AMANO

ENGLISH

ESPAÑOL

FRANÇAIS

한국어

ELECTRONIC TIME RECORDER

EX3500N

OPERATION MANUAL

ENGLISH／ESPAÑOL／FRANÇAIS／한국어

Important safety information

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

⚠Warning: Warns possibilities of occurrences of fatal or serious physical injuries unless its content is duly observed.

⚠Caution: Cautions possibilities of occurrences of physical injuries or of material damages and losses unless its content is duly observed.

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

- Examples of illustrative indications

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

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

INTRODUCTION

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

- ◆EX3500N 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 have 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.

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FOR THE OPERATIONAL SAFETY

ENGLISH

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 that indicated on the product.
  This could cause fire or electric shock.
- Do not overload power outlet.
  This could cause fire or electric shock.
- Do not connect or disconnect power plug with wet hand.
  This could cause electric shock.
- Do not damage or break power cord.
  If a heavy object is put on it, or the cord is pulled or bent forcibly, the cord may be damaged and this could cause fire or electric shock.
- Do not remodel the time recorder.
  This may cause fire or electric shock.
- If any abnormality occurs such as smoke, smell or heat, disconnect the power plug from the power outlet and contact your dealer.
  Continued use of the time recorder in the above cases could cause fire or electric shock.
- If foreign matter (metal piece, water or other liquid) get inside the time recorder, immediately disconnect the power plug from the power outlet and contact your dealer.
  Continued use of the time recorder in this case cause fire or electric shock.
- Before connecting time signal line, disconnect power plug of time signal buzzer, etc. from power outlet.
  If connected as is. it could cause fire or electric shock. (Only for models which can be connected to extemal time signal device)
- To avoid fire hazard, use only a fuse of the correct type, voltage rating, current rating as specified by the manufacturer:

Power source	Fuse
110-120V AC	250V,700mA
220-240V AC	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.
- When replacing the fuses, do not use fuses that exceed the specified capacity or use wire and silver paper.
  Use of any other materials for fuse will cause fire.
  Make sure that the fuse has the proper specified capacity prior to use.

⚠ Caution

- Do not install the time recorder in unstable or inclined place.
  The time recorder could drop or fall, causing an injury.

- Do not put a water container or metal object on the time recorder.
  If water or metal object gets inside the time recorder, it may cause fire or electric shock.

- Do not install this time recorder in any place where there is oily smoke or moisture near the cooking table or humidifier. Also do not install it in a dusty place.
  Either of the above could cause fire or electric shock.

- The operator should be grounded first before starting maintenance and setting.
  If maintenance and setting is started before he is properly grounded, the equipment may be damaged by static electricity.

- For mounting the time recorder on the wall, use a fixture suitable to wall material so that the weight of the unit can be securely held.
  If not, the time recorder may fall, causing an injury.

- Be sure to hold the plug when the power plug is being disconnected from the power outlet.
  If you pull the power cord, it may be damaged, causing fire or electric shock.

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

AFTER UNPACKING :

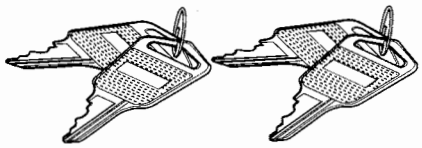
Components

EX3500N components are as follows. Be sure to check before operation that all components are supplied.

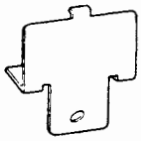
☐ EX3500N time recorder

☐ An operation manual (this manual)

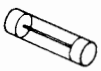
☐ Two pair of keys (four keys)



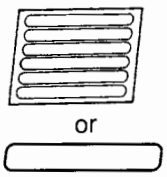
☐ A bracket for wall installation



☐ A spare fuse
110 –120V AC···250V, 700mA
220 –240V AC···250V, T500mA
(Attached to the front case)

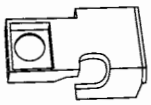


☐ Seals for different languages



or

☐ Time signal cover 1



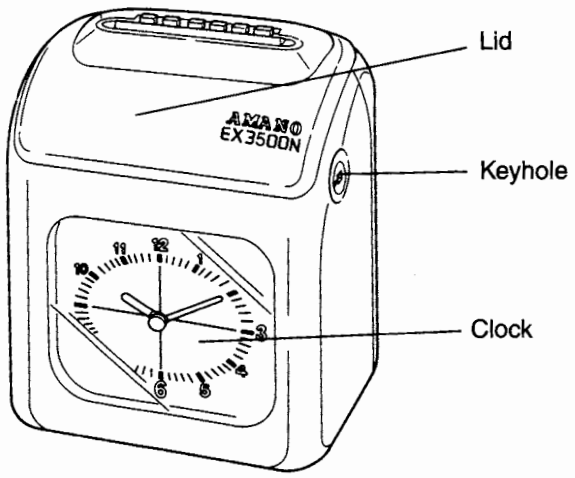
☐ Time signal washer 1

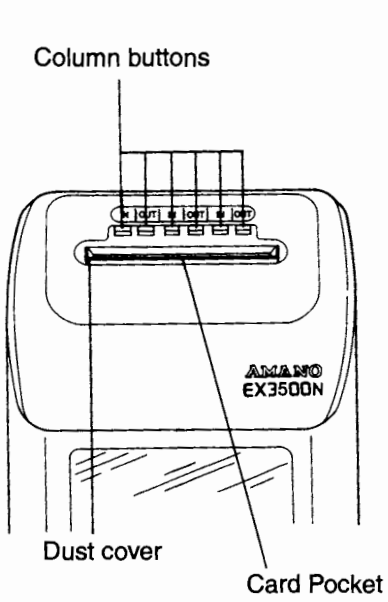
☐ Screw 1

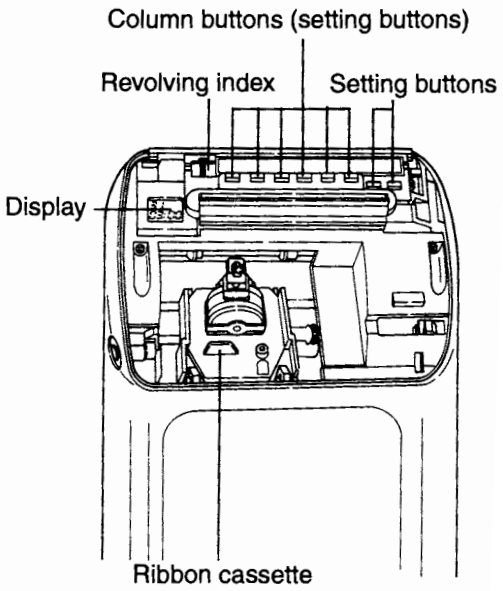
☐ Wire binding band ... 1

NAMES OF PARTS

Names of Exterior Parts





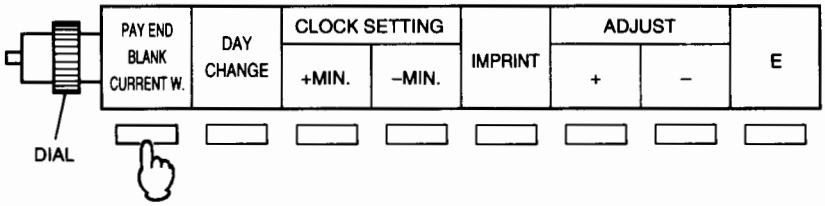


Programming Section

ENGLISH

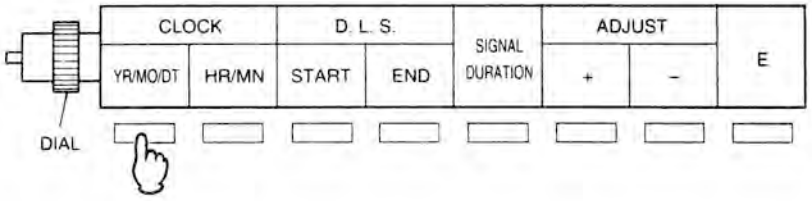
Remove the upper case to set each item. (See Page 13.) Turn the dial at the left side to rotate the setting index. Setting index ①, setting index ② and setting index ③ can be selected.
Press the button at the front of the setting index to operate. For setting details see pages 14~ 34.

Setting Index ①



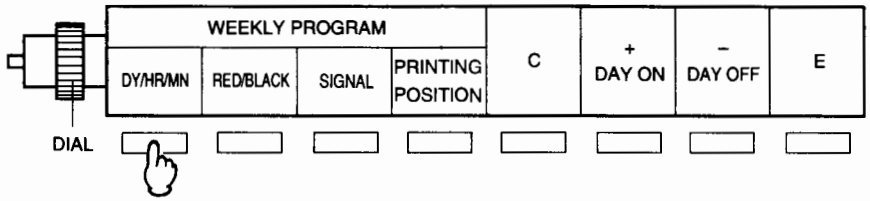
PAY END BLANK CURRENT W.	This button is used to select a pay period ending date or week, a blank row position on time card (monthly pay only) or a current week (in case of bi-weekly pay only). Press the "+" or "–" button to change the value.
DAY CHANGE	This button is used to change the time at which 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. 24 hours/12 hours 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 the set value quickly.
ADJUST –	Press this button once to decrease a set value by 1. Hold this button down to decrease the 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 savings 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 savings time. If both the starting and the ending dates are set to the same date, the set daylight savings time is canceled. If only the starting date or the ending date is set, the daylight savings time function will not operate. Change the value by pressing the "+" or "–" button.
SIGNAL DURATION	Use this button to change time signal duration. Change the value by pressing the "+" or "–" button. The initial value is 5 seconds.
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 ③



ENGLISH

WEEKLY PROGRAM DY/HR/MN	Press this button to set day of the week, hour, and minute in a weekly program.
WEEKLY PROGRAM RED/BLACK	Press this button to set change-over of ribbon color for printing time cards in black or red in a weekly program.
WEEKLY PROGRAM SIGNAL	Press this button to set time signal.
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.

BEFORE OPERATION

Power Source

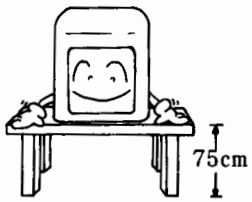
- Use a power source with a stable voltage.
- Use a power source that supplies continuous voltage and is independent of other equipment.
- The time recorder has a built-in lithium battery, on which the inner clock runs and which stores the programming data. (The battery is effective for three years of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

Installation

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

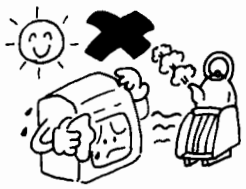
Installation location

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



Improper installation locations

- Places exposed to direct sunlight or close to heat sources



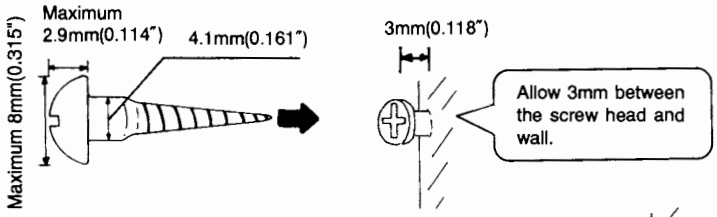
- Places exposed to rain

- Dusty or unstable places

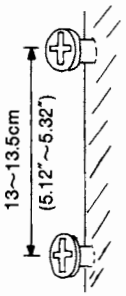
- Places exposed to strong vibration or shocks

Wall Mounting

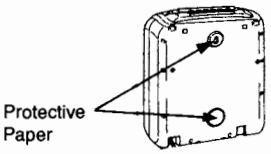
1 Insert a screw into the wall.
Place one screw about 94cm (37") to 124cm (48.8") above the floor. At this height the time recorder is easy to use.



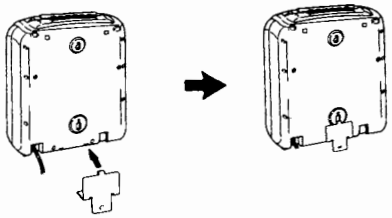
2 Insert a second screw into the wall.
Place this screw 13cm to 13.5cm immediately below the first screw.



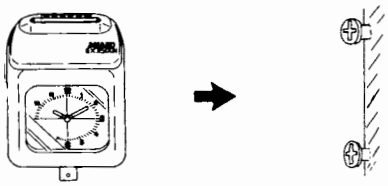
3 Peel off the protective paper.



4 As shown in the figure, attach the bracket for wall mounting to the back of the case.

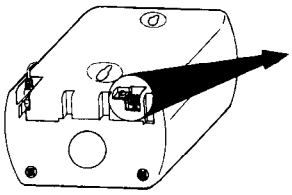


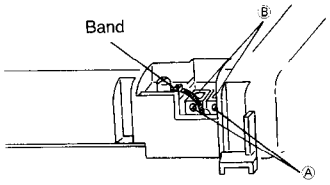
5 Hook the unit on the screws through the holes on the back of the case.



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

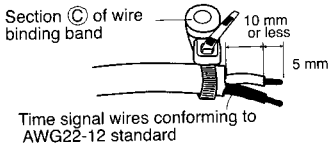
How to Connect an External Time Signal Unit



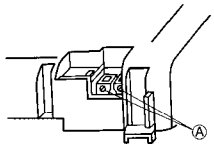


Loosen the band

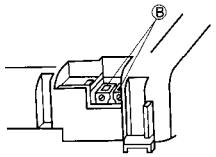
1 Bind the wires with the band and cut off unused portion of the band.



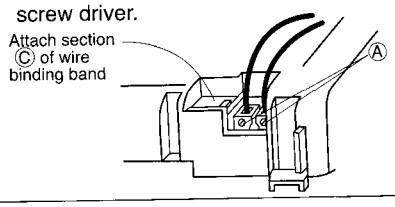
2 Loosen the screws at "A", using a screw driver.

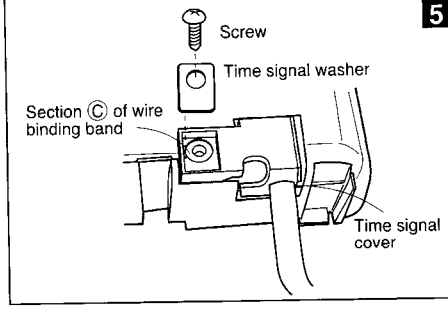


3 Insert the wires of the time signal unit into "B".



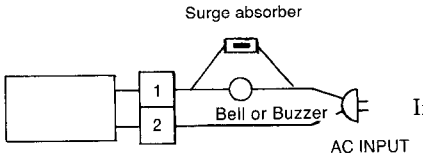
4 Tighten the screws at "A", using the screw driver.





5 Install the time signal cover.
(1) Install the time signal cover on the body from the right side of the cover.
(2) Attach section "C" of wire binding band to the hole of time signal cover.
(3) Attach time signal washer with the hole on the top side.
(4) Tighten screw.

Contact output : Dry contact
Contact capacity : 250VAC, 0.5A or less
24VDC, 0.5A or less

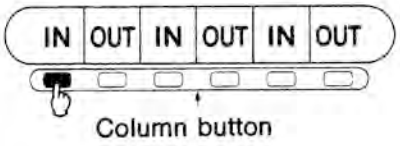


Install a surge absorber on the signal unit side

OPERATION

Selecting the Print Column

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

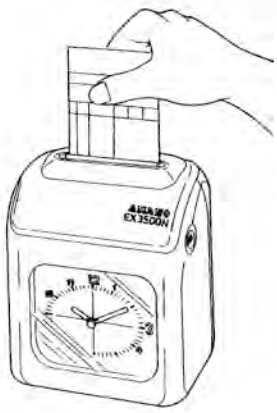


◆ Time cards are printed in the column where the column button light is on. To change the print position, press the button corresponding to the desired print position.

◆ Print Position Shift

The print position shifts automatically at the IN or OUT time set.
(Refer to "Setting a Shift of Print Position" for details.)
Even if Print Position Shift has been previously set, print position can be selected manually.
(Refer to "Setting Imprint" for details.)

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 14.)
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 8:20
└ the "Hour" in small print

8 8:28
└ normal print

- •The "Hour" is in small print for the first printing when the EX3500N is first operated or after the time has been changed ±5 minutes or more.
- •If the parameters of daylight savings 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 small print.
- •If a time change of ±5 minutes or more is made and the clock time is then switched back to within ±5 minutes of the "actual time" (including the time that has elapsed), 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 and Closing the Lid

⚠Warning

- Do not remodel the time recorder.

This may cause fire or electric shock.

⚠ Caution

- The operator should be grounded first before starting maintenance and setting.

If maintenance and setting is started before he is properly grounded, the equipment may be damaged by static electricity.

How to Open the Lid

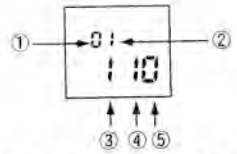
1. Insert the keys into the keyholes on both sides of the case and turn the keys in the direction as shown in the figure above.
2. Open the lid.
3. Remove the lid

* When you remove the keys, be sure to return the keyholes to their original position.

How to Close the Lid

1. Connect the hooks on the lid with those on the case.
2. Bring the lid down toward you. Push down firmly on the front of the lid until it clicks into place.
3. When the lid is closed, the hands of the clock will move, stop momentarily at 12 o'clock, then indicate the current time.

Setting Imprint



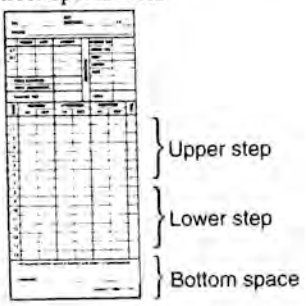
Print formats are changed as follows :

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 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 : "Sifting 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.

③Hour Indication

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)

④Minute Indication

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:

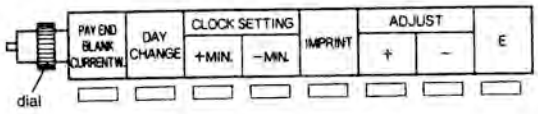
Minute	0	1	2	3	4	5	6	7	8	9	~	29	30	31	32	33	34	35	~	54	55	56	57	58	59
1/100 hour A	00	02	03	05	07	08	10	12	13	15	~	48	50	52	53	55	57	58	~	90	92	93	95	97	98
1/100 hour B	00	00	00	05	05	05	10	10	10	15	~	45	50	50	50	55	55	55	~	90	90	90	95	95	95
1/10 hour	0	0	0	0	0	0	1	1	1	1	~	4	5	5	5	5	5	5	~	9	99	9	9	9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

⑤Day 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

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

1 Turn the dial of the setting index.



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

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

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

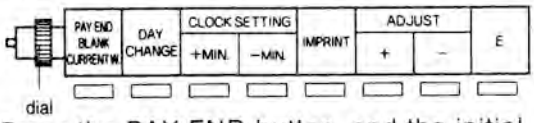
Changing Pay Period Ending Date

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 14～16.)

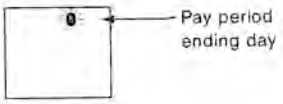
⟨Weekly pay⟩

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 5 mark blinks at "FR".)

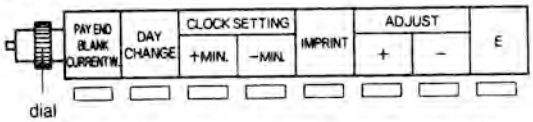


3 Press the "+" or "−" button and bring the 1 mark to "MO". Press the "E" button, and the blinking 1 mark stops blinking. The setting has been registered.

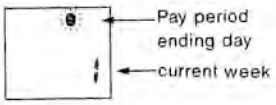
⟨Bi-weekly pay⟩

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 5 mark blinks at "FR", and the current week is the first week.)

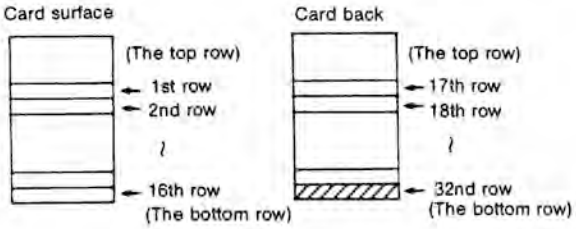


3 Press the "+" or "−" button and bring the 7 mark to "SU". Press the "E" button, and the blinking 7 mark stops blinking. The setting has been registered.

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.

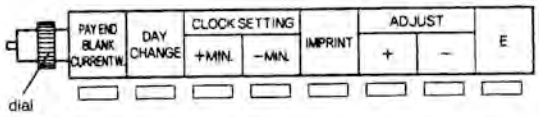
<Monthly pay>

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 Turn the dial of 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.)

Pay period ending date Blank row

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.

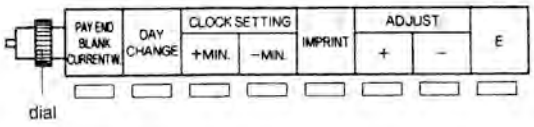
Setting the Clock

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

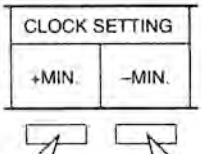
ENGLISH

Setting Minutes

1 Turn the dial of 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.
·If the clock is advanced or delayed only a few minutes, adjust the time by pressing [+MIN.] or [–MIN.] button.
If the clock is advanced more than ten minutes, adjust the time by pressing [HR/MN] button described in Setting the Date.
(See page 20.)

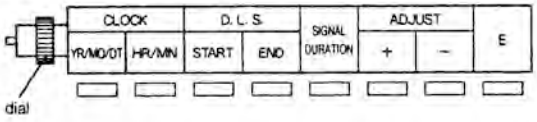
Setting the Date

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 December 18, 2002 to December 21, 2002.

1 Turn the dial of 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.

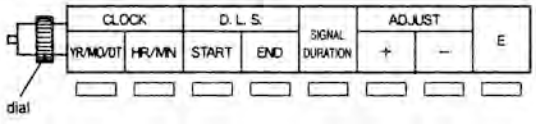
For year setting, 00 to 95 are 2000s and 96 to 99 are 1900s.

<Setting of Hour and Minute>

Example : Change 18:00 to 8:30.

ENGLISH

1 Turn the dial of 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 hands will move to match the set time and the clock will start at 00 second.

Day change time (in case when one-day work finishes later than AM3:00)

This time recorder has been set so that row of the time card shifts at AM3:00. Printings from AM3:00 on current day to and AM2:59 the following day are printed on the same printing row.

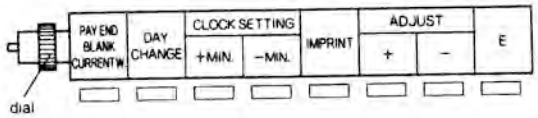
Printing row shifts at AM3:00. If work of one day finishes later than AM3:00, IN time and OUT time will be printed in different rows.

DATE	MORNING		AFTERNOON		OVERTIME		HRS.
	IN	OUT	IN	OUT	IN	OUT	
1	8 22:25						
2				02 5:12			

If one day work normally exceeds AM3:00, alter the day change time to some other time (when no one is working).
Alter the day change time by hour units with the minutes place fixed to 00.

Example : Set the day time change at 6:00.

1 Turn the dial of the setting index.



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

3 Press the "+" or "−" button, then set "06:00". Press the "E" button, and the blinking display will stop blinking. The setting has been registered.

When the day change time is set to 6:00, time will be printed on the same row until 5:59 the following day.

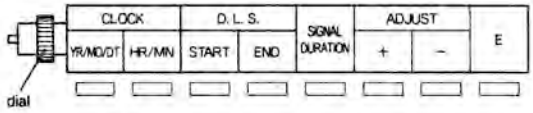
DATE	MORNING		AFTERNOON		OVERTIME		HRS.
	IN	OUT	IN	OUT	IN	OUT	
1	8 22:25			02 5:13			
2							

Changing Time Signal Duration

Time signal means that an external time signal device (bell, buzzer, etc.) sounds at the beginning/end of work time. Setting of time signal can be done using the weekly program. (See page 29.)

Example : Change the initial value to 10 seconds.

1 Turn the dial of the setting index.



2 Press the SIGNAL DURATION button, and the initial value (5 seconds) will appear.

3 Press the "+" or "–" button to set the value at 10. Press the "E" button to register the setting.

Note: If duration is set to 00 second, the time signal will not sound even if the time signal has been set using weekly program.

Setting Daylight Savings 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.

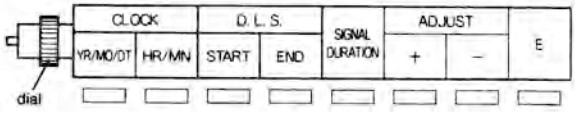
[Automatic updating the setting of daylight Saving Time]

For example, when starting date is set to April 7th (Sunday) of 2002, and ending date is set to October 27th (Sunday) of 2002, 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 6th (Sunday) of 2003, Ending date : October 26th (Sunday) of 2003. After setting the Daylight Saving Time once, it is not necessary to set again.

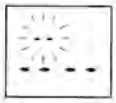
Note : This function works only when both the starting and ending dates of daylight savings time are set.

Example : Set the starting date and time to 5:00, April 7th of 2002.

1 Turn the dial of 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.

4 Press the "+" or "–" button to set the starting year.
Press the "E" button to register the setting.

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 7

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.

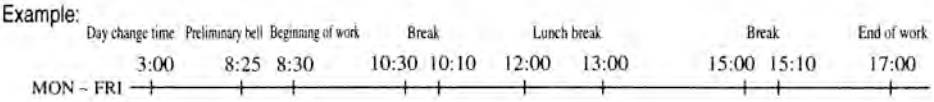
- To confirm the setting contents
  After the setting has been completed, each time the START or END button is pressed, display will change between set date and time. The set value can be confirmed.
- To cancel the setting
  Set the starting and ending dates to the same date. The daylight saving time 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 41.

Example:



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

■ Weekly program

No.	HR MN	DAY							R/B	SIGNAL	PRINTING POSITION
		MO	TU	WE	TH	FR	SA	SU			
1	3:00	▲	▲	▲	▲	▲	▲	▲			①23456
2	8:25	▲	▲	▲	▲	▲				○	123456
3	8:30	▲	▲	▲	▲	▲				○	123456
4	8:31	▲	▲	▲	▲	▲			R		123456
5	10:00	▲	▲	▲	▲	▲				○	123456
6	10:10	▲	▲	▲	▲	▲				○	123456
7	12:00	▲	▲	▲	▲	▲				○	123④56
8	13:00	▲	▲	▲	▲	▲				○	123456
9	15:00	▲	▲	▲	▲	▲				○	123456
10	15:10	▲	▲	▲	▲	▲				○	123456
11	17:00	▲	▲	▲	▲	▲			B	○	123456

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

- ◆ For 2-color printing, set to R: starting with red printing or B: starting with black printing.
- ◆ For shifting of printing column, set shifting columns (1~6).

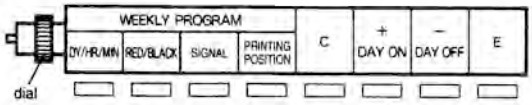
Setting Day of the Week and Time

In a weekly program, day of the week and time are set first, and other items such as 2-color printing, time signal, and shift of print position are set later.

ENGLISH

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 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 28 and following pages for operation procedures from here.
More than 1 item can be set, and their order does not matter.

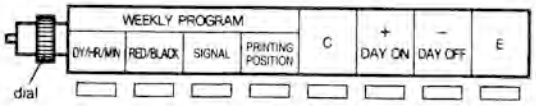
Setting Weekly Program

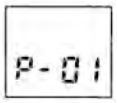
Setting 2-Color Printing

It is possible to change printing color to distinguish between regular work hours, starting late, and leaving early. Set the desired day of the week first, then set 2-color printing.

Example : Set printing in red at 8:31, and Monday to Friday.

1 Turn the dial of the setting index.





2 Set day of the week and time.
* Refer to "Setting day of the Week and Time" (Page 27).

3 Press the RED/BLACK button.

4 Select the color.
R : Start of red printing.
B : Start of black printing.
No indication : No 2-color printing is made.
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.

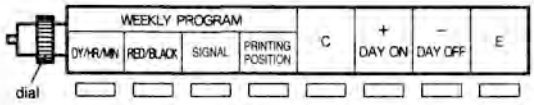
7 Set Program No. 2.
MO~FR, 17:00 and B: Black print are set to P-02.
Note: If R and B are set at the same time, R print will have priority.

Setting Time Signal

It is possible to sound external time signals to signal starts and ends of breaks and working hours. Set the desired day of the week first, and then set signal time.

Example : Set a time signal sound at 8:30, Monday to Friday.

1 Turn the dial of the setting index.



2 Setting day of the week and time.
* Refer to "Setting day of the Week and Time" (Page 27).

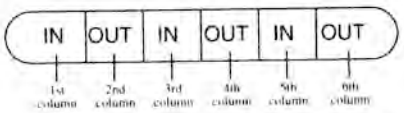
3 Press the SIGNAL button.

4 Select whether the time signal is sounded or not.
When ♂ is indicated, the time signal sounds.
When no mark is shown, the time signal does not sound.
Select any of the above by using the +/DAY ON button or the -/DAY OFF button.

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

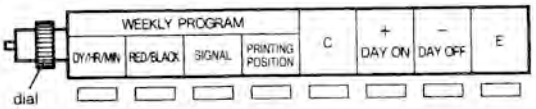
Setting a Shift of Print Position

Print columns automatically shift from 1st column to 6th column at the designated time. Print columns can be set to "IN" for reporting time range, "OUT" for quitting time range.



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 "Setting day of the Week and Time" (Page 27).

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 copy them. When the next program has been set, they are copied in the next program in which no data has been set.

Example: Set the time signal sound at 9:00 and 12:00.

1. Set the weekly program.

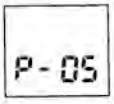
2. Hold the "E" button down for two seconds, and an empty program number will be indicated.

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 time signal, 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 is changed (confirmed) as follows :

Example: Change the setting in program No. 5 from "Time signal sound at 9:00" to "Time signal sound at 8:30".

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

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 Press the "E" button again.
When the next program nunber 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.

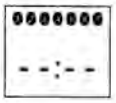
1. Press the +/DAY ON or -/DAY OFF button to select Program No. 5.

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.



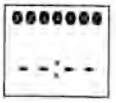
Additional Setting

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

⚠Warning

- Do not connect or disconnect power plug with wet hand.
  This could cause electric shock.
- Do not damage or break power cord.
  If a heavy object is put on it, or the cord is pulled or bent forcibly, the cord may be damaged and this could cause fire or electric shock.

⚠Caution

- Be sure to hold the plug when the power plug is being disconnected from the power outlet.
  If you pull the power cord, it may be damaged, causing fire or electric shock.

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 clock does not run.	Power failure	⇨ Wait until the power supply is recovered.
	The power cord is disconnected.	⇨ Insert the power plug firmly in the power outlet.
	The movement malfunctions.	⇨ Pull the power plug out of the power outlet, then insert it again.
The clock is slow. (or fast)	Mistakes in setting the clock	⇨ Set it correctly referring to "Setting the Clock" (Page 19, 21).
	Power failure.	⇨ Reset it referring to "Setting the Clock" (Page 20, 21).
	The movement malfunctions	⇨ Pull the power plug out of the power outlet, then insert it again.
The date is set incorrectly.	Mistake in setting date.	⇨ Reset the date referring to "Setting the Date" (Page 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" (Page 17) 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 connect 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 1	Error of clock home position sensor	Contact the dealer from whom you bought the time recorder.
Err 2	Error of column home position sensor	
Err 3	Error of printing timing pulse sensor	

*In case of Err 1 time cards can still be printed on.

IF PRINTS BECOME DIM (replacing the Ribbon Cassette)

⚠ Warning

- Do not connect or disconnect power plug with wet hand.
  This could cause electric shock.
- Do not damage or break power cord.
  If a heavy object is put on it, or the cord is pulled or bent forcibly, the cord may be damaged and this could cause fire or electric shock.
- Do not remove any parts other than parts the removal procedure of which are described in this item.
  There is high voltage part inside, and touching it could cause an electric shock.

⚠ Caution

- Before replacing the ribbon cassette, remove the upper case and disconnect the power plug from the power outlet.
  Replacing the ribbon cassette while the power plug is connected may cause injury or electric shock.
- Be sure to hold the plug when the power plug is being disconnected from the power outlet.
  If you pull the power cord, it may be damaged, causing fire or electric shock.

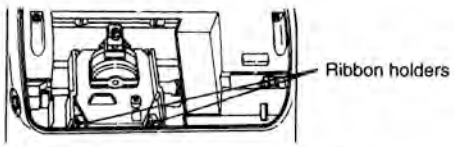
ENGLISH

MAINTENANCE

Replacing Ribbon Cassette

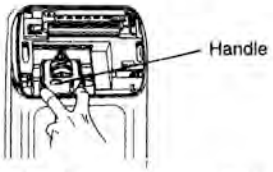
1. Open the Lid.

Note: Change the ribbon with the power on.



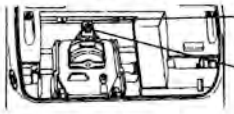
Insert the keys into the keyhole on both side of the case, turn the keys in the direction indicated in the figure above, and open the lid.

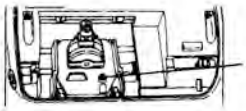
2. Remove the cassette.



As shown in the figure above, pull the ribbon holders toward you and, holding them there, pull out the cassette.

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.

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.

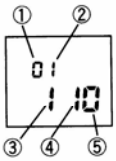
Wipe the window glass with a dry soft cloth.

APPENDIX

Specifications

- **Power source** : 110-120VAC + / - 10% or 220-240VAC + / - 10%, 50/60Hz
- **Power consumption** : 110-120 VAC...Stand-by 70 mA Rated 400 mA
  220-240 VAC...Stand-by 60 mA Rated 220 mA
- **Operating conditions** ; Temperature −10℃ to 40℃
  Humidity 10% to 90%RH (without condensation)
- **Weight** : 2.3kg (5.1 ℓ bs.)
- **Dimensions** : 190(W)×224(H)×127(D) mm
  (7.1/2″)×(8.6/8″)×(5″)
- **Clock system** : Quartz oscillation system, Accuracy +/−3 seconds per week
  (25℃+/−5℃) (77℉+/−10℉)

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
	③Print 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)
	④Minute Indication 1 : Minutes 2 : 1/100 hour A 3 : 1/100 hour B 4 : 1/10 hour	1 : Minutes
	⑤Day 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	
Time Signal duration	0~59	5 (seconds)

Weekly Program Setting Table

No.	HR MN	DAY							R/B	SIGNAL	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
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22											123456
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25											123456