



# Dispenser/Reloader of Cartadis Magnetic cards

User's manual V3.1

## DRC9 / CR9



### ≧ SAFETY ≦

This CARTADIS product and supplies are manufactured and certified to strict safety regulations, electromagnetic regulations and established environmental standards.

### ≧ WARNING! ≦

Any unauthorised alteration, which may include the addition of new functions or connection of external devices, may impact the product certification.

Please contact your CARTADIS representative for more information.

#### ⇒ Warning markings

All warning instructions marked on or supplied with the product should be followed.

#### ⇒ Electrical supply

This product shall be operated from the type of electrical supply indicated on the product's data plate label. If you are not sure that your electrical supply meets the requirements, please consult your local power company for advice.

To disconnect all electrical power to the product, the disconnect device is the power cord. Remove the plug from the electrical outlet.



#### ⇒ Operator accessible areas

This product has been designed to restrict operator access to safe areas only. Operator access to hazardous areas is restricted with covers or guards which would have to be removed using a tool. Never remove these covers or guards.

#### ⇒ Maintenance

Any operator product maintenance procedure will be described in the user documentation supplied with the product. Do not carry out any maintenance on the product which is not described in the customer documentation.

#### ⇒ Cleaning your product

Before cleaning this product, unplug the product from the electrical outlet. Always use materials specifically designated for this product. The use of other materials may result in poor performance and may create a hazardous situation. Do not use aerosol cleaners; they may be flammable under certain circumstances.

***For more information on Environment, Health and safety in relation to this CARTADIS product and supplies, please contact the following customer help lines:***

***Europe: +33 1 48 77 40 60.***



The CE mark applied to this product symbolises CARTADIS declaration of conformity with the following applicable European Union Directives as of the dates indicated:

#### ⇒ January 1, 1995:

Council directive 73/23/EEC, amended by Council Directive 93/68/EEC, approximation of the laws of the member states related to low voltage equipment.

#### ⇒ January 1, 1996:

Council directive 89/336/EEC, approximation of the laws of the member states related to electromagnetic compatibility.

A full declaration of conformity, defining the relevant directives and referenced standards, can be obtained from your CARTADIS representative.

### ≧ WARNING! ≦

In order to allow this equipment to operate in proximity to Industrial, Scientific and Medical (ISM) equipment, the external radiation from the ISM equipment may have to be limited or special mitigation measures taken.

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# 1. Introduction

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The DRC9/CR9 is a device designed to dispense or reload the pre-loaded Cartadis magnetic cards. According to its configuration it can also dispense blank cards.

- DRC9:
  - Dispenses Cartadis magnetic cards to users against a payment by coins or bills.
  - Reloads money on Cartadis cards.
- CR9:
  - Does not feature a module for card dispensing, this device only reloads Cartadis magnetic cards against payment.

The functions common to both devices are:

- Display of the user information on a 7-inch colour screen.
- Works offline (no need of a network connection).
- Entry of the user information (identification, various options) on the touchscreen.
- Reload of Cartadis cards by coins.
- As an option, reload by bills.
- Possibility of bonus prices.

The system is very simple to use and accessible to users without any particular training. A Cartadis card is reloaded (§ 3.2) as follows:

1. The user presses « recharge card».
2. User inserts his Cartadis card in the motorized reader, the card is kept inside the reader while money is inserted for reloading...
3. Coin insertion, the user displays the current credit of the card and the amount inserted (attention the system does not give change).
4. The end of reload is displayed by pressing a key. In case you have forgotten, the transaction will be closed automatically after an adjustable time.

**ATTENTION:**

The « recharging » step is accessible to the user who already has a Cartadis card.

If this is not the case, the user must first purchase a card by pressing the « buy card » button (§ 3.1).

# 2.Installation

---

## 2.1 Prerequisite

The implementation of a DRC9/CR9 system requires the following items:

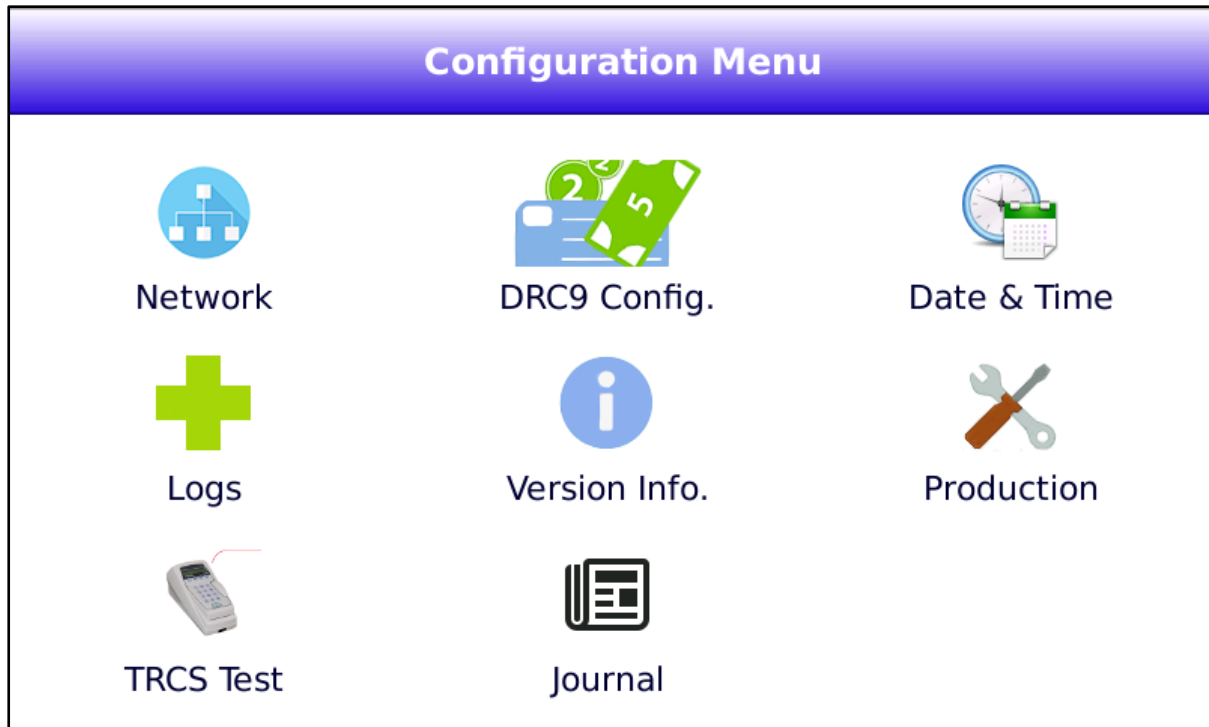
- A mains supply close to the DRC9/CR9 system.
- The distributor is supplied on a pedestal, the installation is very simple and it may be fastened on the ground

## 2.2 Configuration menu

The configuration of a DRC9/CR9 allows to configure card prices, date and time and money acceptors.

The DRC9 door opening is detected by a micro-switch that moves to the access of the DRC9 administration menu. Closing the door puts the DRC9 back to the operating mode.

The configuration menu is displayed as follows:

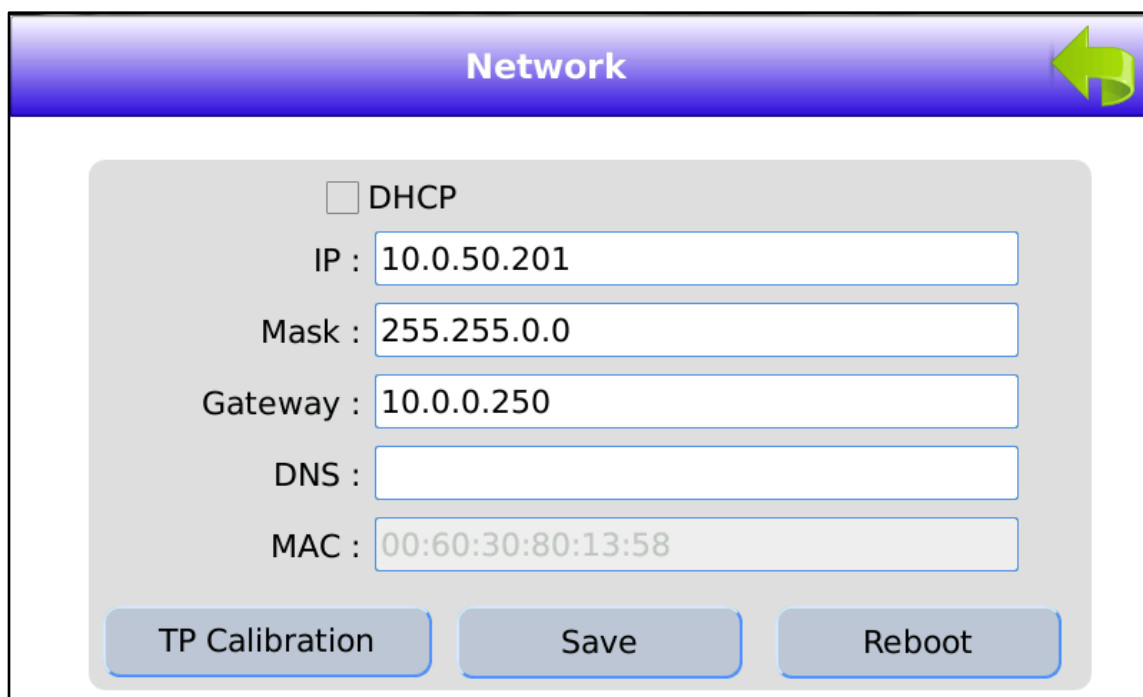


The functions accessible from the administration menu are:

- **Network:** Configuration of the network parameters. The network doesn't need to be initialized for proper operations of the DRC9/CR9. The network features are indicated for maintenance purpose and allow to remotely reset the unit.
- **DRC9 Config.:** Configuration of accepted coins and notes, consultation of sales statistics and cash collection function.
- **Date & Time:** Setup the clock of the DRC9/CR9.
- **Logs:** Display of the DRC9 internal logs.
- **Version Info.:** Display of the firmware versions.
- **Production:** DRC9 general reset.  
Click on « DRC9 » then « Counters RAZ ».
- **TCRS Test:** Test the communication with the Cartadis reader subset. .
- **Journal:** Events related to DRC9 (power on, error messages ...).



If you plan to use the network to access the DRC9/CR9 unit, set the IP address required for your installation. Then press « Save » to save the configuration.



**Network**

☐ DHCP

IP : 10.0.50.201

Mask : 255.255.0.0

Gateway : 10.0.0.250

DNS :

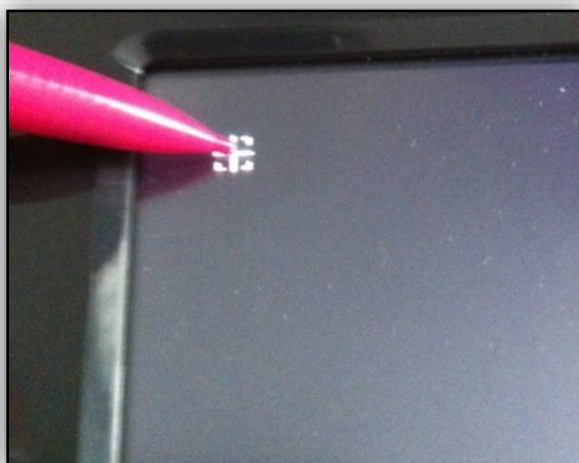
MAC : 00:60:30:80:13:58

TP Calibration      Save      Reboot

Once the parameters modified and saved, please press the « Reboot » button.

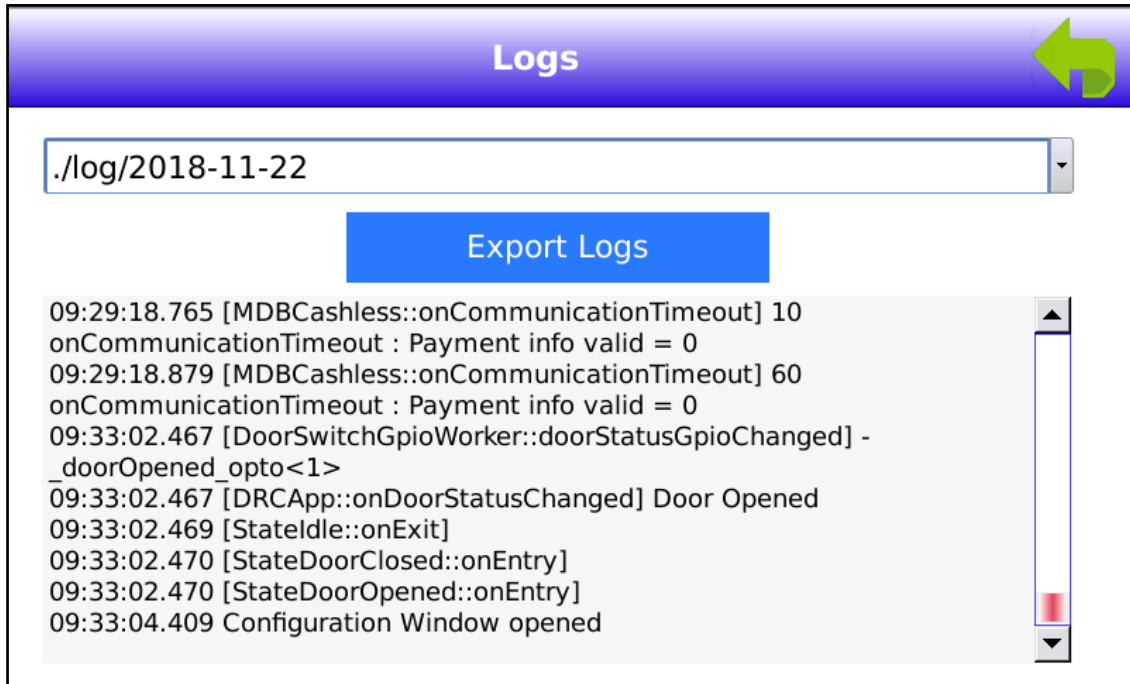
## 2.3 Calibration of the touchscreen

Calibrate the touchscreen by selecting the « Network » menu and press the button « TP Calibration ». Use the tip of a pen or a similar instrument (no scissors or knives) as shown on the picture below, touch each pattern on the screen. The calibration screen will close automatically after the fifth calibration point and the application will restart.



## 2.4 Logs

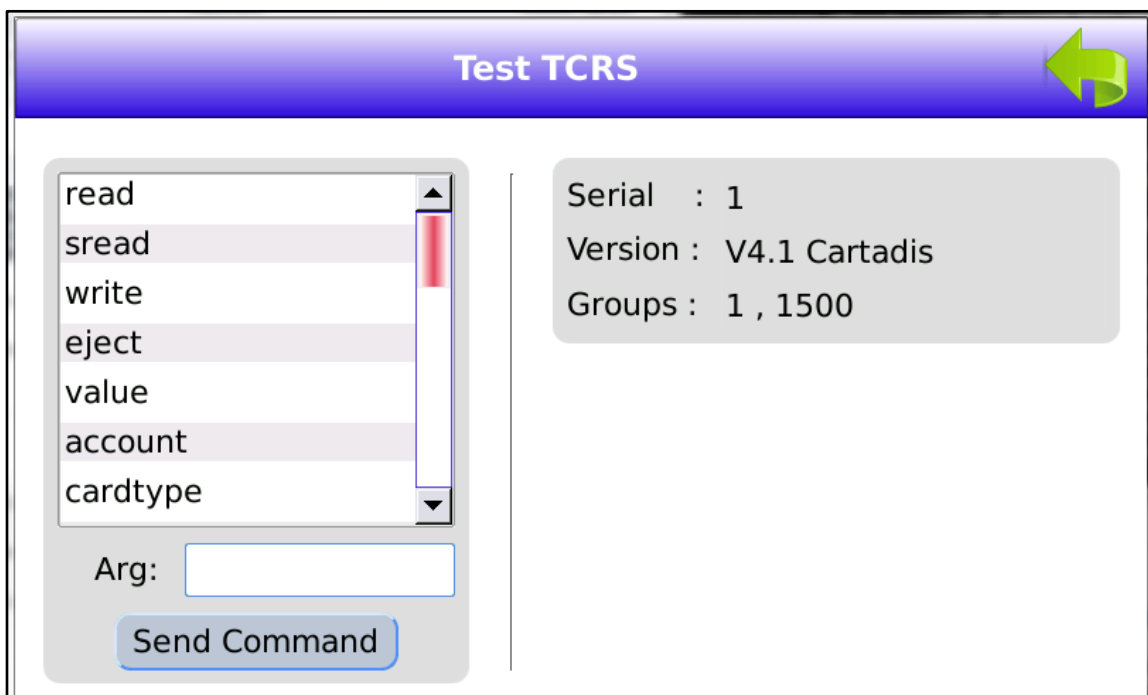
Selecting the menu « Logs » gives access to the trace files stored locally on the device. These files may be useful for maintenance purpose. They can be consulted directly from the terminal or stored on a USB key.



## 2.5 Test TCRS

The button « Test TCRS » allows to check the communication between the Cartadis reader and the DRC9/CR9 controller.

With this test menu, it is possible to read / write / eject a magnetic card from the reader.



### Adding of a group number

In the Test TCRS menu:

- insert the Administration card corresponding to the new desired group number,
- select « addgrp » and click on « Send command »,
- then select « eject » and click on « Send command » to eject the card.

### Deletion of a group number

To delete a group number:

- select « delgrp », click on « Arg: »,
- use the keyboard to remove the desired group number,
- save by selecting « OK » and click on « Send command ».

### Group lists

To display all the group numbers:

- select « listgrp » and click on « Send command ».

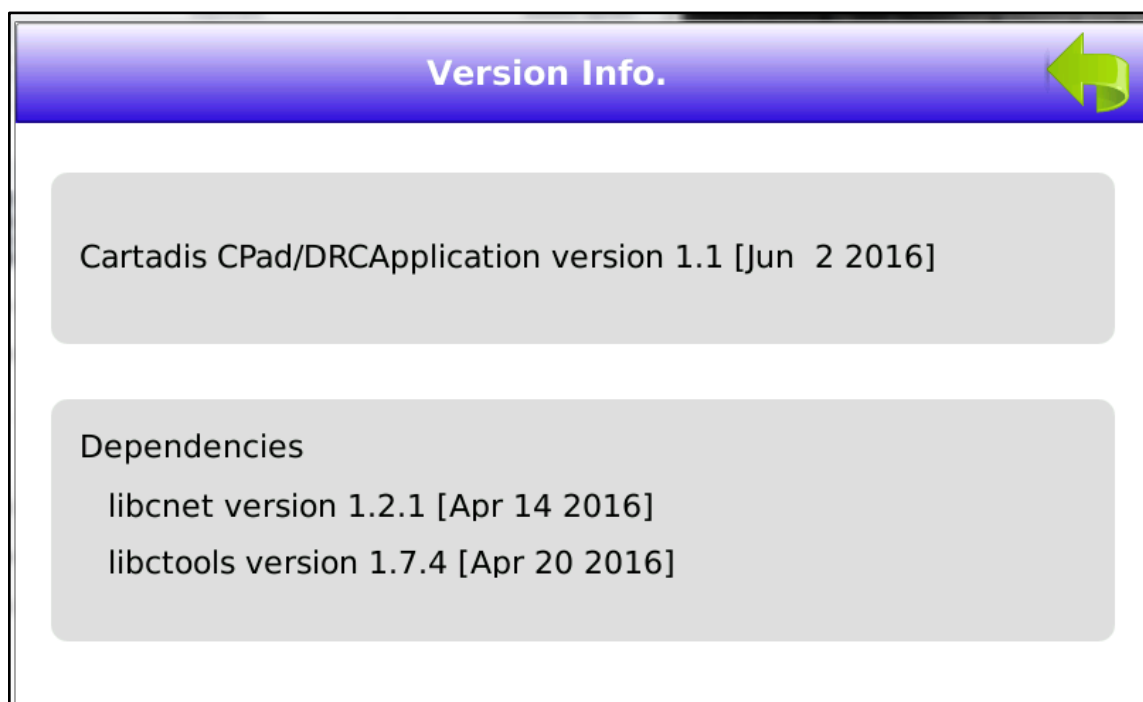
### **Note:**

**The DRC9 accepts all cards whose group numbers are listed.**

**When buying a new card, the group number to be saved on the card will be the first in the list.**

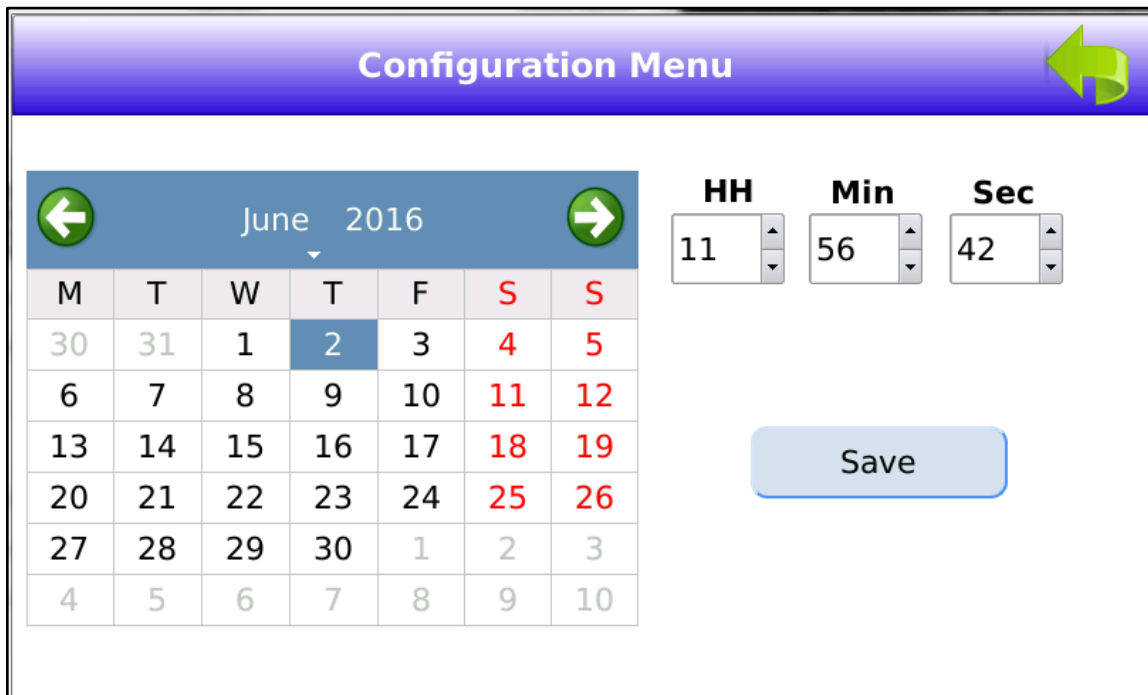
## 2.6 Version Info.

The button « Version info. » shows the firmware version of the DRC9/CR9 unit.



## 2.7 Date & Time

The button « Date & Time » allows to setup the internal clock of the DRC9/CR9.



The screenshot shows the 'Configuration Menu' interface. At the top is a purple header bar with the text 'Configuration Menu' and a green arrow pointing left. Below the header, on the left, is a calendar for June 2016. The calendar has a grid with days of the week (M, T, W, T, F, S, S) and dates. The date '2' is selected. To the right of the calendar are three spinners for 'HH', 'Min', and 'Sec'. The values are 11, 56, and 42 respectively. Below these spinners is a blue 'Save' button.

M	T	W	T	F	S	S
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	1	2	3
4	5	6	7	8	9	10

HH: 11, Min: 56, Sec: 42

Save

## 2.8 Config. DRC9

The « Config. DRC9 » menu is displayed as follows



The screenshot shows the 'DRC9 - Select an action' menu. It has a purple header bar with the text 'DRC9 - Select an action' and a green arrow pointing left. Below the header, there are five blue buttons arranged in two rows: 'Configuration', 'Statistics', 'Test' in the first row, and 'Devices info.', 'Devices settings' in the second row.

Configuration Statistics Test

Devices info. Devices settings

The available menus are:

- Configuration
- Statistics
- Test
- Devices info
- Devices settings.

## 2.9 Test

The « Test » button allows to test: the coin acceptor, the bill acceptor and the card dispenser. Once the test button is pressed you get the following screen:

DRC9 - Test

Insert coins or bills...

Test card dispenser

Coins

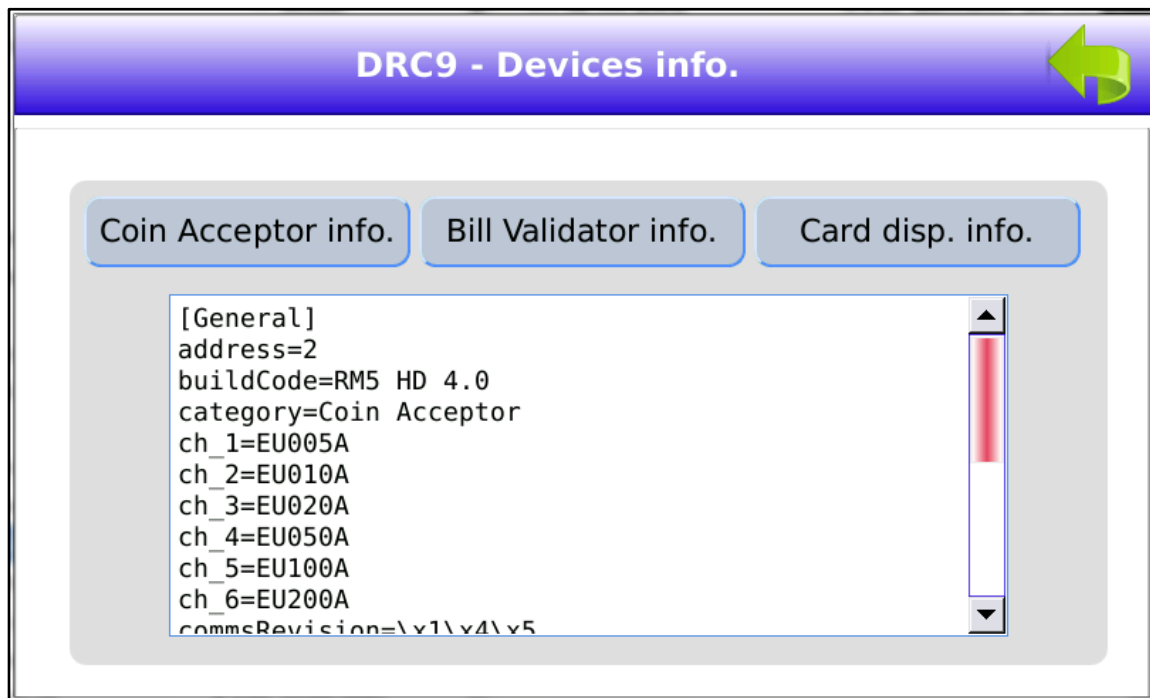
Channel	Denom.	Nb	Total
1	€ 0.05	0	0.00
2	€ 0.10	0	0.00
3	€ 0.20	0	0.00
4	€ 0.50	0	0.00
5	€ 1.00	0	0.00
6	€ 2.00	0	0.00
Total		0	0.00

Bills

Channel	Denom.	Nb	Total
1	€ 5.00	0	0.00
2	€ 10.00	0	0.00
3	€ 20.00	0	0.00
4	€ 50.00	0	0.00
Total		0	0.00

## 2.10 Devices info.

The « Devices info. » button shows the values of the coin acceptor and bill acceptor channels.  
The 3 information screens are:



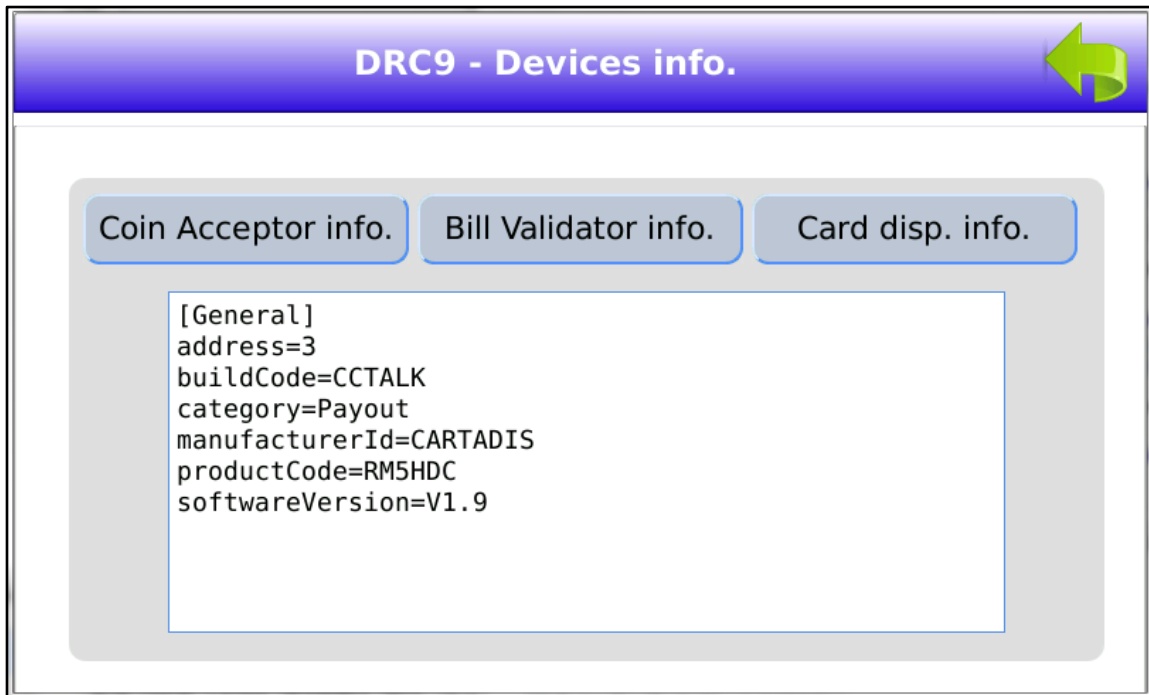
The screenshot shows the 'DRC9 - Devices info.' screen with a green back arrow in the top right. Three buttons are visible: 'Coin Acceptor info.', 'Bill Validator info.', and 'Card disp. info.'. The 'Coin Acceptor info.' button is selected, and its data is displayed in a text box with a vertical scrollbar.

```
[General]
address=2
buildCode=RM5 HD 4.0
category=Coin Acceptor
ch_1=EU005A
ch_2=EU010A
ch_3=EU020A
ch_4=EU050A
ch_5=EU100A
ch_6=EU200A
commsRevision=\x1\x4\x5
```



The screenshot shows the 'DRC9 - Devices info.' screen with a green back arrow in the top right. Three buttons are visible: 'Coin Acceptor info.', 'Bill Validator info.', and 'Card disp. info.'. The 'Bill Validator info.' button is selected, and its data is displayed in a text box with a vertical scrollbar.

```
[General]
address=40
buildCode=Standard
category=Bill Validator
ch_1=EU0005A
ch_2=EU0010A
ch_3=EU0020A
ch_4=EU0050A
commsRevision=\x1\x4\x5
countryCode=EU
currencyRevision=EUR02133
```



**DRC9 - Devices info.**

Coin Acceptor info. Bill Validator info. Card disp. info.

[General]  
 address=3  
 buildCode=CCTALK  
 category=Payout  
 manufacturerId=CARTADIS  
 productCode=RM5HDC  
 softwareVersion=V1.9

## 2.11 Devices settings

The coin mechanism of the DRC9/CR9 may accept coins of 0.05€ 0.10€ 0.20€ 0.50€ 1€ and 2€ and bills of 5€ 10€ 20€ and 50€.

A range of coins and bills may be inhibited by pressing the « Settings key ».

The DRC9/CR9 displays the following screen:



**DRC9 - Devices settings**

**Coins inhibit**

☐ \$2    ☐ \$1    ☐ \$0.50    ☒ \$0.20    ☒ \$0.10  
☒ \$0.05    ☒ \$0.02    ☒ \$0.01

**Bills inhibit**

☐ \$5    ☐ \$10    ☐ \$20

A coin or a bill is rejected by checking the box at the right of the value to inhibit.

## 2.12 Production

By clicking on the "Production" menu in the "Configuration" menu of DRC9 then RAZ counters, all the sales statistics are reset.

### 2.12.1 Configuration menu

Page 1 to 3 is changed by pressing the button at the bottom and right of the screen.

The available values may be checked or not by pressing the screen:

- Enable Card Recharge: validates the TCRS reader use for a card reloading.
- Enable Card Dispense: validates the unstacker use for a new card purchasing.
- Enable bills: validates the use (optional) of a banknote reader.
- Display prices: enables reloading set prices to be displayed on the screen.
- Enable Key Beeps: pressing each key makes a sound beep.
- Remaining cash beep: once a new card is dispensed, sound beeps invite the user to insert this card into the reader (if the amount inserted is greater than the new card price).
- Maintenance mode: inhibits the full use of DRC9 in case of problem requiring technical intervention (permanent display of « Maintenance » on the screen).
- Use unicode font: font decrease related to the country (currency). In Euro zone, do not check this box.
- Language: defines the country concerned. Currency symbols displayed on the screen and language are determined by this choice.
- Credited Currency: with the alphabetical keyboard, definition of the value of the data to record on the card (copies, units, currency value...) in all languages, default value Euro.
- Reboot time: time of DRC9 automatic reboot (default value 3 am).
- Inactivity Timeout (sec): time after which the screen reverts to standby (after pressing a key).
- Price scale:  $100 = \text{Sales prices expressed in centimes} / 1000 = \text{Prices expressed in thousandths}$ .
- Max Value allowed: maximum value (in centimes) allowed for reloading a card.
- Card Price: Value of the support (magnetic card supplied) when buying a new card.
- Screen Saver (sec): definition in seconds of switching to standby mode (black screen) if the DRC9 is inactive for a long time.
- Site Name: with the alphabetical keyboard, definition of the ticket header (sales statistics statement by USB key in .txt).
- Mode: three choices of DRC9 operating modes are available:
  - 1) Mode 0: the magnetic card is recorded in Euros (Euros cents) / the value displayed on the screen is expressed in Euros.
  - 2) Mode 1: the magnetic card is recorded in Euros (Euros cents) / the value displayed on the screen is expressed in copies (or units according to the Credited Currency parameter setting).



- 3) Mode 2: the magnetic card is recorded in copies / the value displayed on the screen is expressed in copies (or units according to the Credited Currency parameter setting).

### 2.12.2 Adjusting copies sale prices

- Price 1: with the numerical keyboard, definition of the unit price in Euro cents then « : », then « 1 ». Validate the entry by pressing OK.  
Example: 10: 1 > 10cts allocate 1 copy.
- Price 2: definition of a second price in Euro cents (decreasing price) then « : », then « xx ». Validate the entry by pressing OK.  
Example: 100: 12 > 1€ allocates 12 copies if a degressive price is set.
- Price 3: definition of a third price in Euro cents (decreasing price) then « : », then « xx ». Validate the entry by pressing OK.

There are six different prices, they are displayed by pressing key « + », they are decreased by pressing key « - ».

- Enable Bank card payment:  
Check the box if a MDB bank card terminal is configured.  
6 reloading amounts can be configured (configuration done in cents).  
*Note: Support for MDB bank card terminal depends on the country.*
- Enable printer:  
Check box if printer present.
- Overpayment Timeout (secs)

Time during which the message « please insert your new card to recharge » remains displayed when you buy a new card.  
Default value: 60 seconds.

Edit config file

Prices

Price 110:1

Price 2100:12

Price 3200:30

Enable Bank Card Payment

Amount 1200

Amount 21000

Amount 32000

Amount 4

Amount 5

Amount 6

Enable Printer

Printer VAT2000

Overpayment Timeout (secs)60

Coins Changer

Nb. Pieces min.6

Min. Value In Tubes

+

-

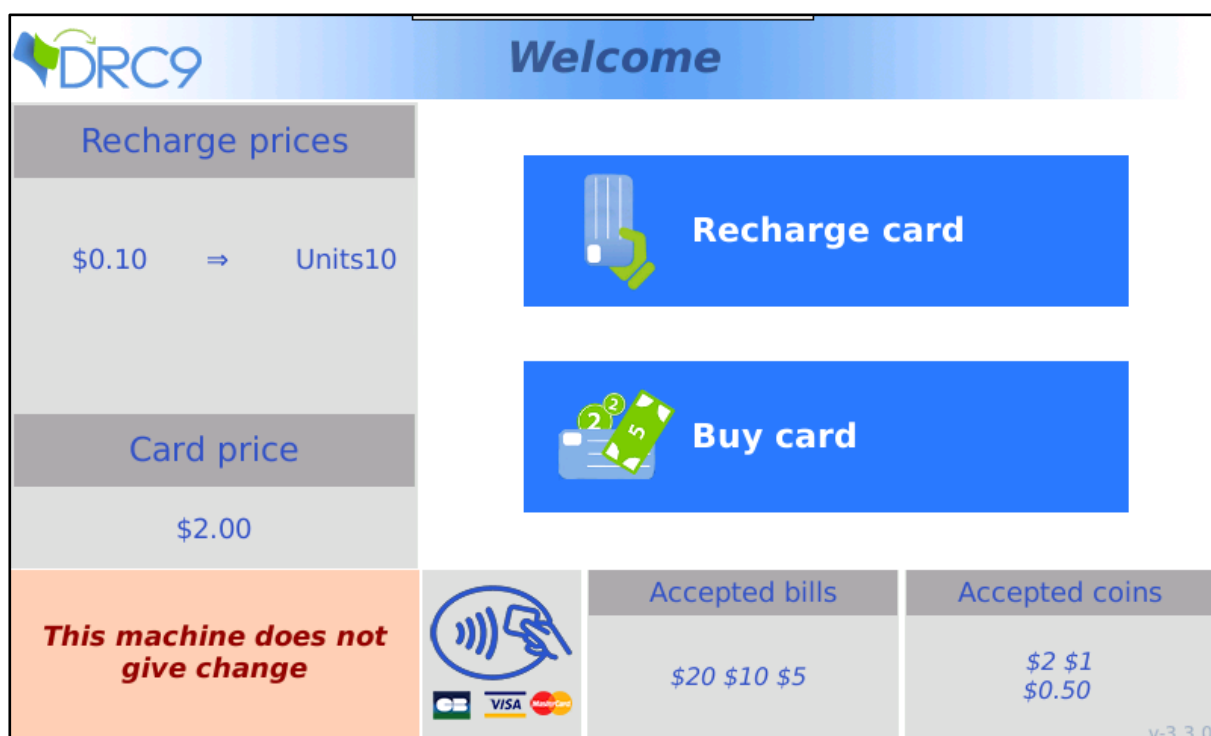
+

-

# 3.Use

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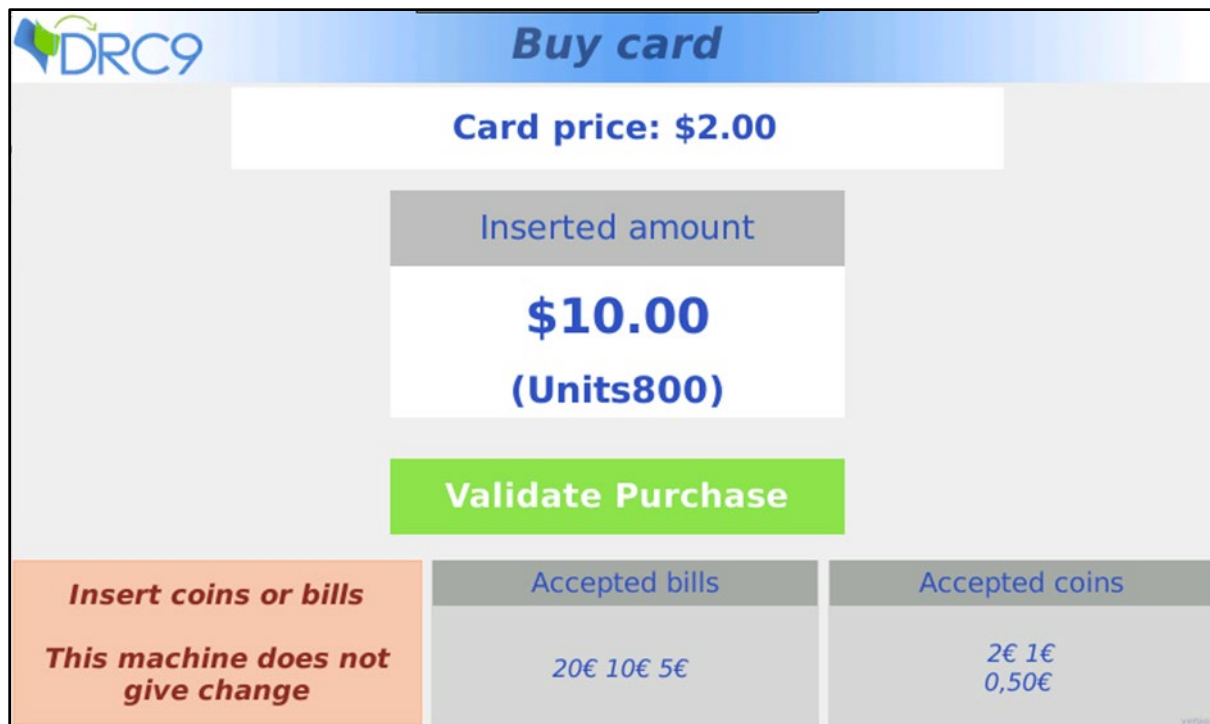
The DRC9/CR9 welcome screen is:



### 3.1 Buying a card

For buying a card (DRC9), the user has to press the key « Buy card ». For recharging a card, he will have to press the key « Recharge card ».

After having pressed the key « Buy card », the DRC9 displays:



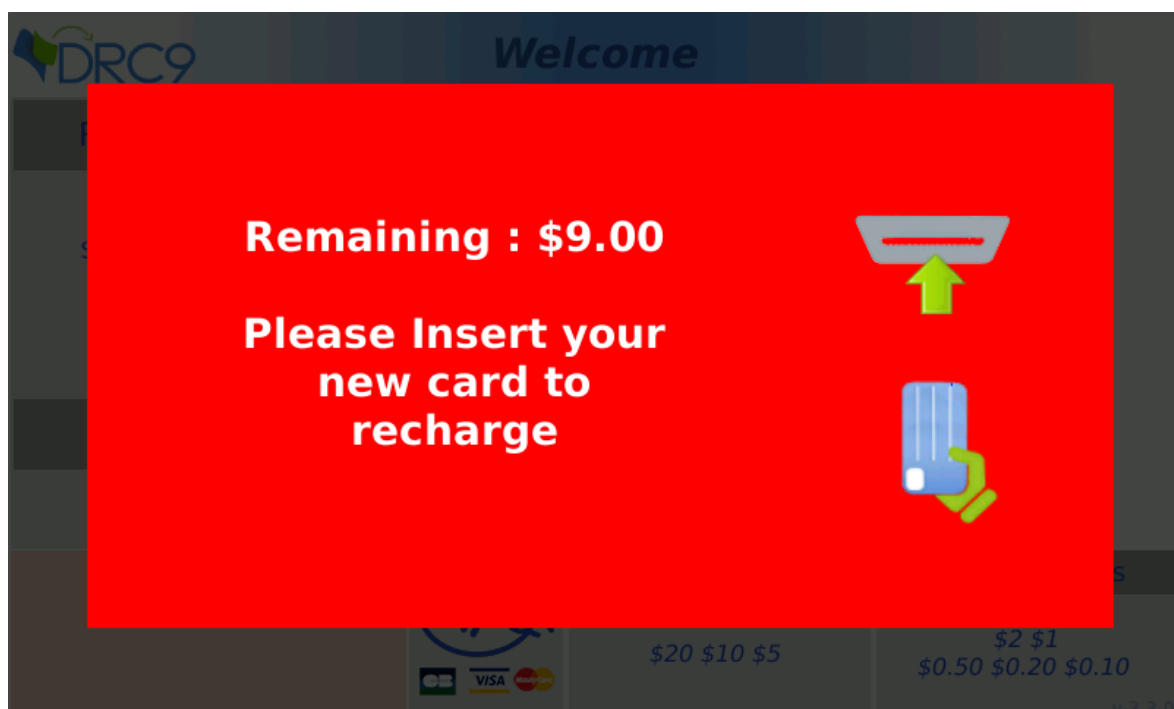
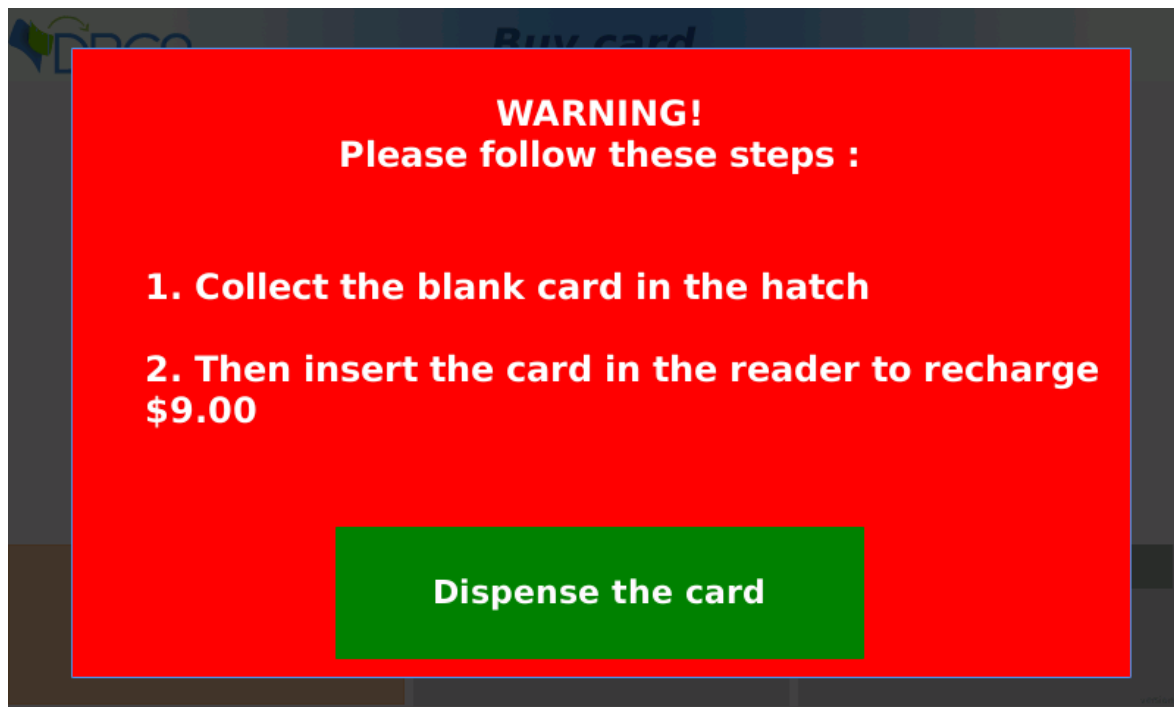
The user can insert coins or bills, the values of coins and bills accepted are displayed.

The amount inserted and the amount credited to the user card are displayed in the center window. According to the configuration, the amount credited is expressed in Euros or in Units (with or without decimals).

When buying a card, the amount inserted is decomposed into a part for the card payment, the other part exceeding the price of the card is used to credit the card.

The transaction is completed by pressing the key « Validate purchase ». In case the user does not press this key, a transaction of end is launched automatically after 1 minute of inactivity (adjustable).

At the end of the transaction, a blank card is dispensed and the DRC9 invites the user to insert the card in the magnetic card reader with the following screen:

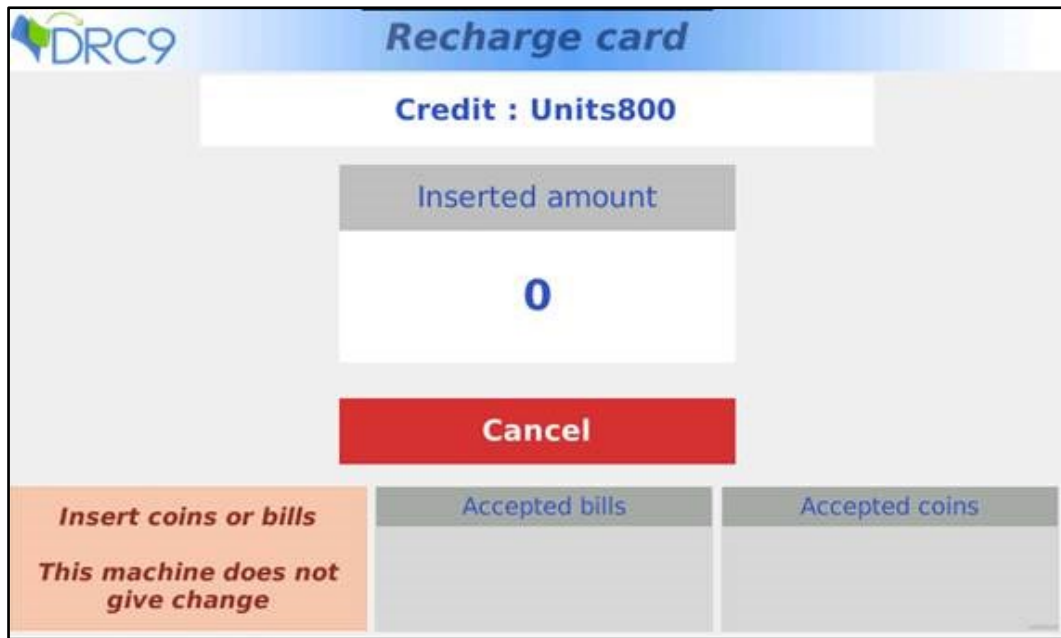


**WARNING:**

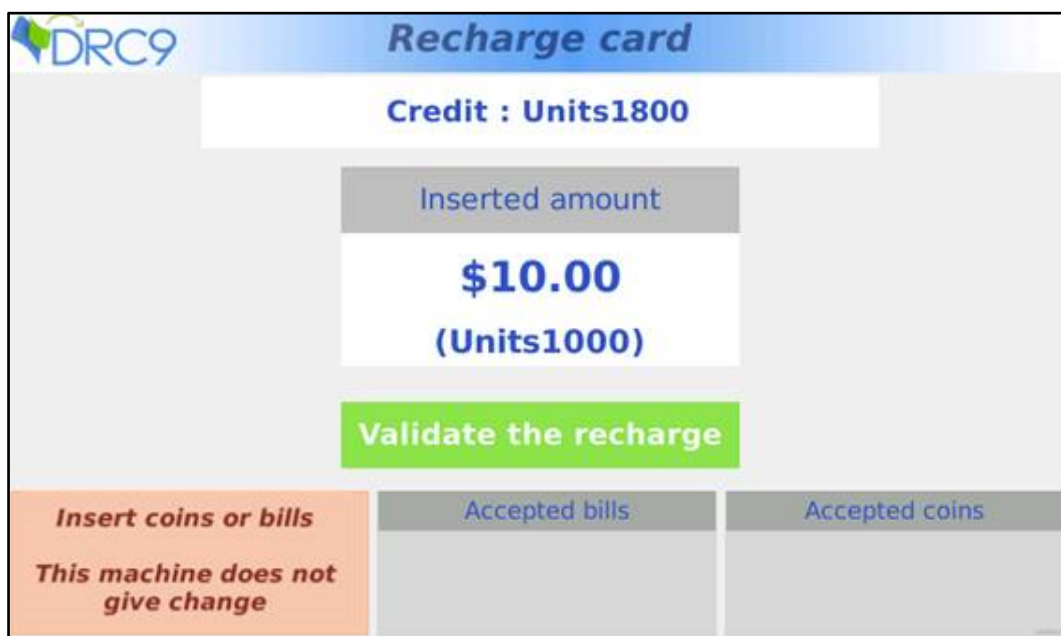
It is very important to insert the just delivered card in the DRC9 else the card will not be properly encoded with the requested value.

## 3.2 Card recharging

In order to recharge a card, the user has to press « Recharge card », then he must insert the card to recharge in the magnetic card reader. The following screen is displayed:



At this stage the user can insert money in coins and bills. The screen is updated in real time with the current amount of money:



The user will have to press key « Validate the recharge » for completing the recharging transaction. In case the user does not press this key, a transaction of end is launched automatically after 20 seconds of inactivity.

# 4. Management

---

## 4.1 Viewing of statistics

The DRC9 management mode is launched automatically when the door is open.

The DRC9 administrator can:

- View the turnover statistics.
- Collect money.
- Print a statement.
- Fill the dispensing card feeder.

The statistics can be viewed by selecting the « DRC9 Config. » menu and press the « Collect » button.

The following screen comes to display:

Statistics					
Reference	CASH			COINS BOX	
	Recharges	7	\$54.00	\$2.00	19
	Buys	24	\$96.00	\$1.00	0
Period	Total	31	\$150.00	\$0.50	0
	BANK CARD			\$0.20	0
Collect	Recharges	0	\$0.00	\$0.10	0
	Buys	0	\$0.00	\$0.05	0
Print Ticket	Total	0	\$0.00	\$0.02	0
	TOTAL TURNOVER			\$0.01	0
Accounting	Recharges	7	\$54.00	Total	\$38.00
	Buys	24	\$96.00	BILLS BOX	
	Total	31	\$150.00	\$5.00	0
				\$10.00	11
				\$20.00	0
				In Box   \$110.00	

« Reference » contains sales statistics from the start and cannot be reset.

« Period » contains sales statistics from the last collection of money.

Statistics consist of:

- Total number of cards dispensed and reloaded.
- Turnover of sales in Euros.
- Turnover performed with coins and the details of the coins inserted.
- Turnover performed with bills and the details of the bills inserted.

## 4.2 Procedure of cash collection

The person in charge of cash collection can view the periodic statistics for checking that the amount of money collected is equal to the amount generated by the DRC9/CR9.

Once the money collected, the person in charge must insert a USB memory key in the DRC9 controller and then press the « Collect » button for opening a new statistics period. This will also cause a report file created on the USB memory key.

If the « printer » option has been provided, a paper ticket can be printed by pressing the « print ticket » key.

At the end of printing, the periodic counters can be reset.

To activate the printer, check the box « Enable Printer » on page 2 of the « configuration » menu.



**Example of cash statement:**

```

*****
-----
      DRC9 (93871)
      V-3.3.1
      CPAD(12588623)
      Date : 9/17/19 7:58 AM
      ## 1 ##
-----
      STATISTICS #4
      From 2019-Sep-17 06:36
      To 2019-Sep-17 07:58
*****
      TURNOVER
-----
Total cash box (DC) = $0.00
Total Card (DB) = $0.00
-----
-----
Total turnover (DT + DC + DB) = $38.00
-----
      INDICATORS
-----
No. Cards buying = 0 cards
No. Cards reloading = 0 cards
Total over-payment = $0.00
*****
Total coins = $0.00
Total bills = $0.00
Total cash box = $0.00
-----
Total Card (DB) = $0.00
-----
Total turnover = $0.00
-----
No. Cards buying = 0 cards
No. Cards reloading = 0 cards
*****
      COINS BOX
-----
Total coins = $0.00
-----
      COIN CHANGER (TUBES)
-----
10 x $0.10 = $1.00
10 x $0.20 = $2.00
10 x $0.50 = $5.00
10 x $1.00 = $10.00
10 x $2.00 = $20.00
Total tubes = $38.00
Operator filling = $38.00
-----
Tube variation (DT) = $38.00
Operator filling = $38.00
-----

```

```

          BILLS BOX
-----
Total bills = $0.00
-----
          PRICES
-----
      Recharge card
$0.10 = $0.10
$1.00 = $1.20
$2.00 = $3.00

Card price = $2.00
-----
Group1 : 1
Group2 : 93871
      Max Value = 1000000
-----
```

## 4.3 Procedure of card feeder filling

The procedure for filling the card feeder is:

- Open the DRC9 door.
- Remove the detachable front panel from the feeder by dragging it upwards and then by tilting it outwards.
- Remove the card weight.
- Add your new cards by stacking them and putting them in contact with the sides of the feeder.
- **IMPORTANT:** replace the card weight.
- Replace the detachable front panel.
- Close the door.

# 5. Maintenance

---

## 5.1 Coin mechanism an banknote reader test

The coin mechanism can be tested without affecting the sales statistics. The procedure is as follows:

- Open the DRC9 door.
- Select the menu « DRC9 Config. ».
- Press key « Test ».

The DRC9/CR9 displays:

DRC9 - Test

Insert coins or bills...

Coins

Channel	Denom.	Nb	Total
1	€ 0.05	0	0.00
2	€ 0.10	0	0.00
3	€ 0.20	0	0.00
4	€ 0.50	0	0.00
5	€ 1.00	0	0.00
6	€ 2.00	0	0.00
Total		0	0.00

Bills

Channel	Denom.	Nb	Total
1	€ 5.00	0	0.00
2	€ 10.00	0	0.00
3	€ 20.00	0	0.00
4	€ 50.00	0	0.00
Total		0	0.00

From now on, coins and bills can be inserted. The screen is updated at each insertion. Coins or bills introduced are not counted in the sales statistics.

## 5.2 Card dispenser test (DRC9)

From the previous screen, press « Test card dispenser », the DRC9 displays:

DRC9 - Test

Card Distribution test

Nb. cards:

30

Card ID

**OK**

Pressing the key « Single Card » launches the dispensing mechanism, a card should be unstacked from the feeder and should drop in the dispensing basket.

Pressing the key « Test Optos » checks that the optical mechanism of detection works correctly. If there is no card, the message « Empty feeder » must be displayed.

## 5.3 Trouble-shooting

DRC9 display	When buying a card	When recharging
Unaccepted group	The card from the store is not a blank card.	The card inserted comes from another site.
No longer distributes new cards	Check that the cards are correctly positioned in the store. Clean the two reflective cells at the bottom of the feeder.	-
The Buy card key is greyed out	Check that a card is not jammed at the output of unstacker.	-
Please insert a blank card	The card inserted after the purchase, is not a blank card.	-
Illegal extract	-	The card inserted was badly written by the last device in which it was inserted. It can be re-written from the Recording menu of one of the TC4N of the site.
Card jam	-	Card jammed in the card reader. Check the motor belt or the mechanical cause of the card lock.
When a card is inserted, it appears after 10 read attempts	-	The read / write head must be cleaned. In the Test menu, make several successive Read and Write. If errors occur, If errors occur, the head will have to be changed.

