



Bill Recycler

**BRV**

Series

Installation Guide

International Currency Technologies Corp.

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## 1. Introduction

### 1-1. Features

- BRV is the latest Bill Acceptor equipped with Recycle-unit, the capacity of the Recycle-unit is up to 30 bills.
- BRV supports various type of interface in vending machine or payment system.
- Standard MDB bezel for easy installation.

## 2. Specifications

**Validation rate** 96% or higher

*Note: The acceptance rate excludes notes that are dirty, wet, broken or wrinkled.*

**Bill width validated** 62~68mm  
66~72mm

**Bill Insertion** 4 - way Acceptance

**Escrow** 1 bill

**Transaction Speed** Approx. 4 sec. to recycler  
Approx. 3 sec. to bill box

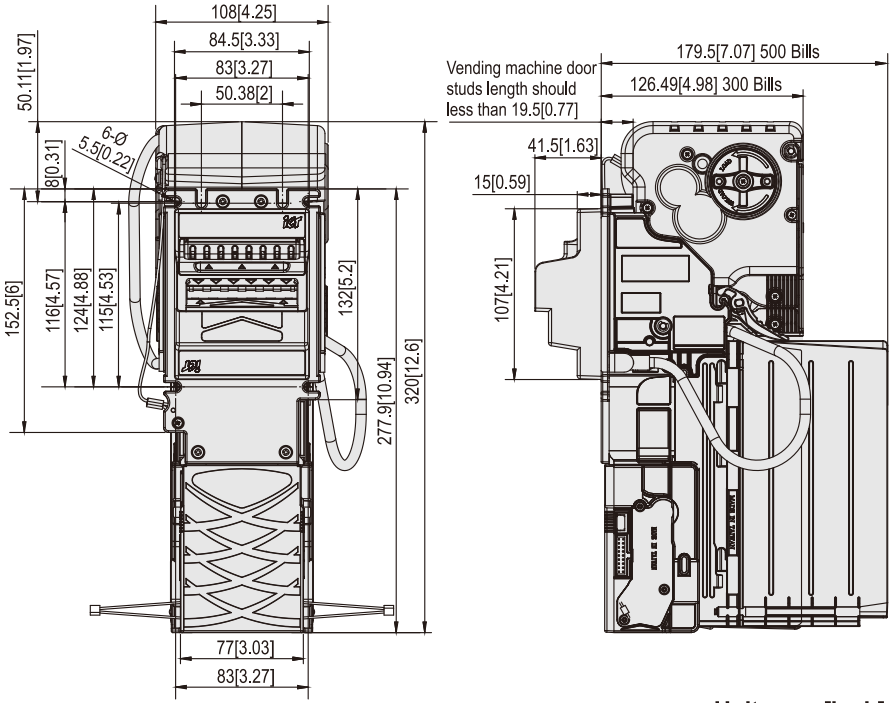
**Interfaces** RS232(ICT-BC)  
JPSTD  
MDB

<b>Power Sources</b>	12V DC±10% 24V DC±10% 34V DC±10%
<b>Power Consumption</b>	Standby: 350mA, 4.2W Operation: 2.5A, 30W Maximum: 4A, 48W
<b>Environment</b>	Operating Temperature : 0°C~60°C Storage Temperature : -30°C~70°C Humidity : 30%~95% RH (no condensation)
<b>Firmware Updates</b>	USB flash disk MDB-FTL MTB
<b>Bill Box Capacity</b>	Bill box: Approx. 300 bills Approx. 500 bills Recycler: Approx. 30 bills

### **3. Packing List**

<b>Main</b>	Bill Recycler
<b>Accessory</b>	Harnesses: Refer to 5-1 BRV Installation Guide BRV DIP Switch Setting Guide

## 4. Dimension



Unit : mm [inch]

4 FIG.01

## 5. Installation

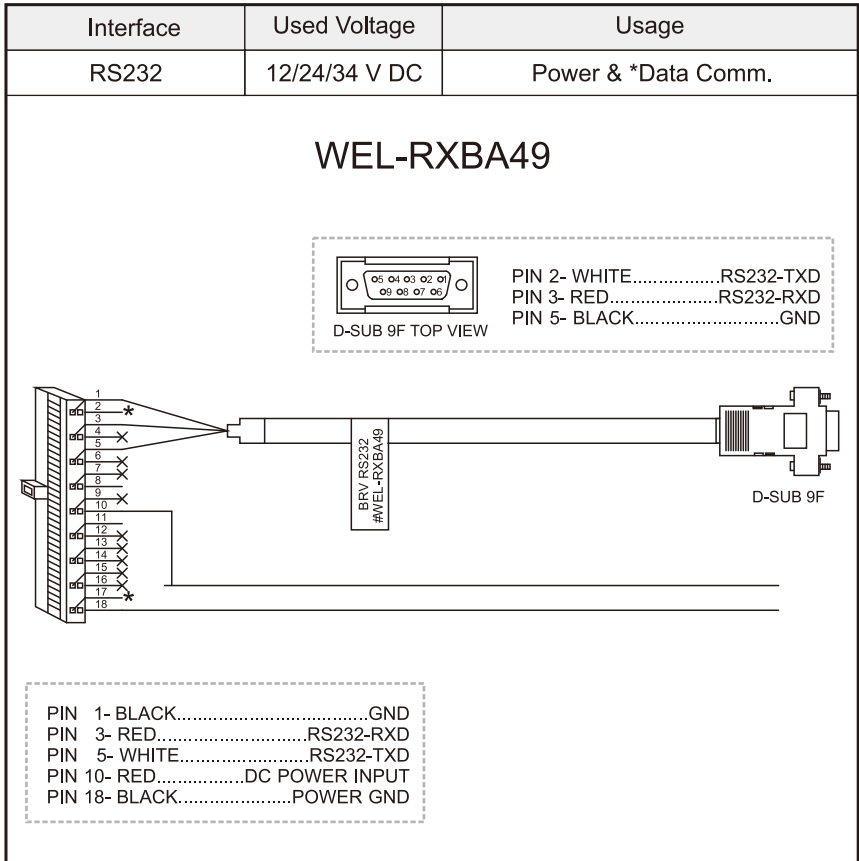
### 5-1. Harness Application

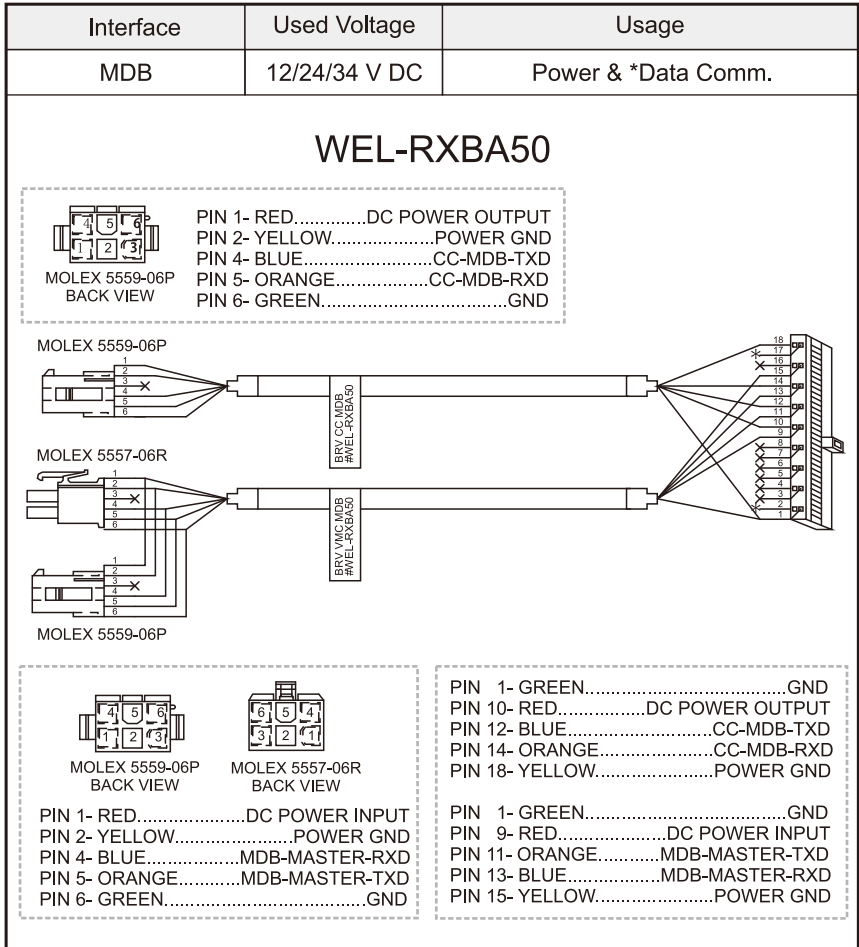
5-1 TABLE.01

Interface	Used Voltage	Usage	Harness	Page
RS232	12/ 24/ 34V DC	Power & *Data Comm.	WEL-RXBA49	5
MDB			WEL-RXBA50	6
JPSTD			WEL-RXBA46	7

\*Data Comm. : Data Communication.

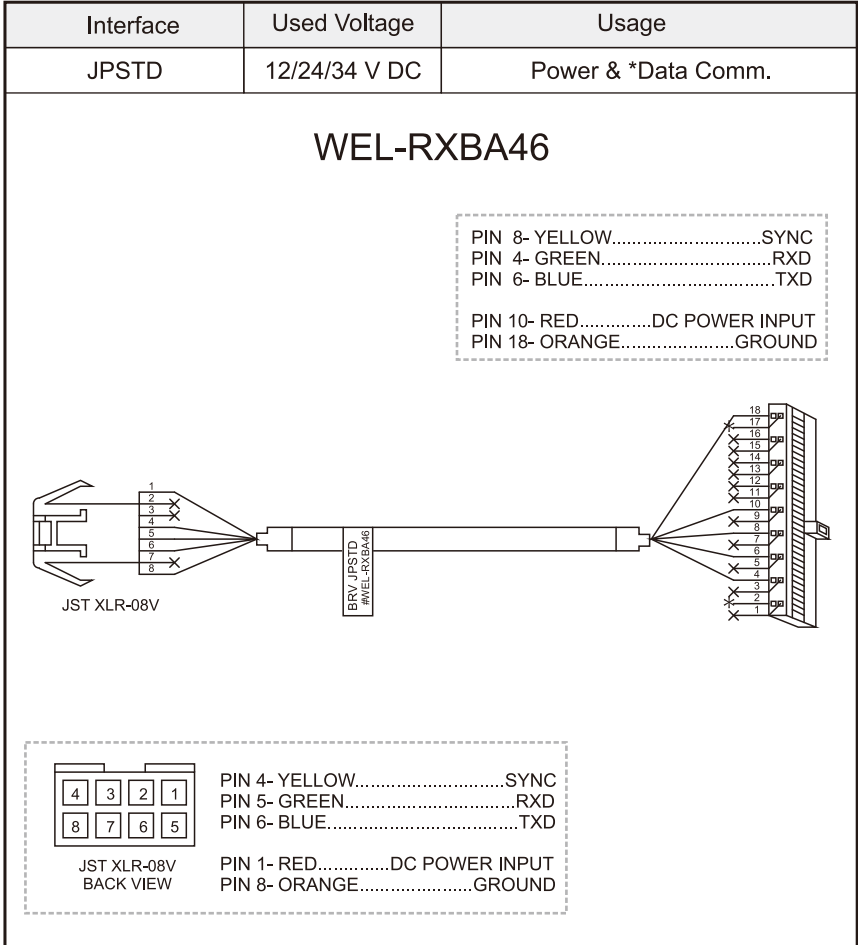
5-1 FIG.01







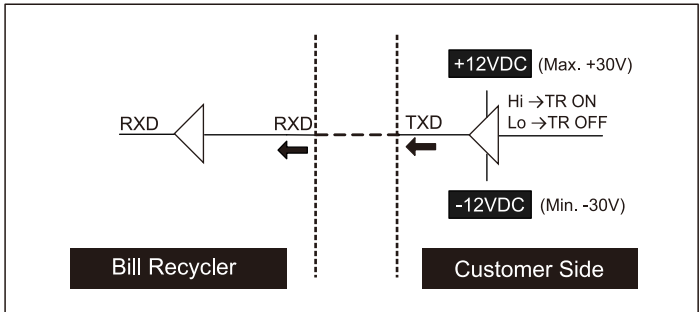
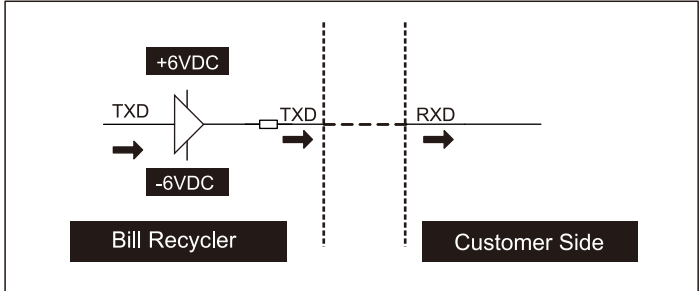
5-1 FIG.03



5-1-1. I/O Circuit

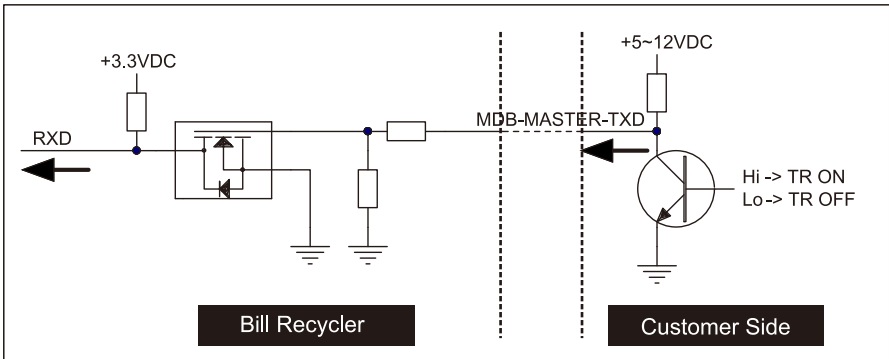
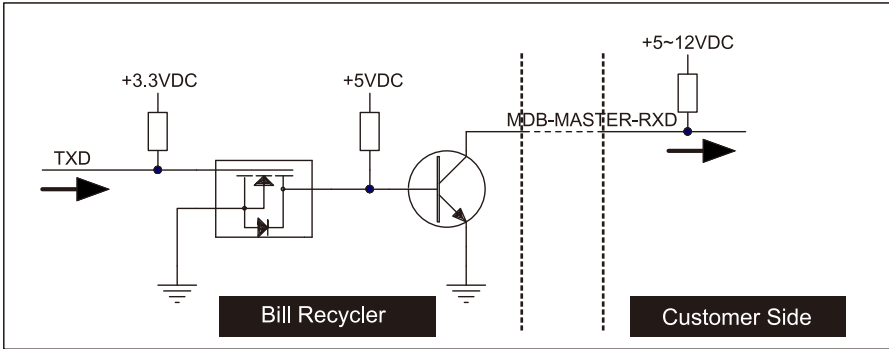
RS232 Interface

5-1-1 FIG.01



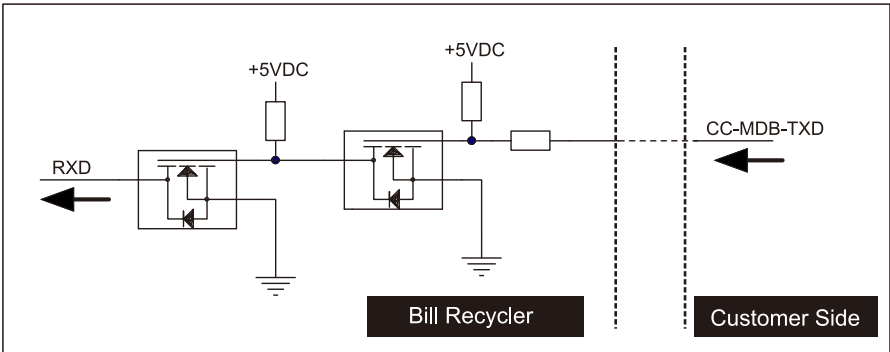
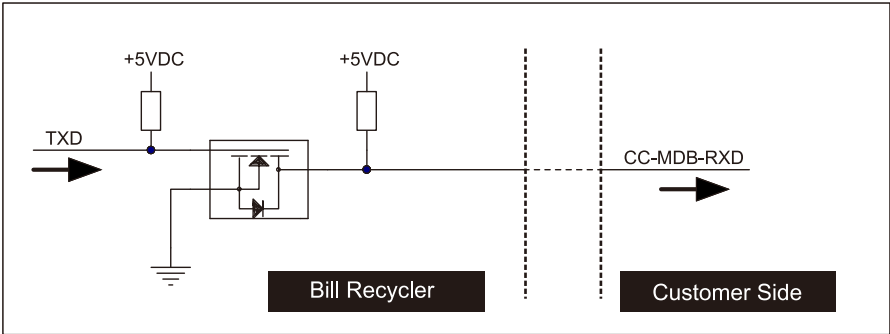
MDB Interface(To VMC).

5-1-1 FIG.02



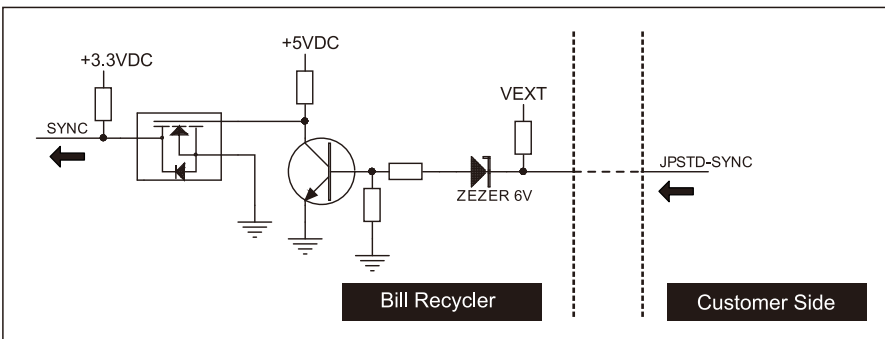
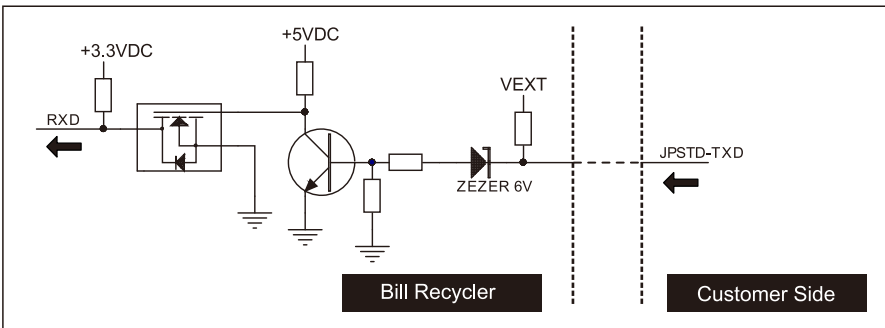
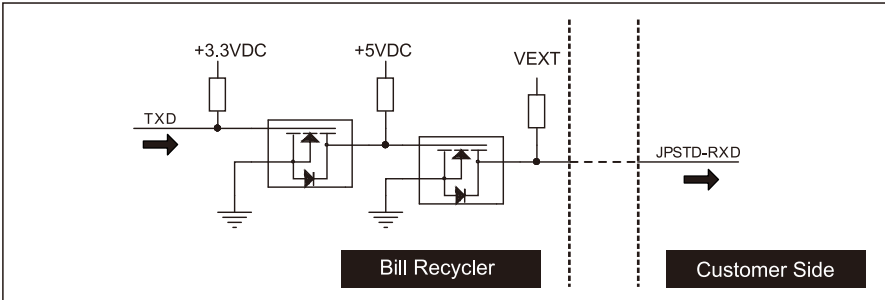
MDB Interface(To Coin Changer).

5-1-1 FIG.03



JPSTD Interface

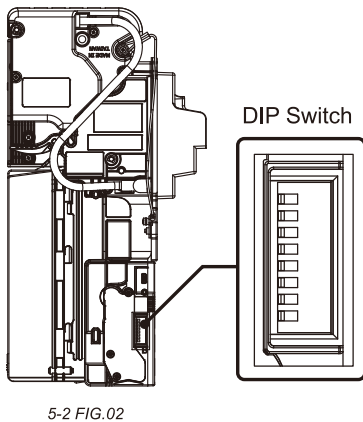
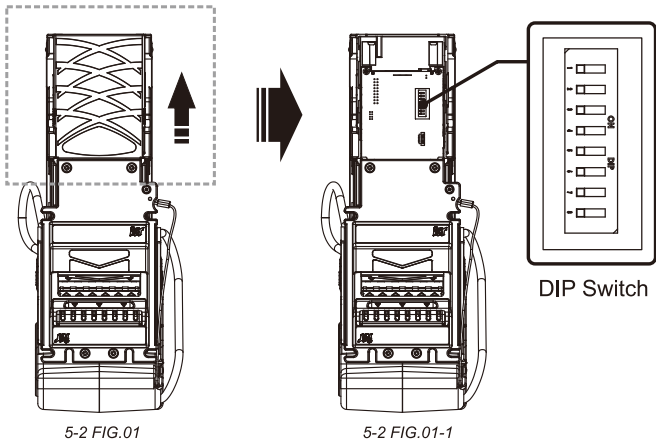
5-1-1 FIG.04



## 5-2. DIP Switch Setting

Two dip switches are located on as 5-2 FIG.01 the CPU board, and as 5-2 FIG.02 the sides of BRV.

Please refer to “BRV DIP Switch Setting Guide” in the package for more detail.

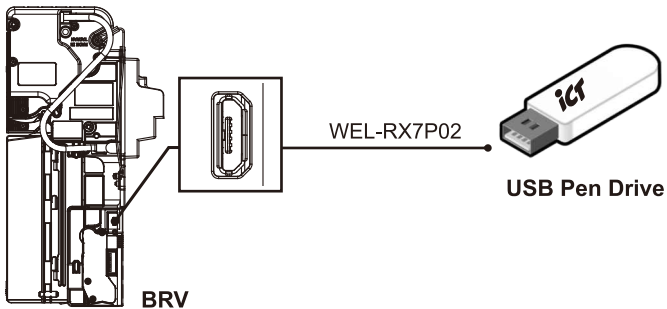


### 5-3. Firmware Download and Upgrade

**Step 1.** Put the “BRVxxxxxxxxxxxxxxxxx.bin”file into your USB flash disk.



**Step 2.** Turn off the BRV, plug the USB flash disk into the USB connector on the BRV with USB extension cable and then turn on the BRV.



**Step 3.** The LED of bezel will flash twice, and then remove the USB flash disk from the BRV.

**Step 4.** The BRV will automatically reset and standby for normal operation.

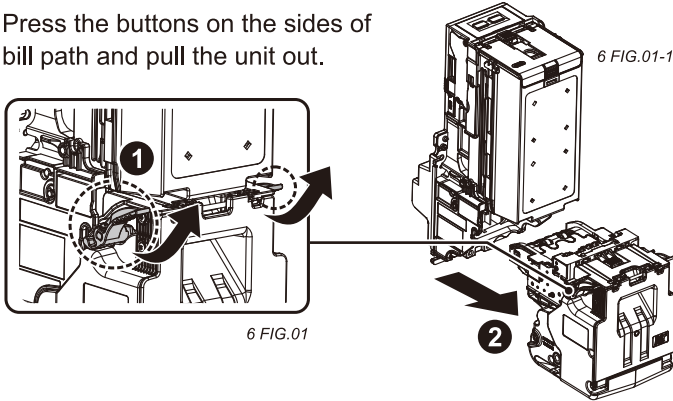
## 6. Maintenance

To make sure the bill acceptor always works smoothly, please clean the internal parts regularly.

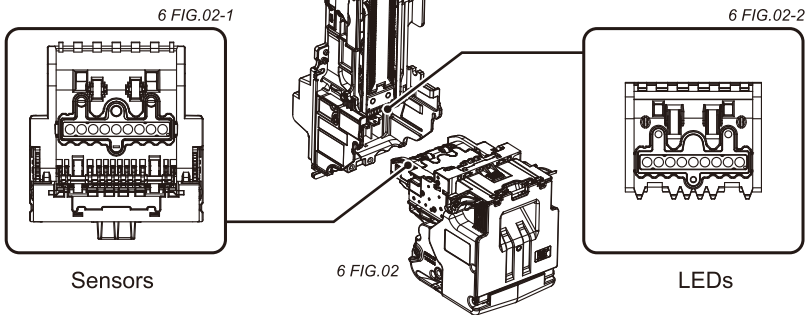
To clean the internal parts (2 bill paths):


### Bill path - 1

1. Press the buttons on the sides of bill path and pull the unit out.



2. Use a soft, dry cloth or towel to clean the bill path and sensors.

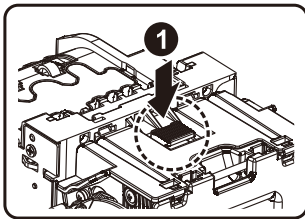


	<b>Maintenance Notice</b>	
	<i>(Any improper maintenance will result invalid warranty.)</i>	
Recommended	Mild, non-abrasive, soap water.	
DO NOT USE	Organic solvent , Alcohol, Volatility liquid.	

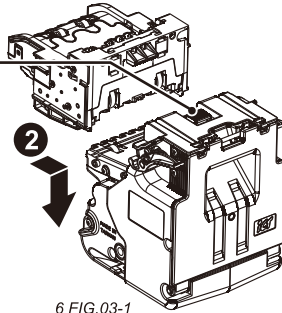


**Bill path - 2**

1. Press the buttons on the top to separate the recycler.



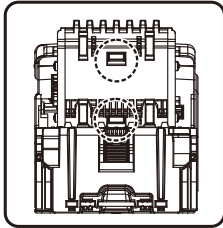
6 FIG.03



6 FIG.03-1

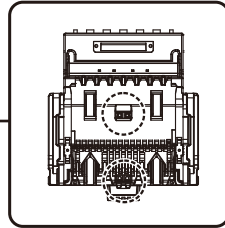
2. Use a soft, dry cloth or towel to clean the second bill path, sensors and RC's prisms.

6 FIG.04-1

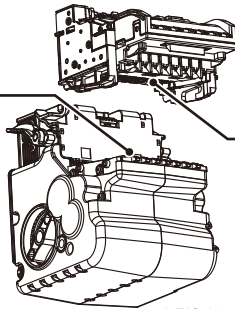


Prisms


6 FIG.04-2



Sensors



6 FIG.04

	<b>Maintenance Notice</b>	
	<i>(Any improper maintenance will result invalid warranty.)</i>	
<b>Recommended</b>	<b>Mild, non-abrasive, soap water.</b>	
<b>DO NOT USE</b>	<b>Organic solvent , Alcohol, Volatility liquid.</b>	

## 7. Troubleshooting

### 7-1. Bezel LED Errors

7-1 TABLE 01

LED	Meaning	Solutions
Green	White card Calibration	Use ICT white card to calibration Bill Validator.
Red	BRV start error	Run ProductTest Tool to check firmware version and run tests to see if result is all OK.

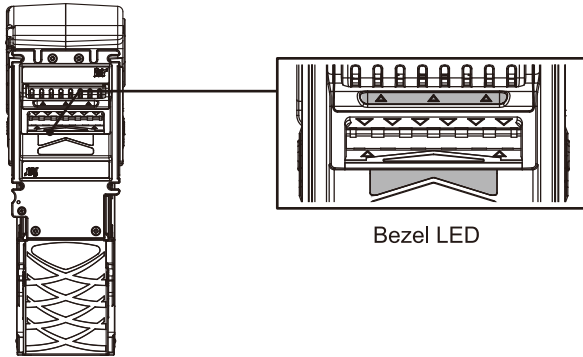
7-1 TABLE 02

LED Flashes		Meaning	Solutions
Red	Green		
1		Indicate that something has jammed the bill path.	Inspect for foreign object or banknote. (Refer to page 17 )
2		Indicate that bill acceptor is not enable.	Please inspect dip switch setting.
3		Indicate that bill acceptor is having input sensor problem.	Please inspect or clean any foreign object on sensor or on bill path. (Refer to page 14 & 15)
3	1	Optical anti fishing sensor module error.	Remove LED housing: Inspect for foreign object and clean on Security hook.
3+2		Indicates that the unit is having hook sensor problem.	
3+4		Banknote path sensor error	
4		Indicates that the unit has detected fishing issue.	Inspect for dirt or foreign object on sensor or on bill path. (Refer to page 14 & 15)
5		Stacker removed.	Please replace the stacker box.
5	1	Recycle motor problem.	Clean foreign object from inside of Recycler. (Refer to page 17)
5	2	Recycle bill jammed.	
5	3	Recycle sensor error.	
5	4	Recycle full.	Use dip switch to unload banknote to stacker.
6		Stacker error or stacker full.	Stacker full of banknote or the press banknote module error.
7		Motor error.	Inspect for dirt or foreign object on sensor or on bill path.



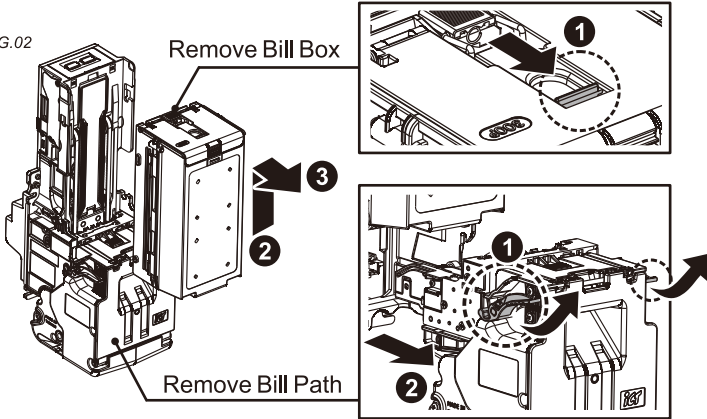
**If the error can not be solved after corrective actions or it recurs, please contact ICT for technical support.**

7-1 FIG.01



Bezel LED

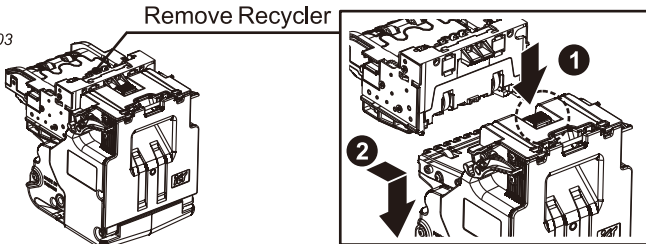
7-1 FIG.02



Remove Bill Box

Remove Bill Path

7-1 FIG.03



Remove Recycler



If the error can not be solved after corrective actions or it recurs, please contact ICT for technical support.



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