



Taiko™ Series

PUB-7/11 Banknote Acceptor Operation and Maintenance Manual

(Revision 7)



REVISION HISTORY		
Rev No.	Date	Reason for Update
A	7/12/10	Initial Version
1	2/14/11	Barcode Coupon Specification Added
2	8/17/11	Important corrections made to Tables in Section 2.
3	4/09/12	Added Waffletechnology Cleaning Card availability & Usage information in Section 2, corrected Part Number Information in Section 7 and added 2 Tables to Appendix A.
4	3/25/13	Added EBA Type Bezel in Section 7.
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6	5/1/16	Updated Part Number in Section 7 and Appendix A.
7	Oct. 29, 2021	Redesigned the cover, updated the International Compliance information, updated the Technical Contact information in Section 1 and Section 3, and updated Parts Lists in Section 7.

International Compliance

- RoHS Directives  or  or  or  or 
- UL & c-UL Marks  File No. E142330
- CE Mark 
- UKCA Mark 

Electrical Current Symbol

Direct Current:  indicates Direct Current values on product labels.

The JCM Website for patents is: <http://www.jcm-hq.co.jp/english/patents/>

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Taiko™ Series Banknote Acceptor

Section 1

1 GENERAL INFORMATION

Description

This section provides a general overview of the Taiko™ Series Banknote Acceptor (PUB-7/11) pictured in Figure 1-1. This first section is designed to help you navigate through this guide with ease and provides the following information:

- Taiko™ PUB-7/11 Unit
- Model Descriptions
- Precautions
- Primary Features
- Component Names
- Specifications
- System Configuration
- Unit Dimensions
- Technical Contact Information

In order to make operation of this device easier and make navigation within this manual simpler, the following illustrations were used within the text:

- **Safety Instructions**, which need to be observed in order to protect the operators and equipment, have been written in **Bold** text and have been given the pictographs: ⚠️ ⚡️
- **Special Notes**, which effect the use of the Banknote Acceptor, have been written in *italic* text and have been given the pictograph: ➡️
- **Steps**, requiring the operator to perform specific actions are given sequential numbers (1., 2., 3., etc).

Taiko PUB-7/11 Unit



Figure 1-1 Taiko PUB-7/11 Unit

Model Descriptions

Table 1-1 lists the Product Model Number Descriptions.

Table 1-1 Taiko PUB-7/11 Model Number Specifications

No	Model: PUB - * - *** - * - * - * - * - **
	No (1) (2) (3) (4) (5) (6) (7)
(1)	Validation Method 7 = Optical/Transmissive/Reflection 11 = Optical/Transmissive/Reflection/Magnetic (MAG)
(2)	Country Code Type - ISO 3116 based 3-digit codes
(3)	Bezel 0 = No Bezel 1 = Banknote Width Minimum = 67mm/Maximum = 82mm (Euro) 2 = Banknote Width Minimum = 75mm/Maximum = 82mm (British) 3 = Banknote Width Minimum = 70mm/Maximum = 82mm (China/Taiwan) 5 = Banknote Width Minimum = 66mm (US Dollar)
(4)	Optional Unit 0 = Without Optional Unit 1 = With Optional Interface Pin Assignment Conversion Adaptor Harness Unit (ccTalk Compatible) 2 = Parallel (ID-001) Interface Type (Upper Tray dedicated 16-Pin Connector) 3 = Individual Specification 4 = 24V DC Specification 5 = Barcode Coupon Specification
(5)	CPU Board Type 0 = Standard 2 = Interface Pin Assignment (ccTalk Compatible) 3 = Parallel Interface 4 = 24V DC/12V DC*
(6)	Optional Code 0 = Standard 1 = Individual Specification
(7)	Interface X4 = ID-003 (Serial)/MDB/Pulse/ccTalk) 01 = ID-001 (Parallel) 03 = ID-003 (Serial) (For Barcode Specification) 62 = ID-062

*. 24V DC is only available when using the Optional 24V DC Version.

Precautions

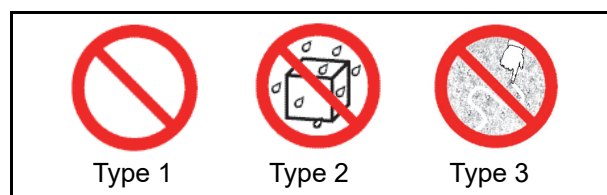


Figure 1-2 Precautionary Symbols

The Figure 1-2 symbols are defined as follows:

- (Type 1) Do not insert a torn, folded, or wet Banknote, as this action may cause a Banknote jam inside the unit.
- (Type 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.
- (Type 3) Do not install the unit into a dusty environment. Dust may affect and degrade the sensor's performance.

USER CAUTIONS

Careful measures are taken in this product to ensure its quality; however, the following cautions should be read and understood by all users in order to confirm safe operation.

Installation Cautions

The Installation Cautions are defined as follows:

- Do not allow the Unit to endure or operate at a high temperature, in high humidity and/or in a dusty environment.
- Do not use the Acceptor where temperature variations widely fluctuate.
- Do not install the Unit into an area where excessive vibration, shock or chemical vapors are present.
- This equipment is intended for indoor use only. Be sure that the Host Machine contains enough protection to avoid wet or dusty conditions when installing.
- Avoid exposing the Unit to direct Sunlight and/or incandescent Lamp illumination having a Gradient Angle of 15 Degree or more, and an illumination index of 3,000 Lux or less.
- Ensure that the Host Machine is designed for daily operational access such as maintenance and/or clearing a Banknote Jam.
- Be sure to use in the specified power range and pin assignment. If not, the Unit may be damaged.
- Be sure to connect the power harness connectors firmly, otherwise an input/output contact failure may occur.
- Do not pull on the power harness to disconnect its connector or damage may occur.
- Do not obstruct the Acceptor's air holes in order to provide sufficient cooling to the Unit.

Mounting, Dismounting & Transportation

Methods for Mounting, Dismounting & Transporting the Unit are as follows:

- Be sure to turn the Power OFF before mounting or removing the Unit from its permanent location. Plugging or unplugging Connector Plugs from their receptacles while the Power is ON may cause damage to the Unit.
- When reassembling a disassembled Unit Section, ensure that each part is properly placed in its correct location.
- Be sure to carry the Unit by both hands when transporting it. Holding the Unit by one hand may cause personal injury if the Unit accidentally becomes disassembled and falls apart.
- Be careful not to use excessive outside pressure on the Unit, or subject it to excessive vibration during transportation.

Preventive Maintenance

The Preventive Maintenance requirements are defined as follows:

- Be sure the Power to the Unit is OFF before beginning a Maintenance Procedure. The equipment produces improper operating signals while in maintenance mode that may cause personal injury.
- Be sure to remove power to the Unit when opening the upper or lower lid. The active Roller may cause personal injury.
- Be careful that foreign objects or dust do not enter the Unit when opening the Guide Area.

4. When closing the Unit, ensure all service door locks click into place.
5. If the Validator section is dirty due to dust, foreign objects or other such debris adhering to it, the Banknote acceptance rate will degrade. Clean the Unit once a month to keep its performance stable.
6. Use a soft, lint-free cloth, Cotton swab or Compressed Air spray to clean dust and debris from the Banknote transportation path.
7. Perform cleaning and maintenance regularly when using the equipment in a place where excessive Automobile exhaust emission or Cigarette Smoke may exist.
8. Be sure that the Guide or individual Unit Sections are properly placed in their correct location following a maintenance procedure.
9. Do not redesign or disassemble the Unit. Unauthorized use by inadequately trained personnel, or use outside the original manufacture's intent for operation voids the warranty.



Caution: Do not use any Alcohol, thinner or citrus based products for cleaning any surfaces. The Lenses can become clouded by chemical effect that may cause acceptance errors.

Banknote Fitness Requirements

1. The following Banknote types may not validate correctly, or can cause a Banknote jam and/or damage to the Unit's Transport path. Banknotes exhibiting the conditions listed below and illustrated in Figure 1-3 should be avoided:
 - Having perforated or torn areas
 - Having excessive folds
 - Wet or damp
 - Having excessive wrinkles
 - Worn condition
 - Adhering foreign objects and/or oil.

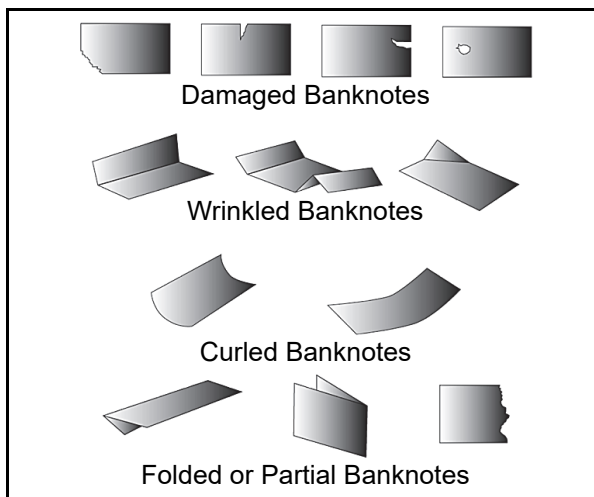


Figure 1-3 Unacceptable Banknotes

Primary Features

The Taiko™ PUB-7/11 Series of Banknote Acceptors contains the following primary features:

- Installation and removal of a TAIKO Unit is very easy because of its clip-on design. Anyone can install a TAIKO Unit quickly.

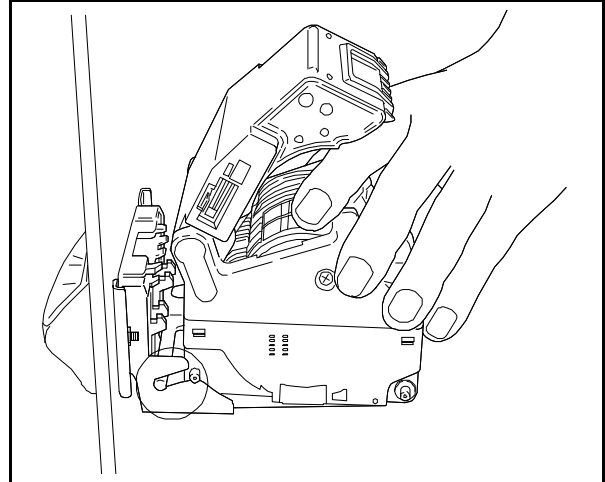


Figure 1-4 Installation Simplicity

- Data scanning frequency can be selected by setting DIP Switches. Scanning once or twice is selectable. The acceptance rate can be improved by setting it to scan twice.

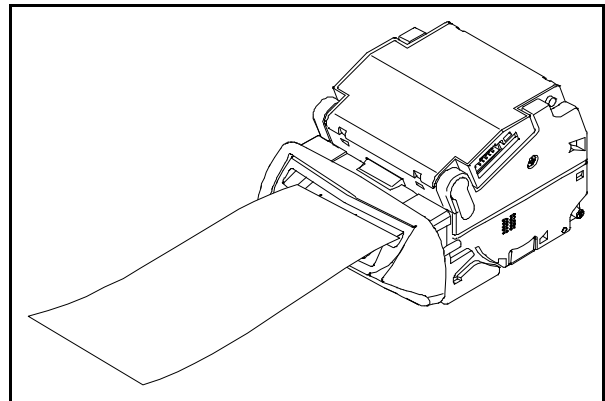


Figure 1-5 Scan Frequency Capability

- The JCM patented Anti-Pullback Mechanism provides powerful protection against Banknote stringing (fishing). The drum rotates every time a Banknote passes through the Unit, and tangles any foreign object attached to the Banknote such as string and/or tape around drum.
- One or five drum rotations is DIP Switch selectable. The greatest fishing protection is obtained by selecting the five rotation setting.

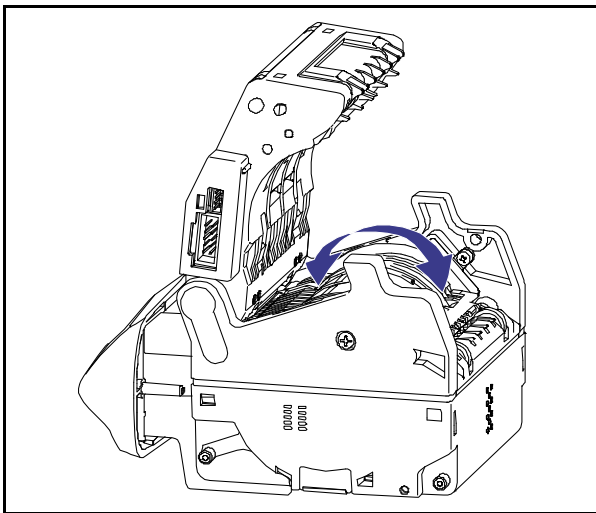


Figure 1-6 Taiko Anti-Pullback Feature

- The LED pattern can be changed by DIP Switch settings depending on the user's desire to use Pattern 1 or Pattern 2.

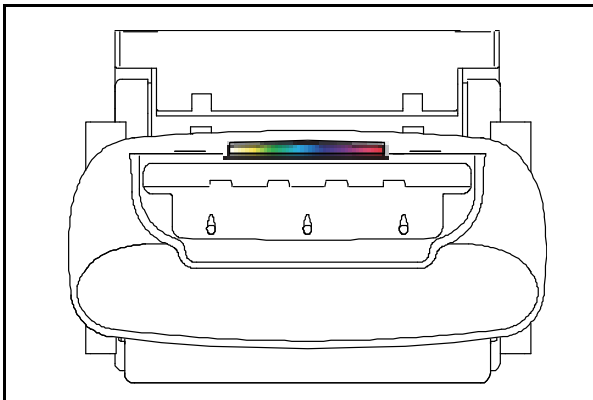


Figure 1-7 LED Pattern Selectable

Product Label

Figure 1-8 and Figure 1-9 illustrates the simple installation instructions contained on the Taiko™ top panel label.



Figure 1-8 PUB-11 Top Panel Instruction Label

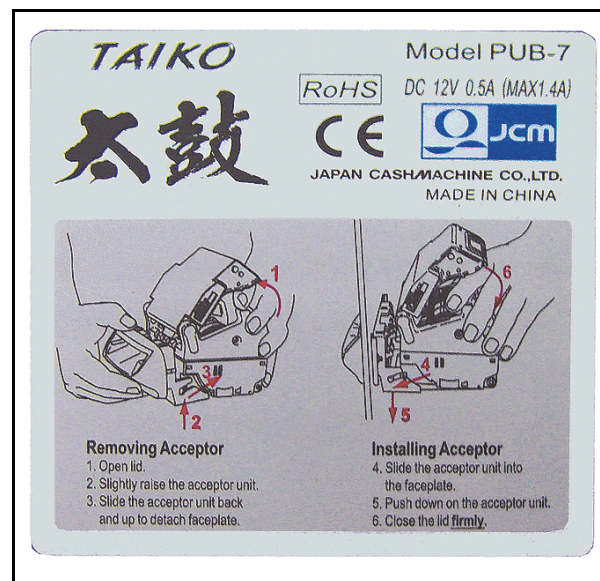


Figure 1-9 PUB-7 Top Panel Instruction Label

Component Names

Figure 1-10 illustrates the Taiko™ PUB-7/11 Component Names and Locations.

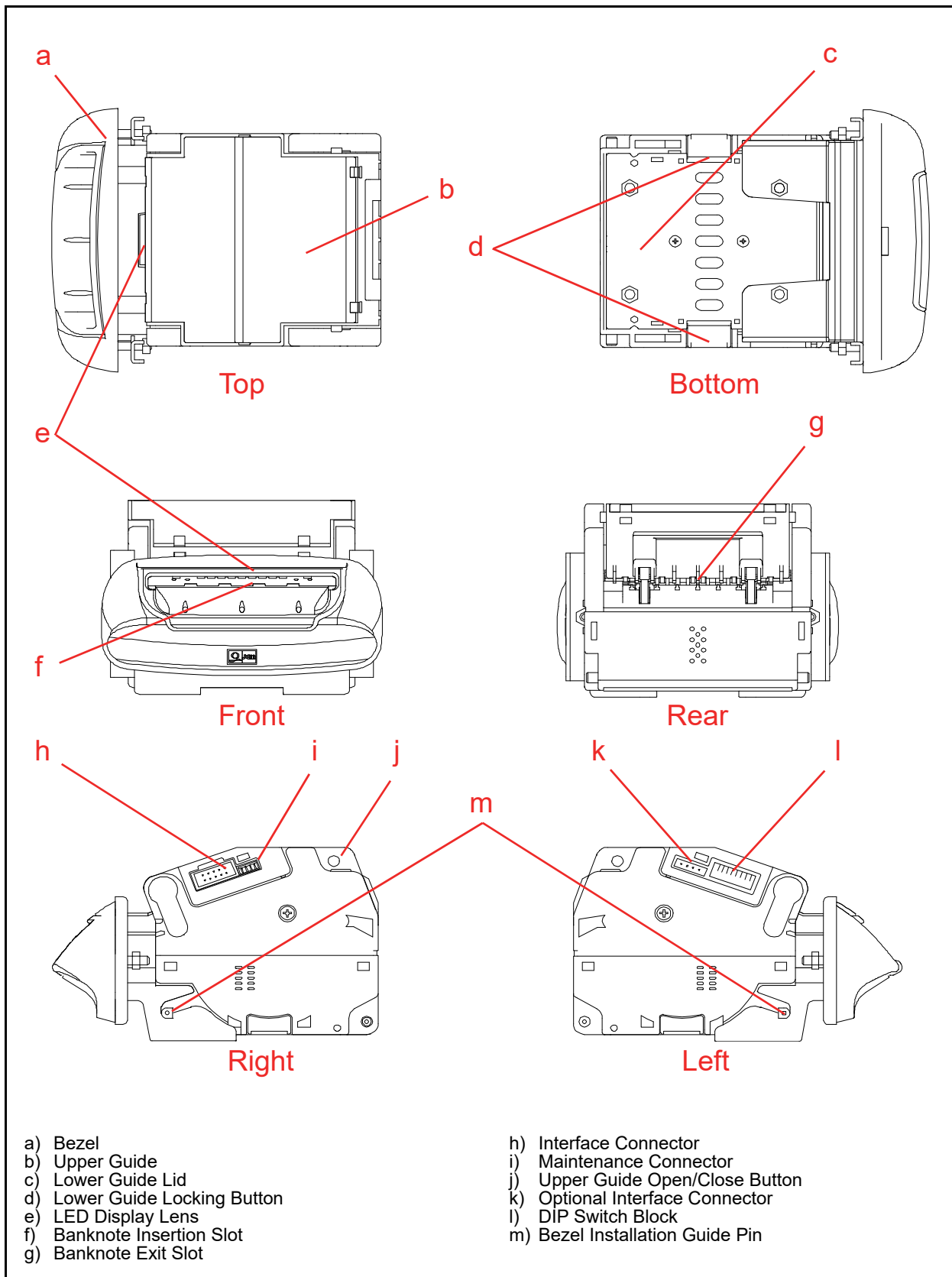


Figure 1-10 Taiko PUB-7/11 Component Names

Specifications

TECHNICAL SPECIFICATIONS

Table 1-2 Taiko PUB-7/11 Technical Specifications

Acceptance Rate*:	95% or greater [†] Note: The following banknote types are excluded: a) Banknotes with excess or poor magnetism or unclear graphics b) Double (dual) Notes c) Worn, dirty, wet, stained, torn or excessively wrinkled Banknotes d) Banknotes having folded corners or edges e) Banknotes having the wrong cut dimensions or printing displacement f) Returned Banknotes because of incorrect or failed insertion.
Banknote Types Accepted:	Long side: 120~160mm (4.72~6.3 in.) Short side: 62~82mm (2.44~3.23 in.)
Barcode Coupon‡:	Standard Specification a) Read code interleaved: 2 of 5 b) Narrow Bar: 0.5mm-0.6mm (0.019-0.023 in.) c) Wide Bar to Narrow Bar ratio = 3:1 d) Characters: 18 Characters e) Print Position: Middle (Divide a Coupon equally on the left, right, top and bottom of the Coupon's center) f) Print Width: Wider than 10mm (0.39 in.)
Insertion Direction:	Banknote: Four-way Barcode Coupon: Two-way (Barcode Surface Up)
Processing Speed**:	Approximately 2 seconds (from Banknote insertion to denomination signal output) Approximately 3 seconds (from Banknote insertion to credit signal output)
Validation Method:	PUB 7 = Optical (4 wavelength), Transmissive and Reflection PUB 11 = Optical (4 wavelength), Magnetic, Transmissive and Reflection
Diagnostic Indicators ^{††} :	Front Panel Bezel LED, Full color illuminating (Gradation & Solid)
Escrow:	1 note
Anti-stringing Mechanism:	Pull-Back (PB) Unit (Anti-pullback system - JCM Patented)
Interface:	X4: ID-003 (Serial)/MDB/Pulse/ccTalk 01: Parallel (ID-001) 03: Serial (ID-003)

*. When security measures against counterfeiting are implemented, the software may not fulfill the specified acceptance rate level.

†. Refer to the Software Information Sheet related to the specific Country's software.

‡. Refer to the Barcode Coupon Specification.

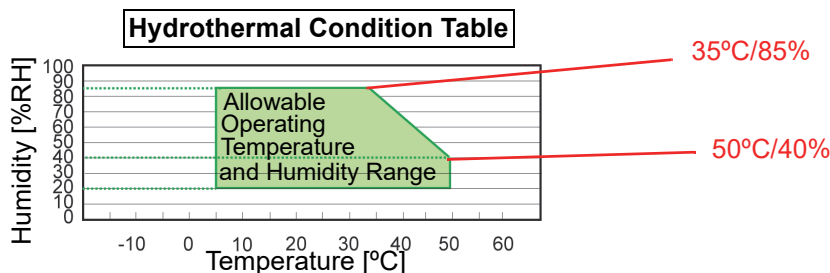
** Excluded Host communication time lag. (Power Supply: +12V DC, Temperature: 25°C ±5°C)

††. DIP Switch selectable.

ENVIRONMENTAL SPECIFICATIONS

Table 1-3 Taiko PUB-7/11 Environmental Specifications

Operating Temperature:	+5°C to +50°C (41°F to 122°F)
Storage Temperature:	-20°C to +60°C (-4°F to 140°F)
Relative Operating Humidity:	20% to 85% RH (non-condensed)
Relative Storage Humidity:	20% to 85% RH (non-condensed)
Visible Light Sensitivity:	Avoid contact with direct sunlight (Interior lighting must be incandescent with a Radiant Angle of 15 Degree or more having an Illumination index of 3000 Lux or less)
Installation:	Indoors Only



Unit Dimensions

TAIKO PUB-7 STANDARD BEZEL UNIT OUTSIDE DIMENSIONS

Figure 1-12 illustrates the Taiko™ PUB-7 Type 1, Type 2 or Type 3 Standard Bezel Unit outside dimensions.

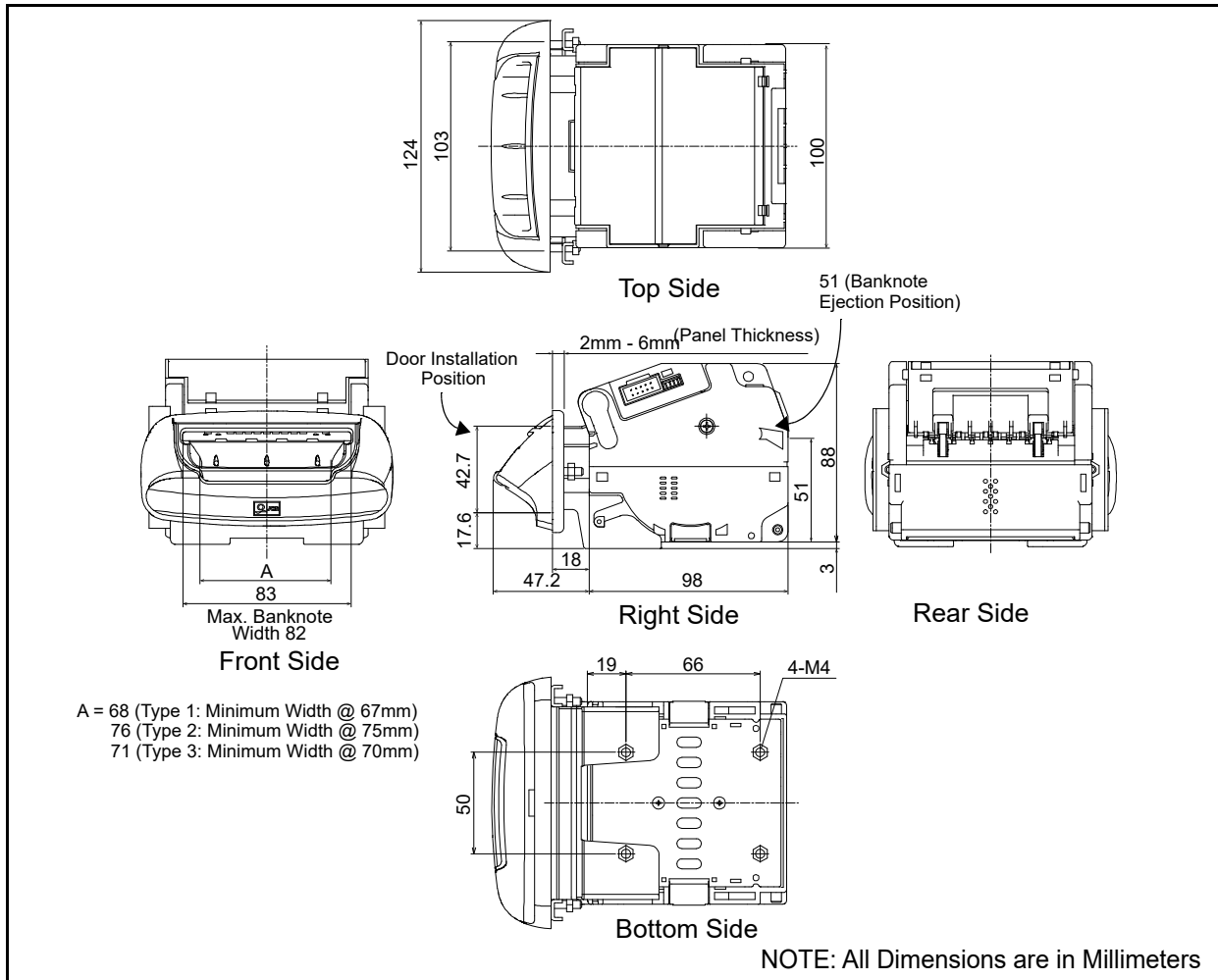


Figure 1-12 Taiko PUB-7 Complete Unit Outside Dimensions

Taiko PUB-7/11 Unit Clearance Dimensions

Figure 1-13 illustrates the Taiko™ PUB-7/11 Unit's open Acceptor clearance dimensions.

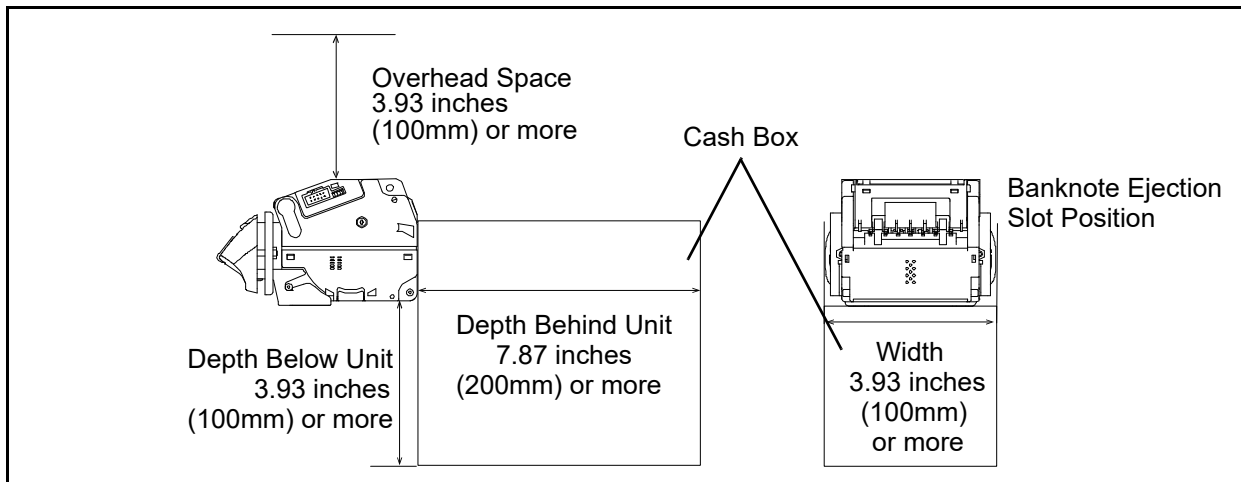


Figure 1-13 Taiko PUB-7/11 Banknote Acceptor's Clearance Dimensions

TAIKO PUB-11 STANDARD US BEZEL UNIT OUTSIDE DIMENSIONS

Figure 1-14 illustrates the Taiko™ PUB-11 Type 5 Standard US Bezel Unit outside dimensions.

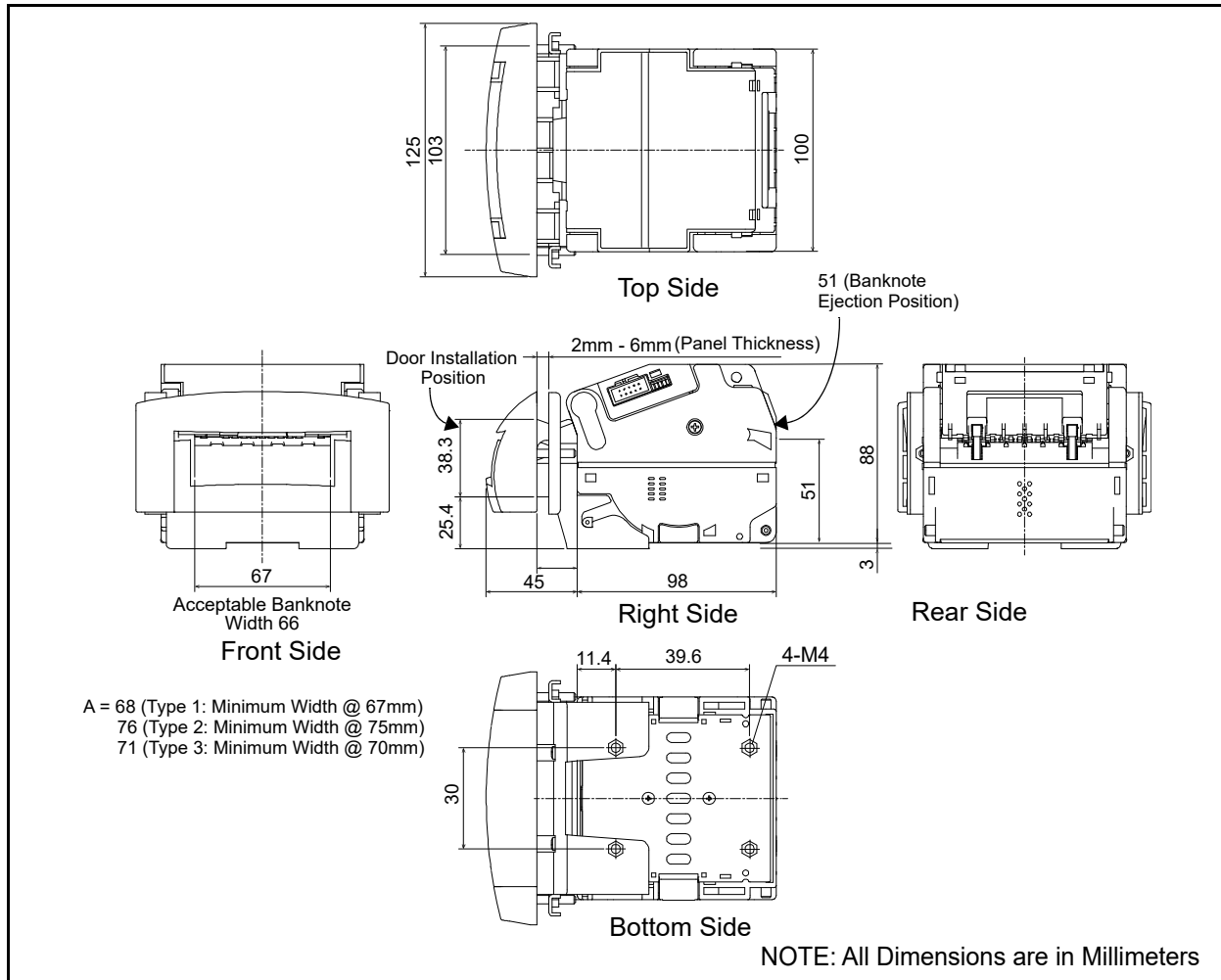


Figure 1-14 Taiko PUB-11 (US Dollar) Complete Unit Outside Dimensions

Technical Contact Information

To obtain further Technical Information regarding the Taiko™ PUB-7/11 Device, please contact the closest office to your location listed below:

Americas

JCM American

Phone: +1-702-651-0000

Fax: +1-702-644-5512

925 Pilot Road,
Las Vegas, NV 89119

E-mail: support@jcmglobal.com

Europe, Middle East, Africa & Russia

JCM Europe GmbH

Phone: +49-211-530-645-60

Fax: +49-211-530-645-85

Mündelheimer Weg 60 D-40472
Düsseldorf Germany

E-mail: support@jcmglobal.eu

UK & Ireland

JCM Europe (UK Office)

Phone: +44 (0) 190-837-7331

Fax: +44 (0) 190-837-7834

Luminous House, 300 South Row,
Milton Keynes MK9 2FR, United Kingdom

E-mail: support@jcmglobal.eu

Asia and Oceania

JCM American (Australia Office)

Phone: +61-2-9648-0811

Fax: +61-2-9647-1438

Unit 21, 8 Avenue of the Americas Newington,
NSW 2127 Australia

E-mail: Sales-AsiaPac@jcmglobal.com

JAPAN CASH MACHINE CO., LTD. (HQ)

Phone: +81-6-6703-8400

Fax: +81-6-6707-0348

2-3-15, Nishiwaki, Hirano-ku,
Osaka 547-0035 JAPAN

E-mail: Shohin@jcm-hq.co.jp

The JCM Website for all locations is:

<http://www.jcmglobal.com>

Taiko™ Series Banknote Acceptor

Section 2

2 INSTALLATION

This section provides installation/operation instructions for the Taiko™ Series Banknote Acceptor (PUB-7/11). This section contains the following information:

- Installation and Removal
- Power Harness Wiring Procedure
- Clearing a Banknote Jam
- DIP Switch Configurations
- Error Codes and Conditions
- Interface Connector Pin Assignments
- Cleaning Procedures
- Standard Interface Circuit Schematics
- Operational Flowcharts



WARNING: Turn the equipment power OFF before removing or replacing any Taiko™ components!

Installation and Removal

Installing the PUB-7/11 Taiko Bezel

To install or remove a Taiko™ PUB-7/11 Unit Bezel in a door or wall perform the following steps:

1. Create the correct sized opening required to install the Taiko™ Bezel, using the Panel Cut-Out Dimensions shown in Figure 2-1.

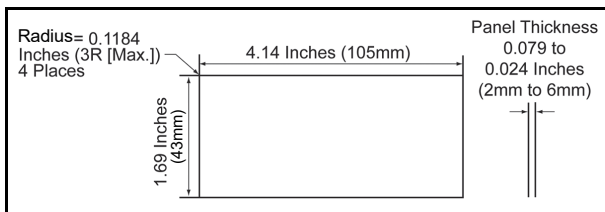


Figure 2-1 Taiko Bezel Cut-Out Dimensions

2. Open the Upper Guide in the arrow direction shown in Figure 2-2 by pressing in on the Upper Guide Open/Close Buttons.

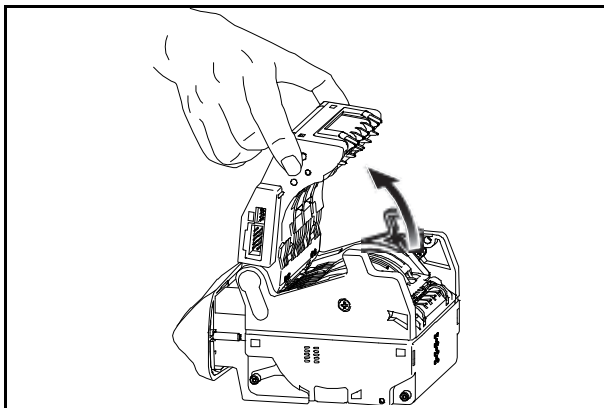


Figure 2-2 Opening Taiko's Upper Guide

3. Hold the Taiko™ Unit by placing your hand under the Upper Guide (Figure 2-3 j).
4. Slightly press down on the Bezel and raise the rear Taiko™ Unit body (Figure 2-3 k).
5. Slide the body up and back to detach it from the Bezel section (Figure 2-3 l).

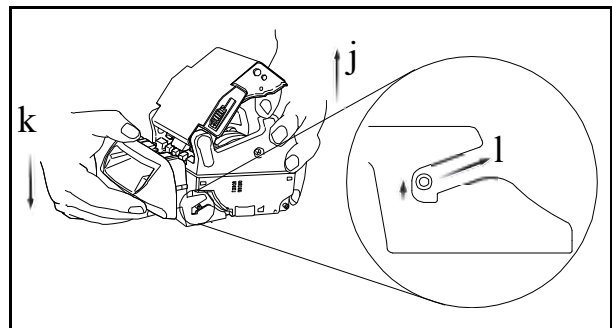


Figure 2-3 Removing the Taiko Bezel

6. Remove the two (2) Bezel Brackets and the two (2) Hexagonal Nuts from the Bezel.
7. Insert the Bezel into the previously cut-out area in the Door Front Panel as shown in Figure 2-4.

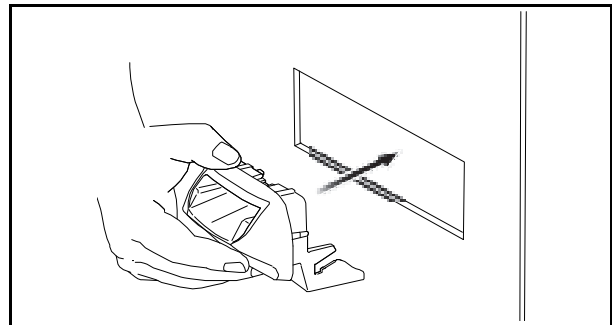


Figure 2-4 Installing the Taiko Bezel

8. Set the Bezel in the door hole and attach the two (2) Bezel Brackets to the back side of the Bezel using the two (2) Hexagonal Nuts previously removed (Figure 2-5).



WARNING: Tightening the Nuts with too much force can damage the Bezel. The necessary torque is 6.196 inch-lbs (0.7Nm).

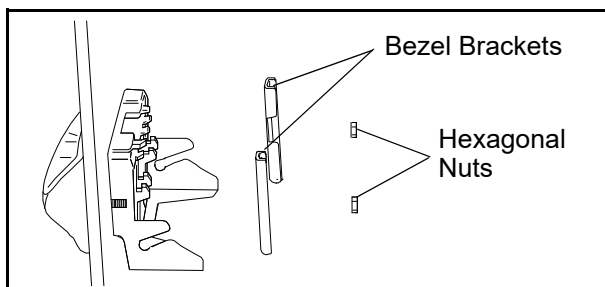


Figure 2-5 Mounting the Taiko Bezel

9. Open the Upper Guide by pressing-in and holding down the Upper Guide Open/Close Buttons while lifting the Lid up (Figure 2-6 j).
10. Insert the Bezel Installation Guide Pin into the Bezel Guide (Figure 2-6 k).
11. Slide the Guide all the way in and push down on the Taiko™ Unit body (Figure 2-6 l).

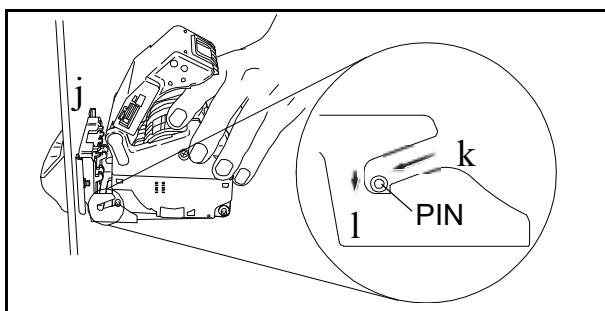


Figure 2-6 Installing the Taiko Bezel

12. Close the Upper Guide firmly until a locking Click is heard (Figure 2-7).

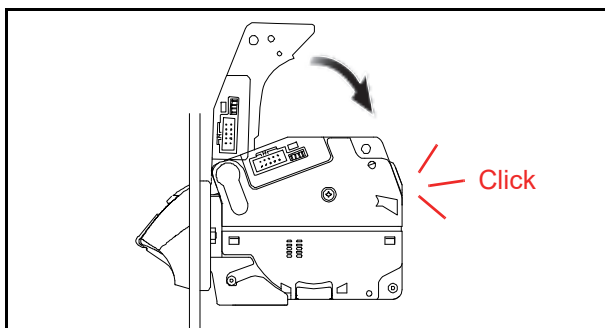


Figure 2-7 Closing the Taiko Upper Guide



Caution: Ensure that the Taiko Unit body and Bezel are firmly installed and securely fixed to the door before closing the Upper Guide; When closing the Upper Guide, be careful not to get your finger caught under the lid when closing it.



NOTE: When removing a Taiko Unit, perform the previously described procedure in reverse.

Power Harness Wiring Procedure

Before beginning to build a Power Interface Connector, ensure one of the two plug types listed in Table 2-1 are available.

Table 2-1 Power Connector Specifications

Part	Connector	
	Lock Lever Socket	Ribbon Cable Socket
Plug	XG5M-1032-N (Omron)	XG4M-1030-T (Omron)
Semi-Cover	XG5X-0501 (Omron)	N/A
Lock Lever 2	XG4Z-0002 (Omron)	N/A
Applicable Wire Size	UL1061 WAG24	1.27mm Pitch Flat Ribbon Cable, AWG28 UL2651 or UL20012

Once the Power Interface Connector Plug has been fastened to the Power/Signal Cable being used, perform the following steps:

1. Confirm that power is NOT supplied to the new Power Harness.
2. Insert the new Power Harness Socket into the right side Panel Interface Connector of the Taiko™ Unit Body (Figure 2-8).

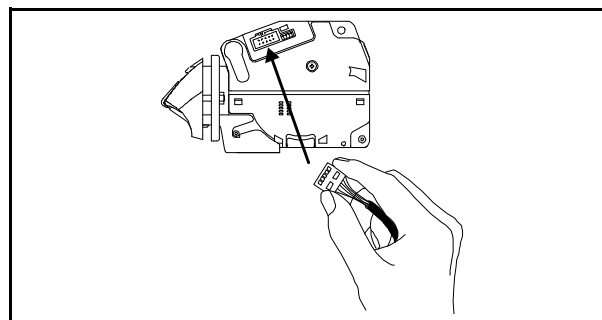


Figure 2-8 Attaching a Taiko Power Connector

3. Supply power and confirm that the Taiko™ Unit operates properly.



WARNING: When installing a Taiko Unit, or connecting its Harness Plug, be sure power to the harness is disconnected. The Taiko Unit is only designed to use a 12 or 24 Volt DC input. Any other power level can damage the Taiko Unit! If the power Harness itself is strongly pulled on, it may tear loose from its Connector's Pins.

Clearing a Banknote Jam

Clearing an Upper Area Banknote Jam

When an upper area Banknote jam occurs, the Front Panel Red LED Display will begin flashing three (3) times with a pause between flash sets. Perform the following steps to clear a Banknote jam within the Taiko™ Unit's Acceptor area:

1. Remove Power from the Taiko™ Unit.

2. Press-in on the Upper Guide Open/Close Buttons and open the Upper Guide in the direction indicated in Figure 2-9 j.
3. Remove the jammed Banknote as illustrated in Figure 2-9 k.

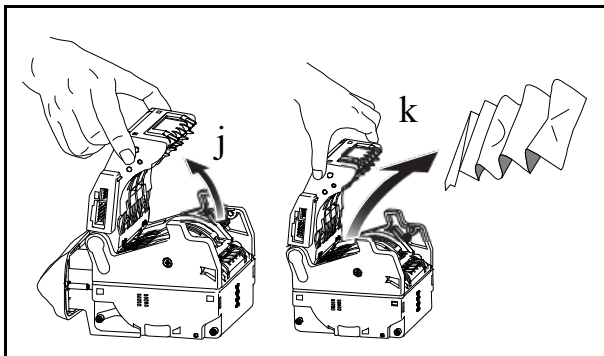


Figure 2-9 Upper Area Banknote Jam Removal



Caution: When closing the Upper Guide, be careful not to get your finger caught under the Lid when closing it!

Clearing a Lower Area Banknote Jam

When a lower area Banknote jam occurs, the Front Panel Red LED Display will begin flashing four (4) times with a pause between flash sets.

Perform the following steps to clear a Banknote jam within the Taiko™ Unit's Transport area:

1. Remove Power from the Taiko™ Unit.
2. Remove the Taiko™ Unit body from the mounted Bezel Section (review removal instruction shown in Figure 2-3 on page 2-1 of this Section).
3. Remove the Lower Lid by pressing in on the Lower Lid Lock Release Button (Figure 2-10 j).
4. Remove the jammed Banknote as illustrated in Figure 2-10 k.

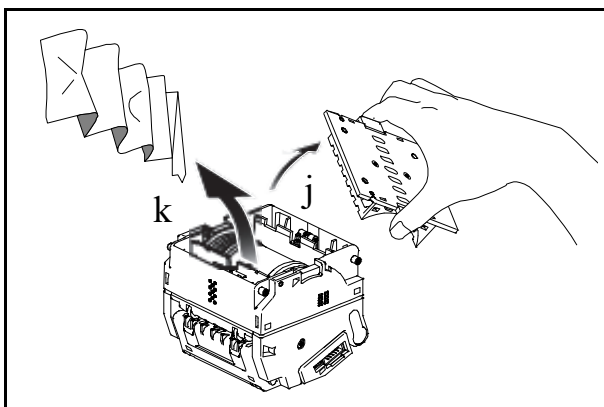


Figure 2-10 Lower Area Banknote Jam Removal



NOTE: Re-install the Taiko Unit onto the Bezel by reversing the steps related to, and beginning from Figure 2-6 on page 2-2 of this Section.

DIP Switch Configurations

The communication method and various Taiko™ Unit functions can be selected by using the Unit's Left side set of DIP Switches (Figure 2-11).

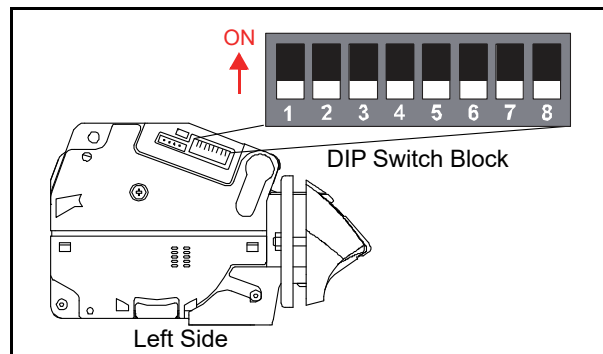


Figure 2-11 Left Side DIP Switch Block Location



NOTE: DIP Switch settings may vary based on Software changes related to the specific Country using the Taiko Unit.

Table 2-2 lists the various typical DIP Switch settings available for programming the Taiko™ Unit.

Table 2-2 Typical DIP Switch Settings

ON

**Switch
No.**

Switch Position Setting

ON

OFF

1

Test Mode 1*

Normal Mode

2

Double Scan Mode†

Normal Scan Mode

3

Reserved

Reserved

4

Five (5) Drum Rotation
Cycles‡
(Anti-Fishing Prevention)

Normal Operation

5

Refer to the specific Country's Software
Specifications

6

6

7

8

IF Setting

OFF

OFF

OFF

ID-003 Serial

ON

OFF

OFF

MDB

7

OFF

ON

OFF

ccTalk (Non-Encrypted)

ON

ON

OFF

ccTalk (Encrypted)*

-

-

ON

Pulse†

8

*. If the encryption code is unclear, refer to the "Encryption Code Initialization Setting Mode" on page 2-5 of this Section to initialize the Encryption Code.

†. For detailed information concerning Communication Settings, refer to the individual Country's Software Information Sheet.


*. For details concerning the Test Mode, refer to "Performance Test Diagnostics" on page 6-6 in Section 6.

†. The acceptance rate will be improved, but operation time will increase if a Banknote is rejected.

‡. Anti-Fishing prevention will be improved, but operation time will increase.

Table 2-3 lists the various special DIP Switch settings available for programming the Taiko™ Unit.

Table 2-3 Programming DIP Switch Settings

									
Setting Function		SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
Denom. Value Setting Mode	Accept Setting	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF
	Inhibit Setting	ON	OFF	OFF	OFF	OFF	ON	ON	OFF
LED Pattern Setting Mode	Define Pattern 1	ON	ON	OFF	OFF	OFF	OFF	ON	OFF
	Define Pattern 2	ON	OFF	ON	OFF	OFF	OFF	ON	OFF
Encryption Code Initialization Setting Mode		ON	ON	ON	ON	ON	ON	OFF	OFF
Download Mode*		ON	OFF	OFF	OFF	OFF	OFF	ON	ON
Adjustment Mode*		ON	ON	OFF	OFF	OFF	OFF	OFF	ON

*. For details concerning Taiko™ Software Download and Adjustment Modes, refer to "Software Downloading Procedure" on page 6-1 in Section 6 of this Service Manual.

Denomination Setting Mode

Perform the Accept/Inhibit setting function for the Banknote Denomination required based on the Software requirements of the Specific Country in which it is being used. The default settings are to accept all Denominations of the Specific Country.

ACCEPT SETTING MODE

To establish an "Accept" setting function, perform the following steps:



Figure 2-12 "Accept" Mode DIP Switch Settings

1. Remove power from the Taiko™ Unit.
2. Set DIP Switch No.1 and No.6 to **ON** (See Figure 2-12 above).
3. Re-apply Power to the Taiko™ Unit.
4. After the Front Panel LED display flashes White, set DIP Switch No.1 to the **OFF** position to enter the Setting Mode.
5. Insert the Banknote Denomination to be accepted into the Insertion Slot. The setting registered is correct if the Front Panel LED Display flashes a light **Blue** Color, and the inserted Banknote is returned.
6. Insert the next Banknote Denomination to be accepted until all required values have been processed, set and accepted.

INHIBIT SETTING MODE

To establish an "Inhibit" setting function, perform the following steps:

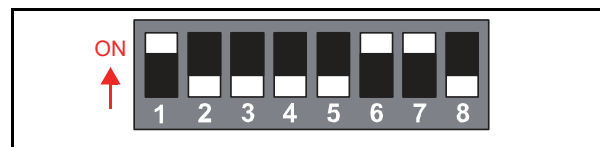


Figure 2-13 "Inhibit" Mode DIP Switch Settings

1. Remove Power from the Taiko™ Unit.
2. Set DIP Switch No.1, No. 6 and No.7 to **ON** (Figure 2-13).
3. Re-apply Power to the Taiko™ Unit.
4. After the Front Panel LED display flashes White, set DIP Switch No.1 to the **OFF** position to enter the Setting Mode.
5. Insert the Banknote Denomination to be inhibited into the Insertion Slot. The setting is registered if the Front Panel LED display flashes an **Orange** Color, and the inserted Banknote is returned.
6. Insert next Banknote Denomination to be inhibited until all required values have been processed.

The Banknote 'Accept' or 'Inhibit' programming operations are now complete.



NOTE: The Accept/Reject setting for a Banknote denomination can be confirmed by observing the Front Panel LED Color. After an initial operation is performed, the LED will flash a number of times equal to the total number of Banknote denominations processed. **Blue** indicates an 'Accept' setting and **Red** indicates a 'Reject' setting.

LED Pattern Setting Mode

The LED Color Pattern Type can be changed according to user preference. Select between Pattern 1 or Pattern 2, the default setting is Pattern 1.

DEFINING PATTERN 1

To define a "Pattern 1" (a flashing Color Sequence) operating function, perform the following steps:

1. Remove Power from the Taiko™ Unit.
2. Set DIP Switch No.1, No.2 and No.7 to **ON** (Figure 2-14).

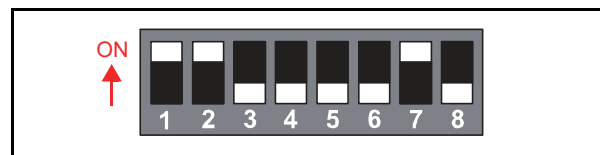


Figure 2-14 Define Pattern 1 DIP Switch Settings

3. Re-apply Power to the Taiko™ Unit.
4. Set DIP Switch No.1 to **OFF** to cause the LED Display Pattern to emulate "Pattern 1" when operating.

DEFINING PATTERN 2

To define a “Pattern 2” (a fading Color Sequence) operating function, perform the following steps:

1. Remove Power from the Taiko™ Unit.
2. Set DIP Switch No.1, No.3 and No.7 to **ON** (Figure 2-15).

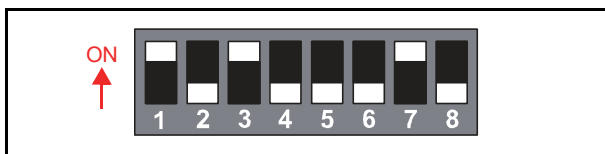


Figure 2-15 Define Pattern 2 DIP Switch Settings

3. Re-apply power to the Taiko™ Unit.
4. Set DIP Switch No.1 to **OFF** to cause the LED Display Pattern to emulate “Pattern 2” when operating.

Encryption Code Initialization Setting Mode

When the ccTalk Encrypted Communication Code is unknown, use the set the Encryption Code Initialization DIP Switch setting to use the last 6 digits of the specific Taiko™ Serial Number, located on the back side of a Taiko™ Unit as the Encryption Code.

To set the “Encryption Mode” operating function, perform the following steps:

1. Remove Power from the Taiko™ Unit.
2. Set DIP Switch No.1 through No.6 to **ON**, and Switches No.7 and No.8 to **OFF** (Figure 2-16).

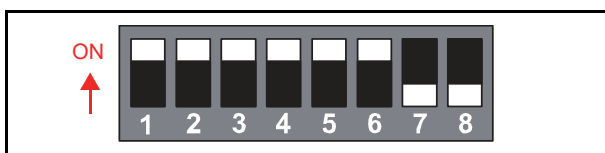


Figure 2-16 Encryption Mode DIP Switch Settings

3. Re-apply Power to the Taiko™ Unit.
4. Set DIP Switch No.1 to **OFF** to initialize the Encryption Code setting.

The Taiko™ installation DIP Switch settings are now complete.

Error Codes & Conditions

Table 2-4 lists the **Red** Error Code flash sequence definitions displayed by the Taiko™ Front Panel LED indicator.

Table 2-4 Red LED Error Code Flash Definitions

Red Flashes	Error Indicated
2	ROM Error
3	Banknote Jam inside Ejection Slot
4	Banknote remains inside the Transport Path
5	EEPROM Read/Write Error
6	Motor Error
8	Entrance Solenoid Error
9	Exit Solenoid Error
12	Sensor Operation with Abnormal Timing

Interface Connector Pin Assignments

Table 2-5, Table 2-6, Table 2-7 and Table 2-8 list the various Connector Pin Labels for adapting these available Communication Standards to the Unit.

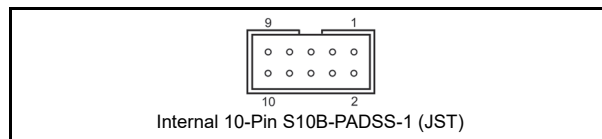


Figure 2-17 ID-003/MDB/ccTalk/Pulse Interface Connector

Table 2-5 Serial ID-003/MDB Interface Pin Assignments

Pin No.	Signal Name	I/O*	Function
1	NC	-	No Connection
2	NC	-	No Connection
3	RXD-	IN	Data Receive Line (Active when current is present)
4	RXD+		
5	TXD-	OUT	Data Send Line (Active when current is present)
6	TXD+		
7	Vcc	-	+12V DC Power (7-Pin)
8	Vss	-	Power Ground
9	Vcc	-	+24V DC Power (9-Pin) [†]
10	NC	-	No Connection

*. I/O (Input/Output) is the function viewed from the Banknote Acceptor Side.

†. 24V DC is available only when the optional 24V DC Specification is used.

Table 2-6 ccTalk Interface Pin Assignments

Pin No.	Signal Name	I/O*	Function
1	ccTalk	IN/OUT	ccTalk Send/Receive Line
2	ccTalk	-	ccTalk GND Line
3	NC	-	No Connection
4	NC	-	No Connection
5	NC	-	No Connection
6	NC	-	No Connection
7	Vcc	-	+12V DC Power (7-Pin)
8	Vss	-	Power Ground
9	Vcc	-	+24V DC Power (9-Pin) [†]
10	NC	-	No Connection

*. I/O (Input/Output) is the function viewed from the Banknote Acceptor Side.

†. 24V DC is available only when the optional 24V DC Specification is used.

Table 2-7 Pulse Interface Pin Assignments

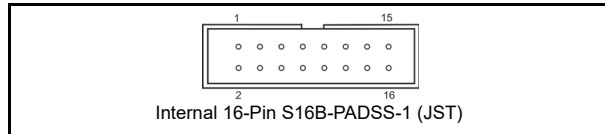
Pin No.	Signal Name	I/O*	Function
1	NC	-	No Connection
2	NC	-	No Connection
3	Enable/Disable (-)	IN	Enable/Disable Signal Input Line (Enabled when current is present) (Disabled when current is NOT present) No Connection
4	Enable/Disable (+)		
5	Vend (-)	OUT	Pulse Signal Output Line (Active when current is present)
6	Vend (+)		
7	Vcc	-	+12V DC Power (7-Pin)

Table 2-7 Pulse Interface Pin Assignments

Pin No.	Signal Name	I/O*	Function
8	Vss	-	Power Ground
9	Vcc	-	+24V DC Power (9-Pin) [†]
10	NC	-	No Connection

*. I/O (Input/Output) is the function viewed from the Banknote Acceptor Side.

[†]. 24V DC is available only when the optional 24V DC Specification is used.

**Figure 2-18** ID-001 Interface Connector**Table 2-8** Parallel ID-001 Interface Pin Assignments

Pin No.	Signal Name	I/O*	Function
1	Vcc	-	+12V DC Power
2	Vss	-	+12V DC Power Ground
3	Vss	-	Power Supply Ground
4	NC	-	No Connection
5	ACK	IN	ACKnowledge Signal Receive Line
6	REJ		REject Signal Receive Line
7	INH		INHibit Signal Receive Line
8	VALID	OUT	Vend VALID Send Signal Line
9	VEND1		VEND1 Valid Send Signal Line
10	VEND2		VEND2 Valid Send Signal Line
11	VEND3		VEND3 Valid Send Signal Line
12	NC	-	No Connection
13	NC	-	No Connection
14	BUSY	OUT	BUSY Signal Send Line
15	ABN		ABortNote Signal Line
16	STKF		STacKerFull Signal Line

*. I/O (Input/Output) is the function viewed from the Banknote Acceptor Side.

Cleaning Procedures

To clean the Taiko™ Unit, gently rub the Sensors and Rollers clean using a dry, soft, lint-free cloth **ONLY**.

Do not use any Alcohol, solvents, Citrus based products or scouring agents that may cause damage to the Validation Section Sensors and/or Rollers.

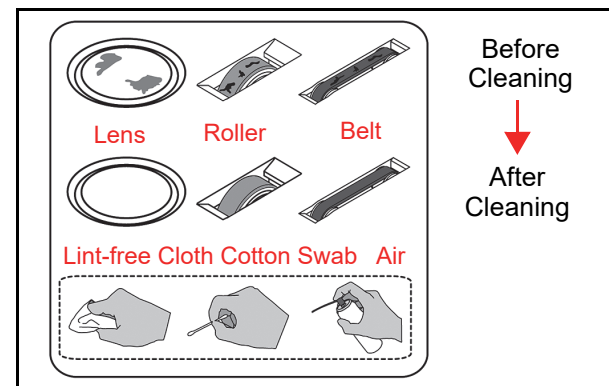
Sensor and Roller Cleaning Procedure

To clean the Taiko™ Unit, proceed as follows:

1. Turn the Taiko™ Unit and Host Machine's Power **OFF**.
2. Open the Taiko™ Upper Guide.
3. Clean the appropriate path and Lens of each Sensor (See Figure 2-21 areas "a" through "k" and the corresponding descriptions listed in Table 2-9 to locate each Sensor that requires cleaning).



Caution: Do not use Alcohol, thinner or citrus based products for cleaning any surfaces. The Lenses can become clouded by chemical effect that may cause acceptance errors.

**Figure 2-19** Sensor Cleaning

Available Cleaning Card

A JCM Waffletechnology Bill Validator Cleaning Card is now available (JCM Part No. 501-100252R, Manufacturer's Part No. KWJCM-B5B15M). The Cleaning Card is designed to be used as a supplemental part of a Preventive Maintenance program to help in reducing dirt and Paper dust build-up within a Unit. This will optimize performance between regular Preventive Maintenance intervals. This is the only cleaning card authorized for use on the Taiko (PUB-7/11) Validator (Figure 2-20).



Figure 2-20 JCM Waffletechnology Cleaning Card

Card Features

- A unique Waffletechnology design that hugs all surfaces to insure complete surface cleaning
- Specially designed scrubber patterns insure that belts and O-ring Rollers are cleaned and lubricated to prevent them from drying out.

Directions For Use

1. Remove Cleaning Card from pouch and insert it into the Banknote Validator.
2. The Cleaning Card will be accepted and then automatically returned.
3. Dispose of used Card in an environmentally safe manner.

For more information and a list of Authorized Waffletechnology Distributors visit:

<http://www.jcmwaffletechnology.com>.

Operational Check

Once the Taiko™ Unit is installed, perform the following steps to ensure the Taiko™ Unit is in its normal Operational Mode:

1. Remove Power and perform Test No.5 “Acceptance Test Procedure” on page 6-7 of Section 6 in this Service Manual. Return the DIP Switches to their pre-Test Operational Mode positions, and re-apply Power to the Taiko™ Unit.

Taiko Sensor and Roller Locations

Figure 2-21 illustrates the various Taiko Sensor cleaning locations, and Table 2-9 respectively lists the Taiko Sensor Type Cleaning Methods.

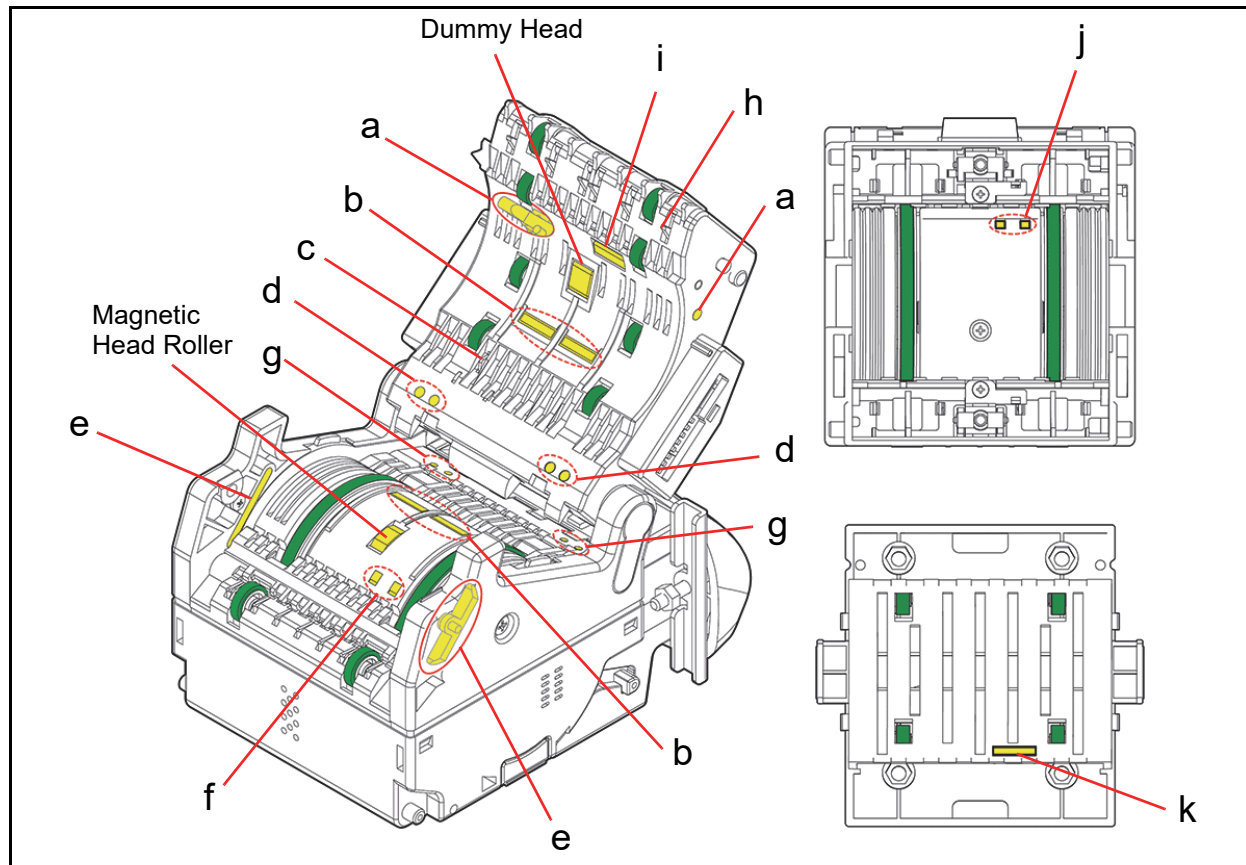


Figure 2-21 Taiko Sensor Cleaning Locations

Table 2-9 Taiko Sensor Type Cleaning Methods

Sym.	Sensor Type	Cleaning Method
a	Side Sensor	Wipe clean using a lint free cloth or blow clean using Compressed Air.* †
b	Validation Sensor	
c	Entrance Flapper Sensor	
d	Entrance Sensor	
e	Side Sensor Prism	
f	Upper Transport Sensor	
g	Entrance Sensor Prism	
h	Bend Lever Sensor	
i	Upper Transport Sensor Prism	
j	Lower Transport Sensor	
k	Lower Transport Sensor Prism	

*. Wipe and clean all of the Rollers and Belts (illustrated in a green color) shown in Figure 2-21 using a soft lint-free Cloth.

†. Use only non-flammable compressed air.

Figure 2-23 illustrates the Taiko™ ccTalk Communications Interface Schematic Diagram



Standard Interface Circuit Schematics (Continued 2)

Figure 2-24 illustrates the Taiko™ Pulse Communications LED Schematic Diagram.

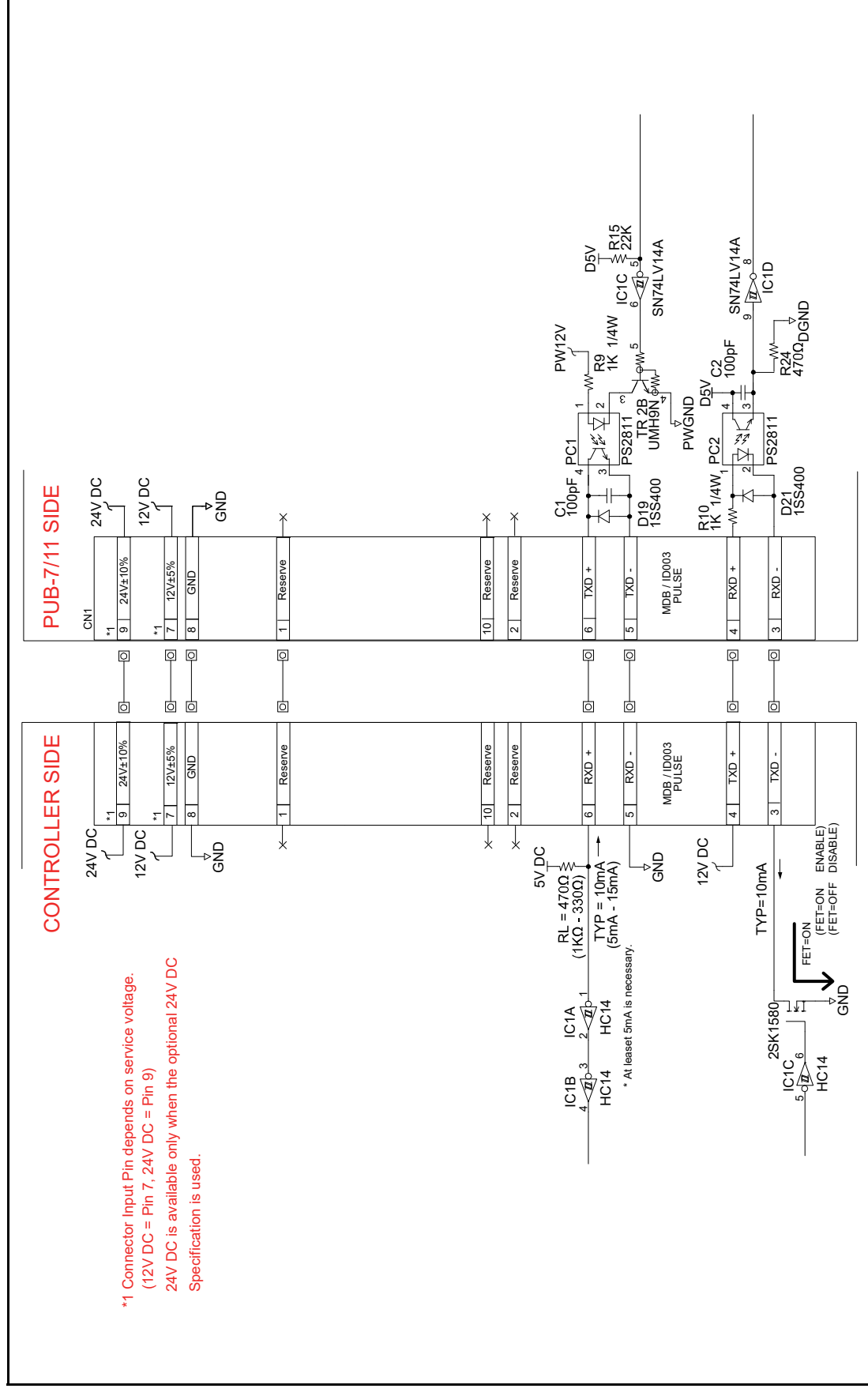


Figure 2-24 Pulse Communications Interface Schematic Diagram

Standard Interface Circuit Schematics (Continued 3)

Figure 2-25 illustrates the Taiko™ Parallel ID-001 Communications Interface Schematic Diagram.

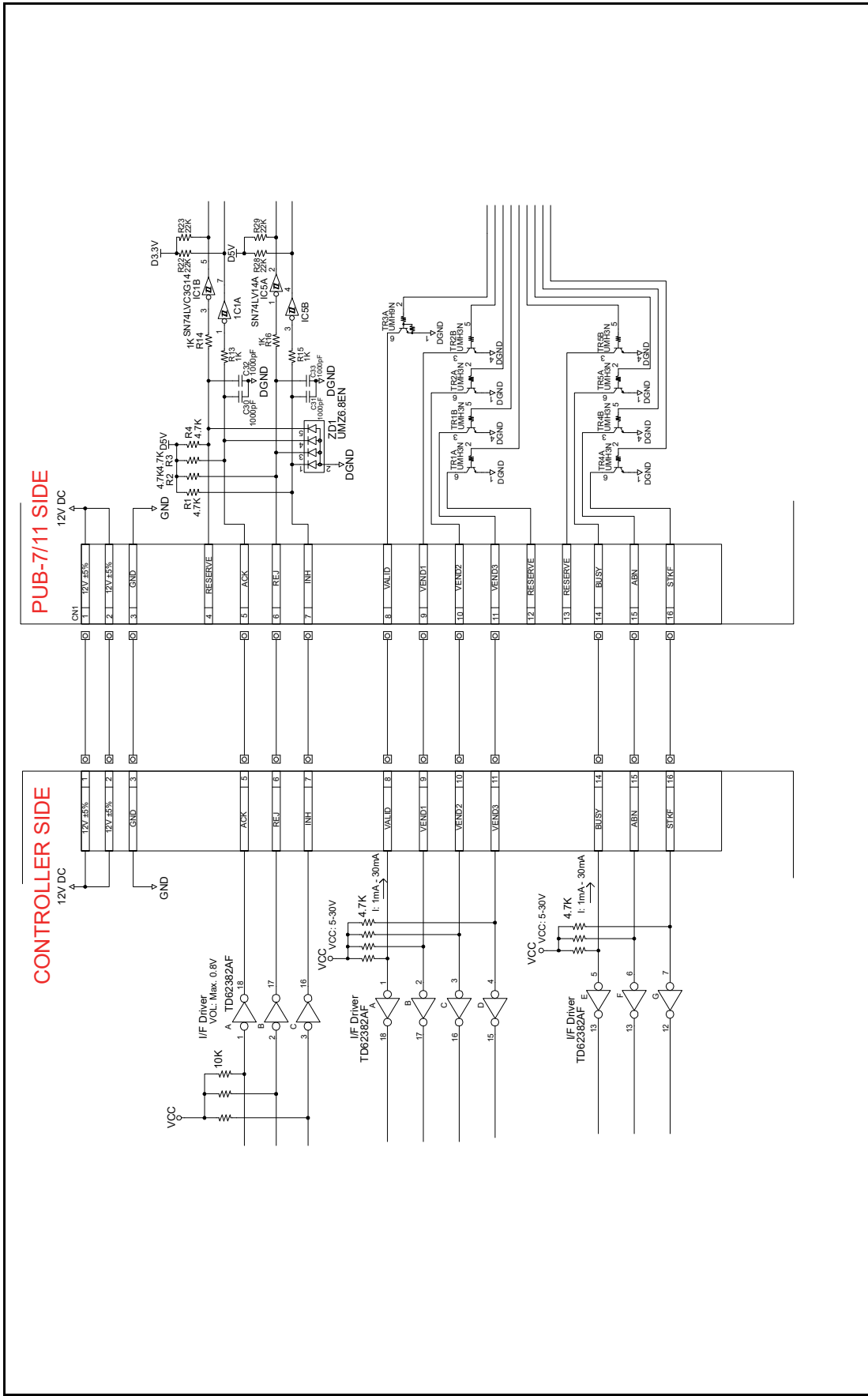


Figure 2-25 Parallel ID-001 Communications Interface Schematic Diagram

Standard Interface Circuit Schematics (Continued 4)

Figure 2-26 illustrates the Taiko Parallel ID-062 Communications Interface Schematic Diagram.

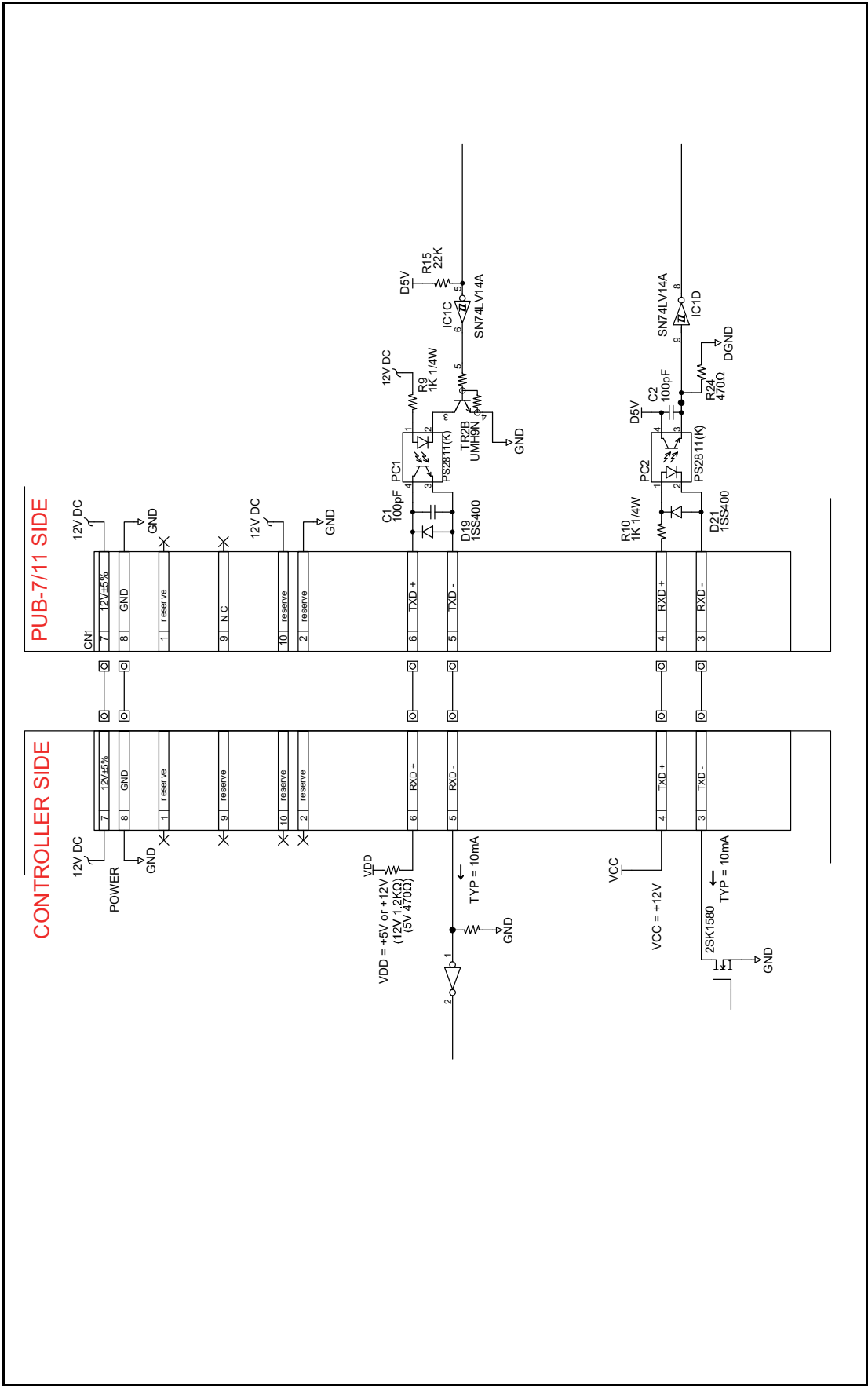


Figure 2-26 Parallel ID-062 Communications Interface Schematic Diagram

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Operational Flowcharts

Figure 2-27 depicts part one of a typical Taiko™ Initialization Banknote acceptance flow process.

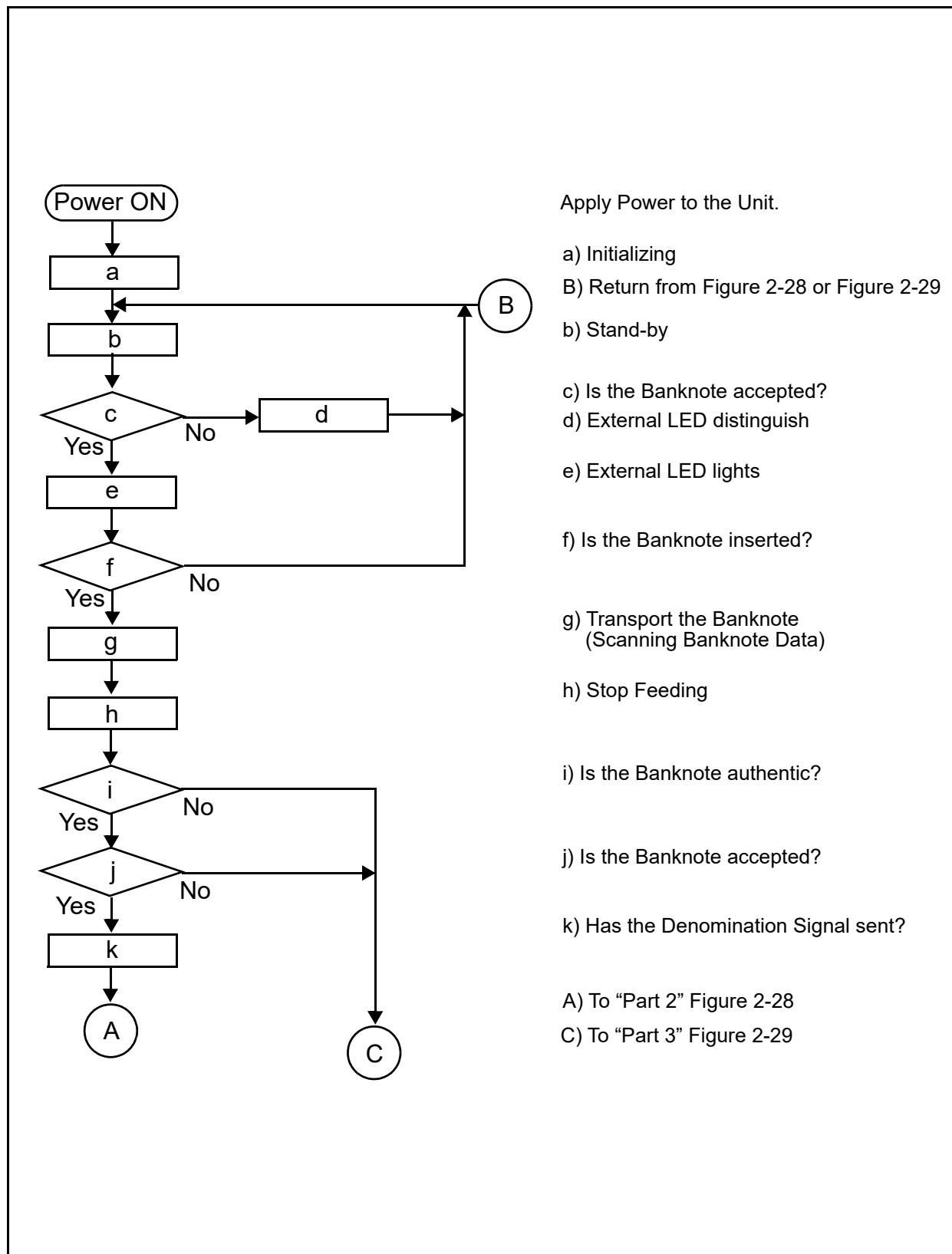


Figure 2-27 Taiko Operational Flowchart (Part 1)

Operational Flowcharts (Continued)

Figure 2-28 depicts part two of a typical Taiko™ Banknote acceptance flow process.

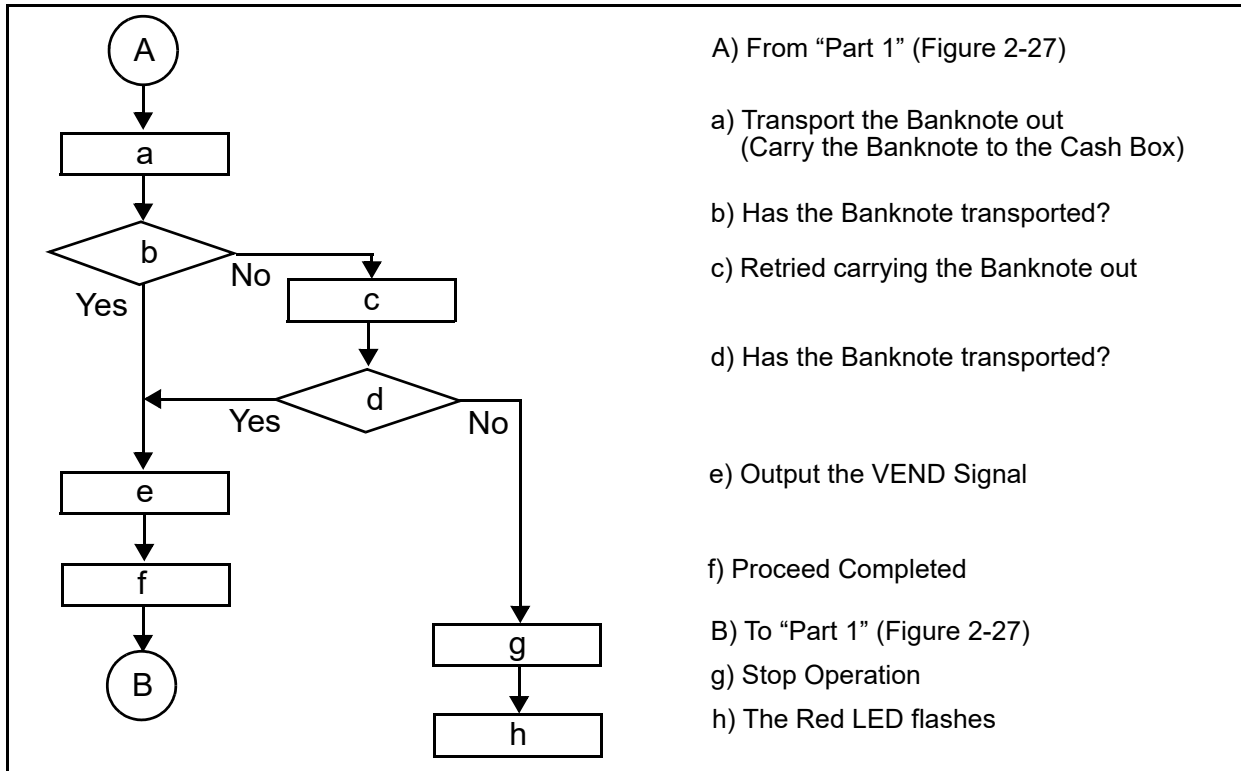


Figure 2-28 Taiko Operational Flowchart (Part 2)

Figure 2-29 depicts part three of a typical Taiko™ Banknote acceptance flow process.

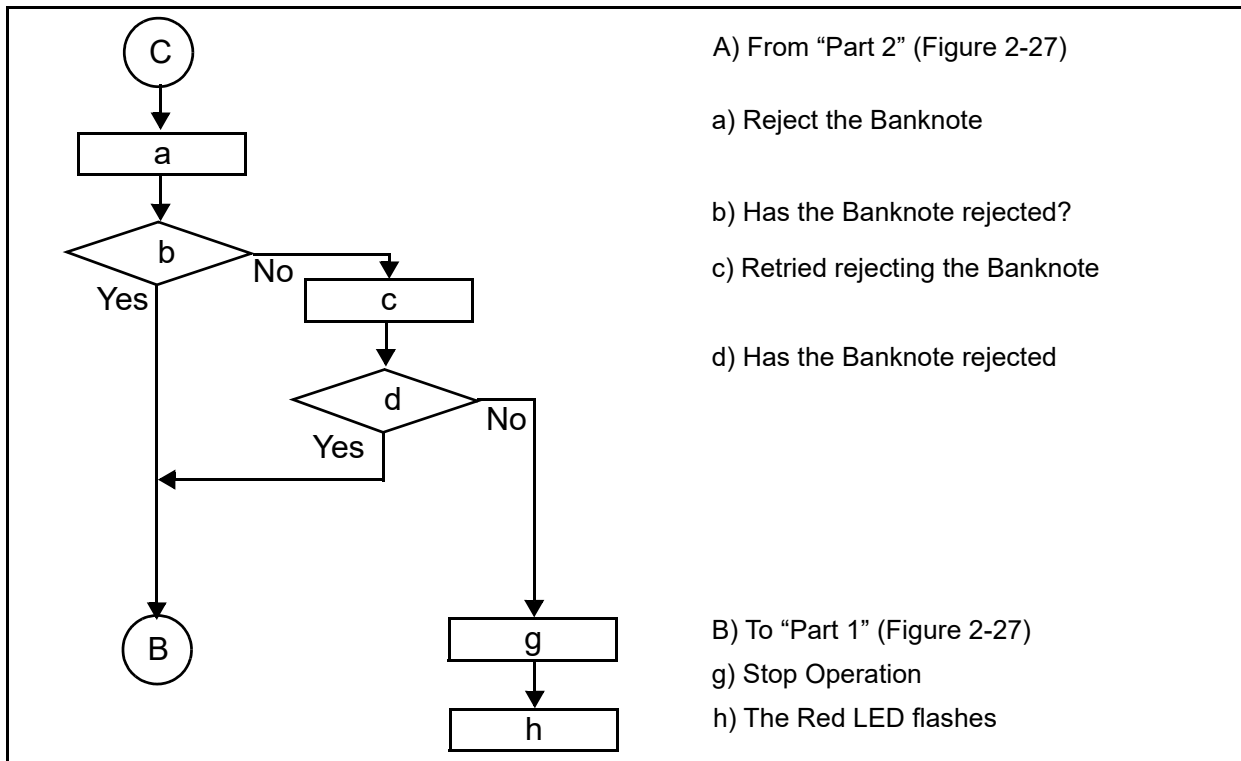


Figure 2-29 Taiko Operational Flowchart (Part 3)

Taiko™ Series

Banknote Acceptor

Section 3

3 COMMUNICATIONS

This section was intentionally left out due to a Non-Disclosure Agreement requirement.

If this information is required, please contact the closest office location listed below:

Americas

JCM American

Phone: +1-702-651-0000

Fax: +1-702-644-5512

925 Pilot Road,
Las Vegas, NV 89119

E-mail: support@jcmglobal.com

Europe, Middle East, Africa & Russia

JCM Europe GmbH

Phone: +49-211-530-645-60

Fax: +49-211-530-645-85

Mündelheimer Weg 60 D-40472
Düsseldorf Germany

E-mail: support@jcmglobal.eu

UK & Ireland

JCM Europe (UK Office)

Phone: +44 (0) 190-837-7331

Fax: +44 (0) 190-837-7834

Luminous House, 300 South Row,
Milton Keynes MK9 2FR, United Kingdom

E-mail: support@jcmglobal.eu

Asia and Oceania

JCM American (Australia Office)

Phone: +61-2-9648-0811

Fax: +61-2-9647-1438

Unit 21, 8 Avenue of the Americas Newington,
NSW 2127 Australia

E-mail: Sales-AsiaPac@jcmglobal.com

JAPAN CASH MACHINE CO., LTD. (HQ)

Phone: +81-6-6703-8400

Fax: +81-6-6707-0348

2-3-15, Nishiwaki, Hirano-ku,
Osaka 547-0035 JAPAN

E-mail: Shohin@jcm-hq.co.jp

The JCM Website for all locations is:

<http://www.jcmglobal.com>

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Taiko™ Series Banknote Acceptor

Section 4

4 DISASSEMBLY/REASSEMBLY

This section provides disassembly and reassembly instructions for the Taiko PUB-7/11 Banknote Acceptor Series. This section contains the following information:

- Tool Requirements
- Bezel Guide Removal
- CPU Circuit Board Removal
- MAG Circuit Board Removal (PUB-11)
- Transport Drum Removal
- Sensor Circuit Board Removal
- Encoder Board and Drive Motor Removal
- Entrance and Exit Solenoid Removal

Tool Requirements

The following tools will be required to perform disassembly and reassembly:

- #1 & #2 Phillips Screw Drivers
- Medium Flat Blade Screw Driver
- E-Ring Holder
- Needle Nose Pliers

Bezel Guide Removal

To remove the Bezel Guide, proceed as follows:

1. Remove two (2) mounting screws (Figure 4-1 **a₁** & **a₂**) located behind the Bezel Guide.
2. Separate the Bezel Guide (Figure 4-1 **b**) from the Front Bezel (Figure 4-1 **c**).

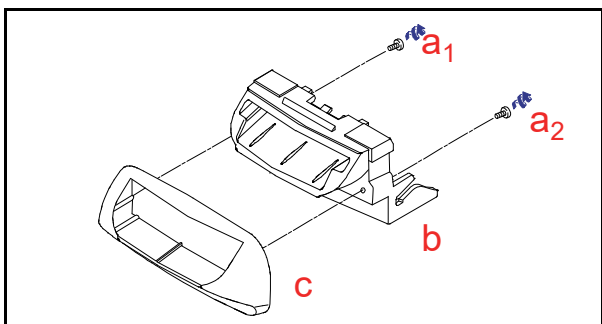


Figure 4-1 Taiko Bezel Guide Removal



NOTE: Insert the new Bezel Guide into the Bezel, replace and tighten the two (2) mounting screws that secure the Bezel to the Bezel Guide.



WARNING: Tightening the screws with too much force can damage the Bezel. The necessary torque is 6.196 inch-lbs (0.7Nm).

CPU Circuit Board Removal

To remove the CPU Circuit Board, proceed as follows:

1. Insert a medium size Flat blade Screw Driver into the gap located on the left or right side area (Figure 4-2 **a₁** & **a₂**) of the Upper Guide Cover (Figure 4-2 **b**), and lift the Upper Guide Cover up and off the Unit.

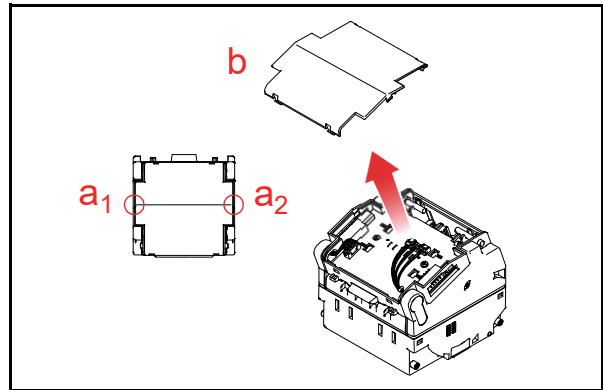


Figure 4-2 Taiko CPU Board Cover Removal

2. Unplug the four (4) Harness Connectors (Figure 4-3 **a₁** to **a₄**) from the CPU Circuit Board (Figure 4-3 **b**).



NOTE: If the Unit is the PUB-11, unplug the single (1) MAG Sensor Relay Harness (Figure 4-3 **d**).

3. Remove the two (2) Mounting Screws (Figure 4-3 **c₁** & **c₂**) retaining the CPU Circuit Board in place.
4. Lift the CPU Circuit Board up and off the Unit.

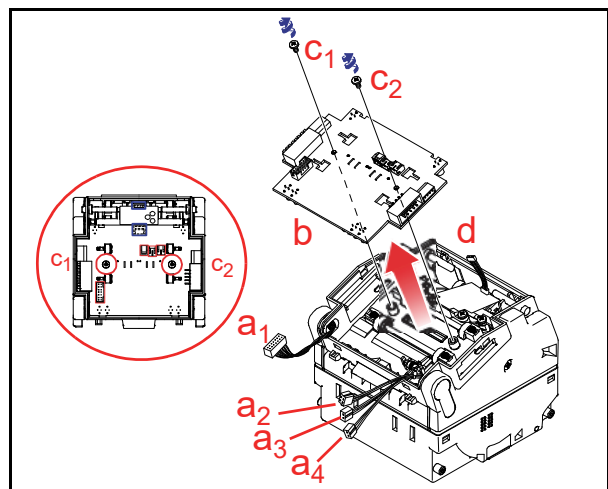


Figure 4-3 Taiko CPU Circuit Board Removal

MAG Circuit Board Removal (PUB-11 Only)

The MAG Circuit Board is mounted in the PUB-11 Unit only. To remove the MAG Circuit Board, proceed as follows:

1. Remove the two (2) Mounting Screws (Figure 4-4 **a₁** & **a₂**) retaining the MAG Circuit Board (Figure 4-4 **b**) to the Unit.
2. Remove the MAG Circuit Board from the Unit.
3. Remove the single (1) MAG Sensor Relay Harness (Figure 4-4 **c**).

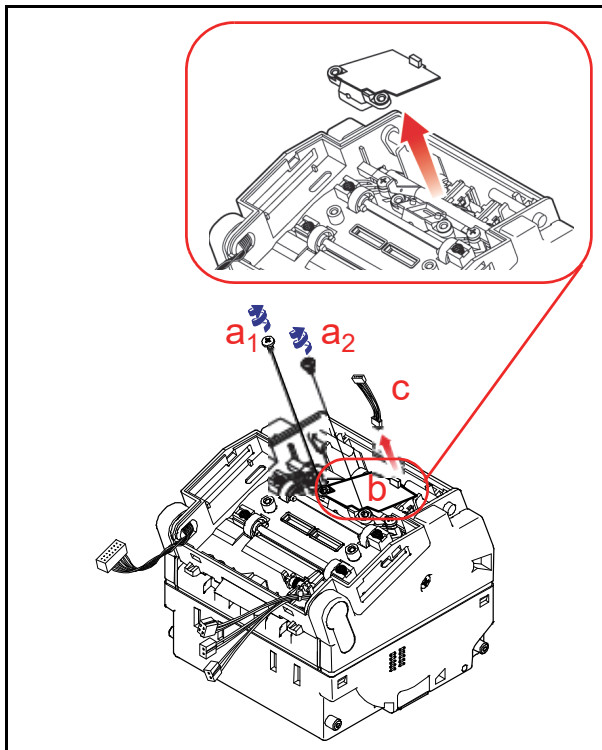


Figure 4-4 Taiko MAG Circuit Board Removal

Transport Drum Removal

To remove the Transport Drum, proceed as follows:

1. Remove the two (2) Mounting Screws (Figure 4-5 **a₁** & **a₂**) from the left and right sides of the Unit.

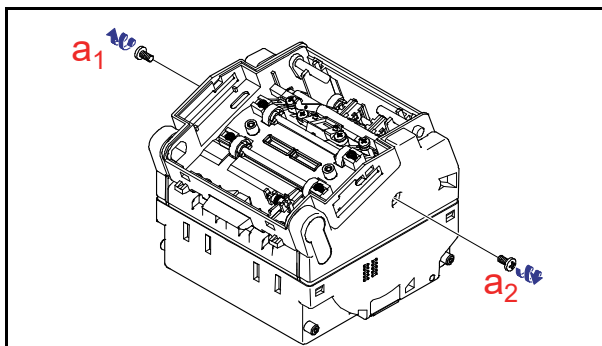


Figure 4-5 Taiko Side Mounting Screw Removal

2. Remove the Upper Guide Assembly (Figure 4-6 **a**), and remove the left and right Side Covers (Figure 4-6 **b₁** & **b₂**) from the Unit.
3. Unplug the two (2) Relay Harnesses (Figure 4-6 **c₁** & **c₂**) from the Upper Guide Assembly.



NOTE: Be careful that the two (2) Shafts, four (4) Pinch Rollers and four (4) Springs are not lost when removing the Upper Center Guide Assembly.

4. Remove the Harness Cover (Figure 4-6 **d**) from the right Side Cover and separate the Center Guide Unit from the Unit.

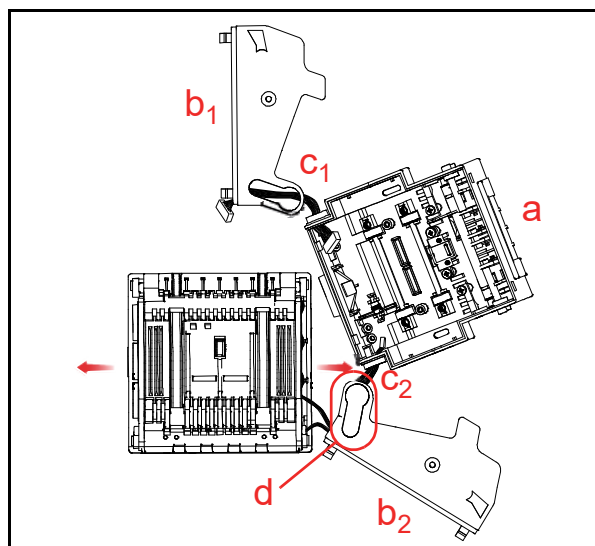


Figure 4-6 Upper Guide and Side Covers Removal

5. Remove the Transport Drum (Figure 4-7 **a**) from the Unit.

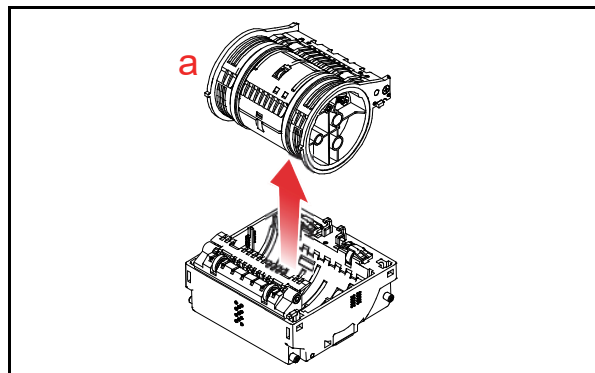


Figure 4-7 Taiko Transport Drum Removal

Sensor Circuit Board Removal

To remove the Sensor Circuit Board, proceed as follows:

1. Remove the six (6) Mounting Screws (Figure 4-8 **a₁** to **a₆**) retaining the right and left Transport Drum End Covers (Figure 4-8 **b₁** & **b₂**).
2. Remove the right and left Transport Drum End Covers from the Transport Drum (Figure 4-8 **b₁** & **b₂**).

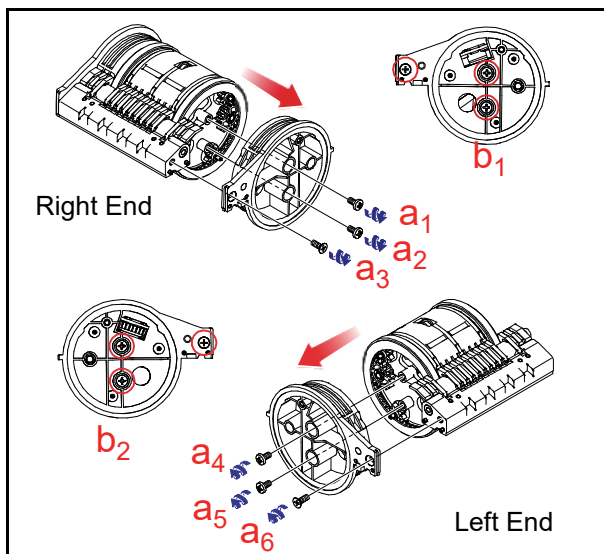


Figure 4-8 Transport Drum End Cover Removal

3. Remove the right and left Feed Roller Assemblies (Figure 4-9 **a₁** & **a₂**) from the Center Drum Unit Assembly (Figure 4-9 **b**).

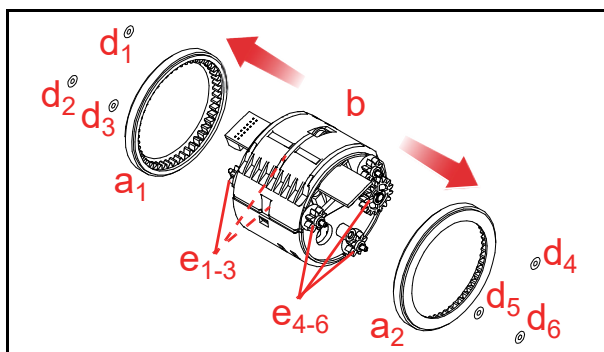


Figure 4-9 Dual Feed Roller Assembly Removal



NOTE: Be careful that the six (6) Washers (Figure 4-9 **d₁** to **d₆**) and the six (6) Gears (Figure 4-9 **e₁** to **e₆**) are not lost when removing the Feed Roller Assemblies.

4. Insert a small Flat Blade Screw Driver into the encircled area shown in Figure 4-10a.
5. Twist and pry the upper portion of the Center Guide up, to separate the upper and the lower Center Guides (Figure 4-10 **b** & **c**).

6. Unplug the Relay Harness connected between the upper and lower Center Guide.

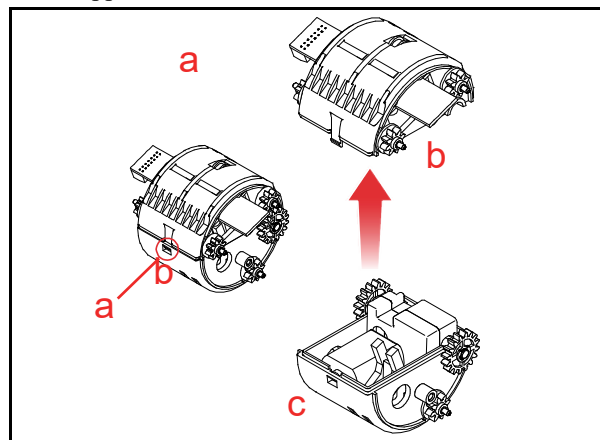


Figure 4-10 Transport Drum Separation

7. Remove the single (1) Mounting Screw (Figure 4-11 **a**) retaining the Prism (Figure 4-11 **b**) on the Upper Center Guide (Figure 4-11 **c**), and remove the Prism from the Upper Center Guide.

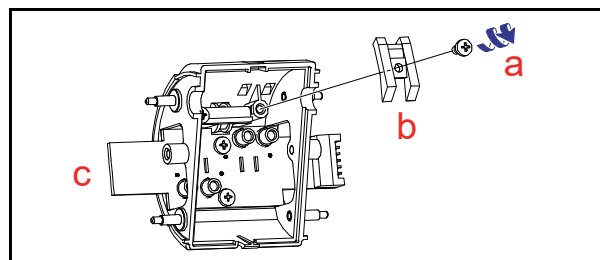


Figure 4-11 Upper Center Guide Prism Removal

8. Remove the two (2) Mounting Screws (Figure 4-12 **a₁** & **a₂**) retaining the Sensor Circuit Board (Figure 4-12 **b**).
9. Slide the Sensor Circuit Board out through the side opening slit provided and remove the Sensor Circuit Board from the Upper Center Guide (Figure 4-12 **c**).

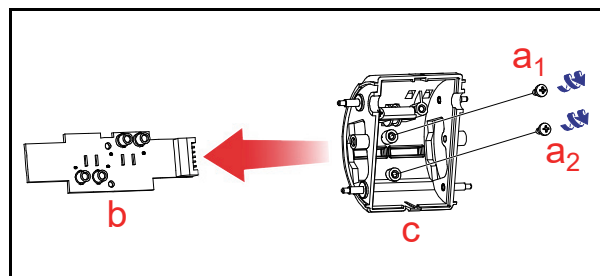


Figure 4-12 Upper Guide Sensor Board Removal

Encoder Board and Drive Motor Removal

To remove the Transport Drum Encoder Circuit Board and Drive Motor Assembly, proceed as follows:

1. Remove the single (1) Mounting Screw (Figure 4-13 **a**) from the Lower Center Guide (Figure 4-13 **b**).
2. Remove the Motor Drive Assembly (Figure 4-13 **c**) from the Lower Center Guide.

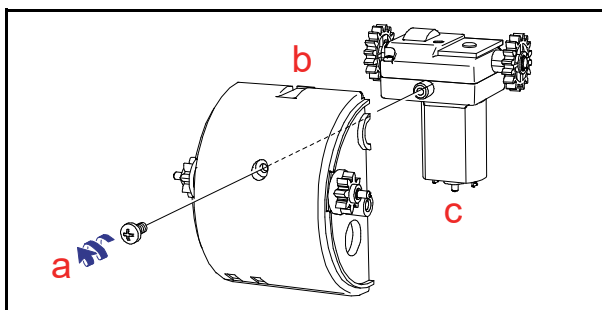


Figure 4-13 Motor Drive Assembly Removal

3. Remove the single (1) Mounting Screw (Figure 4-14 **a**) retaining the Encoder Circuit Board (Figure 4-14 **b**), and take the Encoder Circuit Board off the Motor Drive Assembly (Figure 4-14 **c**).

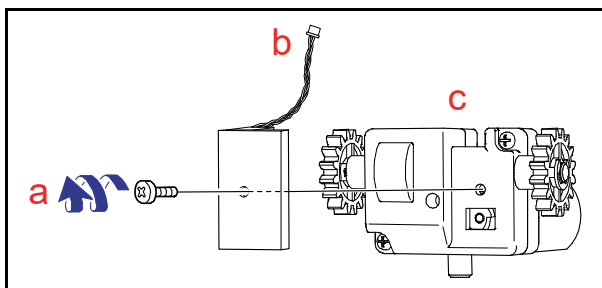


Figure 4-14 Encoder Circuit Board Removal

Entrance and Exit Solenoid Removal

To remove the Transport Entrance and Exit Solenoid Units, proceed as follows:

1. Remove the Lower Guide Assembly (Figure 4-15 **a**) by pressing the Lower Guide Locks (Figure 4-15 **b₁** & **b₂**) in the direction indicated by the small arrows.

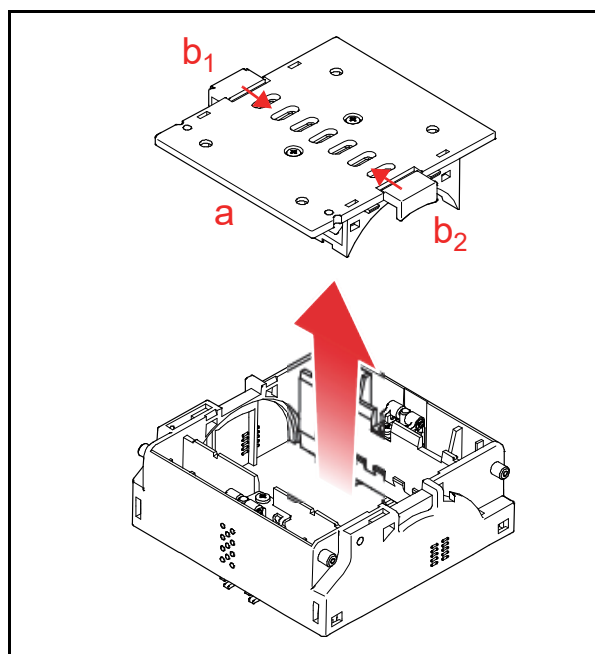


Figure 4-15 Lower Guide Assembly Removal

2. Remove the two (2) Mounting Screws (Figure 4-16 **a₁** & **a₂**) from the Unit and remove the Rear Guide Assembly (Figure 4-16 **b**).

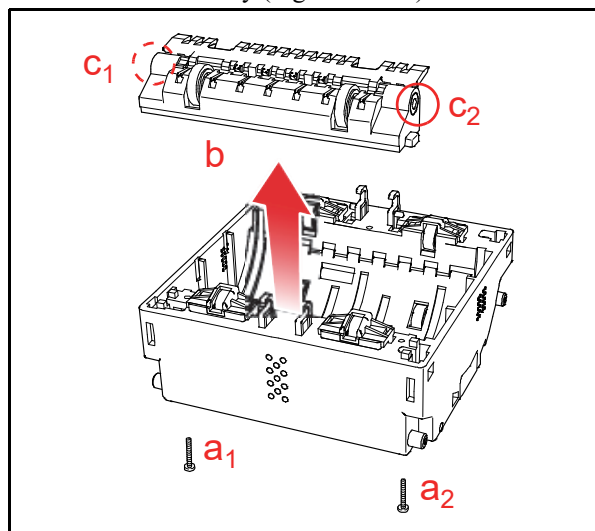


Figure 4-16 Lower Guide Assembly Removal

NOTE: Be careful that the two (2) bushings (Figure 4-16 **c₁** & **c₂**) located on the left and right sides of the Rear Guide Assembly are not lost when removing the assembly.

3. Remove the two (2) Guide Levers (Figure 4-17 **a₁** & **a₂**) from the Unit.

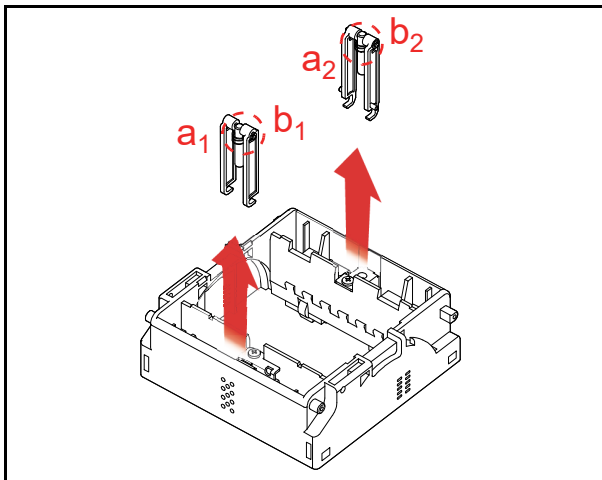


Figure 4-17 Lower Guide Lever Removals



NOTE: Be careful that the two (2) Springs (Figure 4-17 **b₁** & **b₂**) are not lost when removing the Guide Levers.

4. Remove the two (2) Mounting Screws (Figure 4-18 **a₁** & **a₂**) retaining each Entrance and Exit Solenoid (Figure 4-18 **b** & **c**).
5. Remove the Entrance Solenoid and the Exit Solenoid.

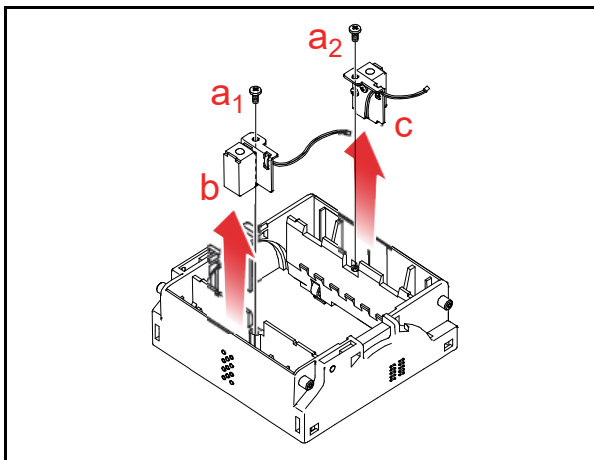


Figure 4-18 Entrance & Exit Solenoid Removal

This procedure completes the Pub-7/11 Unit disassembly.

Reverse all or part of the preceding instructions to reassemble any of the components described during this disassembly procedure.

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Taiko™ Series Banknote Acceptor

Section 5

5 WIRING DIAGRAMS

This Section provides the Taiko™ Banknote Acceptor Series (PUB-7/11) Wiring Diagrams and inter-connect information for the following items:

- PUB-7 System Wiring Diagrams
- PUB-11 System Wiring Diagrams.

PUB-7 System Wiring Diagrams

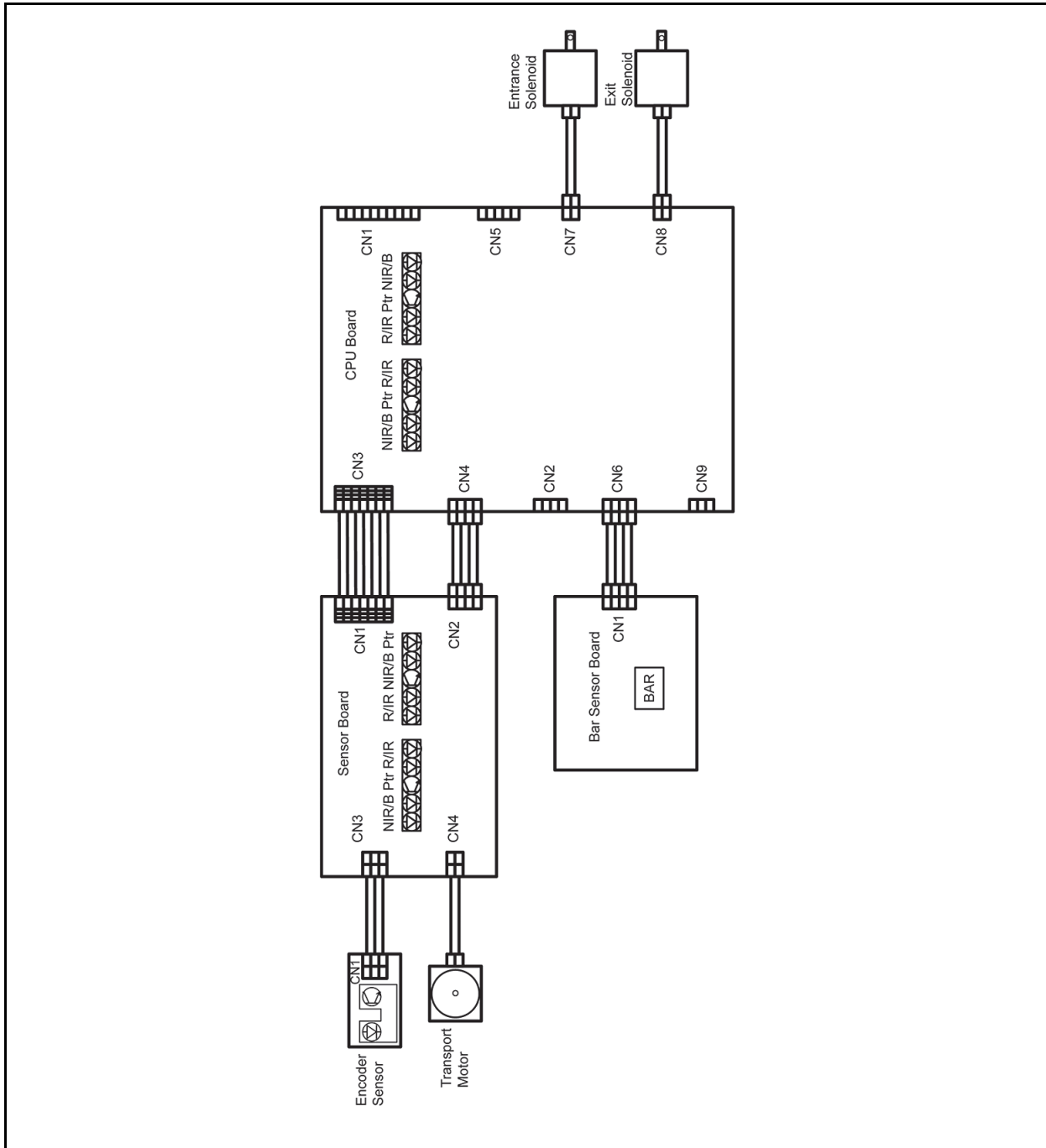


Figure 5-1 PUB-7 12 Volt DC System Wiring Diagram

PUB-7 System Wiring Diagrams (Continued)

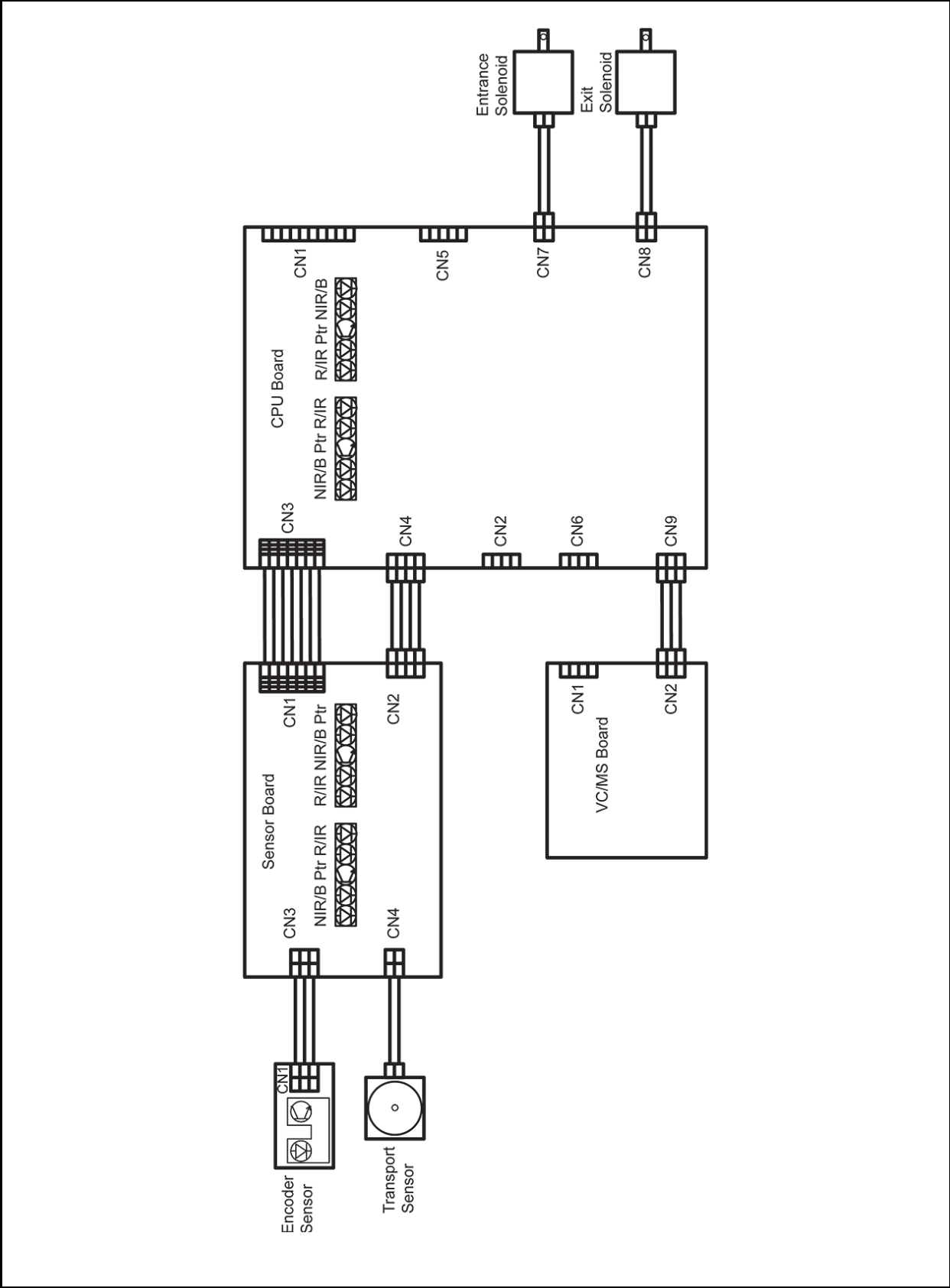


Figure 5-2 PUB-7 24 Volt DC System Wiring Diagram

PUB-11 System Wiring Diagrams

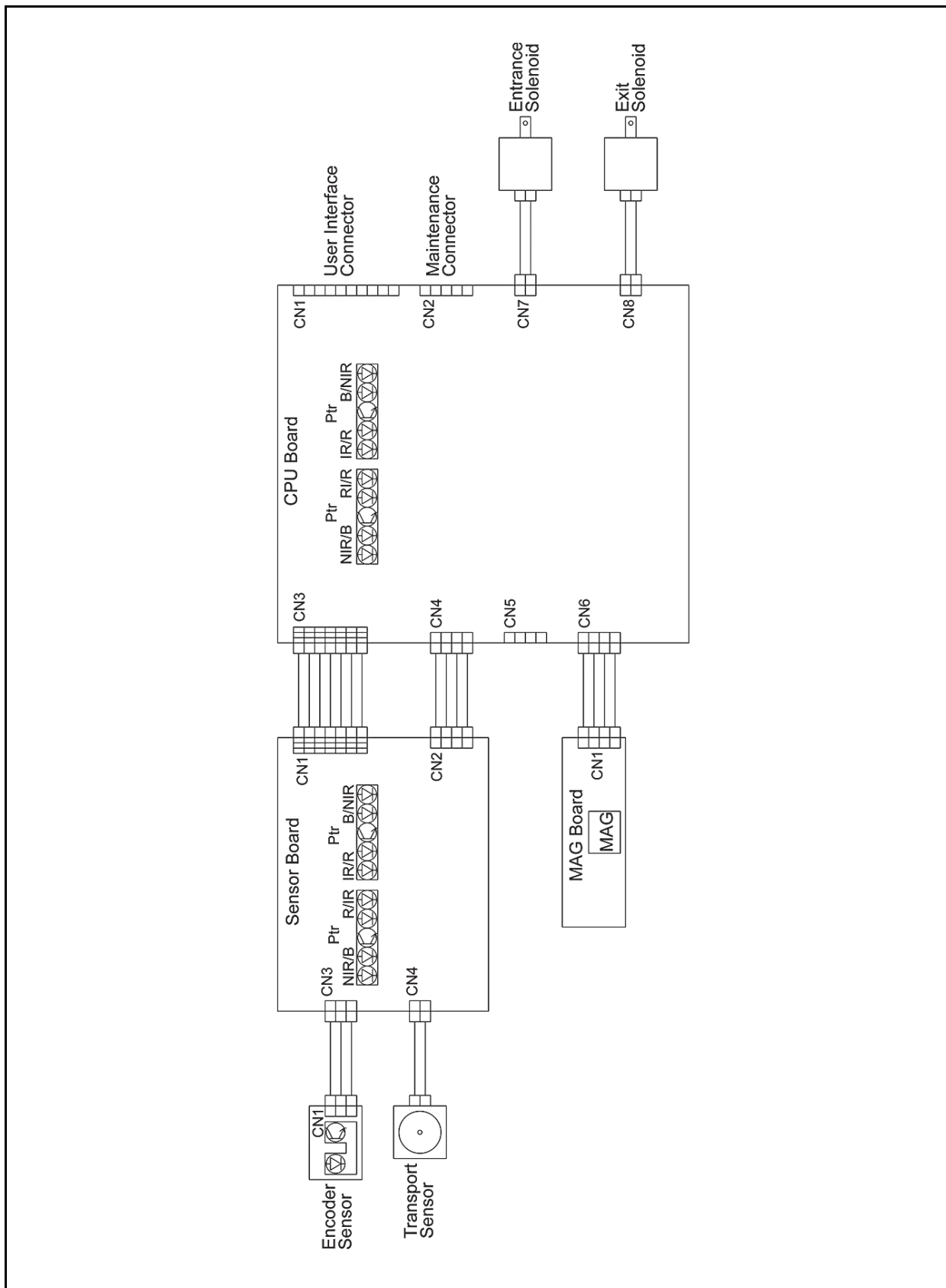


Figure 5-3 PUB-11 12 Volt DC System Wiring Diagram (with Mag)

PUB-11 System Wiring Diagrams (Continued)

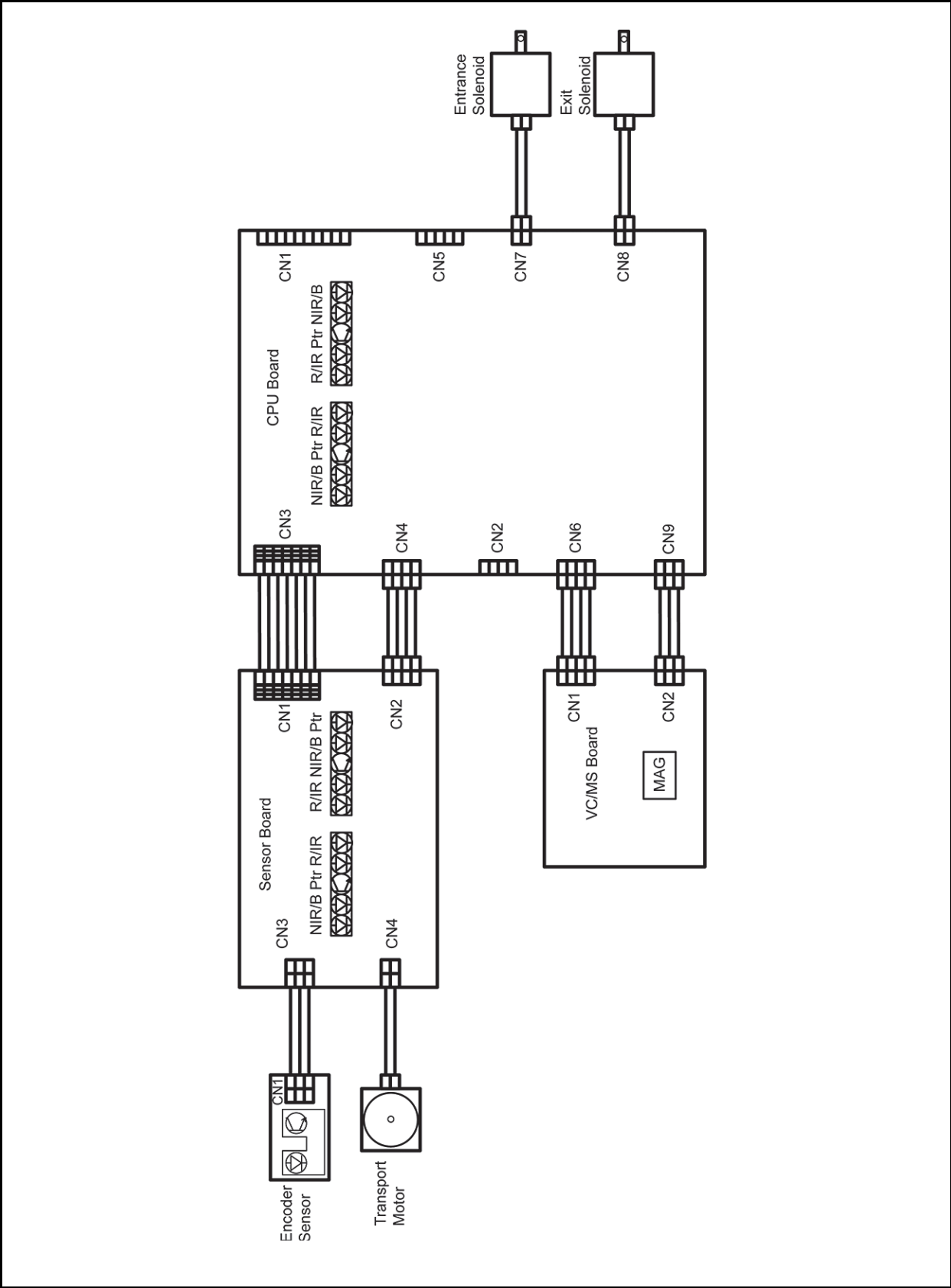


Figure 5-4 PUB-11 24 Volt DC System Wiring Diagram (with Mag)

Taiko™ Series Banknote Acceptor

Section 6

6 CALIBRATION AND TESTING

This section provides Calibration and Performance Testing instructions for the Taiko™ Series Banknote Acceptor (PUB-7/11). This section contains the following information:

- Workbench Tool Requirements
- Software Download Preparation
- Software Downloading Procedure
- Calibration Procedure
- Performance Test Diagnostics

Workbench Tool Requirements

The following workbench tools are required;

- Taiko Unit (PUB-7/11)
- JCM Power Supply
- Taiko Harness A
- Taiko Harness B
- VM-450 Harness (for ID-001)
- VM-450 Unit (for ID-001)
- KS-070 Reference Paper (without Bar Code Reader)
- KS-088 Reference Paper (with Bar Code Reader)
- PC (Windows® 2000/XP)
- Taiko Download Program CD



NOTE: See Figure A-1 on page A-5 to identify each maintenance part number to order.



WARNING: Make sure the External Power Supply is OFF when connecting the Harnesses to the Taiko™ PUB-7/11. Failure to do so may cause electrical shock and/or permanent damage to the equipment.

Software Download Preparation

The following instructions describe how to decompress and store a downloaded program onto a PC for eventual installation into the Taiko™ Banknote Acceptor:

1. Refer to Figure 6-3 interconnection diagram to properly connect the power supply, various cables and wiring Harnesses to the PUB-7/11.
2. Figure 6-1 illustrates the Taiko's external connectors, DIP Switch Block locations and its initial Switch settings. To prepare the PUB-7/11 for a software download, set the DIP Switches as follows:

- Set DIP Switch No.1, 7 and 8 to 'ON'
- Set DIP Switches No.2 through 6 'OFF'.

3. Supply power to the PUB-7/11. The Green Front Panel Indicator LED will begin flashing approximately once every second.

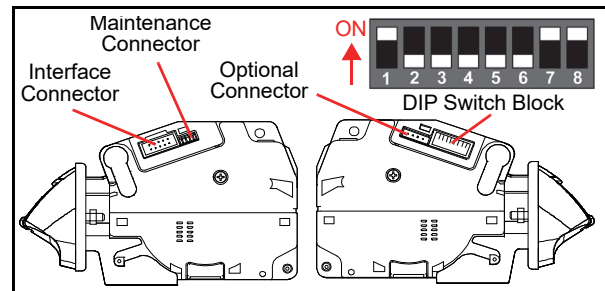


Figure 6-1 DIP Switch & Connector Locations

Software Downloading Procedure

PC Program Installation

The following PC initialization functions are required prior to downloading software:

1. Create and name a new PUB Folder on your PC.
2. Extract the PC Program ZIP File and save the expanded file program contents in the PUB file Folder just created.
3. Open the Folder and Double Mouse-click on "Ver.1.20.exe" of the expanded PUB-7/11 PC Download Program. The **Download Program Ver.1.20** Screen shown in Figure 6-2 will appear.

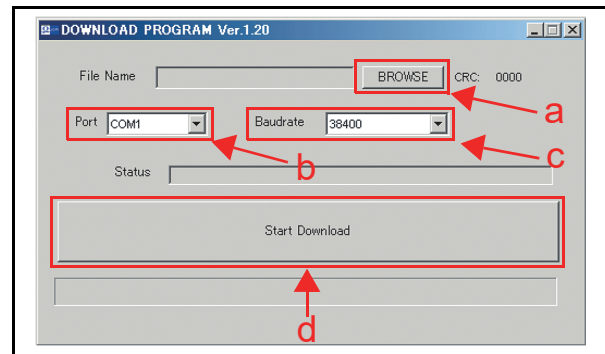


Figure 6-2 Taiko PC Download Program Screen

4. Mouse-click on the "BROWSE" Screen Button (Figure 6-2 a) and select the desired Software Program required for installation (i.e., example = PII.10801.usa2).
5. Select an available PC COM Port Number from the "Port" pull-down Menu (Figure 6-2 b).
6. Confirm that a Baud Rate of 38400 is selected; if not, set the Baud Rate to 38400 from the "Baud-rate" pull-down Menu (Figure 6-2 c).

7. Mouse-click on the large “Start Download” Screen Button (Figure 6-2 **d**) to begin downloading the selected Software File.
8. When downloading is complete, the Taiko™ Front Panel LED will turn a **Blue** Color.
9. Turn the Taiko™ power ‘OFF’, and remove the programming connections from the Taiko™ Unit.

Writing a New Serial Number


Upgrading/Replacing Software


The initial software downloading procedure has been described previously in the "Software Downloading Procedure" on page 6-1 of this Section. However, when the Taiko™ Software has been upgraded or the Taiko™ Unit's CPU Board has been replaced, new software must be downloaded to the Taiko™ Unit.

PROGRAMMING REQUIREMENTS

When downloading new software, the items listed below are required.

- Taiko Unit (PUB-7/11)
- JCM Power Supply
- Taiko Harness A
- Taiko Harness B
- VM-450 Harness (for ID-001)
- VM-450 Unit (for ID-001)
- Download Application
- KS-088 Reference Paper (with Bar Code Reader)
- Software Program

 **NOTE:** See Figure A-1 on page A-5 to identify each maintenance part number to order.

 **NOTE:** Use a Test Bench and a Harness instead of an external Power Supply. A Test Bench and a Harness are to be dedicated by each individual Country's User Protocol Specification requirements.

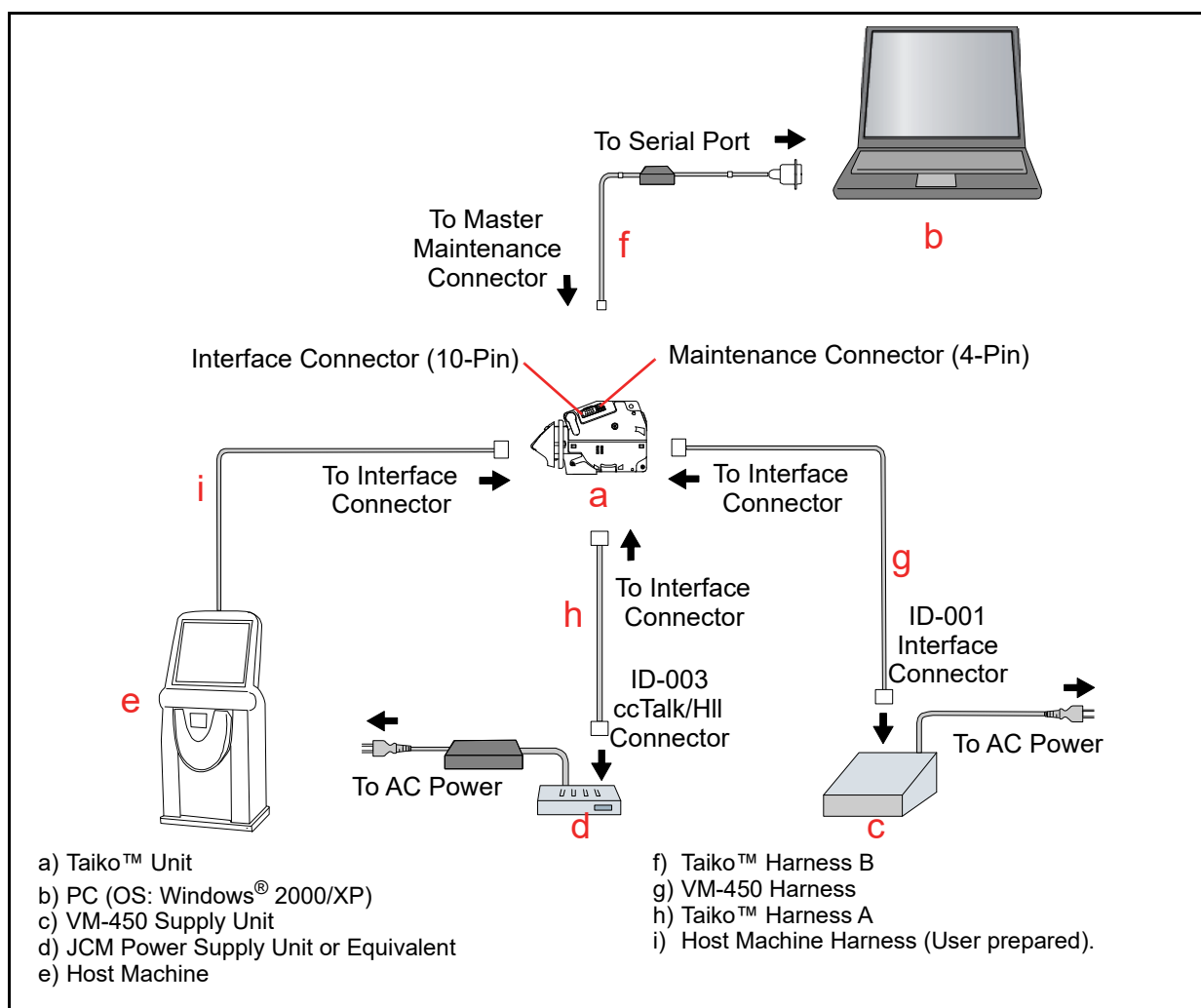



Figure 6-3 Taiko Re-Programming Software Tool Connection Configuration

Table 6-1 Test Bench Interface Protocols

Interface Protocol	Operating Label	Interface Connector	Optional Connector
ID-003-MDB/Pulse/ccTalk*	X3	Black	Yes
ID-001†	01	White	No

*. Use JCM Power Supply Unit or equivalent. Or use Taiko™ Harness "A" (EDP# 127527or JCME G00183 for ID-003 & G00182 for ID-0E3).

†. Use JCM Power Supply Unit or equivalent VM-450 Harness.

 **NOTE:** When a Taiko™ Unit is installed into a Host Machine, the Power Supply Unit, Taiko™ Harness "A" and the VM-450 Connection Harness are not required.

Re-Programming Connection Procedure

When re-programming a Taiko™ Unit the following DIP Switch settings and cable connections are required:

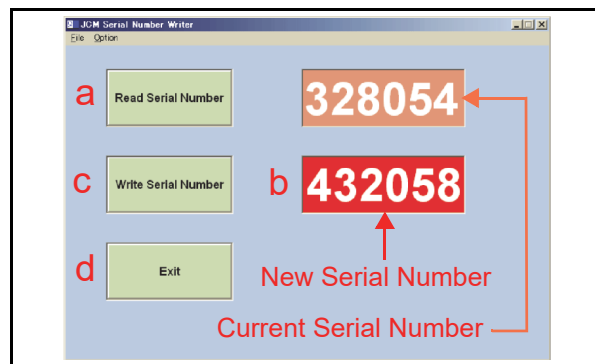
1. On the DIP Switch Block located on the right side of the Taiko™ Unit, set DIP Switches No.1, 7 and 8 to **ON**.
2. Connect the PC, Harness and Power Supply Unit cables to the Taiko™ Unit as shown in Figure 6-1 on page 6-1 of this Section. Ensure that the Taiko™ Unit is connected to the PC using a Taiko™ Harness "B" to ensure the proper connection is made to the Taiko™ Unit.
3. Turn the Taiko™ Unit power **ON**.
4. Check that the Front Panel Taiko™ LED flashes White.
5. Set DIP Switch No.1 to **OFF**.
6. Check that the Taiko™ LED is extinguished.

Serial Number Writer Application Use

When replacing a Taiko™ CPU Circuit Board, perform the following steps to write a new Serial Number onto it:

1. Refer to the previous "Software Downloading Procedure" on page 6-1 of this Section to properly perform a PC Software Download, and to Figure 6-1 on page 6-1/Figure 6-3 on page 6-2 to identify the tools, harness connections and DIP Switch Settings required to transfer Software to the Taiko™ Unit.
2. Double Mouse-Click on SerialNo.exe in the Folder created in Step One (1) of "PC Program


Installation" on page 6-1, and then the following window will appear.

**Figure 6-4** JCM Serial Number Writer Screen

3. Mouse-Click on the Read Serial Number Screen Button (Figure 6-4 **a**) and the current Unit's Serial Number will be displayed in the Text Box next to the Button.

 **NOTE:** When the CPU Circuit Board is new, nothing will be displayed in the Text Box.

4. Enter a new 6-digit Serial Number in the input Text Box next to the Write Serial Number Screen Button (Figure 6-4 **b**). Example: If the Unit's Serial Number is 03050438058, enter the last 6 digits of the Serial Number into the Text Box (e.g., 438058).
5. Mouse-click on the Write Serial Number Screen Button (Figure 6-4 **c**) to begin writing a new Serial Number into the Taiko™ Memory.

 **NOTE:** When writing a Serial Number into Taiko™ Memory using SerialNo.exe, the new Serial Number will be used as the new Encryption Code Number.

6. When Serial Number writing is complete, the Taiko™ LED will flash a **Blue** Color.
7. Mouse-click on the Exit Screen Button (Figure 6-4 **d**) to close the Screen.


Cloning Units

Use the Clone Harness, to copy Software from a Master Taiko™ Unit to any Slave Taiko™ Unit. Perform this procedure as often as necessary to copy Software to all available Taiko™ Units.


Required Items

When cloning Taiko™ Units, the items listed below are required;

- Taiko Unit (PUB-7/11) - Master
- Taiko Unit (PUB-7/11) - Slave
- JCM Power Supply
- Taiko Harness A
- Clone Harness
- ID-003/MDB-Pulse/ccTalk Software
- VM-450 Unit (for ID-001)
- VM-450 Harness (for ID-001)

 **NOTE:** See Figure A-1 on page A-5 to identify each maintenance part number to order.

Refer to the applicable Software Information Sheet to obtain the required cloning features Software.

 **NOTE:** When the Taiko™ Unit is connected to the Host Machine, the Power Supply Unit and Taiko™ Harness “A” are not required.

CLONING PROCEDURES

Perform the steps to Clone a Taiko™ Unit:

1. Connect the Master Taiko™ Unit, the Slave Taiko™ Unit, the Power Supply Unit and the Harnesses as illustrated in Figure 6-5.
2. Set Master Taiko™ Unit DIP Switches #1, 2, 7 and 8 to ‘ON’.
3. Set the Slave Taiko™ Unit DIP Switches #1, 7 and 8 to ‘ON’.
4. Confirm that the White LED on the Master Taiko™ Unit is flashing, and that the Green LED on the Slave Taiko™ Unit is also flashing.
5. Set Master Taiko™ Unit DIP Switch #1 ‘OFF’ to begin the cloning process.
6. When cloning begins, the Master Taiko™ Unit’s Front Panel LED will be a Pink Color, and the Slave Taiko™ Unit LED will be a Yellow Color.
7. When the Slave Taiko™ Unit’s Front Panel LED lights Blue (or flashes Green), the cloning process is complete (after approximately 15 minutes).
8. Set the Master Taiko™ Unit’s DIP Switch #1 to ‘ON’ to end the cloning process.
9. When creating another Taiko™ Unit Clone, turn the power to all of the Units OFF and re-connect the next Slave Taiko™ Unit in place of the previously cloned Unit; then re-perform this procedure from Step 2 again.

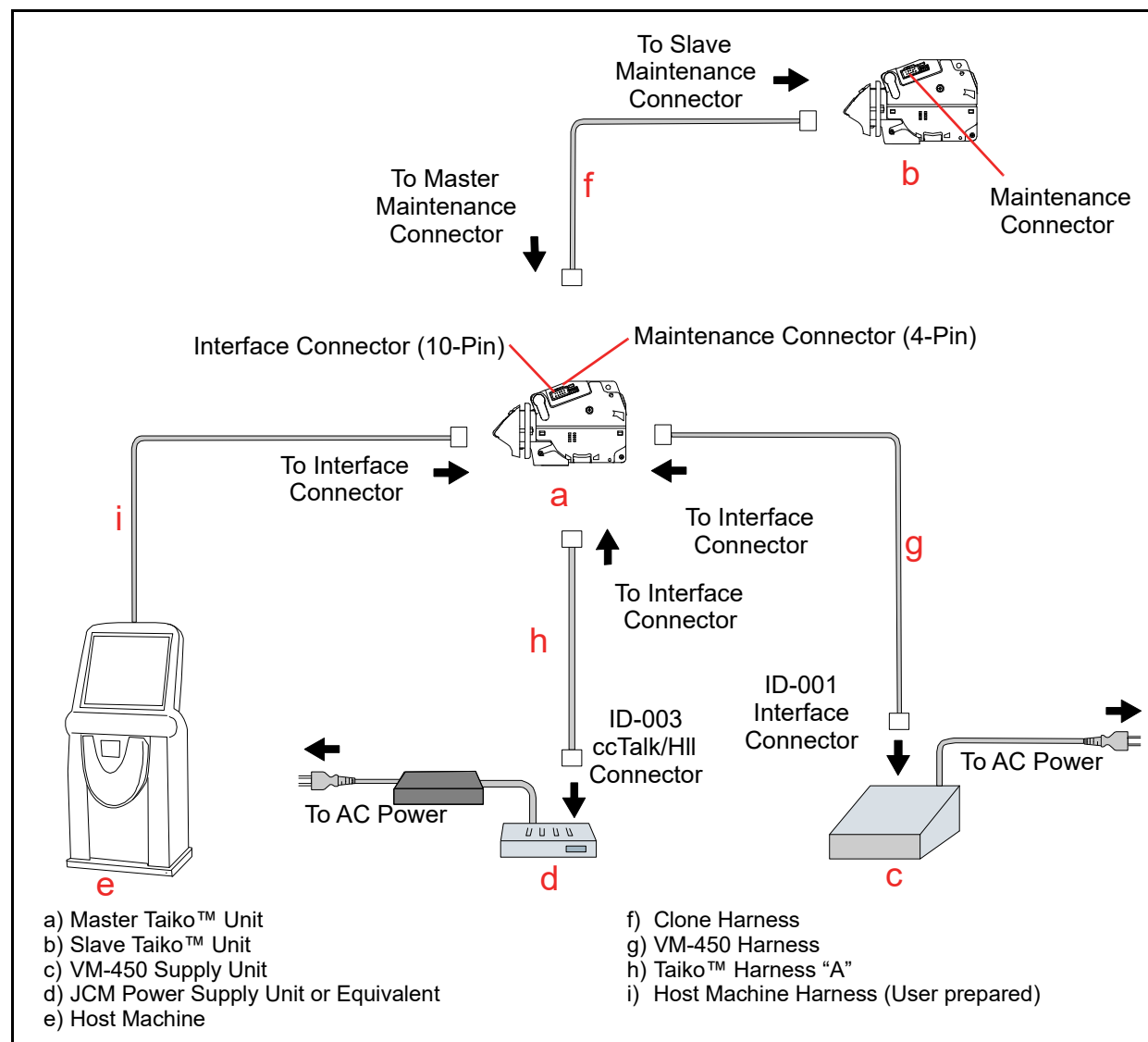



Figure 6-5 Taiko Clone Software Tool Connection Configuration

Calibration Procedure

Calibration Description


Calibration sets a starting reference point for all Optical and Magnetic Sensors within the Taiko™ Unit.

 **NOTE:** This task should only be accomplished at a Workbench.

Calibration Tool Requirements

The equipment and tools listed below are required to perform Taiko™ Workbench calibration.

- Taiko Unit (PUB-7/11)
- JCM Power Supply
- Taiko Harness A
- Download Application
- KS-088 Reference Paper (with Bar Code Reader)

 **NOTE:** See Figure A-1 on page A-5 to identify each maintenance part number to order.

When to Calibrate

- After new software has been downloaded
- After a Banknote Acceptor component has been disassembled/reassembled for repair
- After the CPU and/or Sensor Circuit Board has been replaced.

Initial Settings

1. Make sure power is not supplied to the Taiko™ Unit intended for calibration, and remove it from its Bezel mounting (Figure 6-6).

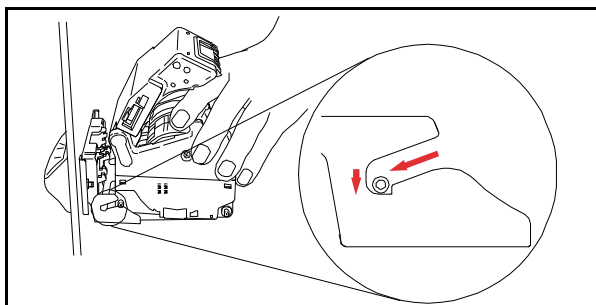


Figure 6-6 Removing Taiko from Bezel Mount

2. Connect an External Power Supply. (Figure 6-3 and Figure 6-5).
3. Set Right Side Panel DIP Switches No. 1, 2 and 8 **ON** (Figure 6-7), and apply AC power to the External DC Power Supply Unit.

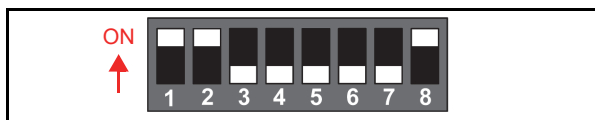


Figure 6-7 Adjustment DIP Switch Setting

4. Confirm that the Front Panel LED is flashing a White Light.

5. Set DIP Switch No.1 to '**OFF**' and confirm that the **Green** Front Panel LED is lit (ON).
6. Insert the KS-070 Reference Paper into the Taiko™ Unit (Figure 6-8 a), or if calibration of the Barcode Coupon Specification Unit is required, insert the KS-088 Reference Paper. When the Rollers begin to rotate, continue inserting the Reference Paper all the way into the Unit (Figure 6-8 b).

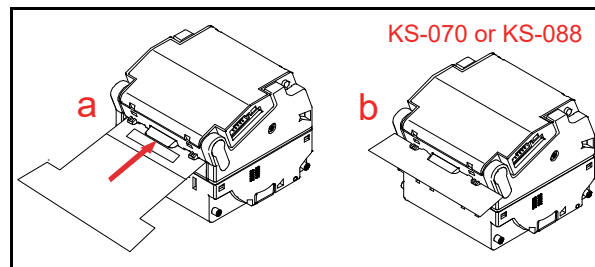


Figure 6-8 Reference Paper Insertion

7. When the Reference Paper reaches the inner limit, the Front Panel LED will flash a **Green** Color.
8. Turn DIP Switch No.8 '**OFF**' to begin the Calibration Procedure.
9. Confirm that the Front Panel **Yellow** LED is lit, indicating a Sensor Adjustment is occurring.
10. When the Paper adjustment is complete, the Reference Paper will exit out of the Taiko™ Unit automatically (Figure 6-9).

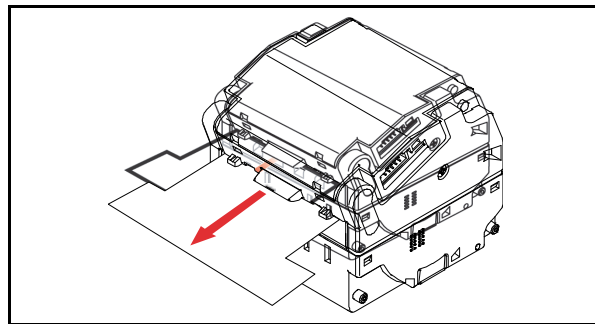


Figure 6-9 Adjustment Complete Paper Ejection

11. Remove the KS-070 or KS-088 Reference Paper. The Front Panel LED will flash **Green**.
12. Turn DIP Switch No.8 '**ON**' to begin the Non-Paper Calibration Procedure.
13. When the Non-Paper Adjustment and EEPROM data writing procedures are complete, confirm that the Front Panel LED is lit a **Blue** Color.



WARNING: If the adjustments and/or EEPROM Data writing procedures are not successfully completed, the **Red** LED will light! In this case, start the procedure over again from the very beginning.


Performance Test Diagnostics

The Taiko™ Unit is equipped with various diagnostic features to aid in repair and maintenance. This section describes the test procedure required for each function using specific DIP Switch settings to identify the cause of a suspect failure condition.

In order to identify a failure condition's cause, the Taiko™ Unit has to be in the TEST Mode.

The various Taiko™ Tests available and their related DIP Switch settings are listed in Table 6-2.

Table 6-2 Taiko TEST DIP Switch Settings

								
Setting Function	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
DIP Switch Test	ON	ON	ON	ON	ON	ON	ON	ON
Transport Motor Forward Rotation Test	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Transport Motor Reverse Rotation Test	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
Aging Test	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
Solenoid Test	ON	ON	ON	ON	OFF	OFF	OFF	OFF
Acceptance Test	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
Entrance Flapper Test	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
Exit Flapper Test	ON	ON	OFF	ON	ON	OFF	OFF	OFF

DIP SWITCH TESTS

Prior to entering the Test Mode, perform the following steps to test the DIP Switch Functions:

1. Set all DIP Switches to their ON position and supply Power to the Taiko™ Unit.
2. Set DIP Switch No.1 to **OFF** to begin the Test. The Front Panel LED will light a steady **Yellow** Color.
3. Set DIP Switches No. 1, 5 and 7 to **OFF**, and verify that the Front Panel LED lights **Green**.
4. Now, set DIP Switches No. 2, 4, 6 and 8 to **OFF**, and verify that the Front Panel LED lights **Blue**.



WARNING: If the Red LED lights, the DIP Switch Block is faulty.

No.1 Transport Motor Forward Rotation Test

This Test detects the Taiko™ Units forward Motor speed rotational rate. Confirm that the Motor operates smoothly without emitting abnormal noise.

1. Set DIP Switch No.1 to ON and supply power to the Taiko™ Unit.
2. Set DIP Switch No.1 to **OFF** to begin the Test. The Transport Motor will rotate in a forward direction. The **Blue** Front Panel LED will flash,

and despite the number of flashes, the Test is complete when no error is detected.



WARNING: If the Red LED lights, the Transport Motor is faulty.

No.2 Transport Motor Reverse Rotation Test

This Test detects the Taiko™ Unit's reverse Motor speed rotational rate. Confirm that the Motor operates smoothly without emitting abnormal noise.

1. Set DIP Switch No.1 and No.2 ON and supply power to the Taiko™ Unit.
2. Set DIP Switch No.1 to **OFF** to begin the Test. The Transport Motor will rotate in a reverse direction. The **Blue** Front Panel LED will flash, and despite the number of flashes, the Test is complete when no error is detected.



WARNING: If the Red LED lights, the Transport Motor is faulty.

No.3 Aging Test Procedure

This Test detects component aging within the Taiko™ Unit. Proceed as follows to perform the Aging Test:

1. Set DIP Switches No. 1, 2 and 4 ON and supply the Power to the Taiko™ Unit.
2. Set DIP Switch No.1 to **OFF** to begin the Test. The Taiko™ Unit will begin repeating the following operation continuously:
 - The Motor rotates forward, then
 - The Motor rotates in reverse.

A **Blue** Front Panel Color indicates proper operation.

If a Sensor error occurs during an Aging Test, the Taiko™ will stop operating. The Sensor exhibiting the error can be determined by counting the number of LED flashes and comparing the count to the list in the first part of Table 6-3.

Table 6-3 Aging Test Error Codes

Flash No. & Color	Sensor Location
1	Right Entrance Sensor
2	Left Entrance Sensor
3	Upper Transit Sensor
4	Lower Transit Sensor
5	Entrance Solenoid Sensor
6	Exit Solenoid Sensor
7	VEND Lever Sensor
8	Encoder Sensor
1	Right IR Transmissive (Lower to Upper)
2	Left IR Transmissive (Lower to Upper)
3	Right Red Transmissive (Lower to Upper)
4	Left Red Transmissive (Lower to Upper)
5	Right NIR Transmissive (Lower to Upper)

Table 6-3 Aging Test Error Codes (Cont.)

Flash No. & Color	Sensor Location
6	Left NIR Transmissive (Lower to Upper)
7	Right Blue Transmissive (Lower to Upper)
8	Left Blue Transmissive (Lower to Upper)
1	Right IR Transmissive (Upper to Lower)
2	Left IR Transmissive (Upper to Lower)
3	Right Red Transmissive (Upper to Lower)
4	Left Red Transmissive (Upper to Lower)
5	Right NIR Transmissive (Upper to Lower)
6	Left NIR Transmissive (Upper to Lower)
7	Right Blue Transmissive (Upper to Lower)
8	Left Blue Transmissive (Upper to Lower)

No.4 Solenoid Test Procedure

The Solenoid Test detects the Solenoid's normal operating condition. Proceed as follows to perform a Solenoid Test:

1. Set DIP Switch No. 1, 2, 3 and 4 **ON** and supply the Power to the Taiko™ Unit.
2. Set DIP Switch No.1 to **OFF** to begin the Test. The Taiko™ Unit will begin the following test operation:
 - The Entrance Flapper will operate ON & OFF, then
 - The Exit Flapper operates ON & OFF.

The Front Panel LED will light **Blue** indicating the Test is complete and no error was detected.



WARNING: If the Red LED lights, the Solenoid is faulty.

Table 6-4 Solenoid Error Codes

Red Flashes	Error Indicated
1	Entrance Solenoid not Energizing
2	Entrance Solenoid Energizing, but does not release
3	Exit Solenoid not Energizing
4	Exit Solenoid Energizing, but does not Release

No.5 Acceptance Test Procedure

The Acceptance Test detects the proper presence of inserted Banknotes. Proceed as follows to perform an Acceptance Test:

1. Set DIP Switch No.1 and No.5 **ON** and supply the Power to the Taiko™ Unit.
2. Set DIP Switch No.1 to **OFF** to begin the Test.
3. Insert a Banknote into the Taiko™ Unit. If the Banknote is returned the **Red** or **Yellow** LED will flash a specific number of times indicating the

return error condition. Table 6-5 lists the flash counts and the related error condition.

Table 6-5 LED Flash Error Codes

Red Flashes	Error Indicated
2	ROM Error
3	Banknote Jam inside Acceptor
4	Banknote Remaining in the Transport Path
5	Adjustment Error
6	Motor Error
8	Entrance Solenoid Error
9	Exit Solenoid Error
12	Sensor Operating with Abnormal Timing
1	Slanted Banknote Insertion Rejection
4	X-Rate Error
5	Banknote Transportation Error
7	Pattern Error
8	Photo Level Error
9	Inhibit Setting Value Rejection
13	Banknote Length Error
14	IR/Red Error
15	Counterfeit Currency Rejection

No.6 Entrance Flapper Test Procedure

The Entrance Flapper Test detects proper Entrance Flapper operation. Proceed as follows to perform an Entrance Flapper Test:

1. Set DIP Switches No. 1, 4 and 5 **ON** and supply the Power to the Taiko™ Unit.
2. Set DIP Switch No.1 to **OFF** to begin the Test. The Taiko™ Unit will begin repeating the Entrance Flapper open and close testing operation.

The **Blue** Front Panel LED will light indicating the Test is complete and no error was detected.



WARNING: If the Red LED lights, the Entrance Flapper is faulty.

No.7 Exit Flapper Test Procedure

The Exit Flapper Test detects proper Exit Flapper operation. Proceed as follows to perform an Exit Flapper Test:

1. Set DIP Switches No. 1, 2, 4 and 5 **ON** and supply Power to the Taiko™ Unit.
2. Set DIP Switch No.1 to **OFF** to begin the Test. The Taiko™ Unit will begin repeating the Exit Flapper open and close testing operation. The **Blue** Front Panel LED will light indicating the Test is complete and no error was detected.



WARNING: If the Red LED lights, the Exit Flapper is faulty.

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Taiko™ Series Banknote Acceptor

Section 7

7 EXPLODED VIEWS AND PARTS LISTS

This section provides product exploded views and parts lists for the Taiko™ Series Banknote Acceptor (PUB-7/11®). This section contains the following information.



NOTE: Parts may be changed for improvement without notice.

- Entire Taiko Unit Exploded View

- PUB-7/11 Center Guide Unit Exploded View
- PUB-7/11 Upper Unit Exploded View
- PUB-7/11 Transport Unit Exploded View
- PUB-7/11 Lower Unit Exploded View
- PUB-7/11 Bottom Unit Exploded View
- Taiko PUB-7/11 Bezel Unit Exploded View
- EBA Type Bezel Exploded View

Entire Taiko Unit Exploded View

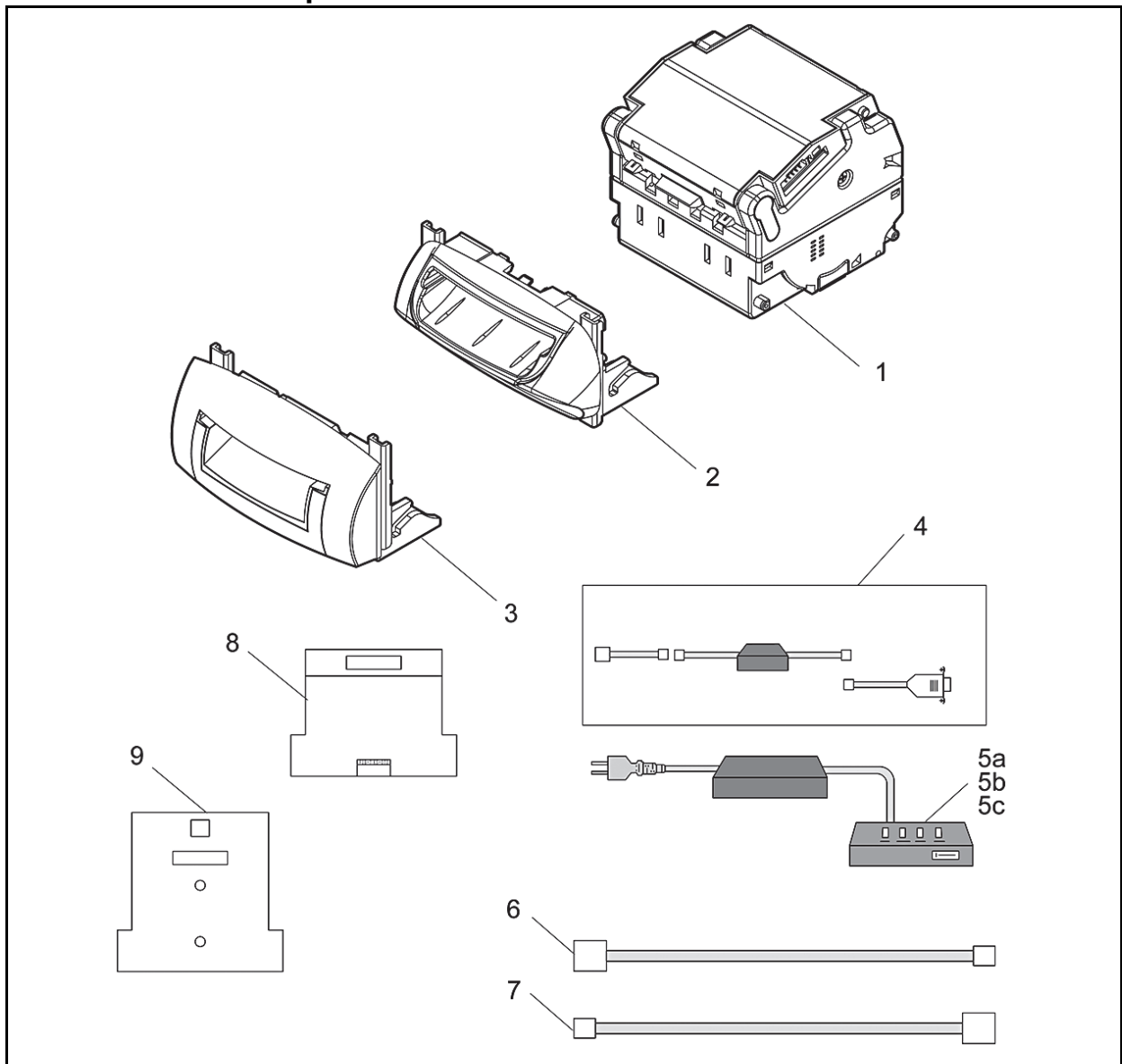
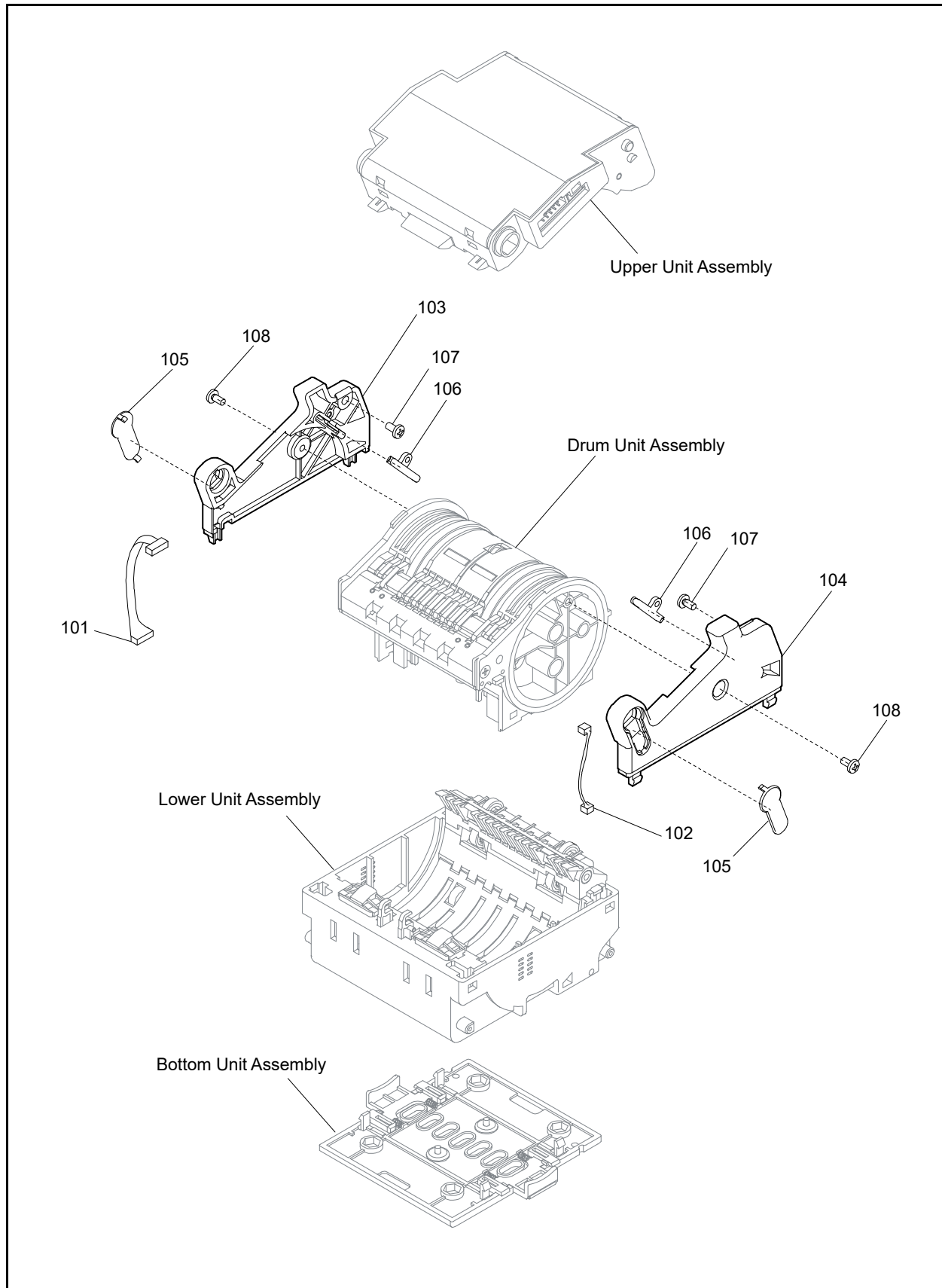


Figure 7-1 Entire Taiko Unit Exploded View

Primary Taiko PUB-7/11 Unit Parts List

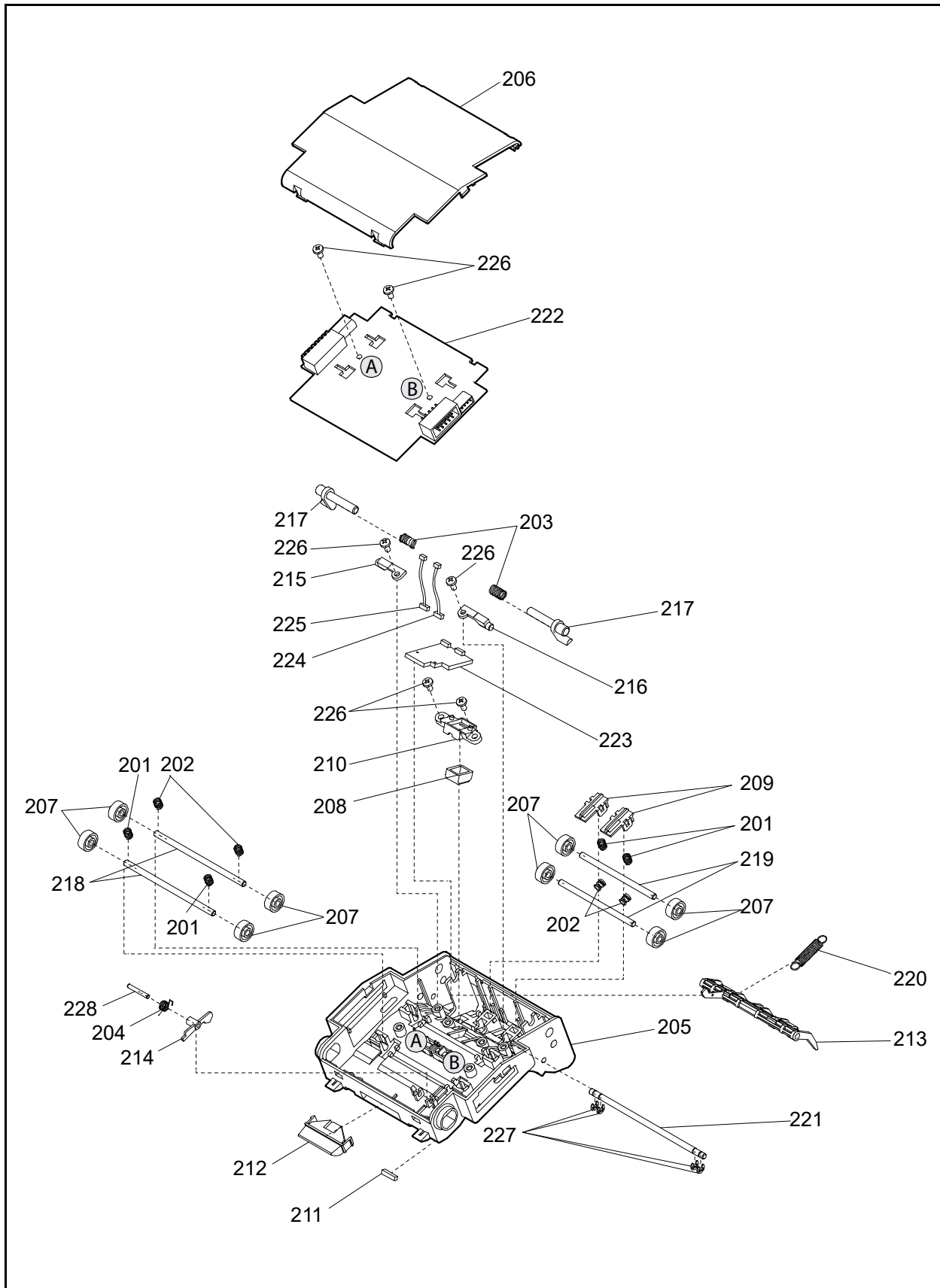
Table 7-1 Primary Taiko PUB-7/11 Unit Parts List

Ref No.	EDP No.	JAC Part No.	Description	Remark
1	--	--	PUB-7 Unit	(See See Figure 7-2 for individual parts)
	--	--	PUB-11 Unit	(See See Figure 7-2 for individual parts)
2	--	--	PUB-7 Bezel	(See Figure 7-7 for individual piece parts)
3	--	--	PUB-11 Bezel	(See Figure 7-7 for individual piece parts)
4	116488	400-100573RA	TAIKO Harness B (Option)	Assembly for loading Software from a PC
5a	116125	501-000187RA	JCM Power Supply Unit (Option)	
5b	G00205	← Order JCMEu #	UAC Power Supply	
5c	G00176	← Order JCMEu #	MIB 232 Power Supply	
6	127527	400-100551RA	TAIKO Harness A (Option)	For connecting PUB-7/11 Unit to Power Supply Unit
	G00183	← Order JCMEu #	Harness (for UAC or MIB 232 PSU)	
	G00182	← Order JCMEu #	Harness (for ccTalk)	
7	124528	400-100589RA	Clone Harness (Option)	For Cloning Units
8	119581	501-000186RA	KS-070 Calibration Paper	For Calibrating Units
9	197917	501-100256R	KS-088 Calibration Paper	For Calibrating PUB-7-11 Units that contain Barcode Coupon reading capabilities.

PUB-7/11 Center Guide Unit Exploded View**Figure 7-2** PUB-7/11 Center Guide Unit Exploded View

PUB-7/11 Center Guide Units Parts List**Table 7-2** PUB-7/11 Center Guide Units Parts List

Ref No.	EDP No.	JAC Part No.	Description	Qty	Remark
101	114977	400-100558RA	Relay Harness (14P)	1	
102	114980	400-100560RA	Relay Harness 2 (4P)	1	
103	110873	900-101000RA	Side Cover Left	1	
104	110874	900-101001RA	Side Cover Right	1	
105	110900	900-200137RA	Harness Cover	2	
106	115496	900-101017RA	Exit Prism (A)	2	
107	057260	186-265000RA	M2.6x5 Phillips Self Tapping Pan Head Screw	2	
108	107111	189-100310RA	M3x10 Phillips Self Tapping Binding Screw	2	

PUB-7/11 Upper Unit Exploded View**Figure 7-3 PUB-7/11 Upper Unit Exploded View**

PUB-7/11 Upper Units Parts List**Table 7-3 PUB-7/11 Upper Units Parts List**

Ref No.	EDP No.	JAC Part No.	Description	Qty	Remark
201	115484	250-100549RA	Pinch Roller Spring (A)	4	
202	115485	250-100550RA	Pinch Roller Spring (B)	4	
203	115511	250-100554RA	Lock Spring	2	
204	115509	250-100555RA	Shutter Sensor Spring	1	
205	110871	900-100998RA	Upper Guide	1	For use only in NON-Parallel Interfaced Units (See Table A-4 & Table A-5 on page A-4 of Appendix A in this Service Manual)
206	110872	900-200136RA	Upper Guide Cover	1	
207	110880	900-101006RA	Pinch Roller	8	
208	110885	550-100614RA	Dummy Head	1	Used only in PUB-7 WITHOUT Barcode Sensor capability
209	110890	250-100557RA	Spring Guide	2	
210	131655	550-100615RA	Magnetic Head Holder	1	Used only in PUB-7 Units NOT containing a Barcode Sensor or operating at 12/24Volts
211	275844	900-101014RA	Prism (C)	1	
212	110910	900-101015RA	Right Guide	1	
213	110955	200-200381RA	Sensor Lever	1	
214	115495	200-200294RA	Shutter Sensor lever	1	
215	115497	900-101018RA	Exit Prism (B) Left	1	
216	115498	900-101019RA	Exit Prism (B) Right	1	
217	097342	200-200296RA	Locking Lever	2	
218	115490	200-200298RA	Pinch Roller Shaft	2	
219	115505	200-200299RA	Pinch Roller Shaft (B)	2	
220	115508	250-100558RA	Sensor Lever Spring	1	
221	115956	200-200300RA	Sensor Lever Shaft	1	
222	259364	300-100422RA	CPU Board, Pub-7, TWN/GBR/SCO	1	Used in PUB EDP #121383 Only (for use in early PUB-7 Versions only)
		300-500011RA	CPU Board, Pub -7/11, USA	1	Used in Standard PUB 7-11 Units for all Countries
		300-000007R	CPU Board, Pub -7/11, USA, W/O D19 Poly Vinyl Slider (OEM for ICA)	1	Used in PUB EDP #148061 Only (e.g., Diode D19 was removed)
		300-000009R	CPU Board, Pub-7, 12V/24V EUR	1	Used in PUB EDP #189306 & #195059 Only (for 12/24Volt Units only)

Table 7-3 PUB-7/11 Upper Units Parts List (Continued)

Ref No.	EDP No.	JAC Part No.	Description	Qty	Remark
222	259363	300-000008R	CPU Board, Pub-7, ID001/044 EUR	1	Used in PUB EDP #139238 Only (for ID-001/044 Parallel Interface for all Countries)
223	130880	300-200130RA	Magnetic (MAG) Sensor Board	1	For use only in PUB-11 NOT operating at 12/24V
	189072	300-000010R	VC/MS Conversion Sensor Board (no MAG Sensor)	1	For use with PUB-7 when operating at 12/24V
	189071	← Order by EDP #	VC/MS Conversion Sensor Board (with MAG Sensor)	1	For use only in PUB-11 operating at 12/24V
	195055	300-000011R	Barcode Sensor Board (no MAG Sensor)	1	For use with only PUB-7 operating at 12V with Barcode Sensor capability
224	189305	← Order by EDP #	Power Relay Harness	1	
225	131072	400-100590RA	MAG Sensor Relay Harness	1	For PUB-11 Only
226	082040	186-261006RA	2.6x6 Phillips, Self Tapping, Pan Head Screw	6	
227	003705	100-100029R	Ø2 E-Ring Ø2	4	
228	090776	200-200302RA	Ø2x14 Parallel Pin	1	

PUB-7/11 Transport Unit Exploded View

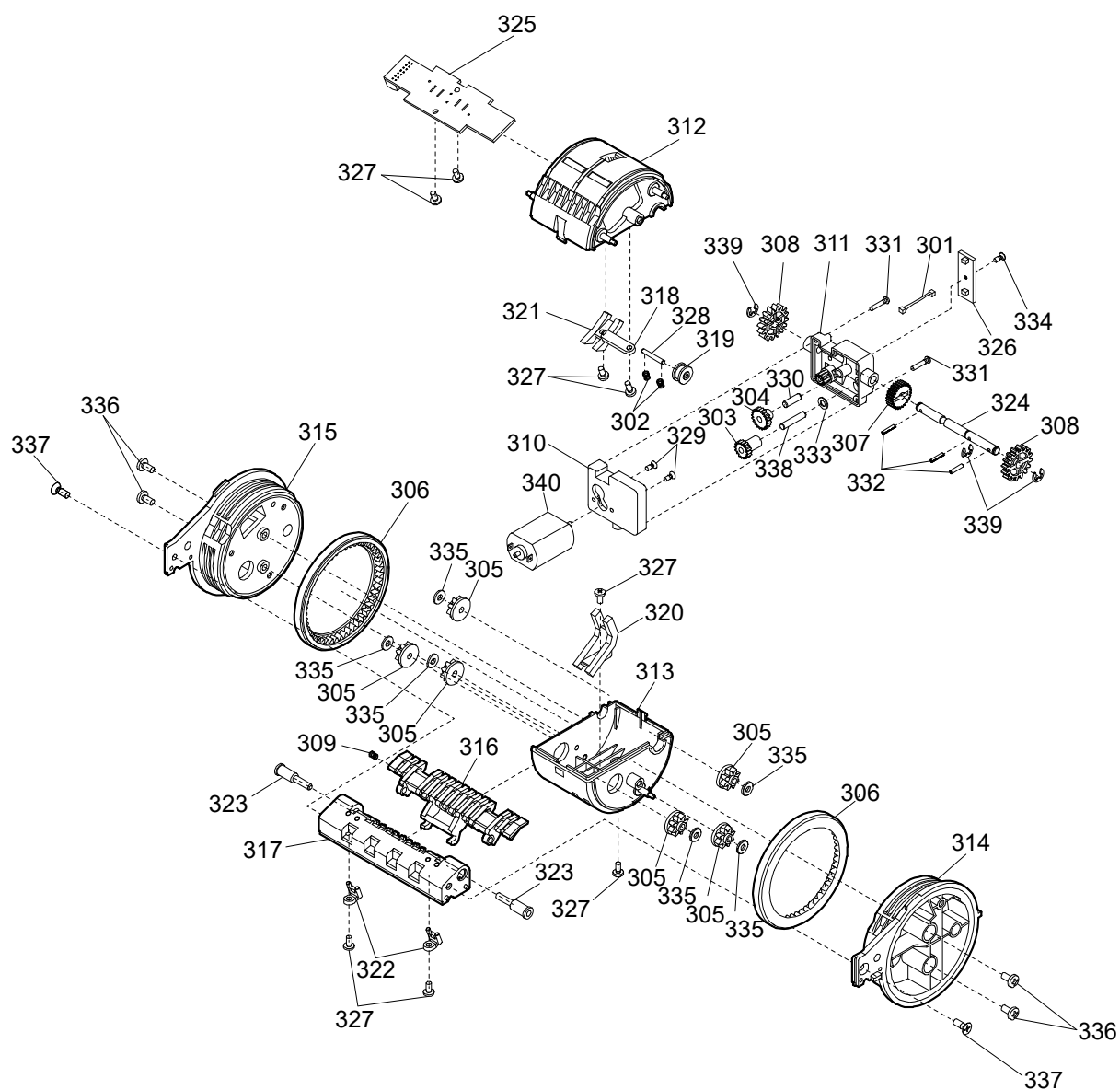


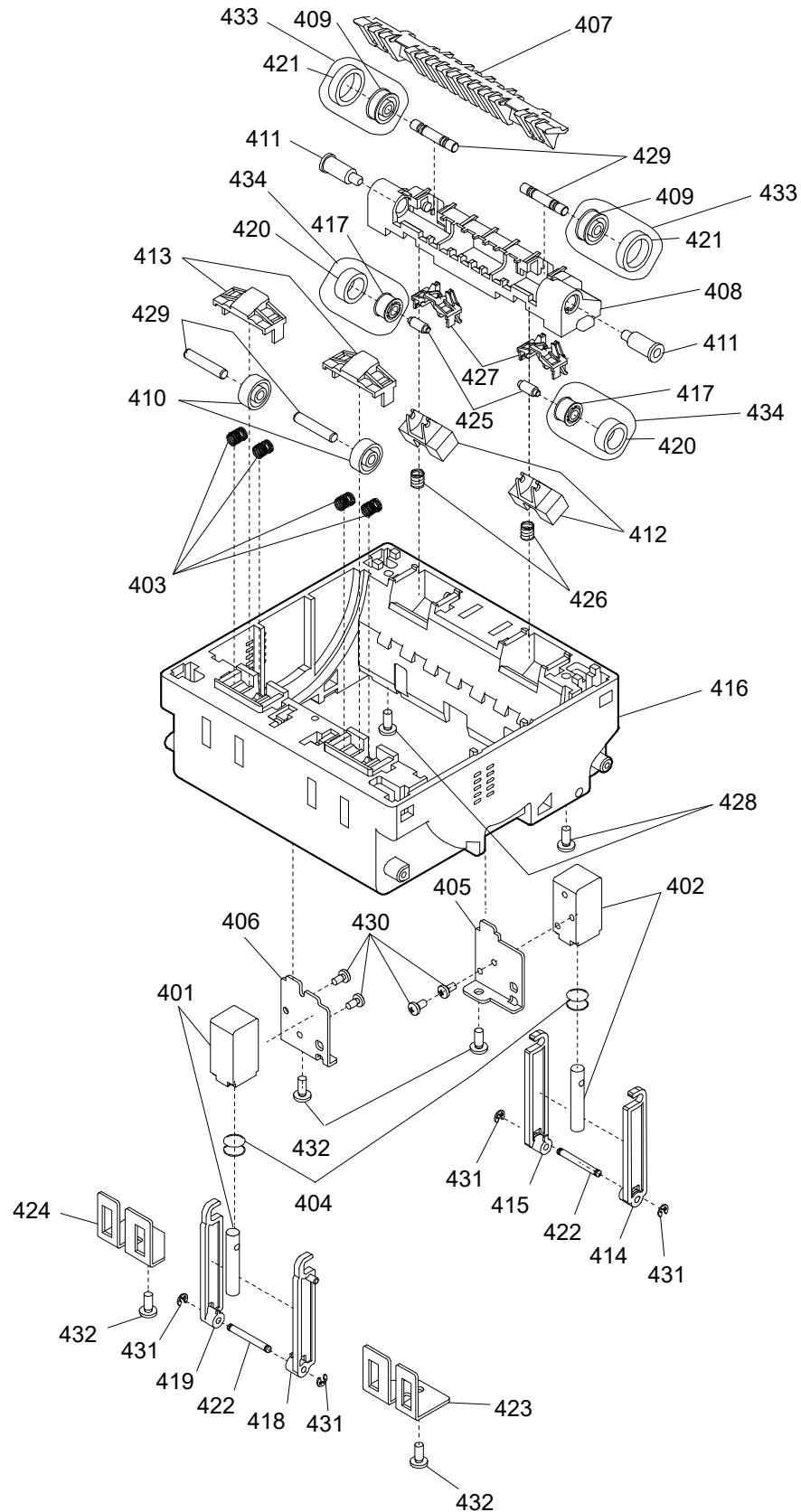
Figure 7-4 PUB-7/11 Transport Unit Exploded View

PUB-7/11 Transport Units Parts List**Table 7-4** PUB-7/11 Transport Units Parts List

Ref No.	EDP No.	JAC Part No.	Description	Qty	Remark
301	114978	400-100559RA	PI Harness (3P)	1	
302	115487	250-100552RA	Magnetic Roller Spring	2	Used in PUB-11 Only
303	110923	900-100987RA	Worm Gear	1	
304	110914	900-100988RA	Idle Gear	1	
305	110915	900-100989RA	Gear Guide	6	
306	127664	550-100646RA	Feed Roller Assy.	2	
307	242446	900-100990RA	Worm Gear Wheel	1	
308	110925	900-100991RA	Drive Gear	2	
309	115510	250-100556RA	Shutter Spring	1	
310	239098	900-100992RA	Gear Box B	1	
311	110866	900-100993RA	Gear Box A	1	
312	230491	900-100994RA	Center Guide A	1	
313	239099	900-100995RA	Center Guide B	1	
314	230492	900-100996RA	Center Guide Right	1	
315	230493	900-100997RA	Center Guide Left	1	
316	230494	900-101002RA	Guide Lever A	1	
317	110877	900-101004RA	Center Guide C	1	
318	110903	900-101011RA	Spring Stopper	1	
319	110904	900-101024RA	Magnetic Head Roller	1	Used only in PUB-7/11 Units NOT containing a Barcode Sensor. (See Table A-4 & Table A-5 on page A-4 of Appendix A in this Service Manual)
320	110907	900-101012RA	Prism (A)	1	
321	110908	900-101013RA	Prism (B)	1	
322	110911	900-101016RA	Prism (D)	2	
323	115501	200-200295RA	Lever Bushing (B)	2	
324	115489	200-200301RA	Drive Gear Shaft	1	
325	239658	300-500020RA	Sensor Board	1	
326	114831	300-100426RA	Interrupter Board	1	
327	082040	186-261006RA	2.6x6 Phillips, Self Tapping, Pan Head Screw	8	
328	090776	200-200302RA	Ø2x14 Parallel Pin	1	
329	006022	171-200040RA	M2x4 Flat Head Screw	2	
330	072361	200-200303RA	Ø3x10 Parallel Pin	1	
331	062887	186-200010RA	M2x10 Phillips Self Tapping Pan Head Screw	2	
332	104019	200-200304RA	Ø1.6x8 Parallel Pin	3	
333	006026	142-306005	3x6x0.5 Flat Washer	1	
334	057260	186-265000RA	M2.6x5 Phillips Self Tapping Pan Head Screw	1	
335	116015	900-026508RA	Ø2x6.5x0.8 Polly Vinyl Slider	6	

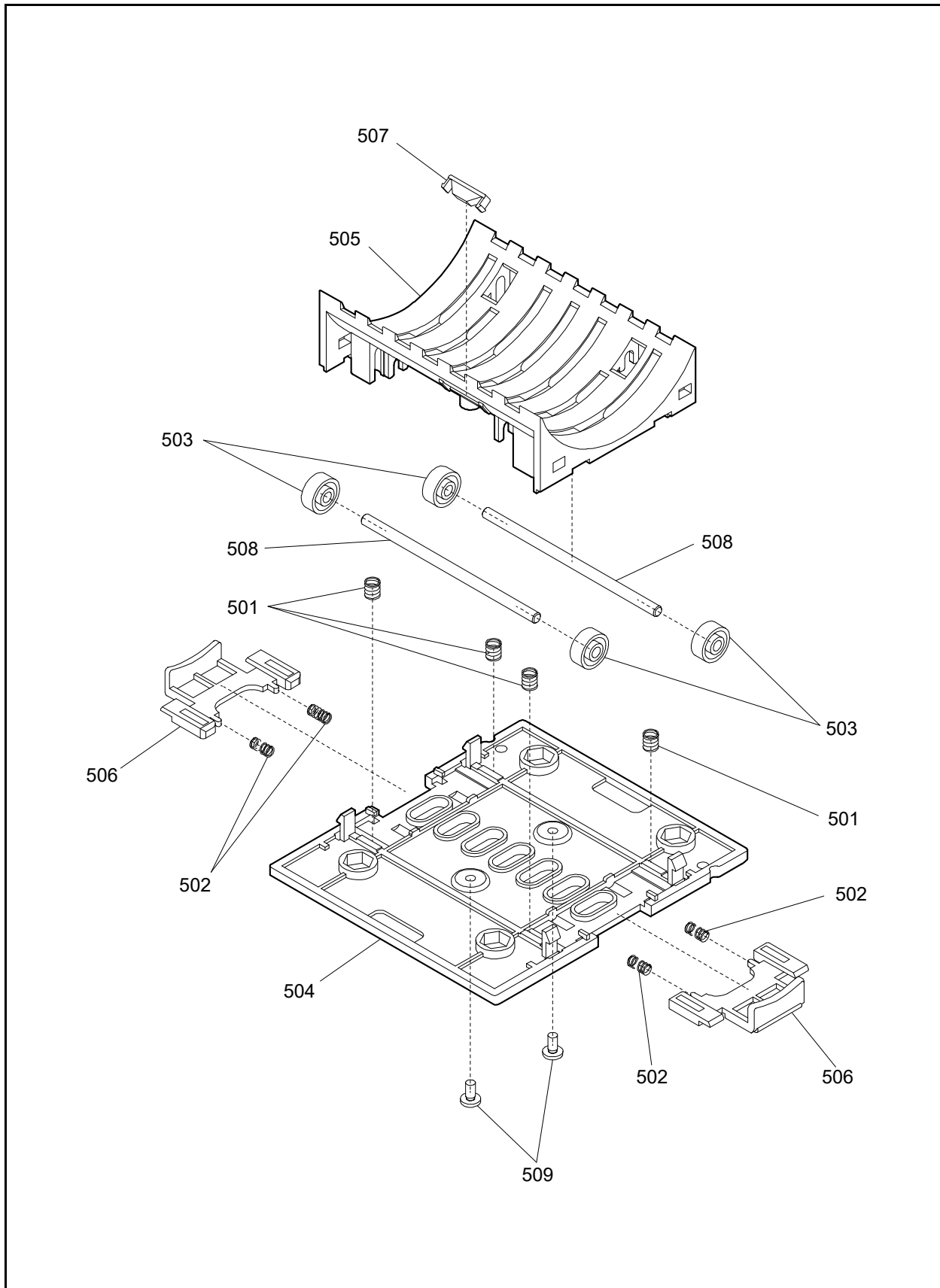
Table 7-4 PUB-7/11 Transport Units Parts List (Continued)

Ref No.	EDP No.	JAC Part No.	Description	Qty	Remark
336	107111	189-100310RA	M3x10 Phillips Self Tapping Binding Screw	4	
337	092229	171-300008RA	M3x8 Phillips Self Tapping Flat Head Screw	2	
338	074666	200-200382RA	3x15 Parallel Pin	1	
339	003707	100-100043R	Ø3 E-Ring	3	
340	229459	-	Feed Motor Gear Assy.	1	

PUB-7/11 Lower Unit Exploded View**Figure 7-5 PUB-7/11 Lower Unit Exploded View**

PUB-7/11 Lower Units Parts List**Table 7-5 PUB-7/11 Lower Units Parts List**

Ref No.	EDP No.	JAC Part No.	Description	Qty	Remark
401	115543	451-100102RA	Entrance Solenoid	1	
402	240087	451-100103RA	Exit Solenoid	1	
403	115485	250-100550RA	Pinch Roller Spring (B)	4	
404	115486	250-100551RA	Solenoid Spring	2	
405	131105	200-200285R	Solenoid Bracket (B)	1	
406	131103	200-200287R	Solenoid Bracket	1	
407	110876	900-101003RA	Guide Lever B	1	
408	110878	900-101005RA	Rear Guide	1	
409	110879	550-100613RA	Drive Pulley	2	
410	110880	900-101006RA	Pinch Roller	2	
411	110881	200-200288R	Lever Bushing (A)	2	
412	127512	900-101045RA	Idle Slider	2	
413	110894	200-200290RA	Clamp B	2	
414	110895	200-200379RA	Lever Link Left	1	
415	110896	200-200380RA	Lever Link Right	1	
416	110906	900-101025RA	Lower Base	1	
417	115494	550-100615RA	Drive Pulley (F)	2	
418	115499	900-101020RA	Guide Lever Link Right	1	
419	115500	900-101021RA	Guide Lever Link Left	1	
420	115502	900-101022RA	Reject Roller (F)	2	
421	115503	900-101023RA	Reject Roller	2	
422	115507	200-200297RA	Solenoid Shaft	2	
423	127557	200-200306RA	Bezel Installation Plate Right	1	
424	127555	200-200307RA	Bezel Installation Plate Left	1	
425	127512	200-200385RA	Idle Slider	2	
426	127511	250-100617RA	Idle Roller Spring	2	
427	127513	200-200307RA	Clamp (A-N)	2	
428	082040	186-261006RA	2.6x6 Phillips, Self Tapping, Pan Head Screw	2	
429	109658	200-200305RA	M3x16 Parallel Pin	4	
430	006244	171-200103RA	M2x3 Pan Head Screw	4	
431	003704	100-100042RA	Ø1.5 E-Ring	4	
432	116909	189-261000RA	M2.6x10 Phillips Self Tapping Pan Head Screw	4	
433	127519	550-100618RA	Drive Pulley Assembly	2	For use with Items 409 & 421 on page 7-12 of this Section
434	127518	550-100619RA	Drive Pulley (F) Assembly	2	For use with Items 417 & 420 on page 7-12 of this Section

PUB-7/11 Bottom Unit Exploded View**Figure 7-6 PUB-7/11 Bottom Unit Exploded View**

PUB-7/11 Bottom Units Parts List**Table 7-6** PUB-7/11 Bottom Units Parts List

Ref No.	EDP No.	JAC Part No.	Description	Qty	Remark
501	115484	250-100549RA	Pinch Roller Spring (A)	4	
502	115488	250-100553RA	Lower Guide Lock Spring	4	
503	110880	900-101006RA	Pinch Roller	4	
504	110889	900-101008RA	Lower Guide Cover	1	
505	110892	900-101009RA	Lower Guide	1	
506	110898	200-200293RA	Lower Guide Lock	2	
507	275844	900-101014RA	Prism (C)	1	
508	115490	200-200298RA	Pinch Roller Shaft	2	
509	057260	186-265000RA	M2.6x5 Phillips Self Tapping Pan Head Screw	2	

Taiko PUB-7/11 Bezel Unit Exploded View

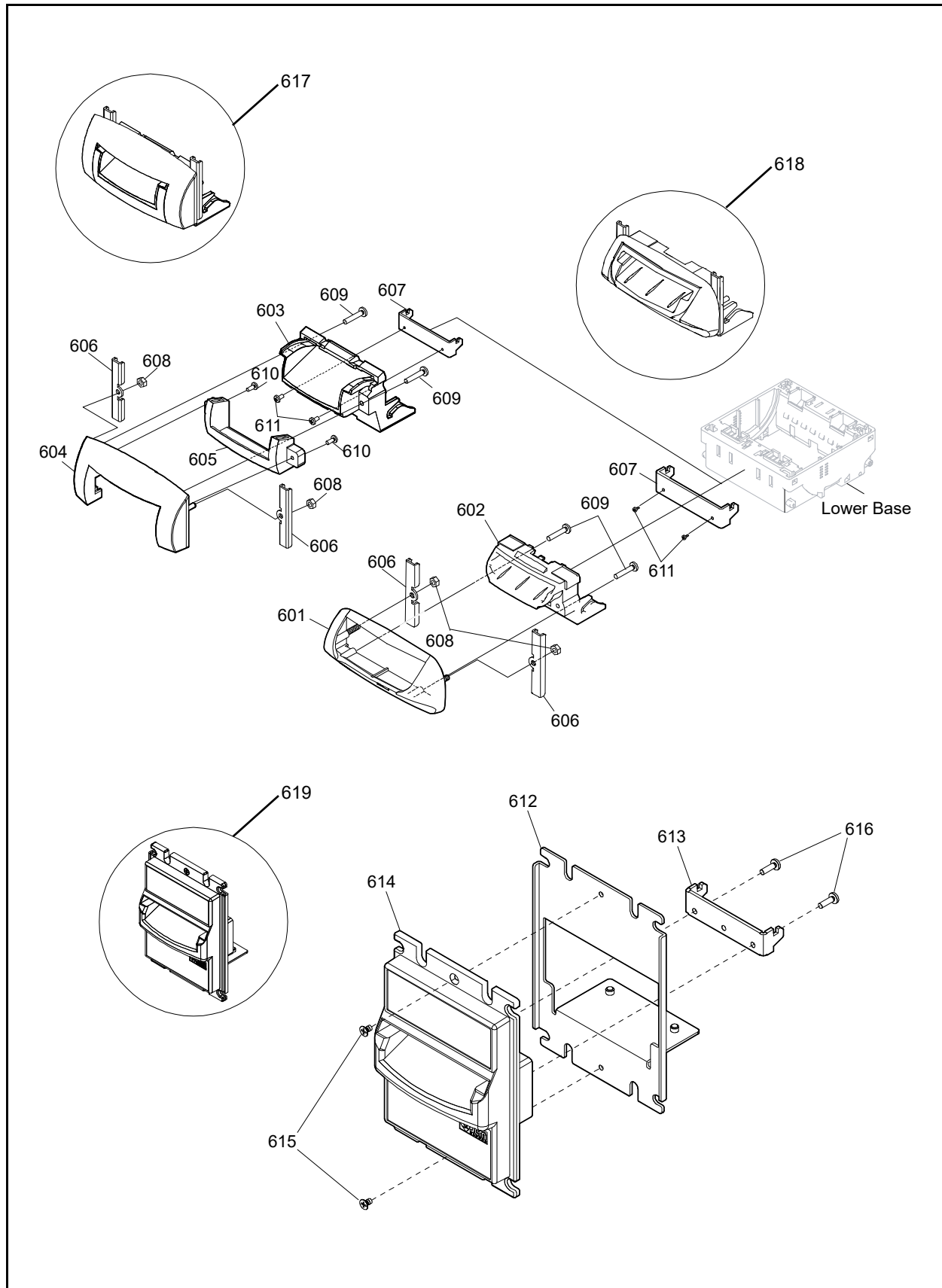


Figure 7-7 Taiko PUB-7/11 Bezel Unit Exploded View

Taiko PUB-7/11 Bezel Units Parts List**Table 7-7** Taiko PUB-7/11 Bezel Units Parts List

Ref No.	EDP No.	JAC Part No.	Description	Qty	Remark
601	110884	200-200384RA	Bezel	1	
602	110897	900-100981RA	PUB-7 Bezel Guide for EURO (68mm)	1	Type 1
	118069	900-100983RA	PUB-7 Bezel Guide for GBR/SCO (76mm)	1	Type 2
	121519	900-100984RA	PUB-7 Bezel Guide (71mm)	1	Type 3
603	131111	900-200135RA	PUB-11 US Bezel Guide (67mm)	1	Type 5
604	131108	900-100976RA	US Bezel A (67mm)	1	
605	131109	900-100977RA	US Bezel B (37mm)	1	
606	115492	200-200383RA	Bezel Bracket	2	
607	127556	200-200308RA	Bezel mounting Hook	1	
608	116908	140-031033RA	Hexagonal Nut M4	2	
609	116910	189-000410RA	M4x10 P Phillips Self Tapping Binding Screw	2	
610	080908	181-000036RA	3x6 Phillips Self Tapping Binding Screw	2	
611	006037	186-400015R	3x12 Pan Head with Sems Screw	2	
612	143685	200-000339R	Bezel Plate Assy	1	
613	143686	200-000340R	Bezel Hook	1	
614	143147	902-100492RA	Bezel (V)	1	
	201847	← Order by EDP #	Bezel (V) ICA	1	Intended for OEM Development
615	005332	175-330005	M3x5 Flat Head Screw	2	
616	107111	189-100310RA	M3x10 Phillips Self Tapping Binding Screw	2	
617	134164	-	PUB-11 FACE PLATE FOR US (67MM)	1	
618	121872	-	PUB-7 FACE PLATE FOR EURO	1	
	121873	-	PUB-7 FACE PLATE FOR GBR/SC	1	
	122095	-	PUB-7 FACE PLATE(71MM)	1	
619	143687	-	PUB-7 VENDING BEZEL UNIT	1	
	205748	-	PUB-7 ICA VENDING BEZEL UNIT	1	Intended for OEM Development

Taiko EBA Type Bezel Unit Exploded View

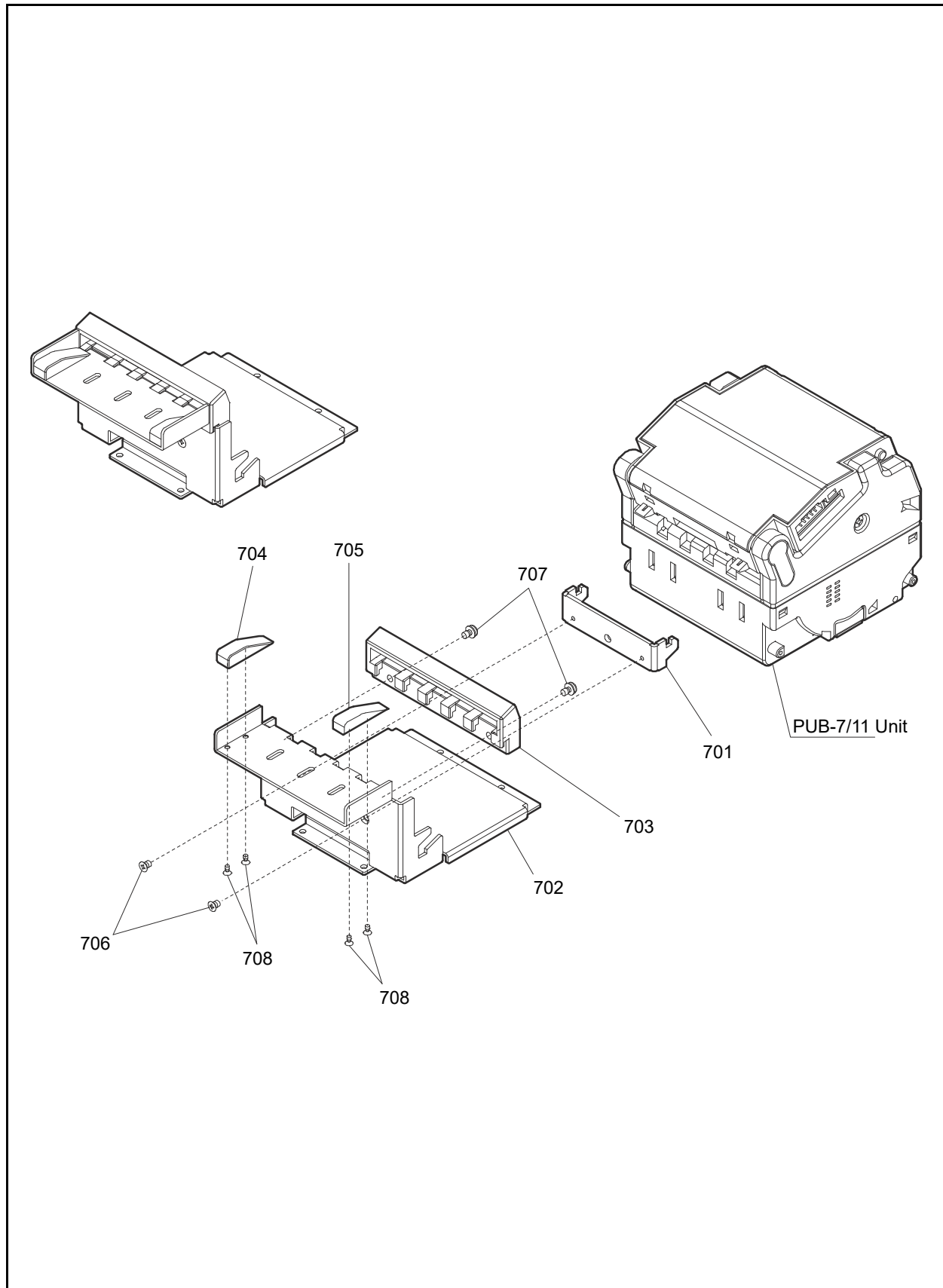


Figure 7-8 Taiko EBA Type Bezel Unit Exploded View

Taiko EBA Type Bezel Units Parts List**Table 7-8** Taiko EBA Type Bezel Units Parts List

Ref No.	EDP No.	JAC Part No.	Description	Qty	Remark
701	127556		Face Fix Hook	1	
702	187815		EBA Type Bezel A	1	
703	187817		EBA Type Bezel B	1	
704	187819		Guide 68 L	1	
	187822		Guide 71 L	1	Width 71
	187824		Guide 76 L	1	Width 76
705	187821		Guide 68 R	1	
	187823		Guide 71 R	1	Width 71
	187825		Guide 76 R	1	Width 76
706	149635		M3x4 Flat Small Head Screw	2	
707	001767		M3x5 Screw with Washer (Small)	2	
708	131154		2x4 Phillips, Self Tapping, Flat Screw	4	

Taiko™ Series

Banknote Acceptor

Section 8

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Banknote Acceptor

Appendix A

A TROUBLESHOOTING

This section provides Troubleshooting instructions for the Taiko™ Banknote Acceptor (PUB-7/11) Series. This section contains the following information:

- Introduction
- Troubleshooting Overview
- Fault Table Listings
- Usage Specifications
- Error Codes and Conditions.

Introduction

Most Banknote Validator failures are due to minor causes. Before replacing any parts, make sure that all assembly and Circuit Board Connectors are properly fitted and the Harnesses are properly connected.

Faulty Banknote acceptance by the Validator portion of the Unit is often caused when dust or Iron powder adheres to the Identification Sensor, Magnetic Sensor or Transport Belt. Clean the Acceptor section first, then observe the operating state of the Validator in detail when re-initializing power. This observation is important in locating any failure

causes and the possible fault area. If the Validator Head has to be repaired by disassembling it, always re-calibrate the Sensors following a repair. Perform all repairs by referring to Calibration and Testing in Section 6 of this manual, and Disassembly/Reassembly in Section 4 of this manual.

Troubleshooting Overview

This product allows the operator to perform fault diagnosis by checking various fault Table listings against the symptom, and survey the cause(s) of any failure occurrences during the process.

After determining the cause of the failure, execute the Performance Test, perform a Sensor re-adjustment and then repair the Unit by replacing any appropriate parts deemed necessary.

Fault Table Listings

Table A-1 through Table A-3 each lists the various possible Taiko fault conditions that can occur and the necessary actions required to correct them.

Table A-6 lists the Red LED Color Flash Error Code that may occur during normal and dynamic testing operations.

Table A-1 General Fault Conditions

Symptoms/Error Messages	Possible Fault Causes	Corrective Action Required
Banknote Acceptor is not working (does not accept any Banknotes).	Power is not supplied to the Acceptor	Verify that the specified Voltage and Ground Connections are supplied to appropriate Pins of the Interface Connector.
	Incorrect Connection	Verify that all Harnesses and Connectors are properly fitted. Verify if any Connector Pins are bent, missing, or broken. Verify if the specified Voltage is being supplied to the appropriate Pin (See "Power Harness Wiring Procedure" on page 2-2 of Section 2 in this Service Manual).
	Correct Software is not downloaded	Download the appropriate Software to the Taiko Unit (See "Software Downloading Procedure" on page 6-1 of Section 6 in this Service Manual).
	CPU and/or Sensor Board Failure	Perform the Acceptance Test (See "Performance Test Diagnostics" on page 6-6 of Section 6 in this Service Manual). If the Acceptance Test result is unacceptable, replace the CPU and/or Sensor Circuit Board (See "CPU Circuit Board Removal" and "Sensor Circuit Board Removal" on page 4-3 of Section 4 in this Service Manual). Once the CPU/Sensor Board is replaced, perform a complete Calibration Procedure (See the "Calibration Procedure" on page 6-5 of Section 6 in this Service Manual).
	The Entrance Sensor is not working or there is a foreign object lodged within the entrance area	Remove ANY foreign objects in the Transport Path and clean the Entrance Sensor (See "Cleaning Procedures" on page 2-6 in Section 2 of this Service Manual). Perform the Aging Test (See No.3 "Aging Test Procedure" on page 6-6 in Section 6 of this Service Manual). If any Sensor error is detected, replace the CPU/Sensor Board (See "CPU Circuit Board Removal" in Section 4 of this Service Manual).

Table A-1 General Fault Conditions (Continued)

Symptoms/Error Messages	Possible Fault Causes	Corrective Action Required
Banknote jams occur often	A Feed or Pinch Roller is soiled or broken	Clean the Feed or Pinch Roller (See "Cleaning Procedures" on page 2-6 in Section 2 of this Service Manual). If any roller damage is found, replace the defective Roller; then perform the "Sensor Circuit Board Removal" on page 4-3 of Section 4 in this Service Manual.
	The Feed or Pinch Roller Spring is missing or loose	Examine the Feed and/or Pinch Roller Spring's condition and replace it as required if damage or fatigue is noted.
	A foreign object exists on the Transport Path	Remove ANY foreign object(s) found on the Transport Path and clean the path (See "Clearing a Banknote Jam" on page 2-2 of Section 2 in this Service Manual).
	Incorrect Bezel width for Banknote being inserted	Change the Bezel Guide to represent the correct Banknote width specification (See "Installing the PUB-7/11 Taiko Bezel" on page 2-1 of Section 2 in this Service Manual).
	The Banknote width is 83mm or larger or 62mm or smaller (Out of Taiko Design Specification)	Use only the acceptable Banknote width ("Technical Specifications" on page 1-6 of Section 1 in this Service Manual).
Acceptance rate is low	Rollers, Belts and Lenses are soiled with dirt	Clean the Rollers, Belts and Lenses ("Cleaning Procedures" on page 2-6 in Section 2 of this Service Manual, and perform the "Calibration Procedure" on page 6-5 in Section 6 of this Service Manual).
	Sensors need adjustment	Adjust the Taiko Unit Sensors (See "Cleaning Procedures" on page 2-6 in Section 2 of this Manual and perform the "Calibration Procedure" on page 6-5 of Section 6 in this Service Manual).
	Taiko unit has not been adjusted following disassembly	Readjust the Taiko Unit (See "Cleaning Procedures" on page 2-6 in Section 2 of this Service Manual and perform the "Calibration Procedure" on page 6-5 in Section 6 of this Service Manual).
	The Software revision is out of date	Download and install the latest Software Program (See "Software Downloading Procedure" on page 6-1 in Section 6 of this Service Manual).
	The Software program for the Banknote inserted is not supported	Verify if the denomination's value issued year is appropriate for that specified in the specific Country's Software Information Sheet (See Table 1-2, "Taiko PUB-7/11 Technical Specifications," on page 1-6 of Section 1 in this Service Manual).
All Banknotes being returned	The Loaded Software does not match the currency being validated	Download the appropriate Software program to the Taiko Unit (See "Software Downloading Procedure" on page 6-1 in Section 6 of this Service Manual).
	DIP Switch Settings are wrong	Reset the Acceptance DIP Switch settings correctly and reapply power to the Unit (See "DIP Switch Configurations" on page 2-3 in Section 2 of this Service Manual).
	The Host Command is set to "inhibit" Mode	Reset the Host Command to the "Accept" Mode.
	A CPU/Sensor failure has occurred	Replace the CPU and/or Sensor Circuit Board (See "CPU Circuit Board Removal" and "Sensor Circuit Board Removal" on page 4-3 of Section 4 in this Service Manual). Once the CPU/Sensor Board is replaced, perform a complete Calibration Procedure (See "Calibration Procedure" on page 6-5 in Section 6 of this Service Manual).
	Sensors needs to be cleaned and readjusted	Readjust the Taiko Unit Sensors (See "Cleaning Procedures" on page 2-6 in Section 2 of this Service Manual and perform the "Calibration Procedure" on page 6-5 in Section 6 of this Service Manual).
Motor rotates a few times and stops	CPU Circuit Board failure	Replace the CPU Circuit Board (See "CPU Circuit Board Removal" procedure on page 4-1 of Section 4 in this Service Manual).
	DIP Switch Settings are wrong	Reset the Acceptance DIP Switch settings correctly and reapply power to the Unit (See "DIP Switch Configurations" on page 2-3 in Section 2 of this Service Manual).
Can not enter the TEST mode.	A DIP Switch is suspect as broken	Perform the "DIP Switch Tests" on page 6-6 of Section 6 in this Service Manual. If the DIP Switch Test result is good, replace the CPU Circuit Board (See "CPU Circuit Board Removal" procedure in Section 4 of this Service Manual). Once the CPU Circuit Board is replaced, perform a complete Calibration Procedure (See "Calibration Procedure" on page 6-5 in Section 6 of this Service Manual).
	CPU Board failure.	Replace the CPU Circuit Board (See "CPU Circuit Board Removal" procedure in Section 4 of this Service Manual). Once the CPU Circuit Board is replaced, perform a complete Calibration Procedure (See "Calibration Procedure" on page 6-5 in Section 6 of this Service Manual).

Table A-2 Adjustment Fault Conditions

Symptoms/Error Messages	Possible Fault Causes	Corrective Action Required
Adjustment Error	Wrong Reference Paper being used	Use the correct KS-070 or KS-88 specified Reference Paper for calibrating the Taiko Unit.
	CPU and/or Sensor Board Failure	Replace the CPU Circuit Board (See "CPU Circuit Board Removal" procedure in Section 4 of this Service Manual). Once the CPU Circuit Board is replaced, perform a complete Calibration Procedure (See "Calibration Procedure" on page 6-5 in Section 6 of this Service Manual).

Table A-3 Communication Fault Conditions

Symptoms/Error Messages	Possible Fault Causes	Corrective Action Required
Cannot communicate with the Host Machine.	DIP Switch settings are incorrect	Set all DIP Switches to OFF and re-apply power to the Taiko Unit.
	Connectors are off or loosely fitted	Firmly re-seat all of the Communication Connectors.
	Damaged Connector Pin(s)	Check for any bent, missing or damaged Pins in the Connector Plugs and mating Receptacles. Straighten or replace Pins or the entire Connector.
	CPU and/or Sensor Board is corrupted	Replace the CPU and/or Sensor Circuit Board (See "CPU Circuit Board Removal" and "Sensor Circuit Board Removal" on page 4-3 of Section 4 in this Service Manual). Once the CPU/Sensor Board is replaced, perform a complete Calibration Procedure (See "Calibration Procedure" on page 6-5 in Section 6 of this Service Manual).
	Incorrect Interface	Verify that the correct interface between the Host Machine and the Banknote Acceptor is being used. If wrong, reset the Interface DIP Switches accordingly ((See "DIP Switch Configurations" on page 2-3 in Section 2 of this Service Manual).

Table A-4 Taiko Usage Specification (Part 1)

				EDP No. →		110871	139230	131655	110904	196601
Function Model	Pin Assignment	Interface	Input Power Source	Barcode Sensor	ICA (OEM)	Upper Guide	Upper Guide Parallel	MAG Head Holder	MAG Head Roller	Barcode Sensor Block
PUB-7	Early Version	Serial	12V	-	-	O	X	O	O	X
	Standard	Serial	12V	-	-	O	X	O	O	X
	Standard	Serial	12V	Available	-	O	X	X	X	O
	Standard	Serial	12V	-	Available	O	X	O	O	X
	Standard	Parallel	12V	-	-	X	O	O	O	X
	Standard	Serial	12V/24V	-	-	O	X	X	O	X
PUB-11	Standard	Serial	12V	-	-	O	X	X	O	X
	Standard	Serial	12V	-	-	O	X	X	O	X
	Standard	Serial	12V	-	Available	O	X	X	O	X
	Standard	Parallel	12V	-	-	X	O	X	O	X
	Standard	Serial	12V/24V	-	-	O	X	X	O	X
	Standard	Serial	12V/24V	-	-	O	X	X	O	X

Table A-5 Taiko Usage Specification (Part 2)

EDP No. →	239656				239657	900776	130880	189072	189071	195055	131072	189305
Function Model	CPU Board Early Pin Assignment	CPU Board	CPU Board for ICA	CPU Board for 12V/24V	CPU Board for Parallel I/F	Ø2x14 Parallel Pin	MAG Board	VC/MS Board (No MAG)	VC/MS Board (With MAG)	Barcode Sensor Board	MAG Relay Harness	Power Relay Harness
PUB-7	O	X	X	X	X	Qty.2	X	X	X	X	X	X
	X	O	X	X	X	Qty.2	X	X	X	X	X	X
	X	O	X	X	X	Qty.1	X	X	X	O	X	X
	X	X	O	X	X	Qty.2	X	X	X	X	X	X
	X	X	X	X	O	Qty.2	X	X	X	X	X	X
	X	X	X	O	X	Qty.2	X	O	X	X	X	O
PUB-11	X	O	X	X	X	Qty.2	O	X	X	X	O	X
	X	O	X	X	X	Qty.2	O	X	X	X	O	X
	X	X	X	X	X	Qty.2	O	X	X	X	O	X
	X	X	O	X	O	Qty.2	O	X	X	X	O	X
	X	X	X	O	X	Qty.2	X	X	O	X	X	O

Error Codes and Conditions

Table A-6 lists the Red Error Code flash sequence definitions displayed by the Taiko Front Panel LED Indicator.

Table A-6 Red LED Error Code Flash Definitions

Red Flashes	Error Indicated
2	ROM Error
3	Banknote Jam inside Ejection Slot
4	Banknote remains inside Transport Path
5	EEPROM Read/Write Error
6	Motor Error
8	Entrance Solenoid Error
9	Exit Solenoid Error
12	Sensor operation at an abnormal timing

Maintenance Equipment

This portion provides product information for the Taiko™ Maintenance Equipment.

Taiko Maintenance Equipment

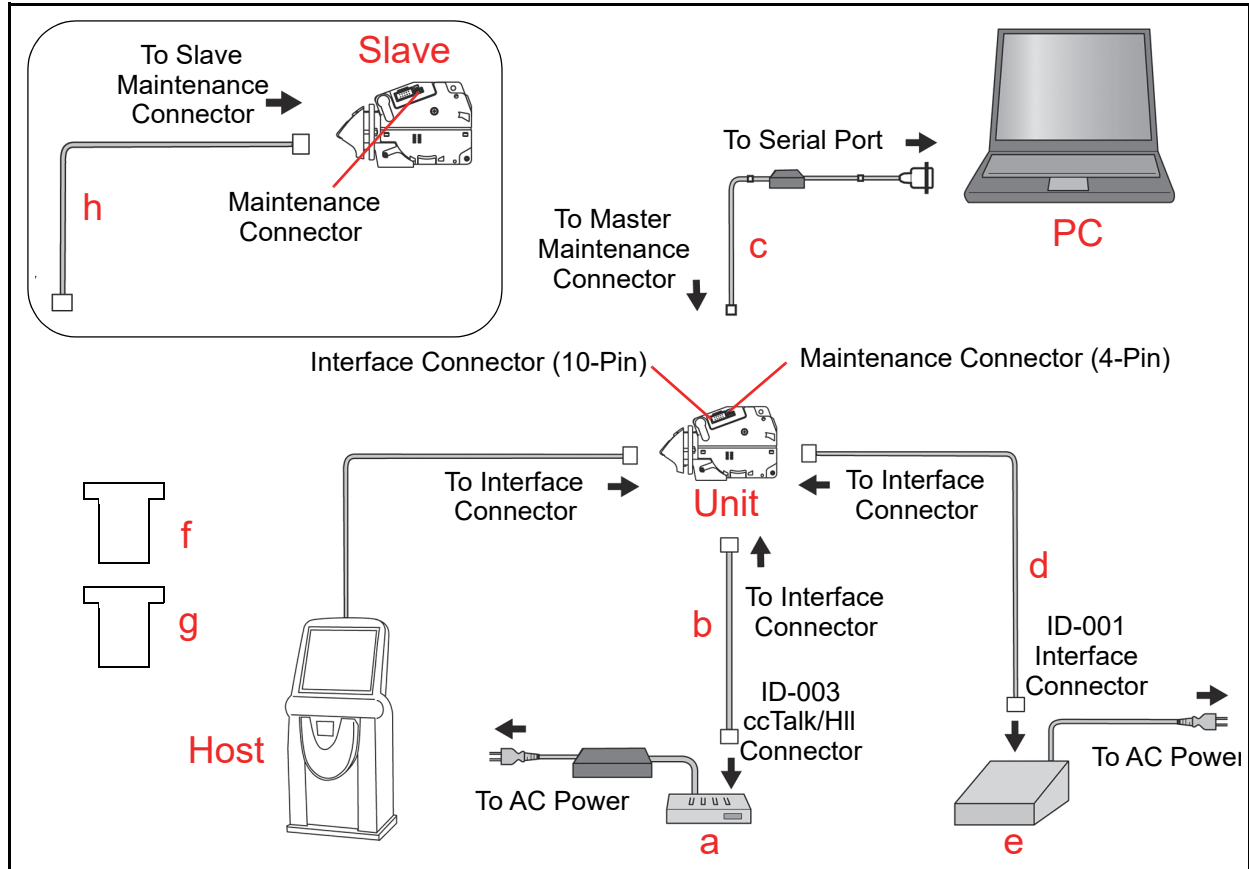


Figure A-1 Additional Maintenance Equipment Requirements

Table A-7 Additional Maintenance Equipment Parts List

Ltr.	EDP No.*	JAC No.	Description	Qty.	Remark
a	116125	501-000187RA	JCM Power Supply	1	Or VM-30, UAC and equivalent
	G00176			1	
	G00205	701-100104R		1	
b	127527	400-100551RA	Taiko Harness A	1	Included in JCM Power Supply
	G00183			1	For ID-003
	G00182			1	For ID-0E3
c	116488	400-100573RA	Taiko Harness B	1	
d	139571	400-100843RA	VM-450 Harness	1	For ID-001
e	059307	501-000026R	VM-450 Unit	1	For ID-001
f	199581	501-000186RA	KS-070 Reference Paper	1	For ID-001
g	197917	501-100256R	KS-088 Reference Paper	1	
h	124528	400-100589RA	Clone Harness	1	

*. A Product EDP Number that begins with a "G" is a Product developed by JCM-E Germany.

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Taiko™ Series

Banknote Acceptor

Appendix B

B GLOSSARY

A

1 **Acceptor**

a term used to identify a number of devices used to validate and accept Banknotes, then communicate the acceptance results to a host machine ...1-1

2 **Anti-stringing Mechanism**

a method of preventing Banknotes from being illegally removed from a validator using a string or wire to retrieve it once it has been accepted by the Unit ...1-6

B

3 **Bezel**

The Banknote input portion of a Taiko PUB-7/11 Unit ...2-1

D

4 **DIP Switch**

acronym for a Dual In-line Package Switch - a Printed Circuit Board mountable two-position Slide Switch Package containing up to 16 individual ON/OFF throw Switches ...2-3

E

5 **EEPROM**

acronym for Electrically Erasable Programmable Read-Only Memory ...6-5

I

6 **Identification Sensor**

optical sensors used for reading images on Banknotes for comparison to recorded known image information ...A-1

7 **Interface**

also abbreviated as I/F. Signifies and identifies the Circuitry and/or Protocol for a specific communications standard ...2-5

M

8 Magnetic Sensor

a Sensor used to detect the Magnetic Ink present on certain Country's Banknote denominations ...A-1

P

9 Pictograph

small internationally recognized safety and attentions Symbols placed to the left of Notes, Cautions and Warnings throughout this Manual ...1-1

10 PUB-7/11

abbreviation for PUBlic House-Type/Type. Named for the original Taiko™ Beta Test Site ...1-1

S

11 Setting Mode

various selectable Modes available for setting specific operational conditions in the Taiko PUB-7/11 Unit ...2-4



JCM
G L O B A L



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