the **Route Alpha 250** terminal takes its power through the unit. A half-size zero is displayed when the terminal powers up, followed by the software version number and then the first address number with a **dot**, or a **dot** and **dash** (**1.** or **1.-**)

Functions can be changed only if a dash shows after the address number.

Press UP or DOWN 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 jump large blocks of addresses.

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

Press ENTER again to return to the address display. Press RESET to store the new value.

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

Problem	Causes	Actions
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 the last operation.
Terminal powers up but addresses cannot be accessed	The product is not compatible with the terminal	Different terminal is needed, or different software needed.
Terminal does not power up	Bad connections or faulty cable. No power to the unit (*the* **Route Alpha 250** *terminal is powered through the acceptor*)	Check connections. Replace lead if necessary. Power up the unit.
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 terminal for repair.
Non-standard characters printed on the display	Faulty unit	Send unit for repair to authorised MEI distributor.

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

Address	Parameter	Range	Meaning	Notes
200	Maximum credit	**0-65,535**	Maximum credit allowed	
201 - 204	Prices **1, 2, 3 & 4**	**0-65,535**	Values of prices **1, 2, 3 & 4**	*Prices **5 & 6** are at addresses **255** and **256***
226	Single vend or multi-vend	**0 - 1**	**0** = single vend **1** = multi-vend	
227	Escrow return inhibit	**0 - 1**	**0** = escrow return allowed **1** = escrow return inhibited	
228	Reset mode (**electromechanical installation only**)	**0 - 4**	**0** = blocker reset **1** = delayed blocker reset (30mS) **2** = delayed blocker reset (200mS) **3** = blocker hold reset **4** = reset after escrow accept signal	

Address	Parameter	Range	Meaning	Notes
229	Inhibit **coin**: coins 1 to 4	**0 - 15**	Address value = the sum of the codes where: Code **0** = no coins inhibited Code **1** = inhibit coin 1 Code **4** = inhibit coin 3 Code **2** = inhibit coin 2 Code **8** = inhibit coin 4 To inhibit more than one coin at the same time, add their **codes** together. For example, codes **1** + **8** = **9**. If you choose **9** for this address range value, coins 1 and 4 will be inhibited.	
230	Inhibit **coin**: coins 5 to 8	**0 - 15**	Address value = the sum of the codes where: Code **0** = no coins inhibited Code **1** / **2** / **4** / **8** = inhibit coin 5 / 6 / 7 / 8	
231	Inhibit **coin**: coins 9 to 12	**0 - 15**	Address value = the sum of the codes where: Code **0** = no coins inhibited Code **1** / **2** / **4** / **8** = inhibit coin 9 / 10 / 11 / 12	

Address	Parameter	Range	Meaning	Notes
232	Inhibit **exact change** group Inhibit coins 1 - 4	**0 - 15**	Code **1 / 2 / 4 / 8** = inhibit change coin 1 / 2 / 3 / 4	
233	Inhibit coins 5 - 8	**0 - 15**	Code **1 / 2 / 4 / 8** = inhibit change coin 5 / 6 / 7 / 8	
234	Inhibit coins 9 - 12	**0 - 15**	Code **1 / 2 / 4 / 8** = inhibit change coin 9 / 10 / 11 /12	
235	Change delay	**0-255**	Delay in steps of 1.0 second	
236	**Exact change** equation - i	**0 - 31**	Value = sum of codes where **1/2/4/8** = tubes **A/B/C/D**	
237	**Exact change** equation - ii	**0 - 31**	Value = sum of codes where **1/2/4/8** = tubes **A/B/C/D**	
238	Price hold	**0 - 1**	**0** = do not hold price **1** = hold price. *(Exec. only.* ***Cannot be set for 2- & 6-price Japanese version.)***	
239	Price display	**0 - 1**	**0** = do not display price **1** = display price	
240	Coin scaling factor	**1 - 250**	*Used with* Protocol A *only.* *(Exec. only.* ***Cannot be set for 2- & 6-price Japanese version.***)	

Address	Parameter	Range	Meaning	Notes
241	Decimal point position	**0 - 3**	**0 / 1 / 2 / 3** = move point position 0,1, 2, or 3 spaces	
242	Overpayment inhibit	**0 - 1**	**0** = overpayment allowed **1** = overpayment inhibited	*Not* MDB
243	Clear overpayment inhibit	**0 - 1**	**0** = cleardown allowed **1** = cleardown inhibited	*Not* MDB
244	Keypad inhibit	**0 - 1**	**0** = keypad enabled **1** = keypad disabled	*Not* MDB
245	Price teach inhibit	**0 - 1**	**0** = price teach allowed **1** = price teach inhibited	*Not* MDB
246	Fast sense	**0 - 1**	**0** = normal **1** = fast *(electromechanical only)*	*Not* MDB
247	Float down (auto tube inventory)	**0 - 1**	**0** = float-down disabled **1** = float-down enabled	
248	Vending mode	**0 - 1**	**0** = EUROPEAN mode **1** = JAPANESE mode	
			To alter the vending mode, move the two-position link (located on the control board behind the fuse box) between the pins labelled E and J.	

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Address	Parameter	Range	Meaning	Notes
249	6-price or 2-price mode	**0 - 1**	**0** = 6-price mode **1** = 2-price mode **Can be set in Japanese mode only.**	
250	Exact change display option	**0 - 1**	**0** = normal **1** = exact change on credit display	
251 - 254	Float level for tube **A**, **B**, **C** or **D**	**0 - 255**	Set the number of coins to be floated to in tube **A**, **B**, **C** or **D**	
255	Value of price **5**	**0 - 65,535**		6-price only
256	Value of price **6**	**0 - 65,535**		6-price only
261 - 264	Full count for tube **A**, **B**, **C** or **D**	**0 - 255**	Set number of coins in tube that activates **full** sensor	
271 - 274	Low count for tube **A**, **B**, **C** or **D**	**0 - 255**	Set number of coins in tube that activates **low** sensor	
281 - 284	Safe count for tube **A**, **B**, **C** or **D**	**0 - 255**	Minimum number of coins that must be left in a tube (*this number is multiplied by two in the changer*)	
291	1st coin type in tube **A**	**0 - 12**	**0** = *no coin*, **1** = coin 1, **2** = coin 2, **3** = coin 3...	

Address	Parameter	Range	Meaning	Notes
292	1st coin type in tube **B**	**0 - 12**	**0** = *no coin*, **1** = coin 1, **2** = coin 2, **3** = coin 3...	
293	1st coin type in tube **C**	**0 - 12**	**0** = *no coin*, **1** = coin 1, **2** = coin 2, **3** = coin 3...	
294	1st coin type in tube **D**	**0 - 12**	**0** = *no coin*, **1** = coin 1, **2** = coin 2, **3** = coin 3...	
301	2nd coin type in tube **A**	**0 -12**	**0** = *no coin*, **1** = coin 1, **2** = coin 2, **3** = coin 3...	
302	2nd coin type in tube **B**	**0 - 12**	**0** = *no coin*, **1** = coin 1, **2** = coin 2, **3** = coin 3...	
303	2nd coin type in tube **C**	**0 - 12**	**0** = *no coin*, **1** = coin 1, **2** = coin 2, **3** = coin 3...	
304	2nd coin type in tube **D**	**0 - 12**	**0** = *no coin*, **1** = coin 1, **2** = coin 2, **3** = coin 3...	
310	Value of coins in tubes	**0 - 65,535**	Value of coins in **ALL** tubes	*READ ONLY*
311 - 314	Coin count for tube **A**, **B**, **C** or **D**	**0 - 255**	Current number of coins in tube **A**, **B**, **C** or **D**	*READ ONLY*
321 - 332	Value of coins 1 - 12	**0 - 65,535**	Value of an individual coin	

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Address	Parameter	Range	Meaning	Notes
340 - 349	**Refer to the table of Route Alpha 250 terminal error codes and addresses in this manual**			
360	Audit module - VMC I/D	**0 - 65,535**	Vending machine identification code	ADVANCED AUDIT *ONLY*
361	Audit - **print-out language**	**0 - 4**	**0** = English **1** = French **2** = German **3** = Dutch **4** = Spanish	ADVANCED AUDIT *ONLY*
362	Audit - **print-out type**	**0 - 2**	**0** = Basic **1** = Basic + Interim Report **2** = Basic + Interim + Free Vend Report	
363	Audit - **print-out lines limit**	**0 - 25**	Limits print-out details to first few specified price lines	
364	Audit - **installation day**	**1 - 31**	**Day date** of installation into machine	
365	Audit - **installation month**	**1 - 12**	**Month** of installation into machine	
366	Audit - **installation year**	**0 - 99**	**Year** of installation into machine	

Address	Parameter	Range	Meaning	Notes
385	Audit unit is BDV	**0 - 1**	**0** = audit unit is not BDV type **1** = audit unit is BDV type	ADVANCED AUDIT *ONLY*
386	VMC unit is BDV	**0 - 1**	**0** = VMC unit is not BDV **1** = VMC is BDV	ADVANCED AUDIT *ONLY*
387	CPC unit is BDV	**0 - 1**	**0** = CPC is not BDV **1** = CPC unit is BDV	ADVANCED AUDIT *ONLY*
388	Card revaluation	**0 - 1**	**0** = revaluation not allowed **1** = revaluation allowed	ADVANCED AUDIT *ONLY*
389	Audit unit fitted	**0 - 1**	**0** = audit unit not fitted **1** = audit unit fitted	BDV *only*
390	VMC unit fitted	**0 - 1**	**0** = VMC unit not fitted **1** = VMC unit fitted	BDV *only*
391	CPC unit fitted	**0 - 1**	**0** = CPC unit not fitted **1** = CPC unit fitted	BDV *only*
392	BDV exact change equation	**0 - 1**	**0** = normal operation **1** = use BDV exact change equation	BDV *only*

Coin, Tube and Designator Options

Country, country code & coin set	Tube Types OLD NEW		Designators	Position	FULL Tube Count addresses 261 - 264	LOW Tube Count addresses 271 - 274 OLD NEW		SAFE Tube Count addresses 281 - 284 OLD NEW	
U K (GB)									
1 pence	5	5	**F** - VIOLET	A	95	13	14	4	2
1 pence	5	5	**F** - VIOLET	B	95	13	13	4	2
1 pence	5	5	**F** - VIOLET	C	95	14	14	4	2
2 pence	3	3	**E** - BLUE	B	75	10	11	2	2
2 pence	3	3	**E** - BLUE	C	75	11	11	2	2
2 pence	3	3	**E** - BLUE	D	75	10	10	2	2
5 pence	6	6.5	**E** - BLUE	A/C	84	12	12	6	2

| Country, country code & coin set	Tube Types OLD	NEW	Designators	Position	FULL Tube Count addresses 261 - 264	LOW Tube Count addresses 271 - 274 OLD	NEW	SAFE Tube Count addresses 281 - 284 OLD	NEW
10 pence	3	3.5	**D** - GREEN	A/C	76	11	11	4	2
10 pence	3	3.5	**D** - GREEN	B/D	76	10	10	4	2
20 pence	4	4.5	**E** - BLUE	A/C	81	11	12	6	2
20 pence	4	4.5	**E** - BLUE	B/D	81	10	11	6	2
50 pence	1	1	**D** - GREEN	B	54	7	7	6	6
£1 pound	4	4	**B** - ORANGE	A/C	38	6	7	2	2
£1 pound	4	4	**B** - ORANGE	B/D	38	6	6	2	2

Changing Between European and Japanese Vending Mode

Switch off the power to the host machine *before* changing the mode

Change the vending mode by moving the two-position jumper link. The link is located on the control board, under the fuse box cover.

Squeeze together the release catches of the coin storage cassette and lift out the cassette.

Press down the blue release catch above the acceptor with a small screwdriver. Pull the top of the acceptor forward and downward.

Two-position jumper link in EUROPEAN vend position

Fuse in holder

E J
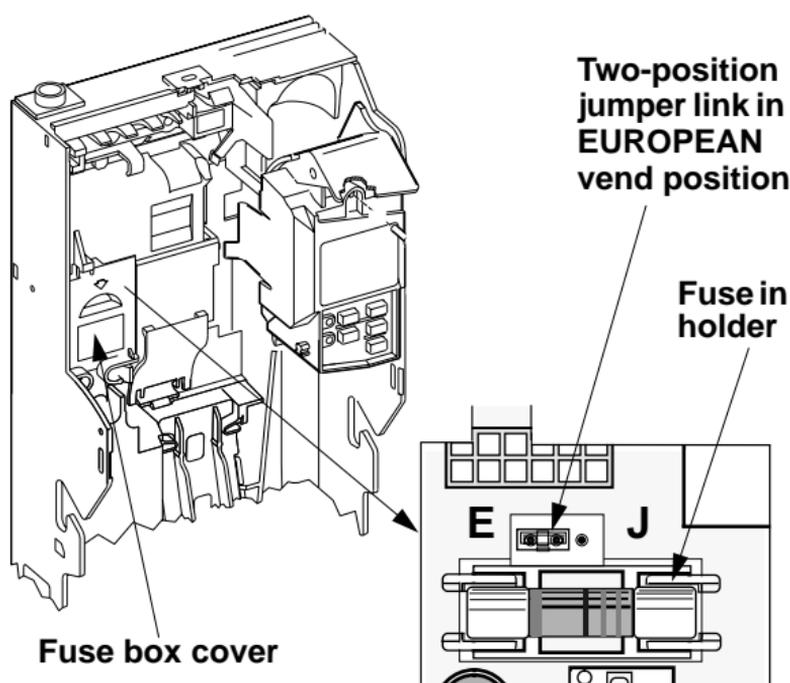
Fuse box cover

Open the fuse box cover, behind the acceptor. The two-position link is located above the fuse holder. Set the vending mode by placing the jumper link onto the two pins nearest to **E** for European, or to **J** for Japanese.

Close the fuse box cover and press the acceptor into place. Switch on the power and park the dispenser arms, then replace the coin cassette.

Make sure that the release catches of the acceptor and of the cassette snap shut firmly.

Use the **Route Alpha 250** terminal to set address 248 to **0** for EUROPEAN mode or to **1** for JAPANESE mode. Check the red LED comes on.

Compatibility

The CashFlow® 550/560 product is compatible with the majority of modern vending machines requiring a changegiver.

It is a plug-compatible replacement for the previous ME1704 changegivers.

The options currently available are:

a 6-Price, electromechanical changegiver

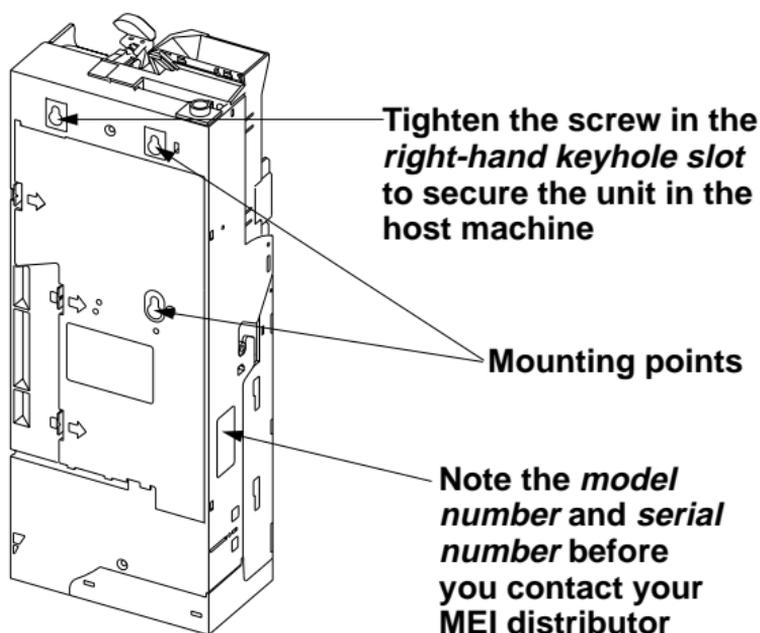Interfaces are provided for a credit display on this variant, if required.

The looms fitted on CashFlow® products have a range of connectors and pin-outs, ensuring that they are fully compatible with existing vending machine wiring.

550/560 Loom Cables Colour & Function	
Orange	**Price 1**
Yellow	**Price 2**
Green	**Price 3**
Black	**Price 4**
Grey	**Price 5**
Red	**Price 6**
Violet	**Vend start**
Brown	*Live*
Blue	**Neutral**
White / Brown	**Exact change**

# Installing, Starting and Testing a CashFlow® Unit

Before installation...

1. Check that the unit's specifications are correct for the host machine.

2. Ensure that the unit's modules are assembled securely.

3. Check that the connector on the unit's loom matches the one on the host machine.

4. Confirm that the voltage of the power supply *to the changegiver* is the same as that shown in the keypad window of the changegiver.

Tighten the screw in the *right-hand keyhole slot* to secure the unit in the host machine

Mounting points

Note the *model number* and *serial number* before you contact your MEI distributor

Fit the 6-Price changegiver onto the locating screws in the machine

1. Ensure that the unit is level on its three keyhole mounting slots.

2. Check that the right-hand mounting screw is at the top of the keyhole slot, and that the unit is **level**.

3. Press down the top cover flap and tighten the right-hand mounting screw to secure the unit in place in the machine.

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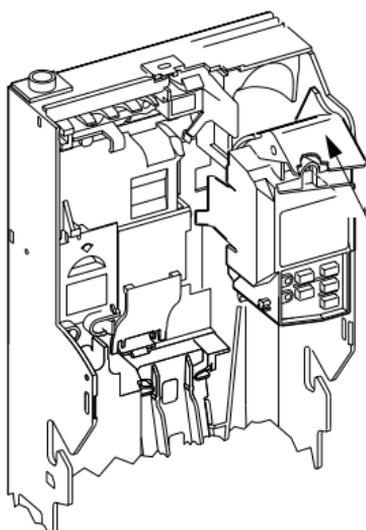
Push open the top cover flap to get access to the fixing screw and to tighten it

Connect the looms and secure them in their correct positions

1. Check that the looms cannot be trapped by the unit or by the door of the machine.

2. Check that the unit's lid opens fully when the reject button is pressed, and that the lever has 2mm - 3mm of clearance from the reject mechanism of the machine. Adjust the clearance if necessary.

3. **Ensure that the unit's coin entry cup is aligned with the machine's coin entry chute, and that the coin exit chutes are lined up.**

4. With the power off, insert ten of the largest and smallest coins to check the coin routing to the coin return cup.

Switch on the power to the unit

1. Check that the red LED comes on.

2. Set the vend prices with the keypad or with the **Route Alpha 250** terminal.

NOTE: The keypad is suitable if the installation has an electromechanical or Executive interface. If the installation has an electronic serial interface such as MDB, where prices are normally held in the vending machine, it is not appropriate.

Float the coin tubes

Floating the tubes through the creditor

1. Press **Mode + A**, and insert change coins. When the tubes reach the pre-set maximum float level, further coins are routed to the cashbox.

Use the coin entry slots to replace any coin that falls inadvertently through a tube, so that it is not counted twice by the creditor.

2. Press **A** to return to normal operation.

Floating the tubes by hand

NOTE: *Do not* **attempt to float up the tubes by hand if the unit has an audit module fitted. Float the tubes through the creditor.**

1. Insert a full coin cassette, or remove the unit's cassette and fill the tubes to the float levels.

If the cassette is difficult to remove, release it and tilt it forward. Push in the coin filling flap, and fill tube **A** through the gap. Fill tubes **B**, **C** and **D** through the coin entry slots.

2. Press **Mode + Mode**, replace the cassette, then press **Mode + A + B**.

3. Insert samples of non-change coins to check that they route to the cashbox.

4. Press **A**, **B**, **C** and **D** in turn to check that coins are dispensed.

5. Press **Mode + A** and refloat the tubes through the creditor.

When the pre-set float level is reached, further coins are routed to the cashbox.

6. Press **A** to return the unit to normal operation.

The unit is now ready for use

MEI Product Manuals

Full technical details of this product are included in the **CashFlow**® **550/560 6-Price changegiver** *Product Maintenance Handbook*, a copy of which is available, with other handbooks related to the product, from your MEI Approved Distributor, or your regional **MEI** sales office.

MEI Product Training

Product training courses are available for **CashFlow**® and other MEI products.

The courses cover the technical features and the maintenance of the product, and give you hands-on experience in servicing **CashFlow**® products quickly and efficiently.

Contact your regional **MEI** Sales Office for more information.

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