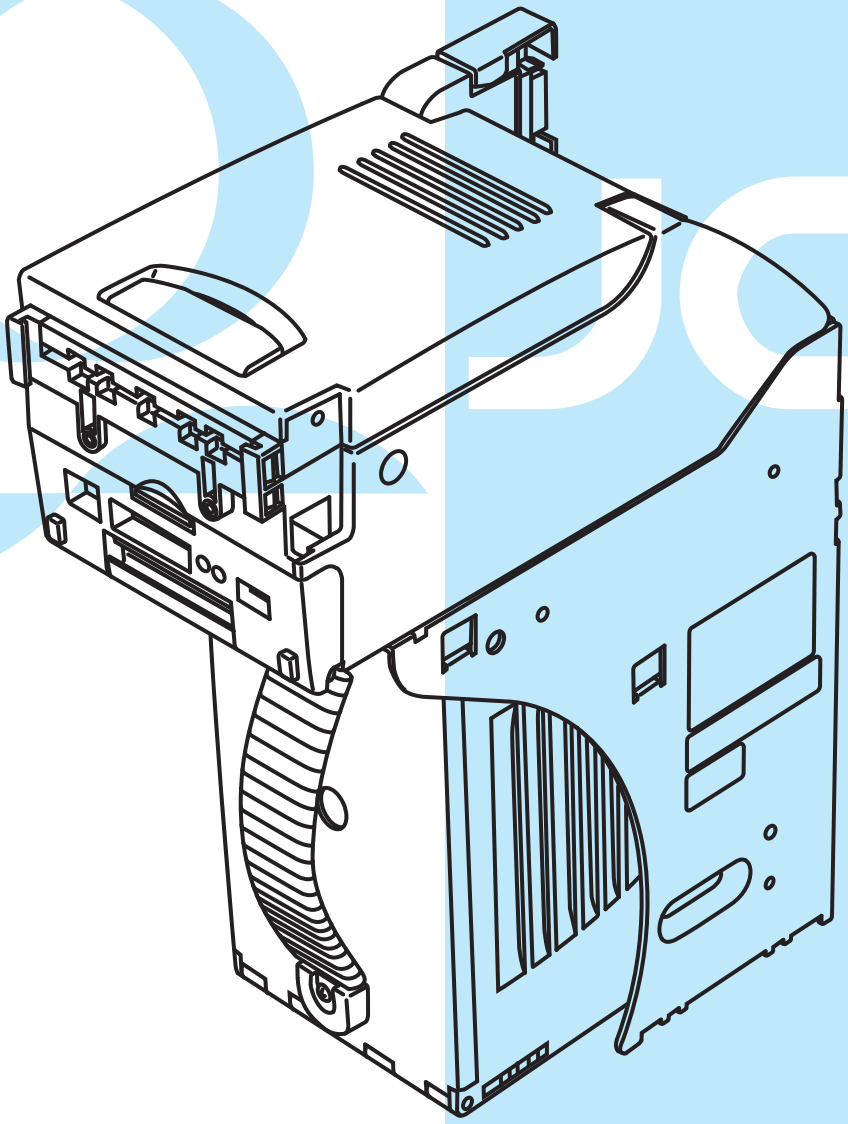
Universal Bill Acceptor
UBA-1X-SS
Service Manual



Issue 05/2006

JAPAN CASHMACHINE CO., LTD.

Preface

Thank you for purchasing the Japan Cash Machine Universal BIll Accepter (here after referred to as the “UBA”). Please read this manual carefully as it explains, step by step, how to use the UBA correctly and safely. Be sure to read this manual and any related materials thoroughly to understand the correct operation and functions of this unit.

Note

1. It is fobridden to copy the contents of this manual, in whole or in part, except for the user’s personal use, without the express permission of Japan Cash Machine Co., Ltd.
2. The information provided in this manual is subject to change without notice.
3. This manual has been written with care and attention to detail; however, should you find any errors or omissions, please contact Japan Cash machine Co., Ltd. and inform tem of you findings.
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Documentation Conventions

The list below describes the documentation convertions used in this manual.

	This icon indicates situations where slight bodily injury or equipment damage can occur.
	This icon indecates important information or procedures that must be followed for correct and risk-free unit operation.
	This icon indicates useful or recommended supplemental information.
1), 2)	This indicates steps in a procedure. Be sure to perform these steps in the order given.
*	This indicates useful or important supplemental information.

CE Marking Notes

The UBA-10-SS and UBA-11-SS are CE marked products.

■Complies with the following Standard.

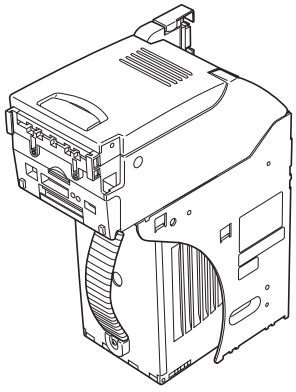
EN61000-6-1: 2001 EN61000-4-2: 1995+A1 : 1998+A2 : 2001
EN61000-4-3 : 2002+A1 : 2002
EN61000-4-8- : 1993+A1 : 2001

EN61000-6-3 : 2001 EN55022 : 1998 (ClassB)

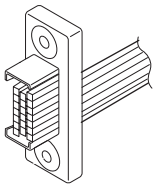
Package Contents

The UBA's packing box contains the items listed below. Please check to confirm that all items shown below have been included.

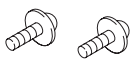
■UBA unit (1)



■Harness and connector (1)



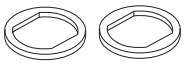
■Attachment Screws for Interface Connecter (2)



■Key Hole Cap (1)

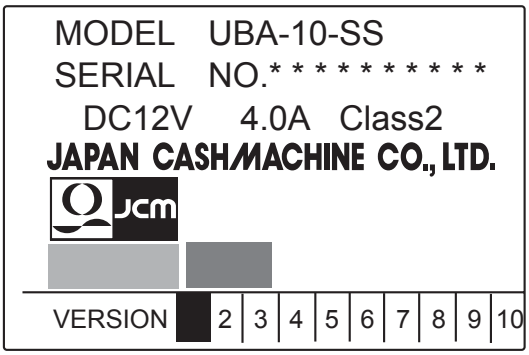
■Plate Key Locks (2)

■Key Spacers (2)



Version Information

To identify your UBA unit revision code, see the metallic label attached to the right side of UBA. This code is at the bottom of the label, to the right of “VERSION” In this example, the black box (■) is in this position, which means this unit version code is “1”



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Universal Bill Acceptor

UBA-1X-SS Service Manual

Chapter 1

Model Numbers & Specifications

Issued: 07/2007

1-1. Precautions

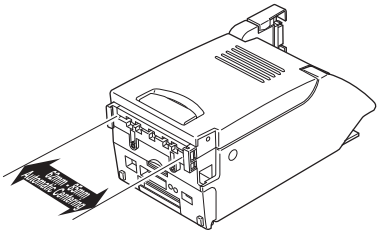
(1) Do not insert a torn, folded, or wet bill, as this may cause bill jam inside the unit.
(2) Do not expose the unit to water.
The unit contains several precision electronic devices which can be damaged if water or any liquid is sprayed or spilled into the unit.
(3) Do not install the unit in a dusty environment. Dust may affect the sensor performance.
(4) Do NOT carry the UBA unit with the handle of the cash box otherwise the acceptor unit and frame may fall down and damage.
(5) When opening the upper cover, hold the guide since it does not stay up in position. Improper handling may cause personal injury and/or damage to the equipment.

1-2. Main Features

The UBA has the following main features:

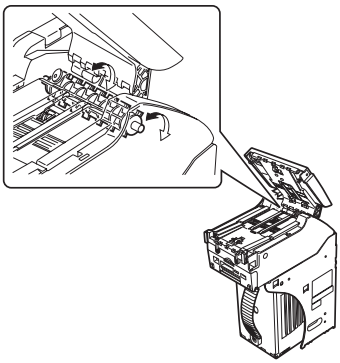
1-2-1. Automatic Centering

Automatic centering mechanism allows the unit to read bills ranging from 62 to 85mm wide without using bill guides. It helps to improve the overall acceptance rate while virtually eliminating counterfeit acceptance.



1-2-2. Proven anti-stringing (anti-fishing) Technology

This JCM patented anti-stringing mechanism provides powerful protection against bill stringing. The drum rotates every time a bill passes through, and it tangles around any foreign object attached to the bill, such as string and tape. If any foreign object is detected, UBA does not give credit to the host controller.

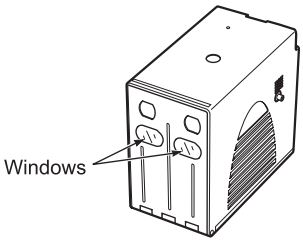


1-2-3. Changeable Photo-coupler isolation / RS-232C Communication

Onboard electronics allowing TTL or RS-232C communication without additional conversion boards.

1-2-4. Plastic Cash Box

Constructed of durable and impact-resistant plastic, assuring secure cash handling.
Equipped with dispute resolving windows to show the value area of last inserted note.



1-2-5. ICB System (Optional)

This JCM patented Intelligent Cash Box system, designed for casino operators, increases efficiency by reducing common errors in casino drop and count processes. In addition to time and cost savings, the ICB system provides analysis of data for accountability and profitability.

1-3. UBA Naming Composition

1-3-1. Product Configurations

UBA Product Name is made up of 3 parts of which Model, Type and Software.

UBA-10-SS 500-00-020F0 USA-03

Model Type Software

1-3-2. Model

UBA - 1 0 - SS
(1) (2)

(1) CPU Board Type

0: 8Mbit Flash Rom
1: 8Mbit EPROM
2: 16Mbit Flash Rom
4: USB Interface Applicable 16Mbit Flash Rom

(2) Stacker Configuration

SS: Security Stacker (Standard)

1-3-3. Type

5 0 0 - 0 0 - 0 2 0 F 0
(3) (4) (5) (6) (7) (8) (9) (10) (11) (12)

(3) Cash Box Capacity

5: 500 notes (Standard)
9: 900 notes

(4) Cash Box Type

0: UBA Cash Box (Black Plastic Box)
S: WBA Cash Box (Steel Box)

(5) Cash Box Handle Color

0: UBA Standard Handle (Blue)
1: Red Handle
N: Without handle
J: WBA Standard Handle (Steel)

(6) Transport Unit Type

0: UBA Standard CPU (5.0V Flash Rom) *1

1: 3.3V Flash Rom CPU

(7) Transport Unit Color

0: UBA Standard (Blue)

(8) Faceplate

0: No faceplate (Standard)

1: With UBA faceplate (85mm width)

2: With Blue/Blue LED

A: With Blue/Blue LED (2-line)

(9) ICB (Option)

1: With ICB board and ICB box

2: With ICB board and UBA Cash box (Standard)

(10) Optional Board

0: No external I/F board (Standard)

1: With 24V13.5V + RS-232C I/F Conversion Board

2: With RS-232C I/F Conversion Board *2

(11) Input/Output Signals

F: Photo-coupler Isolation

R: RS-232C

(12) External Connection Harness

0: Without Harness *1

1: Standard Harness *1

2: OEM Harness *1

3: DC24V/DC13.5V Conversion Harness (Photo-coupler) *1

4: DC24V/DC13.5V Conversion Harness (RS-232C) *1

5: Standard Harness (USB I/F) *2

6: OEM Harness (USB I/F) *2

7: DC24V/DC13.5V Conversion Harness (Photo-coupler, USB I/F) *2

8: DC24V/DC13.5V Conversion Harness (RS-232C, USB I/F) *2

*1 For UBA-10/11/12-SS only.

*2 For UBA-14-SS only.

1-3-4. Software

USA - 03
(13) (14)

(13) Accepted Country Code

ISO3166-based 3-digit code (Refer to Chapter 3, Appendix 3. Country Code)

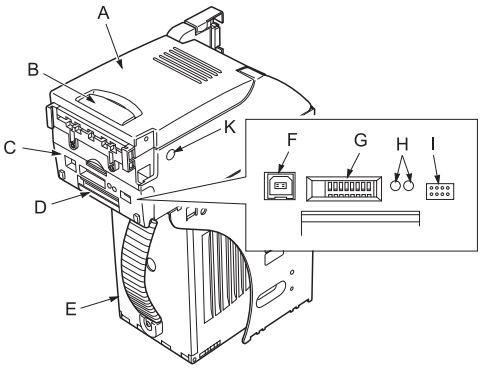
(14) Interface

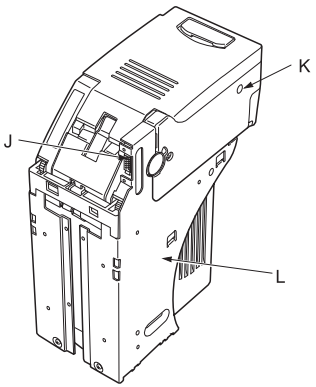
03: JCM ID-003 Serial Interface
24: OEM Interface
28: OEM Interface (USB) *1

*1 For UBA-14-SS only.

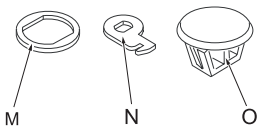
1-4. Component Names

UBA





Accessory



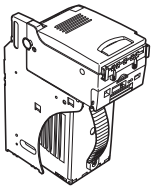
A: Acceptor Unit
B: Upper Guide Lever
C: Front Access Door
D: Transport Unit Release Lever
E: Cash Box
F: USB Connector
for software downloading and adjustment
G: Dip Switch
The default settings are all OFF. Depending on the software, the denomination settings are restricted. Refer to the software specifications.

No.	Function	ON	OFF
1	Denomination 1	Inhibit	Accept
2	Denomination 2		
3	Denomination 3		
4	Denomination 4		
5	Denomination 5		
6	Denomination 6		
7	Denomination 7		
8	Mode *1	Test	Normal

*1 For details about Mode settings, refer to Chapter 4 Trouble Shooting.

H: Diagnostic LEDs
Green: Flashes to show the cause of bill rejection
Red: Flashes to show the cause of malfunction
For details, refer to 4-3. LED diagnostic Codes
I: Front Bezel Connector
Connect to the faceplate
J: Interface Connector
connect to the Host Machine
K: Centering Guide Open
L: Frame
M: Key Spacer
N: Plate Lock Key
O: Key Hole Cap

1-5. System Configuration



UBA-1X-SS

1.• Face Plate 85mm with green LED # 113945
delivered with cable 12 V lightning # 113236

2.• Face Plate 85mm with 2 blue LED # 113946
delivered with cable 12 V lightning # 113236

3.• Face Plate 85mm with 5 blue LED # 113944
delivered with cable 12 V lightning # 113236

4.• Face Plate 82mm with green LED # 131649
delivered with cable 12 V lightning # 113236

5.• Face Plate 82mm with green LED # G00087
delivered with cable 5V lightning # 108649

6.• Face Plate 82mm with green LED # 123185
delivered with cable 5V lightning # 108649

Interface Connector

USB Connector

Front Bezel Connector

Faceplate *1

A-B Type USB Cable

PC
(Windows98/2000/XP) *2

MIB 232 Test Adapter
(Part# G00176)

Communication Harness *3 → Host Machine

*1 UBA standard faceplate can be connected. When connecting your own faceplate, refer to 1-7. Connector and Pin Assignment.

*2 PC can be connected to download a software and perform an adjustment. For details about software downloading , refer to Chapter 5.

*3 Depending on the UBA unit type and host machine interface, use an appropriate harness.

1-6. Specifications

1-6-1. Technical Specifications

Bills Accepted	Width: 62-85mm Length: 120-165mm (up to 170mm with WBA steel cash box)
Insertion Direction	Refer to Software Specifications
Acceptance Rate *1	Refer to Software Specifications
Processing Speed	Approx. 2 seconds (from bill insertion to vend signal output) Approx. 5 seconds (from bill insertion to bill complete stacking)
Cash Box Capacity	500 notes/900 notes
Interface	ID-003(Serial)/ID-024(OEM)/ID-028(OEM USB)
Escrow	1 Bill
LED	Diagnostic LEDs (Front)/Faceplate LEDs (Option)

*1 The following bills are excluded;
- Bills with excessive or sparse magnetism, or unclear printing patterns.
- Overlapped bills
- Bill with stain, wear, wetness, tear or excessive wrinkles
- Bill with folded corner or edge
- Bill with incorrect cut dimensions or printing displacement

When security measure against counterfeit is implemented, the software may not fulfill the specified level of acceptance rate.

1-6-2. Environmental Specifications

Operation Temperature	5°C to 50°C
Storage Temperature	-20°C to 60°C
Operation Humidity	+30% to 85%RH (non condensing)
Light Disturbance	Avoid direct sunlight
Installation	Indoors only

1-6-3. Electrical Specifications

Supply Voltage		DC12V (+5%) Use power supply with 4.0A or more
		DC24V (+5%) Use power supply with 2.7A or more *1
Current Consumption	DC12V	Standby: 300mA In Operation: 1.6A
	DC24V *1	Standby: 150mA In Operation: 1.0A

*1 Only when used the optional DC24V/DC13.5V Conversion Board.

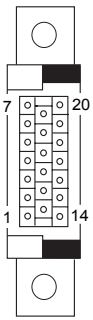
1-6-4. Structural Specifications

Mounting	Horizontal Mounting
Weight	Approx. 4.0kg
Outline Dimentions	114mm(W) x 298mm(H) x 225mm(D)

1-7. Connector and Pin Assignment

1-7-1. Interface Connector

■ UBA-10-SS/UBA-11-SS/UBA-12-SS

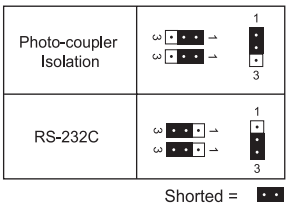
Connector	Pin No.	Signal Name	I/O	Signal Descriptions
	1	+12V POWER		DC +12V Power
	2	GND POWER		DC 0V Power
	3	M.RES	IN	Bill Acceptor reset signal line
	4	PC/RS232C OUT	OUT	Signal output line from Acceptor to Controller
	5	+12V (I/F)		Interface Power (DC +12V)
	6	PC/RS232C IN	IN	Signal Input line from Controller to Acceptor
	7	GND (I/F)		Interface Power (photo-coupler DC 0V)
	8	(TTL1)	(IN)	Reserved (TTL1)
	9	(TTL1)	(OUT)	Reserved (TTL1)
	10	(TTL2)	(IN)	Reserved (TTL2)
	11	(TTL2)	(OUT)	Reserved (TTL2)
	12	(TTL3)	(IN)	Reserved (TTL3)
	13	GND		Interface Power (RS-232C DC 0V)
	14	LED POWER		LED Drive Line - anode
	15	(TTL4)	(IN)	Reserved (TTL4)
	16	(TTL5)	(IN)	Reserved (TTL5)
	17	(TTL3)	(OUT)	Reserved (TTL3)
	18	LED- (TTL4)	(OUT)	LED Drive Line - cathode / TTL4
	19	(TTL5)	(OUT)	Reserved (TTL5)
	20	(TTL6)	(OUT)	Reserved (TTL6)

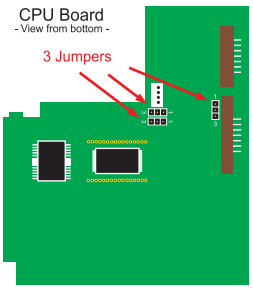
* I/O (input/output) is the term from bill acceptor's side.

* Signal name, I/O and function without parenthesis are for ID-003 Interface.

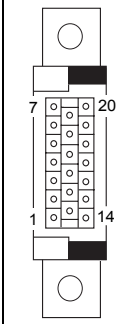
Socket : DRA-20PC-FO (JAE)
Contact : D02-22-26P-10000 (JAE)
Mating Connector
Socket : DRA-20SC-FO (JAE)
Contact: D02-22-26S-10000

The Signal level (Photo-coupler isolation/RS-232C) can be selected with the jumper switch located on the CPU board. The CPU board needs to be removed from the acceptor unit to change the jumper setting. To remove CPU board, refer to 4-5. Replacing CPU Boards.





■UBA-14-SS

Connector	Pin No.	Signal Name	I/O	Signal Descriptions
	1	+12V POWER		DC +12V Power
	2	GND POWER		DC 0V Power
	3	M.RES	IN	Bill Acceptor reset signal line
	4	(PC OUT)	(OUT)	(Signal output line from Acceptor to Controller)
	5	+12V I/F		Interface Power (DC +12V)
	6	(PC IN)	(IN)	(Signal Input line from Controller to Acceptor)
	7	(GND I/F)		(Interface Power. photo-coupler DC 0V)
	8	Vbus		USB Communication Vbus signal line: DC +5V
	9	-DATA	IN/OUT	USB Communication Input/Output signal line
	10	+DATA	IN/OUT	USB Communication Input/Output signal line
	11	(TTL1)	(OUT)	Reserved (TTL1)
	12	GND USB		USB Communicaton Ground: DC 0V
	13	(GND I/F)		(Interface Power. RS-232C DC 0V)
	14	LED POWER		LED Drive Line - anode
	15	(TTL1)	(IN)	Reserved (TTL1)
	16	(TTL2)	(IN)	Reserved (TTL2)
	17	(TTL3)	(IN)	Reserved (TTL3)
	18	LED- (TTL2)	(OUT)	LED Drive Line - cathode (TTL2)
	19	(TTL3)	(OUT)	Reserved (TTL3)
	20	NC		Do not connect

* I/O (input/output) is the term from bill acceptor's side.

* Signal name, I/O and function without parenthesis are for ID-003 Interface.

Socket : DRA-20PC-FO (JAE)

Contact : D02-22-26P-10000 (JAE)

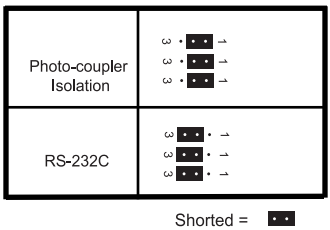
Mating Connector

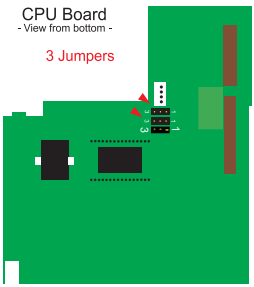
Socket : DRA-20SC-FO (JAE)

Contact: D02-22-26S-10000

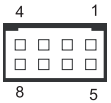
Jumper settings RS 232 for new CPU board (3.3Volt) UBA-10/11/12

The Signal level (Photo-coupler isolation/RS-232C) can be selected with the jumperswitch located on the CPU board. The CPU board needs to be removed from the acceptorunit to change the jumper setting. To remove CPU board, refer to 4-5. Replacing with the new CPU board please find jumper settings attached.





1-7-2. Front Bezel Connector (CN13)



Connector	Pin No.	Signal Name	I/O	Function
	1	NC		Reserved
	2	NC		Reserved
	3	NC		Reserved
	4	NC		Reserved
	5	+12V Power		DC +12V Power (UBA Faceplate LED Drive Line)
	6	GND (Power)		DC 0V Power
	7	LED Power		WBA Faceplate LED Drive Line
	8	LED-		LED Drive Line (cathode)

* I/O (input/output) is the term from bill acceptor's side.

Header : RF-H08(07)2SD-1110 (JST)
Contact : RF-SC2210 (JST)
Housing : RF-08 (JST)
Recommended wire : String UL1007 AWG#24 to 26

1-7-3. Optional Board and Harness

The Optional Conversion Board can be attached to UBA unit.

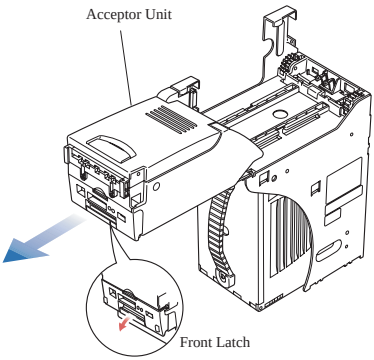
Two types of the optional conversion board are available

4033-3240-06-13A-01 (EDP#: 122467)	DC24V/DC13.5V and RS-232C Signal Level Conversion Board This board will allow you to convert DC24V to DC13.5V and communicate with RS-232C Interface.
4033-3240-06-13A-02 (EDP#: 123323)	RS-232C Signal Level Conversion Board This board will allow you to communicate with RS-232C Interface.

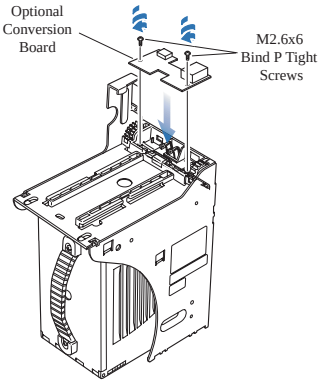
- **When installing the optional conversion board to the UBA-10/ 11/12 unit, set the jumper switch on the CPU board to Photo-coupler setting regardless of the interface. For the jumper switch setting, refer to page 1-10.**

■ Installing the optional conversion board

1) Press down the front latche and slide the UBA's acceptor unit forward.



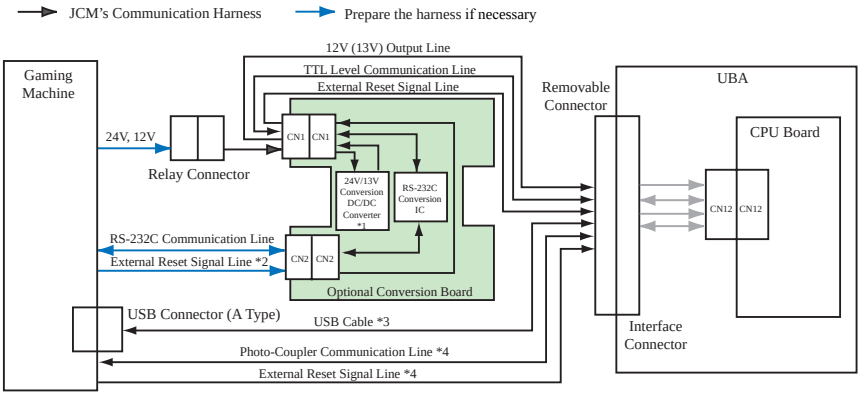
2) Place the optional conversion board and insert the M2.6x6 Bind P Tight screws into two (2) insertion slots. Use a screw driver to tighten such attachment screws and secure the board in place.



Three types of combination kit are available.

Harness / Board	RS-232C I/F harness with M3x12 W sems screw and clamp (Part#: 3240-05-19, EDP#: 124736)	Photo-coupler I/F harness with M3x12 sems screw and clamp (Part#: 3240-05-20, EDP#:124738)
DC24V/DC13.5V and RS-232C signal level conversion board (Part#: 4033-3240-06-13A-01, EDP#: 122467)	UBA 24V/RS-232C Board + RS-232C Harness Kit (EDP#: 123200)	UBA 24V/RS-232C Board + Photo-coupler Harness Kit (EDP#: 123521)
RS-232C signal level conversion board (Part#: 4033-3240-06-13A-02, EDP#: 123523)	UBA RS-232C Board+ RS-232C Harness Kit(EDP#: 123522) RS-232C Harness Kit(EDP#: 142475) w/o Connector (CN1) at Power cable	

■External Interface Conversion Structure for Optional Conversion Board



*1 The 24V/13.5V conversion DC/DC converter is NOT mounted on RS-232C signal level conversion board (Part#: 4033-3240-06-13A-02, EDP#: 123523).

*2 For RS-232C I/F Harness (Part#: 3240-05-19, EDP#: 124736).

*3 Only for UBA-14-SS.

*4 For Photo-coupler I/F Harness (Part#: 3240-05-20, EDP#: 124738).

◆ CN2 Connector

Connector	Pin No.	Signal Name
	1	MRESET
	2	TXD
	3	RXD
	4	GND (I/F)

Header: 53103-0430 (JAPAN MOLEX)

Contact: 50083-8014 (JAPAN MOLEX)

Houseing: 51030-0430 (JAPAN MOLEX)

Recommended Wire: UL1007 AWG#24 to 26

◆ **Relay Connector**

Connector	Pin No.	Signal Name
 1 3	1	24V
	2	12V
	3	GND

Header: 51029-0310 (JAPAN MOLEX)

Header Contact: 50087-8014 (JAPAN MOLEX) or 70021-00041 (USA MOLEX)

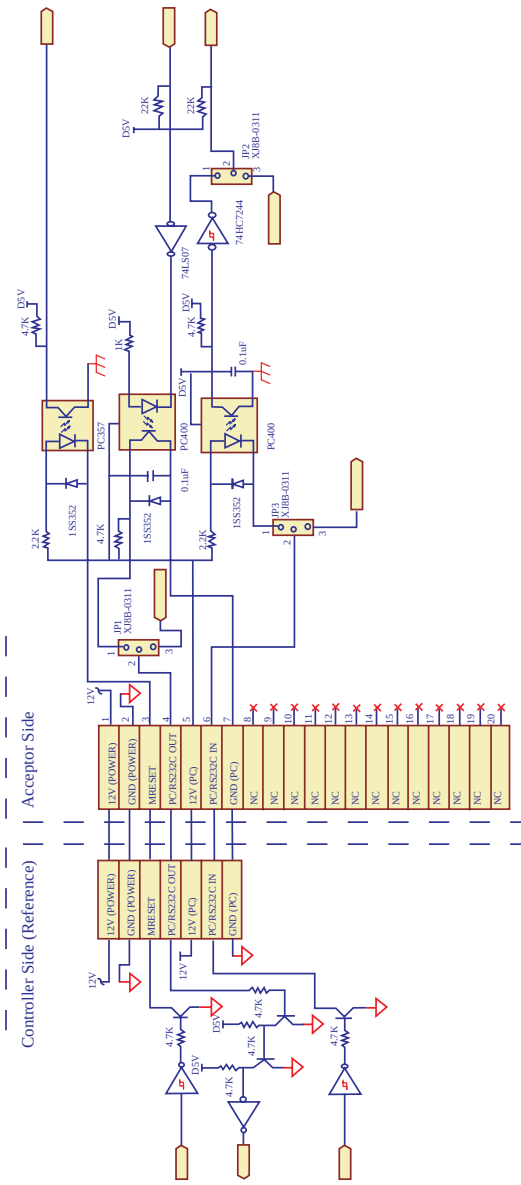
Housing: 51030-0330 (JAPAN MOLEX)

Housing Contact: 51030-0430 (JAPAN MOLEX)

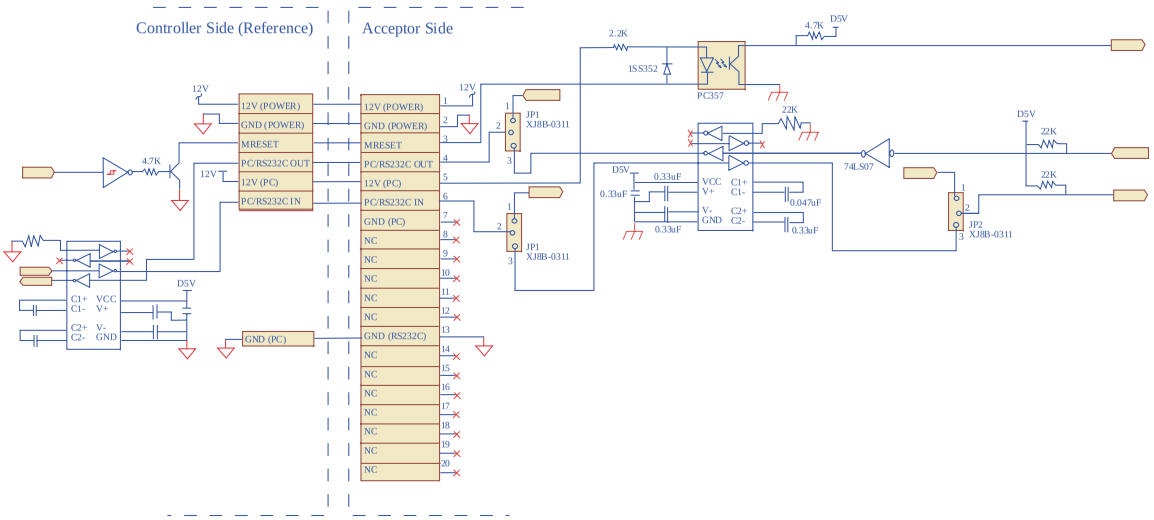
Recommended Wire: UL1007 AWG#24 to 26

1-8. Input/Output Circuits

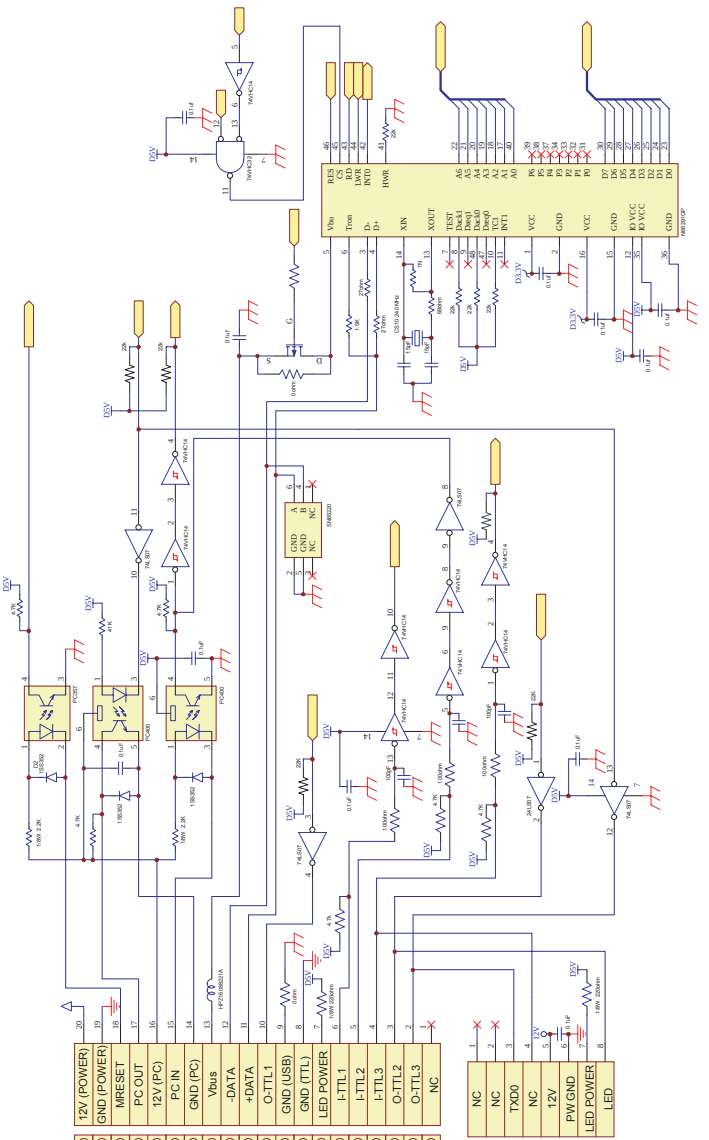
1-8-1. External Connector Interface Circuit -Photo-Coupler- (UBA-10-SS/UBA-11-SS/UBA-12-SS)



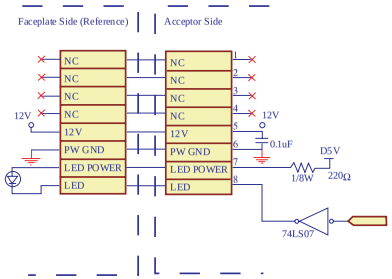
1-8-2. External Connector Interface Circuit -RS-232C- (UBA-10-SS/UBA-11-SS/UBA-12-SS)



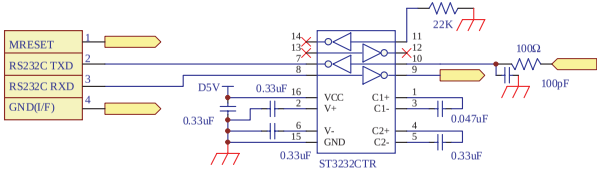
1-8-3. External Connector Interface Circuit (UBA-14-SS)



1-8-4. Faceplate LED Lightning Control Circuit

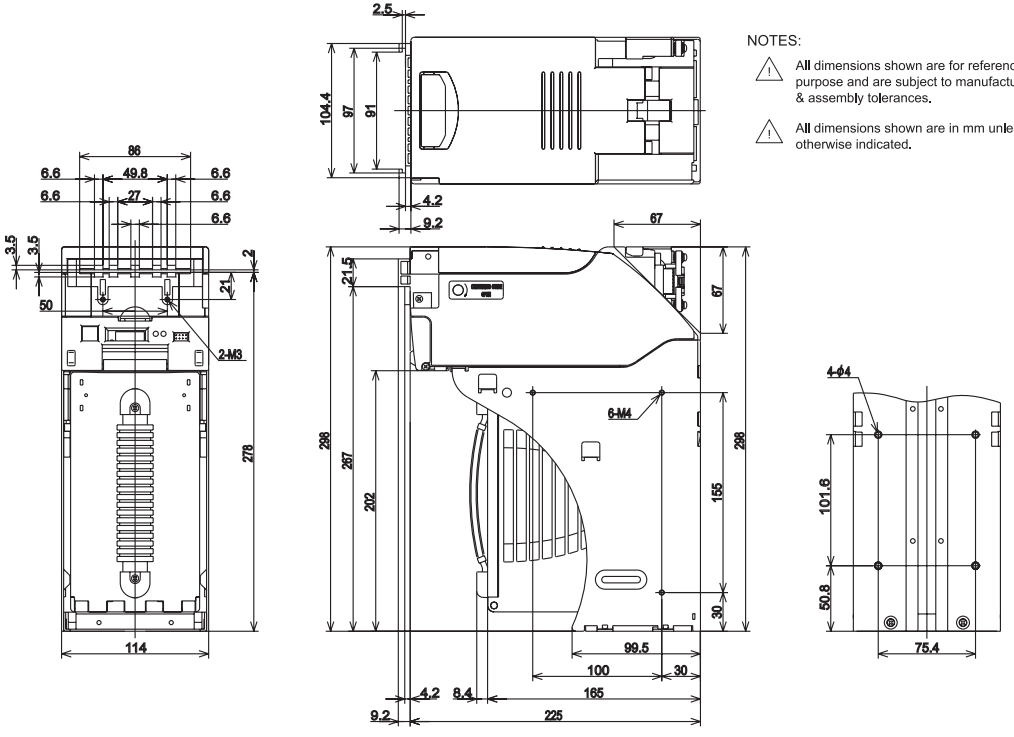


1-8-5. Optional Conversion Board Interface Circuit



1-9. Dimensions

1-9-1. UBA-1X-SS

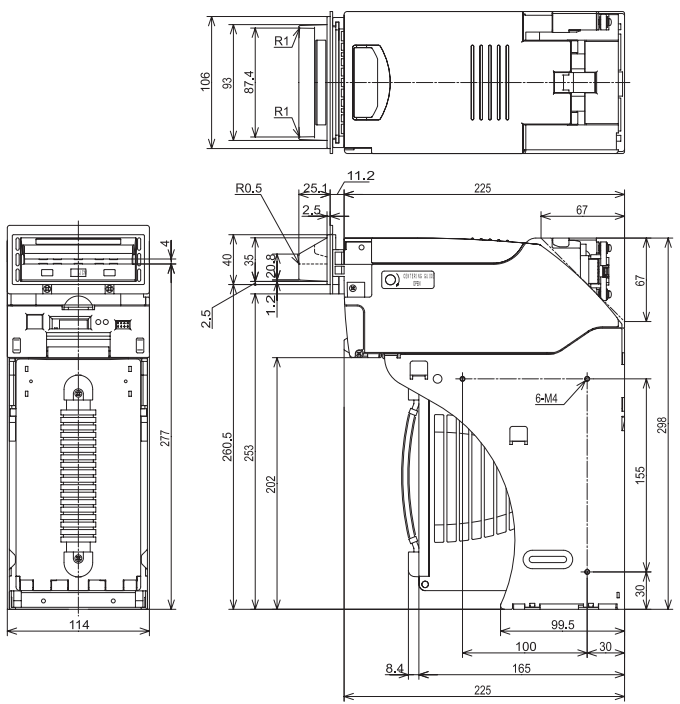


NOTES:

⚠ All dimensions shown are for reference purpose and are subject to manufacturing & assembly tolerances.

⚠ All dimensions shown are in mm unless otherwise indicated.

1-9-2. UBA-1X-SS with UBA Faceplate

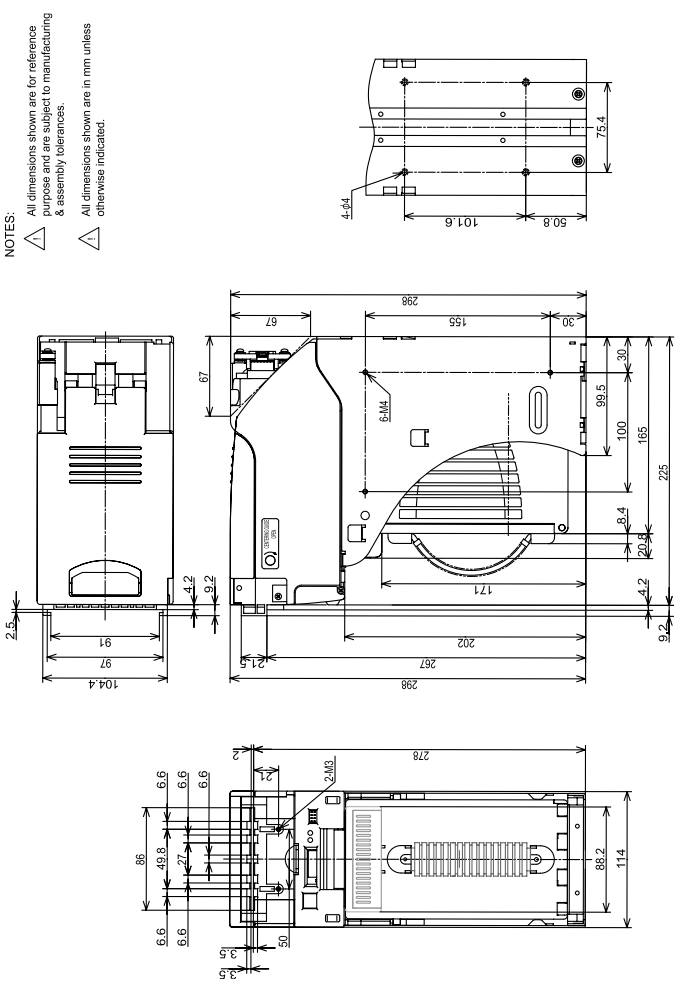


NOTES:

All dimensions shown are for reference purpose and are subject to manufacturing & assembly tolerances.

All dimensions shown are in mm unless otherwise indicated.

1-9-3. UBA-1X-SS with ICB box



1-9-4. UBA-1X-SS with Large box

NOTE

Universal Bill Acceptor

UBA-1X-SS Service Manual

Chapter 2

Operation & Maintenace

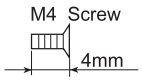
Issue 05/2006

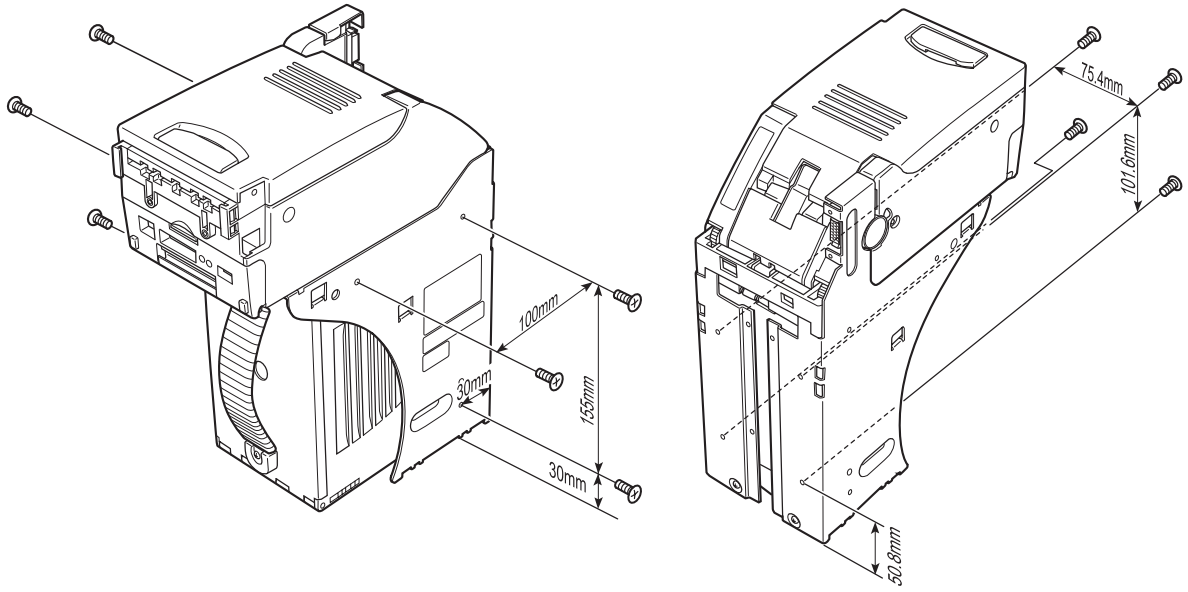
2-1. Installation

2-1-1. UBA unit Installation

1) Remove power from host machine.
2) Set UBA DIP switches, if required. The initial setting is all OFF where all the denominations are enabled. (see 1-4. Component Names)
3) Connect the proper interface harness from the host machine to UBA. (see 1-7. Connector and Pin Assignment)
4) Install the UBA into the host machine via the mounting screws (M4). There are 4 mounting holes on the frame end and 3 each on both sides of the frame. (see below)
5) Apply power to the machine, verify that the red chip LED next to the DIP switch is ON, and both red and green diagnostic LEDs are OFF.

- **If the red chip LED is OFF, check connections and make sure power is applied.**
- **If any of the diagnostic LEDs are ON, check error codes to fix the problem. (see 6-2. Performance Test)**
  Check operation, insert banknotes of each denomination to verify that notes are accepted and credited properly in the host machine.

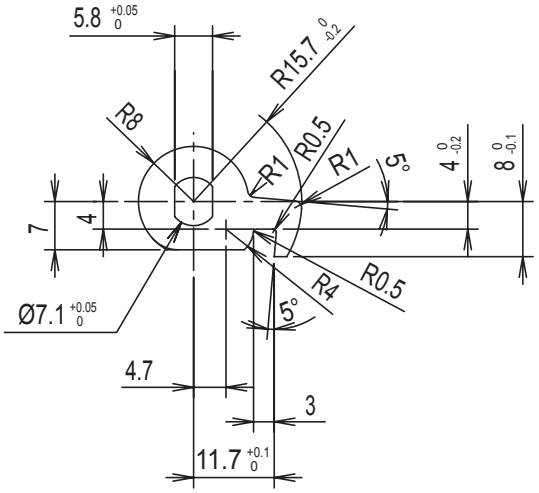




2-1-2. Lock Installation

One or two security locks can be installed with UBA cash box. When installing a security lock, accesorries attached may be required. Two key spacers, plate lock keys and a key cap are attached as accessories.

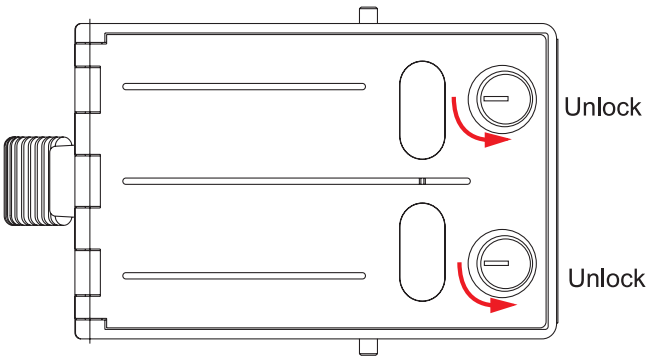
The plate key lock's dimension is as shown below. Choose a lock that fits the following hole dimensions. Standard 5/8" and 1-1/8" formats are supported. Use a key spacer if required.



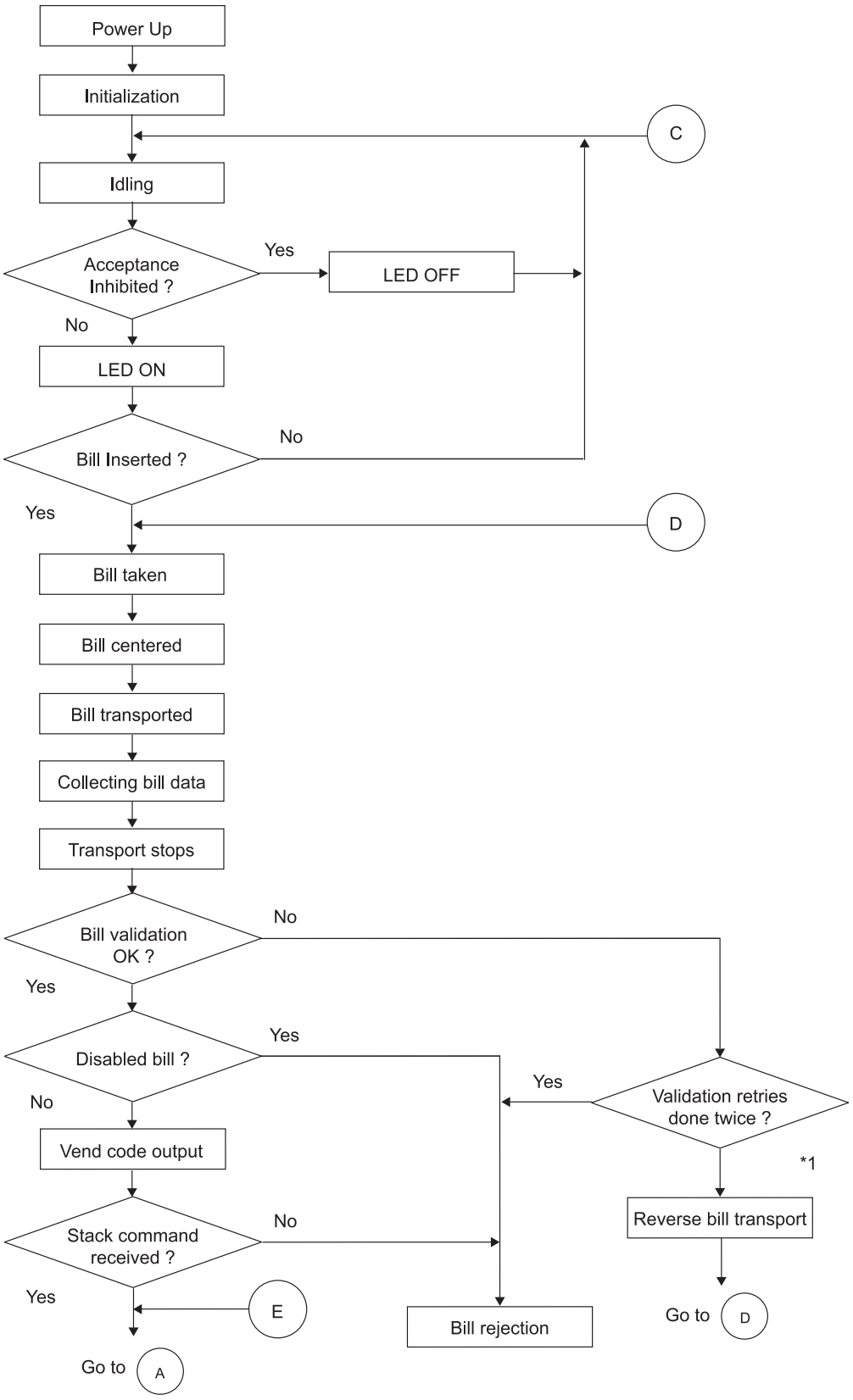
- **There are many lock designs and key spacer washers may be required for some lock types. Locks vary greatly in price, security, keying policies, etc. The customer is responsible for selecting a lock with performance that is fit for the intended purpose. JCM does not test or endorse any specific brand of lock for security characteristics.**

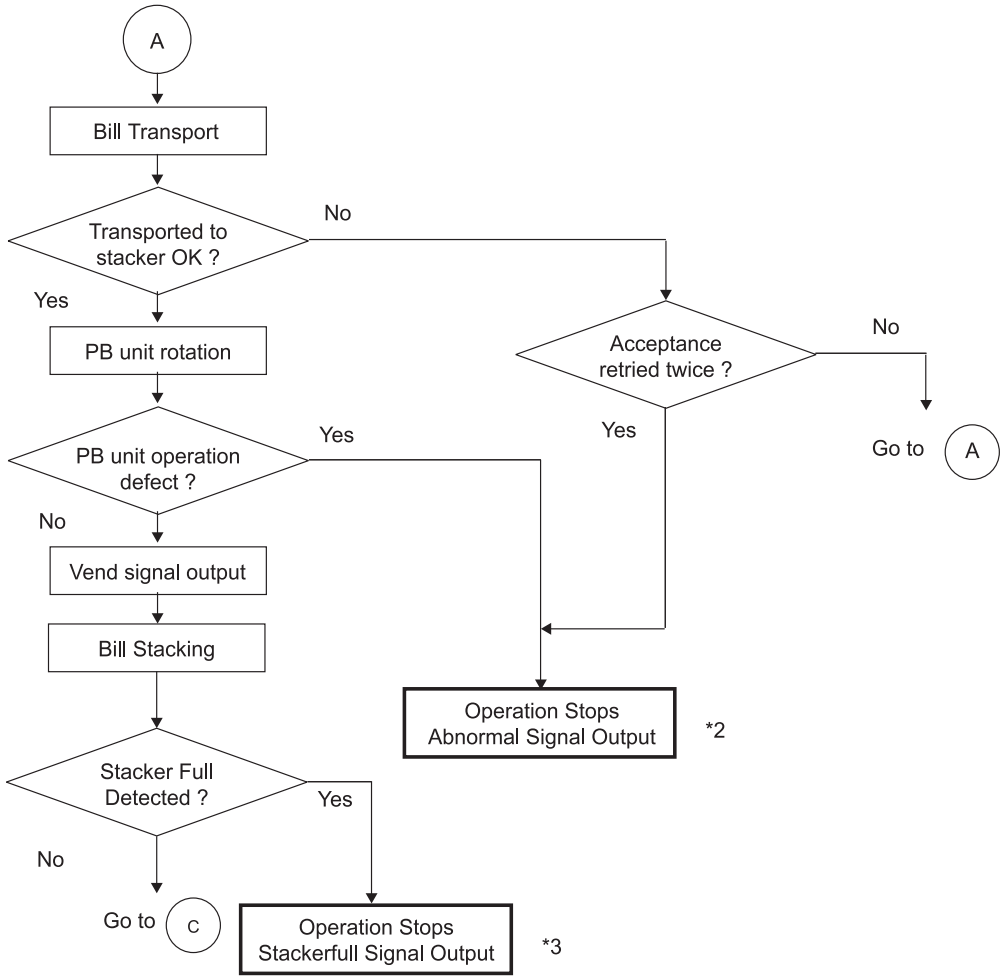
When using only one lock, the remaining blank hole does not give access to the contents of the cash box. However, some regulatory authorities may require the key cap.

When two locks are installed, they must rotate in same directions as shown below.



2-2. Operation Flowchart





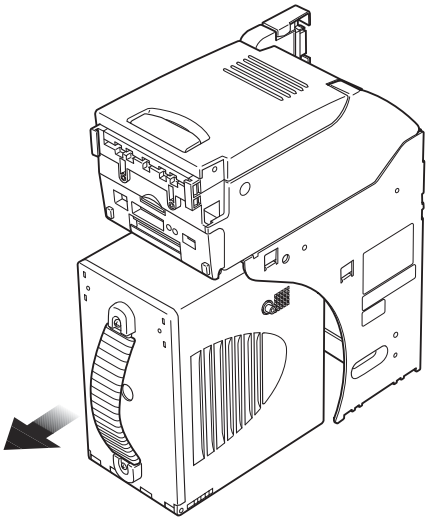
*1: When the bill validation is NG, bill is rejected and then automatically inserted again for second validation. Altogether the bill acceptor tries to revalidate the bill 3 times at maximum.

*2: When abnormal signal is detected, remove the cause of malfunction and power up again, or send reset command to bill acceptor.

*3: When stackerfull signal is detected, take out bills from cash box, and re-install the box in position. The unit will initializes itself automatically.

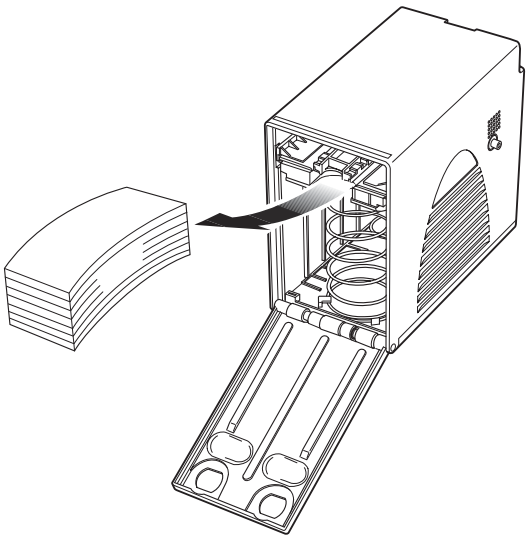
2-3. Retrieving Bills

1) Pull the handle to release the cash box from the frame.



2) When a key is installed, unlock the key. For details about lock, refer to 2-1-2. Lock Installation.

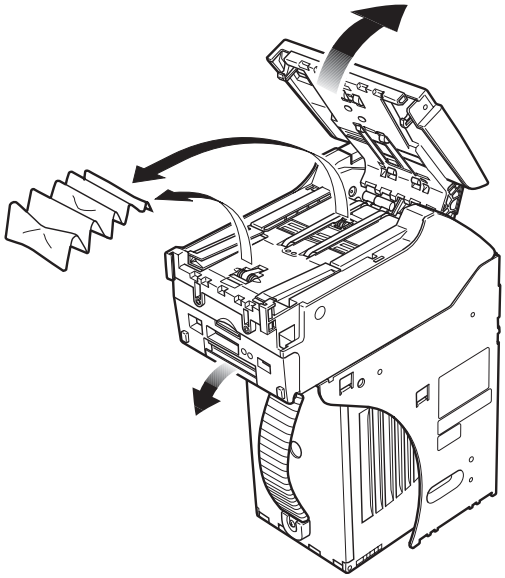
3) Open the cash box door and retrieve the bills.



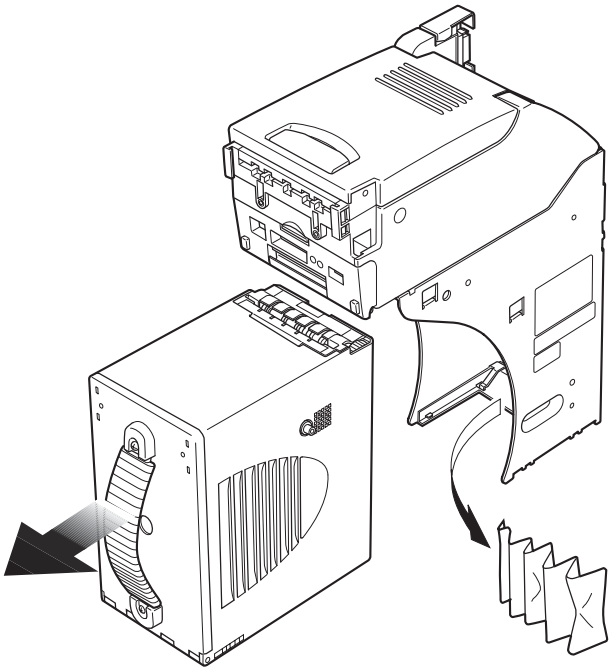
2-4. Clearing Bill Jam

1) When a bill is jammed near the acceptor's entrance, pull the tab on top of the acceptor to open the upper guide. Remove the jammed bill.

- **When opening the upper guide, hold the guide since it does not stay up in position. Improper handling may cause personal injury and/or damage to the equipment.**



2) When a bill is jammed near the cash box entrance, pull the box handle to take out the cash box from the frame. Remove the jammed bill.



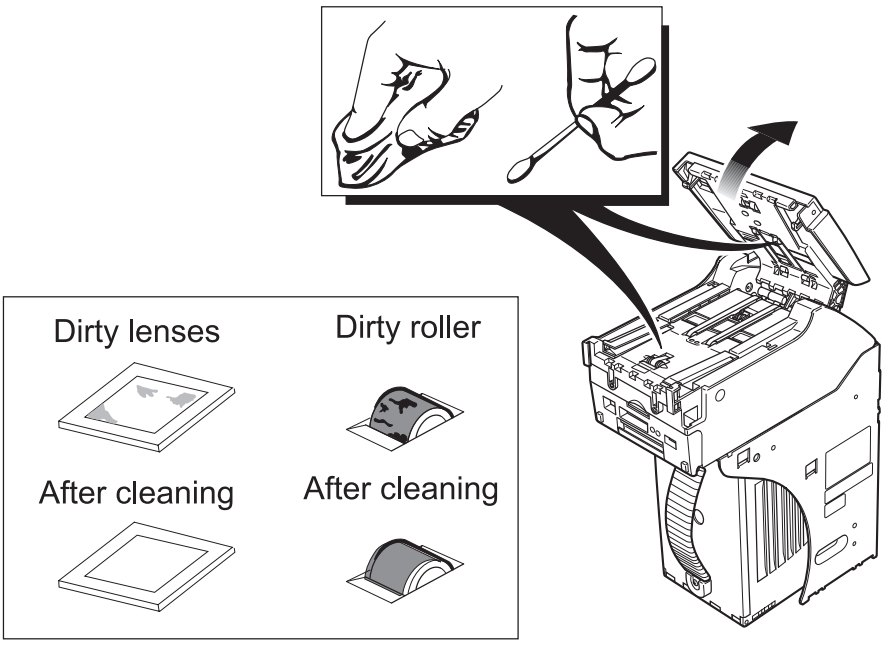
2-5. Preventive Maintenance

It is important to keep the bill path, rollers, and belts clean.
The sensor lenses are transparent, and made of polymer material. Handle them with care. Use a soft lint-free cloth or cotton bud to wipe out dirt and stain on the surface of magnetic and optical sensors, rollers and belts. Repeat the cleaning process as needed until the transport path is free of contaminants.

- ***Do not use alcohol or thinner for cleaning.***
- ***When opening the upper guide, hold the guide since it does not stay up in position. Improper handling may cause personal injury and/or damage to the equipment.***

Note

- JCM support cleaning cards, Part#G00173 (ask Sales for info)



Cash Box Preventive Maintenance (P/M)
Perform periodic P/M on the cash boxes to ensure proper operation. Use compressed air to blow out the paper fibers and other debris that builds up over time. Check the belts and all moving parts for wear and proper positioning. If the unit does not operate properly, it can cause bill jams.

Auto-Calibration up to Firmware Version 1.39

After completing the P/M or when the lenses need to be adjusted in the field, perform the Auto-Calibration. The Auto-Calibration can quickly improve acceptance rate. However, this is not the regular adjustment but the provisional adjustment method.

- **At maintenance centers and workshops, perform the regular adjustment.**

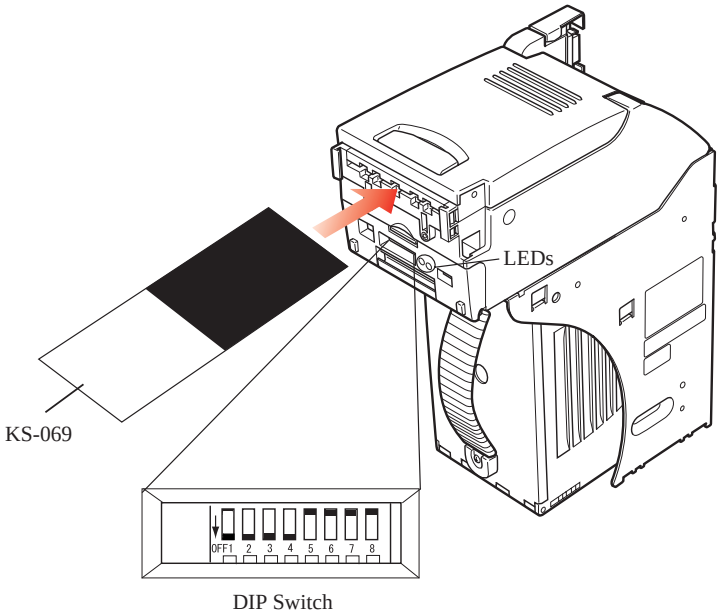
■Items required

- JCM MIB232 (EDP No.: G00176) or equivalent
- Calibration Paper (Part No.:KS-069, EDP No.: 107726)

- **Before perfoming the Auto-Calibration, remove the faceplate.**
- **The software program must be ver. 1.39 or deeper.**

■Auto-Calibration porocedure

1) Set the DIP switch No. 5, 6, 7 and 8 ON, and supply the power to the UBA unit.
2) Insert the calibration paper (KS-069) into the UBA unit's bill insertion slot with black part forward.
3) The unit will carry the paper back and forth several times. When the process is completed, the paper will be automatically dispensed from the UBA.



DIP Switch

4) When the green LED flashes, it means the calibration is completed successfully.

- **When the red LED flashes, the Auto-Calibration is not completed successfully. Turn the power OFF, check the lenses and perform the Auto-Calibration again.**

Auto-Calibration from Firmware Version 1.40

After completing the P/M or when the lenses need to be adjusted in the field, perform the Auto-Calibration. The Auto-Calibration can quickly improve acceptance rate. However, this is not the regular adjustment but the provisional adjustment method.

- **At maintenance centers and workshops, perform the regular adjustment.**

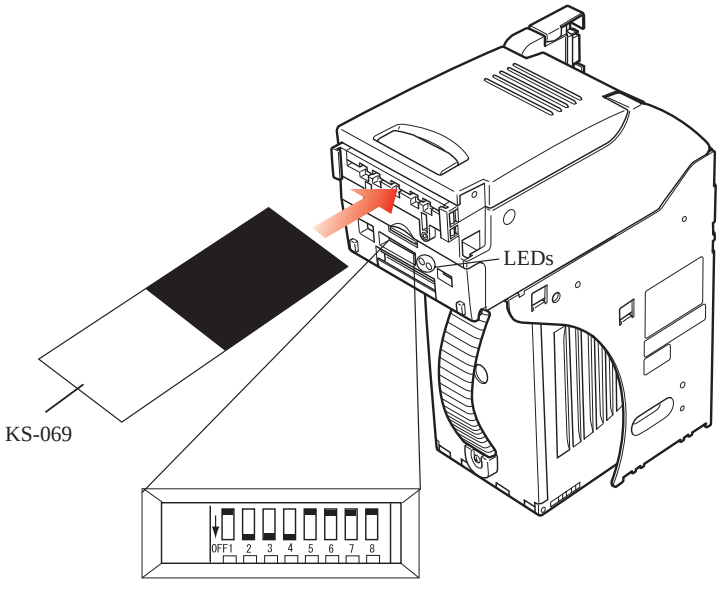
■Items required

- JCM MIB232 (EDP No.: G00179) or equivalent
- Calibration Paper (Part No.:KS-069, EDP No.: 107726)

- **Before perfoming the Auto-Calibration, remove the faceplate.**
- **The software program must be ver. 1.40 or higher.**

■Auto-Calibration porocedure

1) Set the DIP switch No.1,5, 6, 7 and 8 ON, and supply the power to the UBA unit.
2) Insert the calibration paper (KS-069) into the UBA unit's bill insertion slot with black part forward.
3) The unit will carry the paper back and forth several times. When the process is completed, the paper will be automatically dispensed from the UBA.



DIP Switch

4) When the green LED flashes, it means the calibration is completed successfully.

- **When the red LED flashes, the Auto-Calibration is not completed successfully. Turn the power OFF, check the lenses and perform the Auto-Calibration again.**

2-6. Technical Support

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URL: www.jcmgold.com.hk

Universal Bill Acceptor

UBA-1X-SS Service Manual

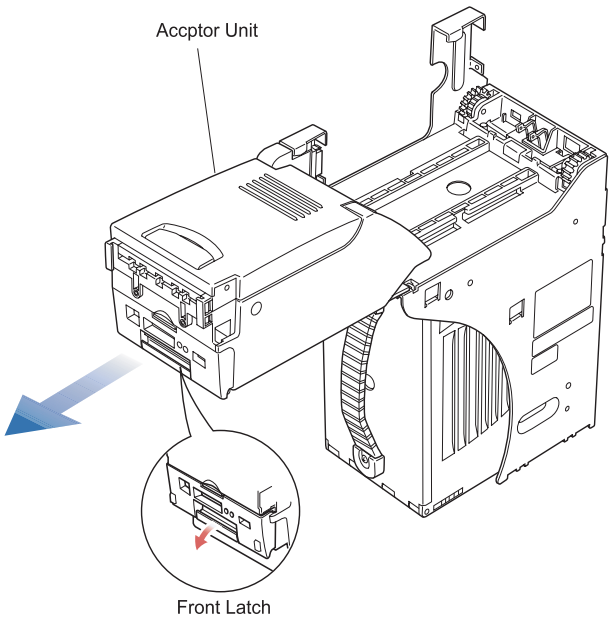
Chapter 3

Disassembly Instructions

Issue 2005-12

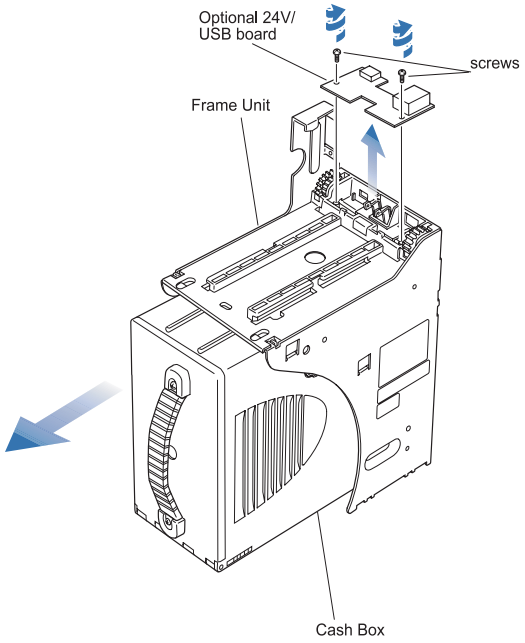
3-1. Disassembly of Entire Unit

1) Press down the front latch and slide the UBA transport unit forward.



2) Pull the handle to take out the cash box from frame.

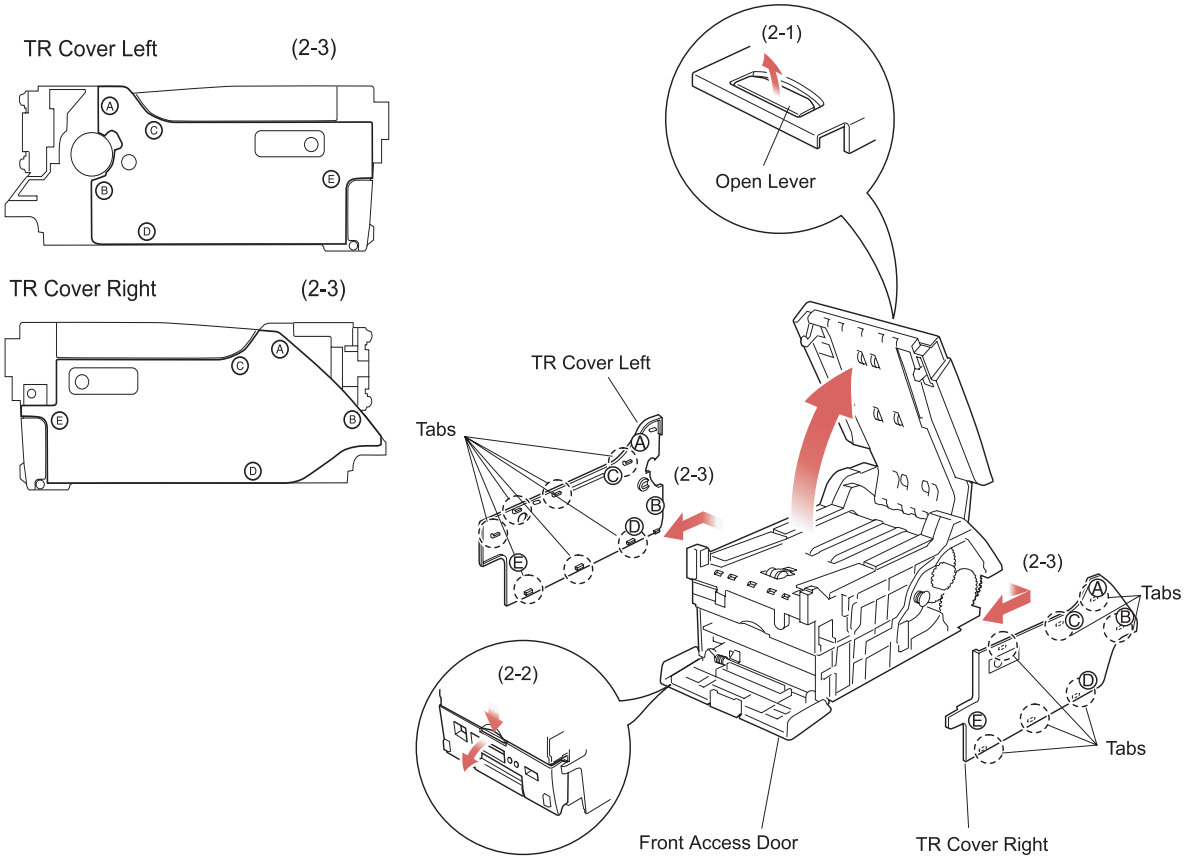
3) When an optional 24V/USB board is installed, remove the optional board from the frame.



- **Applicable screw size is 2.6x8P Tight and the torque necessary is 4kg-cm.**

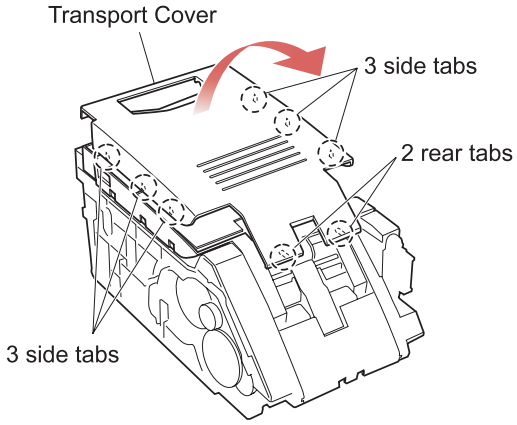
3-2. How to Remove Side Covers / Top Cover

1) Pull the open lever on top and fully open the transport cover.
2) Fully open the front access door.
3) Lift and hold the points (A) (B) with nails, then slide the cover to the arrowed direction to remove the side cover (To re-attach side covers). Place side covers in proper position. Hold points (C) (D) (E), then slide the cover to the arrowed direction.



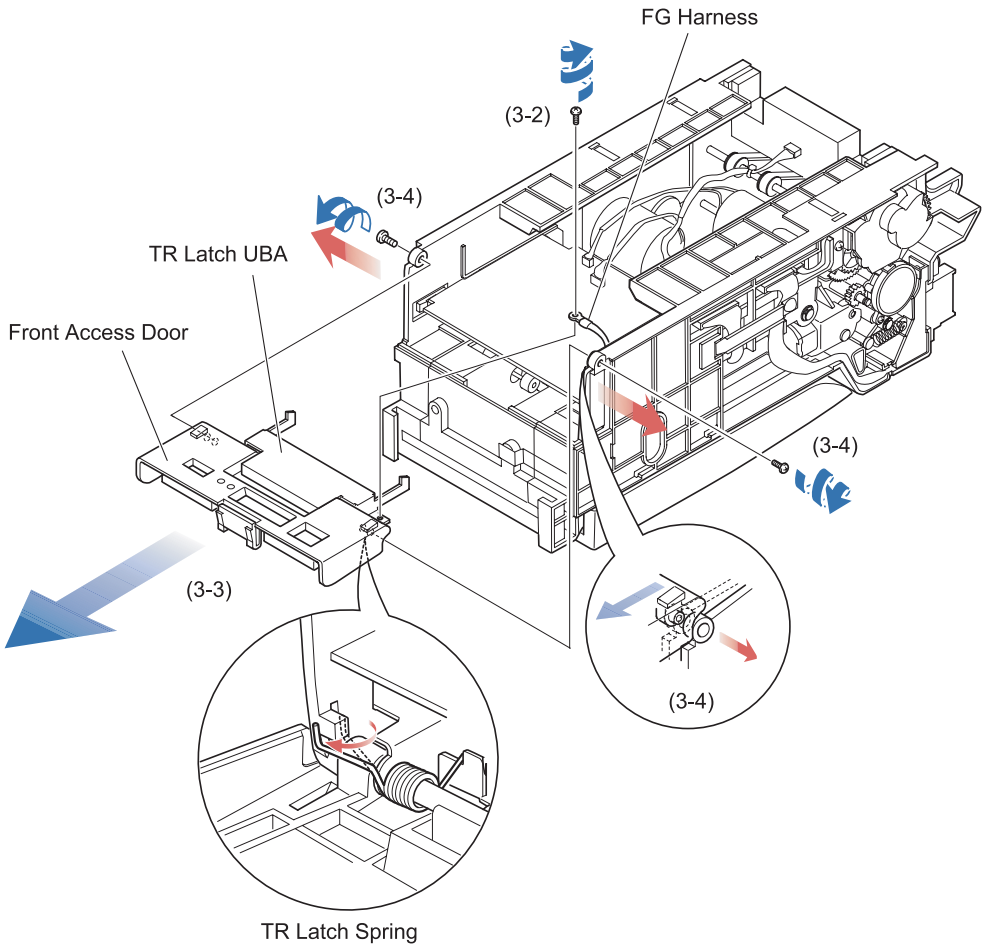
4) Release 6 tabs on the sides of transport cover with flathead screwdriver. Remove the transport cover upward with the two rear tabs as points of support.

- **Hold the upper guide while removing TR covers right / left as it does not stay up in position.**
  Improper handling may result in personal injury and/or damage to equipment.
  When removing a TR Cover, be sure to handle TR cover's hook carefully. If the TR cover's hook is damaged, change new TR cover.



3-3. How to remove Front Access Door

1) Turn the transport unit upside down.
2) Unscrew the screw on the side of front access door to release the FG harness.
3) Fully open the front access door and release the lock of TR latch spring.
4) Unscrew two screws on the shaft, slightly widen the UBA transport units to the arrowed directions, and remove the front access door from transport unit.



[Remarks on Re-assembly]

- **The 2 screws on the shaft need to be tightened at the torque of 3.0kg-cm.**

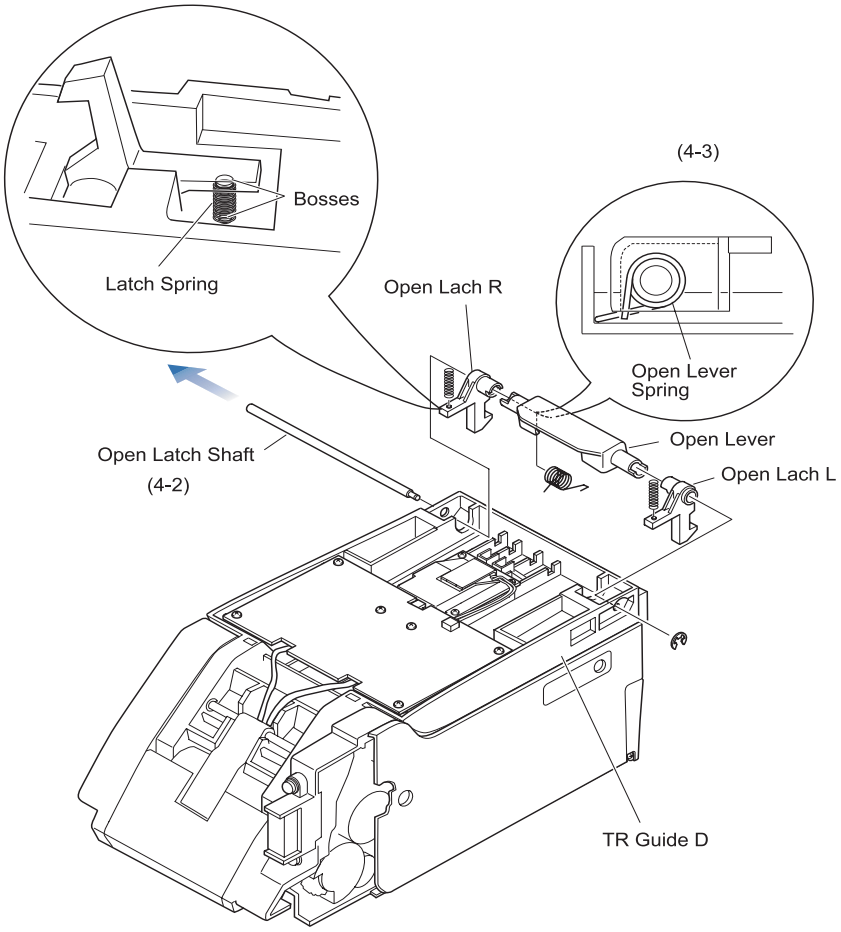
3-4. Disassembly of Open Lever on Transport Unit

1) Remove the transport cover (see 2-4)
2) Remove an e-ring on the shaft, and pull out the open latch shaft.
3) Lift the TR Guide D, then remove open lever, open lever L/R, and open lever springs.

⚠ **- Make sure not to lose latch springs placed underneath open latch L/R.**

⚠ **[Remarks on Re-assembly]**

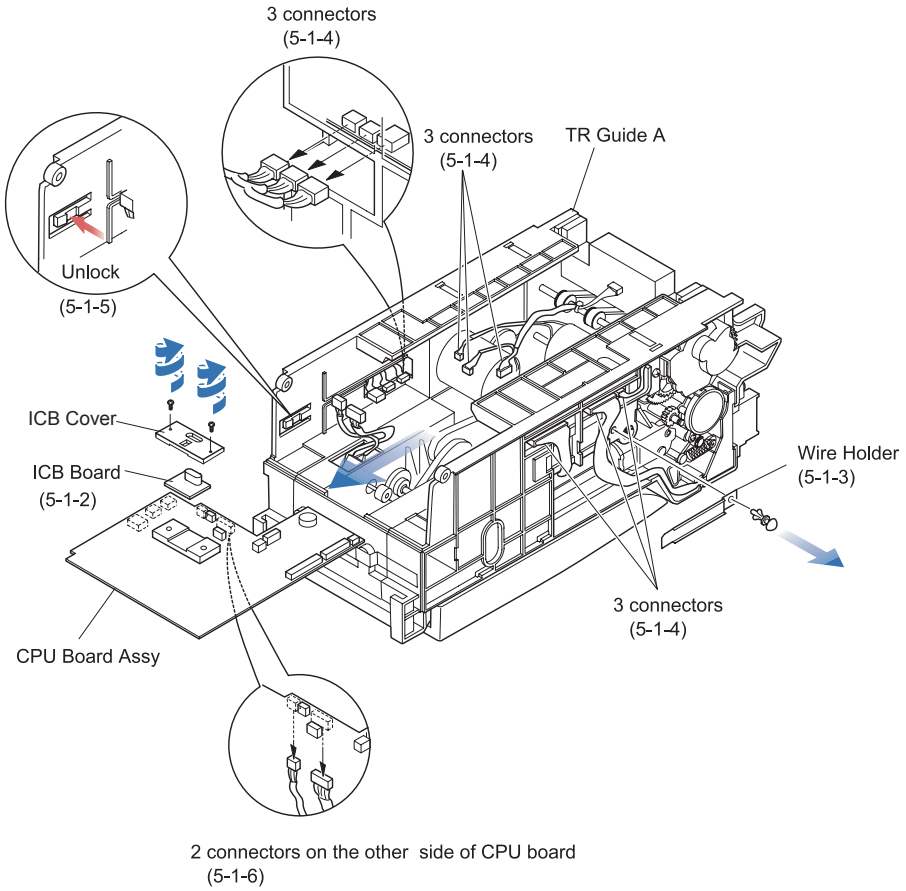
- **The open lever spring needs to have its hooked end half-round.**
- **The open latch springs shall be placed on the bosses of TR guide D with tweezers after the shaft is re-inserted.**



3-5-1. CPU Board

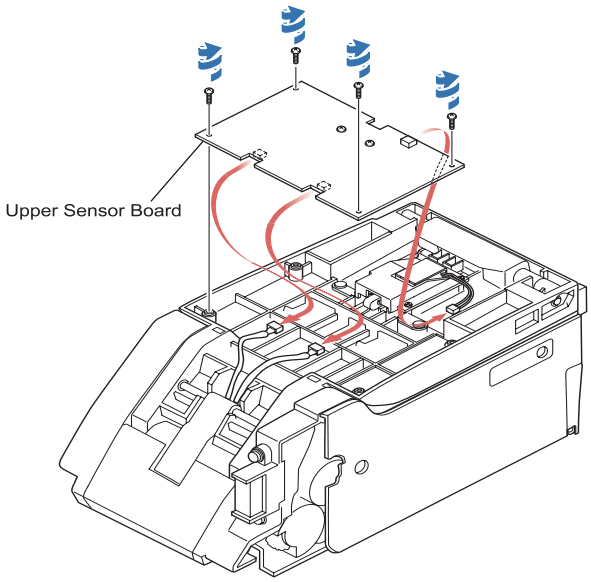
1) Turn the transport unit upside down.
2) Remove ICB board.
3) Pull up push rivet with flathead screw driver and remove the wire holder.
4) Disconnect 9 connectors from CPU board.
5) Unlock the TR guide A slightly, and pull the CPU board forward.
6) Before fully pulling out the CPU board, disconnect the remaining 2 connectors on the other side of CPU board.

⚠ - **When installing ICB board on the CPU board, Check PLUG No. and Socket No. and install a proper way.**



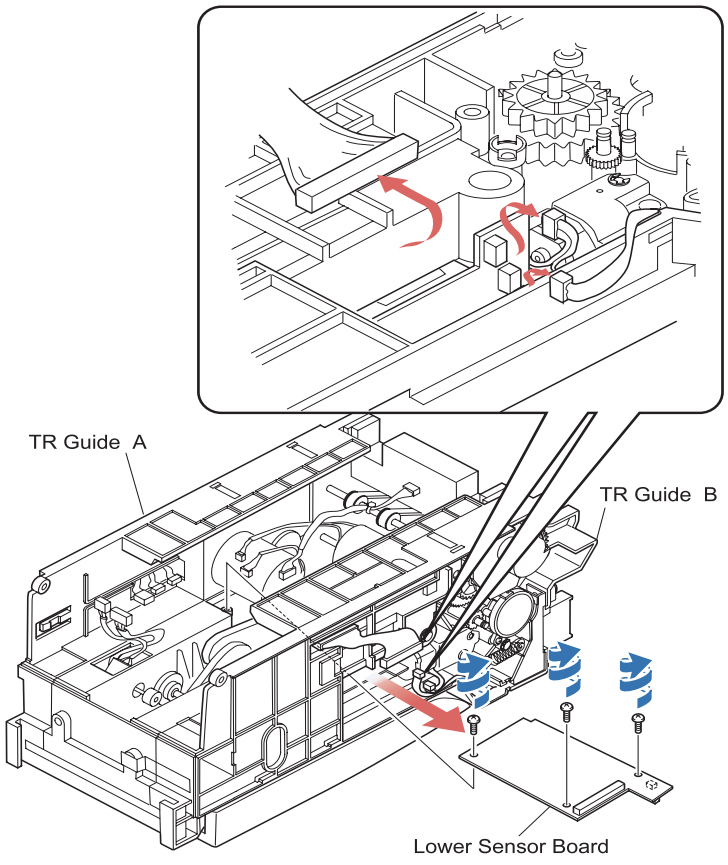
3-5-2. Upper Sensor Board

1) Remove the transport cover
2) Unscrew the 4 screws and disconnect 3 connectors. Remove the upper sensor board.



3-5-3. Lower Sensor Board

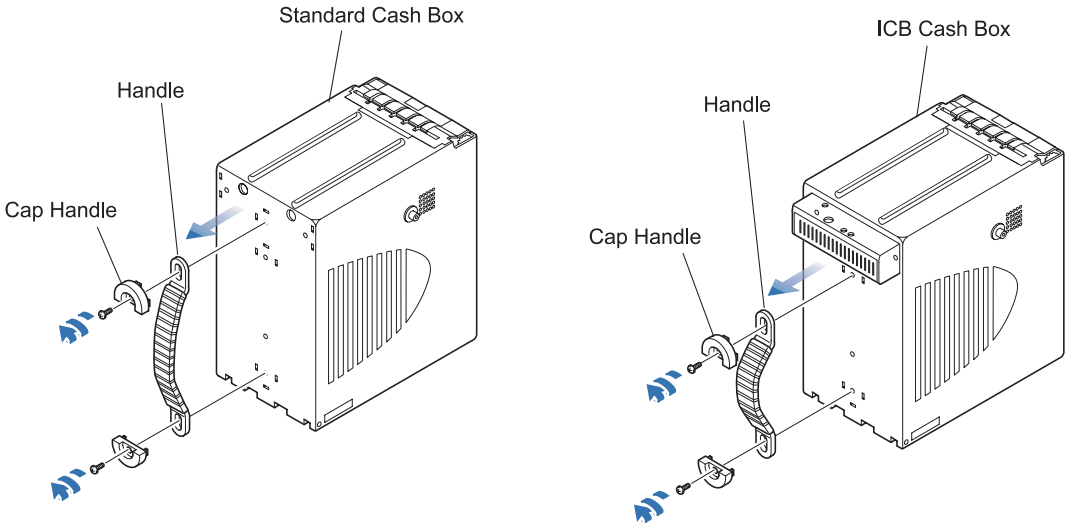
1) Disconnect 3 connectors from the lower sensor board.
2) Unscrew 3 screws, lift the lower sensor board and slide it to the side.



3-6. Disassembly of Box Handle and IT Box

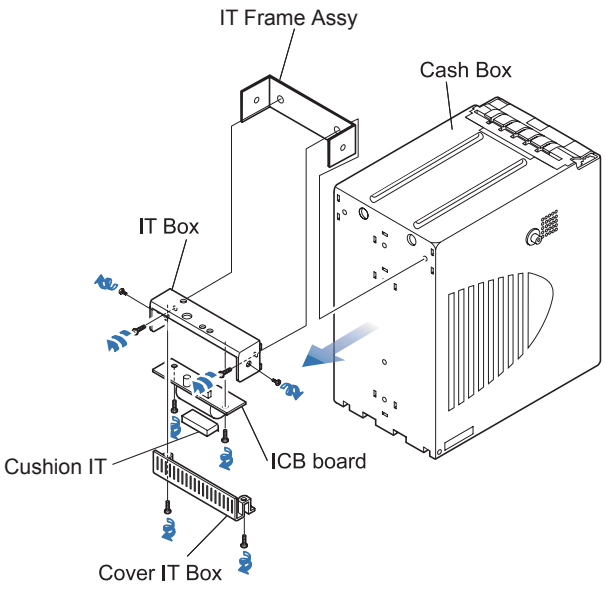
3-6-1. Remove the Cash box handle

1) Unscrew the two screws on the box handle.
2) Remove cap handle to take out the handle.



3-6-2. Removing ICB module

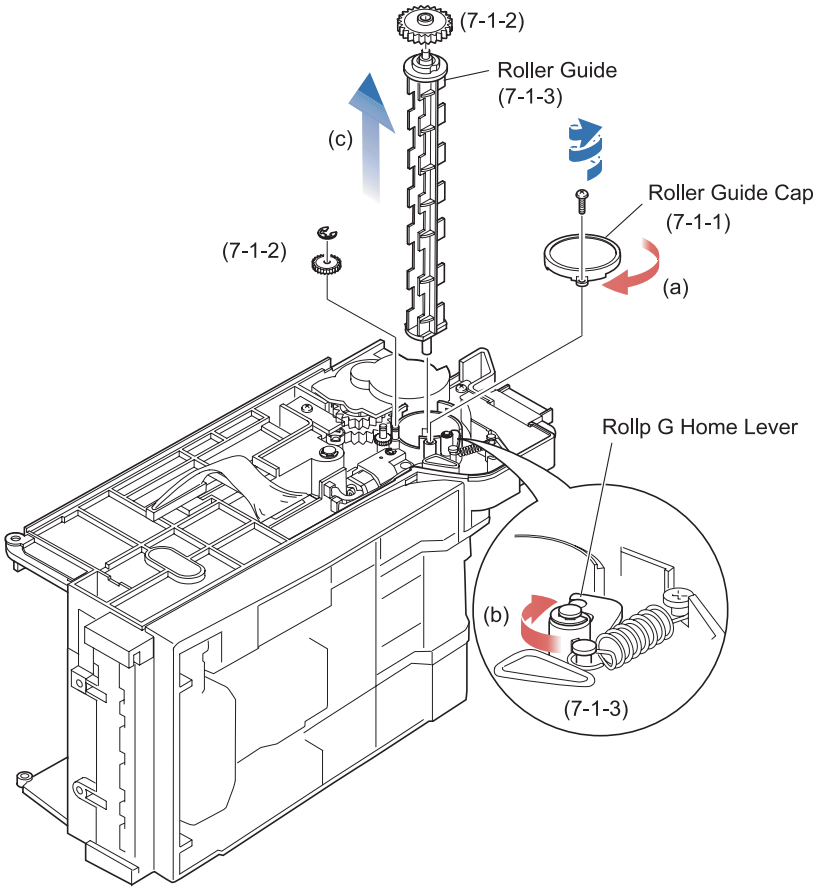
1) Unscrew the 2 screws to remove the cover IT box.
2) Unscrew the 2 screws to fix IT box on to the cash box.
3) Unscrew the 2 screws to fix ICB board on the IT box.



3-7. Other Disassembly Instructions

3-7-1. Disassembling TR Guide A, B, C, D, E.

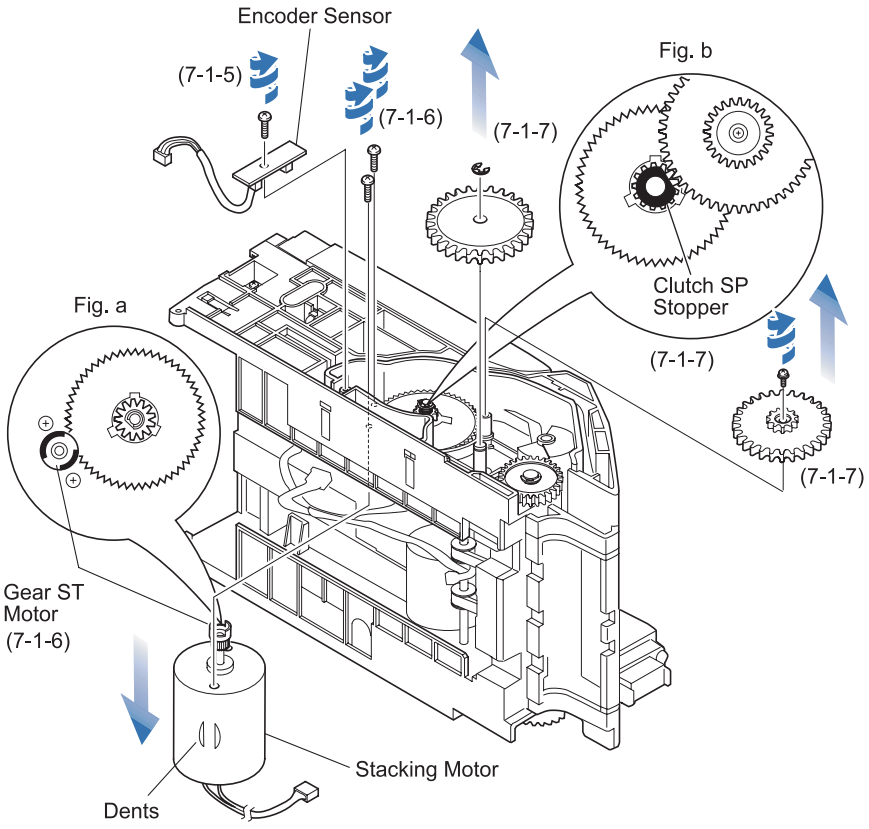
1) Unscrew a screw and twist the Roller Guide Cap to the arrow shown and remove it upward.
2) Remove an e-ring, then remove two gears.
3) Pull out the Roller Guide.



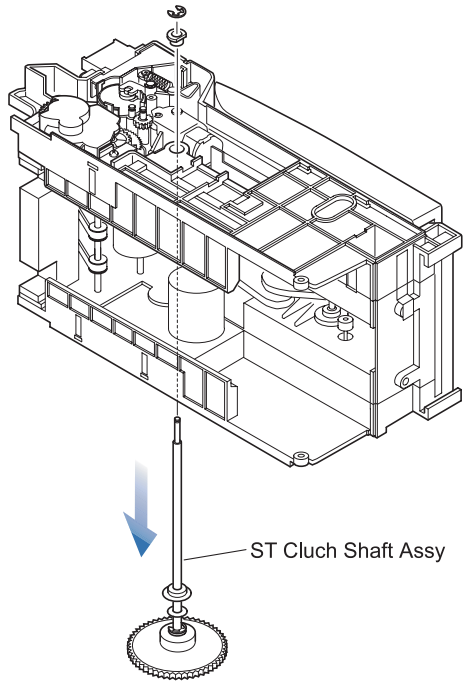
4) Turn the UBA transport unit upside down.
5) Unscrew a screw, then remove the Encoder Sensor Board.
6) Align the cutout of Gear ST Motor as shown in the diagram. Unscrew two screws, then remove Stacking Motor inward.
7) Align the gear of Clutch SP Stopper as shown in the diagram, then remove a screw and e-ring and two gears.

[Remarks on Re-assembly]

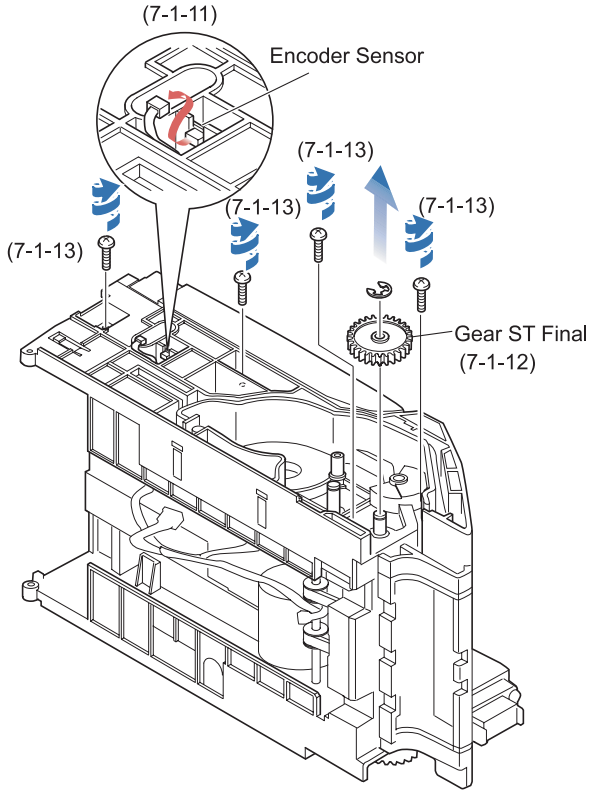
- **When re-assembling Stacking Motor, set the dents of motor in the direction shown in the diagram.**
- **Gear ST Motor and Cutch SP Stopper shall be aligned in the diagram 7-7 before re-assem bling.**



8) Turn the UBA transport unit upside down.
9) Remove an e-ring, then pull the ST Clutch Shaft Assy downward.

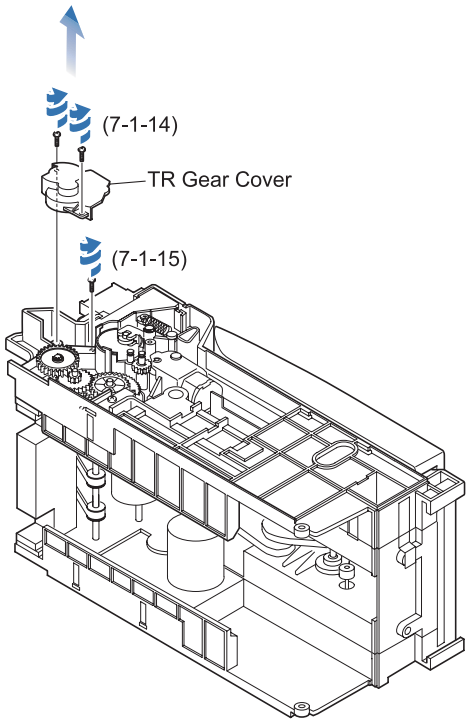


10) Turn the UBA transport unit upside down.
11) Disconnect a connector from Encoder Sensor Board.
12) Remove an e-ring, then remove Gear ST Final.
13) Unscrew four screws.

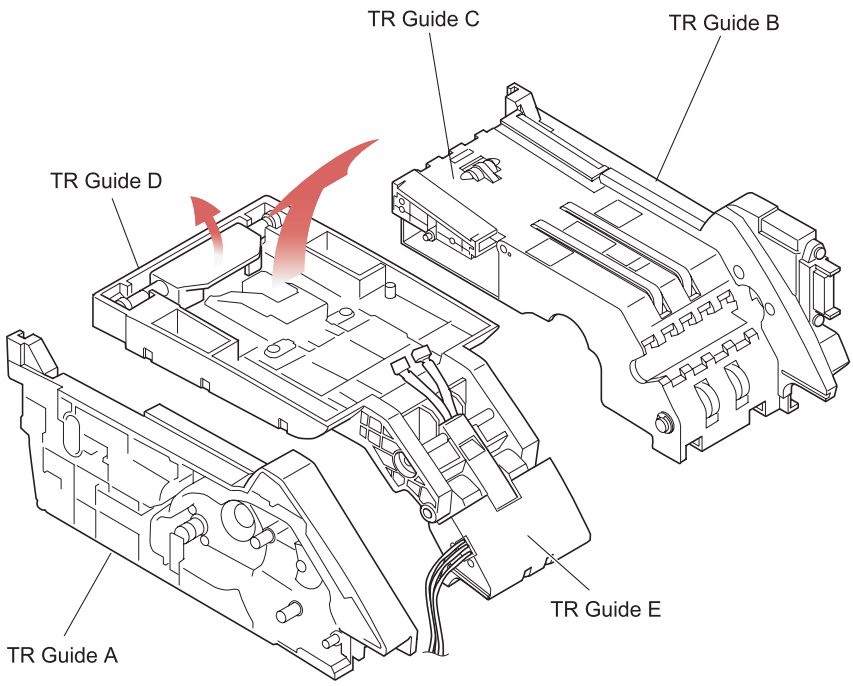


14) Unscrew two screws then remove TR Gear Cover.

15) Unscrew a screw.

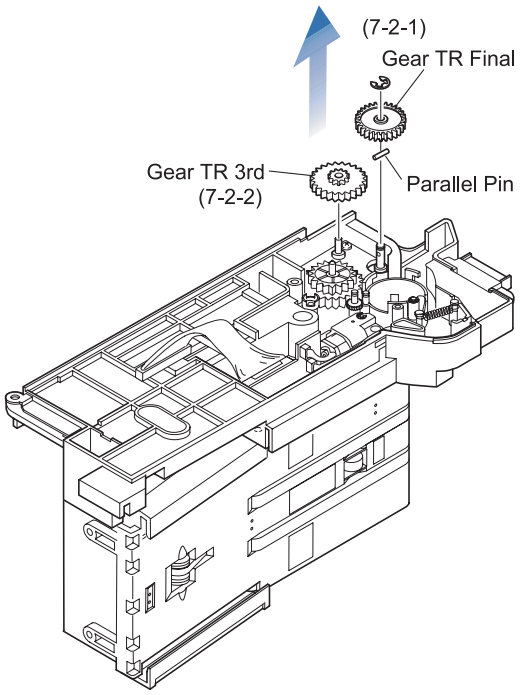


16) Pull the Open Lever and open the TR guide D. The unit gets separated into TR Guide A, TR Guide B/C, and TR Guide D/E.

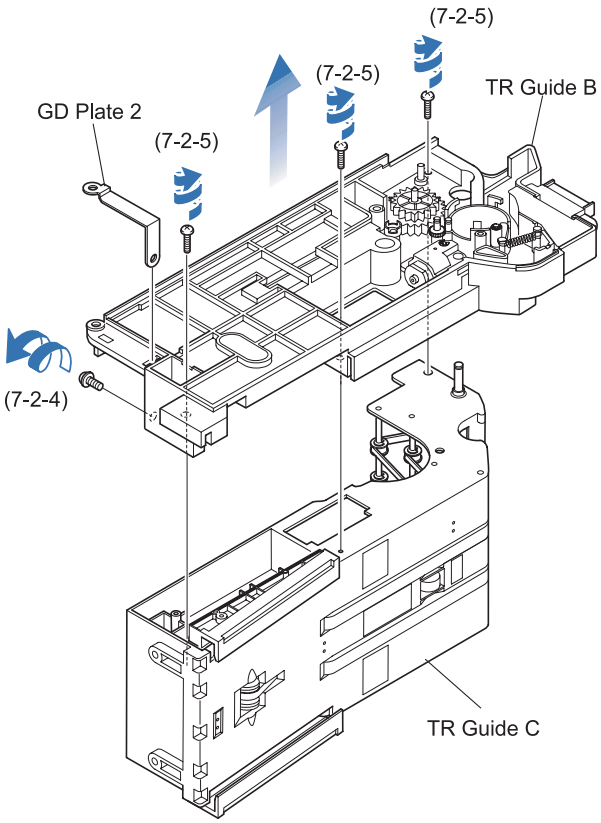


3-7-2. Disassembling TR Guide UBA B/C

1) Remove an e-ring and remove Gear TR Final and a parallel pin.
2) Remove Gear TR 3rd.
3) Refer to the instruction on 5-3, and remove Lower Sensor Board.

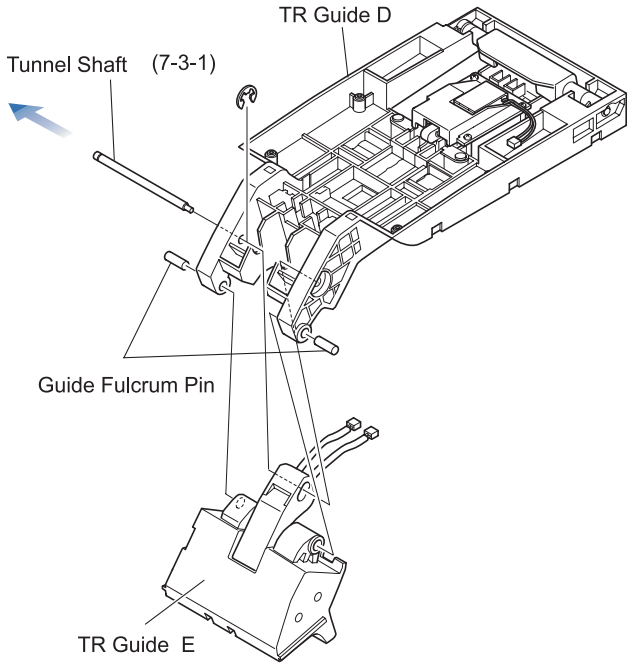


4) Unscrew a screw to remove GD Plate 2.
5) Unscrew three screws to get TR Guide B and C separated.



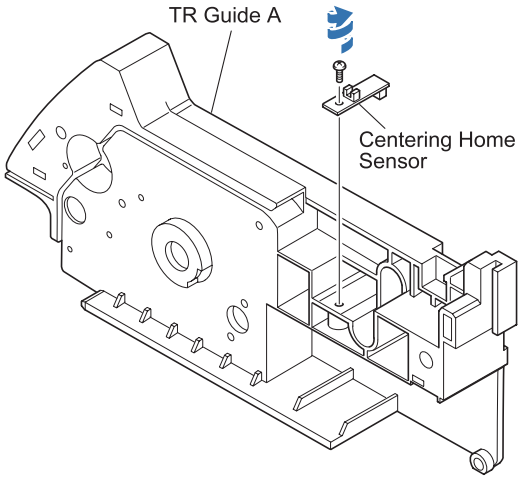
3-7-3.Disassembling TR Guide D/E

1) Remove an e-ring and pull out Tunnel Shaft.
2) Remove two Guide Fulcrum Pins and get TR GuideD and E separated.



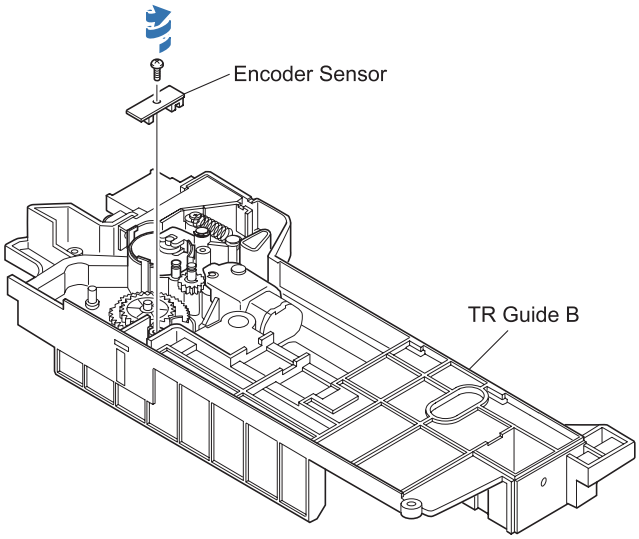
3-7-4. Disassembling Centering Home Sensor Board

1) Centering Home Sensor Board is attached on TR Guide A. Unscrew a screw on the centering home sensor Board to displace the board.



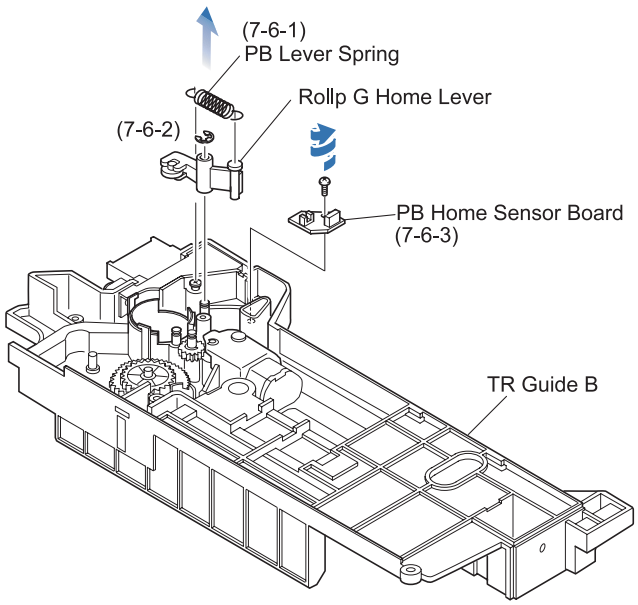
3-7-5. Disassembling Encoder Sensor Board

1) Encoder Sensor Board is attached on TR Guide B. Unscrew a screw on the encoder sensor board to displace the board.



3-7-6. Disassembling PB Home Sensor Board

1) PB Home Sensor Board is attached on TR Guide B. Take out PB Lever Spring from Roll G Home Lever.
2) Remove an e-ring, then remove Roll G Home Lever.
3) Unscrew a screw, then remove PB Home Sensor Board.

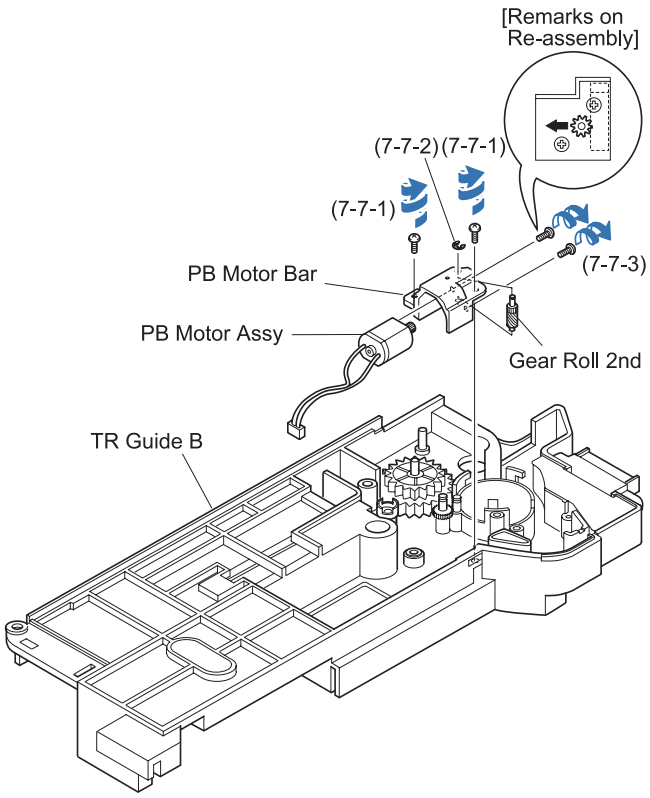


3-7-7. Disassembling PB Motor Assy

1) Unscrew two screws, then remove PB Motor Assy.
2) Remove an e-ring, then remove Gear Roll 2nd.
3) Unscrew two screws, then remove PB Motor Assy.

[Remarks on Re-assembly]

- **When re-assembling PB Motor Bar with PB Motor Assy, fasten the screws in a way that Gear Roll 2nd and the gear of PB Motor Assy do not tightly clinch each other.**

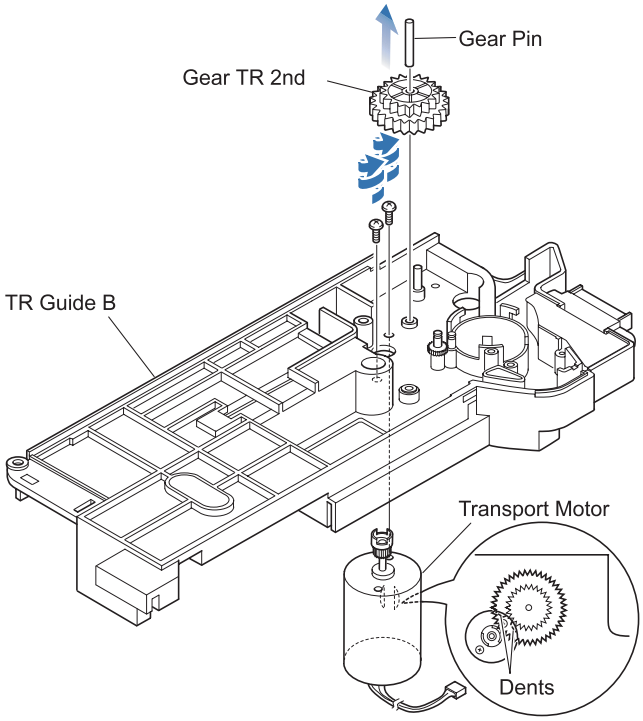


3-7-8. Disassembling Transport Motor

1) Remove Gear Pin, then Gear TR 2nd.
2) Unscrew two screws, then remove Transport Motor.

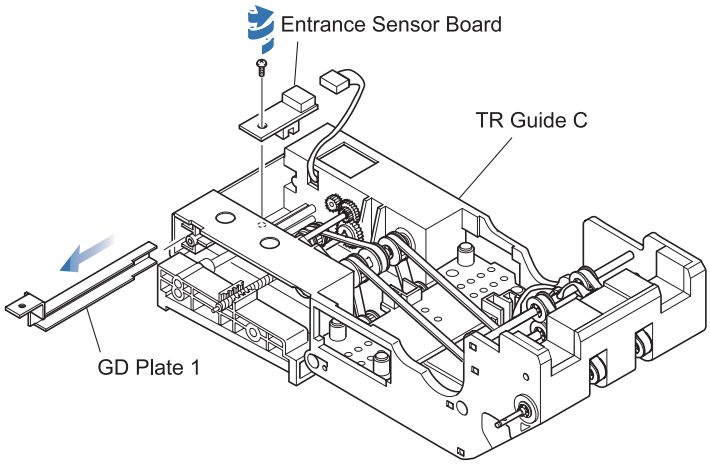
[Remarks on Re-assembly]

- **Gear Pin is not re-usable. Use a new Gear Pin in re-asssembling (4033SH0126, Part#: 108154)**
- **When attaching the Transport Motor, set the dents of motor in the direction shown in the diagram.**



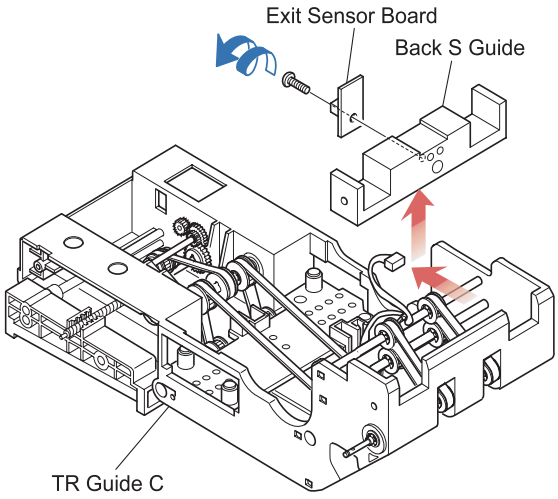
3-7-9. Disassembling Entrance Sensor Board

1) Pull out GD Plate 1 to the arrowed direction.
2) Unscrew a screw, disconnect a connector, then remove Entrance Sensor Board.



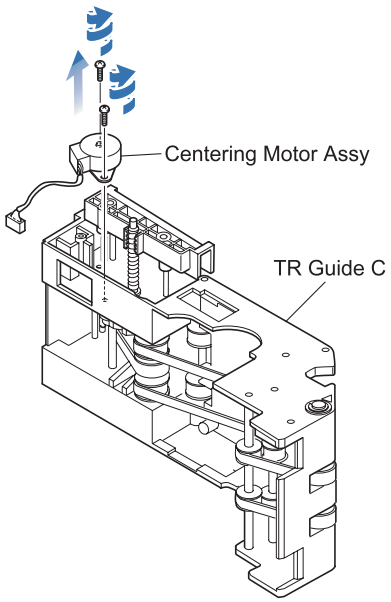
3-7-10. Disassembling Exit Sensor Board

1) Disconnect a connector on the exit sensor board, and remove the Back S Guide forward and then upward.
2) Unscrew a screw and remove Exit Sensor Board.



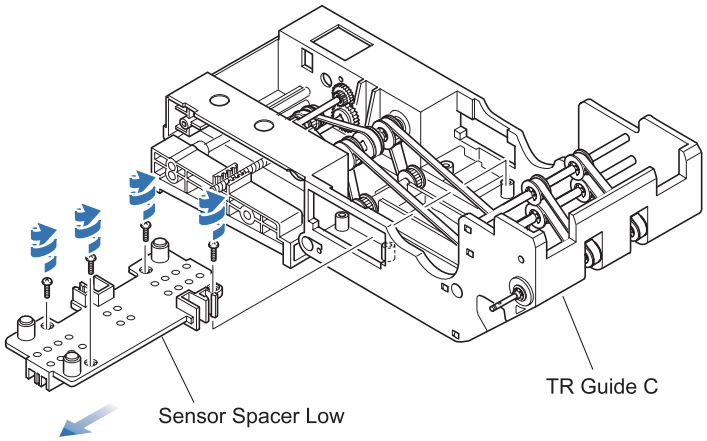
3-7-11. Disassembling Centering Motor Assy

1) Unscrew two screws, then remove Centering Motor Assy.



3-7-12. Disassembling Timing Belts

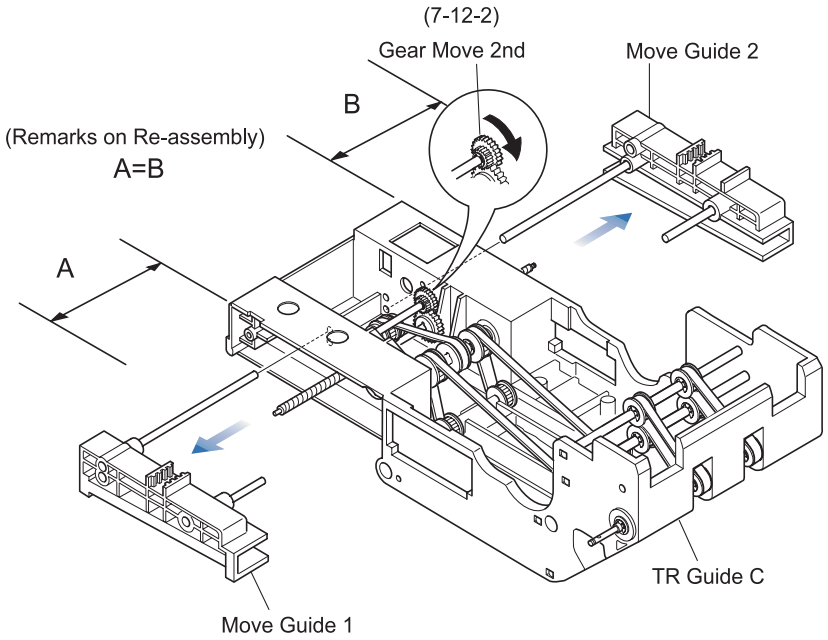
1) Unscrew 4 screws, then remove Sensor Spacer Low upward and slide it sideways.



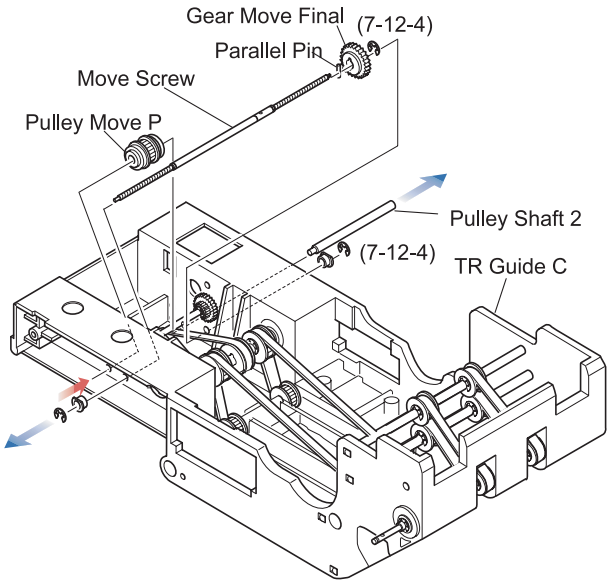
2) Rotate Gear Move 2nd to the arrowed direction to remove Move Guide 1 and 2.

[Remarks on Re-assembly]

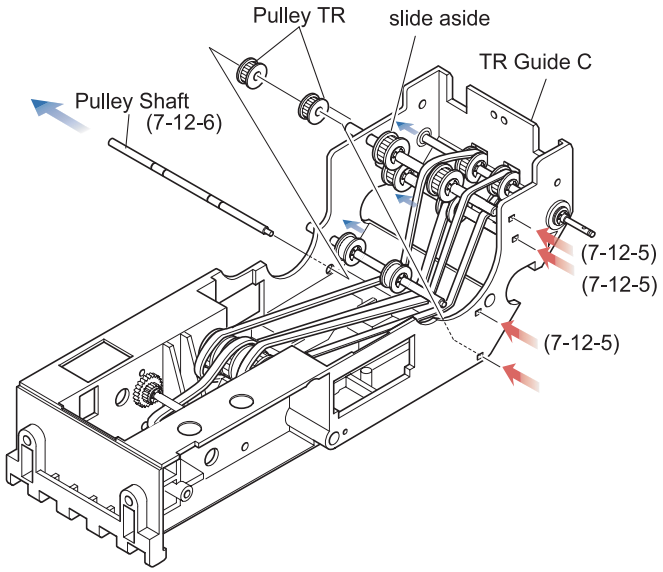
- **When re-assembling Move Guide 1 and 2, set Move Guide 1 and 2 to have the equal gap width with TR Guide C.**



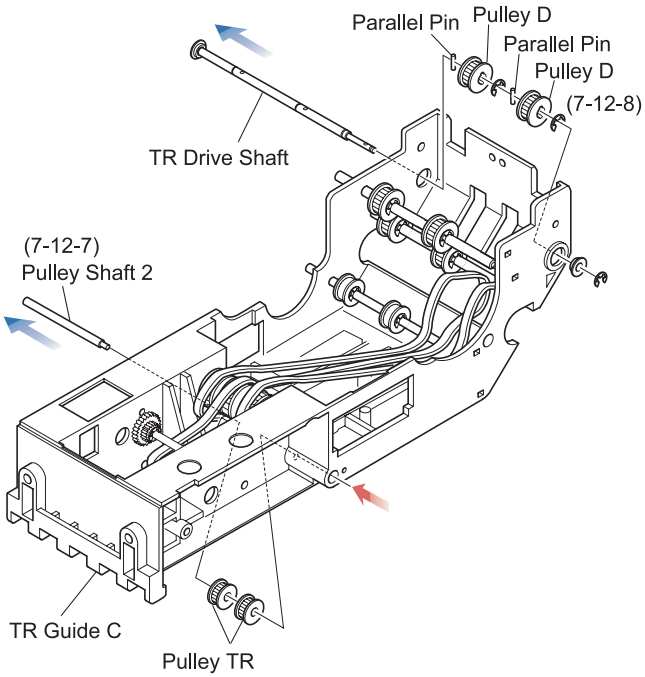
3) Push out the Pulley Shaft 2 to the arrowed direction to remove together with Pulley Move P.
4) Remove two e-rings, then pull out Move Screw with Gear Move Final and Parallel Pin.



5) Push out the ends of three Pulley Shafts as shown in the diagram.
6) Push out the end of Pulley Shaft, and pull it out to the arrowed direction. Remove two Pulley TRs.



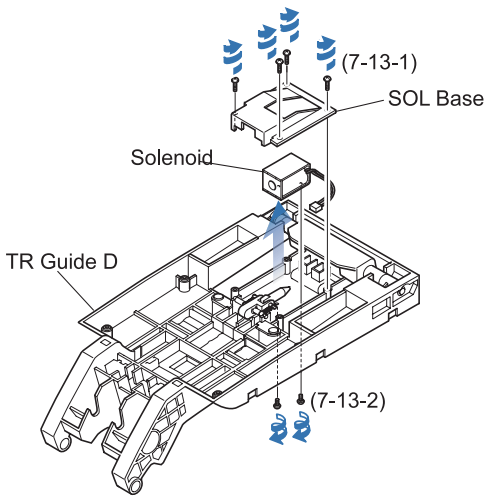
7) Push out the end of Pulley Shaft, then pull out to the arrowed direction.Remove two Pulley TRs.
8) Remove three e-rings, pull out TR Drive Shaft together with two Pully Ds and two Parallel Pins.



9) Remove five e-rings, then pull out TR Shaft 2 together with three Pully Ds and two Parallel Pins.
10) Remove three timing belts.

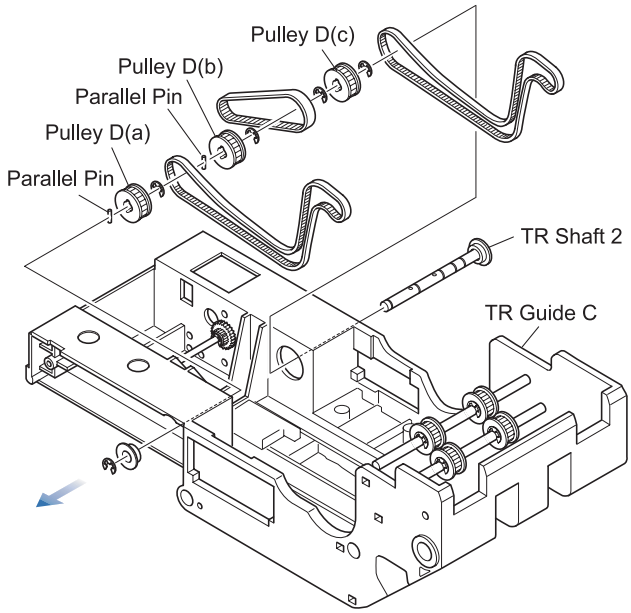
[Remarks on Re-assembly]

- **Insert Parallel Pins in Pulley D (a) and (b) only, and no Parallel Pin is used for Pulley D (c).**



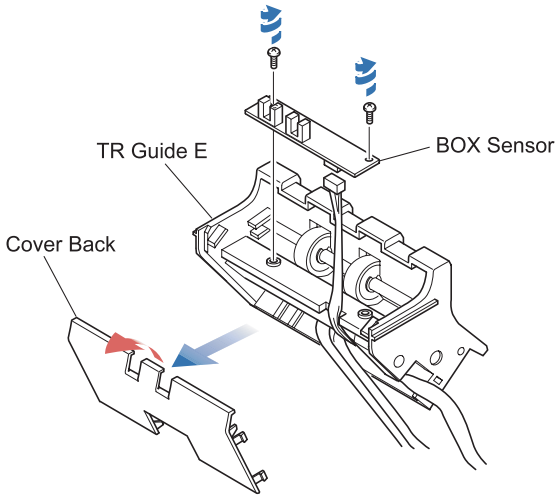
3-7-13. Disassembling Solenoid

1) Unscrew four screws from the SOL base. Remove SOL base.
2) Unscrew two screws from the other side of TR Guide D to remove Solenoid.



3-7-14. Disassembling Box Sensor Board

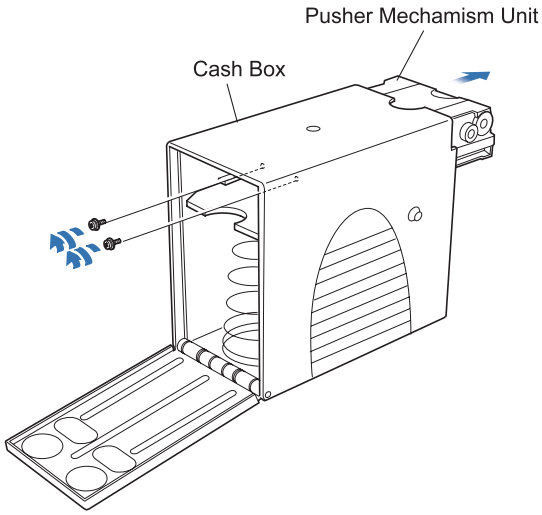
1) Remove Cover Back by pressing down the circled area.
2) Unscrew two screws, disconnect the connector, then remove Box Sensor Board.



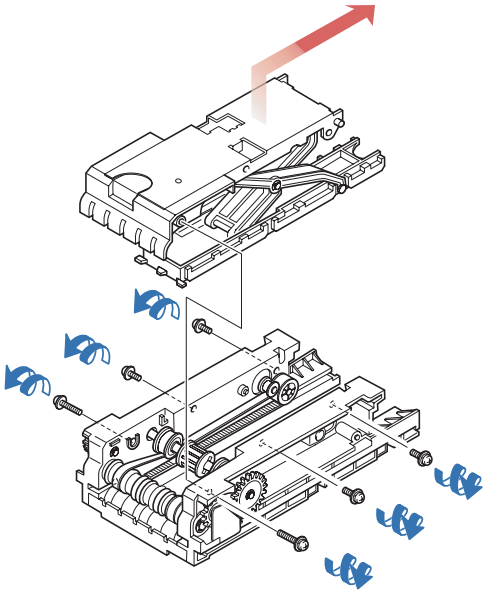
3-8. Disassembly of Cash Box

3-8-1. Disassembly of Pusher Mechanism Unit

1) Open the lid of Cash Box, then remove two screws to slide out Pusher Mechanism Unit.

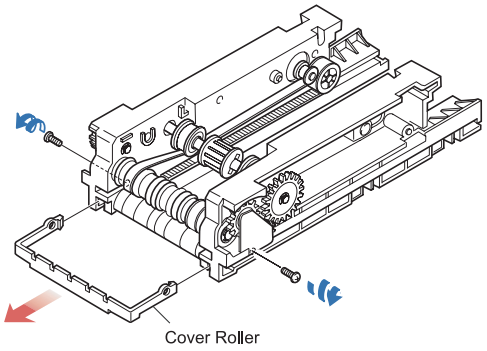


2) Unscrew six screws, then remove the Pusher Mechanism upwards.

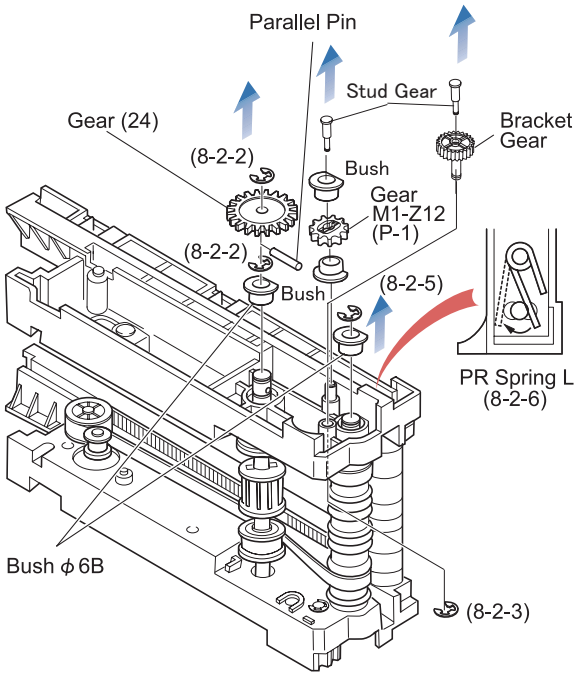


3-8-2. Disassembly of Timing Belts

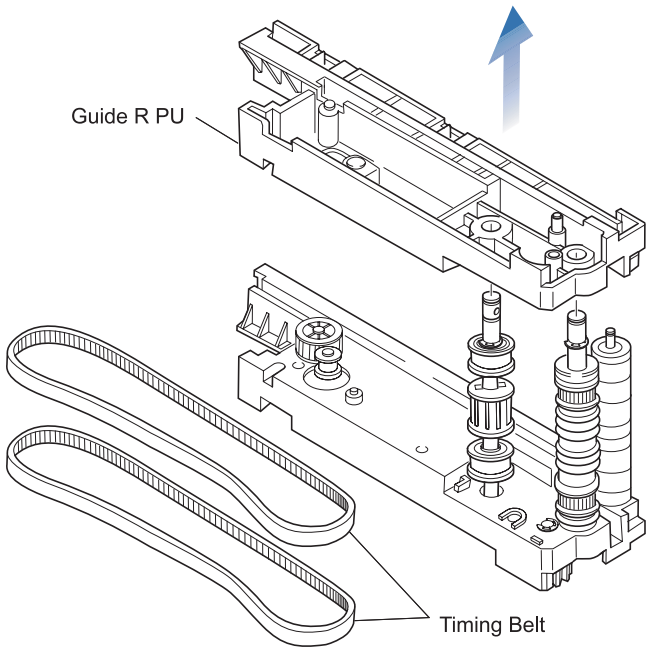
1) Unscrew two screws from each side to remove Cover Roller.



2) Remove two e-rings, then remove Gear (24), Parallel Pin, and Bush ϕ6B.
3) Remove an e-ring, then remove Bracket Gear.
4) Remove Gear M1-Z12(P-1).
5) Remove an e-ring, then take out and Bush ϕ6B.
6) Unloose the PR Spring L from the ditch of Shaft Roller.



7) Pull out the Guide R PU upward, then remove Timing Belts.



Universal Bill Acceptor

UBA-1X-SS Service Manual

Chapter 4

Trouble Shooting & Performance Test

Issue 12/2006

4-1. Trouble Shooting

4-1-1. General Problems

Symptoms/Error Messages	Possible Causes	Corrective Action
Bill Acceptor is not working (does not take any bills).	No external power is applied to the bill acceptor (+12VDC, GND)	Verify that the +12VDC and ground are connected to appropriate pins on the main connector.
	Wrong or inappropriate connections	Check the connections of all harnesses and connectors. Check for any bent, missing or damaged pins in the connectors.
	Corrupted software.	Download the correct software. Refer to chapter 5 for download instructions.
	CPU board failure.	Refer to 6-2. Diagnostics and conduct Initial Operation Test. If the test result is NG, replace CPU board. Make sure to calibrate the sensors after CPU board is replaced.
	ICB sensor board is not inserted in the CPU board socket.	Insert ICB sensor board in the CPU board socket. Note ICB sensor board must be inserted regardless of the use of ICB feature.
	(For UBA-11 only) The EPROM is inserted in wrong direction.	Remove the acceptor unit from the frame. Remove the EPROM from CPU board and re-insert it in correct direction.
Bill is jamming often.	Drive belts are dirty or damaged.	Clean the drive belts and the pressure rollers. Replace if necessary.
	Pressure roller spring is loose or missing.	Check the pressure roller springs with finger and replace if necessary.
	Foreign object in the transport path and inside the Cash Box.	Clean the transport path to remove the foreign object.
	Acceptor unit is not all the way seated in the frame (the latches of transport unit releases lever are not locked in the frame.	Set the transport unit all the way back so that the latches of transport unit release levers are locked in the frame.
	Bill is wider than 85 mm or narrower than 62mm (out of UBA specifications).	Use only bills within UBA specifications.
Low acceptance rates.	Dirt and stain on the rollers, belts and lenses.	Clean the transport path. Refer to 2-5. Preventive Maintenance.
	Sensors need to be calibrated.	Follow the instructions on 5-2. Adjustment to adjust the sensors.
	The unit has been disassembled and the Adjustment is not done after it is reassembled.	Make sure to adjust the sensors after re-assemble the UBA.
	Using wrong software or old version software.	Make sure if the programmed software is the latest version and it supports the bills you wish to be accepted.
	Bills are not to be accepted in this software.	Check the specifications, and make sure the bills are to be accepted in the software (check denomination/issuing year).
	Sensors lenses are loose or missing.	Sensor lenses need to be placed in position. Contact JCM.

Symptoms/Error Messages	Possible Causes	Corrective Action
Upper Guide can not be opened.	Centering Guides are not at the home position.	Turn OFF the Power and ON, then send the reset command from host machine to initialize.
		If the power cannot be ON, use the hexagonal box driver to open the Upper Guide.
All bills rejected.	Wrong software (different currency).	Download correct software. Refer to 5-1. Software Download.
	The bills are not to be accepted in the software.	Make sure the bills are included in the specifications of software (denominations/issuing year)
	Wrong DIP switch settings.	Enable the denominations by setting DIP switches OFF
	Bill acceptance is inhibited by the command from host controller.	Enable the bill acceptance by the command.
	Upper/Lower sensor board failure.	Change the Upper/Lower sensor board. Refer to 3-5. How to remove Circuit Boards.
	Sensors need to be calibrated.	Follow the instructions on 5-2 Adjustment to adjust the UBA.
Motor Keeps running.	Upper Guide is open.	Close the guide firmly.
	Foreign object or jammed bill is in the transport path.	Remove the foreign object or jammed bill, and close the cover.
	Motor failure.	Refer to the 4-2. Diagnostic and conduct Forward/Reverse Motor Rotation Test.
Can not enter the TEST mode.	Wrong dip switch settings.	Set the switch No.8 ON, and then supply power to the UBA.
	Dip switch failure.	Refer to the 4-2. Diagnostic and conduct DIP Switch TEST to check if the DIP switch has a failure.
	CPU Board failure.	Change the CPU board. Refer to 3-5. How to Remove Circuit Boards.

4-1-2. Adjustment Problems

Symptoms/Error Messages	Possible Causes	Corrective Action
Can not start the ADJTOOL_V***.exe program by double-clicking.	OS is not applicable.	Our Adjustment program supports only Windows 2000/XP.
	The program files are corrupted.	Ask JCM for the correct programs.
Communication Error.	Wrong or inappropriate connections	Check the connections of PC and UBA connectors. Check for any bent, missing or damaged pins in the connectors.
	DIP switch setting of UBA is not correct.	Set the DIP switch (No.1 to 7 OFF and No.8 ON) of UBA, and turn on the power of PS75-002.
	DIP switch failure.	Refer to the 4-2. Diagnostic and conduct DIP Switch Test.
	CPU board failure.	Change the CPU board. Refer to 3-5. How to Remove Circuit Boards.
Adjustment Error.	Wrong reference paper.	Follow the instruction on the ADJTOOL_V***.exe program and use the correct reference paper.
	Upper/Lower sensor boards failure.	Change the Upper/Lower sensor board. Refer to 3-5. How to Remove Circuit Boards.

4-1-3. Communication Problems

Symptoms/Error Messages	Possible Causes	Corrective Action
Can not communicate with host.	DIP switch settings are wrong.	Set all DIP switches OFF.
	Connectors are disconnected or loosely connected.	Firmly connect all the connectors.
	Damaged connector pins.	Check for any bent, missing or damaged pins in the connectors.
	CPU board is corrupted.	Replace CPU board. Refer to Chapter 3.
	Wrong interface.	Check if the interface is the same for the host machine and the bill acceptor.
	Acceptor Head Failure.	ICB board is not installed on the CPU board. Install the ICB board.
		ICB board is installed in wrong way.Check the PLUG No. on the ICB board and SOCKET No. on the CPU board. Install the ICB board in the correct direction.

4-2. Diagnostic

UBA is equipped with diagnostic feature to aid in repair and maintenance. This section describes the test procedure of each function using DIP switch to identify the cause of failure condition. To identify the cause of failure condition, UBA need to be entered in the TEST mode.

■How to enter TEST mode

1) Set the DIP switch No.8 ON and supply the power to the UBA.

2) Check both red and green diagnostic LEDs light. This indicates the unit is in the TEST mode.

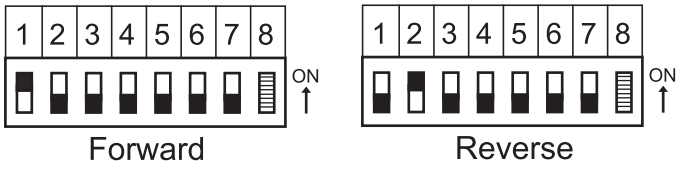
3) Set the DIP switch depending on the test you wish to execute.

4) Set the DIP switch No.8 OFF to start the test. When the test starts, both red and green diagnostic LEDs turns OFF. After few seconds, the diagnostic LEDs turn ON/OFF depending on the condition of the part that the test is executed.

5) To finish the test, set the DIP switch No.8 ON and turn the UBA power OFF.

4-2-1. Transport Motor Forward/Reverse Rotation Test

This detects the motor speed of forward/reverse rotation. Confirm the motor operates smoothly without abnormal noise.

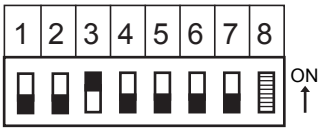


Motor Condition	LED Status		Causes and Solutions
Fast	OFF	x 2	Contact JCM
Slow		x 3	Transport motor encoder sensor does not ditect. Check all harnesses and connectors. The motor/CPU board failure may occur. Change the moter/CPU board. Refer to Chapter 3. Disassembly Instructions.

- If any of the diagnostic LED status are different from above, contact JCM.

4-2-2. Stacker Test

This detects the stacker condition. When the test starts, the pushing mechanism is working constantly. When the green LED lights, it means the stacker is working properly. If the red LED lights, refer to Stacker Test Error Code shown below and detects the error.



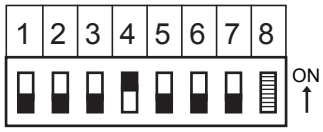
Stacker Test Error Code

Condition of Stacker	LED Status		Causes and Solutions
Stacker Full	x 1	OFF	Stacker encoder board failure may occur. Check all harnesses and connectors. Change the stacker encoder board/CPU board if required.
Stacker Jam	x 2		Exit sensor board failure may occur. Check all harnesses and connector and change the exit sensor board/CPU board if required.
Stacker Motor Lock	x 4		Stacker motor may be corrupted. Change the motor if required. Stacker encoder board failure may occur. Check all harnesses and connectors. Change the stacker encoder board/CPU board if required.
Box Error	x 10		Box sensor board failure may occur. Check all harness and connectors. Change the Box sensor board/CPU board if required.

- If any of the diagnostic LED status are different from above, contact JCM.

4-2-3. Running Test

This detects the UBA operating condition. If neither red nor green LED lights, it means the UBA operates properly. If the red LED lights, refer to Running Test Error Code shown below and detects the error.



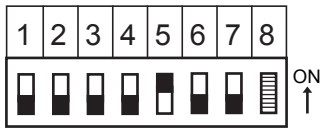
Running Test Error Code

Condition of Stacker	LED Status		Causes and Solutions
Stacker Full	x 1	OFF	Stacker encoder board failure may occur. Check all harnesses and connectors. To change the stacker encoder board/CPU board, refer to 3-5. How to Remove Circuit Boards.
Stacker Jam	x 2		Exit sensor board failure may occur. Check all harnesses and connector. To change the exit sensor board/CPU board, Refer to 3-5. How to Remove Circuit Boards.
Stacker Lock	x 4		Stacker motor may be corrupted. To change the motor, refer to Chapter 3. Disassembly Instructions. Stacker encoder board failure may occur. Check all harnesses and connectors. Change the stacker encoder board/CPU board if required.
Acceptor Jam	x 6		Check the prisms if there are any dirt or scratches. To clean the prisms, refer to 2-5. Preventive Maintenance Lower sensor board failure may occur. To change the Lower sensor board refer to 3-5. How to Remove Circuit Boards.
Motor Lock	x 6		Transport motor encoder sensor does not detect. Check all harnesses and connectors. The motor/CPU board failure may occur. Change the motor/CPU board. Refer to Chapter 3. Disassembly Instructions.
Upper PCB Set-up Error	x 7		Upper sensor board failure may occur. To change the upper sensor board, refer to 3-5. How to Remove Circuit Boards.
Solenoid Error	x 8		The Solenoid/upper sensor board failure may occur. Check all harness and connectors. To change upper sensor board, refer to 3-5. How to Remove Circuit Boards.
PB Unit Error	x 9		PB home sensor board/Lower sensor board failure may occur. Check all harnesses and connectors. To change the PB home sensor board/ Lower sensor board, refer to 3-5. How to Remove Circuit Boards.
Box Error	x 10		Box sensor board failure may occur. Check all harness and connectors. To change the Box sensor board/CPU board, refer to 3-5. How to Remove Circuit Boards.
Centering Mechanism Error	x 14		Centering mechanism home sensor board/CPU board failure may occur. Check all harnesses and connectors. To change Centering mechanism home sensor board/CPU board, refer to 3-5. How to Remove Circuit Boards.

- If any of the diagnostic LED status are different from above, contact JCM.

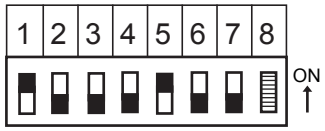
4-2-4. PB unit (Anti-pullback mechanism) Test

This detects PB (Anti-pullback mechanism) operating condition. If there are any problems for the centering mechanism , the red LED blinks 9 times. PB home sensor board/Lower sensor board failure may occur. Check all harnesses and connectors. To change the PB home sensor board/ Lower sensor board, refer to **3-5. How to Remove Circuit Boards.**



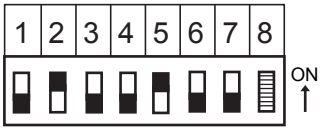
4-2-5. Centering mechanism Test

This detects Centering mechanism operating condition. If there are any problems for the centering mechanism , the red LED blinks 14 times. Centering mechanism home sensor board/CPU board failure may occur. Check all harnesses and connectors. To change Centering mechanism home sensor board/CPU board, refer to **3-5. How to Remove Circuit Boards.**



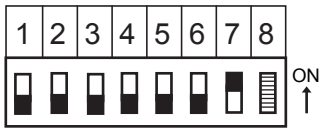
4-2-6. Solenoid Test

This detects solenoid sensor condition. If there are any problems for the solenoid sensor, the red LED blinks 10 times. The Solenoid/upper sensor board failure may occur. Check all harness and connectors. To change upper sensor board, refer to **3-5. How to Remove Circuit Boards.**



4-2-7. Sensor Test

This detects sensor condition. To check the sensor condition, sets the DIP switch depending on the sensor you wish to test as shown below.

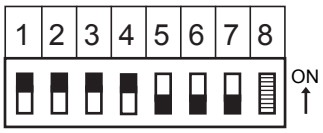


Sensor Name	DIP Switch No.	Condition
Entrance Sensor	SW 1 ON	Open the upper guide to check Entrance Sensor condition. If green LED is ON while opening the guide, the sensor condition is normal.
Centering Timing Sensor		Open the upper guide to check Entrance Sensor condition. If red LED is ON while opening the guide, the sensor condition is normal.
PB-in Sensor	SW 2 ON	Open the upper guide to check Entrance Sensor condition. If green LED is ON while opening the guide, the sensor condition is normal.
Exit Sensor		Block the Exit Sensor with a piece of paper etc. If red LED is ON while the Exit Sensor is blocked, the sensor condition is normal.
PB Home Position Sensor	SW 3 ON	Rotate the PB with your fingers. If green LED is ON/OFF while rotating the PB, the sensor condition is normal.
Centering Home Position Sensor		Move the centering mechanism with hexagonal box driver. If the red LED is ON while the Centering mechanism is at home position, the sensor condition is normal.
Transport Motor Entrance Sensor	SW 4 ON	Open the upper guide and move the belts to check Transport Motor Entrance Sensor. If the green LED is On and OFF, the sensor condition is normal.
Stacker Motor Encoder Sensor		Rotate the stacker gear by your fingers. If the red LED is ON/OFF while rotating, the sensor condition is normal.
Pusher Plate Home Position Sensor	SW 5 ON	Rotate the stacker gear by your fingers. If the green LED is ON/OFF while rotating, the sensor condition is normal.
Stacker Detection Sensor		Remove the cash box from the frame unit. If red LED is on when the stacker sets in position, Stacker Detection Sensor condition is normal

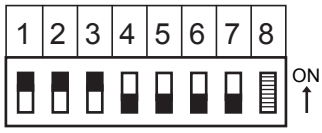
4-2-8. Bill Acceptance Test

This detects the acceptance of bills. After setting the DIP switch No. 8 OFF to start the test, insert a bill to detects the acceptance of bill.

- Whenever the UBA is disassembled or new software is down-loaded, make sure to perform bill acceptance test.



With Cash Box



No Cash Box

Bill Acceptance Test Error Code

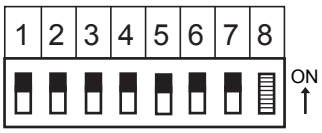
LED Status		Possible Causes	Causes and Solutions
OFF	x 1	Slant insertion	Insert the bill straight.
	x 2	Magnetic sensor pattern error	Check all lenses if there are any dirt or scratches. To clean the sensors refer to 2-5.Preventive Maintenance. Upper sensor board failure may occur. Check all harnesses and connectors. To change the upper sensor board, refer to 3-5. How To Remove Circuit Boards.
	x 3	Paper detected inside acceptor at standby	Remove the paper from the acceptor and clean the lenses. Refer to 2-5. Preventive Maintenance. Upper/Lower sensor boards failure may occur. Check all harnesses and connectors. To change the upper/lower sensor board, refer to 3-5. How To Remove Circuit Boards.
	x 4	Optical sensor error	
	x 5	Bill feed error	Check all lenses if there are any dirt of scratches. To clean the sensors refer to 2-5.Preventive Maintenance. Upper sensor board failure may occur. Check all harnesses and connectors. To change the upper sensor board, refer to 3-5. How To Remove Circuit Boards.
	x 6	Bill identification error	Remove the bill from the acceptor and clean the lenses. Refer to 2-5. Preventive Maintenance. Upper/Lower sensor boards failure may occur. Check all harnesses and connectors. To change the upper/lower sensor board, refer to 3-5. How To Remove Circuit Boards.
	x 7	Optical sensor Error 2	
	x 8	Optical sensor Error 3	
	x 9	Inhibited bill	Set the DIP switch properly. Refer to 1-4. Component Names and Software Specifications
	x 13	Bill length error	Check all belts and rollers on the transport path. To clean the belts and rollers, refer to 2-5. Preventive maintenance. To change the belts and rollers, refer to chapter 3. Disassembly Instructions.
	x 14	Optical sensor error 4	Remove the bill from the acceptor and clean the lenses. Refer to 2-5. Preventive Maintenance. Upper/Lower sensor boards failure may occur. Check all harnesses and connectors. To change the upper/lower sensor board, refer to 3-5. How To Remove Circuit Boards.
	x 15	Optical sensor error 5	

- If any of the diagnostic LED status are different from above, contact JCM.

4-2-9. DIP Switch Test

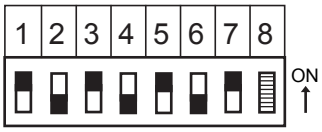
This detects the DIP switch condition.

1) Set the all DIP switch ON and supply power to the UBA. Check both red and green LEDs light.
2) Set the switch No.8 OFF. The blinking LEDs turn OFF.



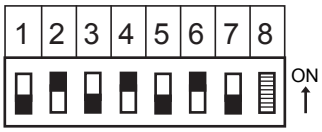
LED Status	
OFF	OFF

3) Set the even number switches (No.2, 4 and 6) OFF. Confirm the green LED lights.



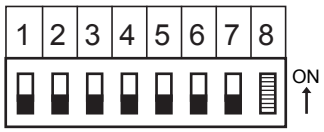
LED Status	
OFF	ON

4) Set the even numbers switches (No.2, 4 and 6) ON and then set the odd numbers switches (No. 1, 3, 5 and 7) OFF. Confirm the Red LED lights.



LED Status	
ON	OFF

5) Set all switches OFF. Confirm the red and green LED light.



LED Status	
ON	ON

- **If any of the diagnostic LED status are different from above, the DIP switch/CPU board failure may occur. To change the CPU board, refer to 3-5. How To Remove Circuit Board. If the error is not solved, contact JCM.**

4-3. LED Diagnostic Codes

4-3-1. Malfunction Error Codes

LED Status		Error	Causes and Solutions
x 1	ON	Boot ROM error	Change the CPU board. Refer to 3-5. How To Remove Circuit Boards.
x 2	ON	1. Incorrect contents of external ROM or empty program 2. No program in external ROM (Flash ROM)	Change the CPU board. Refer to 3-5. How To Remove Circuit Boards.
x 3	ON	Internal ROM error	Change the CPU board. Refer to 3-5. How To Remove Circuit Boards.
x 4	ON	External ROM error	Change the CPU board. Refer to 3-5. How To Remove Circuit Boards.
x 1	OFF	Stacker Full	Stacker encoder board failure may occur. Check all harnesses and connectors. Change the stacker encoder board/CPU board if required.
x 2	OFF	Stacker pusher mechanism fault Transport Jam (1)	Stacker motor may be corrupted. Change the motor if required. Stacker encoder board failure may occur. Check all harnesses and connectors. Change the stacker encoder board/CPU board if required. Exit sensor board failure may occur. Check all harnesses and connector and change the exit sensor board/CPU board if required.
x 3	OFF	Transport jam (2)	Exit sensor board failure may occur. Check all harnesses and connector and change the exit sensor board/CPU board if required.
x 4	OFF	Stacker encoder signal fault Acceptor Jam	Stacker encoder sensor failure may occur. Check the prisms if there are any dirt or scratches. To clean the prisms, refer to 2-5. Preventive Maintenance Lower sensor board failure may occur. To change the Lower sensor board refer to 3-5. How to Remove Circuit Boards.
x 5	OFF	Transport motor speed error	Transport motor encoder sensor does not detect. Check all harnesses and connectors. The motor/CPU board failure may occur. Change the motor/CPU board. Refer to Chapter 3. Disassembly Instructions.
x 6	OFF	Transport motor error	
x 9	OFF	PB Unit Error	PB home sensor board/Lower sensor board failure may occur. Check all harnesses and connectors. To change the PB home sensor board/ Lower sensor board, refer to 3-5. How to Remove Circuit Boards.
x 10	OFF	Stacker Error	Box sensor board failure may occur. Check all harness and connectors. Change the Box sensor board/CPU board if required.
x 11	OFF	ICB BOX Communication Error (Failure 02)	Check the power of the BOX's ICB Board ON. Check the sensors on the ICB board if there are any dirt or foreign objects.
x 12	OFF	Cheated / ICB BOX Check Sum Error (Failure 07)	When using ICB Box, Initialize the ICB Box. For details about the box initialization, refer to ICB System's Operation and Maintenance Manual.
x 13	OFF	Centering Mechanism Solenoid Error / ICB BOX installed in another machine (Failure 08)	The Solenoid/upper sensor board failure may occur. Check all harness and connectors. To change upper sensor board, refer to 3-5. How to Remove Circuit Boards. When using ICB box, install the ICB BOX to the proper machine or initialize the ICB Box. For details about the box initialization, refer to ICB System's Operation and Maintenance Manual.
x 14	OFF	Centering Mechanism Error/ ICB BOX data retrieved without initialization (Failure 09)	Centering mechanism home sensor board/CPU board failure may occur. Check all harnesses and connectors. To change Centering mechanism home sensor board/CPU board, refer to. How to Remove Circuit Boards. When using ICB box, initialize the ICB Box. For details about the box initialization, refer to ICB System's Operation and Maintenance Manual.

- If any of the diagnostic LED status are different from above, contact JCM.

4-3-2. Reject Codes

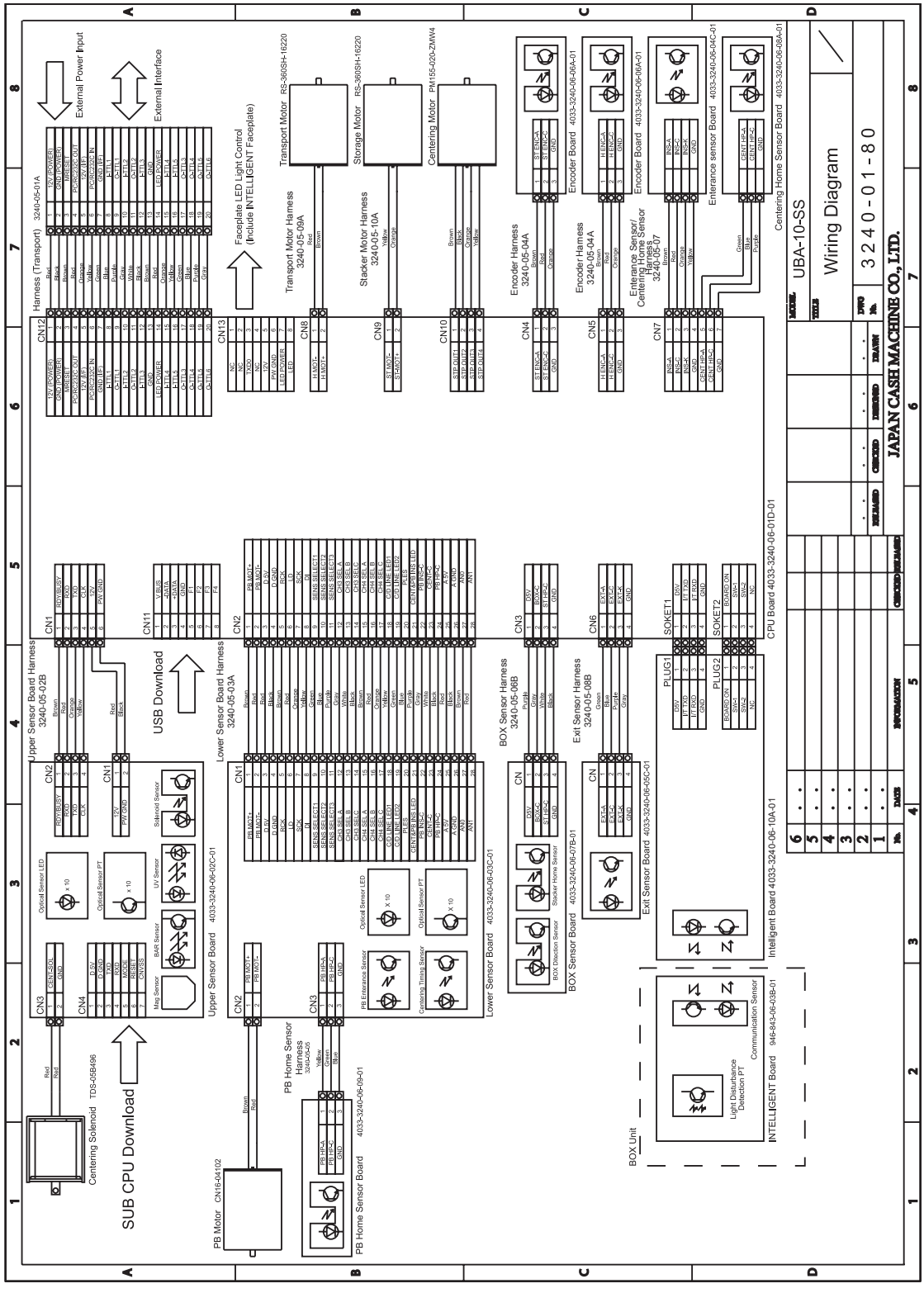
LED Status		Error	Solutions
OFF	x 1	Slant insertion	Insert the bill straight.
	x 2	Magnetic sensor pattern error	Check all lenses if there are any dirt of scratches. To clean the sensors refer to 2-5.Preventive Maintenance. Upper sensor board failure may occur. Check all harnesses and connectors. To change the upper sensor board, refer to 3-5. How To Remove Circuit Boards.
	x 3	Paper detected inside acceptor at standby	Remove the paper from the acceptor and clean the lenses. Refer to 2-5. Preventive Maintenance. Upper/Lower sensor boards failure may occur. Check all harnesses and connectors. To change the upper/lower sensor board, refer to 3-5. How To Remove Circuit Boards.
	x 4	Optical sensor error 1	
	x 5	Bill feed error	Check all lenses if there are any dirt of scratches. To clean the sensors refer to 2-5.Preventive Maintenance. Upper sensor board failure may occur. Check all harnesses and connectors. To change the upper sensor board, refer to 3-5. How To Remove Circuit Boards.
	x 6	Bill identification error	Remove the paper from the acceptor and clean the lenses. Refer to 2-5. Preventive Maintenance. Upper/Lower sensor boards failure may occur. Check all harnesses and connectors. To change the upper/lower sensor board, refer to 3-5. How To Remove Circuit Boards.
	x 7	Optical sensor error 2	
	x 8	Optical sensor error 3	
	x 9	Inhibited Bill	Set the DIP switch properly. Refer to 1-4. Component Names and Software Specifications
	x 10	Return Bill	Reject instruction from the host
	x 12	Bill Feed Error 2	
	x 13	Bill length error	Check all belts and rollers on the transport pat. To clean the belts and rollers, refer to 2-5. Preventive maintenance. To change the belts and rollers, refer to chapter 3. Disassembly Instructions.
	x 14	Optical sensor error 4	Remove the paper from the acceptor and clean the lenses. Refer to 2-5. Preventive Maintenance. Upper/Lower sensor boards failure may occur. Check all harnesses and connectors. To change the upper/lower sensor board, refer to 3-5. How To Remove Circuit Boards.
	x 15	Optical sensor error 5	

- If any of the diagnostic LED status are different from above, contact JCM.

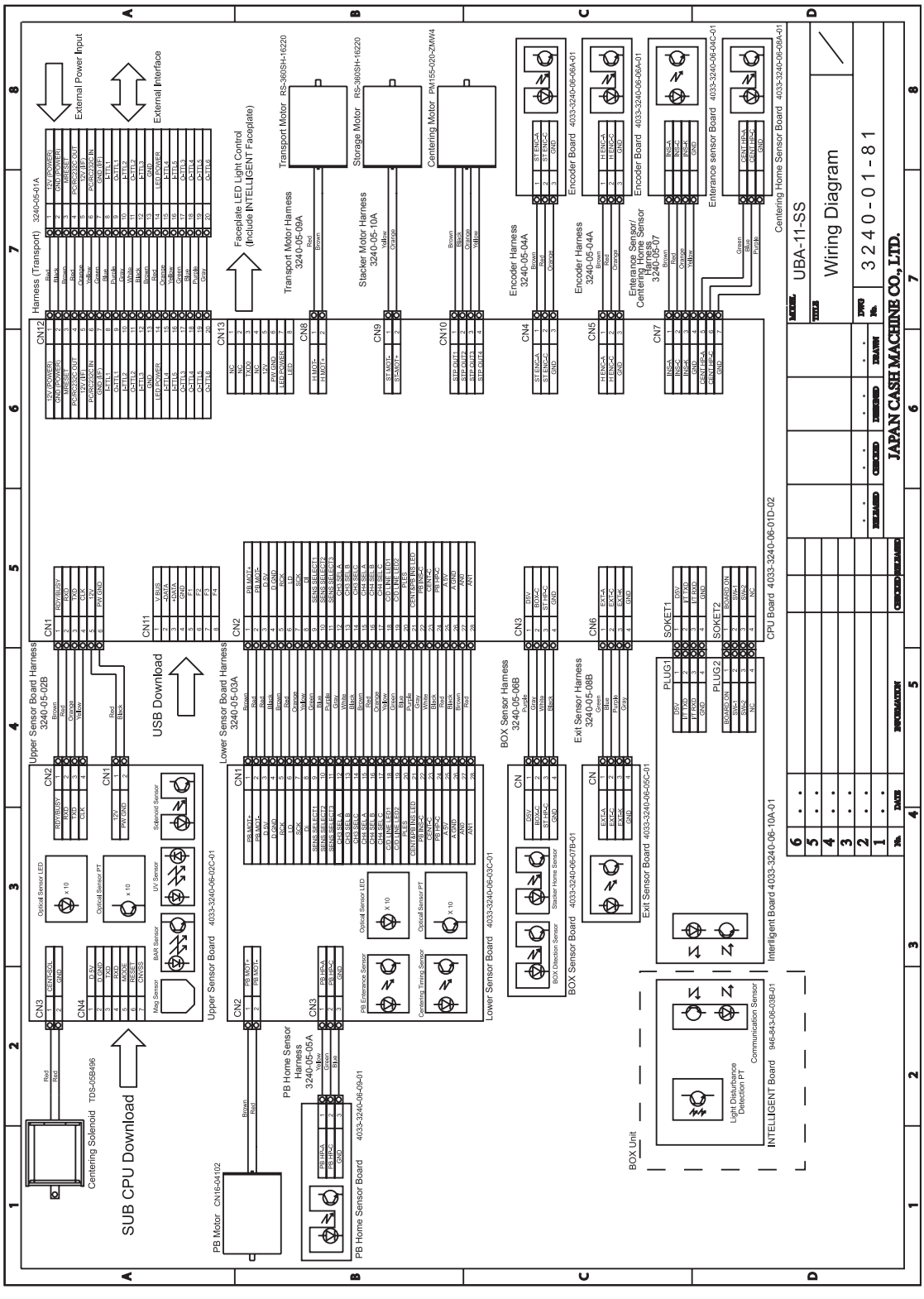
CHAPTER 4

4-4. Wiring Diagram

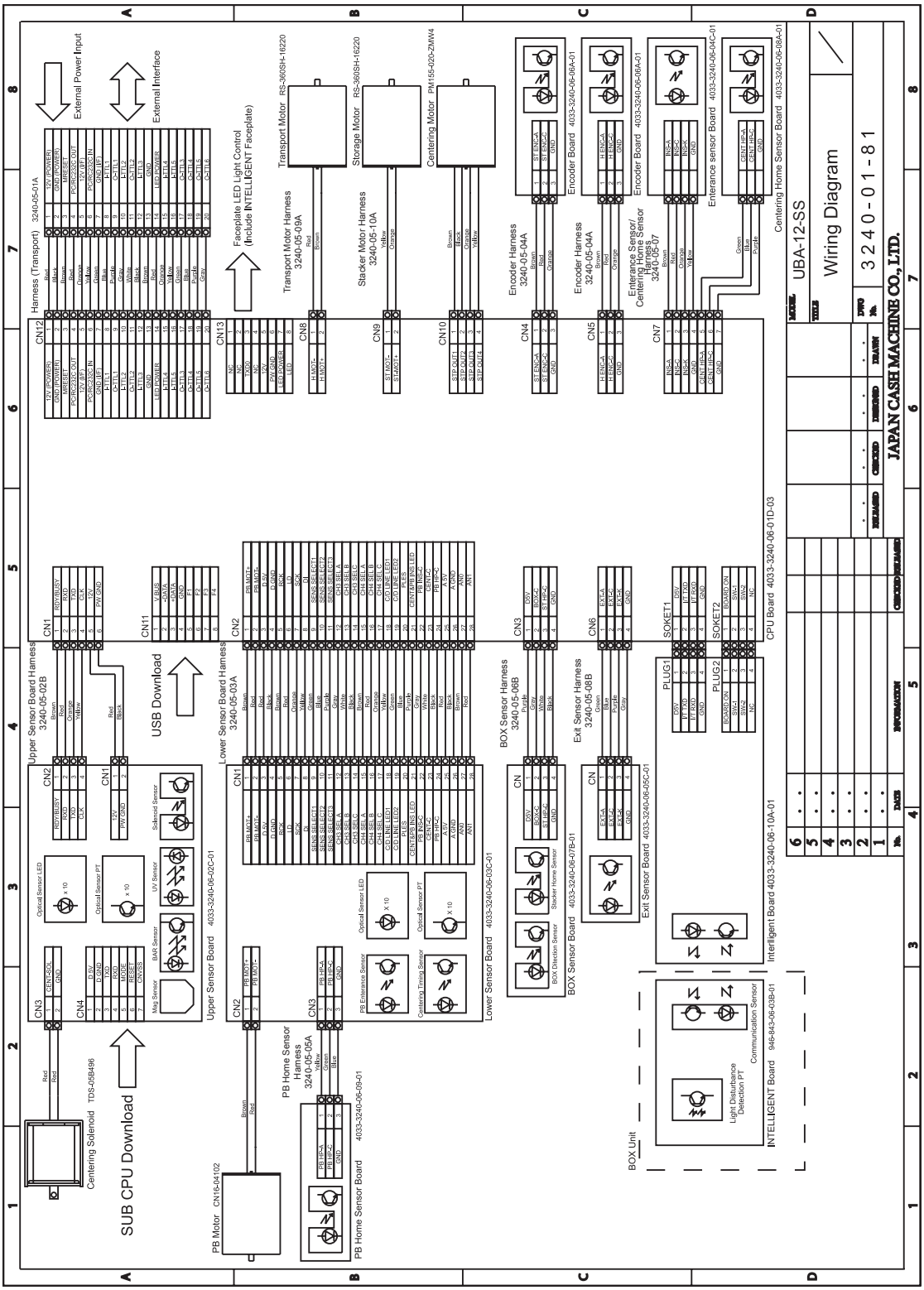
4-4-1. UBA-10-SS Wiring Diagram



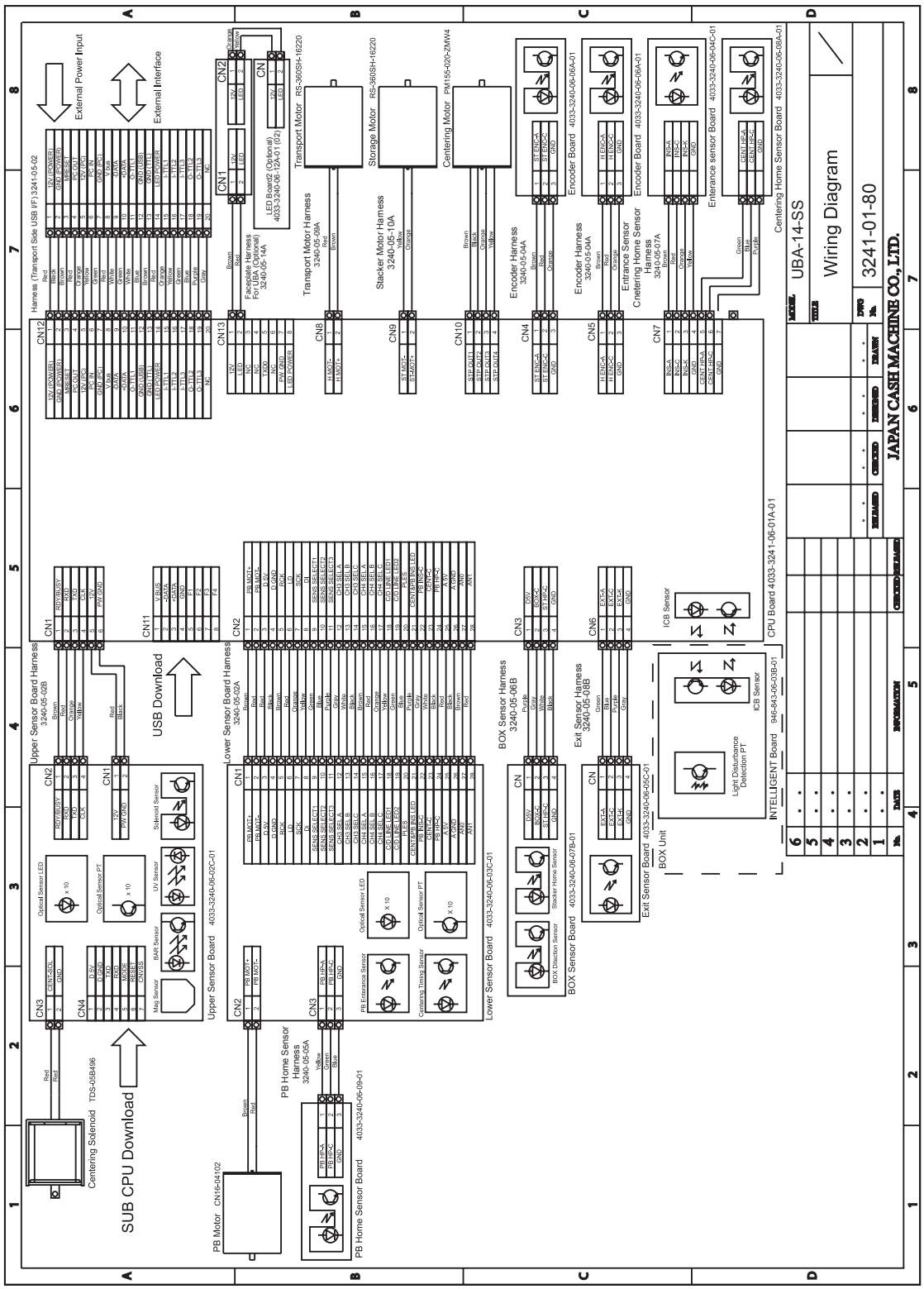
4-4-2. UBA-11-SS Wiring Diagram



4-4-3. UBA-11-SS Wiring Diagram

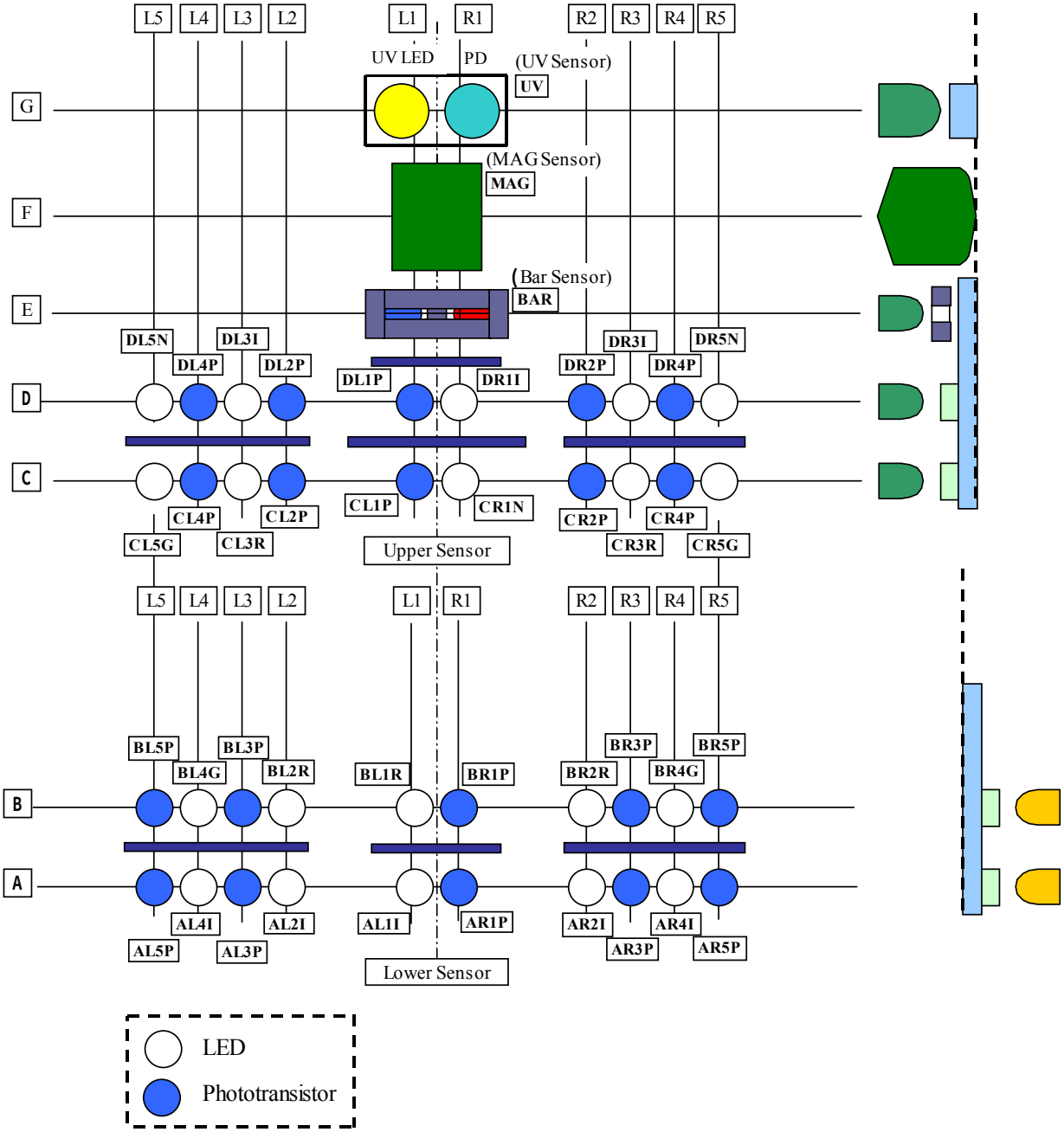


4-4-4. UBA-14-SS Wiring Diagram



4-5. Validation Sensor

4-5-1. Sensor Layout



4-5-2. Sensor Name Conversion Table

When the adjustment error occurred, specify the sensors which have problem using the following conversion table. For the names of LED/Phototransistor, refer to the names described in 4-4-1. Sensor Layout.

Notation on the adjustment software	LED	Phototransistor
l5t_ni	DL5N	BL5P
l4t_ir	AL4I	CL4P
l3t_ir	DL3I	BL3P
l2t_ir	AL2I	CL2P
l1t_ir	AL1I	CL1P
r1t_ir	DR1I	BR1P
r2t_ir	AR2I	CR2P
r3t_ir	DR3I	BR3P
r4t_ir	AR4I	CR4P
r5t_ni	DR5N	BR5P
l5t_gn	CL5G	AL5P
l4t_gn	BL4G	DL4P
l3t_rd	CL3R	AL3P
l2t_rd	BL2R	DL2P
l1t_rd	BL1R	DL1P
r1t_ni	CR1N	AR1P
r2t_rd	BR2R	DR2P
r3t_rd	CR3R	AR3P
r4t_gn	BR4G	DR4P
r5t_gn	CR5G	AR5P
l4u_ni	DL5N	DL4P
l3u_ir	DL3I	DL4P
l2u_ir	DL3I	DL2P
c0u_ir	DR1I	DL1P
r2u_ir	DR3I	DR2P
r3u_ir	DR3I	DR4P
r4u_ni	DR5N	DR4P
l4u_gn	CL5G	CL4P
l3u_rd	CL3R	CL4P
l2u_rd	CL3R	CL2P
c0u_ni	CR1N	CL1P
r2u_rd	CR3R	CR2P
r3u_rd	CR3R	CR4P
r4u_gn	CR5G	CR4P
l4d_ir	AL4I	AL5P
l3d_ir	AL4I	AL3P
l2d_ir	AL2I	AL3P
c0d_ir	AL1I	AR1P
r2d_ir	AR2I	AR3P
r3d_ir	AR4I	AR3P
r4d_ir	AR4I	AR5P
l4d_gn	BL4G	BL5P
l3d_gn	BL4G	BL3P
l2d_rd	BL2R	BL3P
c0d_rd	BR1R	BL1P
r2d_rd	BR2R	BR3P
r3d_gn	BR4G	BR3P
r4d_gn	BR4G	BR5P
b0u_ir	BAR SENSOR	

4-5-3. Error Codes for Adjustment Program

Error Code	Message Displayed	Description
4-A	GAIN ERROR 'OVER 4.3v'	Light-Receiving Adjustment Error #1
4-B	ADJUSTMENT ERROR	Sensor Light Quantity Adjustment Error #1
4-C	BLACK LEVEL ERROR	Sensor Light Quantity Adjustment Error #2
4-E	GAIN ERROR	Light-Receiving Adjustment Error #2
4-G	FRONT/BACK/PBin/WIDTH LEVEL ERROR	Triggering Sensor Light-Receiving Level Error
6-A	OFFSET ERROR	Light Receiver Circuit Abnormality #1
6-B	OFFSET ERROR	Light Receiver Circuit Abnormality #2
6-C	OFFSET ERROR	Light Receiver Circuit Abnormality #3
MAG	ADJUSTMENT ERROR	Magnetic Sensor Adjustment Error
	ADJUSTMENT ERROR UNDER0.74v	
Without (These errors have no error codes.)	GAIN MAX LIMIT OVER ERROR	Sensor Abnormality
	BAR GAIN MAX LIMIT OVER ERROR	
	UV GAIN MAX LIMIT OVER ERROR	
	A/D DATA LEVEL ERROR	Light-Receiving Level Error
	PBin/WIDTH D/A ERROR	Triggering Sensor Adjustment Error
	MOTOR SPEED ERROR	Transport Motor Speed Error
	EEPROM WRITE ERROR	Adjusted Value Writing Error

Universal Bill Acceptor

UBA-1X-SS Service Manual

Chapter 5

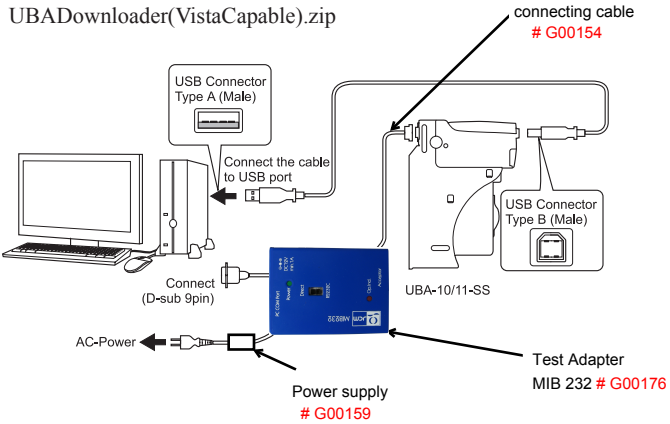
Software Download & Adjustment

Issue 12/2007

5-1.Software Download (Using USB Port)

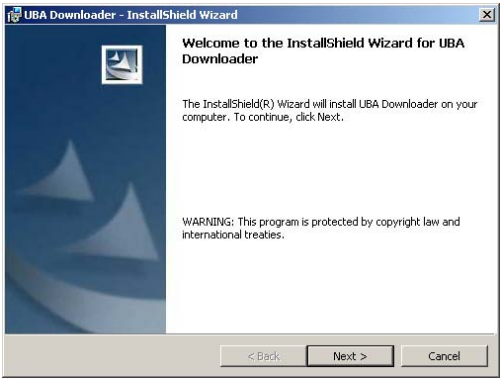
5-1-1. Required Items

- JCM Test Adapter MIB232, Part No.: G00176 or equivalent
- PC (with USB port, OS: Windows 2000/XP/Vista)
- USB Cable (A type Male <=> B Type Male)
- UBADownloader(VistaCapable).zip



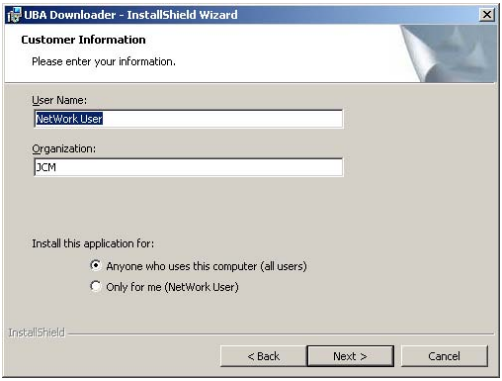
5-1-2. Initial Settings

1) Unzip the UBADownloader(VistaCapable).zip and save all files in the same folder.
2) Double click the "**Setup.exe**".
3) The following screen appears. Press the [NEXT] button to continue installation.

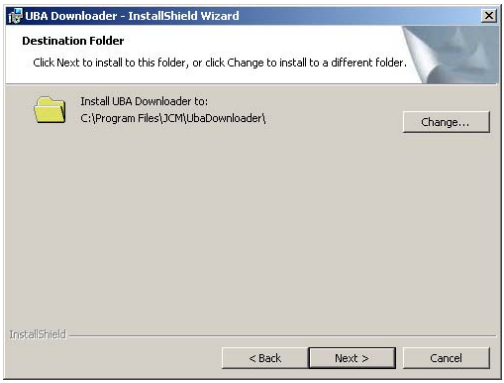


CHAPTER 5

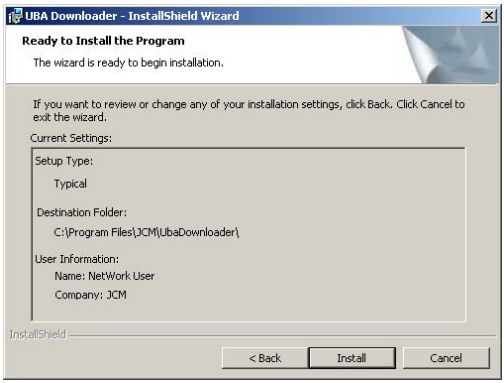
4) Enter User Name and Organization. Press [NEXT] button.



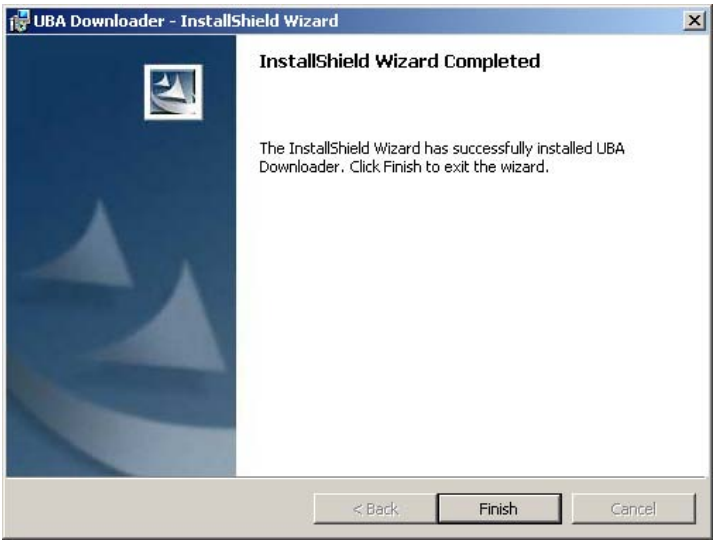
5) Confirm the folder to install the UBA Downloader. Press the [NEXT] button.



6) Ready to Install the Program. Press the [NEXT] button to start the install.



7) When the software installation is complete, the following screen appears. Press the [FINISH] button to exit the InstallShield Wizard.



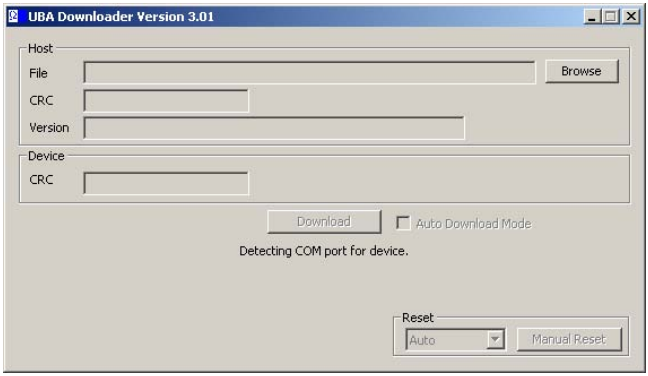
8) Check that the UBA Downloader Icon has been created on your desktop.

5-1-3. Software Download Instructions

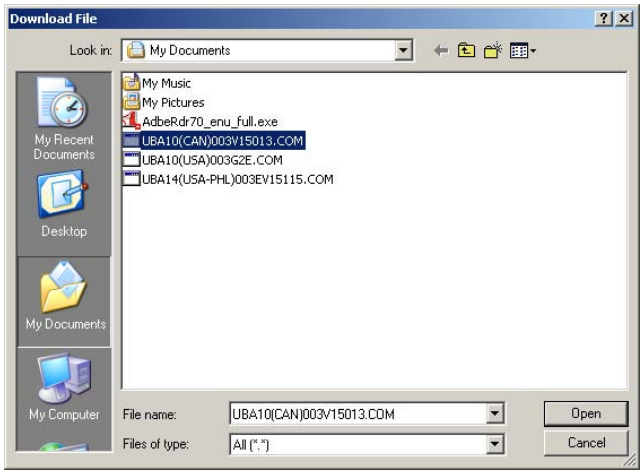
When installing the software, follow the step below.

- **JCM's USB Driver (jcmusb0101.inf) needs to be installed before installing the software.**

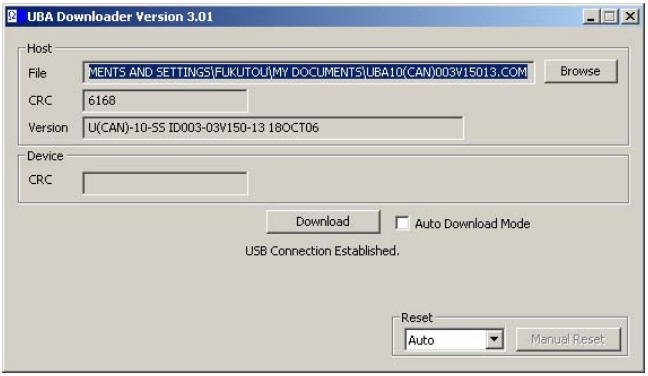
1) Set the UBA DIP switches No. 6, 7 and 8 ON and then supply the power.
2) Double click the UBA Downloader Icon.
3) The following screen will appear.



4) Press the [Browse] button and select a software you want to download.



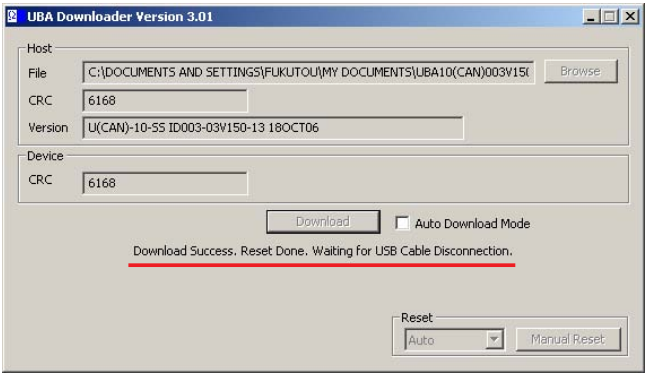
5) Press the [DOWNLOAD] button to start software download.



Note

- If Auto Download Mode is selected, downloading starts as soon as the software is selected.

6) When the download is completed, the following message will appear.



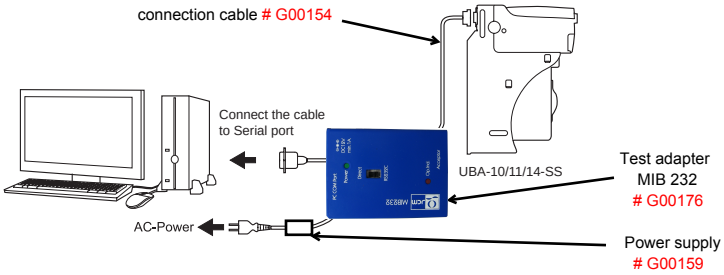
7) Press the [x] button to close the window.

- **After software is downloaded to the UBA, it is recommended to test the bill acceptance of software to confirm the software is successfully downloaded. See 4-2-8. Bill Acceptance Test.**

5-2. Software Download (Using Serial Port)

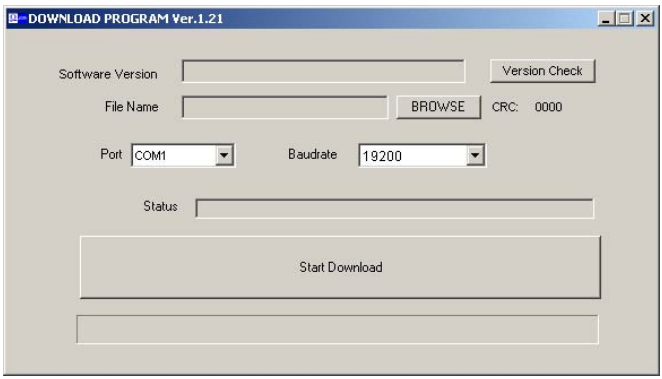
5-2-1. Required Items

- JCM Test Adapter MIB 232, Part No.: G00176) or equivalent
- PC (with Serial port, OS: Windows 2000/XP)
- The latest DOWNLOAD PROGRAM (DOWNLOAD(Ver.1.21).exe or later)

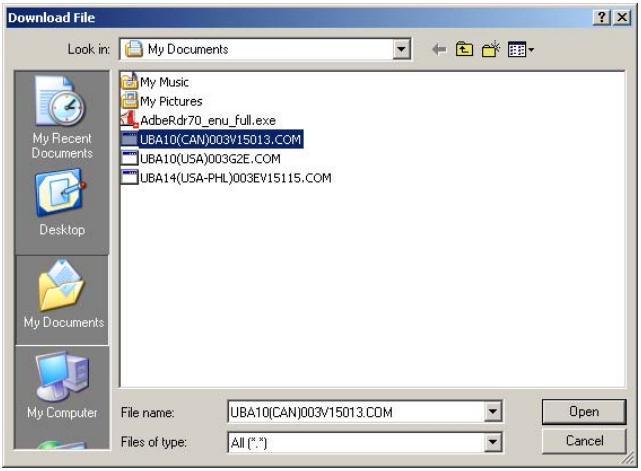


5-2-2. Software Download Instructions

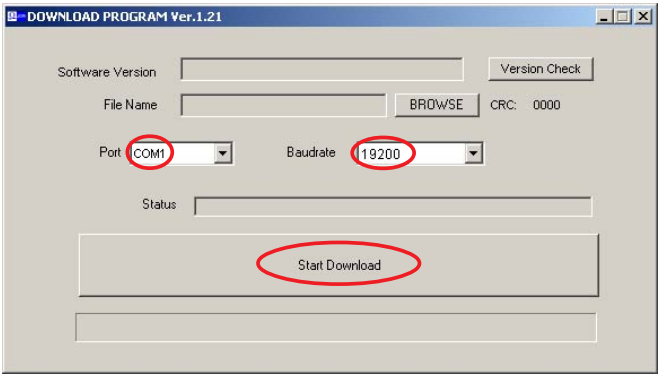
1) Save the DOWNLOAD(Ver.***).exe to you PC.
2) Set the UBA DIP switches No.6, 7 and 8 ON and then supply the power.
3) Double click the DOWNLOAD(Ver.***).exe and then the following screen will appear.



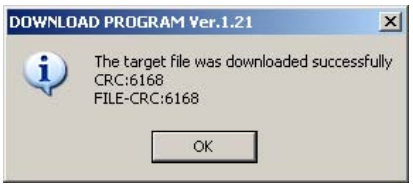
4) Press the [BROUSE] button and then the Download File window will appear. Select a software you want to download and press the [Open] button.



5) Select your PC's COM Port No. and Baudrate 19200 and then press the [Start Download] button.



6) When download completes, the following message window will appear.

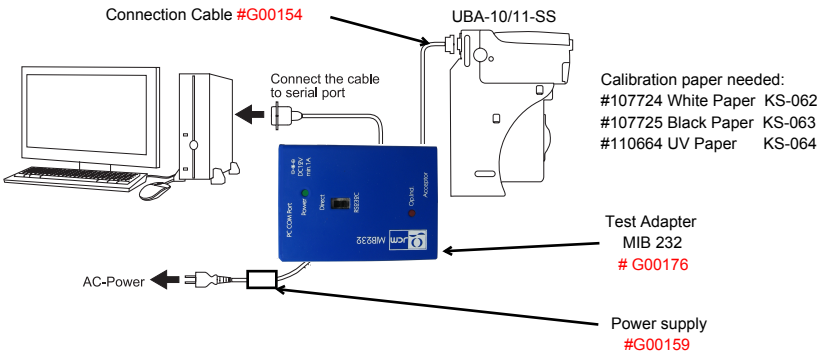


7) Press the [OK] button to close the message window.

5-3. Adjustment

5-3-1. Required Items

- UBA
- JCM Test Adapter, Part No.: G00176 or equivalent
- PC (with RS-232C serial port, OS: Windows 2000/XP)
- White Reference Paper (KS-062, Part No.: 107724)
- Black Reference Paper (KS-063, Part No.: 107725)
- UV Reference Paper (KS-064, Part No.:110664)
- Mag Tool (MG-03, Part No.:G00179) included
- Mag Head Test board
- Adjustment Program (ADJTOOL_V1.06-4.exe, comm.ini and adj.ini)



5-3-2. Initial Settings

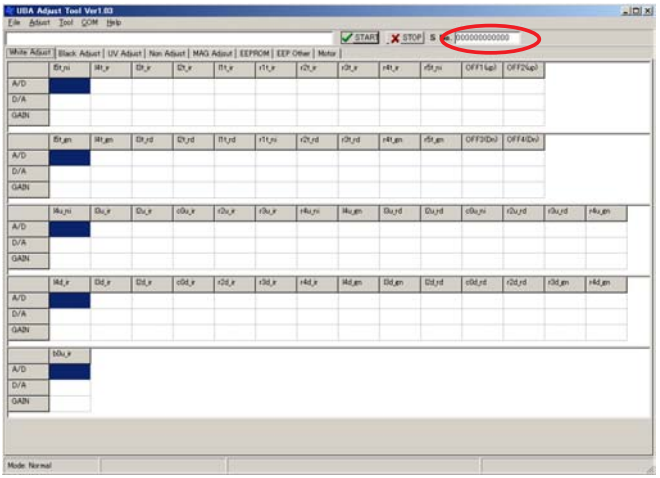
1) Make sure that your UBA's jumper setting is in photo-coupler isolation.
   For details about jumper setting, refer to 1-7-1. Interface Connector.
2) Connect the Test Adapter to UBA and serial port of your PC.
   Set the switch No.8 of UBA Dip switch ON, and supply power to the unit.
3) Create a new folder in your PC.
4) Save the Adjustment program "**ADJTOOL_Vxxx.exe**", "**comm.ini**" and "**adj.ini**" in the folder.

5-3-3. Adjustment Procedure

1) Check the Your PC's COM Port number which the UBA is connected.
2) Open **"comm.ini"** file with Note Pad. Check the COMPORT (line 3 from the top) is the same number as your PC's COM Port number. If not, change the number and save the file.

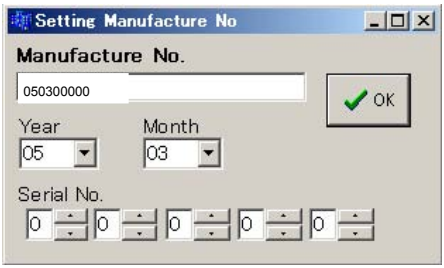
- **When the following message appears, Your PC's COM Port number connecting the UBA may differ. Click [OK] button and close the message. Then open comm.ini file again and change COM Port Number porperly.**

3) Double click the ADJTOOL_xxx.exe and the following screen will appear.



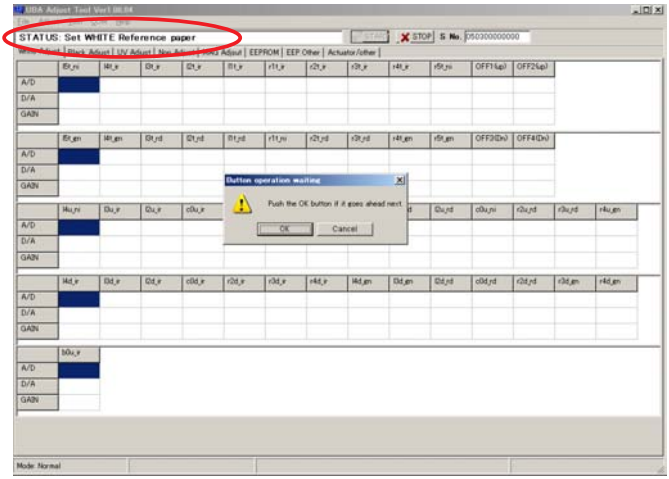
CHAPTER 5

4) When clicking the upper right corner "S No." text enter box, the following screen appears. Enter your UBA 's serial number and click [OK].

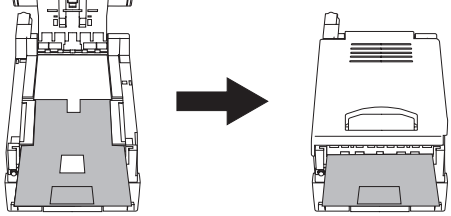


5) Set the UBA DIP Switch No.8 OFF and click [START] button on the screen.

6) After a while checking the motor speed automatically, the following screen appears. See the left corner of the screen



7) Open the upper guide of UBA and insert white reference paper, and then close the guide firmly.

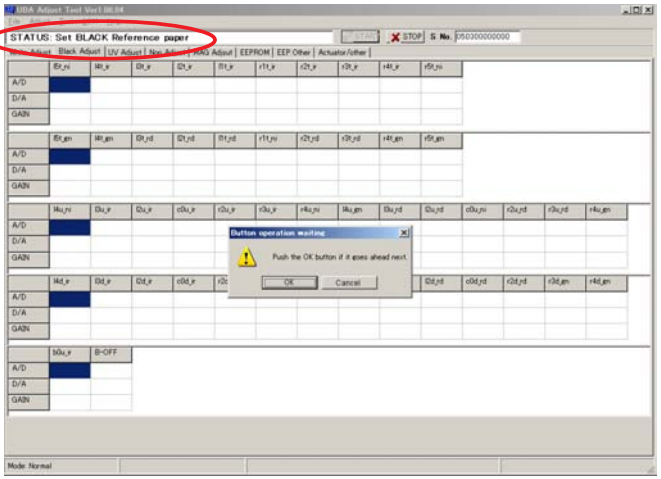


Insert white reference paper to the far end

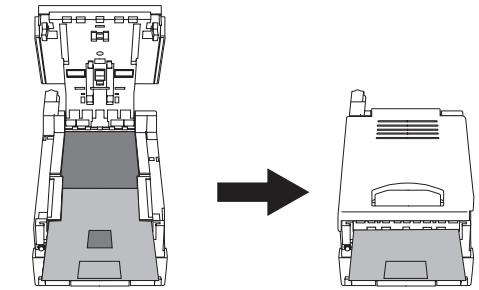
Close the upper guide

8) Then click [OK] button of the Button Operation Waiting window.

9) After a while, the screen asks you to insert black reference paper.



10) Open the upper guide and Remove white reference paper and then insert black reference paper.



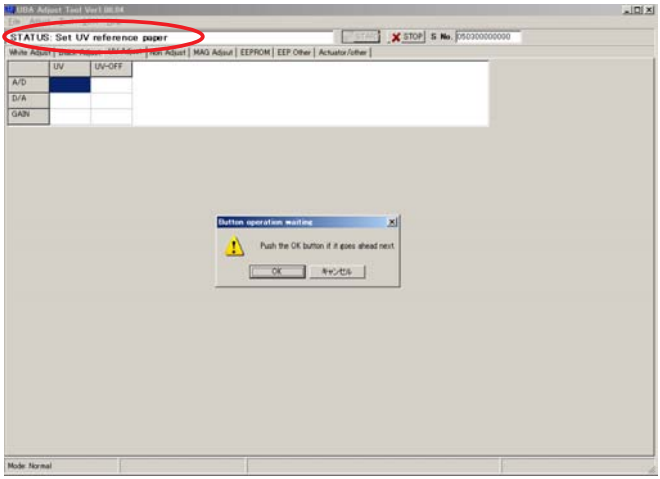
Insert black reference paper to the far end

Close the upper guide

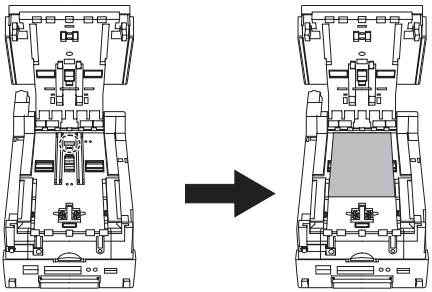
CHAPTER 5

11) Close the upper guide firmly and click [OK] button of the Button Operation Waiting window.

12) After repeating the steps 8) to 11) a few times, the screen asks you to insert UV reference paper.



13) Open the upper guide of UBA and remove the black reference paper. Insert UV reference paper and close the upper guide firmly. Click [OK].

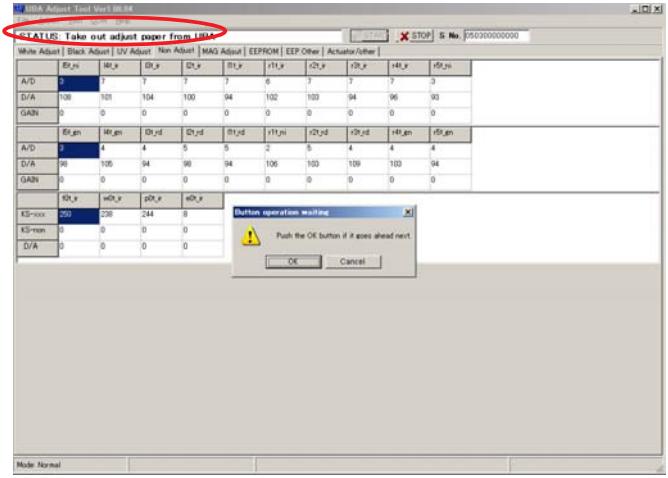


Set the UV reference paper to cover the white plastic on the lower tray

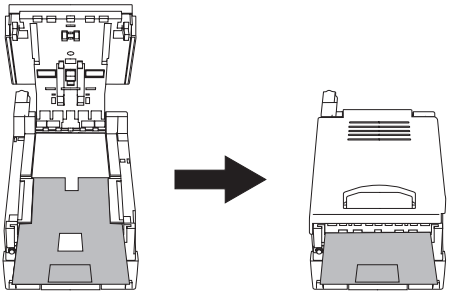
After setting the UV reference paper,close the upper gide.

- **Be sure to set the UV reference paper label side up.**

14) When the UV sensor adjustment is complete and the screen asks you to remove the UV reference paper and click [OK] button.



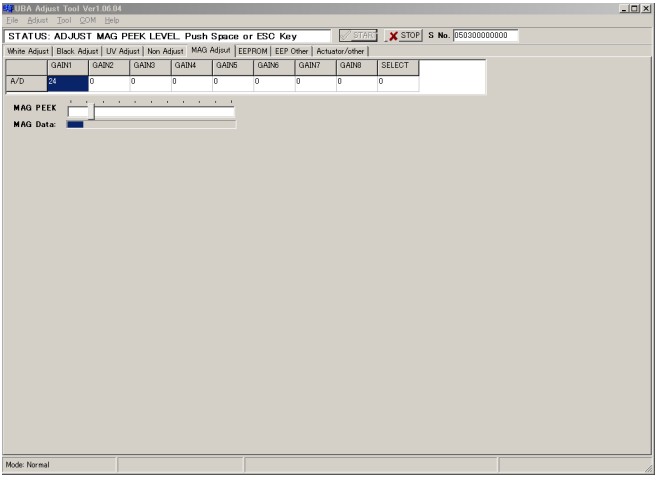
15) No-paper adjustment begins. After a while, the following screen appears. Insert white reference paper again.



Insert white reference paper to the far end

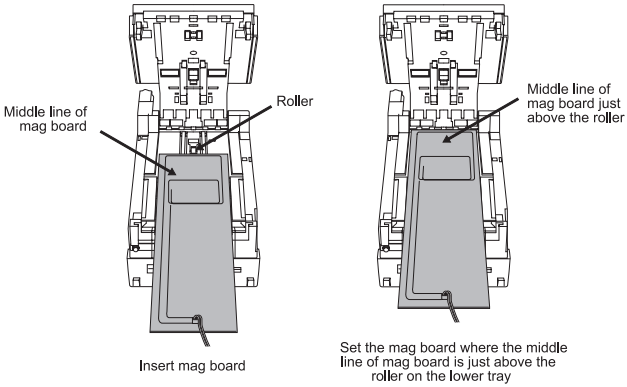
Close the upper guide

16) When the adjustment with optical sensors is completed, the following screen appears.



17) Insert Mag test board into UBA. Set the mag test board with its middle line just above the roller of the lower tray, and close the guide firmly. Click [OK].

18) Move the mag test board slightly back and forth to find the peak value. Find the position where the "Gain1" value enters the range within -5P in relation to the peak value, and press [Space] or [Esc] key.



Note - **The average peak value is approx. 20P ~ 35P. Use this value only for reference, and make sure to find the peak value with your equipment.**

19) When the mag head adjustment is complete, the whole adjustment procedure is finished. The following screen appears. Click [OK] button to end the adjustment. If you wish to repeat the adjustment with another unit, restart from 5).

Universal Bill Acceptor
UBA-1X-SS Service Manual
Appendix

A-1. ICB Features

Issued 08/2007

A-1. ICB Features

JCM's Intelligent Cash Box (ICB) system increases efficiency in the soft drop and soft count process for casinos. This is accomplished using proprietary software to create individual machine set tickets which are printed by Printer Station (TSP-02). Those tickets are inserted into the ICB-compatible UBA bill validators at specific machine locations. When the ICB is placed in an ICB-equipped machine, the UBA transmits the machine No. ticket to the Cash Box through optical sensors. After the machine No. (ICB BOX ID) has been set, all insertions into the UBA are transmitted to the Cash Box memory module in the same manner. When the Cash Box is removed from the UBA unit, it is placed on a READ/WRITE TOOL that is attached to the Printer Station. The READ/WRITE TOOL reads the contents of the Cash Box, transmits the information to the Printer Station, and a ticket is generated with the machine No. in bar code format and other specified information. The READ/WRITE TOOL resets the Cash Box fields to zero, and it is ready to be reinstalled in any compatible machine.

A-1-1. Required Items

When using the ICB (Intelligent Cash Box) feature, the following items are required.

- ICB (Intelligent Cash Box)
- READ/WRITE TOOL RW-M2 (ROM:Ver.3.00-03 or higher) (EDP#:127480)
- Printer Station TSP-02-00-220-**-001 (ROM: ITBtsp02.s, Ver.:JPS-02 01 ID-003 Ver1.01c or higher)(EDP#: **=03:#091283, 24:#091281, 33:#102500)
- ICB PRINT SET TICKET simulation software installer (setup.exe, SETUP.LST, ITBtsp02.s, ICB Print Ticket.CAB)
- Interlligent Box Host Simulator Software(ITBOXV30519(38400bps).exe or higher)

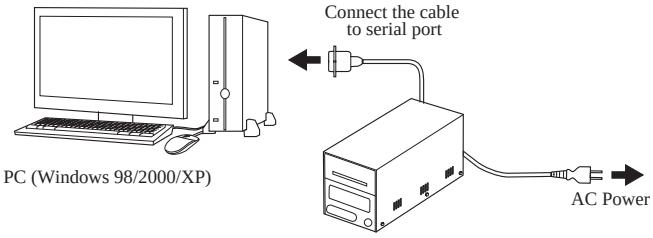
A-1-2. Installing the ICB PRINT SET TICKET Simulation software

1. Copy all installer files (setup.exe, SETUP.LST, ITBtsp02.s, ICB Print Ticket CAB) in the same folder to you PC.
2. Double click the setup.exe and then the setup window will appear.
3. Follow the instruction and complete the installation of the ICB PRINT SET TICKET simulation software.

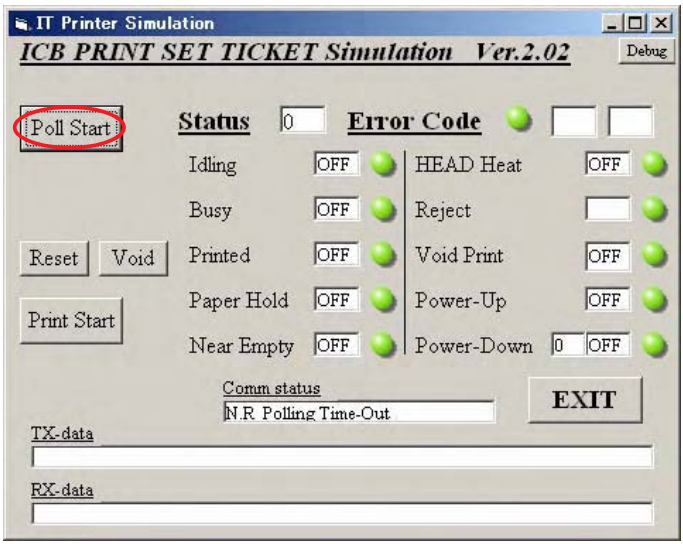
A-1-3. Tickets Printing Procedure

The Machine No. Ticket, Enable Ticket and Disable ticket are required when using the ICB feature.

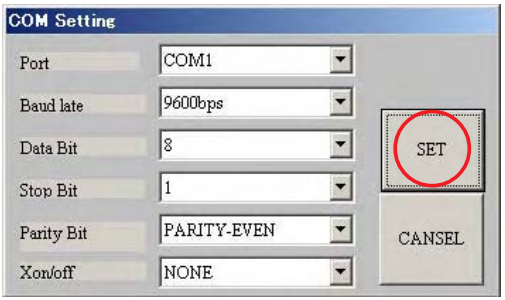
1. First, load fan-fold paper into the Printer Station, and attach the power cord.
2. Attach the 9-pin cable (female-to-female) to the RS-232C port on the Printer Station (TSP-02-00-220-**-001), and the other end to a serial port on your computer.



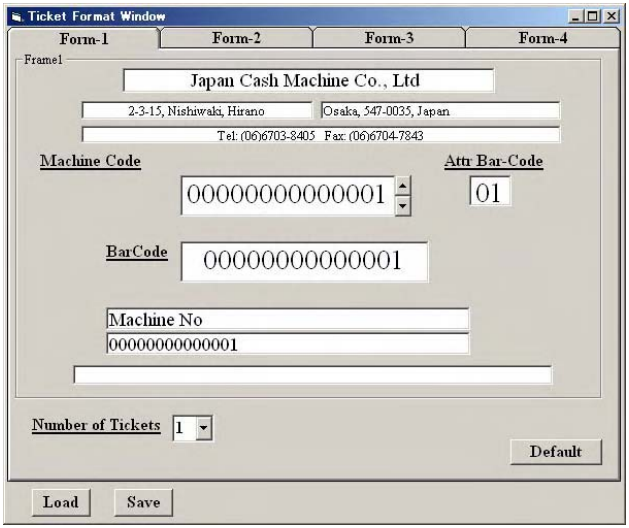
3. Turn on the Printer Station power (The ON/OFF switch is on the back of the Printer Station).
4. Start up the IT Printer Simulation from Window's START > Program> ICB> ICBTICKET.
5. Click on the [Poll Start] button.



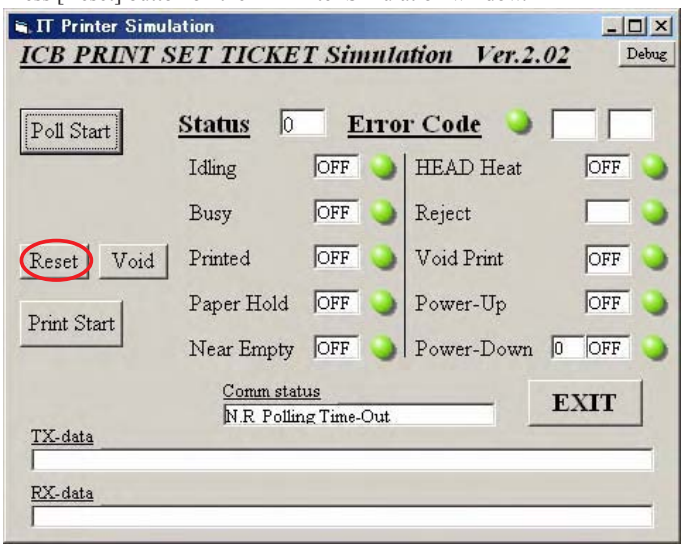
6. The “COM Setting” window will appear. The COM Port setting can only be changed on this window. Change the Port number if required and click on the [SET] button.



7. The Ticket Format window will appear.



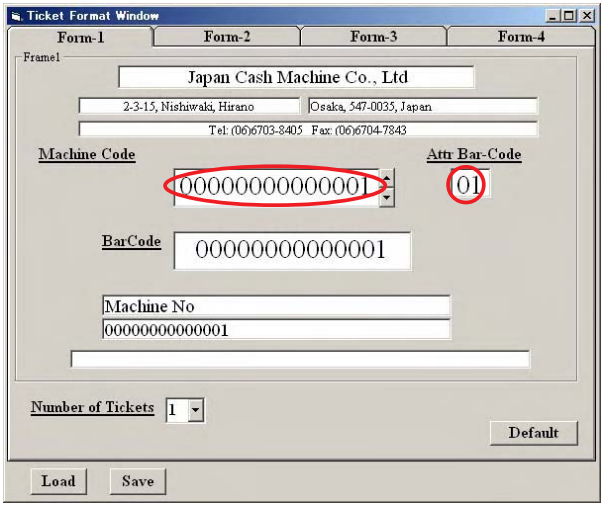
8. Press [Reset] button on the IT Printer Simulation window.



9. Enter the specific information, such as Name, Address, Telephone in the top portion of the Form-1 on the Ticket Format window. Next procedure differs depending on which ticket you are printing.

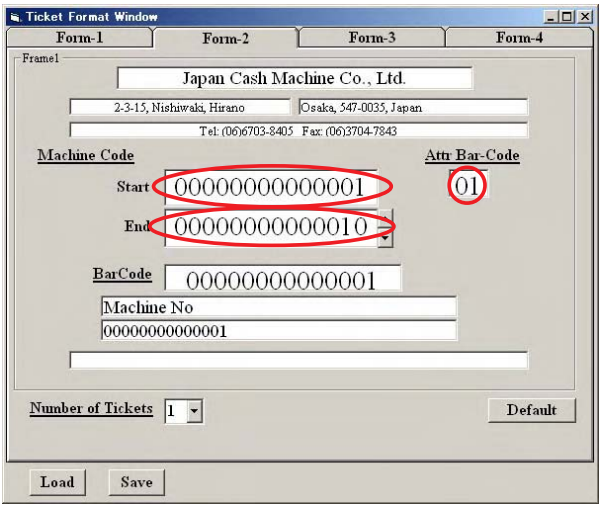
■ **Machine No. Set Ticket**

The Machine No. Set Ticket is required to the number of the ICB Boxes you use. When printing the Machine No. Set Ticket, enter 14-digit identification number. The number can reflect location, asset number, etc. Enter **01** in the Confirm the Attr Bar-Code box.



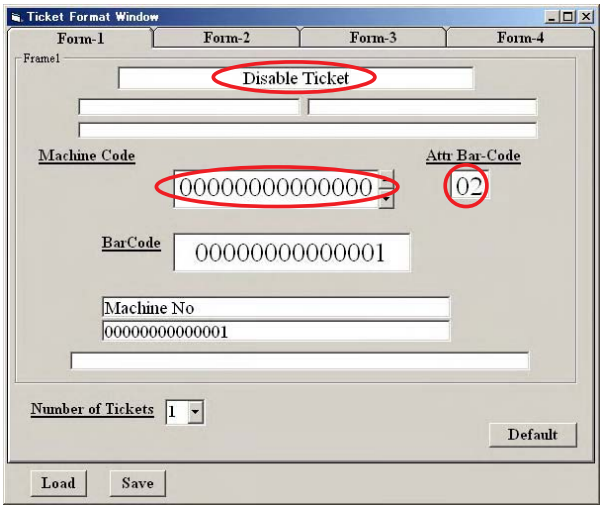
Note

- Form-2 is used to establish a sequential series of Machine Number Tickets manually. The customer identification information must be entered as on Form-1. Leave the number in the "Number of Tickets" window at 1 unless multiple tickets for the same machine are required. Enter the Machine Code Start and End.



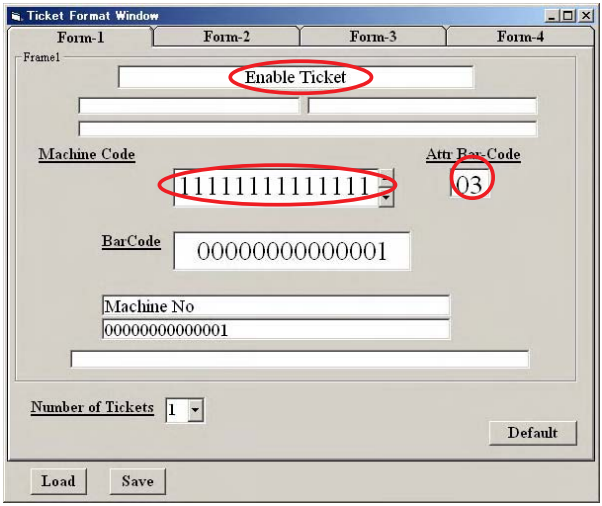
■ Disable Ticket

The Disable Ticket is required to set the ICB feature disable. Only one ticket is required despite the number of the ICB Boxes you use. When printing the Disable Ticket, enter "Disable Ticket" in the top portion on the Ticket Format Window and all zero (0) in the Machine Code and Bar Code box. Enter **02** in the Confirm the Attr Bar_Code window.

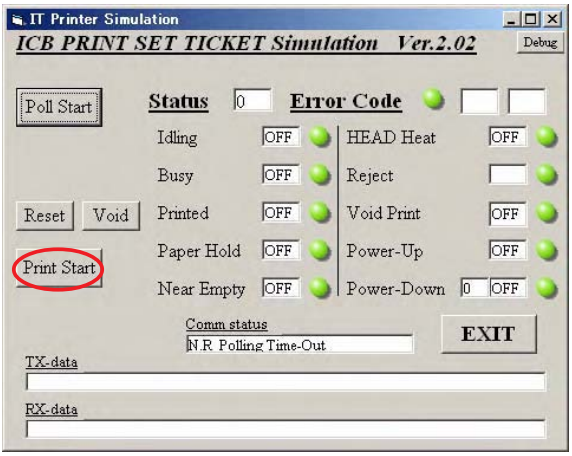


■ Enable Ticket

The Enable ticket is required to set the ICB feature enable. Only one ticket is required despite the number of the ICB Boxes you use. When printing the Enable Ticket, enter "Enable Ticket" in the top portion on the Ticket Format Window enter all one (1) in the Machine Code box. Enter **03** in the Confirm the Attr Bar_Code window.



10. Leave the number in “Number of Ticket” window at 1 unless multiple tickets for the same machine are required.
11. Click on the [Print Start] button on the IT Printer Simulation window.



- **Press the Print Start button only once, otherwise blank ticket will be printed out.**

12. Then the ticket will be printed out.

Sample of Machine No. Ticket

- **If the blank ticket is printed out, check the all connection of the harness and the ROM of the printer station (ITBtsp02.s, Ver.:JPS-02 01 ID-003 Ver1.01c or higher). The blank ticket is still printed out, the thermal head may be wrong. Change the thermal head of the printer station.**

A-1-3. Enable Setting

Before using the ICB feature, perform the enable setting as shown below.

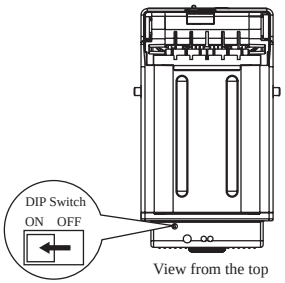
1. Set the UBA unit's DIP Switch No.s 1, 3 and 8 ON.
2. Turn the power of UBA unit ON.
3. After initializing, insert the Enable Ticket to the UBA unit.
4. Confirm the LEDs of the faceplate flashes rapidly and then the ticket will be returned.

- **If the ticket is rejected right away and the LEDs flashes slowly, the ticket is not valid. Confirm that the ticket is printed properly and the accepter head has durt. The ticket is still rejected right away and the LEDs flashes slowly, confirm that the software program supports the ICB feature and perform the adjustment of the accepter head.**

5. Insert the Machine No. Set Ticket to the UBA unit.
6. Confirm the LEDs of the faceplate flashe rapidly and then the ticket will be returned.

- **If the ticket is rejected right away and the LEDs flashes slowly, the ticket is not valid. Confirm that the ticket is printed properly and the accepter head has durt. The ticket is still rejected right away and the LEDs flashes slowly, confirm that the software program supports the ICB feature and perform the adjustment of the accepter head.**

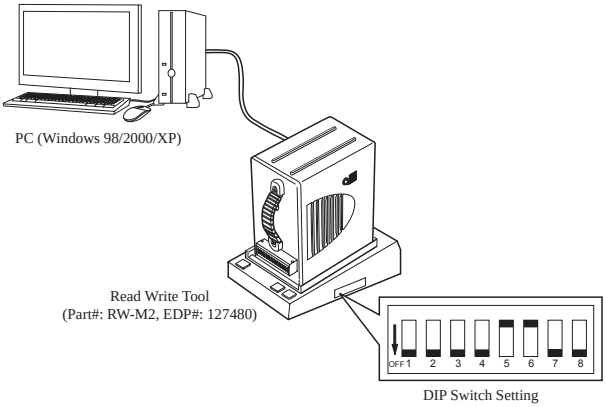
7. Set the DIP Switches of the UBA unit all OFF.
8. Confirm the ICB switch of the ICB Box ON.



View from the top

9. Set the READ/WRITE TOOL DIP switch setting Nos.5 and 6 ON and then supply the power to the READ/WRITE TOOL.

10. Set the ICB Box upside down on the READ/WRITE TOOL (RW-M2).



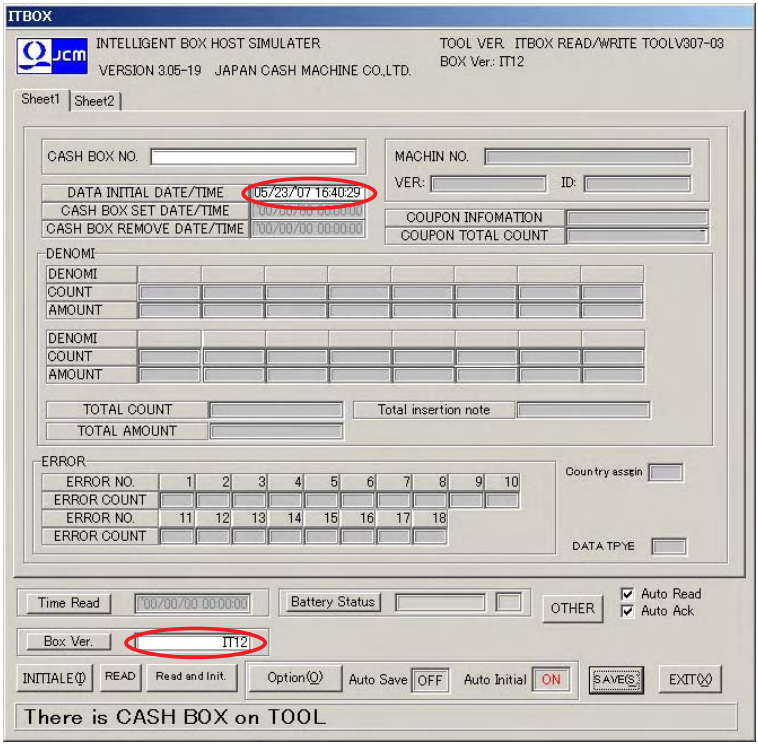
DIP Switch Setting

- **Do NOT shake the Cash Box while reading data otherwise the data will be corrupted.**

11. Confirm the OK lamp of the READ/WRITE TOOL turns ON and then OFF.

- **Remove the ICB Box from the READ/WRITE TOOL after confirming the OK lamp turned OFF completely.**

12. Double click the Interlligent Box Host Simulator Software and then the following window will appear.



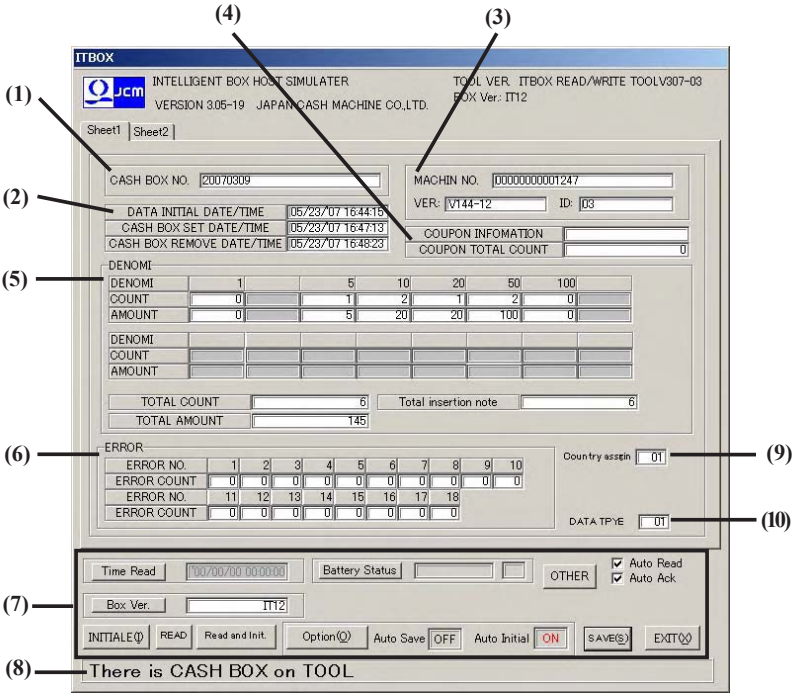
13. Confirm that the ICB box is initialized. When the only DATA INITIAL DATE/TIME and Box Ver. are displayed in the window, it means the ICB box is initialized.
14. Now ready to use the ICB feature. Attache the ICB Box to the UBA unit and then supply the power.

- **If the ICB BOX is not initialized, an error occurs when attached it to the UBA unit.**

A-1-4. Data Read

When reading the data, follow the steps below.

1. Remove the ICB Box from the UBA unit.
2. Set the ICB Box upside down to the Read Write Tool.
3. Double click the Intelligent Box Host Simulator Software and then the following window will appear. The descriptions of the window are shown below.



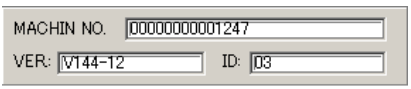
(1)

The UBA CASH BOX NO. is displayed here.

(2)

The date/time when the dash box data is initialized, the cash box is installed in the UBA and the cash box is removed from the UBA are displayed here

(3)



The MACHINE NO., the version and ID of the ROM installed in the UBA are displayed here.

(4)

COUPON INFOMATION	
COUPON TOTAL COUNT	0

The Information and total count for coupon are displayed here.

(5)

DENOMI

DENOMI	1		5	10	20	50	100	
COUNT	0		1	2	1	2	0	
AMOUNT	0		5	20	20	100	0	

DENOMI								
COUNT								
AMOUNT								

TOTAL COUNT	6	Total insertion note	6
TOTAL AMOUNT	145		

The number and amount of each denomination and total are displayed here.

(6)

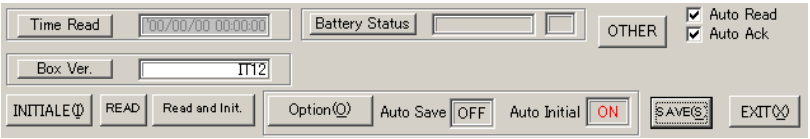
ERROR

ERROR NO.	1	2	3	4	5	6	7	8	9	10
ERROR COUNT	0	0	0	0	0	0	0	0	0	0
ERROR NO.	11	12	13	14	15	16	17	18		
ERROR COUNT	0	0	0	0	0	0	0	0		

The number of error occurred are displayed here. The ERROR NO. conversion table are as shown below.

Error No.	Descripton
1	Box Full (Register the count 0 to 255)
2	Stacker JAM
3	Stacker Lever JAM
4	Acceptor Head JAM
5	No Acceptor Head
6	Transport Motor Lock
7	Reserved
8	Solenoid Error
9	Reserved
10	Box Removed
11	Reserved
12	Reserved
13	Reserved
14	Reserved
15	Reserved
16	Reserved
17	Reserved
18	Reserved

(7)



The descriptions of the buttons are as follows.
[Time Read]: Display the time data of the ICB module.
[Battery Status]: Display the battery status of the ICB module .
[Other]: Not used.
[Auto Read]: If the checkbox is checked, the Cash Box data are read and initialize them automatically.
[Auto Ack]: Not used.
[Box Ver.]: Display the Cash Box version.
[INITIALE (I)]: Initialize the data.
[READ]: Read the Cash Box data.
[Read and Init]: Read the Cash Box data and then initialize.
[Option (O)]: Select ON/OFF of "Auto Save". Auto Initial is always ON. If you want to initialize manually, uncheck the "Auto Read" checkbox.
[Save (S)]: Save the Cash Box data as csv data.
[EXIT (X)]: Exit the program.

(8)

The status of the Read/Write tool are displayed here.

(9)

The assigned Country No. is displayed here. For details, refer to country code.

(10)

The DATA TYPE is displayed here.

A-1-5. Disable Setting

When setting the ICB feature disable, follow the steps below.

1. Set the UBA unit's DIP Switch No.s 1, 3 and 8 ON.
2. Turn the power of UBA unit ON.
3. After initializing, insert the Disable Ticket to the UBA unit.
4. Confirm the LEDs of the faceplate flashes rapidly.
5. The ticket will be returned and the lights will go out.
6. Set the UBA DIP switches to their normal position.