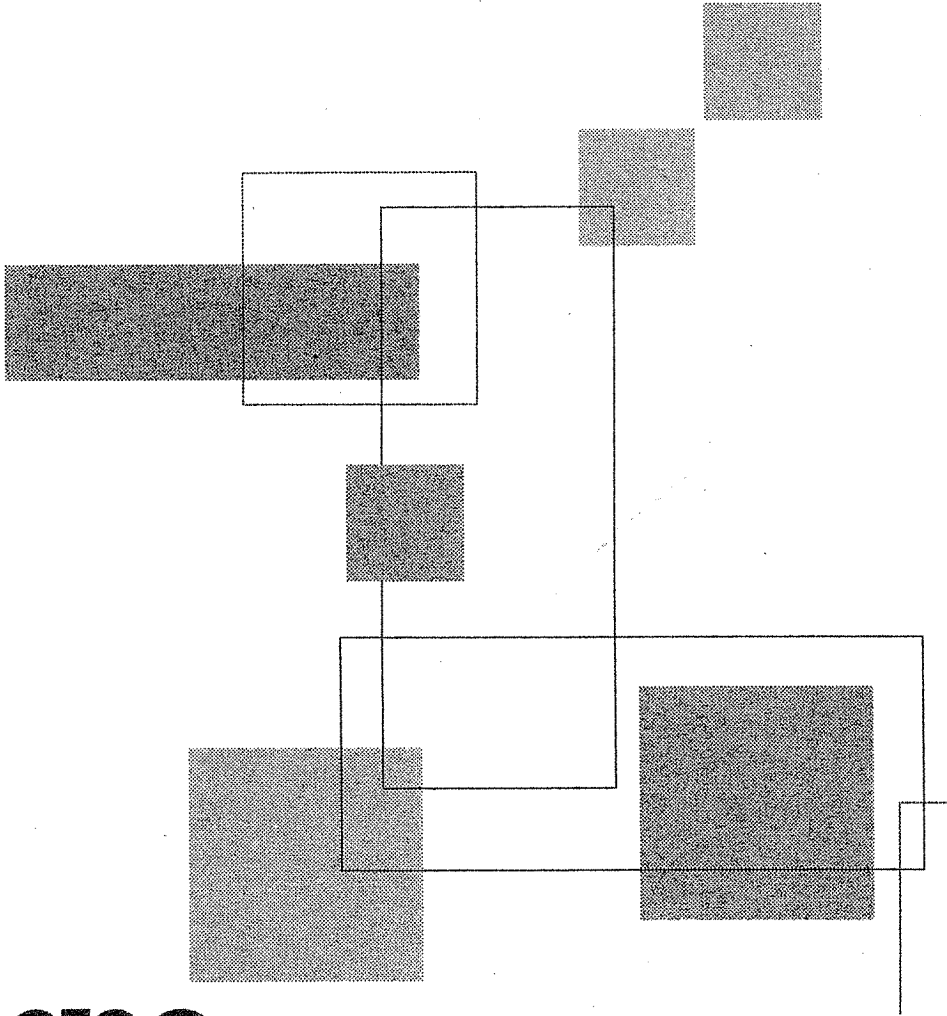


Key/Card Counter IV

User's Guide



RISO

112-03002

Thank you for purchasing the Key/Card Counter IV.

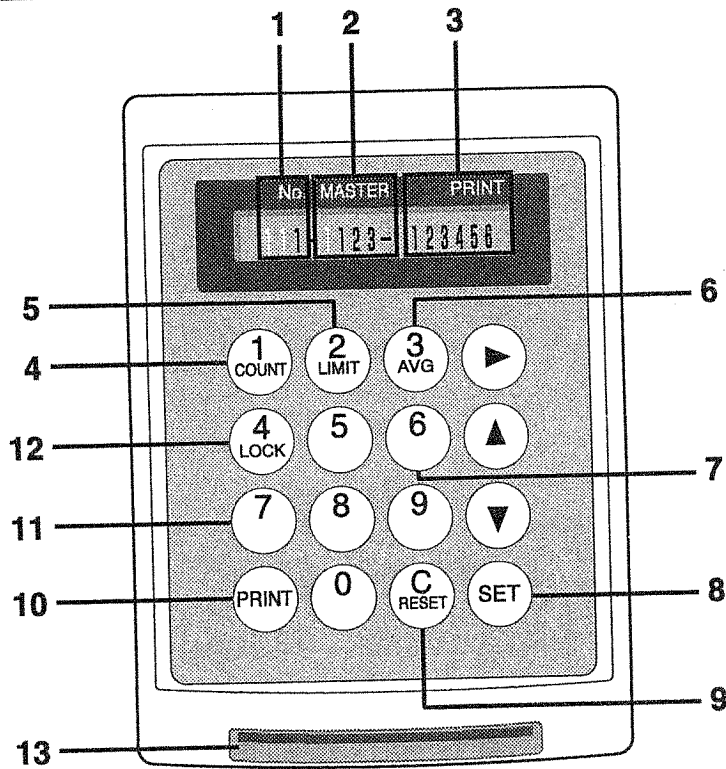
This counter enables you to check the usage volume of the RISOGRAPH series printer for each card holder and control the operation cost in your office by restricting the usage volume.

Please read this guide before using the Key/Card Counter IV to obtain the maximum benefits of this equipment.

Contents

- Contents 1
- The Control Panel 2
- Accessory Cards 3
- Inserting a Card 3
- Using an Operator Card 4
- Using the Control Card 5
 - Count Display Mode 5
 - Limit Control Mode 7
 - Average Display Mode 10
 - Lock-out Mode 11
 - Control Range Selection Mode 13
 - Data Output Mode 14
 - Language Selection Mode 15
- If the printer usage volume exceeds the number of figures available on the counter 16
 - In the Display on the Counter 16
 - On the Output Data Sheet 17
- Battery Replacement 17
- Cleaning 18
- Specifications 18
- Package Contents 19
- Optional Operator Card Kit 19

The Control Panel



- | | |
|--|--|
| <p>1. Operator card number
Indicates the ID number of the inserted operator card.</p> <p>2. Master count
Indicates the number of masters made with the current operator card.</p> <p>3. Copy count
Indicates the number of copies printed with the current operator card.</p> <p>4. Count Key (→ p.5)
Displays the usage volume of the printer.</p> <p>5. Limit Key (→ p.7)
Used to enter the Limit control mode.</p> <p>6. Average Key (→ p.10)
Displays the average number of copies per master.</p> | <p>7. Control Range Key (→ p.13)
Selects the number of card holders to be monitored.</p> <p>8. Set Key
Selects or confirms the current setting.</p> <p>9. Reset Key (→ p.6)
Clears the record of usage volumes of the printer.</p> <p>10. Print Key (→ p.14)
Prints the selected mode data.</p> <p>11. Language Key (→ p.15)
Selects the displayed language.</p> <p>12. Lock Key (→ p.11)
Prevents the use of the selected operator cards.</p> <p>13. Entry slot</p> |
|--|--|

Accessory Cards

Operator card : Enables you to use the printer. It is to be distributed to the departments or persons that operate the printer.

Control card : Enables you to operate the counter in various administrator modes.

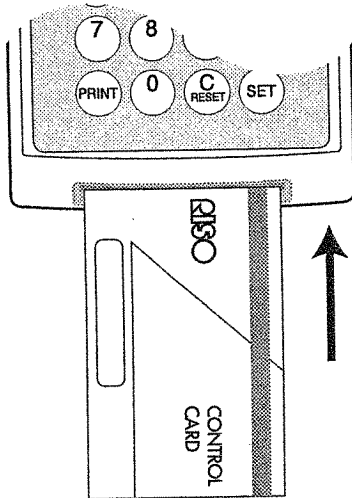
The available modes are as follows:

- Count display mode Displays the usage volume (master count and copy count) of the printer for selected operator cards.
- Limit control mode Limits the usage volume of the printer to be allowed for selected operator cards.
- Average display mode Displays the average number of copies produced from a master using selected operator cards.
- Lock-out mode Prevents the use of the selected operator cards.
- Control range selection mode Selects the number of operator card accounts to be monitored.
- Data output mode Sends data stored in the counter to the printer and outputs them on paper.
- Language selection mode Selects the displayed language, Japanese or English.

Cleaning card : Cleans the reading head of the counter.

Inserting a Card

Insert a card slowly into the entry slot of the counter with the ID mark facing up.



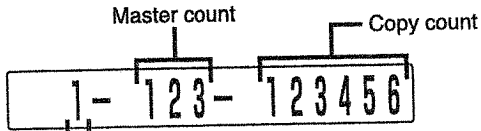
Using an Operator Card

This card enables you to operate the printer.

1 Turn on the printer.

2 Insert your Operator card into the entry slot of the counter.

The printer usage volume (master and copy counts) recorded for the current operator card is displayed, and the printer becomes available for operation.



The ID number of the current operator card is displayed.

- If the card is not correctly inserted, the following message appears. Pull out the card and insert it again slowly into the counter.

ERROR

- If the current operator card is locked out and not available, the following message appears.

NOT AVAILABLE

- If the usage volume (master or copy count) reaches the specified limit, the following message appears, preventing further operation on the printer with the current operator card. In this case, contact the Control card owner.

OVER THE LIMIT

Using the Control Card

This card enables you to operate the counter in various administrator modes.

Count Display Mode

You can display the usage volume (master count and copy count) of the printer for desired operator cards.

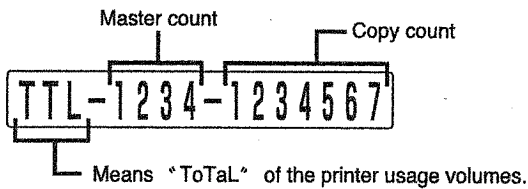
1 Insert the Control card into the counter.

The Administrator mode entry stage appears.





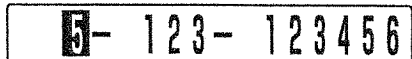
2 Hold down the key for more than one second.

The Count display mode initial stage appears, indicating the total of the printer usage volumes (master and copy counts) recorded for the respective operator cards.





Displaying the usage volume for a desired operator card

Press the  or  key repeatedly until a desired operator card number is displayed in the corresponding column.



Note:

You can show the printer usage volume for a desired operator card by entering the corresponding card number and pressing the  key as well. If you enter the number which is over the total of operator cards provided, the counter beeps, canceling the current operation. If a wrong card number is entered, just enter the correct one before pressing the  key.

Clearing the usage volume data for a desired operator card

- 1 Lead the number of the operator card whose usage volume data you want to clear to show in the display.

5- 123- 123456

Note:

If you want to clear all usage volume data for all operator cards at a time, lead "TTL-" to show in the display.




TTL-1234-1234567


- 2 Press the  key.

The following message appears.

CLEAR DATA?

Note:

- To cancel this operation, press the  key again.
- If the  key is held down for more than one second or you do not operate the counter for more than 30 seconds after pressing the  key, the display automatically returns to the Administrator mode entry stage (SELECT MODE).

- 3 Press the  key.

The usage volume data for the selected operator card will be cleared, resetting the corresponding master and copy counts to "0".



▶ To quit the administrator mode...

Pull out the Control card from the counter.

▶ To move to another administrator mode...

Return to the Administrator mode entry stage.

There are the following three ways to do it.


- Pull out the Control card and insert it into the counter again.
- Hold down the  key for more than one second.
- Hold down the  key for more than one second.

■ Limit Control Mode

You can limit the usage volume of the printer to be allowed for desired operator cards. Three different ways are prepared to apply limit to the usage volume as described below.


Note:
0 (zero) cannot be entered as usage volume limit in this mode. If you want to prevent the use of selected operator cards, go to the Lock-out mode. (→ p.11)

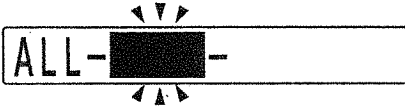
Applying the same limit for all operator cards

- 1** Insert the Control card into the counter and hold down the  key for more than one second.
The Limit control mode initial stage appears.





Note:
The numbers may already be displayed in this stage, indicating the current printer usage volume limit for the respective operator cards.

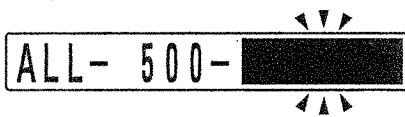
- 2** Press the  key.
The master count column flashes.




- 3** Enter the maximum number of masters allowable for the respective operator cards.
When the value has already been entered, it will be overwritten.

Note:
To skip the master count column, press the  key.

- 4** Press the  key.
The master count limit is settled and the copy count column starts flashing.



5 Enter the maximum number of copies allowable for the respective operator cards.
When the value has already been entered, it will be overwritten.

6 Press the  key.

The copy count limit is settled.

The same count limit is now to be applied to the printer usage volume for the respective operator cards.

Applying limit to the total printer usage volume

Press the  key when the Limit control mode initial stage is displayed.

"TTL" appears in place of "ALL", allowing you to apply limit to the total printer usage volume.


Proceed as described in the previous page to enter the maximum numbers of masters and copies allowable with the printer.





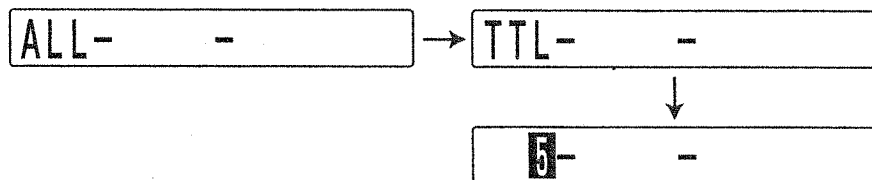
Note:

The numbers may already be displayed in this stage, indicating the current limit against the total printer usage volume.



Applying limit for a desired operator card

After opening the Limit control mode initial stage, press the  key repeatedly until a desired operator card number is displayed in the corresponding column.

Proceed as described in the previous page to enter the maximum numbers of masters and copies allowable for the selected operator card. If you want to apply limit for another operator card as well, press the  or  key repeatedly until its number is displayed.



Note:

- The numbers may already be displayed in this stage, indicating the current printer usage volume limit for the selected operator card.
- You can directly enter the Limit control mode stage for a desired operator card by entering the corresponding card number and pressing the  key while the card number column is flashing as well. If you enter the number which is over the total of operator cards provided, the counter beeps, canceling the current operation. If a wrong card number is entered, on the other hand, just enter the correct one before pressing the  key.

Clearing limit from a desired operator card

- 1 Proceed to the Limit control mode stage of the operator card from which you want to clear the printer usage volume limit.

5- 500- 100000


Note:

- If you want to clear the printer usage volume limit from all operator cards at a time, stay in the Limit control mode initial stage.

ALL- 500- 100000


- If you want to clear the total printer usage volume limit, lead "TTL-" to show in the display.

TTL- 4000- 1000000

- 2 Press the  key and clear the master count limit.

Press the  key and the  key orderly to clear the limit.

5- [REDACTED]- 100000

- 3 Press the  key again and clear the copy count limit.

Press the  key and the  key orderly to clear the limit.

5- - [REDACTED]



▶ To quit the administrator mode...

Pull out the Control card from the counter.

▶ To move to another administrator mode...


Return to the Administrator mode entry stage.

There are the following three ways to do it.

- Pull out the Control card and insert it into the counter again.
- Hold down the  key for more than one second.
- Hold down the  key for more than one second.

■ Average Display Mode

You can display the average number of copies produced from a master using desired operator cards.

Insert the Control card into the counter and hold down the  key for more than one second.



The Average display mode initial stage appears, indicating the average number of copies produced from a master using all operator cards.

TTL-AVG- 37

Note:



The decimal fraction is rooted.

Displaying the average number of copies for a desired operator card

Press the  or  key repeatedly until a desired operator card number is displayed in the corresponding column.

5-AVG- 60

Note:

You can show the average number of copies produced from a master using a desired operator card by entering the corresponding card number and pressing the  key as well. If you enter the number which is over the total of operator cards provided, the counter beeps, canceling the current operation. If a wrong card number is entered, just enter the correct one before pressing the  key.



► To quit the administrator mode...

Pull out the Control card from the counter.

► To move to another administrator mode...

Return to the Administrator mode entry stage.


There are the following three ways to do it.

- Pull out the Control card and insert it into the counter again.
- Hold down the  key for more than one second.
- Hold down the  key for more than one second.

Lock-out Mode

You can prevent the use of desired operator cards.

Preventing the use of all operator cards

- 1 Insert the Control card into the counter and hold down the  key for more than one second.

The Lock-out mode initial stage appears, indicating the current availability status of all operator cards.




ALL/UNLOCKED

Note:

When all operator cards are not available, the following message appears.




ALL---

- 2 Press the  key.

The right-hand message flashes.



ALL/UNLOCKED


- 3 Press the  key.



The flashing message changes as indicated below.



ALL/LOCKED



Note:

The messages "Unlocked" and "Locked" alternately appear each time the  key is pressed.



- 4 Press the  key and the  key together.

The Lock-out mode is activated for all operator cards, preventing their use.

Note:



To cancel the Lock-out mode for all operator cards, lead "Unlocked" to appear in the display before pressing the  and  keys together.



Preventing the use of a desired operator card

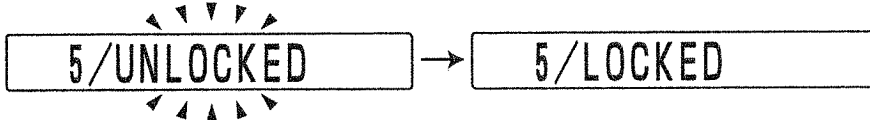
- 1 After opening the Lock-out mode initial stage, press the  or  key repeatedly until a desired operator card number is displayed in the corresponding column.

5/UNLOCKED


Note:

You can directly enter the Lock-out mode stage for a desired operator card by entering the corresponding card number and pressing the  key while the card number column is flashing as well. If you enter the number which is over the total of operator cards provided, the counter beeps, canceling the current operation. If a wrong card number is entered, on the other hand, just enter the correct one before pressing the  key.

- 2 Press the  key and the  key orderly.
The right-hand message flashes and changes to "LOCKED".



Note:

The messages "Unlocked" and "Locked" alternately appear each time the  key is pressed.



► To quit the administrator mode...

Pull out the Control card from the counter.

► To move to another administrator mode...

Return to the Administrator mode entry stage.

There are the following three ways to do it.

- Pull out the Control card and insert it into the counter again.
- Hold down the  key for more than one second.
- Hold down the  key for more than one second.


■ Control Range Selection Mode

You can select the number of operator card accounts to be monitored between; "99" and "499". When the number of accounts is 99 or less, select "99". If it is more than 99, on the other hand, select "499".

- 1** Insert the Control card into the counter and hold down the  key for more than one second.

The Control range selection stage appears.


ACCOUNTS: 499

- 2** Press the  key.

The number of accounts changes to "99".

ACCOUNTS: 99

Note:

"499" and "99" alternately appear as the number of accounts each time the  key is pressed.



▶ To quit the administrator mode...

Pull out the Control card from the counter.

▶ To move to another administrator mode...

Return to the Administrator mode entry stage.

There are the following three ways to do it.

- Pull out the Control card and insert it into the counter again.
- Hold down the  key for more than one second.
- Hold down the  key for more than one second.

■ Data Output Mode

You can send data stored in the counter to the printer and outputs them on paper.

The types of data which can be output are as follows: printer usage volume (master and copy counts), applied limit count, average number of copies per master and Lock-out mode status.

1 Insert the Control card into the counter and select the type of data you want to print out.

Select the related administrator mode by holding down the corresponding key for more than one second.

Printer usage volume (master and copy counts)	① COUNT
Limit count applied against usage volume	② LIMIT
Average number of copies per master	③ AVERAGE
Lock-out mode status	④ LOCK

2 Press the key.

The following message appears.

PRINT OUT DATA?

Note:




Load printing paper of A4 (letter) or larger size on the printer.

3 Press the key.

The following message appears and the printer starts printing out the selected data. When printing operation is completed, the display returns to the Administrator mode entry stage (SELECT MODE).

-PRINTING OUT-

Note:


- To cancel the Data output mode, press the  key before pressing the  key.
- If any problem occurs on the printer during this operation, the following message appears. In this case, take required actions to solve the problem, referring to the dedicated user's guide. Then press the  key of the counter to clear this message and repeat this operation from the beginning.

CHECK PRINTER

- The mark "*" will be printed in the corresponding columns if no limit is applied for a operator card.
- A different page layout is applied in printing out data according to the selected control range ("99" or "499").


■ Language Selection Mode

You can select the displayed language between "Japanese" and "English".

- 1 Insert the Control card into the counter and hold down the  key for more than one second.

The Language selection mode stage appears.


DISPLAY: ENGLISH

- 2 Press the  key.

The selected language changes to "JAPANESE".

DISPLAY: JAPANESE

Note:

"ENGLISH" and "JAPANESE" alternately appear as the displayed language each time the  key is pressed.



▶ To quit the administrator mode...

Pull out the Control card from the counter.

▶ To move to another administrator mode...

Return to the Administrator mode entry stage.

There are the following three ways to do it.

- Pull out the Control card and insert it into the counter again.
- Hold down the  key for more than one second.
- Hold down the  key for more than one second.

If the printer usage volume exceeds the number of figures available on the counter

Even if the printer usage volume (master and copy counts) exceeds the number of figures available on the counter (see the chart below), you can continue to use the printer but the actual usage volume will not be indicated as it is on the counter due to notation change as described below.

Numbers of figures available in counting printer usage volume

	Master count	Copy count
For an operator card	3 (up to 999)	6 (up to 999,999)
For the total of all operator cards	4 (up to 9,999)	7 (up to 9,999,999)

■ In the Display on the Counter

- When the printer usage volume (master and copy counts) for an operator card exceeds the number of figures available on the counter, "-", which is indicated before each count display, changes to "+".

<Example> - For an operator card -

When neither count exceeds the available number of figures;

2- 900- 900000

When the master count reaches "1,000";

2+ 0- 900000

When the copy count reaches "1,000,000";

2- 900+ 0

- When the total printer usage volume exceeds the available number of figures, on the other hand, "-" does not change to "+".

<Example> - For the total of all operator cards -

When neither count exceeds the available number of figures;

TTL-9000-9000000

When the master count reaches "10,000";

TTL- 0-9000000

When the copy count reaches "10,000,000";

TTL-9000- 0

■ On the Output Data Sheet

- When the printer usage volume (master and copy counts) for an operator card exceeds the number of figures available on the counter, "+" will be additionally printed before the excess count data.

<Example 1>

When the master count of the operator card No.2 reaches "1,000" ;

No.	MSTR	PRINTS
1	55	555555
2+	0	900000

<Example 2>

When the copy count of the operator card No.2 reaches "1,000,000" ;

No.	MSTR	PRINTS
1	55	555555
2	900+	0

- When the total printer usage volume exceeds the available number of figures, on the other hand, the excess count data will be printed without "+" before it.

<Example 3>

When the master count reaches "10,000" ;

No.	MSTR	PRINTS
1	55	555555
ALL	0	1000000

■ Battery Replacement

This equipment has a battery-powered memory backup system. If the battery has lost most of the power, the following message appears, preventing the counter from accepting both operator cards and the control card. In this case, contact your authorized service representative and request him to replace the battery.

REPLACE BATTERY

Important!

Do not turn off the power switch on the printer while the above message is displayed. If the power is turned off, all memories stored in the counter will be cleared.

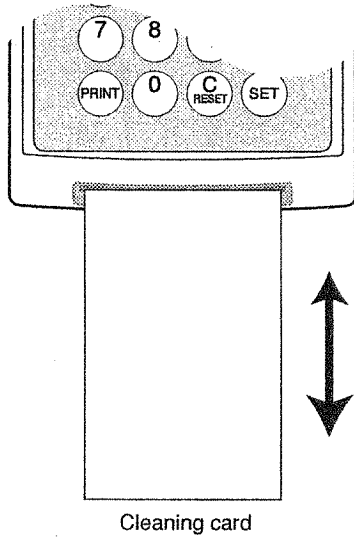
Note:

The battery normally lasts for 2 years.

Cleaning

Clean the reading head of the counter once a month using the cleaning card included in this package to avoid possible data reading errors.

To clean the reading head, insert and pull out the cleaning card on the counter several times with the felt side facing up.



Specifications

Account capacity	: 99 / 499 accounts (alternative)
Displayed language	: Japanese / English (alternative)
Copy count display limit	: 999,999 (for a single account) 9,999,999 (for the total of accounts)
Master count display limit	: 999 (for a single account) 9,999 (for the total of accounts)
Card life	: 1,000 insertions
Memory backup battery life	: 2 years

Package Contents

1. Key/Card counter 1 unit
2. Control card 1 pce
3. Operator card 30 pcs
4. Cleaning card 1 pce
5. Lithium battery CR2032 (to be put inside the unit) 1 pce
6. User's guide (This guide) 1 copy

Optional Operator Card Kit

The following optional operator card kits are prepared to allow you to increase the operator card accounts according to your administrative requirements.

Type	Card No.	Quantity
Card kit A	31-99	69 pcs
Card kit B	100-199	100 pcs
Card kit C	200-299	100 pcs
Card kit D	300-399	100 pcs
Card kit E	400-499	100 pcs

Key/Card Counter IV Installation Procedure

Type of Connectable Printer

The following printer models are the intended basic units for connection to the Key/card counter IV.

RISO KAGAKU CORPORATION Models

- RISOGRAPH GR3770
- RISOGRAPH FR Series
- RISOGRAPH CR 1630-AN/C/EN/UP/AW
- 1620-C
- 1610-AS/UI/AW
- 1600-C
- RISOGRAPH RN Series
- RISO RN Series

NOTE :

- When you install the Key/card counter IV on RISOGRAPH GR3770 or FR series models (except for FR- α models), the Interface board III(S) is required.
- When installing on CR series models, the Interface board IV is required.
- As for the procedures of leading the Key/card counter wire harnesses inside CR series models, refer to the Interface Board IV Installation Procedure Guide.
- When installing on RISO RP series models, the Key/card counter IV Attachment Kit A is required.

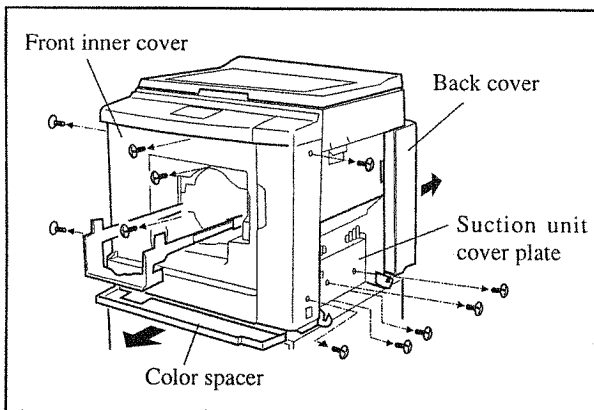
Nobody but Riso-authorized service representatives is allowed to install this unit.

Packing List

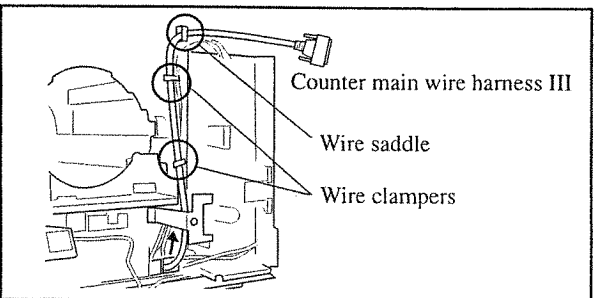
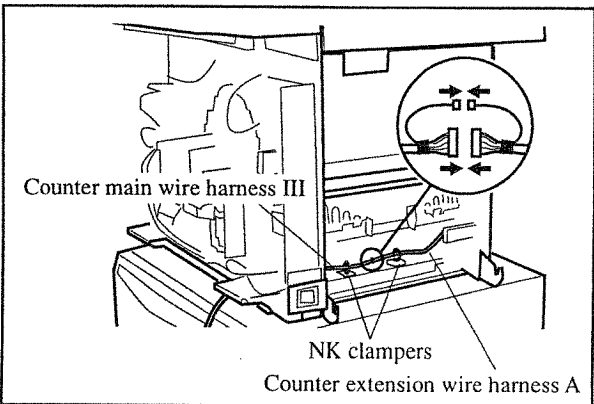
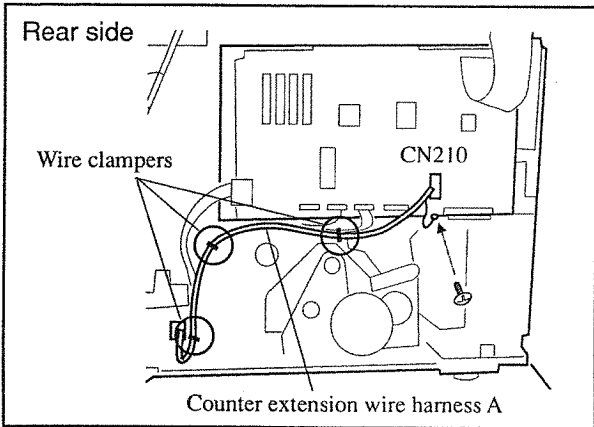
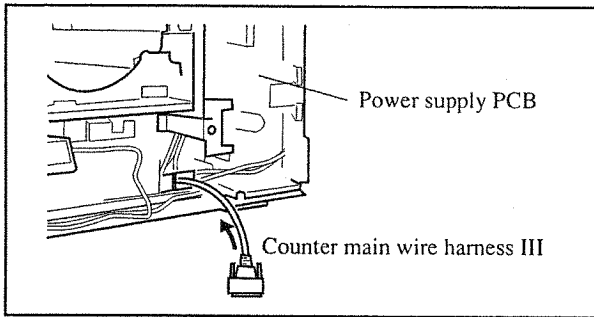
This package contains the following items.

1. Key/card counter unit 1 unit
2. Counter main wire harness III 1 pc.
3. Counter extension wire harness A (long) .. 1 pc.
4. Counter extension wire harness B (short). 1 pc.
5. Counter bracket A 1 pc.
6. Lithium battery (CR-2032) 1 pc.
7. Battery expiration date label 1 pc.
8. Ferrite core 1 pc.
9. NK clamper 2 pcs.
10. Wire clamper 5 pcs.
11. Screwed clamper 2 pcs.
12. Wire harness protection tape 1 pc.
13. Screws 1 set
14. Installation guide (This manual) 1 copy
15. User's guide 1 copy
16. Control card 1 pc.
17. Operator card 30 pcs.
18. Cleaning card 1 pc.
19. Declaration of Conformity
(*for EU only) 1 copy

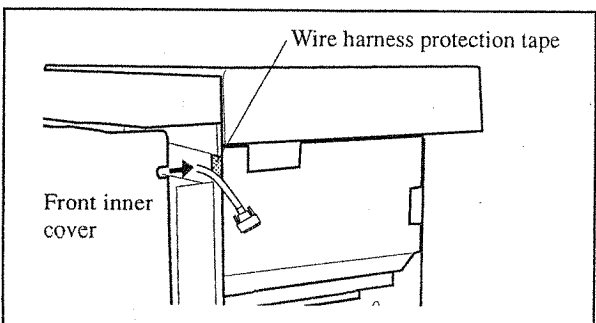
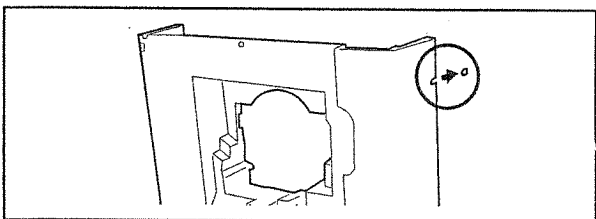
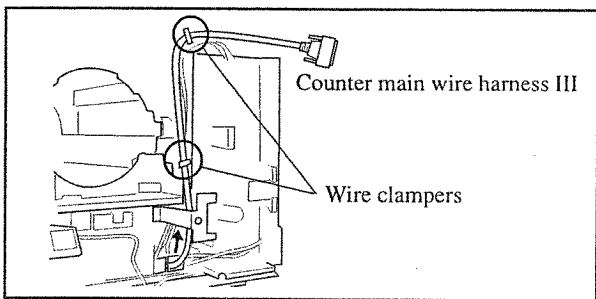
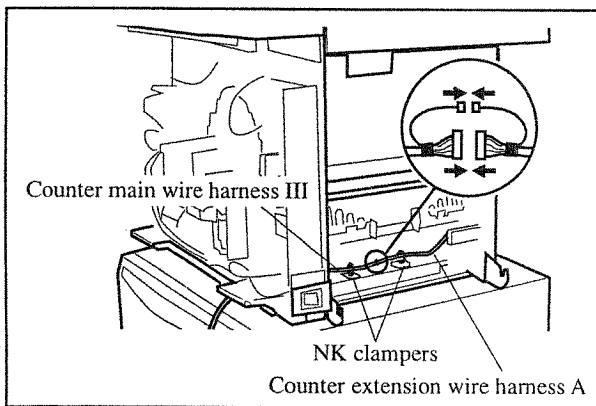
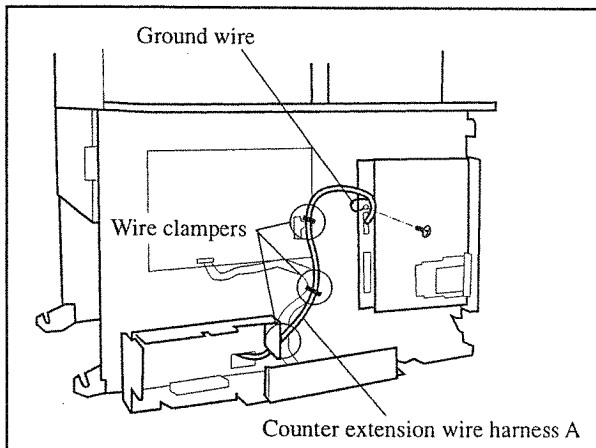
1) Leading wire harnesses inside the printer - RISOGRAPH RN series models -



1. Remove the **Print cylinder** and turn off the power switch. Then unplug the power cord.
2. Remove the **Front cover**, **Front inner cover**, and the **Back cover**. If the **Color spacer** is attached to the stand, remove it as well.
3. Remove the **Paper receiving tray** and then the **Suction unit cover plate**.

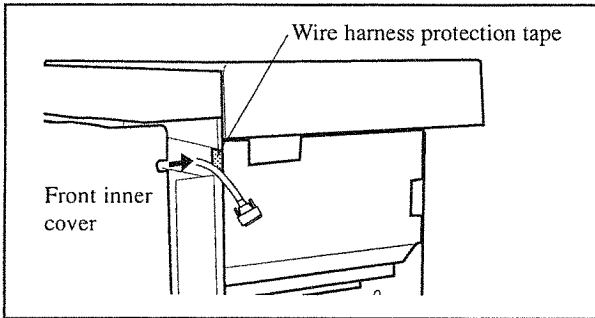
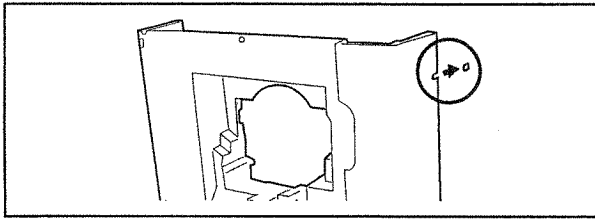


4. Lead the smaller connector of the **Counter main wire harness III** through one (right-hand) of two openings which are found on the side frame under the lower left corner of the Power supply PCB.
5. Lead the connector (without ground wire) of the **Counter extension wire harness A** (longer one) through the hole located on the lower left part of the rear side frame.
6. Connect another connector of the **Counter extension wire harness A** to CN210 on the Main control PCB.
7. Remove the PCB securing screw below the CN210 and replace it securing the terminal of the **ground wire** coming out of the wire harness together.
8. Bind the **Counter extension wire harness A** to the existing wire harnesses with **wire clampers** at three points to keep it from touching the neighboring driving parts.
9. Connect the connectors of the **Counter main wire harness III** and **Counter extension wire harness A** under the Suction unit as illustrated.
10. Attach **NK clampers** at two positions on the Bottom cover and secure the **Counter main wire harness III** and **Counter extension wire harness A** with them.
11. Lead the **Counter main wire harness III** along the left side of the **Power supply PCB** and put it through the existing wire saddle. Then take the slack and bind it to the existing wire harness with wire clampers at two points.



5. Lead the connector (without ground wire) of the **Counter extension wire harness A** (longer one) through the hole located on the lower left part of the rear side frame.
6. Remove the ROSE control PCB cover and connect another connector of the **Counter extension wire harness A** to CN7 on the Main control PCB.
7. Remove the PCB securing screw above the CN7 and replace it securing the terminal of the **ground wire** coming out of the wire harness together.
8. Bind the **Counter extension wire harness A** to the existing wire harnesses with **wire claspers** at three points to keep it from touching the neighboring driving parts.
9. Connect the connectors of the **Counter main wire harness III** and **Counter extension wire harness A** under the Suction unit as illustrated.
10. Replace the ROSE control PCB cover.
11. Attach **NK claspers** at two positions on the Bottom cover and secure the **Counter main wire harness III** and **Counter extension wire harness A** with them.
12. Lead the **Counter main wire harness III** along the left side of the **Power supply PCB** and then take the slack and bind it to the existing wire harness with wire claspers at two points.
13. Make a U-shape cutting on the **Front inner cover**. To cut the cover in a U-shape, twist off the part to be removed with a pliers and smoothen the edge of the opening with a cutter knife for a fine finish.
14. Cover the edge of the side frame with the **Wire harness protection tape** to protect the wire harness passing through the U-shape hole of the **Front inner cover**.
15. Replace the **Front inner cover**, leading the **Counter main wire harness III** through the U-shape opening of the cover.
16. Replace the **Back cover**, **Suction unit cover plate**, **Paper receiving tray** and the **Front cover**, and then re-install the **Print cylinder**.

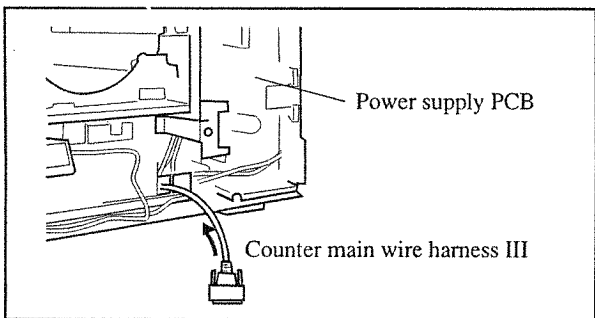
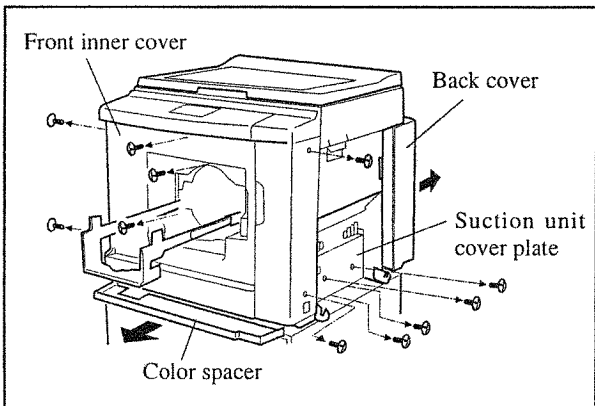
Proceed to the section "Installation of the Key/lock



12. Make a U-shape cutting on the **Front inner cover**. To cut the cover in a U-shape, twist off the part to be removed with a pliers and smoothen the edge of the opening with a cutter knife for a fine finish.
13. Cover the edge of the side frame with the **Wire harness protection tape** to protect the wire harness passing through the U-shape hole of the **Front inner cover**.
14. Replace the **Front inner cover**, leading the **Counter main wire harness III** through the U-shape opening of the cover.
15. Replace the **Back cover**, **Suction unit cover plate**, **Paper receiving tray** and the **Front cover**, and then re-install the **Print cylinder**.

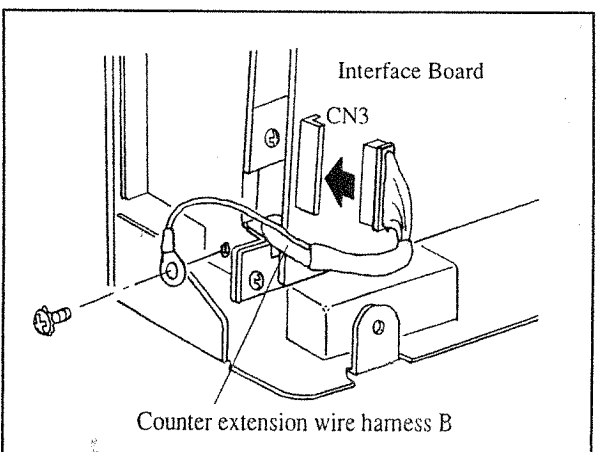
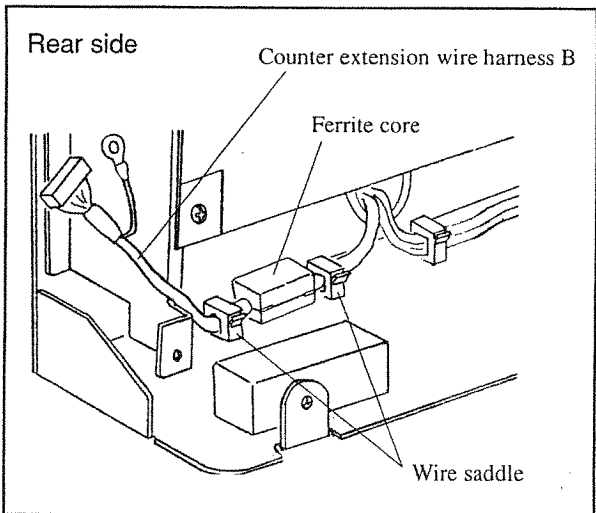
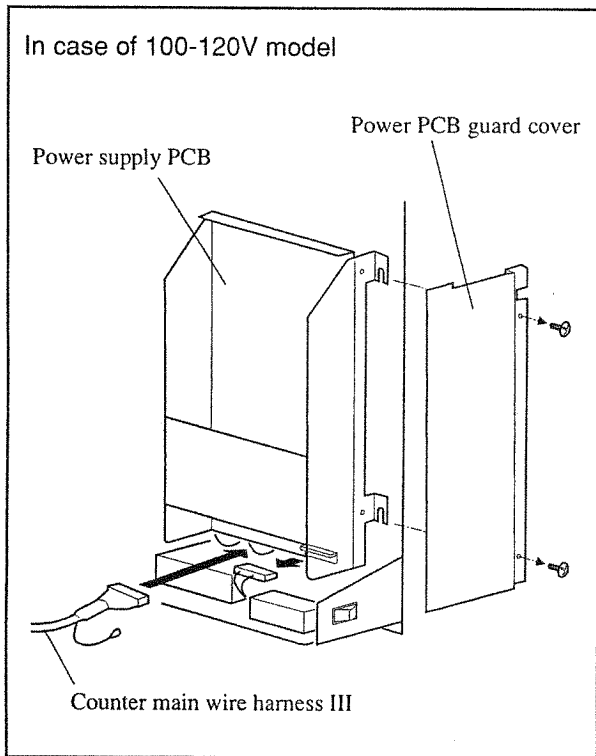
Proceed to the section "Installation of the Key/card counter unit" on page 7.

1) Leading wire harnesses inside the printer - RISO RN series models -

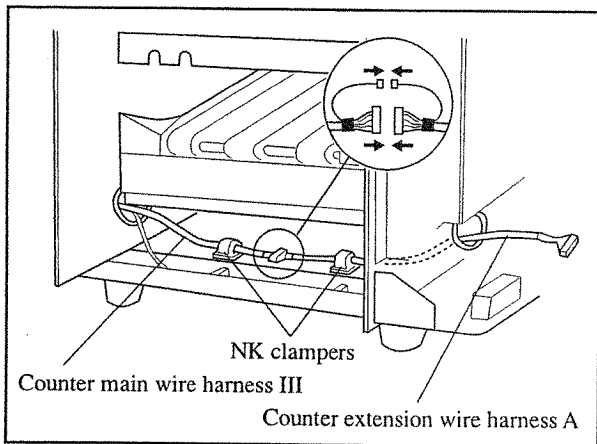


1. Remove the **Print cylinder** and turn off the power switch. Then unplug the power cord.
2. Remove the **Front cover**, **Front inner cover**, and the **Back cover**. If the **Color spacer** is attached to the stand, remove it as well.
3. Remove the **Paper receiving tray** and then the **Suction unit cover plate**.
4. Lead the smaller connector of the **Counter main wire harness III** through one (left-hand) of two openings which are found on the side frame under the lower left corner of the Power supply PCB.

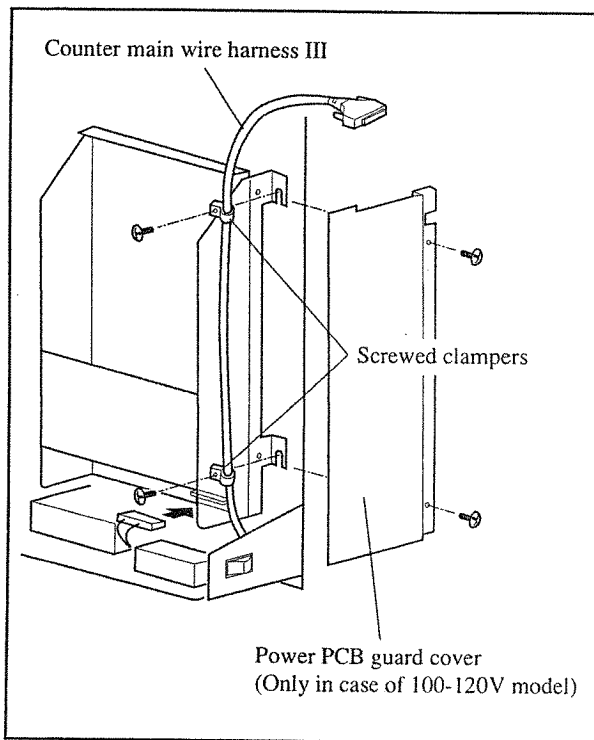
1) Leading wire harnesses inside the printer - GR3770 & FR series models -



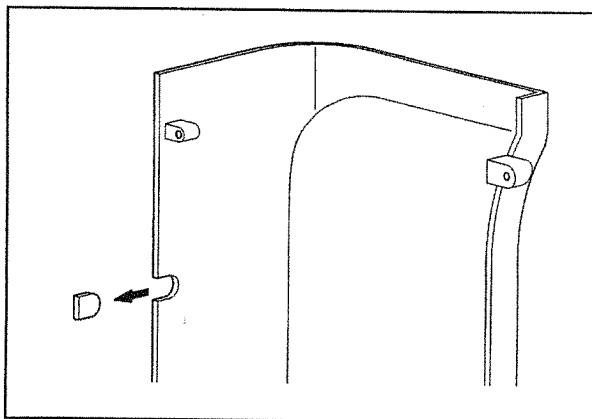
1. Turn off the power switch and unplug the power cord.
2. Remove the **Front right cover** and the **Back cover**.
3. Remove the **Paper receiving tray** and then the **Suction unit cover plate**.
NOTE : Retain the removed screws as they will be reused.
4. If you work on **100-120V model**, remove the **Power PCB guard cover** from the Power supply PCB.
NOTE : Retain the removed screws as they will be reused.
5. Remove the **Power supply PCB** after disconnecting all connectors on it.
6. Lead the smaller connector of the **Counter main wire harness III** through one (right-hand) of two openings which are found on the side frame under the Power supply PCB.
7. Lead the connector (without ground wire) of the **Counter extension wire harness B** (shorter one) through the hole located on the rear side frame under the System PCB (or Main control PCB).
NOTE : Remove the **Interface board** together with the brackets if it is already attached on the System PCB (or Main control PCB).
8. Put the **Ferrite core** on the **Counter extension wire harness B** as illustrated.
9. Secure the **Counter extension wire harness B** at two points on the Bottom plate (left) with the existing wire saddles.
10. Attach the **Interface Board** on the System PCB (or Main control PCB), following the instructions given in the **Interface board III(S) Installation Procedure Guide**.
NOTE : Replace the Interface Board instead if it is removed in Step 7.
11. Connect another connector of the **Counter extension wire harness B** to **CN3** on the Interface Board and attach the terminal of the **ground wire** coming out of the wire harness to the PCB bracket with a star-washer screw.



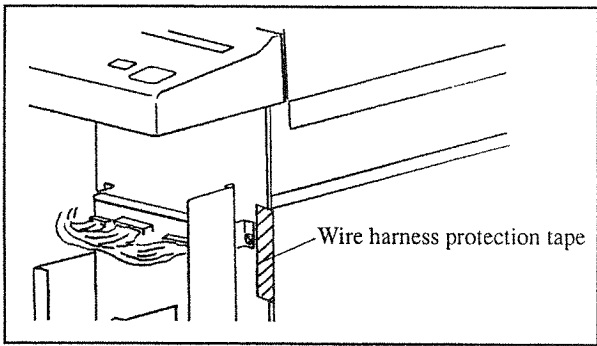
12. Connect the connectors of the **Counter main wire harness III** and **Counter extension wire harness B** under the Suction unit as illustrated.
13. Attach **NK clammers** at two positions on the Bottom cover and secure the **Counter main wire harness III** and **Counter extension wire harness B** with them.



14. Return the **Power supply PCB** to the original position securing the **Counter main wire harness III** along the right-side Power supply PCB bracket by holding the wire harness with screwed clammers and securing the screwed clammers together with the right-side Power supply PCB bracket with packed-in double washered screws.
15. If you work on **100-120V model**, replace the **Power PCB guard cover** on the Power supply PCB.
16. Connect all the removed connectors to the **Power supply PCB**.

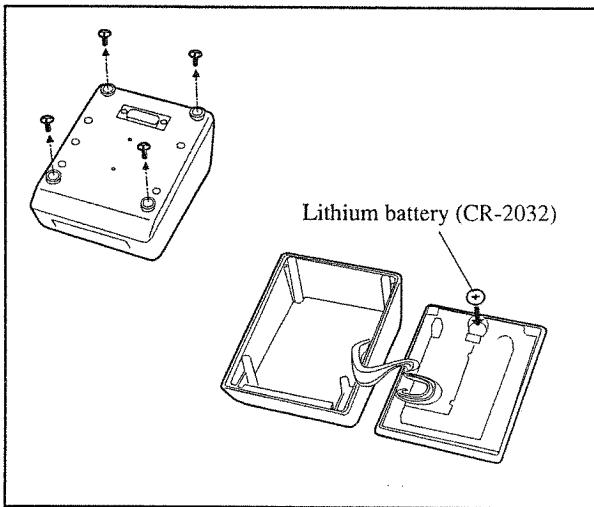


17. Replace the **Back cover**, **Suction unit cover plate** and the **Paper receiving tray**.
18. Make a U-shape cutting on the **Front right cover**. To cut the cover in a U-shape, twist off the part to be removed with a pliers and smoothen the edge of the opening with a cutter knife for a fine finish.



19. Cover the edge of the side frame with the **Wire harness protection tape** to protect the wire harness passing through the U-shape hole of the **Front right cover**.
20. Replace the **Front right cover**, leading the **Counter main wire harness III** through the U-shape opening of the cover.

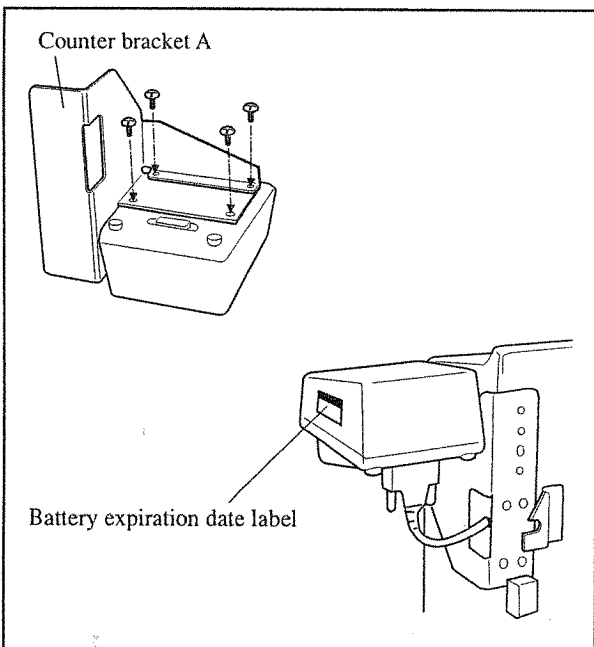
2) Installation of the Key/card counter unit



1. Remove the case cover from the **Key/card counter unit** and put a **lithium battery (CR-2032)** into the battery holder.

NOTE : Be sure to put the battery with the + side facing upward.

2. Replace the case cover on the **Key/card counter unit**.



3. Secure the **Key/card counter unit** to the **Counter bracket A**. (Washed screw M3x8, 4pcs)
4. Secure the **Counter bracket A** (with the Key/card counter unit) to the front side frame of the printer, leading the connector of the **Counter main wire harness III** through the opening of the bracket. (Binding screw M4x8, 2pcs)
5. Connect the **Counter main wire harness III** to the **Key/card counter unit**.
6. Write the date of two years later on the **Battery expiration date label** and stick the label on the side of the **Key/card counter unit**.

3) Operation check

1. Pressing both "0" and "C" keys on the Key/card counter control panel together, turn on the main power switch on the printer.
2. After confirming that the indication "FFFFFFFFFFFFFF" appears in the display on the Key/card counter control panel, press the "1", "9", "5" and "3" keys orderly.

NOTE : If no indication appears when the printer is turned on, return to the step 1.

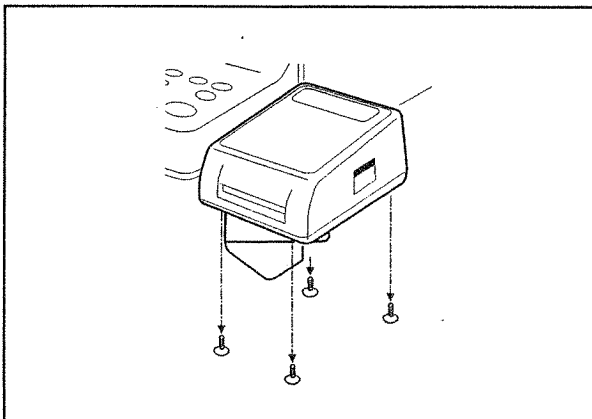
3. After the display message changes to "INSERT CARD", insert the "OPERATOR CARD No. 1" into the Key/card counter and print 5 copies with a newly made master.
4. Insert the "CONTROL CARD" into the Key/card counter and press the "1" key more than a second. Then press the "PRINT" and "SET" keys orderly to print out the data of master count and print count.

5. Check that the following data are printed out on copies.

No.	MSTR	PRINTS
1	1	5
ALL	1	5

6. To clear the above data, follow the procedures below.
 - 1) Press the "1" key more than a second leaving the "CONTROL CARD" in the Key/card counter.
 - 2) After the indication "TTL- 1- 5" appears on the display, press the "C" and "SET" keys orderly. The panel indication is changed to "TTL- 0 -0" and the data are all cleared.

Battery replacement

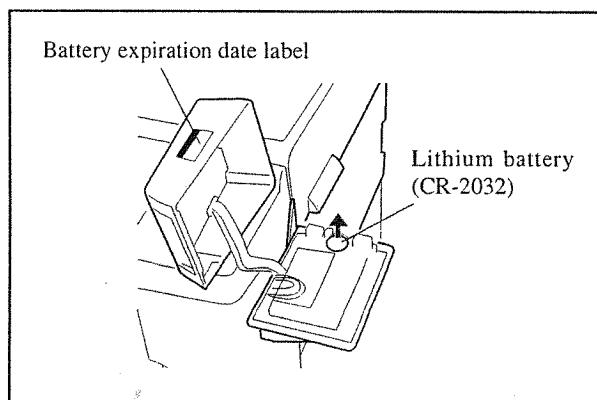


The used battery (normally after two years' operation) can be replaced by the following procedures.

1. **Turn on the main power** of the printer and remove the case cover of the **Key/card counter unit** by removing the securing screws on the bottom of the unit.

Important!

Always replace the used battery with the power of the printer turned ON. Otherwise, all memories in the Key/card counter will be cleared out.



2. Pick off the used battery from the battery holder and put a new one (CR-2032) there.
3. Replace the case cover on the **Key/card counter unit**.
4. Write the date of two years later on the **Battery expiration date label** on the side of the **Key/card counter unit**.