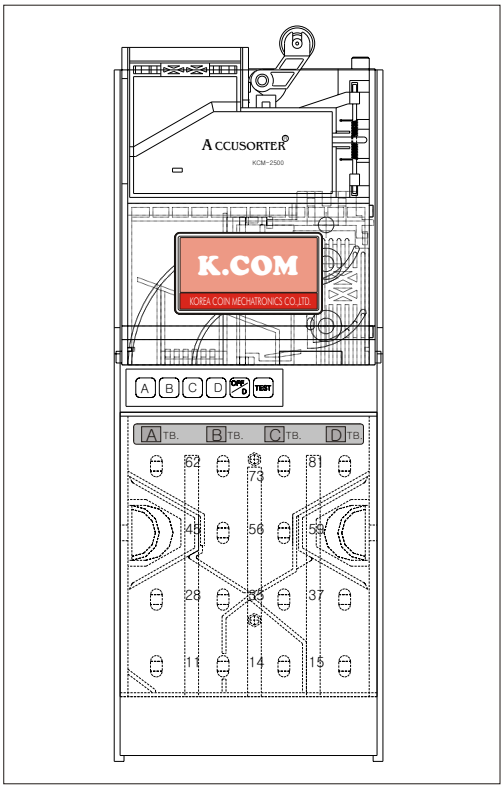
K.COM

OPERATION MANUAL

COIN MECHANISM.



Many thanks for your consideration of our **K.COM** coin mechanism.

Please read this operation manual carefully before using our mechanism.

■ CONTENTS ■

- MODEL :KCM-S2500(RUS)
  (Serial type)
- POWER : +24VDC
- POWER CONSUMPTION :
  2.4w (Waiting mode)
  7.2w (Operating mode)
- DIMENSIONS :
  W137 X D82 X H355
- WEIGHT : Approx 2.0kg

KOREA COIN MECHATRONICS CO., LTD.

INDEX

1. SPECIFICATION

1-1). GENERAL SPECIFICATION

Model : KCM-S2500(Serial type)

TYPE	DESCRIPTION
Usable coin	1,2,5Rouble
Communication	SERIAL (4800 BPS)
Maximum capacity	256Rouble
Limit for continusly inserting of same kind of coin	5R : 32EA, 2R : 32EA, 1R : 32EA
Discriminating method for coins	Electric discrimination(Diameter, Thickness, Material)
Coins for change	1,2,5Rouble
Loading capacity stock coins	5R : 73+73=146EA , 2R : 77EA, 1R : 88EA
Pay method for change	DC motor operating method (24VDC)
Electric power	+24VDC
Power consumption	Waiting:2.4W(24V, 100mA), Operating:7.2W(24V, 300mA)
Weight	Approx 2.0 Kg
Operating temperature	-15℃ ~ +60 ℃
Functions	ESCROW INVENTORY CONTROL FOR CHANGE TUBE INDI

1-2). Introduction

KCM-2500 series coin mechanism of **K.COM** is 1way~5way system and it can discriminate the eight different kinds of coin. And it have multi-functions for each condition such as **KCM-P2500** (Parallel 2Price, 6Price), **KCM-M2500** (MDB), **KCM-S2500** (VTS), **KCM-R2500** (RS232).

1-3) Features

- ⦿ Compatibility / Can be replaced by the earlier model
- ⦿ Enlarged coin storage / It can minimize lost sales by lack of changes
- ⦿ Changeable coin tube/ Corresponds to the size of inserted coins
- ⦿ Identification for foreign currency / Identify any foreign currency by their diameter & material respectively
- ⦿ Multi coin system that can discriminates seven different kinds of coins

1-4) Details of function

(1) Refuse to receive coins

① When receiving the signal of prohibiting to receive coins

② Over load of max loading capacity

③ Return change

④ Operating inventory

⑤ Operating reject lever

⑥ Occurring coin mec. error

⑦ Before initializing

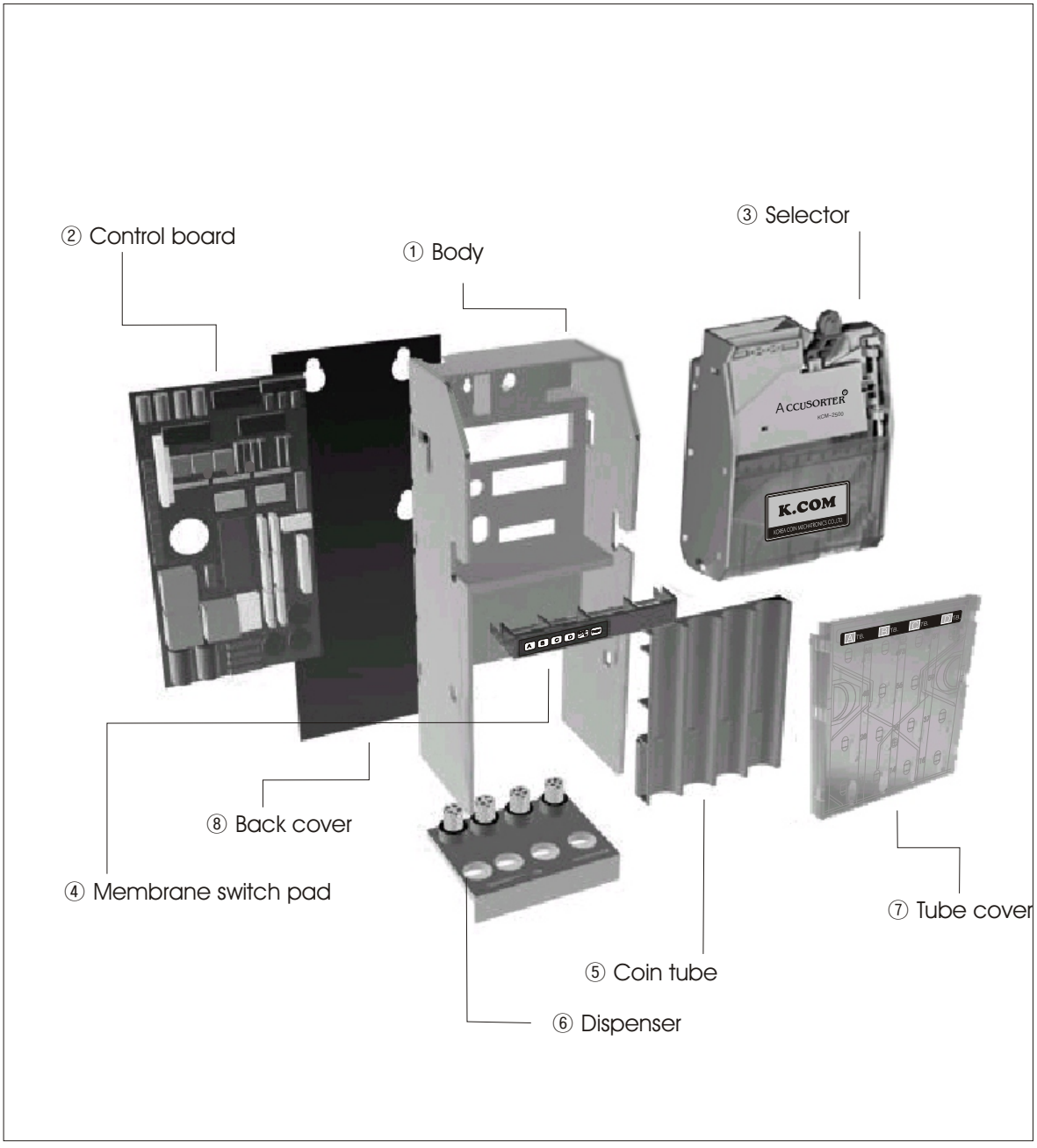
(2) Serial Interface

- Baud rate	: 4800 BPS
- Communication method	: Half duplex
- Synchronous communication	: ASYNC
- Control voltage	: DC24V
- Data frame	: 1 Start bit 8 Data bits 1 Parity bit(Even) 1 Stop bit

2.COMPOSITION OF COIN MECHANISM

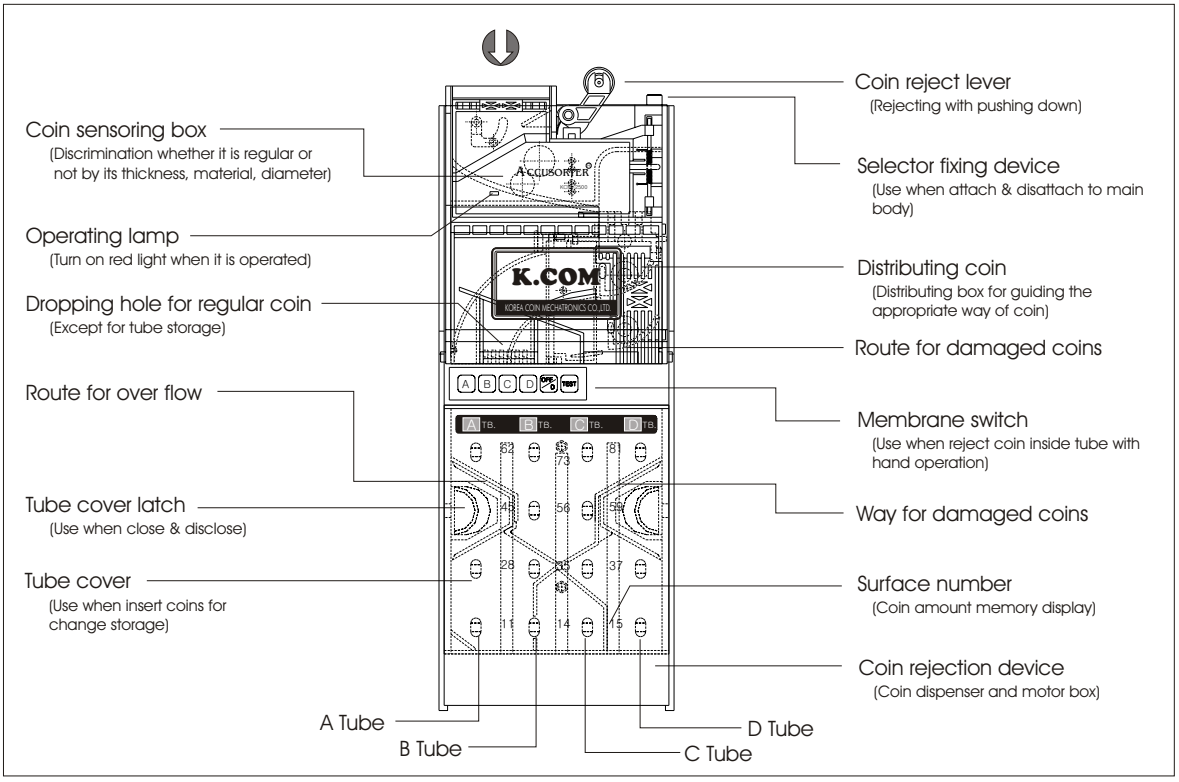
A series of **K.COM** is consist of sections for easy replacement to assemble and disassemble.

① Body
② Control board
③ Selector
④ Membrane switch pad
⑤ Coin tube
⑥ Dispenser
⑦ Tube cover
⑧ Back cover

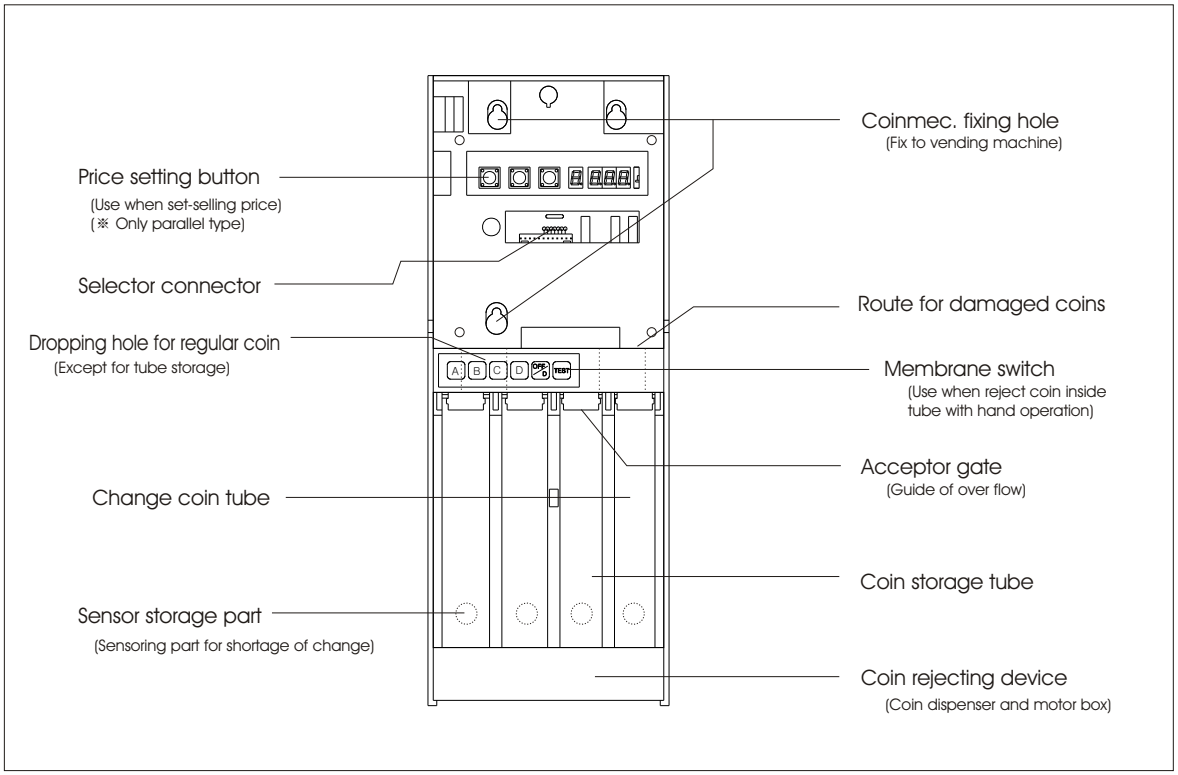


3. ASSEMBLY DRAWING AND DESIGNATION

3-1) External structure

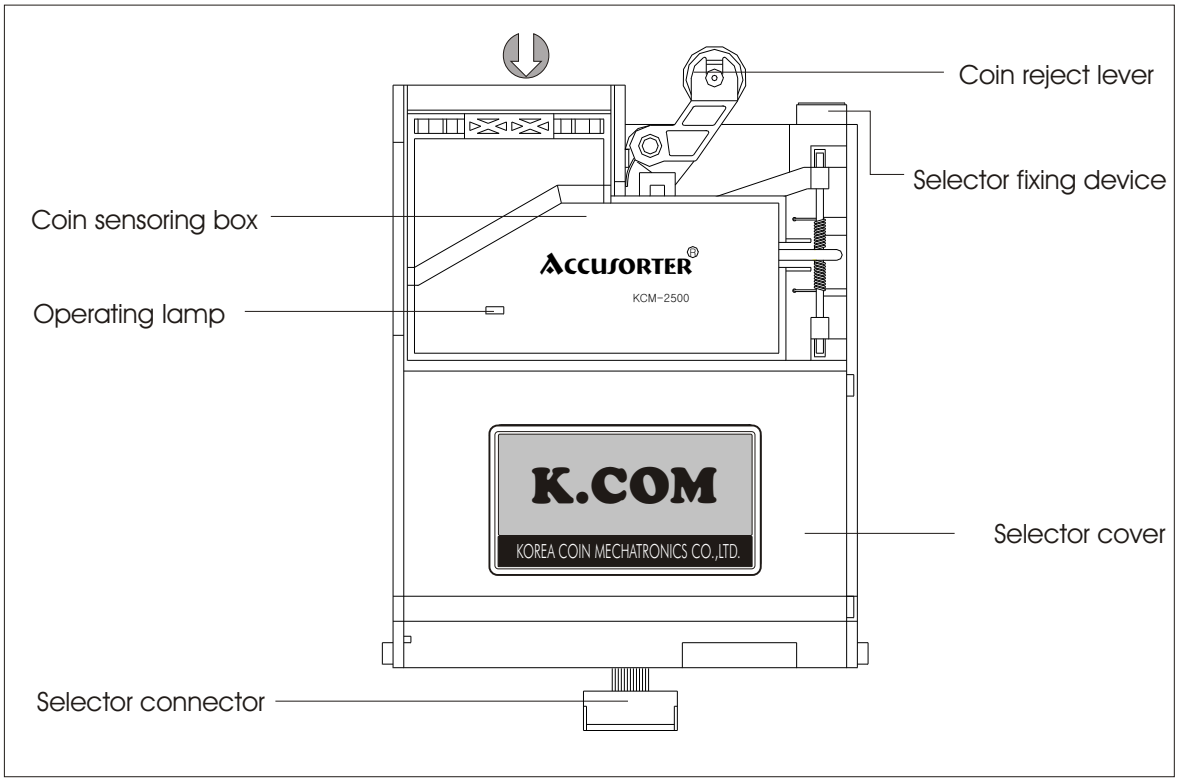


3-2) Internal structure

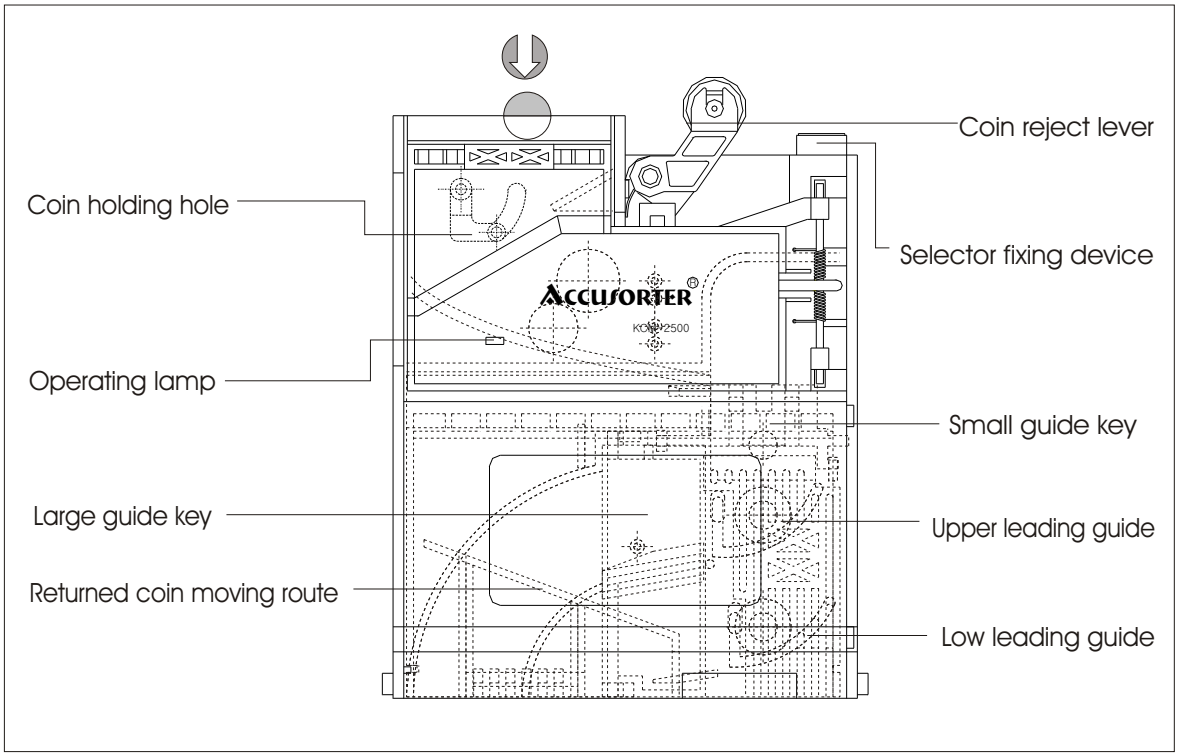


4. COIN SELECTOR

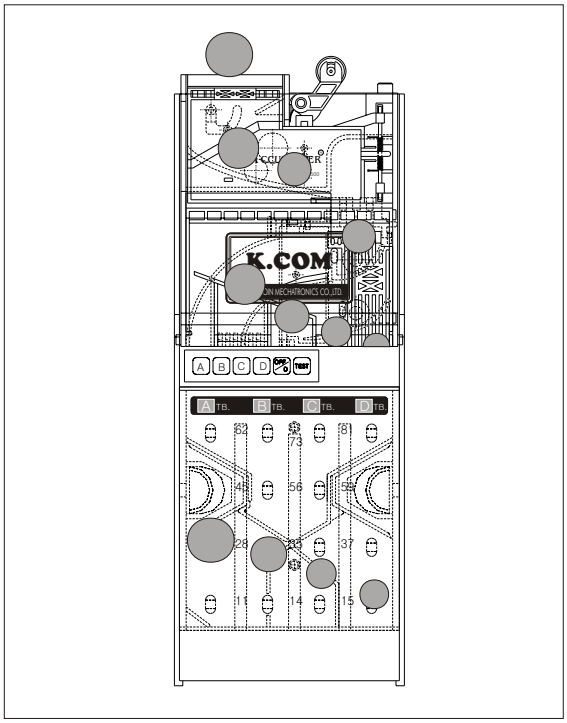
4-1) External structure



4-2) Internal structure



5. ROUTE OF COINS



5-1) Route of regular coins of A, B, C & D (stock for tube)

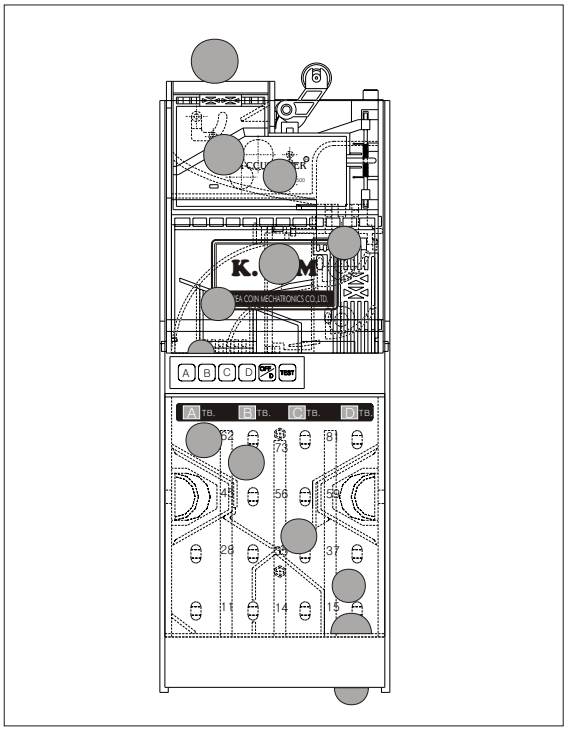
The coins A, B, C & D which are discriminated for regular coin are guided to the appropriate way of the coin A, B with opening of the small and large guide key to operate the upper leading guide.

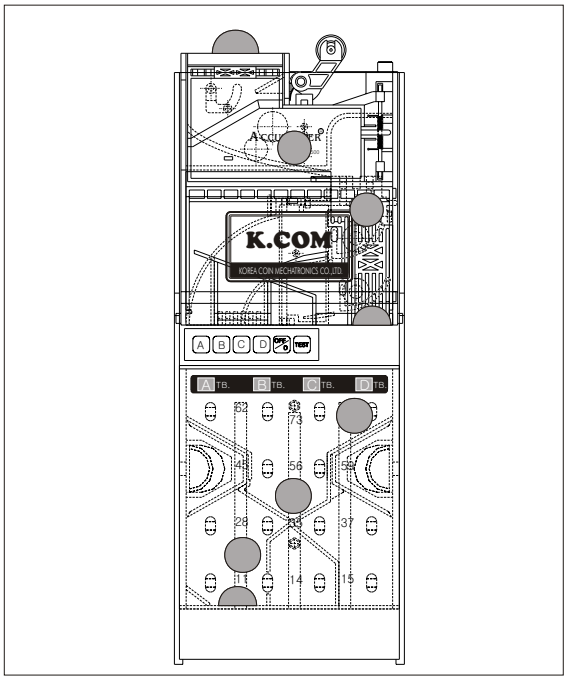
On the other hand the coins C, D are dropping through the each route of the coin A, B, C & D by the interrelation with upper and low leading guide and large guide key.

5-2) Route of regular coins of E, F, G (stock for safe)

Other coins which are discriminated for regular coins E, F, G are dropping to coin safe through the front dropping hole of the middle secting part.

It is operated by closing of large guide key and opening of small guide key.





5-3) Route of damaged coins

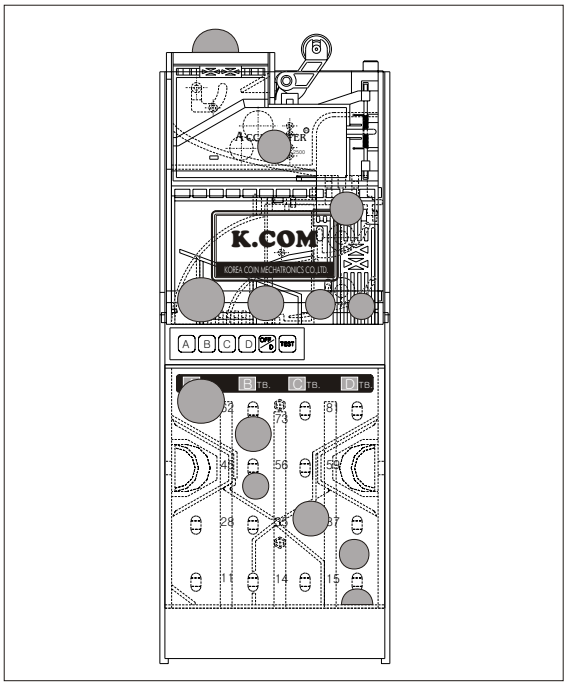
Damaged coin is different from the memory data of regular coin with it's thickness, material, diameter, so it is dropping through way of the upper cover to be dropped hole of damaged coin.

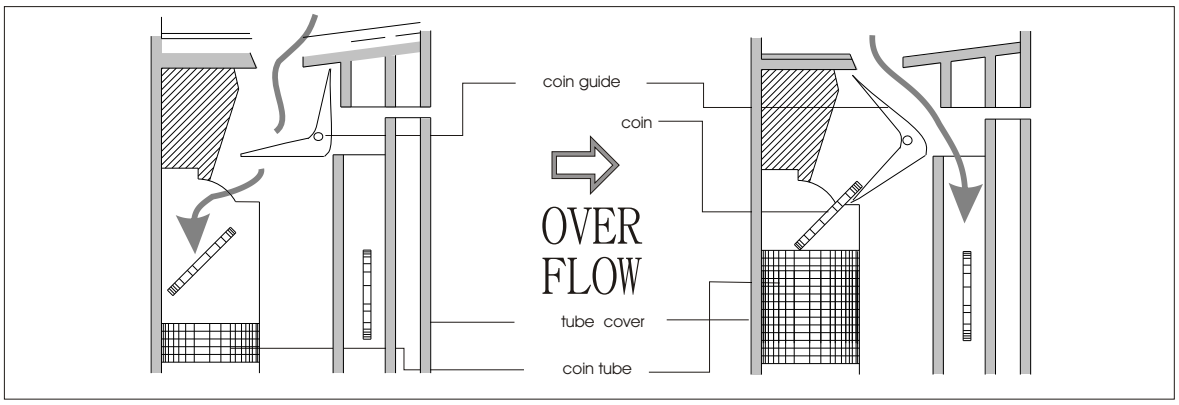
Because small guide key will not be operated.

5-4) Route of overflow

When the coin tube is full of inserted coins, the last coin is pushing down the coin guide which is attached to the bottom of coin secting part. And then the coin guide makes slide for the coins, so the following coins are dropping to safe through the route of the back of tube case cover.

Furthermore, when coins are ejected for changes, it is stacked up in tube box by restoring the position of coin guide.



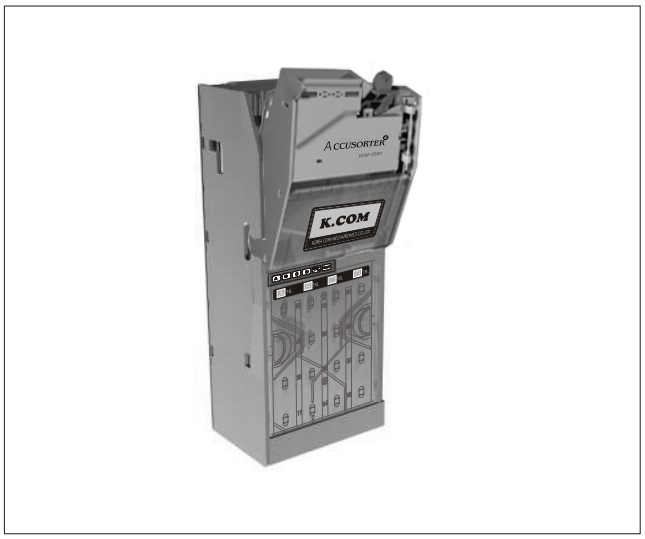


Operate of the guide of coin route

6. HOW TO USE

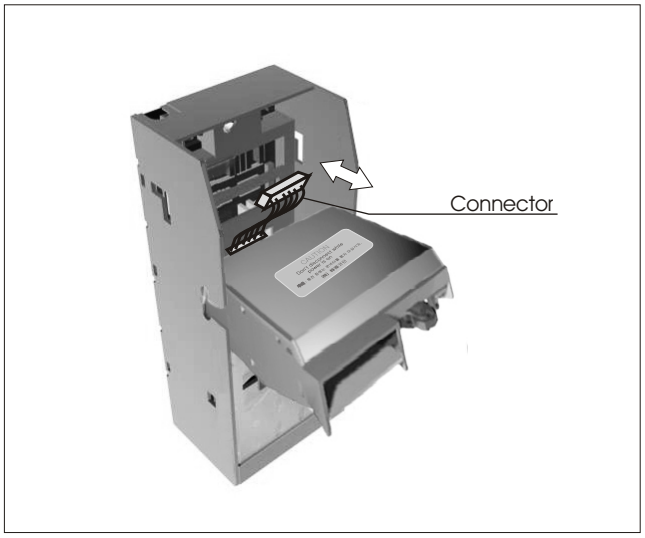
6-1) Mounting method

①



After pushing the selector fixing latch on the upper part of the selector, pull it toward front with 90 angle from the body.

②

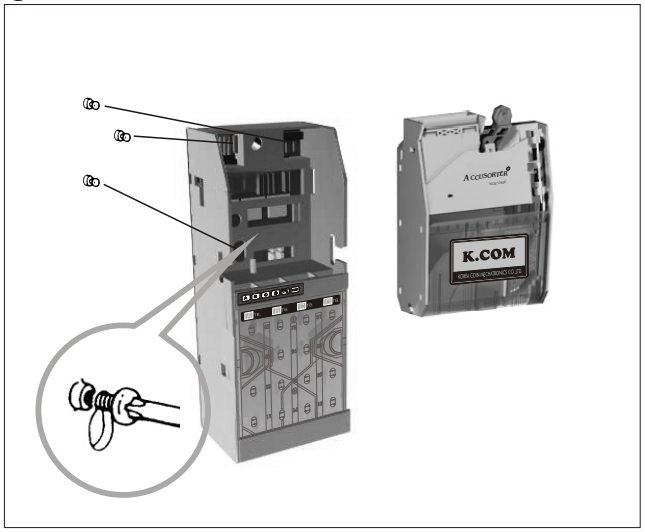


Incline the selector to the front direction to with 45 angle from main body and take off the selector from the body after disconnecting the connector.

< Attention >

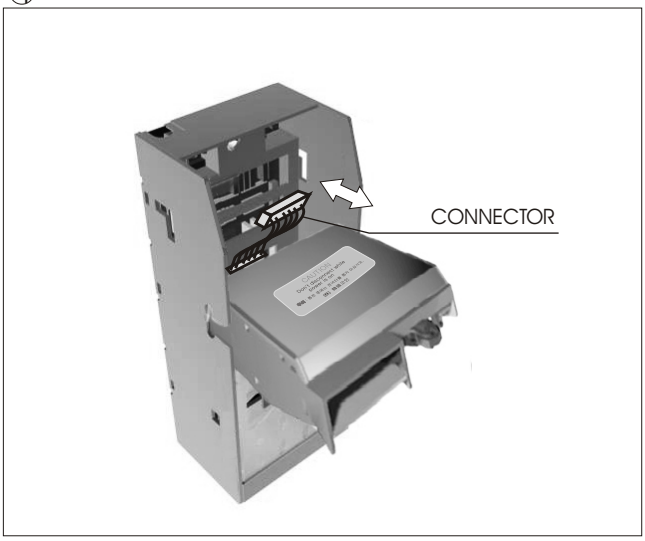
- ▶ 1. Separate the selector from the body without electric power
- ▶ 2.Be careful not to damage the machine by dropping it or mechanical shock as it is precise product

③



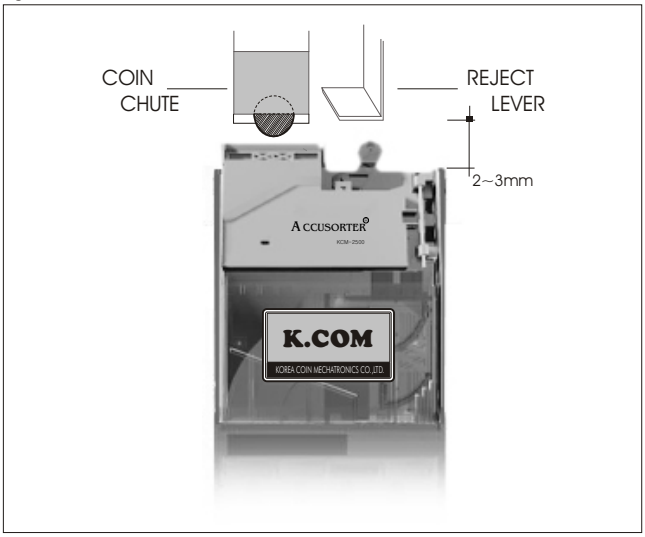
Align the three elliptic holes on the back board of the body to the fixing screw on vending machine and turn in the fixing screws.

④



Connect to the main connector after attaching selector

⑤

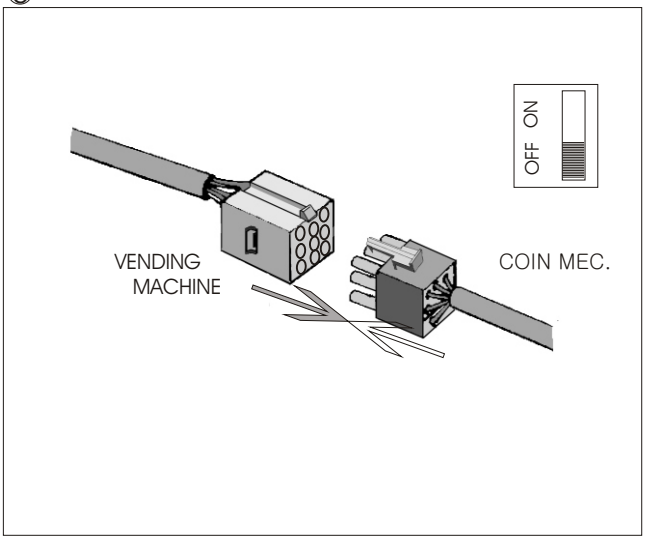


Assemble the selector by reversing the direction for disassembly with careful attention to the coin loading chute and reject lever of vending machine.

< Attention>

- ¢ 1. Keep 2~3m/m between the reject lever of vending machine and the reject lever of coin mechanism.
- ¢ 2. The coin slot of the vending machine and that of the coin mechanism should be aligned.
- ¢ 3. Adjust and set up the coin loading chute and the cash box chute.

⑥



After checking whether the power is off, connect the vending machine with the coin mechanism.

6-2) Change implement and withdraw method

(1) When directly putting change into the tube

Open tube cover and disassemble it after inserting thumb and middle finger into the semicircular hole of the selector key of the body.

① Fill more than 15 proper coins into each tube.
② Make sure the sign for out of coin light is off after closing the cover completely.

(2) When adding with a key pad

① Supply more than fifteen coins into the desired coin loading chute of key pad.
② Confirming the sign of out of coin light is off after considering proper coins pile up in order.

▶ If coins are not arranged well after supplying change, open the tube cover and arrange them again.

¢ Inserting the damaged coins is strictly prohibited.

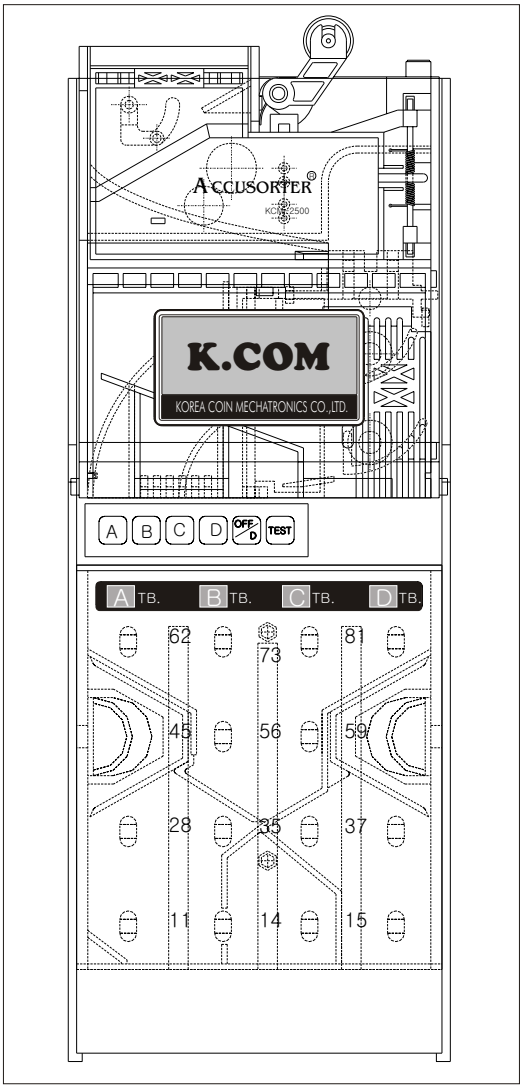
¢ The way of operating inventory switch and function is followed.

6-3) Function of inventory switch

Functions of inventory switch which is attached the front of coin mec. are following.

A	B	C	D	OFF/D	TEST

A B C D	: Use when withdrawing the coins in the change tube
OFF/D	: Use for stop
TEST	: Use for rejecting trial



(1) When a withdrawing the coins in the change tube

: If you push the switch for withdrawing desired coin, the operation motor will operate to reject coin.

ex) When withdrawing the coin "A"

A	→	OFF/D
Operating		Stopping

(2) The relation between inventory switch and inter coin purchasing counter

- If you push the inventory switch, the inter coin purchasing counter become the situation of clear.
- If the sensor for change can detect the remain changes, coin counter is set to "10" for all kinds of coins.

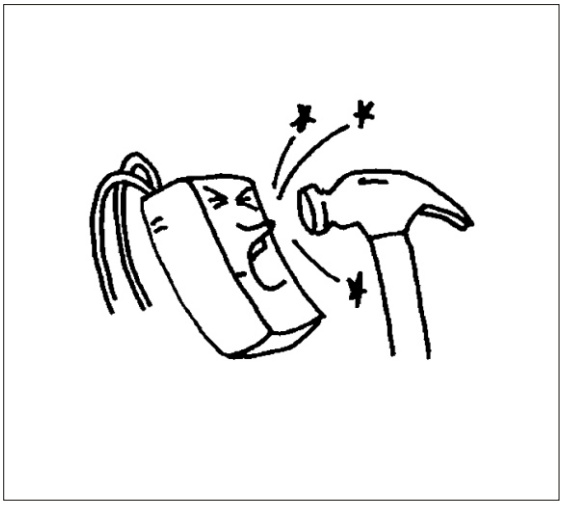
7. MAIN CONNECTOR

Pin NO	I/O	Name of the signal	Description
1	Input	Power(+24DC)	DC24V 10%
2	------	------	DC8V 5%
3	------	----	------
4	Input	SYNC	COMMAND SYNC
5	Input	Data IN	C/M receiving data input
6	Output	Data OUT	C/M sending data output
7	------	----	------
8	Output	GND	GND

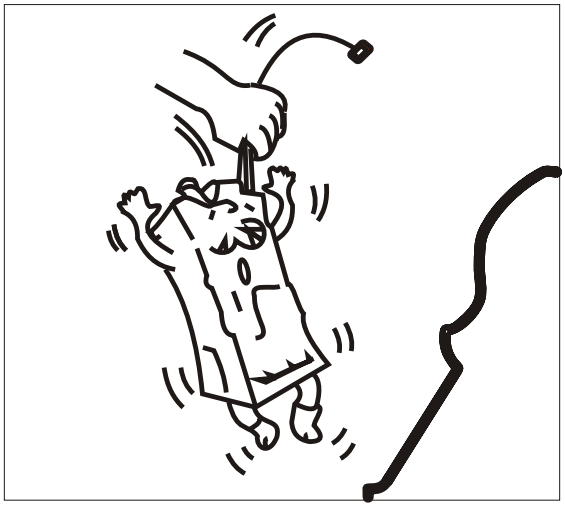
▶ The conditions for input, output and transmission, receiving is standardized by coin mechanism.

8. MAINTENANCE

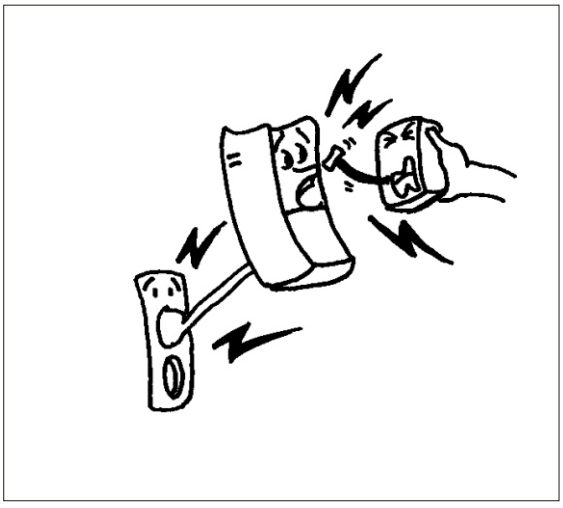
8-1) Matters that demand special attention



Please be careful to do not create any mechanical shock or dropping as it is precise assembly.



Coin mechanism must be carried not by holding harness but by holding it's body.



Before turning off the power, any connection and disconnection with vending machine is strictly prohibited.

Keep out high temperature and humid places because coin mechanism has circuit inside.

8-2) Simple Cleaning

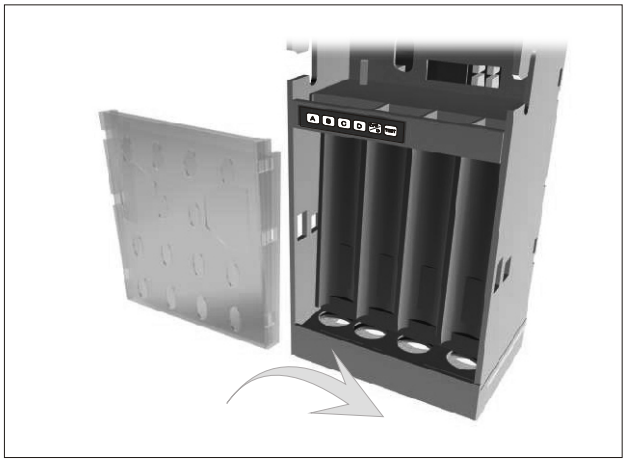
(1) Internal of the selector

Power must be off
-- Pull the coin sensoring part of coin selector toward the front and then clean the bottom part of body and coin moving rail.

< Attention>

▶ In case of using a cleaning agent, avoid using solvents like lubrication oil and thinner. Using alcohol and wipe with a dry cloth.

(2) Inside of tube

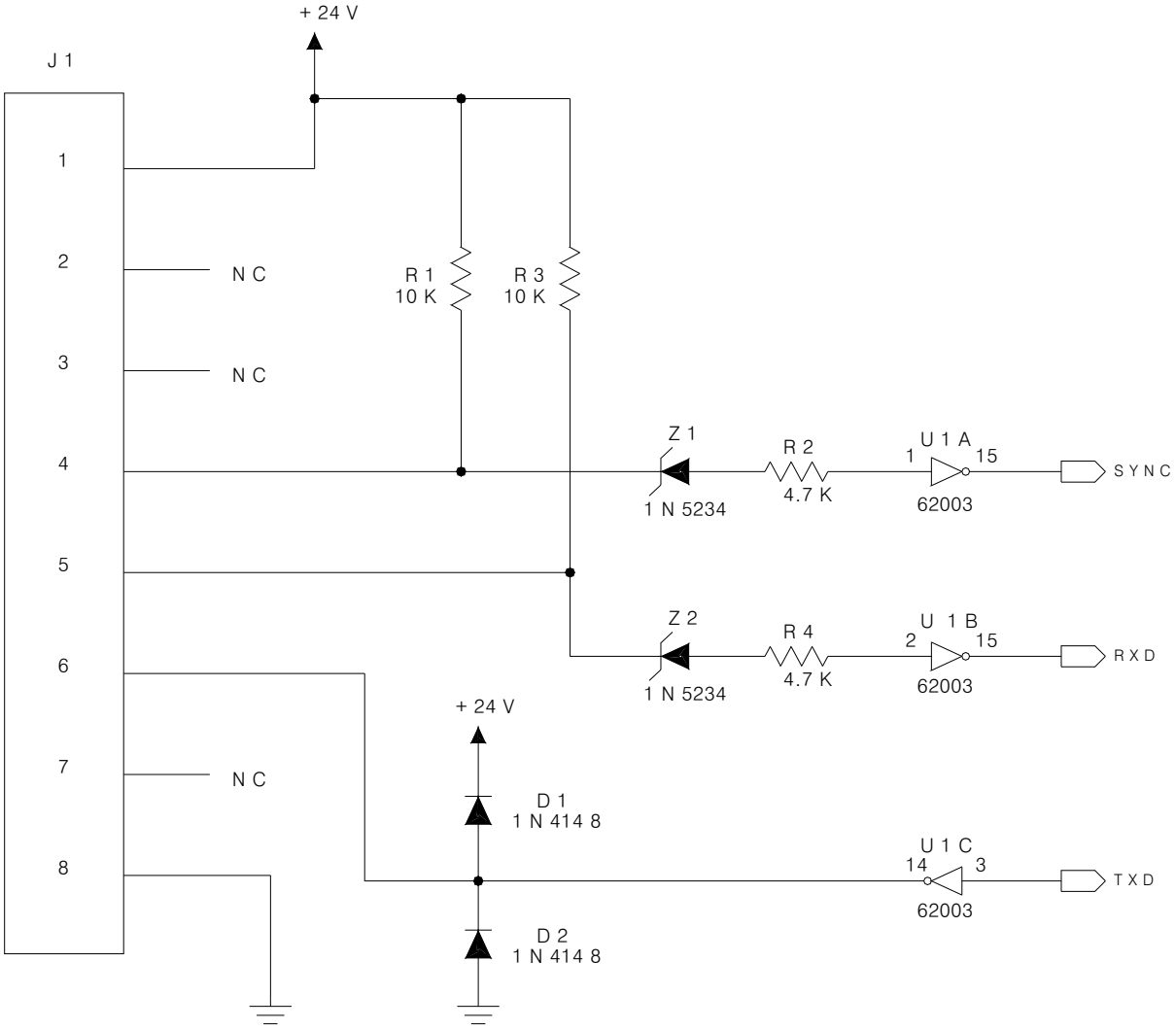


Open the cover of the coin tube and always check any resistance due to any residue between white slides of exit for coin when start to operate.
Check residue between the coin slides under exit of "D" shaped coin tube.

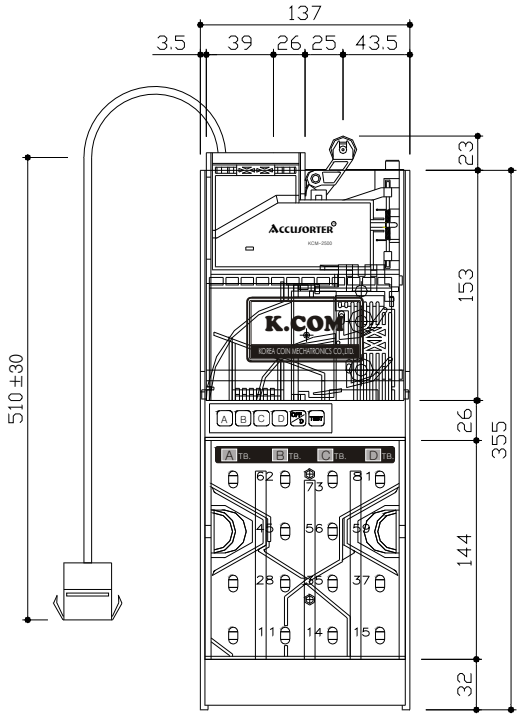
< Attention >

- After finishing the checking and simple cleaning of the machine, check normal condition of the coin mechanism. Then insert a coin to check for any errors.
- If you assemble or disassemble this product without any pertinent purpose except above listed case, it will not included in free A/S range.
  So when any problem occurs, you must call to K.COM for repair.

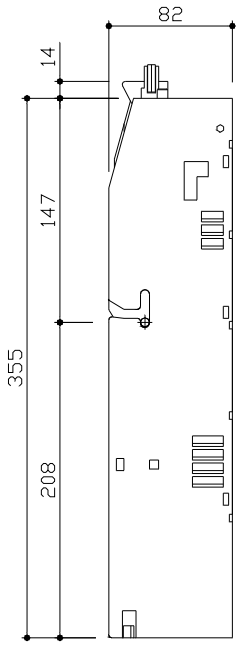
9. INTERFACE CIRCUIT



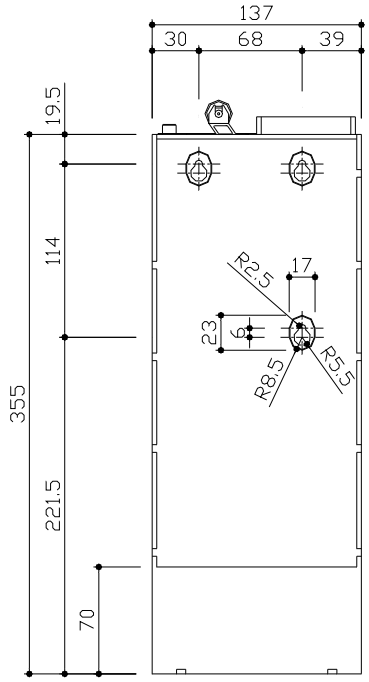
10. DIMENSIONS



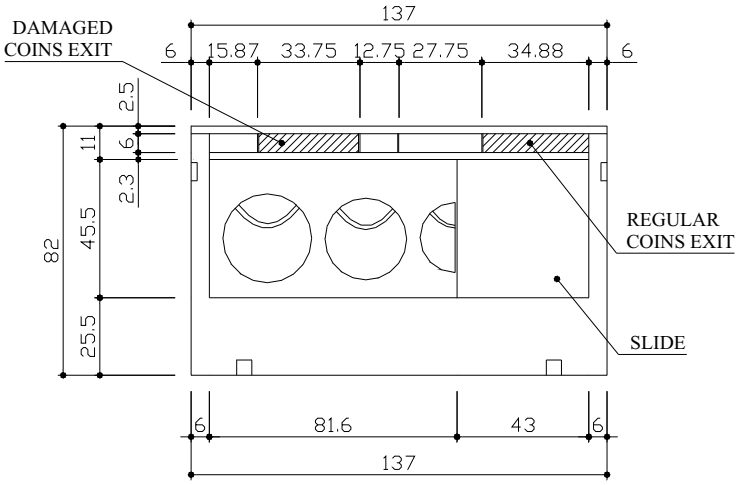
FRONT VIEW



RIGHT VIEW



REAR VIEW



BOTTOM VIEW