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Contents

| | |
|--|-----------|
| 1. Introduction | |
| 1-1. Overview | 2 |
| 1-2. Features | 2 |
| 2. Specifications | 3 |
| 3. Packing List | 4 |
| 4. Dimension | 5 |
| 5. Installation | |
| 5-1. Harness Application | 6 |
| 5-1-1. I/O Circuit | 13 |
| 5-2. DIP Switch Setting | 17 |
| 5-3. Software Download and Upgrade | 17 |
| 6. Maintenance | 18 |
| 7. Troubleshooting | |
| 7-1. Bezel LED Errors..... | 19 |
| 7-2. Back LED Errors..... | 20 |

1. Introduction

1-1. Overview

The XBA-mini Bill Acceptor equips with innovative wide-angle banknote insertion technology to offer superior acceptance rate of 98% or higher. With the outstanding design, the XBA-mini has the ability to provide very high degree of immunity to strong ambient light, and the advanced optical/ mechanical anti-fishing structure for better investment protection. The built-in USB port allows firmware upgrades via USB flash drive conveniently.

1-2. Features

- Unique wide-angle banknote insertion technology
- High immunity against strong ambient light
- Advanced optical/mechanical anti-fishing structure
- Firmware via USB, MDB-FTL, TTL-Serial.
- Auto-calibration technology and multi-color optical sensors
- Superior validation M.T.B.F 300.000 cycles
- Strong resistance to severe weather conditions
- Improved water draining system
- Equipped with flip-up metal cash box

2. Specifications

General

Acceptance Rate 98% or greater
Note: The incomplete bills such as extremely dirty, wet, broken or wrinkled ones are excluded.

Bill Insertion Four way acceptable

Transaction Speed Approx. 2.5 s to stack

Interface MDB, Pulse, ICT Protocol, JPSTD

Installation Indoor & Outdoor

Electrical

Power Source 12V DC±10%
 24V DC±10%
 34V DC±10%
 24V AC±10%

Power Consumption Standby: 0.2A, 2.4W
 Operation: 1.0A, 12W
 Maximum: 2.0A, 24W

Operation Environment Operating Temperature: -15°C~60°C
 Storage Temperature: -30°C~70°C
 Humidity: 30%~95%RH(no condensation)

Mechanical

Bill Capacity Standard cashbox: Approx.100 bills, 200 bills,
 350 bills, 600 bills, 1000 bills
 Flip-up cashbox: Approx.100 bills, 200 bills

Weight Approx.1.2kg~1.7kg
 (depend on Bezel style and Bill box capacity)

Bill Accepted Width 62~74mm

Outline Dimension Refer to page.5

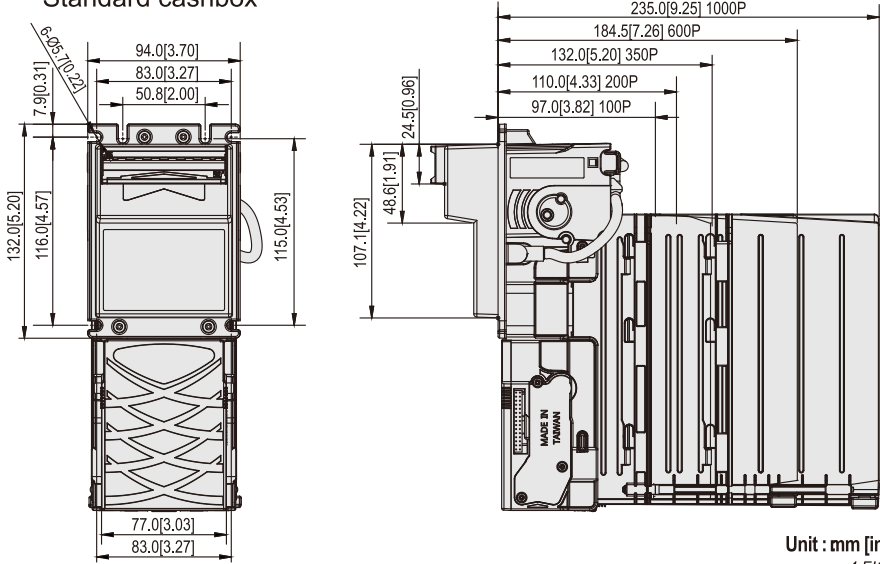
3. Packing List

Main Bill Acceptor

Accessory Harnesses: Refer to 5-1

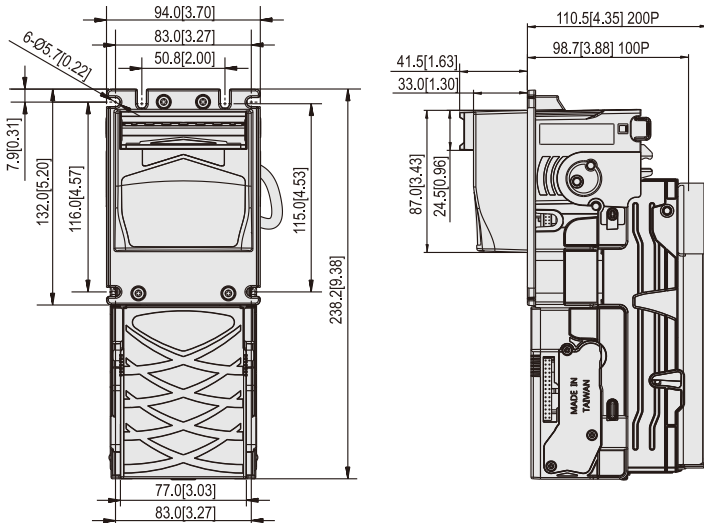
4. Dimension

Standard cashbox



Unit : mm [inch]
4 FIG.01

Flip-up cashbox



Unit : mm [inch]
4 FIG.02

5. Installation

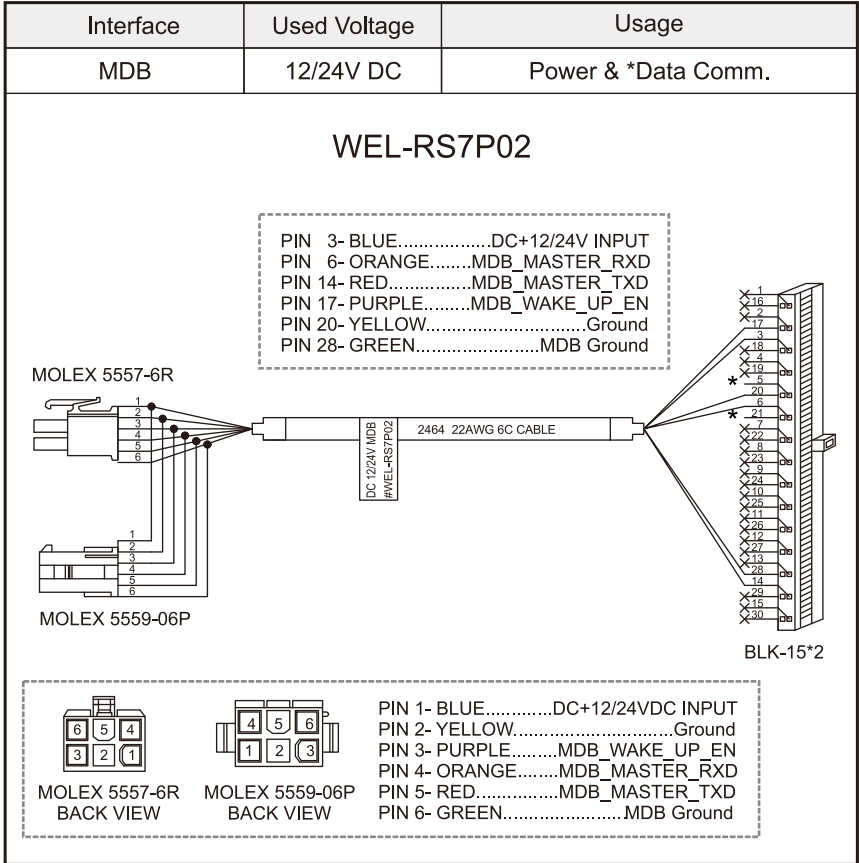
5-1. Harness Application

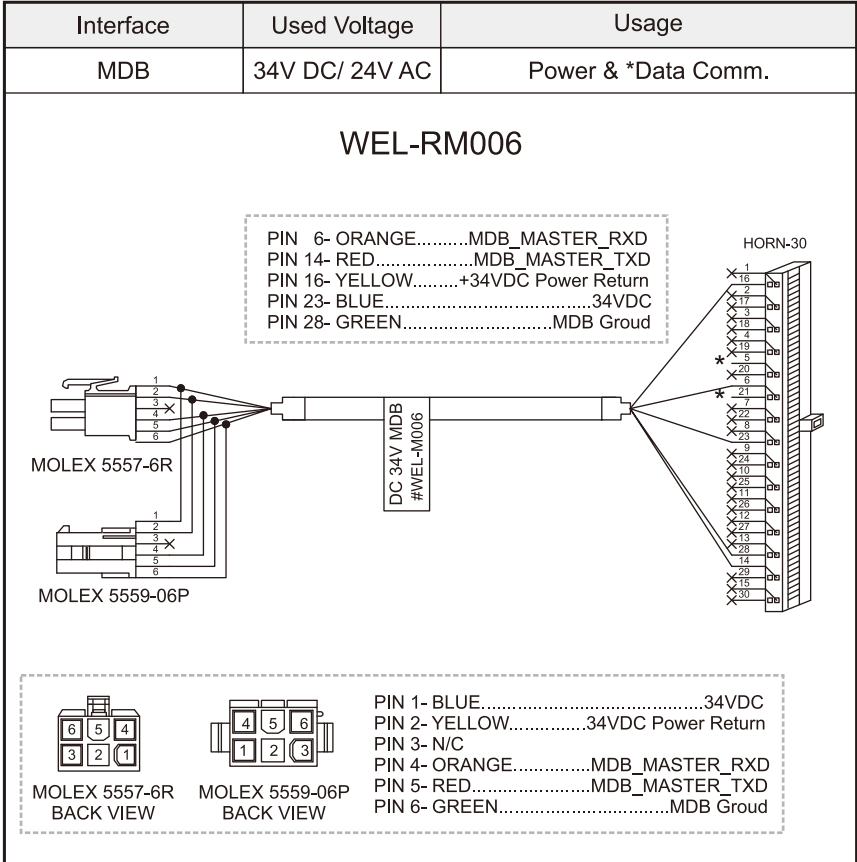
5-1 TABLE 01

| Interface | Used Voltage | Usage | Harness | Page |
|--------------|--------------|---------------------|-------------|------|
| MDB | 12/24VDC | Power & *Data comm. | WEL-RS7P02 | 7 |
| | 34VDC | Power & *Data comm. | WEL-RM006 | 8 |
| | 24VAC | | | |
| Pulse | 12/24VDC | Power & *Data comm. | WEL-RV701 | 9 |
| | | Extension Wire | CU-R961-1 | 10 |
| ICT Protocol | 12/24VDC | Power | WEL-RV701 | 9 |
| | | Extension Wire | CU-R961-1 | 10 |
| | | *Data Comm. | WEL-RV706-1 | 11 |
| JPSTD | 24VDC | Power & *Data Comm. | WEL-RX7P03 | 12 |

*Date Comm.:Data Communication.

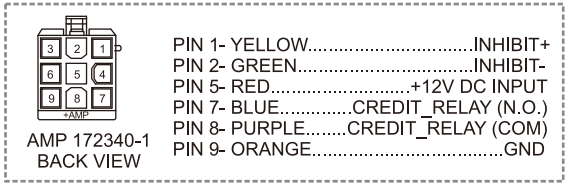
5-1 FIG.01



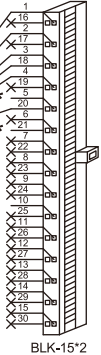


| Interface | Used Voltage | Usage |
|--------------|--------------|---------------------|
| Pulse | 12/24V DC | Power & *Data Comm. |
| ICT Protocol | 12/24V DC | Power |

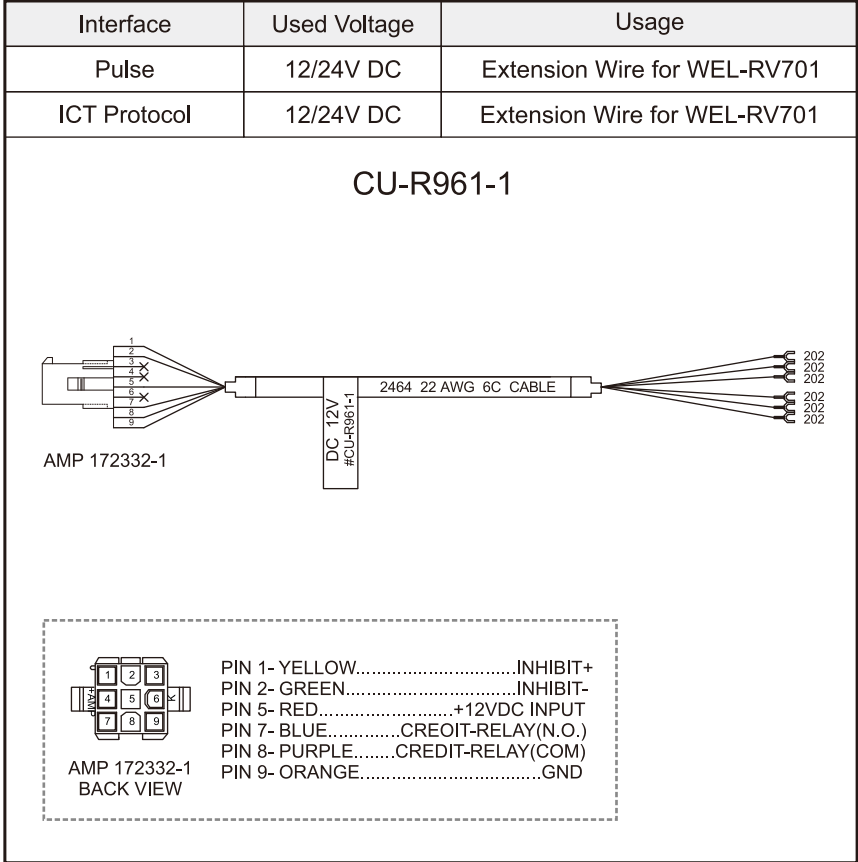
WEL-RV701



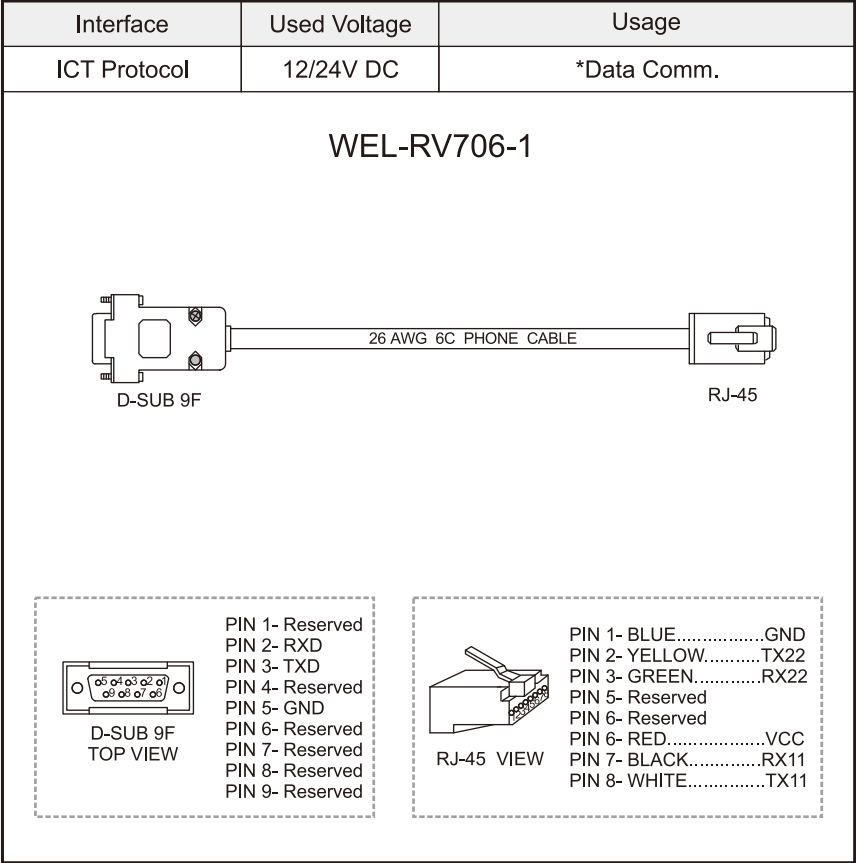
DC 12V
#WEL-RV701

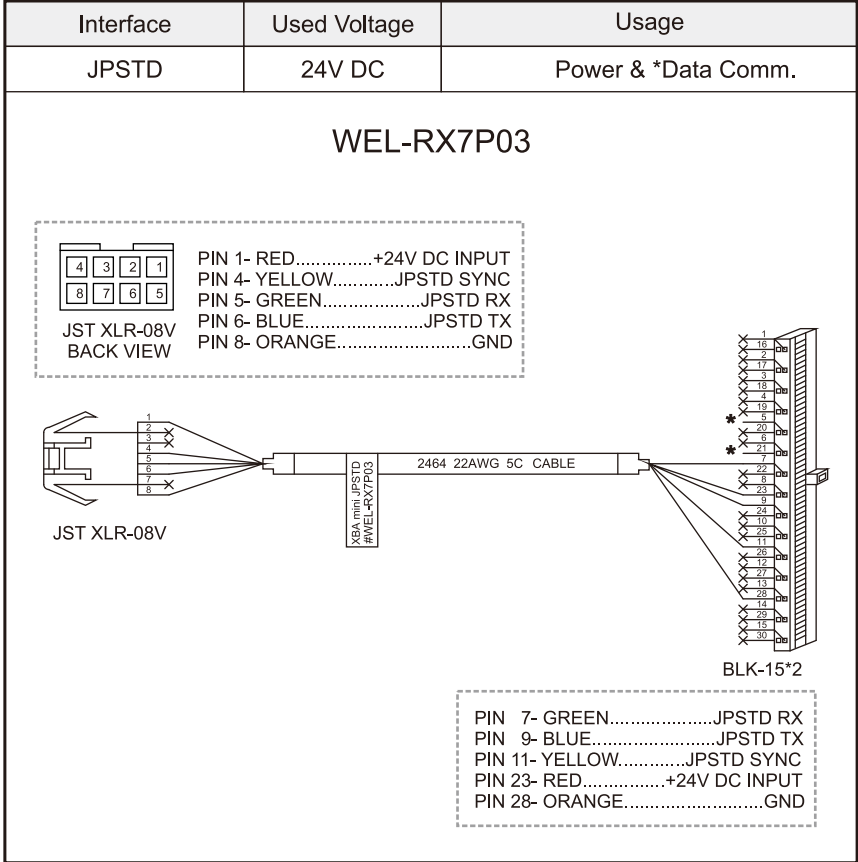


5-1 FIG.04



5-1 FIG.05

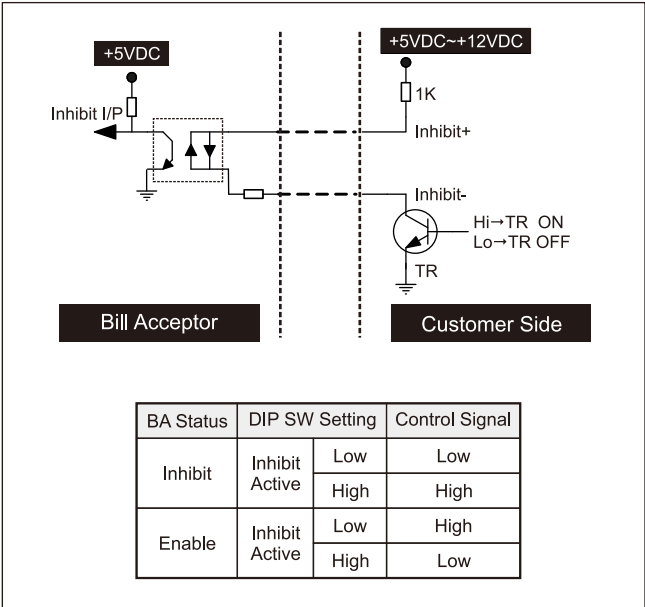
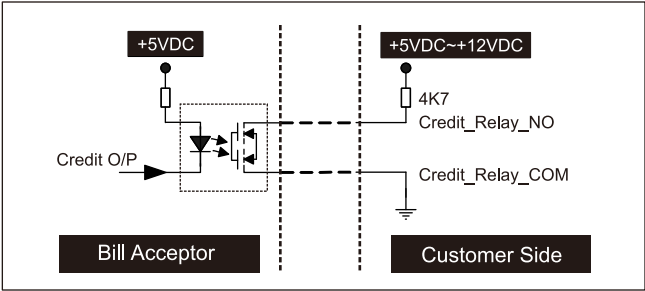




5-1-1. I/O Circuit

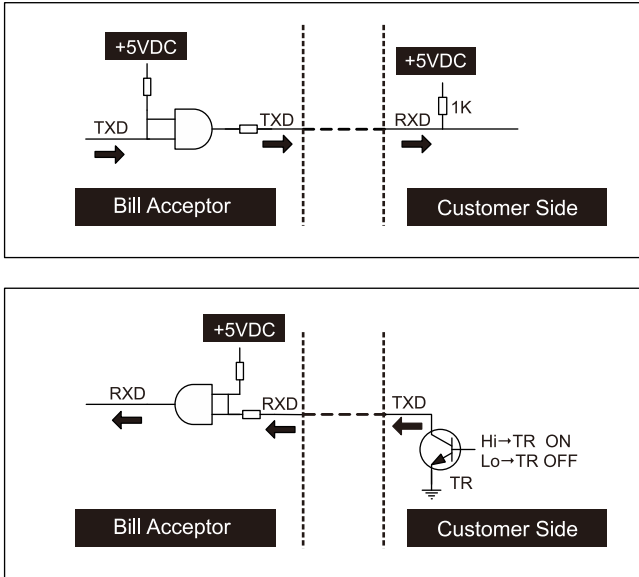
Pulse Interface.

5-1-1 FIG.01



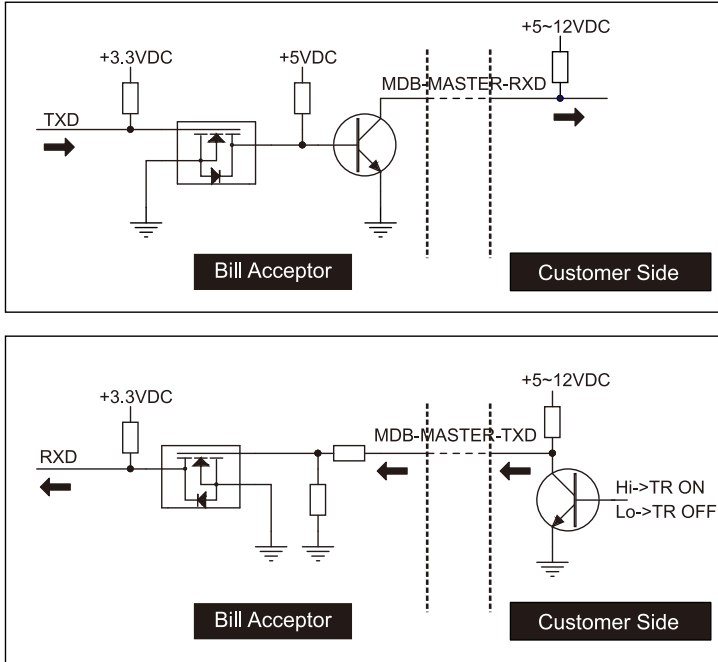
ICT-Protocol Interface.

5-1-1 FIG.02



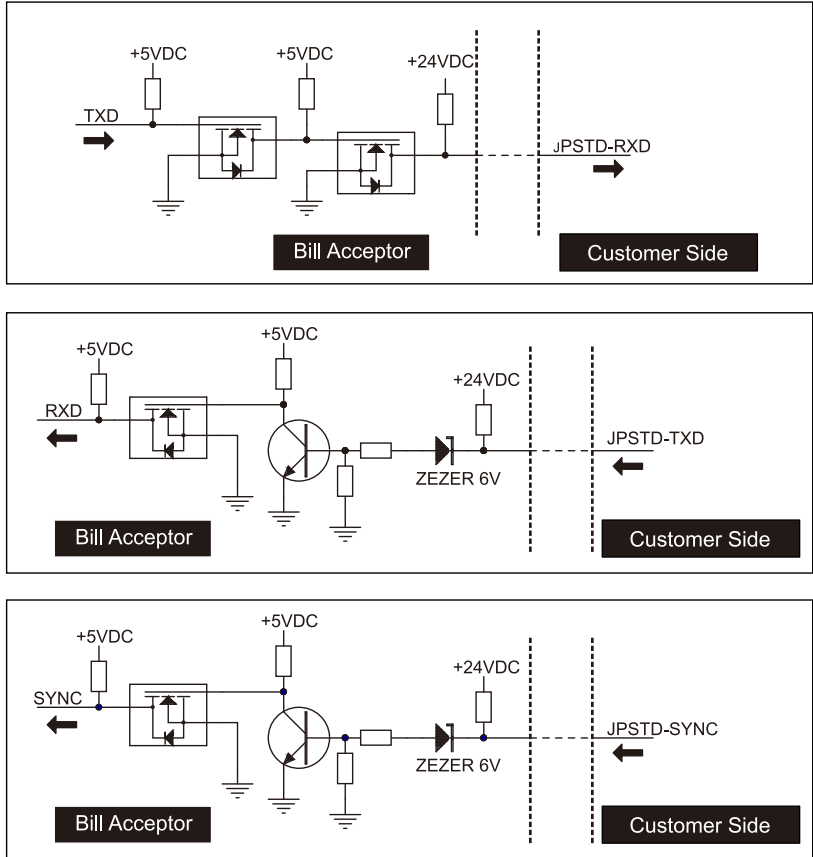
MDB Interface.

5-1-1 FIG.03



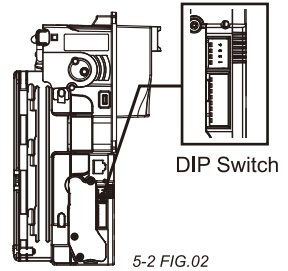
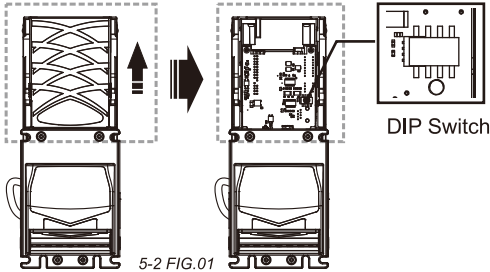
JPSTD Interface.

5-1-1 FIG.04



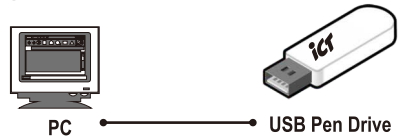
5-2. DIP Switch Setting

Two dip switches are located on as FIG.01 the CPU board, and as FIG.02 the sides of XBA-mini series.



5-3. Firmware Download and Upgrade

Step 1. Put the "X7Exxx.bin" file into your USB Pen Drive.



Step 2. Turn off XBA-mini, plug the USB Pen Drive into the USB connector on the XBA-mini and then turn on the XBA-mini.



Step 3. The LED in the rear side of bill insertion module will flash twice, then remove the USB Pen Drive from XBA-mini.

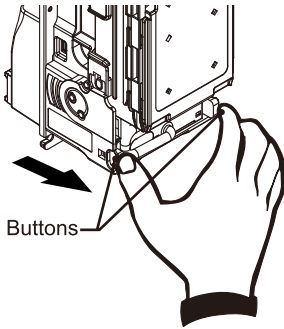
Step 4. Wait for about 30sec., Then XBA-mini will automatically reset and standby for normal operation.

6. Maintenance

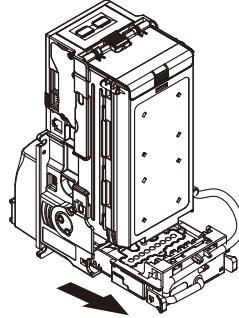
To make sure the bill acceptor always works smoothly, please clean the internal parts regularly.

To clean the internal parts:

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

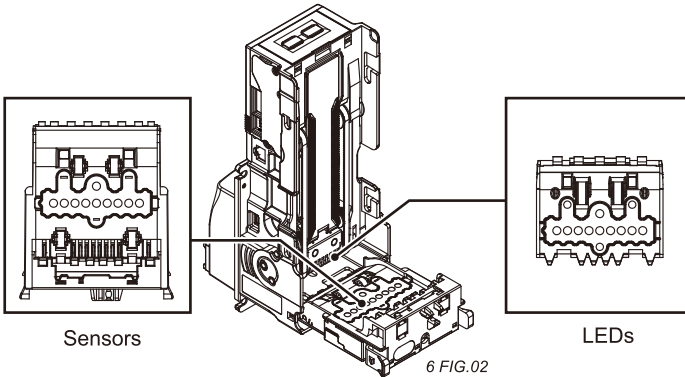


6 FIG.01-1



6 FIG.01-2

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



6 FIG.02

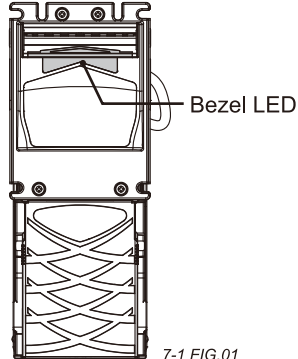


Maintenance Notice
(Any improper maintenance will result invalid warranty.)

| | |
|-------------|--|
| Recommended | Mild, non-abrasive, soap water. |
| DO NOT USE | Organic solvent , Alcohol , Volatility liquid. |

7. Troubleshooting

7-1. Bezel LED Errors



7-1 FIG.01

7-1 TABLE.01

| LED Flashes | | Status | Corrective Actions |
|-------------|-------|---|--|
| Red | Green | | |
| | 1 | White Card Calibration | Please calibrate with ICT white calibration card. |
| 1 | | Bill jammed. | Remove the bill box by sliding the top button and the bill path(as 7-2 FIG.01), and then remove the jammed bill. |
| 2 | | Disable. | Inspect the right DIP switch setting. |
| 3 | | Recognition sensor module error. | Inspect the foreign objects on sensor or bill path and clean. |
| 3 | 1 | IR error. | Inspect the foreign objects on sensor or bill path and clean. |
| 3+2 | | Hook sensor error. | Inspect the foreign objects on security hook and clean. |
| 4 | | Anti-string sensor error or a stringing attempt has detected. | Inspect the foreign objects on sensor or bill path and clean. |
| 5 | | Bill box has been removed. | Replace the bill box. |
| 6 | | Stacker error or stacker full. | Empty the bill box. |
| 7 | | Motor error. | Inspect the foreign objects on bill path and clean. |

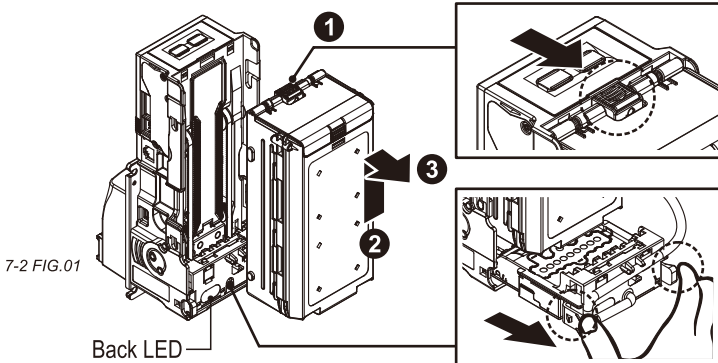


If the error can not be solved after corrective actions or happen again, please contact ICT for technical support.

7-2. Back LED Errors

7-1 TABLE.01

| LED Flashes | Status | Corrective Actions |
|-------------|---|--|
| Red | | |
| 1 | White Card Calibration | Please calibrate with ICT white calibration card. |
| 1 | Bill jammed. | Remove the bill box by sliding the top button and the bill path(as 7-2 FIG.01), and then remove the jammed bill. |
| 2 | Disable. | Inspect the right DIP switch setting. |
| 3 | Recognition sensor module error. | Inspect the foreign objects on sensor or bill path and clean. |
| 3+1 | IR error. | Inspect the foreign objects on sensor or bill path and clean. |
| 3+2 | Hook sensor error. | Inspect the foreign objects on security hook and clean. |
| 4 | Anti-string sensor error or a stringing attempt has detected. | Inspect the foreign objects on sensor or bill path and clean. |
| 5 | Bill box has been removed. | Replace the bill box. |
| 6 | Stacker error or stacker full. | Empty the bill box. |
| 7 | Motor error. | Inspect the foreign objects on bill path and clean. |



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

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