The

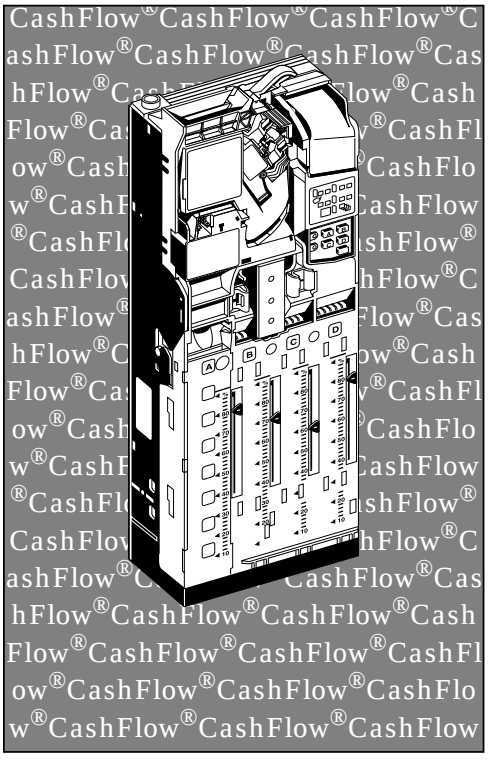
CASHFLOW® 350

REFERENCE SERIES

MULTI-PRICE
TOTALISER

POCKET GUIDE

ROUTINE MAINTENANCE, SAFETY, INSTALLATION & TROUBLESHOOTING



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CashFlow® 350 Multi-Price Totaliser Pocket Guide

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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.

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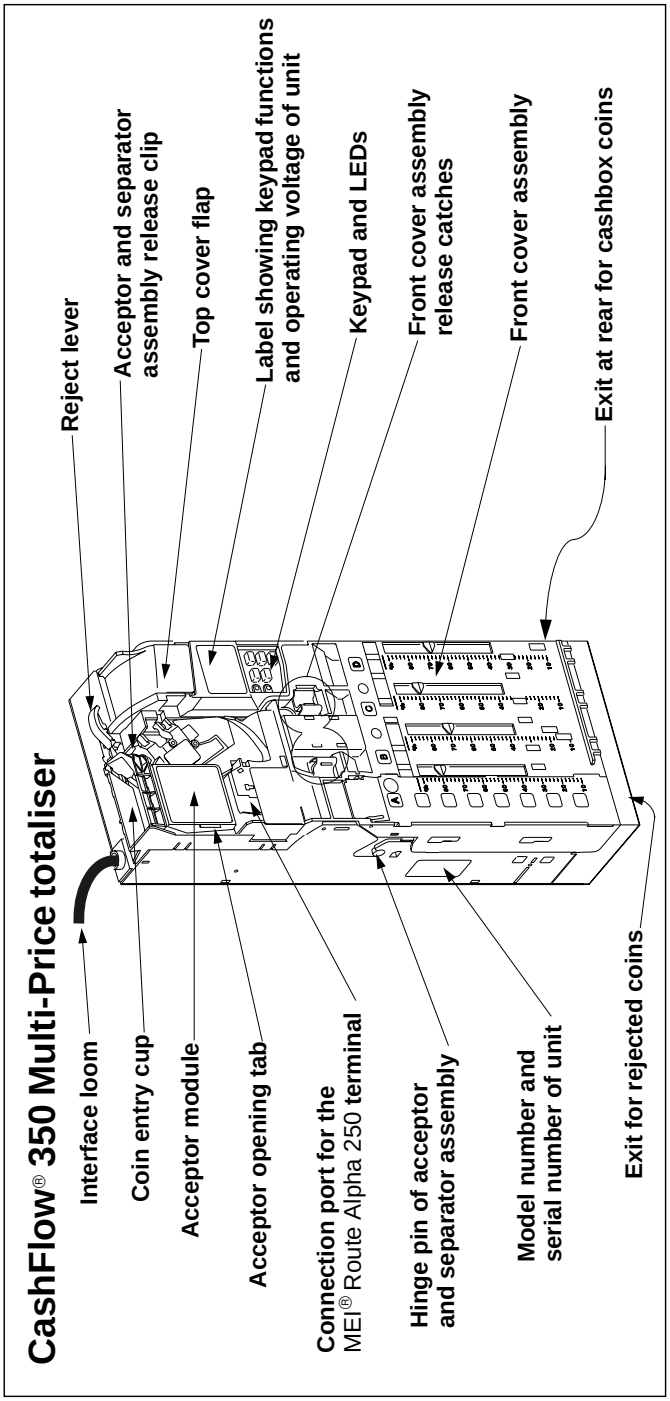
CashFlow® 350 Multi-Price totaliser
Reject lever
Acceptor and separator assembly release clip
Top cover flap
Label showing keypad functions and operating voltage of unit
Keypad and LEDs
Front cover assembly release catches
Front cover assembly
Exit at rear for cashbox coins
Interface loom
Coin entry cup
Acceptor module
Acceptor opening tab
Connection port for the MEI® Route Alpha 250 terminal
Hinge pin of acceptor and separator assembly
Model number and serial number of unit
Exit for rejected coins

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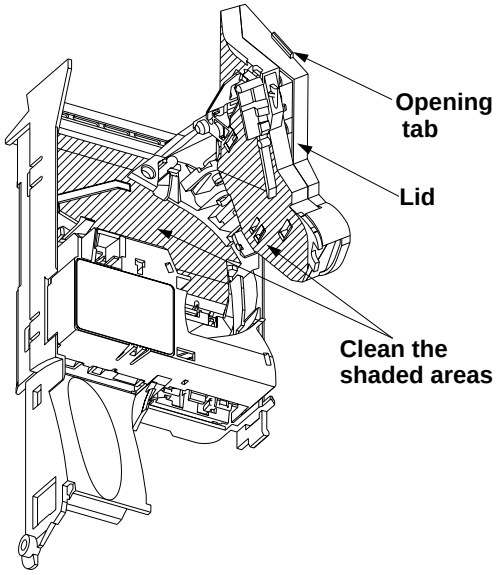
Routine Maintenance

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.



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.

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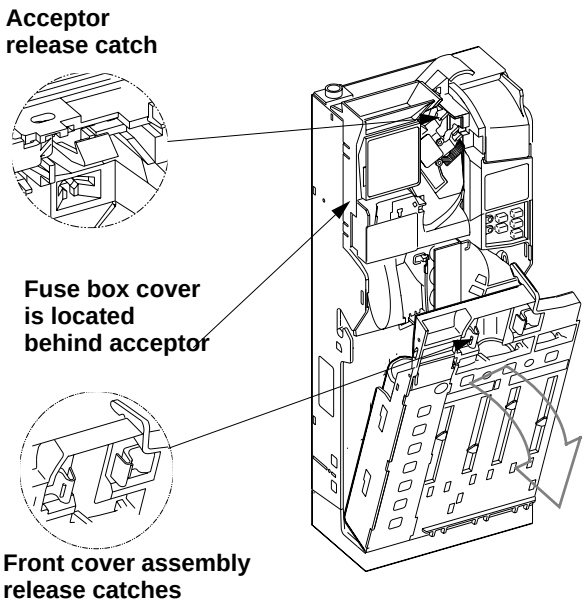
Checking and Replacing a Fuse

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

Squeeze together the two release catches of the front cover assembly and lift out the assembly.



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 fuses are 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.

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

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

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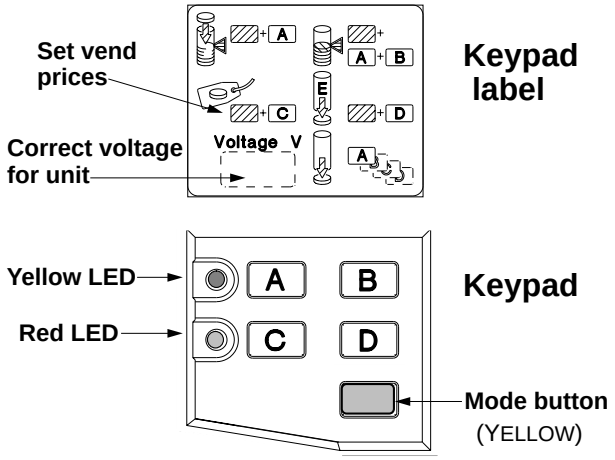
Using the Keypad

Use the keypad to set the vending prices.

Refer to the troubleshooting table in this Guide for information about reading the red and yellow LEDs.

The keypad label shows the correct voltage for the unit, and the key combination used for setting prices.



Setting the Vending Prices

The unit must be powered up to set the prices with the keypad.

1. Press **Mode + C** to enter price teach mode. Insert coins equal to the **lowest** vending price.

2. 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.

3. Add coins for the next higher price, and make a selection.

4. Continue until you have set all the prices.

5. Press **C** to cancel accumulated credit and to leave price teach.

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Troubleshooting the Unit with the MEI® Route Alpha Terminal

Address	Parameter	Range	Meaning and Actions	Notes
342	EEPROM errors - **i** **CAUTION** **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.**	**0 - 15**	Range value = sum of the codes, where: **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.* **8** = audit FEM removed ***Switch off power to the machine.*** *Check that audit* FEM *is inserted firmly in the board.* *Contact your* MEI *distributor if the error persists.*	***READ ONLY***

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Address	Parameter	Range	Meaning and Actions	Notes
343	EEPROM errors - **ii**	**0 - 15**	Range value = sum of the codes, where: **1** = incorrect configuration version *Contact* your MEI *distributor.* **2** = audit FEM not initialised *Initialise* the audit 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***

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Address	Parameter	Range	Meaning and Actions	Notes
344	Operational errors - **i**	**0 - 15**	Range value = sum of the codes, where: **1** = *not used* **2** = error in initialising acceptor ***Switch off power to the machine.*** Open the lid of the acceptor then close it again firmly. Wait for at least 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***

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Address	Parameter	Range	Meaning and Actions	Notes
345	Operational errors - **ii**	**0 - 15**	Range value = the sum of the codes, where: **1** = front cover assembly removed ***Switch off power.*** *Remove front cover assembly. Check acceptor coin path, check for jams in separator. Close lid of acceptor firmly. Power up. Replace the front cover assembly, 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***
349	Reset error flags	**0 - 1**	**0** = do not reset error flags **1** = reset error flags *Check for coin jams. Refer to the troubleshooting table in this Guide if the problem persists.*	

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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*** before cleaning the opto's.
	Power loom not inserted correctly	**Switch off power to the machine**, and check the loom.
Poor coin acceptance	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 are blocked or dirty	Refer to the ***Product Maintenance Handbook*** before attempting to clean the strobes or the opto's.

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Problem	Causes	Actions
Unit rejects one type of coin or token	Coin or token is inhibited	Check that the coin or token is included in the coin set of the totaliser, and has been enabled.
	Coin or token is damaged or worn	Use the **Route Alpha 250** terminal to enable the coin. Discard the worn or damaged coin/token.
Coins are not routing correctly	The top-level sensor loom or the separator loom is not connected correctly	**Switch off the power**, remove the front cover assembly and release the acceptor. Check that the top-level sensor and separator looms are fitted correctly. Replace the acceptor and front cover assembly. Switch on power to the unit, and check that coins are accepted.
	Wrong acceptor or separator is fitted	Check that the acceptor and separator are the correct versions. Refer to your authorised MEI distributor.
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 totaliser mechanism	Check for jams in the acceptor, clear jams.
	Lid of the acceptor is open	**Switch off 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.

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Problem	Causes	Actions
Red LED stays *off*	No power to the unit, or voltage not correct	Check that the power supply to the totaliser 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.
Red LED is *flashing*	Fault with the totaliser unit	**Switch off the power to the machine**, wait at least 15 seconds and switch on again.
	A coin is jammed in the dispenser module	**Switch off the power to the machine**, remove the front cover assembly and check the dispenser for jams. Clear any blockages and check for damaged coins.
	Fault with the audit module	Refer to the section in this Guide on **Troubleshooting with the Route 250 Alpha terminal.** Check addresses **342 to 349.** Return the unit to your MEI distributor for repair if necessary.

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Problem	Causes	Actions
Red LED stays *off* and all coins are rejected	No stock available for vending	Restock machine if necessary.
	Check for fault on vending machine	If an Executive version machine, check the communications cable. Refer to the ***Product Maintenance Handbook***.
	No blocker signal from the machine	Check for a full waste bucket. Check if machine is paused halfway through a vend cycle. Complete the cycle if necessary.
	LED or keypad fault	Check the keypad module. If faulty, refer to your MEI distributor.
	Faulty transformer	Check the transformer. If faulty, refer to your MEI distributor.
Red LED *permanently off*. No other problems present	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	Refer to **Route Alpha 250** addresses **342 - 349**	Refer to the section in this Guide on troubleshooting with the **Route Alpha 250** Terminal.
	The lid of the acceptor is not closed firmly	**Switch off power to the machine** and open and close the lid of the acceptor. 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.

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Problem	Causes	Actions
Yellow LED is *off*	Normal operation	No action
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 set or change prices. (*To exit from shifted mode, press* **Mode** *or wait for 45 seconds*)
Yellow LED *off permanently*. No other problems present.	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.

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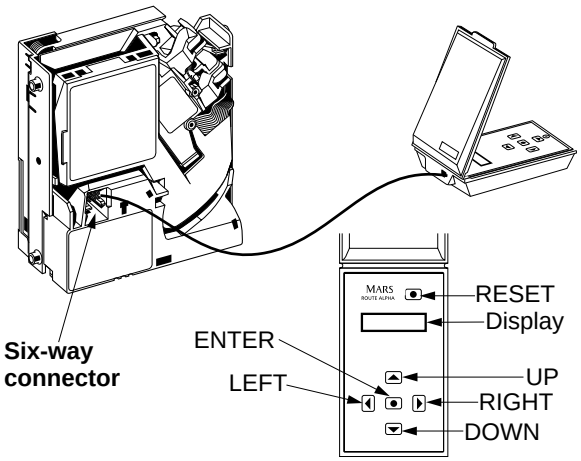
Setting a Unit's Functions with a MEI® Route Alpha 250 Terminal

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 display the current value in the selected address, then change the value by pressing UP or DOWN.

Press ENTER again to display the address. 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.

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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 **Route Alpha 250** terminal	Send terminal for repair to authorised MEI distributor.

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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**	
205 - 225	Prices **5** to **25** (*Executive product only*)	**0-65,535**	Values of prices **5** to **25**	*Only when audit FEM fitted*
226	Single vend or multi-vend	**0 - 1**	**0** = single vend **1** = multi-vend	
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	

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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	*Not* MDB

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Address	Parameter	Range	Meaning	Notes
235	Change delay	**0-255**	Delay in steps of 1.0 sec., where 255 = infinite delay	*Not* MDB
238	Price hold	**0 - 1**	**0** = do not hold price **1** = hold price	*Not* MDB
239	Price display	**0 - 1**	**0** = do not display price **1** = display price	*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 unit only)*	*Not* MDB
248	Vending mode	**0 - 1**	**0** = European mode **1** = Japanese mode	(*5- & 6-price product only*)
255	Price 5	**0 - 65,535**	Value of price 5	(*5-price only*)
342 - 349	**-**	**Refer to the table of Route Alpha 250 terminal error codes and addresses in this Guide**		
360	Audit module - **VMC I/D**	**0 - 65,535**	Vending machine identification code	ADVANCED AUDIT *ONLY*

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Address	Parameter	Range	Meaning	Notes
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 Report **1** = Basic + Interim **2** = Basic + Interim + Free Vend	ADVANCED AUDIT *ONLY*
363	Audit - **print-out lines limit**	**0 - 25**	Limits print-out details to first few specified price lines	ADVANCED AUDIT *ONLY*
364	Audit - **installation day**	**1 - 31**	**Day date** of installation into machine	ADVANCED AUDIT *ONLY*
365	Audit - **installation month**	**1 - 12**	**Month** of installation into machine	ADVANCED AUDIT *ONLY*
366	Audit - **installation year**	**0 - 99**	**Year** of installation into machine	ADVANCED AUDIT *ONLY*
382	Link Master I/D	**0 - 9999**	Identification code of link master node	ADVANCED AUDIT *ONLY*

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Installing, Starting and Testing a CashFlow® Unit

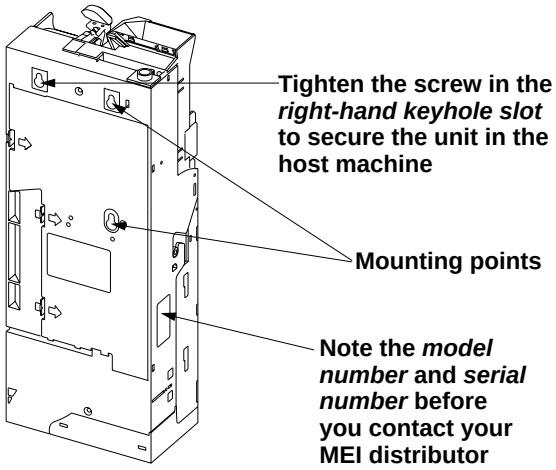
Before installation...

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.



Fit the Multi-Price Totaliser 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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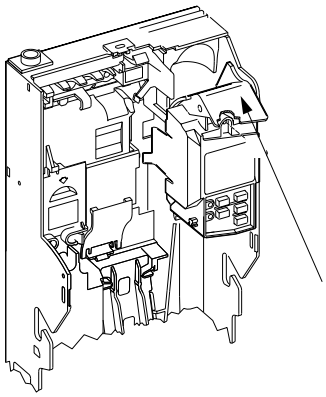

Push open the top cover flap to get access to the fixing screw and to tighten it

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 routing to the coin return cup.

Switch on the power to the unit

1. Check that the red LED comes on.

2. Insert a sample of each coin and check that it is routed to the cashbox.

3. Set the vend prices with the keypad or with the **Route Alpha 250** terminal. Check that the prices are set correctly by making sample vends.

NOTE: Use the keypad to set prices if the installation has an electromechanical interface. If the installation has an electronic serial interface, prices are normally held in the vending machine.

The unit is now ready for use

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MEI Product Manuals

Full technical details of this product are included in the **CashFlow® 999 Product *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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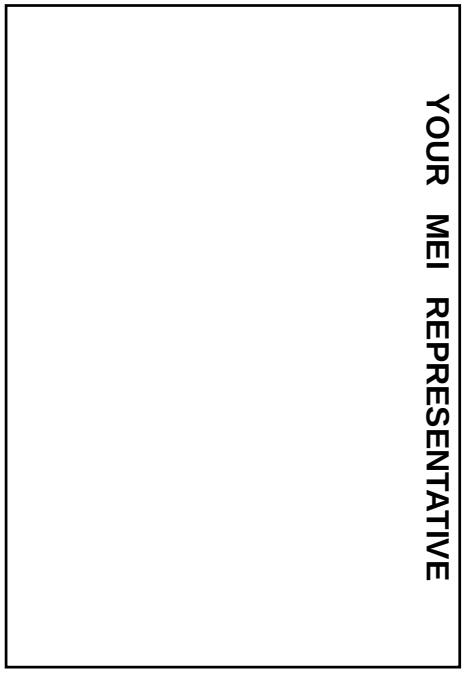
THE INTELLIGENT TRANSACTION™