

MAX®

ELECTRONIC TIME RECORDER

ER-2100

INSTRUCTION MANUAL



- ☆Keep this Instruction Manual nearby yourself to read it whenever it is necessary.
- ☆Do not disassemble yourself the machine at any time. Contact your dealer/distributor you bought it if you could not solve the problem after you check it according to "Trouble Shooting".

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1 MAIN FEATURES

Feature 1

-No setting is required for installing ER-2100.-

The date, year and *time are already set. In case of monthly pay period and the end of month for pay day, you will be able to install ER-2100 without any setting. (Remark: *Please note in some countries and areas the time is not set initially and correctly.)

Feature 2

-6 columns a day without any key operation to select the desired column position.-

ER-2100 can print 3-times IN/OUT (6 columns a day) automatically in correct column position on time card without pressing the desired column key.

Feature 3

-Any double printing and printing in wrong column on time card can be never made.-

Feature 4

-ER-2100 can display a clock by 24 hour or 12 hour system.-

Feature 5

-Summer Time (Daylight Savings Time) can be set.-

In the country where the Daylight Savings Time exists, ER-2100 has the function to switch automatically to the Daylight Savings Time.

Feature 6

-Slant insertion system of ER-2100 makes easier to insert time card.-

Feature 7

-Wide and color display of ER-2100 makes you read clearer than any other liquid crystal display.-

Feature 8

-Symbols of *Late in*, *Early out* and *Overtime* are available.-

ER-2100 can print the date at the left position of the time and the symbols of ► for *Late in*, ◀ for *Early out*, and † for *Overtime* at the right position of the time on time card.

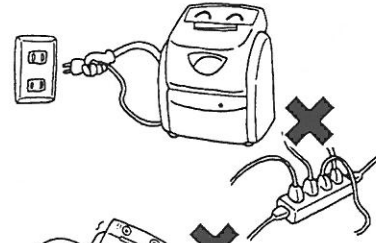
Feature 9

-5 year's memory backup-

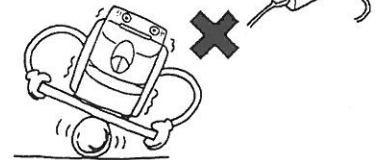
A memory backup supported by an internal battery and a clock function guaranteed over a period of 5 years as accumulated power failure after assembling at the factory.

2 NOTES FOR USAGE

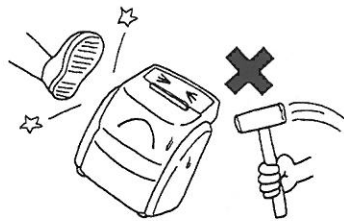
- ① Be sure that the plug of ER-2100 should be connected to the regular power voltage of your country. Pull out the plug in case of the power off.



- ② Avoid sharing the same power outlet with the electronic product that requires a lot of power.



- ③ Install ER-2100 away from the following places:
a) any place that is not level or subject to vibration. Do not drop or hit ER-2100. Avoid shock from impact.



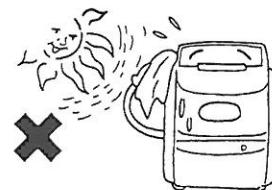
- b) any place that has dust or high humidity. Keep beverages and liquid containers away from ER-2100.



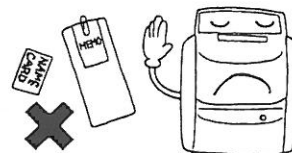
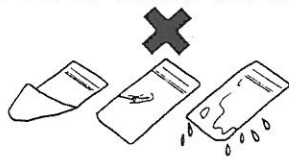
- c) any place that temperature goes below 0°C or over 40°C.



- d) any place that catches direct sunlight, or located close to heat source.



- ④ Do not insert card or paper other than specified time card for ER-2100. Avoid defective cards which are bent or torn.



- ⑤ Keep the covers closed while ER-2100 is not in operation.



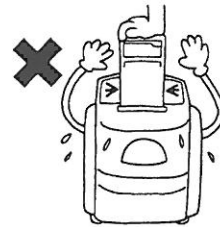
- ⑥ Be sure to use a dry cloth for cleaning. Do not use solvents (alcohol, benzine, thinner, etc.) or a damp cloth.



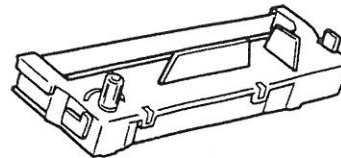
- ⑦ Do not force to put time card into ER-2100 since time card will be pulled automatically.

- ⑧ Do not force to pull time card out from ER-2100 since time card will be ejected automatically.

- ⑨ Do not cover hole punches on time card since ER-2100 select the column position to print by reading hole punches.



- ⑩ Do not fill up ink by yourself. Replace the ink ribbon ER-IR101.



- ⑪ Never disassemble ER-2100 by yourself at anytime. Contact your dealer/distributor you bought it if you could not solve the problem after you check it according to **20 TROUBLE SHOOTING**.

- ⑫ Do not hang ER-2100 on wall without Wall Mounting Kit (Option).

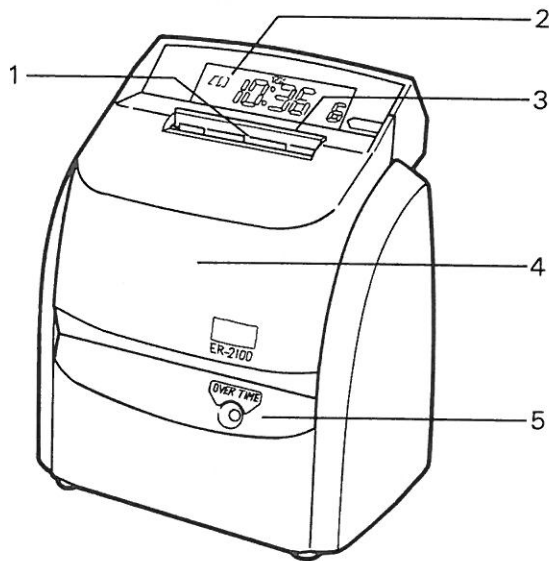
- ⑬ Hang ER-2100 on wall with Wall Mounting Kit according to instruction manual. (SEE **19**)

- ⑭ Do not replace by yourself the battery of memory backup. Contact your dealer/distributor.

- ⑮ Do not fail to install ER-2100 at the following places;
a) where breaker is installed.
b) where outlet is close to ER-2100 and is easy to put the plug.

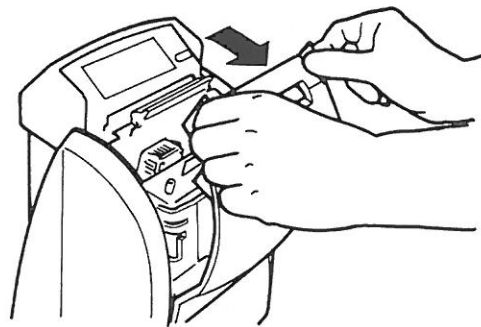
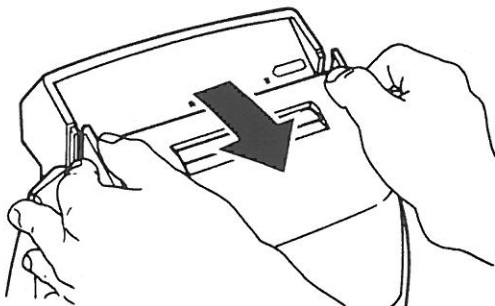
3 PARTS DESCRIPTIONS (Outside)

1. Time Card Insertion
2. Display
3. Cover
4. Front Cover
(for program Keyboard
and replacing ink ribbon)
5. Overtime Application Key



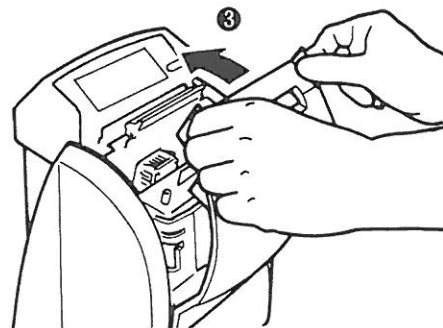
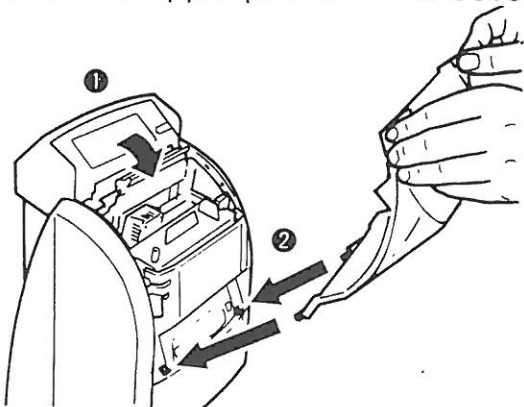
How to open Front Cover

☆ Pull Front Cover away from ER-2100.



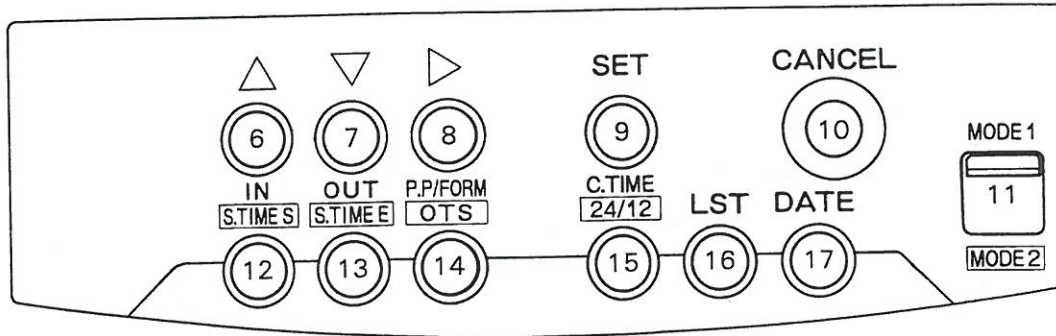
How to close Front Cover

- ① Close Cover for insertion of time card.
- ② Insert the lower part of Front Cover to ER-2100.
- ③ Push the upper part of Front Cover to ER-2100.



4 PARTS DESCRIPTIONS (Keyboard & Display)

[A] KEYBOARD LAYOUT

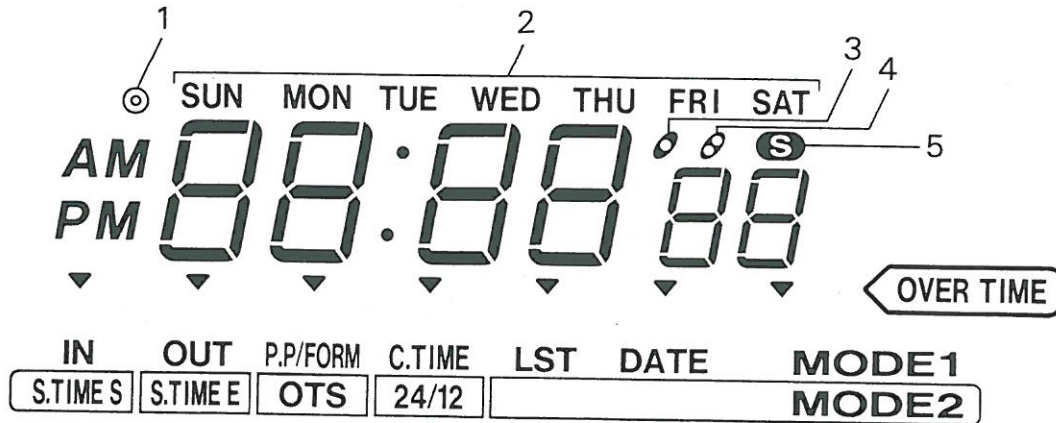


[B] KEYS & FUNCTIONS

Parts No.	Symbol	Function
6	△	<i>Forward Key</i>
7	▽	<i>Backward Key</i>
8	▷	<i>Digit Key</i>
9	SET	<i>Setting Key</i>
10	CANCEL	<i>Cancel Key</i>
11	MODE 1/MODE 2	<i>Slide Switch</i>

KEYBOARD					
Slide switch <i>MODE 1</i>			Slide switch <i>MODE 2</i>		
No.	Setting item	Function	No.	Setting item	Function
12	<i>IN</i>	Working Start Time	12	<i>S.TIME S</i>	Summer Time Start
13	<i>OUT</i>	Working End Time	13	<i>S.TIME E</i>	Summer Time End
14	<i>P.P / FORM</i>	Pay Period/Format	14	<i>OTS</i>	Overtime Start
15	<i>C.TIME</i>	Current Time	15	<i>24/12</i>	24/12 hour system on display
16	<i>LST</i>	Line Shift Time	—	—	—
17	<i>DATE</i>	Day/Month/Year	—	—	—

[B] DISPLAY



1. The mark of basic setting operation
2. Day of Week
3. The mark of Setting *Mode 1*
4. The mark of Setting *Mode 2*
5. Daylight Savings Time (Summer Time)

ABBREVIATIONS

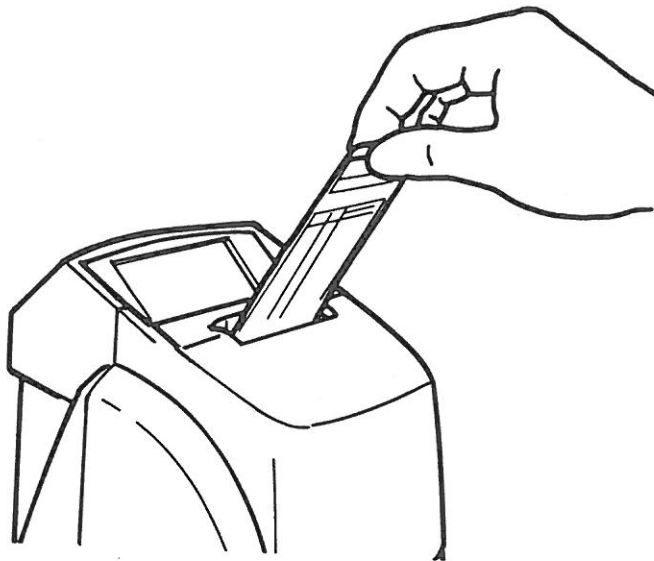
Please note that in this instruction manual, keys and example printed characters are abbreviated as describes below.

- (1) Keys on keyboard
 - (A) A key for setting item is shown in ***bold Italic*** such as ***LST-key*** and ***DATE-key***.
 - (B) Keys for setting and cancelling of setting item are shown in ***bold Italic*** such as ***SET-key*** and ***CANCEL-key***.
 - (C) Forward, backward and digit key are shown as it appears on the keyboard such as ***Δ-key***.
- (2) Numbers to be set or reset are enclosed in quotation symbols (" ") and ***bold italic*** such as "***12***".
- (3) A mark on display is enclosed in double quotation marks (" ") such as "⊙".

5 USUAL OPERATION

☆ER-2100 can print the time on time card automatically in a correct column position without pressing a desired column key.

☆When "E-01" displays, time card is inserted with a wrong face. (See **21** ERROR CODES)



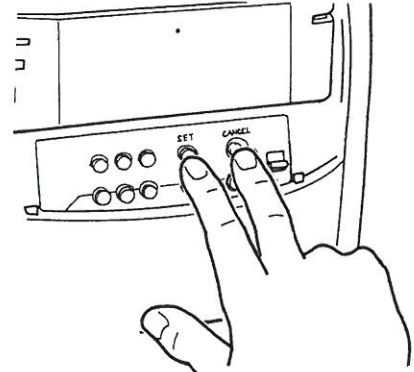
1. Insert time card to the position where automatic feed starts.
2. Do not keep holding time card during printing.
3. Time card will be ejected automatically after printing is finished.

6 BASIC SETTING OR CANCELLING OPERATION

The setting data of ER-2100 is always protected not to set or reset.

In case you set or reset the setting data, press both **SET-key** and **CANCEL-key** more than 3 seconds.

After the mark of "◎" appears on display you are ready to set or reset.



(A) SET OR RESET

1. Select **Mode 1** or **Mode 2** by slide switch.
2. Press key on keyboard for your desired setting item. Then the mark of "▼" will appear on setting item at display.
3. Initial setting

KEYBOARD					
Slide switch MODE 1			Slide switch MODE 2		
No.	Setting Item	Initial setting	No.	Setting Item	Initial setting
11	IN	--:--	11	S.TIME S	-- -- --
12	OUT	--:--	12	S.TIME E	-- -- --
13	P.P/FORM	0 31	13	OTS	--:--
14	C.TIME	(Current Time by 24 hour system)	14	24/12	24:00
15	LST	3:00	—	—	—
16	DATE	(Current Date by order of Day/Month/Year)	—	—	—

4. Press **△-key** or **▽-key** until showing the desired number of flashing digits.
5. Press **▷-key** then the desired digits to set or reset will flash.
6. Setting is completed by pressing **SET-key**.
7. Finally, press both **SET-key** and **CANCEL-key**, then the setting data will be protected after the mark of "◎" disappears on display. If you would forget this procedure, the mark of "◎" disappears automatically for protecting setting mode after 60 seconds.

(B) CANCELLING

If you need to cancel the setting data, follow the next procedure.

1. Select **Mode 1** or **Mode 2** by slide switch.
2. Press the key on keyboard for your desired cancelling item. Then the mark of "▼" will appear on the desired item at display.
3. Press **△-key** or **▽-key** until showing "--:--" or "-- -- --" with flashing.
4. Cancelling is completed by pressing **SET-key**.
5. Finally, press both **SET-key** and **CANCEL-key**, then the setting data will be protected after the mark of "◎" disappears on display. If you would forget this procedure, the mark of "◎" disappears automatically for protecting setting mode after 60 seconds.

[CAUTION]

★You can cancel only the setting item for **IN, OUT, OTS, S.TIME S** and **S.TIME E**.

7 SETTING CURRENT TIME

The time is already set. If you find incorrect time on your time recorder, you will be able to reset it by the following procedure.

<Example>

Clock display: 11:58 AM

Correct time: 12:02 PM

Operation	Display
Select MODE 1 by slide switch and press C.TIME-key . Then "▼" appears on C.TIME at display and the digits of Hour flash.	
Press Δ-key or ▽-key until showing "12" at the digits of Hour.	
Press ▷-key then the digits of Minute will flash.	
Press Δ-key or ▽-key until showing "02" at the digits of Minute.	
Setting is completed by pressing SET-key .	

[CAUTION]

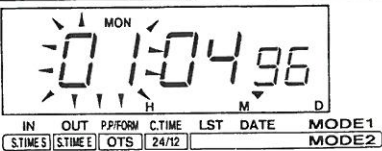



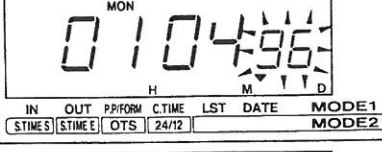
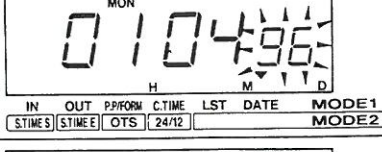

- ★The time will start from every 00 second in case of this procedure.
- ★In some countries and areas the time is not set initially and correctly.

8 SETTING DATE AND YEAR

The date and year are already set. If you need to reset the date and year, you will be able to reset it by the following procedure.

<Example>

April 1, 1996

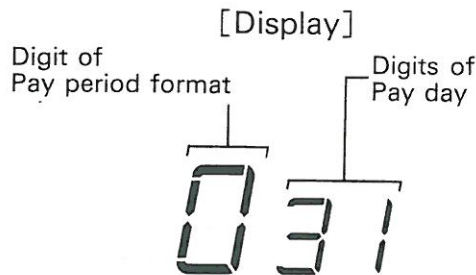
Operation	Display
Select MODE 1 by slide switch and press DATE-key . Then "▼" appears on DATE at display and the digits of Day flash.	
Press △-key or ▽-key until showing "01" at the digits of Day.	
Press ▷-key then the digits of Month will flash.	
Press △-key or ▽-key until showing "04" at the digits of Day.	
Press ▷-key then the digits of Year will flash.	
Press △-key or ▽-key until showing "96" at the digits of Year.	
Setting is completed by pressing SET-key .	

[CAUTION]

★Day of week will be set automatically.

9 SETTING A PAY PERIOD

The initial setting of Pay day is "31" and Pay period format is Monthly base. You will be able to select one of 3 types of pay period format, (A) Monthly, (B) Weekly and (C) Bi-Weekly according to the following code number.



Code number on display	Pay period format
0	Monthly
1	Weekly
2	Bi-weekly

You will be able to set or reset this setting item by the following procedure.

(A) Setting for Monthly pay period

<Example>

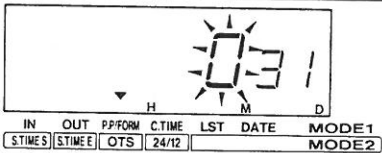
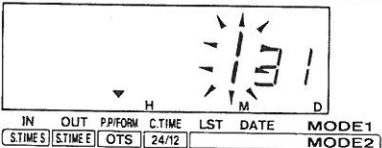
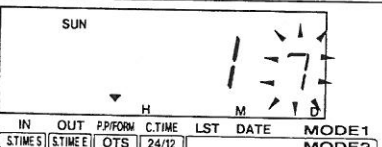
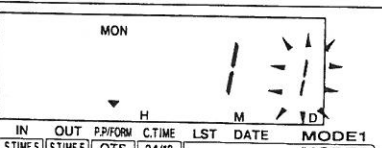
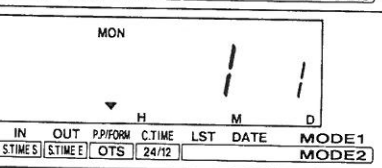
15th pay day (Monthly)

Operation	Display
Select MODE 1 by slide switch and press P.P/FORM-key . Then "▼" appears on P.P/FORM at display and the digit of Pay period format flashes.	
Press Δ-key or ▽-key until showing "0" at the digit of Monthly pay period.	
Press ▷-key then the digits of Pay day will flash.	
Press Δ-key or ▽-key until showing "15" at the digits of Pay day.	
Setting is completed by pressing SET-key .	

(B) Setting for Weekly pay period

<Example>

Today is April 1, 1996 and you make today the pay day.

Operation	Display
Select MODE 1 by slide switch and press P.P/FORM-key . Then "▼" appears on P.P/FORM at display and the digit of Pay period format flashes.	
Press △-key or ▽-key until showing "1" at the digits of Monthly pay period.	
Press ▷-key . As today is April 1, 1996, * the first day of next Sunday, "7" (April 7th) is flashing at the digit of Pay day.	
Press △-key or ▽-key until showing "1" at the digits of Pay day.	
Setting is completed by pressing SET-key .	

[Caution]

- ★The pay day will be automatically moved to the next pay day. It is not necessary to reset the pay day every week if you have no change.
- ★If setting for the digits of Pay day is not finished, setting can not be completed.

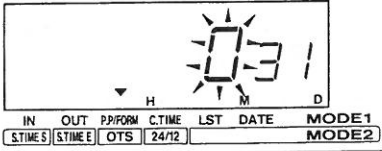
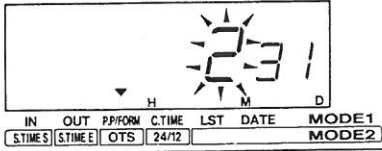
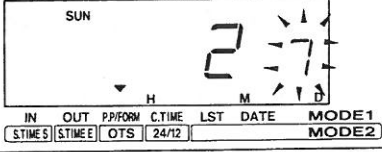
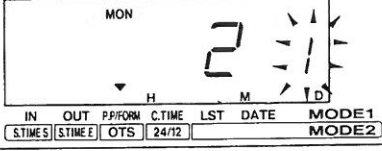
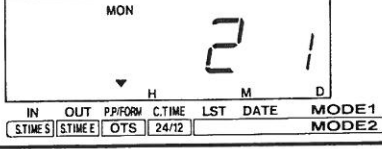
[Remark]

- *If today is Sunday, a day for today will appear and flash on display.

(C) Setting for Bi-Weekly pay period

<Example>

Today is April 1, 1996 and you make today the pay day.

Operation	Display
Select MODE 1 by slide switch and press P.P/FORM-key . Then "▼" appears on P.P/FORM at display and the digit of Pay period format flashes.	
Press △-key or ▽-key until showing "2" at the digit of Hour.	
Press ▷-key . As today is April 1, 1996, * the first day of next Sunday, "7" (April 7th) is flashing at the digits of Pay day.	
Press △-key or ▽-key until showing "1" at the digits of Pay day.	
Setting is completed by pressing SET-key .	

[Caution]

- ★The pay day will be automatically moved to the next pay day. It is not necessary to reset the pay day every two weeks if you have no change.
- ★If setting for the digits of Pay day is not finished, setting can not be completed.

[Remark]

- *If today is Sunday, a day for today will appear and flash on display.

10 SETTING IN (Working Start Time) FOR *Late In*

If you need to judge *Late in* on time card, you will be able to set *IN* by the following procedure.

<Example>

Working starting time: 08:30 AM

Operation	Display
Select MODE 1 by slide switch and press IN-key . Then "▼" appears on IN at display and the digits of Hour flash.	
Press △-key or ▽-key until showing "8" at the digits of Hour on display.	
Press ▷-key then the digits of Minute will flash.	
Press △-key or ▽-key until showing "30" at the digits of Minute.	
Setting is completed by pressing SET-key .	

☆The symbol of **▷** for *Late in* will be printed automatically at the right position of the time when the time card only for IN1 is inserted after the setting time of *IN* at 08:30 AM. (Not including just *IN* time of 08:30 AM)

[Caution]

★The symbol of **▷** for *Late in* will be printed on the time card even for IN2 or IN3 before the setting time of *OUT* if the setting time of *OUT* is set.

(See **11** SETTING OUT FOR EARLY OUT)

(See **17** PRINTING OF SYMBOLS ON TIME CARD)

11 SETTING OUT (Working End Time) FOR *Early Out*

If you need to judge *Early out*, you will be able to set **OUT** by the following procedure. The symbol of ◀ for *Early out* will be printed automatically when the time card for OUT1, OUT2 or OUT3 is inserted before the setting time for **OUT**.

<Example>

Working end time: 18:30 PM

Operation	Display
Select MODE 1 by slide switch and press OUT-key . Then "▼" appears on OUT at display and the digits of Hour flash.	
Press △-key or ▽-key until showing "18" at the digits of Hour on display.	
Press ▷-key then the digits of Minute will flash	
Press △-key or ▽-key until showing "30" at the digits of Minute.	
Setting is completed by pressing SET-key .	

[Caution]

★If **OTS** is set, the symbol of ◀ for *Early out* will not be printed after the setting time for **OTS** and the time will be printed in OUT3 column position on time card. (See 14 SETTING OTS)

★If you press **Overtime Application-key**, the time will be printed in OUT3 column position with the symbol of † for **Overtime** instead of ◀ for *Early out* on time card. (See 15 OVERTIME APPLICATION)

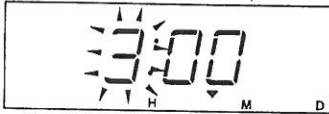


(See 17 PRINTING OF SYMBOLS ON TIME CARD)

12 SETTING LST (A Printing Line Shift Time)

LST (Printing Line shift time/Day change time) is already set at 03:00 AM. If you need, you will be able to reset it by the following procedure.

<Example>

The setting time for **LST**: 05:00 AM

Operation	Display
Select MODE 1 by slide switch and press LST-key . Then "▼" appears on LST at display and the digits of Hour flash.	 <p>IN OUT P.PFORM C.TIME LST DATE MODE1 (STIME) (STIME) (OTS) 24/12 LST DATE MODE2</p>
Press △-key or ▽-key until showing "5" at the digits of Hour on display.	 <p>IN OUT P.PFORM C.TIME LST DATE MODE1 (STIME) (STIME) (OTS) 24/12 LST DATE MODE2</p>
Setting is completed by pressing SET-key .	 <p>IN OUT P.PFORM C.TIME LST DATE MODE1 (STIME) (STIME) (OTS) 24/12 LST DATE MODE2</p>

[Caution]

★Only the digit of Hour is adjustable.

13 SETTING DAYLIGHT SAVINGS TIME (Summer Time)

This should be set only in the country where the Daylight Savings Time is adopted.

[A] Setting Summer Time Start

<Example>

Date of Summer Time Start: April 7, 1996, Sunday.

Operation	Display
Select MODE 2 by slide switch and press S.TIME S-key . Then "▼" appears on S.TIME S at display and the digits of Day flash.	
Press Δ-key or ▽-key until showing "07" at the digits of Day on display.	
Press ▷-key then the digits of Month will flash.	
Press Δ-key or ▽-key until showing "04" at the digits of Month on display.	
Press ▷-key then the digits of Year will flash.	
Press Δ-key or ▽-key until showing "96" at the digits of Year on display.	
Setting is completed by pressing SET-key .	

It is not necessary to reset the date of **S.TIME S** every year, if the next year's **S.TIME S** is the same month, week and day of week, since it will be changed automatically.

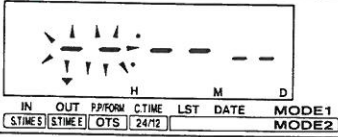



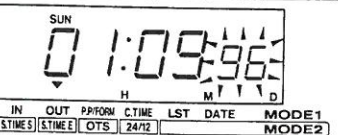
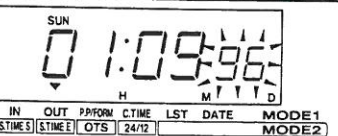
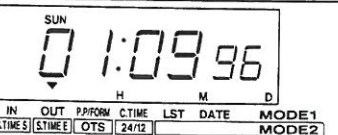
[Caution]

- ★ Only when both **S.TIME S** and **S.TIME E** are set, this function is valid.
- ★ Set **S.TIME S** for current year.
- ★ Even if the date of previous year or next year is set, the date of **S.TIME S** will be changed automatically to the same month, week and day of week of current year.

[B] Setting Summer Time End

<Example>

Date of Summer Time End: September 1, 1996, Sunday.

Operation	Display
Select MODE 2 by slide switch and press S.TIME E-key . Then "▼" appears on S.TIME E at display and the digits of Day flash.	
Press Δ-key or ▽-key until showing "01" at the digits of Day on display.	
Press ▷-key then the digits of Month will flash.	
Press Δ-key or ▽-key until showing "09" at the digits of Month on display.	
Press ▷-key then the digits of Year will flash.	
Press Δ-key or ▽-key until showing "96" at the digits of Year on display.	
Setting is completed by pressing SET-key .	

During summer time the mark of "S" appears on display.

It is not necessary to reset the date of **S.TIME E** every year, if the next year's **S.TIME E** is the same month, week and day of week, since it will be changed automatically.

[Caution]

★Only when both **S.TIME S** and **S.TIME E** are set, this function is valid.

★Set **S.TIME E** for current year.

★Even if the date of previous year or next year is set, the date of **S.TIME E** will be changed automatically to the same month, week and day of week of current year.

14 SETTING OTS (Overtime Start Time)

ER-2100 can print the symbol of ∇ for *Overtime* on time card automatically or manually.

If the time for **OTS** is set, the symbol of ∇ will be printed automatically at the right position of the time on time card after the setting time for **OTS**. (Not including the time for **OTS**)

<Example>

The time for **OTS**: 19:30 PM

Operation	Display
Select MODE 2 by slide switch and press OTS-key . Then " ∇ " appears on OTS at display and the digits of Hour flash.	
Press Δ -key or ∇ -key until showing "19" at the digits of Hour on display.	
Press \triangleright -key then the digits of Minute will flash.	
Press Δ -key or ∇ -key until showing "30" at the digits of Minute on display.	
Setting is completed by pressing SET-key .	

If you set as the above, " ∇ " will appear on **Overtime** at display from 19:31 to 02:59 in case **LST** is 03:00.

[CAUTION]

- ★ If the time for **OTS** is set, the function of **Overtime Application-key** will not be effective.
- ★ When the time card for OUT1, OUT2 or OUT3 is inserted after the setting time for **OTS**, time will be printed automatically with the symbol of ∇ always in OUT3 column position on time card.

(See **17**. PRINTING OF SYMBOLS ON TIME CARD)

15 OVERTIME APPLICATION-Manual operation for Overtime

ER-2100 can print the symbol of † for *Overtime* by manual operation. This function will not be effective if the time for **OTS** is already set. (See [14] *SETTING OTS*) If the time for **OTS** is already set, cancel it.

In case of application for *Overtime* by manual, follow the next procedure.

1. Press **Overtime Application-key**, then "▼" will appear on **Overtime** at display.
2. Insert time card and the symbol of † for *Overtime* will be printed at the right position of the time and the time will be printed always in OUT3 column on time card.
3. This function is valid only for once a day.

[Printing sample]

In case you set both **IN** (Working start time) and **OUT** (Working end time).




IN: 08:30

OUT: 17:00

ER-M						
NAME _____						1
DATE _____ No. _____						
D	IN 1	OUT 1	IN 2	OUT 2	IN 3	OUT 3 R
1						~17:25†
2	~ 8:56†					~ 18:56†
3	~ 9:01†	~ 11:58†				~ 18:58†
4	~ 7:58	~ 11:57†	~ 13:00†			~ 17:53†
5	~ 9:00†	~ 12:00†	~ 12:01†	~ 15:01†		~ 18:01†
6	~ 7:55	~ 12:05†	~ 13:04†	~ 15:03†	~ 15:03†	~ 19:03†
7						
8						
9						
10						
11						
12						
13						
14						
15						
▶→Late in ↔Early out †→Over time						
R.T.HOURS		O.T.HOURS				
RATE		RATE				

16 SETTING 24/12 HOUR SYSTEM ON DISPLAY

ER-2100 is set initially by 24 hour system on display. If you need 12 hour system, you will be able to reset it by the following procedure.

Operation	Display
Select MODE 2 by slide switch and press 24/12-key . Then "▼" appears on 24/12 at display and the digits of Hour flash.	
Press Δ-key or ▽-key until showing "12" at the digits of Hour on display.	
Setting is completed by pressing SET-key .	

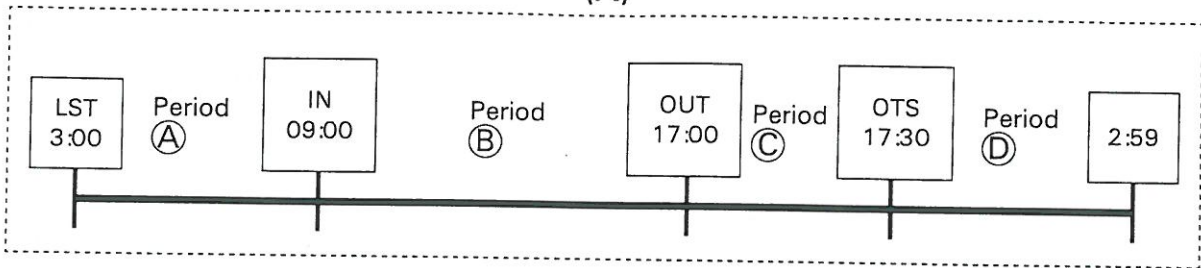
[CAUTION]

★The time can be printed on time card only by 24 hour system.

17 PRINTING OF SYMBOLS ON TIME CARD

If the program data is set as the table (A), the symbols of ► for *Late in*, ◀ for *Early out* and † for *Overtime* will be printed at the right position of the time like the table (B) on time card.

(A)



(B)

Period when time card is inserted.	First printing (IN1)	Second printing (OUT1)	Third printing (IN2)	4th printing (OUT2)	5th printing (IN3)	6th printing (OUT3)
Period ① [Column position]	-	◀	-	◀	-	◀
Period ② [Column position]	►	◀	►	◀	►	◀
Period ③ [Column position]	►	-	-	-	-	-
Period ④ [Column position]	►	†	-	†	-	†

[Printing samples]

1. In case you set only *IN* (Working start time) at 09:00

D	IN 1	OUT 1	IN 2	OUT 2	IN 3	OUT 3	R
1	► 9:01	◀ 11:56	◀ 13:01	◀ 16:59			
2	► 8:56	◀ 12:01	◀ 12:59	◀ 17:02			
3							

2. In case you set only *OUT* (Working end time) at 17:00

D	IN 1	OUT 1	IN 2	OUT 2	IN 3	OUT 3	R
1	► 8:56	◀ 11:56	◀ 13:01	◀ 16:59			
2	► 9:01	◀ 12:01	◀ 12:59	◀ 17:02			
3							

3. In case you set both *IN* and *OUT*.

IN: 09:00
OUT: 17:00

D	IN 1	OUT 1	IN 2	OUT 2	IN 3	OUT 3	R
1	► 8:56	◀ 11:56	◀ 13:01	◀ 16:59			
2	► 9:01	◀ 12:01	◀ 12:59	◀ 17:02			
3							

4. In case you set *IN*, *OUT* and *OTS* (Overtime start time).

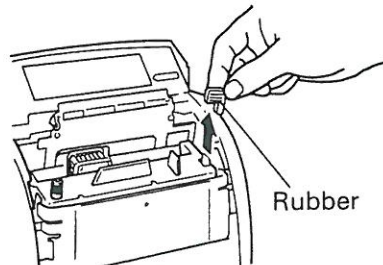
IN: 09:00
OUT: 17:00
OTS: 17:30

D	IN 1	OUT 1	IN 2	OUT 2	IN 3	OUT 3	R
1	► 8:56					◀ 18:58	
2	► 9:01	◀ 17:01					
3	► 9:00	◀ 12:00	◀ 19:00			◀ 21:00	
4	► 8:59	◀ 12:00	◀ 13:00	◀ 15:00	◀ 19:00	◀ 21:00	
5							

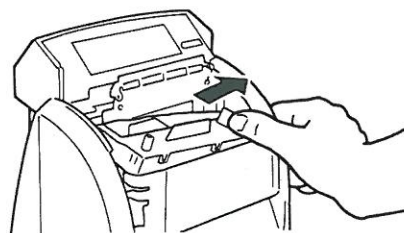
18 REPLACING AN INK RIBBON

Use only ER-IR 101 INK RIBBON for replacement.
Replace the ink ribbon every 1 or 1.5 year by the following procedure.

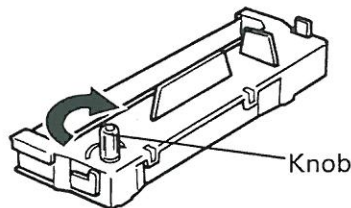
- 1 Disconnect the power cord.
- 2 Remove Front Cover and rubber.



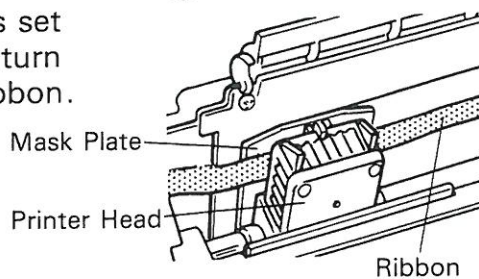
- 3 Push an ink ribbon toward right, then pick it up.



- 4 Prepare a new ink ribbon.
Turn the knob to the direction indicated by an arrow to remove the slack in the ribbon.



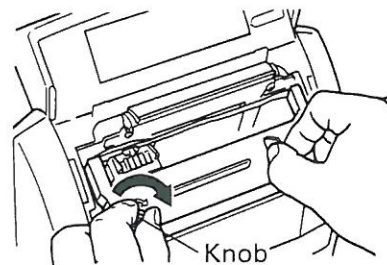
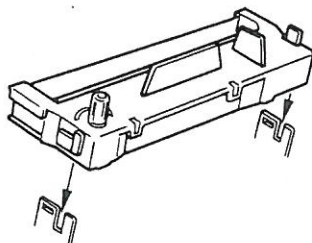
- 5 Install the cassette, so that the ribbon tape is set between Mask plate and Printer Head. Then turn the knob again to remove the slack in the ribbon.



[CAUTION]

★Do not touch the Printer head since it is sometime too hot.






- 6 Set the cassette properly.



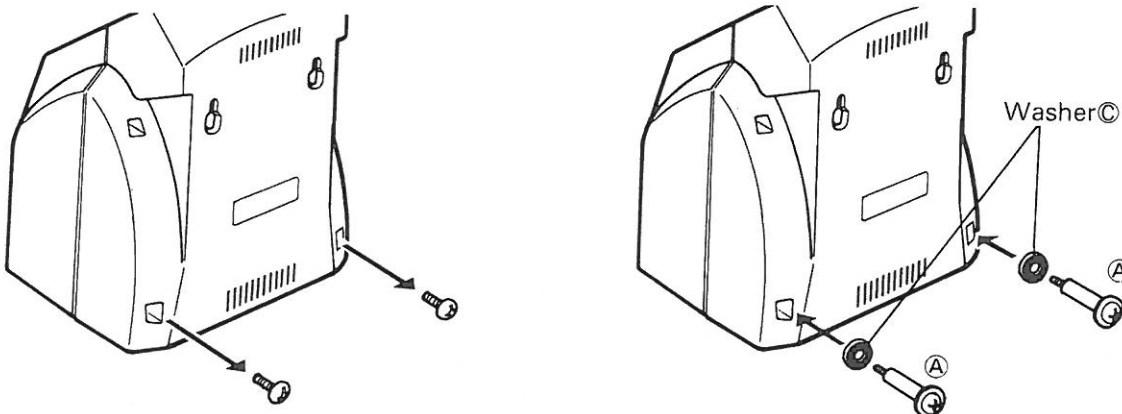
- 7 Close Front Cover, then connect the power cord.

19 WALL MOUNTING INSTRUCTION (Option)

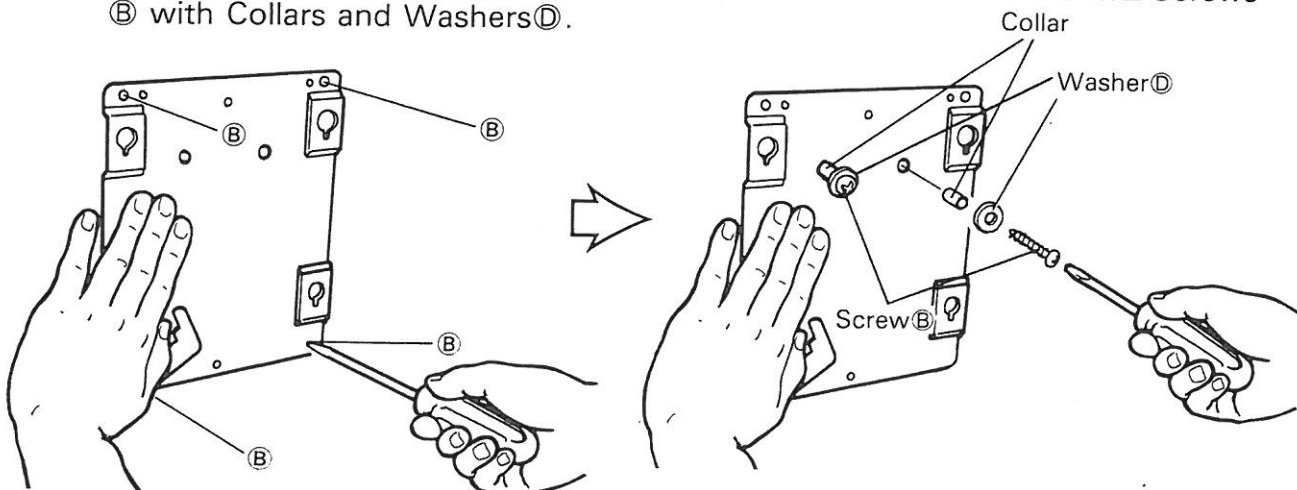
If you hang ER-2100 on the wall, install it by the following procedure. The Wall Mounting Kit is an option, not an accessory.

	2 pcs. × Screw A
	7 pcs. × Screw B
	2 pcs. × Collar
	2 pcs. × Washer C
	2 pcs. × Washer D

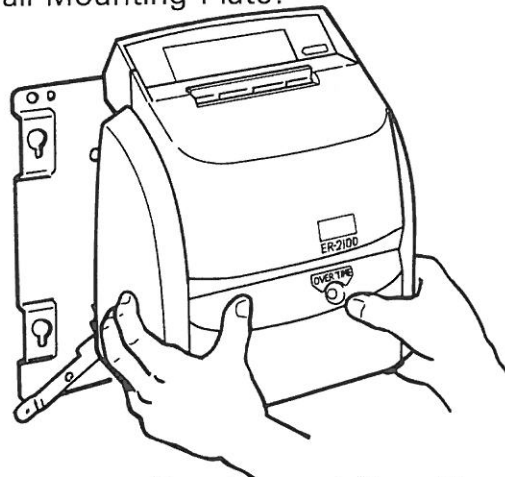
1. Replace the original screws of ER-2100 to Screw A with Washer C on the back of ER-2100 as illustrated.



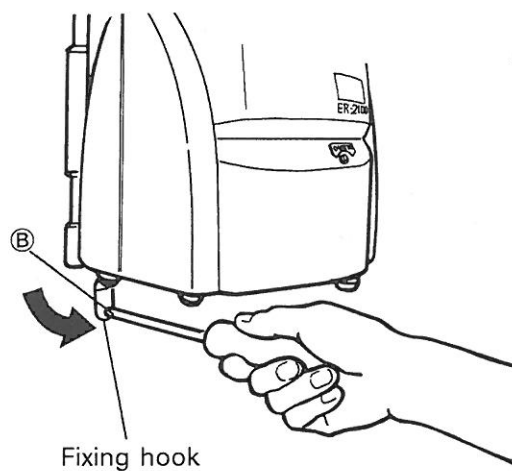
2. Fix Wall Mounting Plate to wall with 4 Screws B as illustrated. And fix 2 Screws B with Collars and Washers D.



-
-
3. Insert the 2 Screws ① on the back of ER-2100 into specified holes on Wall Mounting Plate. And insert the two specified holes on the back of ER-2100 into the 2 Screws ② on Wall Mounting Plate.



4. Turn the fixing hook in the arrow direction and fix with a Screw ③ at the position where the turning stops.



20 TROUBLE SHOOTING

Contents	Check	See
No display	→Is the power cord connected to the power outlet?	2
No printout on time card	→Is the ink ribbon set properly?	18
Card insertion obstructed	→Is the card being inserted with the correct face?	5
	→Is the card either bent or damaged?	2
Deviation in the printing line position	→Is the card inserted too strongly? →Did you pull out the card during the printing process? →Did you keep holding the card when it was automatically being pulled inside? →Is the card damp?	5
Faint printout	→Is the ink ribbon being used too long? →Is the ink ribbon set properly?	18

Do not disassemble ER-2100 by yourself at any time. Contact your dealer/distributor you bought it if you could not solve the problem after you check it according to the above.

21 ERROR CODES

Error Codes	Error Contents	Countermeasures
<i>E-00</i>	The time card is not inserted well inside to the position where automatic feed activates.	Insert the time card to the position where automatic feed starts.
<i>E-01</i>	The time card is inserted with the wrong face.	Insert time card with another face.
<i>E-02</i>	ER-2100 can not read hole punches on time card.	Are hole punches covered? Is the card either bent or damaged?
<i>E-04</i>	6th printing or printing in OUT3 column position is already completed.	
<i>E-05</i>	150 sheets of time card are already inserted a day.	(ER-2100 can deal with up to 150 sheets of time card.)
<i>E-69</i>	Automatic feed does not carry a time card smoothly.	Do not hold a time card. Also check a time card with bending or other defects.
<i>E-EE</i>	Printer malfunction	Try to get normal printout by connecting and disconnecting the power plug.

22 MAIN SPECIFICATIONS

Product description	Max Electronic Time Recorder ER-2100
Power Supply	AC110V/220V/230V/240V±15% 50/60Hz
Outside dimensions	$\frac{W}{207\text{mm}} \times \frac{D}{147\text{mm}} \times \frac{H}{262\text{mm}}$
Weight	6.6 lbs. (3.0kg)
Power consumption	Normal 10W, Maximum 30W
Clock system	Crystal quartz oscillation monthly tolerance ±15 seconds (normal temperature:25°C±5°C)
Display	Day, Hour, Minute, AM/PM, Day of week, ☉, ☌, ☌, S
Printed information	Day, Hour/minute (6 columns), symbol of ▶, ◀, †
Guarantee in case of power failure	A memory backup supported by an internal battery and a clock function guaranteed over a period of 5 years as accumulated power failure after assembling at factory.
Time card	ER-M Time Card
Ink ribbon	ER-IR 101 (Black)
Operation temperature	0°C - 40°C
Storage temperature	-20°C - 60°C

- This operation manual is subject to change without notice due to functional enhancement.

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