

User manual

Money detector

English

12 / 12M / 12P / 12WMP / 12PM / 12LPM

PRO-12 SERIES



www.pro-intell.com

PRO Intellect Technology Corporation offers the PRO-12 series of counterfeit currency detectors. This series is designed for the authentication of banknotes from various currencies, including United States dollars and the euro, as well as securities and documents such as licenses, bonds, and excise stamps. The multi-stage verification accurately detects counterfeit banknotes and documents that simple single-stage devices may fail to detect. This device is designed for use in banks, accounting departments, currency exchanges, supermarkets, etc.

	PRO-12	PRO-12P	PRO-12M	PRO-12WP	PRO-12PM	PRO-12LPM
UV lamp, W	2x6	2x6	2x6	6	2x6	2x6
Daylight lamp, W		4		4+6	4	4
Loupe magnification						2.5
Magnetic sensor			+		+	+
Activation time , s	1					
Wavelength, nm	365					
Power supply	110/220V 50/60Hz					
Power consumption, W	15	15	15	8	15	15
Dimensions, mm	110x270x110	140x270x140	40x270x140	40x270x140	40x270x140	40x270x140
Dimensions, inch	4 3/10(L) x 10 3/5(W) x 4 3/10(H)	5 1/2 (L) x 10 3/5(W) x 5 1/2 (H)	5 1/2 (L) x 10 3/5(W) x 5 1/2 (H)	5 1/2 (L) x 10 3/5(W) x 5 1/2 (H)	5 1/2 (L) x 10 3/5(W) x 5 1/2 (H)	5 1/2 (L) x 10 3/5(W) x 5 1/2 (H)
Net weight, g	650	930	930	930	930	930
Net weight, lb	1.4	2.1	2.1	2.1	2.1	2.1

PRO-12

- Two 6W UV lights (total power 12 W)

**PRO-12M**

- Two 6W UV lights (total power 12 W)
- Magnetic sensor

**PRO-12P**

- Two 6W UV lights (total power 12 W)
- 4W fluorescent light
- Working table 50x90mm with ruler



PRO-12WPM

- 6W UV light
- Two fluorescent light (upper 6W lamp, lower 4W lamp)
- Magnetic sensor
- Working table 50x90mm with ruler



PRO-12PM

- Two 6W UV lights (total power 12 W)
- 4W fluorescent light
- Magnetic sensor
- Working table 50x90mm with ruler



PRO-12LPM

- Two 6W UV lights (total power 12 W)
- 4W fluorescent light
- Magnetic sensor
- 2.5x Magnifying glass
- Working table 50x90mm with ruler
- Automatic power on/off sensor (~ 5 min based on settings)





Figure 1

1. Desktop surface.
2. Power switch (rear wall).
3. Operation mode switch (for PRO-12 and PRO-12M detectors: Power switch).
4. Fluorescent light working surface (for 12P, 12WP, 12PM, 12LPM models)
5. Magnetic sensor (for 12M, 12PM, 12LPM models)
6. Magnetic sensor indicator
7. Power on/off sensor (for 12LPM model) – to activate the device, place a banknote over the on/off sensor
8. 2.5x magnification lens (for 12LPM model)



UV detection



White transmitted light detection



Magnetic sensor

1. The device should only be used on an even horizontal surface. Keep the device away from water or small objects that can become embedded in the internal components of the device.
2. Do not place the device in direct sunlight or any strong artificial light that can interfere

with the UV or fluorescent light. Take precautions to protect the device from vibration or dust.

3. If the device has been exposed to cold for an extensive period of time, it should be kept at room temperature for at least 3 hours before use.

4. **WARNING!** Do not use the device for more than 8 hours consecutively. After 8 hours, the device should be turned off to prevent the UV or fluorescent light from overheating. Do not leave the device turned on without an operator. The manufacturer is not responsible for injury or damage to the device in the event of improper use of the device.

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Ultraviolet light banknote test

Turn the power switch to the “I” position.

It is recommended that the device is placed out of direct sunlight or any other type of strong directional light that may interfere with the operator’s ability to use the UV lamp correctly. The UV lamp allows for verifying the paper composition (through luminescence) and luminescent marks. It also allows for the operator to check for signs of tampering with the banknote, including altering official markings on the note or whether or not the banknote has been in contact with chemicals that alter its properties.

Under UV light, banknote paper should not glow. However, official markings including luminescent marks that are normally hidden under regular lighting conditions should be easily seen under UV light. The UV security features incorporated into supported currencies are shown in the Appendix.

Counterfeit banknotes printed on common (non-official) white paper will glow brightly under UV light. However, it should be noted that the same glow can be seen when authentic banknotes have been exposed to certain environments, especially laundry detergent or bleach. Further authentication should be used to determine the status of these banknotes.

Counterfeit banknotes printed on low quality paper (such as newspaper or blotting paper) do not glow under UV light. However, it is impossible for the same quality of images to be printed on this type of paper, especially in relation to watermarks. When an authentic watermark is placed under UV lighting, it is barely visible, while a counterfeit watermark can be clearly seen.

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Verification in the white transmitted and oblique light

Switch the device to the fluorescent light mode

This method of testing is used to verify visual characteristics of the banknote that are visible under fluorescent light. The face and the reverse of the banknote should be tested. The following features should be verified:

- evidence of erasure
- accuracy of the currency’s patterns
- continuity of line
- presence of visible fibers

- accuracy / presence of microprinting
- presence of watermarks

Foreign currency images are shown in Appendices 1.2, 2.2., and 3.2.

For the PRO-12WP, the oblique light test is possible.

Turn the power switch to the “I” position

Magnetic marks for supported currencies are shown in Appendices 1.3, 2.3, and 3.3.

Place the banknote face up on the working surface and move the banknote across the magnetic sensor where magnetic marks should be present on the banknote. If a magnetic mark is present, the device will provide audio confirmation and the indicator will light up.

To check for the presence of magnetic ink on the banknote, move the banknote across the magnetic sensor. Do not attempt to check a banknote more than once, as the process can create static electricity that can cause the device to return a false positive for the presence of magnetic ink.

The metallic strip embedded in Russian rubles can trigger the magnetic sensor, despite the lack of magnetic ink.

Moving a banknote across the sensor 2 or 3 times is sufficient for testing. More than this can result in errors in the magnetic scanning process.

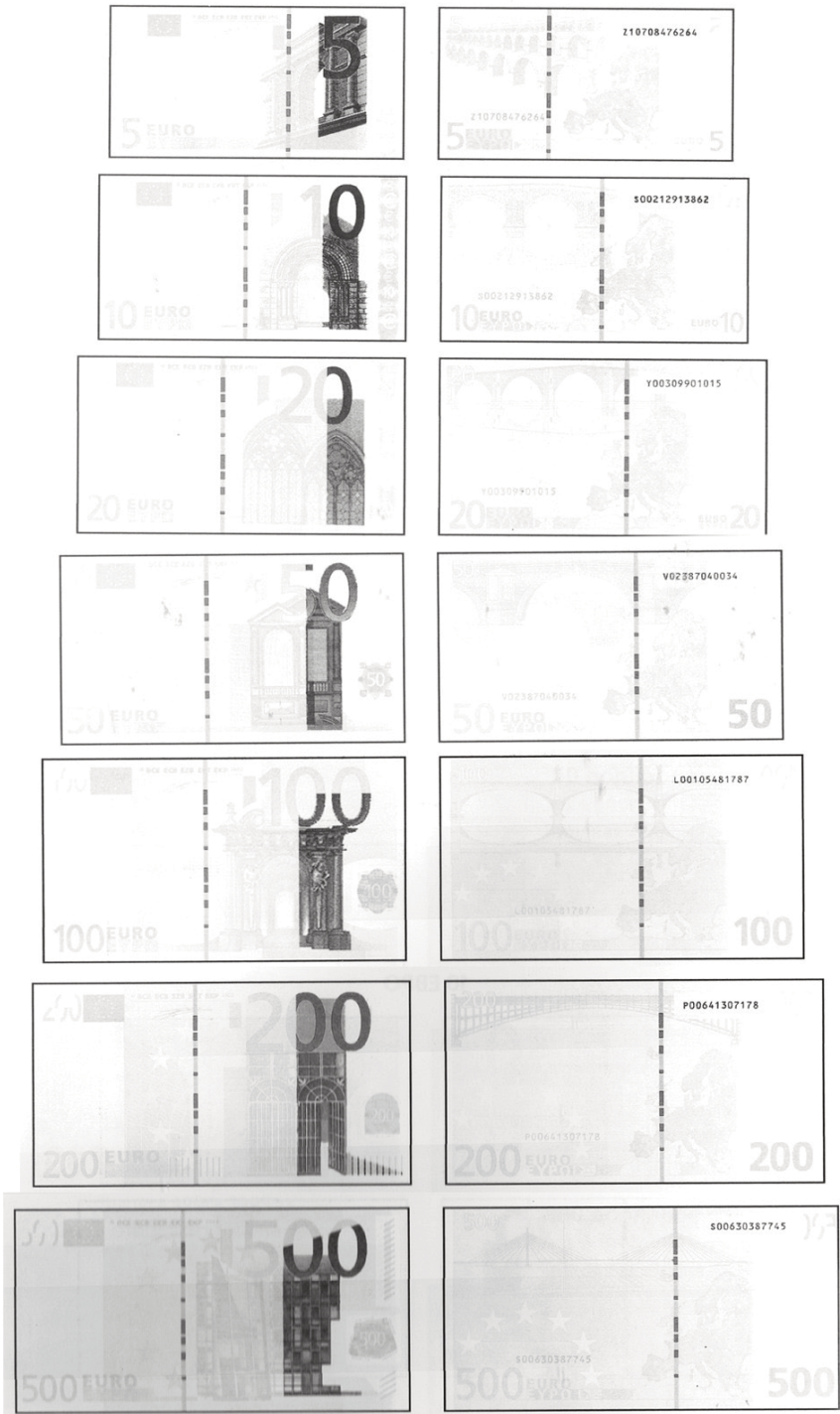
It is important to avoid touching the magnetic sensor with metallic objects or the operator’s fingers during the scanning process.

Cell phones can cause electromagnetic interference during the scanning process if a call is placed too close to the device.

ATTENTION: It is possible for counterfeit banknotes to imitate the magnetic properties of an authentic banknote if a magnetic substance has been rubbed on the surface of the banknote. Such banknotes will cause the sensor to give a positive to the presence of magnetic ink where there should be no ink or can give a negative where there should be ink.

ATTENTION: Some types of copiers, laser printers, and other devices can imprint magnetic substances onto the surface which will cause the sensor to give a positive.

EURO. Magnetic marks situation



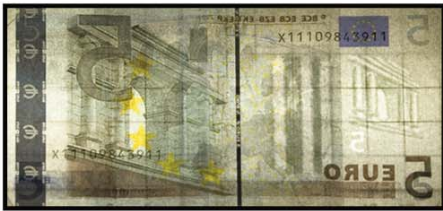
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EURO. Correct image under UV-light



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EURO. Correct image under backlight



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USD. Magnetic marks situation



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USD. Correct image under UV-light



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USD. Correct image under backlight



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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.

