

VALIDATOR PROGRAM





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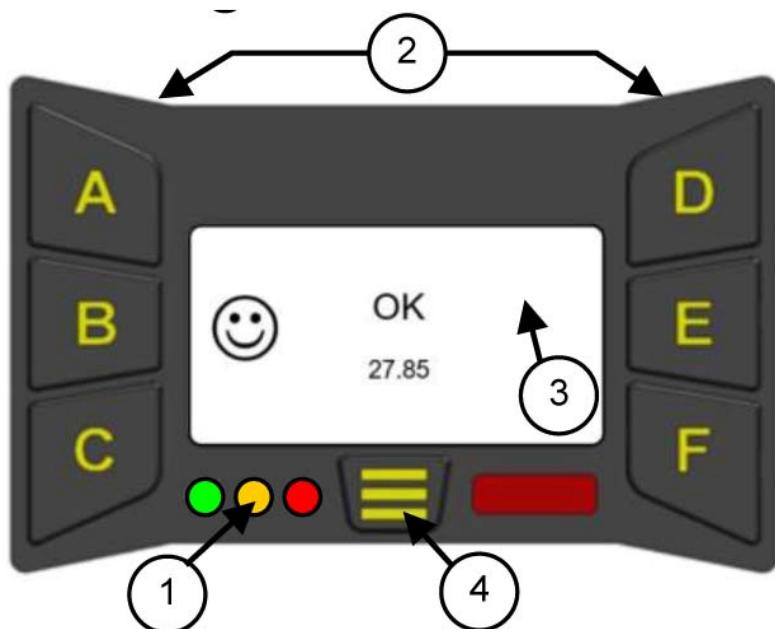
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CPI GRYPHON CHANGEGIVER



**GC3 1.02 Software
2020 - Rev G1**

UNDERSTANDING THE USER INTERFACE KEYPAD



3 LEDs	Red, Amber, Green
2 Buttons A to F	Dispense coins & navigate through menus
3 Display (LCD)	Menu information & warning display
4 Mode Button	Access service & set-up menus

GENERAL KEYPAD BUTTON OPERATIONS

When the changer is in the idle state, the A - F buttons can be used to dispense coins from the tubes. If however, the mode is pressed beforehand, these buttons are used to navigate through the service & setup menu options.

General Operation of Keypad Buttons			
	Dispense coin from tube A		Dispense coin from tube D
	Dispense coin from tube B		Dispense coin from tube E
	Dispense coin from tube C		Dispense coin from tube F
	Mode Button		

The mode button can be used to access the two configuration modes available.
Service Mode and Setup Mode.

SERVICE MODE: gives access to the most frequently used product configuration options.
(See Service Mode Options)

SET - UP MODE: gives access to general product configuration options that are required when setting up your change giver. (See Set-Up Mode)

Mode Button Operation Functions	
	Press quickly to access Service Mode menus
	Press and Hold for 2 seconds, will access the Set-up Mode menus without a pass code required. Note: If however the change giver had detected an error/fault, this action will take you to the test/diagnostic menu.
	Access the Set-up Mode menus.
	Ensure tube cassette is fitted then press button twice to view change giver audit data

SERVICE MODE OPTIONS

Press Button Sequence	Description / (Action)
	Float coin tubes / (Insert coins then press F button)
	Float teach takes a snapshot of current tube levels.
	View coin details / (press D to scroll up & E down)
	Enter predefined cassette code / (then press F)
	Custom cassette teach / define pay-out and press F

LED LIGHT CODES

The 3 Led's fitted on the changegiver provides up to the minute status information. Please refer to the table below for more details.

	On	Changegiver OK	
	Cycles X 2	Normal power up sequence. Changegiver OK	
	Blinks Off	Coin accepted / rejected (Refer to Green LED Codes)	
	Flashing	Changegiver in Menu mode (Refer to Green LED Codes)	
	On	Changegiver inhibited by VMC	
	Flashing	Changegiver requires attention (Refer to Amber LED Codes)	
	Off	No Power to Changegiver. Check power looms are connected & ensure power is switched ON.	
	Alternating	Changegiver Faulty (Remove from vending machine)	

GREEN LED CODES

In Idle Condition	General operation LED Code		
On	Changer working normally. (Tube Value)		OK 27.85 EUR
After Pressing Mode Button	LED Codes for when in Set-up or Service Mode		
→	Slow Flash	Changegiver is in Service Mode or in Set-up Mode and a menu option has been selected	
Coin Accepted / Rejected	Coin Discrimination LED Codes		
	1 x Blink	Inserted coin was accepted	
	2 x Blinks	Inserted coin was rejected - unknown (not recognised by discriminator)	
	3 x Blinks	Coin rejected (Inhibited by machine or changegiver program settings)	

AMBER LED CODES

The amber LED allows you to pinpoint a fault that may have occurred on one of the modules of the changegiver. These types of fault can be rectified at the machine and can be, for example caused by: a coin jam, dirt built up or the cassette has been removed etc. The changegiver also indicates on its display which module is being affected.

Amber Flashes	Changegiver Maintenance LED Codes	
	Discriminator error	Coin jam validator optics
	Accept gate error	Coin jam tube path
	Separator module top level sensor Tube cassette error	Coin count error D
	Dispenser module error	Tubes jamed C D

SELECTING A PREDEFINED CASSETTE

The changegiver has stored in memory a selection of predefined tube cassettes. Each cassette allows a different pay-out option to be selected. (See Table Below) Using the buttons on the keypad, press the button sequence as shown on the table or refer to the tube cassette front label for the button sequence. Once the changegiver has accepted the code, the cassette will be set.

To select a predefined cassette, Press followed by the cassette code. Finally press "Save" to confirm.

Cassette Code	Tube A	Tube B	Tube C	Tube D	Tube E	Tube F
AAA	\$0.50	\$0.10	\$0.20	\$2.00	\$1.00	\$0.20
AAB	\$0.50	\$2.00	\$1.00	\$2.00	\$0.10	\$0.20

DEFINING A CUSTOM CASSETTE

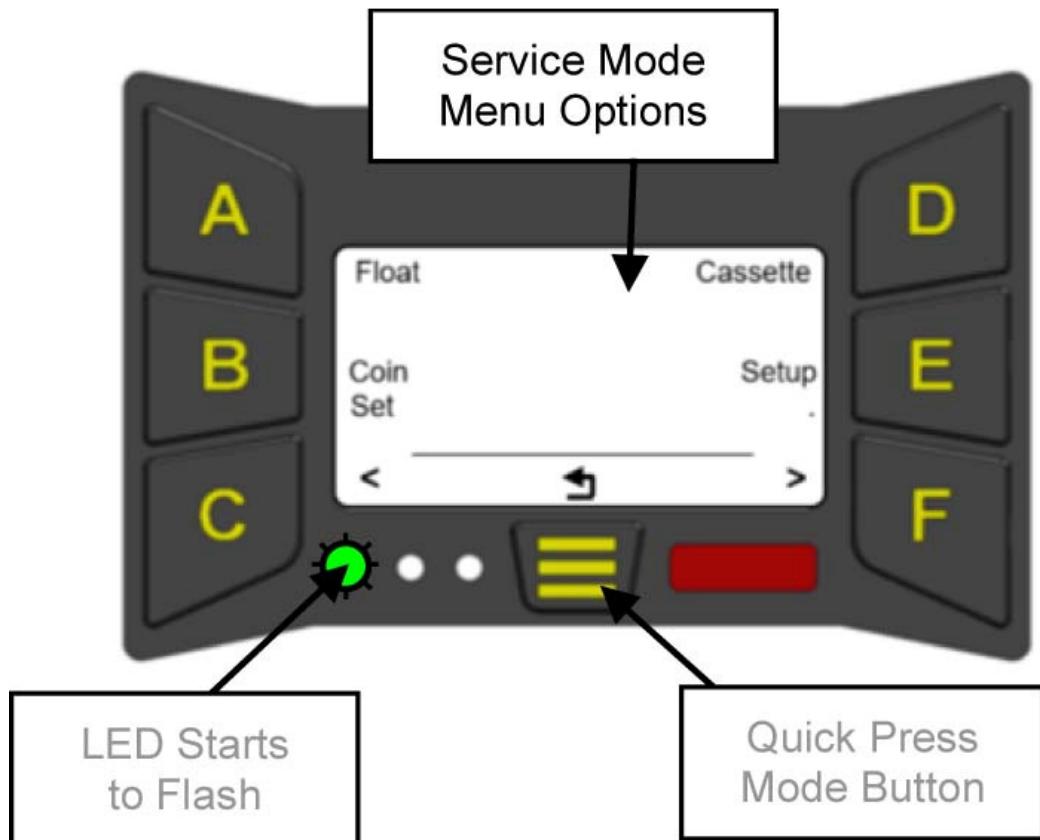
If the pay-out you require is not predefined you can custom program your own. The changegiver follows the restriction may listed below.

Coin	Tube	Limiter	Tube Restriction Map					
			A	B	C	D	E	F
(AUD)	(mm)	(Colour)						
\$0.10	25.5	Green	✓	✓	✓	✓	✓	✓
\$0.20	30.0	Blue	✓		✓			✓
\$0.50	33.9	None	✓					
\$1.00	27.5	Grey	✓		✓		✓	✓
\$2.00	22.5	Grey	✓	✓	✓	✓	✓	✓

ACCESSING THE SERVICE MODE MENU

A Quick press of the yellow mode button will take you into the **Service Mode Menus**.

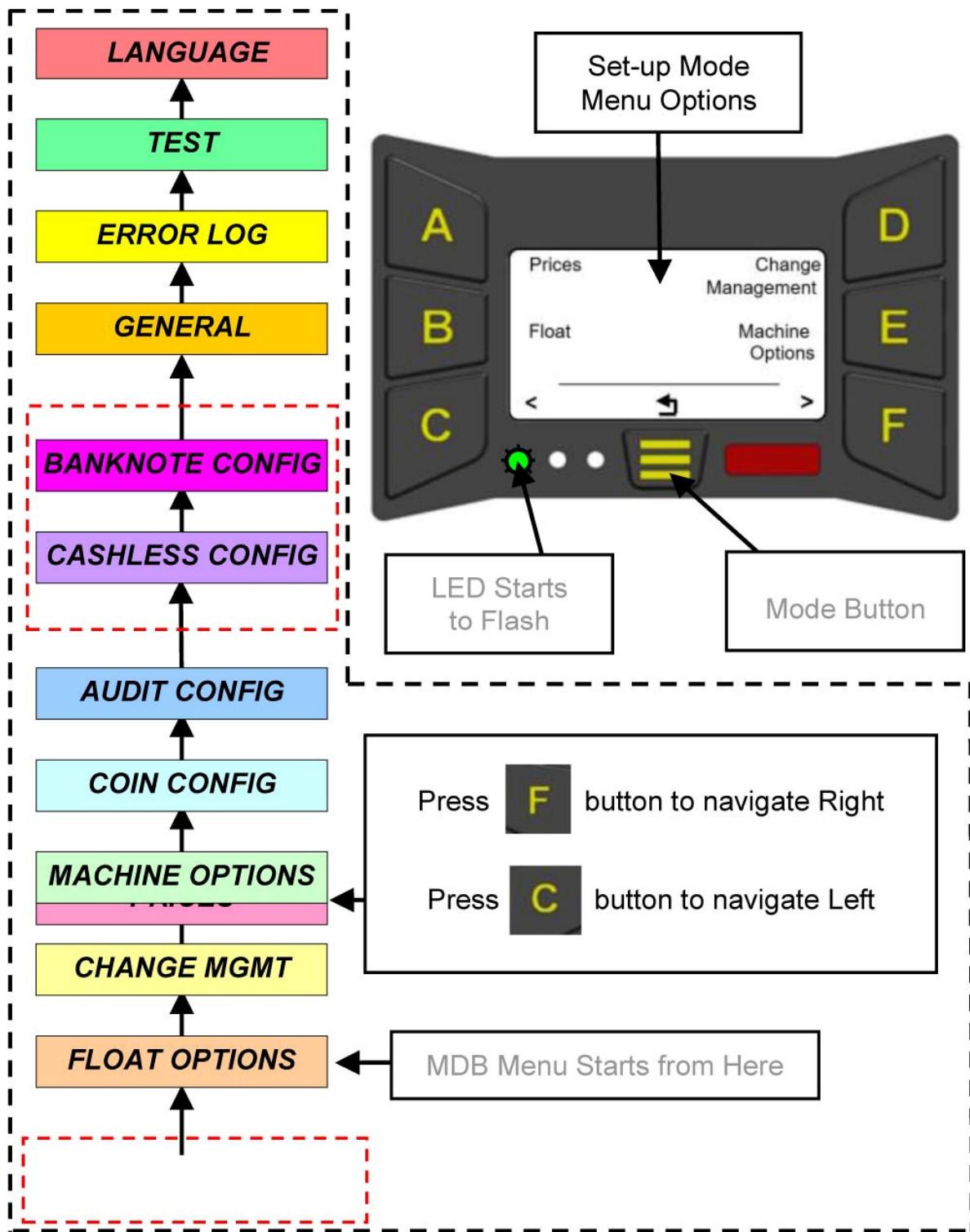
The display will change to show the options available. (See Picture Below) Once in this mode the green LED will start to flash. Using the buttons select the options required.



ACCESSING THE SET-UP MODE MENU

To access the **Set-Up Mode** menus, press the mode buttons followed by the **E** button. OR press and hold the mode button for 3 seconds.

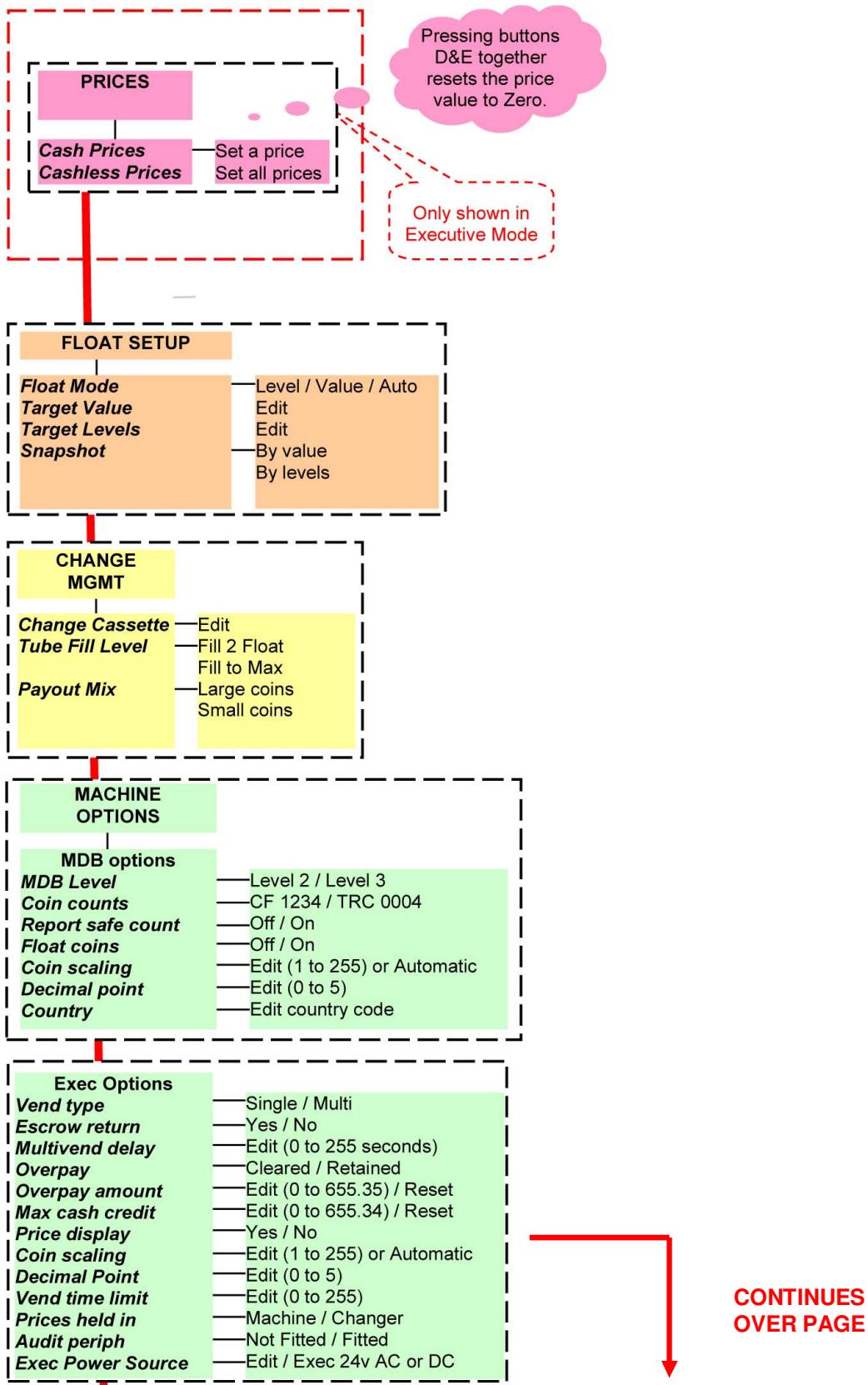
The display will now show the first menu page available. Press the **F** button to navigate Right and the **C** button to navigate Left. (See Pictures Below)



SET-UP MODE MENU

This chart shows a detailed structure of the **Set-Up Menus**.

To access the **Set-Up Mode** menus, Press the mode button followed by the **E** button.



SET-UP MODE MENU Cont

FROM
PREVIOUS
PAGE

BDV Options	
Vend type	Single / Multi
Escrow return	Yes / No
Multivend delay	Edit (0 to 255 seconds)
Overpay	Cleared / Retained
Overpay amount	Edit (0 to 655.35) / Reset
Max cash credit	Edit (0 to 655.34) / Reset
Price display	Yes / No
Coin scaling	Edit (1 to 255) or Automatic
Decimal point	Edit (0 to 5)
Vend time limit	Edit (0 to 255)
Award discount	Edit (0 to 655.35) / Reset
Trigger discount	Edit (0 to 655.35) / Reset
Maximum change	Edit (0 to 655.34) / Reset
Link master id	Edit (0 to 9999)
Exact chg alg	MEI ExC / BDV ExC
BDV ExC eqn	Edit (eqn 0 to 12)
BDV ExC offset	Edit (0 to 255)
BDV ExC coin 1-14	Accept / Inhibited
Audit periph	Not Fitted / Fitted

COIN CONFIG	
Token teach	Teach 1 / Teach 2 / Teach 3
Coin setup	Coin 1 to 32
Channel Setup	Channel 1 to 64
Exchange rate	—
2 to 1	Edit

AUDIT CONFIG	
Machine ID	Machine id Select / Edit / Reset
Asset Number	Reset audit Interims / Tot + Int
Reset Audit	Edit / No change / Reset
	Report type Basic Interims Free vends Cashless vend Report Title / Edit Install Date / Edit

BANKNOTE CONFIG	
Highest value	Edit (0 to 655.34) / Reset

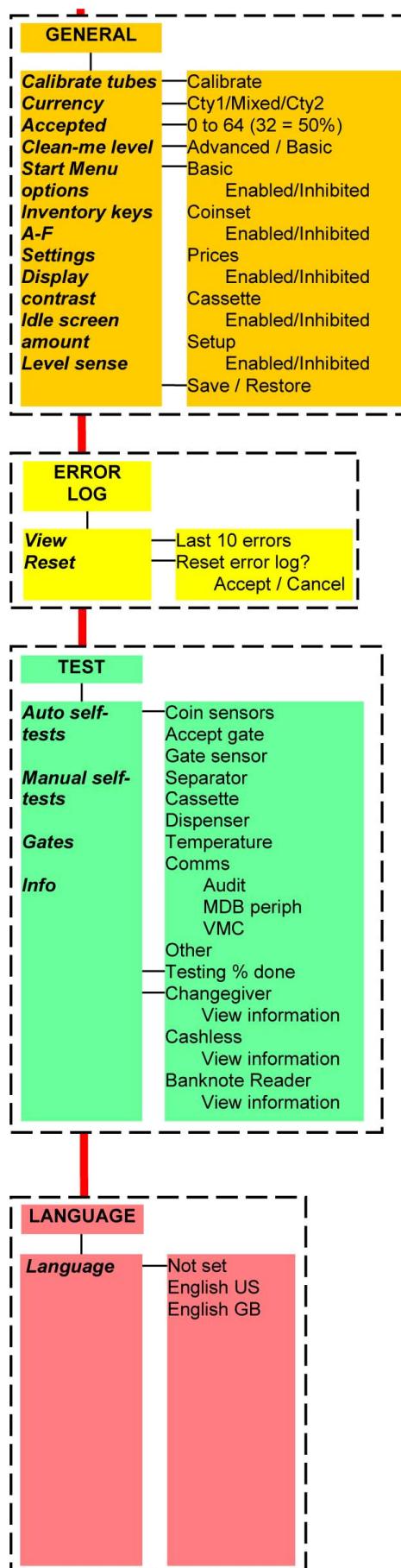
CASHLESS CONFIG	
Revalue	Yes / No

CONTINUES
OVER PAGE

Only shown in
Executive Mode

SET-UP MODE MENU Cont

FROM
PREVIOUS
PAGE



DISPLAY SYMBOL INDICATORS

During the changegiver programming or normal operation, icons may be shown on the display. These icons will indicate if the changegiver requires any attention or will assist you in selecting a particular mode.



Symbol	Meaning	Comment
>	Menu navigation	Navigate screen to the right
<	Menu navigation	Navigate screen to the left
Λ	Menu navigation	Move up through a menu or increase a value setting
∨	Menu navigation	Move down through a menu or decrease a value setting
↶	Menu navigation	Back one screen or Exit
😊	Smiley face	Changegiver is OK
😐	Average face	Changegiver requires assistance
😢	Sad face	Changegiver requires replacing
USB	Maintenance	Connected to USB
PC	Maintenance	Connected via USB to PC
✗	Maintenance	Error detected

NRI COIN CHANGER



**MODEL CWC 1.03
FIRMWARE 1.04A**

GENERAL INFORMATION

- Please read this manual in its entirety
- The information in this manual is intended for car wash entry machine using the IDS Car Wash Entry (CWE)
- Always power down and unplug the Car Wash Entry machine when replacing components or when servicing any electrical and / or moving parts
- Not all features of the CWE might be implemented in the car wash entry machine
- Please note that car wash entry machine have hazardous voltages (240 volts)

PAYMENT SYSTEMS

The CWE supports the Multi Drop Bus (MDB) protocol and is fully MDB compliant for coin changers (including MDB coin validators), note validators and cashless systems.

Please note: if using an MDB coin validator, no change is given.

AUDIT INFORMATION / DEX PORT

The CWE is fitted with a serial RS232 port to collect audit data. This data complies with the international car wash entry machine audit standard using the DEX/ UCS protocol.

Both remote (wireless) or handheld devices can be connected.

For more information please contact your car wash entry machine supplier.

COIN CHANGER

When installing a coin changer please make sure that it is fitted properly on the 3 mounting screws and that the return lever at the top of the coin changer does not touch the return plunger (i.e.: the coin reject button on the outside of the car wash entry machine door).

***When changing the coin changer because of a malfunction or for any other reason, always switch the power off.**

NOTE VALIDATOR

If the car wash entry machine is only fitted with a coin changer and you would like to add a note validator at a later stage, you should program this into the CWE (see Programming).

See also maximum change and maximum credit in programming mode. The values might have to be changed.

***When changing the note validator because of a malfunction or for any other reason, always switch the power off.**

CAR WASH ENTRY MACHINE OPERATING MODES

Dispense Mode

This is the default operating mode of the car wash entry machine . The way the CWE operates in dispense mode is configured via various setting accessed in program mode (See Service menu). In addition to this, dispense mode can be altered utilizing the following additional features:

- **FREE VEND MODE** – A switch connected to the SW1 input on the CWE can be used to selected free vend mode. Free vend mode permits the CWE to operate without the need to insert money or have any MDB devices connected.
- **PRICE SET 1 & 2** – The CWE supports two PRICE SETs. This means that each product can have two price setting. The price used is selected using the CWE's SW2 input. When SW2 is 'OFF' or has no connection PRICE SET 1 is used. When SW2 is 'ON' PRICE SET 2 is used.

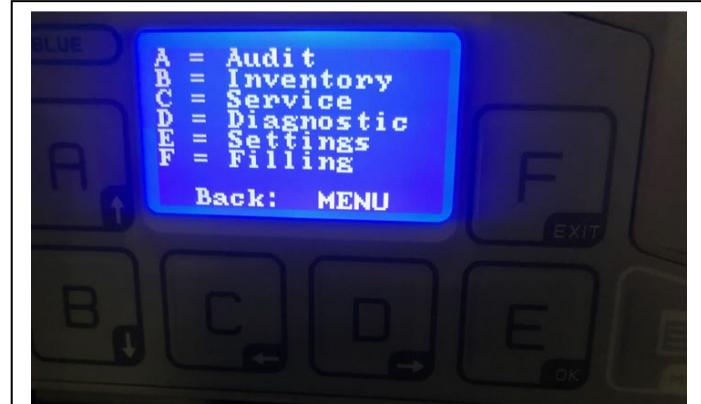
OUT OF ORDER

During dispense mode the CWE can detect various faults which result in the CWE being placed out of order. When this happens an OUT OF ORDER message is displayed with the cause indicated on the second line of the display. The follow are the various out of order states:

CANT RESET CWE	Indicates invalid CWE configuration or CWE failure
CANT RECFG MDB	Unable to reset CWE's MDB services.
CANT START MDB	Unable to unblock MDB devices.
MDB NOT READY	MDB devices in unexpected state.
CANT BLOCK MDB	MDB device not responding to request to BLOCK
CANT GIVE CHG	Unable to complete dispensing of change with in 60s
COIN OFFLINE	No response from Coin changer.
NOTE OFFLINE	No response from Note validator.
NO MDB DEVICES	No MDB devices responding.
COIN INCOMPAT	Indicates Coin changer does not support MDB level 3.
NOTE INCOMPAT	Indicates that NOTE validator does not support MDB level 1 or above.
EEPROM FAULT	CWE EEPROM write fault.
FLASH FAULT	CWE FLASH memory write fault.

FILLING CHANGER TO START

- Press Menu Button On Changer
- Press F for Fillings
- Then Load Coins Through Coin Front Slot One At A Time
- The Changer Must Sort and Count Into Individual Tubes
- 50 Coins of \$1 and \$2 Will Be Sufficient To Start
- If Coins Are Too Low, Machine Will Say "NO CHANGE GIVEN"



MENU BUTTON TREE

on computer backboard Hold for 1sec

1=CONFIG

1. Clock / Date
10. Set Prices
11. Discount Prices
12. Discount Periods
12. Maximum Change
14. Maximum Credit
15. Use Escrow for
16. Payout Mode
20. Pulse CC
21. Pulse Exact Price
30. Coin Mech
31. Coin Ch1
32. Coin Ch2
33. Coin Ch3
34. Coin Ch4
35. Coin Ch 5
36. Coin Ch 6
37. Vend Token CH
60. Wash Start T/O Time
61. Wash Start Pulse Time
62. Wash PreSelect Time
70. Receipt Print Enabled
72. Printer Type Hengstler 9600
80. Asset Number

Use Button **2** to move
UP through the menu

Use Button **5** to move
UP through the menu

Press Button **E** to ENTER
required menu's

Make desired CHANGES using keypad

2=TEST

1. Digital Control Inputs
2. Test Buttons
2. Test Wash Options
3. Test Print

3=AUDIT

- | | |
|------------------------------|--------|
| 1. Hopper Paid | |
| 2. Total Count | |
| 4. Total Detail (Press E) | |
| 5. Total Sales | \$x.xx |
| 10. Total Free | |
| 12. Total Free | \$x.xx |
| 20. Total Token | |
| 22. Total Token | \$x.x |
| 30. Total Card | |
| 32. Total Card | \$x.xx |
| 34. Total Card Reval | \$x.xx |
| 36. Total Card Pulses | \$x.xx |
| 40. Total Credit Held | \$x.xx |
| 50. Total to Coin Box | \$x.xx |
| 52. Total to Tube | \$x.xx |
| 60. Total Notes | \$x.xx |
| 70. Total Change | \$x.xx |
| 80. Credit | \$x.xx |
| 81. Coins To Tubes | \$x.xx |
| 82. Coins To Tubes | |
| 83. Coins To Tubes (Press E) | |
| 90. Last Reset | |
| 91. Audit Resets | |
| 92. Dex Readouts | |

Press Button **E**
to STORE required menu's

Press Button **C**
to return to wash cars

MENU BUTTON TREE on computer backboard Hold for 1sec

4=INFO

- 1. Model
- 2. Firmware
- 3. Serial Number
- 4. Asset Number
- 10. MDB Devices
- 20. CPU Temperature
- 30. Event Logs

5=IMPORT

- 1. Import Settings
- 2. Import Print Config
- 3. Messages
- C = Exit

6=EXPORT

- 1. Settings
- 2. Print Config
- 3. DEX
- 4. Logs
- 5. Memory

C = Exit

Use Button **2** to move UP through the menu

Use Button **5** to move UP through the menu

Press Button **E** to ENTER required menu's

Make desired CHANGES using keypad

Press Button **E** to STORE required menu's

Press Button **C** to return to wash cars

SERVICE MENU

The service menu is accessed by holding the MENU button for 1s. The menu shows a list of modes and the button number used to select them. The modes are:

1=CONFIGURATION

Configuration mode allows access to all car wash entry machine variables.

2=TEST

Test mode makes it possible to test certain operations of the car wash entry machine without inserting money or affecting the audit data.

3=AUDIT

Audit mode displays car wash entry machine audit information on the LCD screen.

4=INFO

Info mode displays CWE version information and other live data.

5=IMPORT

Import mode is used to load program mode settings from a SD flash card.

6=EXPORT

Export mode is used to save various report and setting to a SD flash card.

C=EXIT

Return to dispense mode.

CONFIGURATION MODE (1=CONFIG)

Configuration mode enables the various CWE settings to be viewed and edited.

When configuration mode is first selected a brief help message is displayed on the screen to assist in how to view and edit the CWE's settings. This help message is only intended as a reminder with full details presented below.

QUICK GUIDE

- The settings are arranged in a numbered list.
- Use the '5' and '2' buttons to step back and forth respectively through the settings list.
- The settings can be either numeric, such as times or amounts, or modes such as OFF or ON.
- Most settings in the list are edited using the following procedure:
 - When the setting is displayed press 'E' to display a cursor.
 - Enter a new value at the cursor position or change the setting's mode using the '0' to '9' buttons.
 - Press 'E' to save the setting or 'C' to cancel.
- Other settings require a different method to view and edit. The details for viewing and editing these settings are given in the respective sections below.

Pressing the 'C' button once (or several times) will exit back to service mode.

In Configuration Mode the following variables can be changed.

1	CLOCK / DATE	33	COIN CH3
10	SET PRICES	34	COIN CH4
11	DISCOUNT PRICES	35	COIN CH5
12	DISCOUNT PERIODS	36	COIN CH6
13	MAXIMUM CHANGE	37	VEND TOKEN CH
14	MAXIMUM CREDIT	60	WASH START T/O TIME
15	USE ESCROW FOR	61	WASH START PULSE TIME
16	PAYOUT MODE	62	WASH PRESELECT TIME
20	PULSE CC	70	RECEIPT PRINT ENABLED
21	PULSE CC EXACT PRICE	71	CARD SURCHARGE
30	COIN MECH	72	PRINTER TYPE HENGSTLER 9600
31	COIN CH1	80	ASSET NUMBER
32	COIN CH2		

1. CLOCK (24HR CLOCK MODE)

The clock is used to time stamp reports and some other events. The date / time are entered and displayed as DD/MM/YY and hh:mm:ss.

Caution should be taken to ensure that invalid dates in a month are not entered as the system does not check for this. For example the 30th of February can be entered but is invalid.

Once the date / time are set correctly the system will advance the dates correctly including allowing for leap years.

10. SET PRICES

Setting prices requires a different procedure to that of other settings.

To start price setting, press "E" when the "SET PRICES" item is displayed, then follow the procedure below:

1. Enter the wash number as prompted or press "C" to exit.
The current price setting for the selected item will now be displayed.
2. To change the price setting press "E" to show the cursor.
Note the price setting will be changed to the default value of "NOT USED".
3. Enter the new price by using the keypad.
4. Press "E" to save the new setting or "C" to cancel.
5. Continue from step 2 above.

Repeat the above procedures until all prices are set and all selections that are not valid are set to "NOT USED".

11. DISCOUNT PRICES

The discount prices are set the same way as the standard prices.

If there is no discount for certain selections please enter the standard price.

12. DISCOUNT PERIODS

Select day (1= Monday, 2= Tuesday, 3= Wednesday, etc)

Then select the time period for which the discount period is valid.

13. MAXIMUM CHANGE

The amount programmed in this field is the maximum amount of change the coin changer (or coin hopper) will return to the customer regardless of the amount of credit remaining. If the value of coins in the coin changer's tubes is less than the maximum change setting amount, then the CWC will display "NO CHANGE GIVEN".

14. MAXIMUM CREDIT

This is the maximum amount of credit which can be inserted into the coin changer (and if fitted) the note reader. Once this amount is reached the CWC will block all coins and notes.

15. USE ESCROW FOR

The default setting “NONE” means that all notes are directly stacked into the note cassette holder. “ALL” means that any note denomination can be returned by pressing the “CANCEL” button. You can also select a particular note denomination to be returned to the customer. Please note that only the last inserted note can be returned.

16. PAYMENT MODE

Choose “USE MDB COIN CHANGER” if a coin changer is used.
If hoppers are used, select your favourite payout configuration.

20. PULSE CC

Select “ON” if you are using a credit card reader which is not MDB but which will give pulses as credit.

21. PULSE CC EXACT PRICE

We recommend that this setting should be the default setting OFF

30. COIN MECH

Select “ON” if you are using a parallel coin validator like the QL from Microcoin or the NRI G13 series

31. COIN CH1

Set the value of the coin which represents CH 1, i.e 1.00 (\$1.00 coin)
Tokens with a value can be programmed like a standard coin.

32. COIN CH2 see COIN CH1 above

33. COIN CH3 see COIN CH1 above

34. COIN CH4 see COIN CH1 above

35. COIN CH5 see COIN CH1 above

36. COIN CH6 see COIN CH1 above

37. VEND TOKEN CH

A VEND TOKEN is a token which automatically adapts to the highest price of the car wash entry system.
A VEND TOKEN will not give any change.

60. WASH START T/O TIME

T/O = TIME OUT

If a busy signal is not detected (after activation of a wash start) within the set time (default 120 seconds) the wash is cancelled.

61. WASH START PULSE TIME

This is the time the wash output relay will pulse.

62. WASH PRESELECT TIME

If a time is added in this field the customer can either select a wash first or pay first. We recommend that a value of 10 (10 seconds) should be set in this field if you want to use this feature. If no payment has been made within the 10 seconds the selection will be cancelled.

70. RECEIPT PRINT ENABLED

If a ticket printer is used, this setting should be set to "ON"

71. CARD SURCHARGE

A surcharge amount can be added if customer pays with a credit card.

72. PRINTER TYPE

Select your printer type.

Please note that the Hengstler printer can be set to either 115200 or 9600 baud. (The default setting of a new purchased Hengstler printer is 115200 baud).

80. ASSET NUMBER

You can insert a number in this field for easy recognition of your car wash entry system when you are using the DEC / UCS audit information.

TEST MODE (2=TEST)

Test mode enables various CWE features to be tested.

When test mode is first selected a brief help message is displayed on the screen to assist in how to access the various tests available. This help message is only intended as a reminder with full details presented below.

QUICK GUIDE

- The available tests are arranged in a numbered list.
- Use the '5' and '2' buttons to step back and forth respectively through the list.
- To run the displayed test, press the **E** button and follow any prompts given.
- Pressing the '**C**' button once (or several times) will exit back to service mode.

In Test Mode the following CWE features can be tested:

1. Digital Control Inputs

Several inputs can be checked, such as busy signal, which coin is on which channel, signals from the hoppers, etc.

2. Test Buttons

This test displays the current keypad input status (including the MENU button). When testing the console buttons, test the C button last of all as this button will also exit the test.

2. Test Wash Outputs

You can test the wash outputs without inserting money.

3. Test Print

A test ticket can be printed by pressing one of the wash selection buttons.

AUDIT MODE (3=AUDIT)

Audit mode provides details of sales and other events.

When Audit mode is first selected a brief help message is displayed on the screen to assist in how to access the various audit data. This help message is only intended as a reminder with full details presented below.

QUICK GUIDE

- The available audit data are arranged in a numbered list.
- Use the '5' and '2' buttons to step back and forth respectively through the list.
- Most audit data is displayed in the list.
- Some items required the E button to be pressed after which the CWE will provide another list or display prompts for the user to enter some information.
- Pressing the 'C' button once (or several times) will exit back to service mode.

The following audit and information is available.

1. Hopper Paid		50	Total to Coin Box	\$x.xx
2. Total Count		52	Total to Tube	\$x.xx
4. Total Detail (Press E)		60	Total Notes	\$x.xx
5. Total Sales	\$x.xx	70	Total change	\$x.xx
10. Total Free		80	Credit	\$x.xx
12. Total Free	\$x.xx	81	Coins in Tubes	\$x.xx
20. Total Token		82	Coins in Tubes	
22. Total Token	\$x.xx	83	Coins in Tubes (Press E)	
30. Total Card		90	Last Reset	
32. Total Card	\$x.xx	91	Audit Resets	
34 Total Card Reval	\$x.xx	92	DEX Readouts	
36. Total Card Pulses	\$x.xx			
40. Total Credit Held	\$x.xx			

INFORMATION MODE (4=INFO)

Info mode displays CWE version information and other data.

When info mode is first selected a brief help message is displayed on the screen to assist in how to access the various audit data. This help message is only intended as a reminder with full details presented below.

QUICK GUIDE

- The available information is arranged in a numbered list.
- Use the '5' and '2' buttons to step back and forth respectively through the list.
- Pressing the 'C' button once (or several times) will exit back to service mode.

1. Model

Display the CWE model.

2. Firmware

Display the CWE firmware version.

3. Serial Number

Display the CWE unique serial number.

4. Asset number

Displays the CWE asset number as set in program mode.

10. MDB Devices

This will display the MDB devices which have been automatically detected.

20. CPU TEMPERATURE

Will show the temperature range occurred over a period of time

30. EVENTS LOGS

IMPORT MODE (5=IMPORT)

Import mode is used to load the CWC's memory with settings and or texts (printer configurations and discount messages) which have previously been saved to an SD flash card.

The information that can be imported includes one or more of the following:

- 1= SETTINGS
- 2= PRINT CONFIG
- 3= MESSAGES
- C= EXIT

After selecting import mode, a series of prompts will be displayed.
Use the information given below for assistance:

INSERT CARD OR C TO EXIT

This prompt will only be displayed if you have not already inserted a SD flash card into the CWC.

In order to continue you must insert an SD flash card, otherwise press "C" to exit back to the service menu.

1. IMPORT SETTINGS

This prompt will allow you to import all settings.

If you wish to load the saved settings into the CWC's memory, then press "1".

2. IMPORT PRINT CONFIG

The print configuration file holds all the car wash operator's details like name, address, phone contact, ABN, etc.

To import, press "2".

3. MESSAGES

The message file holds the text which is displayed during the discount period.

To import, press "3".

C=EXIT

Use this selection to exit back to the service menu.

EXPORT MODE (6=EXPORT)

Export Mode is used to save various reports and setting information to an SD flash card. The SD flash card can then be inserted into another CWC so that settings and price information can be transferred. Or alternatively, it can be inserted into an SD flash card reader connected to a personal computer so the various reports can be viewed. Once Export Mode is selected and an SD flash card inserted, a menu will be displayed offering the following options:

1 SETTINGS

This selection will generate a settings file called “SETTINGS>DAT” on the SD flash card..

Caution – If a settings file already exists it will be overwritten.

The settings file can be imported into another CWC using import mode.

2 PRINT CONFIG

This selection will export the printer configuration file onto the SD card.

The print config file can be imported into another CWC using import mode.

3 DEX

This selection will generate an audit report containing the same text as the EVA DTS DEX report available via the RS232 com port.

The file is saved as “DEX###.TXT” where ### is a number which increases each time a DEX audit file is added to the SD flash card.

After the report is generated a message will prompt the user to select whether or not the CWC audit data should be cleared.

4 LOGS

5 MEMORY

This selection is for factory use only.

C=EXIT

Use this selection to exit back to the service menu.

TOKENS

To Program Tokens In For C2 Blue MDB

- Press Menu
- Then Press C..(Service Mode)
- Scroll to TOKEN TEACH ..
- Then press E.. for enter
- Then press Token Teach
- Select A.. for Token
- Then enter .. Drop through at least 20 coins
- Then press .. Select A (Normal)
- Comes up Token programmed in



APPENDIX A - FIRMWARE BOOT-LOADER

The CWC is provided with a firmware boot loader which enables new operating firmware to be installed into the CWC.

Follow the steps below to install new firmware.

It is important to read and understand all steps involved below before starting.

1. Obtain an SD flash card containing the firmware update.
2. Turn the CWC off.
3. Insert the SD flash card into the CWC.
4. Press and hold the MENU button.
5. While holding the MENU button, turn on the CWC.
6. The CWC will display “APPLICATION UPDATE AVAILABLE” followed by “Release MENU To Install”. If you decide not to install the firmware, DO NOT release the MENU button, instead continue to hold the MENU button and then turn off the CWC and wait until the screen has gone blank before releasing the MENU button.
7. Release the MENU button.
8. You can follow the progress on the LCD screen.
9. The CWC will now erase its firmware memory and start installing the new firmware. If this step is interrupted by a power failure, simply restart the procedure again.
10. When the new firmware is installed the CWC will restart. If the new firmware’s settings are not compatible with the old firmware, then all settings will be set to the factory defaults.
11. Turn the CWC off and remove the SD flash card containing the firmware update. In order to prevent the firmware accidentally being installed again, it is advised to not use the firmware SD flash card for normal use.
12. Turn the CWC on again and check its settings and operation.

COIN CHANGER C2 BLUE



CHANGER OVERVIEW

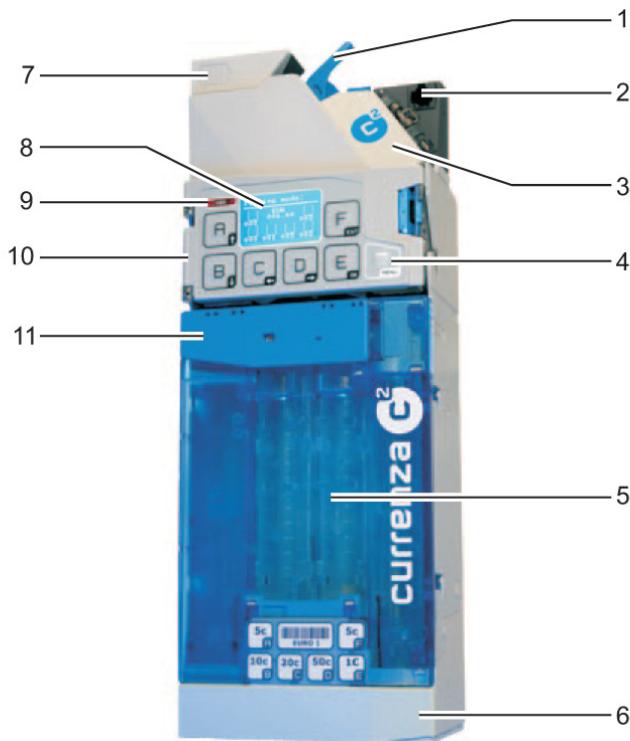


Fig. 1: Design

Item	Designation	Item	Designation
1	Return lever	7	Coin insert funnel
2	Interface connector	8	Display (HI)
3	Coin validator	9	IrDA interface (HI)
4	Keys (HI)	10	Human Interface (HI)
5	Tube cassette	11	Lever for cassette removal
6	Payout set		

CHANGER CONTROL PANEL



CHANGER SETUP FIRST FILL

FIRST STEPS

Since the individual functions of the changer are programmed by the manufacturer according to customer-specific requirements, you only have to fill the six change tubes of the tube cassette with the appropriate coin types when starting up the device for the first time.

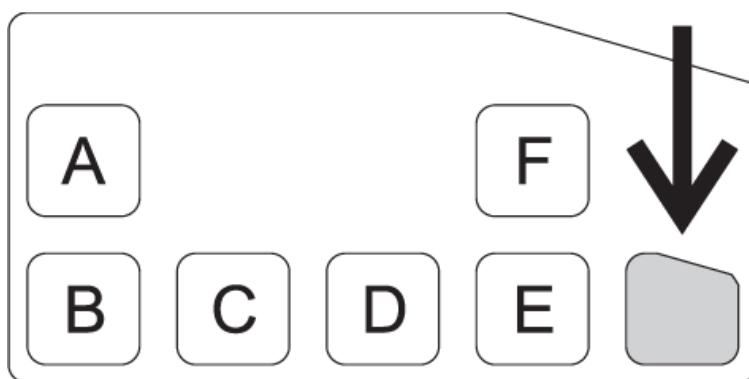
FILLING THE TUBES FOR THE FIRST TIME (Tube cassette **INSERTED**)

Filling is controlled via menu functions. Press the **MENU** button to enter the selection level. Then press key **F** to activate the filling mode. Fill as usual.

FILLING THE TUBES FOR THE FIRST TIME (Tube cassette **REMOVED**)

Activation of automatic tube counter programming during filling to this float level/tube

Deactivation of automatic tube counter correction according to the filling levels sensors



1. Press the **MENU** key.
The coin changer is no longer in operation mode
The main menu should be displayed
Activate filling mode by pressing the **F** button

2. Remove the empty tube cassette and insert a pre filled tube cassette
The tube counters are set to the coin numbers of the float levels

3. Press the **MENU** key.
Returns to the main menu
After the menu key has been pressed, changer returns to operational mode

FILLING INSTRUCTIONS VIA MENU KEY

NOTE: If cash box is not empty, it must be emptied.
Coins directed to the cash box are not counted.

It is not necessary to empty the cash box, IF the changer has been set so that only coins to be sorted into tubes are accepted when the tubes are being filled.

1. Press the **MENU** key.
The coin changer is no longer in operation mode
The main menu should be displayed
Activate filling mode by pressing the **F** button

2. Insert valid coins
The respective tube counter counts the accepted coins, and the coin changer sorts the respective coin type into the tube configured accordingly UNTIL
 - The full sensor is covered
 - Or the configured maximum number of coins is reached
 - Or the float level is reachedThereafter, the tube coins inserted will, depending on the settings, either
 - not be accepted and sent to the return area
 - OR be accepted and directed into the cash box area

3. Press the **MENU** key again when the tubes are full
Green LED indicates changer has returned to operational mode
If no coins are inserted for 30 sec the changer will return to operational mode without pressing the menu key.

ERROR MESSAGES

All error messages are displayed in the form of self explaining plain text messages



Error Message Example

Color (LED)	Status	Meaning
red	permanent light	problems that can be solved only by a technician
yellow	flashing	problems that can easily be solved by customer
green	permanent light or flashing	no problems

SETTINGS FOR FILLING AND EMPTYING

SETTINGS FOR FILLING AND EMPTYING CASSETTE

c² Configuration

4

Settings for filling and emptying cassette



This chapter describes useful or required settings for refilling and emptying the coin cassette:

- Configuring float level
- Setting tube counters to float-level automatically
- Correcting tube counters according to filling level sensors
- Resetting tube counters before refilling cassette
- Redirecting cash-box coins to return area
- Reporting inserted coins to machine (only c² MDB)
- Disabling/enabling inventory keys / disabling/enabling inventory keys using MDB/BDV protocol

Which settings should be done?

To enable the coin changer to register the exact coin number we recommend the following settings depending on the filling method used:

Settings for tube refilling by coin insertion

If the cassette is refilled by inserting the tube coins (and without emptying the cassette completely beforehand), see that the tube counters are not corrected according to the filling level sensors automatically, as the inserted coins will be registered exactly in the tube filling mode.

Whereas, if you remove and completely empty the cassette before inserting the tube coins, you should set the following in order to reset the tube counters before refilling the cassette:

- Resetting the tube counters before refilling the cassette
- Correcting tube counters according to filling level sensors automatically

Settings for direct refilling the removed cassette

If the cassette is removed to be directly refilled with a certain number of coins per tube, i.e. counted coins, the coin changer must be set as follows to ensure the exact registration of the coin number:

- Configuration of the coin number as float level per tube
- Automatic tube counter setting to float levels
- Deactivation of the automatic tube counter correction according to filling level sensors

If the cassette is removed to be directly refilled with any number of coins, the tube counters must be corrected according to filling level sensors automatically.

c² Configuration

SETTINGS FOR FILLING AND EMPTYING CASSETTE

Configuring float levels

Should you wish the service personal to always fill or empty the tubes at a filling level of a certain and always identical coin number, it is advisable to configure so-called float levels.

First of all specify a number of coins for each change tube (see section "Specifying float level per tube" in this chapter).

If the tubes are refilled by inserting the tube coins with the cassette installed, you also have to activate the float-up function (see section "Activating/deactivating float-up function" in this chapter).

If the coin cassette is going to be removed to be refilled directly, you have to activate the automatic tube counter programming (see section "Setting tube counters to float levels automatically" in this chapter).

Specifying float level per tube

To specify the float levels:

Quick approach:

= Main menu > E = Settings > Coin settings > Float level

How often?	Effect	Ziel
1		1 x You enter the main menu
2		1 x You enter the SETTING menu
3		until Coin settings You want to enter submenu COIN SETTINGS
4		1 x You enter the submenu
5		until Float level You want to enter submenu FLOAT LEVEL
6		1 x You enter the submenu
7		until tube desired You want to set a float level for this tube
8		1 x Now you can set a float level for this tube
9		until required digit You highlight the digit to be set
10		until required value This value is to be set
11	<i>Please repeat steps 9 and 10 to set the other two digits of the float level, if necessary</i>	
12		1 x You lock the set float level in memory
13	<i>Please repeat steps 7 to 12 to set the float levels of the other tubes, if necessary</i>	
14		1 x/2 x You return to main menu/operating mode

SETTINGS FOR FILLING AND EMPTYING CASSETTE

c² Configuration

Activating/deactivating float-up function

You should activate the float-up function if the cassette is refilled by inserting the tube coins on site. This makes sure that all tube coins being inserted after the float level has been reached will be directed to the return area.



If the float-up function is activated but no float level configured (float level for the single tubes = 000), the tube will be filled until the optional 50% filling level sensor is covered, or emptied until this sensor is no longer covered.

To activate/deactivate the float-up function:

Quick approach:



= Main menu > E = Settings > Operating modes > Float-up

Press key ...	How often?	Effect
1	1 x	You enter the main menu
2	1 x	You enter the SETTING menu. The correct menu item has already been selected
3	1 x	You enter submenu OPERATING MODES
4	until Float-up	You want to activate/deactivate the FLOAT-UP function
5	1 x	Now you can activate/deactivate the FLOAT-UP function
6	A / B until setting desired	You want to activate/deactivate the function
7	1 x	You lock the setting in memory
8	1 x/2 x	You return to main menu/operating mode

c² Configuration

SETTINGS FOR FILLING AND EMPTYING CASSETTE

Setting tube counters to float levels automatically

Activate this function if you remove the coin cassette to directly refill it with a certain number of coins (float levels). This is to ensure that the tube counters will be set to the float level coin number automatically in the tube filling mode as soon as you remove the cassette from the coin changer.

To activate/deactivate the automatic tube counter programming:

Quick approach:

= Main menu > E = Settings > Operating modes > Program tube counters autom.

Press key ...	How often?	Effect
1	1 x	You enter the main menu
2	1 x	You enter the SETTING menu. The correct menu item has already been selected
3	1 x	You enter submenu OPERATING MODES
4	until Program tube counters autom.	You want to activate/deactivate the function
5	1 x	Now you can activate/deactivate the function
6	until setting desired	You want to activate/deactivate the function
7	1 x	You lock the setting in memory
8	1 x/2 x	You return to main menu/operating mode

SETTINGS FOR FILLING AND EMPTYING CASSETTE

c² Configuration

Correcting tube counters according to filling level sensors

Six tube counters are monitoring the exact number of coins in the tubes and register each coin collected by and paid out from the tubes.

In addition each tube is equipped with up to four filling level sensors. If the coin changer is supposed to compare the tube counter readings with the measured filling levels of the sensors after a coin has been accepted or paid out and correct the tube counters if necessary, you should activate the automatic tube counter correction.



If the vending machine control is unable to process the automatic correction of the tube counters, you must deactivate this function.

If the tube counter correction is deactivated, ensure that the tubes are emptied either using the inventory keys or the service menu. Otherwise the tube counters do not equal zero before refilling the tubes, but the number of coins registered before emptying the tubes (cp. separate service manual).

To activate/deactivate the tube counter correction:

Quick approach:

= Main menu > E = Settings > Operating modes > Tube counter correction

Press key ...	How often?	Effect
1		1 x You enter the main menu
2		1 x You enter the SETTING menu. The required menu item has already been selected
3		1 x You enter submenu OPERATING MODES
4		until <i>Tube counter correction</i> You want to activate/deactivate the TUBE COUNTER CORRECTION
5		1 x Now you can activate/deactivate the TUBE COUNTER CORRECTION
6		until setting desired You want the tube counters to be corrected/not corrected according to filling level sensors
7		1 x You lock the setting in memory
8		1 x/2 x You return to main menu/operating mode

c² Configuration

SETTINGS FOR FILLING AND EMPTYING CASSETTE

Resetting tube counters before fill-up

If change is refilled by inserting the tube coins but the cassette is removed to be completely emptied before fill-up, the coin changer should be set so that the tube counters will be reset when removing the cassette, i.e. before refilling the tubes.

To activate/deactivate the tube counter reset:

Quick approach:

= Main menu > E = Settings > Operating modes > Tube counters correct. to zero

Press key ...	How often?	Effect
1	1 x	You enter the main menu
2	1 x	You enter the SETTING menu. The required menu item has already been selected
3	1 x	You enter submenu OPERATING MODES
4	until Tube counters correct. to zero	You want the TUBE COUNTERS to be reset/ignored
5	1 x	Now you can set the function
6	until setting desired	You want the tube counters to be reset/ignored when removing the coin cassette
7	1 x	You lock the setting in memory
8	1 x/2 x	You return to main menu/operating mode

SETTINGS FOR FILLING AND EMPTYING CASSETTE

c² Configuration

Redirecting cash-box coins to return area

If you replenish change by inserting coins and if you do not want the cash-box coins to be accepted but only the tube coins, the coin changer can be set so that all cash-box coins will be inhibited and redirected to the return area when the changer is in tube filling mode.

To disable/enable the cash-box coins when refilling the coin cassette:

Quick approach:

= Main menu > E = Settings > Operating modes > Only tube coins in filling mode

Press key ...	How often?	Effect
1	1 x	You enter the main menu
2	1 x	You enter the SETTING menu. The required menu item has already been selected
3	1 x	You enter submenu OPERATING MODES
4	until Only tube coins in filling mode	You want only tube coins/also cash-box coins to be accepted
5	1 x	Now you can set the function
6	A / B until setting desired	In tube filling mode you want only tube coins/also cash-box coins to be accepted
7	1 x	You lock the setting in memory
8	1 x/2 x	You return to main menu/operating mode

c² Configuration

SETTINGS FOR FILLING AND EMPTYING CASSETTE

Reporting inserted coins to machine (only c² MDB)

If you replenish change by inserting the tube coins in the tube filling mode and if you want the machine to count the coins inserted and display them for checking purposes, the coin changer may transfer a filling report to the machine.

To activate/deactivate the filling report function:

Quick approach:



= Main menu > E = Settings > Operating modes > Manual fill report

Press key ...	How often?	Effect
1		1 x You enter the main menu
2		1 x You enter the SETTING menu. The required menu item has already been selected
3		1 x You enter submenu OPERATING MODES
4		until Manual fill report You want the machine to receive/not receive a filling report
5		1 x Now you can set the function
6		until setting desired You want the changer to transfer/not transfer a filling report
7		1 x You lock the setting in memory
8		1 x/2 x You return to main menu/operating mode

PRICES AND VENDING MODES

c² Configuration

PRICES AND VENDING MODES (ONLY c² BDV/EXECUTIVE)

Configuring "Committed to vend" or change return at any time

To ensure that the vending machine is not used as a money changer and inserted cash is returned whenever you want, the coin changer can be set up so that change is only paid out after a vending operation.

If the changer is not set to "Committed to vend", the customer, at any time, can cause the return of the (residual) credit by pressing the return button, even without having pressed a selection button or bought something.



In addition, a maximum amount of money, which is allowed to be accepted at most for a transaction, can be configured (see section "Limiting acceptance of coins and banknotes (only c² BDV/Executive)" in Chap. 6 "Cash acceptance").

To activate/deactivate "Committed to vend":

Quick approach:

= Main menu > E = Settings > Operating modes > Selling mode > Committed to vend

Press key ...	How often?	Effect
1	1 x	You enter the main menu
2	1 x	You enter the SETTING menu. The required menu item has already been selected
3	1 x	You enter submenu OPERATING MODES
4	until Selling mode	You want to enter submenu SELLING MODE
5	1 x	You enter the submenu
6	until Committed to vend	You want/do not want the customer to buy something before he can claim back the change
7	1 x	Now you can set the function
8	until setting desired	You want to activate/deactivate the "Committed to vend" function
9	1 x	You lock the setting in memory
10	1 x/2 x	You return to main menu/operating mode

Resetting or storing credit which cannot be paid out

If the remaining credit cannot be paid out of the coin cassette or connected hoppers or recyclers (payout units are empty or no appropriate tube/hopper coin/recycler banknote programmed), that credit can either be reset or saved for the next vending operation or customer.

To reset/store the credit which cannot be paid out:

Quick approach:

= Main menu > E = Settings > Operating modes > Residual credit

Press key ...	How often?	Effect
1	1 x	You enter the main menu
2	1 x	You enter the SETTING menu. The required menu item has already been selected
3	1 x	You enter submenu OPERATING MODES
4	until Residual credit	You want to specify how to manage the RESIDUAL CREDIT
5	1 x	Now you can set the function
6	until setting desired	You want the residual credit which cannot be paid out to be DELETED/stored
7	1 x	You lock the setting in memory
8	1 x/2 x	You return to main menu/operating mode

CASH ACCEPTANCE

CASH ACCEPTANCE

c² Configuration

Limiting acceptance of tube coins (filling level limitation)

The changer can be configured so that each change tube accepts no more than a specific number of coins. When this number of coins is reached in a tube, all further coins for this tube are then directed into the cash-box temporarily. Only when coins have been paid out of this tube, coins are again sorted into the tube.



If this function is not used (setting "000"), the upper filling level sensor (full sensor) of the tubes determines, irrespective of the number of coins, from when the coins will be sorted into the cash-box and no longer into the tubes.

To configure the filling level limitation:

Quick approach:

= Main menu > E = Settings > Coin settings > Filling level limitation

Press key ...	How often?	Effect
1		1 x You enter the main menu
2		1 x You enter the SETTING menu
3		until Coin settings You want to enter submenu COIN SETTINGS
4		1 x You enter the submenu
5		until Filling level limitation You want to enter submenu FILLING LEVEL LIMITATION
6		1 x You enter the submenu
7		until tube desired You want to set a filling level limitation for this tube
8		1 x Now you can set a limitation for this tube
9		until required digit You highlight the digit to be set
10		until required value This value is to be set
11	Please repeat steps 9 and 10 to set the other two digits of the filling level limitation, if necessary	
12		1 x You lock the set filling level limitation in memory
13	Please repeat steps 7 to 12 to set the filling level limitations of the other tubes, if necessary	
14		1 x/2 x You return to main menu/operating mode