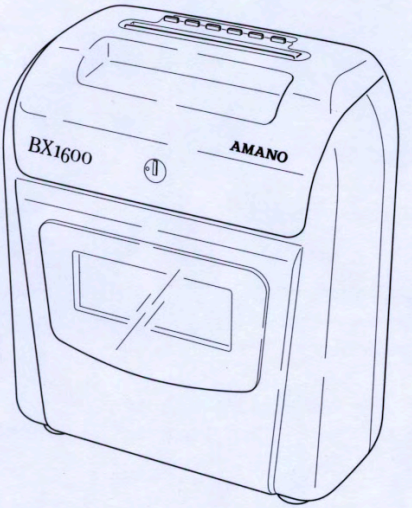
AMANO

ELECTRONIC TIME RECORDER

BX1600

OPERATION MANUAL



■ Important safety information

Precautions given in this manual are categorized according to the degree and content of hazardousness as follows. Do not fail to read these precautions carefully before starting use of this product.

⚠**Warning:** Warns of the risk of fatal or serious physical injuries unless its content is duly observed.

⚠**Caution:** Cautions on the risk of physical injuries or of material damages and losses unless its content is duly observed.

- Serious physical injuries include loss of eyesight, suffering a physical injury, suffering a burn (high temperature or low temperature), receiving an electric shock, suffering a fracture and poisoning, which leave aftereffects or which require hospitalization or extensive outpatient treatment to cure.
- Physical injuries include suffering a burn and receiving an electric shock for which hospitalization or extensive attendance to the hospital may not be necessary to cure.
- Material damages and losses include damages and loses affecting houses, household belongings, livestock and pets.

• Examples of illustrative indications

Triangular framing stands for a warning or a caution.
Specific content is being illustratively represented inside the triangular frame.

⃠ framing stands for a prohibition.
Specific content is being illustratively represented inside the circular frame.

The reversed circle framing stands for an indispensability.
Specific content is being illustratively represented inside the circular frame in reversed print.

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INTRODUCTION

Read this manual carefully for sale and proper use of the product. Also, after reading this manual, preserve it at a handy location for quick reference whenever required.

◆BX1600 time recorders will not operate normally unless installed in a proper environment. Do not install them outdoors or where they are exposed to rain.
◆The specifications, appearance, and descriptions are subject to change due to improvement.
◆This manual has been carefully prepared, but if you find any errors or any descriptions which you cannot understand clearly, contact the dealer from whom you bought your time recorder.
◆Use or reproduction of this manual in part or in whole without the prior permission of AMANO Corporation is forbidden by law.

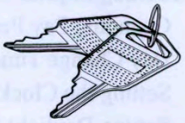
Components

BX1600 components are as follows. Be sure to check before operation that all components are supplied.

☐BX1600 time recorder

☐An operation manual (this manual)

☐One pair of keys (two keys)

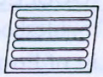


☐A bracket for wall installation

☐A spare fuse
(Attached to the front case)
110-120VAC ··250V, 700mA
220-240VAC ··250V, T500mA
(Time Lag with a low breaking capacity)

Use of any other materials for fuse will cause fire.
Make sure that the fuse has the proper specified capacity prior to use.

☐Stickers for different languages



Note

BX1600 time recorders will not operate normally unless installed in a proper environment. Do not install them outdoors or where they are exposed to rain.

FOR THE OPERATIONAL SAFETY

Carefully read to fully appreciate the following warnings and cautions before starting use of the equipment.

⚠Warning

- **Do not use with any power voltage other than the specified voltage.**
  This may cause fire or electric shock.

- **Do not overload on a single socket.**
  This may cause fire or electric shock.

- **Do not touch the power plug with wet hands.**
  This may cause electric shock.

- **Do not harm or damage any cords, such as power cord, etc.**
  Also, note that putting a heavy object on them, pulling or bending them by force will likely damage the power cord, which may cause fire or electric shock.

- **Do not attempt to remove <a rear cover, a cabinet, or a hazard protector>.**
  This may cause electric shock.

- **Do not remodel the time recorder.**
  This may cause fire or electric shock.

- **If any unusual status is found with the time recorder, such as smoke, strange odor, heating or other, immediately disconnect the power plug from the outlet and contact your local dealer for servicing.**
  If you continue to use the time recorder, it may cause fire or electric shock.

- **If any object (metal piece, water or other liquid) gets inside the time recorder, immediately disconnect the power plug from the power outlet and contact your local dealer for servicing.**
  If you continued to use the time recorder, it may cause fire or electric shock.

- **When replace the fuses, use only the specified fuses.**
  Do not use any other materials. This may cause electric shock.

- **Do not replace the fuse by yourself.**
  This may cause fire or electric shock. This work shall be done by our authorized dealers.

- **Ground the time recorder properly.**
  If you use the time recorder without proper grounding, electric leakage may cause fire or electric shock. Ask your local dealer when grounding cannot be made.

⚠Caution

- **The socket-outlet shall be installed near the time recorder and shall be easily accessible.**

- **Do not place the time recorder on unstable surface.**
  It may drop or fall off which could cause injury.

- **Do not place any metallic objects or containers filled with liquid on the time recorder.**
  Such objects may fall and/or spill into the time recorder, and may cause fire or electric shock.

- **Do not place the time recorder in the oily smoke, moisture and dusty atmosphere, such as a side of kitchen counter and/or humidifier.**
  This may cause fire or electric shock.

- **For the wall mounting, use a proper fixture and tools suited for wall material which support the weight of this equipment enough.**
  If not, the time recorder may fall off which could cause injury.

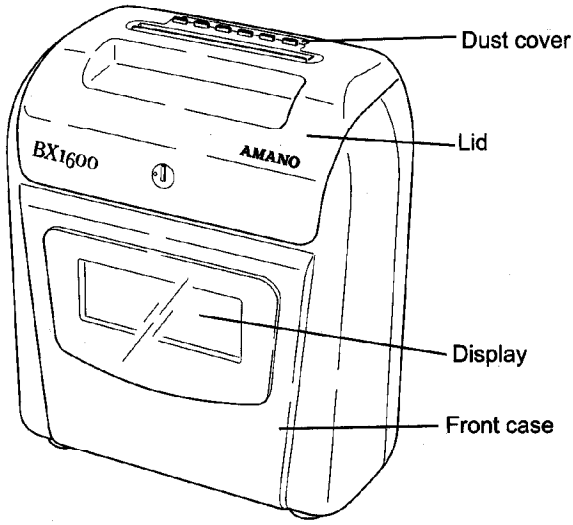
- **When disconnecting the power plug be sure to hold the plug, not the cord.**
  Pulling the power cord may damage the cord and this may cause fire or electric shock.

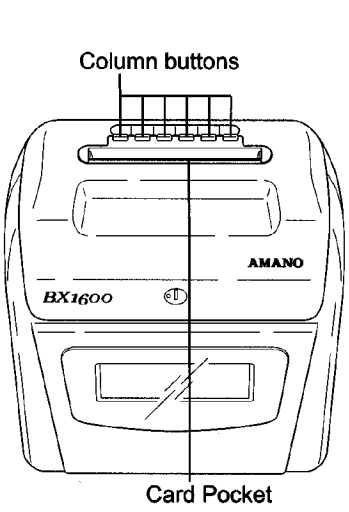
- **Before replacing the ribbon cassette, disconnect the power plug from the power outlet.**
  Replacing the ribbon cassette while the power plug is connected may cause injury or electric shock.

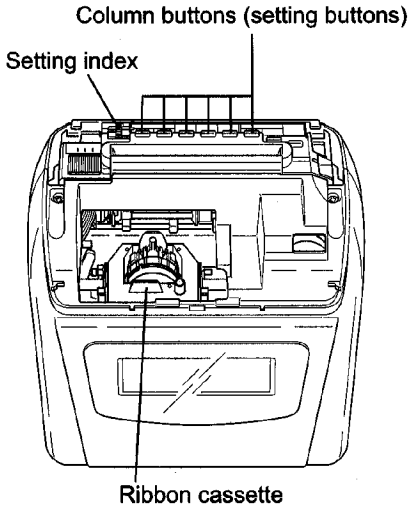
- **Although this instruction manual contains the maintenance information that should not be performed by the end user, you may not attempt to service such work yourself.**
  This may cause injury or electric shock.

NAMES OF PARTS

Names of Exterior Parts



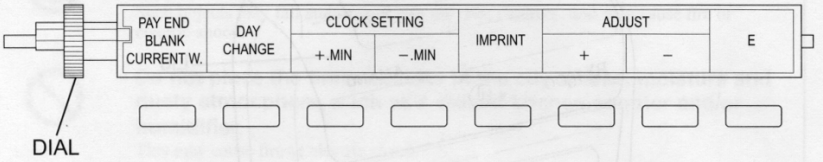




Programming Section

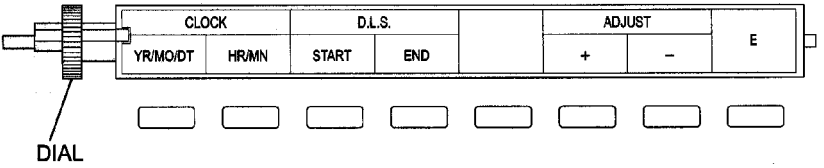
Open the lid to set each item. (See page 1-12.) Turn the dial at the left side to rotate the setting index. Setting index ①, setting index ②, and setting index ③ can be selected. Press the button at the front of the setting index to operate. For setting details see pages 1-13~1-31.

Setting Index ①



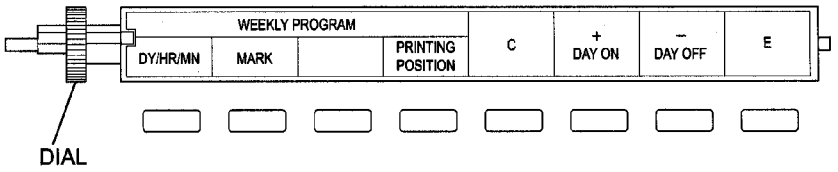
PAY END BLANK CURRENT W.	This button is used to select a pay period ending date or week, a blank row position on time card (monthly pay only) or a current week (in case of bi-weekly pay only). Press the "+" or "–" button to change the value.
DAY CHANGE	This button is used to change the time at which the date changes over. Press the "+" or "–" button to change the value.
CLOCK SETTING + MIN.	Each time this button is pressed, the clock advances one minute. Keep it pressed to advance the minute quickly. When this button is pressed, the clock will start running with the second set to "00" automatically.
CLOCK SETTING – MIN.	Each time this button is pressed, the clock will decrement one minute. Keep it pressed to decrement the minute quickly. When this button is pressed, the clock will start running with the second set to "00" automatically.
IMPRINT	Use this button to change print formats such as card type, 24hours/12hours indication printing change, minute imprint, day of the week, etc.
ADJUST +	Press this button once to increase a set value by 1. Hold this button down to increase a set value quickly.
ADJUST –	Press this button once to decrease a set value by 1. Hold this button down to decrease a set value quickly.
E	Press this button to register set values.

Setting Index ②



CLOCK YR/MO/DT	Use this button to change year, month, and day. To change these values, press the "+" or "–" button.
CLOCK HR/MN	Use this button to change hour and minute. To change these values, press the "+" or "–" button.
D.L.S. START	Use this button to set the starting date of daylight saving time. The starting date can be set by designating a year, a month and date. The change-over time can be set at any time between one o'clock and nine o'clock in hour units. Change the value by pressing the "+" or "–" button.
D.L.S. END	Use this button to set the ending date of daylight saving time. If both the starting and the ending dates are set to the same date, the set daylight saving time is canceled. If only the starting date or the ending date is set, the daylight saving time function will not operate. Change the value by pressing the "+" or "–" button.
ADJUST +	Press this button once to increase a set value by 1. Hold this button down to increase a set value quickly.
ADJUST –	Press this button once to decrease a set value by 1. Hold the button down to decrease a set value quickly.
E	Press this button to register set values.

Setting Index ③



WEEKLY PROGRAM DY/HR/MN	Press this button to set day of the week, hour, and minute in a weekly program.
WEEKLY PROGRAM MARK	Press this button to set for printing time cards in the irregular mark printing or the normal printing in a weekly program.
WEEKLY PROGRAM PRINTING POSITION	Press this button to set shift of print column.
C	Hold this button down for more than 2 seconds to cancel the content of the weekly program number displayed. (If this button is held down for less than 2 seconds, only the screen contents will be canceled, and the existing program contents will remain.)
+ DAY ON	When setting a weekly program, press this button to stop the day of the week from blinking and make it effective for the program. Hold this button down to advance any value quickly.
– DAY OFF	When setting a weekly program, press this button to extinguish the day of the week blinking and make it ineffective for the program. Hold this button down to decrease any value quickly.
E	Press this button to register set values.

CAUTIONS WHEN INSTALLING

Installation

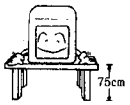
Proper installation and good power conditions will enable you to operate the time recorder for a long time.

⚠Caution

- **The socket-outlet shall be installed near the time recorder and shall be easily accessible.**
- **Do not place the time recorder on unstable surface.**
  It may drop or fall off which could cause injury.
- **Do not place any metallic objects or containers filled with liquid on the time recorder.**
  Such objects may fall and/or spill into the time recorder, and may cause fire or electric shock.
- **Do not place the time recorder in the oily smoke, moisture and dusty atmosphere, such as a side of kitchen counter and/or humidifier.**
  This may cause fire or electric shock.

Installation location

- Prepare a stand about 75cm high.
- Install the time recorder horizontally.



Improper installation locations

- Places exposed to direct sunlight or close to heat sources

- Places exposed to rain

- Dusty or unstable places

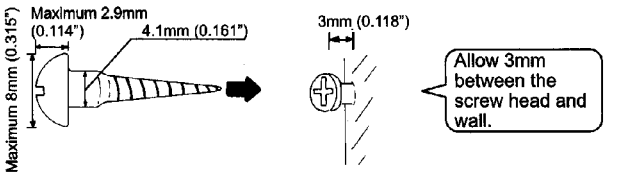
- Places exposed to strong vibrations or shocks

Wall Mounting

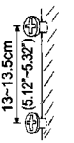
IMPORTANT!

- The wall mounting is implemented by our authorized dealers.
- This work should not be performed by the customer.
- If the BX1600 is insufficiently mounted, it may fall, resulting in damage to the unit or a personal injury.
- When mounting the BX1600 on a concrete wall or other special wall material, prepare special screws.

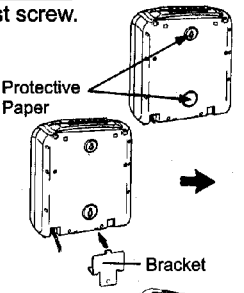
1 Insert a screw into the wall.
Place one screw about 94cm (37") to 124cm (48.8") above the floor.
At this height the time recorder is easy to use.
Secure to the wooden wall thicker than 10mm using screws (or equivalent).



2 Insert a second screw into the wall.
Place this screw 13cm to 13.5cm immediately below the first screw.

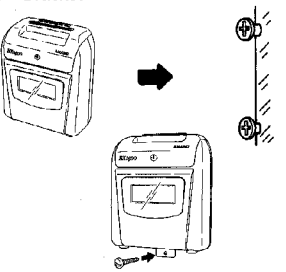


3 Peel off the protective paper.



4 Install the bracket into the bell-bottom hole (a hole, located lower than the other hole on the rear surface of the case).

5 Hook the unit on the screws through the holes on the back of the case.



6 Secure the bracket to the wall with the lower screw.

Power Source

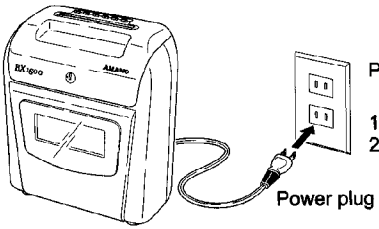
⚠Warning

- **Do not use with any power voltage other than the specified voltage.**
  This may cause fire or electric shock.
- **Do not overload on a single socket.**
  This may cause fire or electric shock.
- **Do not touch the power plug with wet hands.**
  This may cause electric shock.
- **Do not harm or damage any cords, such as power cord, etc.**
  Also, note that putting a heavy object on them, pulling or bending them by force will likely damage the power cord, which may cause fire or electric shock.
- **Do not attempt to remove <a rear cover, a cabinet, or a hazard protector>.**
  This may cause electric shock.
- **Do not remodel the time recorder.**
  This may cause fire or electric shock.
- **If any unusual status is found with the time recorder, such as smoke, strange odor, heating or other, immediately disconnect the power plug from the outlet and contact your local dealer for servicing.**
  If you continue to use the time recorder, it may cause fire or electric shock.
- **If any object (metal piece, water or other liquid) gets inside the time recorder, immediately disconnect the power plug from the power outlet and contact your local dealer for servicing.**
  If you continued to use the time recorder, it may cause fire or electric shock.

⚠Caution

- **When disconnecting the power plug be sure to hold the plug, not the cord.**
  Pulling the power cord may damage the cord and this may cause fire or electric shock.
- **The socket-outlet shall be installed near the time recorder and shall be easily accessible.**

Insert the power plug into the power outlet

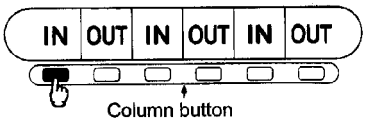


- Use a power source with a suitable voltage.
- Use a power source that supplies continuous voltage and is independent of other equipment.
- The time recorder has a built-in lithium battery on which the inner clock runs and which stores the programming data. (The battery is effective for three years of cumulative power failure hours.)

OPERATION

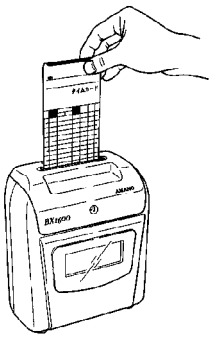
Selecting the Print Column

Press an appropriate IN or OUT button to select the print position for time cards.



- ◆Time cards are printed in the column where the column button light is on. To change the print position, press the button corresponding to the desired print position.
- ◆The print position on time cards remains unchanged until another column button is pressed.

Inserting Time Cards



Insert a time card lightly in the card pocket. The card is automatically pulled in and printed.

Surface Detection Function (see page 1-13.)

If a time card is inserted backwards by mistake, a long "beep" sound will occur, and the card will be rejected. (The surface detection function can be set only when the Monthly pay card is used.)

- ◆Time cards are automatically pulled in. Do not push them in the card pocket by force, and do not try to pull them out during printing.
- ◆If a time card is inserted upside down by mistake, it will be printed. Be careful to correctly insert time cards in the card pocket.
- ◆Do not insert any objects other than time cards.

Initial Print after Time Change

If the clock time has been adjusted to a time change of 5 minutes or more from the currently displayed time, the first printing after the change was made will print the "Hour" in small print. If the change in time is less than 5 minutes, the printing will remain as normal.

8:20 — the "Hour" in small print

8:28 — normal print

- The "Hour" is in small print for the first printing when the BX1600 is first operated or after the time has been changed ±5 minutes or more.
- If the parameters of daylight saving time is set on the day when the automatic time change is to take place, the first printing after the automatic time change will have the "Hour" in smart print.
- If a time change ±5 minutes or more is made and the clock time is then switched back to within ±5 minutes of the "actual time", the printing will be normal.

Note : Since this is an easily recognized feature on time cards, it can also be used as a method of indicating any unauthorized time changes.

SETTING

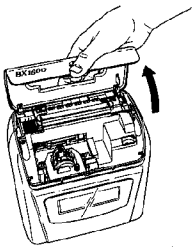
Opening / Closing the Lid

Open the lid when you adjust time, change pay period ending date, change year, month or day, replace ribbon cassette, etc.

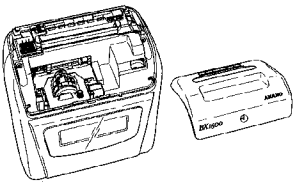
Note : Open/close the lid with power turned on.

How to open

1. Insert the key into the keyhole and turn clockwise.

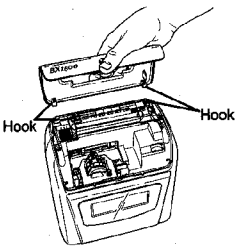


2. Open the lid upward.



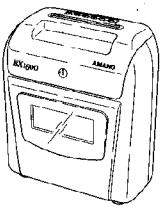
3. Remove the lid.

How to close



1. Engage the hooks of the lid with the hooks of the unit.

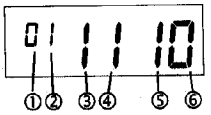
2. Close the lid.



3. When the lid is closed, the hands of the clock indicate the current time. Return the key to the original position.

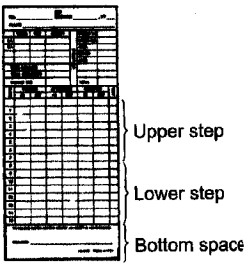
Setting Imprint

Print formats are changed as follows :



①Card Type (with 6mm pitch)
Select from 1~7 the mode which applies to the card you use.
*with 7mm pitch (special order), choose either "2" or "4".

0 : Monthly pay surface detection not operational
1 : Monthly pay surface detection operational
2 : Upper step Weekly pay (Bottom space : 23mm)
3 : Upper step Weekly pay (Bottom space : 35mm)
4 : Lower step Weekly pay (Bottom space : 23mm)
5 : Lower step Weekly pay (Bottom space : 35mm)
6 : Bi-weekly pay (Bottom space : 23mm)
7 : Bi-weekly pay (Bottom space : 35mm)



②Shifting Print position manually
1 : "Shifting print position manually" operational
2 : "Shifting print position manually" not operational

1 : "Shifting print position manually" operational

Both automatic shifting of print column with weekly program and manual selection using column button can be used together.
When the column button is pressed, the column position will be operational for 10 seconds. After printing is completed, or if no print is completed within 10 seconds after the column button is pressed, print position will return to the column which has been set by weekly program.
If no weekly program is set, column button will be operational continuously.

2 : "Shifting print position manually" not operational

Print column shifts only by weekly program : Column position cannot be shifted manually.
If weekly program has not been set, note that printing cannot be done even if the card is inserted.

③24-hour/12-hour Indication Change-over

1 : 24-hour indication
2 : 12-hour indication

④Hour Imprint

1 : 24-hours (0~23 hours) (0 is not printed at the tens digit of hour. Example : 9:00)
2 : 12-hours (AM/PM hours) (Minute is underlined for PM. Example : 9:00)
3 : 24-hours (0~23 hours) (0 is printed at the tens digit of hour. Example : 09:00)

⑤Minute Imprint

1 : Minutes
2 : 1/100 hour A
3 : 1/100 hour B
4 : 1/10 hour

1/100 hour A, 1/100 hour B,and 1/10 hour:

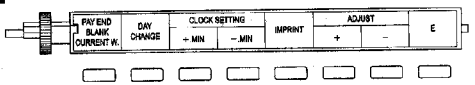
Minute	0	1	2	3	4	5	6	7	8	9	~	29	30	31	32	33	34	35	~	54	55	56	57	58	59
1/100 hour A	00	02	03	05	07	08	10	12	13	15	~	48	50	52	53	55	57	58	~	90	92	93	95	97	98
1/100 hour B	00	00	00	05	05	05	10	10	10	15	~	45	50	50	50	55	55	55	~	90	90	90	95	95	95
1/10 hour	0	0	0	0	0	0	1	1	1	1	~	4	5	5	5	5	5	5	~	9	99	9	9	9	9

⑥Day of The Week Imprint

0 : Date 1 : English 2 : Spanish 3 : French
4 : German 5 : Italian 6 : Japanese
7 : Day No.(1~7) 8 : No indication

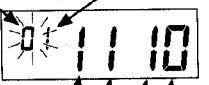
Example : Set "Monthly pay surface detection operational" , "Shifting print position manually operational" "12-hour indication" , "12-hour system printing" , "1/100 hour B" and "Date printing".

1 Turn the dial of the setting index.



Shifting Print position manually

Card type



24-hour/12-hour Indication Change-over

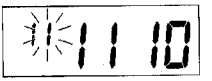
Print format

Minute indication

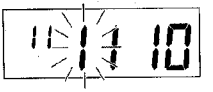
Day of the week indication

2 Press the IMPRINT button. The initial value will appear.

3 To change the card type, press the "+" or "–" button and set "1". Press the "E" button to register it.



4 To change the shifting print position manually, press the "+" or "–" button and set "1". Press the "E" button to register it.



5 To change the 24-hour/12-hour indication, press the "+" or "–" button and set "2". Press the "E" button to register it.

6 To change the hour indication, press the "+" or "–" button and set "2". Press the "E" button to register it.

7 To change the minute indication, press the "+" or "–" button and set "3". Press the "E" button to register it.

8 To change the day of the week indication, press the "+" or "–" button and set "0". Press the "E" button to register it.

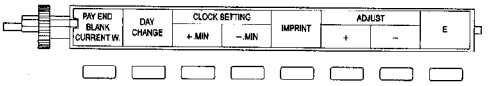
Changing Pay Period Ending Date

Pay period ending date can be set three ways : weekly pay, bi-weekly pay and monthly pay. Select the desired one. Make the selection when setting imprint. (See pages 1-13~1-15.)

<Weekly pay>

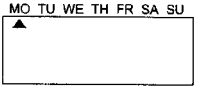
Example : Set the pay period ending day to Monday.

1 Open the lid and turn the setting index.



2 Press the PAY END button, and the initial value will appear. (The ▲ mark blinks at "FR".)

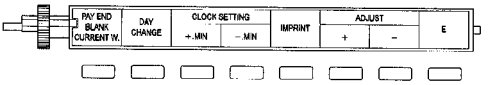
3 Press the "+" or "–" button and bring the ▲ mark to "MO". Press the "E" button, and the blinking ▲ mark stops blinking. The setting has been registered.



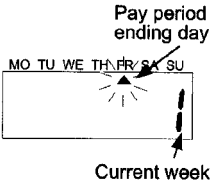
<Bi-weekly pay>

Example : Set the pay period ending day to Sunday and the current week to the second week.

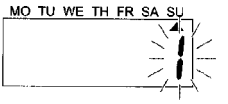
1 Open the lid and turn the setting index.



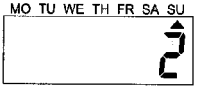
2 Press the PAY END button, and the initial value will appear. (The ▲ mark blinks at "FR", and the current week is the first week.)



3 Press the "+" or "–" button and bring the ▲ mark to "SU". Press the "E" button, and the blinking ▲ mark stops blinking. The setting has been registered.

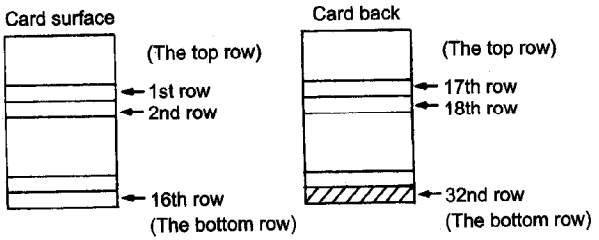


4 Press the "+" or "–" button to change the number to "2". Press the "E" button, and the blinking number stops blinking. The setting has been registered.



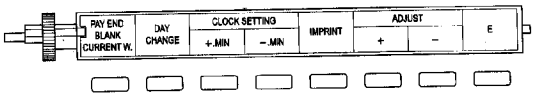
<Monthly pay>

For the "Monthly Pay", assign "pay period ending date" and "blank row". A blank row means a row is left blank out of the 32 rows on the front and back of a time card. The top row of the front is numbered 01 and the last row on the back is numbered 32. The desired row can be set by designating the number.

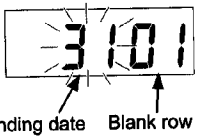


Example : Set the pay period ending date to the 25th and the blank row to the 17th.

1 Open the lid and turn the setting index.



2 Press the "PAY END" button, and the initial value will appear. (The pay period ending date is the 31st, and the blank row is the 1st.)



3 Press the "+" or "−" button to change the pay period ending date and set 25 in place of 31. Press the "E" button to register it.

4 Press the "+" or "−" button to change the blank row and set 17 in place of 01.
Press the "E" button to register it.

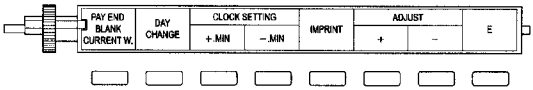
The setting is completed. Close the lid.
If required, other settings can also be performed before closing the lid.

Day Change Time

A day change time is the time when a print row is changed on a time card.When a day change time is made, only hours are changed, and the minutes is fixed at 00. The initial day change time has been set at 3 o'clock a.m.

Example : Set the day change time at 5 : 00.

1 Open the lid and turn the setting index.



2 Press the "DAY CHANGE" button. The initial value will appear. (3 : 00)

3 Press the "+" or "–" button, then set "05 : 00". Press the "E" button, and the blinking display will stop blinking. The setting has been registered.

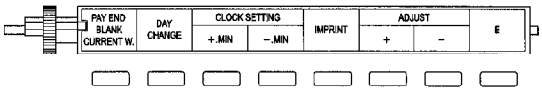
The setting is completed. Close the lid.
If required, other settings can also be performed before closing the lid.

Setting the Clock

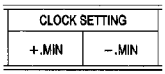
There are two procedures : setting the minutes, and setting the date and hour.

Setting Minutes

1 Open the lid and turn the setting index.



2 Correct the time by using the "+ MIN." and "− MIN." buttons.



Each time this button is pressed, the clock advances one minute. Keep it pressed to advance the minute quickly. When this button is pressed, the clock will start running with the second set to "00" automatically.

Each time this button is pressed, the clock will decrement one minute. Keep it pressed to decrement the minute quickly. When this button is pressed, the clock will start running with the second set to "00" automatically.

When [+ MIN.] or [− MIN.] button is pressed, the display will change to the clock.

* To advance or delay the clock only a few minutes, adjust the time by pressing [+ MIN.] or [− MIN.] button.
* To advance the clock by more than ten minutes, adjust the time by pressing [HR/MN] button described in Setting the Date. (See page 1-21.)

Setting the Date

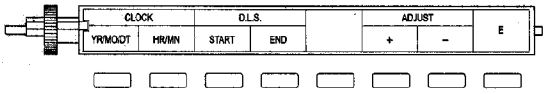
Year, month, date, hour, and minute are set as follows :

> Press the "+" or "–" button to change values. Be sure to press the "E" button before setting a new item or when registering values.

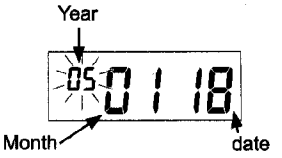
<Setting of Year, Month, and Date>

Example : Change January 18, 2005 to April 21, 2005.

1 Open the lid and turn the setting index.



2 Press the "YR/MO/DT" button.



3 Press the "+" or "–" button to change the year and press the "E" button. If it is not necessary to change the year, press the "E" button.

4 Press the "+" or "–" button to change the month and press the "E" button. If it is not necessary to change the month, press the "E" button.

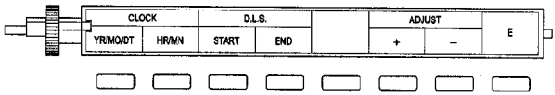
5 Press the "+" or "–" button to change the date. Press the "E" button to register the setting. If it is not necessary to change the date, press the "E" button.

The setting is completed. Close the lid.
If required, other settings can also be performed before closing the lid.
For year setting, 00 to 95 are 2000s and 96 to 99 are 1900s.

<Setting of Hour and Minute>

Example : Change 18 : 00 to 8 : 30.

1 Open the lid and turn the setting index.



2 Press the "HR/MN" button.

3 Press the "+" or "–" button to change the hour.
Press the "E" button to register the setting.

4 Press the "+" or "-" button to change the minute.
When the "E" button is pressed, the clock will start at 00 second.

Setting Daylight Saving Time

Starting/ending dates and times of the daylight saving time are set as shown below.

- When the time reaches the registered starting time of the day beginning daylight saving time, the clock will advance 1 hour automatically.
- When the time reaches the registered ending time of the last day of daylight saving time, the clock will return 1 hour automatically.

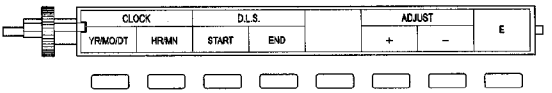
[Automatic updating the setting of Daylight Saving Time]

For example, when starting date is set to April 3rd (Sunday) of 2005, and ending date is set to October 30th (Sunday) of 2005, the time recorder understands that the starting date is the 1st Sunday of April and ending date is the last Sunday of October. So, after the Daylight Saving Time period has ended, the setting of the Daylight Saving Time for following year will automatically be re-set as Starting date: April 2nd (Sunday) of 2006, Ending date: October 29th (Sunday) of 2006. After setting the Daylight Saving Time once, it is not necessary to set again.

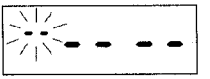
Note : This function works only when both the starting and ending dates of daylight saving time are set.

Example : Set the starting date and time to 5:00, April 3rd of 2005.

1 Open the lid and turn the index.



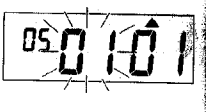
2 Press the "START" button.



3 When the "+" or "–" button is pressed, initial values of the starting year/month/date and this day of the week will be displayed.

①MO②TU③WE④TH⑤FR⑥SA⑦SU

4 Confirm the year. If the value is correct, press the "E" button.



5 Press the "+" or "–" button to set the starting month. Press the "E" button to register the setting.

6 Press the "+" or "–" button to set the starting date. Press the "E" button to register the setting.

Day of the week of April 3

7 By pressing the E button again, starting time will be displayed.

8 Press the "+" or "–" button to set the starting time. Press the "E" button to register the setting.
Note : Only Hour can be set for starting time. Minute will be fixed at 00.

9 Press the END button next to the START button. Setting of the ending year/month/date will start. Perform the setting of the ending date in the same way as setting of starting date.

The setting of daylight saving time is completed. Close the lid. If required, other settings can also be performed before closing the lid.

- To confirm the setting contents
  After the setting has been completed, each time the START or END button is pressed, display will change between set date and time. The set value can be confirmed.
- To cancel the setting
  Set the starting and ending dates to the same date. The daylight saving time function will be invalidated.

Before Setting Weekly Program

Setting table preparation
Before setting a program, check the working conditions and prepare a setting table.
Setting table is shown on page 1-37.

Example :

When working conditions are as shown above, enter the weekly program as follows:

Weekly program

No.	HR MN	DAY							MARK R/B	PRINTING POSITION
		MO	TU	WE	TH	FR	SA	SU		
1	3:00	▲	▲	▲	▲	▲	▲	▲		①23456
2	8:31	▲	▲	▲	▲	▲			R*1	123456
3	12:00	▲	▲	▲	▲	▲				123④56
4	17:00	▲	▲	▲	▲	▲			B*2	123456

A maximum of 25 steps can be set for weekly program.

◆For irregular mark and normal printings, set to R: starting with the irregular mark printing or B: starting with the normal printing.
◆For shifting of printing column, set shifting columns (1~6).

*1 R : Start of the irregular mark printing. ♦ 8:31

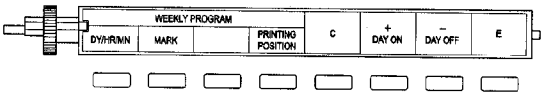
*2 B : Start of the normal printing. 8:30

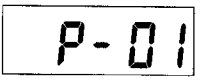
Setting Day of the Week and Time

In a weekly program, day of the week and time are set first, and other items such as irregular mark printing and shift of print position are set later.

Example : Monday to Friday and 8:30.

1 Turn the dial of the setting index. Then indicate the Program No.





2 Press the DY/HR/MN button to begin setting.

3 Set day of the week.
To set Monday to Friday, press the +/DAY ON button.
To set Saturday and Sunday, press the −/DAY OFF button. Then, press the "E" button to register the setting.

4 Set Hour.
Press the +/DAY ON button or −/DAY OFF button to set the hour. Press the "E" button to register the setting.

5 Set Minute.
Press the +/DAY ON button or −/DAY OFF button to set the minute. Press the "E" button to register the setting.

6 Other items can be set.
If an incorrect setting is made, return to the display in step "5" and press DY/HR/MN button to perform setting again. Or press "C" button for two seconds until beep sound is heard and repeat from step "2".

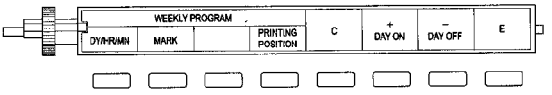
Refer to page 1-26 for setting procedures regardless of the setting order.

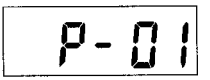
Setting Irregular Mark Printing and Normal Printing

It is possible to change the content of printing to distinguish between regular work hours, starting late, and leaving early. Set the desired day of the week first, then set the irregular mark printing.

Example : Set the irregular mark printing to 8:31, Monday to Friday.

1 Turn the dial of the setting index.





2 Set day of the week and time.
*Refer to page 1-25 for setting procedures from here.

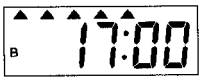
3 Press the MARK button.

4 Select the irregular mark or the normal.
R : Start of the irregular mark printing.
B : Start of the normal printing.
No indication : No set-up.
Press the +/DAY ON button or the −/DAY OFF button to select the color.

5 Press the "E" button.
To set other weekly programs, proceed to other items after pressing the "E" button.

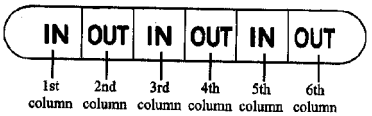
6 Press the "E" button again.
When the next program number appears, the registration is completed.

7 Set Program No. 2.
MO~FR, 17:00 and the normal printing (B) will be set to P-02.
Note : If the irregular mark printing and the normal printing are set at the same time, irregular mark printing will have priority.



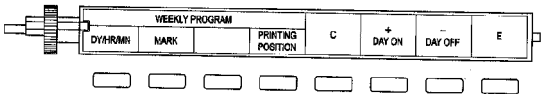
Setting a Shift of Printing Position

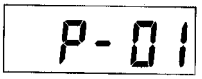
Print columns automatically shift from 1st column to 6th column at the designated time.



Example : The print column moves to the 1st column at 3:00 and the 4th column at 12:00 Monday to Friday.

1 Turn the setting index.





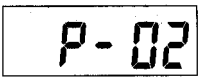
2 Setting day of the week and time.
*Refer to page 1-25 for setting procedures from here.

3 Press the PRINTING POSITION button.

4 Select a print column.
Press the +/DAY ON button or the −/DAY OFF button to select a print column position.
1~6 : Print column shifts to 1~6.
No indication : Print column does not shift.

5 Press the "E" button.
To set other weekly programs, proceed to other items after pressing the "E" button.

6 Press the "E" button again.
When the next program number appears, the registration is completed.



7 Set Program No. 2.
MO~FR, 12:00 4 (shifted to 4th column) are set in P-02.

Note : If different columns are set at the same time, column with higher program No. has priority. Column with lower program No. does not shift.

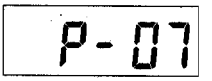
Copying Set Items

Set items (day of the week, time) can be copied in the next program. Setting time can be reduced by changing the copied data. When time and day of the week have already been set, hold the "E" button down for more than two seconds to copy them. When the next program has been set, they are copied in the next program for which no data has been set.

Example : Set the irregular mark (R) to 8:31 and 17:31.

1 Set the weekly program.

2 Hold the "E" button down for two seconds, and an empty program number will be indicated.

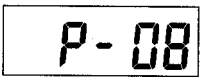


3 Release the "E" button, and the day of the week and time will be copied.

4 Press the +/DAY ON or the −/DAY OFF button to change to the desired time.

5 Set the irregular mark (R), and press the "E" button.

6 Press the "E" button again.
When the next program number appears, the registration is completed.

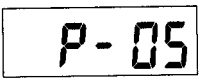


Changing (Confirming) Set Items

A weekly program can be changed (confirmed) as follows :

Example : Change the setting in program No. 5 from "Irregular mark at 8:31" to "Irregular mark at 9:01".

1 Press the +/DAY ON or −/DAY OFF button to indicate the number of the program to be changed (confirmed).

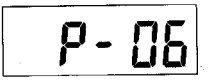


2 Press the "E" button, and the contents of the program to be changed (confirmed) will be displayed.

3 Change the setting and press the "E" button.

4 Change the setting and press the "E" button. Press the +/DAY ON button or the −/DAY OFF button to change the contents to the desired ones.

5 Press the "E" button again. When the next program number appears, the registration is completed.



Canceling of Set Data

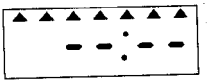
Weekly programs can be canceled as follows : the contents of a program to be canceled are confirmed before cancellation, but they can be canceled while their numbers are displayed.

Example : Cancel the set data of Program No. 5.

1 Press the +/DAY ON or −/DAY OFF button to select Program No. 5.

2 Press the "E" button, and the contents of the program to be canceled are displayed.

3 Hold the "C" button down for two seconds. When you hear a long "beep" sound, the cancellation is completed.
Time display becomes --:--.
Pressing C button again returns display to Program No.



Additional Setting

Weekly programs can be added as follows :

Example : Add set data to an empty program (Program No. 5).

1 Display a program number on the display and hold the "E" button down for two seconds, and an empty program number will appear. (The next program in which no data has been set.)

2 Set data to be added.

TROUBLESHOOTING

Troubleshooting

Trouble	Causes and Corrective Measures	
The time recorder does not accept time card.	Power failure.	⇨ Wait until power supply is restored.
	The power cord is disconnected.	⇨ Insert the power plug firmly into the power outlet.
	Cards were inserted or pulled out by force.	⇨ Pull the power plug out of the power outlet, then insert it again.
A long "beep!" sound is heard without printing.	The card was inserted in the card pocket backwards.	⇨ Insert it in the pocket the other way round.
	The card was not correctly inserted in the card pocket.	⇨ Insert it in the pocket with slight pressure.
The date is set incorrectly.	Mistake in setting date.	⇨ Reset the date referring to "Setting the Date" (See page 1-20).
Light printing (Imperfect printing)	The ribbon is worn out.	⇨ Replace the ribbon cassette.
	The ribbon cassette is not set correctly.	⇨ Set it correctly.
The print position is wrong.	Incorrect setting of pay period ending date, etc.	⇨ Set them correctly referring to "Changing Pay Period Ending Date" (See page 1-16) for an example.
	Improper use of the time recorder.	⇨ Explain how to insert cards in the card pocket and how to remove them.
Unclear printing	Improper use of the time recorder.	⇨ Explain how to remove a card from the card pocket.

After all the above items have been checked, if the time recorder does not operate correctly, contact your dealer. Do not disassemble or lubricate, etc.

List of Error Codes

When the IN/OUT button lamp has gone out with an error signal, a problem may have occurred inside the time recorder. Disconnect the power cord, and after a while reconnect it to the power outlet. If the time recorder does not return to normal, check the error indication and contact the dealer from whom you bought the time recorder.

- Error code is displayed for 4 seconds after the lid is opened. After 4 seconds, the recorder enters the setting mode.

Error No.	Meaning of Error	Measures
Err 2	Error of column home position sensor	Contact the dealer from whom you bought the time recorder.
Err 3	Error of printing timing pulse sensor	

IF PRINTS BECOME DIM (Replacing the Ribbon Cassette)

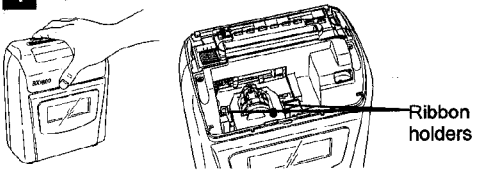
⚠Warning

- **Do not touch the power plug with wet hands.**
  This may cause electric shock.
- **Do not harm or damage any cords, such as power cord, etc.**
  Also, note that putting a heavy object on them, pulling or bending them by force will likely damage the power cord, which may cause fire or electric shock.
- **Do not disassemble or touch any parts other than the explained part in this Manual.**
  This may cause electric shock.

⚠Caution

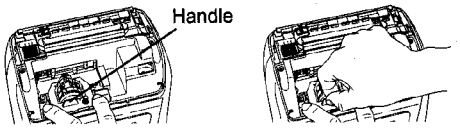
- **Before replacing the ribbon cassette, disconnect the power plug from the power outlet.**
  Replacing the ribbon cassette while the power plug is connected may cause injury or electric shock.
- **When disconnecting the power plug be sure to hold the plug, not the cord.**
  Pulling the power cord may damage the cord and this may cause fire or electric shock.

1 Open the lid.



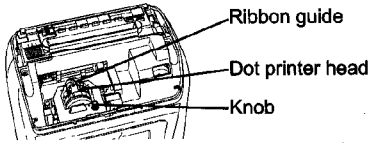
Insert the key into the keyhole, turn it clockwise and open the lid upward.
With the dot printer moved to the center, disconnect the power plug from the power outlet.

2 Remove the cassette.



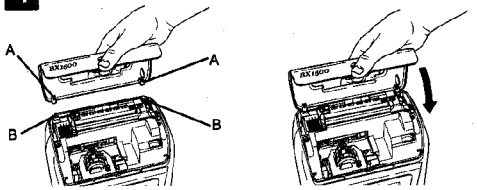
While pulling the ribbon holders toward the front, pull out the handle of the cassette to remove it.

3 Insert a new cassette.



Correctly insert a new cassette between the ribbon guide and the dot printer head.
Push the cassette head until it clicks into place. Turn the knob clockwise to remove any slackness in the ribbon.

4 Close the lid.

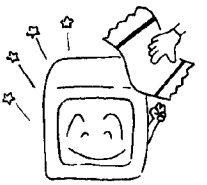


Connect the hooks in the lid (A in the figure) with the hooks in the case (B). Bring the lid down toward you until it is inserted into place.

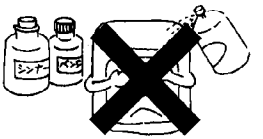
APPENDIX

Daily Maintenance

Clean the case when it becomes soiled.



- Wet a soft cloth with water or a neutral detergent and wipe the case lightly.
- Do not use benzine, volatile thinner or other chemicals for cleaning, because they may damage or discolor the case.
- Note that spraying insecticide over the case may also damage or discolor the case.

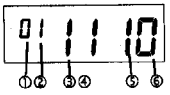


Wipe the window glass with a dry soft cloth. Be careful when wiping it because the glass surface has been specially processed.

Specifications

- Powers source : 110-120VAC +/−10% or 220-240VAC +/−10%, 50/60Hz
- Power consumption : 110-120VAC ... Rated 0.2A
  220-240VAC ... Rated 0.1A
- Operating conditions : Temperature −10°C to 40°C
  Humidity 10% to 90 % RH (without condensation)
- Weight : 2.3kg (5.1 ℓbs.)
- Dimensions : 190(W)×224(H)×104(D) mm
  (7.1/2″)×(8.6/8″)×(4″)
- Clock system : Quartz oscillation system, Accuracy +/−3 seconds per week
  (25°C+/−5°C) (77°F+/−10°F)
- Memory holding function : 3 years of total power failure time (all functions other than internal clock stop) with lithium battery.
  Printing cannot be done during power failure.

Initial Values

Content	Set Value Range	Initial Value
Pay period ending date, Pay period ending day, Current week	01~31, 1~7, 1~2	31 (ending on 31st)
Blank	01~32	01 (1st row)
Day change time	Time 00~23	03 (3 : 00 (midnight))
Print format  	①Card Type 0 : Monthly pay surface detection not operational 1 : Monthly pay surface detection operational 2 : Upper step weekly pay (Bottom space : 23mm) 3 : Upper step weekly pay (Bottom space : 35mm) 4 : Lower step weekly pay (Bottom space : 23mm) 5 : Lower step weekly pay (Bottom space : 35mm) 6 : Bi-weekly pay (Bottom space : 23mm) 7 : Bi-weekly pay (Bottom space : 35mm)	0 : Monthly pay surface detection not operational
	②Shifting Print position manually 1 : "Shifting print position manually" operational 2 : "Shifting print position manually" not operational	1 : "Shifting print position manually" operational
	③24-hour/12-hour Indication Change-over 1 : 24-hour indication 2 : 12-hour indication	1 : 24hour indication
	④Print Format 1 : 24 hours (0~23 hours) (0 is not printed at the tens digit of hour. Example : 9 : 00) 2 : 12 hours (AM/PM hours) (Minute is underlined for PM. Example : 9 : 00) 3 : 24 hours (0~23 hours) (0 is printed at the tens digit of hour. Example : 09 : 00)	1 : 24hours (0~23hours)
	⑤Minute Indication 1 : Minutes 2 : 1/100 hour A 3 : 1/100 hour B 4 : 1/10 hour	1 : Minutes
	⑥Day of the week indication 0 : Date 1 : English 2 : Spanish 3 : French 4 : German 5 : Italian 6 : Japanese 7 : DAY NO. (1~7) 8 : No indication	0 : Date
Daylight savings time	Daylight savings time starting date Execution time : 0 : 00~9 : 00 Daylight savings time Ending date Execution time : 0 : 00 ~9 : 00	yyyy. 1. 1. 2:00 yyyy. 1. 1. 3:00

Weekly Program Setting Table

No.	HR MN	DAY							MARK R/B*	PRINTING POSITION
		MO	TU	WE	TH	FR	SA	SU		
1										123456
2										123456
3										123456
4										123456
5										123456
6										123456
7										123456
8										123456
9										123456
10										123456
11										123456
12										123456
13										123456
14										123456
15										123456
16										123456
17										123456
18										123456
19										123456
20										123456
21										123456
22										123456
23										123456
24										123456
25										123456

* R : Start of the irregular mark printing.
B : Start of the normal printing.