User manual

Currency counters

57 / 57U / 57UM/S / 55R / 55S / 55E

PRO 57 SERIES

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The PRO 57 series of banknote counters for accurate,efficient, high-speed and automatic counting of small to medium volumes of currency (including EURO and USD).
This series provides fast and reliable counting as well as counterfeit detection via 3 methods: optical density, UV reflection, and magnetic characteristics.
These devices are ideal for use at payroll desks, currency exchanges, supermarkets, and other retail outlets. The external display allows a configuration of the device in the workspace that is comfortable and convenient for the operator.
The PRO 55 counters are designed for accurate, efficient, and quiet processing of small to medium volumes of United States dollars (PRO 55S) and EURO (PRO 55E). These counters are ideal for use at supermarkets and other retail outlets, as well as accounting departments, check cashing locations, offices, etc. This manual will help you to easily and quickly become acquainted with the device, its functions, and its capabilities. Please read this manual to ensure proper operation of the device.

1 PRO 57 series Main functions

• This device is designed for counting banknotes, creating batches of banknotes, keeping a running sum total of all counted banknotes, and verifying the authenticity of banknotes based on anti-counterfeiting measures incorporated into difference currencies including EURO and USD
• Counting speed 800/1200/1500 banknotes per min
• MG detection for EURO and USD; 10 levels
• UV detection; 10 levels
• Optical density; 10 levels
• Preset batch mode: buttons 0-9
• Summation with viewing of the last stack
• Manual and automatic start
• Auxiliary hopper plates
• Audio confirmation of operation modes
• External display

2 Specification

• Counting speed	PRO 57 series	800/1200/1500 banknote/min
	PRO 55	1000 banknote/min
• Hopper capacity		150 banknotes
• Stacker capacity		200 banknotes
• Default capacity		0-9999
• Range of specific counting		1-999
• Power consumption		70 W
• Power supply		220V/50Hz
• Net weight		6.0 kg
• Gross weight		7.0 kg
• Overall dimensions		250x170x290 mm

3 Appearance

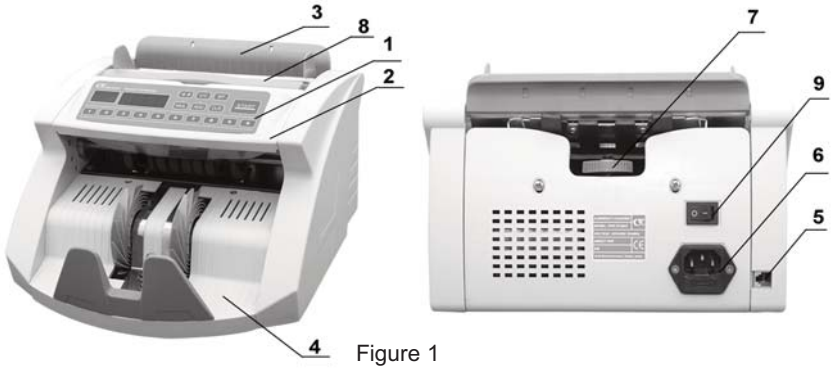


Figure 1

1. Control panel
2. Cover
3. Hopper
4. Stacker
5. External display port
6. Power cord
7. Paper thickness adjustment screw
8. Carrying handle
9. Power switch

4 Control panel functions

1. Main count display
The main count display depicts counting results and operational information in case of changes in the following parameters:
- Counting speed
- Sensitivity level of magnetic sensor
- Sensitivity level of UV sensor
- Sensitivity level of optical density

2. Batch display
Depicts:
- a number of desired banknotes in batch mode
- a number of counted banknotes in the last stack (summation mode on)
- an error code

3. “START” button
The button starts:
-counting

-continues counting and clears error messages on display 2
-clearing counting result on the main display 1
-storing changes to the counter settings

4. “ADD” button

ON/OFF summation mode. Pressing the button once switches ON the summation mode (indicator lights up). Pressing the button a second time switches OFF the mode.

5. “UV” button

Switch ON/OFF UV detection (by default indicator is ON)

6. “E$” button

Switch ON/OFF magnetic detection for EURO and USD (by default indicator is ON).

7. Digit buttons (0-9)

Used for entering number values on display 2 in batch mode (counting of specified number of banknotes). Press any digit button (from 0-9) to enter batch mode automatically.

8. “MUL” button

Automatic/manual counting mode. To start calculations in manual mode it is necessary to press “**START**” button. In automatic mode (indicator is off by default) counting starts automatically after you place a stack of banknotes in the hopper.

9. “CLR” button

This button clears the figures on display 1 and 2.
After pressing the button, the device quits batch mode and resets the summation and counting results.

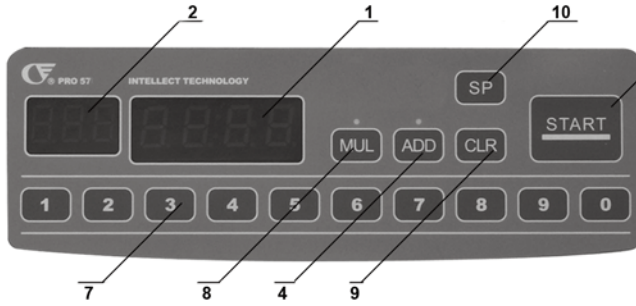
10. “SP” button

The “**SP**” button changes the counting speed. Each pressing of “**SP**” button changes the speed. The display will depict the current speed value. After pressing “**START**” button, the counter will save the set speed value and uses it in the future.

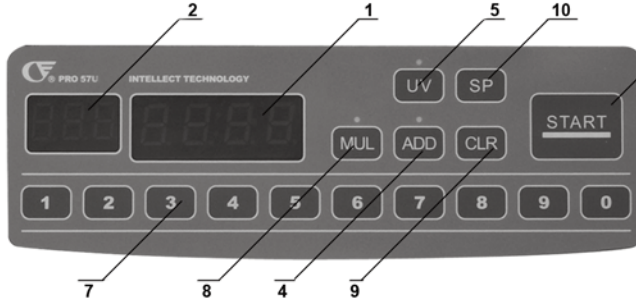
5 Safety precautions and maintenance rules

• Read this manual before operation
The manual should be available to operator.
• The device should be installed on an even horizontal surface, away from water and dangerous objects
• Don’t place the device in an area where it can be affected by direct sunlight, directional artificial light, strong vibration, or dust
• Do not operate the device with wet hands
• Do not expose to water (or other liquid). Avoid foreign objects
• Avoid dropping the device
• During operation:
When finished be sure there are no banknotes in the hopper or transport system
Figure 2
• Clean the device regularly and service the device as needed at a licensed service center to comply with the specified parameters
• Do not disassemble, repair or attempt to update the counter on your own. This can

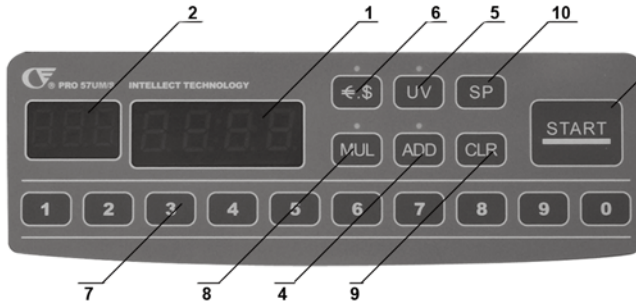
PRO 57



PRO 57U



PRO 57UM/S



PRO 55E (EURO)
PRO 55S (USD)
PRO 55R (RUBLES)

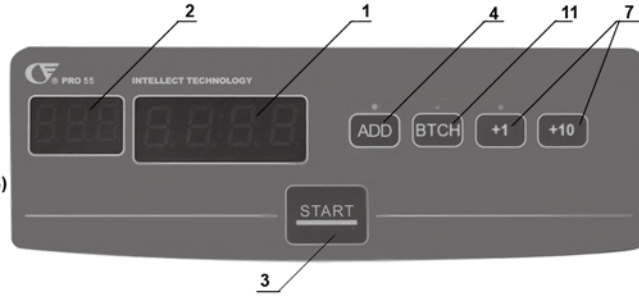


Figure 2

result in damage to the device or injury to the operator. Contact a licensed service center in case of failure
• Do not turn on the counter if the power cord is damaged
• If the device was exposed to cold for an extensive period of time, it is necessary to keep it at the room temperature for no less than 4 hours
Remember! The producer is in no way responsible for damage to the device or injury to the operator in the event of incorrect operation /care of the device.

6 Counterfeit detection

6.1. UV detection (for PRO 57UM/S and PRO-57U models)
The UV detector is designed for various currencies and all banknote types.
The counter automatically tests the UV reflection level of the banknotes. If the level is incorrect, the device stops counting and “Eu” error is displayed. Suspicious banknotes will always be placed on top of the output stack. Such banknote should be verified for authenticity. Remember that original banknotes accidentally exposed to hostile environment can also have an incorrect UV-level.
Press “UV” button to switch on the mode. The backlighting LED will light up. The UV detector functions in any counting operation mode.
6.2. Magnetic detection (for PRO 57UM/S model)
The magnetic detector is designed for EURO and USD detection.
The device automatically tests the presence of magnetic marks on the banknote. If there are no MG marks, the counter stops counting and “En” error is displayed. Suspicious banknotes will always be placed on top of the output stack. Such banknote should be verified for authenticity.
Press “**E$**” button to switch on magnetic detector. The backlighting LED will light up.

7 Counter operation

7.1. Preparation
• Connect the power cord to the device as shown in Fig. 1-6
• Turn power switch (Fig. 1-9) ON
• The “PRO” logo will appear on the screen while in batch mode
• The model type will be seen on the main screen. If an error message is shown on the batch mode display as listed in Table 8, contact a service center
• Counter starts
• When self test mode is finished, the display will read “0” and the counter is ready for operation
Optical density detection is switched on as default.
7.2. Counting procedure
ATTENTION! To avoid errors in counting, sort banknotes and put aside the following: banknotes with excessive wear and tear, banknotes that have been exposed to chemicals including detergents, banknotes that have unofficial markings on them, etc.

The PRO 57 series operates differently than other types of counters. When banknotes are passed through the device, they are drawn from the top of the stack, not from the bottom. Special attention should be paid to the correct stacking of the banknotes before attempting any operations.
-Banknotes should be placed in the hopper in a neat stack with the first bill facing up
-Banknotes should be placed into the hopper perpendicular to the tray. The notes should then be leaned back flat against the tray. Banknotes will be loaded into the device automatically
Wrong banknote position can cause errors, banknotes being ejected from the device, crumpling or jamming.
-Place banknotes in the hopper
-The counter will count banknotes automatically
-The result will be indicated on the display
-Repeat operation up to Table 7.2., when necessary
-When counting is finished clear count display results by "**START**" or "**CLR**" button
If an error message occurs, see Table 8

7.3. Batch operation mode

(Counting mode for a specified number of banknotes).
- Enter a 2-digit number corresponding to the amount of banknotes to be calculated.
Press digital buttons (Fig. 2-7) to set the number of banknotes, that need to be counted
- Repeat from the beginning of Table 7.2.
- Remove banknotes from the stacker
- Add banknotes if necessary
- Press "**CLR**" button to clear display 2 after counting
- If an error occurs during counting, see Table 8
- Repeat from the beginning of Table7.3.

7.4. Summation mode

- Press "**ADD**" button and the LED indicator will light up
- Repeat operations up to Table 7.2.
- When there are no more banknotes in the hopper, remove banknotes from the stacker
- Put a new stack of banknotes into the hopper
- Repeat from the beginning, when necessary
- The display 1 will show the total result of counted banknotes
- In batch mode, display 2 shows the amount of counted banknotes in the last stack
- Clear count display by pressing "**CLR**" button when finished
- Press "**ADD**" button again to leave summation mode
- If an error occurs during counting, see Table 8
- Repeat up to Table 7.4.

8 Function settings and troubleshooting

8.1. Adjustment of the slot size

Remember! Adjusting the feeder slot size is possible by using the paper thickness adjustment screw (Fig. 1-7) on the rear panel. Turn the screw counterclockwise to decrease the feeder slot size and clockwise to increase the size. The feeder slot should

be larger for excessively worn banknotes, dirty banknotes and USD. The feeder slot should be smaller for “new” banknotes. Adjusting the feeder slot size should be done slowly and smoothly, with adjustments of 30 degrees.
If adjusting the feeder slot size results in the sensor responding slowly, slow separation of joined banknotes, irregular stacking of banknotes, and/or an error “F-1” occurs, then the slot size should be smoothly increased without exceeding a rotation of 30 degrees.
If adjusting the feeder slot size results in “Ed”, and/or “dd” error codes occurring frequently, then the slot size should be smoothly decreased without exceeding a rotation of 30 degrees.

8.2. Change of settings of PRO 57 model

8.2.1. Changing the magnetic detection sensitivity level

Hold “**E$**” button for 4 seconds. “En” sign will be seen on the display 2. The main display will show the sensitivity level of the detector. Set the necessary level of sensitivity from 0 to 9 (high sensitivity level) using digital buttons 0-9.
Press “**START**” button to enter a new figure in the data store and exit sensitivity level change mode.

8.2.2. Changing the UV detection sensitivity level

Hold “**UV**” button for 4 seconds. “Eu” sign will be seen on the display 2. The main display will show the sensitivity level of the detector. Set the necessary level of sensitivity from 0 to 9 (high sensitivity level) using digital buttons 0-9.
Press “**START**” button to enter a new figure in the data store and exit sensitivity level change mode.

8.2.3. Changing the optical density sensitivity (banknote transparency)

It should be noted that a single stack of banknotes can contain bills with a wide range of wear and tear, which results in the notes having different densities. A high sensitivity level can be used to alert the operator when notes have different density due to wear and tear or forgery. Hold “**MUL**” button for 4 seconds. “Ed” sign will be seen on the display 2. The main display will show the sensitivity level of the detector. Set the necessary level of sensitivity from 0 to 9 (high sensitivity level) by using digital buttons 0-9. Press “**START**” button to enter a new figure in the data store and exit sensitivity level change mode.

Attention! New settings are stored for future use.

Remember! Wrong settings can cause failures and frequent error messages. Error messages listed in Table 8.

Settings by default correspond to average values:

En=5 Eu=5 Ed=5 dd =4

8.3. Change of settings of PRO 55 model

Changing the optical density sensitivity (banknote transparency)

It should be noted that a single stack of banknotes can contain bills with a wide range of wear and tear, which results in the notes having different densities. A high sensitivity level can be used to alert the operator when notes have different density due to wear and tear or forgery.
Hold “**ADD**” button for 4 seconds. “Ed” sign will be seen on the display 2. The main display will show the sensitivity level of the detector. Set the necessary level of sensitivity

from 0 to 9 (high sensitivity level) by using digital buttons 0-9.
Press “**START**” button to enter a new figure in the data store and exit sensitivity level change mode.

Technical maintenance
In order to provide the best functioning of the device, it is necessary to comply with the following simple requirements:
Switch off the device, when not in use
Use protective cover, when not in use
Clean the hopper and stacker with a clean dry cloth. Sensors can cause errors when dirty. It is recommended to carry out preventive measures, including partial disassembling of the counter each 30 days by an engineer in the service center.

Error codes

Error Code	Ursache	Fehlerbeseitigung
F-1	1. Passing of halved banknote 2. Failure of left or right sensors of the counter	1. Remove the banknotes from the stacker and take away the suspicious banknote (lying on the top). Repeat the counting procedure 1. Contact appropriate
dd	Chain note detected	Remove banknotes from the feed opening, and repeat counting procedure.
Ed	Double notes detected, notes are stuck together	1. Remove the banknotes from the hopper and press “START” button to continue counting procedure 2. Adjust the slot, see Table 8.1.
Eu	Suspicious note detected by UV	Remove the suspicious banknote (lying on the top), and press “START” button to continue counting procedure. Use additional verification methods for suspicious banknote
En	Suspected note without magnetic marks detected	Remove the suspicious banknote (lying on the top), and press “START” button to continue counting procedure. Use additional verification methods for the suspicious banknote. Remember that detection is designed for EURO and USD only.

Press "**START**" button to clear error message and continue counting procedure.

System errors. Service

Error Code	Ursache	Fehlerbeseitigung
E-0	Left sensor is either blocked or failed.	Switch on/off the power, clean the sensor or contact service centre.
E-1	Right sensor is either blocked or failed.	Switch on/off the power, clean the sensor or contact service centre.
E-2	Sensor in the stacker is blocked by banknotes or is dirty.	Remove banknotes from the stacker, clean or replace the sensor.
E-3	Tachometer sensor is either dirty or failed.	Clean or replace the sensor.

In case of system errors contact the appropriate Service centre.

9 Warranty

Manufacturer guarantees proper functioning of the device during the warranty period since the date of sale under condition of compliance with maintenance and storage procedures described in this manual. After unpacking the device please keep the package and technical description. Warranties are canceled in the event that the device was not transported in the original packaging or maintenance procedures were violated. Manufacturer is not responsible for device malfunction as a result of improper maintenance, storage and transportation including mechanical failures.
In case of the device failure during the warranty period, the customer has the right to have it repaired in our service center for free. The service center accepts equipment for cleaning due to dust and mud, however cleaning equipment from dust and mud is not included in the warranty and is charged separately.
Warranty service does not include any training for equipment maintenance or other use of the device (connection, testing, customizing, preventive works etc.) which the customer can complete on their own by referencing the attached manual.
Producer is entitled to introduce updated software, not described in the current manual.

Warranty service is not available in the following cases:
- Absence of a warranty card, an incorrectly filed warranty card, or other invalid card
- If operation or maintenance rules mentioned in the manual were violated
- If there is mechanical damage to the equipment
- If there are foreign objects or liquid inside of the device

The present warranty does not apply to lamps, batteries, belts, network adaptors, power units, safety fuses, brushes, parts of the body of the product or any other parts which have a naturally limited period of service including failures caused by power supply failures. Replaced defective parts are to be considered the property of the producer. The owner delivers faulty equipment to the service center at their own expense.