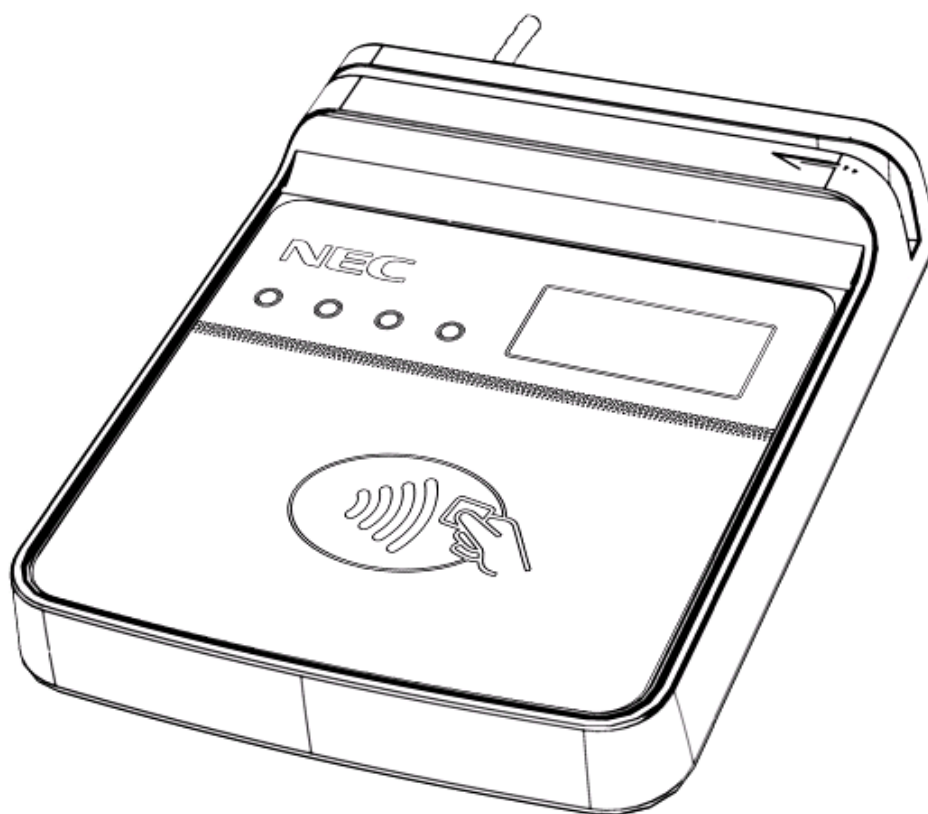# NEC

Versatile Terminal for E-money systems VRW-05A VRW-05B

User's Manual

Thank you for purchasing **"Versatile Terminal for E-money systems VRW-05A VRW-05B"**
Read this manual carefully before using to confirm correct performance.

Table of contents

Introduction

This manual explains basic functions and operations of Versatile Terminal for E-money systems VRW-05A VRW-05B. Store this manual in a place where it can be referenced to whenever needed.

Copyright and Publishing Statements
- This manual must not be reprinted in part or whole without permission.
- The contents of this manual are subject to change without notice.

Trademarks
- Company names and product names other than NEC, written in this manual, are registered trademarks of each company.

Important Notes
- The purpose of this manual is to cover all functions of this equipment; however, if there are any unclear points, misprints or incomplete descriptions etc., please contact your retailer.
- Our company will not be responsible for any financial losses due to any external factors, such as breakdown, malfunction, natural disaster, or power failure etc.

Federal Communication Commission Interference Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device does not cause harmful interference,
(2) However, it may receive interference received from outside. Outside interference may cause undesirable operation.

This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy. If not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. Which can be determined by turning the equipment off and on, if this equipment causes harmful interference to radio or television reception. the user is encouraged to try to correct the interference by one of the following measures:

Reorient or relocate the receiving antenna.
-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.

FCC Caution
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

Wireless Planning Coordination

| 1970/2012/WRLO |

| 1982/2012/WRLO |

Read This First

[About the Symbols]

The symbols and the equipment illustrations in this manual are for the safe usage of this equipment. To prevent any harm to the customers, please note the symbols carefully. The symbols and their meanings are described below. Please make sure you are aware of the meanings of the symbols when reading this manual.

Symbols in This Manual

⚠ **Warning**   Ignoring this symbol or mishandling this equipment may cause death or serious injury.

⚠ **Caution**   Ignoring this symbol or mishandling this equipment may cause injury or damage to the equipment.

Reminder   Ignoring this symbol or the mishandling of this equipment may cause malfunction or disable the equipment entirely.

🚫	**Prohibition** Indicates prohibition	🚭	**Do not Bring Close to Flames** Indicates that the machine is too close to flames and it will catch fire.

⚠	**Caution** Indicates danger	⚡	**Electric Shock Risk** Indicates the possibility of electric shock when it is misused.
🔥	**Smoke and Fire Risk** Indicates the probability of smoke or fire when mishandling.	♨	**Overheating Risk** Indicates the possibility of failure caused by heat inside the equipment when mishandling.

❗	**Compulsory Action** Indicates that action must be taken		

For Your Safety

Away from Pacemaker

Persons with implanted cardiac pacemakers should be at least 22cm away from this equipment.

Do Not Use in Prohibited Areas

Do not use this product near persons with medical devices such as cardiac pacemakers or hearing aids.

Electrical waves from this equipment are much lower than that of mobile phones. Effects on medical electric equipments are extremely low, but please follow the instructions of each medical institution when using this product. Do not use this product when it is forbidden by medical institutions. Even where it is allowed by medical institutions turn the power off if there is any medical electric equipment in use nearby. For more details, please contact medical institutions.

Do Not Use in Airplane

According to flight conditions, each airline companies prohibit the use of radio and electric equipment. This product belongs to a list of products that are restricted. For more details, please contact airline companies.

Do Not Disassemble, Repair or Modify

Do not disassemble or modify the equipment. It may cause fire or electric shock. Ask your nearest retailer or maintenance service for internal inspection or repair.

Do Not Use When There is Smoke, Unusual Smell or Unusual Sound

When using the equipment, if you see smoke or smell unusual odor, turn the power off immediately. These are signs of potential fire or electrical shock. To avoid danger, ask your nearest retailer or maintenance service for help. DO NOT repair the equipment by yourself

Do Not Insert Wire or Metal

Do not insert foreign objects such as wire or metal into opening, such as the connector pins of the equipment.　It may cause electric shock.

For Your Safety

⚠Warning

Keep Away from Fire

Do not use this equipment near gas or other flammable materials. It may cause fire or explosion.

Do Not Touch with Wet Hands

Do not unplug the cable with wet hands. It may cause electric shock.

Regarding Disposal

When disposing of this product, do not incinerate it or throw it into the fire. This may cause intense burning. Please contact your retailer when disposing of this product as it must be disposed of in a regulated manner.

For Your Safety

⚠️Caution

Do Not Put any Liquid or Foreign Objects into the Equipment

Do not put any type of liquid or foreign objects, such as pins or paper clips, into the equipment. This may cause fire, electric shock or breakdown. If this occurs, you must turn the machine off and contact your retailer immediately. Do not disassemble the equipment yourself.

Do Not Place the Equipment in Dusty/Humid Area

Do not use the equipment in dusty or highly humid places. It may cause fire.

Do Not Bend or Twist the Cables

Do not bend or twist the cables. A broken cable can cause fire or electric shock. Do not try to repair the cable even if it is damaged.

Do Not Expose to Direct Sunlight

Do not leave the equipment or the power cable under direct sunlight or near appliances that generate heat. When the internal temperature of the equipment rises, it may not work correctly, and may cause fire.

Do Not Place Near Appliances that Generate Radio Waves

Do not place the equipment near appliances that generate radio waves, such as security equipment. It may cause malfunction.

⚠️Caution Using Contactless IC Card Reader

Avoid Strong shock

Avoid banging or dropping items, such as canned goods and bottles on the reading surface of Contactless IC card reader. This action may cause damage to the equipment.

Do not pour any type of liquid.

Do not pour any type of liquid such as water on the equipment. This action may cause electric shock or breakdown.

For Your Safety

Reminder

Safety Precautions

- Do not use the equipment in a place where the temperature change is extreme

Temperature range of this product is 0-35 ℃ with a humidity level of 20-80% RH, non-bedewing condition. Do not place this equipment where temperatures or humidity exceed these levels.

- Do not drop or apply shock

This equipment can endure normal vibration and movements, however please do not subject it to banging, dropping or violent vibrations.

- Never disassemble or modify

This equipment has high precision components that have been carefully adjusted, therefore, please avoid opening the main unit yourself.

- Cleaning

Lightly wipe parts with a dry, lint-free cloth. Unplug the USB cable from the host machine. Unplug the AC Adapter from the main unit when in use. Malfunction or breakdown may occur if cleaned with the power on.
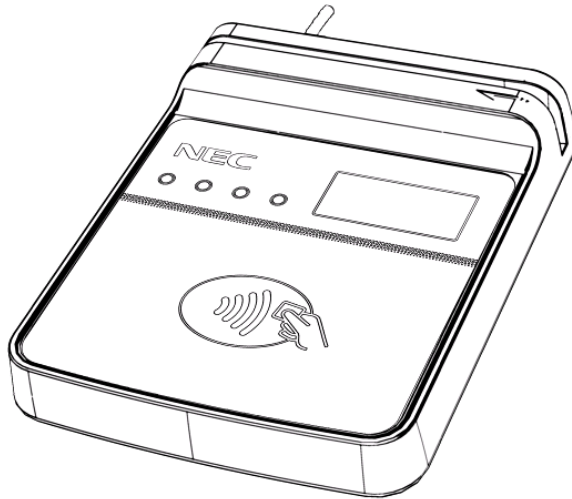
Notes for Disposal

When disposing of this equipment, please follow your local regulations. For details, ask your retailer or contact your local government.
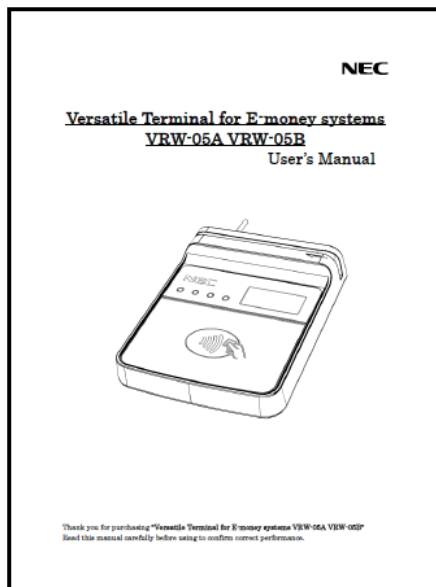
1. Before Use

Accompanying Items

The following items are included with your Versatile Terminal for E-money systems kit. Please confirm all the items are in the package.
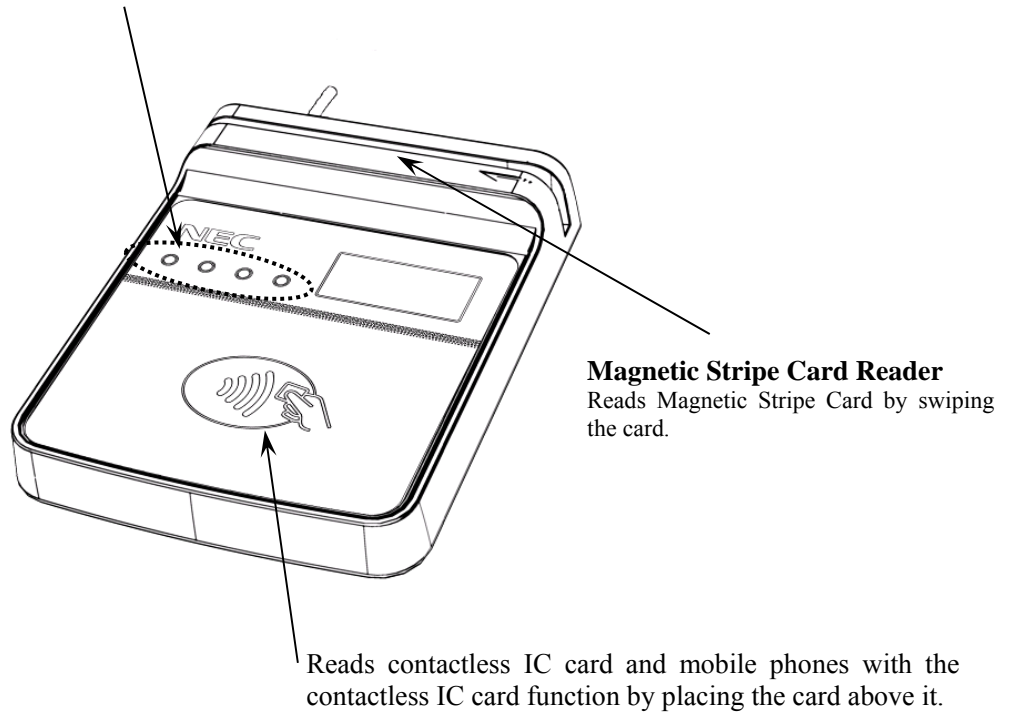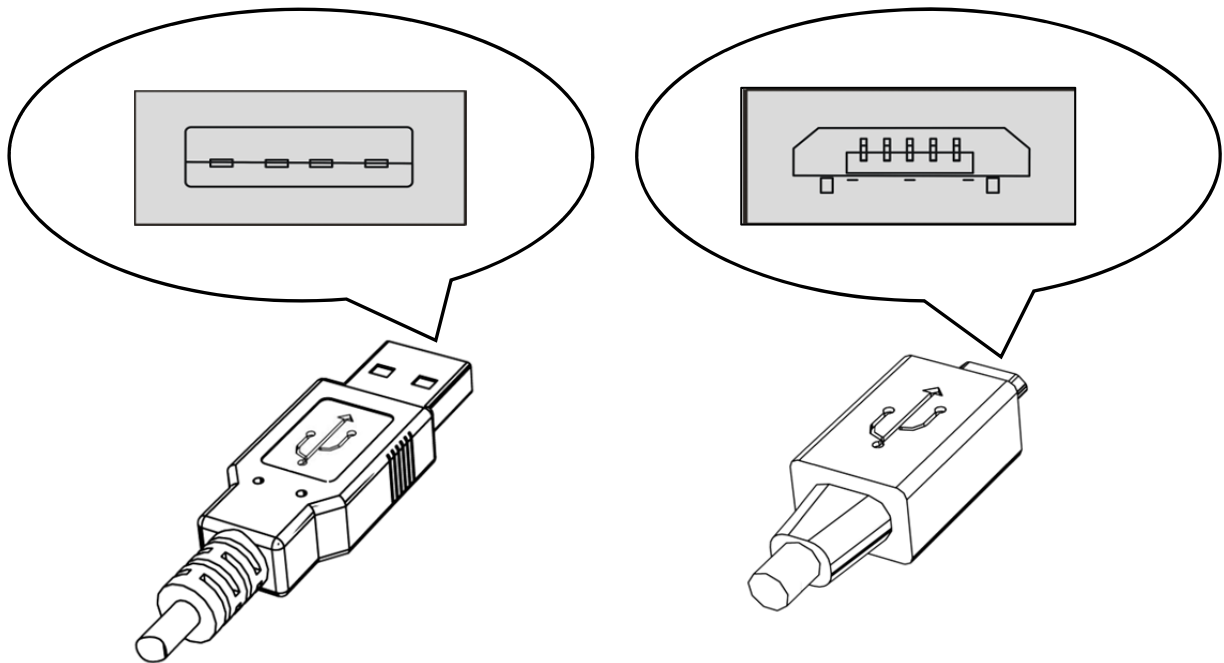

□ Main Unit

□ User's Manual (This book)

Please contact your retailer if there are any items missing or damaged.

Parts and Functions Overview

The four LED lights indicate the R/W conditions.

Magnetic Stripe Card Reader
Reads Magnetic Stripe Card by swiping the card.

Reads contactless IC card and mobile phones with the contactless IC card function by placing the card above it.

This terminal has two types of ports as shown below.

USB2.0 Standard A plug   USB2.0 Micro B plug
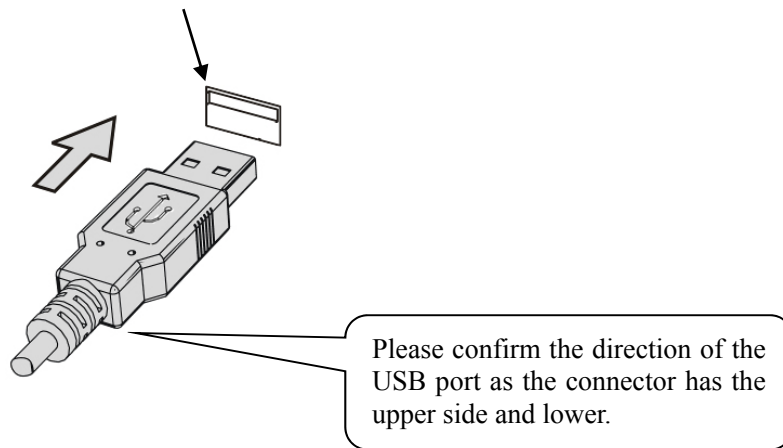
2. How to use

How to connect with a Host Terminal via USB

*Please install and set up the driver on a host terminal before connecting.
Please contact your retailer for more details.

Confirm the directions of the USB cable and connect it to the USB port of the host terminal.
It is recommended to close all other applications when connecting to the host terminal.

USB port of the host terminal
e.g. Standard A USB port

Please confirm the direction of the USB port as the connector has the upper side and lower.
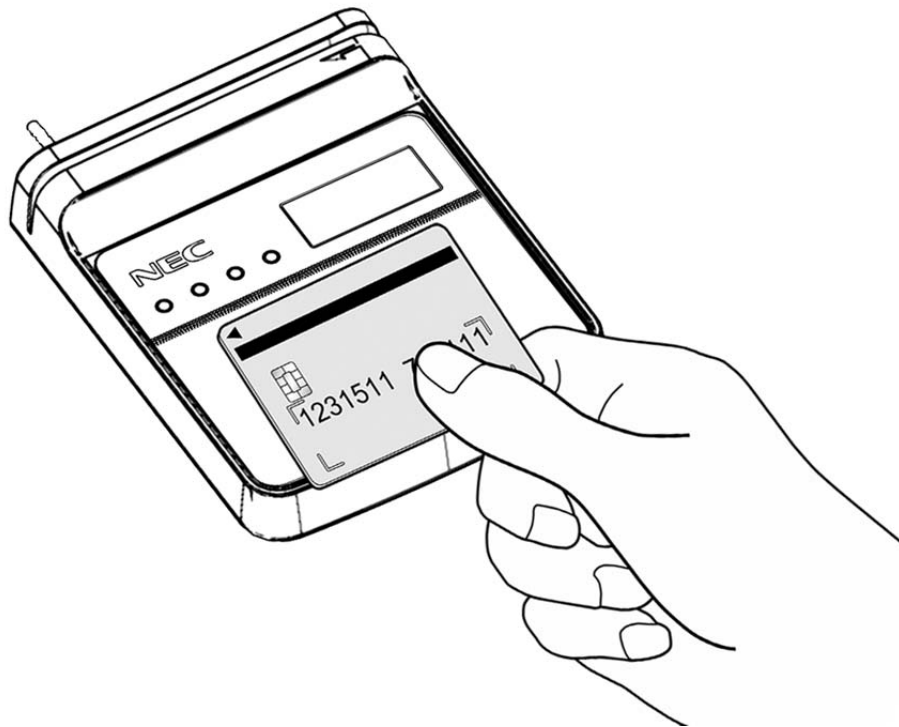
Using Contactless IC Card Reader.

You may use either Contactless IC Cards or mobile phones equipped with the Contactless IC Function on this terminal.

- How to read the Contactless IC Card

Cover and tap the Contactless IC symbol in the center of the card reader with the IC card.

- How to read a mobile phone equipped with the Contactless IC Function

Cover and tap the Contactless IC symbol in the center of the card reader with the mobile phone.

Reminder
- If Contactless IC Card is in a wallet, take it out when in use.
- The Contactless IC Card cannot be read when placed upright.
- Do not put the IC Card on the top of another IC Card when using.
- Keep the card on the equipment until the transaction is completed.
- Do not press the Contactless IC Card down hard on the equipment.
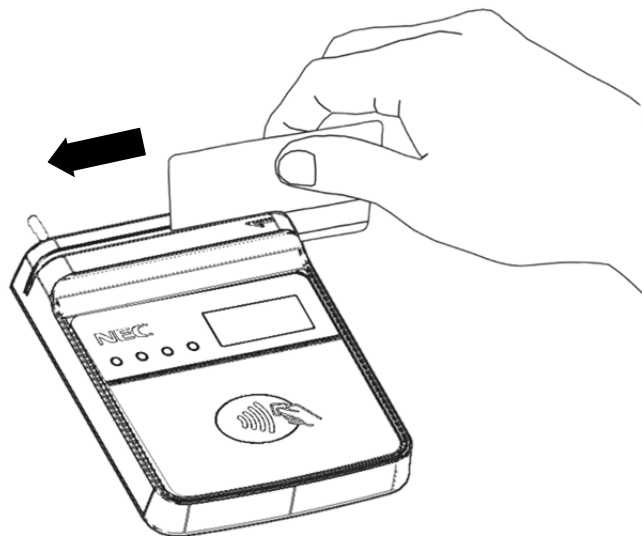
How to Use the Magnetic Stripe Card Reader

You may use your magnetic stripe card with this equipment.

Position the magnetic stripe card down and facing inward(Note1) and insert it into the end of the card reader slot then swipe it to the left. Make sure to keep the swipe speed constant. Do not stop in the middle of the card or insert the Magnetic Strip Card in the middle of the slot. The card scanning standard speed range is 15-150cm/s.

Note 1) How to identify front side and back side of the Magnetic Stripe Card
The front surface of the card has embossed characters (stand out characters) and the characters can be read correctly from the front side.
If there are no embossed characters on the card, the front side has an arrow pointing left on the top left of the card.

⚠ **Caution**
- If the card is not inserted fully when swiping, the reading will fail.
- If the card is swiped too fast or too slow, the reading will fail
- Swipe the card thoroughly and do not stop in the middle.
- Customer information is registered on the Magnetic Stripe Card by magnetic recording process. The information may be lost if a magnetic gets near the card.

3. Cleaning

Cleaning the Product

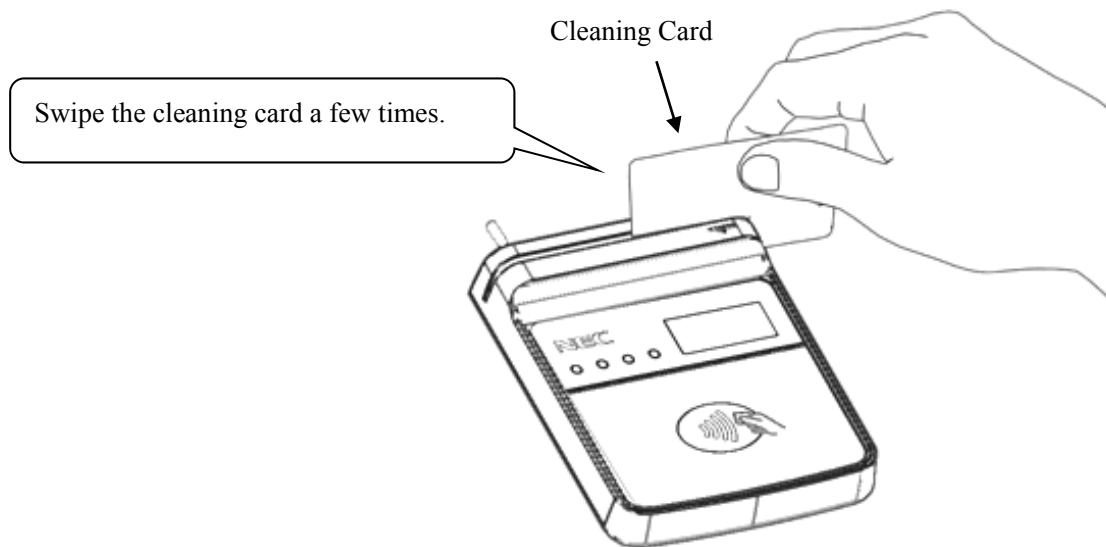Cleaning methods of the main unit and important notes.

- Main Unit
For daily cleaning, use a soft, dry and clean cloth to wipe stains off.
For stubborn stains, use a soft, well squeezed wet cloth to wipe stains off.

- Magnetic Stripe Card Reader
Periodically, clean the magnetic contact reader writer using the specified cleaning card.
At the shop where you purchase this equipment you should be able to obtain a specified cleaning card.

Cleaning Card
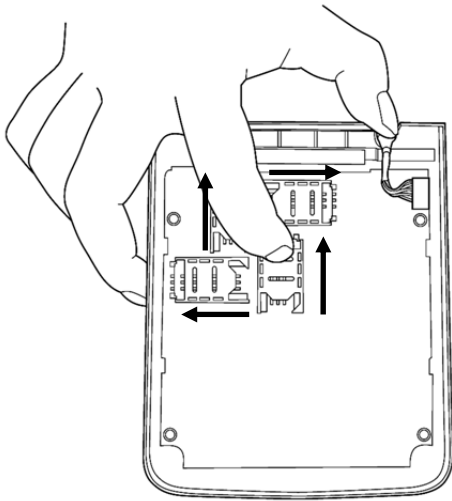
Swipe the cleaning card a few times.

Reminder
- When cleaning, do not use volatile organic cleaners such as benzene, thinners etc. These products may cause deformation, discoloration or even breakdown of equipment.
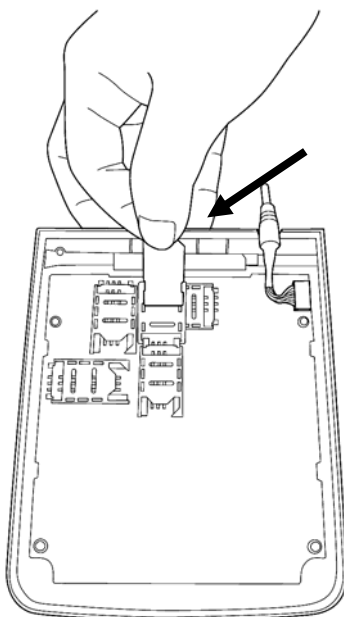- For safety, always remember to turn off the host machine and unplug the USB cable, before cleaning.

4. How to insert/remove the SAM card
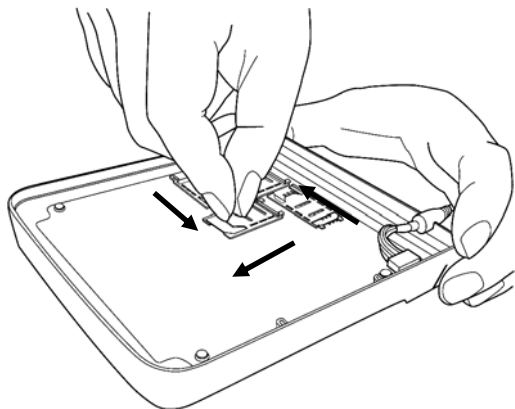
How to insert/remove the SAM card

1. Turn your terminal over and take out the four screws found in the corners by using a screwdriver. You need a special screwdriver so please refer to the retailer with whom you purchased your terminal.

2. Remove the back panel.

3. Slide the SAM slot in the direction shown below and open it up.

4. Insert the SAM card as shown below.
   (Position the notch and indentations in the correct direction.)

5. Slid the SAM card into place as shown below.

6. Return the back panel with the 4 screws.
   That is all there is to inserting the SAM card.

   ※ When removing a SAM card, always follow this procedure.

Reminder	- Be careful not to pull the USB cable when inserting a SAM card.
	- Do not open the back panel unless it is necessary.

5. Troubleshooting

If you have any trouble, refer to the solutions below.

Troubles	Check point	Page
The power does not turn on.	Check the USB cable connection.	13
Contactless IC Cards or mobile phones equipped with the Contactless IC Function cannot be read.	Please make sure you are placing the card in the right spot.	14
The Magnetic Stripe Card cannot be read.	Please make sure the direction of the Magnetic Stripe Card is correct.	15

6. Specification and Regulation

Item		Spec		Remarks
Product code		VRW-05A	VRW-05B	
Host Interface		USB2.0(Standard A)	USB2.0(Micro B)	Full speed
Contactless IC Card R/W module		ISO14443 Type A/Type B conformity		
Magnetic Stripe Card Reader		MSR (Magnetic Stripe Card Reader) ISO 1&2, JIS conformity		
Indicator		4 green LED		
Power Supply		Host Terminal via USB		
Dimensions		112.0(W) x 139.0(D) x 28.0(H) mm		
Weight		About 175.0 g		
Operation Environment	Temperature	From 0 to 35 [℃]		
	Humidity	From 20 to 80 [%]		
Storage Environment	Temperature	From -20 to 40 [℃]		
	Humidity	From 10 to 90 [%]		

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