

KWS

KIWON SYSTEM



MAR. 2010. (V.1.0)

KIWON SYSTEM

PRODUCT INTRODUCTION

FEATURES

- BIZ, a bill recognizer, can be widely used for automatic vending system
 - Vending machine, Parking ticket recognizer, computer game machine, Ticket & Note dispenser and etc.

- Anti-fishing function
 - The latest anti-fishing technology prevents all kinds of fishing.
 - Bill fishing is prevented by a shutter which corresponds to the width of currencies.

- Recognition sensor
 - By using ultraviolet, infrared and image sensor, can distinguish counterfeits and classify currencies.
 - Image sensor(CIS) can recognize coupons, merchandise bonds as well as paper money.
 - BIZ can recognize bill-box detaching.

- Compact size and simplicity
 - Simple module type construction is convenient to decomposition and assembly.
 - For small size, can be matched various size of bill-boxes and face plates.

- Easy upgrade and security
 - Programs can be upgrade by IRDA or USB memory stick.
 - Waterproof PCB, conforming to various environment standards.

SPECIFICATION

General

Acceptance speed (including stacking)	Within 3.5sec.	Including fishing detecting
Operating temperature	Temp: -15 to +60°C Relative humidity: 5~95%	Non-condensing
Storage temperature	Temp: -40 to +80°C Relative humidity: 5~100%	Non-condensing
LED indication	Green: normal state Red: abnormal state	Ordinary: SLEEP MODE
Interface	USB, IRDA, Serial, CC Talk, FTL	
Power source	DC +12 V	From main set(machine)
Power range	DC +7.5~40V	
Power consumption	Standby: ≤SLEEP MODE Operating(Max.): ≤ 1.5A	
Size	102(W)*235(D)*67(H)	
Anti-fishing	Front shutter, switching system	
Acceptable bill size	74mm X 155mm	Over 74mm - Optional
Banknote box capacity	100bills, 300bills	Optional
Audio guidance	Support	Optional
Escrow	Support	
Weight	About 1Kg	

Indicating part(Front LED)

Classification	Contents
RED blinking	Working Error
GREEN blinking	Stand by
RED on	Busy
Cross blinking	Main board Error

Bill recognizing part

Bills	All currencies, coupons, merchandize bonds in every country.
Sensor	Infrared(IR), ultraviolet, image(CIS) sensor
Bill insertion	4 way acceptance
Scanning type	CIS sensor(contact type /200DPI B/W /IR)

PRODUCT TYPE



(Standard type/ 100s banknote-box)



(300s banknote-box type)

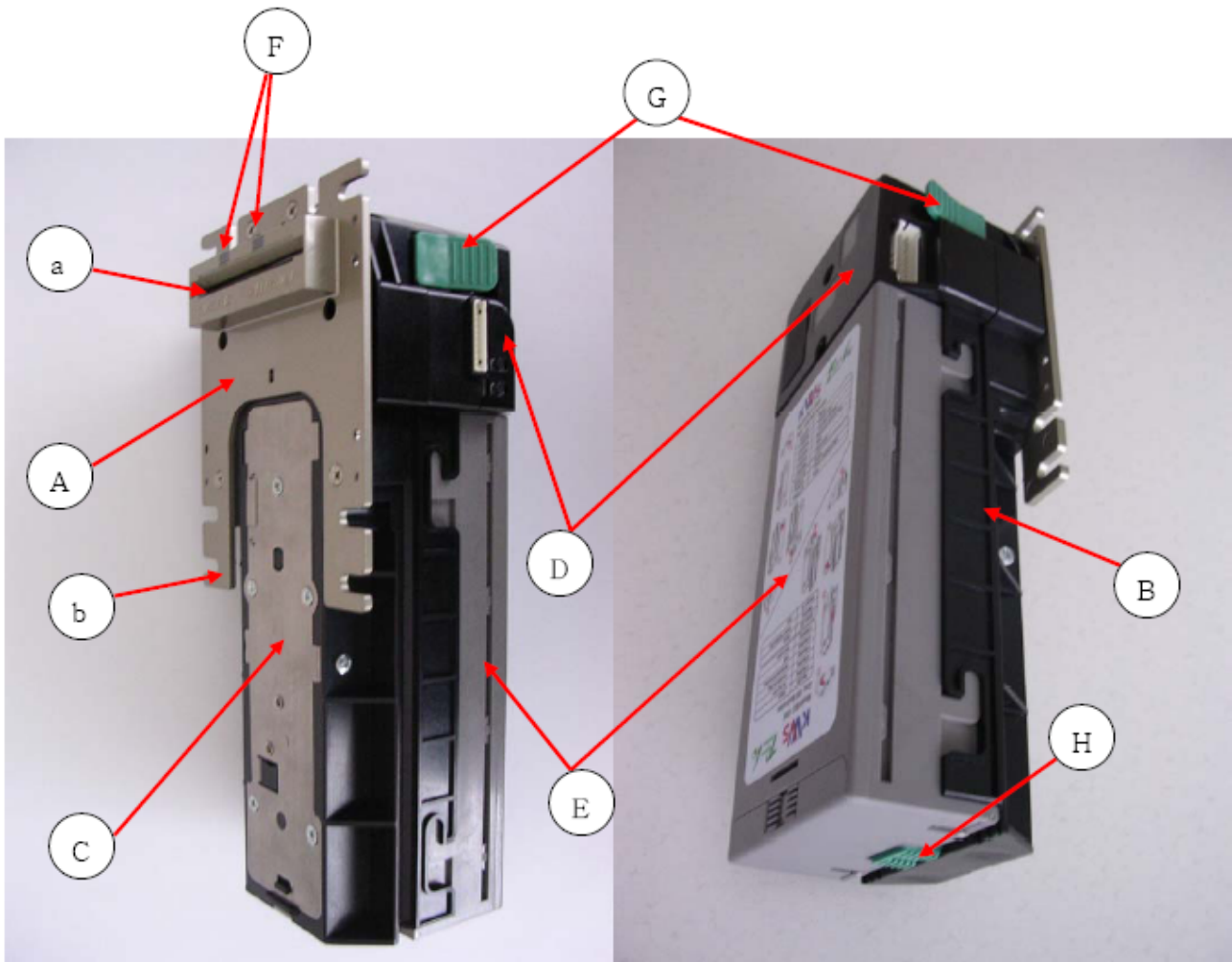


(“A face plate” type)

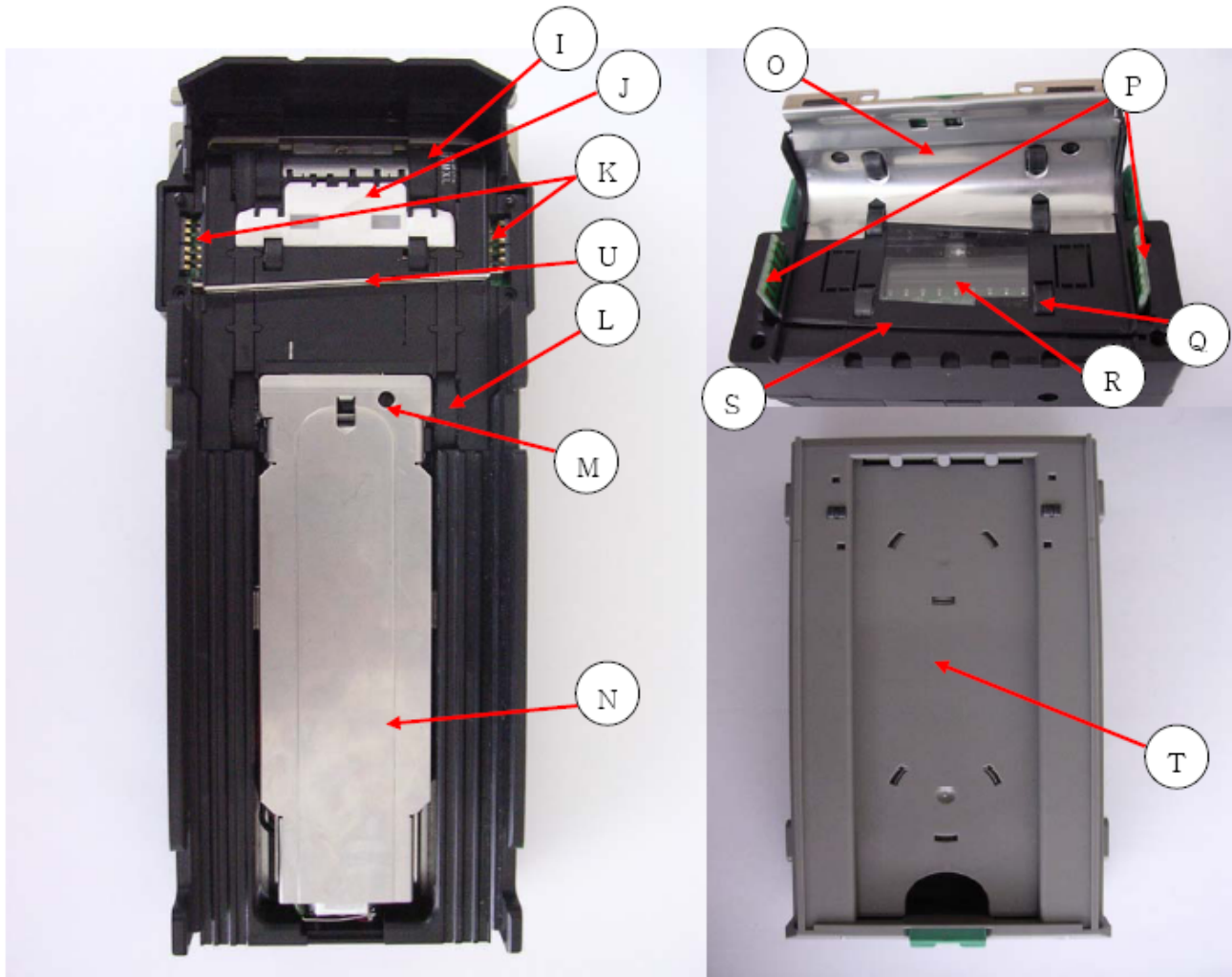


(“B face plate” type)

PART NAME & FUNCTION

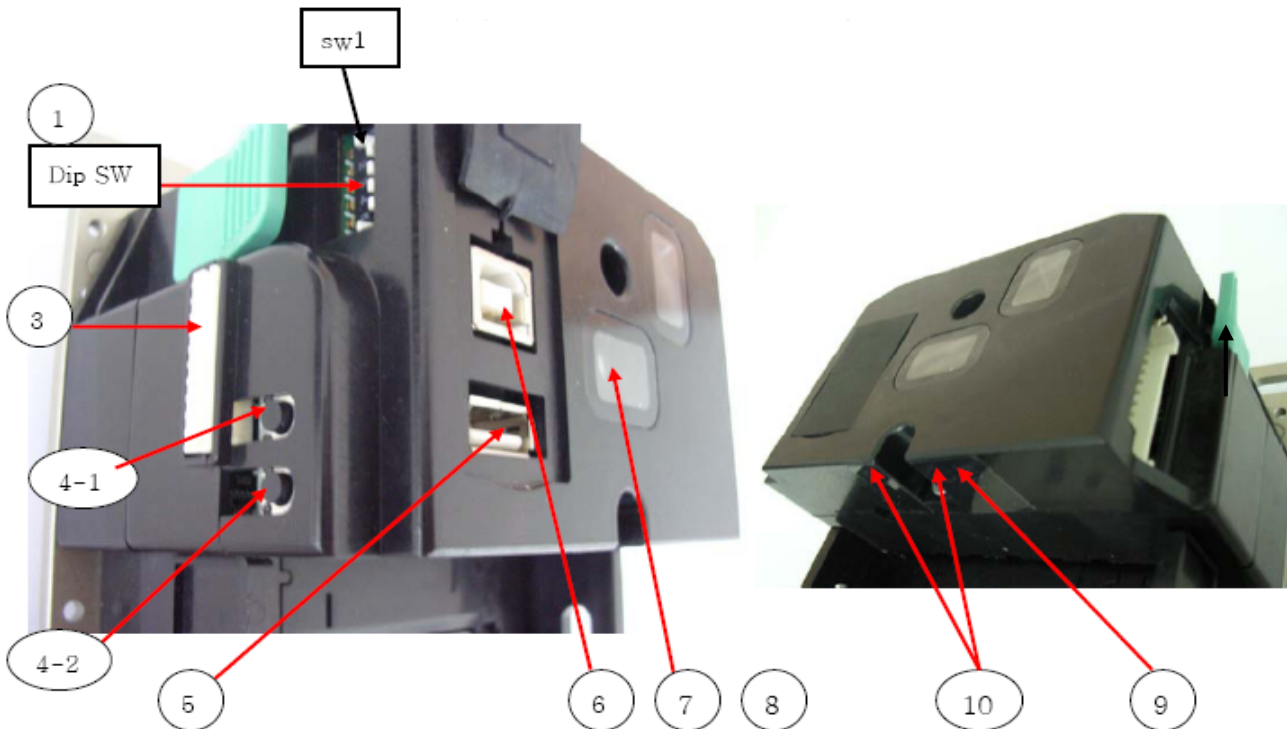


Part	Part name	Function	Remark
A	Face plate	Device fixing to main machine.	
a	Insert gate	Inserting and returning bills	74mm
b	Fix hole	Hole for fixing to main machine	8 points
B	Main frame	Fixing each unit and Face plate	
C	Lower unit ass'y	Feeding bills and assisting bill-recognition	
D	Upper unit ass'y	Recognizing, distinguishing, communicating with electronic circuit board	
E	Banknote box	Stacking bills	100s or 300s
F	Lead guide	Indicating device status	
G	Main locker	Fixing upper unit assy to frame	
H	Box locker	Fixing banknote box to frame	



Part	Part name	Function	Remark
I	Feed roller	Roller for feeding and returning	
J	CIS sensor adjust plate	Adjusting CIS sensor value	
K	Connector	Connecting to upper guide	
L	Belt	Conveying driving power	
M	End sensor	Detecting fishing and checking collection status	
N	Push plate	Pushing bills to banknote box	
O	Upper guide	Anti-knife(prevent scratch from inserting knife)	
P	PCB connector	Connecting PCB to lower guide	
Q	Pressure roller	Assisting bill feeding	
R	CIS sensor	Recognizing bills	
S	Shutter guide	Guiding shutter to check fishing	
T	Stacker plate	Guiding bills to be stacked	
U	Shutter	Distinguishing fishing bills(up-down movement)	

PART NAME & FUNCTION

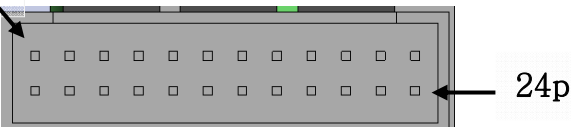


1:

DIP Switch	SW1	SW2	SW3	SW4	SW5	SW6	Remarks
Power	ON						Indoor
Sleep mode	OFF ●						Outdoor
USB Upgrade		OFF ●					
20 Euro Inhibit			OFF ●				
10 Euro Inhibit				OFF ●			
5 Euro Inhibit					OFF ●		
Debug mode						OFF ●	
●:Standard Status							

1p

2:



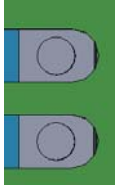
24P Connector (MDB Board to TERMINAL)							
1	Pulse In2	7	NC	13	Vcc + 3.3V	19	GND
2	Pulse In1	8	Pulse Out2	14	MDB - GND	20	MDB - Wakeup
3	NC	9	NC	15	Rs232 – RXD	21	NC
4	NC	10	Pulse Out1	16	MDB – RXD	22	MDB – GND
5	NC	11	VCC + 5V	17	Rs232 – TXD	23	NC
6	Pulse Out3	12	ccTalkData	18	MDB -TXD	24	MDB - VCC

3:



10P Connector (program input): Only use for Debug

4:



Tact switch

1	Reset	Push for 3sec.
2	Upgrade/ Boot loader mode	Push for 3sec.

5:



USB-B type port: Firmware upgrade/Communication with PC

6:



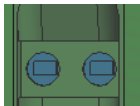
USB-A type port: Insert USB memory stick and Upgrade

7:



IRDA

8:



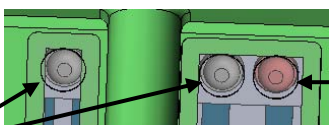
RED LED: Error Indicator

1 sec flashing	Sensor Error
2 sec flashing	Cassette Nothing
3 sec flashing	Cassette Full Error
4 sec flashing	Jam Error
5 sec flashing	Stacker Error
6 sec flashing	Shutter Error
6 sec flashing	Sub-Board Nothing
6 sec flashing	Motor Error
Always On	Upgrade Mode

GREEN LED: BIZ Status

Flashing	Stand by
Always On	Busy

9,10:



9

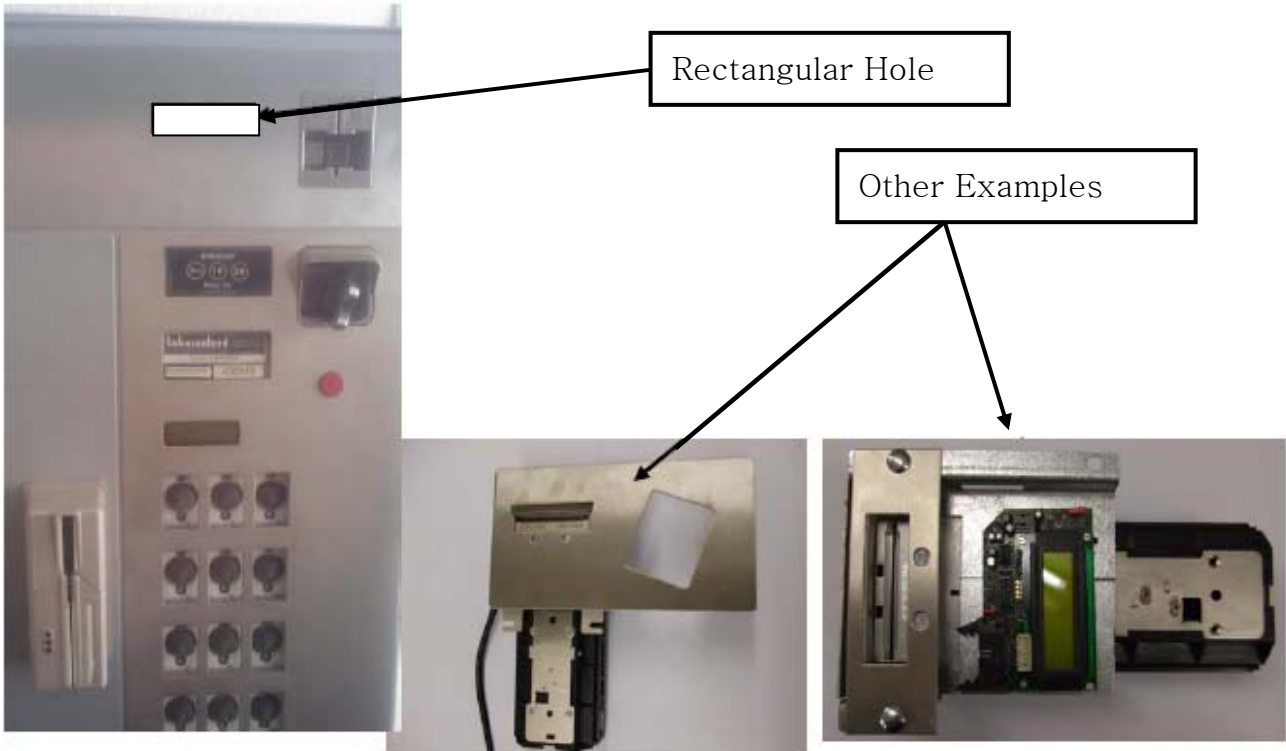
10

IR sensor

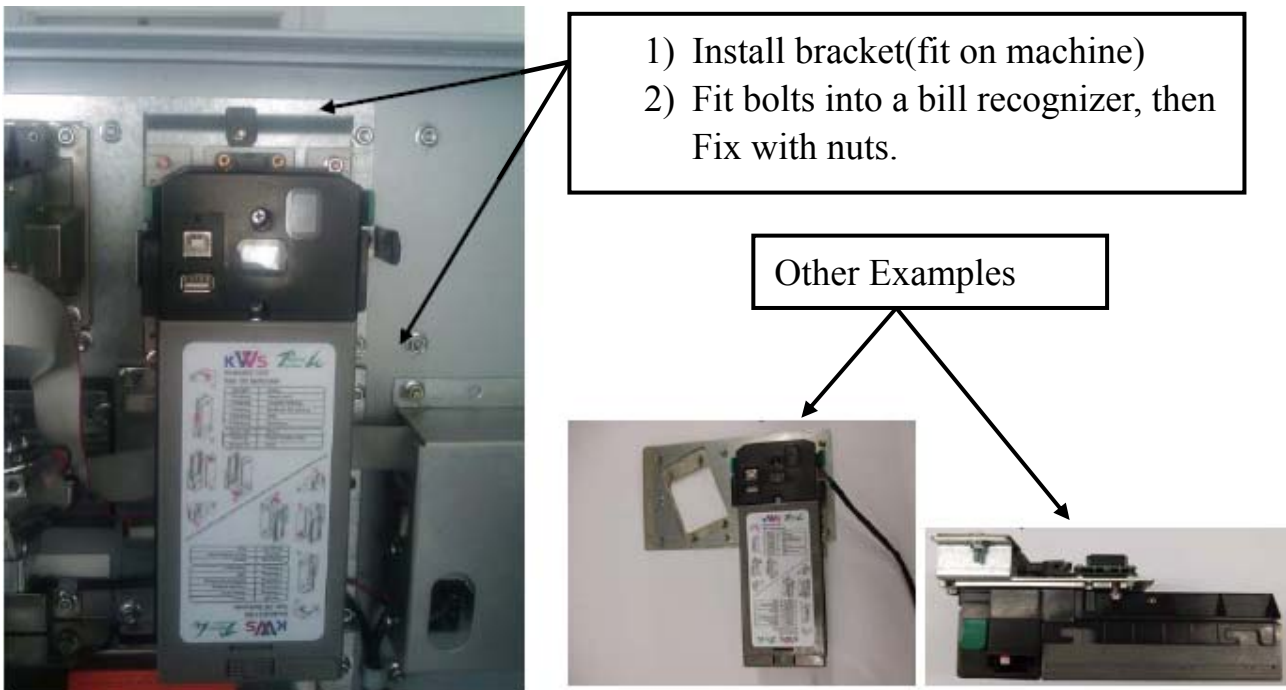
9	Tx	Stacker sensing
10	Rx	Stack full sensing

INSTALLING (standard type)

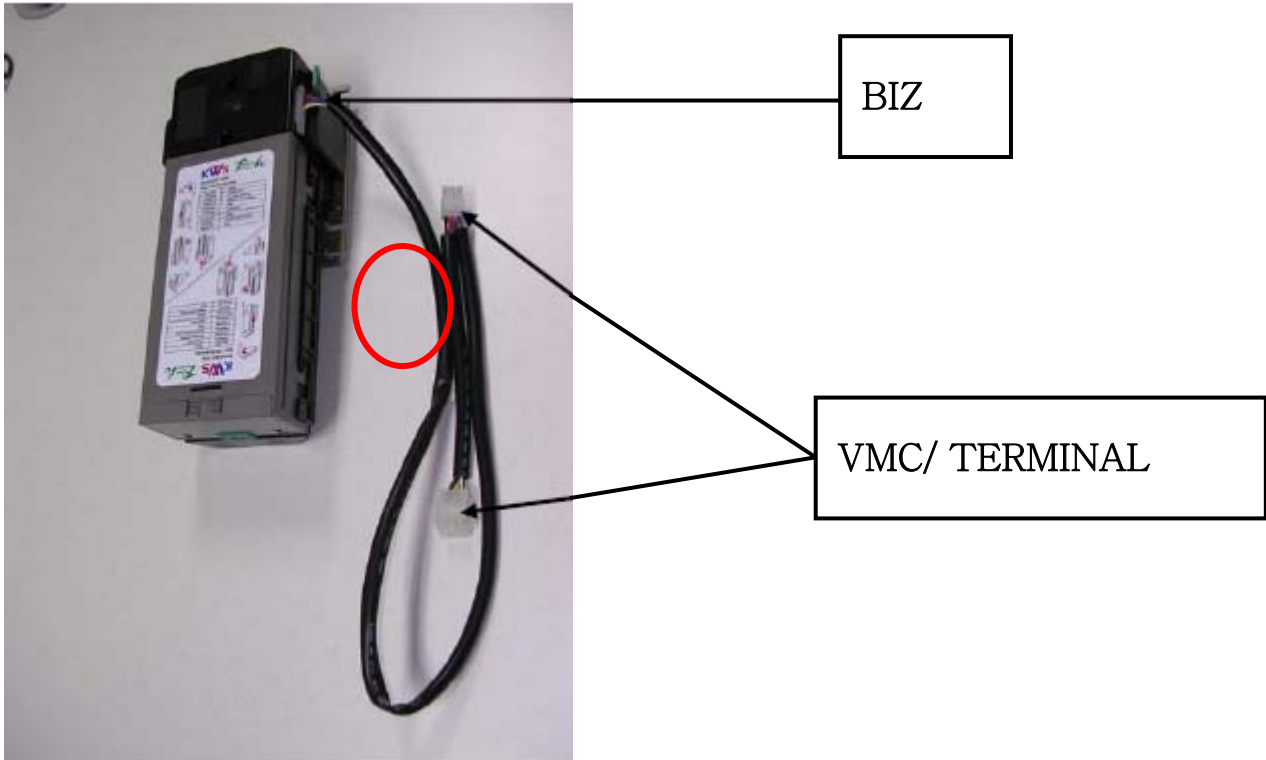
1. Make a hole to meet with size at the point of installing insert gate.



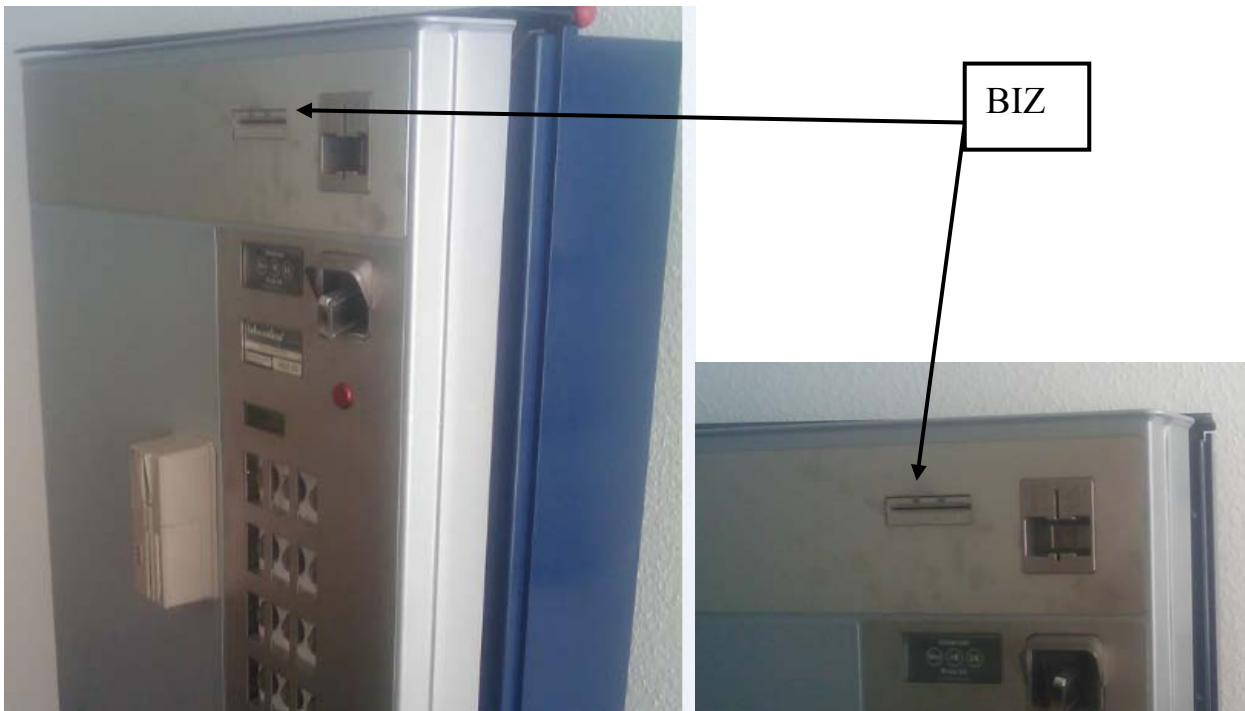
2. After installing bracket, fix a bill recognizer.



3. Connect MDB Cable.



4. After setting up, test operating status by inserting bills.



INSTALLING (A type)

: Before fixing on machine, fix A type's one to standard type plate.



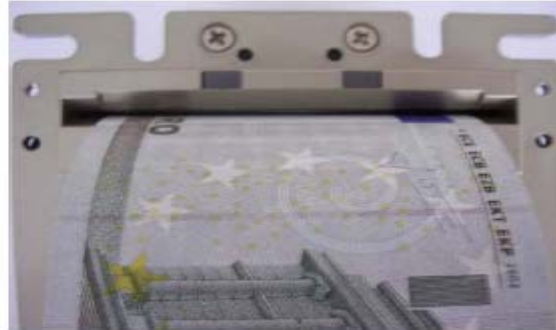
INSTALLING (B type)

: Before fixing on machine, fix B type's one to standard type plate.



INSERTING BILLS

Insert bills into insert gate and check “Green LED” blinking.



<Matters that require attention when insert bills>

1. Please insert bills in the middle of insert gate.(especially narrow bills, eg: €5)

* If inserted with inclining to one side, sensor could not recognize.



(correct)



(wrong)

2. Please unfold and flatten bills (especially check edge part)

* If folded or got loosed bills are inserted, sensor could not recognize.



3. Worn-out or folded bills would cause bill- entangling or stalling.

4. If a fishing-note is inserted, it is going to be returned automatically.



Fishing Tape

SOFTWARE UPGRADE

<Using USB memory stick>

1. Make a KWS folder and Download S/W in USB memory stick from homepage or e-mail.
2. Check Red LED On, with pushing lower button for 3sec.
3. Connect USB memory stick.



4. Check blinking of Red LED and Green LED in turn. If it doesn't work, disconnect USB and connect again.



5. After check LED status(blinking for 2sec in turn), disconnect USB memory stick.

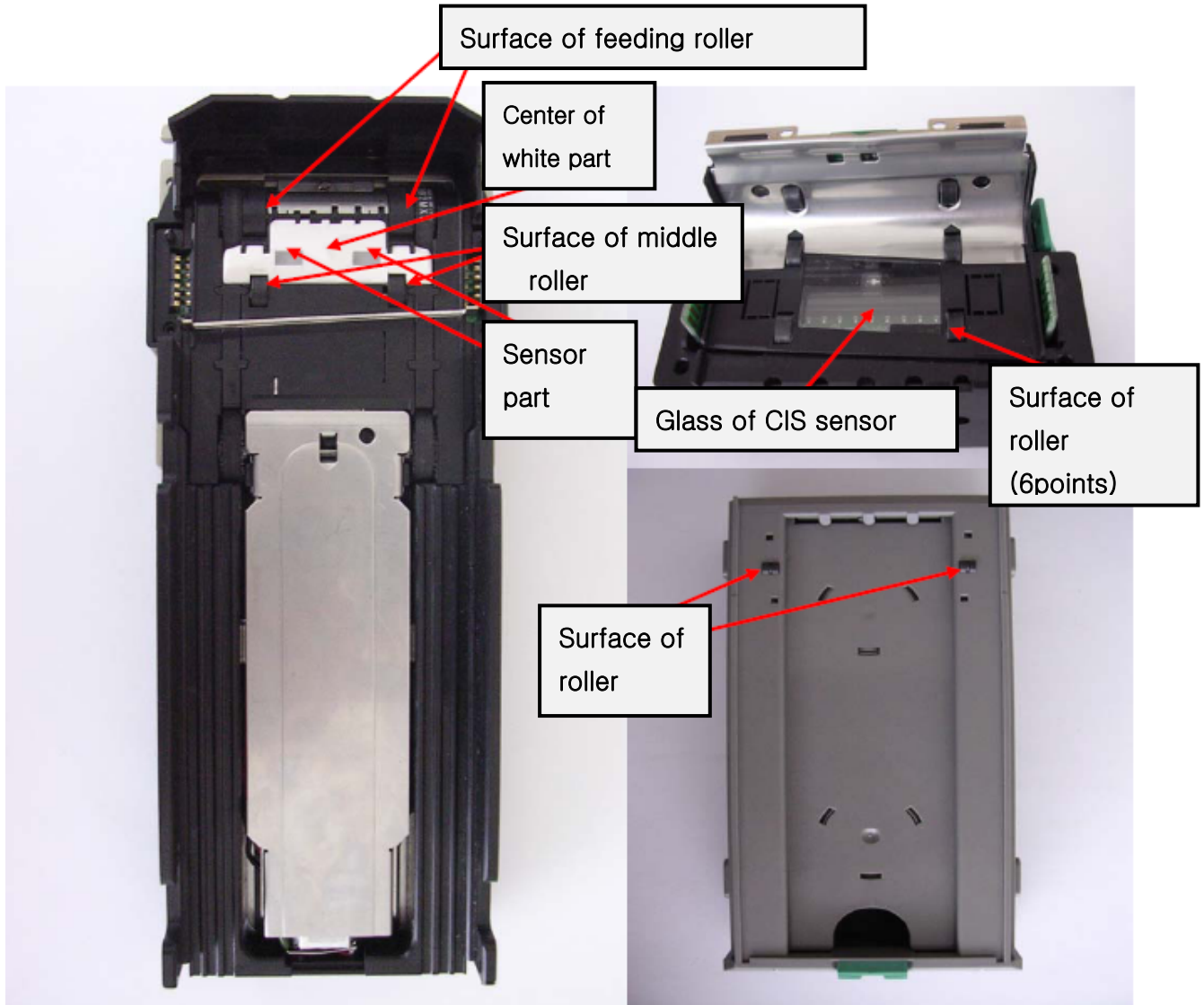


<Using IRDA >

Upgrade using a IRDA device.

CLEANING

When acceptance rate is going down or bill-stalling happens often, please clean bills recognizer as followings.

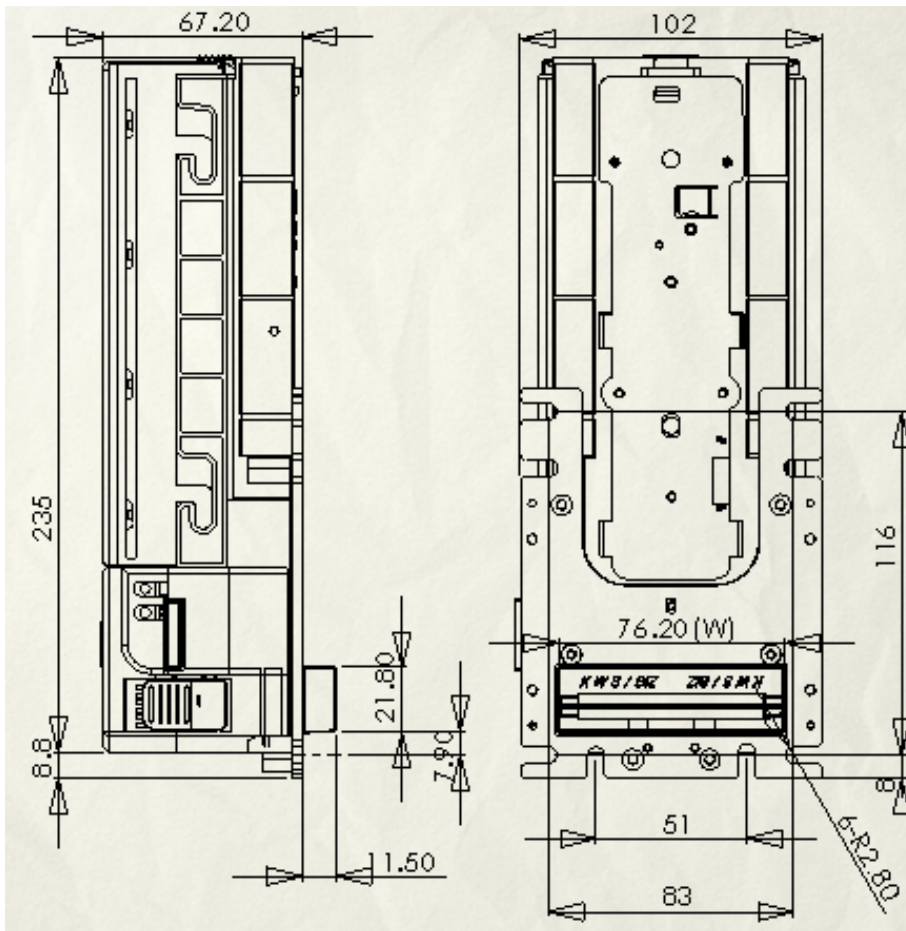


1. Like as above picture, disassemble each unit,
2. After checking status of pollution in arrow-pointed parts,
3. Wipe smoothly with a alcohol-soaked fabric.

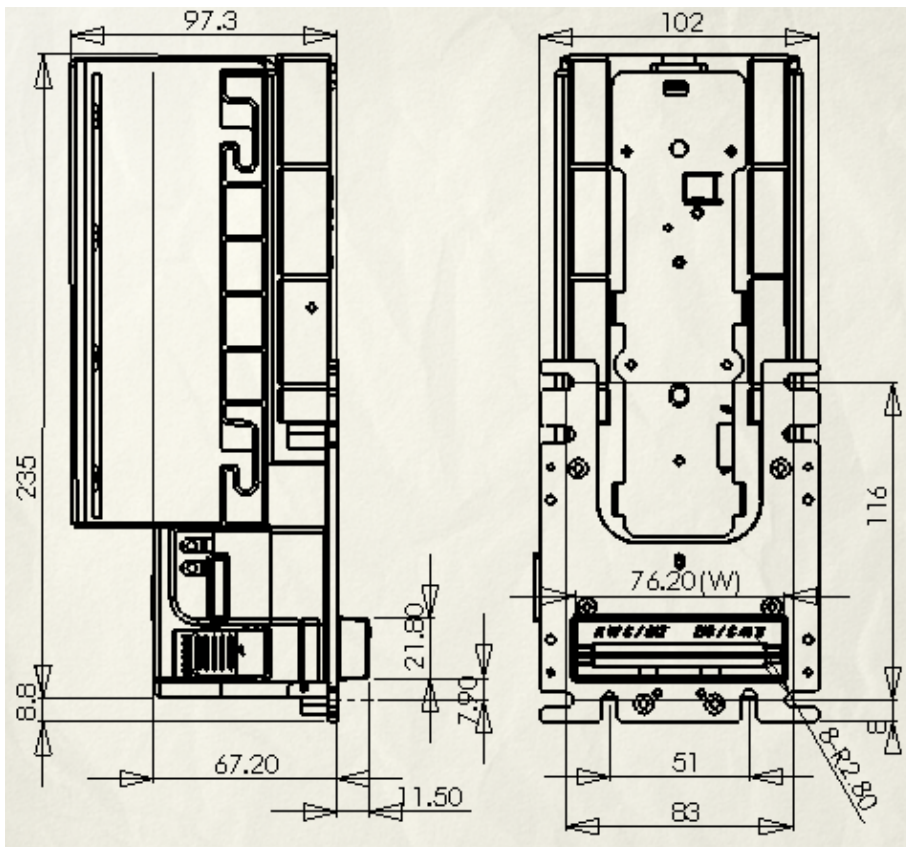
Note:

- * Do cleaning in case acceptance rate get decreased.
- * If acceptance rate was not increased after cleaning, ask for A/S.

SCHEMATIC (standard type)

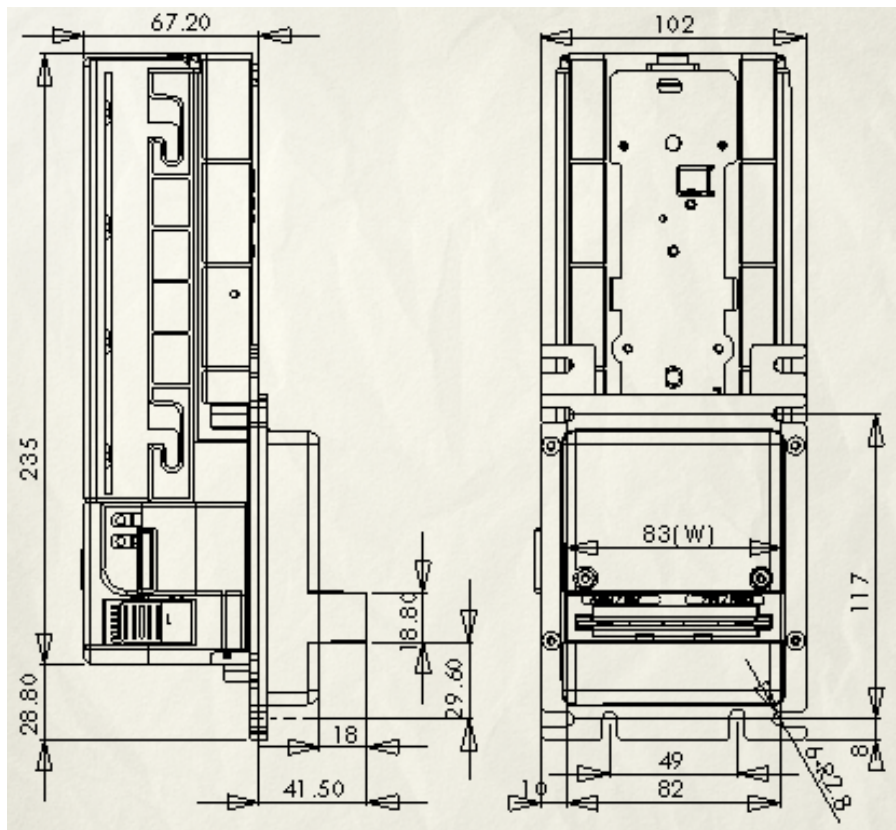


For 100 bills



For 300 bills

SCHEMATIC (A type face plate)



SCHEMATIC (B type face plate)

