



Ver. 050413



PCD Service Manual

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Updated on April 13 2005

This manual is under updating during April, not final printing version.

PCD: Portable Counterfeit Detector



PCD SERIES: MODEL INFORMATION

Model Name	Detecting Currency	Remarks
PCD-D	USD	
PCD-E	EUR	
PCD-R	RMB	
PCD-Y	JPY	
PCD-DY	USD, JPY	
PCD-DE	USD, EUR	
PCD-DR	USD, RMB	
PCD-LC	Local Currency	
PCD-DLC	USD, Locally Currency	

- LC: Local Currency.
- Maximum number of currency in a unit: two currencies.



◆ Features

1. Accurate Counterfeit Detection (Super K, Super Note, Ultra Super Note)

2. Potable and Compact Design

The smallest portable counterfeit detector in the world with automatic feeding system.

3. Simple and Easy Operation

To start operation all you have to do is simply bill insertion.

4. Suitable for Wide Range of Markets

Banks, Supermarkets, Wholesale & Retail Shops, Duty Free Shops, Hotels, Casino, Taxi etc.

5. Easy Upgrade

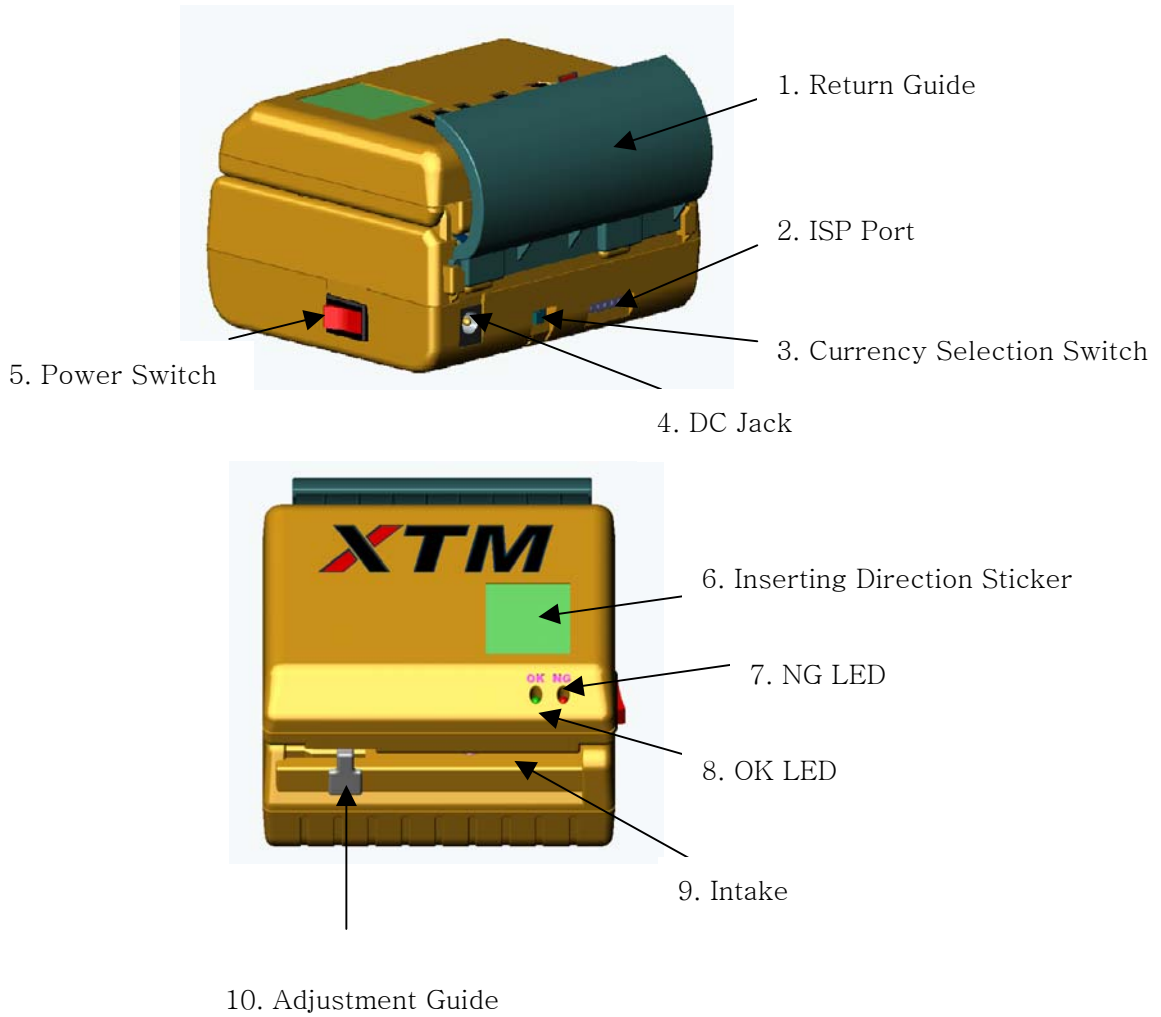
Directly download the upgraded version of software from PC/Internet.

◆ Specifications

Feeding Type	One-by-one, Automatic Feeding System
Detecting Currencies	All denomination of US dollar since 1970, Sophisticated Counterfeits including Super K, Super Note, Ultra Super Note) Euro, RMB and other local currencies
Detection Technology	Infra Red, MR(Magnetic Pattern Recognition), Optimized Software.
Detecting Speed	Apprx. 0.8 sec/note
Insertion direction	One way (face up, short-lengthway)
Dimension / Net Weight	105mm(W) x 90mm(D) x 65mm(H) Apprx. 300g
Power Source	DC12V ADAPTOR



◆ **Guides to Components**



Parts	Description
1. Return Guide	Guides the bill coming through the unit.
2. ISP Port	Upgrades software by being connected to computer.
3. Currency Selecting Switch	Selection switch for two-currency detection model.
4. DC Jack	Connects Adaptor
5. Power Switch	Power Switch
6. Inserting Direction Sticker	Shows insertion direction of bills.
7. NG LED	Turns "ON" with red light when counterfeits are detected.
8. OK LED	Turns "ON" with green light when bills are recognized as genuine
9. Intake	Bills are inserted into this part.
10. Adjustment Guide	Adjust this to let the bills aligned rightly without being skewed.



◆ Safety Precautions

1. To prevent any possibility of electric shock, do not immerse the device in water or permit liquids inside the device.
2. Do not operate the device for any other purpose other than its intended use.
3. Do not allow other materials to enter the device except bills.
4. Do not operate the unit with a defective adaptor having a damaged cord.
5. Use quality approved adaptor, if not, it could cause serious problem on the device.
6. Turn off the power when unattended or not in use for a period of time.

◆ Operating Instructions

1. Getting Started

- 1) Install the return guide on the backside of the unit.
- 2) Connect the adaptor into the unit.
- 3) Turn the Power Switch On:

As soon as the motor initialized with one short beep sound, NG LED and OK LED turns ON with light for a second, which indicates the unit is normally ready to operate.

If NG LED keeps flashing, which indicates the unit is in abnormal status; Please check the unit with the error checking method.



2. How to adjust “Currency Selection Switch”

- 1) For the two-currency model, before starting detection, firstly adjust the currency selection switch for the bill you want to detect.
- 2) On the backside of the unit, there is currency selection switch between communication port and adaptor inlet. As shown in the [Picture 1], when selected into \$ side (left side), which is the dollar detection mode, and the right side selection means Euro or the local currency if any. When changed the switch, it sounds a beep.



[Picture 1] Dollar Detection Mode



[Picture 2] LC (local currency) Detection Mode

For PCD-DE, Euro Detection Mode

For PCD-DR, RMB Detection Mode

3. Adjusting the Guide

Align the bill to the right edge of the unit with the correct direction depending on the detecting currency. Adjust the guide to the proper fit. Otherwise, the bill can be skewed during insertion, and can affect on detection accuracy.



4. Inserting a bill

Feed a bill into the Intake, and the bill automatically comes through the unit.

Make sure that bills should be inserted according to the correct inserting direction depending on currency as per the following picture. As well, bills should be aligned at the right edge of the unit. Please insert a bill, touching the right end of the unit with the direction



Dollar



Euro



Chinese RMB



5. Detecting Counterfeit Currency

- 1) When bills are recognized as genuine, OK LED turns "ON" with green light
- 2) When counterfeits or suspected bills are detected, it rejects the bill with beep sounds and NG LED turns "ON" with red light. According to the number of beep sounds, the cause of rejection can be checked. (Please refer to the "**Alarming for the Suspected Bills**" as bellow.)



◆ Error Checking Methods

1. Hardware Initialization Errors

No.	Beep Sound Indication	Cause
1	NG LED ON with one beep	CENTER-SENSOR Error
2	NG LED ON with two beeps	LEFT-SENSOR Error
3	NG LED ON with three beeps	RIGHT-SENSOR Error
4	NG LED ON with four beeps	ENCODER-SENSOR
5	NG LED ON with five beeps	FEED ERROR

2. Alarming for the Suspected Bills

When suspected bills are detected, it rejects the bill with beep sounds. Depending on the number of beep, it indicates different status of the detected bill.

NO	Beep Sound Indication	Cause
1	NG LED ON with one beep	IR Pattern ERROR
2	NG LED ON with two beeps	MR Value ERROR (Min & Max)
3	NG LED ON with three beeps	MR Pattern ERROR
4	NG LED ON with four beeps	LENGTH ERROR (long & short)



◆ **Counterfeit Detection Sensitivity Adjustment by dip switches**

When you open the top cover of the unit, there is a switch unit with 10 dip switches. By adjusting each switch, you can manually set the counterfeit detection sensitivity levels of the machine.

Currency	Sensors	Sensitivity Level *	SW #1	SW #2	SW #3	SW #4	SW #5	SW #6	SW #7	SW #8	SW #9	SW #10
USD	IR	1	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
		2	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
		3	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
		4	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
	MR	1	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
		2	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
		3	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
		4	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
EUR / LC	IR	1	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
		2	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
		3	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
		4	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF
	MR	1	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
		2	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF
		3	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
		4	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON

Counterfeit Detection Sensitivity Level

Level #1: Low

Level #2: Middle (default setting)

Level #3: High

Level #4: Very High

Please note:

Level #1: When set with Sensitivity Level #1, it accepts genuine bills without errors, but some counterfeit bills can be passed through.

Level #2: This level is factory default setting, mildly adjusted for both genuine and counterfeit bills.



Level #3: This level is higher level than level #2.

Level #4: When set with Sensitivity Level #4, it detects counterfeits with higher accuracy, but some genuine bills can be rejected. This level is preferred to use for distributor's demonstration purpose of counterfeit bills only.