



**SuperVision mc<sup>2</sup>**

**WE PROVIDE GENUINE SECURITY**

**USER'S MANUAL**

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## 1 Introduction

### 1.1 Abbreviations and acronyms used

AC	Alternating Current
DC	Direct Current
LCD	Liquid Crystal Display
LED	Light Emitting Diode
PIN	Personal Identification Number

### 1.2 Contact information

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E-mail: [bellcon@bellcon.dk](mailto:bellcon@bellcon.dk)

Home page: [www.bellcon.com](http://www.bellcon.com) and [www.bellconasia.com](http://www.bellconasia.com)

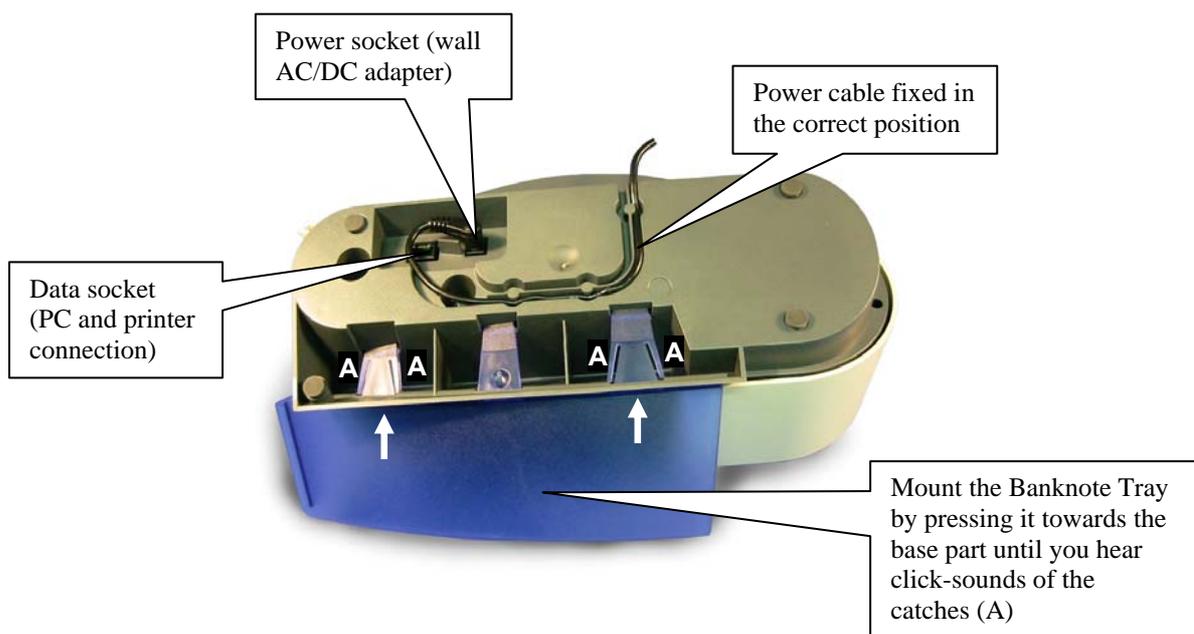
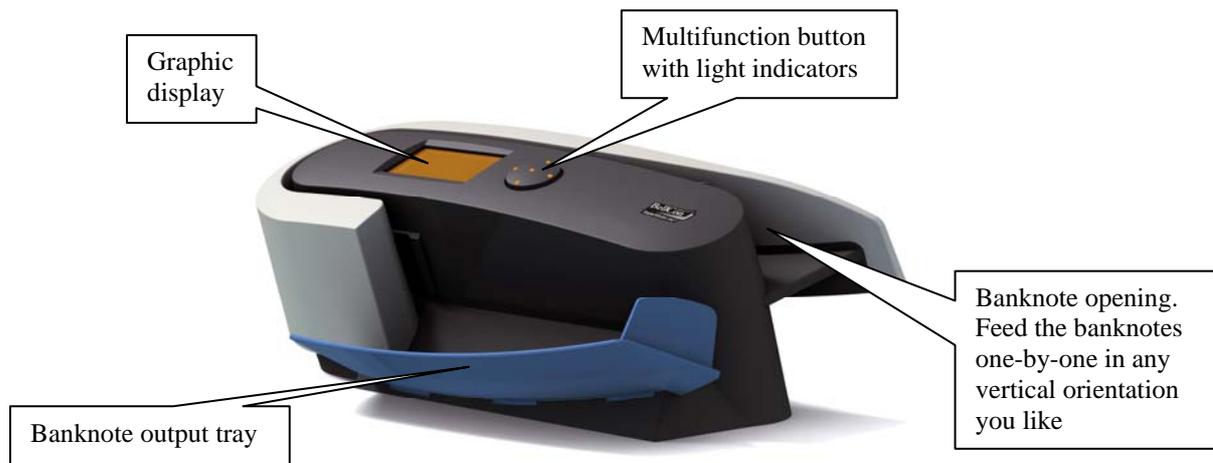
## 2 SuperVision mc<sup>2</sup> operating instructions

The following sections will describe in detail how to use SuperVision mc<sup>2</sup>.

### 2.1 Important information

- Do not operate SuperVision mc2 in environments with strong magnetic and/or electromagnetic fields.
- Do not operate SuperVision mc2 outside the specified temperature range (below 5°C or above 40°C).
- In case of SuperVision mc2 malfunction, disconnect power and contact your dealer. Do not try to solve the problem yourself.
- Use only the enclosed SuperVision mc2 power adapter supplied by BellCon for this product.

### 2.2 SuperVision mc<sup>2</sup> at a glance



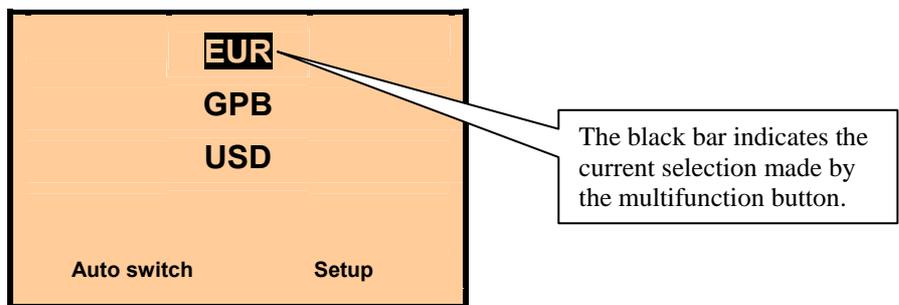
### 2.3 User interface

SuperVision mc<sup>2</sup> is operated by a multifunction button with five light indicators and a graphic display.

Multifunction button:



The graphic transfective LCD display is backlit by LEDs. As an example, the display will look like this:



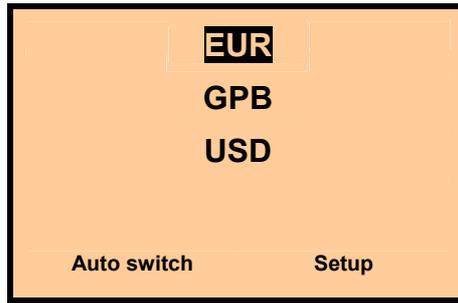
### 2.4 Power on/off

There is no on/off switch on SuperVision mc<sup>2</sup>.

When the power supply is connected and the mains is switched on; the five light indicators on the multifunction button and the display will light up in amber colour. For five seconds the display will show the following window:



After the five seconds, the display will switch to:



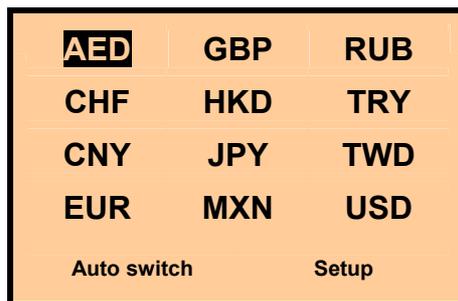
This display depends on the position before SuperVision mc<sup>2</sup> switched into sleep mode.

After 5 minutes of idle state, SuperVision mc<sup>2</sup> will automatically switch into sleep mode. The display goes off and light indicators change from amber to blue light.

SuperVision mc<sup>2</sup> is re-activated by touching anyone of the switches of the multifunction button.

## 2.5 Manual currency selection

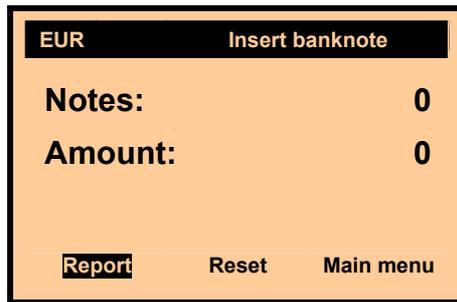
In the "Main menu" window, the different currencies can be selected by using the [Up], [Down], [Left] and [Right] switches.



Up to 12 different currencies can be installed in SuperVision mc<sup>2</sup> at the same time. In the standard version of SuperVision mc<sup>2</sup> EUR, GBP and USD are installed.



EUR (euro) is selected. When pressing [OK], the display will show:



At the top, the display shows the selected currency and informs the user to insert a banknote in the machine. The next lines indicate how many accepted notes have been processed by SuperVision mc<sup>2</sup> and the total amount of these banknotes.

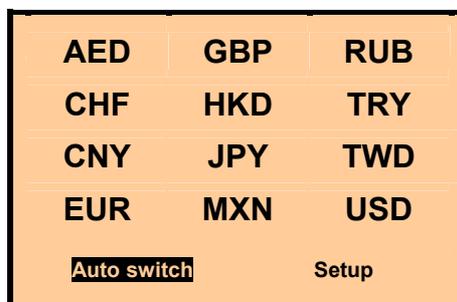
- Activating "Report" will switch to a new window presenting details of the processed banknotes.
- Activating "Reset" will reset the banknote and amount counter (including the Report).
- Activating "Main menu" will switch to the "Main menu" window.

The currency selection is permanent, meaning that SuperVision mc<sup>2</sup> will restart in the same position as before it switched into sleep mode.

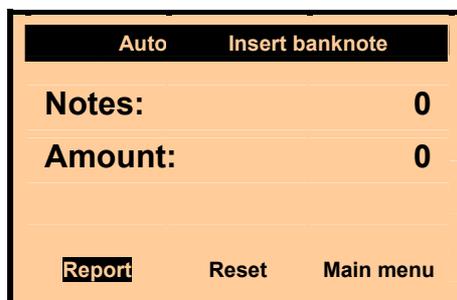
## 2.6 Automatic currency selection

SuperVision mc<sup>2</sup> can automatically switch between installed currencies by recognizing the banknotes, which are inserted. However, a few currencies cannot be recognized by SuperVision mc<sup>2</sup> making manual selection necessary.

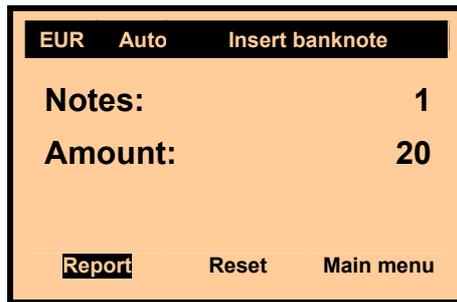
To select the auto switch mode, in the "Main menu" window navigate to "Auto switch" by using the [Up], [Down], [Left] and [Right] switches.



When pressing [OK], the display will show:



When inserting a euro banknote, SuperVision mc<sup>2</sup> will automatically switch to EUR mode:



Inserting a US dollar banknote will switch SuperVision mc<sup>2</sup> to USD mode:

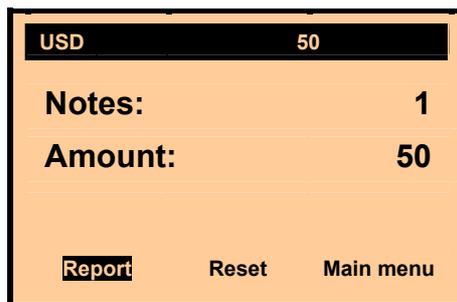


And so on.

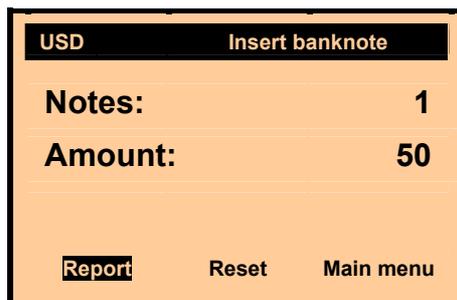
The auto currency selection is permanent, meaning that SuperVision mc<sup>2</sup> will restart in the Auto mode after sleep mode.

## 2.7 Verification of a genuine banknote

When a genuine banknote is inserted in SuperVision mc<sup>2</sup>, the window will shortly give the following information and a short beep sound will be heard. The banknote counter will increase by one, and the total amount counter will increase by the value of the banknote.



After this, the display will show:



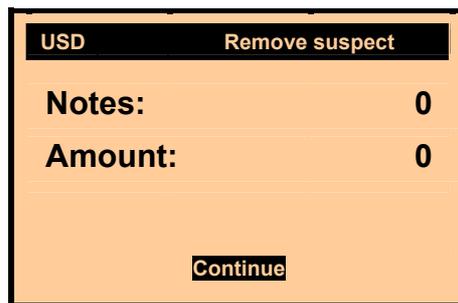
SuperVision mc<sup>2</sup> is now ready for a new banknote.

## 2.8 Verification of a suspect banknote

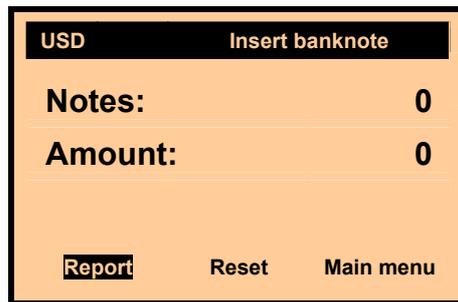
When a suspect banknote is inserted in SuperVision mc<sup>2</sup>, the window will give the following information and a two seconds beep sequence will be heard (even if the sound is muted). The banknote counter and the total amount counter will not increase. The conveying of the banknote will stop before the banknote is ejected to the output tray.

A suspect banknote is:

- a counterfeit banknote,
- a double fed banknote, or
- a non-recognized banknote



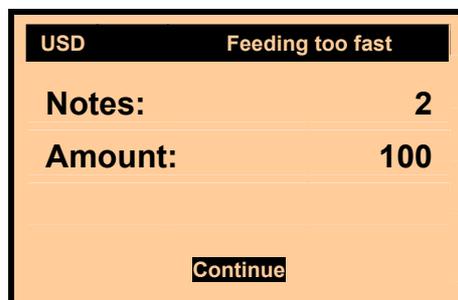
When the suspect banknote is removed and the user has activated "Continue" (by pressing any of the five switches), the display will show:



SuperVision mc<sup>2</sup> is now ready for a new banknote.

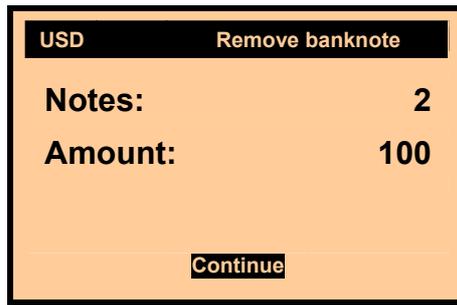
## 2.9 Error messages

If banknotes are fed too fast in SuperVision mc<sup>2</sup>, the display will show:



Three beeps will be heard, the conveying of the banknotes will stop before the banknotes are ejected to the output tray, and the counters' values will not increase. When all the stopped banknotes are removed and the user has activated "Continue" (by pressing any of the five switches), SuperVision mc<sup>2</sup> is ready for operation again.

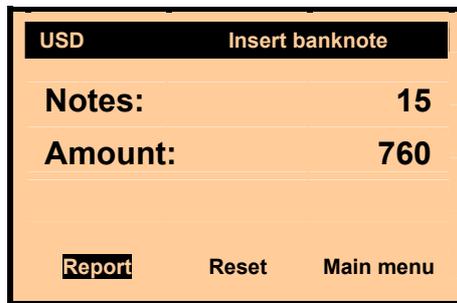
If banknotes are jammed in the transport system, the display will show:



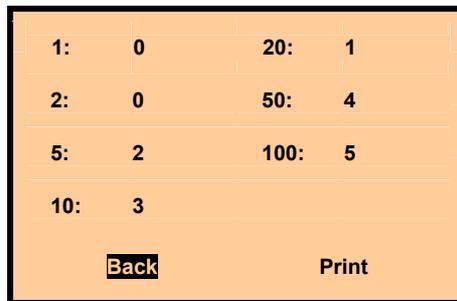
Three beeps will be heard, the conveying of the banknotes will stop, and the counters' values will not increase. When all the jammed banknotes are removed and the user has activated "Continue" (by pressing anyone of the five switches), SuperVision mc<sup>2</sup> is ready for operation again.

### 2.10 Display and print details of verified banknotes

When banknotes have been processed, the display will for example show:



Activating "Report" will display a new window:



The window shows that two USD 5 banknotes, three USD 10 banknotes etc. have been accepted. The information in this window will vary from currency to currency. Activating "Back" will bring the user back to the previous window.

If you have connected an external printer to SuperVision mc<sup>2</sup>, you can print the detailed counting result. Navigate to "Print" and press [OK]. The result on the printer will appear like this:

BellCon APS		
Currency: USD		
1X	3=	3
2X	3=	6
5X	3=	15
10X	5=	50
20X	5=	100
50X	3=	150
100X	2=	200
TOTAL	24=	524

Printing result

## 2.11 Reset counters

The banknote counter is increased by one every time a genuine banknote is processed. The maximum number is 100 as the output tray will be full at this point. When 100 banknotes are reached, the display text "Insert banknote" will change to "Remove notes" and three beeps will be heard. At this point it is not possible to insert further banknotes in SuperVision mc<sup>2</sup> until the counter is reset (and the banknotes are removed from the output tray).

After 100 genuine banknotes (value 10), the display will show:

USD		Remove notes
<b>Notes:</b>		<b>Full 100</b>
<b>Amount:</b>		<b>1.000</b>
<b>Report</b>	Reset	Main menu

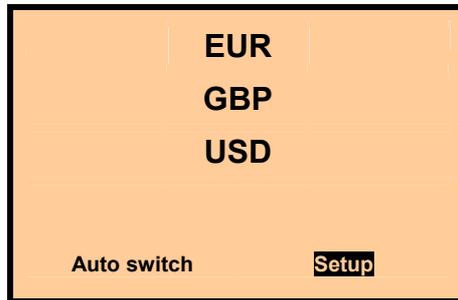
After activating "Reset", the display will show:

USD		Insert banknote
<b>Notes:</b>		<b>0</b>
<b>Amount:</b>		<b>0</b>
<b>Report</b>	Reset	Main menu

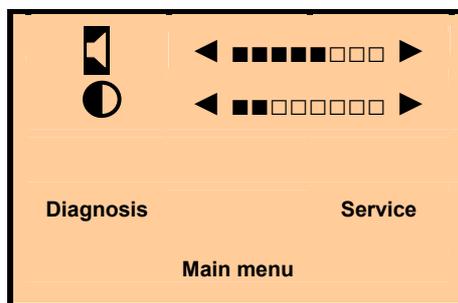
When no banknotes have been processed for a period of five minutes, the counters will automatically reset. When SuperVision mc<sup>2</sup> goes into sleep mode or when the power has been switched off, the counters will also reset.

## 2.12 Sound and contrast adjustment

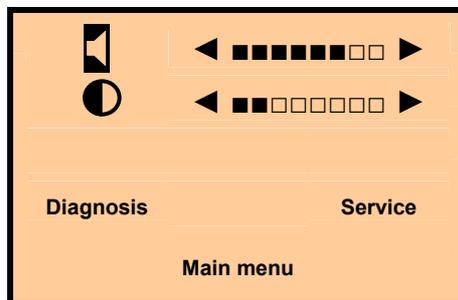
In the "Main menu" window choose and activate "Setup".



The display will show:



When the black bar is positioned on the loudspeaker symbol, the sound level can be adjusted by the [Left] and [Right] switches. Increasing the sound by one step will change the display:



The display contrast is adjusted similarly by positioning the black bar on the contrast symbol.

- Activating "Diagnosis" will switch to the Diagnosis window.
- Activating "Service" will switch to the Service window.
- Activating "Main menu" will switch to the Main menu window.
- Pressing [OK] when positioned on the loudspeaker or contrast symbol will switch to the Main menu window.

If no switches have been activated for a period of 30 seconds, SuperVision mc<sup>2</sup> will automatically switch to the Main menu window.

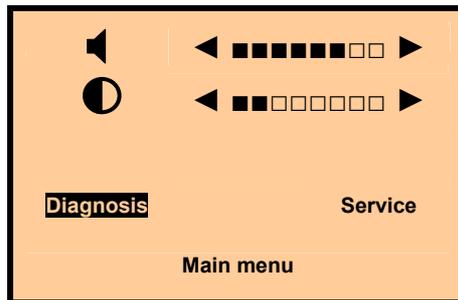
## 2.13 Banknote diagnosis

In the Diagnosis window it is possible to get an overview of the function of the internal sensors in SuperVision mc<sup>2</sup>.

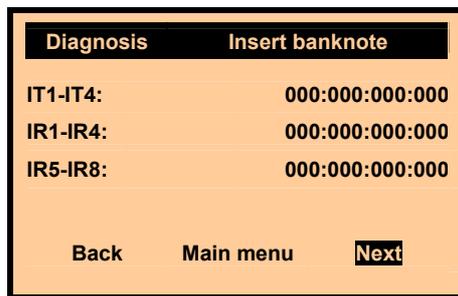
In the Main menu window navigate to "Setup":



Press [OK]:



Navigate to "Diagnosis" and press [OK], the following window will appear:

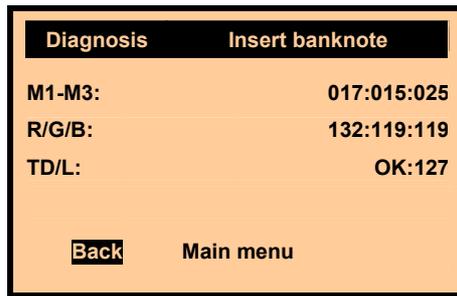


If a (bank-) note is inserted, the display will read out values of all the sensors in two windows. The values in the display are internal measurement values except (L) where the actual banknote length is presented in mm. The read-out for the security thread (TD) will be either "OK" or "NO" (no thread detected).

Just insert a banknote in the machine. The values will vary from note to note and from orientation to orientation. The display may look like this:



Activate "Next" to see the remaining diagnosis results:



It is possible to continue inserting more (bank-) notes. You can toggle between the two diagnosis result windows using "Back" and "Next".

- Activating "Back" will return to the previous window.
- Activating "Main menu" will switch to the Main menu window.

## 2.14 Service mode

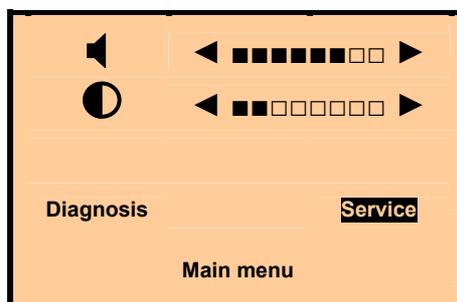
The Service mode PIN code is 2306.

**Please note:** When you enter the Service mode you must carefully follow the instructions below. Otherwise there is a risk you might damage the calibration of the machine.

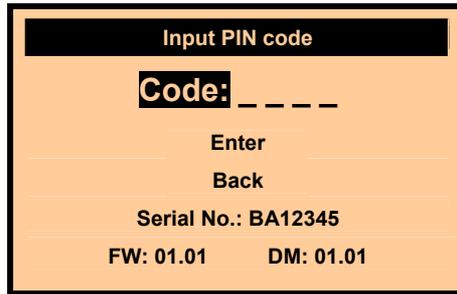
Navigate to "Setup" in the Main menu window:



Press [OK]:

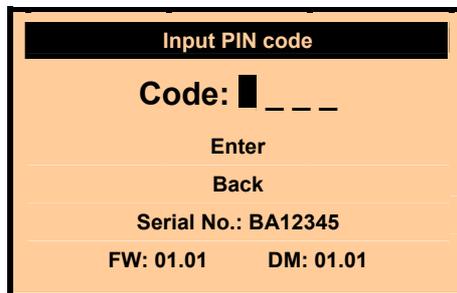


Navigate to "Service" and press [OK]:

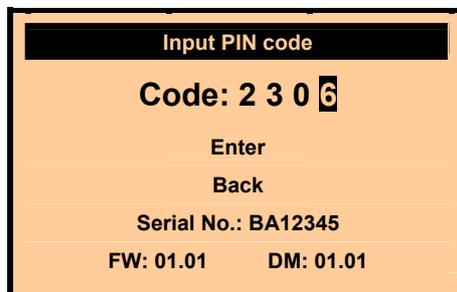


The window presents the device serial number, the firmware version (FW) and the detection module version (DM) of the installed software.

Navigate the black bar to the first digit of the PIN code:



Select the value of the first digit by using the [Up] and [Down] switches. Next, move the black bar to the next digit by using the [Right] switch and then select the value. Continue until all four digits are selected:



The code is entered by:

1. Pressing [OK].
2. Navigating to "Enter" and then pressing [OK].

This will result in the following window display:



The counter presents a counter value of all banknotes processed by SuperVision mc<sup>2</sup>.

- Activating "Calibrate" will switch to the calibration window.
- Activating "Restore factory settings" will restore the factory adjustments.
- Activating "Main menu" will return to the main menu.

If an invalid PIN code is entered, the window will show the following message for four seconds:

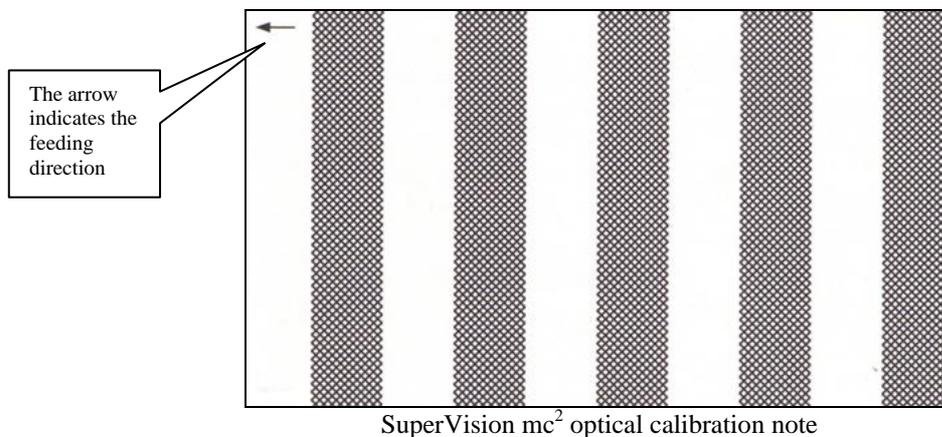


After this SuperVision mc<sup>2</sup> returns to the previous window and the PIN code can be corrected and re-entered.

### 2.14.1 Calibration

SuperVision mc<sup>2</sup> was calibrated at the BellCon factory. Over time, the performance of the sensors in SuperVision mc<sup>2</sup> can change. If you experience that genuine banknotes are rejected by SuperVision mc<sup>2</sup>, you can optimize the performance by calibrating the machine.

You will need the optical calibration note, which was included in the delivery:



The optical calibration note should be kept protected from direct sunlight, dirt and moisture. If you see any visible sign of wear out (dirt, folds, splits, etc.) the calibration note should be replaced.

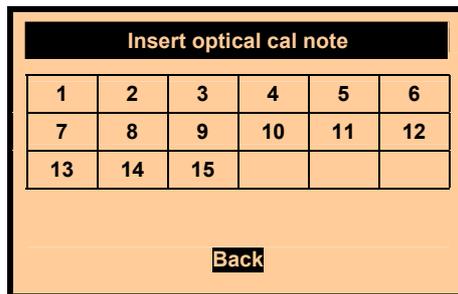
- Do never attempt to use any other (bank-) notes for the SuperVision mc<sup>2</sup> calibration than the note supplied by BellCon.
- Do never fold the calibration note.

**Please note:** It is very important to protect SuperVision mc<sup>2</sup> from direct sunlight and strong artificial light when inserting the optical calibration note.

In the Service menu navigate to "Calibrate" and press [OK]:



This will result in the following window:

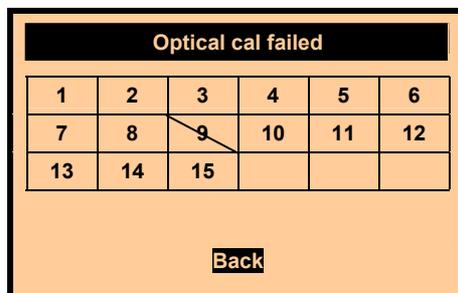


Insert the optical calibration note, which was included in the delivery. The machine calibrates and the display will change:



Activate "Restart" by pressing [OK] to restart the machine.

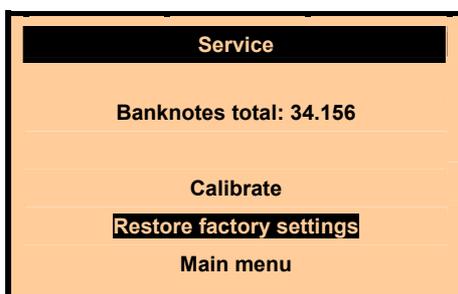
If you get the message "Optical cal failed" and one or more stroked-out fields appear during calibration, it indicates a faulty optical sensor, which needs to be repaired/replaced.



Please contact your dealer for help.

### 2.14.2 Restore factory setup

If something goes wrong when calibrating SuperVision mc<sup>2</sup>, it is possible to restore the factory calibration. In the Service menu navigate to "Restore factory settings" and press [OK].



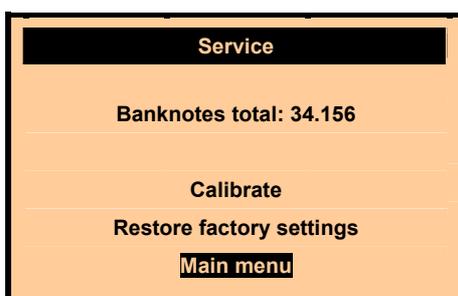
"Restore factory settings" is activated by pressing the [OK] switch and the factory settings (including calibration) are restored. For four seconds the window will display:



The previous window will appear again.

### 2.14.3 Leaving service mode

It is possible to leave service mode in two ways:



Either navigate to "Main menu" and press [OK] or await SuperVision mc<sup>2</sup> to turn into sleep mode.



