



G+D
Currency Technology

User Manual

BPS® C1



Translation of the original
operating instructions

Art.-No. 503762081
Issue 11/2019

Note

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Disclaimer

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

This documentation is based on the machine type BPS® C1, Release 3.3; Main Firmware DSP V002.075 and User Interface UI V005.012

Subject to technical changes.



This product meets the safety requirements of the relevant EU directives and complies with the EN 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 159
D-81677 Munich, Germany
Tel. +49 (0) 89 4119-0
Fax +49 (0) 89 4119-1535
<http://www.gi-de.com>

Technical support

→ *Chapter F "Technical Support", p. 203*

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Changes

Issue Overview

11/2019

Version	Change
1	Serial production
2	Edition for product release 2.3: <ul style="list-style-type: none"> ● New UV sensor ● Processing of checks ● Simultaneous processing of tickets and banknotes or checks and banknotes ● Sorting according to ECB specifications ● Search lists for serial numbers ● Language switch by SD card ● LAN interface ● Detailed description for setting the FIT sorting criteria ● Reports
3	Edition for product release 2.5: <ul style="list-style-type: none"> ● Currencies: <ul style="list-style-type: none"> – Detecting currencies automatically – Processing several currencies simultaneously ● Wizard for extended deposit processing ● Wizard for sorting according to ECB specifications ● GD_PCSuite end user tool: Full scan of the banknote ● Reports extended
4	Edition for product release 2.5.2: <ul style="list-style-type: none"> ● Operational sequences for banknote processing corrected and added ● Information for sending reports ● Reports updated

5	<p>Edition for product release 2.7:</p> <ul style="list-style-type: none"> ● New sorting mode ● Operational sequences for banknote processing and screen displays corrected and added ● Reports extended ● New functions in the GD_PCSuite Distributor-Tool software
6	<p>Edition for product release 2.8.1:</p> <ul style="list-style-type: none"> ● GUI: new symbols for operator 1 and operator 2 ● Synchronization of date and time via SNTP ● GD_PCSuite – Distributor Tool: <ul style="list-style-type: none"> – New: installation no longer required – Additional version data available – New machine behavior during update
7	<p>Edition for product release 3.0:</p> <ul style="list-style-type: none"> ● New option: Format SD card ● New information on banknote processing ● New functions and languages in the machine model
8	<p>Edition for product release 3.1:</p> <ul style="list-style-type: none"> ● New reports ● New icon and message when time for maintenance is reached
9	<p>Edition for product release 3.3:</p> <ul style="list-style-type: none"> ● Lock keypad ● Improved result display <ul style="list-style-type: none"> – Display different currencies as a list – Display fitness report ● Displays of the SD card status and the saving progress on the SD card ● Parameter input via keypad improved ● GD_PCSuite installation procedure improved ● Reports extended

- Universal SD card

Details:

- → *Section 6.3 “Control Unit”, p. 32*
Description of the numerical keypad extended.
- → *Section 6.7 “Selecting a Currency”, p. 40*
Additional information for automatic currency recognition
- → *Section 6.10.2 “Fitness Mode”, p. 48*
Section has been revised.
- → *Section 6.10.2.2 “Processing Banknotes in Fitness Mode ”, p. 50*
Section has been revised
- → *Section 6.10.2.2.1 “Processing Banknotes Using the Wizard”, p. 50*
Section has been revised
- → *Section 6.10.7 “Processing Banknotes in Multi-Deposit”, p. 63*
Information added about various wizards
- → *Section 6.10.9 “Processing Banknotes of Different Currencies Simultaneously”, p. 72*
Information added about result display
- → *Section 6.11 “Using Result Lists”, p. 74*
Information about the report: Fitness added
- → *Section 6.11.5 “Displaying the Fitness Report for the First or Second Half Year”, p. 79*
New chapter
- → *Section 6.16 “Locking Keys”, p. 85*
New chapter
- → *Section 6.20.2.1 “Setting Print Options”, p. 101*
New option added
- → *Section 6.20.3.3 “Setting the Results Display”, p. 103*
New chapter
- → *Section 6.20.5 “Setting the FIT Mode”, p. 106*
The section has been revised.
- → *Section 6.20.6.1 “Setting the Time and Date”, p. 108*
New behavior during input
- → *Section 6.20.6.2 “Setting the User ID”, p. 109*
New behavior during input
- → *Section 6.20.6.5.1 “Preparing the SD Card”, p. 110*
Procedure updated
- → *Section 6.20.6.7 “Setting the IP Address”, p. 112*
New behavior during input
- → *Section 6.20.6.8 “Switching Languages via SD Card”, p. 116*
Information added about permanently changing the language.

- → *Chapter 7 “GD_PCSuite Software”, p. 121*
New software directories
- → *Section 7.2 “BPS C1 Connecting and Installing Driver Software”, p. 122*
Information on installing driver software manually for Windows 10
- → *Section 7.3.1.1 “Starting Viewer”, p. 134*
Program start corrected
- → *Section 7.3.2.1 “Starting the Reader”, p. 145*
Program start corrected
- → *Section B.1.1 “Report: Deposit (XML)”, p. 176*
Ticket ID information added for report rpt5020
- → *Chapter D “Status of the SD Card”, p. 197*
New chapter
- → *Chapter E “Icons Used”, p. 199*
Updated icons

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1 About This Manual

This chapter contains the following information:

- Overview of all manuals in the BPS C1 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 All Manuals for the BPS C1 System Operating Instructions

Quick Start Guide

This manual forms part of the System Operating Instructions. The following manuals form part of the System Operating Instructions:

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 contains the following information about:

- BPS C1 Site and Facility Requirements
 - 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

The user manual and the software application are provided in the download area. The link to the download area can be found in the quick start guide.

Service Manual

The Service Manual describes maintenance work carried out on the product by field engineers.

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

Troubleshooting Manual

The Troubleshooting Manual offers an interactive troubleshooting including links to detailed procedures and video tutorials.

The Troubleshooting Manual is only available as part of the electronic documentation library EB Suite. The contents of the Troubleshooting Manual depend on your access rights.

Spare Parts Catalog

Please use the electronic spare parts catalog for Banknote Processing Systems on CD/DVD to order spare parts.

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:

- The → "Safety" chapter contains important safety information.
- In the → "General Information on the Product BPS C1" chapter, you will find an overview of the product..
- The → "BPS C1 Site and Facility Requirements" 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.
- The → "Installation" chapter contains information on the transport, installation, and commissioning of the product.
- The → "Operation" chapter contains the following information:
 - Important terms
 - Operating controls
 - Control unit and user interface
 - Default settings
 - Banknote processing operating procedures
 - System settings
 - System faults
 - Cleaning
- The → "GD_PCSuite Software" chapter provides you with information on the system requirements and on installing and using the "PC Suite – End User Tool" and "PC Suite – Distributor Tool" software programs.
- The → "Disposal" chapter provides you with all the information required for disposal.
- The → Appendix contains useful additional information. Examples:
 - Technical data

- Description of reports
- Description of the criteria for fitness sorting
- Information on the SD card
- Symbols used
- Contact addresses
- A list of abbreviations and glossary of terms
- Table of figures
- Index

1.4 Conventions Used in this Manual

1.4.1 General Document Conventions

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

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

Conventions	Definition
[Key]	<p>Keys on the keyboard are in square brackets.</p> <p>Example: Press [Alt] + [p] to print the file.</p>
<i>File or path</i>	<p>File names or paths are in italics.</p> <p>Example: Open <i>readme.txt</i>.</p>
Command	<p>Commands are in Courier font.</p> <p>Example: Open an input window and enter <code>ping</code>.</p>
Code	<p>Codes are in courier font.</p>
"Title"	<p>Titles of reports, logs, modes, windows, etc. are in quotation marks.</p> <p>Example: The "xy" window appears.</p>
→ " <i>Manual title</i> "	<p>References to other manuals are in italics. The manual title is also in quotation marks.</p> <p>Example: → "<i>Service Manual</i>"</p>
→ <i>Chapter "Chapter heading"</i>	<p>References to other chapters/sections are in italics. The title of the chapter/section is also in quotation marks.</p> <p>For example, → "<i>Jam Recovery</i>" chapter</p>
<i>Homepage Giesecke +Devrient</i>	<p>References to a website address are in italics.</p>
1. list entry 2. list entry	<p>In numbered lists, make sure you follow the sequence of list entries.</p>
<ul style="list-style-type: none"> ● list entry ● list entry 	<p>In unnumbered lists, the sequence of list entries is not important.</p>
<ul style="list-style-type: none"> a) list entry b) list entry 	<p>In alphabetical lists, the list entries give alternatives.</p>

Conventions	Definition
	This symbol identifies important information.
*	* indicates optional components. Inquire if the option is available on your machine.
[1]	Numbers in square brackets indicate individual operational steps. You must carry out these steps in the sequence indicated.
⇒	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.

Requirements for the Procedure

- Requirement 1
- Requirement 2



DANGER

Safety information before the procedure

Applies to the whole procedure

Observe the measures to prevent risks at each step.

Procedure

- [1] Perform this step.



- [2] Perform this step. Note the image above.

⇒ Result of this step



Figure 1: Image of a Result

Secondary Steps

- [3] To perform this step:
- [3-1] Perform this secondary step.
- [3-2] Perform this secondary step.

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 alternative:
For variant A: → [8a]
For variant B: → [8b]
- [8a] **Variant A**
 - [8a-1] Perform this step for variant A.
 - [8a-2] Perform this step for variant A.
- [8b] **Variant B**
 - [8b-1] Perform this step for variant 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

Before you work with our product, you must have previously read and understood the system operating instructions and especially the safety instructions they contain. You may only then operate and maintain our product if you are trained and authorized to do so. Remain conscious of safety as you work.

2

This chapter contains the following information:

- Overview of the general symbols for safety information
- Overview of the symbols identifying specific hazards
- Safety instructions for BPS C1

2.1 Safety Information Symbols



DANGER

The symbol together with the signal word DANGER indicates an immediate risk to life or health.

Ignoring this warning will result in death or serious injury.

The safety information tells you about the type and source of the risk, the consequences if it is not observed, and the measures to take to prevent the risk.



WARNING

The symbol together with the signal word WARNING indicates a possible risk to life or health.

Ignoring this warning may result in death or serious injury.

The safety information tells you about the type and source of the risk, the consequences if it is not observed, and the measures to take to prevent the risk.



CAUTION

The symbol together with the signal word CAUTION indicates a possible hazard to health.

Ignoring this warning may result in minor injury.

The safety information tells you about the type and source of the risk, the consequences if it is not observed, and the measures to take to prevent the risk.

**NOTICE**

This symbol, with the signal word **NOTICE**, is used to identify warning information.

Ignoring this information may result in damage to parts of the product or jeopardize data consistency.

The safety information tells you about the type and source of the risk, the consequences if it is not observed, and the measures to take to prevent the risk.

2.2 Symbols Used to Identify Specific Hazards

**DANGER**

Risk of crushing

This symbol indicates a danger from crushing by moving parts.

The safety information tells you about the type and source of the risk, the consequences if it is not observed, and the measures to take to prevent the risk.

**DANGER**

Risk of electric shock

This symbol indicates a danger of electric shock.

The safety information tells you about the type and source of the risk, the consequences if it is not observed, and the measures to take to prevent the risk.

**DANGER**

Risk of tripping

This symbol indicates a risk of tripping.

The safety information tells you about the type and source of the risk, the consequences if it is not observed, and the measures to take to prevent the risk.

2.3 Safety Information

2.3.1 Proper Use

Our product has been constructed using the latest technology and is safe for operation. For your safety, you must use it appropriately and properly.

You must comply with the necessary safety measures for hazard-free use of the product. Failure to follow these instructions can put lives at risk or can damage the product.

Proper Use

Always take notice of the safety warnings, even if you are an experienced user with good system knowledge.

A banknote processing system may only be used to check banknotes for denomination, authenticity, and condition, to count and to sort them.

The processing of tickets is permitted.

Improper Use

Improper use, for example, the singling of hard objects such as coins, paper clips and staples, is not permitted and will result in the invalidation of the warranty.

2.3.2 Prohibition of Unauthorized Modifications or Changes

For safety reasons, no changes may be made to the product without informing and receiving written approval from the manufacturer.

Any unauthorized structural changes or additions invalidate the EU Declaration of Conformity for the product.

Any unauthorized structural changes or additions invalidate the GS mark approval for the product.

Only genuine spare parts may be used for repair.

2.3.3 Circumstances Under Which the Product May Not Be Operated

The product may not be operated if the ambient and operating conditions that are listed in the → "BPS C1 Site and Facility Requirements" section of the system operating instructions are not fulfilled.

If the product is not in an operational state for technical or other reasons, you must prevent the product from being started up.

2.3.4 Safety Information to Protect Persons

Be sure to comply with national accident prevention regulations.

When working on the product, respect the following:

- Avoid wearing loose-fitting or open clothing.
- Remove ties, rings, watches, and jewelry before beginning work.
- Protect long hair with a scarf or hair net.

Refrain from any working method that may impair the operational safety of the product. Proceed in accordance with the safety information specified in the system operating instructions.

Ensure that unauthorized persons are kept away from the product.

Check the product for any externally identifiable damage and faults at least once a day. Immediately report any safety-related changes (including in the operating behavior) to the internal department responsible.

Only operate the product when it is in perfect working condition.
Do not remove any safety devices. Do not disable any safety devices. This can put lives at risk or can damage the product.

2

2.3.5 Information on Special Dangers for the Operator

During operation of the product, observe the following information:

Electrical Voltage/Current

Work on live parts and assemblies carries the risk of electric shocks. Only carry out this work if you are authorized to do so.

Ergonomics

Stand or sit in a comfortable manner. Arrange your workstation so that you can work ergonomically.

- Set your chair to the optimum position.
- Correct the height of the work surface if possible.
- Tilt the touch screen to the optimum position if possible.

Non-Specified Materials

Dangers may arise from the use of non-specified materials such as cleaning material, sprays, lubricants, etc. If you use these materials, follow the manufacturer's safety instructions.

Risk of Crushing

- When closing flaps, doors, transport sections, etc., be careful that your hands or fingers are not crushed between the closing edges. Use the operating equipment provided.
- When starting the singler, make sure that your hand is not in the singler area.

Dust

Never use compressed air to clean the product. Breathing in dust can lead to health problems. Dust in the air can also damage the bearings and electronic parts. No claims can be made under the warranty for parts that are damaged in this way. Always vacuum up any dust with a suitable vacuum device, fitted with a micro-filter.

3 General Information on the Product BPS C1

The BPS C1 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 unbundled 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.

This manual describes all the available options. The availability of these options depends on the configuration of the BPS C1.



Important!

The technical data for external devices supplied by G+D is not included in this documentation.

Availability of Products

Important Notice for
the USA/Canada

Not all products and functions are available in all countries.

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

- Serial number scanning (→ *Section 6.5, p. 36*, → *Section 6.10.3, p. 57*, → *Section 6.10.9, p. 72*, → *Section 6.14, p. 81*, → *Section 6.14.2, p. 82*, → *Section 6.15, p. 83*, → *Section 6.18, p. 88*, → *Section 6.19, p. 90*, → *Section 6.20, p. 99*, → *Section 6.20.2, p. 101*, → *Chapter 7, p. 121*, → *Section 7.3.1, p. 134*, → *Section 7.3.1.5, p. 136*, → *Section 7.3.1.6, p. 137*, → *Section 7.3.1.7, p. 137*, → *Section 7.3.1.9, p. 138*, → *Section 7.3.1.10, p. 139*, → *Section 7.3.1.11, p. 141*, → *Section 7.3.2, p. 144*, → *Section 7.4.1, p. 148*, → *Section 7.4.5, p. 155*, → *Chapter A, p. 173*, → *Chapter E, p. 199*)
- Check function (→ *Section 6.10.3, p. 57*, → *Section 6.10.9, p. 72*, → *Section 7.3.1.11, p. 141*, → *Section 7.4.1, p. 148*, → *Chapter E, p. 199*)
- Detecting the currency automatically (→ *Section 6.7, p. 40*)
- Processing different currencies simultaneously (→ *Section 6.7, p. 40*, → *Section 6.10.9, p. 72*)

4 BPS C1 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 C1 has the following system data.

4.1.1 Dimensions and Weights

The BPS C1 product has the following dimensions and weights:

	Depth [mm]	Width [mm]	Height [mm]	Weight [kg]
BPS C1	350	333	350	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 C1 has the following type label:

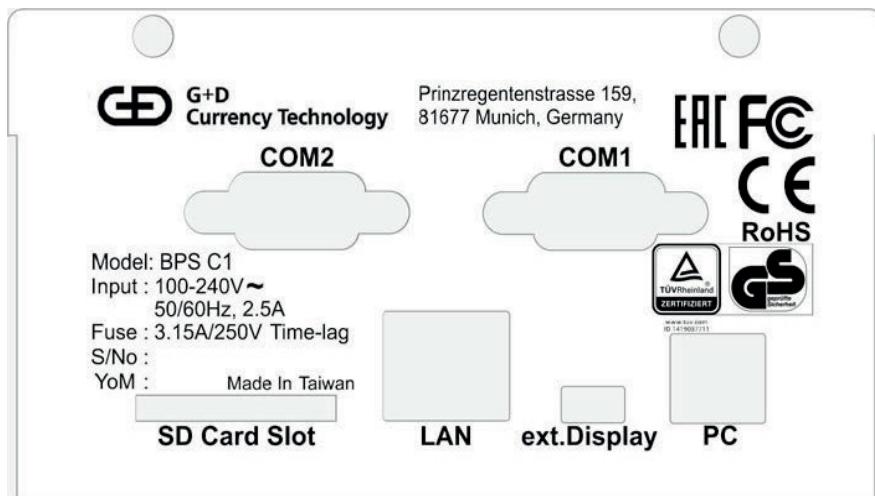


Figure 2: Type Label

You will find the type label on the rear of the BPS C1.

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 C1 product is fitted with an inlet connector (IEC 60320-1). A country-specific connection cable for single-phase 230 V alternating current is supplied. You must provide connection cables for any other sockets.

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. There are two ranges for the supply voltage:

Frequency
50 Hz – 60 Hz ± 1%

Table 3: Mains Frequency

Supply Voltage

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

Table 4: Supply voltage ranges

Fuse Protection

The following table shows the values for the fuse protection:

	250 V
Fuse protection	3.15 A; medium slow-blow

Table 5: Fuse Protection

Maximum Current Consumption

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

	115 V	230 V
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	Max. 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 ENDIN 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
	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 C1 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 C1 are between 68 and 76 dB(A) according to DIN EN ISO 11205.

4.1.7 Electromagnetic Compatibility

The BPS C1 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 55022 Class B	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 <= 16 A per phase)
DIN EN 61000-3-3	Product standard for limit values - Limiting voltage changes and fluctuations, and flickers in publicly owned low-voltage networks for devices with a rated current of <= 16 A per phase
DIN EN 55024	Product standard for information technology equipment - interference immunity factor properties - limit values and testing procedures

Table 10: Standards Applied for Electromagnetic Compatibility

4

4.2 Installation Room

The BPS C1 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

Climate in the installation room	Values
Relative humidity below the dew point not permissible	30% – 80% r.h.

Table 11: Values for the Room Climate

For machines with an integrated camera (ticket reader*) or external M-feature detectors, the applicable temperature range is +15 °C - +30 °C.

Moisture Content of
the Banknotes to be
Processed

Storage of banknotes	Values
Relative humidity	35% – ca. 65% r.h.
Moisture content of the banknotes	4.5 g/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 to 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
- SD card
- 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 C1 product to a network, see → *Section 4.2.8 “Local Area Network (LAN)”, p. 21*. An Ethernet network connection must be fitted near to 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 C1	1200 mm x 700 mm

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 C1 product can be set up as a sitting or standing workstation.

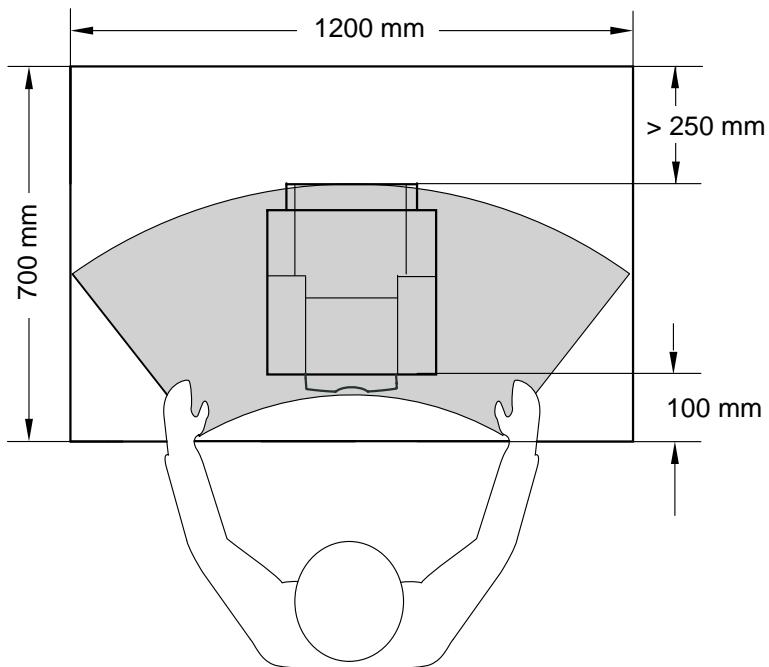


Figure 3: Workstation design

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 $100 \text{ M}\Omega$ (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 $100\text{ M}\Omega$, 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 C1 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 BPS C1 product in the vicinity of strong magnetic or electromagnetic fields can cause disruptions of the system processes.

Do not install the BPS C1 product in the vicinity of strong magnetic fields.



NOTICE

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

The BPS C1 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 site via a Local Area Network (LAN; Ethernet 10BASE-T with STP cable; 10, 100, 1000MBit/s). Optional EDP system components can also be connected via the LAN.

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

- Distances between the individual EDP system components,
- spatial separations,

- LAN technology used.

The physical location of the LAN line must take into account all of the planned EDP 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 EDP components with lengths of up to 100 m each.

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

4

4.2.9 Remote Service Connection

BPS Eco-Remote enhances the service and support capabilities. It is a secure, efficient and comprehensive remote access solution and enables standard services for quick installation, commissioning, and maintenance actions. Key services are Remote Diagnosis and Remote Update, especially important for fast support during the warranty period.

All online connections will be initiated and controlled by the customer. This ensures that no unauthorized party can access the BPS systems. For more details please also refer to the → "Technical Description and Guideline of Remote Service by G&D" (also covering IT security aspects).

Hardware requirements

- G&D RAS Server (BPS Eco-Cube part no. 505374000) or
- Customer provided server, compliant with the following minimum hardware requirements:
 - 1 CPU; 1 GHz minimum
 - 1 GB RAM minimum
 - 40 GB hard disk drive capacity minimum
 - 100 Mbit/s network interface controller

Supported operating systems

- 32/64 Bit Microsoft Windows 7, ultimate and professional (v6.1 build 600014 and above) or newer version
- 32/64 Bit Microsoft Windows Server 2008, Enterprise SP 2 (v6.1 build 600014 and above) or newer version
- 32/64 Bit Red Hat Enterprise Linux 5.x (v6.1 build 600014 and above)

- 32/64 Bit SUSE Linux Enterprise 10 (v6.1 build 600014 and above)

Contact G+D if you want to use a Linux operating system.

Connection requirements

- Intranet connection (LAN) to the product BPS C1
- Intranet access to:
 - <https://ras.gi-de.com> (193.108.184.106), port 443
 - <https://rasg1.gi-de.com> (193.108.184.107), port 443

5 Installation

The following must be observed during the installation.

5.1 Transport

Please 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 BPS C1 product is lying horizontally during transport.

Please take note of the following safety information during transport.



WARNING

Incorrectly transporting heavy equipment may result in 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
 - Protective goggles



DANGER

Risk of electric shock

Electric shock may result in death or serious injury.

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



NOTICE

Existing plug connections

may damage the machine during transportation.

Unplug all plug connections.

5.1.1 Transport Outside of Buildings

When transporting the product BPS C1 outside of buildings you must transport it in the original packaging or equivalent.

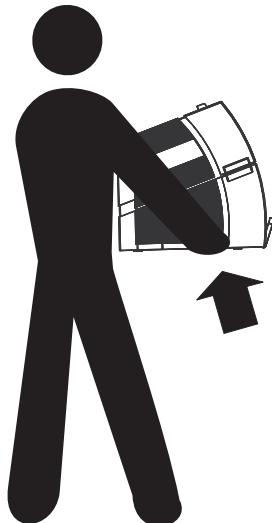
5.1.2 Transport Inside Buildings

You can transport the BPS C1 product inside buildings without special packaging.

You must carry the BPS C1 product as follows:

One Person

5



- [1] Grasp the handles with the fingertips of both hands.
- [2] Hold the machine against your upper body.
- [3] Support the machine with your forearms at either side.

Two People

- [1] Two people grasp the handles with the fingertips of one hand.
- [2] Both people support the machine with their other hand on the rear panel.

5.2 Unpacking

The packaging consists of the following components:

- Cardboard (cover) (1)
- Accessories (mains cable, documentation) are located on the foam insert (2)
- Foam inserts: top (2); bottom (5)
- Outer cardboard box (6)
- Corrosion protection film (not illustrated)
- Transport locks (7)

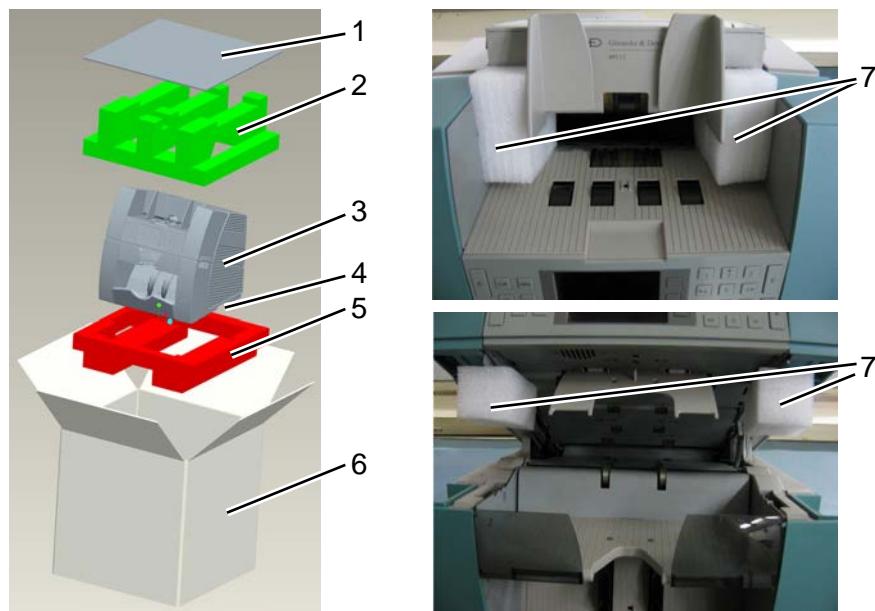


Figure 4: Packaging Components

- [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] Remove the transport locks (7) from the top and bottom transport sections (four pieces).
- [9] Retain the packaging for possible future transport.

5.3 Installation and Connection

Requirement

Unpack the machine. The instructions for unpacking can be found on the package insert BPS C1 → *Quick Start Guide* and in the → *Section 5.2 “Unpacking”, p. 26*

Delivery Package

Check the items supplied:

- BPS C1 Machine
- Mains cable (country-specific)
- Customer documentation (Quick Start Guide)
- USBCable

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.

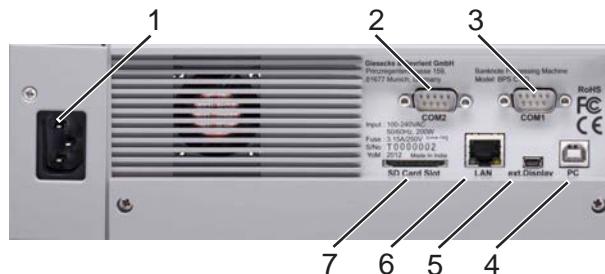


Figure 5: Connections

- 1 Connection for power supply
- 2 COM2: Interface for printer or barcode reader
- 3 COM1: Printer interface
- 4 USBInterface for PC
- 5 Interface for external display
- 6 LAN interface
- 7 Interface for SD card



DANGER

Risk of electric shock

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

The power plug or mains cable may not be placed under extreme weight or crushed.

Make sure that the mains cable is routed safely.



CAUTION

Where cables are routed along the floor, there is a risk of tripping.

Make sure that all cables are routed safely.


Important!

If you are connecting two printers, the COM1 interface is used for Operator 1 and the COM2 interface for Operator 2.

If you only connect one printer and two operators use the same printer, the printer must be connected via the COM1 interface.

You can only connect the barcode reader to the COM2 interface.

Procedure

NOTICE

Skewed installation of the machine/device results in impaired function.

1. Make sure the machine/device is on a horizontal table top.
2. Make sure that no objects, such as pens or screwdrivers, are located underneath the machine/device.

[1] Place the machine on a suitable, sufficiently stable surface, see → *Section 4.2.4 "Installation Area"*, p. 19.

[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 power cable supplied (1).

Printer (Optional)

[5a] Connect two printers (2 and 3).

- COM1: Connection for Operator 1
- COM2: Connection for Operator 2
- Under "Output Setting" select the option "Dual Printer", see → *Section 6.20.4 "I/O Settings"*, p. 104.

[5b] Connect a printer (3).

- COM1: Connection for Operator 1 and 2
- Under "Output Setting" select the option "Single Printer", see → *Section 6.20.4 "I/O Settings"*, p. 104

Barcode Reader (Optional)

[6] Connect the barcode reader (2).

- COM2: Connection for Operator 1 and 2
- Under "Output Setting" select the option "Printer + Barcode Reader", see → *Section 6.20.4 "I/O Settings"*, p. 104

PC (Optional)

[7] Connect the PC (4).

External Display (Optional)

[8] Connect the external display (5).

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.

The machine/device may be damaged.

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

1. Switch off the machine/device.
2. Unplug the power plug from the power socket.
3. Have the machine/device checked by qualified personnel before continuing work.

6.1 Important Terms

6

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

Batch	<ul style="list-style-type: none">● The value of banknotes is not known;● accounting based on counted banknotes;
Deposit	<ul style="list-style-type: none">● Value of banknotes is given;● accounting against target value of deposit;
Difference	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 (issue) 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 which it cannot positively identify. The machine sends rejects to the reject stacker.

6.2 Operating Controls

The machine has the following operating controls:

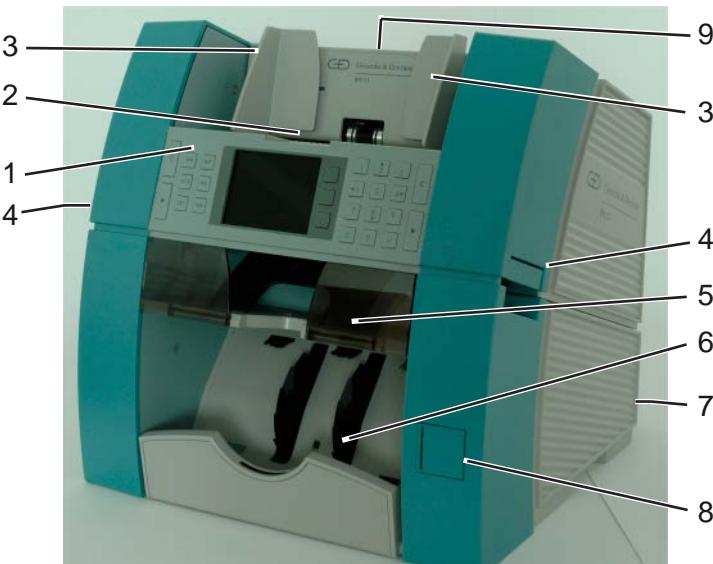


Figure 6: Operating controls

- 1 Operating unit, see → *Section 6.3, p. 32*
- 2 Singler
- 3 Banknote guides
- 4 Release handle to open the lower transport section
- 5 Reject stacker
- 6 Delivery stacker
- 7 Connections (from the rear), see → *Section 5.3, p. 28*
- 8 Power switch
- 9 Release handle to open the upper transport section

6.3 Control Unit

The control unit consists of various keys and a screen (3).

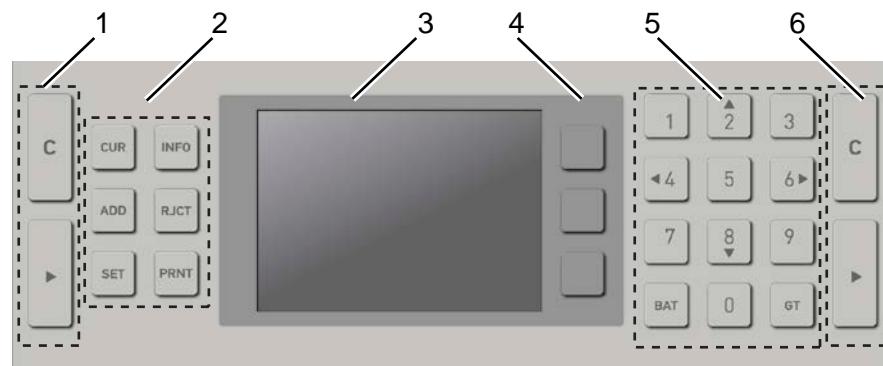


Figure 7: Control Unit

Keypad for Operators
(1 and 6)

Two operators can work at the machine. You can start and stop the banknote processing by using the keypad. For the default settings, functions and inputs, both operators use the same keys.

Keypad Default Settings (2)



Cancel – Cancel action and return to the main menu

Enter key – confirm selection or input, start banknote processing

Function Buttons (4)

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

- **CUR key** – select currency
 - *Section 6.7, p. 40*
 - *Section 6.10.9, p. 72*
 - *Section 6.10.10, p. 73*
- **ADD key** – add accounting units
 - *Section 6.8, p. 42*
- **SET key** – system settings
 - *Section 6.19, p. 90*
- **INFO key** – display information as list
 - *Section 6.12, p. 79*
- **RJCT key** – display reject reasons
 - *Section 6.15, p. 83*
- **PRNT key** – open print menu or save accounting unit manually to create the result list
 - *Section 6.14, p. 81*
 - *Section 6.11, p. 74*

Three function buttons for controlling banknote processing are located to the right of the screen (3).

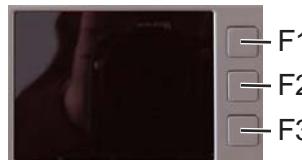


Figure 8: Function buttons



Important!

The function buttons on the machine are not labeled **F1** to **F3** but are called this in the description. The current function of the keys can be seen on the screen next to the relevant function button, represented by a symbol.

Numerical Keypad (5)



Figure 9: Numerical Keypad

Use the numerical keypad to enter values. You use the keys **2** and **8** (up and down), and **4** and **6** (left and right) to navigate on the screen.

BAT Key

You can set the number or value of banknotes using this key.

→ *Section 6.10.5, p. 60*

→ *Section 6.10.6, p. 61.*

GT Key

With this key, you can display the overall result and the daily result as a list and the fitness report.

→ *Section 6.11, p. 74*

Entering the Values

In the configuration menu, use the numerical keypad to enter values. Depending on which values are allowed, the keys have the following meaning:

- **BAT** key – switches between the following numerical keypad functions.
 - Numerical input
 - Input of symbols and all uppercase letters
 - Input of symbols and all lowercase letters
 - Movement function (2–up; 8–down; 4–left; 6–right) of the cursor
- **GT** key – deletes the character before the cursor.

The numerical keypad numbers have the following characters depending on whether uppercase or lowercase input is selected:

- **1** – !, @, #, \$, %, &, ?, _, -, ., /
- **2** – A, B, C or a, b, c
- **3** – D, E, F or d, e, f
- **4** – G, H, I or g, h, i
- **5** – J, K, L or j, k, l

- **6** – M, N, O or m, n, o
- **7** – P, Q, R, S or p, q, r, s
- **8** – T, U, V or t, u, v
- **9** – W, X, Y, Z or w, x, y, z
- **0** – <space>

You can enter letters as follows:

- Short-press the key – the first character of the respective number appears.
- Long-press the key – the character is highlighted in color. Pressing again switches between the letters. Confirm the input by pressing the Enter key.

The input of symbols and letters is only possible in certain fields.

6.4 Switching the Machine On and Off

The power switch is at the front of the machine.



Figure 10: Machine Power Switch

Switching On

- [1]** Press the power switch.
- ⇒ After the machine has been started up, the main screen is displayed, see → *Figure 11 “User Interface”, p. 36*.

Switching Off

**Important!**

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

- [1] Print or save the results, if required; see → *Section 6.14, p. 81* and → *Section 6.11, p. 74*.
- [2] Press the power switch.
⇒ The machine is switched off.

6.5 User Interface

6

After switching on the machine you will see the main menu on the screen.

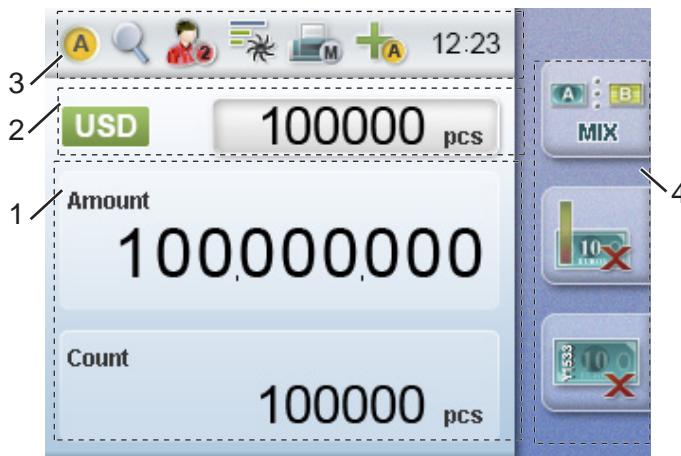


Figure 11: User Interface

1 Result

Here you can view the result of the accounting. The number and value of the accounted banknotes are shown on the screen.

2 Currency and target value

Here you can see the selected currency and the predefined banknote denomination or the predefined quantity.

3 Default settings

Here you see what default settings are currently selected.

4 Functions

Here you can select the sorting mode as well as enable fitness sorting and serial number reading using the relevant function keys next to the icons. You can also confirm or cancel the system settings.

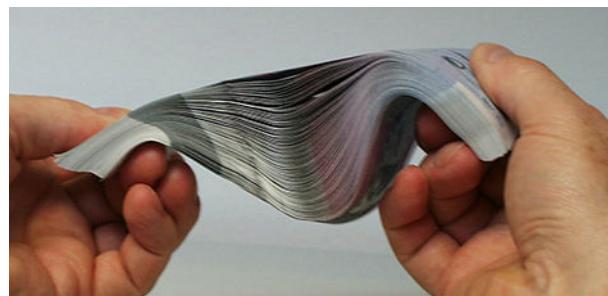
An overview of all the symbols can be found in the Appendix, see
→ *Chapter E “Icons Used”, p. 199.*

6.6 Preparing Banknotes

- [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.

**NOTICE**

Objects such as clips, paperclips, or rubber bands can damage the machine/device.

Make sure that there are no objects on the banknotes.

Only banknotes may be placed in the singler!

Only banknotes and tickets may be placed in the singler during ticket operation!

- [8]** Before inserting the banknotes in the singler, sort out banknotes with the following characteristics:

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



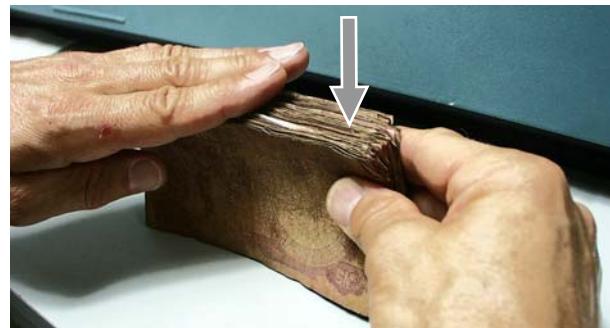
Figure 12: Poor quality banknote

- [9]** Place these banknotes to one side for manual inspection.

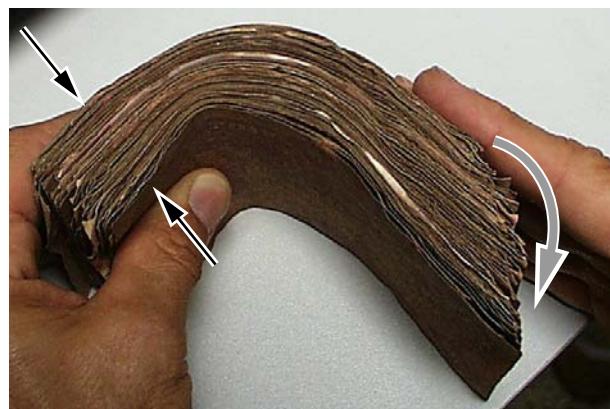
- [10]** Before placing the banknotes in the singler, make sure that the banknotes are not arched downward along their length.

Particularly poor quality banknotes

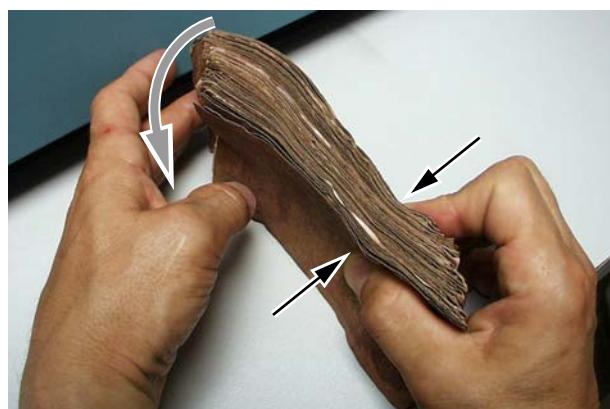
The following procedure is recommended in addition:



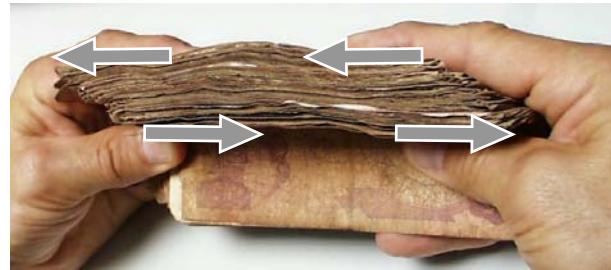
[11] Straighten the BN lengthwise.



[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

6.7 Selecting a Currency

Depending on the factory settings, you can select different currencies or set the machine to automatically detect the currency.

The currently selected currency is visible at the top left of the screen.

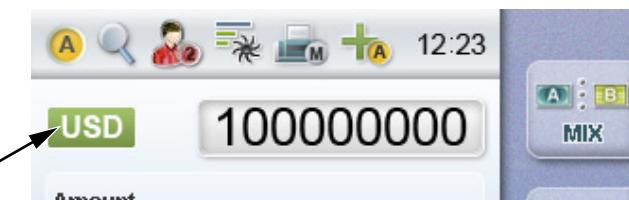


Figure 13: Selecting the Currency

You have the following options for selecting the currency:

- Selecting the currency sequentially
- Selecting a currency from a list
- Detecting the currency automatically (**AUTO** option)
- Processing different currencies simultaneously (**MIX** option)

Selecting the Currency Sequentially

[1] Briefly press the **CUR** button.

⇒ The available currencies appear one after the other on the screen.

[2] Press the **CUR** button until the desired currency appears.

⇒ The desired currency has been set.

Selecting the Currency from the List

[1] Press and hold the **CUR** button.

⇒ The available currencies appear in a list on the screen.

[2] Select the desired currency using the numerical keypad.

[3] Press the Enter key.

⇒ The desired currency has been set.

Automatically Recognizing Currency

Along with the currencies, there is also the **AUTO** option. When this option is selected, the machine detects the currency automatically. The currency that the sensor recognizes first is the reference for the sorting.

[1a] Select the **AUTO** option sequentially.

→ “*Selecting the Currency Sequentially*”, p. 40.

6

[1b] Select the **AUTO** option from the list.

→ “*Selecting the Currency from the List*”, p. 41.

⇒ During banknote processing, the machine sorts all banknotes in the currency that the sensor recognizes first into the delivery stacker.

If the currency is automatically recognized, the following options are fixed and cannot be changed:

- Sorting mode: 
- Fitness mode: 

If the currency is automatically recognized, you can only choose between the following options for serial number scanning:

- Serial number scanning: 
- Compare serial numbers: 

Tickets and checks cannot be read.

Processing Different Currencies Simultaneously

The **MIX** option is available for the currencies. This enables you to process different currencies simultaneously. Which currencies can be processed simultaneously depends on the available currencies on the machine. In

addition, your service partner/local service organization can assign only certain currencies to the two operators. This means the operator can only process the assigned currencies simultaneously.

- [1a] Select the **MIX** option sequentially, see → “*Selecting the Currency Sequentially*”, p. 40
- [1b] Select the **MIX** option from the list, see → “*Selecting the Currency from the List*”, p. 41.
 - ⇒ During banknote processing, the machine sorts all the banknotes of the various available currencies into the delivery stacker.
 - For more information on simultaneously processing different currencies, see → *Section 6.10.9*, p. 72.

6.8 Adding the Accounting Units

Recommended Requirement

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

Enable automatic printing, see → *Section 6.19.2*, p. 92. If manual printing is set, must ensure to 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 (arrow). When this function is enabled, the total of the accounting units added is displayed.



Figure 14: Adding the Counter Result

Procedure

- [1] Press the **ADD** key.
 - ⇒ The machine enables or disables the function.

When this function is enabled, you can save the results of the banknote processing in the following lists.

- "Daily result" list
Value, number, and total of banknotes processed in one day
- "Grand Total" list
Value, number, and total of banknotes processed in several processing steps

Further information about result lists can be found in → *Section 6.11 "Using Result Lists", p. 74.*

[2] Process the banknotes.

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

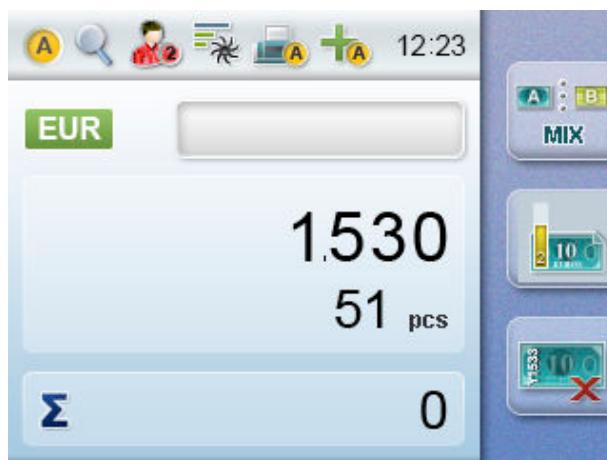
- Automatic adding – The machine automatically adds the accounting units when you remove the banknotes from the delivery stacker.
- Manual adding up – You must manually add up the accounting units before you remove the banknotes from the delivery stacker.

To edit the system settings, see → *Section 6.19.2 "Selecting Automatic Singling/Printing/Adding", p. 92.*

[2a] **Automatic adding**

Print Result

If you want to print the result and have enabled manual printing, you need to print the result before removing the banknotes.



[2a-1] Press the **PRNT** key twice.

⇒ The print menu opens and the result is printed.

[2a-2] Remove the banknotes from the delivery stacker.

⇒ The machine saves and adds the total.

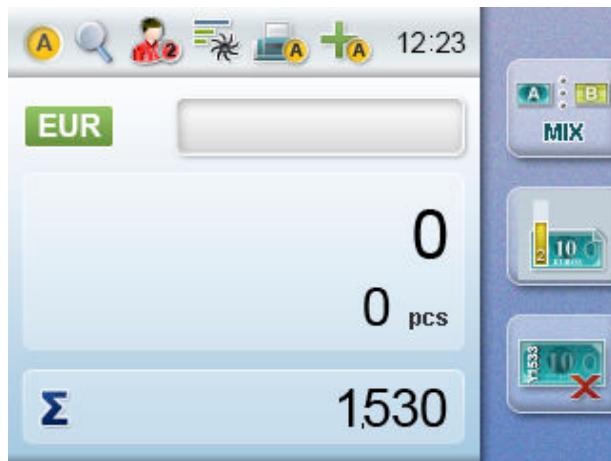


Figure 15: Saved Total

[2a-3] Continue work with a new deposit.

[2b] Manual Adding

Leave the banknotes in the delivery stacker.

[2b-1] Press the **PRNT** key.

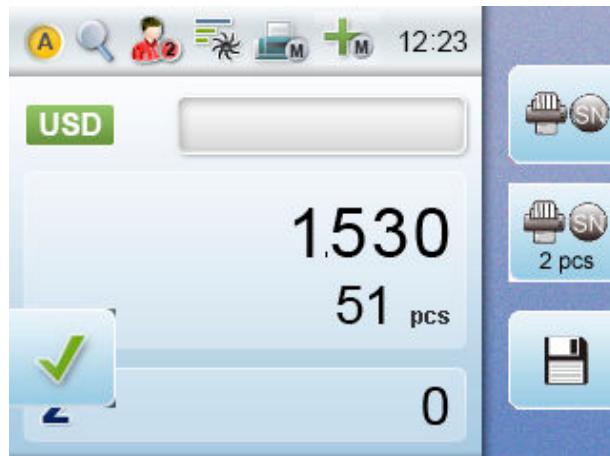
⇒ The print menu opens.



Important!

If you take the banknotes out of the delivery stacker before you press the **PRNT** key, the "Save" symbol is not available. You cannot save the total.

Print Result



[2b-2] Press the **PRNT** key.

⇒ The result is printed. The print menu closes. To save the result you need to reopen the print menu using the **PRNT** key.

Save Result

[2b-3] Press the **F3** key.

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

[2b-4] Remove the banknotes from the delivery stacker.

[2b-5] Continue work with a new deposit.

Delete End Result

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, see → *Section 6.11.3, p. 76*.

6.9 Switching Operators

The machine allows banknote processing by two operators on one machine. The machine stores the accounting data of both operators separately. All functions of banknote processing can be used separately by both operators. The operators work with their current settings in their operation mode.

If you are working on your own with the machine, you can select a second mode for banknote processing on the second operator.



Important!

The configuration settings (→ *Section 6.20, p. 99*) and the speed selected (→ *Section 6.19.1, p. 91*) apply to both operators and cannot be set individually by each operator.

The first operator works on the left-hand side of the machine and the second operator on the right-hand side.



Figure 16: Operator Keys



Operator 1 works with the left-hand keys (1).



Operator 2 works with the right-hand keys (2).

Your service partner/local service organization can also disable the second operator. This means that a single operator can work on the machine with both sets of keys (1 and 2).

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

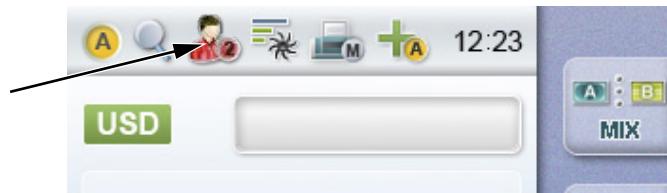


Figure 17: Operator Login

Switching to Operator 1

Operator 2 has completed their current banknote processing.

- [1] Press the Enter key on the left.

⇒ The display on the screen switches to Operator 1.

Switching to Operator 2

Operator 1 has completed their current banknote processing.

- [2] Press the Enter key on the right.

⇒ The display on the screen switches to Operator 2.

6

6.10 Processing Banknotes

6.10.1 Select Sorting Mode

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

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

- Select sorting mode sequentially
- Select sorting mode from a list

Select the sorting mode by pressing the **F1** key.



Figure 18: Select Sorting Mode

Select Sorting Mode Sequentially

[1]

Briefly press the F1 key.

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

[2]

Press the F1 key until the desired sorting mode appears.

⇒

The desired sorting mode is set.

Select Sorting Mode from a List

[1]

Press and hold the F1 key.

⇒ The available sorting modes are listed on the screen.

[2]

Use the numerical keypad to select the sorting mode.

[3]

Press the Enter key.

⇒

The desired sorting mode is set.

You can select the following sorting modes.



Process banknotes of different denominations.



Suspect and unknown banknotes are sorted to the reject stacker.



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 suspect banknotes into the reject stacker.

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 suspect banknotes to the reject stacker.

Example:

delivery stacker

BN face

Reject stacker

BN back

Orientation
1



and



Orientation 3

and

delivery stacker BN face Orientation 2 	Reject stacker BN back 	Orientation 4
	<p>Sort banknotes according to one orientation. The banknote whose orientation is recognized first by the sensor then acts as the reference for sorting.</p>	
	<p>The machine sorts banknotes with other orientations and suspect banknotes into the reject stacker.</p>	
	<p>Sort a denomination according to emission (series). The banknote whose series is recognized first by the sensor then acts as the reference for sorting.</p>	
	<p>The machine sorts banknotes with another emission (series) and suspect banknotes into the reject stacker.</p>	
	<p>Sort banknotes according to one customer mode.</p>	
	<p>The machine sorts banknotes that do not match the customer mode and suspect banknotes to the reject stacker. You can find further information on the customer mode in → <i>Section 6.19.4 "Setting the Customer Mode"</i>, p. 97.</p>	

Important!

Your service partner/your local service organization can disable denominations. Afterwards, the machine sorts these denominations in the reject stacker. This setting is useful to remove denominations from the accounting which were removed from circulation.

6.10.2 Fitness Mode

You can also choose fitness criteria, which the machine will take into consideration when sorting. The following fitness modes are available:

Further information about setting the sorting criteria can be found in → *Section 6.20.5 "Setting the FIT Mode"*, p. 106

This sorts the banknotes according to the ATM fitness criterion. The machine sorts banknotes that match the fit and unfit fitness criteria as well as suspect and unknown banknotes into the reject stacker.

This sorts the banknotes according to the ATM and fit fitness criteria. The machine sorts banknotes that match the unfit fitness criterion as well as suspect and unknown banknotes into the reject stacker.

In the Euro adaptation, this fitness mode corresponds to the specifications of the European Central Bank (ECB).



This sorts the banknotes according to the unfit fitness criterion. The machine sorts banknotes that match the ATM and fit fitness criteria as well as suspect and unknown banknotes into the reject stacker.



You enable the "2+0 Fitness Mode" sorting mode as a result. In one processing step you then sort the fit banknotes (ATM,fit) and the unfit banknotes (unfit) and calculate the deposit for both fitness criteria at the same time. This sorting mode is suitable for smaller deposits.



For more detailed information on banknote processing using this sorting mode: → *Section 6.10.8 “Calculate Fit and Unfit Banknotes at the Same Time”, p. 68*

This is used to disable the fitness mode.

6.10.2.1 Selecting Fitness Mode

You can switch the fitness mode within a deposit. A detailed list of the banknotes processed according to the individual fitness criteria can be found in the associated report (→ *Section B.2.1 “Report: Deposit”, p. 181*).



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.

Procedure



- [1] Press the **F2** key.
⇒ The currently selected fitness mode is displayed on the right-hand side of the screen.
- [2] Press the **F2** key until the desired fitness mode appears.
⇒ The fitness mode is set.

6.10.2.2 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, see → <i>Section 6.18 "System Malfunctions"</i> , p. 88. Press key C and check the reject reasons.
Processing Rejects	If there are rejects, check the reject reasons. If there are reject reasons in the yellow area (transport disturbance), it is recommended to process the rejects again.
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. You have two options for processing the banknotes:
	<ul style="list-style-type: none"> ● Processing banknotes using the wizard → <i>Section 6.10.2.2.1 "Processing Banknotes Using the Wizard"</i>, p. 50 ● Processing banknotes without using the wizard → <i>Section 6.10.2.2.2 "Processing Banknotes without Using the Wizard"</i>, p. 54

A wizard is configured on the machine. Your service partner/local service organization can set whether the wizard is available. If the wizard is available, it is installed for operator 2.

To process the banknotes in accordance with the ECB specifications, you must choose one of the two options and follow the procedure described in the relevant chapter.

Processing Banknotes Using the Wizard

If the wizard is available, the machine is configured in such a way that you can enable the wizard via operator 2. To do so you must select either the "ATM" or "Fit" fitness mode. If you start with the "Fit" fitness mode, the steps for "ATM" sorting are not applicable. The example below describes the entire sorting process.

Requirement	<ul style="list-style-type: none"> ● Wizard is available ● Enable automatic printing. <p>This is the only way to ensure the machine prints the report when processing is complete.</p>
Adding the Accounting Units	If you want to add the accounting units using the ADD key, you need to enable automatic adding.
Recommended Requirement	Enable automatic singling.


Important!

If you use the wizard to process banknotes, you cannot set the following functions:

- Detecting the currency automatically
- Processing different currencies simultaneously

Procedure

- [1] Switch to operator 2.



- [2] Use the **F2** key to select Fitness mode 1.

Sorting ATM Banknotes

- [3] Insert the banknotes into the singler.

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

Rerun for ATM Banknotes

Rerun ATM?	
Yes	No

- [4] Select the desired option.

Yes: → [5]

No: → [7]

- [5] Press the left Enter key.

- [6] Place the rejects back into the singler.

⇒ The machine sorts the banknotes. The request "Rerun ATM" then appears again.

- [7] Press the right Enter key.

⇒ The machine automatically switches to Fitness mode 2 ("Fit").

- [8] Remove the banknotes from the delivery stacker.

Sorting Fit Banknotes

- [9] Place the banknotes from the reject stacker into the singler.

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

**Important!**

When there are no more banknotes in the reject stacker, press the Enter key. The wizard then takes you to the next step.

Rerun for Fit Banknotes

Rerun fit?	
Yes	No

- [10]** Select the desired option.
 Yes: → **[11]**
 No: → **[13]**
- [11]** Press the left Enter key.
- [12]** Place the rejects back into the singler.
 ⇒ The machine sorts the banknotes. The request "Rerun fit" then appears again.
- [13]** Press the right Enter key.
 ⇒ The machine automatically switches to Fitness mode 3 ("Unfit").
- [14]** Remove the banknotes from the delivery stacker.

Sorting Unfit Banknotes

- [15]** 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.

**Important!**

When there are no more banknotes in the reject stacker, press the Enter key. The wizard then takes you to the next step.

Rerun for Unfit Banknotes

Rerun unfit?	
Yes	No

- [16]** Select the desired option.
 Yes: → **[17]**
 No: → **[19]**
- [17]** Press the left Enter key.
- [18]** Place the rejects back into the singler.
 ⇒ The machine sorts the banknotes. The request "Rerun unfit" then appears again.

[19] Press the right Enter key.

New Deposit with Same ID

Another deposit with same ID?	
Yes	No

[20] Select the desired option.

Yes: → [21]

No: → [23]

[21] Press the left Enter key.

⇒ The machine automatically switches to Fitness mode 1 ("ATM").

[22] Repeat steps → [3] to → [19].

[23] Press the right Enter key.

⇒ The window for manual inspection appears.

Performing Manual Inspection

Denom.	Fit	Unfit	Reject	Amount
500x	1 +	0 +	0 =	500
200x	0 +	0 +	0 =	0
100x	4 +	0 +	0 =	400
50x	4 +	2 +	0 =	300
20x	4 +	2 +	0 =	120
10x	32 +	0 +	0 =	320
5x	6 +	4 +	0 =	50
<hr/>				
Pcs	51 +	8 +	0 =	59
<hr/>				
Amount				1,690

[24] If you want to enter banknotes, proceed as follows for each denomination:

[24-1] Use keys **2** and **8** on the numerical keypad to select the desired denomination.

[24-2] Press the right Enter key.

[24-3] Enter the number of rejects.

[24-4] Press the right Enter key.

[25] Press the **C** key (cancel).

Deposit Overview

The window with the deposit overview appears. The table shows the result sorted according to fitness.

Deposit Result	
ATM	830 \$ 12 pcs
Fit	700 \$ 39 pcs
Unfit	160 \$ 8 pcs
Recon.	0 \$ 0 pcs

[26] Press the right Enter key.

Detailed Overview

The window with the detailed overview appears. The table shows the result sorted according to denomination.

Denom.	Detailed Result			
	ATM	Fit	Unfit	Recon.
500\$	1	0	0	0
200\$	0	0	0	0
100\$	2	2	0	0
50\$	1	3	2	0
20\$	0	4	2	0
10\$	8	24	0	0
5\$	0	6	4	0
Amount	1690 \$			

[27] Press the right Enter key.

⇒ The machine completes the accounting process and prints the report.

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.

Requirement

Press the **ADD** key to add the accounting units (see → *Section 6.8, p. 42*).

Recommended requirements

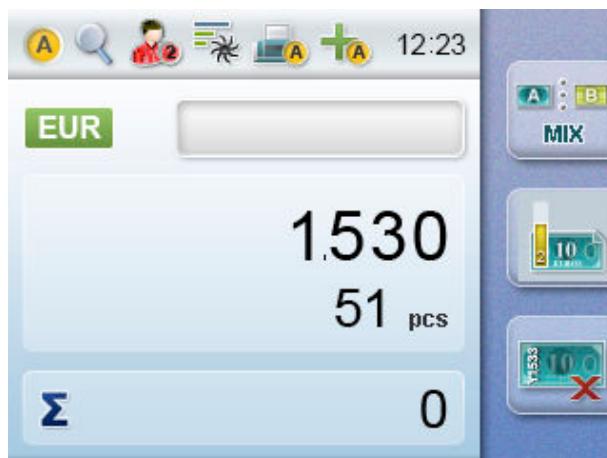
Enable automatic singling, automatic printing, and automatic adding, see → *Section 6.19.2, p. 92*.

Procedure


- [1] Use the **F1** key to select sorting mode **MIX**.

Fitness Mode 2: Fit


- [2] Use the **F2** key to select Fitness mode 2.
- [3] Press the **ADD** key.
- [4] 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.



- [5] Remove the banknotes from the delivery stacker.
 ⇒ The total is saved.

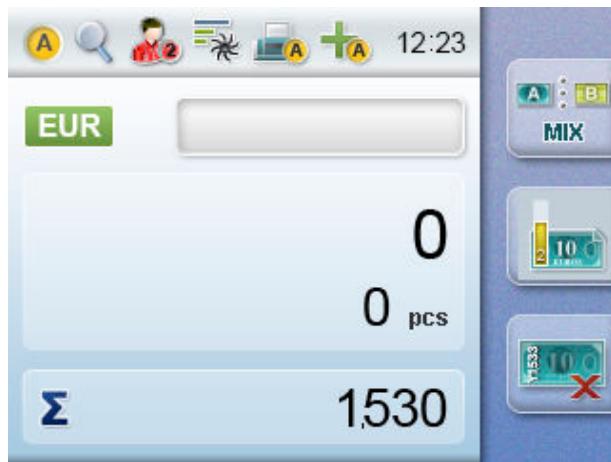


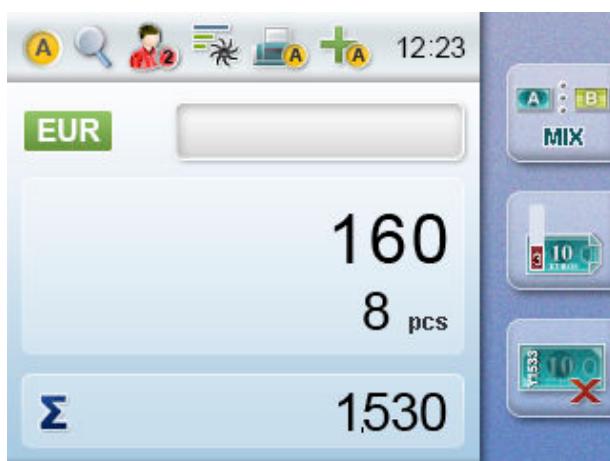
Figure 19: Saved Total of ATM and Fit Banknotes

Checking the Reject Reasons

- [6] Check the reject reasons.
- [6-1] Press the **RJCT** key.
- [6-2] Check the reject reasons for the rejected banknotes.
- [6-3] To close the window, press the **RJCT** key.

Fitness Mode 3:Unfit

- 
- [7] Use the **F2** key to select Fitness mode 3.
 - [8] 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.



- [9] Remove the banknotes from the delivery stacker.
 ⇒ The total is added and saved.

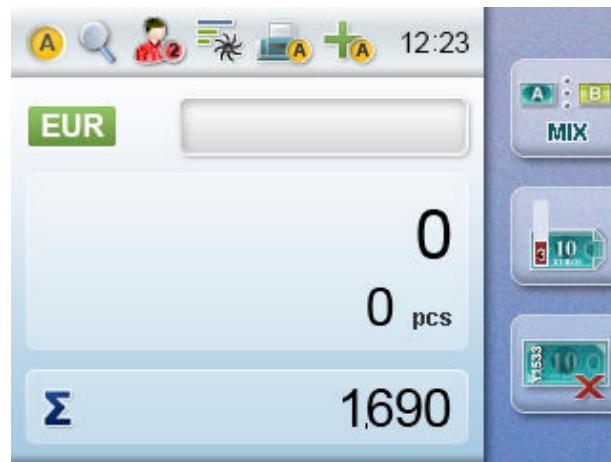


Figure 20: Saved Total of Unfit Banknotes

- [10] Check the reject reasons, see → [6].
- [11] To show the grand total of the deposit, press the **GT** key.
- [12] If manual printing is enabled, print the result.
- [13] Delete the "Grand Total" result list (see → *Section 6.11.3, p. 76*) and start the next deposit.



Important!

If you change the FIT sorting criteria settings for the Euro adaptation (see → *Section 6.20.5 "Setting the FIT Mode"*, p. 106), the machine loses its European Central Bank certification.

6

6.10.3 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.



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:

- 125
- EAN13
- 128C

**Important!**

The machine can process banknotes in the selected sorting mode and simultaneously read in tickets. Your service partner/local service organization can specify whether the machine processes tickets alone or tickets and banknotes or set the barcode type.



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 process banknotes in the selected sorting mode and simultaneously read in checks. Your service partner/local service organization can specify whether the machine processes checks alone or checks and banknotes.

The machine reads type E-13B, CMC-7, OCR-A and OCR-B checks.

Other check formats can only be scanned without processing banknotes at the same time. To do this, deactivate the security feature check.

→ *Section 6.20.1 “Enable or Disable the Check on Security Features”, p. 100*



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

The symbol on the right of the screen shows which function is currently selected.



Figure 21: Enabling Serial Number, Ticket Reading or Check Function

Procedure

- [1] Use the **F3** key to select the required function.
- ⇒ This sets ticket reading, the check function, or serial number reading.

6

6.10.4 Processing Banknotes without Deposit

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

The machine sorts unknown and suspect banknotes into the reject stacker.

Procedure

- [1] Press the **BAT** key until "-----" appears in the deposit input field.
- [2] Press the enter key.
⇒ The machine switches to the mode for banknote processing without deposit. Settings for the banknote quantity or value remain stored.
- [3] Insert the banknotes into the singler.
- [4a] If automatic singling is set, the machine starts to single the banknotes.
- [4b] If manual singling is set, press the Enter key.
⇒ The machine counts the banknotes. The quantity and total of banknotes in the delivery stacker appear on the screen.



Figure 22: Result of the "Banknote Processing without Deposit"

6.10.5 Specifying the Package Size

6

You can specify additional package sizes, which are stacked and accounted.

The machine sorts unknown and suspect banknotes into the reject stacker.



Important!

If you specify the package size, you can only choose between the following options:

- Sorting mode: 
- Sorting mode: 

Procedure

- [1] Press the **BAT** key until "Pcs." appears in the deposit input field.
- [2] Enter the package size using the numerical keypad.
- [3] Press the Enter key.
- [4] Insert the banknotes into the singler.
- [5a] If automatic singling is set, the machine starts the process.
- [5b] If manual singling is set, press the Enter key.
 ⇒ 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.

- [6] Place more banknotes in the singler.
 ⇒ The machine stops when the defined package size (see arrow) is reached.

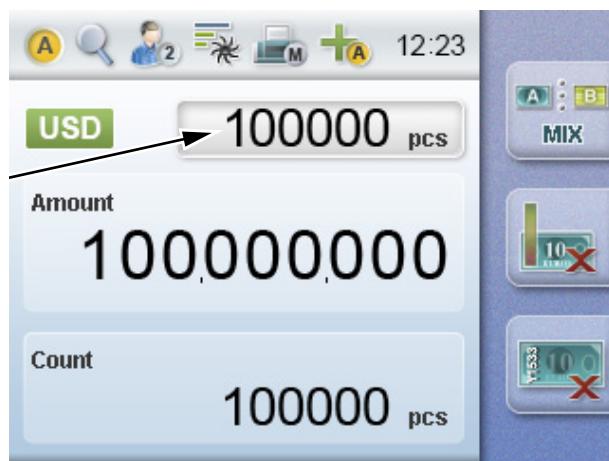


Figure 23: Banknote Processing with Package Size

- [7] Remove the BN package.
 ⇒ The quantity and total of banknotes in the delivery stacker is displayed on the screen.
 The machine counts more BN packages until no further banknotes are inserted. The banknote that the sensor recognizes first after each complete package is the reference for sorting.
- [8] Press the **C** key to end the processing of incomplete banknote packages.



Important!

Your service partner/local service organization can change the default setting for detecting the reference banknote. Then the machine accepts a new reference banknote for sorting once the delivery stacker and the singler contain no more banknotes.

6.10.6 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 suspect and excess banknotes into the reject stacker.

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 requirements are advised:

- Enable manual adding, printing and singling (→ *Section 6.19.2, p. 92*).
- Start with the largest banknote denomination and close the deposit with the smallest banknote denomination.



Important!

If you specify a target value (deposit), the following option is fixed and cannot be changed:

- Sorting mode: 
- Fitness mode deactivated: 

In addition, you can only enable the serial number scanning:

- Scan serial numbers: 
- Compare serial numbers: 

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Procedure

- [1] Press the **BAT** key until "0" or the current target value is displayed in the deposit input field.
- [2] Using the numerical keypad, enter the target value.
- [3] Press the Enter key.
- [4] Insert the banknotes into the singler.
- [5a] If automatic singling is set, the machine starts the process.
- [5b] If manual singling is set, press the Enter key.
 ⇒ The machine counts the banknotes.
 The machine stops when the target value is reached.

The quantity and total of banknotes in the delivery stacker is displayed on the screen (see arrow).

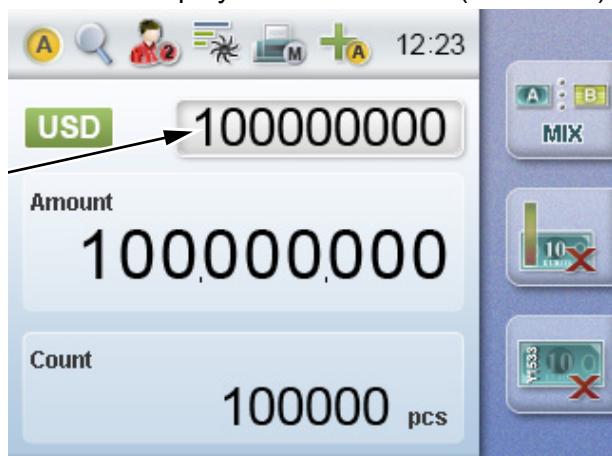


Figure 24: Result of the Banknote Processing with Deposit

- [6] Press the **C** key to end the processing of incomplete banknote packages.

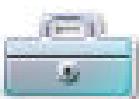
6.10.7 Processing Banknotes in Multi-Deposit

You can process banknotes in multi deposits. A wizard is configured on the machine for this purpose. Your service partner/local service organization can set whether the wizard is available. If the wizard is available, you can enable it and use multi-deposit banknote processing, or you can disable the wizard. In addition, your service partner/your local service organization can set the wizard so that it only requires a customer number and a deposit number and no target value.

If you enable the wizard, the machine adds up the accounting units automatically (→ *Section 6.8, p. 42*).

This is used to enable the wizard, assign a customer number, and to assign each deposit a deposit number and, if set, a target value.

This is used to disable the wizard. Customer number, deposit number, and a target value do not have to be assigned.



Barcode Reader



Your service partner/local service organization can set whether you have to enter a target value.



If you use a barcode reader, you do not need to confirm the input. The wizard automatically takes you to the next step.

During the banknote processing, input of customer and deposit number is blocked.

Security Query When Deleting Deposit Data

If you press and hold the **C** key, you can delete the accounting data for the deposit. A security query appears.



Figure 25: Security Query When Deleting Deposit Data



Cancel process

To cancel the deletion, press the **F1** key.



Delete data

To delete the accounting data, confirm the query with the **F3** key.

Requirement

- Multi-deposit is available.

[1] Enable automatic adding (→ *Section 6.19.2, p. 92*)

Recommended requirements

Enable automatic singling and automatic printing (→ *Section 6.19.2, p. 92*).



Important!

When using multi-deposit banknote processing, you cannot set the following functions:

- Detecting the currency automatically
- Processing different currencies simultaneously

Selecting Multi-Deposit

This step is not required directly after switching on the machine.

[1] Press the **PRNT** key.



[2] Select key **2** on the numerical keypad.

Entering the Customer Number



- [3] Enter the customer number.
- [4] Press the Enter key.

Entering the Deposit Number



- [5] Enter the deposit number.
- [6] Press the Enter key.

Entering the Target Value



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- [7] When the target value prompt appears, enter the target value.
- [8] Press the Enter key.

Processing Banknotes

- [9] Process the banknotes.
- [9-1] 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.
- [9-2] Check the reject reasons if necessary, see → *Section 6.15, p. 83.*
- [9-3] Re-process the rejects if necessary.
- [9-4] Perform a manual inspection if necessary, see → *Section 6.13, p. 80.*

Balancing the Deposit

- [10] Press the **PRNT** key.
 - ⇒ The multi-deposit menu appears.



Figure 26: Multi-Deposit Menu

[11] The following options are available for balancing the deposit.

[11a] Printing the Result

[11a-1] Press the **PRNT** key.

⇒ The machine prints the result. The multi-deposit menu closes.

[11a-2] To open the multi-deposit menu, press the **PRNT** key.

[11b] Confirming the Deposit



[11b-1] Press key **1** on the numerical keypad.

⇒ The machine saves and adds the total.

[11c] Canceling the Deposit



[11c-1] Press key **2** on the numerical keypad.

⇒ The machine deletes the data for this deposit.

[11d] Correcting the Customer Number



[11d-1] Press key **4** on the numerical keypad.



[11d-2] Enter the new customer number.

[11d-3] Press the Enter key.

⇒ The new customer number is assigned to the accounting unit. The multi-deposit menu closes.

[11d-4] To open the multi-deposit menu, press the **PRNT** key.

[11e] Correcting the Deposit Number



[11e-1] Press key **5** on the numerical keypad.

[11e-2] Enter the new deposit number.

[11e-3] Press the Enter key.

⇒ The new deposit number is assigned to the accounting unit. The multi-deposit menu closes.

[11e-4] To open the multi-deposit menu, press the **PRNT** key.

[11f] Correcting the Target Value



[11f-1] Press key **6** on the numerical keypad.

[11f-2] Enter the new target value.

[11f-3] Press the Enter key.

⇒ The new target value is assigned to the accounting unit. The multi-deposit menu closes.

[11f-4] To open the multi-deposit menu, press the **PRNT** key.

[11g] Cancel without Data Loss

If you want to correct all the values or disable the wizard, you can skip back to the beginning without losing any accounting data.



[11g-1] Press key **9** on the numerical keypad.



[11g-2] To disable the wizard, press key **1**.

[11g-3] To reenter the customer number, deposit number, and target value, press key **2**.

6

Processing the Next Deposit

After accounting is complete for the deposit (key **1**), the wizard remains active and automatically reverts to the input of the next deposit number.



[12a] Enter the new deposit number. Repeat the steps from → [6].

Processing the Next Customer

[12b] To enter a new customer number, press the **C** key. Repeat the steps from → [4].

6.10.8 Calculate Fit and Unfit Banknotes at the Same Time



This sorting mode is particularly suitable for smaller deposits. In one processing step you can then sort and calculate the fit banknotes (ATM, fit) and the unfit banknotes (unfit). The reject stacker is used as a second delivery stacker.

Assigning the Stackers in the User Interface Display

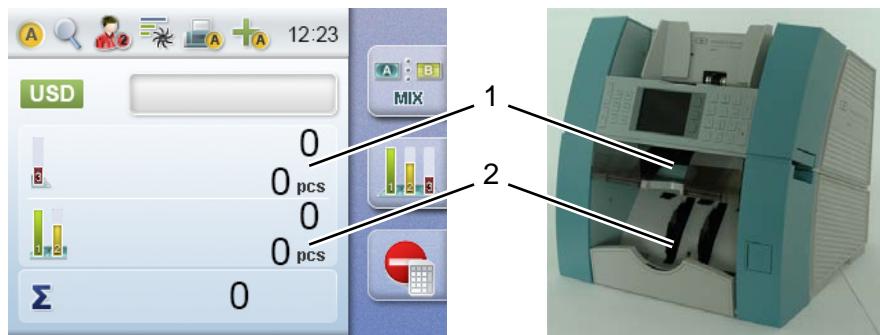


Figure 27: Assignment: Stackers – Display on the User Interface

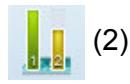
Display of the unfit banknotes located in the reject stacker.

You can view the reject reasons of the unfit banknotes (orange area) using the **RJCT** key.

→ *Section 6.15 “Display Reject Reasons”, p. 83*



(1)



(2)

Rejects

If there are rejects due to transport disturbance (yellow area), authenticity (red area) or other malfunctions (blue area), these banknotes are also sorted in the reject stacker. As soon as a reject is detected, the values are reset to 0 in the unfit banknotes (1) section.

The deposit is only fully calculated if there are no rejects.

You can find more detailed information on processing rejects in step → [3].

Recommended Requirements

Enable automatic singling and automatic printing. → *Section 6.19.2, p. 92*



Important!

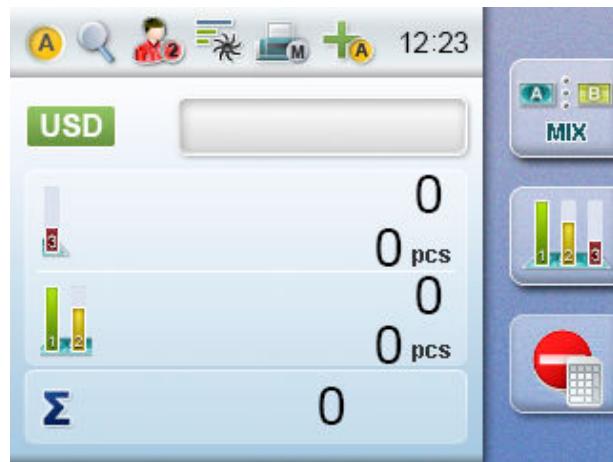
If you press **ADD** key, the result lists can be displayed after processing by pressing the **GT** key. → *Section 6.11, p. 74*

Please note that in this sorting mode you cannot see on the user interface whether the **ADD** key has been activated. First press the **ADD** key and then select the sorting mode using the **F2** key.

Procedure



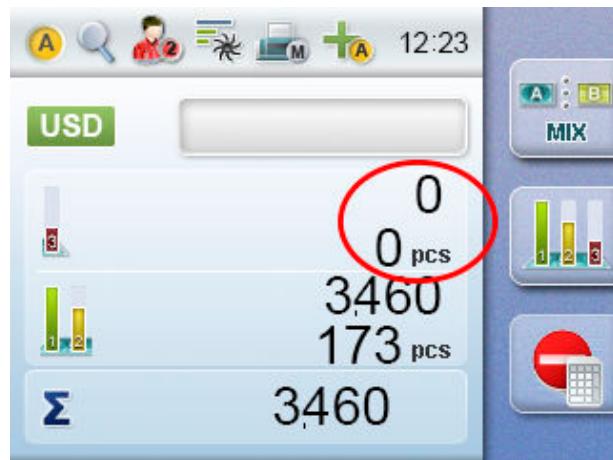
- [1] Use the **F2** key to select sorting mode "2+0 Fitness Mode".



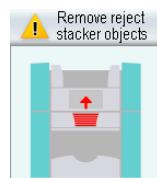
- [2]** Insert the banknotes into the singler.
 ⇒ The machine sorts the ATM and fit banknotes into the delivery stacker. Unfit banknotes and suspect banknotes are sorted into the reject stackers. If the delivery or reject stacker is full or the singler is empty, the machine stops.

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Checking Rejects



- [3]** If banknotes are located in the reject stackers but the values have been reset to 0 on the user interface, the error message "Empty reject stacker" appears. At this point the rejects must be checked:



- [3-1]** Rerun: Remove the banknotes from the reject stacker. Insert the banknotes into the singler.

- [3-2] If the values have been reset to 0 on the user interface again, remove the banknotes again from the reject stacker.
- [3-3] Place the rejects individually back into the singler.
 - ⇒ The machine counts the banknotes until a reject is detected. The values in the user interface are reset to 0. A reject is located in the reject stacker on the unfit banknotes.
- [3-4] First remove the reject and then discard this banknote separately.
- [3-5] Then remove the remaining banknotes from the reject stacker and discard these unfit banknotes separately.
- [3-6] Check the remaining banknotes from the reject stacker.
- [3-7] If the machine does not recognize the rejects, repeat steps [3-4] to [3-6].
 - ⇒ As a result, you separate the unfit banknotes from the rejects.
- [3-8] Place the removed unfit banknotes again into the singler.
 - ⇒ The deposit is complete. The number and value of the unfit banknotes as well as the ATM and fit banknotes are displayed.

Performing Manual Inspection



- [4] If necessary, perform a manual inspection. → *Section 6.13, p. 80*
- [5] Remove the banknotes from the reject stacker and the deliver stacker.
 - ⇒ The deposit is calculated.

6.10.9 Processing Banknotes of Different Currencies Simultaneously

You can process different currencies simultaneously on the machine. Which currencies you can process at the same time depends on the currencies available on the machine and assigned to you.

Sorting/Fitness Criteria and Additional Settings

If you process different currencies simultaneously, the following options are fixed and cannot be changed:

- Sorting mode: 
 - Fitness mode: 
 - Serial number, ticket reading, or check function: 
 - **BAT key:** No information for quantity and value of the banknotes
- Depending on the selected display, the number and total of the last processed currency or a list with all processed currencies appears. You can set the display in the machine's configuration menu.
→ *Section 6.20.3.3 “Setting the Results Display”, p. 103*

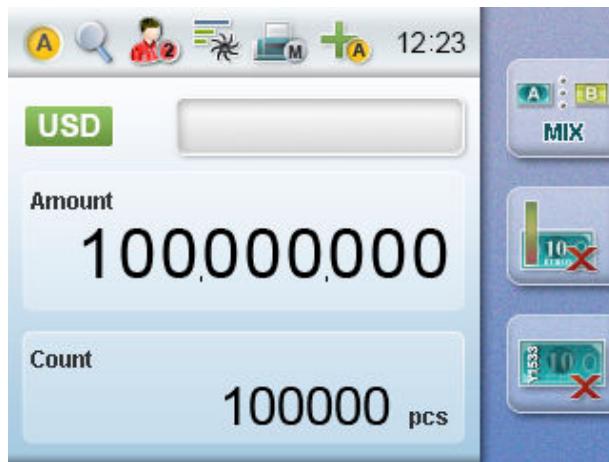
Results Display

6

Procedure



- [1] Select the **MIX** currency.
- [2] Insert the banknotes into the singler.
- [3a] If automatic singling is set, the machine starts to single the banknotes.
- [3b] If manual singling is set, press the Enter key.
⇒ The machine counts the banknotes. You will see the quantity and total of the currency last processed on the screen.



- [4] Press the **CUR** key to show the number and total of the other currencies.

Performing Manual Inspection

6

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



Important!

If you have selected the list of all processed currencies as the display, you can only perform the manual inspection if you change to the respective currency using the **CUR** key.

- [5] Use the **CUR** key to select the required currency.
 [6] Follow the instructions for the manual inspection.
→ Section 6.13 "Performing Manual Inspection", p. 80

6.10.10 Sort 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 counts the number of banknotes.



Important!

During this sorting, the machine does not check the banknotes for authenticity.

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. If you have selected the highest speed, the banknotes are counted at a speed of 1300 BN/min.

Procedure

- [1] Press the **CUR** key until **CNT** appears on the screen.
- [2] Place the banknotes in the singler.
- [3a] If automatic singling is set, the machine starts the process.
- [3b] If manual singling is set, press the Enter key.
 ⇒ The machine sorts the banknotes according to size. The number of banknotes in the delivery stacker is displayed on the screen.

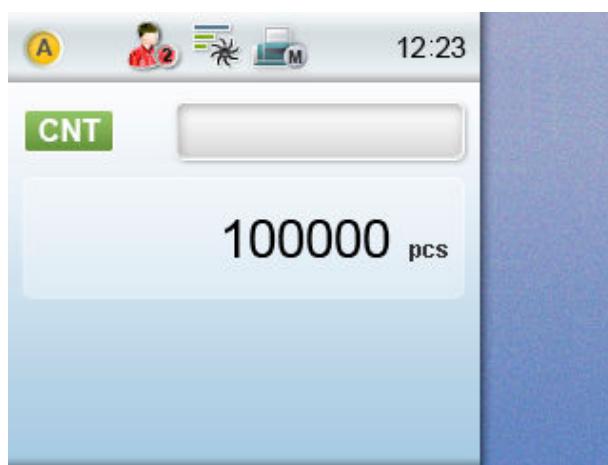


Figure 28: Sort by size

You can specify a package size which should be used to count the banknotes, see → *Section 6.10.5, p. 60.*

6.11 Using Result Lists

When the function for adding the accounting units is activated (**ADD** key: → *Section 6.8, p. 42*) the following result lists are available during banknote processing.

- **Grand Total**
Value, quantity, and total of banknotes for different processing steps and days
- **Daily Result**
Value, quantity, and total of banknotes for different processing steps per day
- **Fitness report**
Value, quantity, and total of banknotes for the various fitness criteria (ATM, fit and unfit) for the current half year

You can do the following with the results lists:

- Recreate
→ *Section 6.11.1, p. 75*
- Display
→ *Section 6.11.2, p. 76*
- Print
→ *Section 6.11.3, p. 76*
→ *Section 6.11.4, p. 77*
- The "Grand Total" result list can also be deleted to start a new accounting process.
→ *Section 6.11.3, p. 76*

Report:Fitness for the First and Second Half Year

In the daily result list, you can display the report: Fitness for the respective half year.

→ *Section 6.11.5 "Displaying the Fitness Report for the First or Second Half Year", p. 79*

Requirement

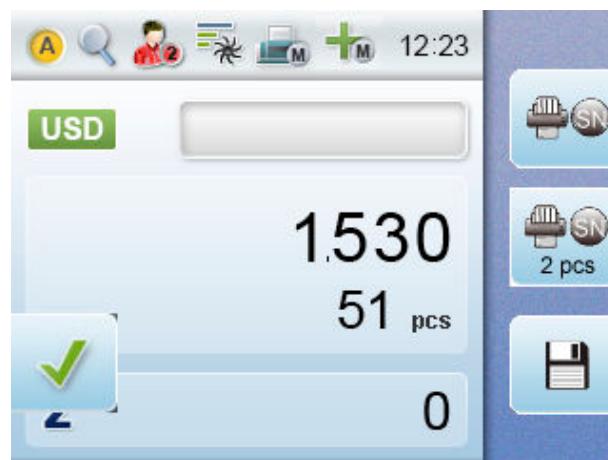
You can only generate the daily result list and the fitness report with the SD card inserted. The status of the SD card is displayed on the screen when the card is inserted, removed or switched on when the card is inserted.

→ *Chapter D "Status of the SD Card", p. 197*

6.11.1 Recreating the Result List

Procedure

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



[2] Press the **F3** key.

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

After saving, the screen for further processing appears. The total of the accounting units appears at the bottom of the screen.

- [3] Repeat step → [1] to → [2] for each processing step that you wish to save.



Important!

The "Daily 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" icon appear.

6.11.2 Displaying the Result List

Procedure

6

- [1] Press the **GT** key until the "Grand Total" or "Daily Result" list appears on the screen.
- [2] Press the **CUR** key to show the result of different currencies.
- [3] Use keys **4** and **6** on the numerical keypad to navigate through the daily results of different days in the "Daily Result" list.

6.11.3 Printing or Deleting the "Grand Total" Result List

Procedure

- [1] Press the **GT** key until the "Grand Total" result list appears on the screen.

Grand Total			
USD	200x	500=	100000
	100x	500=	50000
	50x	500=	25000
	20x	500=	10000
	10x	500=	5000
	5x	500=	1000
	2x	100=	200
	1x	55=	55
Σ	3155 pcs		192755

- [2] Press the **PRNT** key.

⇒ The print menu opens.



Figure 29: "Grand Total" Result List Print Menu

You can select the following functions:

- **PRNT** or **F1** key
This prints the "Grand Total" result list.
- **F2 key**
This deletes the "Grand Total" result list.
- **F3 key**
This closes the print menu.

- [3] Press the desired key.
 [4] To close the result lists, press the **GT** key.

6.11.4 Printing the "Daily Result" List

Procedure

- [1] Press the **GT** key until the "Daily Result" list appears on the screen.
- [2] Use keys **4** and **6** on the numerical keypad to display the various daily entries.

Daily Result			28. Apr.2013
USD	200x	500=	100000
	100x	500=	50000
	50x	500=	25000
	20x	500=	10000
	10x	500=	5000
	5x	500=	1000
	2x	100=	200
	1x	55=	55
Σ	3155 pcs		192755

[3] Press the **PRNT** key.

⇒ The print menu opens.

Daily Result			28. Apr.2013
USD	200x	500=	100000
	100x	500=	50000
	50x	500=	25000
	20x	500=	10000
	10x	500=	5000
	5x	500=	1000
	2x	100=	200
	1x	55=	55
Σ	3155 pcs		192755

Figure 30: "Daily Result" List Print Menu

You can select the following functions:

- **"PRNT" key**

This prints the current or selected daily result list.

- **F2 key**

This prints all the saved daily results.

- **F3 key**

This closes the print menu.

[4] Press the desired key.

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

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

In the daily result list, you can display the report: Fitness for the respective half year.

- 1st half year – 1 January to 30 June
- 2nd half year – 1 July to 31 December

Requirement

The function for totaling the accounting units (**ADD** key) is activated.

→ *Section 6.8, p. 42*

Procedure

- [1] Press the **GT** key until the **Daily Result** list appears.
- [2] Press the **F2** key.
⇒ The report for the different fitness criteria (ATM, fit and unfit) appears one after the other for the current half year.
- [3] To close the display, press the **GT** key.

6.12 Displaying as a List

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

Procedure

- [1] Press the **INFO** key.
⇒ The result of banknote processing appears as a detailed list.



Figure 31: Banknote Processing Result as List

- [2] Press the **CUR** key to show a detailed list of the different currencies one after another.

- [3] Press the **INFO** key again to return to the main page of banknote processing.

6.13 Performing Manual Inspection

You can add rejected banknotes which were manually inspected and released to the accounting unit in list mode when the "Conciliation Off line" function is enabled. You can also add the value of unit coins to the accounting unit.



Important!

Only when "Conciliation Off line" is selected as the conciliation setting is the conciliation symbol shown on the bottom right of the screen, see → *Section 6.20.3 "Multi-Deposit Setting"*, p. 102..

Requirement

6

The "Conciliation Off line" function is enabled, see → *Section 6.20.3*, p. 102.

Procedure

- [1] Press the **INFO** key.
 ⇒ The result of banknote processing is displayed as a detailed list.
- [2] Press the **F3** key.
 ⇒ The conciliation menu opens.

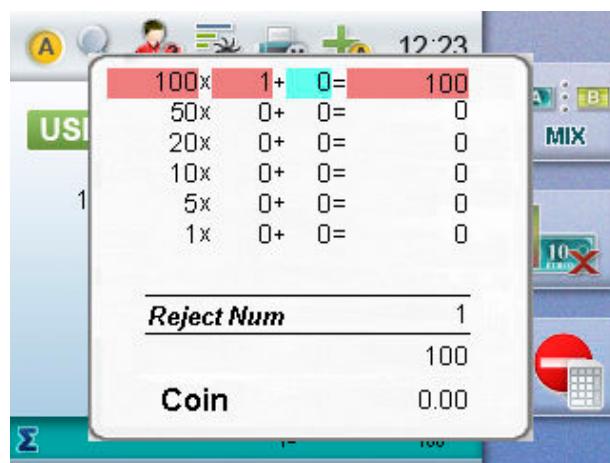


Figure 32: Conciliation Menu



Important!

With the reject reason "Duplicate" you must count the banknotes 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] Use keys **2** and **8** on the numerical keypad to select the denomination for the number of banknotes that you would like to add.
- [4] Press the Enter key.
- [5] Enter the number of rejects for the relevant denomination.
- [6] Press the Enter key.
⇒ The value of the banknotes is added.

Entering Coins

- [7] Use keys **2** and **8** on the numerical keypad to select the **Coin**.
- [7-1] Press the Enter key.
- [7-2] Enter the value before the decimal point.
- [7-3] Press the Enter key.
- [7-4] Enter the value after the decimal point.
- [7-5] Press the Enter key.
⇒ The value of the coins is added.



Important!

The value of entered coins and the total value appears only in the corresponding report. Only the values of the processed banknotes are displayed in the user interface.

- [8] To close the conciliation menu, press key **C**.
- [9] Press the **INFO** key to return to the main page of bank-note processing.

6

6.14 Print Result

You can print the result of banknote processing.

The following information is displayed:

- Currency
- Number of denominations
- Subtotal
- 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)

Reading Serial Numbers	You can also select printing when you have enabled serial number reading. Information on setting the options for serial number printing can be found in the → <i>Section 6.20.2 “Setting the Options for Serial Number Printing”, p. 101.</i>
Printer	To print the result, a printer must of course be connected. Information on connecting a printer can be found in the → <i>Section 5.3 “Installation and Connection”, p. 28..</i>
Result List	When working with result lists, you can find information on printing these result lists in the following sections: <ul style="list-style-type: none">● → <i>Section 6.11.3 “Printing or Deleting the “Grand Total” Result List”, p. 76</i>● → <i>Section 6.11.4 “Printing the “Daily Result” List”, p. 77</i>

6.14.1 Automatic Printing

When the "Automatic Printing" function is enabled (see → *Section 6.19.2 “Selecting Automatic Singling/Printing/Adding”, p. 92*), the result of banknote processing is printed automatically if one of the following two conditions applies:

- The banknotes are removed from the delivery stacker after banknote processing.
- The "ADD" function is not enabled and all banknotes in the singler are sorted into the relevant stacker.

6.14.2 Manual Printing

When the "Manual Printing" function is selected in the Settings menu, you must print the data of the banknote processing manually.

Proceed as follows:

Procedure

[1] Press the **PRNT** key.

⇒ The Print menu is opened.

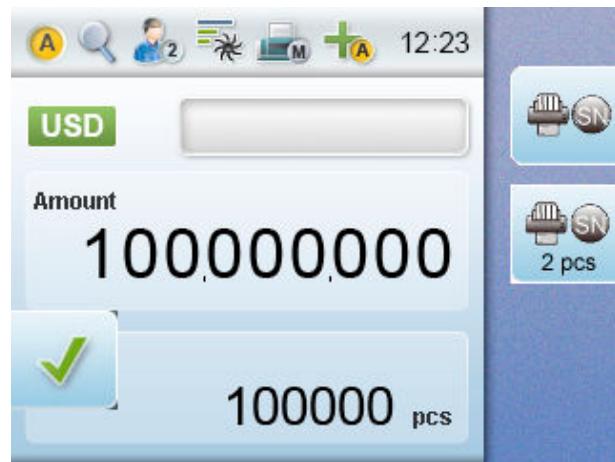


Figure 33: Print Menu

You can select the following functions:

- Press the **PRNT** key.
The current result is printed.
- Press the **F1** key.
If you have enabled the serial number reading option, the result is printed with serial numbers, see → *Section 6.10.3, p. 57.*
- Press the **F2** key.
If you have enabled the serial number reading option, the result is printed twice with serial numbers, → *Section 6.10.3, p. 57.*

[2] Press the desired key.

⇒ The printer prints the result or the result list is deleted.



Important!

If you press the Enter key in the Print menu, the printer prints out the same result as with the function key **PRNT**.

6.15 Display Reject Reasons

After banknote processing you can have the reject reasons displayed.

- **Double**

Double feed of BN

- **Skew**

Skew; the number of skewed banknotes exceeds the maximum limit allowed.

- **Close Feed**
The distance to the previous banknote is too small.
- **Note Gate**
Banknote is asynchronous to the gate switching.
- **Soiling**
The banknote is too soiled or the soiling modulation is too large.
- **Dog Ear**
The corners of the banknote are folded over too far.
- **Stains**
The banknote has too many stains.
- **Hole**
The size of the hole in the banknote is too large.
- **Tape**
The banknote contains too much adhesive tape.
- **Tear**
The tears in the banknote are too large.
- **IR Error**
Infrared; feature in the BN not present or too weak
- **UV Error**
Ultraviolet; feature in the BN not present or too weak
- **MG Error**
Magnet; feature in the BN not present or too weak
- **IMG Error**
Error during image recognition
- **Denomination**
Unidentified banknote
- **SN Error**
Error reading serial numbers
- **Other Errors**
Other reasons for rejection

The reasons for rejection are displayed in different colors.

- Yellow – transport disturbance
- Orange – criteria for unfit banknotes
- Red – criteria for suspect banknotes
- Blue – other reasons for rejection

Procedure

- [1] Press the **RJCT** key.

⇒ The reasons for rejection are displayed on the screen.

Reject Reasons	
Double	Skew
Close Feed	Note Gate
Soiling	Dog Ear
Stain	Hole
Tape	Tear
IR Error	UV Error
MG Error	IMG Error
Denomination	SN Error
Other Errors	Σ

[2] To close the window, press the **RJCT** key.

6.16 Locking Keys

6

You can lock all keys except the operator keypad. This prevents unintentional changes to the machine settings during processing, which can otherwise lead to accounting errors. If you lock the keys, only the input and cancel keys will work for the operators.

If you lock the key, an icon briefly appears on the screen.

Locked – The keys are locked.



Locking Keys

[1] Press the **0** key on the numerical keypad until the Lock icon appears.

⇒ The keys are locked.

[2] Press the **0** key on the numerical keypad until the Unlock icon appears.

⇒ The keys are unlocked.

6.17 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.

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



CAUTION

There is a risk of crushing when closing the machine.

You may trap your fingers.

When closing, be careful not to crush your fingers.

- [3] Fold the upper module back using the handle.

**6**

- [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



CAUTION

There is a risk of crushing when closing the machine.
You may trap your fingers.
When closing, be careful not to crush your fingers.



- [8] 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.

6.18 System Malfunctions

Should a fault occur during banknote processing, an error 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.

Error Messages

The individual error messages are listed below.


Important!

If the fault persists, contact your service partner or local service organization.

Machine is open



- Close the upper transport section.
- After resolving the problem, press key **C**.

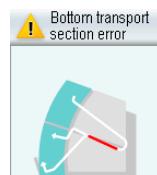


- Close the lower transport section.
- After resolving the problem, press key **C**.

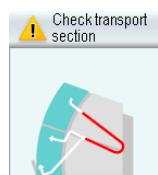
Fault in the transport section



- Check the upper transport section and remove any jammed or torn banknotes if required.
- After resolving the problem, press key **C**.



- Check the lower transport section and remove any jammed or torn banknotes if required.
- After resolving the problem, press key **C**.

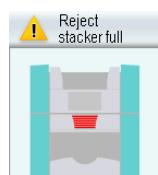


- Check both transport sections and remove any jammed or torn banknotes if required.
- After resolving the problem, press key **C**.

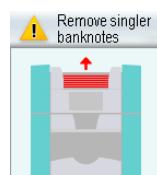


- Clear the banknote jam in both transport sections.
- After resolving the problem, press key **C**.

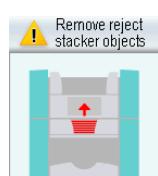
Banknote removal



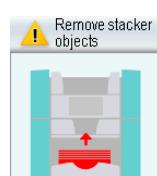
- Remove the banknotes from the reject stacker.



- Remove the banknotes from the feeding compartment.



- Remove the banknotes from the reject stacker.



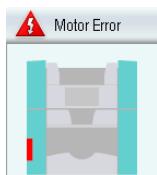
- Remove the banknotes from the delivery stacker.



- Remove the banknotes from the stacker compartment.

Your service partner/local service organization can set whether and for how long this message is visible.

Machine malfunctions



- Check both transport sections and remove any jammed or torn banknotes if required.



- Check both transport sections and remove any jammed or torn banknotes if required.
- After resolving the problem, press key **C**.

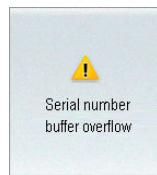
6

Processing messages



The number of banknotes does not match the predefined value.

- Check the banknotes in the feeding compartment. Add new banknotes if necessary.



The buffer memory is full (500 BN).

- Print out the serial numbers.
- To delete the memory, press key **C** twice.
- Remove the banknotes from the stacker. Banknote processing restarts.

Suspicious banknotes



- It is recommended to place the banknotes in the singler again to repeat the recognition process.
- If the machine does not recognize the banknotes, remove the banknotes for manual recognition.

6.19 Change system settings

You can modify different system settings. In the system menu, you navigate with the numerical keypad.

Procedure

[1] Press the key **SET**.

⇒ The system menu opens.

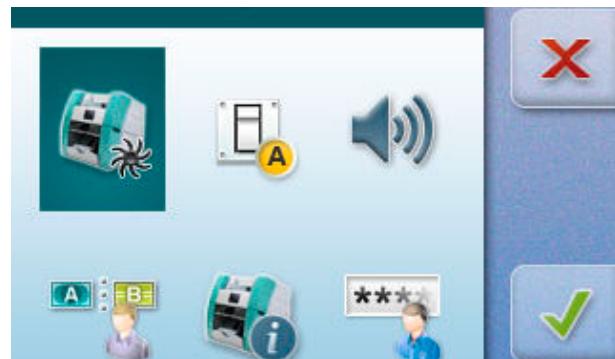


Figure 34: Menu Setting

[2] Select the desired option with the numerical keypad.

[3] Press **F3**.

You have the following options:



Speed symbol

This sets the speed level of banknote processing, see → *Section 6.19.1, p. 91*.



Auto symbol

This sets whether the machine starts singling/printing/adding automatically or manually, see → *Section 6.19.2, p. 92*.



Sound symbol

This enables or disables the alarm sounds and key tones, see → *Section 6.19.3, p. 95*.



Custom Mode symbol

This sets the sorting criteria for the CUSTOM sorting mode, see → *Section 6.19.4, p. 97*.



Information of System symbol

This enables you to view the overall information of the machine, installed software, LAN interface and installed currencies in the machine, see → *Section 6.19.5, p. 98*.



Configuration symbol

This sets the configuration of the machine. You can enable or disable the detection function, set the output mode and format of the serial number, make the multi-deposit setting, I/O setting, fitness setting and device setting, see → *Section 6.20, p. 99*.

6.19.1 Selecting the Speed Level

You can choose from three speed levels.



Low (600 BN/min)



Medium (900 BN/min)



High (1050 BN/min or 1300 BN/min)

At the "High" speed level the machine processes the banknotes at a rate of 1050 BN/min. If the recognition function is disabled or the machine is in **CNT mode** (objects sorted and counted according to size), the machine processes the banknotes at a rate of 1300BN/min at the "High" speed level.

Procedure



[1] Select the **Speed** icon.

[2] Press **F3**.

[3] Select the desired speed.

[4] Press **F3**.

⇒ The speed level is set.

The currently selected speed is shown at the top of the screen.

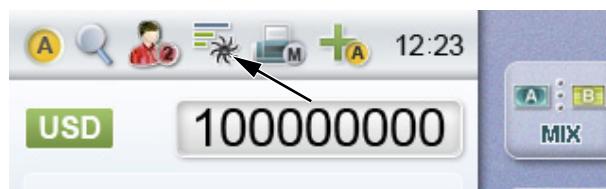


Figure 35: Selecting the Speed Level

6.19.2 Selecting Automatic Singling/Printing/Adding

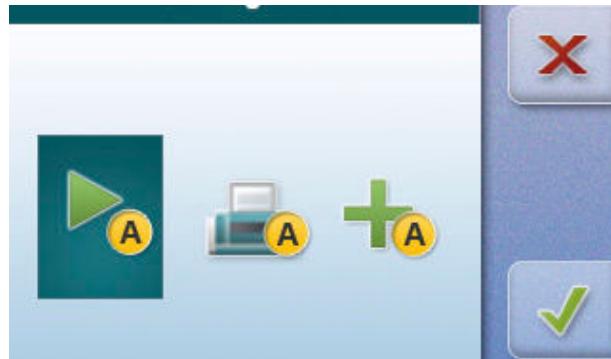
You can configure the machine so that it singles, prints, and adds automatically.

Procedure



[1] Select the **Auto** icon.

[2] Press **F3**.



[3] Select the desired option.

Enabling and Disabling Automatic Singling

You can choose whether the machine singles the banknotes automatically. Singling will start automatically as soon as you place the banknotes in the empty singler.



Automatic singling

Singling starts automatically as soon as you place the banknotes in the empty singler.



Manual singling

Singling starts when you press the Enter key.



[1] Select the **Singling** icon.

[2a] Press the **F1** key to enable manual singling.

[2b] Press the **F3** key to enable automatic singling.

[3] Press the Enter key.

⇒ The currently selected setting can be seen in the top left of the screen.

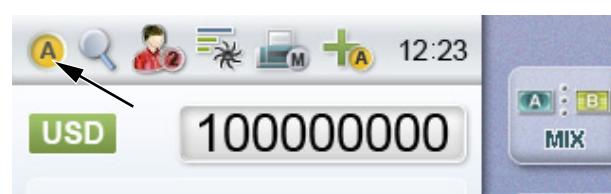


Figure 36: Automatic/Manual Singling

Enabling and Disabling Automatic Printing

You can choose whether the machine prints the banknote processing result automatically. The print process will start automatically as soon as you remove the banknotes from the delivery stacker.



Automatic printing

The print process starts automatically as soon as you remove the banknotes from the delivery stacker.



Manual printing

The **PRNT** key must be pressed to call up the print menu and print the result.



- [1] Select the Print icon.
 - [2a] Press the **F1** key to enable manual printing.
 - [2b] Press the **F3** key to enable automatic printing.
 - [3] Press the Enter key.
- ⇒ The currently selected setting can be seen at the top of the screen.

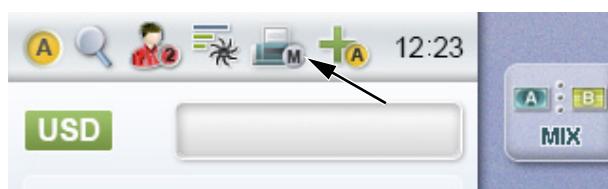


Figure 37: Automatic/Manual Printing

Enabling and Disabling Automatic Adding

You can choose whether the machine adds up the total of different accounting units when the "ADD" function is enabled. The machine will add up the banknotes automatically as soon as you remove the banknotes from the delivery stacker.



Automatic adding

As soon as you remove the banknotes from the delivery stacker the machine automatically adds up the banknotes.



Manual adding

The **PRNT** key must be pressed to call up the print menu and the **F3** key to save/add up the current accounting unit. The banknotes of the current accounting unit must remain in the delivery stacker until you have saved/added up the current accounting unit. If you remove the banknotes too early, you cannot save and add up the banknotes.



- [1] Select the **Add** icon.
 - [2a] Press the **F1** key to enable manual adding.
 - [2b] Press the **F3** key to enable automatic adding.
 - [3] Press the Enter key.
- ⇒ The currently selected setting can be seen at the top of the screen.

6

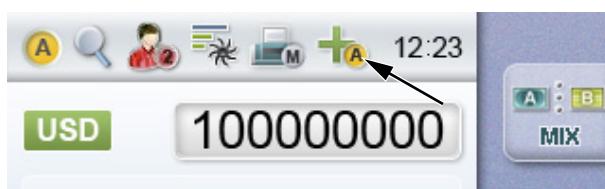


Figure 38: Automatic/Manual Adding

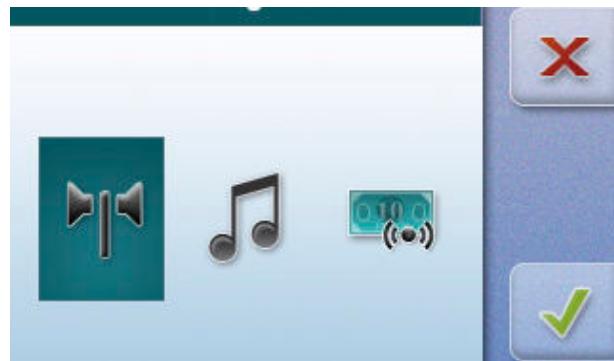
6.19.3 Enabling and Disabling Sounds

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

Procedure



- [1] Select the **Sound** icon.
- [2] Press **F3**.



- [3] Select the desired option.

Enabling and Disabling the Alarm



- [1] Select the **Alarm** icon.
[2] Press the **F1** key to disable the alarm.
[3] Press the **F3** key to enable the alarm.
[4] Press the Enter key.

Enabling and Disabling the Key Tones



- [1] Select the **Key tone** icon.
[2] Press the **F1** key to disable the key tones.
[3] Press the **F3** key to enable the key tones.
[4] Press the Enter key.

Enabling and Disabling the Alarm for Suspicious Banknotes



- [1] Select the **Alarm for suspicious banknotes** icon.
[2] Press the **F1** key to disable the alarm for suspicious banknotes.
[3] Press the **F3** key to enable the alarm for suspicious banknotes.
[4] Press the Enter key.

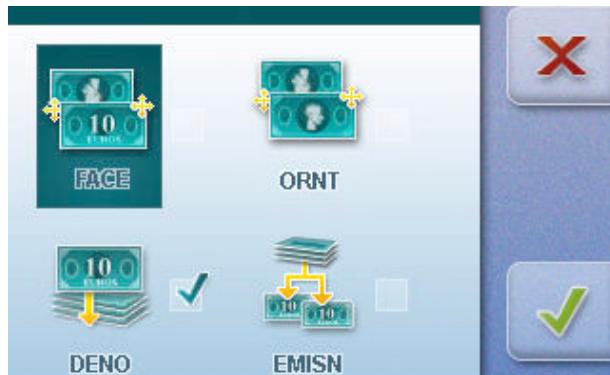
6.19.4 Setting the Customer Mode

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

Procedure



- [1] Select the **Customer mode** icon.
- [2] Press **F3**.



- [3] Select the sorting icons that you want to enable or disable in the customer sorting mode.

- **FACE**

This is used to sort the banknotes according to face or reverse.

- **ORNT**

This sorts the banknotes according to orientation.

- **DENO**

This sorts the banknotes according to denomination.

- **EMISN**

This sorts the banknotes according to issue.

- [4a] Press the **F1** key to disable the selected sorting mode.
 - [4b] Press the **F3** key to enable the selected sorting mode.
 - [5] Press the Enter key.
- ⇒ If two or three sorting modes are enabled (e.g. **FACE**, **DENO**, and **EMISN**), the machine sorts the banknotes according to face and reverse, denomination, and issue.

**Important!**

Only one of the FACE and ORNT modes can be active at any given time.

You can now process the banknotes with the selected settings in "CUSTOM" sorting mode (see→ *Section 6.10.1 "Select Sorting Mode", p. 46*).

6.19.5 System Information

This is where you will find the following system information:

- General information on the machine
- Installed software
- LAN interface
- Installed currencies

You can print the system information on a connected printer or via the "Service" report.

→ *Section 7.4.4 "Creating Reports", p. 153*

6

Procedure



- [1] Select the **System information** icon.
- [2] Press **F3**.

Print System Information



- [3] To print the system information, press **PRNT**.
- [4] Select the desired option using the numerical keypad.
- [5] Press **F3**.
- [6] To print the information for the option selected, press **PRNT**.
- [7] Press the **C** or **F1** key to go back.

Overall Information

This is where you will find the following information:

- Model type
- Serial number
- 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 Currency Version

This is where you will find information on the currencies currently installed.

6.20 Configuration

You can change the configuration of the machine.

Procedure



[1] Select the **Configuration** icon.

[2] Press **F3**.



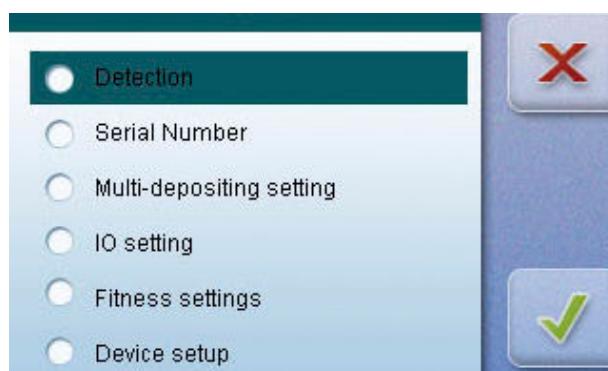
Important!

If the password is enabled in the "Lock Setting Menu", you need to enter a password. To disable the password entry requirement, see → *Section 6.20.6.3 "Setting Access Control", p. 110*.

The default password is '000000'.

To change or reset the password, see → *Section 7.4.3 "Changing the Password or IP Address", p. 152*.

⇒ The configuration menu opens.



[3] Select the desired option using the numerical keypad.

- **Detection**

This enables or disables the check of the security features, see → *Section 6.20.1, p. 100*.

- **Serial Number**

This sets the print options and the output format so that the serial number is printed, see → *Section 6.20.2, p. 101*.

- **Multi-deposit Setting**

This activates the barcode reader and sets the conciliation methods and the result display for different currencies, see → *Section 6.20.3, p. 102*.

- **I/O Setting**

This is used to set the printer and barcode reader options, see → *Section 6.20.4, p. 104*.

- **Fitness Setting**

This is used to set the "ATM" and "FIT" fitness sorting criteria, see → *Section 6.20.5, p. 106*.

- **Device Setup**

This is used to determine the settings for the machine, see → *Section 6.20.6, p. 108*.

[4] Press **F3**.

6.20.1 Enable or Disable the Check on Security Features

You can choose whether, during banknote processing, the machine also checks the banknotes for authenticity.



Detection on

Enable the check on security features;



Detection off

Disable the check on security features

Procedure

[1] Select **Detection**.

[2] Press **F3**.

[3] Select the desired option using the numerical keypad.

- **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.



Important!

If you select **Detection Off**, the authenticity detection for the banknotes is disabled.

[4] Press F3.

⇒ The currently selected setting can be seen in the top left of the screen.

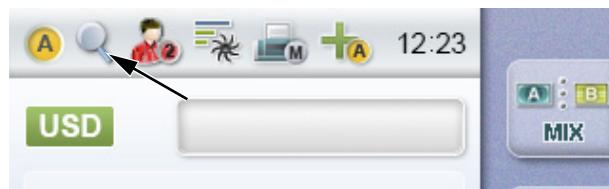


Figure 39: Enable or Disable the Check on Security Features

6

6.20.2 Setting the Options for Serial Number Printing

If you select the processing mode for reading serial numbers, you can print the recorded serial numbers. To do so, you can set the following print options.

- **Output Mode**

This sets the print time and whether the machine saves the serial numbers.

- **Output Format**

This sets the output format.

6.20.2.1 Setting Print Options

To set the print options, proceed as follows.

[1] Select **Output Mode**.

[2] Press the Enter key.

[3] Select the desired option.

- **Normal Print out**

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 Print out**

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 Print out**

This prints the serial numbers of the accounted banknotes in real time. The machine does not save the result. There is no maximum number of banknotes.

- **Not Print out**

This does not print serial numbers.

**Important!**

When printing in real time, the result will be lost if the printer is not working.

6

- [4] Press the Enter key.

6.20.2.2 Setting the Output Format

The machine records the serial number as an image and as a number sequence (OCR). In the output format you can set how you would like to print the serial number.

To set the output format, proceed as follows.

- [1] Select **Output Format**.

- [2] Press the Enter key.

- [3] Select the desired option.

- **Image**

This prints the image of the detected serial number.

- **String**

This prints the number sequence (OCR) of the detected serial number.

- **Image + String**

This prints the image and the number sequence of the recorded serial number.

- [4] Press the Enter key.

6.20.3 Multi-Deposit Setting

This activates the barcode reader and sets the conciliation methods and the result display for different currencies.

6.20.3.1 Enabling and Disabling the Barcode Reader

If a barcode reader is connected, you need to enable it on the machine.

- [1] Select **Barcode Reader**.
- [2] Press the Enter key.
- [3] Select the desired option.
 - **Barcode Reader On**
This enables the barcode reader.
 - **Barcode Reader Off**
This disables the barcode reader.
- [4] Press the Enter key.

6.20.3.2 Setting the Conciliation Method

To set the conciliation method, proceed as follows.

6

- [1] Select **Conciliation**.
- [2] Press the Enter key.
- [3] Select the desired option.
 - **Conciliation Off line**
Here you can add rejected banknotes that have been manually inspected and released to the accounting unit in list mode, see → *Section 6.13, p. 80*
 - **Conciliation On line**
Here you can add rejected banknotes that have been manually inspected and released to the accounting unit with the customer-specific cash management system.
- [4] Press the Enter key.

6.20.3.3 Setting the Results Display

If you process different currencies at the same time, you can set how the result is displayed.

- [1] Select **Display Mode**.
- [2] Press the Enter key.
- [3] Select the desired option.
 - **Standard**
The result on the screen is the last currency processed. Use the **CUR** key to switch to the other processed currencies one after the other. You can also use this option to perform a manual inspection.

- **List**

The result on the screen is a list of all the processed currencies. With this option, you can only perform a manual inspection if you switch to the respective currency using the **CUR** key.

6.20.4 I/O Settings

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

6.20.4.1 Setting the Output Devices

[1] Select **Output Setting**.

[2] Press the Enter key.

You can select the following connected output devices:

- **Dual Printer**

Select this option if two printers are connected to the machine. Two operators can each use their own printer.

- **Single Printer**

Select this option if only one printer is connected to the machine. Two operators use the same printer.

- **Printer + Barcode Reader**

Select this option if a printer and a barcode reader are connected to the machine. Two operators use the same printer and the same barcode reader.

[3] Select the desired option depending on the connected devices.

[4] Press the Enter key.



Important!

If only one printer is connected, use the COM1 interface.

If a printer and a barcode reader are connected, use the COM1 interface for the printer and the COM2 interface for the barcode reader.

6.20.4.2 Setting the Size of the Printer Paper

[1] Select **Print Paper**.

[2] Press the Enter key.

You can choose from the following sizes.

- **W(57.5)**

Paper size 2 " (inches)

- **W(79.5)**

Paper size 3 " (inches)

[3] Select the desired size.

[4] Press the Enter key.

6.20.4.3 Setting the Output Format

[1] Select **Output Format**.

[2] Press the Enter key.

You can choose from the following options:

- **ESC/POS**

This format is suitable for a normal barcode reader connected to the machine.

- **B**

Casinos use this format.

- **C**

Casinos use this format.

- **D**

Casinos use this format.

[3] Select the desired output format.

[4] Press the Enter key.

6.20.4.4 Barcode Reader Setting

This setting is provided for future versions.

6.20.4.5 Setting the Printer Baud Rate

[1] Select **Printer Baud Rate**.

[2] Press the Enter key.

You can select from the following baud rates:

- **9600**

- **57600**

● **115200** – If you want to print the serial number as an image, you must select this baud rate.

[3] Select the desired data transfer speed.

[4] Press the Enter key.

6.20.4.6 Setting the Printer Type

[1] Select **Printer Type**.

[2] Press the Enter key.

You can choose from the following printer types:

- **Thermal**
- **Dot Matrix**

[3] Select the desired printer type.

[4] Press the Enter key.

6.20.5 Setting the FIT Mode

In this operation mode you can set the criteria for fitness sorting "ATM" and "FIT". A more detailed description of these criteria and the meaning of adjustable values can be found in the Appendix, see → *Chapter C "Description of the Criteria for Fitness Sorting"*, p. 193.



Important!

Do not change the settings for certified currencies.

The certification of the machine is then no longer valid.

Procedure

To set the operation mode, proceed as follows.



[1] Select the currency.

No.	Value	Ver
0	1	2000
1	2	2000
2	5	2006
3	5	2003
4	5	1995
5	10	2004
6	10	1999
7	10	1995

- [2] Select the required banknote denomination and issue.
 [3] Select the required quality for fitness sorting (ATM or FIT).

FIT Mode		
ATM	FIT	
1.Dog Ears	5	5
2.Holes	5	5
3.Tears	5	5
4.Stains	5	5
5.Soiling	5	5
6.Tape	5	5
<i>Initialization</i>		
OK		

- [4] Press the Enter key.
 ⇒ The individual sorting criteria can be selected.
 [5] Use the keys **2** or **8** to select the required sorting criterion.
 [6] Edit the value with the keys **4** or **6**.

FIT Mode		
ATM	FIT	
1.Dog Ears	5	5
2.Holes	5	5
3.Tears	5	5
4.Stains	5	5
5.Soiling	5	5
6.Tape	5	5
<i>Initialization</i>		
OK		

- [7] After selection click **OK** to confirm the settings.
 Restoring Default Settings
 [8] Select **Initialization** and confirm to restore the default settings.
 [9] Repeat the steps for every sorting quality, banknote denomination and currency.

Saving Settings



- [10] Save the settings on the page "Selecting the Currency".
- [10-1] Press **C** until you see currency selection.
- [10-2] Select **Save** and confirm.
 ⇒ The settings are saved.

**Important!**

If you do not save the settings with **Save**, your changes are not saved, and the machine is reset to previously saved settings.

6.20.6 Device Setup

You can configure the following machine settings.

6.20.6.1 Setting the Time and Date

You can set the date and time. You can also select the setting with which the machine starts.

Procedure

- [1] Select **Time setup**.
- [2] Press the Enter key.
 ⇒ The current setting appears.
- [3] To edit the setting, short-press the Enter key.
 - **BAT** key – switches between the following numerical keypad functions.
 - Numerical input
 - Movement function (**2**–up; **8**–down; **4**–left; **6**–right) of the cursor
 - **GT** key – deletes the character before the cursor.
- [4] Enter the desired values.
- [5] Press the Enter key.
- [6] Press the **C** key to go back.

⇒ Date and time are set.

6.20.6.2 Setting the User ID

Entering the Values

Use the numerical keypad for input.

- **BAT** key – switches between the following numerical keypad functions.
 - Numerical input
 - Input of symbols and all uppercase letters
 - Input of symbols and all lowercase letters
 - Movement function (**2**–up; **8**–down; **4**–left; **6**–right) of the cursor
- **GT** key – deletes the character before the cursor.

The numerical keypad numbers have the following characters depending on whether uppercase or lowercase input is selected:

- **1** – !, @, #, \$, %, &, ?, _, -, ., /
- **2** – A, B, C or a, b, c
- **3** – D, E, F or d, e, f
- **4** – G, H, I or g, h, i
- **5** – J, K, L or j, k, l
- **6** – M, N, O or m, n, o
- **7** – P, Q, R, S or p, q, r, s
- **8** – T, U, V or t, u, v
- **9** – W, X, Y, Z or w, x, y, z
- **0** – <space>

6

You can enter letters as follows:

- Short-press the key – the first character of the respective number appears
- Long-press the key – the character is highlighted in color. Pressing again switches between the letters. Confirm the input by pressing the Enter key.

Procedure

- [1] Select **Set User ID**.
- [2] Press the Enter key.
 - User 1
 - User 2
- [3] Select the user ID to be edited.
- [4] Press the Enter key.

⇒ The current setting appears.

- [5] To edit the setting, short-press the Enter key.
 - [6] Enter the desired value using the numerical keypad.
 - [7] Press the Enter key.
 - [8] Press the **C** key to go back.
- ⇒ The user ID is set.

6.20.6.3 Setting Access Control

- [1] Select the **Lock Setting Menu**.
- [2] Press the Enter key.
 - **Password**
This enables the password. To access the Configuration men you must enter a password, see → *Section 6.20, p. 99*.
 - **Off**
This disables the password so you can access the Configuration menu without any password.
- [3] Select the required option.
- [4] Press the Enter key.

6.20.6.4 Setting Start Mode

You can specify whether the machine starts with the factory default settings or user settings.

- [1] Select **Factory Default**.
- [2] Press the Enter key.
 - **On**
The machine starts with the factory settings.
 - **Off**
The machine starts with the user settings.
- [3] Select the required start mode.
- [4] Press the Enter key.

6.20.6.5 Software Update via SD Card

Preparing the SD Card

You can create an SD card to update several machines.

Requirements

- Commercial SD card with the following recommended details:
 - HW format: SDHC, C10 and C4
 - SW format: FAT32, 4096(4K)
 - Capacity: 4 GB - 16 GB
- The SD update file *BPSC1_SD_Upgrade_Rel_x_x* as a packed file (.zip or .rar format)
 You get the files from the download link that is given in the Quick Start Guide.

Procedure

- [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 SD card.
 ⇒ You can update with this SD card all hardware variants.

Updating Software by SD Card

Requirement

SD card with the current software

- [1] Select **Software Update by SD Card**.
- [2] Press the Enter key.
- [3] Insert the SD card into the relevant interface on the rear of the machine.
- [4] Select the update mode.
 - **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 SD card.
 - **Smart Upgrade**
 The machine identifies and compares the software versions with those of the SD card and only updates the firmware and modules for which a higher version is available on the SD card.
- [5] Press the Enter key.
 ⇒ The machine starts the update. A green tick appears behind the updated firmware and the updated modules.

**Important!**

In **Force Upgrade** and **Smart Upgrade** modes the machine performs the update steps automatically. The message "Please Restart the Machine" appears in between, but the update continues. Only switch the machine off once a green tick has appeared behind all packages (firmware and modules).

- [6a] Once the update has been completed successfully, the system message "Please Restart the Machine" appears on the screen. Restart the machine.
- [6b] If the update fails, the system message "Upgrade fail" is displayed." Press Start to Upgrade again." appears on the screen. Press the Enter key to repeat the update.

6.20.6.6 Formatting SD Card

6

Requirement

SD Card

**Important!**

If much data which is not required anymore is contained on the SD card, you can delete this data by directly formatting the SD card in the machine.

- [1] Select **Software Update by SD Card**.
- [2] Press the Enter key.
- [3] Insert the SD card into the corresponding interface on the backside of the machine.
- [4] Select **SD Format**.
- [5] Press the Enter key.
- [6] Confirm the prompt.
 ⇒ The machine formats the SD card.

6.20.6.7 Setting the IP Address

Setting the IP address enables you to connect the machine to the local area network and configure connections to an FTP server and a VSI server (video surveillance). This allows you to send XML reports.

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.

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.

Entering the Values

Use the numerical keypad for input.

- **BAT** key – switches between the following numerical keypad functions.
 - Numerical input
 - Input of symbols and all uppercase letters
 - Input of symbols and all lowercase letters
 - Movement function (**2**–up; **8**–down; **4**–left; **6**–right) of the cursor
- **GT** key – deletes the character before the cursor.

6

The numerical keypad numbers have the following characters depending on whether uppercase or lowercase input is selected:

- **1** – !, @, #, \$, %, &, ?, _, -, ., /
- **2** – A, B, C or a, b, c
- **3** – D, E, F or d, e, f
- **4** – G, H, I or g, h, i
- **5** – J, K, L or j, k, l
- **6** – M, N, O or m, n, o
- **7** – P, Q, R, S or p, q, r, s
- **8** – T, U, V or t, u, v
- **9** – W, X, Y, Z or w, x, y, z
- **0** – <space>

You can enter letters as follows:

- Short-press the key – the first character of the respective number appears.
- Long-press the key – the character is highlighted in color. Pressing again switches between the letters. Confirm the input by pressing the Enter key.

The input of symbols and letters is only possible in certain fields.

Using an SD Card

If you operate the machine in a network, it is highly advisable to use an SD card. If the SD card is inserted in the relevant interface on the rear of the machine, the SD card can serve as temporary memory in the event of a connection error with the server. If there

is no SD card inserted and the connection with the server fails, the data will be lost.

**Important!**

The required values are available from your network administrator.

[1] Select **IP Setting**.

[2] Press the Enter key.

- **IP**

You can enter the IP address, the mask and the gateway manually. → [3a]

- **DHCP**

The system assigns the IP address automatically.
→ [3b]

- **FTP IP**

You can enable and disable the connection, and enter the following values manually: → [3c]

- IP address
- Port number
- User name
- User password

- **VSI IP**

You can enable and disable the connection, and enter the following values manually: → [3d]

- IP address
- Port number
- User name
- User password

- **SNTP**

You can enable and disable the connection, and enter the following values manually: → [3e]

- IP address
- Time zone (UTC)

[3] The subsequent procedure depends on the required transaction.

[3a] Entering the IP Address Manually

[3a-1] Select **IP**.

[3a-2] Press the Enter key.

[3a-3] Select the option to be changed.

- [3a-4] Press the Enter key.
 - [3a-5] Enter the desired value using the numerical keypad.
 - [3a-6] Press the Enter key.
⇒ The IP address is set.
 - [3a-7] Press the **C** key to go back.
- [3b] Automatically Assigning the IP Address**
- [3b-1] Select **DHCP**.
 - [3b-2] Press the Enter key.
⇒ The machine retrieves the IP address automatically.
 - [3b-3] Press the **C** key to go back.
- [3c] Manually Entering the FTP IP Address**
- [3c-1] Select **FTP IP**.
 - [3c-2] Press the Enter key.
 - [3c-3] Enable or disable the connection using the Enter key.
 - [3c-4] Select the next option to be changed.
 - [3c-5] Press the Enter key.
 - [3c-6] Enter the desired value using the numerical keypad.
 - [3c-7] Press the Enter key.
⇒ The FTP IP address is set.
 - [3c-8] Press the **C** key to go back.
- [3d] Manually Entering the VSI IP Address**
- [3d-1] Select **VSI IP**.
 - [3d-2] Press the Enter key.
 - [3d-3] Enable or disable the connection using the Enter key.
 - [3d-4] Select the next option to be changed.
 - [3d-5] Press the Enter key.
 - [3d-6] Enter the desired value using the numerical keypad.
 - [3d-7] Press the Enter key.
⇒ The VSI IP address is set.
 - [3d-8] Press the **C** key to go back.
- [3e] Manually Entering the SNTP IP Address**

- [3e-1] Select **SNTP**.
- [3e-2] Press the Enter key.
- [3e-3] Enable or disable the connection using the Enter key.
- [3e-4] Select the next option to be changed.
- [3e-5] Press the Enter key.
- [3e-6] Enter the desired value using the numerical keypad.
- [3e-7] Press the Enter key.
 ⇒ The SNTP IP address is set.
- [3e-8] Select **GMT**.
- [3e-9] Repeatedly press the Enter key until the desired time zone is set.
- [3e-10] Press the **C** key to go back.

Uploading FTP

If the machine sends data to the FTP server and the connection is functioning properly, this message appears on the user interface.

FTP Disconnect

If the machine sends data to the FTP server and the connection is not functioning properly, this message appears on the user interface. The machine saves the data on the SD card and tries to send the data again later on.

Uploading VSI

If the machine sends data to the VSI server and the connection is functioning properly, this message appears on the user interface.

VSI Disconnect

If the machine sends data to the VSI server and the connection is not functioning properly, this message appears on the user interface. The machine saves the data on the SD card and tries to send the data again later on.

6.20.6.8 Switching Languages via SD Card

You can change the language on the machine. Please note that the originally installed language is activated again after a software update. You can only change the language permanently with a new license key.

Requirement

SD card with the current software

Procedure

- [1] Insert the SD card on the rear of the machine.
- [2] Select **Language**.
- [3] Press the Enter key.
- [4] Use the keys **4** or **6** to select the required language.

- [5] Press the Enter key.
- [6] Confirm the request with the Enter key.
- [7] Wait until the system message "Please Restart the Machine" appears on the screen.
- [8] Restart the machine.

6.21 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

Risk of electric shock

Electric shock may cause death or serious injury.

1. Before starting any work, switch off the machine/device.
2. Unplug the power plug from the power socket.
3. Secure the machine/device against being switched back on.

Note also the following safety warnings.



DANGER

Risk of electric shock

Electric shock may result in death or serious injury.

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 risk of serious injury.

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

**CAUTION**

Risk 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**

Incorrect cleaning materials

can damage the machine/device.

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

**NOTICE**

Contaminated cleaning cloth

may damage 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.

Cleaning Aids

Use the following tools for cleaning:

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

To clean the machine, proceed as follows:

Procedure

- [1] Switch off the machine.

→ *Section 6.4 "Switching the Machine On and Off", p. 35*

**DANGER**

Risk of electric shock

Electric shock may result in death or serious injury.

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

- [2] Unplug the mains plug from the power socket.

- [3] Check the machine for damage.



Important!

If safety-relevant damage is visible (damaged or broken network cables or plugs, sharp-edged parts) contact your service partner or local service organization.

- [4] Thoroughly wring out the moistened cleaning cloth.

Cleaning Machine

- [5] Clean the housing with circular movements.
- [6] Remove the cleaning fluid with a clean, damp cloth.
- [7] Dry the housing with a clean, dry cloth.

Cleaning the Transport Section

- [8] Open both transport sections.
→ *Section 6.17 “Opening and Closing the Machine”, p. 85*
- [9] Remove the dust using a cleaning cloth.
- [10] If the soiling is heavy, vacuum the banknote transport paths, singler area, and measurement windows. Do not blow conductive particles into the machine.
- [11] Clean the singler area with a clean, damp cloth.
- [12] Dry the singler area with a clean, dry cloth.



Important!

Use isopropyl alcohol to remove heavy soiling.

- [13] Thoroughly wring out the moistened cleaning cloth.
- [14] Clean the transport sections, rollers, and measurement window.
- [15] Dry the transport section, rollers, and measurement window using a dry, lint-free cloth.



Important!

Ensure that all parts are dry and without residues.

- [16] Close the machine.
→ *Section 6.17 “Opening and Closing the Machine”, p. 85*

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.

6.22 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 next to the currency in addition to the message. This icon remains visible until maintenance has been carried out.

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

Your service partner/your local service organization can set the operating time or number of processed banknotes after which the next maintenance is required.

7 GD_PCSuite Software

The GD_PCSuite software allows you to carry out various operations for a BPS C1 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.

→ *Section 7.2 “BPS C1 Connecting and Installing Driver Software”, p. 122*

Make sure that the system requirements are met.

→ *Section 7.1 “System Requirements”, p. 122*

GD_PCSuite Programs

The following programs are available in GD_PCSuite:

- GD_PCSuite - End User Tool
 - 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 instruction (Quick Start Guide).



Important!

The End User Tool (GD_Viewer/GD_Reader) and the Distributor Tool should not run simultaneously on your PC. Close one program before starting the other.

Software Directories

The directory *Software* contains:

- *Driver*
Driver software
- *GD_PCSuite_Client_x_x_xx* (GD_PCSuite - End User Tool)
 - *GD_BCVIEWER.exe*
 - *GD_SNDBREADER.exe*
- *GD_PCSuite_Relx.x* (GD_PCSuite - Distributor Tool)
 - *PlatformGD_x_xxxxxxx.exe*

"x" stands for the different version numbers.

Overview of
End User Tool

Two program components (Viewer and Reader) can be used to evaluate 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.

→ *Section 7.3 “Using the PCSuite - End User Tool”, p. 133*

Overview of Distributor Tool

The Distributor Tool offers the following options:

- Update software
- Manage BPS C1 in the network.
- Edit password and IP address.
- BPS C1 Upgrade
- Output machine information
- Generate report title.
- Recording banknote data

→ *Section 7.4 "Using the PCSuite – Distributor Tool", p. 146*

7.1 System Requirements

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

- 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

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7.2 BPS C1 Connecting and Installing Driver Software

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

For more information for:

- Windows XP / Vista / 7 / 8
 - *"Manually Installing Driver Software for Windows XP / Vista / 7 / 8", p. 124*
- Windows 10
 - *"Manually Installing Driver Software for Windows 10", p. 130*

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

Requirement

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

**Important!**

Do not 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 C1 is connected to the PC for the first time.

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.



- [4] Click **Next**.

⇒ The software is installed.



Figure 40: Installing Driver Software



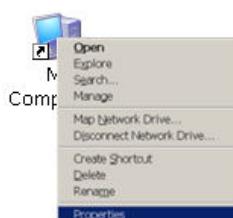
[5] Click **Finish.**

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

Manually Installing Driver Software for Windows XP / Vista / 7 / 8

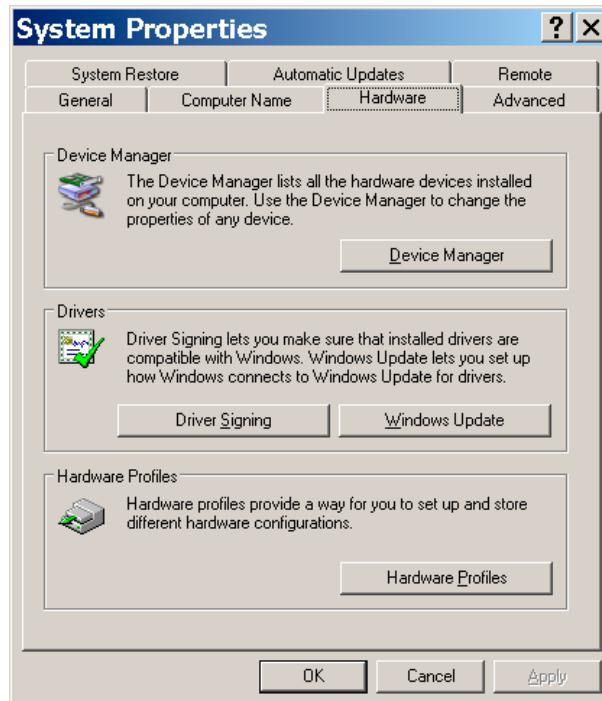


[1] Right-click on the **My Computer icon on your desktop.**

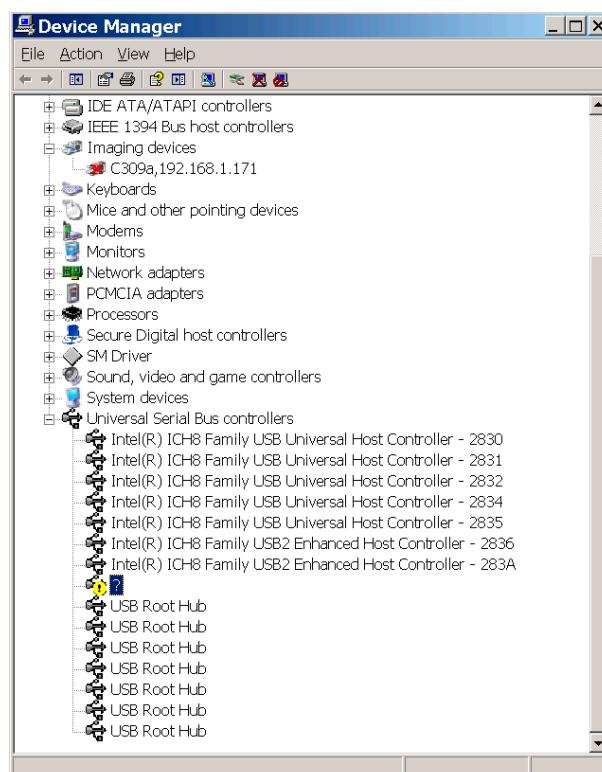


[2] Select **Properties from the drop-down menu.**

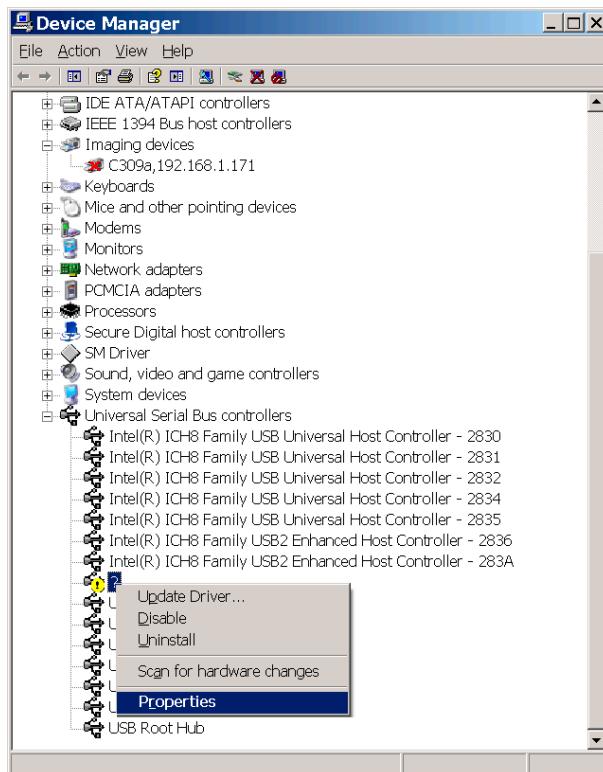
[3] Select the **Hardware tab.**



[4] Click Device Manager.



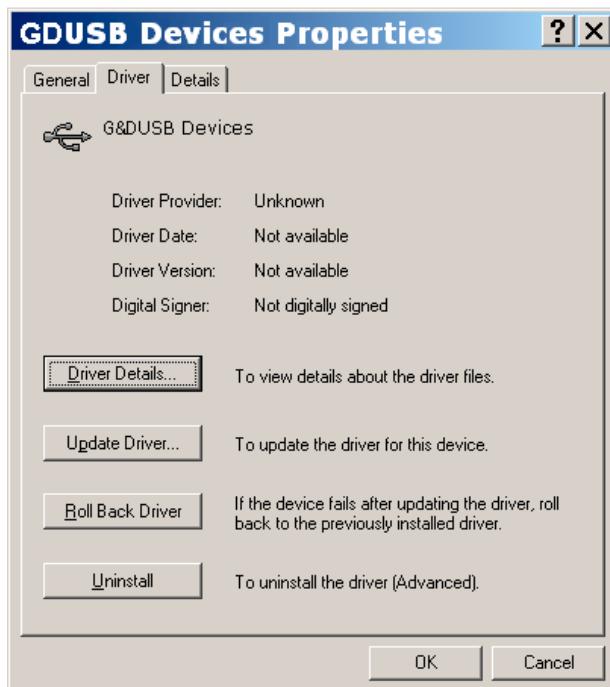
[5] Open the *Universal Serial Bus controllers* directory.



7

[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\GD Technology\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 41: Installing Driver Software

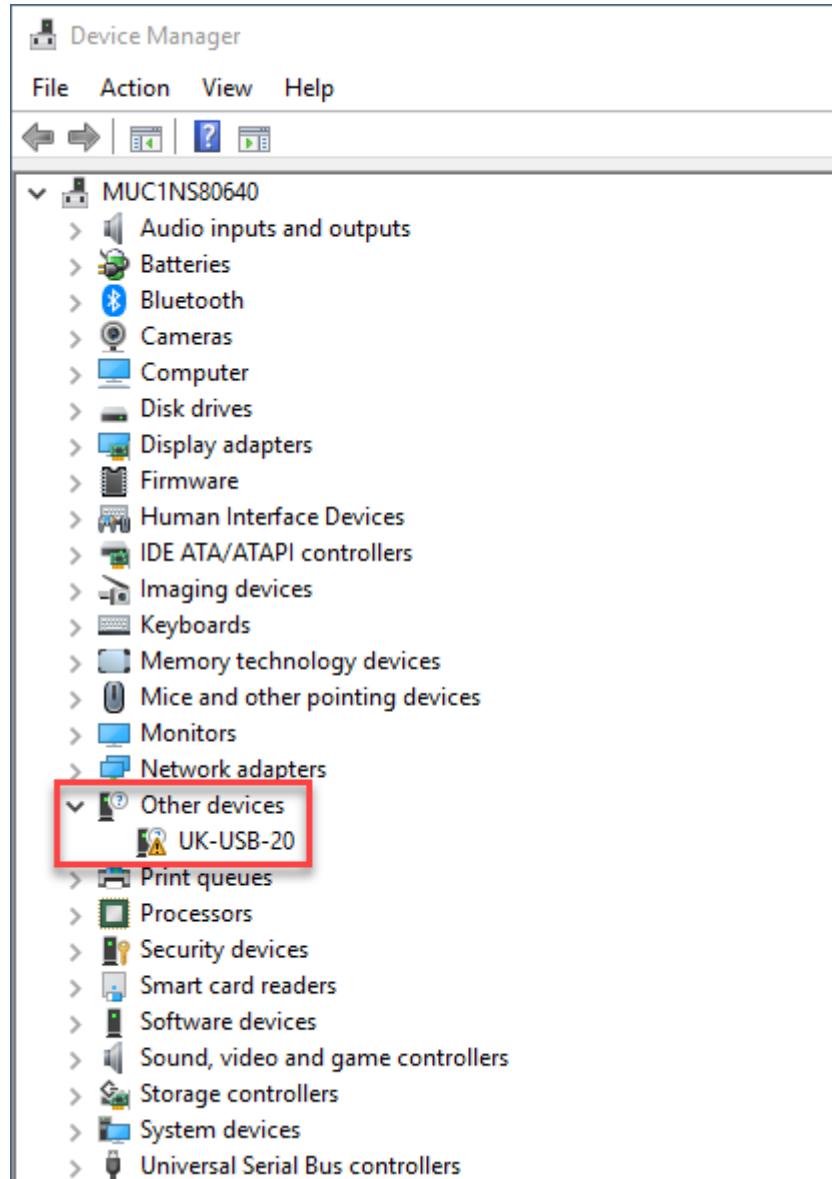


[19] Click **Finish**.

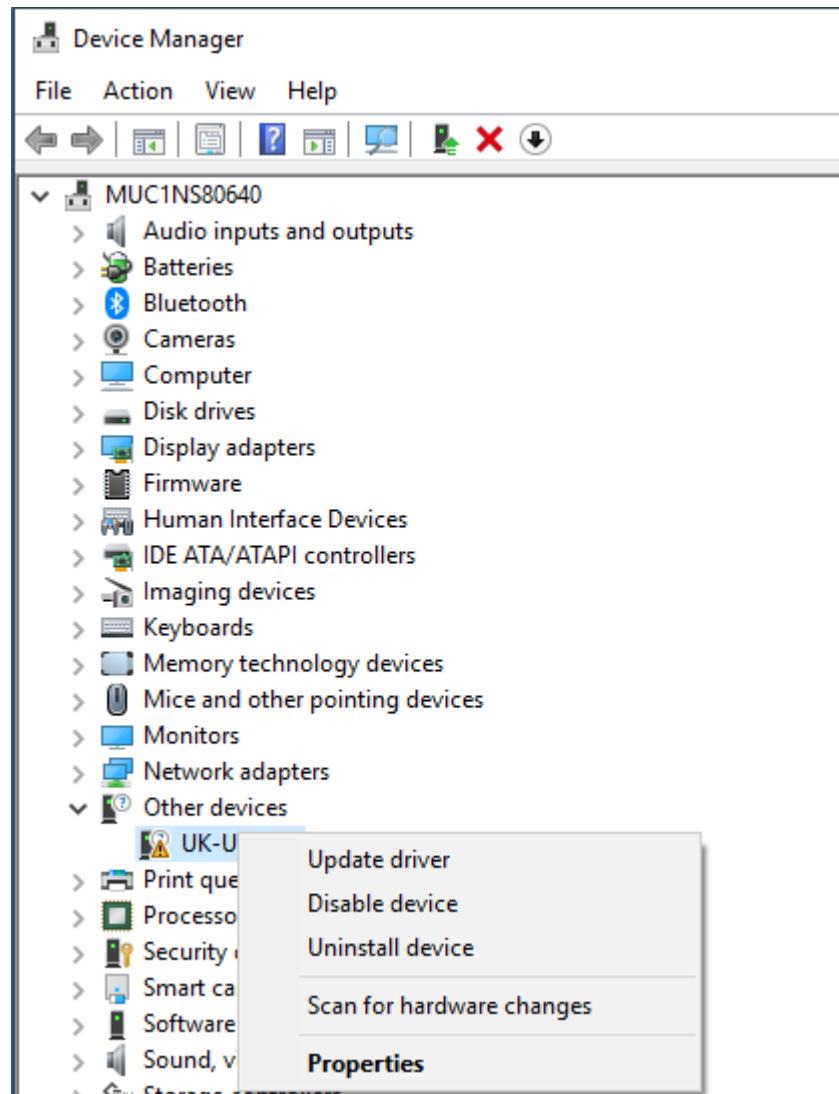
⇒ Installation of the driver software for BPS C1 is now complete.

Manually Installing Driver Software for Windows 10

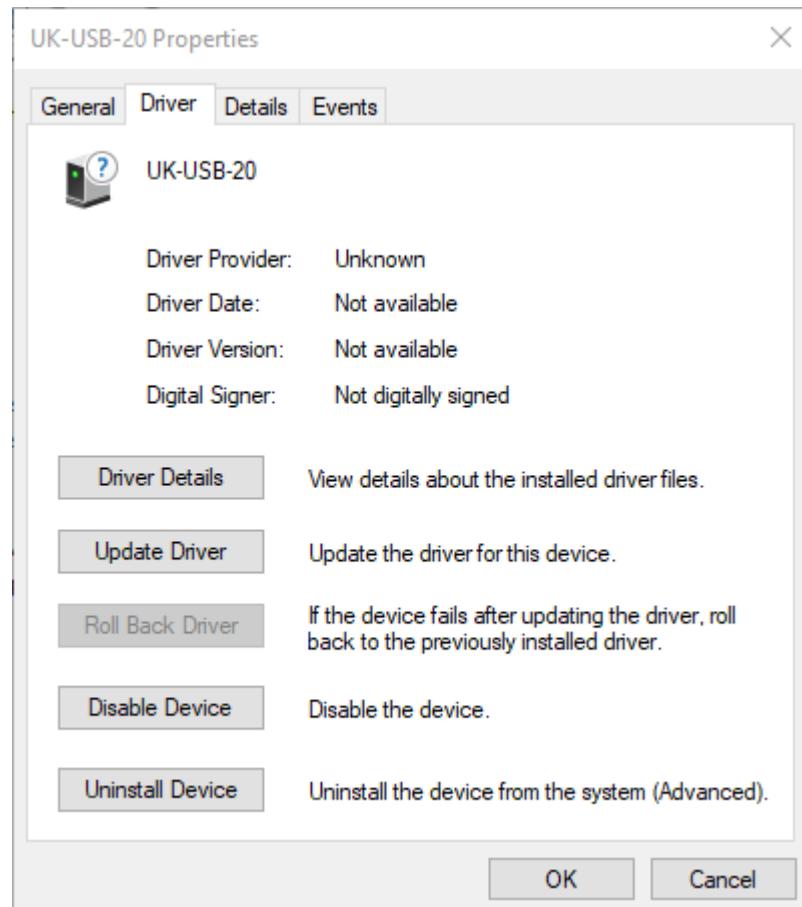
[1] Open the device manager.



[2] Search for the device with the driver problem.

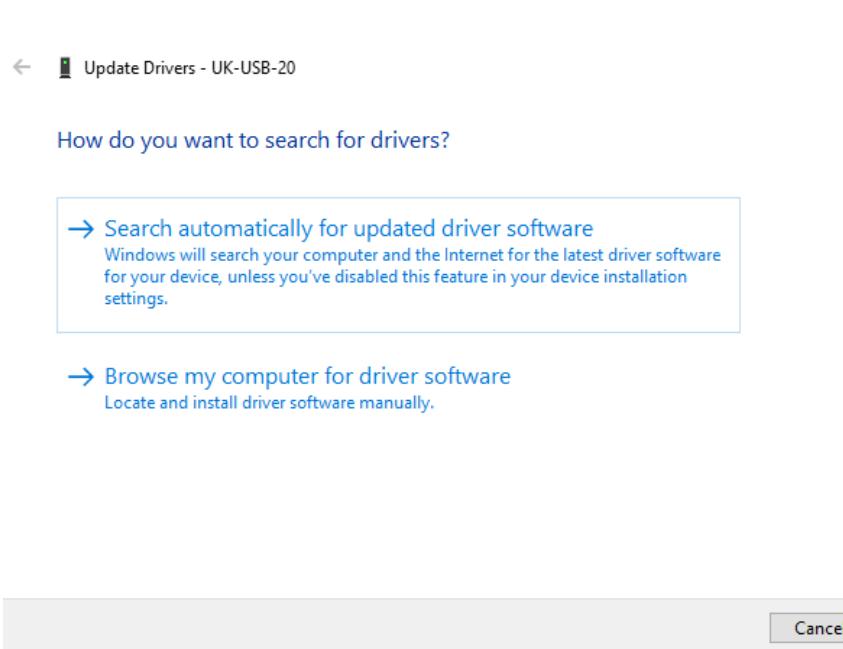


- [3] Right-click on this device and select **Properties** from the drop-down menu.



[4] Select the **Driver** tab.

[5] Select **Update Driver**.



- [6] Select the second option **Browse my computer for driver software**.
- [7] Navigate to the folder **DRIVER**.
- [8] Select **Install**.
- ⇒ The driver software is installed.

7

7.3 Using the PCSuite - End User Tool

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

- GD Viewer
Analyze, save and print the results of banknote processing
- GD Reader
Sort and store saved results



Important!

The End User Tool and the Distributor Tool should not run simultaneously on your PC. Close one program before starting the other.

7.3.1 Using Viewer

GD Viewer is used with the following main menu.

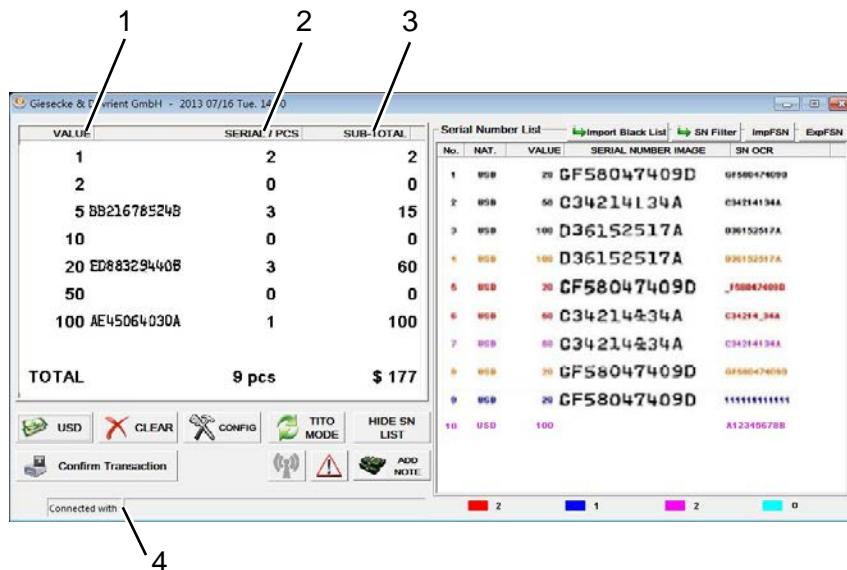


Figure 42: GD Viewer Main Menu

- 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

7

7.3.1.1 Starting Viewer

- [1] Start the Viewer by double-clicking on the program name *GD_BCVIEWER.exe*.
 ⇒ The main menu appears.

7.3.1.2 Selecting the Currency

- [1] Select .
 [2] Select the currency.
 ⇒ The results for this currency appear in the left-hand side of the main menu.

7.3.1.3 Removing Delivery Area

- [1] Select .
 ⇒ The delivery area is deleted.

7.3.1.4 Setting Program Parameters

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

- **System Configuration tab**

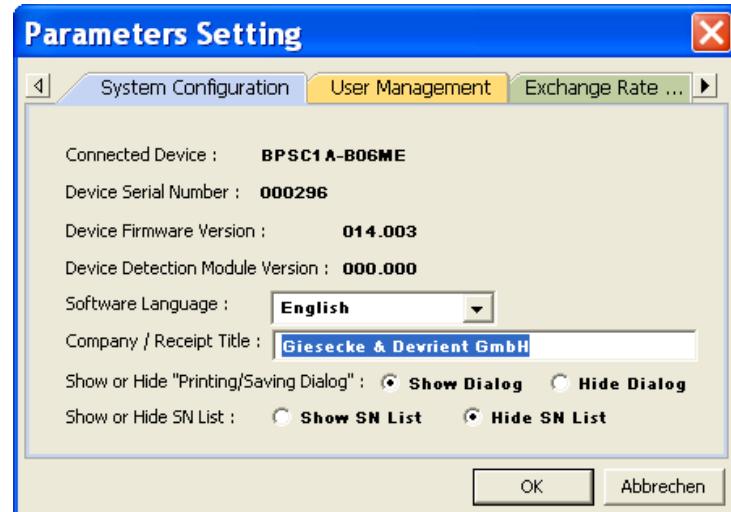


Figure 43: "System Configuration" Tab

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

- **User Management tab**

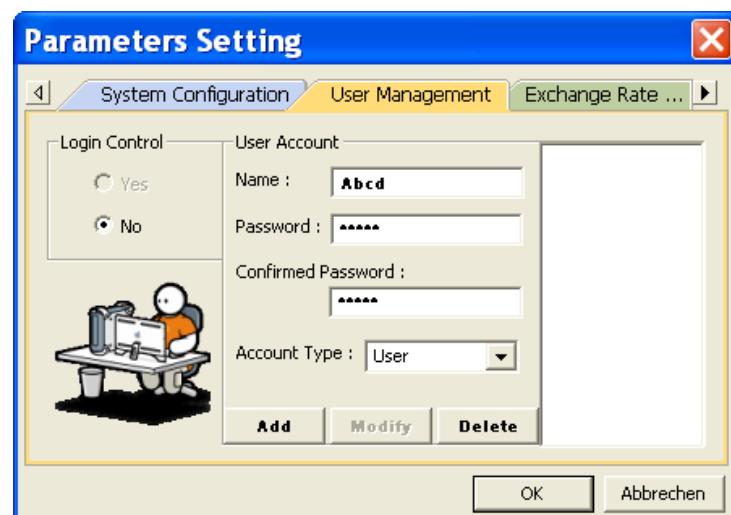


Figure 44: "User Management" Tab

Add users

- **Exchange Rate Setting tab**

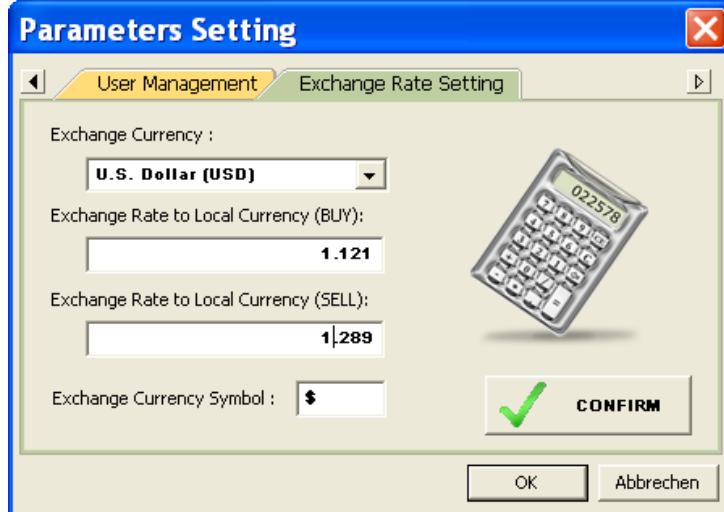
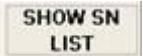


Figure 45: "Exchange Rate Setting" Tab

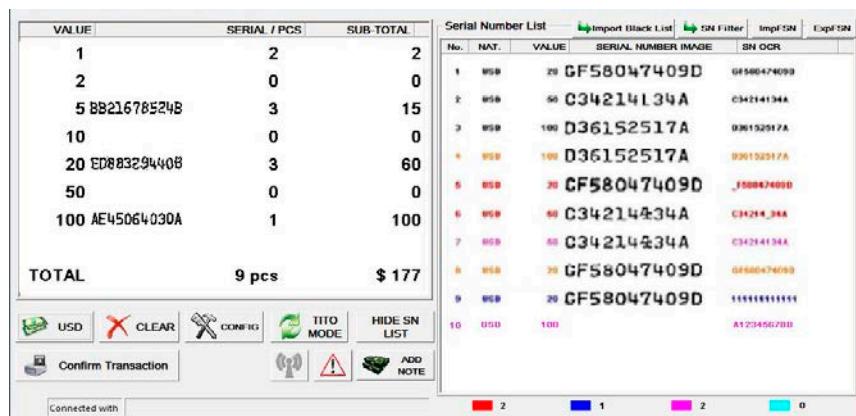
Set exchange rates

- [1] Select .
- [2] Select a tab.
- [3] Enter the data in the corresponding fields.

7.3.1.5 Showing/Hiding Serial Numbers

- [1] Select .
 - [2] Select .
- ⇒ The list of serial numbers appears in the right-hand side of the main menu.
 ⇒ The list of serial numbers disappears.

The serial numbers are displayed with various color codes. The color codes have the following meaning.



VALUE	SERIAL / PCS	SUB-TOTAL
1	2	2
2	0	0
5 BB21678524B	3	15
10	0	0
20 ED88329440B	3	60
50	0	0
100 AE45064030A	1	100
TOTAL	9 pcs	\$ 177

No.	NAT.	VALUE	SERIAL NUMBER IMAGE	SN OCR
1	US\$	20	CF58047409D	G1580474099
2	US\$	50	C34214L34A	C34214L34A
3	US\$	100	D36152517A	036152517A
4	US\$	100	D36152517A	036152517A
5	US\$	20	CF58047409D	J58047409D
6	US\$	60	C34214L34A	C34214L34A
7	US\$	60	C34214L34A	C34214L34A
8	US\$	20	CF58047409D	G1580474099
9	US\$	20	CF58047409D	1111111111
10	US\$	100		A12345678B

Figure 46: 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.

7.3.1.6 Setting SN Filter

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

- [1] Select .



- [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.

7.3.1.7 Using the 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 number 1'

'Name of currency','Serial number 2'

END

Example:

EUR, X10254860498

EUR, Y00758463221

EUR, H21005874552

END

- [1] Select .

⇒ A new window opens.

- [2] In this window select the search list.

- [3] Select **Import**.

⇒ The search list is imported.

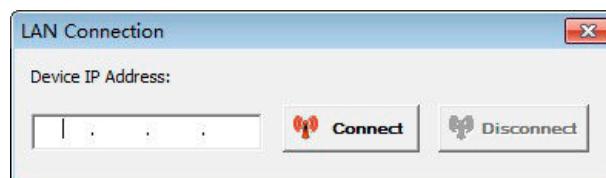
- [4] On completion confirm the dialog window.

7.3.1.8 Setting IP Address

If the machine is connected to the LAN, you can select its IP address.

- [1]

Select .



- [2] Enter the IP address of the machine.

- [3] Select **Connect** to connect the machine to the LAN.

7.3.1.9 Entering Banknote Data Manually

You can manually enter banknote data for rejected banknotes.

- [1]

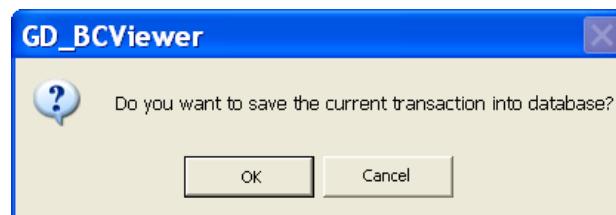
Select .



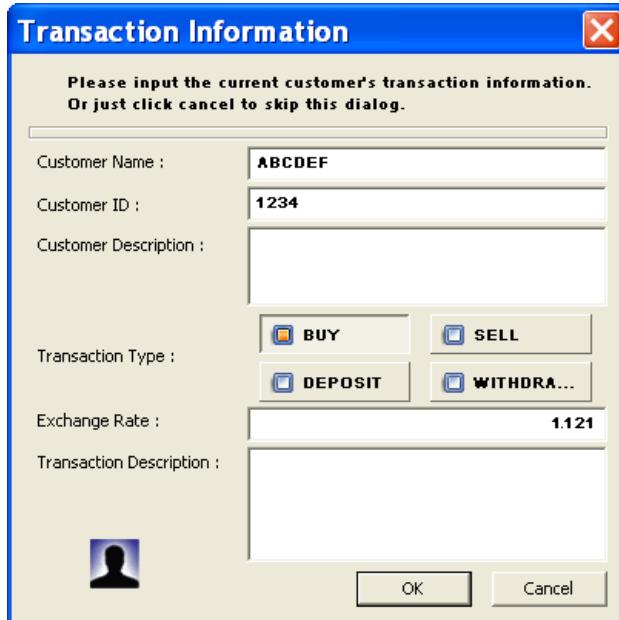
- [2] Select the banknote denomination in the drop-down menu of the **Currency Value** box.
- [3] Enter a serial number in the **Banknote Serial Number** box.

7.3.1.10 Processing Result

- [1] Select  **Confirm Transaction**.



- [2] Click **Save**.



- [3] Enter the data in the corresponding fields.
[4] Click **OK**.
⇒ The "Transaction Printing or Saving Process" window appears.

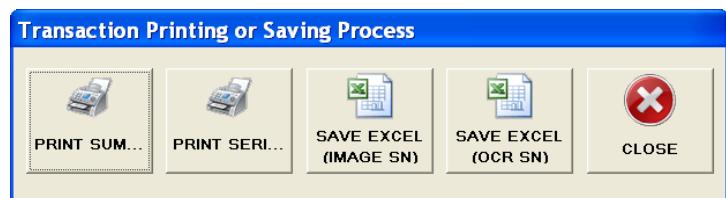


Figure 47: Viewer - Confirming Transaction

You can choose from the following options:

PRINT SUM

This prints out the results on a connected printer.



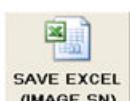
PRINT SERI

This prints out the results with the relevant serial number on a connected printer.



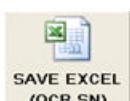
SAVE EXCEL (IMAGE SN)

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.



7.3.1.11 Processing Ticket or Check Reading or Displaying Full Banknote Scan

[1] Select .



[2] Select ticket reading, check reading, or banknote scan.

⇒ The following information appears.

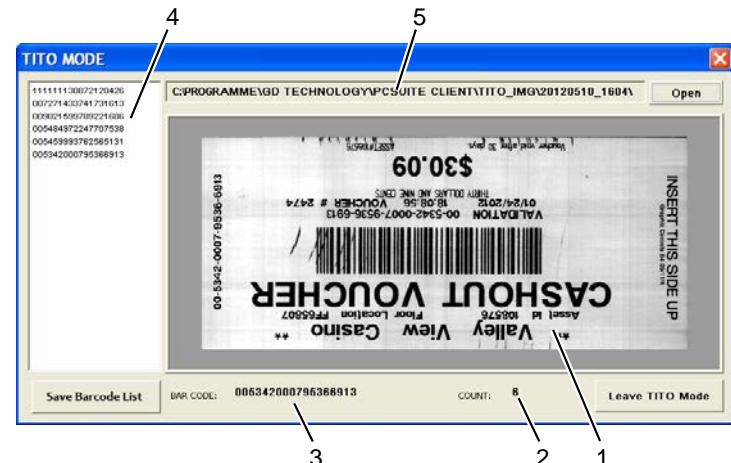


Figure 48: Tito Mode - Menu

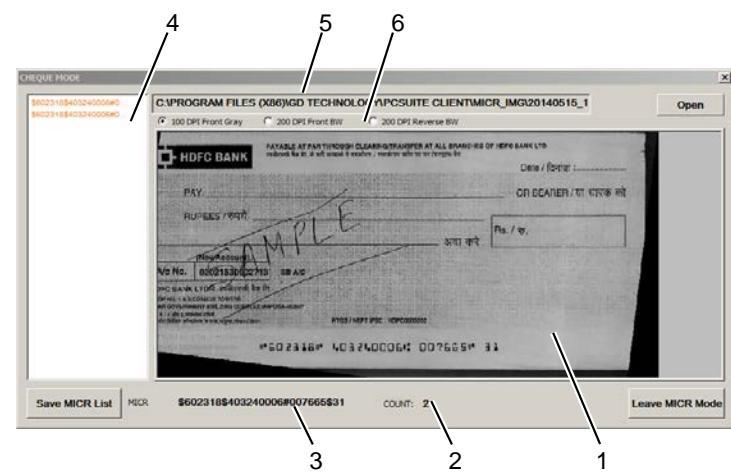


Figure 49: Check Reading Menu

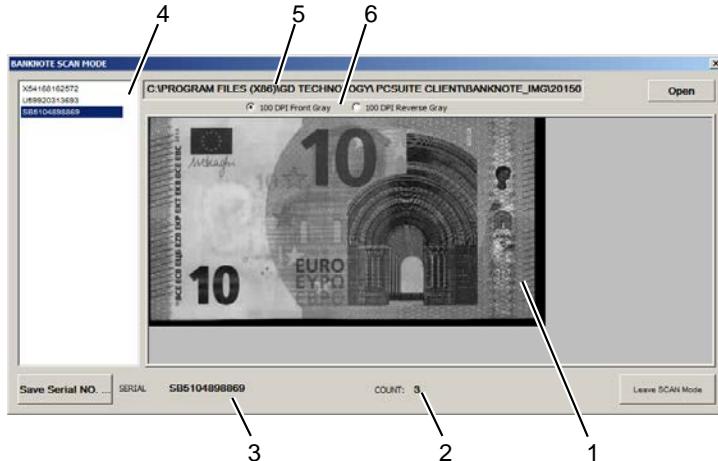


Figure 50: Banknote Scan Menu

- 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.

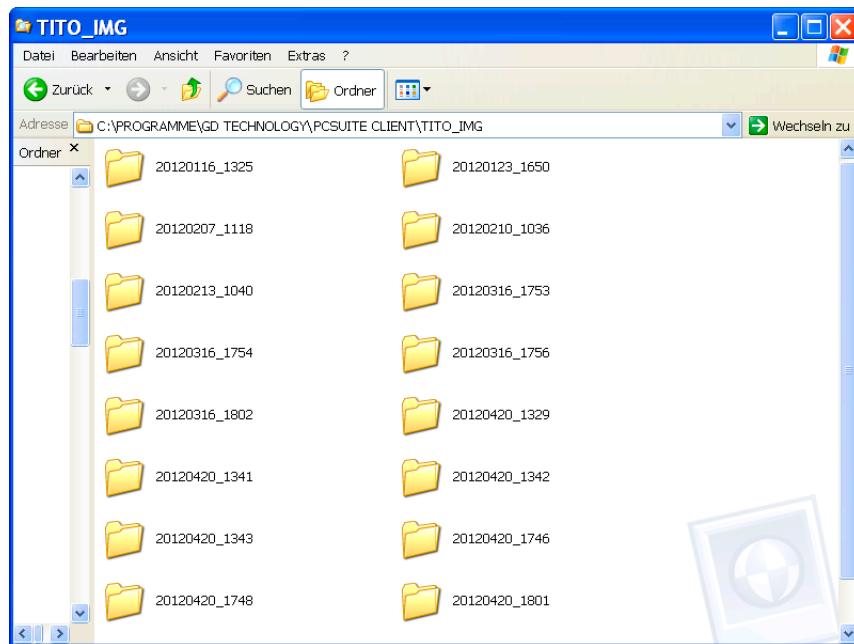
- The default directory used for saving is C:\Programs\GD TECHNOLOGY\PCSUITE CLIENT\TITO_IMG, ... \MICR_IMG, or ... \BANKNOTE-IMG.

- 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

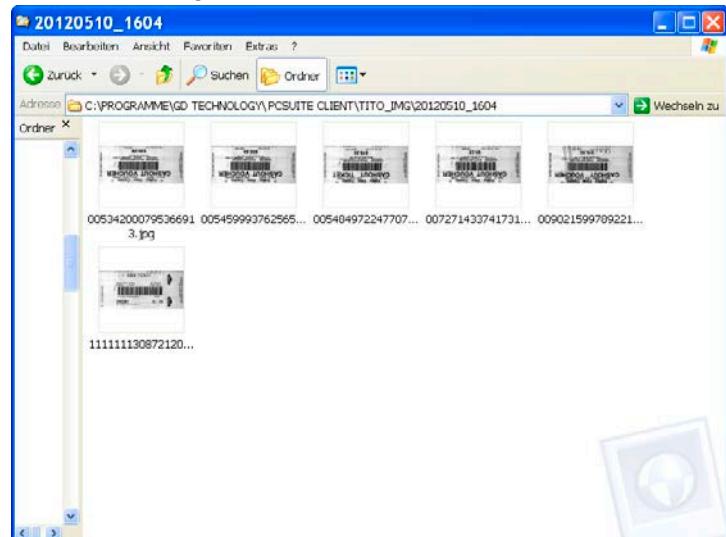


Figure 51: Tito Mode - Read Barcodes

- [5] You can save the list of all decoded barcodes/checks or the scanned serial numbers.
- [5a] **Saving the List of All Decoded Barcodes**
- [5a-1] Select **Save Barcode List**.
- [5a-2] Save the list at the storage location you require.
 ↳ The list is saved as a text file (.txt).
- [5b] **Saving the List of All Decoded Checks**

Ending TITO MODE

[5b-1] Select **Save MICR List**.

[5b-2] Save the list at the storage location you require.

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

[5c] **Saving the List of All Scanned Serial Numbers**

[5c-1] Select **Save Serial NO..**

[5c-2] Save the list at the storage location you require.

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

Ending Check Reading

[6a] To end Tito Mode, select **Leave TITO Mode**.

Ending Banknote Scan

[6b] To end check reading, select **Leave MICR Mode**.

[6c] To end the banknote scan display, select **Leave SCAN Mode**.

7.3.1.12 Displaying Reject Reasons

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

[1] Select .

⇒ The window with the rejects appears.

7.3.2 Using the Reader

After the result data has been processed with the GD Viewer, it is available for further analysis in the GD Reader.

The GD Reader is used with the help of the main menu shown below.

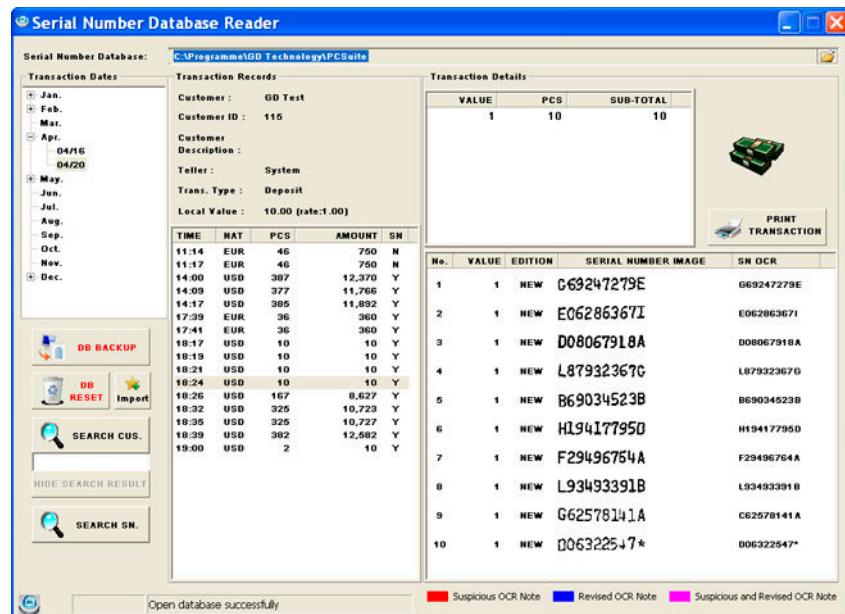


Figure 52: Main Menu of GD Reader

7.3.2.1 Starting the Reader

- [1] Start the Reader by double-clicking on the program name *GD_SNDReader.exe*.
⇒ The main menu appears.
- [2] Check the results displayed.
You can find an explanation of the color codes in → *Figure 46 “Displaying Serial Numbers”, p. 136*.
- [3] Select one of the following functions.



DB BACKUP

Save the serial numbers as a file



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**.



DB RESET

Reset and close the current database



SEARCH CUS.

Search banknote processing for a user

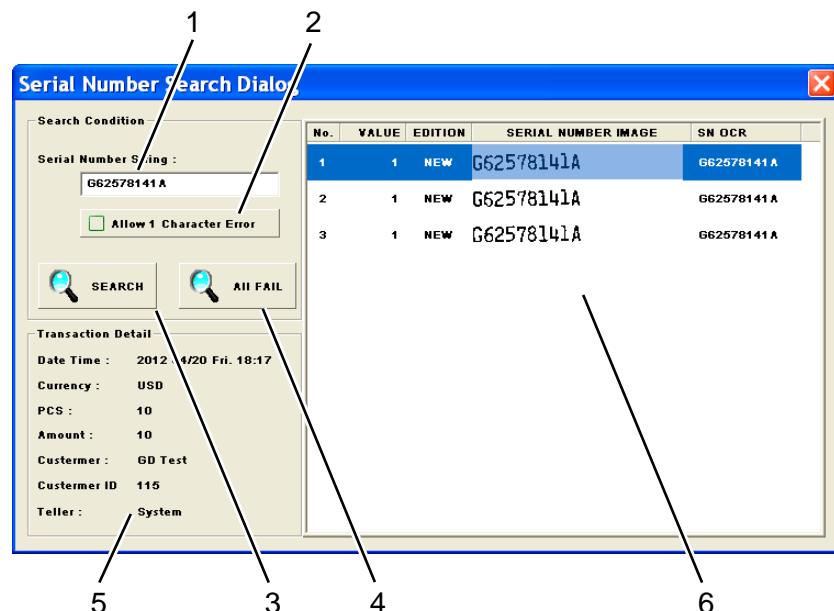
**SEARCH SN.**

Search banknote processing for a serial number

7.3.2.2 Searching for Serial Numbers

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).

7.4 Using the PCSuite – Distributor Tool

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

This chapter describes the following functions:

- → *Section 7.4.1 “Showing Product Information”, p. 148*

- → *Section 7.4.2 “Setting up the Report Title”, p. 150*
- → *Section 7.4.3 “Changing the Password or IP Address ”, p. 152*
- → *Section 7.4.4 “Creating Reports”, p. 153*
- → *Section 7.4.5 “Changing the Machine Type ”, p. 155*
- → *Section 7.4.6 “Updating the Machine”, p. 159*
- → *Section 7.4.7 “Defining the Default Currency”, p. 163*
- → *Section 7.4.8 “Connecting LAN Explorer”, p. 164*
- → *Section 7.4.9 “Recording Banknote Data”, p. 165*

Requirements

"GD_PCSuite" is available.



Important!

The End User Tool and the Distributor Tool should not run simultaneously on your PC. Close one program before starting the other.

Starting the Distributor Tool

- [1] Start the Distributor Tool by double-clicking on the program name *Platformxxx_x_xxxxxxx.exe. GD_PCSUITE*

⇒ The main menu appears.

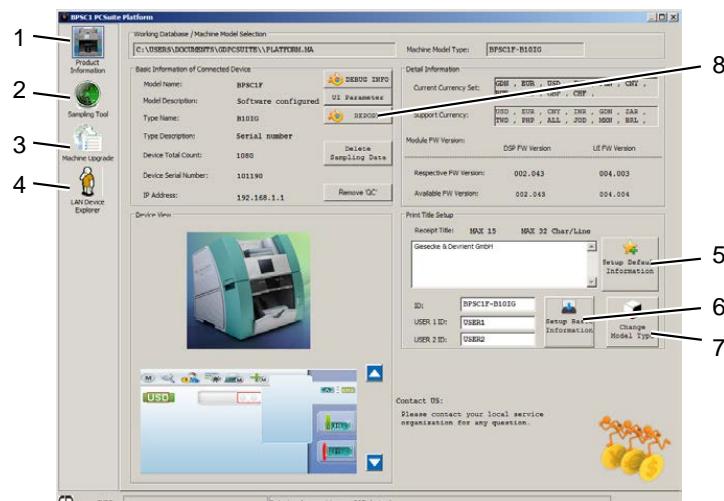


Figure 53: Distributor Tool - Main Menu

- 1 **Product Information** → *Section 7.4.1 “Showing Product Information”, p. 148*
- 2 **Sampling Tool** → *Section 7.4.9 “Recording Banknote Data”, p. 165*
- 3 **Machine Upgrade** → *Section 7.4.6 “Updating the Machine”, p. 159*
- 4 **LAN Device Explorer** → *Section 7.4.8 “Connecting LAN Explorer”, p. 164*
- 5 **Setup Default Info** → *Section 7.4.3 “Changing the Password or IP Address ”, p. 152*

- 6 **Setup Basic Information** → *Section 7.4.2 “Setting up the Report Title”, p. 150*
- 7 **Change Model Type** → *Section 7.4.5 “Changing the Machine Type”, p. 155*
- 8 **REPORT** → *Section 7.4.4 “Creating Reports”, p. 153*

[2] Select the icon for the desired function.

7.4.1 Showing Product Information

The product information for the connected BPS C1 is displayed in the main menu.

Showing Product Information

[1]

Select  in the main menu.



⇒ The current machine data are displayed.

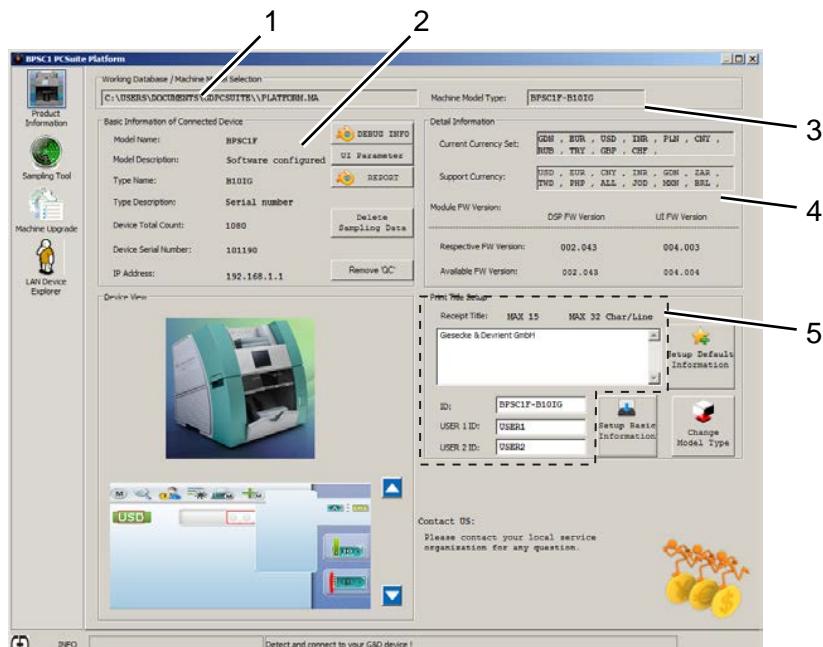


Figure 54: Product Information Menu

1 Working Database

Directory name for the system modules

2 Basic Information of Connected Device

Basic information about the connected device

- **Model Name**
Model details
- **Type Name**
Machine function
- **Type Description**
Detailed function designation
- **Device Total Count**
Number of processed banknotes
- **Device Serial Number**
Device serial number
- **IP Address**

3 Machine Model Type

Machine model, for explanation see figure below.

4 Detail Information

Additional information on the connected device

- **Current Currency Set**
Enabled currencies
- **Support Currency**
Released currencies for the license key (max. 10)
- **Module FW Version**
Firmware version

5 Report Title

Machine Model

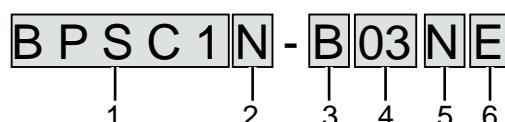


Figure 55: Machine Model

1 Name of the machine

Banknote Processing System Compact1

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)

3 Design

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. 10)

5 Optional functions

- S = Serial number reading
- T = Ticket reading (TITO Mode = reading casino tickets)
- C = Check reading
- M = Multi (serial number reading + ticket reading (TITO))
- G = Multi 2 (serial number reading + check reading)
- H = Multi 3 (ticket reading (TITO) + check reading)
- I = Multi 4 (serial number reading + ticket reading (TITO) + check reading)
- N = None

6 GUI language

B = Indonesian; E = English; F = French; G = German; I = Italian; K = Slovakian; L = Polish; P = Portuguese; R = Russian; S = Chinese; T = Turkish; V = Spanish

You can also output product information for the BPS C1 to the control unit.

→ *Section 6.19.5 “System Information”, p. 98*

7.4.2 Setting up the Report Title

Use the following procedure to set up the report title.

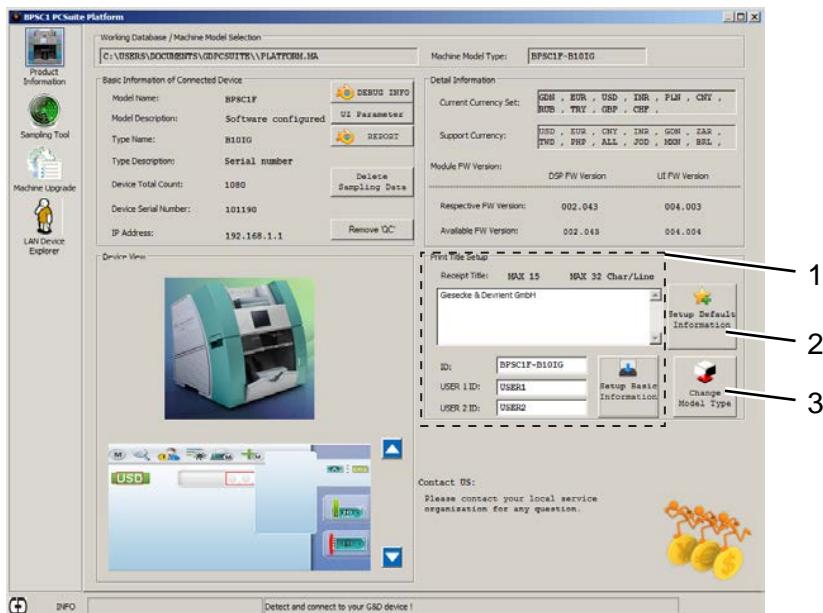


Figure 56: Product Information - Menu

- 1 → [Section 7.4.2 “Setting up the Report Title”, p. 150](#)
- 2 → [Section 7.4.3 “Changing the Password or IP Address ”, p. 152](#)
- 3 → [Section 7.4.5 “Changing the Machine Type ”, p. 155](#)



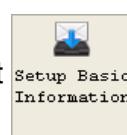
Important!

If you use the XML report, you may not 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.

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  **Setup Basic Information**.

⇒ 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.

7.4.3 Changing the Password or IP Address

Proceed as follows to change the password or IP address:

Procedure

[1]

Select  in the main menu.

⇒ The following menu is displayed.

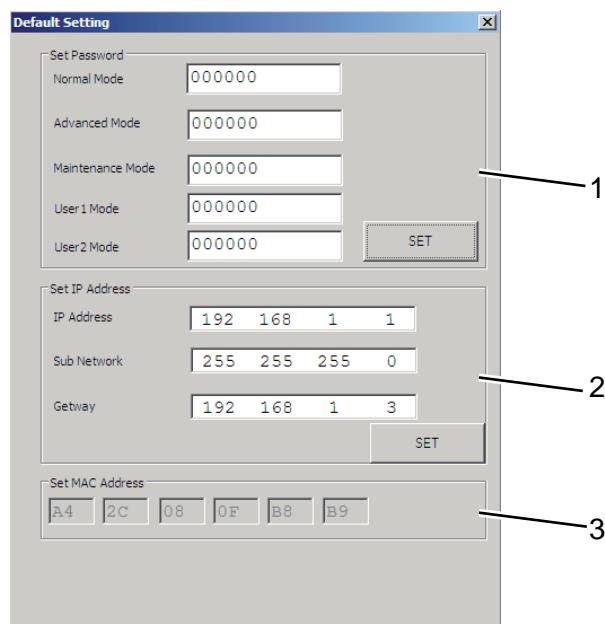


Figure 57: Default Settings

- 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)

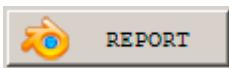
- Password for Maintenance Mode
 - Password for User1 Mode/User2 Mode
- [2] Enter the password (six numerical characters).
- [3] Select **SET**.
- ⇒ The password is saved and the main menu is displayed.

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.

7.4.4 Creating Reports



this time ServiceReport (bin)
 this time ServiceReport (xml)
 this time PaperReport
 1~6 month PaperReport

7~12 month PaperReport

this time XmlReport
 Daily time ExcelReport

You can select the following reports:

→ *Chapter B “Description of Reports”, p. 175*

Service report as .bin text file

Service report as an .xml file; you can send this file to your service partner/local service organization for error analysis.

Report: Fitness as .bin text file

Requirement for the data memory:

- An SD card is inserted into the back of the machine.

Summary of the Fitness report .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.

Requirement for the data memory:

- An SD card is inserted into the back of the machine.

Summary of the fitness report .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 half year.

Report: Deposit as .xml file;

Report: Daily result as .xls Excel file; enter the day desired 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).

Storage Location for Reports

The content of the report depends on whether the SD card is inserted on the back of the machine:

- without SD card – simple list (denomination, number, total value)
- with SD card – complete list

The following reports are saved in the directory in which the "GDPCSuite" software is also saved:

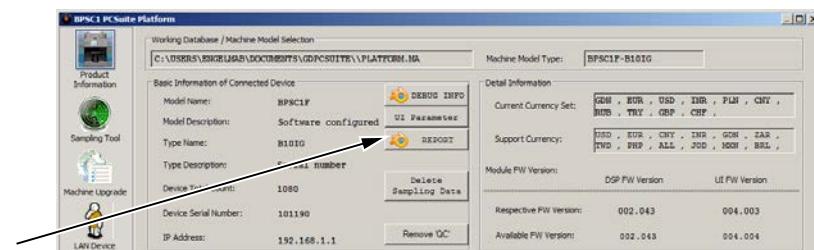
- this time ServiceReport
- this time PaperReport
- 1~6 month PaperReport
- 7~12 month PaperReport
- this time XmlReport
- Daily time ExcelReport

For the following report, you can enter the storage location the first time:

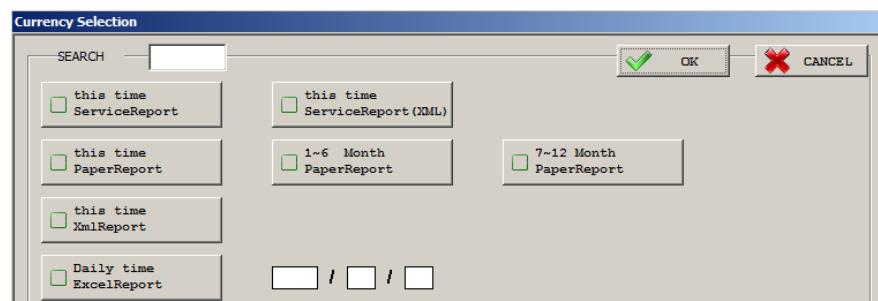
- this time ServiceReport (XML)

Then the report is always saved at the storage location specified. Ensure that you select a directory that is always available and that has an unchangeable name.

Procedure



[1] Select REPORT in the main menu.



[2] Select the desired report and confirm by clicking OK.

⇒ When the report has been successfully created, a message appears with the storage location details.

[3] Press OK to confirm the message.

⇒ The report is saved to the directory specified.

7.4.5 Changing the Machine Type

Extending the Machine Function

You can expand the machine type using a license key for the BPS C1. You can increase the number of currencies available or release the serial number reading and/or ticket reading (TITO Mode) functions.

Updating Software Components

To update the software, see → *Section 7.4.6 “Updating the Machine”, p. 159.*

License key is available

You can obtain two different license keys from your service partner/local service organization.

- License key to extend the machine functions
 - License key for a machine without software (e.g. after replacing circuit board A)
- If you wish to request a license key, the following information is required:
- Device serial number
 - Old model type
 - New model type

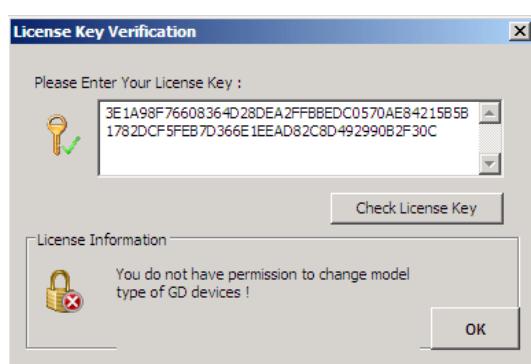
Requirement

New license key

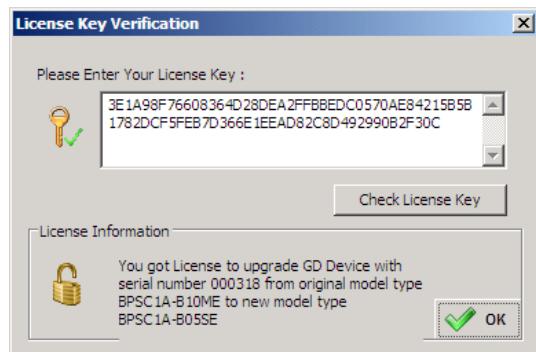
Entering the License Key

[1] Select  in the main menu.

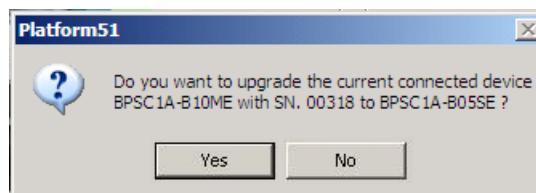
[2] Enter the license key.



[3] Select **Check License Key**.



[4] Confirm the "License Key Verification" using **OK**.



[5] Confirm the message by pressing **Yes**.

Releasing a Currency

7

Release the currencies installed using the license key as follows.

[1]

Select



⇒ In the displayed menu the **Detection Module Upgrade** area contains a question mark.

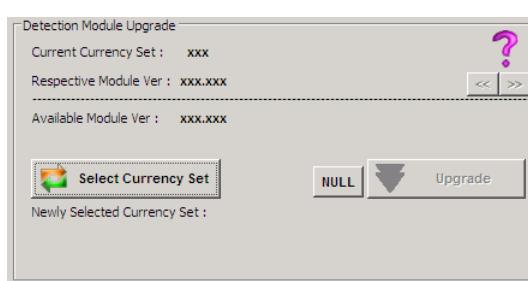
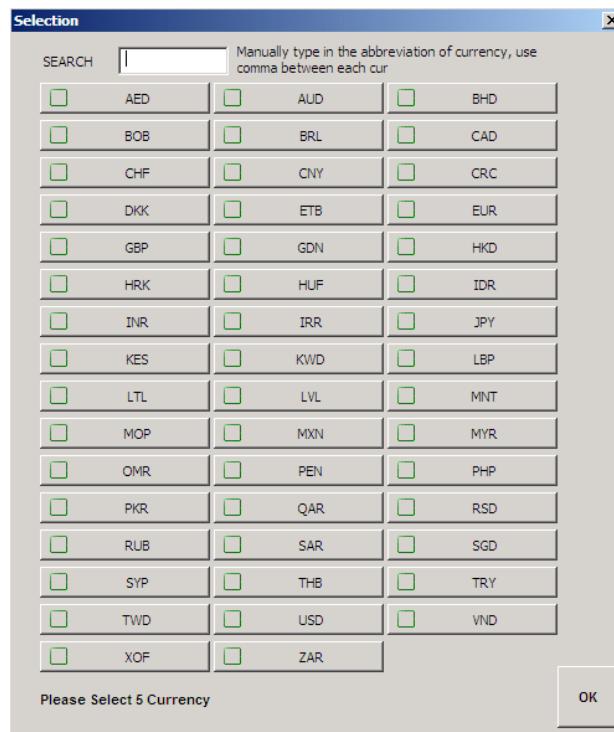


Figure 58: Detection Module Upgrade Area

[2]

Click **Select Currency Set**.



- [3] Select the currencies. You have two options.
- [3-1] Mark the currencies in the menu that is displayed.
- [3-2] Enter the currencies separated by a comma in the **SEARCH** box.
- ⇒ The currencies are marked.
- ⇒ Only certain currencies that have been released using the license key can be marked.

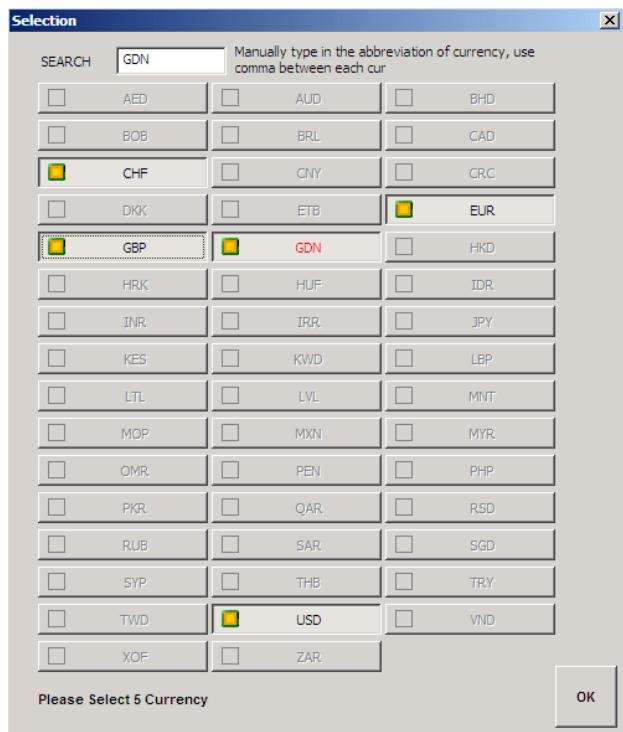


Figure 59: Available Currencies

7

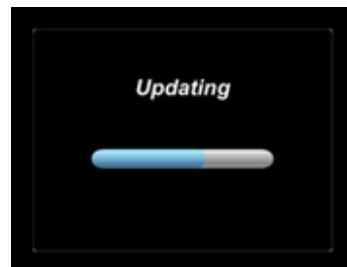
[4] Click OK.

⇒ The selected currencies are enabled.

Starting the Upgrade

[5] 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.

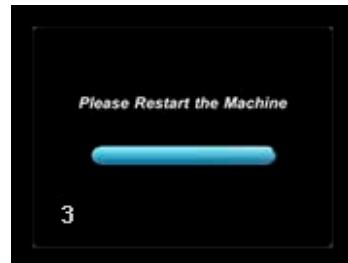


Figure 60: Seconds Counter for Automatic Restart of the Machine

Restart the machine, if it does not start automatically.

- [6] Switch off the machine.
- [7] Switch the machine on again.

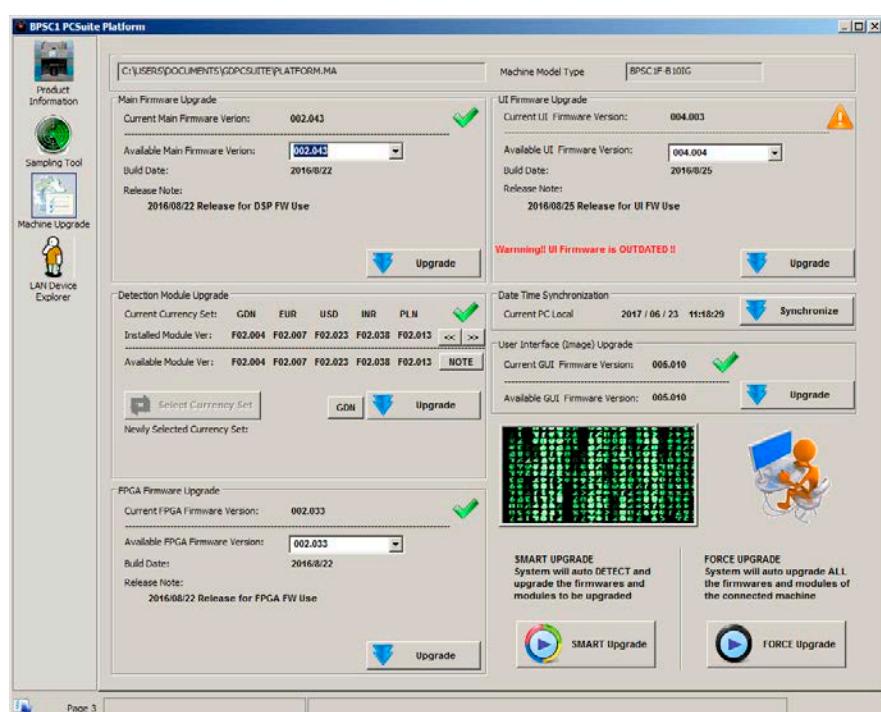
7.4.6 Updating the Machine

You can easily check and update the software version of the connected BPS C1 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.

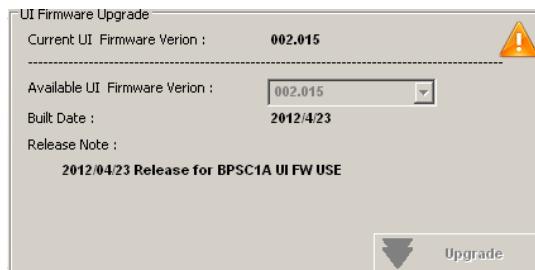
Updating the Firmware

- [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.



- [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.

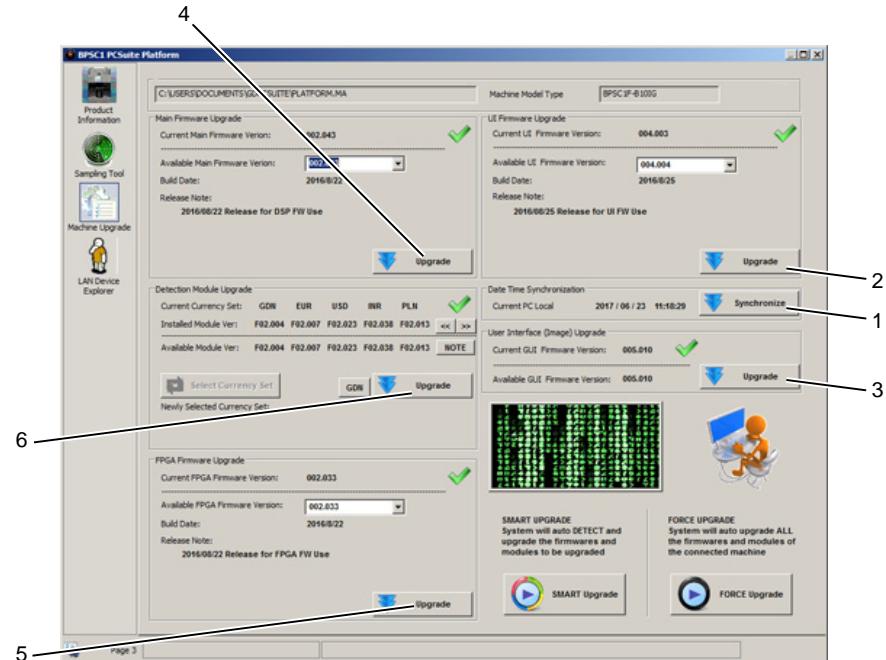


Figure 61: Device Update - Steps

1. Synchronize the PC with the BPS C1
2. UI Firmware Upgrade software
3. USER Interface (Image) Upgrade
4. Main Firmware Upgrade
5. FPGA Firmware Upgrade
6. Detection Module Upgrade

Synchronizing the PC and BPS C1

Before updating, synchronize the date and time of the PC and the BPS C1.

- [4] Select **Synchronize**.

⇒ Date and time are transferred from the PC to the BPS C1.

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.

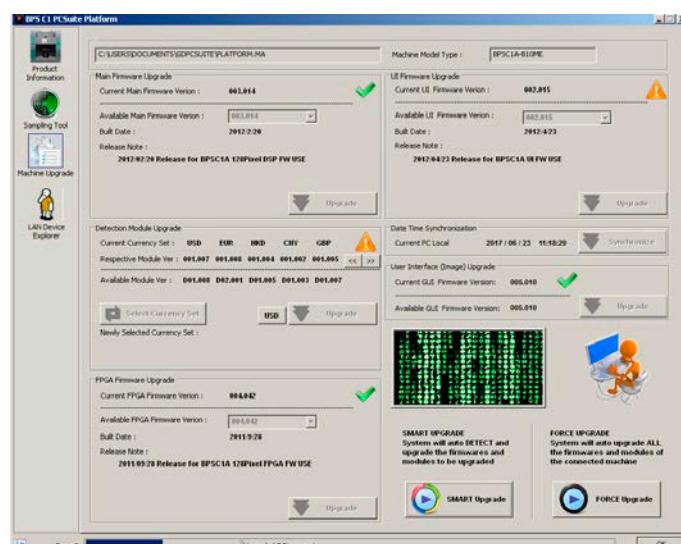


Figure 62: Machine Update - Progress

- On the operating unit of the machine

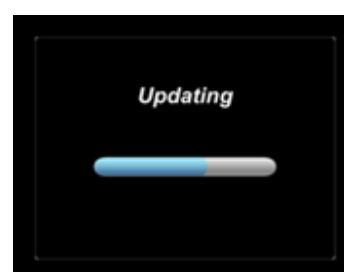
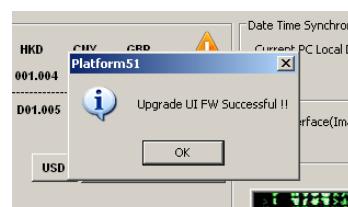


Figure 63: Machine Update - Progress



[7] After the update, confirm the message on the PC screen.

Machine - Automatic Restart

⇒ The machine starts automatically after 3 seconds. A seconds counter appears on the operating unit of the machine.



Figure 64: Seconds Counter for Automatic Restart of the Machine

Additional Option

In addition to the procedure described above, with the Distributor Tool you can also update the machine using the following buttons:



Only components with lower version numbers are updated.



All components are updated. This function may take a long time.



Important!

Once the first components have been updated, the request to restart appears on the machine. Ignore this message, as the machine restarts automatically when the update is complete.



Important!

If you have updated individual components or the machine using the SMART Upgrade option, you must then update the USER interface (images), see → *Figure 53 “Distributor Tool - Main Menu”, p. 147 (3)*.

Note: If an error occurs when using the FORCE Upgrade option to update, confirm the error message and restart the option. The upgrade begins at the point at which the error occurred and continues on from there.

7.4.7 Defining the Default Currency

Follow the steps below to define the default currency for the user interface.

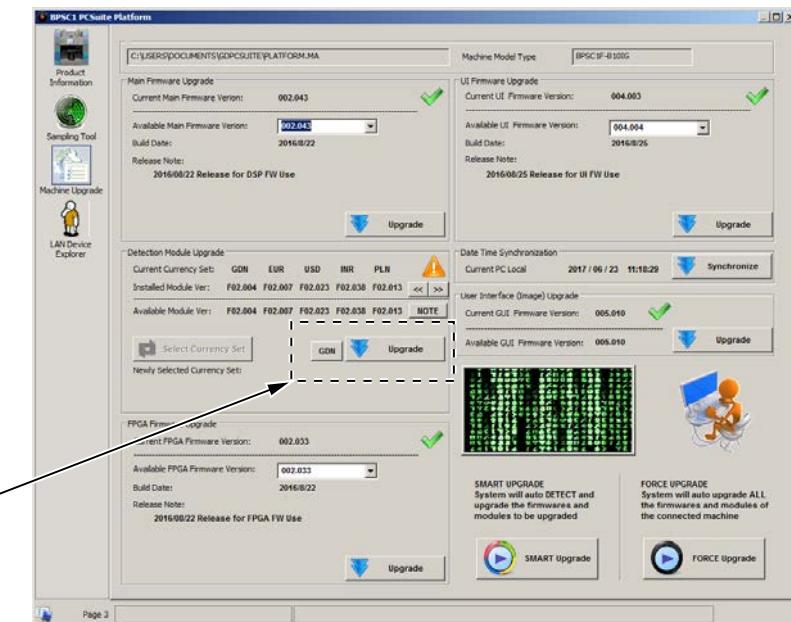
Defining the Default Currency

[1]

Select



in the main menu.



- [2]** Select the Currency button.
 ⇒ The installed currencies are displayed.
- [3]** Mark the desired currency.
- [4]** Select  .
 ⇒ After the machine has been started, the selected currency will be displayed at the top left of the operating unit.

7.4.8 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.

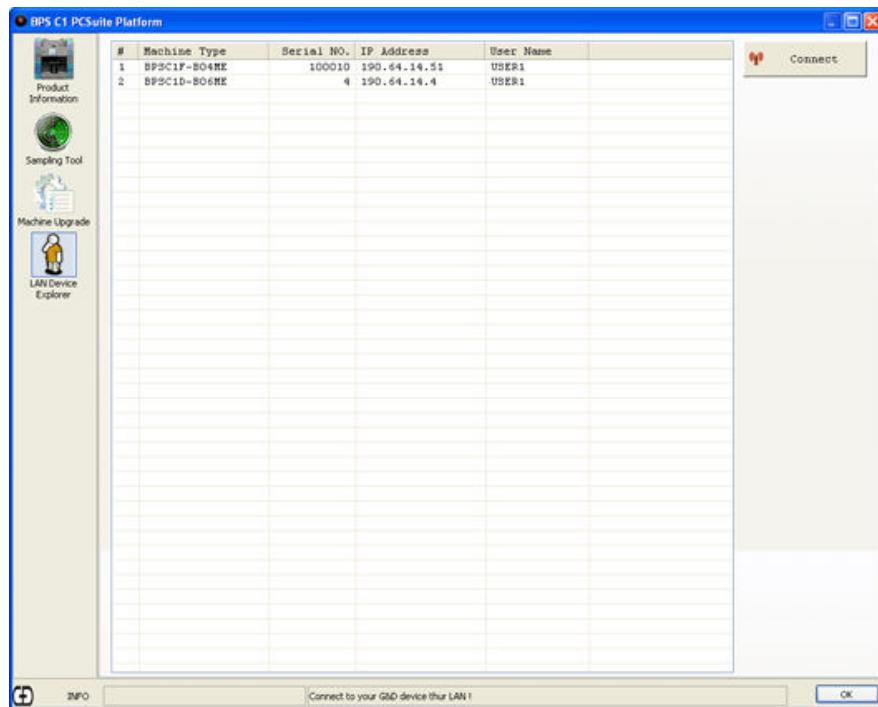
Procedure

- [1]** Connect the LAN cable.

Starting LAN Explorer

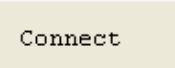
- [2]** Select  in the main menu.

⇒ LAN Explorer is displayed.



[3] Select the desired entry.

Connecting the Machine

[4] Select   in the Explorer menu to establish the connection.

7

7.4.9 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

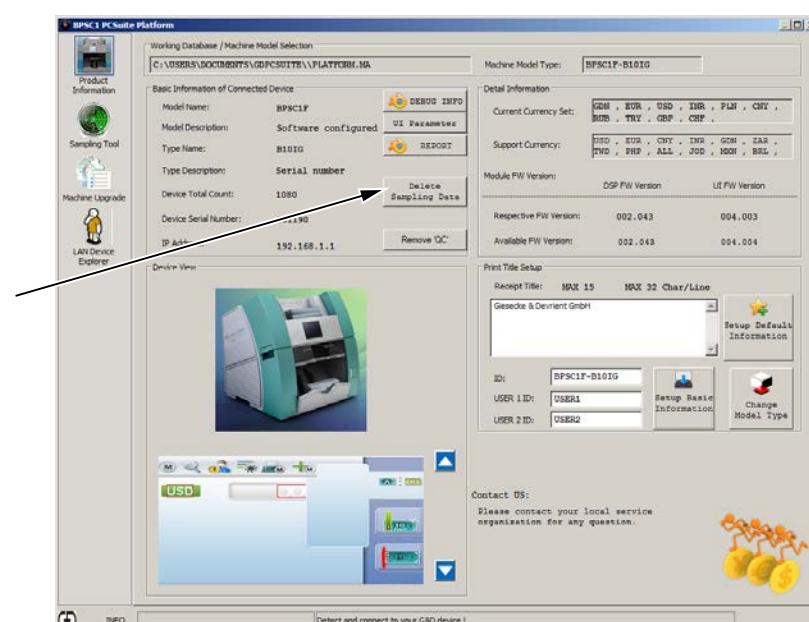
Requirement

- The machine has been thoroughly cleaned, see → *Section 6.21 "Cleaning", p. 117.*
- The singler has been adjusted.
- The banknotes have been provisionally sorted according to quality and orientation.

Resetting Raw Data

[1]

Select  in the main menu.

[2] Click **Delete All Sampling Data**.

[3]

Select .

⇒ The machine is blocked and the following message is displayed:

- On the operating unit of the machine

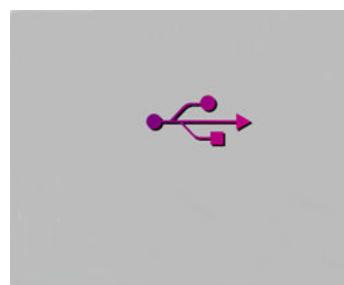


Figure 65: Machine in Service Mode

- On the PC screen

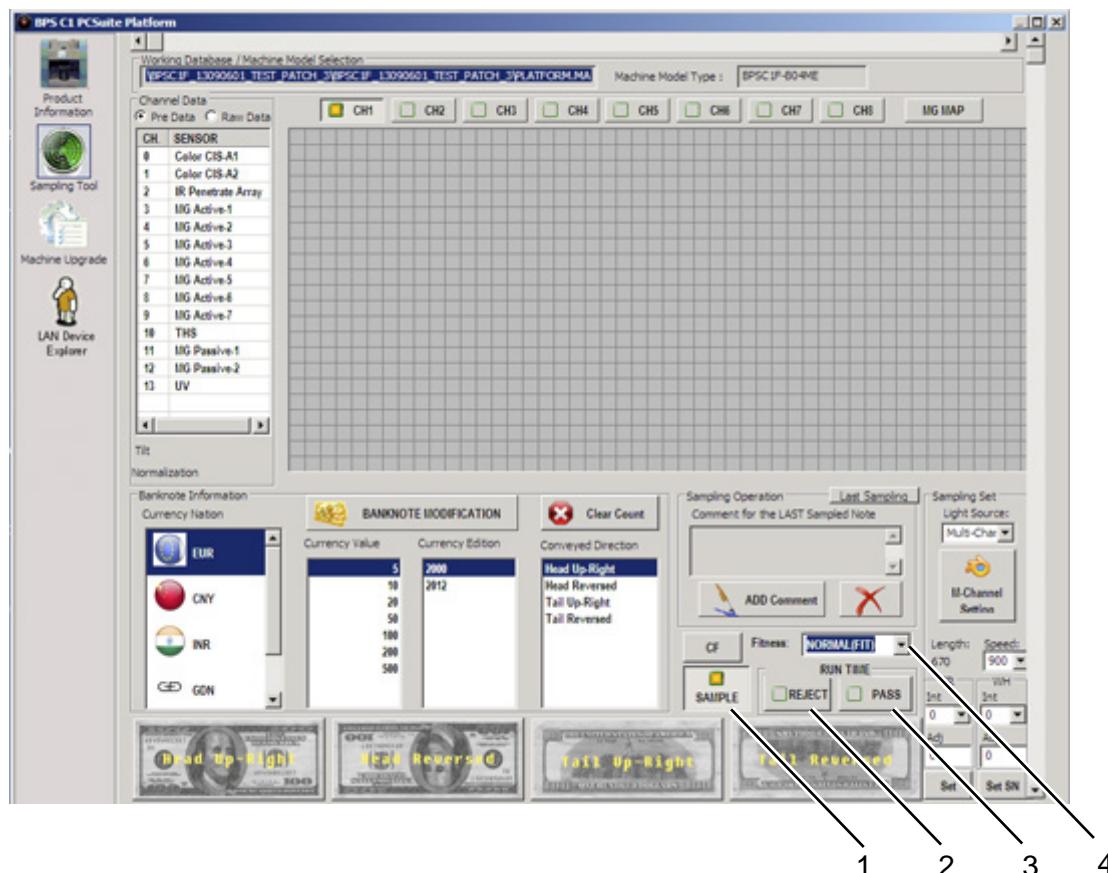


Figure 66: Menu – Sampling Tool

Selecting the Recording Mode

Select one of the following four procedures for recording raw data.

-  (1)

Record banknote data (650 BN/min with 50 dpi)

Use this setting to record all banknotes in the delivery stacker.

-  (2)

Record rejects (1200 BN/min with 10 dpi)

Use this setting to record all banknotes in the reject stacker.

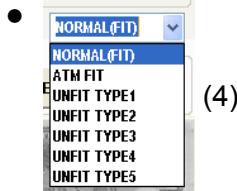
-  (3)

Record new counterfeits (1200 BN/min with 10 dpi)

This setting is used to record counterfeits that have been accepted as real banknotes. Other objects that

Importing Banknote Data

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 button for the recording mode (at the bottom right of the menu).

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**.

A bundle of 100 banknotes is recommended for recording.

- [9] Select **Head Up-Right** (Orientation 1)



- [10] Place the banknote bundle in the singler the selected way round.

⇒ The raw data are saved in the directory *C:\Program Files\GD Technology\BPSC1_PCSuite\2DSample*.

- [11] Select **Head Reversed** (Orientation 2)



- [12] Place the banknote bundle in the singler the selected way round.

⇒ The raw data are saved in the directory *C:\Program Files\GD Technology\BPSC1_PCSuite\2DSample*.

[13] Select **Tail Up-Right** (Orientation 3)



[14] Place the banknote bundle in the singler the selected way round.

⇒ The raw data are saved in the directory *C:\Program Files\GD Technology\BPSC1_PCSuite\2DSample*.

[15] Select **Tail Reversed** (Orientation 4)



[16] Place the banknote bundle in the singler the selected way round.

⇒ The raw data are saved in the directory *C:\Program Files\GD Technology\BPSC1_PCSuite\2DSample*.

[17] Send a zip file containing the *2DSample* directory and the *Platform.ma* file from the directory *C:\Program Files\GD Technology\BPSC1_PCSuite* to G+D.

8 Disposal

You must properly dispose of the transport packaging and the product BPS C1 after discontinuation of use according to the commonly applicable legal requirements.

A Technical Data

The following table lists the other technical data:

	Values
Maximum transport speed	1,300 BIN/min for item counting (Accounting mode: Count mode) 1,050 BN/min for fitness detection, serial number reading, and barcode reading You can also manually set three different speed levels.
Deposit capacity (singler)	ca. 500 BN depending on the banknote quality
Stacker capacity	Delivery stacker – 300 BN Reject stacker – 100 BN
Banknote formats handled	Length: 85 - 190 mm Width: 60 - 100 mm Thickness: 0.08 - 0.12 mm
Number of adaptations	Up to 10 adaptations can be made on the machine.
Display	TFT color screen, 3.5 " (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	350 x 333 x 350 mm (depth x width x height)
Weight	approx. 16 kg
Transport system	Friction rollers
External devices (optional)	<ul style="list-style-type: none"> ● Thermal printer ● Barcode reader ● PC ● External display ● SD card

A

	Values
	<p><u>Recommendation:</u></p> <ul style="list-style-type: none">– HW: SDHC, C10 & C4– Capacity: 4GB-16GB– SW: FAT32, 4096 (4K)● LAN interface
Sensors	<ul style="list-style-type: none">● 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) or Excel file

B

There are several ways to generate the reports:

- Automatic sending – send XML reports to a server
Prerequisite: Existing connection to a FTP server configured on the machine
- Print – print out reports via a connected printer
→ *Section 6.14 "Print Result", p. 81*
- Save – save reports on a PC with the GD_PCSuite software
→ *Section 7.4.4 "Creating Reports", p. 153*

B.1 XML Reports

The following reports can be sent as .xml files to a server:

- "Deposit" report – your service partner/your local service organization has configured the report type in "Maintenance Mode"
 - 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 Convention 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 Bank-note Processing System
--------	----------------------------	---

	Machine ID	6 characters (e.g. 102109)	The final 6 characters of the machine's serial number
	Type of report	7 characters (e.g. rpt1041)	Report ID: Each report type has a unique ID
	Date of creation	yyymmddHHMM SS (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 report format;
SD Card			It is highly advisable to use an SD card. If the SD card is inserted in the relevant interface on the rear of the machine, the SD card can serve as temporary memory in the event of a connection error with the server. If there is no SD card inserted and the connection with the server fails, the data will be lost.

B.1.1 Report: Deposit (XML)

If a FTP server is activated (→ *Section 6.20.6.7 “Setting the IP Address”, p. 112*), the machines send the data as an .xml file.

There are four different report types:

- Deposit report: rpt5010old – report is based on the XML deposit report of the BPS 200/C4 and, if available, uses the same variables and values.
- 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 the ticket reader is enabled.

Important: It is not possible to output the serial number and the ticket ID simultaneously within one report.

Only one report type can be activated. Your service partner/local service organization activates the report type in "Maintenance Mode".

B.1.2 Report: Video Surveillance (VSI)

If video surveillance is enabled (→ *Section 6.20.6.7 "Setting the IP Address", p. 112*), the machine sends the data to a VSI server as .xml files.

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:

- Machine serial number
- 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

"Start Process Report"

- 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

At the start of the deposit the machine sends the following data:

- Device serial number
- 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:

- Device serial number
- 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:

- Machine serial number
- 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
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 -----
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 -----
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 -----
Currency [ GDN ]
Reject : 0%
-----
Currency [ EUR ]
Reject : 0%
-----
Currency [ USD ]
Reject : 0%
-----
Currency [ INR ]
Reject : 0%
```

Figure 67: "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 that your service partner/local service organization has configured in "Maintenance Mode"

B**B.2 Printed Reports**

Reports are fundamentally structured as follows.

Report Header

The following values appear in the report header:

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:	Device serial number
-------------	----------------------

You can configure the following values:

- Report title
- Machine ID
- User ID

These values can be configured under → *Section 7.4.2 "Setting up the Report Title", p. 150.*

The following values appear in the report header, depending on the report type:

Batch ID	On the "Deposit" report and "Different currencies" – no change
----------	--

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: <ul style="list-style-type: none">● ATM● FIT● UNFIT● WIZARD - for the report on banknote processing according to ECB specifications
Date	On the "Daily Result" report for one day, the date of the printed day appears here.

B

B.2.1 Report: Deposit

The Deposit report is the default report issued after banknote processing. The report content depends on the processing step performed.

B

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	
<hr/>		
Currency: EUR		
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
€ 5 X	1 =	5
SubTotal	4	125
<hr/>		
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
€ 5 X	2 =	10
SubTotal	2	10
<hr/>		
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
<hr/>		
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	0	0
<hr/>		
Grand TOTAL		145
<hr/>		

Figure 68: "Deposit" Report

(1) Overview of Banknote Processing for "ATM" Fitness Criterion

Includes the following details about the counted banknotes:

- Currency
- Denomination

	<ul style="list-style-type: none"> ● 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	<p>Includes the following details about the counted banknotes:</p> <ul style="list-style-type: none"> ● 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	<p>Includes the following details about the counted banknotes:</p> <ul style="list-style-type: none"> ● 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	<p>Includes the following details about the banknotes entered during manual inspection:</p> <ul style="list-style-type: none"> ● Currency ● Denomination ● Quantity ● Value
(8) Manual Inspection Result	Information on the total number and total value of the banknotes entered during manual inspection (→ <i>Section 6.13, p. 80</i>)
(9) Total Result	Information on the total value including coins entered during manual inspection (→ <i>Section 6.13, p. 80</i>)

B

B.2.2 Report: Deposit Using Wizard

You can process banknotes with deposit using the wizard (→ *Section 6.10.7, p. 63*).

The report will then also include the following information for each accounted deposit:

- Customer number
- Deposit number
- Comparison with target value

The description below relates to a report with the maximum content:

Giesecke & Devrient GmbH
NO:00001
06-29-2015 12:45:10
Machine ID : BPSC1F-B01ME
User ID : USER1
Machine SN : 101190
Customer ID : 1234
Deposit ID : 77

Currency:EUR
Fitness Mode : None

Counted Result

Denom	Pcs	Amount
€ 20 X	1 =	20
€ 10 X	1 =	10
€ 5 X	1 =	5
Amount	3 =	35

Conciliation Result

Denom	Pcs	Amount
€ 5 X	1 =	5
Amount	1 =	5

SubTotal

		40
--	--	----

Total Result

Coin		1.00
Total	4 =	41.00
Reject Qty	0	

Difference = Total - Deposit

$$- 1 = 40 - 41$$

Figure 69: "Deposit Using Wizard" Report

(1) Overview of Banknote Processing

Includes the following details about the counted banknotes:

- Currency
- Denomination
- Quantity
- Value

(2) Result of Banknote Processing

Information on the total quantity and total value of the counted banknotes

(3) Overview of Manual Inspection

Information on the denomination, quantity, and value of the banknotes entered during manual inspection (→ *Section 6.13, p. 80*)

(4) Manual Inspection Result

Information on the total quantity and total value of the banknotes entered during manual inspection

(5) Banknote Processing and Manual Inspection Result

Information on the total value of the processed banknotes and those entered during manual inspection

(6) Total Result

Information on the total value including coins entered during manual inspection (→ *Section 6.13, p. 80*)

(7) Rejects

Number of rejected banknotes

(8) Comparison with Target Value

Comparison with the target value entered

B

B.2.3 Report: Different Currencies

If you process different currencies simultaneously (→ *Section 6.10.9, p. 72*), the accounting for each processed currency appears in the report.

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	
Currency:EUR		1
Counted Result		
Denom	Pcs	Amount
€ 5 X	1 =	5
SubTotal		5
Coin		0.00
Total	1 =	5
Currency:INR		
Counted Result		
Denom	Pcs	Amount
₹ 1000 X	3 =	3000
SubTotal		3,000
Coin		0.00
Total	3 =	3,000
Reject Qty	1	

Figure 70: "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

B
(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

B.2.4 Report: Grand Total

If you use result lists, you can print the "Grand Total" result list for each currency (→ *Section 6.11.3, p. 76*).

Giesecke & Devrient GmbH
 06-29-2015 12:35:57
 Machine ID : BPSC1F-B01ME
 User ID : USER1
 Machine SN : 101190

Currency:GDN

¤ 500 X	0 =	0	1
¤ 200 X	0 =	0	
¤ 100 X	0 =	0	
¤ 50 X	14 =	700	
¤ 20 X	16 =	320	
¤ 10 X	23 =	230	
¤ 5 X	13 =	65	
TOTAL	66 =	1,315	2

Figure 71: "Grand Total" Report

(1) Overview of Banknote Processing

Includes the following details about the counted banknotes:

- Currency
- Denomination
- Quantity
- Value

(2) Total Result

Information on the total quantity and total value

B.2.5 Report: Daily Result

If you use result lists, you can print the "Daily Result" list for each currency (→ *Section 6.11.4, p. 77*).

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 PaperReport" – Daily result
- "Daily result – One day": Excel export

"Daily result – All days"

Daily Report Giesecke & Devrient GmbH			
Machine ID : BPSC1F-B01ME			
Machine SN : 101190			
User ID : USER1			
Start : 06-15-2015			
End : 06-29-2015			
<hr/>			
Currency:GDN			
<hr/>			
06-15	35	685	CE >
06-29	66	1315	CE >
<hr/>			

Figure 72: "Daily Result – All Days" Report

(1) Overview of Bank-note 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"

Daily Report Giesecke & Devrient GmbH			
06-29-2015 12:36:41			
Machine ID : BPSC1F-B01ME			
User ID : USER1			
Machine SN : 101190			
<hr/>			
Date : 06~29		Currency:GDN	
<hr/>			
CE > 500 X	0 =	0	1
CE > 200 X	0 =	0	
CE > 100 X	0 =	0	
CE > 50 X	14 =	700	
CE > 20 X	16 =	320	
CE > 10 X	23 =	230	
CE > 5 X	13 =	65	2
<hr/>			
TOTAL	66 =	1,315	
<hr/>			

Figure 73: "Daily Result – One Day" Report

(1) Overview of Bank-note Processing

Includes the following details about the counted banknotes:

- Date of selected day
- Currency
- Denomination
- Quantity
- Value

(2) Total Result

Information on the total quantity and total value

Distributor Tool: Daily Result "Paper Report"

You can generate the following report using the Distributor Tool:

PAPER_REPORT_this time PaperReport.bin							
					Day Total	reconciled	Total Amount
Denom	Emission	fit(incl.ATM fit)	unfit	w/o-fitness			
EUR 5	ES1	0	3	0	3	0	15
EUR 5	ES2	12	0	0	12	0	60
EUR 10	ES2	6	0	0	6	0	60
EUR 20	ES2	13	0	0	13	0	260
EUR 50	ES1	29	3	0	32	0	1600
Sum		60	6	0	66	0	1995

Figure 74: Distributor Tool: Daily Result "Paper Report" Report

This report contains the following information:

- Currency
- Denomination
- Series
- 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 export the daily result report also as an Excel file in the Distributor Tool by entering the day desired.

If an SD card has been inserted into the back of the machine, the report contains the following information:

- Date of selected day
- Currency
- Denomination
- Series
- ATM and fit fitness criteria
- Unfit fitness criteria
- Quantity
- Manual inspection result
- Total value

Without an SD card, the report contains the following information:

- Currency
- Denomination
- Quantity
- Total value

B.2.6 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

B

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

Overview of Fitness 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

Figure 75: "Fitness" Report

(1) Overview of Bank-note Processing for "ATM" Fitness Criterion

Includes the following details about the counted banknotes:

- Currency
- Denomination
- Quantity

(2) Overview of Bank-note Processing for "FIT" Fitness Criterion

- Value
- Result with quantity and value

Includes the following details about the counted banknotes:

- Currency
- Denomination
- Quantity
- Value
- Result with quantity and value

(3) Overview of Bank-note 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

Summary of Fitness Report

Information on the total value

Giesecke & Devrient GmbH
 06-29-2015 12:41:34
 Machine ID : BPSC1F-B01ME
 User ID : USER2
 Machine SN : 101190

Currency:EUR

€ 500 X	0 =	0	1
€ 200 X	0 =	0	
€ 100 X	0 =	0	
€ 50 X	0 =	0	
€ 20 X	4 =	80	
€ 10 X	5 =	50	
€ 5 X	3 =	15	
TOTAL	12 =	145	2

Figure 76: "Fitness Deposit (ECB) Summary" Report

(1) Overview of Bank-note Processing

Includes the following details about the counted banknotes:

- Currency
- Denomination
- Quantity
- Value

(2) Overall Result

Information on the total quantity and total value

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 77: "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 78: "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 configuration menu of the machine, see → *Section 6.20.5 “Setting the FIT Mode”, p. 106.*

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 below for a 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 79: 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 80: 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 81: 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 additional 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.

Adhesive Tape

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 increases the thickness of a banknote. The machine checks the thickness of the banknote in defined areas.

Soiling

As regards the values, the greater the value, the smaller the thicker areas must be.

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.

C

C

D Status of the SD Card

If you operate the machine in a network, it is highly advisable to use an SD card. If the SD card is inserted in the relevant interface on the rear of the machine, the SD card can serve as temporary memory in the event of a connection error with the server. If there is no SD card inserted and the connection with the server fails, the data will be lost.

SD Card

If you insert the SD card into the machine, remove it or insert the card when switching on the machine, the status of the SD card appears briefly on the screen.



The SD card is inserted and working.

The SD card has been removed or was not inserted.

The SD card is write-protected.

The SD card has insufficient memory.

The SD card is the wrong format.

Data Transmission to SD Card

If you print or send a report and the connection to the printer or server fails, the machine stores the data on the SD card. The status of the data transmission appears briefly on the screen.



Saving progress

Saving was successful.

An error occurred during saving.

D

E Icons Used

This chapter contains an overview of all the symbols which appear on the user interface on the screen.

	Start singler automatically		Configuration setting
	Start singler manually		System information
	Check security features		Sort by issue
	Do not check security features		Sort by banknote denomination
	Operator 1 logged in		Sort banknotes according to face/reverse
	Operator 2 logged in		Sort by orientation
	Low speed level 600 BN/min		Customer setting
	Medium speed level 900 BN/min		Alarm with suspect banknotes off
	High speed level 1050 BN/min		Alarm with suspect banknotes on
	High speed level 1300 BN/min		Key tones off
	Print result automatically		Key tones on
	Print result manually		Alarm off
	Automatically add accounting unit in online conciliation mode		Alarm on

E

	Add accounting unit manually		Tone setting
	Accounting mode for different denominations		Select automatic singling/printing/adding
	Denomination sorting mode		Select speed level
	Face/reverse sorting mode		Print menu: Confirm printing Configuration menu: Confirm or enable function
	Orientation sorting mode		Print menu: Close Print menu Configuration menu: Cancel or disable function
	Issue sorting mode		Daily result: print all saved daily results
	Customer sorting mode		Daily result: Print daily result list
	Fitness sorting; quality: ATM		Overall result: delete overall result list
	Fitness sorting; quality: Fit		Print overall result list
	Fitness sorting; quality: Unfit		Save result and add current accounting unit to result list
	Disable fitness mode		Print result with serial numbers twice
	Disable serial number reading		Print result with serial numbers
	Serial number scanning		Offline conciliation
	Compare serial numbers		Ticket reader

	Check function		Selected singler is started automatically
	Multi-deposit: Enable wizard, or enter or correct deposit ID		Selected singler is started manually
	Multi-deposit: Disable wizard		Multi-deposit: Customer number
	Multi-deposit: Target value		Multi-deposit: Confirm deposit
	Multi-deposit: Cancel deposit		Multi-deposit: Correct customer number
	Multi-deposit: Correct target value		Multi-deposit: Cancel deposit without data loss
	2+0 Fitness Mode		2+0 Fitness Mode: ATM and fit quality
	2+0 Fitness Mode: Unfit quality		Maintenance required
	Message: Maintenance required		Keypad locked
	Keypad unlocked		SD card inserted and working
	SD card: Not enough memory		SD card: write-protected
	SD card: Wrong format		SD card: Removed or not inserted

E



Save report to SD card:
Progress



Save report to SD card: successful



Save report to SD card:
Error

F Technical Support

Germany	Giesecke+Devrient Currency Technology GmbH Prinzregentenstraße 159 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 (0)1908 926184 E-mail: gdgb.helpdesk@gi-de.com
Spain	Giesecke & Devrient Currency Technology Iberia, S.L. Calle Verano 15 Pol. Ind. Las Monjas E-28850 Torrejón de Ardoz (Madrid) Spain Phone: +34 91 627 0000 Phone: +34 91 627 7200
Russia	Giesecke & Devrient - LOMO, ZAO Torfjanaja doroga, 8 197374 Sankt Petersburg Russia Phone: +7 812 324 1862
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

F

	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
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 Building No: 6W, B Block, 7th Floor Dubai Airport Free zone P.O. Box 54325, 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:

China

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
Shenzhen Giesecke+Devrient Currency Automation Co., Ltd.
4/F, IC Design and Application Industry Zone
1089 Chaguang Rd. Shenzhen 518055
People's Republic of China
Phone: +86 800 830 7667 (local toll free number)
E-mail: custhotline@cn1.gi-de.com
Phone: +86 755 2650 7841 (from abroad)
E-mail: techhotline@cn1.gi-de.com
Giesecke & Devrient Asia Pacific Ltd.
2901 Hysan Place
500 Hennessy Road, Causeway Bay
Hong Kong
Phone: +852 3766 7300
E-mail: gdap.hotline@gi-de.com

Hong Kong

F

F

Glossary

A

A	ampere (physical unit of current)
AC	alternating current
ATM	automated teller machine
	sorting criterion for banknotes

B

BN	banknote
BPS	banknote processing system

C

CD	compact disk
	digital storage medium
CPU	central processing unit

D

DIN	German institute for standardization
DIN EN	German adoption of a European standard
DVD	digital versatile disk
	digital storage medium

E

EC	European Community (until December 1, 2009)
ECB	European Centralbank
EDP	electronic data processing
EMC	electromagnetic compatibility
	capability of electronic components working proper in an electronic environment
EN	European standard
Ethernet	technology for specification of data exchange in local networks
EU	European Union (since December 1, 2009)

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)

GS “Geprüfte Sicherheit” = “tested safety” certification

GUI graphical user interface

H

Hub hub in telecommunications - a device connecting physical nodes on the network with one another

HW hardware
mechanical and electronical equipment of a system

Hz hertz (physical unit of frequency)

I

ID identifier, a characteristic for clear identification

IEC International Electrotechnical Commission

L

LAN local area network
computer network limited to a company or campus site

M

M mega
prefix for units of measurement with a factor of one million

MB megabyte (unit of measurement for data volumes)

O

OCR optical character recognition

P

PC personal computer

R

RAM random access memory

S

SNTP simple network time protocol
standard protocol for synchronizing clocks in computer systems

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; a way of realizing a low-voltage network for electrical power supply in electrical engineering, with separate PE 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

UTC universal time, coordinated

V

V volt (physical unit of electrical potential)

VSI video surveillance interface

W

W watt (physical unit of power)

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