Safescan®

USER MANUAL

ENGLISH

SAFESCAN 2985-SX

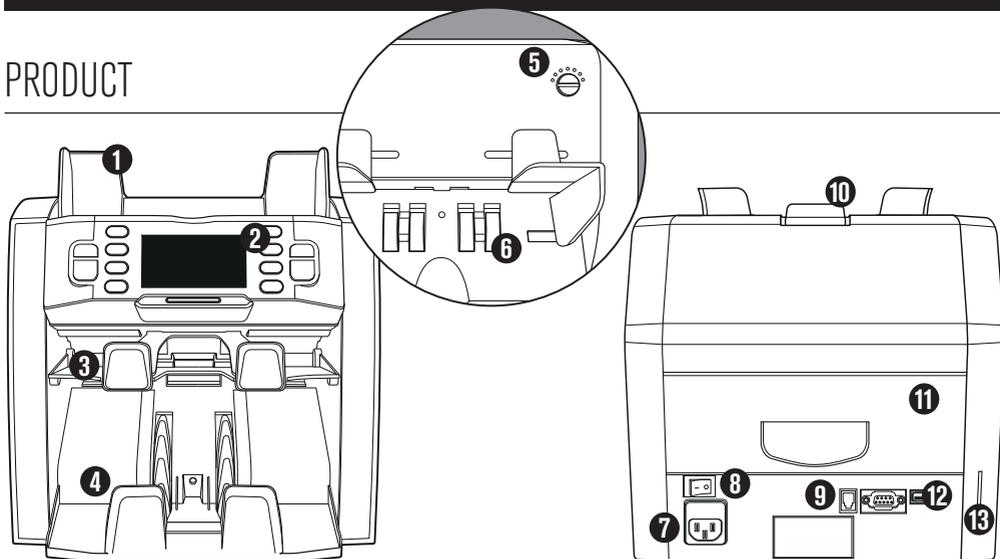# BANKNOTE COUNTER

1. INTRODUCTION

Thank you for purchasing this Safescan 2985-series banknote counter. This user manual will help you to get started with your Safescan banknote counter and describes the setup and operating procedures. We recommend to carefully read these operating instructions before starting to use the device.
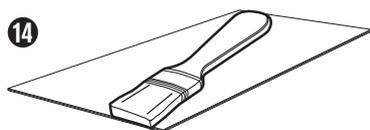
PACKAGE CONTENTS

The retail box contains the following items:
- Safescan 2985-SX Banknote Counter
- Power cord(s) *

- Maintenance kit
- User Manual
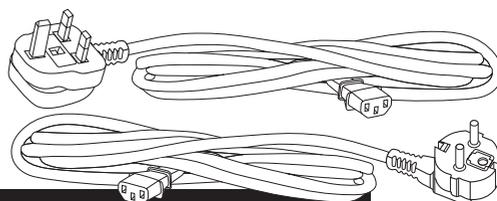
PRODUCT

FRONT

BACK

1.	Hopper with adjustable guides	**9.**	RJ12 port for printer and external display connection
2.	Front panel (display / buttons)	**10.**	Top cover handle
3.	Reject pocket	**11.**	Maintenance tray
4.	Stacker	**12.**	USB port for connection to PC
5.	Hopper sensitivity wheel	**13.**	SD slot for currency updates
6.	Transportation wheels	**14.**	Maintenance kit
7.	Power connection	**15.**	Power cord(s) *
8.	On/Off switch		

* Depending on country

SAFESCAN 2985-SX: FEATURES

Up to 8-point counterfeit detection
(UV, MG, MT, IR, Color, Image, Size, Thickness)

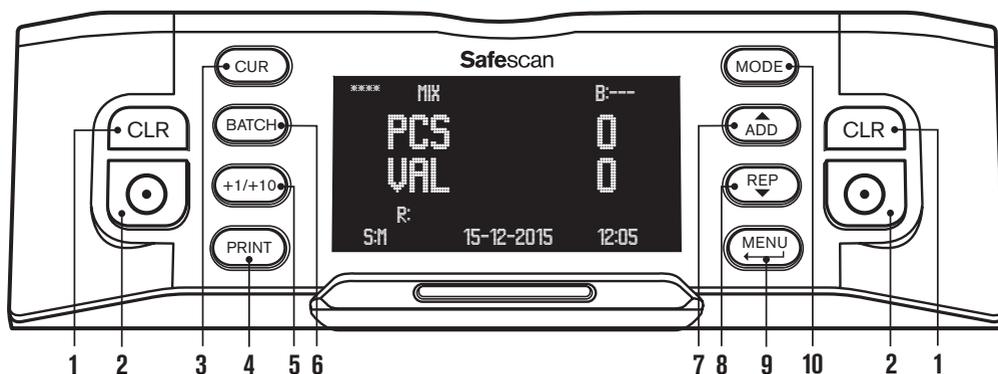| COUNTING MODE	EUR	GBP	CHF	USD	ANY CURRENCY
MIX	●	●	●	●	-
SINGLE	●	●	●	●	-
FREE COUNT	-	-	-	-	●

MIX: value counting of unsorted banknotes, including counterfeit detecion
SINGLE: value counting of sorted banknotes, including counterfeit detection
FREE COUNT: free sheet counting, no currency selection, no counterfeit detection

BASED ON THE DEFAULT CURRENCIES OF THE STANDARD EU MODEL. OTHER CURRENCIES MAY BECOME AVAILABLE DEPENDING ON COUNTRY SPECIFICATION. PLEASE CHECK WWW.SAFESCAN.COM.
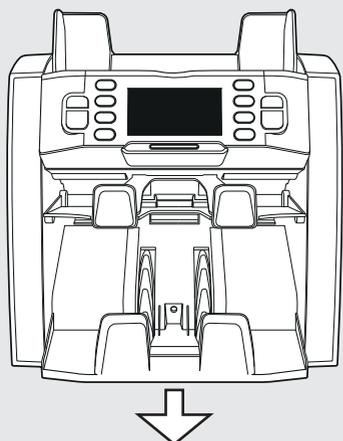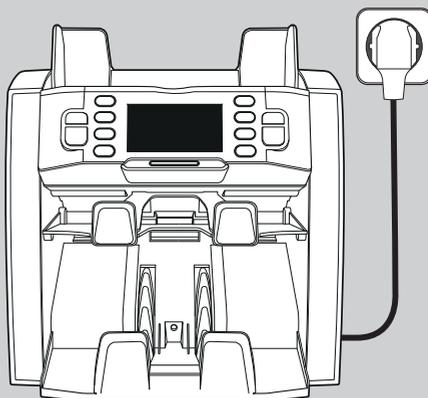
BUTTONS AND OPERATION

1. Clear the number of counted banknotes
2. Start counting / Confirm selection / Reset
3. Currency selection
4. Print count results / send count results to software
5. Batch + 1 pcs / + 10 pcs
6. Batch function on/off and set batch number
7. Add function on/off / browse up in device menus
8. Show detailed count report on screen / browse down in device menus
9. Enter user menu / Go back one level in user menu
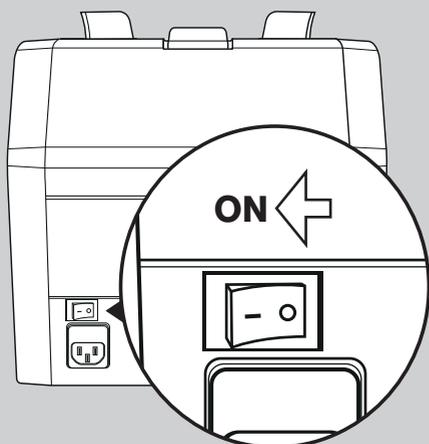10. Counting mode selection

2. INSTALLATION

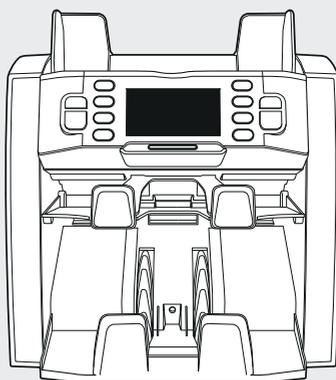**1.** Place the device on a flat and stable surface.

2. Connect the banknote counter to the mains outlet using the supplied power cord.

3. Switch on the banknote counter by pushing the power switch at the back in the "1" position.

ON

4. The machine is now ready for counting. See chapter 4 for detailed explanation on setting currency, counting mode and other custom settings.

READY FOR USE

3. USER MENU

Press the **[MENU]** button to access the user menu. In this menu the following settings can be adjusted:

1. SPEED

- Browse with the arrow keys (ADD and REP buttons) to **[1: SPEED]** and press ⊙ to access the menu.

- Select the desired count speed using the arrow keys: [1] = slow ▶[2] = medium ▶[3]= fast.

- Press ⊙ to confirm your selection. A confirmation message appears.

- Press MENU to go back to the main page of the user menu. Press MENU again to exit the user menu. Default setting is Speed 2.

2. SERIAL NUMBER SCANNING

For some currencies it is possible to scan the serial numbers of the counted banknotes and provide a serial number report after counting.

- Browse with the arrow keys (ADD and REP buttons) to **[2: SERIAL NUMBER SCANNING]** and press ⊙ to access the menu.

- Select serial number scanning **[ON]** or **[OFF]** using the arrow keys (ADD and REP). Press ⊙ to confirm your selection. A confirmation message appears.

- Press MENU to go back to the main page of the user menu. Press MENU again to exit the user menu. Default setting is Serial Number scanning Off.

3. REJECT POCKET CAPACITY

The reject is pocket is used to place suspected counterfeit banknotes in, or to discriminate the banknotes when using FACE and / or ORIENT count modes.

- Browse with the arrow keys (ADD and REP buttons) to **[3: REJECT POCKET CAPACITY]** and press ⊙ to access the menu.

- Select the desired pocket capacity to 50, 40, 30 or 20 banknotes using the arrow keys. Press ⊙ to confirm your selection. A confirmation message appears.

- Press MENU to go back to the main page of the user menu. Press MENU again to exit the user menu. Default setting is 50 pcs.

4. DATE / TIME

Browse with the arrow keys ((ADD) and (REP) buttons) to **[4: DATE TIME]** and press (⊙) to access the menu. A sub-menu appears, with the options to set the Date Format, set the Date and set the Time.

DATE FORMAT:

- Browse with the arrow keys to **DATE FORMAT**. Press (⊙) to enter the date format setting page.
  Select the desired format using the arrow keys: DD-MM-YY, MM-DD-YY or YY-MM-DD.

- Press (⊙) to confirm your selection. A confirmation message appears.

- Press (MENU) to go back to the sub page of the Date/Time setting menu. Press (MENU) again to go to main page of the user menu. Press (MENU) again to exit the user menu. Default setting is DD-MM-YY.

DATE SET:

- Browse with the arrow keys to **DATE SET**.

- Press (⊙) to enter the date set page. Select the day, month, year by using the (+1/+10) button (short press = up with 1, long press = up with 10). Switch between day, month and year by using (ADD) and (REP).

- Press (⊙) to save the date.

- Press (MENU) to go back to the sub page of the Date/Time setting menu. Press (MENU) again to go to main page of the user menu. Press (MENU) again to exit the user menu.

TIME SET:

- Browse with the arrow keys to **TIME SET**.

- Press (⊙) to enter the time set page. Select the hour (HH), minutes (MM) and seconds (SS) using the (+1/+10) button (short press = up with 1, long press = up with 10).
  Switch between hour, minutes and seconds using (ADD) and (REP)

- Press (⊙) to save the time.

- Press (MENU) to go back to the sub page of the Date/Time setting menu. Press (MENU) again to go to main page of the user menu. Press (MENU) again to exit the user menu.

5. HARDWARE AND SOFTWARE VERSION

- Browse with the arrow keys ((ADD) and (REP) buttons) to **[5: VERSION]** and press (⊙) to access the menu. The screen will show various hardware and software version numbers of your device. This info may be required when contacting Safescan customer support.

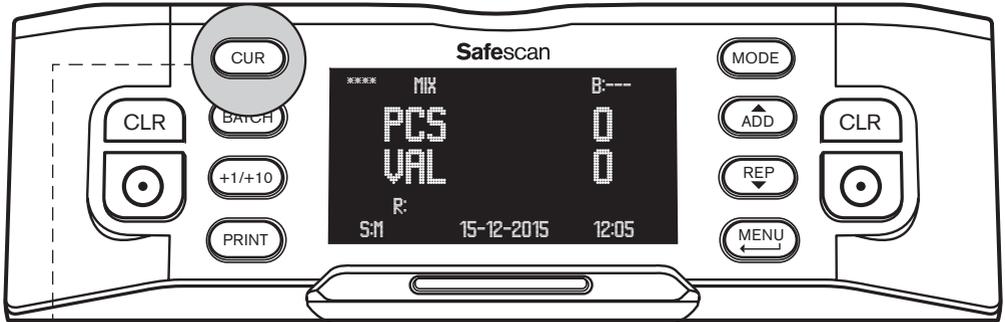- Press (MENU) to go back to the main page of the user menu. Press (MENU) again to exit the user menu.

6. ALARM BEEP

With this function you can switch the audible counterfeit banknote alarm on or off.

- Browse with the arrow keys ((ADD) and (REP) buttons) to **[6: ALARM BEEP]** and press (⊙) to access the menu.

- Select **Beep [ON]** or **Beep [OFF]** using (ADD) and (REP).

- Press (⊙) to confirm your selection. A confirmation message appears. Press (MENU) to go back to the main page of the user menu. Press (MENU) again to exit the user menu.

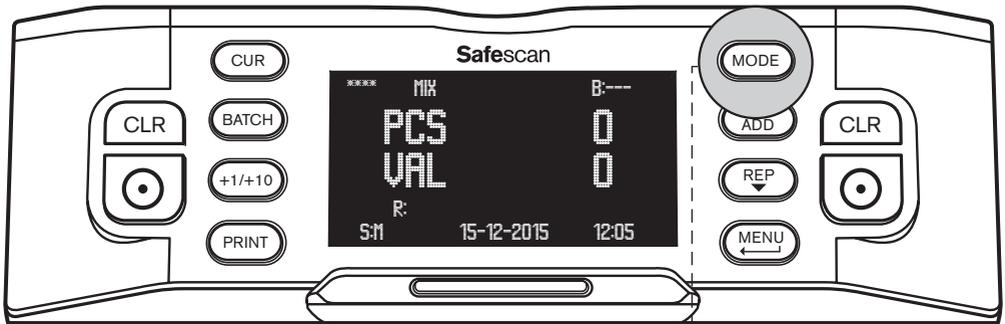# 4. SELECT CURRENCY, COUNTING MODE & REJECT POCKET CAPACITY

1. SELECT CURRENCY

Press the **[CUR]** button to enter the currency selection menu. Browse through the available currencies by pressing (CUR). The selected currency is shown on the top left of the screen. Please note the following special selection options:

- Currency ★★★★ indicates automatic currency detection mode. The banknote counter will automatically recognize which currency is counted.
- Currency **MULTI MIX** offers the option to count mixed currencies. This is however limited to 3 currencies only.
- **FREE COUNT**: the device counts the number of banknotes, no value counting.

Default setting after startup of the device is currency ★★★★.
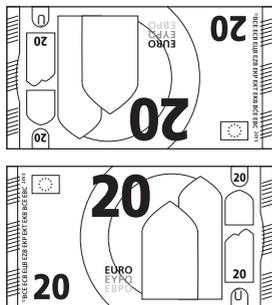
2. SELECT COUNTING MODE

Press the **[MODE]** button to enter the counting mode selection menu. Browse through the available counting modes by pressing (MODE). The selected counting mode is shown on the top middle of the screen. The following counting modes can be selected:

MIX: value counting of unsorted banknotes

SINGLE: value counting of sorted banknotes. Any banknote with a different denomination than the first banknote counted will be placed in the reject pocket.

FACE: discriminates banknotes in face up / face down. One facing is placed in the reject pocket, the other in the stacker. Result after combining the 2 stacks from the reject pocket and the stacker is a stack of banknotes all with face up or face down.
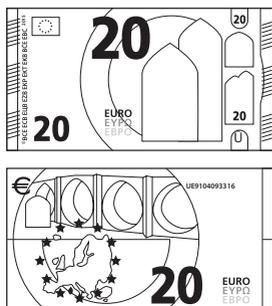
stack 1: FACE: up

stack 2: FACE: down

ORIENT: discriminates banknotes in orientation up / orientation down. One orientation is placed in the reject pocket, the other in the stacker. Result after combining the 2 stacks from the reject pocket and the stacker is a stack of banknotes all with the same orientation.

To create a perfectly sorted stack of banknotes with the same facing and orientation, first do FACE counting, followed by ORIENT counting.

stack 1: ORIENTATION: up

stack 2: ORIENTATION: down

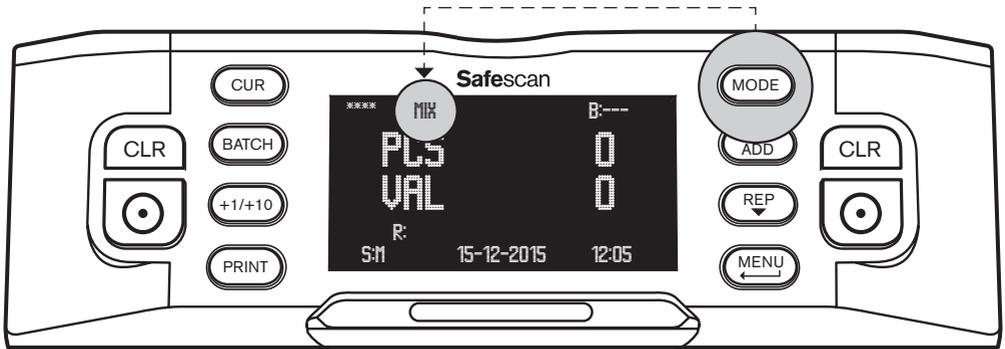Default setting after startup is counting mode MIX.

3. SET REJECT POCKET CAPACITY

During counting, any suspected counterfeit banknote will be placed in the reject pocket. The reject pocket is also used to discriminate banknotes when the device is in FACE or ORIENT counting mode. The reject pocket capacity can vary from 20 to 50 banknotes.

To set the reject pocket capacity, see item 3 in chapter 3 of this manual.

5. COUNTING BANKNOTES
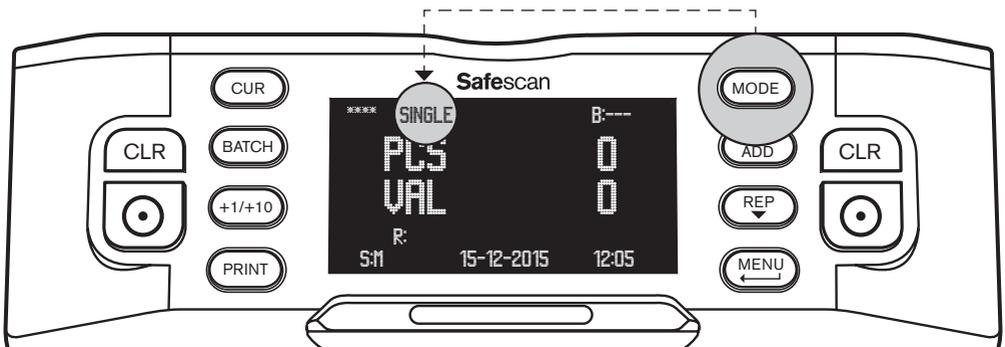
1. VALUE COUNTING OF UNSORTED BANKNOTES

- Make sure that counting mode **MIX** is selected.

- Place a stack of banknotes on the hopper, use the hopper guides to center the banknotes. The banknote counter will automatically start counting. The number of banknotes and their total value is shown on the display.

Any suspected counterfeit will be placed in the reject pocket, and will not be added to the count result.
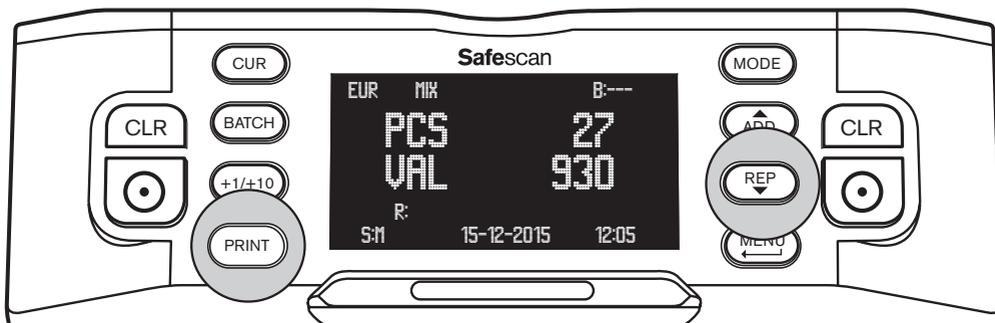
2. VALUE COUNTING OF SORTED BANKNOTES

- Make sure that counting mode **SINGLE** is selected.

- Place a stack of sorted banknotes (of one denomination) on the hopper, use the hopper guides to center the banknotes. The banknote counter will automatically start counting. The number of banknotes and their total value is shown on the display.

Any banknote with a different denomination than the first banknote counted, as well as any suspected counterfeit will be placed in the reject pocket, and will not be added to the count result.

3. SHOW, PRINT OR EXPORT COUNT RESULT

When counting is finished, the following actions can be done (valid for **MIX** and **SINGLE** mode only):

COUNT REPORT ON SCREEN: Press (REP) to show a breakdown of the count result (number of counted banknotes and their value) per denomination. When required, press (REP) again to show the next page of the count result.
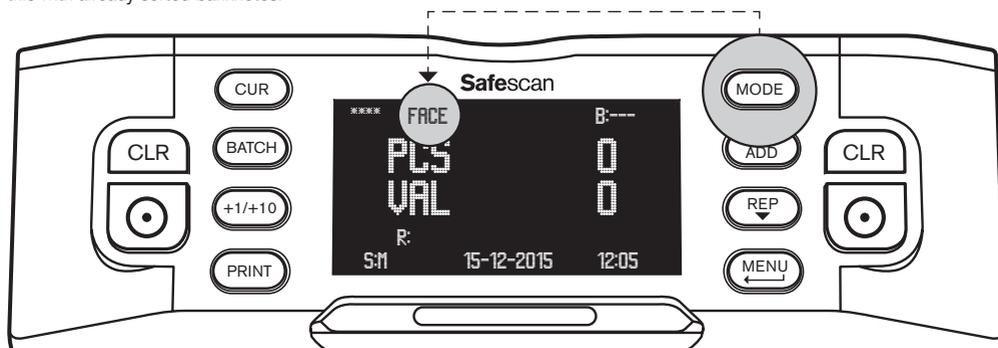
REJECTED BANKNOTE LIST: If one or more banknotes have been placed in the reject pocket, pressing (REP) after the last page of the count result has been shown will show the Rejection List, indicating per banknote the reason for rejecting. When a banknote turns up as suspected counterfeit, count the banknote again. If it keeps on being rejected, you may be dealing with a counterfeit banknote. Notify the authorities or your local or national bank, and hand over the banknote, including all details you may recall on how, when and from whom the banknote was received.

PRINT COUNT REPORT: Press (PRINT) to print a detailed count report showing denomination, number of banknotes and their value, on the Safescan thermal printer (available as option). **More information is shown in Addendum A.**

EXPORT COUNT RESULT: Press (PRINT) to export a detailed count report showing denomination, number of banknotes and their value, to the Safescan Money Counting Software (available as option). In order to communicate with the Safescan Money Counting Software, the banknote counter has to be connected to a computer using the Safescan MCS software cable (available as option). **More information is shown in Addendum B.**

4. FACING SORTED BANKNOTES

This mode enables you to create a stack of banknotes all facing the same way (face up or face down). Usually you would do this with already sorted banknotes.
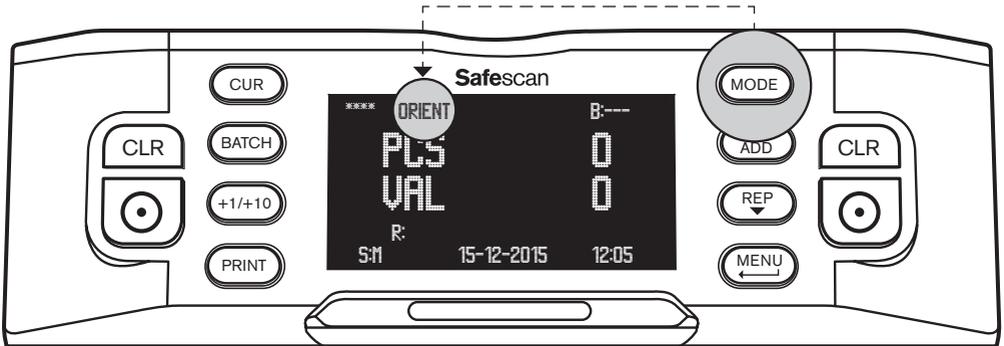

• Make sure that counting mode **FACE** is selected.

• Place a stack of banknotes on the hopper, use the hopper guides to center the banknotes. The banknote counter will automatically start.

It will discriminate between banknotes facing up and banknotes facing down. One facing will be placed in the stacker, the other facing in the reject pocket. The number of banknotes that are placed in the stacker and their total value is shown on the display. Result after combining the 2 stacks from the reject pocket and the stacker is a stack of banknotes all with face up or face down. The orientation however may still vary.

5. ORIENTATION OF SORTED BANKNOTES

This mode enables you to create a stack of banknotes with the same orientation (up or down). Usually you would do this with already sorted banknotes which you first have organized using the FACE count option.
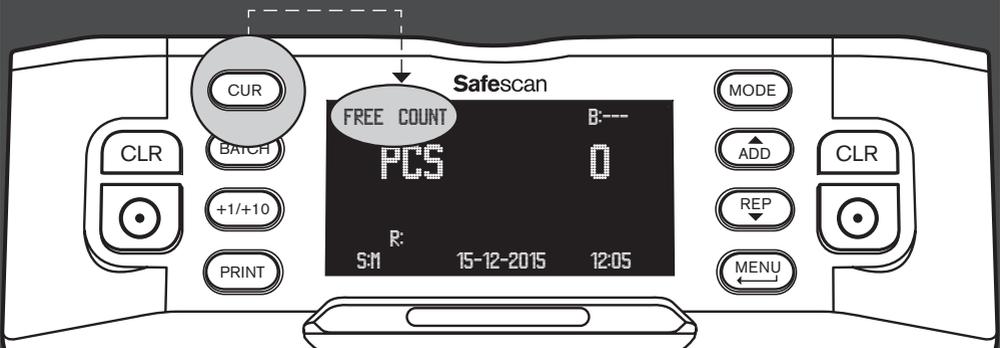

• Make sure that counting mode **ORIENT** is selected.

• Place a stack of banknotes on the hopper, use the hopper guides to center the banknotes. The banknote counter will automatically start. It will discriminate between banknotes with orientation up and banknotes with orientation down. One orientation will be placed in the stacker, the other orientation in the reject pocket. The number of banknotes that are placed in the stacker and their total value is shown on the display.

Result after combining the 2 stacks from the reject pocket and the stacker is a stack of banknotes all with orientation up or down. If you have done ORIENT counting after you have done FACE counting, the end result will be a perfectly sorted stack of banknotes all with the same facing and orientation.

FREE COUNTING

In this mode, the banknote counter merely counts all banknotes that have been fed through the machine, without discriminating on currency or denomination. This is also known as free sheet counting.
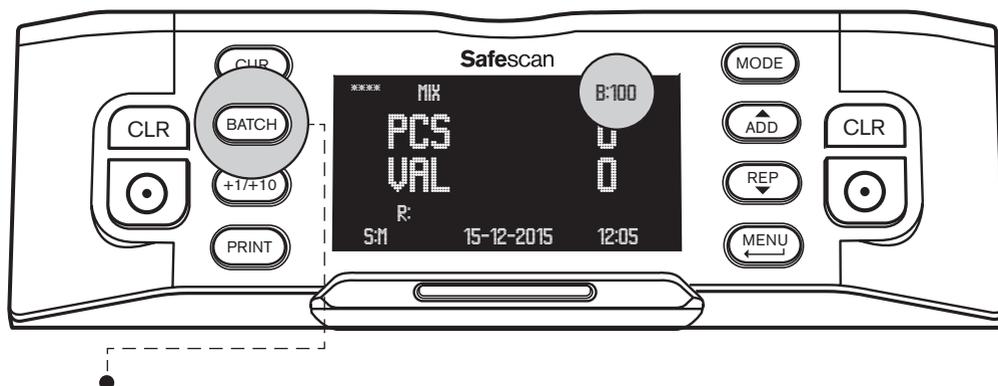

• Make sure that **FREE COUNT** is selected.

• Place a stack of sorted banknotes on the hopper, use the hopper guides to center the banknotes. The banknote counter will automatically start counting. The number of banknotes is shown on the display.

6. ADDITIONAL COUNTING FUNCTIONS

1. BATCH COUNTING

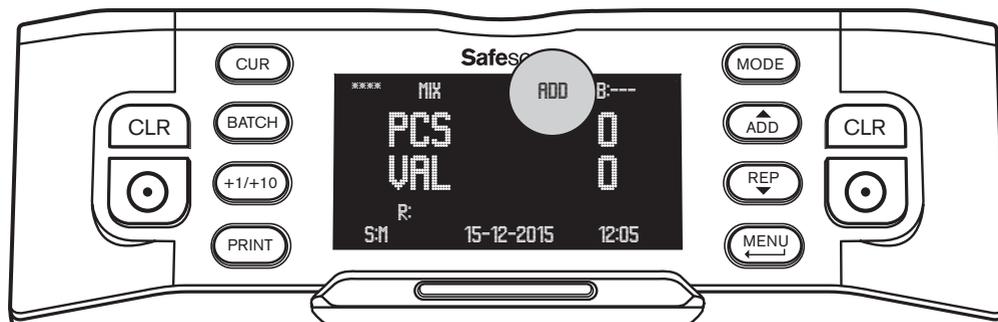Batch counting enables you to create equal stacks of a pre-defined number of banknotes.

- Press **[BATCH]** to enter batch number selection mode. The pre-set batch number will start with **100**, this number is shown on the top right of the screen.

- Pressing (BATCH) again will toggle between the pre-set batch numbers: **100 ▶ 50 ▶ 20 ▶ 10 ▶ 0**. When the batch setting is off, the display shows '**---**'.

- To set any other batch number, press (+1/+10) to increase the batch number by 1 (short press) or 10 (long press). Continue until you have reached your desired batch number.

When a batch number has been set, the banknote counter will stop counting when the pre-set number of banknotes has been reached. Remove the banknotes from the stacker, the banknote counter will automatically continue counting until again the pre-set batch number has been reached.

2. ADD FUNCTION

When the ADD function is switched ON, the banknote counter will add the current count result to the previous count result.

Press (ADD) to switch the Add function on. **'ADD'** will be shown on the top middle on the screen. The banknote counter will now add each count result to the previous count result.

Press the (CLR) button to set the count to 0. Press (ADD) again to switch the ADD function off.

3. SERIAL NUMBER SCANNING

For some currencies it is possible to scan the serial numbers of the counted banknotes and print a serial number report after counting. This can be useful for tracing or accountability purposes.

To enable serial number scanning: Press **[MENU]** to access the user menu.

• Browse with the (ADD) and (REP) buttons to **[2: SERIAL NUMBER SCANNING]** and press ⊙ to access the menu.

• Select **SERIAL NUMBER SCANNING [ON]** using the arrow keys.

• Press ⊙ to confirm your selection. A confirmation message appears.

• Press (MENU) to go back to the main page of the user menu. Press (MENU) again to exit the user menu.
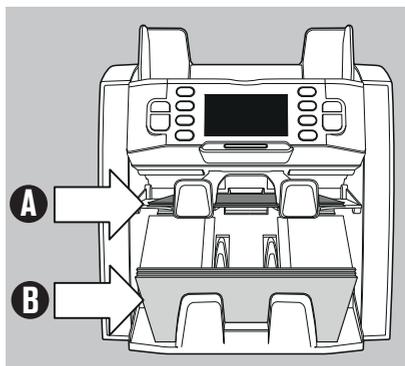
When you now count a stack of banknotes, you will notice the serial numbers are briefly displayed as the banknotes are being counted. When counting has finished, press (PRINT) to print the count results including a full serial number report.

More information about the print function can be found in **Addendum A**.
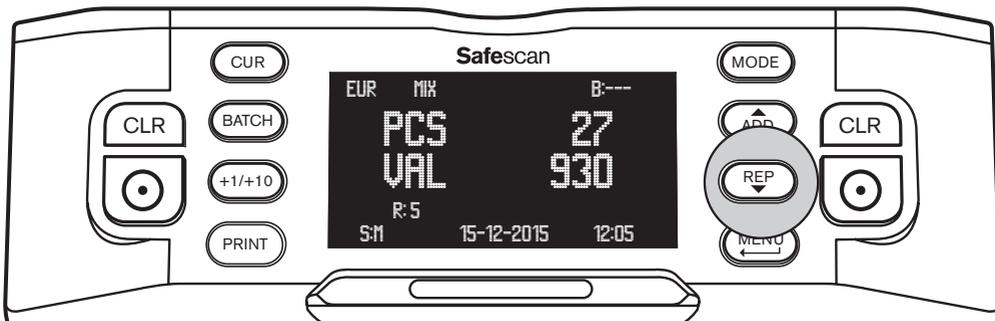
REJECTED AND/OR SUSPECTED BANKNOTES

Thanks to its advanced 8-point detection, the Safescan 2985 is able to filter out suspected counterfeits. All suspected banknotes **A** are automatically separated from the genuine notes **B** and are transported to the reject pocket. The bankknotes that have been placed in the reject pocket are not included in the counting results.

The number of rejected notes is shown in the screen:

```
EUR   MIX              B:----
PCS              27
VAL            930
 R:5
S:M      15-12-2015    12:05
```

REPORTING OF REJECTED NOTES

For all rejected and/or suspected banknotes, the Safescan 2985 will provide a report after the count has finished. The report shows you why banknotes have been rejected.

- After the count has finished and some banknotes have been rejected, press `REP` to go to the **REPORT** menu.

- You will now see the count result overview, showing quantity and value per denomination of the counted banknotes. Press `REP` again until the screen shows **REJECTION LIST**. You will see for each rejected banknote the reason why or on which security feature it has been rejected.

```
Rejection list:
1  IMAGE
2  HALF
3  IR
4  MG
5  IMAGE
```

- Press `MENU` twice to go back to the main screen, press `CLR` if you wish to start a new count.
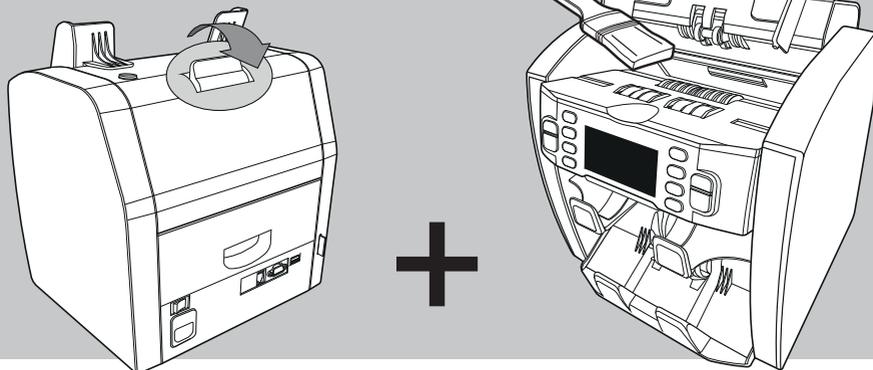
REJECTION MESSAGES

The machine will give you a clear audibe and visual notification when a suspected banknote has been detected. The following messages can be shown:

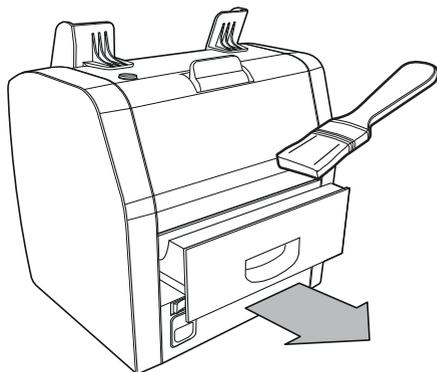| Problem	Cause	Solution(s)
UV, **MG**, **IR**, **IMAGE** error message	• Banknote is a suspected counterfeit. • The integrated UV features of banknotes may become weaker when a banknote is old / heavily used or when it has accendentally been washed with the laundry. • Some currencies are known to have very weak MG features in certain banknote denominations, which are almost impossible to detect. • Some currencies may not have MG or IR features integrated at all.	• Count the banknote again to double check if the problem persists. • Clean the sensors and remove any dust that may have accidentally blocked the sensors. • Clean the magnetic sensors with a banknote cleaning card. • Make sure that the device is not under direct strong light source since this may disrupt the UV sensors. • Make sure that the device is not in the vicinity of any magnetic fields or devices transmitting any signal since this may disrupt the integrated sensors. • If the banknote is in fact genuine, lower the MG sensitivity level and count the banknote again.
SLANT error message	• The banknotes are not being fed straight through the machine.	• Ensure the banknotes are placed neatly and are inserted centered on the hopper. Use the hopper guides to center the banknotes and when counting a large stack of banknotes, guide the notes also with your hands during counting. • The hopper may be set too loose. Adjust the hopper screw in clockwise direction
CHAINED, **DOUBLE** error message	• More than one banknote is being fed through the machine at the same time. • Banknotes may be stuck together, or folded.	• Count the banknotes again to double check if the problem persists. • Ensure that there are no banknotes stuck, folded or glued together. • The hopper may be set too tight. Adjust the hopper screw in anti-clockwise direction.
HALF error message	• An incomplete, torn or half-size banknote has been detected.	• Remove the banknote and press [RESET] to continue counting.
WIDTH. TIME error message	• A banknote with a non-conforming size has been detected.	• Remove the banknote and press [RESET] to continue counting.
DENO DF error message	• A banknote with a different denomination than expected has been detected.	• Count the banknote again to double check if the problem persists.
JUDGE error message	• The denomination of the banknote can not be determined. • Banknote is a suspected counterfeit.	• Count the banknote again to double check if the problem persists.
Stacking Pocket Full message	• There are appr. 200pcs of banknotes in the stacker.	• Remove the banknotes from the stacker, the banknote counter will continue counting.
Reject Pocket Full message	• The number of banknotes in the reject pocket has reached the pre-set reject pocket capacity.	• Remove the banknotes from the reject pocketket, the banknote counter will continue counting.

CLEANING YOUR BANKNOTE COUNTER

To ensure continuous reliable operation, it is required to regularly clean the internal parts and sensors of the device. Dust or dirt may have rubbed off the banknotes and could disturb the correct working of the sensors.

1. Open the device as shown and clean the sensors and rotation wheels by using a dry brush or a air duster spray.
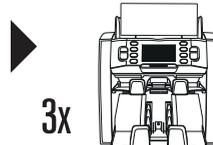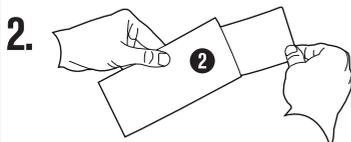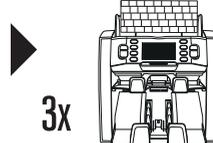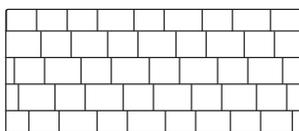
2. Pull out the drawer at the back and clean the sensors inside the machine, which are located at the top.
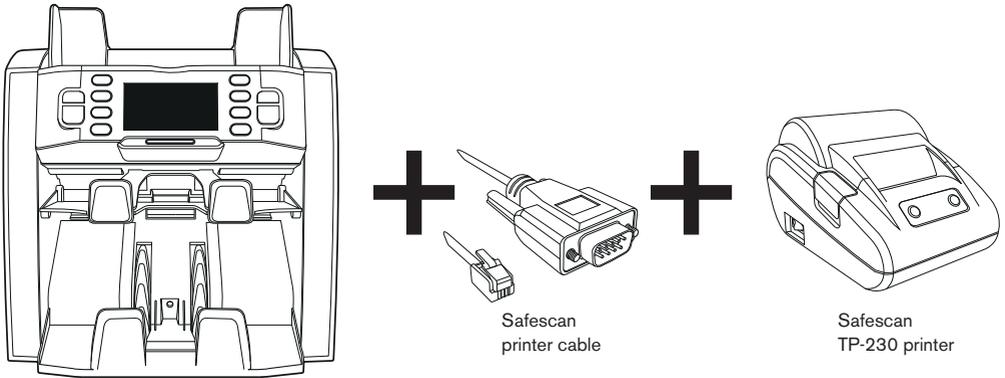
THE USE OF BANKNOTE COUNTER CLEANING CARDS (OPTION)
You can also use the Safescan banknote counter cleaning cards (partno. 136-0546) to clean the roller wheels and MG sensors.
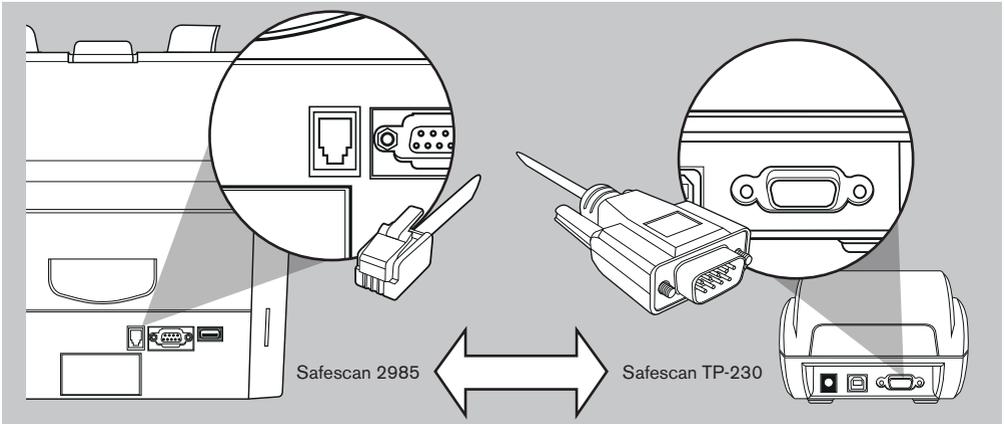
1. ❶ 3x

2. ❷ 3x

ADDENDUM A: USE IN COMBINATION WITH A TP-230 PRINTER

The Safescan 2985-SX can be used in combination with a Safescan TP-230 Thermal Printer. This enables you to make an instant printout of your counting results.

Safescan
printer cable

Safescan
TP-230 printer

CONNECTING THE PRINTER

- Switch OFF the Safescan 2985

- Connect the TP-230 printer to the Safescan 2985 by using the Safescan printer cable as shown

Safescan 2985   Safescan TP-230

- Connect the Safescan TP-230 printer to the mains outlet

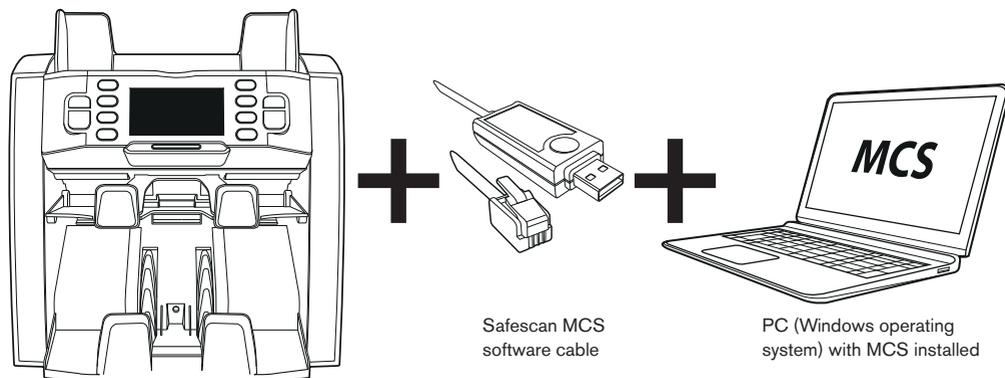- Switch ON the Safescan TP-230 printer

- Switch ON the Safescan 2985

You will now be able to print out your count esults by pressing (PRINT) after finishing your count. The printout will show the quantity as well as the total value per denomination, and the grand total of your count. When you have enabled Serial Number Scanning, the list of serial numbers per banknote will also be shown on the printout.

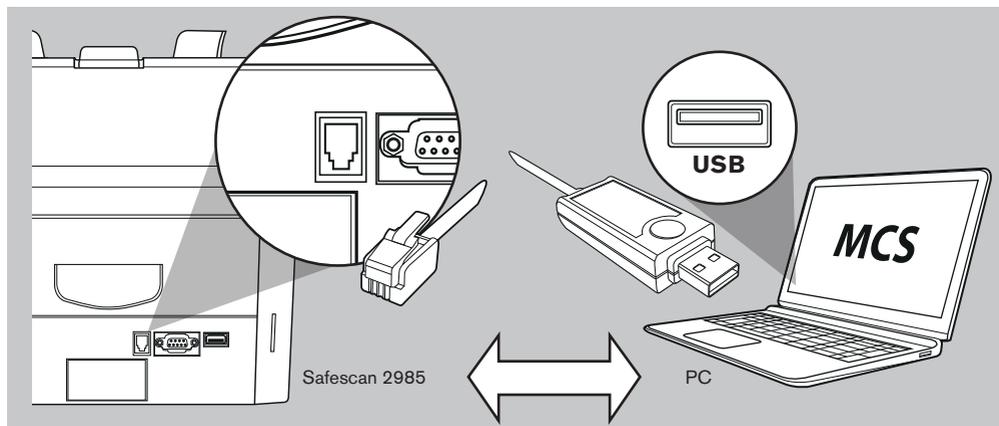⚠ **ALWAYS SWITCH ON THE PRINTER FIRST BEFORE SWITCHING ON THE SAFESCAN 2985**

ADDENDUM B: USE IN COMBINATION WITH MCS SOFTWARE

The Safescan 2985-SX can be used in combination with Safescan Money Counting Software. This enables you to to export your counting results to the PC for further processing.

Safescan MCS
software cable

PC (Windows operating
system) with MCS installed

INSTALLATION

• Install Safescan MCS on your PC (for purchase and installation, see www.safescan.com).

• Connect the Safescan 2985 to your PC by using the software cable, as shown.

Safescan 2985

PC

You will now be able to export your count results by pressing (PRINT) after finishing your count. In the software you will see the quantity per denomination, as well as the total value per denomination and the grand total of your count.

CURRENCY UPDATES

Central banks are constantly updating their banknotes to incorporate the newest security features and make it even harder for counterfeiters to succeed. Safescan's dedicated currency management team makes sure your 2900-series banknote counter keeps pace with these changes. We notify you whenever there's an update; all you have to do is install it using the USB port or SD slot on the back of the device.

For more information about software updates and update instructions, go to www.safescan.com

TECHNICAL SPECIFICATIONS

Supported currencies:	EUR, GBP, USD, CHF + all currencies in "FREE COUNT" mode
Counting modes:	Mix mode, Single mode, Face, Orient
Counting speed:	800 / 1000 / 1200 banknotes per minute
Counterfeit detection:	Up to 8 point counterfeit detection: UV, MG, MT, IR, Image, Color, Size and Thickness.
	Detectable features may differ per currency.
Banknote size range:	50 x 100 mm ~ 85 x 182 mm
Banknote thickness range:	0.075 - 0.15 mm
Hopper capacity:	500 notes
Stacker capacity:	200 notes
Power:	AC 100-240V / 50-60Hz
Power consumption:	< 50W
Dimensions:	21.5 x 27.1 x 26.4 cm / 8.5 x 10.7 x 10.8 inch
Weight:	8.5 kg / 18.7 lbs
Operating Temperature:	0 - 40°c
Available accessories:	Safescan TP-230 thermal printer, Safescan MCS software

WARRANTY

See **www.safescan.com** for warranty procedure.

CE This product is in compliance with the essential requirements and other relevant provisions of the applicable European directives. The Declaration of Conformity (DoC) is available via www.safescan.com.

If you want to dispose of the device, take it to a recycling centre. Never throw away electrical products with the household trash.

DO YOU HAVE QUESTIONS OR NEED TECHNICAL ASSISTANCE?

Our support team is available by phone during office hours (GMT +1 timezone) or by e-mail to answer any question you may have regarding the usage of your Safescan device. See www.safescan.com for details.

When calling or e-mailing our support center, always make sure you have the following information at hand: model number, partnumber, serial number (see product sticker at the bottom of the device), software version number (shown at startup of the device), date of purchase.

www.safescan.com
info@safescan.com