

Cartadis CM4000

Multi-Coin Operated
Copy Vending Unit

User's and technical
Manual V5.0

Cartadis CM4000

Multi-Coin Operated
Copy Vending Unit

User's and technical
Manual V5.0

≧ SAFETY ≦

This CMF 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 CMF 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.



➡ Intervention

Any installation, removing or intervention on the Cartadis unit require previously to unplug the copier or the multifunction. If not, damages may occur on the copier or on the multifunction.

➡ 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 CMF 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 CMF's 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 CMF 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.

TABLE OF CONTENTS

SECTION	PAGES
---------	-------

USER'S MANUAL

1.	INTRODUCTION	3
2.	CM4000 and THE END USERS	5
3.	CM4000 and THE OPERATOR	7
	3.1. Menu organization	7
	3.2. Statistics	11
	3.3. Price setup	12
	3.4. Discount price setup	13
	3.5. Stactistics printing	14
	3.6. Free copies	16

TECHNICAL MANUAL

4.	INSTALLATION	17
	4.1. Mechanical fastening	17
	4.2. Electrical connection	18
	4.2.1. Connection for only one paper format management	20
	4.2.2. Connection for several paper format management	21
	4.3. Configuration parameters	24
	Decimal point	24
	Copier pulse filter	24
	Relay 1 or 2 opening delay	25
	Copy credit reset	25
	Remaining credit reset	25
	Processing mode of "State B" and "State C" signals	25
	Accepted coins selection	26
	Serial number	26
	4.4. Installation validation procedure	27
5.	TROUBLE-SHOOTING	29
6.	TECHNICAL SPECIFICATIONS	31

INTRODUCTION

Thank you for your choosing a **Cartadis CM4000** to manage your copy vending.

This unit is dedicated to copy vending and thus shall be attached to a photocopier of any brand.

It vends photocopies in an unattended environment against coins, the main features are:

- depending on the country up to 8 different coins can be accepted (see the list displayed on the front face of the unit), no back change is given,
- the end user can buy one or more copies in a first time and make copies in a second time,
- the number of available copies is displayed,
- the operator can easily set the prices and also select a subset of accepted coins,
- discount prices can be defined when a user credit reaches a certain amount,
- statistics are available to help the operator to manage the cash,
- according to the technical feasibility of the copier different copy formats or types (black and white or colours) can be sold at different prices,
- a free key copy allows the operator to make copies without any coin.

Several optional items can complete the unit:

- **cash box cover** with lock (needed when the coins collection is done on a cash box exchange basis),
- a **pedestal** allows to mount the unit without mechanical connection to the photocopier,
- a portable **printer** allows the statistics to be printed out.

The Cartadis **CM4000** is available for almost all the countries, in case new coins are issued, the unit can be upgraded at the factory or at your local **Cartadis** distributor.

The first part is intended to the copier operator and describes how to setup :

- copy sales prices according to their size,
- discount prices.

It also explains how to display or to print statistics about the copy turnover.

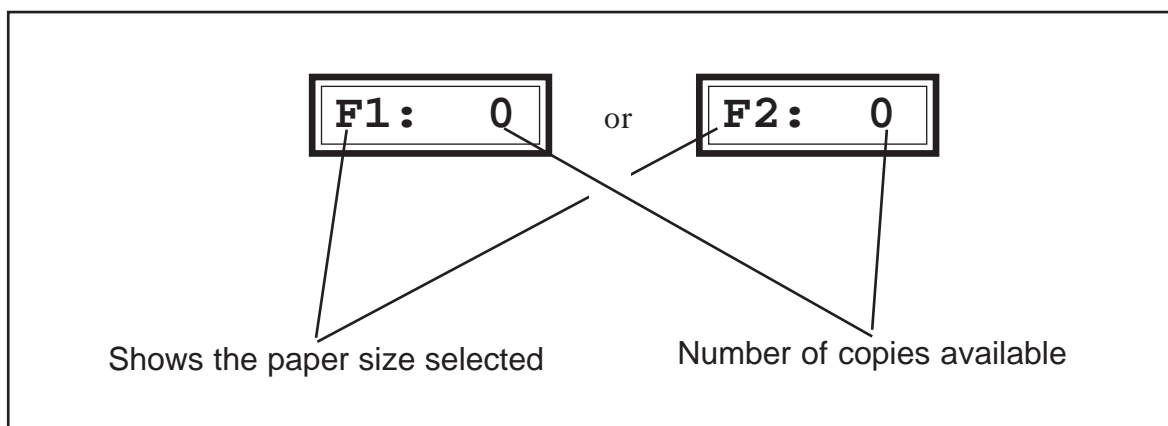
The second part of this manual is intended to the photocopier technician in charge of the Cartadis **CM4000** installation.

2

CM4000 and THE END USERS

Cartadis **CM4000** shows it is ready for work by displaying:

Picture 1



The left side of the display shows the type of the copy selected, 4 types are available: F1, F2, F3 and F4. Each one is related to a different format or type and thus a different price (see price setup in the next section).

According to the installation of your copier, it can mean:

F1	A4 size, B&W	or	F1	A4 size, colour	or	F1	A4 size, B&W
F2	A3 size, B&W		F2	A3 size, colour		F2	A4 size, colour
F3	A4 size, colour		F3	not used		F3	not used
F4	A3 size, colour		F4	not used		F4	not used

Important note:

The selected type of copy (size, black&white or colour) is managed by the Cartadis **CM4000** only if this feature is made available to the unit by the copier.

If the copier can print copies in different sizes or colours but doesn't supply status signals then it will not be possible to manage them differently at the **CM4000** level. To know your configuration ask the technician who made the installation on your copier.

The **CM4000** display can show two kinds of information:

- a) copy format selected with the number of available copies (copy credit),
- b) current money credit.

In standby state the Cartadis **CM4000** displays the number of copies available. The display switches automatically to "money credit" for 2 seconds each time a coin is inserted. This feature allows to give a feed back to the user about the coin recognition.

Regular price charging example:

Let a copy price of 0,15€ and A4 paper size selected.

<p>a</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"> F1: 0 </div> <p>CM4000 is ready</p>	<p>d</p> <p>After 2 seconds the display switches back to copy credit</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"> F1: 1 </div>
<p>b</p> <p>A coin of 0.10€ is first inserted</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"> € 0.10 </div> <p>Money credit is displayed for 2 seconds</p>	<p>e</p> <p>Then 3 coins of 0.10€ are inserted</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"> € 0.45 </div> <p>Updated money credit is displayed for 2 seconds</p>
<p>c</p> <p>A coin of 0,05€ is inserted</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"> € 0.15 </div> <p>The updated money credit is displayed for 2 seconds and the copier is enabled.</p>	<p>f</p> <p>After 2 seconds the display switches back to copy credit</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"> F1: 3 </div> <p>From this point 3 copies can be printed either one by one or in multi-copy mode.</p> <p>The copier will be automatically locked when the copy credit will be exhausted.</p>

CM4000 and THE OPERATOR

3.1 Menu organization

The operator is the person who owns the key of the door and the free key copy. He will be able to:

- set up selling prices of the copies,
- set up several discount price tables if wished,
- display or print statistics.




All these capabilities are available through the software menu. To enter the menu you have to turn the lockable free key copy. In the same way to leave the menu and switch back the **CM4000** to user mode you have to remove the lockable free key copy.

Within the software menu three keys allow the operator to move from one function to an other or to enter values.

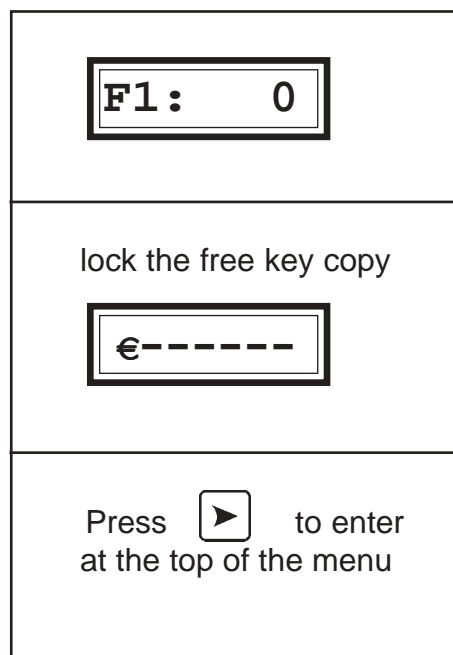
These three keys are located on the Cartadis **CM4000** panel, they are labelled by:



The meaning of keys within the menu is:

-  Enter in a submenu or move the cursor to the right.
-  Move to the next menu item or modify the blinking digit.
-  Leave the current menu or move the cursor to the left.

To enter in the programming menu you must get the free key copy and lock the key. The display shows:



The sequence of the menu is described at the next page. All the functions are divided in 5 submenus:

Stat:

Statistics submenu, manages the turnover and the number of copies done.

Print:

Issues a print out of the statistics.

Price:

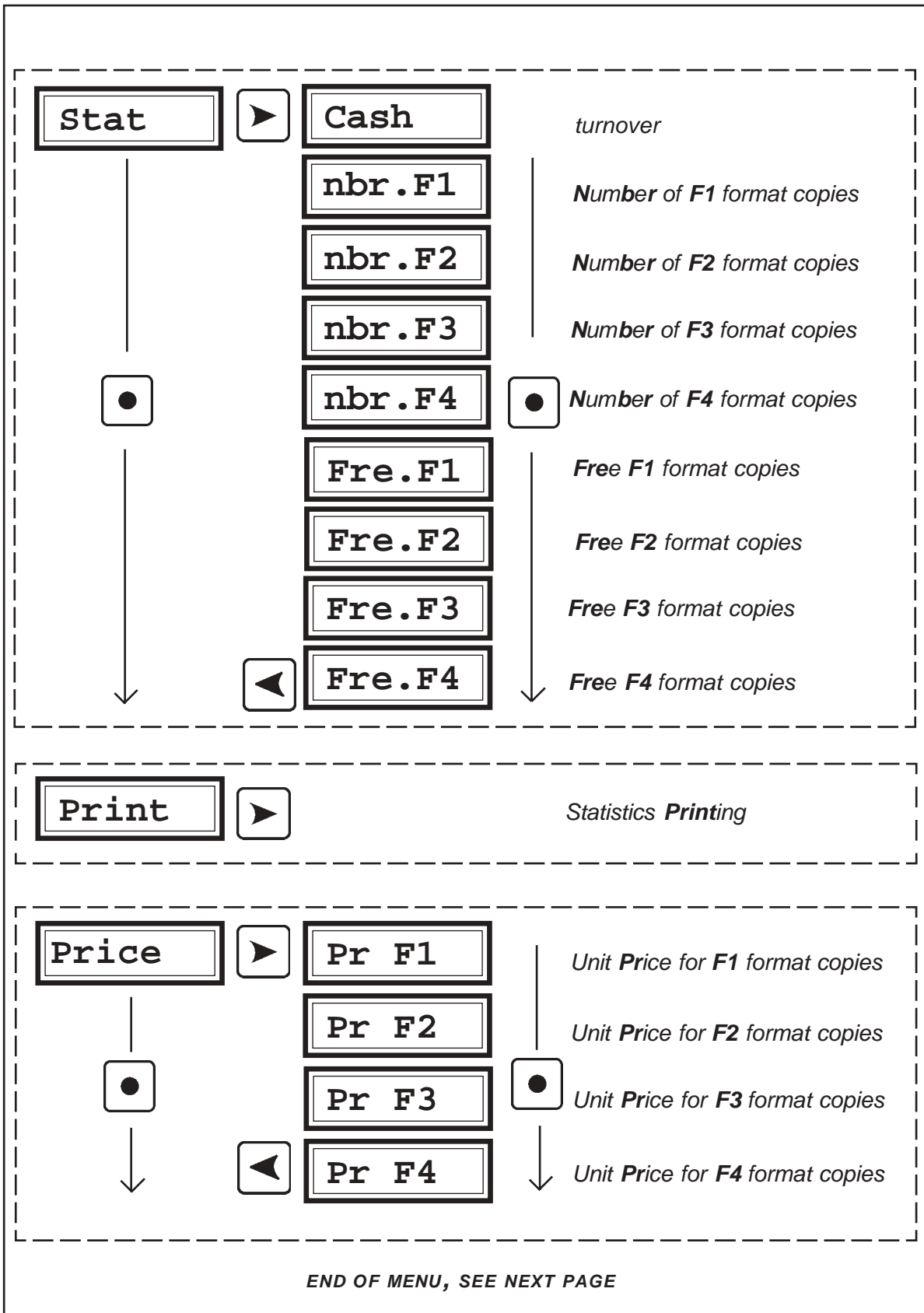
Price submenu, defines the unit price of a copy.

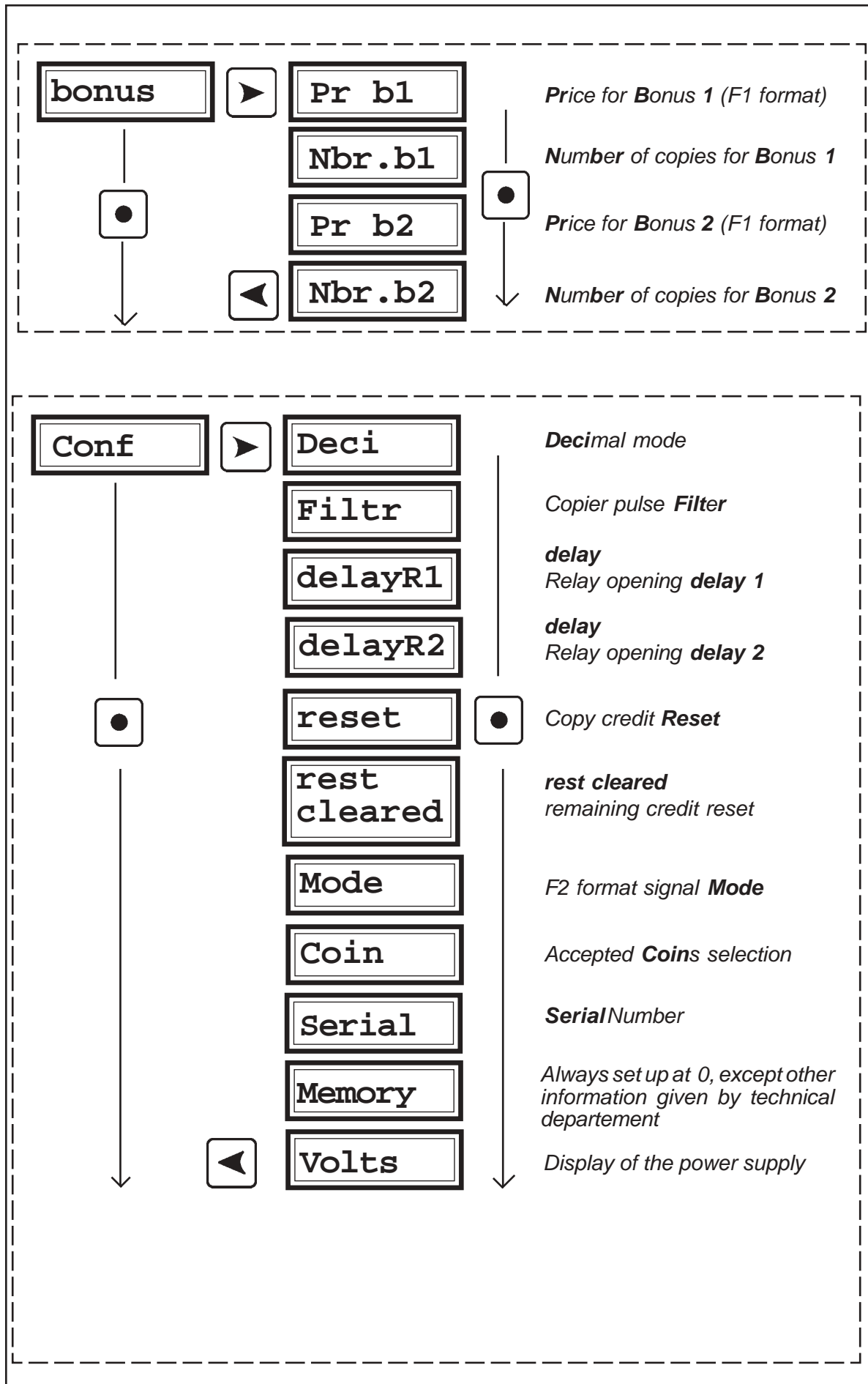
Bonus:

Discount submenu, deals with special discount prices.

Conf:

Configuration submenu, used only at installation time by the technician.



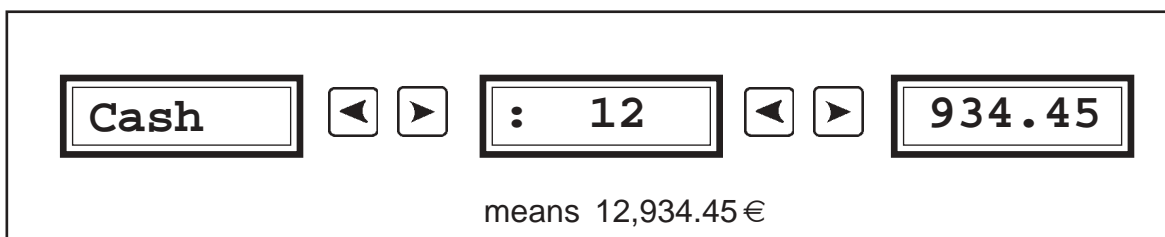


3.2 Statistics

The Cartadis **CM4000** keeps in its memory 9 counters related to the copies made. These counters are not resetable and so are always relative to the date of installation. Since only 5 digits can be displayed at the same time, some counters are displayed in two stages as shown in the following example.

Cash: *turnover*

This counter shows the turnover made with copies paid. The maximum value is 99,999.00. Over the maximum value the counter rolls up to 0.



Nbr.F1 to F4: *Number of F1 to F4 format copies*

These counters show the number of copies paid made with the F1 to F4 formats. Their respective maximum value is 9 999 999. Over this maximum value, these counters roll up to 0.

Fre.F1 to F4: *Free F1 to F4 format copies*

These counters show the number of copies (made with the free key copy) made with the F1 to F4 formats. Their maximum value is 9 999. Over this maximum value, these counters roll up to 0.

3.3. Price setup

The Cartadis **CM4000** can manage 4 formats (or types) of copies, each format being sold at a different price: **Pr.F1**, **Pr.F2**, **Pr.F3** and **Pr.F4**. In most of cases **Pr.F1** is the price of an A4 copy format.

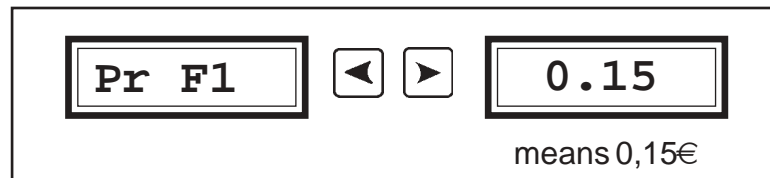
According to the copier hardware and how the connection to **CM4000** was made by the technician at installation time, it is not always possible to operate with formats F2, F3 and F4.

To know if Pr.F1 to Pr.F4 are handled or if only Pr.F1 is available, ask the technician who made the **CM4000** installation on your copier.

Pr F1: Unit Price for F1 format copies


This counter shows the current price of copy made with F1 format. The maximum value is 99.99.


Example of price displaying




Price modification

Once the price is displayed, it is possible to modify it.

Pressing first the key  allows a cursor to appear under the first digit.

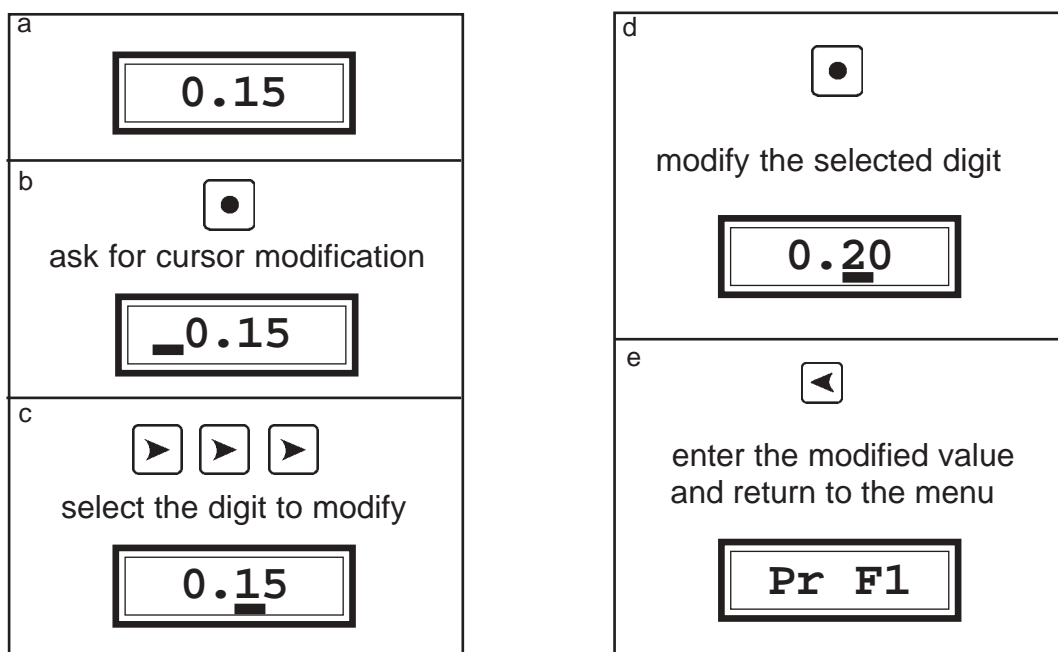
It is possible to modify the digit selected by the blinking cursor with the key .

The digit to modify scrolls from 0 to 9 at each key in.

The key  allows an other digit to be selected.

The key  enters the modified value and returns to the menu.

Example of price modification



Pr.F2 to F4: *Unit Price for F2 to F4 format copies*

Pr.F2 to Pr.F4 can be displayed or modified like Pr.F1. (*Unit Price for F1 format copies*). In most cases Pr.F2 corresponds to an A3 copy format.

3.4. Discount price setup

The Cartadis **CM4000** allows to set up 2 levels of discount prices for the format F1. These prices are entered in a price table:

Number of copies	Price
1 copy	Pr.F1
Nbr.b1 copies	Pr.b1
Nbr.b2 copies	Pr.b2

The value **Pr.F1** (*Unit Price for F1 format copies*) is the unitary price for a F1 copy format, this one being in the menu **price**.

The value **Nbr.b1** (*Number of copies for Bonus 1*) is the **number** of copies (**bonus1** level) got for the **price** of **bonus 1** (**Pr.b1** - *Price for Bonus 1 (F1 format)*).

The value **Nbr.b2** (*Number of copies for Bonus 2*) is the **number** of copies (**bonus2** level) got for the **price** of **bonus 2** (**Pr.b2** - *Price for Bonus 2 (F1 format)*).

The values **Nbr.b1** (*Number of copies for Bonus 1*), **Pr.b1** (*Price for Bonus 1 (F1 format)*), **Nbr.b2** (*Number of copies for Bonus 2*) and **Pr.b2** (*Price for Bonus 2 (F1 format)*) are located in the menu **bonus**.

To display or modify these values you must proceed like for Pr.F1 (*Unit Price for F1 format copies*- see page 11). As an example a discount table for F1 format copies could be:

Number of copies	Price (€)
1 copy	0.15
8 copies	1.00
20 copies	2.00

If no discount prices are requested the value 0 (default factory value) in **Pr.b1** (*Price for Bonus 1 (F1 format)*) disables the discount table.

Very important rules for the discount:

The discount price is given to the user only if copies are not made in between the coins insertion.

A discount price is computed by the CM4000 for the F2 to F4 format copies. This computation is based on the ratio F1 Price to the selected format price.

Knowing the discount table of the previous page and if Pr.F2 (*Unit Price for F2 format copies*) is set to 0.30€, then the Cartadis **CM4000** will compute automatically:






Computed discount table for F2 format

Number of copies	Price (€)
1 copy	0.30
4 copies	1.00
10 copies	2.00

The **CM4000** will apply the same way of computation for the F3 to F4 formats.

3.5. Statistics printing

In order to get a print out of all the statistics you have to follow the procedure:

<p>a</p> <p>Open the door and plug the printer cable in the DIN connector</p>	<p>e</p>  <p>To enter the menu</p>
<p>b</p> <p>Switch on the printer power</p>	<p>f</p>  <p>To select the print menu</p>
<p>c</p> <p>Lock the free key copy</p>	
<p>d</p> 	<p>g</p>  <p>To start printing</p>

Print out example:

```

CA400  V1.6  # 8740
-----
SERIAL  :   119  ← CM4000 serial number
EURO V1.2  ← coins recognition
              identification table

- Statistics -
CASH    :  2 561.55
NBR.F1  :    9 365
NBR.F2  :    1 756
NBR.F3  :     124
NBR.F4  :     253
FRE.F1  :     52
FRE.F2  :     12
FRE.F3  :      5
FRE.F4  :     10

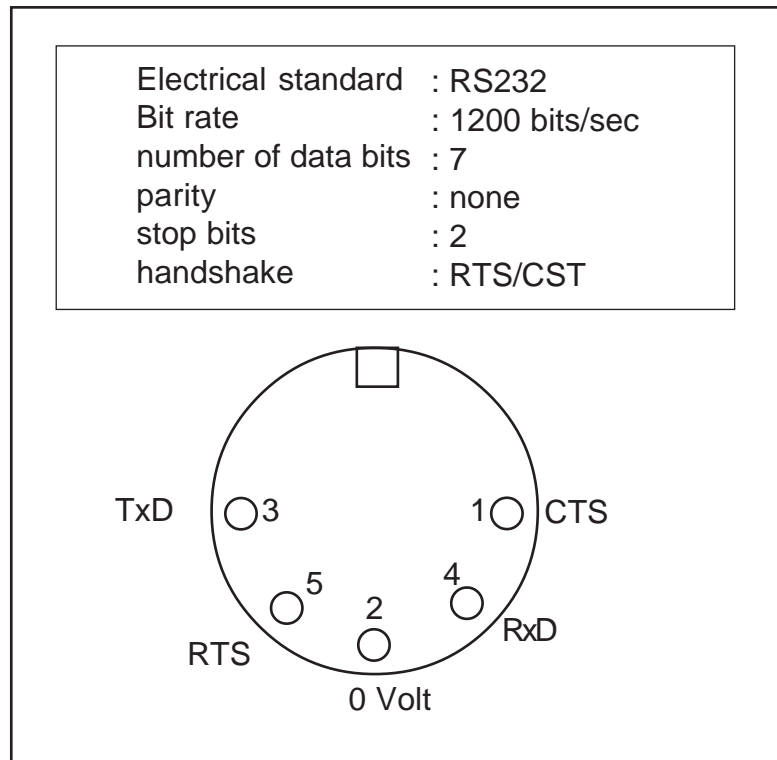
- Prices -
PR.F1   :    0.15
PR.F2   :    0.30
PR.F3   :    1.00
PR.F4   :    2.00

- Bonus -
PR.B1   :    1.00
NBR.B1  :      8 ← technical parameters
PR.B2   :    2.00
NBR.B2  :    20

- Coins -
COINS   :    192

- Configuration -
FILTER  :     10
DELAY1  :      1
DELAY2  :      1
RESET   :      0
RESET.CL :    OFF
MODE    :      0
-----
    
```

DIN Printer connector pinout

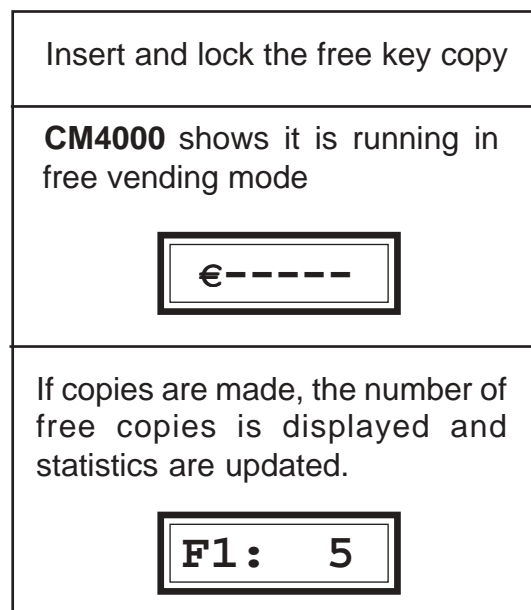


3.6. Free copies

The **CM4000** is fitted with a lock on the top panel, the two possible positions of the key are:

- unlocked position, the key can be removed and coins have to be inserted to make copies.
- locked position, the key stays in the lock and the unit is in free vending mode.

Example:

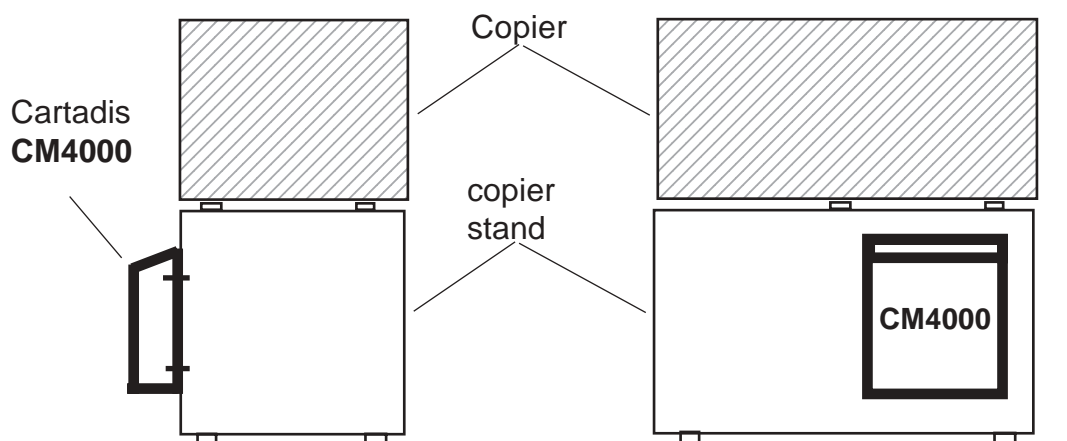


INSTALLATION

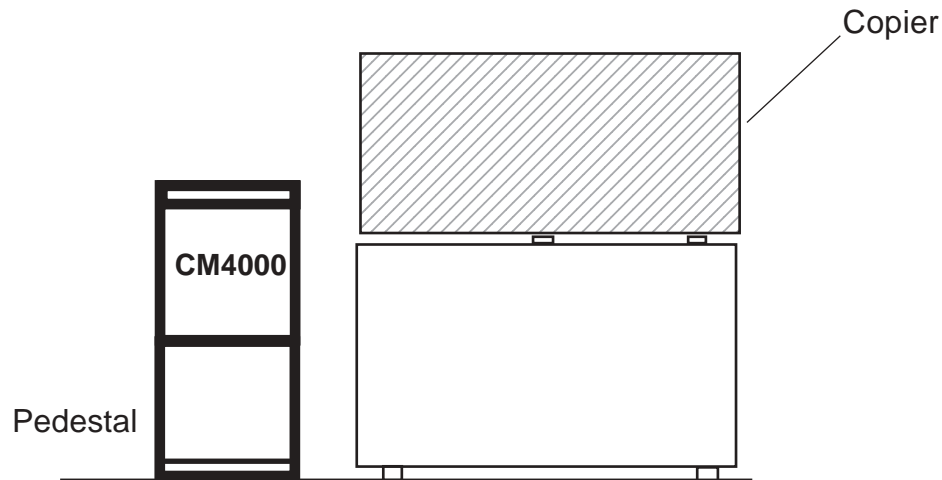
4.1 Mechanical fastening

The Cartadis **CM4000** can be mounted either directly on the copier or on its stand or mounted on the optional **CM4000** pedestal.

Four holes on the back side of the Cartadis **CM4000** allow to screw it on the copier.



The optional pedestal allows to mount the Cartadis **CM4000** close to the copier without mechanical action on the copier:



If requested an optional strong steel cable is available to secure the **CM4000** to the copier.

4.2 Electrical connection

The Cartadis **CM4000** must be connected by a photocopier specialist. The **CM4000** is "seen" by the photocopier as a key counter and has therefore to be connected like a key counter. The **CM4000** has no power pack of its own, it is usually supplied from the +24V power supply of the photocopier. The photocopier can supply the +24V to the **CM4000** from two possible locations:

- easiest way: the +24V is available from one pin out of the key counter connector,
- else: the +24V has to be supplied directly from the copier power supply.

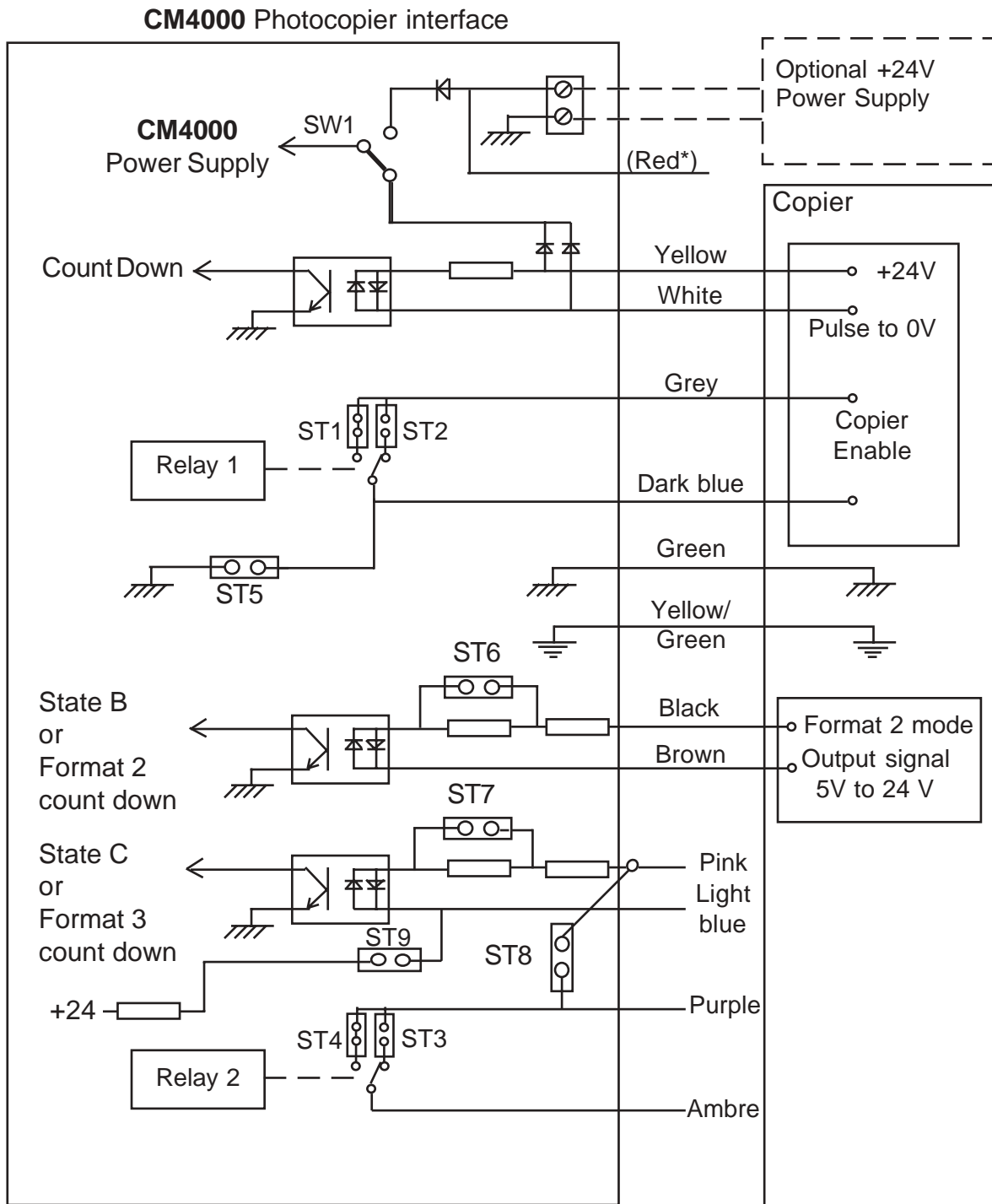
The **CM4000** electronic board is fitted with 3 jumpers, their meaning is:

SW1	Cartadis CM4000 power comes from:	
Downward	(default configuration) the Yellow or White wire	
Upward	the red wire or from an external power supply	

ST2	ST1	Relay 1
off	on	(default configuration) normally opened contact connected to the Grey wire
on	off	normally closed contact connected to the Grey wire

ST3	ST4	Relay 2
off	on	(default configuration) normally opened contact connected to the Purple wire
on	off	normally closed contact connected to the Purple wire

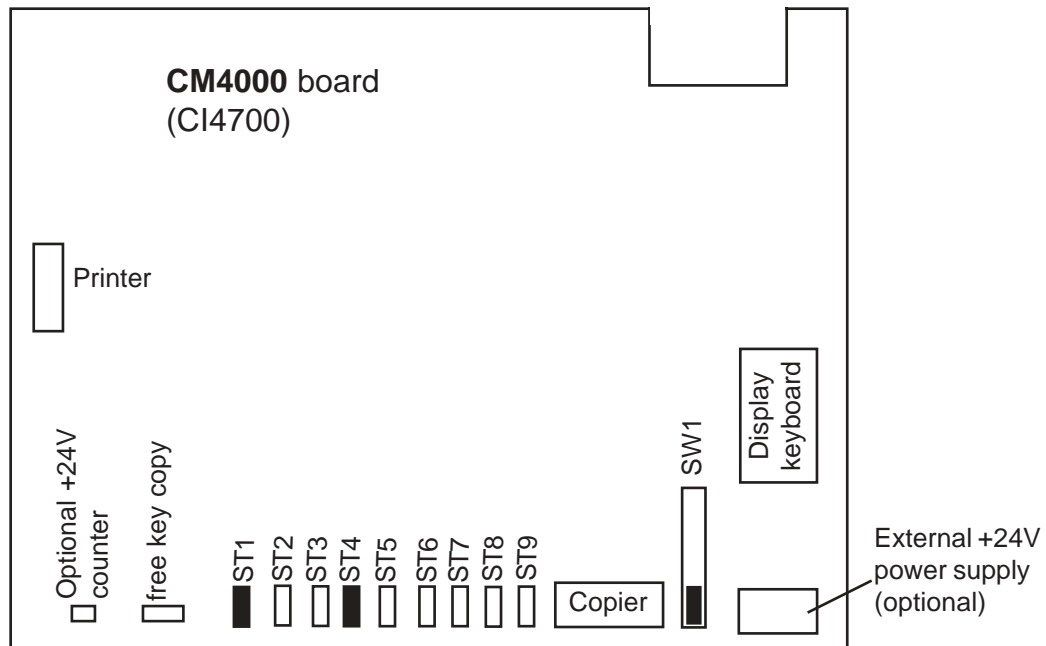
Typical CM4000 connection to photocopier



To modify the default position of the jumpers you must remove the black plastic coin selector from inside the **CM4000** housing. The electronic board is on the back side of the coin selector.

To locate the jumpers on the **CM4000** electronic board see next page.

CM4000 jumpers and connectors location



If a full galvanic insulation between the Cartadis **CM4000** and the photocopier is requested either by the end user or by the copier manufacturer, an optional power supply pack is available. Then this power supply has to be connected to the **CM4000** internal screw connector (old model) or to the JACK connector and the switch SW1 has to be moved upward.

Jumper meaning		
ST1 : Relay R1 : Contact NO	ST4 : Relay R2 : Contact NO	ST7 : Opto 3 low current
ST2 : Relay R1 : Contact NC	ST5 : Reserved	ST8 : Reserved
ST3 : Relay R2 : Contact NC	ST6 : Opto 2 low current	ST9 : Reserved

4.2.1 Connection for only one paper format management

In the "One paper format" connection, format is always supposed to be "F1" and the copy price will always be "**Pr.F1** (*Unit Price for F1 format copies*)". Only 6 wires need to be connected out of the 12 wires of the cable:

- | | |
|---------------------|-----------------------------------|
| - Yellow wire | = terminal 1 of the counter pulse |
| - White wire | = terminal 2 of the counter pulse |
| - Grey wire | = terminal 1 of copier enable |
| - Dark blue wire | = terminal 2 of copier enable |
| - Green wire | = 0 volt |
| - Yellow/Green wire | = protective earth (PE) |

Once the copier has been turned off, connect the four wires: YELLOW, WHITE, DARK BLUE, GREY to the "key counter" connector (see diagram page 19).

0Volt Green wire connection:

- If the 0Volt of your copier is linked to the mechanical frame, then you can connect the **CM4000** Green wire to this frame for simplicity.
- If the 0 Volt of your copier is not linked to the mechanical frame, which is the case for RICOH's original copiers, then you must connect the **CM4000** Green wire to the 0Volt of your copier +24V supply (0Volt is generally available from one of the key counter terminals).

Yellow/Green wire connection:

- This wire must be connected to the copier frame.

Once all the 6 wires are connected switching the copier on involves **CM4000** to also switch on.

Particular case of CANON copiers:

These copiers do not supply +24V to the CCC connector (Card Counter Connector). Connections have to be achieved as follows:

- White wire	= +24V, copier power supply							
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px 5px;">- Yellow wire</td> <td style="padding: 2px 5px;">= pin 4 (0V pulse)</td> </tr> <tr> <td style="padding: 2px 5px;">- Grey wire</td> <td style="padding: 2px 5px;">= pin 3</td> </tr> <tr> <td style="padding: 2px 5px;">- Dark blue wire</td> <td style="padding: 2px 5px;">= pin 1</td> </tr> </table>		- Yellow wire	= pin 4 (0V pulse)	- Grey wire	= pin 3	- Dark blue wire	= pin 1	Card Counter Connector
- Yellow wire	= pin 4 (0V pulse)							
- Grey wire	= pin 3							
- Dark blue wire	= pin 1							
- Green wire	= copier frame							
- Yellow/Green wire	= copier frame							

4.2.2 Connection for several paper format management

The **CM4000** can manage up to 4 formats called "F1", "F2", "F3" and "F4"; each one having its own copy price. F1 to F4 are usually dealing with paper formats or Black and White or colour copies. They can mean for example:

F1	A4 size, W&B
F2	A3 size, W&B
F3	A4 size, colour
F4	A3 size, colour

In order for the **CM4000** to sense the status of the copier, 2 opto-couplers called "**StateB**" and "**StateC**" will have to be connected.

The **CM4000** "mode" parameter (accessible from menu described on page 10) defines the 2 inputs "**StateB**" and "**StateC**" and their role in the format management:

This parameter may be initialized with the following values:

- **0** : both "**StateB**" and "**StateC**" inputs define the format chosen on the copier.
- **1** : both "**StateB**" and "**StateC**" inputs cause the user's credit to be deducted with respectively P2 and P3 prices.

The 2 following tables describe in details the **CM4000** behaviour for each of the 2 possible values of the "mode" parameter.

"mode = 0" parameter (default factory setting)

The "**StateB**" and "**StateC**" inputs define 4 possible copy formats:

StateB voltage between the Black and Brown wires	EtatC voltage between the Pink and Light blue wires	Format
0V	0V	F1
5V to 24V	0V	F2
0V	5V to 24V	F3
5V to 24V	5V to 24V	F4

The price of the chosen copy format is deducted from user's credit as soon as a pulse is received between the yellow and white wires.

The relay 1 goes to the state "ON" if the copy credit, in the chosen format copy, is different from **0**.

The relay 2 goes to the state "ON" if the copy credit, in the format 2, is different from **0**.

To be able to use the "mode = 0" of the **CM4000**, your copier must feature:

- only one pulse is sent whatever the format,
- there is a place where you can connect the state wires to sense the copier status (the polarity of these wires is of no consequence).

On most copiers, it is quite difficult to find a steady signal delivering the A3 mode. In this case, the Black wire and the Brown wire can be connected to an A3 LED terminals (even if it's a multiplexed signal) of the copier panel (if available).

"mode = 1" parameter

In this mode, the user credit goes down of:

- one F1 copy, on receipt of a pulse between the Yellow wire and the White wire.
- one F2 copy, on receipt of a pulse between the Black wire and the Brown wire.
- one F3 copy, on receipt of a pulse between the Pink wire and the Light blue wire.

The White wire and the Yellow wire are usually connected in parallel to the start clutch for A4 format paper.

As the Black wire and the Brown wire are usually connected in parallel to the start clutch for A3 format paper.

In this mode, the **CM4000** is not able to know, before the copy is made, which copy format is selected on the copier. So the **CM4000** "relay 1" will be ON as soon as the F1 copy credit is different from 0 and will stay ON whatever the selected format on the copier.

To prevent a F2 format copy from being made if credit is insufficient, the second **CM4000** relay called "relay 2" has to be connected. This relay switches ON when the F2 copy credit is different from 0.

The usual way to connect this relay is in serial with the A3 cassette sensor, so when the relay is OFF, the copier senses no A3 paper and so this copy format becomes disabled.

Depending on the technology of the cassette or paper sensor, the normally closed or normally opened contact of the "relay 2" can be used (see diagram page 19).

Relay 1 switches ON if the F1 copy credit is different from 0.

Relay 2 switches ON if the F2 copy credit is different from 0.

Important note:

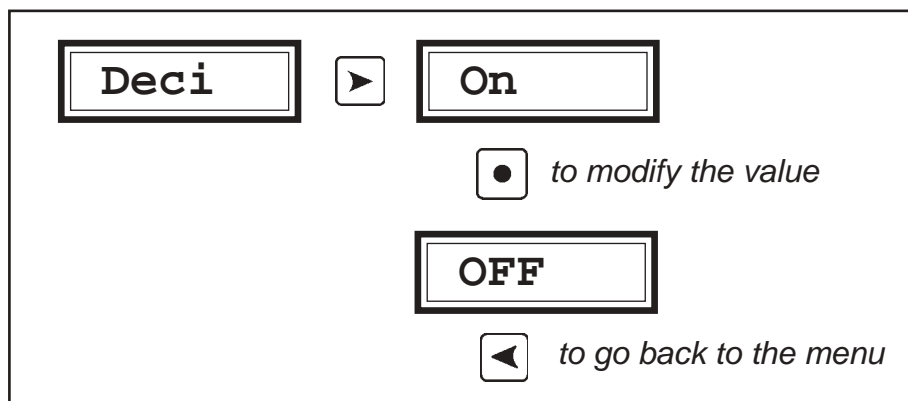
Do not connect the Yellow wire and the White wire to the key counter plug.

4.3. Configuration parameters

In the submenu "conf" several parameters enable to adapt the **CM4000** to the specific model of copier you have and to your country. To reach the wished parameter, locate it from the map of page 9.

Deci: *Decimal mode*

When its value is ON, money credit is displayed with a decimal point. When its value is OFF, money credit is displayed without a decimal point. The default factory setting is ON.

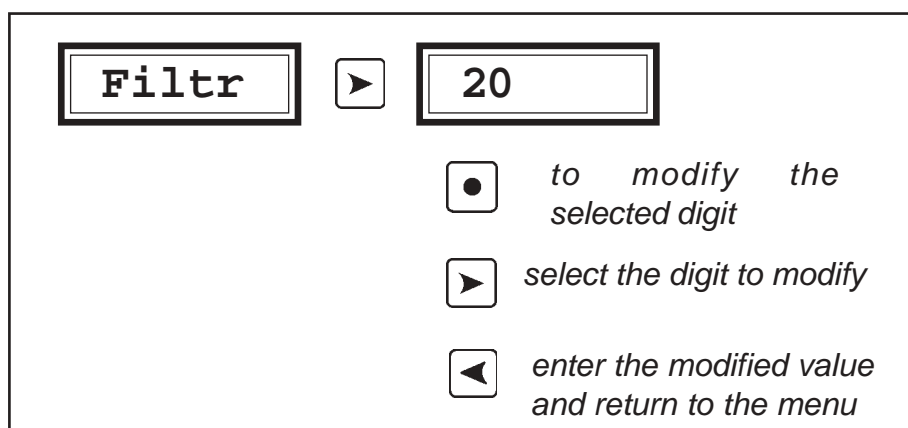


Filtr: *Copier pulse Filter*

This parameter represents the minimum duration in milliseconds for the copier count down pulse. This parameter is adjustable between 1 and 99. It is intended to protection against pulses with bouncing at rising and falling edges. For optimal setting of this parameter, you must proceed by trial and error:

- if this parameter is set too high, **CM4000** may disregard count down pulses.
- if this parameter is set too low, **CM4000** will count more copies than were made.

Adjusting it to 20 milliseconds gives generally good results (default setting).



Delay 1, Delay 2: *Relay 1 or 2 opening delay*

This parameter enables relays 1 or 2 opening to be delayed once copy credit reaches 0. This is adjustable between 0 and 99 seconds and is useful on some copiers which do not accept relay opening upon countdown pulse, and therefore often causes paper to jam or copies not to be fully printed. The default factory setting is 1.

Reset: *Copy credit Reset*

This parameter enables the user copy credit to be cleared after a time has elapsed without copies having been made. The value 0 means no reset. It's adjustable from 1 minute to 99 minutes.

The default factory for this parameter is 0, so no reset is done.

Rest cleared : *remaining credit reset*

Once a copy has been made, in case remaining credit is lower than the smallest price (P1 to P4), the **CM4000** may cancel this remaining credit.

- If "rest cleared" parameter = OFF,
the **CM4000** will never cancel the remaining credit.
- If "rest cleared" parameter = ON,
the **CM4000** will clear the remaining credit in case it is lower than the smallest price.

Example: if "rest cleared" parameter = ON and copy price is 0.15€

- a user inserts a coin of 0,20€,
- The copy credit is 1 and money credit is 0.20€ (displayed for few seconds),
- one copy is done, so copy credit is 0 and money credit is cleared to 0.

Mode : *processing mode of "State B" and "State C" signals*

This parameter deals with copy formats. It can be set up to "0" or "1":

- **0** : means **CM4000** runs in **detection mode of copier status** (default factory setting),
- **1** : means **CM4000** runs in **pulse mode**.

See page 22 and 23 to choose the right value.

Coin: *Accepted Coins selection* (maximum 8 different coins)

This parameter deals with accepted coins, with it you can select a subset of the recognized coins to be accepted. The value 0 means all the coins are accepted, the value 255 means no coin is accepted. Each coin has a, so called, binary weight of : 1, 2, 4, 8, 16, 32, 64 and 128.

For your country see the joined list of recognized coins and their affected binary weight.

To disable a subset of accepted coins, you have to enter a new coin value, this coin value being the sum of the binary weight of the coins to reject.

Example for France

binary weight	Coin
1	2,00
2	1,00
4	0,50
8	0,20
16	0,10
32	0,05
64	0,02
128	0,01

To disable the 0,01 and 0,02 € coins, enter the value 192 (weight 128 +64).

S.Nbr: *Serial Number*

This value is printed on the statistics print out and so, allows to identify the origin of the copier when several print out are coming from several **CM4000**.

You can enter the value you want for the Serial number. The default factory setting is 192 (coins accepted : 0,05€, 0,10€, 0,20€, 0,50€, 1€, 2€).

4.4 Installation validation procedure

To check the **CM4000** for correct operation, follow the procedure:

- insert at least one coin of each type to check for acceptance and rejection according to the parameter "**coin**" (see page 26). Check the money credit after each coin insertion,
- check the copy credit with each allowed copy format,
- make a copy of each allowed copy format and check the copy credit after count down,
- check the "Delay" parameter for correct adjustment doing as follows:
 - 1 - insert enough money to get at least 3 copies,
 - 2 - set the copier for multi copies with 10 copies, strike the key COPY on the copier,
 - 3 - check the number of copies you got is in accordance with the initial credit.

To check for coin acceptance without affecting the statistics you have to press the key of the panel, then keeping this key pressed insert a coin. The coin value is displayed, the coin is not stored in the cash box but rejected

Besides, if you wish to quickly clear the copy credit without making any copy, you must press the Reject coin button. Then keeping it pressed, unlock the free key copy. In this case the "Cash" counter is nevertheless affected by the coins inserted.

TROUBLE SHOOTING

The user got more copies than he paid in multi copies

Try to reduce the value of the "**Delay**" parameter. If the problem is still there that means the copier sends the copy pulse at the end of the copier copy cycle. The only solution is to get a pulse earlier in the copy cycle, for example by connecting the yellow and white wires in parallel with the start paper clutch, or the synchronization clutch in case there are several cassettes.

Err 1 or Err 4

The **CM4000** is out of order and the coin mechanism has to be replaced.

Err 2

The statistics memory is corrupted, ask to your local dealer, he will give you the procedure to clear this error.

Err 3

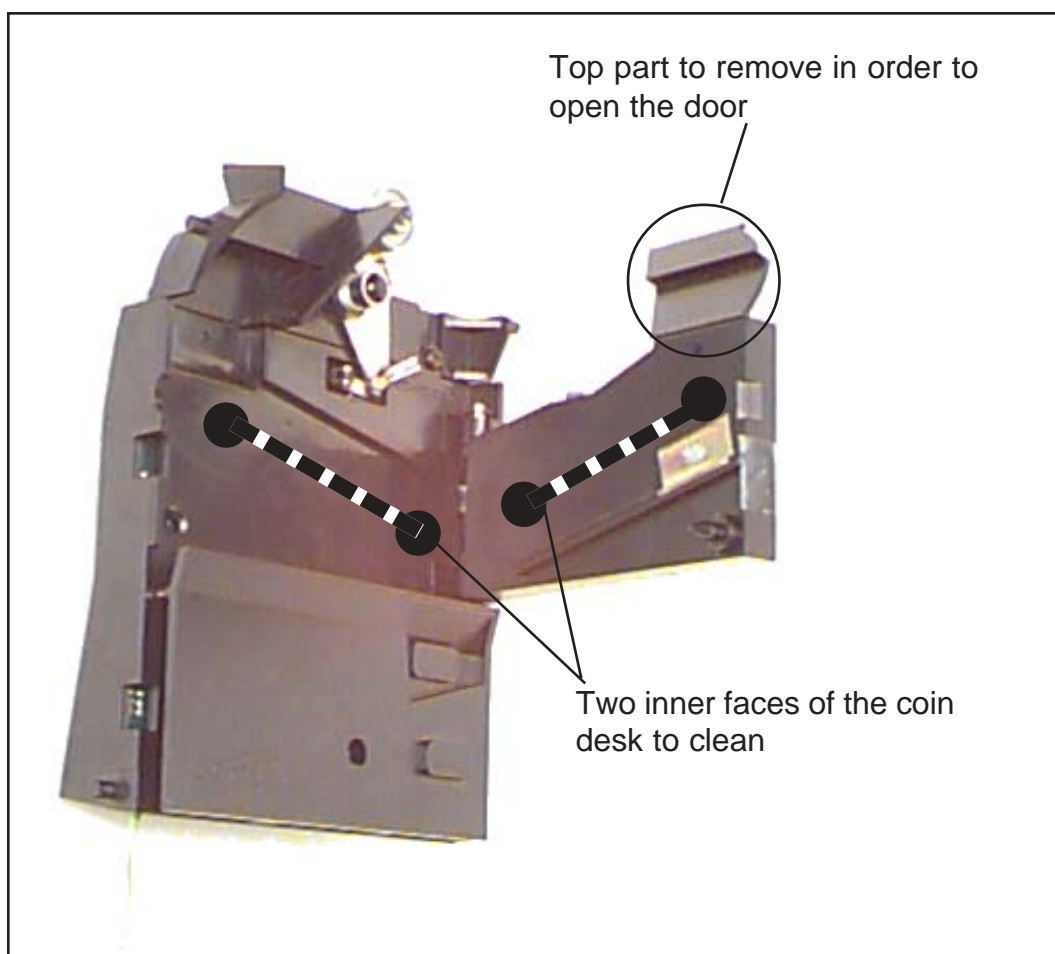
This error code is displayed for 10 seconds if the accepted coin doesn't reach the cash box within a certain elapse time. That could mean the coin desk is dirty and need to be cleaned or the cash box is full.

Coins are often rejected

Clean the coin desk:

- open the **CM4000** door,
- open the selector door, you have to remove the top plastic part by unscrewing the black screw,
- clean the inner parts corresponding to the coin desk,
- rescrew the top plastic part.

If the coins acceptance has not been improved, contact your local distributor.



CM4000 coin selector

TECHNICAL SPECIFICATIONS

TYPE	CM4000
FUNCTION	Multi-coin operated copy vending unit
ELECTRONICS	Very large scale integrated 32 bits microcontroller
MEMORY	EEPROM for parameters and statistics backup
OPERATING CONDITIONS	
Moisture	20% - 90% RH
Temperature	10 - 40°C
USE	Indoors only
DIMENSIONS	280mm (W) x 380mm (H) x 100mm (D)
WEIGHT	7.5 kg (empty)
POWER SUPPLY	24V DC
POWER CONSUMPTION	100 mA idle state 500mA for 0.5 sec. at coin insertion

COUNTER CAPACITIES

User copy credit not limited
User money credit max 1 000.00

Statistics:

Turnover	Max 99 999,00	(overflow round up to 0)
Format 1	Max 9 999 999	(overflow round up to 0)
Format 2	Max 9 999 999	(overflow round up to 0)
Free Format 1	Max 9 999	(overflow round up to 0)
Free Format 2	Max 9 999	(overflow round up to 0)

MANUFACTURER

C.M.F. Fontenay-sous-Bois FRANCE
phone: (33) 1 48 77 40 60