Giesecke+Devrient

User Manual

BPS® C1s

Giesecke+Devrient
Creating Confidence

Legal Notice

Note

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Disclaimer

The specifications stated in this documentation do not represent guaranteed characteristics.

This documentation is based on the type BPS® C1s, hardware release 4.0; software release 4.2.3 – GUI 001.143, DSP 001.063 and FPGA 019.019.

Subject to technical changes.

This printed document/PDF document may not reflect the most recent updates. For the latest version, always refer to our online platform G+D Xpert.

This product meets the safety requirements of the relevant EU (European Union) directives and complies with the EN (European standard) standards as listed in the EU Declaration of Conformity.

This product has been awarded the GS mark for "tested safety" by an independent test and certification body, after type-testing according to the German Product Safety Act (ProdSG, section 20 and section 21).

Manufacturer	Giesecke+Devrient Currency Technology GmbH
	Prinzregentenstraße 161
	D-81677 Munich, Germany
	Tel. +49 89 4119-0
	Fax +49 89 4119-1535
	www.gi-de.com
Technical support	→ chapter D "Technical Support", p. 200
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List of Changes

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1 About This Manual

This chapter contains the following information:

- Overview of all manuals in the BPS C1s operating instructions
- Target group of this manual
- Content and structure of this manual
- A description of the conventions used in this manual

1.1 Overview of the System Operating Instructions BPS C1s Documentation

This manual is part of the system operating instructions. The following documentation as a whole is part of the system operating instructions:

Quick Start Guide
These quick instructions are intended for all users of the product. They describe the first steps without using text so that the user can operate the product. The quick instructions are supplied with the product.

Safety Information
The safety information is intended for all users of the product. It describes all the necessary safety measures for hazard-free use of the product. The safety information is supplied with the product.

User Manual
The user manual is intended for all users of the product and can contain the following information:

- Requirements for the installation site, and for the transport and secure operation of the product
- Technical details for the product
- Installing and connecting the product
- Operating the product and straightforward cleaning and maintenance work that is not performed by Service
- Installing and using the software applications

Cleaning Video and Quick Instructions
The cleaning video and quick instructions are intended for all users of the product. They describe how to correctly clean the product without using text.

The user manual, software application as well as the cleaning video and quick instructions can be found in the download section. You can find the link to the section in the quick instructions.

Service Manual
The service manual describes maintenance work carried out on the product by a field engineer.

The maintenance work includes:

- The replacement of parts for repairs (corrective measures) including the necessary adjustment work
- Installing and using the software application for Service

You will only receive your service manual after you or your staff have received training from G+D to become a field engineer.

Spare Parts Catalog
- Interactive Spare Parts Catalog with integrated technical diagrams.

Available for download on *idgard* and requires access activation.

https://t1p.de/3g3fr

Alternatively, you can request access to the WebShop in the G+D Business Portal. In this case, get in touch with your G+D representative who will manage the approval process.

1.2   Target Group of this Manual

The manual is intended for the operator.

1.3   Content and Structure of this Manual

This manual contains the following:

- → *chapter 2 "Safety Information for the Compact Segment", p. 7* – contains important safety information.
- → *chapter 3 "General Information on the Product", p. 9* – contains the following information:
    - Operating controls
    - Control unit and user interface
    - Important terms
- → *chapter 4 "BPS C1s Site and Facility Requirements", p. 15* – contains the technical data for the product and describes the requirements that must be met at the installation site to safely operate the product.
- → *chapter 5 "Installation", p. 25* – contains information on the transport, installation, and commissioning of the product.
- → *chapter 6 "Operation", p. 31* – contains the following information:
    - Default settings
    - Banknote processing operating procedures
    - Malfunctions
- → *chapter 7 "Configuration", p. 75* – contains information on the system, operator, and supervisor settings.
- → *chapter 8 "Maintenance", p. 113* – contains information on opening and closing as well as cleaning the product.
- → *chapter 9 "GD_PCSuite Software", p. 121* – contains information on the system requirements and on installing and using the "PC Suite – End User Tool" and "PC Suite – Distributor Tool" software programs.

- → *chapter 10 "Disposal", p. 179* – contains information that you need for disposal.
- The →*Appendix* contains useful additional information.
  - – Technical data
  - – Description of reports
  - – Description of the criteria for fitness sorting
  - – Symbols used
  - – Contact addresses
  - – A list of abbreviations and glossary of terms
  - – Table of figures
  - – Index

1.4   Formatting Styles in this Manual

1.4.1   General Conventions

The following formatting styles are used as standard to identify certain information:

Conventions	Definition
This text is important.	Underlined text indicates important information.
Mechanical operating control	Names of mechanical operating controls like keys or switches are written in bold.
	For example: Press **Start** on the device.
GUI Text	Objects in the graphical user interface (GUI), e. g. a button, are in bold.
	For example: Click **OK**.
Menu option > Menu option	Menu names are in bold. Angle brackets indicate navigation through menus.
	For example: Select **File > Print** from the menu.
'User input'	User inputs are in single quotes.
	For example: Enter **port** = '8080'.
<Placeholder>	Placeholders for display text or user input are in angle brackets.
	For example: Enter <Password>.

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Conventions	Definition
[Key]	Keys on the keyboard are in square brackets. For example: Press [Alt] + [P] to print the file.
File or path	File names or paths are in italics. For example: Open *readme.txt*.
`Command`	Commands are in Courier font. For example: Open an input window and enter `ping`.
`Code`	Codes are in Courier font.
"Titles"	Titles of reports, logs, modes, windows,etc. are in quotation marks. For example: The "xy" window appears.
→ *"Manual Title"*	References to other manuals are in italics. The manual title is also in quotation marks. For example: → *"Service Manual"*
→ *"Chapter Heading" chapter*	References to other chapters/sections are in italics. The title of the chapter/section is also in quotation marks. For example: → *"Jam Recovery" chapter*
Homepage Giesecke+Devrient	References to a website address are in italics.
1. list entry 2. list entry	In numbered lists, make sure you follow the sequence of list entries.
● list entry ● list entry	In unnumbered lists, the sequence of list entries is not important.
a) list entry b) list entry	In alphabetic lists, the list entries give alternatives.
(!)	This symbol indicates important information.
1.	These numbers indicate individual operational steps. You must carry out these steps in the sequence indicated.

Conventions	Definition
⇨	An arrow as shown after a step indicates the result of that step.

1.4.2   Document Conventions for Procedures (Instructions)

This section explains how procedures (instructions) are set out. Follow procedures step by step in the specified order:

Required conditions

- Requirement 1
- Requirement 2

⚠ DANGER

Safety information before the procedure

Applies to the whole procedure

► Observe the measures to prevent risks at each step.

Proceeding

1. Perform this step.
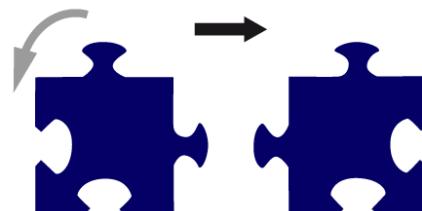
2. Perform this step. Note the image above.

   ⇨ Result of this step

Secondary Steps

3. To perform this step:

   a. Perform this secondary step.

   b. Perform this secondary step.

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Prompts to Skip or Repeat Steps

4. Prompt, e.g. has the error been rectified?

No: → 5

Yes: → 6

5. Only carry out this step if you answered the above prompt with No.

Continue with: → 7

6. Only carry out this step if you answered the above prompt with Yes.

Continue with: → 7

7. Perform this step.

Alternative Steps

8. Select the appropriate option:

Either option A → *Option A*

Or option B: → *Option B*

Option A

a. Perform this step for option A.

b. Perform this step for option A.

Option B

a. Perform this step for option B

Result

Result of the procedure

1.4.3 Figures Used

The screenshots used are examples and may differ from what is actually shown on the display.

2 Safety Information for the Compact Segment

Before working with our product, you must observe not just the system operating instructions and in particular the safety instructions contained in them, but also the safety instructions in the safety information supplied externally. This safety information contains specific safety guidelines and instructions developed specially for this product in order to minimize potential risks and ensure safe handling of the product. The safety information is included in the packing as a separate accompanying document. Keep the safety information in a safe place so that you can refer to it if necessary.

The document is also available digitally here:
Safety Information Compact Products 512095XXX.pdf
https://bit.ly/3C8vmN0

If you have any further questions, please contact Technical Support.
→ *chapter D "Technical Support", p. 200*

3 General Information on the Product

The BPS C1s product is a system for processing banknotes, which offers a variety of functions and application possibilities. Depending on the configuration, this machine can be used to count and sort banknotes and check their authenticity, denomination, value, and fitness. The banknotes are placed loose in the singler. After singling, they are checked and evaluated by the sensors. Based on the sensor results, the banknotes are sorted either to the delivery stacker or the reject stacker.

The system is controlled via the operating unit using a touchscreen and keys.

This manual describes all the available options. The availability of these options depends on the configuration of the machine.

> ⚠ ***Important***
>
> The technical data for external devices supplied by G&D is not included in this documentation.

Availability of Products

Not all products and functions are available in all countries.

Reflection

This device is not intended for use in the direct field of vision at computer workstations. To avoid disturbing reflections at computer workstations, this device must not be placed in the direct field of vision.

Important Notice for the USA/ Canada

The following options are <u>not</u> available in the USA/Canada:

- Serial number scanning
  → *chapter 3.2 "Operating Unit", p. 10*
  → *chapter 3.3 "User Interface", p. 12*
  → *chapter 6.4.1 "Selecting the Currency", p. 37*
  → *chapter 6.4.3 "Sorting Settings", p. 41*
  → *chapter 6.4.3.3 "Enabling Serial Number, Ticket Reading, or Check Function", p. 45*
  → *chapter 6.5.1 "Displaying Reject Reasons", p. 61*
  → *chapter 7.1.7 "Displaying SN History", p. 80*
  → *chapter 6.8 "Printing the Result", p. 69*
  → *chapter 6.8.2 "Manual Printing", p. 70*
  → *chapter 6.9 "Malfunctions and Information Messages", p. 70*
  → *chapter 7 "Configuration", p. 75*
  → *chapter 7.1.6 "Importing/Exporting Settings and Reports", p. 80*
  → *chapter 7.2.3 "Setting Options for Serial Number Scanning", p. 84*
  → *chapter 7.3.1 "UI Settings change", p. 100*
  → *chapter A "Technical Data BPS C1s", p. 181*
- Check function
  → *chapter 6.4.3.3 "Enabling Serial Number, Ticket Reading, or Check Function", p. 45*
  → *chapter 6.4.2 "Processing Banknotes of Different Currencies Simultaneously", p. 39*

3.1   Operating Controls

The machine has the following operating controls:

Figure 1: Operating Controls

1	Operating unit → *chapter p. 27*	6	Delivery stacker
2	Singler	7	Connections (from behind) → *chapter p. 21*
3	Banknote guide	8	Power switch
4	Release handle to open the lower transport section	9	Release handle to open the upper transport section
5	Reject stacker		

3.2   Operating Unit

The operating unit consists of various keys and a touchscreen. You can configure various settings via the keys as well as via the touchscreen.

Figure 2: Operating Unit

Touchscreen

You can configure various settings via the touchscreen.
→ *chapter 3.3 "User Interface", p. 12*

Keypad for the
Operators
(1 and 4)

Two operators can work at the machine. You can start and stop the banknote processing by using the keypad. For the default settings, both operators use the same keys. In addition, five profiles with different default settings can be configured for each operator.
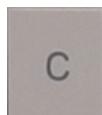
Cancel – cancel action and return to the main menu

Enter key – confirm selection or input, start banknote processing

Keypad Default Settings (2 and 3)

This enables you to make certain default settings prior to banknote processing.

- **CUR** key – select currency
  → *chapter 6.4.1 "Selecting the Currency", p. 37*
- **MOD** key – select sorting mode or open the sorting settings
  → *chapter 6.4.3 "Sorting Settings", p. 41*
- **INFO** key – display information as list
  → *chapter 6.6 "Displaying as a List", p. 64*
- **RJCT** key – display reject reasons
  → *chapter 6.5.1 "Displaying Reject Reasons", p. 61*
- **ADD** key – add accounting units
  → *chapter 6.4.8 "Adding the Accounting Units", p. 53*
- **BAT** key – set the quantity or value of banknotes
  → *chapter 6.4.6 "Processing Banknotes with Deposit", p. 50*
  → *chapter 6.4.5 "Specifying the Package Size", p. 48*
- **GT** key – with the **ADD** function activated, display the overall result and the daily result in the form of a list as well as the fitness reports for the different half-years and the serial number report
  → *chapter 6.7 "Using Result Lists", p. 65*
- **PRNT** key – open print menu or save accounting unit manually to create the result list
  → *chapter 6.8 "Printing the Result", p. 69*
  → *chapter 6.4.8 "Adding the Accounting Units", p. 53*

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3.3 User Interface

After switching on the machine you will see the main menu on the touchscreen.
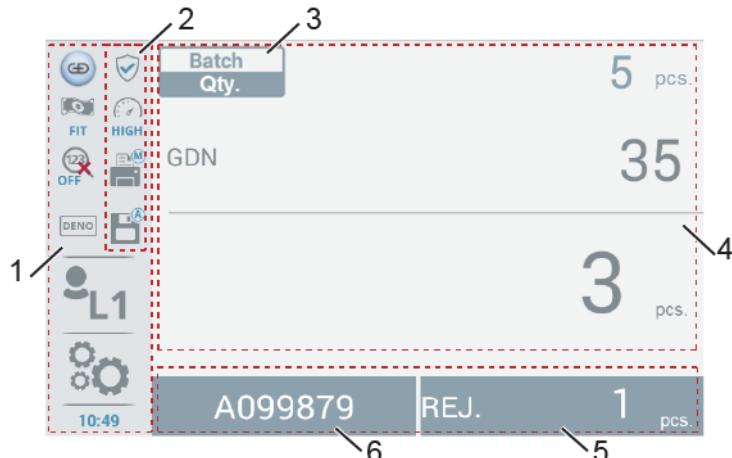
Figure 3: User Interface

1 Basic Settings
Here you can configure various basic settings.

2 Default settings
Here you see what default settings are currently selected.

3 Target value
If the target value is activated, you can configure the specified banknote value or quantity here.

4 Result
Here you can view the result of the accounting. The currency, quantity, and value of the accounted banknotes are shown on the screen.

5 Rejects
Here you can display the reject reasons.

6 Serial numbers
If serial number scanning is enabled, you will see the last serial number read here.

Basic settings

You can configure the following basic settings via the user interface. You can also see what default settings are currently selected.

Here you can open the available currencies and currency options.
→ *chapter 6.4.1 "Selecting the Currency", p. 37*
In addition, you can see whether the security feature check is enabled or disabled.

Here you can open the available fitness modes.
→ *chapter 6.4.3.2 "Selecting a Fitness Mode", p. 43*
You can also see which speed level is selected.

	Here you can open the options for serial number, ticket, and check scanning. → *chapter 6.4.3.3 "Enabling Serial Number, Ticket Reading, or Check Function", p. 45* You can also see which default setting is selected for printing.
	Here you can open the available sorting modes. → *chapter 6.4.3.1 "Selecting the Sorting Mode", p. 41* You can also see which default setting is selected for saving.
	Here you can see which operator is currently logged in. You can also use the icon to switch between the different operator profiles. → *chapter 6.2 "Switching Operators", p. 32*
	This will open the system settings menu. → *chapter 7.1 "Changing System Settings", p. 75*
	Time display
Scroll Bars	When entries are truncated in the content view, a scroll bar is displayed. Drag your finger vertically to display the hidden content.
Display of Multiple Pages	If you see dots at the bottom of the screen, additional pages are available.
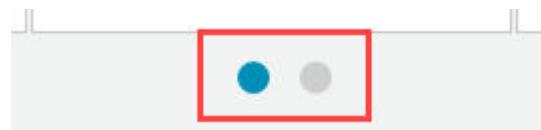
Drag your finger horizontally to display the next page.

Toggle Icon	To activate or deactivate options and settings, a toggle icon is used in various places.

Activated   Deactivated

Select the icon to activate or deactivate the option or setting.

Confirm and Discard	

Confirm selection/input   Discard selection/input

3.4   Important Terms

The most important terms for working with the machine are explained below.

Batch
- The number or value of the banknotes is specified;
- Check against the target value;

A batch is the preparation of banknotes. For example, the production of packages of 100 banknotes for distribution to the customer.

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Deposit	• The number or value of the banknotes can be specified; • If this is specified, accounting takes place against the target value; A deposit is an in-payment. A package of banknotes is counted and checked. If necessary, the deposit is also checked and settled against corresponding target values for amount or quantity.
Discrepancy	For the accounting units "Deposit" and "Input Package", the machine counts against a given banknote value or a given number of banknotes. In the case of a shortfall, the machine outputs an error message.
Emission	Emissions (series) are different issues of the same denomination.
Manual inspection	If the machine repeatedly sends rejects to the reject stacker, you must inspect these banknotes manually.
Rerun	You can have rejects reprocessed automatically. For a rerun you remove the rejects from the reject stacker and place these banknotes in the singler again.
Rejects	Rejects are banknotes or objects that the machine cannot sort automatically or that it cannot positively identify. The machine sends rejects to the reject stacker.

4   BPS C1s Site and Facility Requirements

This chapter contains the technical data for the product and describes the requirements that must be met at the installation site to safely operate the product.

4.1   System Data

The product BPS C1s has the following system data.

4.1.1   Dimensions and Weights

The product BPS C1s has the following dimensions and weights:

	Depth [mm]	Width [mm]	Height [mm]	Weight [kg]
BPS C1s	350	333	400	approx. 16

Table 1: Dimensions and Weights

The packaging has the following dimensions and weights:

	Depth [mm]	Width [mm]	Height [mm]	Weight [kg]
Packaging (including machine and accessories)	450	440	460	20.5

Table 2: Dimensions and Weights of the Packaging including Machine and Accessories

4.1.2   Type Label

The BPS C1s product has the following type label:

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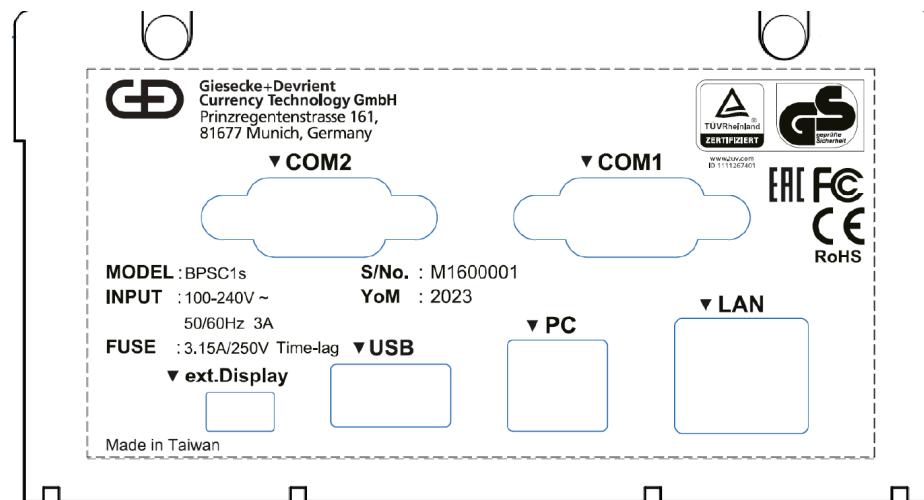
Figure 4: Type Label BPS C1s

You will find the type label on the back of the machine.

4.1.3   Electrical Connection and Power Supply

The customer must provide a 3-wire system including neutral conductor and protective earth conductor for the connection (e.g. TN-S network, TT Network).

A shockproof socket is used for the connection to the power supply. The BPS C1s product is fitted with an inlet connector (IEC-60320-1). A country-specific connection cable for single-phase 230 V or 115 V alternating current is not supplied. Connection cables for country-specific sockets must be ordered additionally or purchased locally.

Use a separate socket or correspondingly dimensioned and approved supply units for each machine.

The power connection and the connection lines must comply with the guidelines set by the responsible power supply company.

Mains Frequency   The following tables show the values for the connection data. The power supply unit used allows two ranges for the supply voltage, the corresponding settings are made automatically.

Frequency
50Hz–60Hz±1%

Table 3: Mains Frequency

Supply Voltage

	Supply Voltage
Range 1	115V±10%
Range 2	230V±10%

Table 4: Supply Voltage Ranges

Fuse Protection

The following table shows the values for the fuse protection:

	250V
Fuse Protection	3.15A; medium time lag

Table 5: Fuse Protection

Maximum Current Consumption

The following table shows the values for the maximum current consumption:

	115V	230V
Maximum current consumption	2.5 A	1.3 A

Table 6: Maximum Current Consumption

Electrical Power Consumption

The following table shows the values for the electrical power consumption:

	Value
Electrical power consumption	Maximum 200 VA

Table 7: Electrical Power Consumption

4.1.4 System Waste Heat

The electricity consumed by the system is almost entirely converted into heat. The waste heat generated by the system therefore corresponds to the values given for the power consumption.

Built-in fans cool the product down. The fans draw air into the base section of the machine and release the exhaust air into the installation room through the rear panel.

The following table shows the values for system waste heat:

	Values
System waste heat	Max. 200 W

Table 8: System Waste Heat

4.1.5 Physical Effects (Generated Vibrations)

The shock and vibration values are negligible.

4.1.6 Noise Level Values

The following table shows the noise level values measured according to DIN EN ISO 7779, DIN EN ISO 3746, DIN EN ISO 9614-2 and DIN EN ISO 11205A.

Operational status	Transport speed	Readiness (idle)	Printer printing	Continuous BN singling (1US$, 20€)	Mixed operation (1/6 idle, 1/6 printer, 2/3 singling)
A-weighted sound power level LwA in dB(A) based on 1 pW	600 BN/min	40	54	74	72

Operational status	Transport speed	Readi-ness (idle)	Printer printing	Continuous BN singling (1US$, 20€)	Mixed operation (1/6 idle, 1/6 printer, 2/3 sin-gling)
	1050 BN/min	40	54	79	77
	1300 BN/min	40	54	80	78
Uncertainty KpA in dB(A)		<2		2	2
A-weighted emission sound pressure level at the workstation LpA in dB(A) based on 20 µPa	600 BN/min	37	49	70	68
	1050 BN/min	37	49	75	73
	1300 BN/min	37	49	78	76
Uncertainty KpA in dB(A)		<2		2	2

Table 9: Noise Level Values

The total of the measured noise level values and corresponding uncertainty represents an upper threshold for the values that may occur during measurements.

You do not need to take any special measures in accordance with EC Directive 2003/10/EC (Noise Directive) due to the measurement values.

The information applies to a BPS C1s operated on a height-adjustable table.

The emission sound pressure levels at the operator's workstation depend on the installation site, the banknote type and banknote quality, the operating conditions, and other parameters.

The typical values for a single installed BPS C1s are between 68 and 76 dB(A) according to DIN EN ISO 11205.

4.1.7 Electromagnetic Compatibility

The BPS C1s product has been checked according to the requirements of Directive 2014/30/EU issued by the Council of the European Union for electromagnetic compatibility (EMC). For proof, see the EU Declaration of Conformity.

The following standards were used:

DIN EN 55032 Class A	Product standard for information equipment - radio disturbance technology characteristics
DIN EN 61000-3-2	Product standard for limit value for harmonic current emissions (equipment

	input current <less than=> 16 A per phase)
DIN EN 61000-3-3	Product standard for limit values – limiting voltage changes, fluctuations, and flickers in publicly owned low-voltage networks for devices with a rated current of <less than=> 16 A per phase
DIN EN 55035	Product standard for information technology equipment – interference immunity factor properties – limit values and testing procedures

Table 10: Standards Applied for Electromagnetic Compatibility

4.1.8 Contents of the EU Declaration of Conformity

Name and Address of the Manufacturer	Giesecke+Devrient Currency Technology GmbH, Prinzregentenstraße 161, 81677 Munich, Germany
	hereby confirms that the following product
Product Description:	Banknote processing system
Model Name:	BPS C1s
Serial Numbers	see details on type label

conforms to the requirements of the following EU Directives:

- 2014/35/EU (Low Voltage Directive)
- 2014/30/EU (EMC Directive)
- 2011/65/EU (RoHS directive)

Compliance is demonstrated through the application of the standard:

- EN 62368-1 + A11

  (Audio/video, information and communication technology equipment - Part 1: security requirements)

- EN 55032 + A11

  (Electromagnetic compatibility of multimedia equipment - emission requirements)

- EN 55035 + A11

  (Electromagnetic compatibility of multimedia equipment - interference resistance requirements)

- EN IEC 63000

  (Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances)

Place and Date	Signatures of company representatives

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4.2   Installation Room

The BPS C1s product is designed for installation in buildings.

The temperature and humidity of the surrounding air influence the operation.

4.2.1   Room Climate

The following environmental conditions are relevant for proper operation:

● Room climate in installation room

● Moisture content of the banknotes to be processed

Room Climate in Installation Room

The installation room must meet the following requirements:

Climate in the installation room	Values
Ambient temperature	+15°C–+35°C
Relative humidity (below the dew point not permissible)	30%–80% r.h.

Table 11: Values for the Room Climate

Moisture Content of the Banknotes to be Processed

Storage of banknotes	Values
Relative humidity	35%–approx.65% r.h.
Moisture content of the banknotes	4.5g/kg at 20°C (water/kg of banknotes)
The storage conditions before processing have a significant influence on the moisture content of the banknotes. The climatic conditions of the installation or banknote processing room only have a slight influence.	

Table 12: Values for the Banknote Humidity and Storage Conditions

Deviations from the above-mentioned values can lead to reduced banknote throughputs. In particular, a lower moisture content of the banknotes can lead to electrostatic effects.

The room climate must also meet the requirements listed when the machine is not in operation, e.g. overnight, on weekends, and on public holidays.

4.2.2   Lighting

In general, the national specifications for lighting for office workstations must be fulfilled.

You must observe the following points:

- The lighting must be glare-free.
- The same level of brightness must be present throughout the installation room. This is particularly important during servicing and maintenance work.
- Avoid direct sunlight.

4.2.3 Connections

Please take note of the following information concerning the connections in the installation room:

Electrical Connections

The socket for the power connection must always be installed near the banknote processing system and easily accessible.

Use a separate socket or correspondingly dimensioned and approved supply units for each machine.

Additional sockets must be installed on site to connect additional external equipment.

Other pieces of external equipment are:

- Thermal printer
- External display
- PC
- Barcode reader
- USB interface
- LAN interface

At least one additional socket must be installed no further than 3 m from the banknote processing system for service requirements. This socket must also be easily accessible.

Network Connection

You can connect the BPS C1s product to a network.
→ *chapter 4.2.8 "Local Area Network (LAN)", p. 23*
An Ethernet network connection must be fitted near the banknote processing system for this.

4.2.4 Installation Area

The following minimum installation area is recommended for installation.

	Table size (l x w)
BPS C1s	1200mmx700mm

Table 13: Dimensions of the Installation Areas

> **!** ***Important***
>
> If external devices are installed, the amount of space required increases.
>
> You must ensure sufficient space for the delivery and removal of the banknotes as well as providing a storage space for the transport containers.
>
> The table must be designed to carry the weight of the machine and any accessories or additional loads.

4.2.5   Traffic Area

The BPS C1s product can be set up as a sitting or standing workstation.
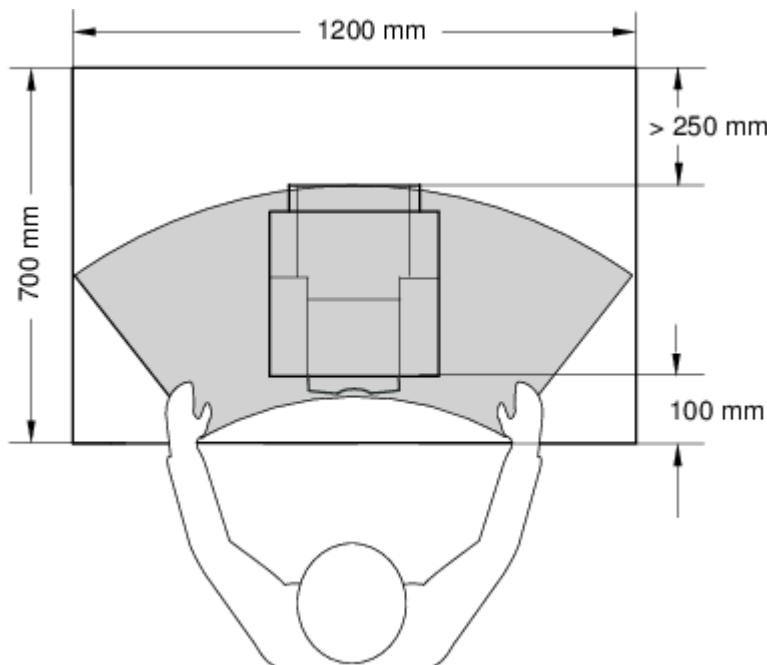
Figure 5: Workstation Design

The marked area indicates the recommended operating area for a machine depending on body size and work organization.

You must organize appropriate operating areas for external equipment.

You must ensure that the traffic areas meet national regulations for accessibility to the banknote processing system as well as for the delivery and removal of the banknotes.

> **⚠ WARNING**
>
> **⚠ Poor posture**
>
> Poor posture over long periods of time can cause long-term health problems (for example, back problems).
>
> ► Arrange the workstation to meet your needs.

4.2.6 Electrostatic Discharge

The floor coverings in the installation rooms must be anti-static to avoid electrostatic discharge (ESD).

The resistance to earth must be less than or equal to 100 MΩ (resistance to earth measured according to DIN EN 1081, procedure B, or resistance to earth measured according to DIN EN 61340-4-1).

For further information, please refer to the national regulations. National building and fire protection ordinances must be followed.

For a resistance to earth of more than 100 MΩ, additional measures are recommended for activities, which exceed the operating limits. These measures prevent temporary malfunctions and/or damages due to electrostatic discharge of the operators or service personnel.

Depending on the requirements in the installation rooms (measured resistance to earth, minimum humidity, etc.), additional measures for touching and/or handling electric components (e.g., replacing a component or connecting a cable) may be necessary to ensure availability. These measures can, for example, comprise special training sessions, special precautionary measures or increased supply of spare parts and can therefore increase maintenance costs.

4.2.7 Magnetic Fields

The product BPS C1s must not be exposed to strong magnetic fields, because external magnetic fields will influence the measuring accuracy of the magnetic sensor.

⚠ NOTICE

Monitors, high-voltage cables, or high-voltage transformers can cause strong magnetic fields.

Operating the highly sensitive sensors of the product near strong magnetic or electromagnetic fields can cause disruptions of the system processes.

► Do not install the product near strong magnetic fields.

⚠ NOTICE

Mobile end devices generate magnetic fields when they are switched on.

The product may malfunction during operation.

► Maintain a minimum distance of two meters to the product.

4.2.8 Local Area Network (LAN)

You can link several banknote processing systems together at one installation location via a Local Area Network (LAN; Ethernet 10BASE-T with STP cable; 10, 100, 1000MBit/s). Optional EDV system components can also be connected via the LAN.

The layout of a LAN reflects the local conditions of the installation location, such as:

- distances between the individual EDV system components,
- spatial separations,
- LAN technology used.

The physical location of the LAN line must take into account all of the planned EDV system components at the installation site. If you do not position all of the banknote processing systems that are to be installed close together in one room, you must design the LAN infrastructure you provide to be state of the art.

The banknote processing systems are equipped by default with an RJ-45 port. On a separate Hub, you can connect EDV components with lengths of up to 100 m each.

The use of additional EDV networks / other network technology is possible after notifying and coordinating with G+D.

4.2.9   Remote Service Connection

The G+D Remote Support enhances the service and support capabilities. It is a secure, efficient, and comprehensive Remote Access Solution (RAS) and enables standard services for the optimization of maintenance actions as well as new advanced service features for performance and productivity improvements for G+D's and also third-party banknote processing, or automation systems and software solutions. Key services are Remote Diagnosis and Remote Update, especially important for fast support during the warranty period.

The system provides a defined interface to the customer network. All online connections will be initiated and controlled by the customer. This ensures that no unauthorized party can access the systems. For more details please also refer to the software manual.

→ *"G+D Remote Support Software Manual"*

Hardware Requirements

- G+D Remote Support (hardware with pre-installed firmware)
- Network cable
- PC with operating system and network card (LAN, RJ45)

Connection Requirements

- Intranet connection (LAN) to the product
- Internet connectivity over HTTPS/SSL port 443

5 Installation

The following must be observed during the installation.

5.1 Transport

Take note of the following information during transport.

Make sure that the unloading area at the installation site is dry and protected from the elements.

Make sure that the product is lying horizontally during transport.

Take note of the following safety information during transport.

⚠ WARNING
Incorrectly transporting heavy equipment
Danger of personal injury, damage to property and to a loss of warranty
► When transporting the machine, follow the legal regulations on transporting heavy equipment.
► Use appropriate lifting and transport equipment.
► Use personal protective equipment.
► Safety shoes
► Gloves

⚠ DANGER
Danger of electric shock
Danger of death or serious injury from electric shock
► Always unplug the machine by pulling on the plug and never by pulling on the cable.

⚠ NOTICE
Existing plug connections
Risk of damage to the machine during transportation.
► Unplug all plug connections.

5.1.1 Transport within Buildings

You can transport the product inside buildings without special packaging.

5.1.1.1 Transport within Buildings by one person

>) **Proceeding**
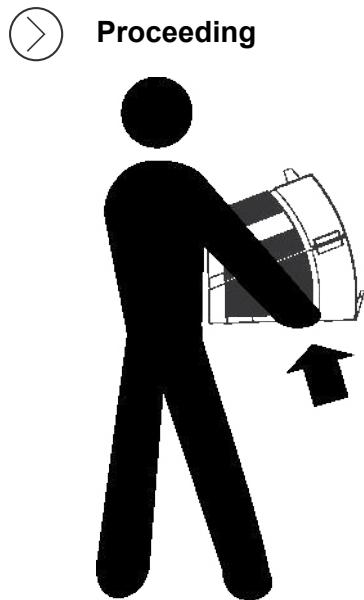
1. Grasp the machine from the bottom with both hands.

2. Hold the machine against your upper body.

3. Support the machine with your forearms at either side.

5.1.1.2 Transport within Buildings by two persons

>) **Proceeding**

1. Two people grasp the machine from the bottom with one hand.

2. Both people support the machine with their other hand on the rear panel.

5.1.2 Transport Outside of Buildings

When transporting the product outside of buildings you must transport it in the original packaging or equivalent.

5.2 Unpacking

The packaging consists of the following components:

- Cardboard (cover) (1)
- Accessories (documentation) are located on the foam insert (2)
- Foam inserts: top (2); bottom (5)
- Outer cardboard box (6)
- Corrosion protection film (not illustrated)

![Exploded view of packaging with numbered parts 1-6]
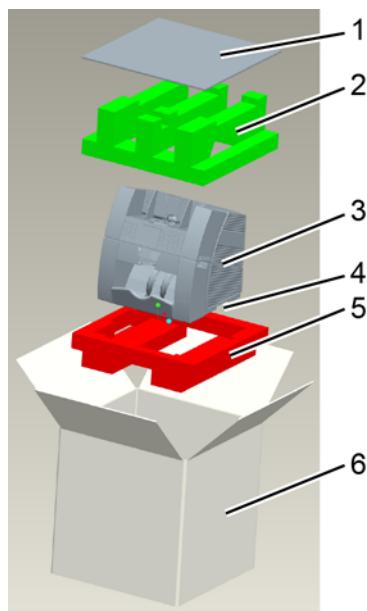
Proceeding

1. Check the packaging to see that it is undamaged. If you notice any damage, contact your retailer.

2. Carefully cut open the adhesive tape on the outer cardboard box (6) and open it.

3. Remove the top layer of cardboard (1) (cover).

4. Remove the accessories from the top foam insert (2).

5. Remove the top foam insert (2).

6. Grasp the recessed handles (4) on the bottom left and right of the machine (3) and carefully remove it from the outer cardboard box (6). Place the machine on a flat, sufficiently load-bearing surface.

7. Remove the corrosion protection film.

8. Insert the enclosed banknote guide.

9. Retain the packaging for possible future transport.

5.3 Installation and Connection

Required conditions

Unpack the machine. The instructions for unpacking can be found on the package insert BPS C1s → *Quick Start Guide* and in the → *chapter 5.2 "Unpacking", p. 26*

Items Supplied

Check the items supplied:

- BPS C1s machine
- customer documentation (Quick Start Guide)
- USB cable

External devices such as printers, PCs, or external displays are optional and must be ordered separately.

You will find the connections on the rear of the machine.
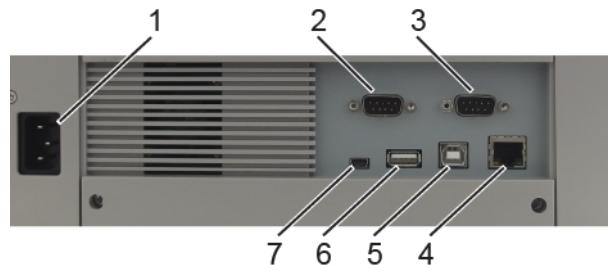
Figure 6: Connections

1   Connection for power supply
2   COM2: interface for printer or barcode reader
3   COM1: interface for printer or barcode reader
4   LAN interface
5   USB interface for PC
6   USB interface for saving data to a USB flash drive
7   Interface for external display

⚠ DANGER

Danger of electric shock

Damaged cables or plugs can cause electric shock, short circuits, fire, etc. This may result in death or serious injury.

► Ensure that plugs or cables are not crushed or placed under extreme weight.

► Ensure that the cables are routed safely.

► Ensure that the cables do not hang out.

⚠ CAUTION

Cables are routed along the floor.

Danger of tripping

► Make sure that all cables are routed safely.

⚠ CAUTION

Reflections at workstations

► This machine must not be placed in the direct field of view at workstations.

⟩ **Proceeding**

1.

⚠ NOTICE

Skewed installation of the machine/device

Risk of impaired function

► Make sure the machine/device is on a horizontal table top.

► Make sure that no objects, such as pens or screwdrivers, are located underneath the machine/device.

Place the machine on a suitable, sufficiently stable surface.
→ *chapter 4.2.4 "Installation Area", p. 21*

2. Make sure that the machine and all cable connections are easily accessible.

3. Make sure that the machine is easy to open.

Mains Cable

4. Connect the mains cable (1).

Printer (Optional)

5. Connect one (2 or 3) or two (2 and 3) printer(s).

6. Configure the printer(s).
→ *chapter 7.2.4 "I/O Settings", p. 85*

Barcode Reader (Optional)

The barcode reader option will be available in a subsequent release.

7. Connect the barcode reader (2 or 3).

8. Configure the barcode reader.
→ *chapter 7.2.4 "I/O Settings", p. 85*

PC (Optional)

9. Connect the PC (5).

External Display (Optional)

10. Connect the external display (7).

5.4 Configuring Currencies without a Licence Key

BPS C1s is available in three pre-configured variants (universal X-Model types):

● 32 currencies and the functions fitness, SN reading and TITO

● 10 currencies and the functions fitness and SN reading

● 5 currencies and the functions fitness and SN reading

Due to the production process, the machines must already have currencies installed. However, it is possible to adjust the currencies once

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without a licence key. To change the number of currencies, a licence key is still required.

Important

This configuration is **only possible** when the machine is connected to the GD_PCSuite software **for the first time**. You should therefore decide which currencies you need before you connect to the GD_PCSuite software for the first time.

Required conditions

You are familiar with the functions and processes of the GD_PCSuite Software.
→ *chapter 9.4.8 "Updating the Machine", p. 164*

Proceeding

1. Check which currencies are pre-installed.

   → *chapter 6.4.1 "Selecting the Currency", p. 37*

2. Make a list of the currencies you require. The number must match the number defined in the model type and the order should be as the user would find it.

3. Switch on the machine and connect it to the PC via USB or LAN.

4. Open the GD_PCSuite software.

5. Confirm the query **Do you want to reset Currencies?** with **Yes** to change the currencies.

   ### Important

   This query will not be repeated. If **No** is selected, the pre-installed currencies will be used and you will need a licence key to change them.

6. Select **Machine Upgrade**.

7. Select **Select Currency** .

   ⇨ The selection list will appear.

8. Select the required currencies in the order in which they are to be displayed to the operator and confirm with **OK**.

9. Select 🔽 Upgrade in the Detection Module Upgrade.

10. Confirm the message **Currency Upgrade Successful**.

Result

The currencies are selected. The machine restarts automatically.

6 Operation

This chapter contains information on how to operate the machine.

Please note the following:

⚠ **NOTICE**

Ensure that no metal objects (for example, staples) and/or liquids find their way into the machine/device.

Risk of damaged machine/device

► If metal objects and/or liquids get into the machine/device:

► Switch off the machine/device.

► Disconnect the machine/device from the power supply.

► Have the machine/device checked by qualified personnel before continuing work.

6.1 Switching the Machine On and Off

The power switch is at the front of the machine.

Figure 7: Machine Power Switch

⟩ **Proceeding**

Switching On

1. Press the power switch.

   ⇨ After booting up, the main screen appears.

Switching Off

2.   ⓘ *Important*

All unsaved results will be deleted when the machine is switched off.

Print or save the results, if required.
→ *chapter 6.8 "Printing the Result", p. 69*
→ *chapter 6.7.3 "Printing or Deleting the "Grand Total" Result List", p. 67*
→ *chapter 6.7.4 "Printing the "Daily Result" List", p. 67*

3.   Press the power switch.

⇨   The machine is switched off.

6.2   Switching Operators

The machine supports banknote processing by two operators with up to five operator profiles per operator on one machine. In the operator profiles you can set different sorting criteria and thus use them as quick modes. All functions of banknote processing can be used separately by both operators. The operators work with their current settings in their operation mode.

The supervisor can set whether two operators with multiple operator profiles are available on the machine as well as the designation of the operator profiles in the supervisor configuration menu.
→ *chapter 7.3.1 "UI Settings change", p. 100*

Figure 8: Operator Keys

An operator with up to five operator profiles (L1–L5) works with the left keys (1).

An operator with up to five operator profiles (R1–R5) works with the right keys (2).

If only one operator is activated in the supervisor configuration menu, the operator can work with both keys (1 and 2).

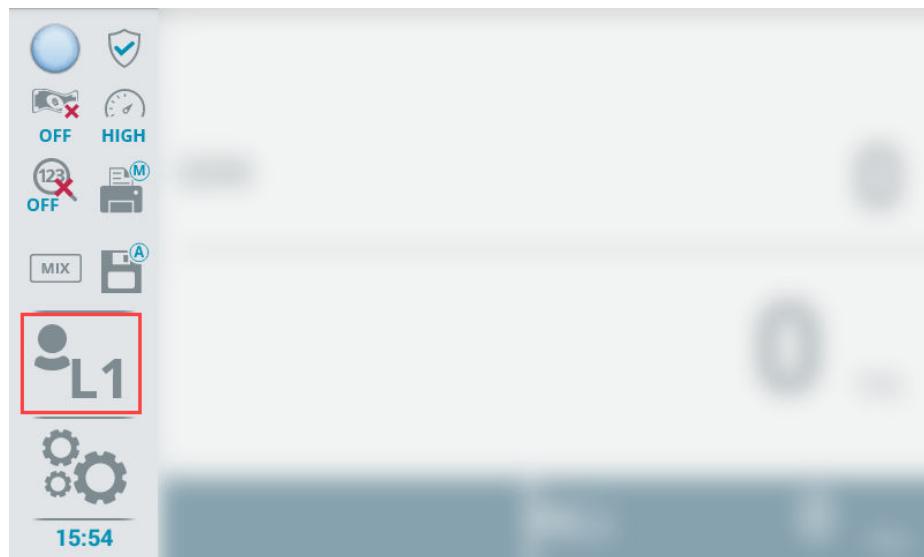The operator currently logged on is shown on the left of the screen.

Figure 9: Operator Login

⟩ **Proceeding**

Switch to Left Operator

1. *Requirement*

   Right operator has completed their current banknote processing.

   Press the Enter key on the left.

   ⇨ The display on the screen switches to the left operator.

Switch to Left Operator Profile

2. Select the operator icon on the left of the user interface until the desired operator profile is displayed.

Switch to Right Operator

3. *Requirement*

   Left operator has completed their current banknote processing.

   Press the Enter key on the right.

   ⇨ The display on the screen switches to the right operator.

Switch to Right Operator Profile

4. Select the operator icon on the left of the user interface until the desired operator profile is displayed.

6.3   Preparing Banknotes
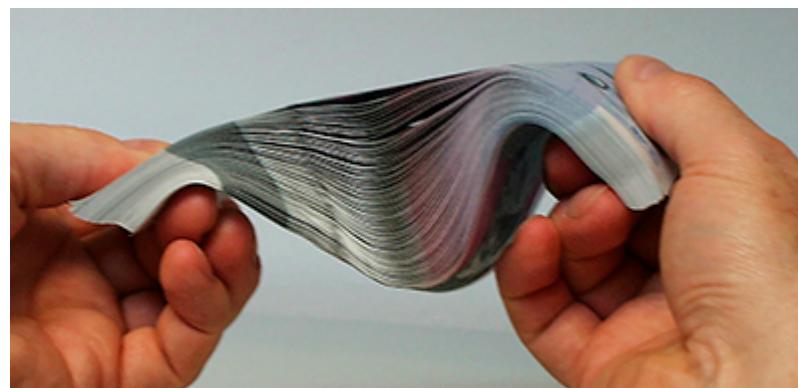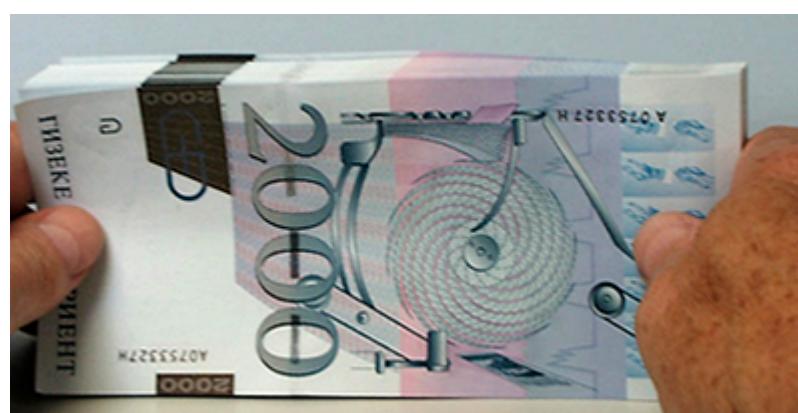
Proceeding

1.   If necessary, remove the straps.

2.   Proceed according to internal regulations.

3.   Fan the banknotes up.

4.   Fan the banknotes down.

5.   Straighten the banknote stack.

6. Make sure that the edges are flush.

7. Smooth the banknotes and remove dog-ears.

> ⓘ *Important*
>
> Proper banknote preparation improves the banknote processing and increases the throughput.

8.

> ⚠ *NOTICE*
>
> **Objects such as clips, paperclips, or rubber bands**
>
> Risk of damaged machine/device
>
> ► Make sure that there are no objects on the banknotes.
>
> ► Only place banknotes in the singler.
>
> ► Only place banknotes and tickets in the singler during ticket operation.

Before inserting the banknotes in the singler, sort out banknotes with the following characteristics:

- Extreme damage
- Heavy soiling
- Curved/kinked banknotes
- Very creased banknotes
- Folded banknotes

Figure 10: Poor quality banknote

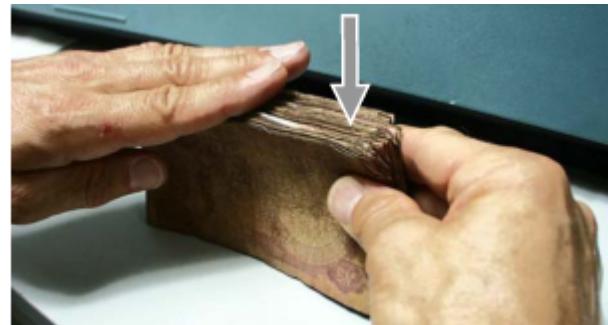9. Place these banknotes to one side for manual inspection.

10. Before placing the banknotes in the singler, make sure that the banknotes are not arched downward along their length.

Particularly poor quality banknotes

The following procedure is recommended in addition:

11. Straighten the BN lengthwise.

12. Fan the right side of the BN package.
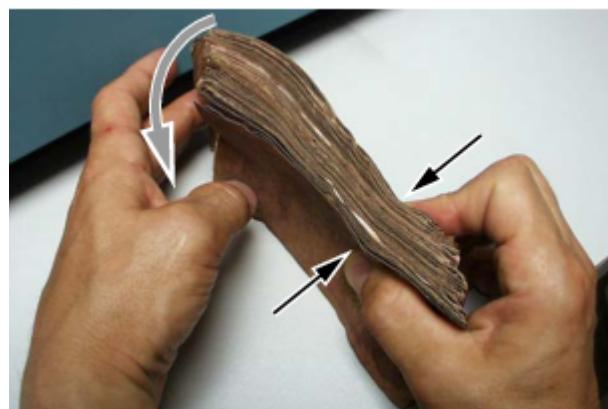
13. Fan the left side of the BN package.

14. Shift the BN sideways.

15. Bend the BN in the middle.

16. Smooth any bent leading edges and dog-ears.

6.4   Processing Banknotes

6.4.1   Selecting the Currency

Depending on the factory settings, you can select different currencies or options related to currency.

The currently selected currency is shown on the screen.

Figure 11: Recognizing Currency Using Euros as an Example

In addition to the different currencies, there are also the following options:

● **COUNT** - Sorting and counting objects by size

→ *chapter 6.4.10 "Sorting Banknotes According to Size", p. 59*

● **AUTO** - Detecting the currency automatically

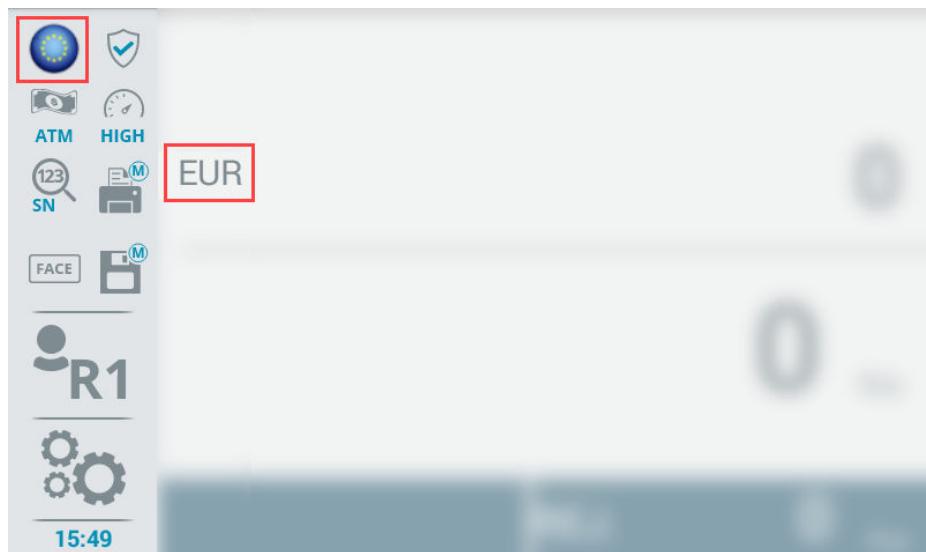When this option is selected, the machine detects the currency automatically. The currency that the sensor recognizes first is the reference for the sorting.

With **AUTO**, only the following options are available during serial number scanning:

Serial number scanning

Compare serial numbers

● **MIX** - Processing different currencies simultaneously

→ *chapter 6.4.2 "Processing Banknotes of Different Currencies Simultaneously", p. 39*

You can set the availability of these options in the operator configuration menu.

Proceeding

You have different options for selecting the currency:
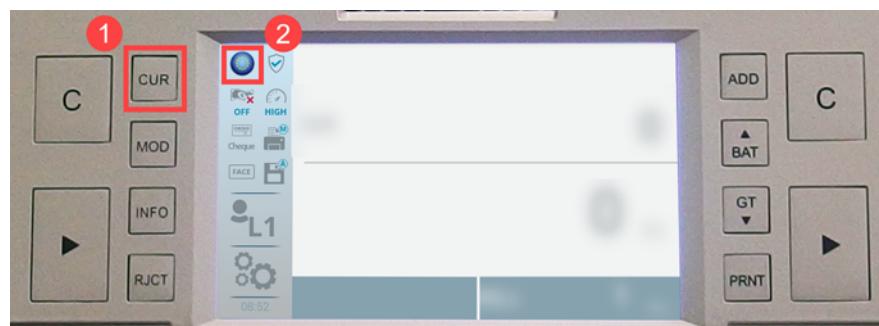
Selecting the Currency Sequentially

1. <u>Briefly</u> press the **CUR** key (1).

   ⇨ The available currencies and options appear one after the other on the screen.

Selecting the Currency Directly

2. Choose between the following options:

a) Press and <u>hold</u> the **CUR** key (1).

b) Select the currency symbol (2) on the touchscreen.

⇨ The available currencies and options are displayed.

3. Select the desired currency or option.

⇨ **Result**

The desired currency or option has been set.

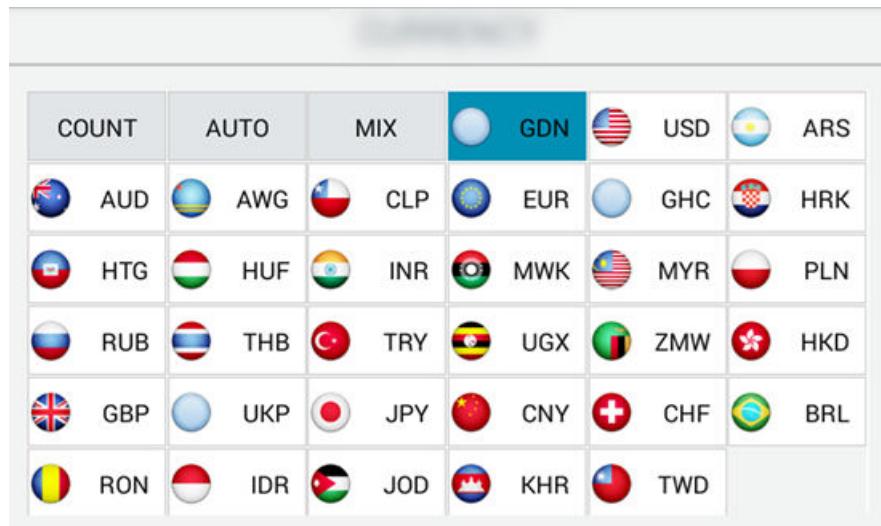## 6.4.2 Processing Banknotes of Different Currencies Simultaneously

You can process different currencies simultaneously on the machine. Which currencies can be processed simultaneously depends on the available currencies on the machine and which have been assigned to you.

Sorting/Fitness Criteria and Additional Settings

Currency Option MIX is used for quickly processing deposits with different currencies, not for sorting banknotes. To prevent incorrect settings being used by mistake, the following options are fixed and cannot be changed:

● Sorting mode: [MIX] or [CUSTOM] (for special applications)

● Fitness mode: [OFF]

● Serial number, ticket reading, or check function: [OFF]

● **BAT** key: No information for quantity and value of the banknotes

Required conditions

Select the currency **Currency Option MIX**.
→ *chapter 6.4.1 "Selecting the Currency", p. 37*

Proceeding

1. Process the banknotes with automatic or manual singling.
    → *chapter 7.1.2 "Selecting Automatic Singling/Printing/Add-ing/Resetting", p. 77*

    ⇨   The machine counts the banknotes. You will see the quantity and total of all processed currency on the screen.

MIX			
OFF	HIGH	EUR	3	45
OFF		USD	3	5
MIX			

L1

15:24
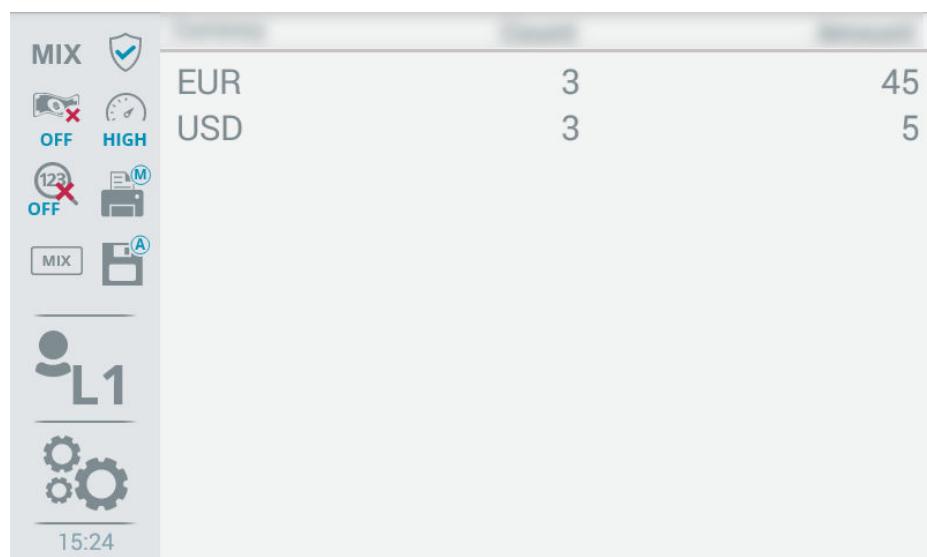
2. Select the desired currency to display the quantity and total of banknote denominations.

- EUR			
5	1	10	0
20	2	50	0
100	0	200	0
500	0		

✔

3.   Confirm to return to the result menu.

4.   Press the **CUR** key to show the number and total of the different currencies.

Performing Manual Inspection

You can add the rejected banknotes of the accounting unit, which have been manually checked and released, for each currency.

5.   Press the **CUR** key until the desired currency appears.

6.   Follow the instructions for the manual inspection.

→ *chapter 6.5.2 "Performing Manual Inspection", p. 63*

6.4.3   Sorting Settings

You can select different sorting settings depending on the factory settings.

The following sorting settings are available:

● Sorting mode (3)
● Fitness mode (1)
● Mode for serial number scanning, tickets, or checks (2)

The currently selected sorting settings are visible on the left of the screen.
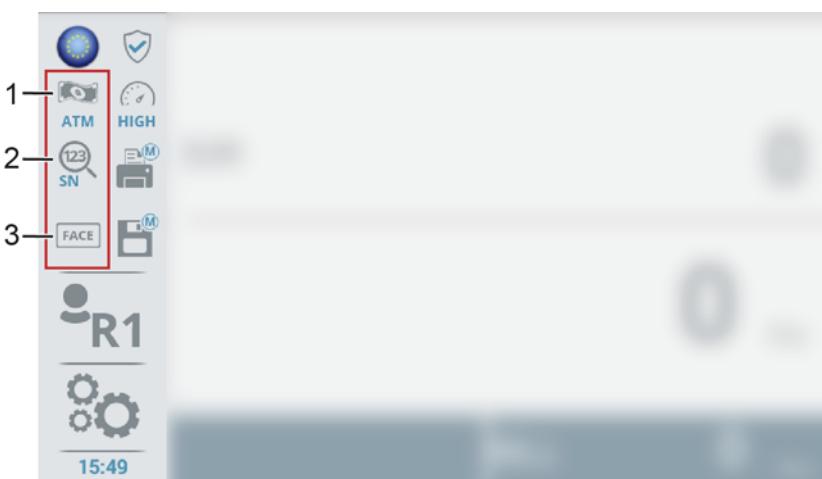

Figure 12: Sorting Settings

You have the following options for selecting the sorting settings:

● Touchscreen
● **MOD** key

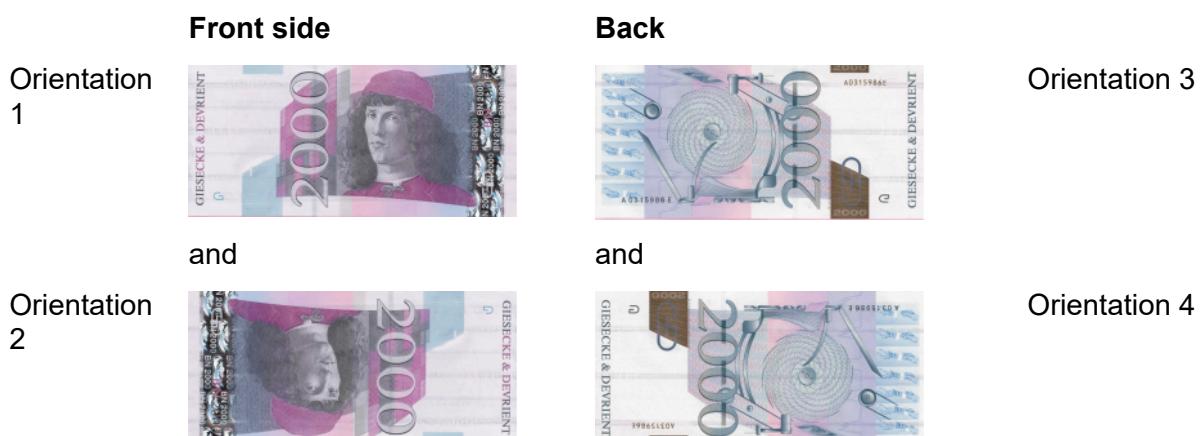#### 6.4.3.1   Selecting the Sorting Mode

You can sort banknotes using different sorting modes. The machine counts the banknotes which it sorts to the delivery stacker.

It is possible that not all sorting modes are activated. The supervisor can deactivate them in the configuration.

The following sorting modes are available:

Mix	Process banknotes of different denominations.
	Suspected counterfeit and unknown banknotes are sorted to the reject stacker.
Face	Sort banknotes separately according to the face or reverse. The banknote whose face or reverse is identified first by the sensor acts as the reference for sorting.
	The orientation of the banknote (upright or upside down) does not matter. The machine sorts banknotes that do not match the reference and suspected counterfeit banknotes to the reject stacker.
Emission	Sort a denomination according to emission (series). The banknote whose series is recognized first by the sensor then acts as the reference for sorting.
	The machine sorts banknotes with another emission (series) and suspected counterfeit banknotes into the reject stacker.
Orientation	Sort banknotes according to one orientation. The banknote whose orientation is recognized first by the sensor then acts as the reference for sorting.
	The machine sorts banknotes with other orientations and suspected counterfeit banknotes into the reject stacker.
Denomination	Sort banknotes according to denomination. The denomination that the sensor recognizes first acts as the reference for sorting.
	The machine sorts banknotes of other denominations and suspected counterfeit banknotes into the reject stacker.
Custom mode	Sort banknotes according to one customer mode.
	The machine sorts banknotes that do not match the customer mode and suspected counterfeit banknotes to the reject stacker.

Explanation for the different orientations of a banknote:

	Front side	**Back**	
Orientation 1			Orientation 3
	and	and	
Orientation 2			Orientation 4

Proceeding

You can select the sorting mode in one of the following different ways:

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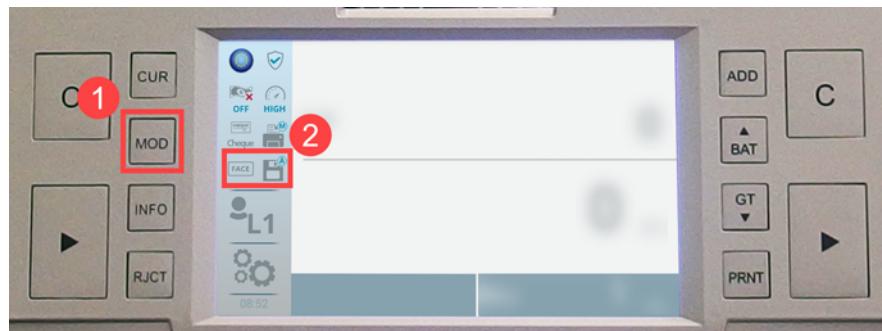Creating Confidence

Figure 13: Selecting the Sorting Mode

Select Sorting Mode Sequentially

1. <u>Briefly</u> press the **MOD** key (1).

   ⇨ The available sorting modes appear one after the other on the screen.

Select Sorting Mode Directly

2. Choose between the following options:

   a. Press and <u>hold</u> the **MOD** key (1).

   b. Select the sorting mode (2) on the user interface.

   ⇨ The available sorting modes are displayed.

3. Select the desired sorting mode.

⇨ **Result**

The desired sorting mode is set.

(!) *Important*

You can switch off denominations via the operator configuration menu. The machine then sorts these denominations into the reject stacker. This setting is useful to remove denominations taken out of circulation from the accounting unit.

6.4.3.2 Selecting a Fitness Mode

You can also choose fitness criteria, which the machine will take into consideration when sorting.

It is possible that not all fitness modes are activated. The supervisor can deactivate them in the configuration.

The following fitness modes are available:

ATM   This sorts the banknotes according to the ATM fitness criterion to the delivery stacker. The machine sorts all other banknotes (fitness criteria fit and Unfit as well as suspected counterfeit and unknown banknotes) into the reject stacker.

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Fit	This sorts the banknotes according to the ATM and fit fitness criteria to the delivery stacker. The machine sorts all other banknotes (fitness criterion Unfit as well as suspected counterfeit and unknown banknotes) into the reject stacker.
	In the Euro adaptation, this fitness mode corresponds to the specifications of the European Central Bank (ECB).
Unfit	This sorts the banknotes according to the Unfit fitness criterion to the delivery stacker. The machine sorts all other banknotes (fitness criteria ATM and fit as well as suspected counterfeit and unknown banknotes) into the reject stacker.
Tape mode	With this, you sort the banknotes with adhesive tape into the reject stacker. All other banknotes are sorted into the delivery stacker.
Prefit	This sorts the banknotes with physical damage (holes, tears, and dog-ears) into the reject stacker. All other banknotes are sorted into the delivery stacker.
2+0	This allows you to calculate both fit and unfit banknotes at the same time. The machine sorts banknotes that match the ATM and fit fitness criteria into the delivery stacker. The machine sorts banknotes that match the Unfit fitness criterion as well as suspected counterfeit and unknown banknotes into the reject stacker. → *chapter 6.4.9.2 "Processing Fitness Sorting with 2+0 Mode", p. 56*
Prefit+Tape	With this, you sort the banknotes with adhesive tape and physical damage into the reject stacker. All other banknotes are sorted into the delivery stacker.
OFF	This is used to disable the fitness mode.

(!) ***Important***

The fitness mode is active in addition to the selected sorting mode. The machine processes banknotes in the selected sorting mode and also sorts them according to the criteria of the selected fitness mode.
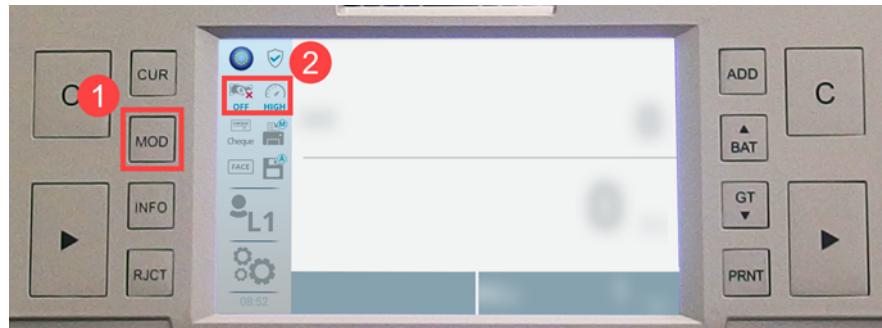

You can switch the fitness mode within a deposit.

For more information on how to process banknotes in fitness mode, click here:

→ *chapter 6.4.9 "Processing Banknotes in Fitness Mode", p. 55*

A detailed list of the banknotes processed according to the individual fitness criteria can be found in the associated report.

⊙ **Proceeding**

1. The following options are available to set the fitness mode.

   a. Press and hold the **MOD** key (1) and select the **Fitness** option.

   b. Select the fitness mode icon (2) on the user interface.

   ⇨ The available fitness modes are displayed.

2. Select the relevant option.

⇨ **Result**

The fitness mode is set.

6.4.3.3 Enabling Serial Number, Ticket Reading, or Check Function

You can select whether the machine reads the serial numbers on the banknotes and prints a list or reads tickets and decrypts a barcode or reads checks.

It is possible that not all functions are activated. The supervisor can deactivate them in the configuration.

Read in serial numbers on banknotes.

You can output the serial numbers to a printer or view them on a connected PC. To view the serial numbers on a PC, the "GD_PCSuite - End User Tool" software must be installed.

Reading serial numbers depends on customization.

Compare two serial numbers on one side of a banknote.

You can output the serial numbers to a printer or view them on a connected PC. To view the serial numbers on a PC, the "GD_PCSuite - End User Tool" software must be installed.

Reading serial numbers depends on customization.

ⓘ *Important*

Select serial number reading in addition to sorting mode. The machine processes banknotes in the selected sorting mode and simultaneously reads in the serial numbers of the banknotes.

Read tickets and decrypt the barcode.

The numbers of decrypted barcodes can be output to a printer. The images of the barcodes and the numbers of decrypted barcodes can be viewed on a connected PC. To view the barcodes on a PC, the "GD_PCSuite - End User Tool" software must be installed.

The following barcode types can be decrypted:

- I25
- EAN13
- Code 128C

⚠ *Important*

The machine can process banknotes in the selected sorting mode and simultaneously read in type I25 tickets. You can specify in the operator configuration menu whether the machine processes tickets only or tickets and banknotes.

Read in checks.

The machine saves the data from the checks as images. You can view these images on a connected PC. To view the images of the checks on a PC, the "GD_PCSuite - End User Tool" software must be installed.

⚠ *Important*

The machine can read in checks. You can set the appropriate check type in the operator configuration menu.
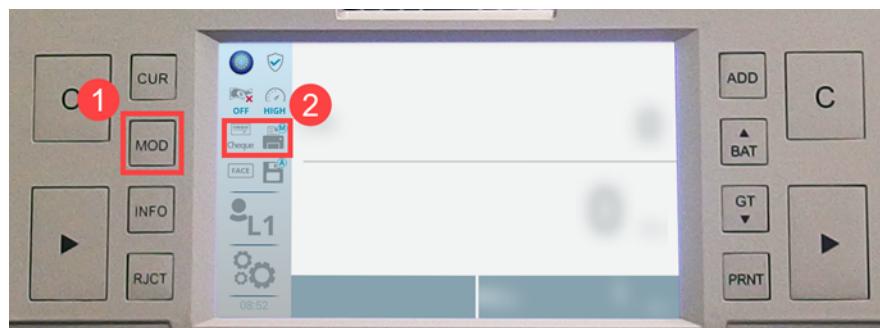
The machine reads type E-13B, CMC-7, OCR-A and OCR-B checks.

This disables the serial numbers, ticket reading, and check function.

⟩ **Proceeding**

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1. You have the following options to set serial number, ticket, and check scanning:

    a. Press and hold the **MOD** key (1) and select the **SN** option.

    b. Select the icon for serial number, ticket, or check scanning (2) on the user interface.

    ⇨ The available options are displayed.

2. Select the desired option.

⇨ **Result**

This sets ticket reading, the check function, or serial number scanning.
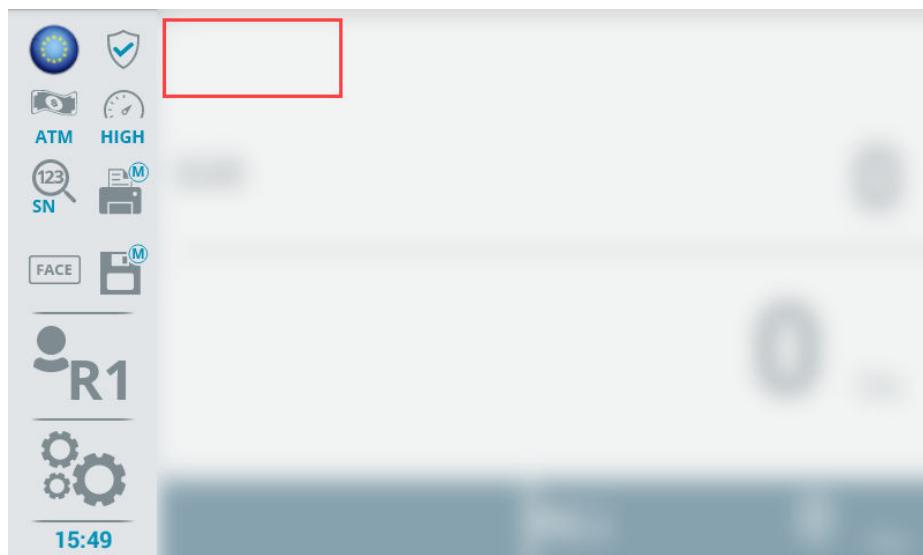
6.4.4   Processing Banknotes without Deposit

If you do not know the value or number of banknotes, process the banknotes without indicating a package size or the target value.

The machine sorts unknown and suspected counterfeit banknotes into the reject stacker.

Proceeding

1. Press the **BAT** key until there is no batch icon on the screen.

    ① *Important*

    If the [icon] symbol is displayed on the screen, the supervisor

    must deactivate the Deposit Balancingwizard.
    → *chapter 7.3.3 "Deposit Balancing adjust settings", p. 105*

    ⇨   The machine switches to the mode for banknote processing
        without deposit. Previously configured settings for quantity
        and value remain saved if you select the respective BAT icon.

2. Process the banknotes with automatic or manual singling.
    → *chapter 7.1.2 "Selecting Automatic Singling/Printing/Add-
    ing/Resetting", p. 77*

⇨   **Result**

The machine counts the banknotes. The quantity and total of bank-
notes in the delivery stacker and the quantity of rejected banknotes in
the reject stacker appear on the screen.

6.4.5   Specifying the Package Size

You can specify package sizes, which are stacked and accounted. You
can choose whether the package size remains fixed until you manually
delete the entry or whether you change the quantity after each com-
plete packet. You also have the option of entering the package size
manually or selecting a preset package size.

The following preset package sizes are available:

● 10
● 20
● 50
● 100

The machine sorts unknown and suspected counterfeit banknotes into
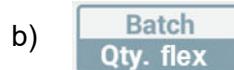the reject stacker.

> **Proceeding**

1. Press the **BAT** key until the desired option appears on the screen.

   a)

   The package size remains fixed until it is deleted manually.

   b)

   The package size can be changed after each complete package.

2. To set the package size, choose between the following options:

   - Option A: Set package size manually
     → a
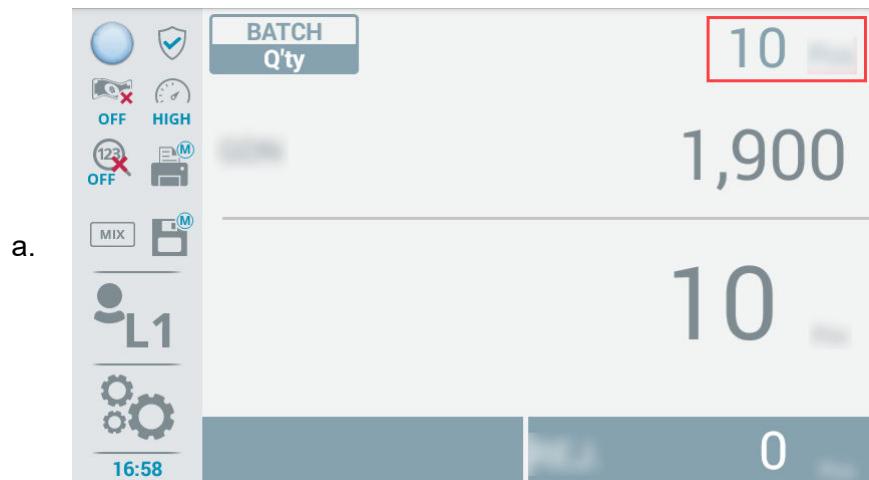   - Option B: Select preset package size
     → a

Option A: Set package size manually

a. Click the icon.

   ⇨ The numerical keypad appears.

b. Enter the package size using the numerical keypad.

c. Confirm your entry.

Option B: Select preset package size

a.

   Press the quantity until the desired package size appears.

3. Process the banknotes with automatic or manual singling.
→ *chapter 7.1.2 "Selecting Automatic Singling/Printing/Add-ing/Resetting", p. 77*

⇨ The machine counts the banknotes. The banknote that the sensor recognizes first is the reference for sorting.

The machine stops and waits for further input until the defined package size is reached.

4. Place more banknotes in the singler.

⇨ The machine stops when the defined package size is reached.

5. Process the rejects if necessary.
→ *chapter 6.5 "Processing Rejects", p. 60*

6. Remove the banknote package.

⇨ The quantity and total of banknotes in the delivery stacker is displayed on the screen.

If a fixed package size is used, the machine counts more banknote packages until no further banknotes are inserted. The banknote that the sensor recognizes first after each complete package is the reference for sorting.

For a flexible package size, you must enter a new package size.
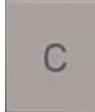
7. Press [C] to close the warning when processing incomplete banknote packages.

6.4.6   Processing Banknotes with Deposit

If the value of the banknotes is predefined and you want to check the target value (deposit), you can process the banknotes in deposit mode.

The machine sorts suspected counterfeit and excess banknotes into the reject stacker.

Batch Payout Mode

You can also use deposit mode with a target value specified as a payout mode and prepare payouts to the customer.

Recommended Requirements for Payout Mode

If you use the deposit mode as a payout mode, the following require-ments are advised:

● Activate manual adding, printing, and singling.
→ *chapter 7.1.2 "Selecting Automatic Singling/Printing/Add-ing/Resetting", p. 77*

● Start with the largest banknote denomination and close the deposit with the smallest banknote denomination.

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Proceeding

1. Press the **BAT** key until the [Batch Amount] icon appears on the screen.

2. Click the [Batch Amount] icon.

   ⇨ The numeric keypad appears on the screen.

3. Enter the target value via the numeric keypad and confirm your entry.

4. Process the banknotes with automatic or manual singling.
   → *chapter 7.1.2 "Selecting Automatic Singling/Printing/Adding/Resetting", p. 77*

   ⇨ The machine counts the banknotes.

      The machine stops when the target value is reached.

5. Process the rejects if necessary.
   → *chapter 6.5 "Processing Rejects", p. 60*

6. Remove the banknote package.

   ⇨ The quantity and total of banknotes in the delivery stacker is displayed on the screen.
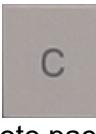
7. Press [C] to close the warning when processing incomplete banknote packages.

6.4.7 Processing Banknotes with Deposit Balancing

You can process banknotes with deposit conciliation. A wizard is configured on the machine for this purpose. Your supervisor can select whether this wizard is available. In addition, your supervisor can set the wizard so that it only requires a customer number and a deposit number and <u>no</u> target value.

Deleting deposit data (!)

Important

If you press and hold the **C** key, the accounting data for the deposit will be deleted. Therefore, do <u>not</u> press the **C** key to close Warning Messages. The supervisor can set how long the warning messages are displayed for.
→ *chapter 7.3.1 "UI Settings change", p. 100*

Required conditions

- Deposit Balancing is available.
- Automatic adding is activated.
  → *chapter 7.1.2 "Selecting Automatic Singling/Printing/Add-ing/Resetting", p. 77*

Recommended requirements

Enable automatic singling and automatic printing.
→ *chapter 7.1.2 "Selecting Automatic Singling/Printing/Adding/Reset-ting", p. 77*

Proceeding

Select deposit conciliation

1. Select the icon on the start screen.

   ⇨ The **Select deposit type** menu opens.

2. Select **Deposit Balancing**.

Entering the supervisor ID

3. When the supervisor ID prompt appears, enter the supervisor ID and confirm.

Entering the customer number

4. Enter the customer number and confirm.

Entering the deposit number

5. Enter the deposit number and confirm.

Entering the target value

6. When the target value prompt appears, enter the target value and confirm.

Processing banknotes

7. Process the banknotes.

   a. Insert the banknotes into the singler.

      ⇨ The machine counts the banknotes. The quantity and total of banknotes in the delivery stacker appears on the screen.

   b. Process the rejects if necessary.
      → *chapter 6.5 "Processing Rejects", p. 60*

8. Remove the banknotes from the delivery stacker.

⇨ The result of the current deposit is added up and the **Select deposit type** menu opens again automatically.

6.4.8 Adding the Accounting Units

You can select whether the machine adds the totals of different accounting units (banknotes) when processing banknotes.

Recommended
Requirement

Enable automatic printing.
→ *chapter 7.1.2 "Selecting Automatic Singling/Printing/Adding/Resetting", p. 77*
If manual printing is set, you must ensure that you print first and then save the data at some point during the procedure. Otherwise the data for printing are no longer available.

You can see whether or not the function is enabled at the bottom of the screen. When this function is enabled, the total of the accounting units added is displayed.
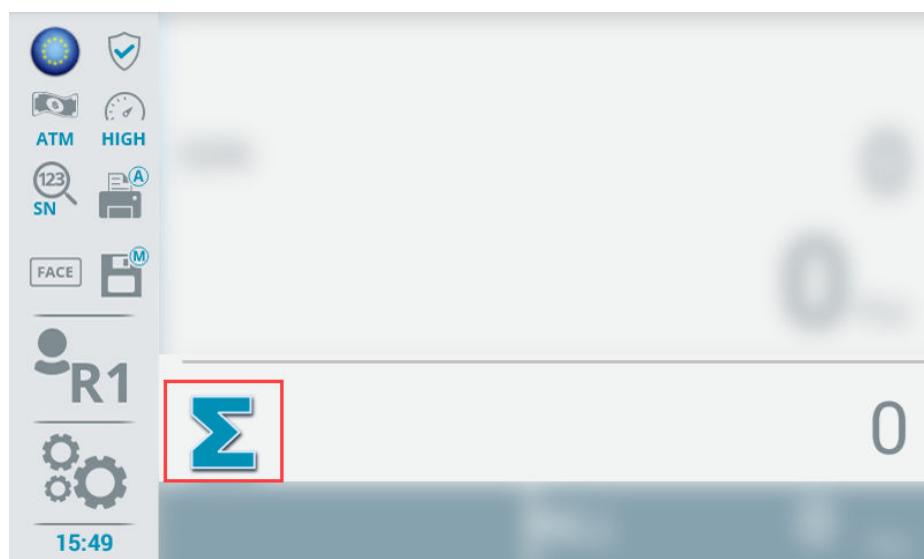

Figure 14: Adding the Counter Result

! *Important*

When you add accounting units, it is not possible to select **Currency Option MIX**.

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Proceeding

1. Press the **ADD** key.

   ⇨ The machine enables or disables the function.

   If the function is activated, the banknote processing results are saved in the "Grand Total" list (value, quantity, and total of banknotes processed in several processing steps).

   → *chapter 6.7 "Using Result Lists", p. 65*

2. Process the banknotes.

3. Process the rejects if necessary.
   → *chapter 6.5 "Processing Rejects", p. 60*

   Depending on the system settings you have the following options for further processing.

   ● Automatic adding – The machine automatically adds the accounting units when you remove the banknotes from the delivery stacker.

   ● Manual adding – You must manually add the accounting units before you remove the banknotes from the delivery stacker.

   You can modify the system settings.
   → *chapter 7.1.2 "Selecting Automatic Singling/Printing/Add-ing/Resetting", p. 77*

   If you want to print the result and have enabled manual printing, you need to print the result before removing the banknotes.
   → *chapter 6.8.2 "Manual Printing", p. 70*

Manual Adding

4. Press the **PRNT** key.

   ⇨ The print menu opens.

5. Select **Save to grand total**.

   ⇨ You have saved the total and added it up manually.

6. Remove the banknotes from the delivery stacker.

7. Continue work with a new deposit.

Delete End Result

8. If you wish to start a new accounting process, you need to delete the end result. Delete the end result via the "Grand total" result list.
   → *chapter 6.7.3 "Printing or Deleting the "Grand Total" Result List", p. 67*

6.4.9   Processing Banknotes in Fitness Mode

The following procedure is recommended if you want to process banknotes in fitness mode.

Suspected Counterfeit Banknotes

If the machine detects a suspected counterfeit banknote an error message is displayed. Press the message to hide it and check the reject reasons.

Processing Rejects

If there are rejects, check the reject reasons and process the rejects.
→ *chapter 6.5.1 "Displaying Reject Reasons", p. 61*
→ *chapter 6.5 "Processing Rejects", p. 60*

Processing Options

First, separate the ATM and fit banknotes from the suspected counterfeit and unfit banknotes. Then separate the suspected counterfeit banknotes from the unfit banknotes.

- Processing banknotes without using the wizard

    → *chapter 6.4.9.1 "Processing Banknotes Without Using the Wizard", p. 55*

- Processing banknotes using the 2+0 mode.

    → *chapter 6.4.9.2 "Processing Fitness Sorting with 2+0 Mode", p. 56*

To process the banknotes in accordance with the ECB specifications, you must follow the procedure described.

6.4.9.1   Processing Banknotes Without Using the Wizard

If the wizard is not available, you can still process the banknotes according to ECB specifications. To do this, perform the steps as described.

Required conditions

- Press the **ADD** key to add the accounting units.
  → *chapter 6.4.8 "Adding the Accounting Units", p. 53*

- Enable automatic singling, automatic printing, and automatic adding.
  → *chapter 7.1.2 "Selecting Automatic Singling/Printing/Adding/Resetting", p. 77*

- Select the sorting mode **Mix**.
  → *chapter 6.4.3.1 "Selecting the Sorting Mode", p. 41*

- Select the fitness mode **FIT**.
  → *chapter 6.4.3.2 "Selecting a Fitness Mode", p. 43*

Proceeding

1. Insert the banknotes into the singler.

    ⇨ The machine sorts the ATM and fit banknotes into the delivery stacker. Suspected counterfeit and unfit banknotes are sorted into the reject stacker.

Processing the Rejects

2. Check the reject reasons and process the rejects.
    → *chapter 6.5.1 "Displaying Reject Reasons", p. 61*
    → *chapter 6.5 "Processing Rejects", p. 60*

3. Remove the banknotes from the delivery stacker.

    ⇨ The total is saved.

Fitness Mode: Unfit

4. Select unfit fitness mode.
    → *chapter 6.4.3.2 "Selecting a Fitness Mode", p. 43*

5. Place the banknotes from the reject stacker into the singler.

    ⇨ The machine sorts the unfit banknotes into the delivery stacker. Suspected counterfeit banknotes are sorted into the reject stacker.

Processing the Rejects

6. Check the reject reasons and process the rejects.
    → *chapter 6.5.1 "Displaying Reject Reasons", p. 61*
    → *chapter 6.5 "Processing Rejects", p. 60*

7. Remove the banknotes from the delivery stacker.

    ⇨ The total is added and saved.

8. To show the grand total of the deposit, press the **GT** key and select **Grand total**.

9. Delete the Grand total result list and start the next deposit.
    → *chapter 6.7.3 "Printing or Deleting the "Grand Total" Result List", p. 67*

    ⓘ *Important*

    If you change the FIT sorting criteria settings for the Euro adaptation, the machine loses its European Central Bank certification.
    → *chapter 7.2.5 "Configuring Fitness Settings", p. 88*

6.4.9.2 Processing Fitness Sorting with 2+0 Mode

This fitness mode is particularly suitable for smaller deposits. It allows you to sort and to settle the fit banknotes (ATM and fit) and the unfit banknotes (Unfit) in a single processing step. The reject stacker is used as a second delivery stacker.

Rejected banknotes may consist of the following:

- Unfit banknotes only
- Suspected banknotes only
- Both unfit and suspect banknotes

The value and quantity of both fit and unfit banknotes and total deposit value are visible at the end of deposit processing. If no suspected banknotes are sent to the reject stacker, the deposit can be completed without a second run.
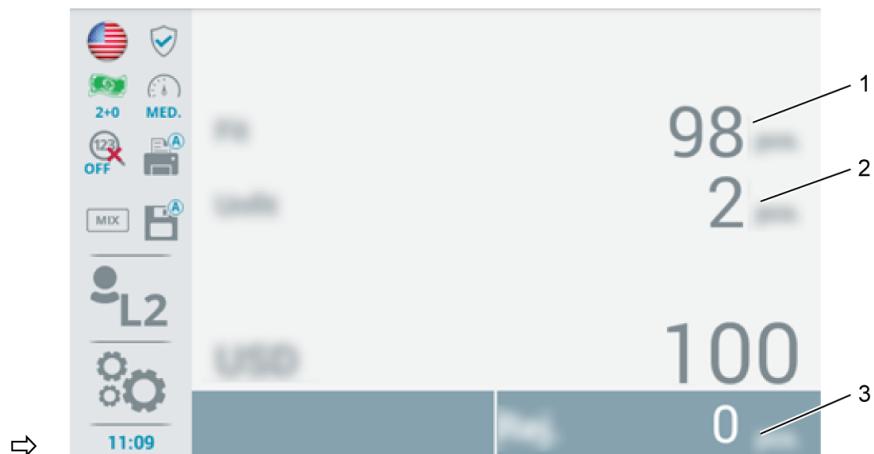
Proceeding

1. Select **2+0 Fitness** Mode.
   → *chapter 6.4.3.2 "Selecting a Fitness Mode", p. 43*

   ⇨

   The main screen shows the green 2+0 icon.

2. Process the banknotes with automatic or manual singling.
   → *chapter 7.1.2 "Selecting Automatic Singling/Printing/Adding/Resetting", p. 77*

   ⇨

   The deposit is counted and the result is displayed: fit (1) and unfit (2) banknotes and suspected banknotes as rejects (3).

3. Depending on the state of the reject stacker, perform the following procedures:

- Option A: Reject Stacker Without Contain Suspected Banknotes
- Option B: Reject Stacker With Suspected Banknotes

Option A   **Reject Stacker Without Contain Suspected Banknotes**

The delivery stacker contains the fit banknotes, the reject stacker contains the unfit banknotes. No suspected banknotes means no rejects.

a. If the reject stacker also contains banknotes that are qualitatively on the threshold between Fit and Unfit, answer the query **Do you want to rerun the rejects?** with Yes.

b. Process the banknotes from the reject stacker again.

   ⇨ The numbers for Fit and Unfit are updated accordingly after the rerun.

c. Answer the query **Do you want to rerun the rejects?** with No.

d. Remove the fit banknotes from the delivery stacker.

e. Remove the unfit banknotes from the reject stacker.

Option B   **Reject Stacker With Suspected Banknotes**

The reject stacker contains suspected banknotes. The result shows the number of unfit banknotes as Unfit and the number of suspected banknotes as Rejects.

a. Answer the query **Do you want to rerun the rejects?** with Yes and process the banknotes from the reject stacker again.

   ⇨ The numbers for Unfit and Reject are updated accordingly after the rerun.

b. Answer the query **Do you want to rerun the rejects?** with No.

   ⇨ A message with the following steps appears on the screen. The message must be closed with **C**.

On the main screen, the 2+0 icon changes to red.

c. Remove the banknotes from the delivery stacker.

d.   Remove the banknotes from the reject stacker and process them again.

⇨   Unfit banknotes are sorted to the delivery stacker, suspected banknotes are sorted to the reject stacker.

e.   Remove the banknotes from both stackers.

⇨   The 2+0 icon changes back to green and the next deposit can be processed.

6.4.10   Sorting Banknotes According to Size

You can sort banknotes and printed documents, which are similar to banknotes, according to size and thickness. The banknote that the sensor recognizes first acts as the reference for sorting. The machine sorts the banknotes which satisfy the sorting criterion into the delivery stacker. The machine sorts the banknotes that do not satisfy the sorting criterion to the reject stacker.

The machine sorts out objects that are out of range. You have the following options:

Level 1	Size ± 25%
Level 2	Size ±31%, thickness ±31%
Level 3	Size ±25%, thickness ±25%
Level 4	Size ±16%, thickness ±16%

The machine counts the number of banknotes.

(!)   ***Important***

During this sorting, the machine <u>does not</u> check the banknotes for authenticity.

🗒   **Required conditions**

Select the currency **COUNT**.
→ *chapter 6.4.1 "Selecting the Currency", p. 37*

> **Proceeding**
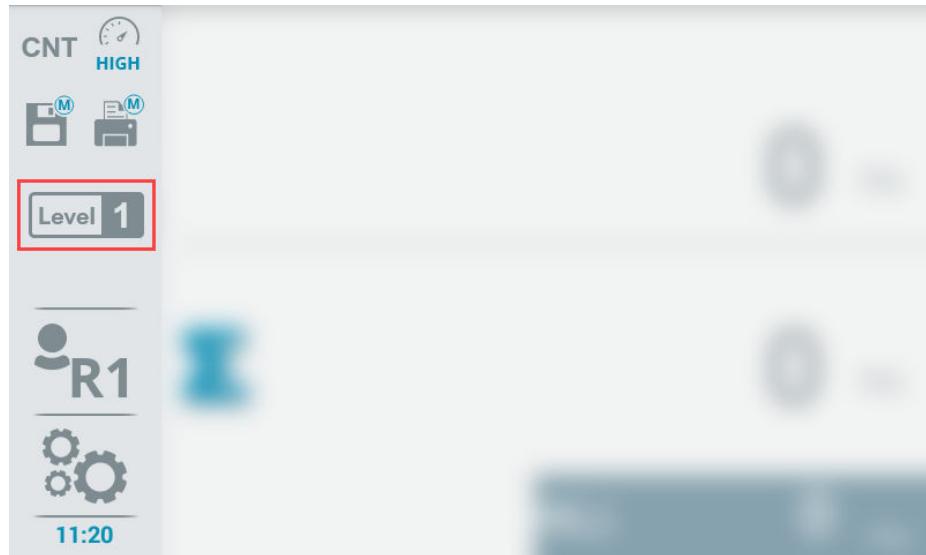
1. Select [Level] to set the desired tolerance range.

2. Process the objects with automatic or manual singling.
    → *chapter 7.1.2 "Selecting Automatic Singling/Printing/Add-ing/Resetting", p. 77*

⇒ **Result**

The machine sorts the banknotes according to size. The number of banknotes in the delivery stacker is displayed on the screen.

You can specify a package size which should be used to count the banknotes.
→ *chapter 6.4.5 "Specifying the Package Size", p. 48*.

6.5 Processing Rejects

BPS C1s assists you in the correct handling of banknotes, especially for rejected banknotes. This new assistance from the machine avoids operator errors and incorrect deposit results.

Required conditions

●   An XML report is configured.
    → *chapter 7.3.4 "Configuring reports", p. 105*
●   Automatic printing is enabled or you press the **PRNT** key for man-ual printing.
    → *chapter 7.1.2 "Selecting Automatic Singling/Printing/Add-ing/Resetting", p. 77*

Once the machine has stopped processing banknotes and the singler is empty, the correct proceeding is as follows:

Proceeding

1. Remove the banknotes from the reject stacker (if rejects exist).

2. Check the reject reasons.
   → *chapter 6.5.1 "Displaying Reject Reasons", p. 61*

3. Rerun the rejects or do reconciliation.
   → *chapter 6.5.2 "Performing Manual Inspection", p. 63*

4. Remove the banknotes from the delivery stacker.

   ⇨ The rejects are processed. The reports are sent as configured.

Troubleshooting

If you remove the banknotes from the delivery stacker while the reject stacker contains banknotes and the automatic printing is enabled or you print the result manually, the machine will give a warning message **Not permitted procedure, process the rejects.** The warning message stays on the screen until you process the rejects and press the **C** key. Only then the message disappears and the reports are sent as configured.

6.5.1 Displaying Reject Reasons

After banknote processing you can have the reject reasons displayed.

● **Doubled**

Double withdrawal of banknotes

● **Close Feed**

The distance to the previous banknote is too small.

● **Skew**

The skew of the transported banknotes exceeds the maximum limit allowed.

● **Time Out**

Banknote is asynchronous to the gate switching.

● **Soiling**

The banknote is too soiled or the soiling modulation is too large.

● **Dog Ears**

The corners of the banknote are folded over too far.

● **Stains**

The banknote has too many stains.

● **Holes**

The size of the hole in the banknote is too large.

- **Tape**

  The banknote contains too much adhesive tape.

- **Tears**

  The tears in the banknote are too large.

- **IR Error**

  Infrared; feature in the banknote not present or too weak

- **UV Error**

  Ultraviolet; feature in the banknote not present or too weak

- **MG Error**

  Magnet; feature in the banknote not present or too weak

- **IMG Error**

  Error during image recognition

- **Deno.**

  Unidentified banknote

- **SN Error**

  Error during serial number scanning

  Search list (black list): Serial number of the banknote is contained in the search list. If a search list is used, the serial numbers are always checked against the list and a hit is shown with this reject reason.

- **Other Error**

  Other reasons for rejection

1	Transport errors
2	Fitness criteria for unfit banknotes
3	Authenticity criteria for suspected counterfeit banknotes
4	Other reasons for rejection

Proceeding

1. Press the **RJCT** key.

   ⇨ The reasons for rejection are displayed on the screen.

2. Select the desired reject reason to open a list with further information.

3. If necessary, you can use **Image** to view an image of the rejected banknote.
   To close the additional window with the banknote again, touch the area outside the window.

4. To close the window, press the **RJCT** key.

6.5.2 Performing Manual Inspection

You can add rejected banknotes that were manually inspected and released to the accounting unit in list mode when the **Reconciliation OFFLINE** function is enabled. You can also add the value of unit coins to the accounting unit.

Required conditions

The **Reconciliation OFFLINE** function is enabled.
→ *chapter 7.2.2 "Setting the Conciliation Method", p. 83*

Proceeding

1. Press the **INFO** key.

   ⇨ The result of banknote processing is displayed as a detailed list.

2. Select one of the denominations displayed.

⇨ The conciliation menu opens.
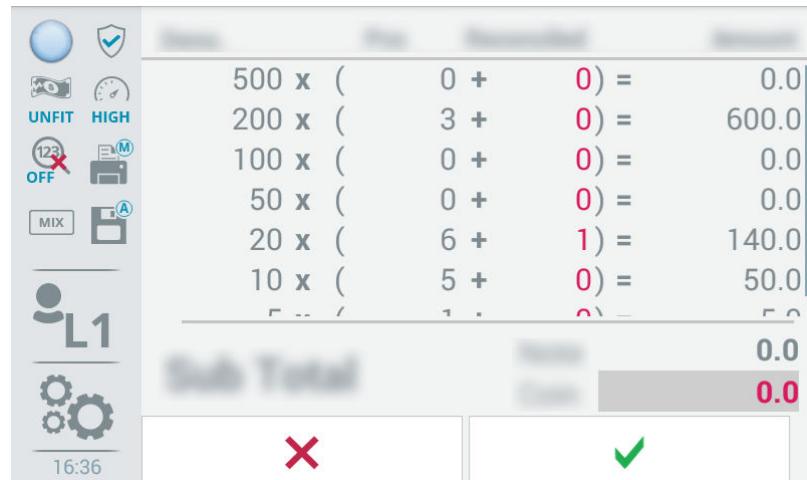
ⓘ *Important*

With the reject reason **Doubled** you must count the bank-notes in the reject stacker. If banknotes adhere to each other, the number of rejects in the conciliation menu will differ. In this case you must separate the banknotes and rerun them with all rejects.

3. Select the red number by the denomination you want to add.

⇨ The numeric keypad appears on the screen.

4. Enter the number of rejects for the relevant denomination, and confirm this.

⇨ The value of the banknotes is added.

Entering Coins

5. Select the number field next to **Coins**.

⇨ The numeric keypad appears on the screen.

6. Enter the value, and confirm.

⇨ The value of the coins is added.

7. Confirm or discard the changes in the conciliation menu.

8. Press the **INFO** key to return to the main page of banknote proc-essing.

6.6 Displaying as a List

You can have the system display the result of the currently performed banknote processing as a detailed list.

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Note

In this case, use the **C** key to delete the result instead of exiting the list. Only press the **C** key if you want to delete the result.

Proceeding

1. Press the **INFO** key.

   ⇨ The result of banknote processing appears as a detailed list.

	200 x	3 =	600
	20 x	4 =	80
	10 x	3 =	30
	5 x	1 =	5
Σ	11 =		715
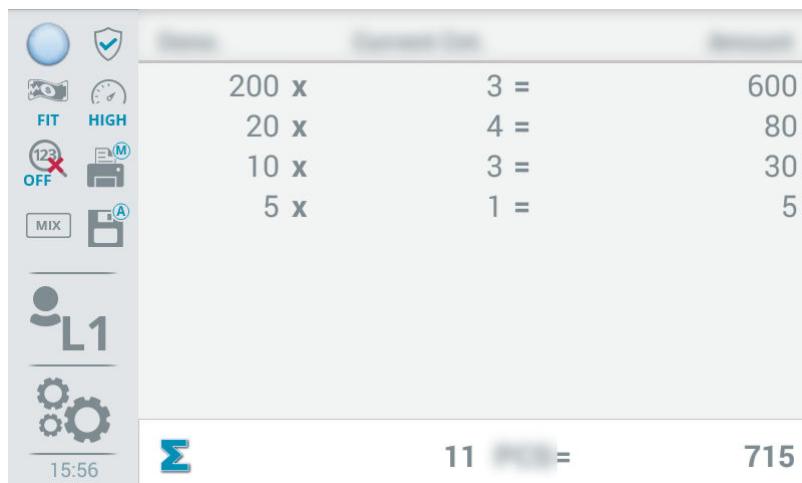
Figure 15: Banknote Processing Result as List

2. If you have processed different currencies at the same time, the overall result per currency will be displayed.

   a. Select the desired currency for a detailed indication.

   b. Select the check mark to close the display.

3. Press the **INFO** key to return to the main page of banknote processing.

6.7   Using Result Lists

When the function for adding the accounting units is activated (**ADD** key: → *chapter 6.4.8 "Adding the Accounting Units", p. 53*) the following result lists are available during banknote processing.

● **Grand total**

   Value, quantity, and total of banknotes for different processing steps and days

● **Day total**

   Value, quantity, and total of banknotes for different processing steps per day

- **Semi-annual report export**

  Value, quantity, and total of banknotes for the various fitness crite-ria (ATM, fit and unfit) for the current half year

- **SN History**

  Quantity and date of banknotes processed with serial number scanning.

The results are saved individually for each operator profile.

6.7.1 Recreating the Result List

You can manually add results to the result list. If you have activated automatic adding, the machine saves the result as soon as you remove the banknotes from the delivery stacker.
→ *chapter 7.1.2 "Selecting Automatic Singling/Printing/Adding/Reset-ting", p. 77*

⊘ **Proceeding**

1. After the processing step, press the **PRNT** key.

2. Select **Save to grand total**.

   ⇨ The banknote processing data are added to the result lists.

3. Repeat step → 1 to → 2 for each processing step that you would like to save.

   ⓘ *Important*

   The "Day total" result list is limited to 30 entries and is regularly overwritten.

   Only when the **ADD** key is enabled and the counted banknotes are in the delivery stacker does the **Save to grand total** option appear.

6.7.2 Displaying the Result List

⊘ **Proceeding**

1. Press the **GT** key.

   ⇨ The **Total** menu is displayed.

2. Select the desired option to open the list.

   You have the following options:

Grand total	Value, quantity, and amount of banknotes for different processing steps and days
Day total	Value, quantity, and amount of banknotes for different processing steps per day
Semi-annual report	Value, quantity, and amount of banknotes for different fitness criteria (ATM, fit and unfit) for the respective half year
SN History	If the serial number scanning function is activated, the serial numbers of the processed banknotes are displayed

6.7.3 Printing or Deleting the "Grand Total" Result List

Required conditions

You are in the **Grand total** result list.
→ *chapter 6.7.2 "Displaying the Result List", p. 66*

Proceeding

1. Press the **PRNT** key.

   ⇨ The print menu opens.

2. Select the desired option.

   You have the following options:

Print grand total	Print result list
Delete grand total	Delete result list

3. To close the result lists, press the **GT** key.

6.7.4 Printing the "Daily Result" List

Required conditions

You are in the **Day total** result list.
→ *chapter 6.7.2 "Displaying the Result List", p. 66*

Proceeding
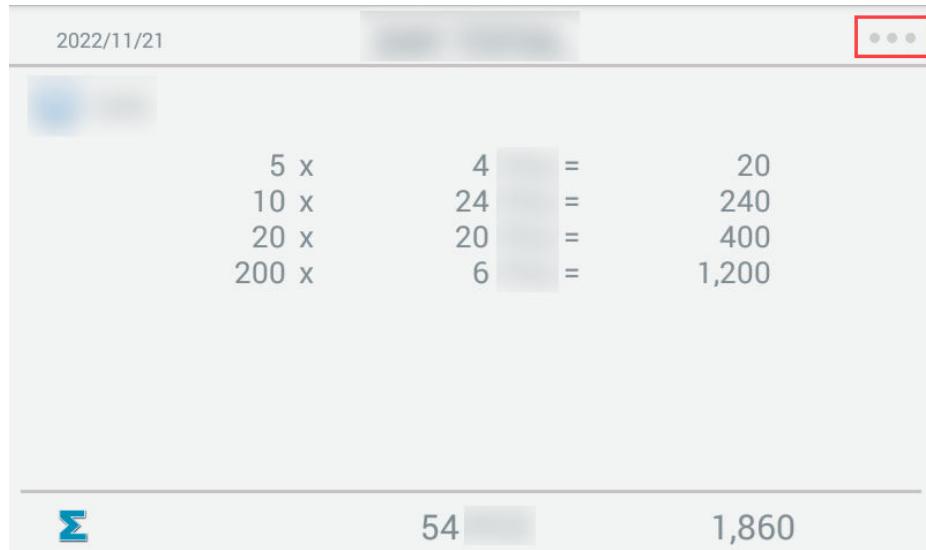
1.   Select the three-dot menu to display the different day entries.

2.   Slide the sliders up or down to select the desired day.

3.   Press the **PRNT** key.

     ⇨   The print menu opens.

4.   Select the desired option:

Print last 30 days	Print all the saved daily results for the last 30 days.
Print one day	Print the current or selected daily result list.

5.   To close the result lists, press the **GT** key.

6.7.5   Displaying the Fitness Report for the First or Second Half Year

You can view the semi-annual fitness report.

●   1st half year – January 1 to June 30

●   2nd half year – July 1 to December 31

Required conditions

●   The function for adding the accounting units (**ADD** key) is activated.
    → *chapter 6.4.8 "Adding the Accounting Units", p. 53*

●   You are in the **Semi-annual report** list.
    → *chapter 6.7.2 "Displaying the Result List", p. 66*

> **Proceeding**
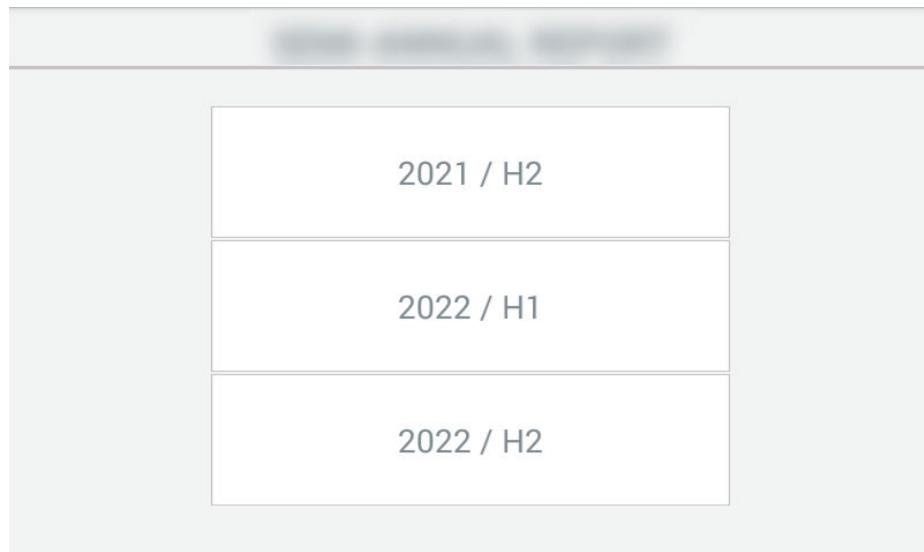
1. Select the desired half year.
   ⇨ The report for the different fitness criteria (ATM, fit and unfit) appears one after the other for the current half year in each case.

2. Scroll up or down to view the other reports.

3. To close the display, press the **C** or **GT** key.

6.8 Printing the Result

You can print the result of banknote processing.

The following information is displayed:

● Currency
● Number of denominations
● Sub-total
● Total number of banknotes
● Total
● Number of rejections
● Customer code (when the barcode of the customer or the header card of the associated barcode reader is scanned)

Serial Number
Scanning
: You can also print when you have activated serial number scanning.
→ chapter 7.2.3 "Setting Options for Serial Number Scanning", p. 84

Printer
: To print the result, a printer must be connected.
→ chapter 5.3 "Installation and Connection", p. 27.

Result List | When working with result lists, you can find information on printing these result lists in the **Using Result Lists** chapter.

- → *chapter 6.7.3 "Printing or Deleting the "Grand Total" Result List", p. 67*

- → *chapter 6.7.4 "Printing the "Daily Result" List", p. 67*

6.8.1 Automatic Printing

Automatic printing must be activated.
→ *chapter 7.1.2 "Selecting Automatic Singling/Printing/Adding/Resetting", p. 77*

The result of banknote processing is printed automatically when the banknotes are removed from the delivery stacker after banknote processing.

6.8.2 Manual Printing

You can manually print the banknote processing data.

Required conditions

Manual printing is activated.
→ *chapter 7.1.2 "Selecting Automatic Singling/Printing/Adding/Resetting", p. 77*

Proceeding

1. Press the **PRNT** key.

   ⇨ The Print menu is opened.

2. Select the desired field.

   You have the following options:

Print receipt	The current result is printed.
Print one receipt with SN	If you have enabled the serial number scanning option, the result is printed with serial numbers. → *chapter 6.4.3.3 "Enabling Serial Number, Ticket Reading, or Check Function", p. 45*
Print two receipts with SN	If you have enabled the serial number scanning option, the result is printed twice with serial numbers. → *chapter 6.4.3.3 "Enabling Serial Number, Ticket Reading, or Check Function", p. 45*

⇨ The printer prints the result.

6.9 Malfunctions and Information Messages

Should a process interruption occur during banknote processing, an animated message will be shown on the screen.

Accounting in the Event of a Backlog	All counted banknotes which have been removed from the delivery stacker have already been saved. In the event of a backlog, the counter result is reset to the value that was saved last. This means that only the banknotes located in the stacker and in the machine must be processed again.
Messages	The individual messages are listed below.

> ⚠ **Important**
>
> If the error persists, contact your service partner or local service organization.

Error in the transport section

Error code and message	Description
  3 **Top transport section error**	• Check the upper transport section and remove any jammed or torn banknotes if required. • After resolving the problem, select **Force run**. • Close the upper transport section.
  4 **Lower transport section error**	• Check the lower transport section and remove any jammed or torn banknotes if required. • After resolving the problem, select **Force run**. • Close the lower transport section.
  28 **Singler jam** or 500 **Top transport section jam** or 501 **Lower transport section jam**	• Clear the banknote jam in both transport sections. • After resolving the problem, select **Force run**.

Banknote removal

Error code and message	Description
  1 **Singler is not empty.**	• Remove the banknotes from the singler.

Error code and message	Description
 9 **Empty the reject stacker.** or 10 **Reject stacker full**	● Remove the banknotes from the reject stacker.
 12 **Empty the delivery stacker.** or 140 **Empty the delivery stacker.**	● Remove the objects from the delivery stacker.

Cleaning

Error code and message	Description
 Open the upper transport section, clean the upper transport section,then close it.	● Remove the banknotes from the singler. Open the upper transport section and clean it. Close the upper transport section.
 Open the lower transport section for cleaning,then close it.	● Remove the banknotes from the delivery stacker. Open the lower transport section and clean it. Close the lower transport section.

Machine error

Error code and message	Description
 7 **Main motor error** or 6 **Singler motor error**	● Check both transport sections and remove any jammed or torn banknotes if required.

Error code and message	Description
 5 **Gate error** or 100 **Solenoid error**	● Check both transport sections and remove any jammed or torn banknotes if required. ● After resolving the problem, select **Force run**.
53 or 54 **Other error**	The machine was updated and is waiting to restart. ● Restart the machine.

Processing messages

Error code and message	Description
 180 **Incomplete batch**	The number of banknotes does not match the predefined value. ● Check the banknotes in the singler. Add new banknotes if necessary.
 13 **Stacker full**	The specified value was not reached. ● Remove the banknotes from the delivery stacker. You can set the duration of how long the message is displayed. → *chapter 7.3.1 "UI Settings change", p. 100*
 9997 **Serial number buffer overflow**	The buffer memory is full (500 BN). ● Print out the serial numbers. ● To delete the memory, press the **C** key twice. ● Remove the banknotes from the delivery stacker. Banknote processing restarts.
29 **Abort by user**	Termination of action by the operator.
30 **Abort by other action**	Termination of action by another machine action.
65 **Last object error**	● Check the most recently singled object.
[1)] **Not permitted procedure, process the rejects.** [1)] This error has no error code number.	It is prohibited to remove banknotes from the delivery stacker if rejects are present. If rejects exist, you must process these rejects before you remove the banknotes from the delivery stacker.

Suspicious banknotes

Error code and message	Description
998 or 999 **Suspicious banknote**	• It is recommended that the banknotes are removed from the reject stacker. • Place the banknotes in the singler to repeat the recognition process. • If the machine does not recognize the banknotes, remove the banknotes for manual recognition.

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7 Configuration

This chapter contains information on how to configure the machine.

7.1 Changing System Settings

You can modify different system settings.

You have the following options:

	Custom mode	This is used to determine the sorting criteria for the sorting mode Custom mode. → *chapter 7.1.1 "Setting the Customer Mode", p. 76*
	Auto.	This allows you to determine whether the machine is to perform singling, printing, or adding automatically. → *chapter 7.1.2 "Selecting Automatic Singling/Printing/Adding/Resetting", p. 77*
	Speed	This sets the speed level for banknote processing. → *chapter 7.1.3 "Selecting the Speed Level", p. 77*
	Sound	This enables or disables the alarm sounds and key tones. → *chapter 7.1.4 "Enabling and Disabling Sounds", p. 78*
	Info	This allows you to view general system information, installed software, the LAN interface, currencies installed in the machine, as well as the QR code that allows you to access operator documentation and tutorials via the browser. → *chapter 7.1.5 "System Information", p. 79*
	Config.	This is how to define the machine configuration. You can activate or deactivate the detection function, set the output mode and format of the serial number, multi-deposit, I/O, fitness and device setting. → *chapter 7.2 "Configuration", p. 81* This will also take you to the supervisor configuration menu. → *chapter 7.3 "Supervisor Configuration Menu", p. 99*
	Import + Export	You can use this to import and export settings and export reports, serial numbers and debug information. → *chapter 7.1.6 "Importing/Exporting Settings and Reports", p. 80*
	Serial Number History	This allows you to search for when a banknote with a specific serial number was processed.

Proceeding

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1. Select the icon for the system settings.

    ⇨   The **Settings** menu is opened.

2. Select the relevant option.

7.1.1   Setting the Customer Mode

You can set the sorting criteria for the **Custom mode** sorting mode. The banknote that the sensor recognizes first is the reference for sorting.

You have the following options:

Face	This sorts the banknotes according to face or reverse.
Orientation	This sorts the banknotes according to orientation.
Denomination	This sorts the banknotes according to denomination.
Emission	This sorts the banknotes according to issue.

Required conditions

You are in the **Custom mode** menu.
→ *chapter 7.1 "Changing System Settings", p. 75*

Proceeding

1. Activate or deactivate the sorting criteria you want to use in the customer sorting mode.
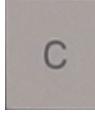
2. Press C to return to the system settings.

Result

If two or three sorting modes are activated (e.g. **Face**, **Denomination**, and **Emission)**, the machine sorts the banknotes by face or reverse, denomination, and emission.

Important

Only one of the **Face** and **Orientation** modes can be active at any given time.

You can now process the banknotes with the selected settings in the **Custom mode** sorting mode.
→ *chapter 6.4.3.1 "Selecting the Sorting Mode", p. 41*

7.1.2 Selecting Automatic Singling/Printing/Adding/Resetting

You can configure the machine so that it singles, prints, adds, and reset counters automatically.

You have the following options:

Auto. start	If this option is active, singling will start automatically as soon as you place the banknotes in the empty singler.. If this option is deactivated, singling will start when you press the Enter key.
Auto. print	If this option is active, the print process will start automatically as soon as you remove the banknotes from the delivery stacker.. If this option is deactivated, you must press the **PRNT** key to call up the print menu and print the result.
Auto. save	If this option is active, the machine will automatically add up the banknotes as soon as you remove the banknotes from the delivery stacker.. If this option is deactivated, you must press the **PRNT** key to call up the print menu and save/add the current accounting unit with Save to grand total.
Auto. clean	If this option is active, the machine will automatically reset the counter result after the singler is empty and when you remove the banknotes from the delivery stacker. If this option is deactivated, the counter result is reset if the singler and the delivery stacker are empty and you press the **C** key and start a new banknote processing cycle.

Required conditions

You are in the **Auto./Manual** menu.
→ *chapter 7.1 "Changing System Settings", p. 75*

Proceeding

1. Activate or deactivate the desired option by pressing the toggle icon .

2. Press to return to the system settings.

7.1.3 Selecting the Speed Level

You can choose from four speed levels:

|	
Low	600 BN/min
Medium	900 BN/min
High	1200 BN/min
Ultra high	1500 BN/min

Required conditions

You are in the **Speed** menu.
→ *chapter 7.1 "Changing System Settings", p. 75*

Proceeding

1. Select the desired speed by pressing the tile.
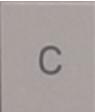
2. Press C to return to the system settings.

Result

The speed level is set.

The currently selected speed is shown on the left of the screen.
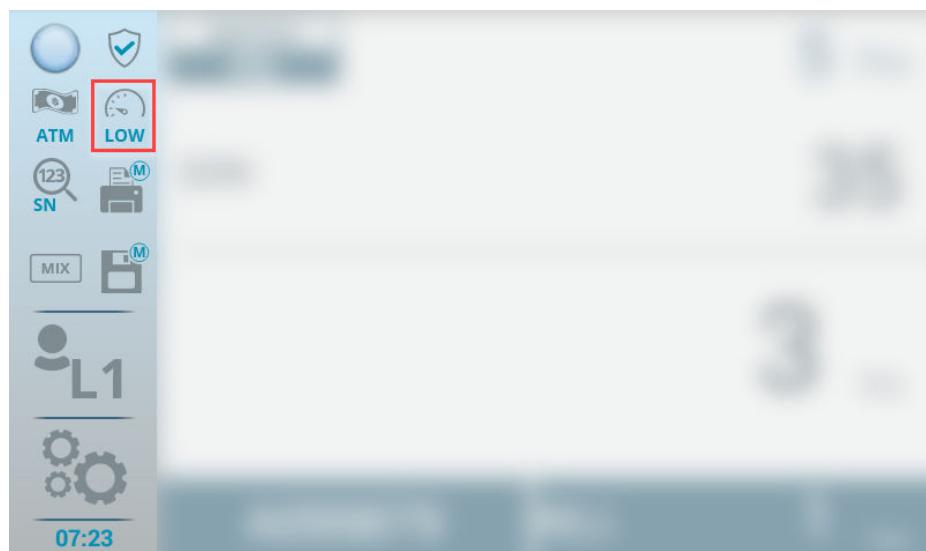
Figure 16: Selecting the Speed Level

7.1.4   Enabling and Disabling Sounds

You can enable or disable key tones, the general alarm, and the alarm for suspicious banknotes.

You have the following options:

Alarm	Beep with each machine warning
Key tone	Beep with each keystroke and touchscreen operation
Suspicious banknote	Alarm when a suspected counterfeit banknote is detected

Required conditions

You are in the **Sound** menu.
→ *chapter 7.1 "Changing System Settings", p. 75*

Proceeding

1. Activate or deactivate the desired option by pressing the toggle icon ⬤◯ .
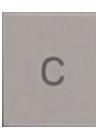
2. Press [C] to return to the system settings.

7.1.5   System Information

This is where you will find system information. You can print the system information on a connected printer or via the "Service" report.

Overall Information	This is where you will find the following information:
	• Model type
	• Serial numbers
	• Factory date
	• Banknote counter
Installed Software	This is where you will find information on the various software versions installed.
LAN Interface	This is where you will find information on the LAN interface.
Installed Currencies Version	This is where you will find information on the currencies currently installed.
User Documentation and Tutorials	Here you will find a QR code that will give you access to a portal for user documentation and video tutorials.
	Recommendation: After updating the software, you should visit these pages to read the new function descriptions and changes.

Required conditions

You are in the **Info** menu.
→ *chapter 7.1 "Changing System Settings", p. 75*

Proceeding

1. Select the desired option.
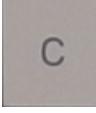
2. Press [C] to return to the system settings.

7.1.6 Importing/Exporting Settings and Reports

You can export several information and operator settings, import operator settings, and upload debug information.

You have the following options:

User Configuration	Export
	Import
Report	XML export
	Semi-annual report export
	Daily report export
Serial Number	Export
	Export FSN
Debug information	Export
	Upload – for uploading debug information to a configured FTP server *FTP, FTP2 server*

Required conditions

- You are in the **Import + Export** menu.
  → *chapter 7.1 "Changing System Settings", p. 75*
- A USB flash drive is plugged in.
  → *chapter 5.3 "Installation and Connection", p. 27*
- The relevant configuration for importing operator settings is on the USB flash drive.

Proceeding

1. Select the relevant option.
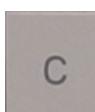
2. Press ⬛ C twice to return to the system settings.

7.1.7 Displaying SN History

You can search for when a banknote with a specific serial number was processed.

Required conditions

You are in the **SN History** menu.
→ *chapter 7.1 "Changing System Settings", p. 75*

> **Proceeding**

1. Select the white field on the left to enter a start date.

    ⇨ The **Set Date** window opens.

2. Select the start date by moving the sliders up or down, and confirm.

3. Select the white text box on the right to enter an end date.

    ⇨ The **Set Date** window opens.

4. Select the end date by moving the sliders up or down, and confirm.

    ⇨ The **SN History** menu displays the selected data.

5. Enter a serial number to search for a specific serial number. Use * as a placeholder for unknown digits.

6. Confirm to start the search.

    ⇨ The display shows the hits and their date, time and number of deposits.

7. Select the serial number to display the entire deposit.

    ⇨ The serial number you are looking for is highlighted in red.
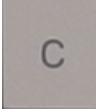
8. Press [C] to close the display.

7.2 Configuration

You can change the configuration of the machine.

You have the following options:

	Detection	This enables or disables the check of the security features. → chapter 7.2.1 "Enabling or Disabling the Check on Security Features", p. 82
	Reconciliation	This is used to set the conciliation method. → chapter 7.2.2 "Setting the Conciliation Method", p. 83
	Serial Number	This sets the print options and the output format so that the serial number is printed. → chapter 7.2.3 "Setting Options for Serial Number Scanning", p. 84
	I/O Settings	This is used to set the printer and barcode reader options. → chapter 7.2.4 "I/O Settings", p. 85

	Fitness Settings	This is used to set the "ATM" and "Fit" fitness sorting criteria. → *chapter 7.2.5 "Configuring Fitness Settings", p. 88*
	Machine Setup	This is used to determine the settings for the machine. → *chapter 7.2.6 "Machine Setup", p. 89*

Required conditions

You are in the **Settings** menu.
→ *chapter 7.1 "Changing System Settings", p. 75*

Proceeding

1. Select **Config.** .

2. Enter the password '111111'.

   ⇨ The **Configuration** menu opens.

3. Select the relevant option.

7.2.1 Enabling or Disabling the Check on Security Features

You can deactivate the authentication of banknotes.

You have the following options:

	Detection ON	During banknote processing the machine checks the authenticity of the banknotes and sorts suspected counterfeits to the reject stacker.
	Detection OFF	The machine counts the number and value of the banknotes.

Recommendation: When processing banknotes, always leave this function activated.

Required conditions

You are in the **Configuration** menu.
→ *chapter 7.2 "Configuration", p. 81*

$\left(\!\gg\!\right)$ **Proceeding**

1. Press **Detection** to enable or disable the desired function.

   ⚠ *Important*

   If you select **Detection OFF**, the authenticity detection for the banknotes is disabled.
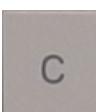
2. Press [C] to return to the configuration menu.

$\left(\!\Rightarrow\!\right)$ **Result**

The currently selected authenticity detection can be seen on the left of the screen.
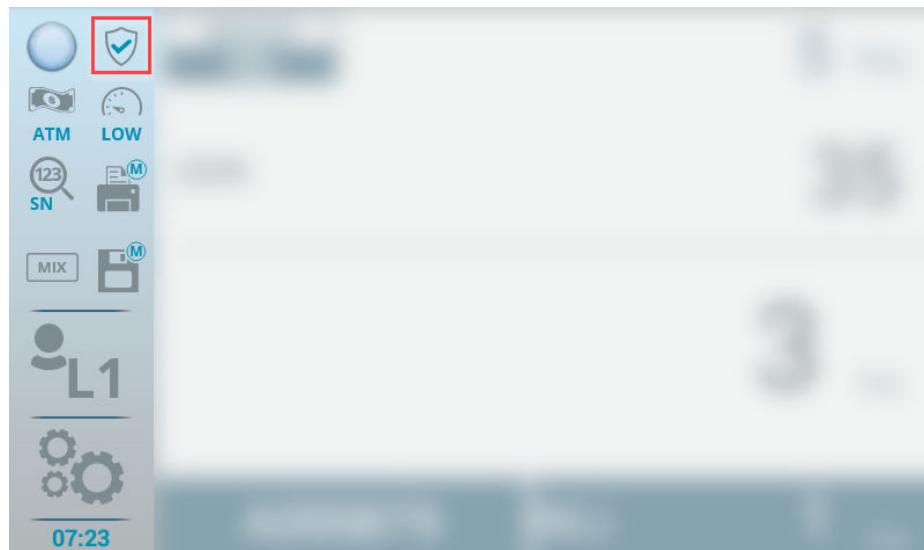
Figure 17: Active Authenticity Detection

7.2.2 Setting the Conciliation Method

You can set the conciliation method for the rejected banknotes. Banknotes that have been checked and released during manual inspection can be assigned to the accounting unit manually or via a customer's own cash management system.

You have the following options:

Reconciliation ONLINE	Here you can add rejected banknotes that have been manually inspected and released to the accounting unit with the customer-specific cash management system.

Reconciliation OFFLINE	Here you can add rejected bank-notes that have been manually inspected and released to the accounting unit in list mode. → *chapter 6.5.2 "Performing Manual Inspection", p. 63*

Required conditions

You are in the **Configuration** menu.
→ *chapter 7.2 "Configuration", p. 81*

Proceeding

1. Press **Reconciliation** to enable or disable the desired function.
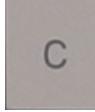
2. Press [C] to return to the configuration menu.

Result

The conciliation method is set.

7.2.3   Setting Options for Serial Number Scanning

If you select the processing mode for reading serial numbers, you can print the recorded serial numbers. To do so, you can set the different print options. The machine records the serial number as an image and as a number sequence. In the output format you can set how you would like to print the serial number.

You have the following options:

Output Mode This sets the print time and whether the machine saves the serial numbers.	Normal printout	This prints the serial numbers of the accounted banknotes and saves the result to the memory. You can print the result in duplicate. The maximum number of saved serial numbers is 500 banknotes.
	Buffer printout	This saves the serial numbers of the accounted banknotes to the memory. You can print the result if you wish. The maximum number of saved serial numbers is 500 banknotes.
	Direct printout	This prints the serial numbers of the accounted banknotes in real time. The machine <u>does not</u> save the result. There is no maximum number of banknotes.
	No printing	This does not print serial numbers.
Output Format This sets the output format.	Image	This prints the image of the detected serial number.

	String	This prints the number sequence of the detected serial number.
SN image format This sets the image format.	**Pre-process**	This creates a compressed image format for the data transfer.
	Raw	This displays the serial number on the user interface.

Required conditions

You are in the **Serial Number** menu.
→ *chapter 7.2 "Configuration", p. 81*

Proceeding

1. Press the desired option.

2. Press the desired setting.

   ⓘ *Important*

   When printing in real time (**Direct printout**), the result will be lost if the printer is not working.
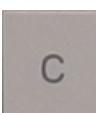
3. Press [C] to return to the configuration menu.

7.2.4 I/O Settings

You can configure the following settings for the connected printer and barcode reader.

7.2.4.1 Setting the Output Devices

To set the output devices, first select the device.

You have the following options:

Printer 1	Select this option if only one printer is connected to the machine. Two operators use the same printer.
Printer 2	Select this option if two printers are connected to the machine. Two operators can each use their own printer.
Barcode Reader	Select this option if one barcode reader is connected to the machine. Two operators use the same printer and the same barcode reader.

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External monitor L	Select this option if an external monitor is connected to machine via COM (1 or 2) or USB. This monitor displays the counting results for the operator that uses the <u>left</u> keys (Cancel and Enter)
External monitor R	Select this option if an external monitor is connected to machine via COM (1 or 2) or USB. This monitor displays the counting results for the operator that uses the <u>right</u> keys (Cancel and Enter)
Compass	Select this option for using an external hardware that is connected to Compass applications.

The interface for the device is then configured.

You have the following options:

None	
COM 1	If two operators use the same printer, assign the same interface to both.
COM 2	If two operators use the same printer, assign the same interface to both.
	If a printer and a barcode reader are connected, use the COM1 interface for the printer and the COM2 interface for the barcode reader.
USB	Select this option to connect the machine to a PC via the PC interface. → *chapter 4.2.3 "Connections", p. 21*

🗒 **Required conditions**

You are in the **I/O Settings** menu.
→ *chapter 7.2 "Configuration", p. 81*

⊘ **Proceeding**

1. Select the desired connected output device on the left side.

2. On the right side, select the desired interface for the connected device.
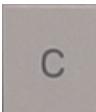
3. Press [C] to return to the system settings.

7.2.4.2 Configuring Further Settings via the Setup Menu

You can set the printer paper size, output format, printer baud rate, printer type, cut and character code.

You have the following options:

Paper Width	W57.5 (2")	W79.5 (3")	
Output Format	ESC/POS		
Baud Rate	9600	38400	115200 If you want to print the serial number as an image, you must select this baud rate.
Type	Thermal	Dot matrix	Surveillance TV
Paper Cut	Full cut After printing, the paper is cut off completely.	Partial cut After printing, the paper is only partially cut off.	No cut The paper is not cut after printing.
Page Code	Here you can specify the character code for the printer if the printer supports it.		

Required conditions

You are in the **I/O Settings** menu.

Proceeding

1. Select **Setup**.
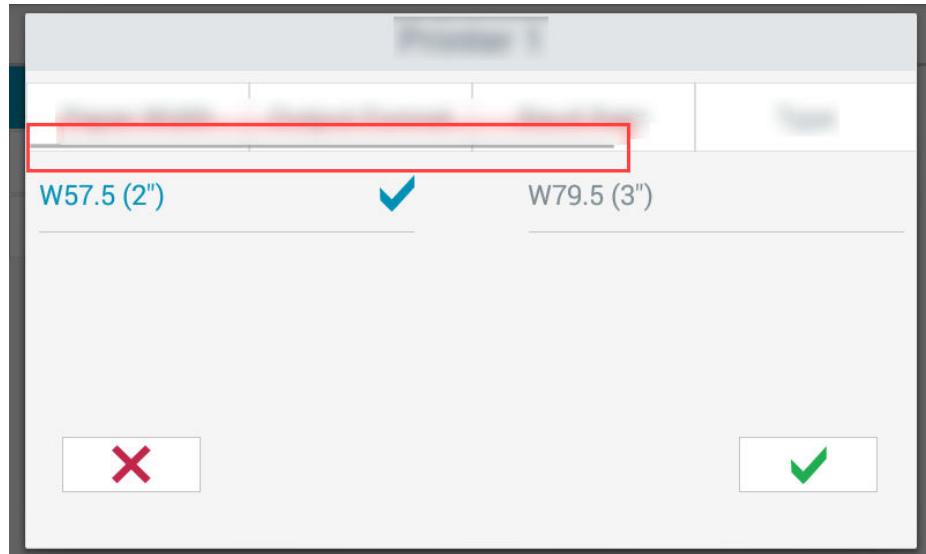
2.   Select the desired options by moving the menu bar to the left or right and pressing the desired menu item.

3.   Confirm or discard the changes.

7.2.5   Configuring Fitness Settings

In this operation mode you can set the criteria for fitness sorting "ATM" and "Fit". A more detailed description of these criteria and their significance can be found in the Appendix.
→ *chapter C "Description of the Criteria for Fitness Sorting", p. 197*

(!)   ***Important***

Do <u>not</u> change the settings for certified currencies.

The certification of the machine is then no longer valid.

Required conditions

You are in the **Fitness Settings** menu.
→ *chapter 7.2 "Configuration", p. 81*

(>)   **Proceeding**

To set the operation mode, proceed as follows.

1.   Select the currency.

Restoring Default Settings

2.   Select **Reset** and confirm to restore the default settings.

Change Criteria

3.   Select the required banknote denomination and issue.

4. Move the points for the desired sorting criterion.
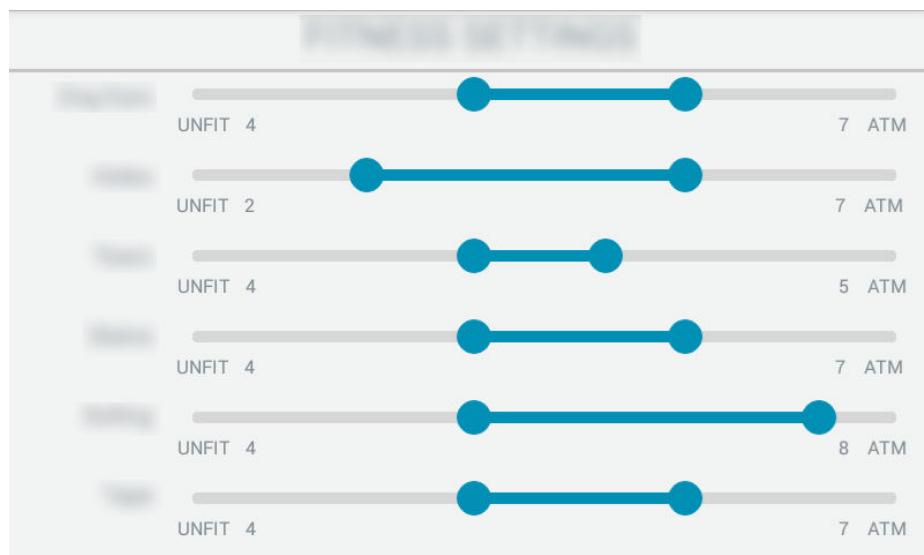
Saving Settings

5. After selection click [▶] to confirm the settings.

6. Confirm or discard the changes.

7.2.6 Machine Setup

You can configure the following machine settings.

7.2.6.1   Setting the "Auto" and/or "Mix" Currency Options

You can set whether the following options are available when selecting the currency in addition to the installed currencies.

→ *chapter 6.4.1 "Selecting the Currency", p. 37*

● **Currency Option AUTO** - Detecting the currency automatically (**AUTO** appears in the list of warnings)

● **Currency Option MIX** - Processing all currencies of a deposit at the same time (**MIX** appears in the list of currencies)
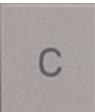
Required conditions

You are in the **Machine Setup** menu.
→ *chapter 7.2 "Configuration", p. 81*

Proceeding

1.   Select **Currency Options**.

2.   Activate or deactivate the desired option by pressing the toggle icon .

3.   Press C to return to the **Configuration** menu.

7.2.6.2   Setting the Ticket Format

You can set which ticket format the machine will process.

You have the following options:

TITO Mix	The machine counts casino tickets in I25 format and banknotes at the same time.
EAN13	Only tickets in EAN13 format are counted, the machine sorts banknotes into the reject stacker.
I25	Only tickets in I25 format are counted, banknotes are sorted by the machine into the reject stacker.
CODE 128 C	Only tickets in CODE 128 C format are counted, banknotes are sorted by the machine into the reject stacker.

Required conditions

You are in the **Machine Setup** menu.
→ *chapter 7.2 "Configuration", p. 81*

Proceeding

1. Select **TITO Format**.

2. Activate or deactivate the desired option by pressing the toggle
   icon [toggle] .
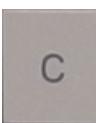
3. Press [C] to return to the **Configuration** menu.

7.2.6.3   Setting the Ticket Length Limit

You can set the length of the ticket ID to limit the tickets to be
accepted.

Required conditions

You are in the **Machine Setup** menu.
→ *chapter 7.2 "Configuration", p. 81*

Proceeding

1. Select **TITO Length Constraint**.

2. Select the number that you would like to change.

   ⇨   The numeric keypad appears on the screen.

3. Enter the desired values, and confirm.
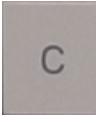
4. Press [C] to return to the **Configuration** menu.

7.2.6.4   Setting Check Types

You can set which types of checks the machine reads. The machine
reads type E-13B, CMC-7, OCR-A and OCR-B checks. Other check
formats can only be scanned without simultaneous processing of bank-
notes. To do this, deactivate the security feature check.

The following check formats can be processed:

● **E-13B**
● **CMC-7**
● **OCR-A**
● **OCR-B**

Required conditions

You are in the **Machine Setup** menu.
→ *chapter 7.2 "Configuration", p. 81*

Proceeding

1. Select **Cheque MICR Font**.

2. Activate or deactivate the desired option by pressing the toggle icon .

3. Press C to return to the **Configuration** menu.

7.2.6.5 Setting Sorting Behavior

You can set whether the machine retains the sorting criteria after the operation of a deposit:

- Specific package size output (**Batch Qty.** or **Batch Qty. flex**)
- Target value (**Batch Amount**)

You have the following options:

Refresh	The machine starts the process with new sorting criteria after banknotes are removed from the stackers. Example: The orientation that the sensor recognizes first is the reference for each new batch.
Keep	The machine maintains the sorting criteria after banknotes are removed from the stackers. Example: The machine continues to sort according to the same orientation.

Required conditions

You are in the **Machine Setup** menu.
→ *chapter 7.2 "Configuration", p. 81*

Proceeding

1. Select **Sorting Behavior**.

2. Activate or deactivate the desired option by pressing the toggle icon .

3. Press to return to the **Configuration** menu.
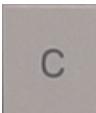
7.2.6.6 Setting Batch Mode

You can set which batch modes are available.

You have the following options:

Batch Payout Mode	If this option is activated, the machine maintains the counter result for an incomplete deposit (specific package size output or target value) even if all stackers are emptied. The deposit is completed once you insert further banknotes into the singler. If this option is deactivated, the machine resets the counter result for an incomplete deposit as soon as you insert further banknotes into the singler.
Batch clear mode	If this option is activated, the machine resets the counter result after the deposit is completed (specific package size output or target value) and there are still banknotes in the singler and you remove the banknotes from the delivery stacker. And the machine also resets the counter result for an incomplete deposit when the reject stacker is full and emptied even if there are still banknotes in the singler.
Batch qty. mode	You can have a specific package size output. → *chapter 6.4.5 "Specifying the Package Size", p. 48*
	💡 ***Tip***
	This option cannot be used in sorting mode Mix. The machine automatically sets the sorting mode Denomination.

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Batch qty. flex mode	Like in Batch Qty. Mode, but you can change the quantity after each complete package.
Batch amount mode	You can enter the value of the banknotes to check the target value. → chapter 6.4.6 "Processing Banknotes with Deposit", p. 50

Required conditions

You are in the **Machine Setup** menu.
→ *chapter 7.2 "Configuration", p. 81*

Proceeding

1. Select **Batch Modes**.

2. Activate or deactivate the desired mode by pressing the toggle icon ⬤ .

3. Press [C] to return to the Configuration menu.

7.2.6.7 Setting the Stacker Capacity

You can set the number of banknotes for the delivery and reject stacker. The poorer the banknote quality, the higher the stacking volume, which can overload the stacker motor or cause the reject stacker to jam. Therefore, you can reduce the maximum number here if necessary.

Default setting:

- Delivery stacker – 250 banknotes (value range 1-400)
- Reject stacker – 100 banknotes (value range 1-200)

Important

Do <u>not</u> increase the default settings if possible.

Required conditions

You are in the **Machine Setup** menu.
→ *chapter 7.2 "Configuration", p. 81*

Proceeding

1. Select **Stacker Capacity**.

2. Select the number that you would like to change.

  ⇨ The numeric keypad appears on the screen.

3. Enter the desired quantity, and confirm.
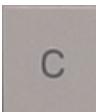
4. Press [C] to return to the **Configuration** menu.

7.2.6.8 Selecting Date and Time

You can set the time, date and time zone.

Required conditions

You are in the **Machine Setup** menu.
→ *chapter 7.2 "Configuration", p. 81*

Proceeding

1. Select **Time Setup**.

2. Select the desired option.

3. Set the desired setting by moving the field up or down.

4. Confirm the changes.

5. Press [C] to return to the **Configuration** menu.

Result

Date, time and time zone are set.

7.2.6.9 Setting Summer Time

You can specify the summer time period so that the machine automatically switches between summer and winter time.

Required conditions

You are in the **Machine Setup** menu.
→ *chapter 7.2 "Configuration", p. 81*

Proceeding

1. Activate summer time by pressing the toggle icon ⬤▬

2. Set the start of summer time in the white field on the left and confirm.

3. Set the end of summer time in the white field on the right and confirm.

4. Confirm your input by pressing **Set Daylight Time**.

5. Press [C] to return to the Configuration menu.

⇒ **Result**

Summer time is set.

7.2.6.10 Switching Languages

You can change the language on the machine.

Required conditions

You are in the **Machine Setup** menu.
→ *chapter 7.2 "Configuration", p. 81*

Proceeding

1. Select **Language**.

2. Select the desired language.

3. Press [C] to return to the **Configuration** menu.

7.2.6.11 Deactivating/Activating Denominations and Series

You can deactivate denominations or series for the currencies available on the machine. All denominations and series are always activated for a currency by default.

Required conditions

You are in the **Machine Setup** menu.
→ *chapter 7.2 "Configuration", p. 81*

Proceeding

1. Select **Denomination Options**.

2. Select the desired currency.

Restoring Default Settings

3. Select **Reset** and confirm to restore the default settings.

Configure denominations and emissions

4. Activate or deactivate the desired denominations and series by

   pressing the toggle icon
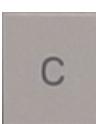
5. Press [C] to return to the **Configuration** menu.

> **Result**
>
> Only the activated denominations and series are still available on the machine and are accounted during processing.

7.2.6.12 Software Update

You can update the machine software with an appropriately prepared USB flash drive.

7.2.6.12.1 Preparing the USB stick

You can prepare an USB stick to update several machines.

> **Required conditions**
> - Commercial USB stick class 3.0 or higher, capacity 4-16 GB
> - The SD update file *BPSC1s_SD_Upgrade_Rel_x_x* as a packed file (.zip or .rar format).
>
> You get the files from the distributor or helpdesk, from the G+D portal (if accessible for you) or from the download link that is given in the Quick Start Guide and in the system information of the machine.
> → *chapter 7.1.5 "System Information", p. 79*

> **Proceeding**
>
> 1. Download the file to a folder on your local PC.
> 2. Unpack the folder.
>   ⇨ A new folder *_Upgrade* with subfolders has been created.
> 3. Copy the complete folder *_Upgrade* to the top level of the USB stick.

> **Result**
>
> You can update all hardware variants with this USB stick.

7.2.6.12.2 Updating the Software by USB Flash Drive

You can choose between different update modes.

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You have the following options:

Force upgrade	Regardless of the versions currently installed on the machine, the system automatically updates the entire firmware and all modules to the versions of the USB flash drive.
Smart upgrade	The machine identifies and compares the software versions with those on the USB flash drive and only updates the firmware and modules for which a higher version is available on the USB flash drive.
GUI upgrade	The machine only updates the GUI module with the version available on the USB flash drive.
	Does not work until a subsequent update. UI is updated via the GD_PCSuite – Distributor Tool software.

You can also update the machine using the GD_PCSuite – Distributor Tool software.

→ chapter 9.4.8 "Updating the Machine", p. 164

Required conditions

● USB flash drive with the current software
  → chapter 7.2.6.12.1 "Preparing the USB stick", p. 97

● You are in the **Machine Setup** menu.
  → chapter 7.2 "Configuration", p. 81

Proceeding

1. Insert the USB flash drive into the relevant interface on the rear of the machine.
   → chapter 4.2.3 "Connections", p. 21

2. Select **Software Update**.

3. Select the update mode.

   ⇨ The machine starts the update.

4. Choose between the following options:

    Option A

    a. Once the update has been completed successfully, the system message **The machine was updated successfully. Restart the machine so that the update takes effect.** appears on the screen. Restart the machine.

    Option B

    a. If the update fails, an error message appears on the screen. Press the Enter key to repeat the update.

7.2.6.13   Resetting Settings

You can reset the user settings to the factory settings.

Required conditions

You are in the **Machine Setup** menu.
→ *chapter 7.2 "Configuration", p. 81*

Proceeding

1. Select **Reset Operator Settings**.

2. Confirm the query.

    ⇨   The factory settings are restored.

7.3   Supervisor Configuration Menu

You can change the configuration of the machine and determine which functions and settings are available to the operator.

You have the following options:

UI Settings	You can use this to set the usernames and the number of operators. You set which currencies and sorting options are available. You define the display of lists, messages and reports. → *chapter 7.3.1 "UI Settings change", p. 100*
User Interface	You can adjust settings for the external display, enlarge the display on the user interface, and define whether the GUI may be updated and the machine managed centrally (Asset Manager). → *chapter 7.3.2 "User Interface adjust settings", p. 104*
Deposit Balancing	Here, you can set which deposit information is queried. → *chapter 7.3.3 "Deposit Balancing adjust settings", p. 105*
Report	Use this to set the content and formats of the report. → *chapter 7.3.4 "Configuring reports", p. 105*
IP Settings	Use it to adjust the IP settings. → *chapter 7.3.5 "IP Settings configuration", p. 107*

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Reset Supervisor Settings	Use it to reset the supervisor settings to the factory settings. → *chapter 7.3.6 "Resetting Supervisor Settings", p. 110*
Reset Database	Use it to reset all data in the internal database. → *chapter 7.3.7 "Resetting Database", p. 110*

Required conditions

You are in the **Settings** menu.
→ *chapter 7.1 "Changing System Settings", p. 75*

Proceeding

1. Click the **Config.** icon.

2. Enter the password '222222'.

   ⇨ The configuration menu opens.

3. Select the relevant option.

7.3.1 UI Settings change

Use this for adjusting settings. You can set the usernames and the number of operators. You set which currencies and sorting options are available. Deactivated options are not displayed in the operator menu. You define the display of lists, messages and reports.

You have the following options:

User Info	**User L** and **User R**	You can change the usernames.
	Options > Dual	If this option is active, it is only possible to switch between the operator profiles L1 and R1. If it is not active, all 10 operator profiles are available.
	Options > Disable	If this option is active, there is only one operator without a name.
Currency Options	All currencies configured on the machine	Only the activated options are displayed to the operator for selection. → *chapter 6.4.1 "Selecting the Currency", p. 37*
Sort Options	**Denomination**, **Face**, **Orientation** and **Emission**	Only the activated options are displayed to the operator for selection. → *chapter 6.4.3.1 "Selecting the Sorting Mode", p. 41*

SN Options	**SN reading** and **SN compare**	Only the activated options are displayed to the operator for selection. → *chapter 6.4.3.3 "Enabling Serial Number, Ticket Reading, or Check Function", p. 45*
TITO/Cheque Options	**Option TITO** and **Option Cheque**	Only the activated options are displayed to the operator for selection. → *chapter 6.4.3.3 "Enabling Serial Number, Ticket Reading, or Check Function", p. 45*
Fitness Options	**ATM**, **Fit**, **Unfit**, **Tape mode**, **Prefit**, **Prefit+Tape** and **2+0**	Only the activated options are displayed to the operator for selection. → *chapter 6.4.3.2 "Selecting a Fitness Mode", p. 43*
List Mode Deno. Order	**Ascending**	The result list displays the denominations in ascending order.
	Descending	The result list displays the denominations in descending order.
Display message	**Display message**	You can set in which cases a warning is displayed to the operator. If you deactivate the option, <u>no</u> warnings will appear for Stacker full, Incomplete batch and Suspicious banknote.
	Duration	If you activate the option, the warning disappears after a certain period of time. You can set the duration of the display under **Duration**.
		If you deactivate the option, the warning only disappears when the operator presses the **C** key.
	Delivery stacker check	The machine uses a sensor to check whether there are banknotes assigned to the delivery stacker and issues a warning in the event of an error. The sensor does not recognize banknotes with a see-through window or heavily bent banknotes. Deactivate the option if the machine issues the warning **Check the delivery stacker.** even though there are banknotes in the delivery stacker.

	Batch message - singler empty	If you activate this option, the warning about an incomplete batch only appears when all banknotes have been processed and the machine stops. If you activate the option, the **Batch message - delivery stacker emptied** option is automatically deactivated.
	Batch message - delivery stacker emptied	If you activate the option, the warning about an incomplete batch appears as soon as the operator empties the delivery stacker. If you activate the option, the **Batch message - singler empty** option is automatically deactivated.
	Full screen for Batch message	If you activate this option, the warning about an incomplete batch appears on the entire screen. If you activate the option, the **Bubble for Batch message** option is automatically deactivated.
	Bubble for Batch message	If you activate this option, the warning about an incomplete batch appears as a speech bubble above the result display on the screen. If you activate the option, the **Full screen for Batch message** option is automatically deactivated.
Duration	**1 sec.**, **3 sec.**, **5 sec.** and **10 sec.**	If you have activated the option under **Warning Messages > Duration** you can set here how long the warning is displayed for.
Reset batch result	**Machine empty**	The machine resets the counter result when the singler and delivery stacker are empty. The machine maintains counter results after the deposit is completed (specific package size output or target value) and there are still banknotes in the singler and you remove the banknotes from the delivery stacker. And the machine also remains the counter result for an incomplete deposit when the reject stacker is full and emptied and if there are still banknotes in the singler.

	Batch completed	The machine resets the counter result after the deposit is completed (specific package size output or target value) and there are still banknotes in the singler and you remove the banknotes from the delivery stacker. And the machine maintains the counter result for an incomplete deposit when the reject stacker is full and emptied and if there are still banknotes in the singler.
	Incomplete rollback	The machine maintains the counter results after the deposit is completed (specific package size output or target value) and there are still banknotes in the singler and you remove the banknotes from the delivery stacker. And the machine rolls back the counter result to the count of the previously completed deposit for an incomplete deposit when the reject stacker is full and emptied and if there are still banknotes in the singler.
	ⓘ *Important* If the operate activates the option **Batch clear mode**, this setting overrides the configuration of the counter results here. → *chapter 7.2.6.6 "Setting Batch Mode", p. 93*	
Report Content	**Batch ID**, **Machine ID**, **User ID**, **Machine SN**, **Date - time** and **Software version**	You can set which information is displayed when printing.
Motor Mode	**Motor brake mode**	By default, this option is deactivated and the motor will slow down, when the deposit is about to complete. This is to avoid too many rejected banknotes. If you activate this option, the motor will not slow down and that can cause the last 1–2 banknotes to be rejected due to insufficient braking at high speed.

🗒 **Required conditions**

You are in the **Supervisor Settings** menu.
→ *chapter 7.3 "Supervisor Configuration Menu", p. 99*

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$\bigodot$ **Proceeding**

1. Select **UI Settings**.

2. Activate or deactivate the desired options in the operator configuration by pressing the toggle icon ◯ .

7.3.2 User Interface adjust settings

You can configure the external display and set whether the operator can perform the GUI update. You can enlarge the display on the user interface and define whether the machine may be managed centrally.

You have the following options:

External Display	3 rows	Display view in 3 rows
	2 rows	Display view in 2 rows
	Grand total flashing	The total amount flashes on the external display.
Adb	Adb	The GUI update can only be performed if this option is activated. This avoids unwanted changes when the machine is connected to a network via LAN.
		If this option is deactivated, the supervisor retains the right to decide on the software update. The operator is still allowed to update the installed currencies.
Console Detailed information on the "Compass Asset Manager" product is available here: → *Compass Asset Manager "User Manual"*	Console	Only if this option is activated can the machine connect with the "Compass Asset Manager" product and be managed centrally.
	Console Debug	If the option is activated, the machine sends a message to the "Compass Asset Manager" about the connection status every three minutes. If the option is deactivated, no message is sent. You do not have to activate this optional setting in order to connect with the "Compass Asset Manager" product.
Video surveillance	Enlarged font	The font on the main screen is displayed larger.

$\checkmark$ **Required conditions**

You are in the **Supervisor Settings** menu.
→ *chapter 7.3 "Supervisor Configuration Menu", p. 99*

$\bigodot$ **Proceeding**

1. Press **User Interface**.

2. Select the relevant option.

3. Activate or deactivate the desired option by pressing the toggle icon .

7.3.3 Deposit Balancing adjust settings

You can set which deposit information the **Deposit Balancing** wizard asks for at startup and after completion of a deposit.

You have the following options:

Deposit Balancing: Requests before the start of the deposit	Deposit Balancing	The wizard requires a customer number and a deposit number.
	Declared deposit value	The wizard requires a target value.
	Supervisor ID	The wizard requires a supervisor ID.
Enter auto. Deposit Opening: Requests after completion of the deposit	Customer ID	The wizard requires the customer number.
	Deposit IDDeposit ID	The wizard requires the deposit number.
	Declared deposit value	The wizard requires a target value.

Required conditions

You are in the **Supervisor Settings** menu.
→ *chapter 7.3 "Supervisor Configuration Menu", p. 99*

Proceeding

1. Press **Deposit Balancing**.

2. Select the relevant option.

3. Activate or deactivate the desired options by pressing the toggle icon .

7.3.4 Configuring reports

You can customize various contents and formats of the reports.

You have the following options:

Semi-annual report	Ignore rejected unfit banknotes.	Unfit banknotes do not appear separately in the report, but are counted as rejected banknotes.

	Add rejected unfit banknotes.	Unfit banknotes are listed separately in the report.
Report Format	**TXT**	Reports are output as a text file.
	CSV	Reports are output as an Excel file.
XML Report and **XML Report2** Here, you can define the content for the XML Report that is sent via the FTP server or the XML Report2 that is sent via the FTP2 server.	**rpt5010_OLD format**	Report is based on the XML-Deposit report of the BPS200/C4 and uses the same variables and values if available.
	rpt5010 format	Same as rpt5010old, but for the "Quality" variable there is the "Accepted" value for processing without fitness mode.
	rpt5011 format	Same as rpt5010 with additional values for coins entered during manual inspection and the total amount (total + coins).
	rpt5020 format	Same as rpt5011 with additional serial number information if serial number scanning is enabled or with additional ticket information if the ticket reader is enabled. Important: It is not possible to output the serial number and the ticket ID simultaneously within one report.
XML Report AM Connect This is where you define the content of the XML report that is used for the "Compass Asset Manager" product.	**rpt5010_OLD format**	Report is based on the XML-Deposit report of the BPS200/C4 and uses the same variables and values if available.
	rpt5010 format	Same as rpt5010old, but for the "Quality" variable there is the "Accepted" value for processing without fitness mode.
	rpt5011 format	Same as rpt5010 with additional values for coins entered during manual inspection and the total amount (total + coins).

rpt5020 format	Same as rpt5011 with additional serial number information if serial number scanning is enabled or with additional ticket information if the ticket reader is enabled. Important: It is not possible to output the serial number and the ticket ID simultaneously within one report.
FSN	Format for the Chinese market.	

Required conditions

You are in the **Supervisor Settings** menu.
→ *chapter 7.3 "Supervisor Configuration Menu", p. 99*

Proceeding

1. Press **Report Settings**.

2. Select the desired function.

3. Activate or deactivate the desired option by pressing the toggle

   icon .

7.3.5 IP Settings configuration

IP server

You can connect the machine to the LAN with a set IP address. You have the option via **DHCP** to automatically assign the required information such as IP address, subnet mask and gateway, or you can assign fixed values manually.

You can enter the following values manually:

DHCP	If you do <u>not</u> want to automatically assign the required information such as IP address, subnet mask and gateway, deactivate the option and assign the values manually.
IP	IP address
Mask	Subnet mask
GW	Gateway

DNS server

To use a directory service for the namespace to convert domain names into IP addresses, you can configure a DNS server.

You can enter the following values manually:

IP1	IP address for the DNS server

| IP2 | IP address of a replacement DNS server if the first DNS server fails. |

SNTP server

You can also configure an SNTP server so that the machine can automatically and regularly synchronize the date and time via the network. If the machine cannot establish a connection to the server or the connection is interrupted, the manually set time is used.

You can enter the following values manually:

| IP | IP address for the SNTP server |
| GMT | Time zone |

FTP, FTP2 server

You can configure connections to an FTP server (FTP and FTP2). This allows you to send XML reports. With FTP2, the machine <u>automatically</u> sends the service report together with the first deposit report every day after it is switched on. You define whether data transfer should be encrypted. You can also specify a timeout value that specifies the maximum amount of time (in milliseconds) to wait for a single server response before the connection is interrupted.

The format for XML reports is set under **Report Settings**.

You can enter the following values manually:

FTP or **FTP2**	This is where you activate the data transfer and define the select encrypted transfer if necessary. ● **OFF** – No data transfer ● **FTP** – Data transfer via FTP ● **SFTP** – Encrypted data transfer via SFTP
IP	IP address for the FTP server
Port	Port number
ID	Username
PW	User password
Timeout	Specification of the time to wait for a server response
Disconnect by time	If this option is activated, the connection to the server is interrupted if there is no server response within the defined time span.

VSI server

You can configure a VSI server for use of video surveillance. You also specify a timeout value that specifies the maximum amount of time (in milliseconds) to wait for a single server response.

Recommendation: If you connect the machine to a VSI server, ensure that you always configure the SNTP server too. This is the only way to make sure the date and time of the machine match the data transferred to the VSI server.

You can enter the following values manually:

IP	IP address for the VSI server
Port	Port number
ID	Username
PW	User password
Timeout	Specification of the time to wait for a server response

AM Connect

You can manage the machine centrally via the "Compass Asset Manager" product. To do so, configure the connection to the AM server. You define whether data transfer should be encrypted. You can also specify a timeout value that specifies the maximum amount of time (in milliseconds) to wait for a single server response before the connection is interrupted.

The format for the XML report is set under **Report Settings**.

→ *chapter 7.3.4 "Configuring reports", p. 105*

You can enter the following values manually:

AM Connect	This is where you activate the data transfer and define the select encrypted transfer if necessary. ● **OFF** – No data transfer ● **FTP** – Data transfer via FTP ● **SFTP** – Encrypted data transfer via SFTP
IP	IP address for the AM server
Port	Port number
ID	Username
PW	Username
PW	Specification of the time to wait for a server response
Disconnect by time	If this option is activated, the connection to the server is interrupted if there is no server response within the defined time span.

Detailed information on the "Compass Asset Manager" product is available here:

→ *Compass Asset Manager "User Manual"*

Use USB flash drive | If no LAN connection is established with the network, the XML reports are stored internally. As soon as the connection is re-established, the saved reports are sent and removed from the internal directory. If the machine is operated without connection to the server (or a PC), the saved reports can be exported to the USB flash drive.

→ *chapter 7.1.6 "Importing/Exporting Settings and Reports", p. 80*

Required conditions

You are in the **Supervisor Settings** menu.
→ *chapter 7.3 "Supervisor Configuration Menu", p. 99*

Proceeding

1. ⚠ *Important*

   The required values are available from your network administrator.

   Select **IP Settings**.

2. Select the relevant option.

3. Activate or deactivate the desired option by pressing the toggle icon .

4. Press the desired value.

5. Enter the required values.

7.3.6 Resetting Supervisor Settings

You can reset the supervisor settings to the original configuration.

Required conditions

You are in the **Supervisor Settings** menu.
→ *chapter 7.3 "Supervisor Configuration Menu", p. 99*

Proceeding

1. Press **Reset Supervisor Settings**.

   ⇨ The confirmation menu appears.

2. Confirm the operation or cancel it.

7.3.7 Resetting Database

You can reset all data in the internal database, including grand total, day total, and other related data.

Required conditions

You are in the **Supervisor Settings** menu.

→ *chapter 7.3 "Supervisor Configuration Menu", p. 99*

ⓥ **Proceeding**

1. Select **Reset Database**.

   ⇨ The confirmation menu appears.

2. Confirm the operation or cancel it.

⊙ **Result**

The database is reset.

8   Maintenance

After a certain period of operation or after a certain number of processed banknotes, a message appears on the user interface after startup.
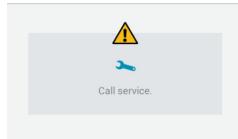
Maintenance of the machine is required. Contact your service partner/your local service organization.

You can close the message using the **C** key.

As soon as maintenance is required, a wrench appears in addition to the message, alternating with the time. This icon flashes until maintenance has been carried out.

"Service" report (XML)

If the machine is connected to LAN and maintenance is required, the "Service" XML report is generated and sent.

Maintenance intervals

Your supervisor can set the operating time or number of processed banknotes after which the next maintenance is required.

8.1   Opening and Closing the Machine

For cleaning work or in the case of malfunctions, you will need to open the machine. The machine has one upper and one lower transport section each of which can be opened separately.

$\bigcirc$ **Proceeding**

Opening the Upper Transport Section

To open the machine, proceed as follows:
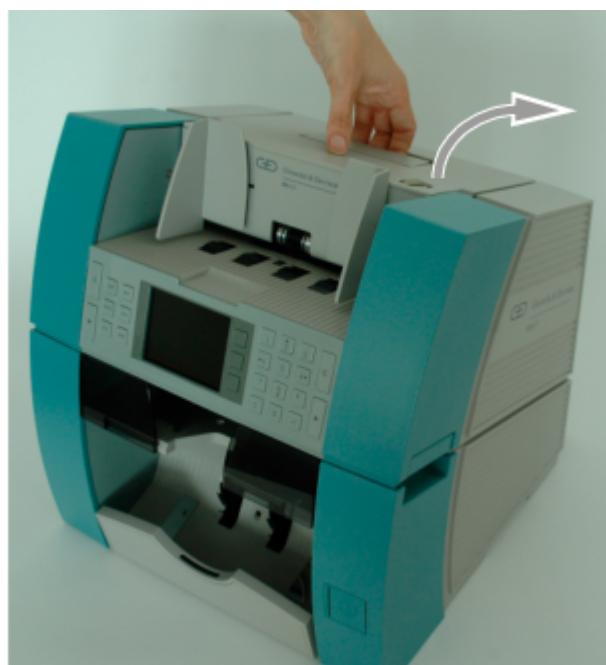
1. Unlock the upper module.

2. Fold the upper module up and back using the handle (arrow).

   ⇨ The upper transport section is open.

Closing the Upper Transport Section

3.

⚠ CAUTION
Danger of crushing when closing the machine
Danger of trapped fingers
► When closing, be careful not to crush your fingers.

Fold the upper module back using the handle.

4. Press the upper module downward on the cover (arrow).

5. Ensure that the upper module engages properly in position.

   ⇨ The upper transport section is closed.

Opening the Lower Transport Section

6. Unlock the lower module.

7. Fold up the lower module using the handles.

   ⇨ The lower transport section is open.

Closing the Lower Transport Section

8.

⚠ CAUTION

Danger of crushing when closing the machine

Danger of trapped fingers

► When closing, be careful not to crush your fingers.

Press the lower module downward on both sides of the cover (arrow.)

9. Ensure that the lower module engages properly in position.

⇨ The lower transport section is closed.

8.2 Cleaning

To keep the machine in perfect condition and operating correctly, you must clean the machine at regular intervals.

Take note of the following recommendations depending on the banknote quality and application:

● Clean once a day
● Clean after 40,000 banknotes
● Clean when looking soiled

Always switch off the machine before cleaning it.

⚠ DANGER

Danger of electric shock

Danger of death or serious injury from electric shock

► Before starting any work, switch off the machine/device.

► Disconnect the machine from the power supply.

► Secure the machine/device against being switched back on.

Note also the following safety warnings.

⚠ DANGER

Danger of electric shock

Danger of death or serious injury from electric shock

► Only field engineers are permitted to remove panel sections screwed in place on the machine/device.

⚠ WARNING

Do not perform any maintenance and service work.

There is a danger of serious injury.

▶ Have maintenance and service work carried out by specially trained maintenance personnel and field engineers.

⚠ CAUTION

Danger from raised dust

Inhaling dust can be hazardous to your health.

Dust in the air can also damage bearings and electronic parts.

▶ Use a vacuum cleaner with a micro-filter.

▶ Never use compressed air for cleaning purposes.

⚠ NOTICE

Electro static discharge possible

Electronic parts can be damaged.

▶ Before starting any maintenance and service work, switch off the machine/device.

▶ Disconnect the machine from the power supply.

▶ Secure the machine/device against being switched back on.

⚠ NOTICE

Incorrect cleaning materials

Risk of damage to the machine/device

▶ Do not use cleaning material with a corrosive or scouring effect.

⚠ NOTICE

Contaminated cleaning cloth

Risk of damage to the measurement window

▶ Always use a new cleaning cloth. Grit contamination from previous cleaning may damage the measurement window.

▶ Use each cleaning cloth once only.

! *Important*

Ensure that no fluid leaks into the inside of the machine.

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Cleaning Aids

Required supplies

- Commercially available cleaning solutions
- Clean, lint-free cloths (for cleaning and drying)
- Isopropyl alcohol for heavy soiling
- Commercially available vacuum device with micro filter

Tip

Watch the Cleaning Video:
https://www.youtube.com/watch?v=TWgA45Oy3Y4

Proceeding

1. Switch off the machine.
   → *chapter 6.1 "Switching the Machine On and Off", p. 31*

2. | ⚠ DANGER |
   |---|

   Danger of electric shock

   Danger of death or serious injury from electric shock

   ► Always unplug the machine by pulling on the plug and never by pulling on the cable.

   Unplug the main plug from the power socket.

3. | ⚠ NOTICE |
   |---|

   Safety-relevant damage is visible

   ► Contact your service partner or local service organization.

   Check the machine for damage.

4. Vacuum the singler area.

5. Thoroughly wring out the moistened cleaning cloth.

Cleaning Machine

6. Clean the housing and singler area with circular movements.

7. Dry the housing and singler area with a clean, dry cloth.

Cleaning the Transport Section

8. Open both transport sections.
   → *chapter 8.1 "Opening and Closing the Machine", p. 113*

9. Vacuum the banknote transport paths and measurement windows. Do not blow conductive particles into the machine.

10. ⚠ *Important*

Use isopropyl alcohol to remove heavy soiling.

Thoroughly wring out the moistened cleaning cloth.

11. Clean the transport sections, rollers, and measurement window with the cleaning cloth.

12. Dry the transport section, rollers, and measurement window using a dry, lint-free cloth.

13. ⚠ *Important*

Ensure that all parts are dry and without residues.

Close the machine.
→ *chapter 8.1 "Opening and Closing the Machine", p. 113*

⇨ **Result**

The machine is cleaned.

⚠ *Important*

With single-shift operation and normal operating conditions clean the machine once a day, or more frequently if needed.

9 GD_PCSuite Software

The GD_PCSuite software allows you to carry out various operations for a BPS C1s connected to your PC via a user interface.

Before using for the first time, the following steps are necessary.

Connection of the machine to the PC and if necessary, installation of driver software.

→ *chapter 9.2 "BPS C1s Connecting and Installing Driver Software", p. 122*

Make sure that the system requirements are met.

→ *chapter 9.1 "System Requirements", p. 122*

GD_PCSuite Pro-
grams

The following programs are available in GD_PCSuite:

● GD_PCSuite - EndUserTool

 With the components GD_Viewer and GD_Reader.

● GD_PCSuite - Distributor Tool

You receive the software via the link that is given in the quick instruc-
tion (Quick Start Guide).

> ⓘ **Important**
>
> The EndUserTool (GD_Viewer/GD_Reader) and the DistributorTool should not run simultaneously on your PC. Close one program before starting the other.

Software Directo-
ries

The directory *Software* contains:

● *Driver*

 Driver software

● *GD_PCSuite_Client_x_x_xx* (GD_PCSuite - EndUserTool)

 – *GD_BCViewer.exe*

 – *GD_SNDBReader.exe*

● *GD_PCSuite_Relx.x* (GD_PCSuite - Distributor Tool)

 – *PlatformGD_x_xxxxxxxx.exe*

 "x" stands for the different version numbers.

Overview of End-
UserTool

Two program components (Viewer and Reader) can be used to evalu-
ate the measurement results of banknote processing on your PC and process them further.

The following options are available:

● Analyze ticket reading barcodes.

● Evaluate serial numbers.

● Save the results in different formats.

→ *chapter 9.3 "Using the PCSuite - End User Tool", p. 134*

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Overview of Dis-
tributorTool

The DistributorTool offers the following options:

- Update software
- Manage BPS C1s in the network.
- Edit password and IP address.
- BPS C1s Upgrade
- Output machine information
- Generate report title.
- Recording banknote data

→ *chapter 9.4 "PCSuite – Operating the Distributor Tool", p. 149*

9.1 System Requirements

For the installation and operation of the "PC Suite" the following HW
requirements are needed.

- Windows operating system ® XP/Vista/Windows ® 7/8/10
- CPU at least 800 M Hz ® Pentium III
- Memory space at least 256 MB RAM
- Working memory at least 60 MB
- A free USB 1.1 or 2.0 interface
- A free 100 Mbit Ethernet interface

9.2 BPS C1s Connecting and Installing Driver Software

Install the driver software manually if it is not installed automatically
when the machine is connected to the PC.

You can connect the machine via USB or LAN. The description
describes only connection via USB.

Required conditions

- Product software has been successfully installed.
- USB cable (in the scope of delivery) or LAN cable (not in scope of
  delivery)

Important

<u>Do not</u> use a USB interface of 3.0 or higher on your computer.

Only connect the machine to the system after the product software has
been installed.

The driver software is only installed when the BPS C1s is connected to
the PC for the first time.

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For more information for:

● Windows XP/Vista/7/8

  → *chapter 9.2.2 "Manually Installing Driver Software for Windows (< Win10)", p. 128*

● Windows 10

  → *chapter 9.2.1 "Manually Installing Driver Software for Windows10", p. 124*

$\left(\!\!\!\!\gg\!\!\!\!\right)$ **Proceeding**

Windows XP/Vista/7/8/10

1. Insert the USB cable into the USB interface on the back of the machine.

2. Plug the other end of the cable into the USB interface of the PC.

3. Switch on the machine.

   ⇨ The operating system detects the machine and completes the installation of the driver software or the "Found New Hardware" message appears.

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4. Click **Next**.

⇨ The software is installed.

Figure 18: Installing Driver Software

5. Click **Finish**.

If the driver software is not installed automatically, proceed as follows.

9.2.1 Manually Installing Driver Software for Windows10

> **Proceeding**

1. Open the device manager.

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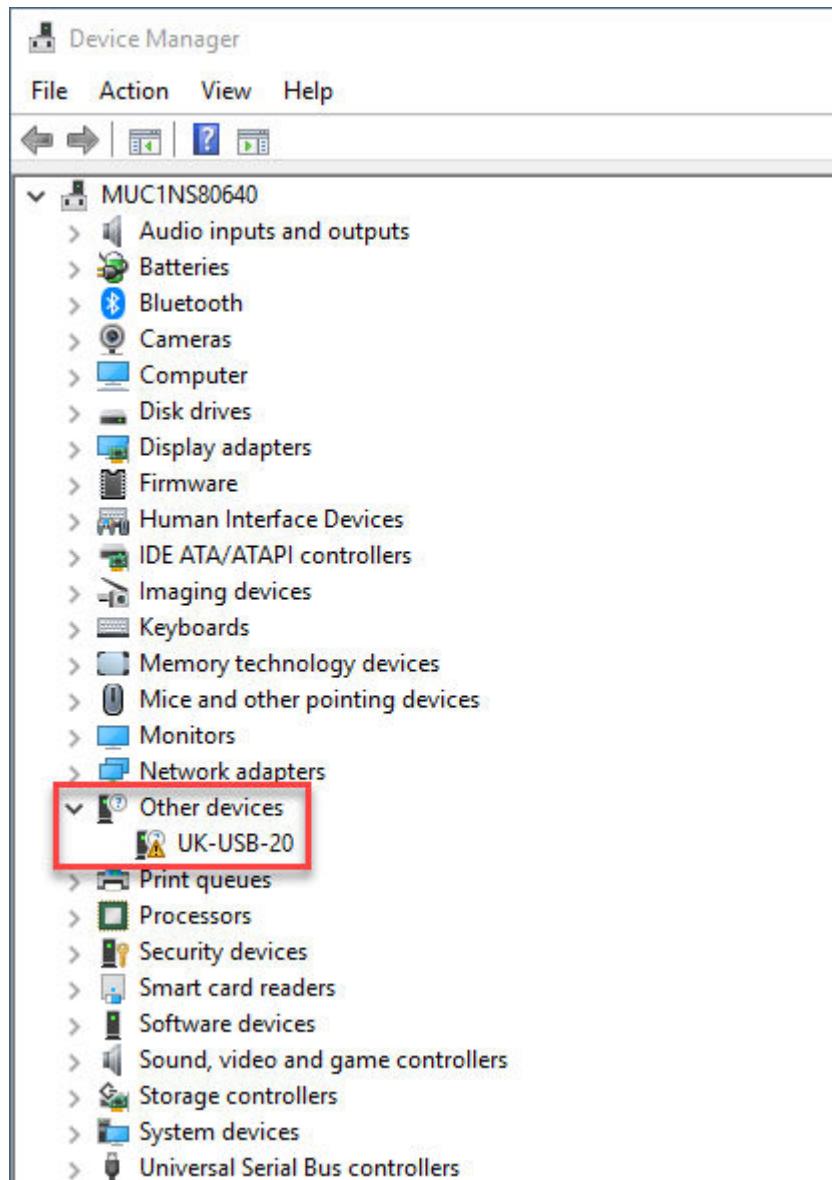
2. Search for the device with the driver problem.
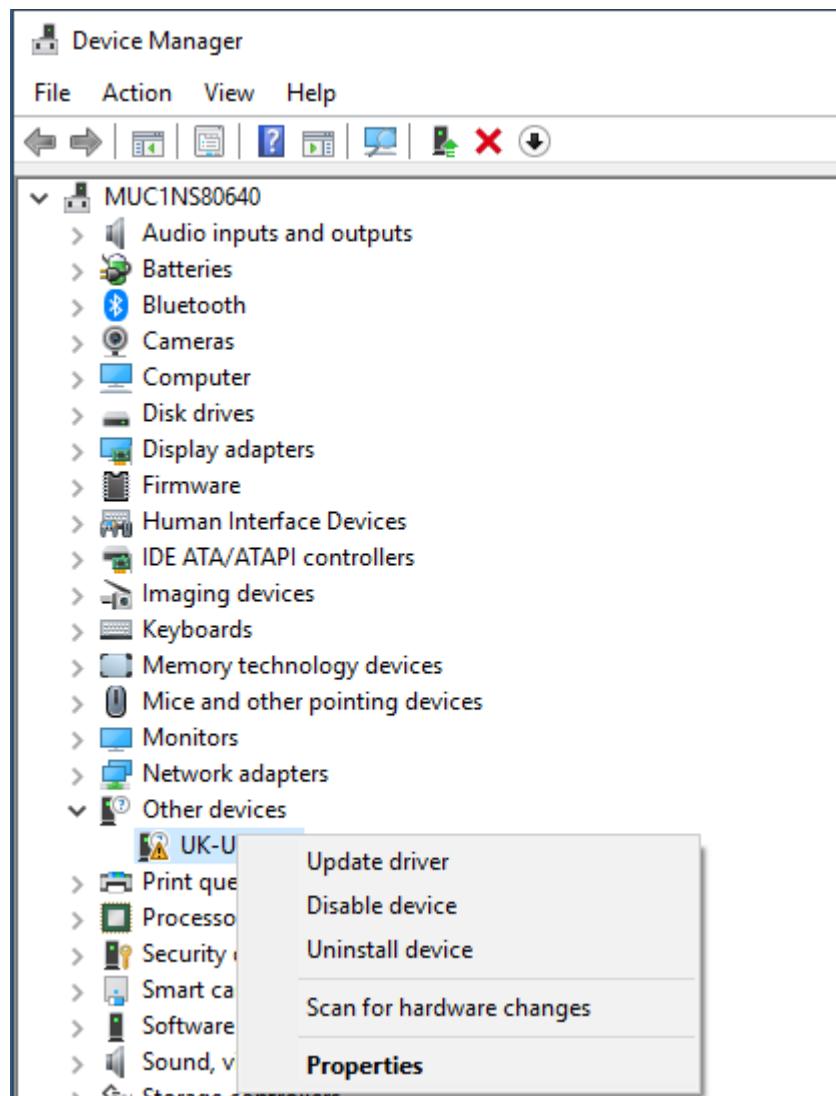
3. Right-click on this device and select **Properties** from the drop-down menu.
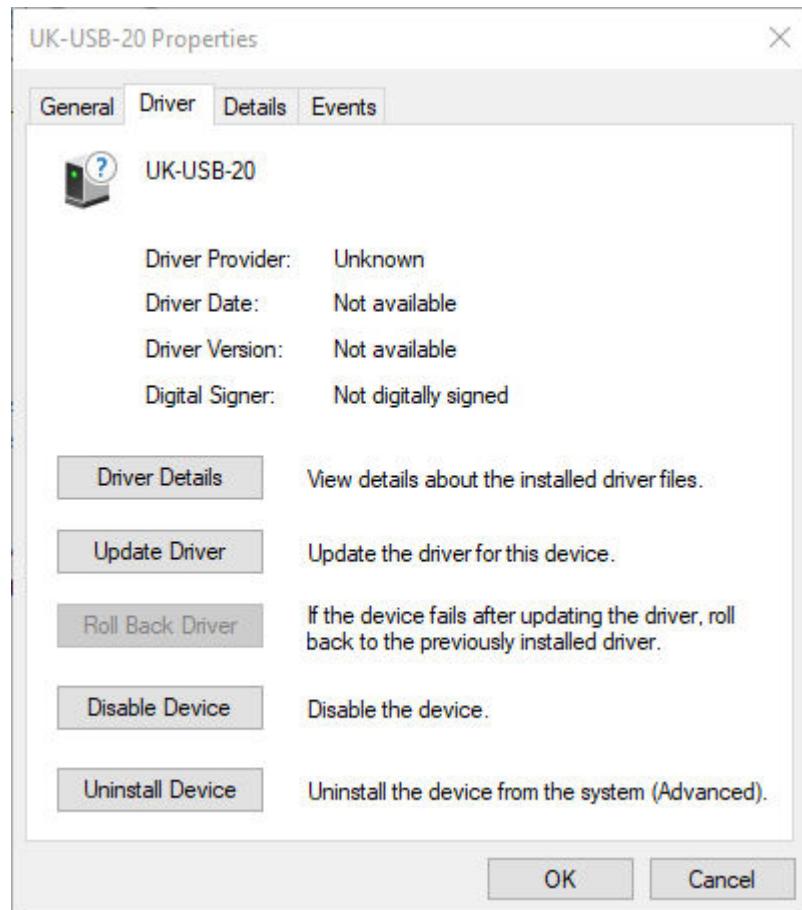
4. Select the **Driver** tab.

5. Select **Update Driver**.

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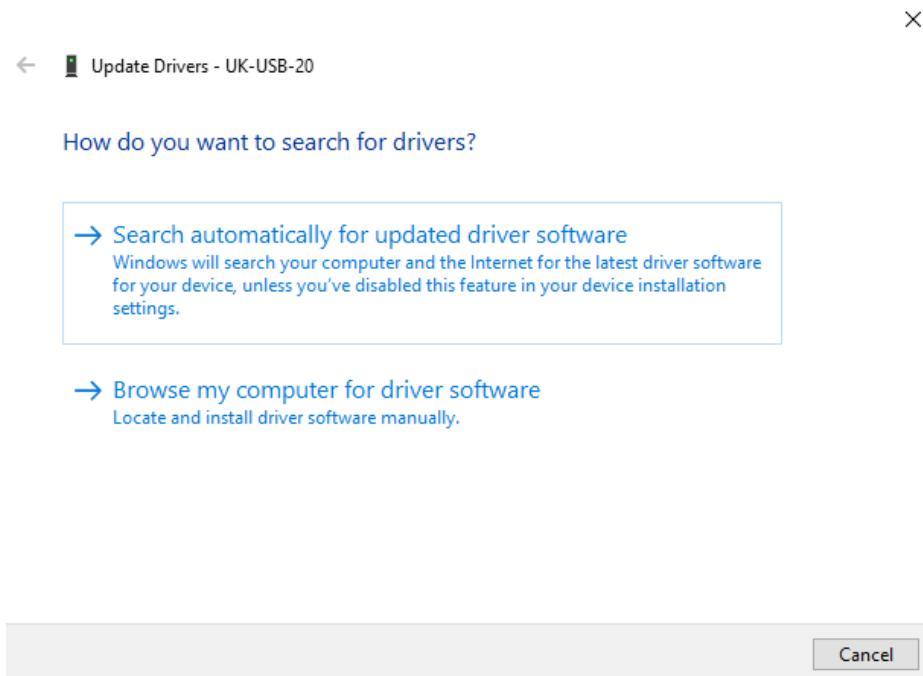
6. Select the second option **Browse my computer for driver software**.

7. Navigate to the folder **DRIVER**.

8. Select **Install**.

Result

The driver software is installed.

9.2.2 Manually Installing Driver Software for Windows (< Win10)

Proceeding

1. Right-click on the **My Computer** icon on your desktop.

2.   Select **Properties** from the drop-down menu.

3.   Select the **Hardware** tab.

4.   Click **Device Manager**.

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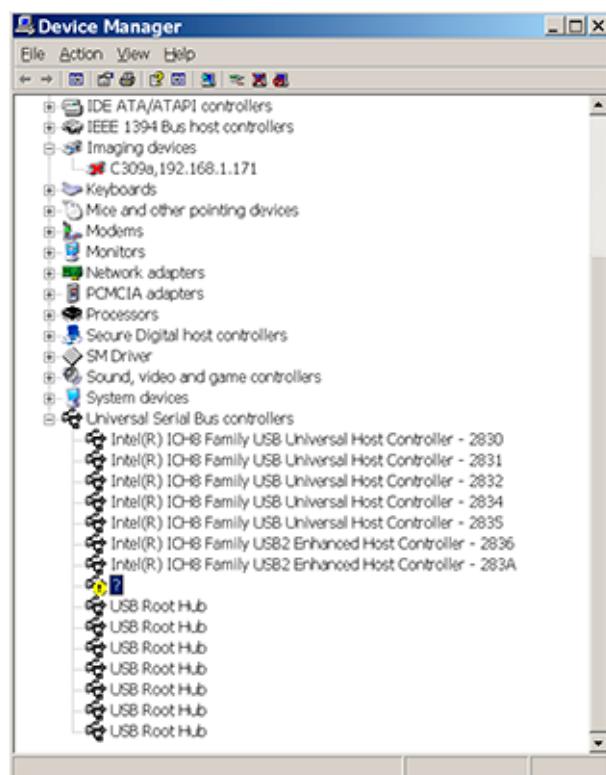
5. Open the *Universal Serial Bus controllers* directory.
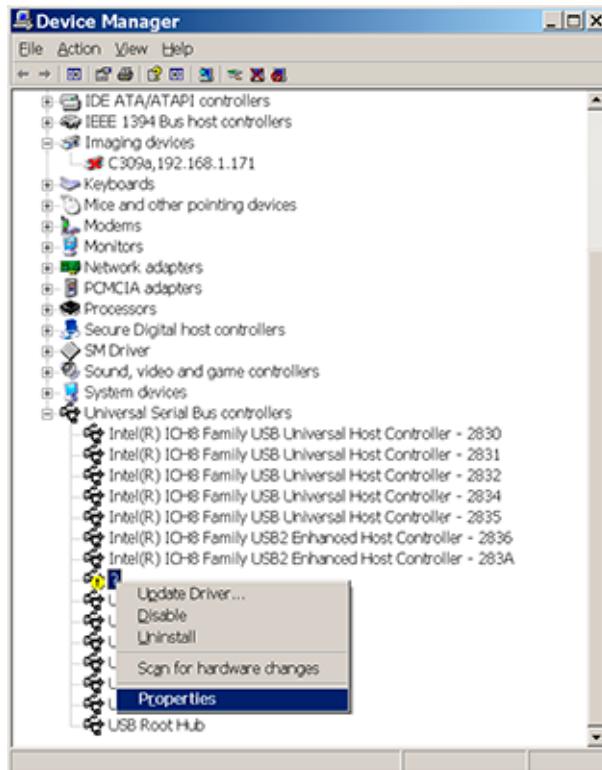
6. Right-click on **?**.

7. Select **Properties** from the drop-down menu.
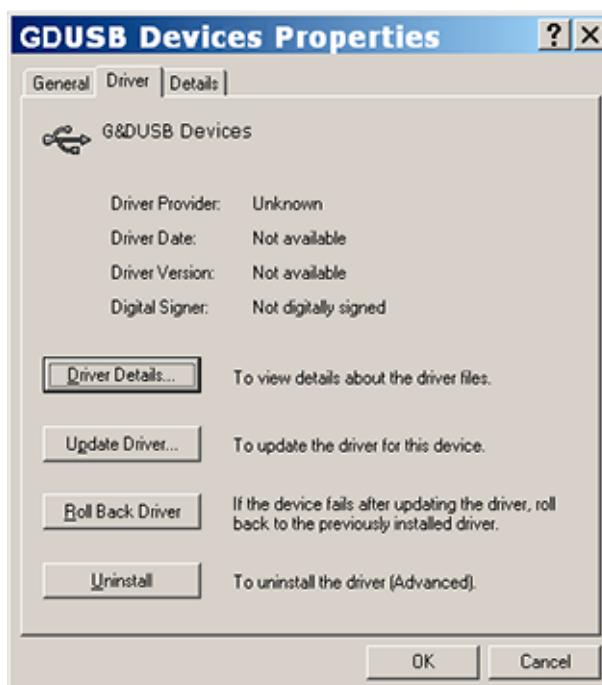
8. Select the **Driver** tab.

9. Select **Update Driver**.

10. Select the first option **Yes, this time only**.

11. Click **Next**.

12. Select the second option **Install from a list or specific location [Advanced]**.

13. Click **Next**.

14. Click **Browse**.

15. Navigate to the *C:\Programms\GDTechnology\PCSuite-Client\driver* directory.

16. Click **Next**.

17. The device manager searches for the driver software.

18. Click **Continue Anyway**.

⇨ The driver software is installed.

Figure 19: Installing Driver Software

19. Click **Finish**.

⇨ **Result**

Installation of the driver software for BPS C1s is now complete.

9.3   Using the PCSuite - End User Tool

The following program components are provided for using the "PC
Suite - End User Tool".

● GDViewer

Analyze, save and print the results of banknote processing

● GDReader

Sort and store saved results

! *Important*

The EndUserTool and the DistributorTool should not run simultane-
ously on your PC. Close one program before starting the other.

9.3.1   Using the Viewer

GDViewer is used with the following main menu.
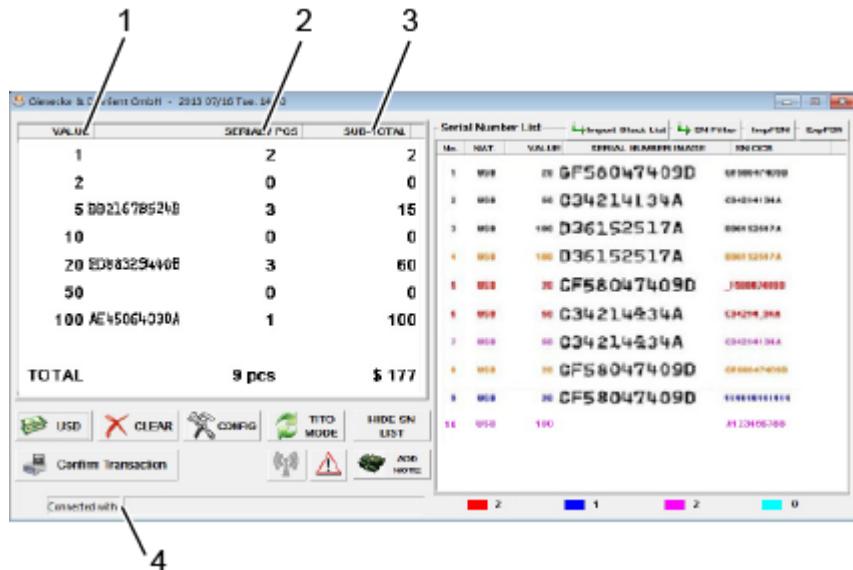
Figure 20: GDViewer Main Menu

1   Denominations of the selected currency
2   Number and serial numbers (only with serial number reading)
3   Value of the processed banknotes
4   Information about connection

Your service partner/local service organization can set whether the
image of the serial number is saved with the background of the bank-
note or with a white background.

9.3.1.1 Starting Viewer

Proceeding

1. Start the Viewer by double-clicking on the program name *GD_BCViewer.exe*.

Result

The main menu appears.

9.3.1.2 Selecting the Currency

Proceeding

1. Select [🟩 USD].

2. Select the currency.

   ⇨ The results for this currency appear in the left-hand side of the main menu.

9.3.1.3 Removing Delivery Area

Proceeding

1. Select [✗ CLEAR].

   ⇨ The delivery area is deleted.

9.3.1.4 Setting Program Parameters

Proceeding

In the "Parameters Setting" window you can configure the following program settings under three tabs.

● **System Configuration** tab
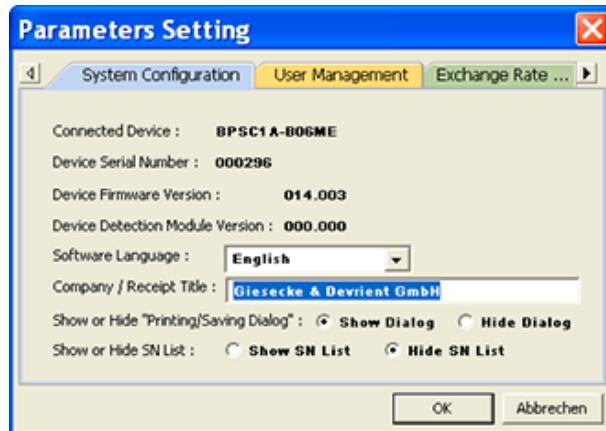
Figure 21: "System Configuration" Tab

Choose the language, assign a receipt title, configure the dialog settings

● **User Management** tab

Figure 22: "User Management" Tab

Add users

● **Exchange Rate Setting** tab

Figure 23: "Exchange Rate Setting" Tab

Set exchange rates

1.   Select .

2.   Select a tab.

3.   Enter the data in the corresponding fields.

9.3.1.5   Showing/Hiding Serial Numbers

Proceeding

1.   Select .
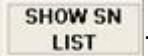
⇨   The list of serial numbers appears in the right-hand side of the main menu.

2.   Select   HIDE SN LIST   .

⇨   The list of serial numbers disappears.

The serial numbers are displayed with various color codes.
The color codes have the following meaning.
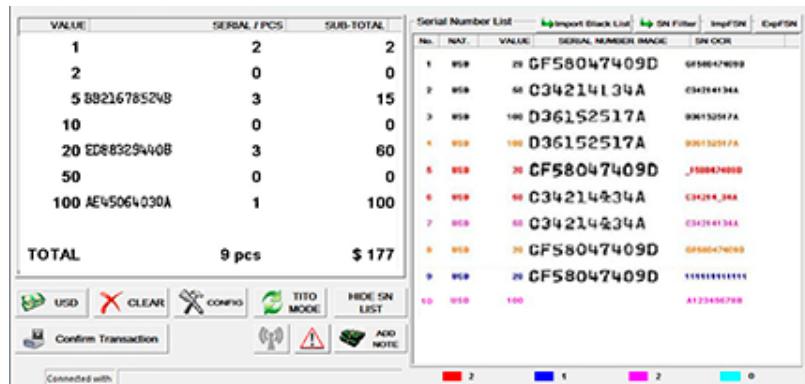
Figure 24: Displaying Serial Numbers

Color	Definition
Red	Serial number's OCR code is suspect
Blue	Serial number's OCR code was checked.
Purple	Serial number's OCR code is suspect and was checked.
Turquoise	A group of serial numbers is on the black list or was rejected by the fitness or SN sorting filter.
Orange	Serial number appears twice in the same bundle.

9.3.1.6   Setting SN Filter

You can select which type of serial number is to be sorted into the delivery stacker.

◯▷   **Proceeding**

1.   Select   SN Filter   .
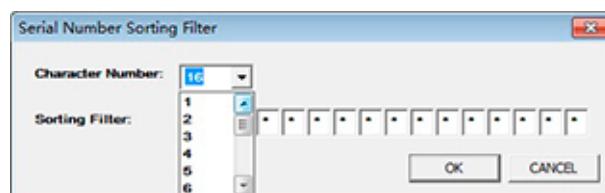
2.   Select the character number, e.g. 2.

3. Enter the characters of the SN, e.g. the first two characters of the SN.

4. Click **OK**.

    ⇨ The machine sorts the banknotes with the specified SN characters into the delivery stacker. The other banknotes are sorted into the reject stacker and the serial number is displayed in blue.

9.3.1.7 Using Search List for Serial Numbers

You can use a search list or a so-called black list to sort banknotes with specific serial numbers. This search list must be available as a text file (`.txt`) in the following format:

'Name of currency','Serial number1'

'Name of currency','Serial number2'

`END`

Example:

`EUR,X10254860498`

`EUR,Y00758463221`

`EUR,H21005874552`

`END`

⊘ **Proceeding**

1. Select ⤷Import Black List.
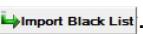
    ⇨ A new window opens.

2. In this window select the search list.

3. Select **Import**.

    ⇨ The search list is imported.

4. On completion confirm the dialog window.

⇨ **Result**

As soon as you use a search list, these entries are compared whenever banknotes are processed. You do <u>not</u> have to activate the serial number reading function for this to happen. When the machine detects a serial number from this list while processing banknotes, it will sort this banknote with the reject reason **SN Error** to the rejects.

9.3.1.8 Connecting Via LAN

If the machine is connected to the LAN, you can connect to the machine using the IP address.

> **Proceeding**
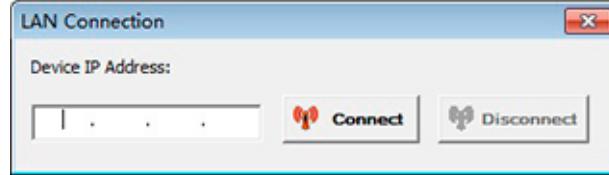
1. Select .

2. Enter the IP address of the machine.

3. To connect to the machine, select **Connect**.

9.3.1.9   Entering Banknote Data Manually

You can manually enter banknote data for rejected banknotes.

> **Proceeding**

1. Select .

2. Select the banknote denomination in the drop-down menu of the **Currency Value** box.

3. Enter a serial number in the **Banknote Serial Number** box.

9.3.1.10 Processing Result

> **Proceeding**
>
> 1. Select [Confirm Transaction].
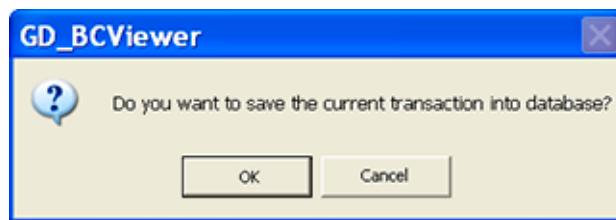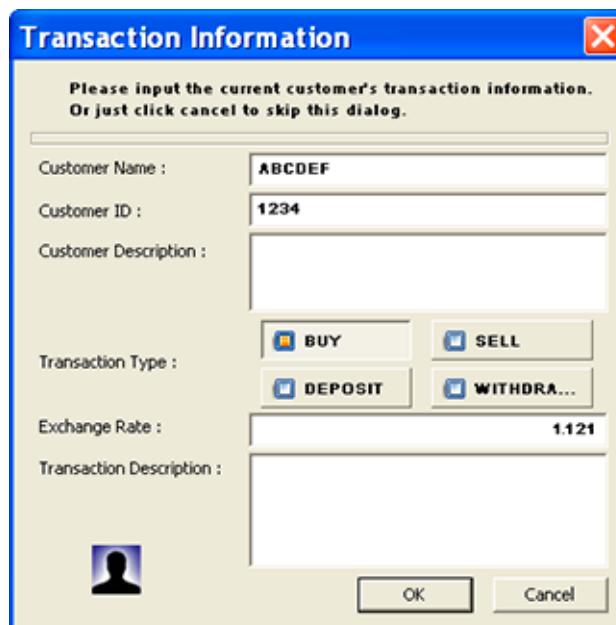
2. Click **OK**.

3. Enter the data in the corresponding fields.

4.   Click **OK**.

⇨   The "Transaction Printing or Saving Process" window
appears.
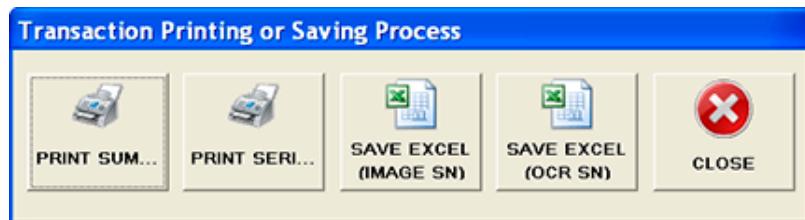
Figure 25: Viewer - Confirming Transaction

You can choose from the following options:

	PRINT SUM This prints out the results on a connected printer.
	PRINT SERI This prints out the results with the relevant serial number on a connected printer.
	SAVE EXCEL (IMAGE SN) This saves the results with the relevant serial number in image format to an EXCEL file.
	SAVE EXCEL (OCR SN) This saves the results with the relevant serial number in OCR format to an EXCEL file.
	CLOSE This terminates the process.
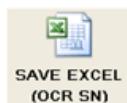
9.3.1.11   Processing Ticket or Check Reading or Displaying Full Banknote Scan

Proceeding

1.   Select .
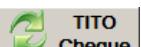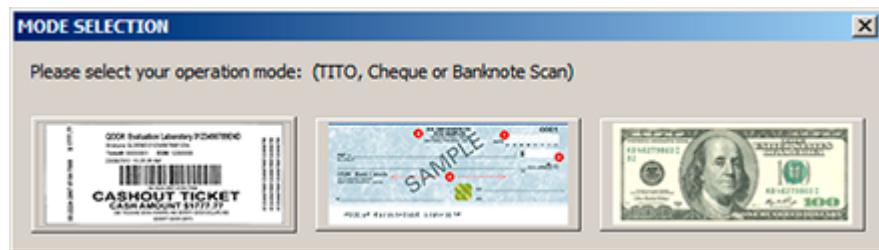
2. Select ticket reading, check reading, or banknote scan.

    ⇨ The following information appears.
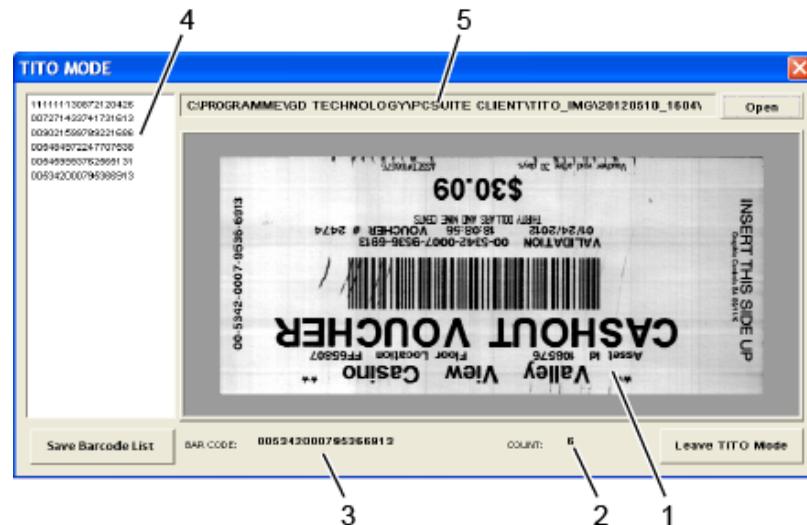
Figure 26: Tito Mode - Menu
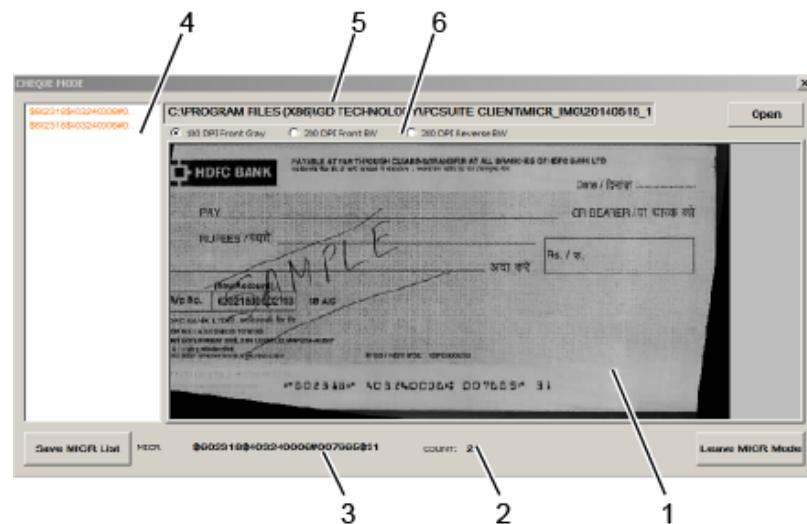
Figure 27: Check Reading Menu
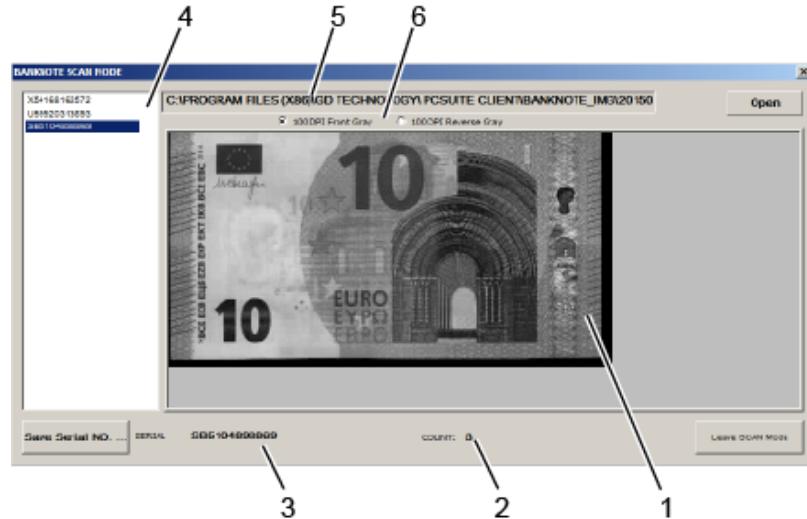
Figure 28: Banknote Scan Menu

1	Image of the last barcode/check read or the last scanned banknote
2	Number of all barcodes/checks/banknotes processed
3	Number of the decoded barcode/check from the image or serial number of the scanned banknote
4	All decoded barcodes/checks or all serial numbers of the banknotes
	The numbers marked in orange in the list are repetitions. The value given in brackets indicates the frequency.
5	Directory name of the saved images
	Notes:
	The directory name is created using the date and time of processing.
	The file name *20110823_1821* stands for 08/23/2011 18:21.
	Each barcode/check/banknote image is saved in this directory with the decoded barcode/check or the serial number as the file name.
	The default directory used for saving is *C:\Programs\GD TECHNOLOGY\PCSUITE CLIENT\TITO_IMG*, *...\MICR_IMG*, or *...\BANKNOTE-IMG*.
6	Print resolution of the image and whether it relates to the banknote front/reverse

Opening the Directory

3. Select **OPEN** (6).

   ⇨ The directory for the current processing opens.
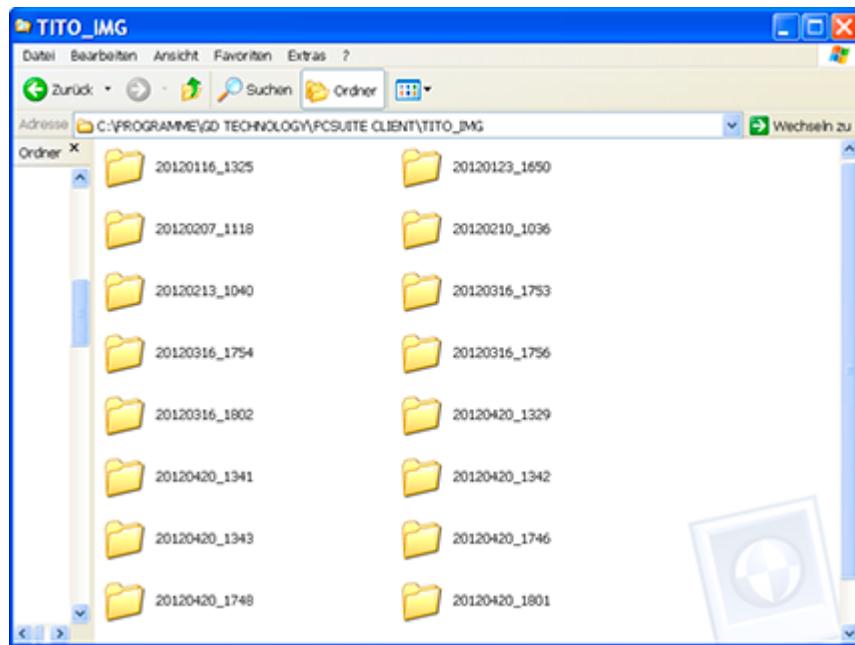
4.   Double-click the directory to open.

⇨   The images of the barcodes/checks/banknotes read appear.

Example: Images of barcodes
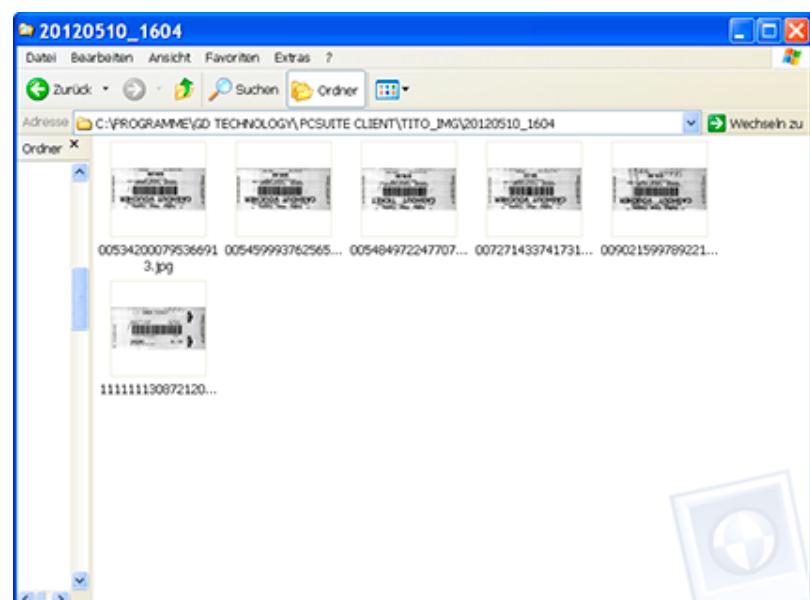
Figure 29: Tito Mode - Read Barcodes

5. You can save the list of all decoded barcodes/checks or the scanned serial numbers.

Option A Saving the List of All Decoded Barcodes

a. Select **Save Barcode List**.

b. Save the list at the storage location you require.

⇨ The list is saved as a text file (.txt).

Option B Saving the List of All Decoded Checks

a. Select **Save MICR List**.

b. Save the list at the storage location you require.

⇨ The list is saved as a text file (.txt).

Option C Saving the List of All Scanned Serial Numbers

a. Select **Save Serial NO.**.

b. Save the list at the storage location you require.

⇨ The list is saved as a text file (.txt).

6. Choose between the following options:

Option A Ending TITO MODE

a. Select **Leave TITO Mode**.

Option B Ending Check Reading

a. Sselect **Leave MICR Mode**.

Option C Ending Banknote Scan

a. Select **Leave SCAN Mode**.

9.3.1.12 Displaying Reject Reasons

Proceeding

If banknotes have been rejected, you can display the rejects.

1. Select [icon].

⇨ The window with the rejects appears.

9.3.2 Using the Reader

After the result data has been processed with the GDViewer, it is available for further analysis in the GDReader.

The GDReader is used with the help of the main menu shown below.
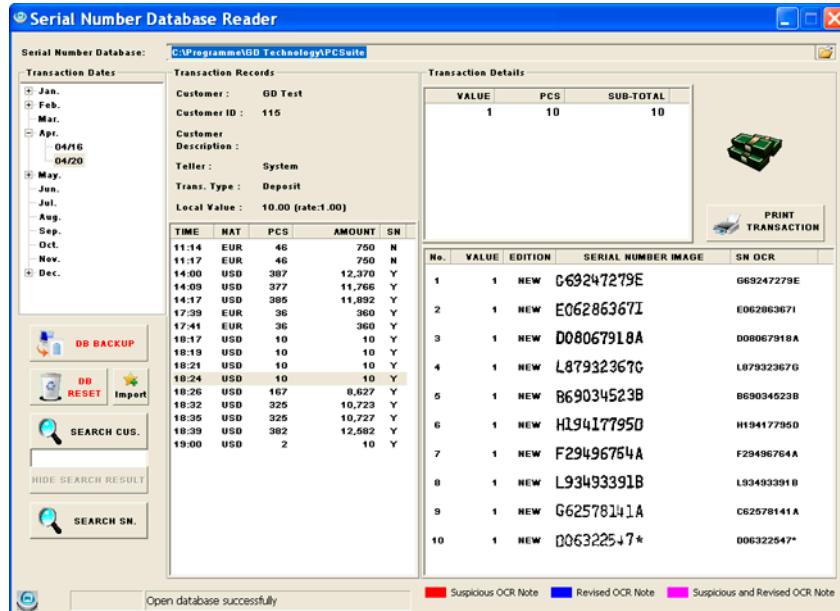
Figure 30: Main Menu of GDReader

9.3.2.1   Starting the Reader

Proceeding

1.   Start the Reader by double-clicking on the program name*GD_SNDBReader.exe*.

   ⇨   The main menu appears.

2.   Check the results displayed.

   You can find an explanation of the color codes in → *chapter 9.3.1.5 "Showing/Hiding Serial Numbers", p. 137*.

3.   Select one of the following functions.

   DB BACKUP

Save the serial numbers as a file

   DB RESET

Reset and close the current database

   SEARCH CUS.

Search banknote processing for a user

   SEARCH SN.

Search banknote processing for a serial number

ⓘ *Important*

The size of the data base is limited to 2 GB. As soon as you reach this limit, the data base can no longer be opened. A warning therefore appears as soon as the data base exceeds a size of 1 GB.

1.   Save the data base with **DB BACKUP**.

2.   Then reset the data base with **DB RESET**.

9.3.2.2   Searching for Serial Numbers

⊙   **Proceeding**

Below you will find a description of how to search for serial numbers.

1.   Select **SEARCH SN.**.
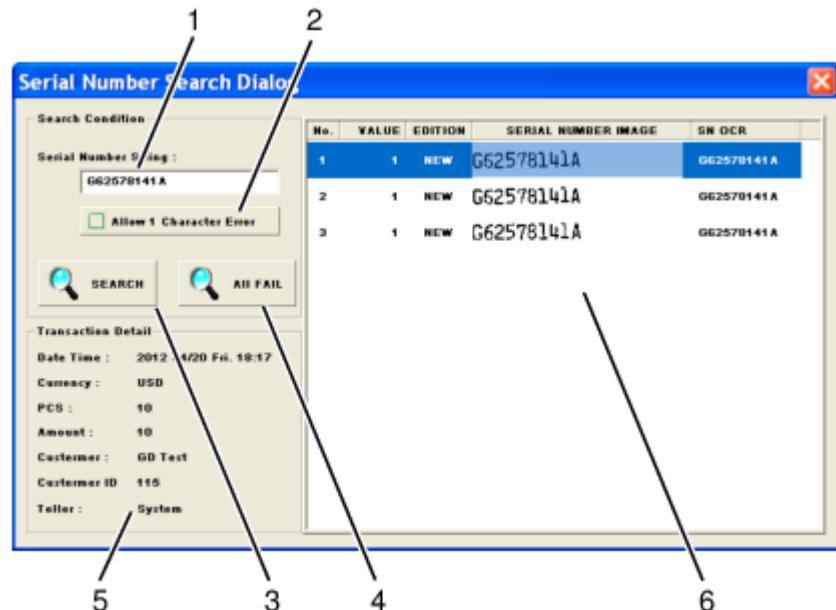
2.   Enter the serial number in the **Serial Number String** box (1).

3.   Select **Allow 1 Character Error** (2).

   ⇨   One mistake is permitted during the search.

4.   Click **SEARCH** (3).

5.   To search for suspect OCR codes, select **All Fail** (4).

6.   Select a banknote from the right-hand side of the display area (6).

   ⇨   Detailed information appears in the **Transaction Detail** area (5).

9.4   PCSuite – Operating the Distributor Tool

The GD_PCSuite – Distributor Tool provides service functions that can be selected in the main menu.

This chapter describes the following functions:

- *→ chapter 9.4.1 "Showing Product Information", p. 151*
- *→ chapter 9.4.2 "Setting up the Report Title", p. 153*
- *→ chapter 9.4.3 "Changing the Password or IP Address", p. 155*
- *→ chapter 9.4.4 "Issuing Reports", p. 156*
- *→ chapter 9.4.7 "Changing the Machine Type", p. 160*
- *→ chapter 9.4.8 "Updating the Machine", p. 164*
- *→ chapter 9.4.9 "Defining the Default Currency", p. 168*
- *→ chapter 9.4.12 "Connecting LAN Explorer", p. 172*
- *→ chapter 9.4.13 "Recording Banknote Data", p. 173*
- *→ chapter 9.4.5 "Connecting Via LAN", p. 158*
- *→ chapter 9.4.6 "Exporting/Importing UI Settings ", p. 159*

Required conditions

"GD_PCSuite" is available.

Important

The EndUserTool and the DistributorTool should not run simultaneously on your PC. Close one program before starting the other.

Proceeding

Starting the Distributor Tool

1.   Start the Distributor Tool by double-clicking on the program name *PCSuite_BPS_x_xxxxx.exe*.

   ⇨   The main menu appears.
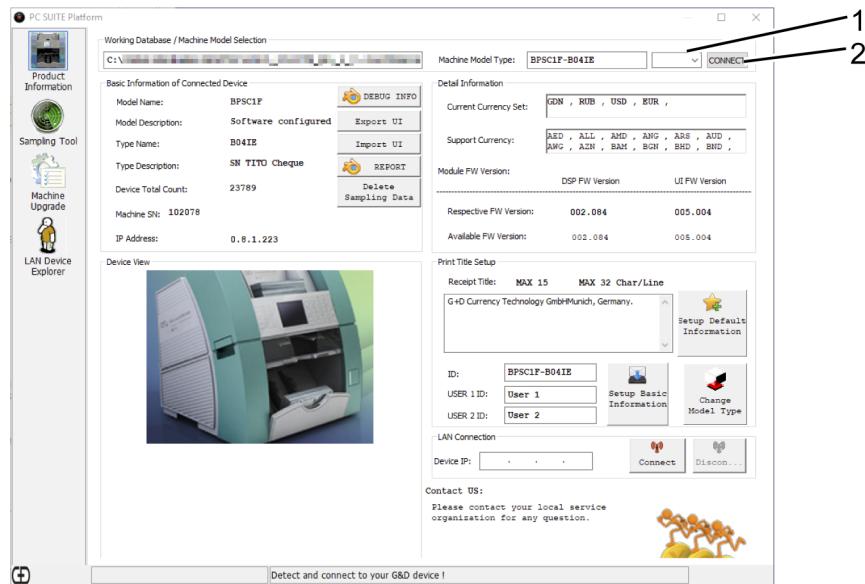
2. For BPS C1s (HW 4.0): Connect the machine manually to the PC.

   a. The machine is recognized as USB serial device by the PC. Check which COM port is assigned to the USB serial device in the system settings of the PC.

   b. Select the according COM port in the main menu (1).

   c. Select **CONNECT** (2).

BPS C1 (HW 3.0) is connected automatically.

3. Select the icon for the desired function.
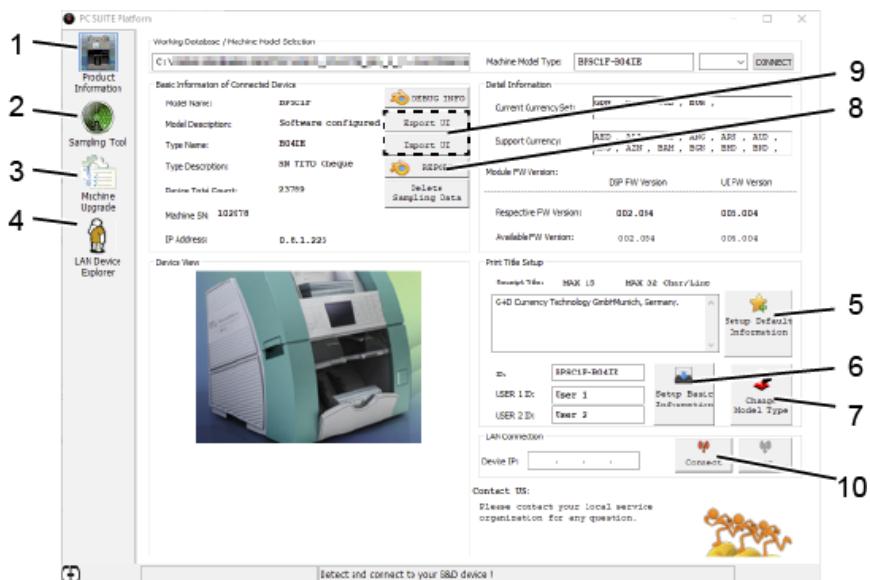
Figure 31: Distributor Tool - Main Menu

1	**Product Information**, → *chapter 9.4.1 "Showing Product Information", p. 151*
2	**Sampling Tool**, → *chapter 9.4.13 "Recording Banknote Data", p. 173*
3	**Machine Upgrade**, → *chapter 9.4.8 "Updating the Machine", p. 164*
4	**LAN Device Explorer**, → *chapter 9.4.12 "Connecting LAN Explorer", p. 172*
5	**Setup Default Info**, → *chapter 9.4.3 "Changing the Password or IP Address", p. 155*
6	**Setup Basic Information**, → *chapter 9.4.2 "Setting up the Report Title", p. 153*
7	**Change Model Type**, → *chapter 9.4.7 "Changing the Machine Type", p. 160*
8	**REPORT**, → *chapter 9.4.4 "Issuing Reports", p. 156*
9	**Export UI** / **Import UI**, → *chapter 9.4.6 "Exporting/Importing UI Settings ", p. 159*
10	**LAN Connection**, → *chapter 9.4.5 "Connecting Via LAN", p. 158*

9.4.1 Showing Product Information

The product information for the connected BPS C1s is displayed in the main menu.

> **Proceeding**
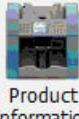
1. Select in the main menu.

⇨ The current machine data are displayed.
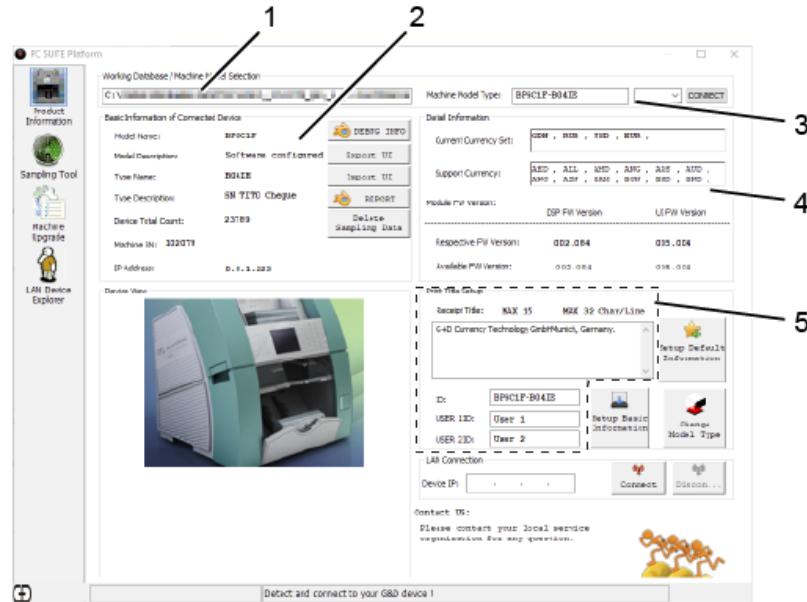
Figure 32: Product Information Menu

1   **Working Database**
       Directory name for the system modules
2   **Basic Information of Connected Device**
       Basic information about the connected machine
       Model Name
       Model Description
       Model details
       Type Name
       Machine function
       Type Description
       Detailed function designation
       Device Total Count
       Number of processed banknotes
       Device Serial Number
       Machine serial number
       IP Address
3   **Machine Model Type**
       Machine model, for explanation see figure below.
4   **Detail Information**
       Additional information on the connected machine
       Current Currency Set
       Enabled currencies
       Support Currency
       Released currencies for the license key (max. 32)
       Module FW Version
       Firmware version
5   **Report Title**

```
B P S C 1 N - B 03 N E
        1       2  3  4  5 6
```
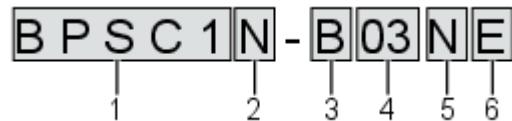
Figure 33: Machine Model

1   Name of the machine
         Banknote **P**rocessing **S**ystem **C**ompact**1**

2   Function (can be changed)
         N = Deposit processing configuration (HW 2.0)
         F = Fitness sorting configuration (HW 2.0)
         D = Previous version for deposit processing (HW 1.0)
         G = Configuration for fitness sorting (HW 3.0)
         P = Configuration for deposit processing (HW 3.0)
         S = Superior variant (HW 4.0)

3   Design (should not be changed)
         B=Standard (English keyboard); C=Special version (Chinese keyboard); I=Special version for India; R=Special version (Russian keyboard); U=Special version for USA and Canada

4   Number of currencies enabled (max. 32) (can be changed)

5   Optional functions (can be changed)
         S = Serial number reading
         T = Ticket reading (TITO Mode = reading casino tickets)
         C = Cheque reading
         M = Multi (serial number reading + ticket reading (TITO))
         G = Multi 2 (serial number reading + cheque reading)
         H = Multi 3 (ticket reading (TITO) + cheque reading)
         I = Multi 4 (serial number reading + ticket reading (TITO) + cheque reading)
         N = None

6   GUI language (from release 4.0 no longer relevant, always E)
         B=Indonesian; E=English; F=French; G=German; F=French; I=Italian; K=Slovakian; L=Polish; P=Portuguese; R=Russian; S=Chinese; T=Turkish; V=Spanish; X=pre-configured

You can also output product information for the BPS C1s to the control unit.

→ *"BPS C1 User Manual, System Information"*

9.4.2   Setting up the Report Title

Use the following procedure to set up the report title.

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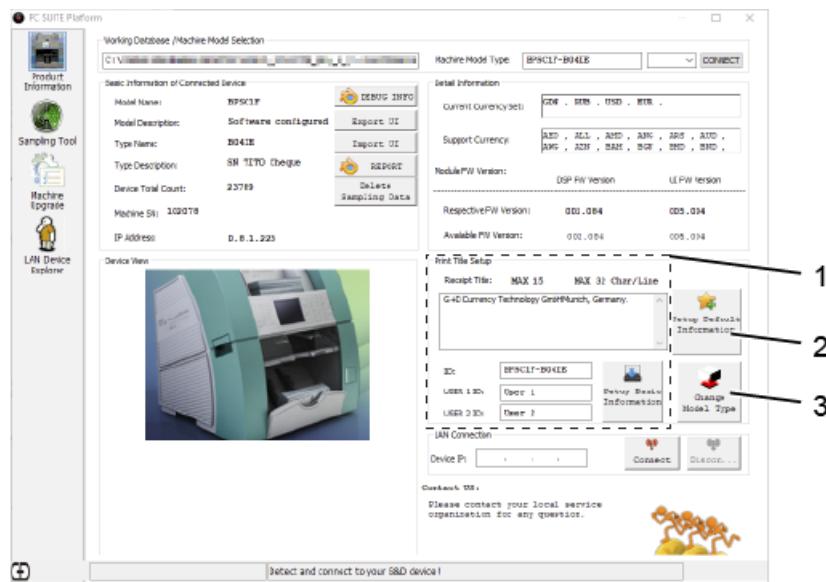
Figure 34: Product Information - Menu

1 → *chapter 9.4.2 "Setting up the Report Title", p. 153*
2 → *chapter 9.4.3 "Changing the Password or IP Address", p. 155*
3 → *chapter 9.4.7 "Changing the Machine Type", p. 160*

(!) ***Important***

If you use the XML report, you may <u>not</u> enter the following characters into the report head (report title, machine model and user identification):

- <
- >
- &
- "
- '

If one of these characters is entered, the XML data is interpreted incorrectly and therefore cannot be used.

(>) **Proceeding**

Setting up the Report Title

1. Enter text in the **Print Title Setup** area (1) (15 lines with 35 characters/line).

2. Enter the machine model designation and the user identification.

3. Select .

(⇨) **Result**

Your entries are stored in the connected device and the next reports will be printed out with this title.

(!) *Important*

The saved information will only be displayed in the menu once the machine has been restarted. Check the entries by carrying out a test print.

9.4.3   Changing the Password or IP Address

You can only change the IP address if you are connected to the machine via USB. Proceed as follows to change the password or IP address:

(>) **Proceeding**

1.   Select ⭐ Setup Default Information in the main menu.

⇨   The following menu is displayed.
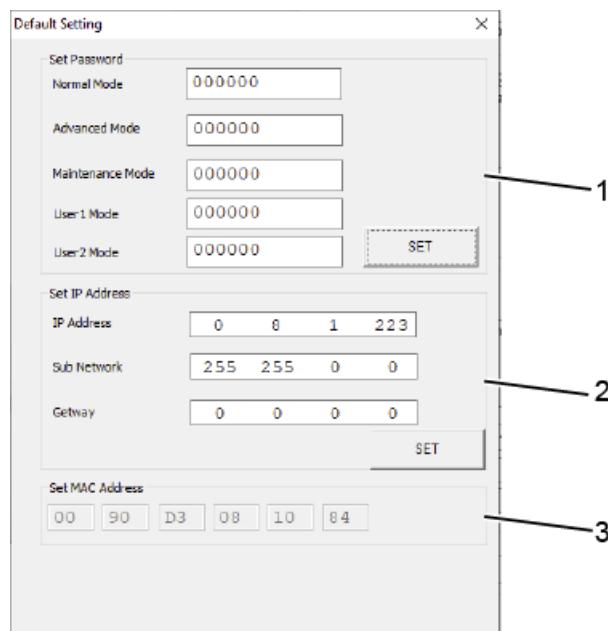
Figure 35: Default Settings

1   **Set Password**
2   **Set IP Address**
3   **Set MAC Address** (the MAC address is only displayed)

Change Password

To change the password use **Part 1** of the menu.

You have the following input options:

- Password for Normal Mode
- Password for Advanced Mode (Supervisor)
- Password for Maintenance Mode
- Password for User1 Mode/User2 Mode

2. Enter the password (sixnumerical characters).

3. Select **SET**.

   ⇨ The password is saved and the main menu is displayed.

Changing the IP Address

To change the IP address use **Part 2** of the menu.

4. Enter the IP address.

5. Select **SET**.

   ⇨ The data are saved and the main menu is displayed. The IP address is changed on the machine. In the main menu under "Basic Information of Connected Device" the changed IP address is only available after restarting the Distributor Tool or after reconnecting via USB.

9.4.4 Issuing Reports
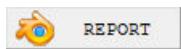
REPORT

You can generate the following reports.

→ *chapter B "Description of Reports", p. 182*

| this time service report | Service report as a `.bin` text file |

| this time service report (XML) | Service report as an `.xml`; you can send this file to your service partner/local service organization for error analysis. |

| this time paper report | Report: Fitness as a `.bin` text file |

| 1~6 month paper report | Requirement for the data memory: |

- A USB flash drive is inserted into the back of the machine.

Summary of the fitness reports as a `.bin` text file for the first half year (period: 1 January – 30 June); new statements are added to this summary within this period. Once the second half year has begun, this summary is saved and you can always regenerate the saved values from the report during the second half year.

| 7~12 month paper report | Requirement for the data memory: |

- A USB flash drive is inserted into the back of the machine.

Summary of the fitness reports as a `.bin` text file for the second half year (period: 1 July – 31 December); new statements are added to this summary within this period. Once the first half of a new year has

begun, this summary is saved and you can always regenerate the saved values from the report during the first new half year.

this time XML report	Report: Deposit as an `.xml` file;

| Daily time Excel report | Report: Daily result as an `.xls` Excel file; enter the relevant day in the format year/month/day. The year always has four digits; the month and day have one to two digits (e.g. 2015/10/22 or 2015/8/4). |

The content of the report depends on whether the USB flash drive is inserted into the back of the machine:

- without USB flash drive – simple list (denomination, number, total value)
- with USB flash drive – complete list

| Save location for reports | The following reports are saved in the directory in which the "GDPCSuite" software is also saved: |

- this time service report
- this time paper report
- 1~6 month paper report
- 7~12 month paper report
- this time XML report
- Daily time Excel report

For the following report, you can enter the save location the first time:

- this time service report (XML)

Then the report is always saved to the specified save location. Ensure that you select a directory that is always available and that has an unchangeable name.

Proceeding
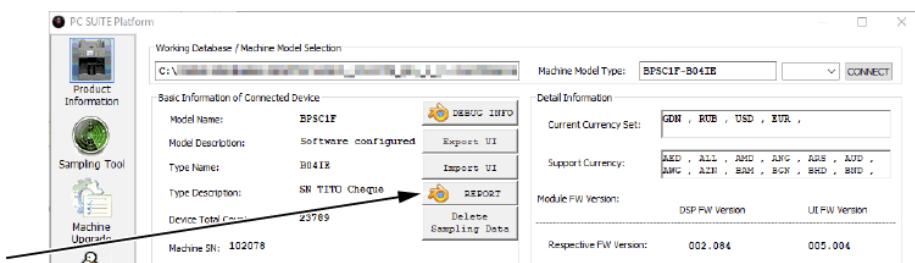
1. Select [REPORT] in the main menu.

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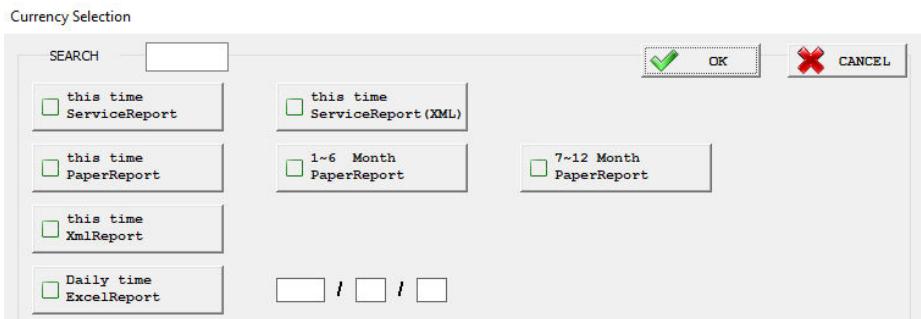
2. Select the relevant report and confirm by clicking **OK**.

⇨ When the report has been successfully created, a message appears with the storage location details.

3. Click **OK** to confirm the message.

Result

The report is saved to the specified directory.

9.4.5 Connecting Via LAN

If the machine is connected to the LAN, you can connect to the machine using the IP address.

Proceeding
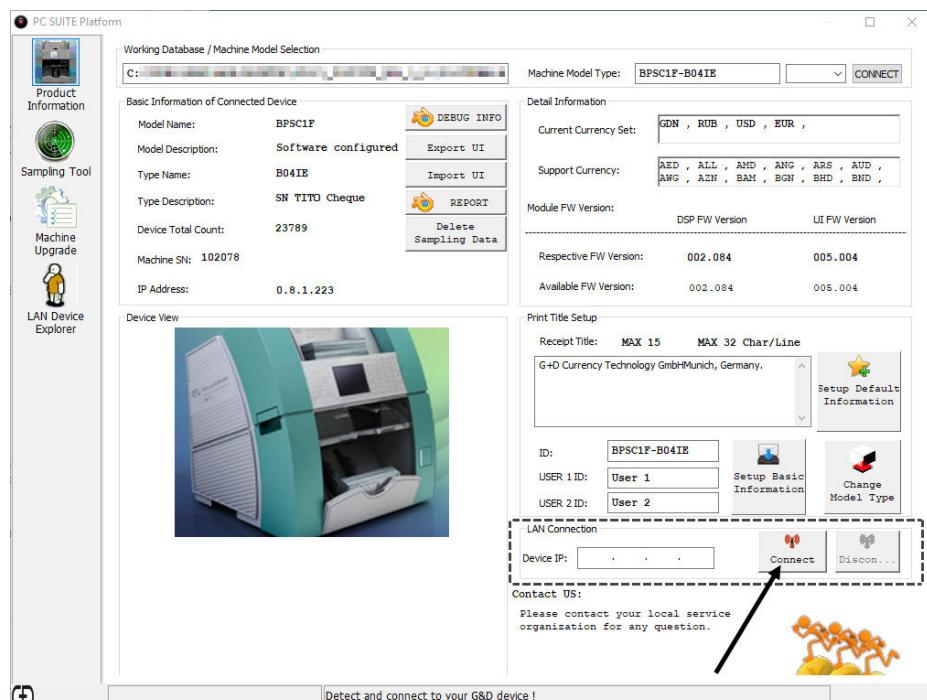
1. Enter the IP (address) of the machine.

2. To connect to the machine, select **Connect**.

9.4.6 Exporting/Importing UI Settings

Your supervisor has configured various settings for the user interface (**UI Settings**) in the **Supervisor Settings**.

You have the option to transfer these settings to other machines. To do this, export these user interface settings as a .bin file on one machine and import this file to other machines.

Required conditions

All machines must have the same software installed.

Proceeding

Exporting Settings
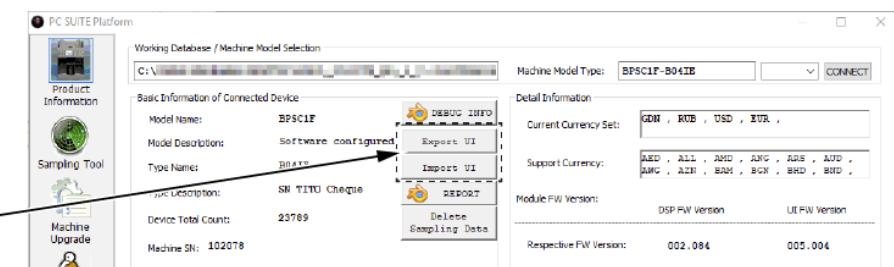
1. Select ⟨ Export UI ⟩ in the main menu.

2. Select the desired directory for the export and save the file.

   ⇨ The .bin file is exported to the specified directory.

3. On completion confirm the dialog window on the PC screen.

   ⇨ You can now import this exported file into other machines to adopt the user interface settings.

Importing Settings

4. Select ⟨ Import UI ⟩ in the main menu.

5. Select the directory where the .bin file to be imported is located.

   ⇨ The user interface settings are imported from this file.

6. On completion confirm the dialog window on the PC screen.

Result

The machine restarts with the imported settings. If the machine does not start automatically, you will have to restart it.

9.4.7   Changing the Machine Type

Extending the Machine Function

You can expand the machine type using a license key for the BPS C1s. You can increase or limit the number of currencies available or release the serial number reading and/or ticket reader (TITO Mode) functions.

Updating Software Components

To update the software, see → *chapter 9.4.8 "Updating the Machine", p. 164*.

License Key is Available

You can obtain two different license keys from your service partner/local service organization.

- License key to change the machine functions
- License key for a machine without software (e.g. after installing a used circuit board A)

  If you wish to request a license key, the following information is required:

  – Serial number of the machine
  – Old model type
  – New model type

Once you have updated the machine using the license key, a release is for the currencies is required for the machine.

Required supplies

New license key

Proceeding

Entering the License Key

1. Select [Change Model Type icon] in the main menu.

2. Enter the license key.

License Key Verification ✕

Please Enter Your License Key :

4B6B8704F00B4ACA401F1F854B1A98C9C209F8A1760
2BB6920A44CBF9EFAEE7D81EFAB81D08D6B8A08CB55
BAAD5EEBC172

Check License Key

License Information

You do not have permission to change model type of GD devices !

OK
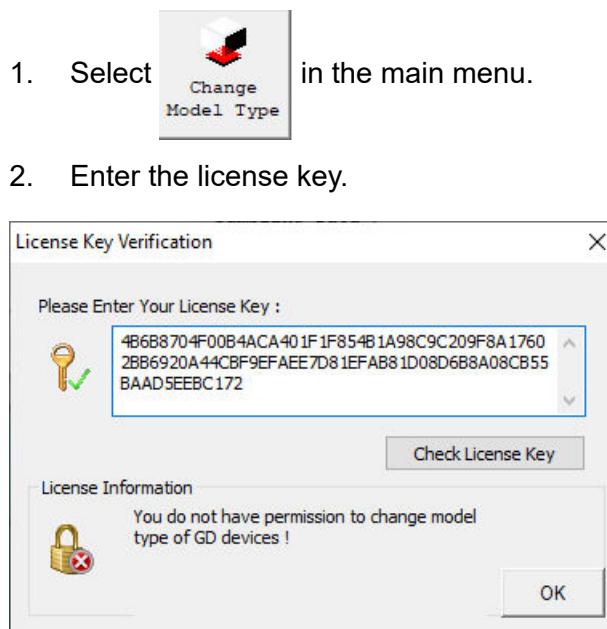
3.   Select **Check License Key**.
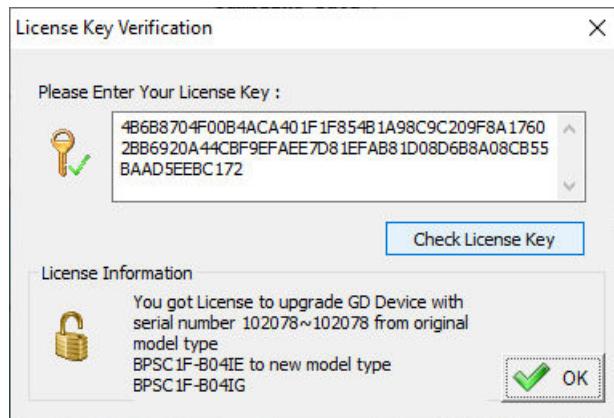
4.   Confirm the "License Key Verification" using **OK**.

5.   Confirm the dialog box.

Releasing Currency

Release the currencies installed using the license key as follows.

6.   Select .

⇨   The **Detection Module Upgrade** area in the menu displayed contains a question mark.
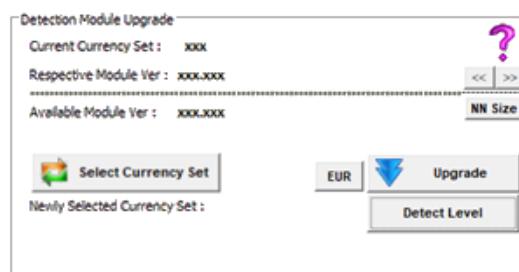
Figure 36: Detection Module Upgrade Area

7.   Click **Select Currency Set**.

8. Select the currencies. You have two options.

   a. Mark the currencies in the menu that is displayed.

   b. Enter the currencies separated by a comma in the **SEARCH** box.

      ⇨ The currencies are marked.

   ⇨ Only <u>certain</u> currencies that have been released using the license key can be marked.
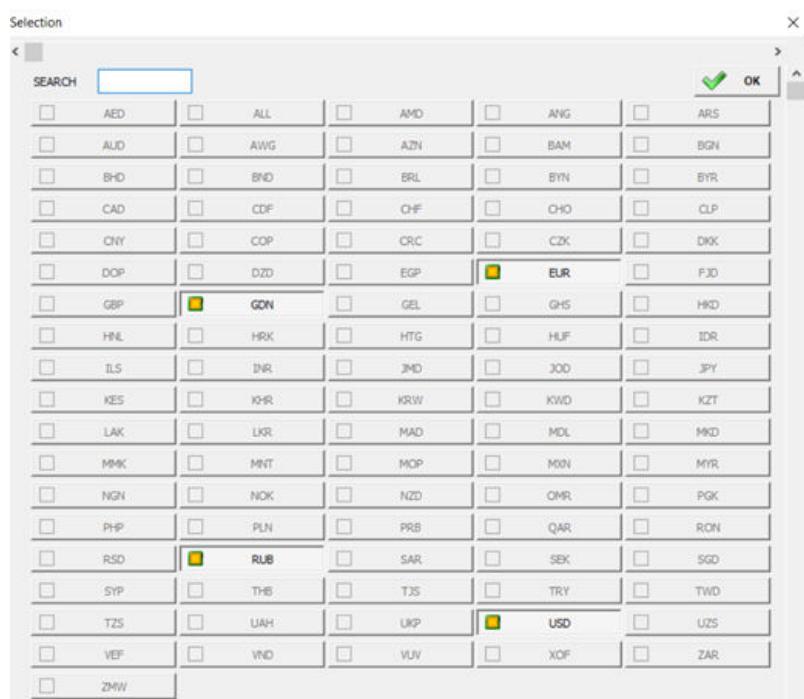
Figure 37: Available Currencies

9. Select **OK**.

   ⇨ The selected currencies are enabled.

Starting the Upgrade

10. Select Upgrade in the **Detection Module Upgrade** area.

    ⇨ The progress of the update is displayed on the screen.
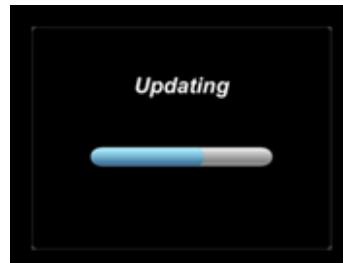
Restarting the Machine

Depending on the UI software version (V004.015 or higher), the machine starts automatically after 3 seconds.

A seconds counter appears on the operating unit of the machine.
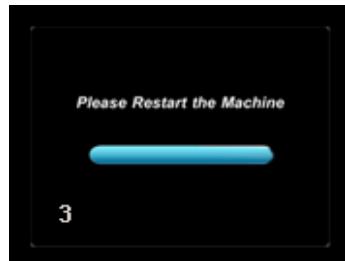
Figure 38: Seconds Counter for Automatic Restart of the Machine

If the machine does not start automatically, you will have to restart it.

11. Switch off the machine.

12. Switch the machine on again.

9.4.8 Updating the Machine

You can easily check and update the software version of the connected BPS C1s via the program menu. The current and available firmware version is displayed for each software component.

In addition, you can define a default currency for the user interface.

Recommendation: Always update the machine with **FORCE Upgrade**. This means that all components are automatically updated in the correct order.

 Proceeding

Update firmware
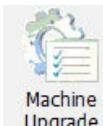
1. Select in the main menu.
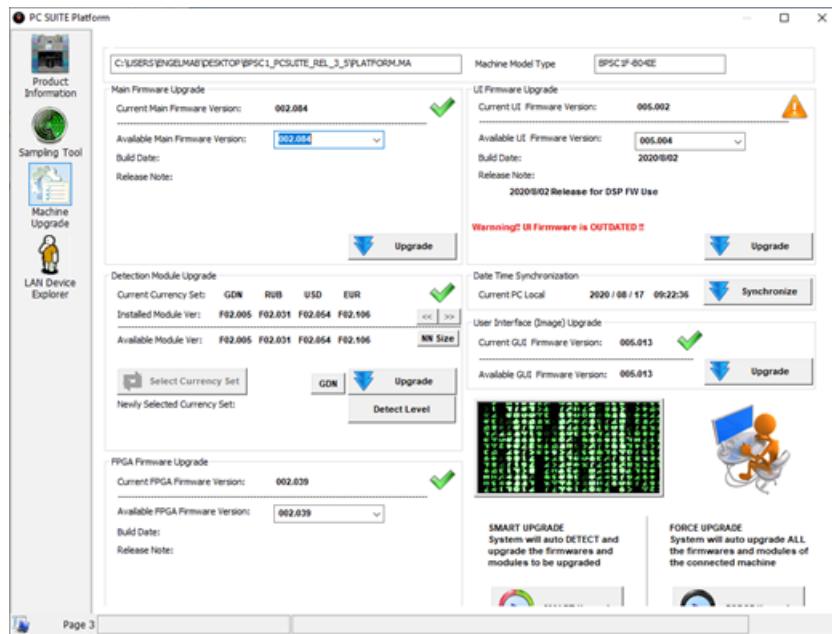
2.   Check the display.

   ●   A green tick means that the latest version is installed.
   ●   If the versions do not match, an orange triangle with a warning
       will appear next to the affected component.

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3. Always update the machine if a warning triangle is displayed for a component.

⚠ *Important*

Please follow the below procedure steps when carrying out the update.
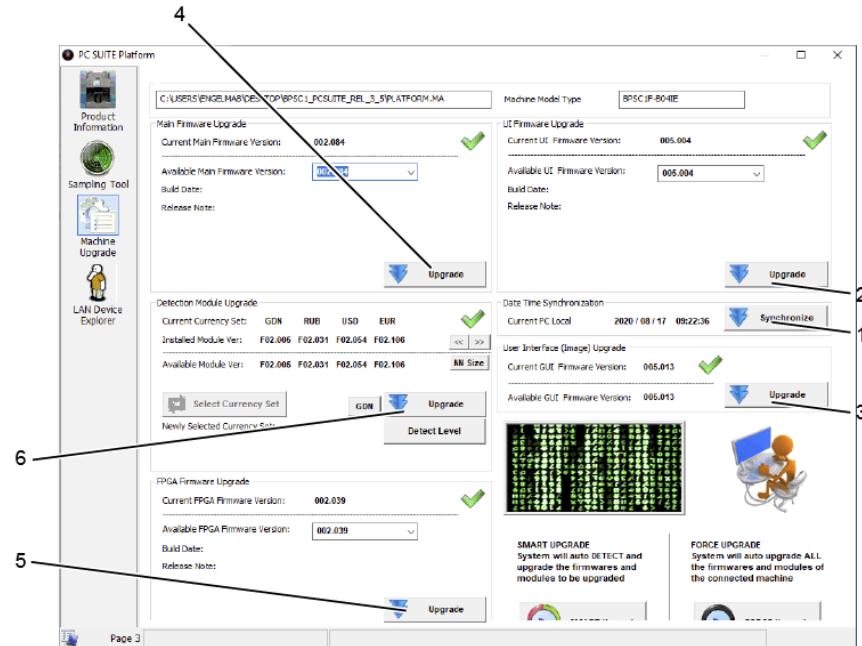
Figure 39: Device Update - Steps

1. Synchronize the PC with the BPS C1s
2. UI Firmware Upgrade software
3. USER Interface (Image) Upgrade
4. Main Firmware Upgrade
5. FPGA Firmware Upgrade
6. Detection Module Upgrade

Synchronize the PC and BPS C1s

Before updating, synchronize the date and time of the PC and the BPS C1s.

4. Select [⬇ Synchronize] .

⇨ Date and time are transferred from the PC to the BPS C1s.

Perform the software component update as follows.

5. Select [⬇ Upgrade] .

Starting the Update

6. Confirm with **OK**.

⇨ The progress of the update is displayed.

● On the PC screen

The black and green matrix is running.

The progress bar at the lower edge of the menu gets bigger.
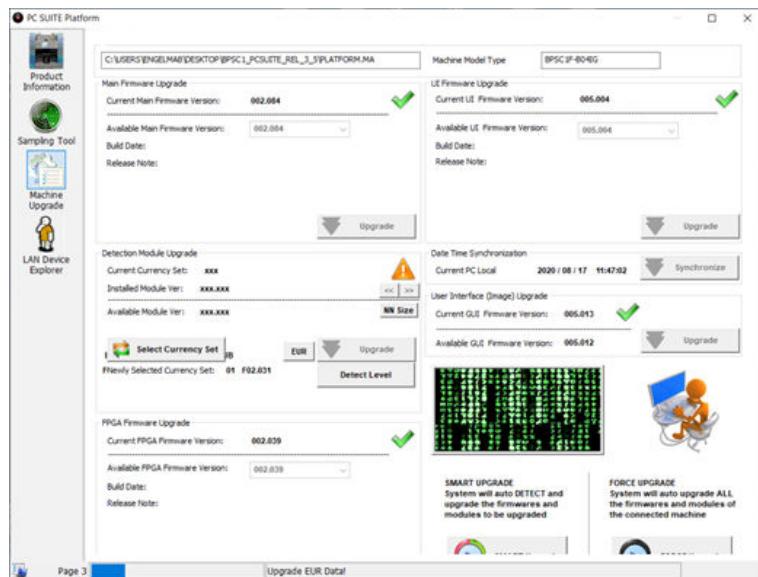
Figure 40: Machine Update - Progress

● On the operating unit of the machine
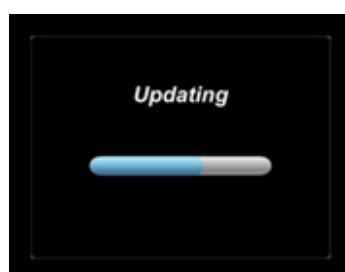
Figure 41: Machine Update - Progress

7. After the update, confirm the message on the PC screen.

⇨ **Result**

Machine - Automatic Restart

The machine starts automatically after 3 seconds. A seconds counter appears on the operating unit of the machine.

Figure 42: Seconds Counter for Automatic Restart of the Machine

9.4.9 Defining the Default Currency

Follow the steps below to define the default currency for the user interface.

> **Proceeding**

Defining the Default Currency

1. Select in the main menu.
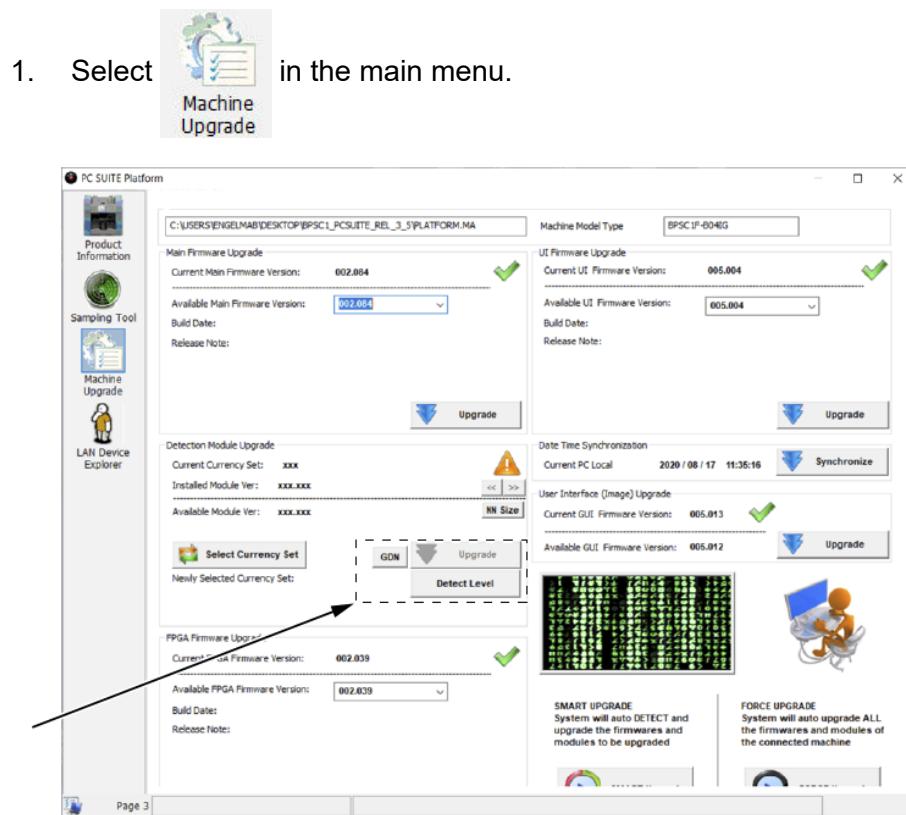
2. Select the Currency button.
    ⇨ The installed currencies are displayed.

3. Mark the desired currency.

4. Select .

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Result

After the machine has been started, the selected currency will be displayed at the top left of the operating unit.

9.4.10   Deactivating/Activating Denominations and Series

You can deactivate denominations or series for the currencies available on the machine. All denominations and series are always activated for a currency by default.

■ – Denomination or series is activated.

☐ – Denomination or series is deactivated.

Proceeding

1.   Select in the main menu.
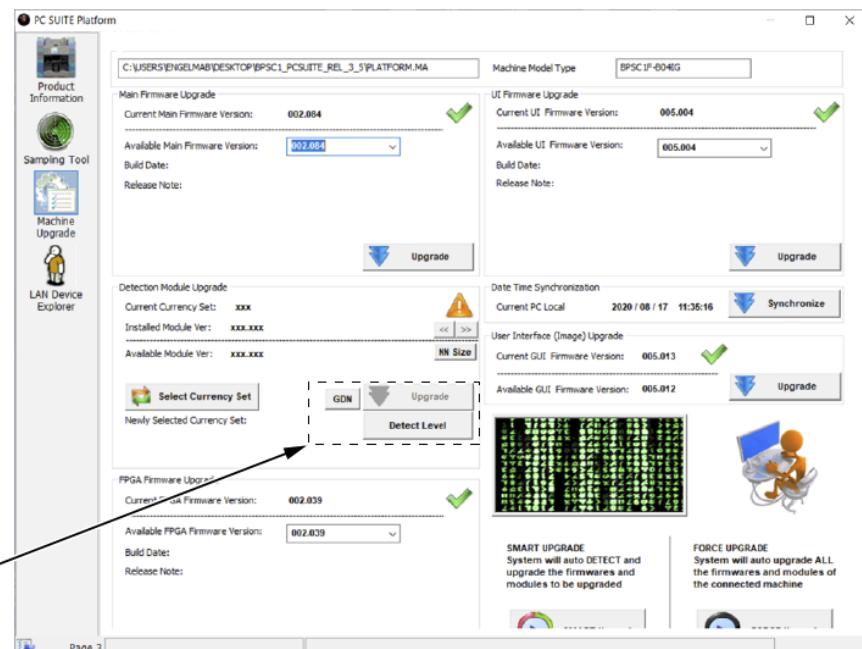
2.   Select **Detect Level** .
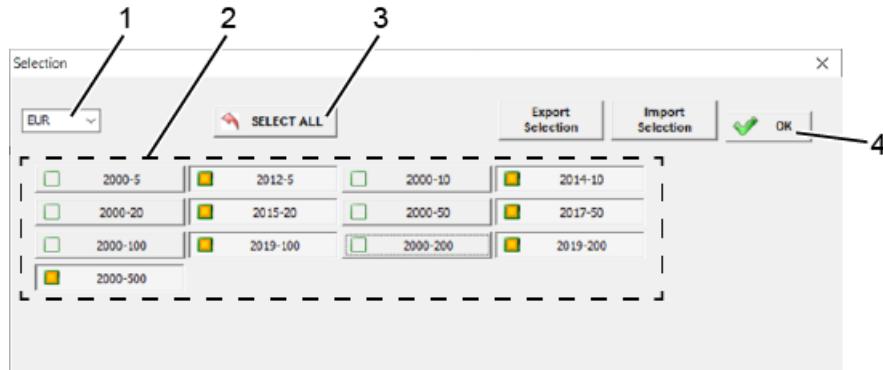
3. Select the desired currency (1).

    Deactivate the desired denominations and series (2).

    [SELECT ALL] (3) – This will deactivate or activate all denominations and series.

4. Click **OK** (4).

5. On completion confirm the dialog window on the PC screen.

⇒ **Result**

Only the activated denominations and series are still available on the machine and are accounted during processing.

9.4.11 Exporting/Importing Currency Settings

You have the option of transferring the currency settings of activated/deactivated banknote denominations and/or series to other machines. To do this, export these currency settings as a .txt file from one machine and import this file on a different machine. When exporting takes place, a separate .txt file with the corresponding currency abbreviation (e.g. EUR for euro) and date of creation is generated for every installed currency. The storage location for the file(s) is the directory where the .exe file of the Distributor Tool is stored. You can only import one .txt file at a time simultaneously on other machines. When there are several files, these must be imported one after the other.

Required conditions

The banknote denomination and series are activated/deactivated for the desired available currencies.
→ *chapter 9.4.10 "Deactivating/Activating Denominations and Series", p. 169*

> **Proceeding**

1. Select in the main menu.

2. Select **Detect Level** .
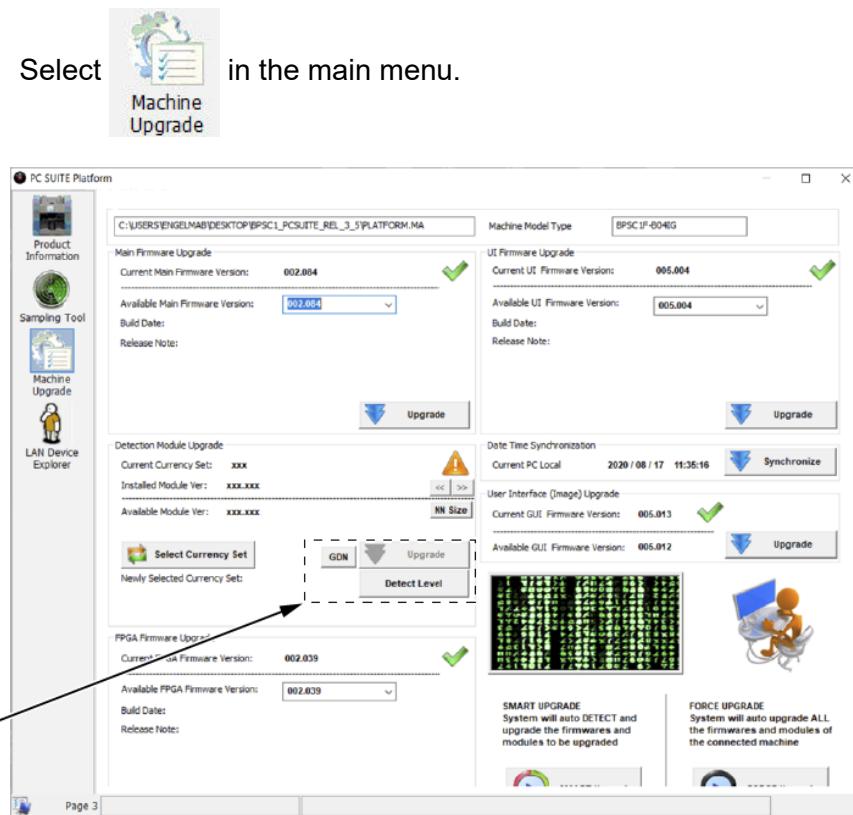
Export settings

3. Select **Export Selection** .
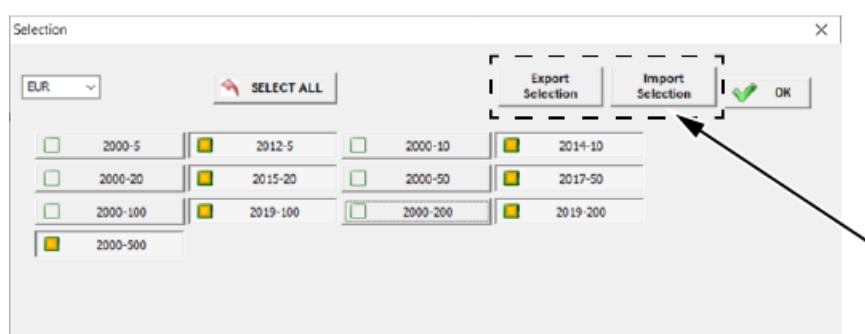
4. Confirm the request.

    ⇨   The settings for every installed currency together with the corresponding currency abbreviation and date of creation are stored as a separate .txt file in the directory where the .exe file of the Distributor Tool is stored (for example "*EUR-2021-02-04.txt*").

5. On completion confirm the dialog window on the PC screen.

Import settings

6. Select [Import Selection].
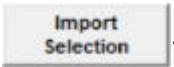
7. Select the desired directory and confirm the selection.

    ⇨   The currency is displayed together with the settings saved in the file for activated and deactivated banknote denominations and/or series.

8. Select **OK**.

9. On completion confirm the dialog window on the PC screen.

10. If necessary, repeat the steps → 6 to → 9, to import the settings of further currencies.

⇨ **Result**

Only the activated denominations and series are still available on the machine and are accounted during processing.

9.4.12 Connecting LAN Explorer

The machines available in the network are displayed in LAN Explorer.

You can update software and adaptations for the machines via the LAN interface.

Follow the steps below to connect LAN Explorer.

〉 **Proceeding**

1. Connect the LAN cable.

Starting LAN Explorer

2. Select [LAN Device Explorer] in the main menu.

    ⇨   LAN Explorer is displayed.
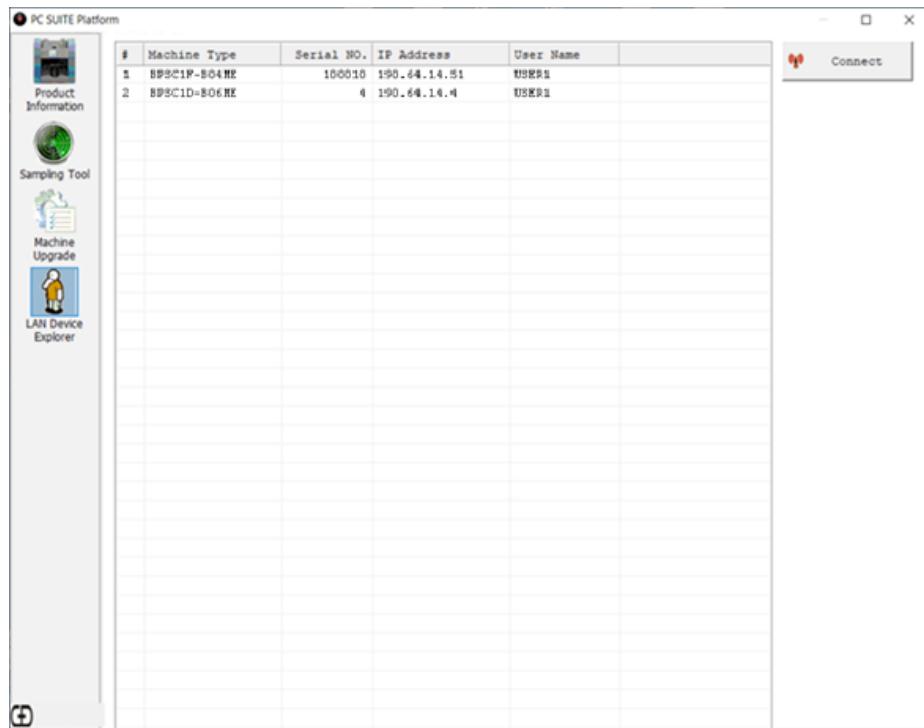
3.   Select the desired entry.

Connecting the Machine

4.   Select [Connect] in the Explorer menu to establish the connection.

9.4.13   Recording Banknote Data

You can extend and stabilize the adaptation by recording the following data:

- New currencies
- Suspicious and counterfeit banknotes
- Unknown banknotes

Record the banknotes by following the below steps:

- Resetting raw data
- Selecting the recording mode
    - Recording raw data
    - Recording rejects
    - Recording counterfeits
- Importing banknotes

Required conditions

- The machine has been thoroughly cleaned.
  → *chapter 8.2 "Cleaning", p. 116*
- The singler has been adjusted.
- The banknotes have been provisionally sorted according to quality and orientation.

Proceeding

Resetting Raw Data
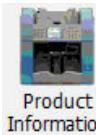
1. Select [Product Information] in the main menu.
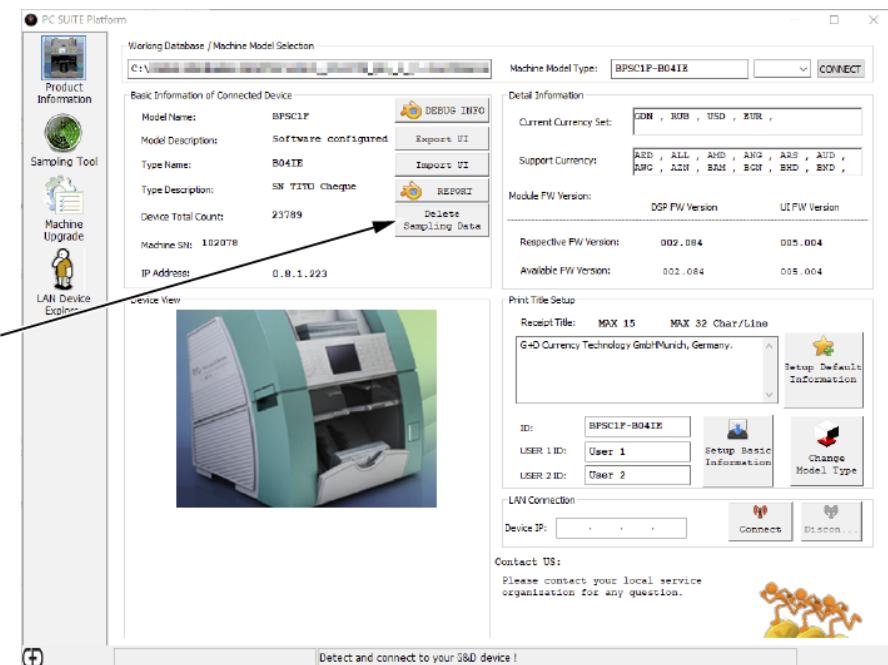
2. Select **Delete All Sampling Data**.

3. Select .

⇨ The machine is blocked and the following message is displayed:

● On the operating unit of the machine
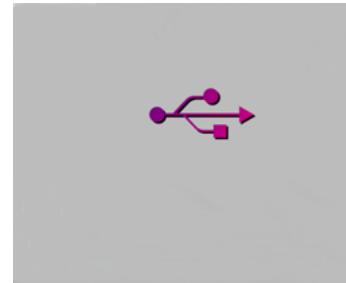
Figure 43: Machine in Service Mode

● On the PC screen
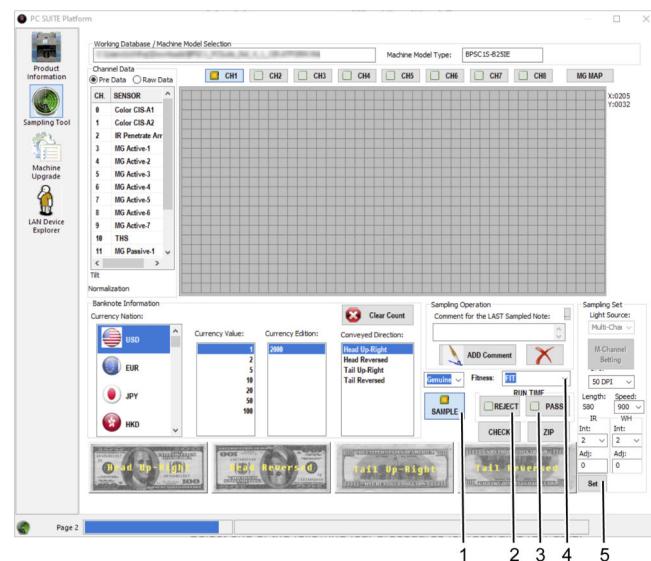
Figure 44: Menu – Sampling Tool

Selecting the Recording Mode

Select one of the following four procedures for recording raw data:

- **SAMPLE** (1)

  Record banknote data

  Use this setting to record all banknotes in the delivery stacker.

- **REJECT** (2)

  Record rejects

  Use this setting to record all banknotes in the reject stacker.

- **PASS** (3)

  Record new counterfeits

  This setting is used to record counterfeits that have been accepted as real banknotes. Other objects that have been recognized as real denominations can also be recorded. To mark the recorded data as counterfeits, select the CF button.
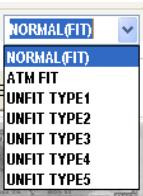
- (4)

  Record different classes of raw data.
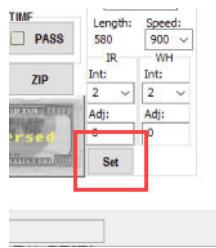
4. Select the **Set** button on the bottom right to confirm the recording mode (5).

    ⚠ *Important*

    Changes are only saved by selecting the **Set** button.

Importing Banknote Data

Before importing, define the banknote data in the "Banknote Information" area.

5. Select the currency under **Currency Nation**.

6. Select the currency value under **Currency Value**.

7. Select the edition (issue) under **Currency Edition**.

8. Select the banknote orientation under **Conveyed Direction**.

Requirement

A bundle of 100 banknotes is recommended for recording.

9. Select **Head Up-Right** (Orientation1)

.

10. Place the banknote bundle in the singler the selected way round.

    ⇨   The raw data are saved in the same directory in which the software is saved.

11. Select **Head Reversed** (Orientation2)

.

12. Place the banknote bundle in the singler the selected way round.

    ⇨   The raw data are saved in the same directory in which the software is saved.

13. Select **Tail Up-Right** (Orientation3)

.

14. Place the banknote bundle in the singler the selected way round.

    ⇨   The raw data are saved in the same directory in which the software is saved.

15. Select **Tail Reversed** (Orientation4)

.

16. Place the banknote bundle in the singler the selected way round.

    ⇨   The raw data are saved in the same directory in which the software is saved.

17. Send a zip file containing the *2DSample* directory and the *Platform.ma* file from the directory in which the software is saved to G+D.

    The *Platform.ma* file should not be larger than 1 GB. If more data is recorded, it needs to be split into several files.

10 Disposal

Dispose the transport packaging and the product after the discontinuation of use according to the local legal requirements.

A Technical Data BPS C1s

The following table lists the other technical data:

	Values
Maximum transport speed	Up to 1,600 BN/min for item counting (Accounting mode: **Count mode** and Simple Detection mode without additional sortings criterias (Fit or SN))
	Up to 1,200 BN/min for fitness detection, serial number reading, and barcode reading
	You can also manually select two lower speed levels.
Deposit capacity (singler)	ca. 1000 BN depending on the banknote quality
Stacker capacity	Delivery stacker – 250 BN
	Reject stacker – 100 BN
Banknote formats handled	Length: 85 - 190 mm
	Width: 60 - 100 mm
	Thickness: 0.08-0.12 mm
Number of currency adaptations	Up to 32 adaptations can be made on the machine.
Display	TFT color touch screen, 5" (inches)
Power supply connection	100–240 V AC 50/60 Hz
Electrical power consumption	max. 200 W
Fuse protection	3.15 A/250 V, medium slow-blow fuse
Dimensions	350x333x400 mm (depthxwidthxheight)
Weight	approx. 16 kg
Transport system	Friction rollers
External devices (optional)	● Thermal printer ● Barcode reader ● PC ● External display ● USB stick ● LAN interface
Sensors	● Image sensor ● Magnet ● Infrared ● Security thread ● Fluorescence ● Mechanical thickness sensor

Table 14: Technical Data

B   Description of Reports

The following types of report exist:

- XML reports
- Printed reports
- Reports as text file (`.bin` and `.txt`) or Excel file (`.csv`)

There are several ways to generate the reports:

- Automatic sending – send XML reports to a server

  Prerequisite: Existing connection to an FTP server configured on the machine
- Print – print out reports via a connected printer

  → *chapter 6.8 "Printing the Result", p. 69*
- Save – save reports on a USB flash drive

B.1   XML reports

The following reports can be sent to a server as `.xml` files:

- "Deposit" report – your supervisor has configured the type in the **Supervisor Settings** menu
  - 5010 or
  - 5010old or
  - 5011 or
  - 5020
- "Video surveillance" reports
  - 1025 (Event)
  - 1039 (VSI Start)
  - 1040 (VSI Stop)
  - 1041 (Keep Alive)
- "Service" report – 5050

Naming conven-
tion for XML
reports

Example: *BPS_102109_rpt1041_150217124159_001.xml*

The file name consists of several parts:

Prefix	3 characters (e.g. BPS)	Machine: Here BPS for Banknote Processing System
Machine ID	6 characters (e.g. 102109)	The final 6 characters of the machine's serial number
Type	7 characters (e.g. rpt1041)	Report ID: Each type has a unique ID
Date of creation	yymmddHHMMSS (e.g. 150217124159)	yy: Year (00..99) mm: Month (01..12) dd: Day (01..31)

			HH: Hour (00..23)
			MM: Minute (00..59)
			SS: Second (00..59)
Counter	3 characters (e.g. 003)		Each file contains an internal counter that can range from 001..999. This makes it possible to distinguish between reports that were generated simultaneously within a single second.
Suffix	3 characters (e.g. xml)		The suffix contains the format;

USB Flash Drive | It is highly advisable to use a USB flash drive. If the USB flash drive is inserted in the relevant interface on the rear of the machine, the USB flash drive can serve as temporary memory in the event of a connection error with the server. If there is no USB flash drive inserted and the connection with the server fails, the data will be lost.

B.1.1 Report: Deposit (XML)

If an FTP server is activated, the machines send the data as an `.xml` file.

→ *chapter 7.3.5 "IP Settings configuration", p. 107*

There are four different types:

- Deposit report: rpt5010old – report is based on the XML-Deposit report of the BPS200/C4 and uses the same variables and values if available.
- Deposit report: rpt5010 – like rpt5010old but for the "Quality" variable there is the "Accepted" value for processing without fitness mode.
- Deposit report: rpt5011 – like rpt5010 with additional values for coins entered during manual inspection and the total amount (total + coins).
- Deposit report: rpt5020 – like rpt5011 with additional serial number information if serial number scanning is enabled or with additional ticket ID information if ticket reading is enabled. Important: It is not possible to output the serial number and the ticket ID simultaneously within one report.

Only one type can be activated.

Your supervisor has configured the type in the **Supervisor Settings** menu.

B.1.2 Report: Video Surveillance (VSI)

If video surveillance is activated, the machine sends the data to a VSI server as `.xml` files.

→ *chapter 7.3.5 "IP Settings configuration", p. 107*

The following reports are available for video surveillance:

- Event during deposit (rpt1025 "Event report")
- Start of deposit (rpt1039 "Start process report")
- End of deposit (rpt1040 "Stop processing report")
- Machine availability (rpt1041 "Keep Alive report")

The machine also sends the "Deposit" report to the cash management system at the end of the deposit.

"Event Report" In the event of the machine stopping when not expected (e.g. a jam), the machine sends the following data:

- Serial number of the machine
- Installation date
- Software release and version information
- Machine type
- Operator details (operator name and number)
- Selected sorting and fitness mode
- Currency
- Start time (format: yyyy-mm-dd hh:mm:ss; e.g. 2018-10-12 07:22:08)
- End time (format: yyyy-mm-dd hh:mm:ss; e.g. 2018-10-12 07:25:48)
- Machine status – The machine status is indicated by a number:
  - 0 – OK (machine available, operational and connected to the server)
  - 1 – Upper transport section is open
  - 2 – Lower transport section is open
  - 3 – Jammed banknotes in the upper transport section
  - 4 – Jammed banknotes in the lower transport section
  - 5 – Jammed banknotes in the entire transport section
  - 6 – Removing banknotes from the feeding compartment
  - 7 – Motor error
  - 8 – Solenoid error
  - 9 – Buffer overflow for serial numbers
  - 10 – Other

"Start Process Report" At the start of the deposit the machine sends the following data:

- Serial number of the machine
- Installation date
- Software release and version information
- Machine type
- Operator details (operator name and number)
- Selected sorting and fitness mode

- Currency
- Start time (format: yyyy-mm-dd hh:mm:ss; e.g. 2018-10-12 07:22:08)

"Stop Process Report"

At the end of the deposit the machine sends the following data:

- Serial number of the machine
- Installation date
- Software release and version information
- Machine type
- Operator details (operator name and number)
- Selected sorting and fitness mode
- Currency
- Start time (format: yyyy-mm-dd hh:mm:ss; e.g. 2018-10-12 07:22:08)
- End time (format: yyyy-mm-dd hh:mm:ss; e.g. 2018-10-12 07:25:48)
- ISO currency code
- Year for the series
- Denomination value
- Quality of processed banknotes
- Number of processed banknotes

"Keep Alive Report"

If the machine is connected to the server but does not send any data, this report confirms availability every five minutes.

The machine sends the following data:

- Serial number of the machine
- Installation date
- Software release and version information
- Machine type
- Live status:
    - 0 – OK (machine available, operational and connected to the server)
    - 1 – Machine not available

B.1.3 Report: Service

You can generate the "Service" report in the Distributor Tool in the following formats:

- Text file (`.bin`)
- `.xml` file

When maintenance is required, the machine generates and sends the XML report.

"Service" report
(text file)

The text file contains the following information:

```
                SERVICE_REPORT_this time ServiceReport.bin

CREATE DATE : 2016/09/07 -15:30:08                              1
ModeType : BPSC1F-B10IG
SerialNumber : 101190
TotalCount : 1080
UI   FW : 004.003
GUI  FW : 005.006
DSP  FW : 002.043
FPGA FW : 002.033
MAC    :0x0:0x90:0xD3:0x8:0xD:0xC
IPV4   : 192:168:001:001
MASK   : 255.255.255.000
Gatway : 192.168.001.003
---------- Sensor DAC ----------                               2
PD1L : 059 , MAX : 250
PD1R : 078 , MAX : 250
PD2  : 075 , MAX : 250
PD3L : 069 , MAX : 250
PD3R : 073 , MAX : 250
PD4L : 079 , MAX : 250
PD4R : 074 , MAX : 250
---------- Detection Module ----------                         3
Currency Number : 10
GDN     VER :002.004
EUR     VER :002.007
USD     VER :002.023
INR     VER :002.038
PLN     VER :002.013
CNY     VER :002.103
RUB     VER :002.019
TRY     VER :002.006
GBP     VER :002.102
CHF     VER :002.004
---------- Reject ----------                                   4
Currency [ GDN ]
Reject : 0%
------------------
Currency [ EUR ]
Reject : 0%
------------------
Currency [ USD ]
Reject : 0%
------------------
Currency [ INR ]
Reject : 0%
------------------
```

Figure 45: "Service" report

(1) Machine and software	Information on the machine, installed software and IP settings
(2) Sensors	Information on the set sensor values
(3) Adaptations	Version number of the installed adaptations
(4) Reject rates	Reject rates of the relevant installed currency

"Service" report
(.xml file)

In addition to the information from the text file, the report also contains the following additional information:

- Reject reasons
- Sorting threshold number of the installed adaptations
- Settings your supervisor has configured in the **Supervisor Settings** menu.

B.2   Printed Reports

Reports are fundamentally structured as follows.

Header of the report

The following values are shown in the header of the report:

Title (e.g. company name)

<Consecutive print number>

<Date>	<Time>
Machine ID:	Details of model type
User ID:	Details of current operator

Machine SN: Serial number of the machine

You can configure the following values:

- Title
- Machine ID
- User ID

These values can be configured under → *chapter 9.4.2 "Setting up the Report Title", p. 153*.

The following values are shown in the header of the report, depending on the type:

Batch ID	On the "Deposit" report and "Different currencies" – not used
Customer ID	On the "Deposit using wizard" report, the customer number appears here.
Deposit ID	On the "Deposit using wizard" report, the deposit number appears here.
Start	On the "Daily result" report for all days, the date of the first day appears here.
End	On the "Daily result" report for all days, the date of the last day appears here.

The following data also appear under the report header:

Currency	Details of the selected currency
Fitness Mode	Details of the fitness mode:

- ATM
- FIT
- UNFIT
- WIZARD – for the report on banknote processing in accordance with ECB specifications

Date	On the "Daily result" report for one day, the date of the printed day appears here.

B.2.1   Report: Deposit

The standard report after banknote processing is the "Deposit" report. The report content depends on the processing step performed.

The description below relates to a report with the maximum content:

```
              Giesecke & Devrient GmbH
                                    NO:00003
 05-04-2016   7:28:04
 Machine ID : BPSC1F-B01ME
 User ID : USER1
 Machine SN : 101190
 ------------------------------------------
 Currency: EUR
 ------------------------------------------        1
 Denom       ATM(Pcs)    Amount
 €   500 X      0 =          0
 €   200 X      0 =          0
 €   100 X      0 =          0
 €    50 X      2 =        100
 €    20 X      1 =         20
 €    10 X      0 =          0          2
 €     5 X      1 =          5
 SubTotal       4          125          3
 ------------------------------------------
 Denom       FIT(Pcs)    Amount
 €   500 X      0 =          0
 €   200 X      0 =          0
 €   100 X      0 =          0
 €    50 X      0 =          0
 €    20 X      0 =          0
 €    10 X      0 =          0          4
 €     5 X      2 =         10
 SubTotal       2           10          5
 ------------------------------------------
 Denom      UNFIT(Pcs)   Amount
 €   500 X      0 =          0
 €   200 X      0 =          0
 €   100 X      0 =          0
 €    50 X      0 =          0
 €    20 X      0 =          0
 €    10 X      0 =          0          6
 €     5 X      0 =          0
 SubTotal       0            0          7
 ------------------------------------------
 Denom      Reject(Pcs)  Amount
 €   500 X      0 =          0
 €   200 X      0 =          0
 €   100 X      0 =          0
 €    50 X      0 =          0
 €    20 X      0 =          0
 €    10 X      1 =         10          8
 €     5 X      0 =          0
 SubTotal       0            0          9
 ------------------------------------------
 Grand TOTAL               145
 ------------------------------------------
```

Figure 46: "Deposit" report

(1) Overview of Banknote Processing for "ATM" Fitness Criterion

Includes the following details about the counted banknotes:

- Currency

- Denomination

	• Quantity
	• Value
(2) Result of Banknote Processing for "ATM" Fitness Criterion	Information on the total quantity and total value of the counted banknotes
(3) Overview of Banknote Processing for "FIT" Fitness Criterion	Includes the following details about the counted banknotes: • Currency • Denomination • Quantity • Value
(4) Result of Banknote Processing for "FIT" Fitness Criterion	Information on the total quantity and total value of the counted banknotes
(5) Overview of Banknote Processing for "UNFIT" Fitness Criterion	Includes the following details about the counted banknotes: • Currency • Denomination • Quantity • Value
(6) Result of Banknote Processing for "UNFIT" Fitness Criterion	Information on the total quantity and total value of the counted banknotes
(7) Overview of Manual Inspection	Includes the following details about the banknotes entered during manual inspection: • Currency • Denomination • Quantity • Value
(8) Manual Inspection Result	Information on the total quantity and total value of the banknotes entered during manual inspection → *chapter 6.5.2 "Performing Manual Inspection", p. 63*
(9) Overall result	Information on the total value including coins entered during manual inspection → *chapter 6.5.2 "Performing Manual Inspection", p. 63*

B.2.2   Report: Different Currencies

If you process different currencies at the same time, the statement for each processed currency appears in the report

→ *chapter 6.4.2 "Processing Banknotes of Different Currencies Simultaneously", p. 39*

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```
                Giesecke & Devrient GmbH
                                      NO:00001
06-22-2015  14:14:19
Machine ID : BPSC1F-B04ME
User ID : USER2
Machine SN : 100008
Batch ID :
Fitness Mode : None
_____      1
Currency:EUR
_____

Counted Result
Denom           Pcs         Amount
 €    5 X       1 =           5
_____

SubTotal                     5
_____

Coin                        0.00
_____

Total           1 =          5
_____
```

```
_____      2
Currency:INR
_____

Counted Result
Denom           Pcs         Amount
 ₹ 1000 X       3 =         3000
_____

SubTotal                   3,000
_____

Coin                        0.00
_____

Total           3 =        3,000     3
_____

Reject Qty      1
_____
```

Figure 47: "Different currencies" report

(1) Accounting for First Currency	Includes the following details about the counted banknotes:
	● Currency
	● Denomination, quantity, and value
	● Result of banknote processing
	● Information about coins entered
	● Total result
(2) Accounting for Second Currency	The information on the other currencies is listed in the same way as the first.
(3) Rejects	Number of rejected banknotes

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B.2.3   Report: Grand total

If you use result lists, you can print the "Grand total" result list for each currency.

→ *chapter 6.7.3 "Printing or Deleting the "Grand Total" Result List", p. 67*

Figure 48: "Grand total" report

(1) Overview of Banknote Processing

Includes the following details about the counted banknotes:

- Currency
- Denomination
- Quantity
- Value

(2) Overall result

Information on the total quantity and total value

B.2.4   Report: Day total

If you use result lists, you can print the "Day total" result list for each currency.

→ *chapter 6.7.4 "Printing the "Daily Result" List", p. 67*

The following reports are available for the daily result:

- "Daily result – all days": Overview of all days
- "Daily result – one day": Overview of the selected day

In addition, you can also generate the following reports via the Distributor Tool:

- "this time paper report" – daily result
- "Daily result – one day": Excel export

"Daily result – all days"

Figure 49: "Daily result – all days" report

(1) Overview of Banknote Processing

Includes the following details about the counted banknotes:

- Start date: Date of first day
- End date: Date of last day
- List of each individual day with total quantity and total value for this day

"Daily result – one day"

Figure 50: "Daily result – one day" report

(1) Overview of Banknote Processing

Includes the following details about the counted banknotes:

- Date of selected day
- Currency
- Denomination
- Quantity
- Value

(2) Overall result

Information on the total quantity and total value

Distributor Tool: Daily "Paper report" result

You can generate the following report using the Distributor Tool:

Figure 51: Distributor Tool: Daily "Paper report" result report

The report contains the following information:

- Currency
- Denomination
- Emission
- Number of banknotes for the ATM and fit fitness criteria
- Number of banknotes for the unfit fitness criterion
- Number of banknotes without fitness criterion
- Total number of banknotes
- Manual inspection result
- Total value of banknotes

"Daily result –
one day": Excel
export

You can also export the "Daily result" report as an Excel file in the Distributor Tool by entering the relevant day.

If a USB flash drive has been inserted into the back of the machine, the report contains the following information:

- Date of selected day
- Currency
- Denomination
- Emission
- ATM and fit fitness criteria
- Unfit fitness criteria
- Quantity
- Manual inspection result
- Total value

Without a USB flash drive, the report contains the following information:

- Currency
- Denomination
- Quantity
- Total value

B.2.5 Report:Fitness

If you use the wizard for banknote processing in fitness mode, two reports are created at the end of processing:

- Overview of fitness report
- Summary of fitness report

In addition, you can also generate the following reports via the Distributor Tool:

- "1~6 month PaperReport" – Fitness report for the first half year
- "7~12 month PaperReport" – Fitness report for the second half year

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Overview of Fit-
ness Report

```
         Giesecke & Devrient GmbH
                              NO:00001
06-29-2015  12:39:52
Machine ID : BPSC1F-B01ME
User ID : USER2
Machine SN : 101190
----------------------------------------
Currency:EUR
Fitness Mode : WIZARD
----------------------------------------
Denom       ATM(Pcs)   Amount
€   500 X       0 =          0
€   200 X       0 =          0
€   100 X       0 =          0
€    50 X       0 =          0
€    20 X       1 =         20
€    10 X       1 =         10
€     5 X       1 =          5
SubTotal        3           35
----------------------------------------
Denom       FIT(Pcs)   Amount
€   500 X       0 =          0
€   200 X       0 =          0
€   100 X       0 =          0
€    50 X       0 =          0
€    20 X       1 =         20
€    10 X       1 =         10
€     5 X       0 =          0
SubTotal        2           30
----------------------------------------
Denom      UNFIT(Pcs)  Amount
€   500 X       0 =          0
€   200 X       0 =          0
€   100 X       0 =          0
€    50 X       0 =          0
€    20 X       0 =          0
€    10 X       0 =          0
€     5 X       0 =          0
SubTotal        0            0
----------------------------------------
Denom      Reject(Pcs) Amount
€   500 X       0 =          0
€   200 X       0 =          0
€   100 X       0 =          0
€    50 X       0 =          0
€    20 X       0 =          0
€    10 X       1 =         10
€     5 X       0 =          0
SubTotal        1           10
----------------------------------------
Grand TOTAL                 75
----------------------------------------
```

1
2
3
4
5

Figure 52: "Fitness" Report

(1) Overview of
Banknote Proc-
essing for "ATM"
Fitness Criterion

Includes the following details about the counted banknotes:

● Currency

● Denomination

● Quantity

	● Value
	● Result with quantity and value
(2) Overview of Banknote Processing for "FIT" Fitness Criterion	Includes the following details about the counted banknotes:
	● Currency
	● Denomination
	● Quantity
	● Value
	● Result with quantity and value
(3) Overview of Banknote Processing for "UNFIT" Fitness Criterion	Includes the following details about the counted banknotes:
	● Currency
	● Denomination
	● Quantity
	● Value
	● Result with quantity and value
(4) Rejects Overview	Includes the following details about the counted banknotes:
	● Currency
	● Denomination
	● Quantity
	● Value
	● Result with quantity and value
(5) Grand Total	Information on the total value

Summary of Fitness Report

Figure 53: "Fitness Deposit (ECB) Summary" Report

(1) Overview of Banknote Processing	Includes the following details about the counted banknotes:
	● Currency
	● Denomination
	● Quantity
	● Value
(2) Overall Result	Information on the total quantity and total value

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Fitness Report of
1st Half Year

You can generate the following report using the Distributor Tool:

```
              PAPER_REPORT_H1H2_1-6 Month PaperReport.bin
start_date: 2016/05/04 - 07:23:58
end_date: 2016/05/04 - 07:24:29

Deno           Emission      fit(incl.ATM fit)          unfit              total
EUR  5         ES1                   0                    2                   2
EUR  5         ES2                  10                    0                  10
EUR 10         ES2                   9                    0                   9
EUR 20         ES2                  16                    0                  16
EUR 50         ES1                  25                    1                  26
Sum                                 60                    3                  63
```

Figure 54: "Fitness for the 1st Half Year" Report

The report contains the number of banknotes for the first half year (1 January – 30 June) sorted according to:

- Currency
- Denomination
- Emission
- Number of banknotes for the ATM and fit fitness criteria
- Number of banknotes for the unfit fitness criterion
- Total number of banknotes

Fitness Report of
2nd Half Year

You can generate the following report using the Distributor Tool:

```
              PAPER_REPORT_H3H4_7-12 Month PaperReport.bin
start_date: 2016/09/12 - 10:36:01
end_date: 2016/09/12 - 10:40:57

Deno           Emission      fit(incl.ATM fit)          unfit              total
EUR  5         ES1                   0                    3                   3
EUR  5         ES2                  12                    0                  12
EUR 10         ES2                   6                    0                   6
EUR 20         ES2                  13                    0                  13
EUR 50         ES1                  29                    3                  32
Sum                                 60                    6                  66
```

Figure 55: "Fitness for the 2nd Half Year" Report

The report contains the number of banknotes for the second half year (1 July – 31 December) sorted according to:

- Currency
- Denomination
- Emission
- Number of banknotes for the ATM and fit fitness criteria
- Number of banknotes for the unfit fitness criterion
- Total number of banknotes

C Description of the Criteria for Fitness Sorting

You can select the sorting criteria for fitness sorting in the sorting options of the machine.
→ *chapter 6.4.3.2 "Selecting a Fitness Mode", p. 43*

You can select the following criteria for every currency, banknote denomination and sorting quality:

- Dog ear
- Hole
- Tear
- Stains
- Adhesive Tape
- Soiling

You can select a value from 0–10 for every criterion. See the following description of what the machine checks for every criterion and the fundamental significance of the values.

Dog Ear
The machine checks in defined areas of the banknote at the four corners whether dog ears are present.

Figure 56: Areas of Banknote Checked for Dog Ears

The dog ear in the defined area may be greater or smaller in size depending on the value set.

The values have the following significance:

0   The size of the dog ear is immaterial.

10   There must be no dog ears in the defined areas.

As regards the values in-between, the greater the value, the smaller the dog ear must be.

Hole
The machine checks in a defined area whether a hole is present.

Figure 57: Area of Banknote Checked for Holes

The hole in the defined area may be greater or smaller depending on the value set.

The values have the following significance:

0   The size of the hole is immaterial.

10   There must be no hole in the defined area.

As regards the values in-between, the greater the value, the smaller the hole must be.

Tear   The machine checks in defined areas whether tears are present.

Figure 58: Areas of Banknote Checked for Tears

The tear in the defined areas may be greater or smaller depending on the value set.

The values have the following significance:

0   The size of the tear is immaterial.

10   There must be no tear in the defined area.

As regards the values in-between, the greater the value, the smaller the tear must be.

Stains   Stains cause more dark areas on banknotes. The machine compares the image of the banknote in a defined area with a stored image of a freshly printed banknote.

As regards the values, the greater the value, the more closely the image of the banknote must match the stored image of a freshly printed banknote.

Adhesive Tape

Adhesive tape increases the thickness of a banknote. The machine checks the thickness of the banknote in defined areas.

As regards the values, the greater the value, the smaller the thicker areas must be.

Soiling

Soiling makes the image of the banknote look darker. The machine compares the image of the banknote in a defined area with a stored image of a freshly printed banknote.

As regards the values, the greater the value, the more closely the image of the banknote must match the stored image of a freshly printed banknote.

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D   Technical Support

Germany	Giesecke+Devrient Currency Technology GmbH
	Prinzregentenstraße 161
	81677 Munich
	Germany
	Phone: +49 89 4119 3737
	E-mail: CSS.HelpDesk@gi-de.com
United Kingdom	G+D Currency Technology GB Ltd.
	Unit 7, Torc MK, Chippenham Drive
	Milton Keynes, MK10 0BZ
	United Kingdom
	GDGB Helpdesk
	Phone: +44 1908 926184
	E-mail: gdgb.helpdesk@gi-de.com
Spain	Giesecke & Devrient Currency Technology Iberia, S.L.
	Calle Verano 15, P. I. Las Monjas
	E-28850 Torrejón de Ardoz - Madrid
	Spain
	Phone: +34 91 627 0000
	Phone: +34 91 627 7200
Turkey	Giesecke+Devrient Currency Technology Istanbul
	Ticaret ve Servis Ltd.Sti.
	Yenibosna Merkez Mahallesi, 29 Ekim Caddesi,
	İstanbul Vizyon Park Plazaları No:7, 3.Blok, Kat:8, No:84 34196
	Çobançeşme-Bahçelievler / İSTANBUL / TÜRKİYE
	Phone: +90 212 347 2827
	E-mail: destek@gi-de.com
USA	Giesecke+Devrient Currency Technology America, Inc.
	45925 Horseshoe Drive
	Dulles, V.A. 20166
	USA
	Phone: +1 888 292 4324
Canada	Giesecke & Devrient America, Inc.
	3700 Steeles Ave West, Suite 202

	Vaughan, ON, L4L 8K8
	Canada
	Phone: +1-866-333-6693
Canada (Digital Solutions, Software)	Giesecke & Devrient America, Inc.
	Mail: Toronto.Support@gi-de.com
	Phone: +1-800-296-4373
Mexico	Giesecke y Devrient Currency Technology de México, S.A. de C.V.
	Av. Santa Rosa No. 11
	Col. La Joya Ixtacala
	Piso 1, Edificio Administrativo B
	CP-54160 Tlalnepantla de Baz, Estado de México
	Mexico
	Phone: +52 55 5039 9944
Brazil	Giesecke+Devrient Currency Technology Brasil Serv. e Com. de Soluções Tecnológicas Ltda.
	Rua Surubim,
	577 - 8° andar - Cidade Monções - São Paulo - SP - CEP
	04571-050 Brazil
	Phone: +55 11 5105 6182
United Arab Emirates	Giesecke+Devrient Currency Technology FZE
	Phase 6 # Light Industrial Unit D3, D4-D5, D6, C3
	Dubai Silicon Oasis
	P.O. Box 341274, Dubai,
	United Arab Emirates
	Phone: +971 4 601 7250
	Fax: +971 4 299 6849
	Hotline: helpdesk_gdfze@gi-de.com
South Africa	Giesecke & Devrient Southern Africa (Pty.) Ltd.
	Block E - Crownwood Office Park
	100 Northern Parkway Road
	2001 Ormonde, Johannesburg
	South Africa
	Phone: +27 11 3094 900 (from abroad)
	Phone: +27 0860000 gdsa (4372) (local toll free number)
	E-mail: helpdesk-gdsaf@gi-de.com

India   Giesecke & Devrient India Pvt. Ltd.

Plot No. 02, EHTP, Sector 34

Gurugram – 122 001, Haryana

India

Service hotline:

Phone: +91 1800 1021 206

E-mail: bnservice.gdindia@gi-de.com

Technical hotline:

Phone: +91 1800 4193 150

E-mail: hotlinesupport.gdindia@gi-de.com

China   Shenzhen Giesecke+Devrient Currency Automation Systems Co., Ltd.

3F, Annex Wing, Shanghai Automobile Building

4050 Nanhai Avenue, Shenzhen 518057

People's Republic of China

Phone: +86 755 2650 7841

E-mail: techhotline@cn1.gi-de.com

Hong Kong   Giesecke & Devrient Asia Pacific Ltd.

Unit 3103, Sun Hung Kai Centre

30 Harbour Road

Wanchai

Hong Kong

Phone: +852 3766 7300

E-mail: gdap.hotline@gi-de.com

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E   Glossary

A

A   Ampere (physical unit of current)

AC   Alternating current

ATM   Automated teller machine

                                     Sorting criterion for banknotes fit for ATMs

B

BPS   Banknote processing system

C

CPU   Central processing unit

D

DIN   German institute for standardization

DIN EN   German adoption of a European standard

E

EC   European Community (until December 1, 2009)

ECB   European Central Bank

EDV   Electronic data processing

EMC   Electromagnetic Compatibility

                                     Capability of electronic components working proper in an electronic environment

EN   European standard

Ethernet   Technology for the specification of data exchange on local networks

F

fit   Sorting criterion; banknotes with authenticity and quality features (e.g. clean enough, authenticity determinable, sufficient stiffness) to be returned to circulation

FTP   File transfer protocol

G

GB   Gigabyte (unit of measurement for data volumes)

H

Hub	Hub in telecommunications - a device connecting physical nodes on the network with one another
HW	Hardware
	Mechanical and electronic system equipment
Hz	Hertz (physical unit of frequency)

I

ID	Identifier, a characteristic for clear identification
IEC	International electrotechnical commission
IP (address)	Internet network protocol or network address (internet protocol)

L

LAN	Local area network
	Computer network for fast data exchange over a limited area.

M

M	Mega
	Prefix for units of measurement multiplied by a factor of one million
MB	Megabyte (unit of measurement for data volumes)

O

OCR	Optical character recognition

P

PC	Personal computer

R

RAM	Working/main memory with directly accessible memory cells (random access memory)
RAS	Remote access service
	The tool was renamed to G+D Remote Support
	Service for access to secure network

T

TN-S network	Terra Neutralum Separatum Network; way of realizing a low-voltage network for electrical power supply in electrical engineering

TT Network	Terre Terre network; way of realizing a low-voltage network for electrical power supply in electrical engineering with a separate protective earth conductor

U

Unfit	Sorting criterion; banknotes that are unfit for circulation as a result of damage, wear, soilage, discoloration, or mutilations. The value of the banknote is known.
USB	Universal serial bus

V

V	Volt (physical unit of electrical potential)

W

W	Watt (physical unit of power)

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