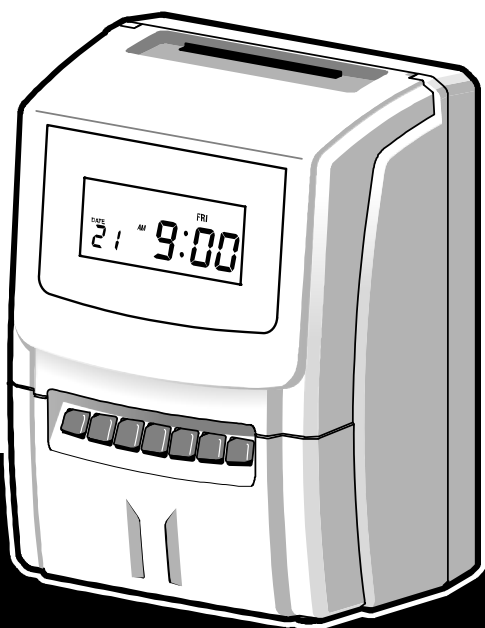


# ELECTRONIC TIME RECORDER

**MAX**®

# ER-2700

**INSTRUCTION MANUAL**



☆Before using this instrument, study this manual to ensure safety warning and instructions. Keep this instruction manual with the instrument for future reference.

# CONTENTS

<b>1</b>	<b>BEFORE USE</b> .....	<b>2</b>
<b>1-1</b>	<b>SAFETY INSTRUCTIONS</b> .....	<b>2</b>
<b>1-2</b>	<b>ACCESSORIES</b> .....	<b>3</b>
<b>1-3</b>	<b>MAIN FEATURES</b> .....	<b>4</b>
<b>2</b>	<b>PARTS DESCRIPTIONS</b> .....	<b>5</b>
<b>3</b>	<b>HOW TO OPEN AND CLOSE FRONT COVER</b> .....	<b>5</b>
<b>4</b>	<b>DISPLAY AND KEYBOARD</b> .....	<b>5</b>
<b>4-1</b>	<b>DISPLAY LAYOUT</b> .....	<b>5</b>
<b>4-2</b>	<b>KEYBOARD LAYOUT</b> .....	<b>6</b>
<b>5</b>	<b>HOW TO OPERATE</b> .....	<b>7</b>
<b>6</b>	<b>HOW TO SET UP</b> .....	<b>8</b>
<b>6-1</b>	<b>SETTING OR CHANGING DATA</b> .....	<b>8</b>
<b>6-2</b>	<b>BASIC OPERATION OF SETTING OR CHANGING DATA</b> .....	<b>8</b>
<b>7</b>	<b>SETTING MODE 1</b> .....	<b>10</b>
<b>7-1</b>	<b>MACHINE MODE 1 (CODE 01)</b> .....	<b>10</b>
<b>7-2</b>	<b>MACHINE MODE 2 (CODE 02)</b> .....	<b>10</b>
<b>7-3</b>	<b>PAY CLOSING DATE (CODE 03)</b> .....	<b>11</b>
<b>7-4</b>	<b>60 OR 100 SCALE (CODE 04)</b> .....	<b>11</b>
<b>7-5</b>	<b>DAILY TOTAL HOURS (CODE 05)</b> .....	<b>12</b>
<b>8</b>	<b>SETTING MODE 2 (YEAR, MONTH, DATE, HOUR, AND MINUTE)</b> .....	<b>14</b>
<b>9</b>	<b>SETTING MODE 3</b> .....	<b>14</b>
<b>9-1</b>	<b>HOLIDAY (CODE 01)</b> .....	<b>14</b>
<b>9-2</b>	<b>SPECIAL DAY (CODE 02)</b> .....	<b>15</b>
<b>9-3</b>	<b>LINE SHIFT TIME, IN/OUT AND OVERTIME WORKING (CODE 03 to 10, # FOR SPECIAL DAY: CODE 11 to 17)</b> .....	<b>15</b>
<b>9-4</b>	<b>DAYLIGHT SAVING TIME (CODE 18 to 19)</b> .....	<b>16</b>
<b>10</b>	<b>SETTING OPTION</b> .....	<b>18</b>
<b>11</b>	<b>CONNECTION TO EXTERNAL TIME SIGNAL</b> .....	<b>21</b>
<b>12</b>	<b>REPLACING INK RIBBON CASSETTE</b> .....	<b>22</b>
<b>13</b>	<b>WALL MOUNTING AND LAID-DOWN POSITION INSTALLATION</b> .....	<b>23</b>
<b>14</b>	<b>ERROR CODES</b> .....	<b>24</b>
<b>15</b>	<b>CAUTION CODE</b> .....	<b>24</b>
<b>16</b>	<b>TROUBLE SHOOTING</b> .....	<b>25</b>
<b>17</b>	<b>SPECIFICATIONS</b> .....	<b>25</b>



# 1 BEFORE USE


## 1-1 SAFETY INSTRUCTIONS


### ■ INDICATIONS

This instruction manual and the product use various indications to help you use this instrument safely and properly.

The following describes those indications.


-  **WARNING:** Negligence could lead to serious injury or death.
-  **CAUTION:** Negligence could lead to an injury, damage of your property, or cause loss of created data.


 **REQUEST** Describes operations that may cause damage to the instrument and require a repair, or operations that require resetting the machine, etc., to restore the condition of the instrument.


 **MEMO** Describes the points of operation and tips.









★ Describes a functional precaution.



### ■ SYMBOLS





 Denotes "What you should be aware of."

 Denotes "What you must not do." An indication in or near this symbol shows a specific prohibition.

 Denotes "What you must do." An indication in this symbol shows a specific instruction.

 <b>WARNING</b>	
	This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.
	Clean a power cord plug regularly. Dust on the plug could cause a fire.
	Obtain power directly from a single plug socket. Avoid connecting many wires to one plug socket. It could lead to a fire.
	Do not connect/disconnect a power plug with a wet hand. It could cause an electric shock.
 	<ul style="list-style-type: none"><li>● Do not operate the instrument, if it is out of order. If it is operated in an out-of-order state, such as it is smoking, emitting an abnormal sound, or smelling funny, it could cause a fire or electric shock. Disconnect a power plug immediately from a socket and contact your dealer/distributor for a repair.</li><li>● Disconnect a power plug before connecting to an external time signal.</li></ul>
	A lithium battery is used inside for memory backup. Never replace the lithium battery by yourself. Contact your dealer/distributor for replacement.

 <b>CAUTION</b>	
	Data stored in the internal memory cannot be stored permanently. We will not be responsible for damages and lost profits caused by loss of data attributed to battery consumption, trouble, repair, and so on.

	Never disassemble or modify this instrument. It could cause a fire, electric shock, or other problems.
	<ul style="list-style-type: none"> <li>● Do not insert foreign substances such as fingers, pens, wire, or paper into this instrument. It could damage the instrument or cause a fire.</li> <li>● Use correct supply voltage. Other voltage level could damage the instrument.</li> <li>● Do not splash water or chemicals on the instrument. If water gets inside the instrument, disconnect a power plug immediately from a plug socket and contact your dealer/distributor for a repair. It could damage the instrument or cause a fire or electric shock.</li> <li>● Do not put paper or cloth on the instrument. It could cause a fire.</li> <li>● Do not place any heavy material on a power cord. It could cause damage or a fire.</li> </ul>
	<ul style="list-style-type: none"> <li>● Never touch a printer head. It is very hot just after printing and you could get burned. Also, dirt on your hand could cause trouble to the printer head.</li> </ul>
	<ul style="list-style-type: none"> <li>● When the instrument is not going to be operated for a long period of time, be sure to disconnect a power cord from a power socket for your safety.</li> <li>● When disconnecting a power cord, be sure to hold a power plug. Do not pull on the power cord, or the cord could be broken and cause a fire or electric shock.</li> </ul>

## 1-2 ACCESSORIES

This instrument comes with the following accessories. Confirm that they are included before using the machine.

1. Instruction manual



: 1 booklet

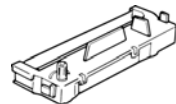
2. Screws for wall mounting



: 4-pcs.

### REQUEST

- ◆ Do not drop or hit the instrument.
- ◆ Install this instrument away from the following places:
  1. Any place that is not level or that is subject to vibration.
  2. Any place that has dust or high humidity. Keep beverages and liquid containers away from this instrument.
  3. Any place that the temperature goes below 0 °C /32 °F or over 40 °C/104 °F.
  4. Any place that catches direct sunlight or is located close to a heat source.
- ◆ Do not insert cards or paper other than the specified time cards for this instrument. Do not use time cards that are bent or torn.
- ◆ Be sure to use a dry cloth for cleaning. Do not use solvents (alcohol, benzene, thinner, etc.) or a damp cloth.
- ◆ Do not re-ink cartridge. Replace with ink ribbon cassette ER-IR102E.
- ◆ Do not hang this instrument on a wall using anything other than the included plate for wall mounting.
- ◆ The socket-outlet shall be installed near the equipment and shall be easily accessible.
- ◆ A 30-minute break is required after continuous printing 15 minutes.



## 1-3 MAIN FEATURES

1. Up to 6 columns (Up to 4 columns when using the Daily Total Hours function).
2. Two-color printing (Black/Red).
3. Printing Daily Total Hours calculation and Accumulation of Daily Total Hours.
4. Can select regular working time or overtime as Daily Total Hours.
5. Setting up to 22 times for external time signal.
6. Setting another program for Special day.
7. Printing regular minutes (1/60) or 1/100<sup>th</sup> of an hour.
8. Can select one of three styles from the following table.

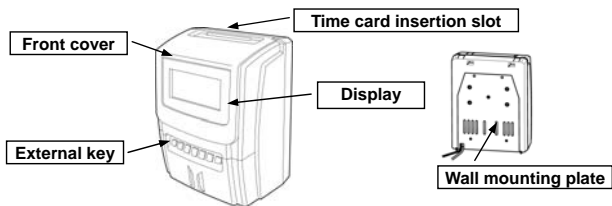
Capacity of employees	Setting program
150 employees	Using Next Day Overtime function (Without Daily Total Hours function)
130 employees	Using Daily Total Hours function (Without Next Day Overtime function)
60 employees	Using Daily Total Hours function and Next Day Overtime function

9. Printing "Late-in: ►," "Early-out: ◀," "Overtime: ⚡" and "Next Day Overtime: ★" symbols.
10. Can select fully automatic or manual operation.
11. Password protection for settings.
12. Three kinds of installation (Table Top, Wall Mounting, and Laid Down Position).
13. Three kinds of pay period formatting (Monthly, Weekly or Bi-weekly).
14. Daylight Saving Time (for summer time).
15. Printing past midnight in the same line of the day by Line Shift Time.
16. Built-in lithium battery protects the clock, calendar and program data for 3 years.
17. Twelve / twenty-four hour display formats.
18. Time / Date / Month / Year are already preset.

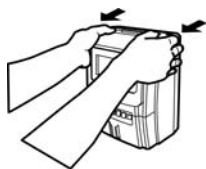


Some areas or countries will be required to reset the time.

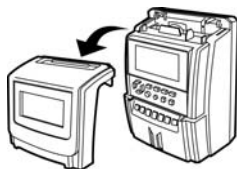
## 2 PARTS DESCRIPTIONS



## 3 HOW TO OPEN AND CLOSE FRONT COVER



Pull as illustrated above.



Remove a front cover.






Push as illustrated above.

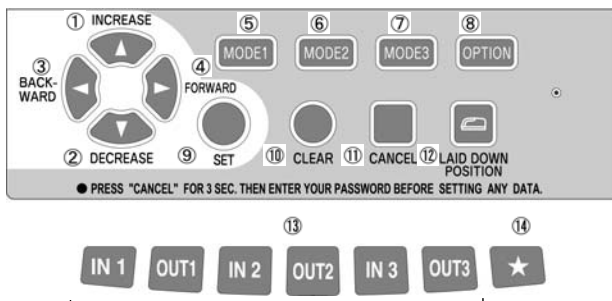
## 4 DISPLAY AND KEYBOARD

### 4-1 DISPLAY LAYOUT






- (A) **DST** symbol appears Daylight Saving Time activates.
- (B)  symbol appears Daylight Saving Time activates.
- (C)  symbol appears during settings are protected by password.
- (D)  symbol appears while you set IN/OUT program for Special day.

## 4-2 KEYBOARD LAYOUT



### [External Keys]

#### Functions of keys

No.	Description	Functions
①	<b>INCREASE</b>	To increase number.
②	<b>DECREASE</b>	To decrease number.
③	<b>BACKWARD</b>	To back setting item (Code No.).
④	<b>FORWARD</b>	To forward setting item (Code No.).
⑤	<b>MODE1</b>	To set Machine Mode1, Machine Mode2, Pay Closing Date, 60 or 100 scale and Daily Total Hours. (See [7] on page 10)
⑥	<b>MODE2</b>	To set Year, Month, Date and current Time. (See [8] on page 14)
⑦	<b>MODE3</b>	To set Holiday, Special Day, Line Shift Time, Working Time (IN1~OUT3, OST) and Daylight Saving Time. (See [9] on page 14)
⑧	<b>OPTION</b>	To set Password, Time Length, Time Signal and LCD Backlight. (See [10] on page 18)
⑨	<b>SET</b>	To register all setting data and return to the start of setting mode.
⑩	<b>CLEAR</b>	To initialize current setting item.
⑪	<b>CANCEL</b>	To return to the start of setting mode without registration.
⑫	 <b>(LAID DOWN POSITION KEY)</b>	To turn the time on the display upside down.
⑬		To select a desired column.
⑭	 <b>(NEXT DAY OVERTIME KEY)</b>	To print the time in the same line of the day after Line Shift Time.

**5****HOW TO OPERATE****⚠ CAUTION**

Install this instrument on a level place.



Do not install on or near a place subject to vibration.


**1. AUTOMATIC OPERATION**

Column to be printed is shifted automatically in the order of **IN1**, **OUT1**, **IN2**, **OUT2**, **IN3** and **OUT3** without pressing any external keys.

1. Insert time card to the position where automatic feed starts.
2. Time card will be ejected automatically after printing the time.

**2. MANUAL OPERATION**

ER-2700 allows manual operation to select a desired column to be printed on.

1. Select a desired column to print by pressing "**IN1**," "**OUT1**," "**IN2**," "**OUT2**," "**IN3**" or "**OUT3**" key.
2.  symbol appears at the selected column on the display.
3. Insert time card to the position where automatic feed starts.
4. Time card will be ejected automatically after printing the time.

**REQUEST**

1. Do not keep holding the time card during printing.
2. Do not pull or push time card with your hand.
3. Do not cover any of small holes at both edges on time card.



1. If "**E-01**" appears on the display, the time card has been inserted incorrectly. (See [14] on page 24)
2. When using Daily Total Hours function, ER-2700 automatically prints Daily Total Hours in the 5<sup>th</sup> column and Accumulation of Daily Total Hours in the 6<sup>th</sup> column after printing the time in the 4<sup>th</sup> column.





## 6 HOW TO SET UP

---

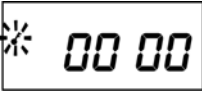
### 6-1 SETTING OR CHANGING DATA

#### Operation

1. Press “CANCEL” key for 3 sec. or more. The  symbol appears on the display.
2. After all changed data in each mode are registered, press the “CANCEL” key again.  
The  symbol disappears.

#### Password protection for settings


Password is able to set up to protect settings. The password is required for settings or changing data after it has been set up in setting OPTION. (See [10 ] on page 18)



#### REQUEST


Making note of the “Password” and keep it in a safe place to prevent it from being lost or used by an unauthorized person.

#### MEMO

If you do not touch any keys for 60 seconds, the  symbol disappears automatically.

### 6-2 BASIC OPERATION OF SETTING OR CHANGING DATA

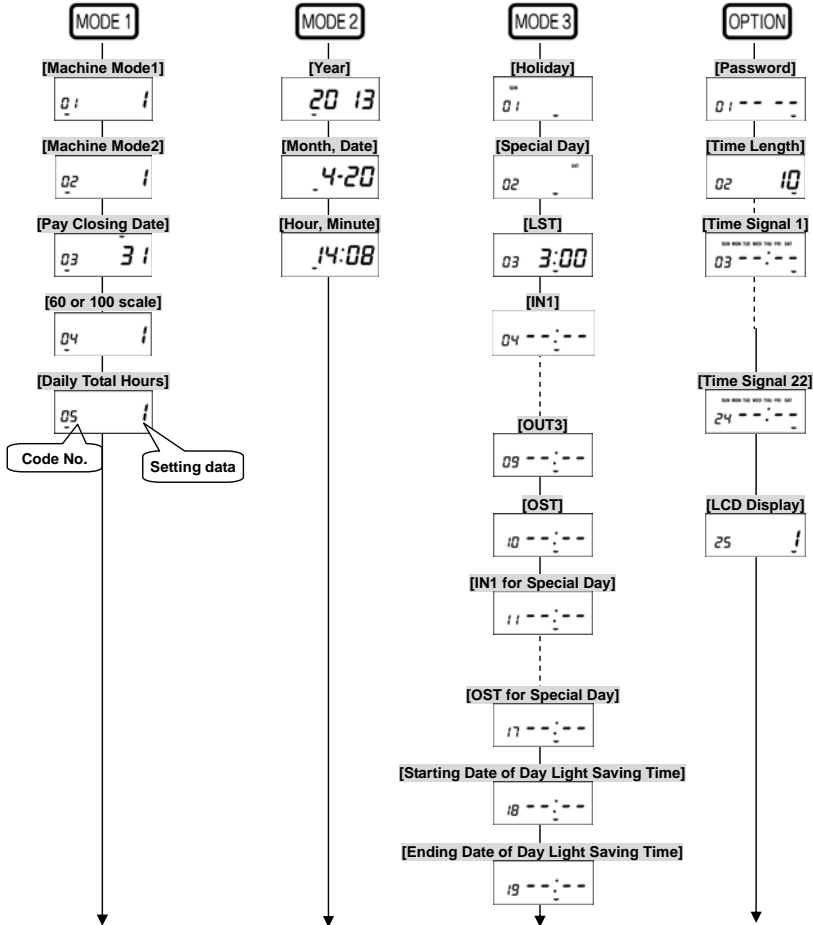
#### Operation

1. Press the “CANCEL” key for 3sec. or more. The  symbol appears on the display to indicate the setting mode is on. If password has been set up, enter the password before into the setting mode.
2. Press “MODE 1,” “MODE 2,” “MODE 3” or “OPTION” key to select setting mode.  
Then first setting item (CODE 01) is displayed.
3. Press “◀ (BACKWARD)” or “▶ (FORWARD)” key to select setting item.
4. Press “▲ (INCREASE)” or “▼ (DECREASE)” key to change data. (The changeable data blinks.)
5. If the changed data is OK, press “◀ (BACKWARD)” or “▶ (FORWARD)” key to move to next setting item.
6. Press “SET” key to register all changed data and to return the start of setting mode. Alternatively, you can press “▶ (FORWARD)” key in last setting item to register all changed data and to return to the **start of setting mode**.

#### MEMO

By pressing “CANCEL” key during setting, you can return to the start of setting mode without registration.

**The Contents of Setting Item**



- ◆ After pressing “SET” key, all changed data in each mode are registered and the display returns to the **start of setting mode** ( symbol appears on the display.).
- ◆ Alternatively, you can press “▶ (FORWARD)” key in last setting item to register all changed data, and then the display returns to the **start of setting mode**.



1. When selecting “3(Without Daily Total Hours function)” in **Machine Mode 1** setting (CODE 01 in MODE 1), **Daily Total Hours** setting (CODE 05 in MODE1) is not displayed.
2. When setting no **Special Day** in **Special Day** setting (CODE 02 in MODE 3), “CODE 11” to “CODE 17” are not displayed.

## 7 SETTING MODE 1

Press “**MODE 1**” key after pressing the “**CANCEL**” key for 3sec. or more.  
If password has been set up, enter the password before into the setting mode.


### 7-1 MACHINE MODE 1 (CODE 01)

Press ▲ or ▼ to select a desired number from the following table and set “**Capacity of Employees.**”  
According to the number, each function will be activated.

◆ Initial data=1

Number	Capacity of Employees	Function		Printed result on Time Card	
		Daily Total Hours	Next Day Overtime	5 <sup>th</sup> column	6 <sup>th</sup> column
1	60	Use	Use	Daily Total Hours	Accumulation of Daily Total Hours
2	130	Use	Not use	Daily Total Hours	Accumulation of Daily Total Hours
3	150	Not use	Use	Time	Time



1. When selecting “1,” you cannot use “**IN3**” and “**OUT3**” external keys. When pressing these keys, “**E-90**” appears on the display.
2. When selecting “2,” you cannot use “**IN3**,” “**OUT3**” and “**Next Day Overtime**(  )” keys. When pressing these keys, “**E-90**” appears on the display.

### 7-2 MACHINE MODE 2 (CODE 02)

Press ▲ or ▼ to select a desired number from the following table and set “**12/24-Hour Format**” and “**Pay Period.**”

◆ Initial data=1

Number	12/24-Hour Format	Pay Period
1	12H	Monthly
2	24H	
3	12H	Weekly
4	24H	
5	12H	Bi-weekly
6	24H	



1. The time is printed only in 24-hour format.
2. When setting in the “**Laid Down Position,**” only 24-hour format is displayed.

### 7-3 PAY CLOSING DATE (CODE 03)

After setting “Machine Mode2,” “Pay Closing Date” is shown on the display.

#### Monthly

Press ▲ or ▼ key to select “Pay Closing Date.” When the display shows a desired closing date, press “▶” key.

From 03 1 to 03 31

#### Weekly

Press ▲ or ▼ key to select “Pay Closing Date”(from today to the next 6 days).

When the display shows a desired closing date, press “▶” key.

From 03 9 18 to 03 9 24

#### Bi-weekly

Press ▲ or ▼ key to select “Pay Closing Date”(from today to the next 13 days).

When the display shows a desired closing date, press “▶” key.

From 03 9 18 to 03 10 1



In Europe, set Date first and Month second.

### 7-4 60 OR 100 SCALE (CODE 04)

Press ▲ or ▼ to select a desired number from the following table and set “Time Printing Style.”

#### ◆ Initial data=1

Number	Time printed on IN/OUT columns	Daily Total Hours	Accumulation of Daily Total Hours
1	Regular minutes (1/60)	Regular minutes (1/60)	Regular minutes (1/60)
2	1/100 <sup>th</sup> of an hour	1/100 <sup>th</sup> of an hour	1/100 <sup>th</sup> of an hour
3	Regular minutes (1/60)	1/100 <sup>th</sup> of an hour	1/100 <sup>th</sup> of an hour



- When using 1/100<sup>th</sup> of an hour as “Time Printing Style”, ER-2700 prints the adjusted time as shown on the “Equivalent Time Chart.” And Accumulation of Daily Total Hours is adjusted after calculating in Regular minutes (1/60).

(See page 14)

### Equivalent Time Chart

Regular minutes (1/60)	1/100 <sup>th</sup> of an hour (1/100)	Regular minutes (1/60)	1/100 <sup>th</sup> of an hour (1/100)	Regular minutes (1/60)	1/100 <sup>th</sup> of an hour (1/100)
00	0.00	20	0.34	40	0.66
01	0.02	21	0.35	41	0.68
02	0.04	22	0.36	42	0.70
03	0.05	23	0.38	43	0.72
04	0.06	24	0.40	44	0.74
05	0.08	25	0.42	45	0.75
06	0.10	26	0.44	46	0.76
07	0.12	27	0.45	47	0.78
08	0.14	28	0.46	48	0.80
09	0.15	29	0.48	49	0.82
10	0.16	30	0.50	50	0.84
11	0.18	31	0.52	51	0.85
12	0.20	32	0.54	52	0.86
13	0.22	33	0.55	53	0.88
14	0.24	34	0.56	54	0.90
15	0.25	35	0.58	55	0.92
16	0.26	36	0.60	56	0.94
17	0.28	37	0.62	57	0.95
18	0.30	38	0.64	58	0.96
19	0.32	39	0.65	59	0.98

### **7-5** DAILY TOTAL HOURS (CODE 05)

Press ▲ or ▼ to select a desired number from the following table and set “**Style of Daily Total Hours.**” ER-2700 prints Daily Total Hours in the 5<sup>th</sup> column and Accumulation of Daily Total Hours in the 6<sup>th</sup> column automatically while printing in the 4<sup>th</sup> column.

◆ Initial data=1

Number	Style of Daily Total Hours
1	Regular work time
2	Overtime

MEMO

1. If “**2(Overtime work)**” is set but Starting time of Overtime Work is not set in “**MODE 3,**” ER-2700 prints “0:00” or “0.00” in the 5<sup>th</sup> column.
2. If “**3(No use the Daily Total Hours function)**” is selected in “**Machine Mode1 (CODE 01)**”, this setting item (CODE 05) does not appear.

**Printing Examples of Daily Total Hours**

1. Setting data: CODE 01=1 (Using Daily Total Hours function)  
CODE 04=1 (Regular minutes (1/60))

D	IN1	OUT1	IN2	OUT2	IN3	OUT3
1	← 9:01	← 11:59	← 12:59	← 16:40	6:39	6:39
2	↻ 8:58	↻ 12:01	↻ 13:10	↻ 18:27	8:20	14:59

[Daily Total Hours] [Accumulation of Daily Total Hours]

2. Setting data: CODE 01=1 (Using Daily Total Hours function)  
CODE 04=3 (1/100<sup>th</sup> of an hour)

D	IN1	OUT1	IN2	OUT2	IN3	OUT3
1	← 9:01	← 11:59	← 12:59	← 16:40	6.65	6.65
2	↻ 8:58	↻ 12:01	↻ 13:10	↻ 18:27	8.34	14.98 #1

[Daily Total Hours] [Accumulation of Daily Total Hours]

#1: In case of 1/100<sup>th</sup> of an hour, Accumulation of Daily Total Hours is changed from Regular minutes (14:59) to 1/100<sup>th</sup> of an hour (14.98). The accumulated hours are not same as the hours added 6.65 to 8.34.

3. Setting data: CODE 01=3 (Not using the Daily Total Hours function)  
CODE 04=1 (Regular minutes (1/60))

D	IN1	OUT1	IN2	OUT2	IN3	OUT3
1	← 9:01	← 11:59	← 12:59	← 16:40	6.65	6.65
2	↻ 8:58	↻ 12:01	↻ 13:10	↻ 18:27	8.34	14.98



- When time is not printed in the 4<sup>th</sup> column, ER-2700 does not print the Daily Total Hours and Accumulation of Daily Total Hours. If you cannot print the time in the 4<sup>th</sup> column by using automatic operation, use manual operation by pressing "OUT2."
- When IN and OUT have not been printed in pairs, ER-2700 cannot output Daily Total Hours and Accumulation of Daily Total Hours.

## 8 SETTING MODE 2 (YEAR, MONTH, DATE, HOUR, AND MINUTE)

Press "**MODE 2**" key after pressing the "CANCEL" key for 3sec. or more.

If password has been set up, enter the password before into the setting mode.

[Example] 1:35 (PM), 21st May, 2013

Procedure [MODE 2]	Display
Press " <b>MODE2</b> " key. Current Year is shown on the display.	
Press  to display the Month/Date. Press  to blink the Date.	
Press  or  until the display shows "21."	
Press  to display the Hour/Minute. Press  to blink the Minute.	
Press  or  until the display shows "35."	
Press the " <b>SET</b> " key to register the changed data. The display returns to the start of setting mode.	



1. symbol appears during Daylight Saving Time activates.
2. In Europe, set Date first and Month second.
3. Clock starts at "00" seconds when the "**SET**" key is pressed.

## 9 SETTING MODE 3

Press "**MODE 3**" key after pressing the "CANCEL" key for 3sec. or more.

If password has been set up, enter the password before into the setting mode.

### 9-1 HOLIDAY (CODE 01)

Set a day of the week as "**Holiday.**" Press the following keys to light on/off the day of the week.

The days of weeks that are lit up mean "**Holiday.**"

◆ Initial data=Nothing (All days are lit off.)

Key									
Day of the week	SUN	MON	TUE	WED	THU	FRI	SAT	ALL days are lit on.	ALL days are lit off.



1. Times on Holidays are printed in red color without any symbols.
2. Daily Total Hours on Holiday does not correspond to IN/OUT program in MODE 3.

## 9-2 SPECIAL DAY (CODE 02)

Set a day of the week as “**Special day.**” Press the following keys to light on/off the day of the week. The days of the week that are lit up mean “**Special day.**”

◆ Initial data=Nothing (All days are lit off.)

Key	IN 1	OUT 1	IN 2	OUT 2	IN 3	OUT 3	★	▲	▼
Day of the week	SUN	MON	TUE	WED	THU	FRI	SAT	ALL days are lit on.	ALL days are lit off.



1. You can set IN/OUT program for Special day in **CODE 11** to **CODE 17**.
2. Special day and Holiday cannot be set to the same day of the week. “**E-91**” appears on the display.

## 9-3 LINE SHIFT TIME, IN/OUT AND OVERTIME WORKING (CODE 03 to 10, # FOR SPECIAL DAY: CODE 11 to 17)

Set LST, IN/OUT and OVERTIME program to activate printing function of symbols, “**Late-in:** ▶,” “**Early-out:** ◀,” “**Overtime:** ⚡.”

Daily Total Hours is calculated according to this program.

CODE No.	Contents of setting program	Initial data
03	LST (Line Shift Time=Day change time)	3 : 00
04	IN1 (Working start time)	-- : --
05	OUT1 (Working end time)	-- : --
06	IN2 (Working start time)	-- : --
07	OUT2 (Working end time)	-- : --
08	IN3 (Working start time)	-- : --
09	OUT3 (Working end time)	-- : --
10	OST (Starting time of Overtime work)	-- : --
11	IN1 for Special Day (Working start time)	-- : --
12	OUT1 for Special Day (Working end time)	-- : --
13	IN2 for Special Day (Working start time)	-- : --
14	OUT2 for Special Day (Working end time)	-- : --
15	IN3 for Special Day (Working start time)	-- : --
16	OUT3 for Special Day (Working end time)	-- : --
17	OST for Special Day (Starting time of Overtime work)	-- : --



1. The time is displayed in only 24-hour format.
2. The **CODE 11** to **17** are displayed only when Special day is set in **CODE 02**.
3. During setting the **CODE 11** to **17** for Special day, ⚡ symbol appears on the display.
4. Times with “**Late-in**” and “**Early-out**” symbols are printed in red color.

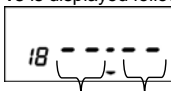


<b>Example</b>	Line Shift Time (Day change time)	:	4 : 00
	Starting time of work	:	9 : 00
	Starting time of lunch	:	12 : 00
	Ending time of lunch	:	13 : 00
	Ending time of work	:	17 : 00
	Starting time of Overtime work	:	17 : 30
	Special day	:	Nothing

Procedure	Display
Press ► to display <b>CODE 03</b> . Current Line Shift Time is shown on the display.	
Press ▲ or ▼ until the display shows "4:00."	
Press ► to display <b>CODE 04 (IN1)</b> . Press ▲ or ▼ until the display shows "9."	
Press ► until the display shows <b>CODE 05 (OUT1)</b> . Press ▲ or ▼ until the display shows "12."	
Press ► until the display shows <b>CODE 06 (IN2)</b> . Press ▲ or ▼ until the display shows "13."	
Press ► until the display shows <b>CODE 07 (OUT2)</b> . Press ▲ or ▼ until the display shows "17."	
Press ► until the display shows <b>CODE 10 (OST)</b> . Press ▲ or ▼ until the display shows "17." Press ► to move the cursor to Minute. Press ▲ or ▼ until the display shows "30." Press ► to display <b>CODE 18</b> .	

## 9-4 DAYLIGHT SAVING TIME (CODE 18 to 19)

Set "Starting and Ending Date of Daylight Saving Time" after setting "OST." In case of setting no Special day in **CODE 02**, **CODE 18** is displayed following **CODE 10**.



(Position for the month) (Position for the week)

	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Figure for month	1	2	3	4	5	6	7	8	9	10	11	12

	1st week	2nd week	3rd week	4th week	Last week
Figure for week	1	2	3	4	L



When setting the last week of the month, set "L" for the last week even if the last week is the 4<sup>th</sup> week.

**Example**

Starting Date of Daylight Saving Time : Sunday of the last week in March.

Ending Date of Daylight Saving Time : Sunday of the last week in October.

Procedure	Display
Press <b>▶</b> to display <b>CODE 18</b> . Starting Date of Daylight Saving Time is shown on the display.	
Press <b>▲</b> or <b>▼</b> until the display shows "3" for March.	
Press <b>▶</b> to move the cursor to set the week. Press <b>▲</b> or <b>▼</b> until the display shows "L" for the Last week.	
Press <b>▶</b> to move the cursor to set the day of the week. Move the cursor to the position of "SUN" for the day of the week by pressing <b>▲</b> or <b>▼</b> .	
Press <b>▶</b> to display <b>CODE 19</b> . Press <b>▲</b> or <b>▼</b> until the display shows "10" for October.	
Press <b>▶</b> to move the cursor to set the week. Press <b>▲</b> or <b>▼</b> until the display shows "L" for the Last week.	
Press <b>▶</b> to move the cursor to set the day of the week. Move the cursor to the position of "SUN" for the day of the week by pressing <b>▲</b> or <b>▼</b> .  Press <b>▶</b> or "SET" key to register the changed data, and then the display returns to the start of setting mode automatically.	



1. During the period of Daylight Saving Time, **DST** symbol appears on the display.
2. Once set, Daylight Saving Time will be adjusted automatically from the following year, in accordance with the setting data.

## 10 SETTING OPTION

Press “**OPTION**” key after pressing the “**CANCEL**” key for 3sec. or more.  
If password has been set up, enter the password before into the setting mode.

### PASSWORD (CODE 01)

A 4-digit password can be set to prevent someone other than the administrator from modifying the time or changing the settings.

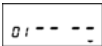
1. Press ▲ or ▼ to change the number of each digit.
2. Press ► to set each digit and to move to the next digit. When ► is pressed at the 4<sup>th</sup> digit, password setting is completed and move to the **CONNECTING TIME LENGETH (CODE 2)** as the next setting item.



After password setting is completed, the 🔑 symbol is always displayed while waiting. Before entering the setting mode, the password input screen is displayed; you cannot enter the setting mode unless a correct password is input.

To set no password, press the “**CLEAR**” key in the password setting screen to display “---”, followed by the “**SET**” key. If “---” (initial value) is displayed, press the “**SET**” key.

[Initial value]

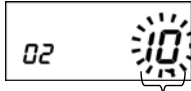


### REQUEST

Making note of the “Password” and keep it in a safe place to prevent it from being lost or used by an unauthorized person.

## CONNECTING TIME LENGTH (CODE 02)

Set “CONNECTING TIME LENGTH” for external output. ER-2700 can control connecting time length to external bell, buzzer or chime.



(Connecting Time Length to the External Bell)

Press ▲ or ▼ to select the desired connecting time length up to 60sec.

◆ Initial data= 10 sec.



- ER-2700 can control connecting time length to external bell from 1 to 60 seconds by 1second.

### Example

Connecting Time Length=15 seconds

Procedure	Display
Press ▲ or ▼ until the display shows “15.”	
Press ► to display CODE 03 as the next setting item.	

## EXTERNAL TIME SIGNAL (CODE 03 to 24)

Set the time and the day of the week to connect to external bell, buzzer or chime.

After setting the time, select the day of the week.

ER-2700 can set “External Time Signal” up to 22 times.

◆ Initial data: Time=- : - : - The day of the week=All days

Key	IN 1	OUT1	IN 2	OUT2	IN 3	OUT3	★	▲	▼
Day of the week	SUN	MON	TUE	WED	THU	FRI	SAT	ALL days are lit on.	ALL days are lit off.

### Example

Time=AM9:00, The day of the week=Mon, Tue, Wed, Thu, Fri

Procedure	Display
Press ▲ or ▼ until the display shows “9.”	
Press ► to move the cursor to set the minute. Press ▲ or ▼ until the display shows “00.”	
Press ► to move the cursor to set the day of the week. Press IN 1 and ★ key to light off “SUN” and “SAT.”	
Press ► to display CODE 03 to set the next time and the day of the week of Time Signal.	

## LCD BACKLIGHT (CODE 25)

“LCD Backlight” is shown on the display after setting “EXTERNAL TIME SIGNAL.”

Select the Backlight mode for your style.

Press ▲ or ▼ to select the desired number from the following table.

Number	LCD Backlight
1	ON
2	OFF
3	Illuminated only when operation

## 11 CONNECTION TO EXTERNAL TIME SIGNAL

### WARNING



Disconnect a power plug before connecting to an external time signal.

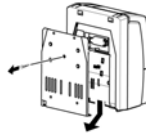
ER-2700 has a relay contact output.

An external bell, buzzer or chime, which are operated in the following methods, is useable.

(Contact capacity: 5A 30V DC)

### Procedure

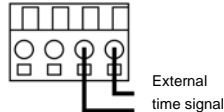
1. Disconnect a power plug. Remove screw and an attached wall mounting plate as illustrated.



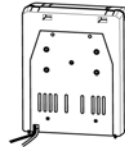
2. Connect a wire to a terminal block using a screwdriver as illustrated.



In case of connection is made to a chime, etc. using ER-2700 as a contact.






3. Take out wires through the takeout port as illustrated and attach the wall mounting plate to body.



## 12 REPLACING INK RIBBON CASSETTE

Use only **ER-IR102E** ink ribbon cassette.

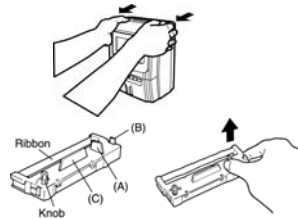
Replace an ink ribbon cassette as below, if the printing is too light.

<b>⚠ CAUTION</b>	
	Never touch a printer head. It is very hot just after printing and you could get burned.
	Disconnect the power cord from a plug socket.
	Wash your hands/body immediately with soap if the ink ribbon rubs off on them.

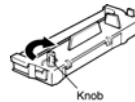
### Procedure

1. Disconnect the power cord from a plug socket.  
Open and remove a front cover.

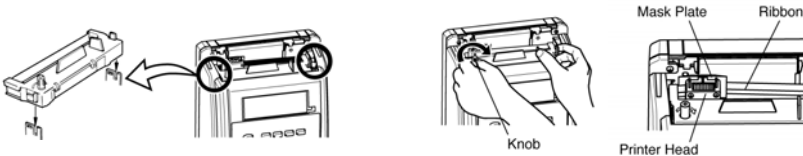
2. Holding (A), (B) and (C) as shown, lift an ink ribbon cassette out.



3. Turn a knob of a new ink ribbon cassette in the direction indicated by the arrow to remove any slack in the ribbon.




4. Insert the cassette properly as illustrated so that ribbon tape is set between "Mask Plate" and "Printer Head." Then turn the knob again to remove the slack in the ribbon.



5. Close the front cover and connect the power cord.

# 13

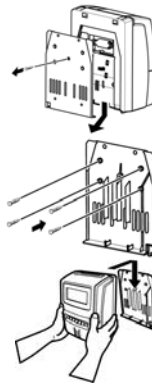
## WALL MOUNTING AND LAID-DOWN POSITION INSTALLATION

<b>⚠ CAUTION</b>	
<b>!</b>	If mounting on a wall, make sure the wall is strong enough to hold the mount and recorder.
△ ⊘	Mount ER-2700 by an attached wall mounting plate. Do not use other materials.
	Disconnect a power cord before installing on wall.


### Wall Mounting

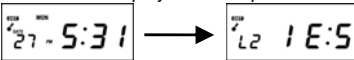
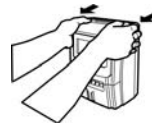
If hanging ER-2700 on a wall, use the following procedure.

1. Remove a screw and an attached wall mounting plate as illustrated.
2. Fix the wall mounting plate to a wall with the included 4 screws (accessories).
3. Install ER-2700 into the wall mounting plate as illustrated.



### Laid-Down Position

1. Remove a front cover.
2. Press the  for "Laid Down Position."
3. The clock display will turn upside down.







## 14 ERROR CODES

Error codes	Problem	Solution
E-00	Time card is not inserted far enough to where automatic feed activates.	Insert time card to where automatic feed starts.
E-01	Time card is inserted on the wrong side.	Insert time card on the other side.
E-02	ER-2700 cannot read holes on time card correctly.	Check if any holes are covered. Check if time card is bent or damaged.
E-04	<ul style="list-style-type: none"> <li>6 printings or 4 printings (In case of using Daily Total Hours function) have been already completed in a day.</li> <li>Improper print was made by manual operation.</li> </ul>	
E-05	150, 130 or 60 time cards have been already inserted in a day/month.	ER-2700 can handle up to 150, 130 or 60 time cards a day/month according to setting program.
E-08	Time card used last period is inserted.	Insert a new time card.
E-11	When setting ER-2700, invalid data is input.	Input correct data.
E-69 00 E-69 01 E-69 02	Automatic feed does not carry time card smoothly.	Do not hold time card during printing. Check if time card is bent or damaged.
E-90	Unusable external key is pressed.	
E-91	When setting ER-2700, Special day and Holiday are set to the same day of the week.	Input correct data.
E-EE	Printer malfunction.	Try to get normal printout by disconnecting or connecting the power cord.

## 15 CAUTION CODE









Caution Code	Problem	Solution
C-05	When you try to revise Machine Mode, Pay Closing Date, Date, LST, or Daily Total Hours, all time data is deleted.	<p><b>If you press "SET" key</b> All time data is deleted and the revised data is registered.</p> <p><b>If you press "CANCEL" key</b> The revision is canceled without deleting time data.</p>

## 16 TROUBLE SHOOTING

<b>⚠ CAUTION</b>	
	Never disassemble the instrument by yourself.
	Contact your dealer or distributor if you could not solve the problem after checking the following table.

Problem	Points to Check	See
No display	Is the power cord connected to the plug socket correctly?	<b>1</b>
No print out on time card	Is the ink ribbon cassette inserted correctly?	<b>12</b>
Card insertion obstructed	Is the card being inserted on the correct side? Is the card bent or damaged?	<b>5</b>
Deviation in the printing line position	Is the card being inserted too strongly? Do you pull out the card during the printing process? Do you keep holding the card when it is automatically being pulled inside? Is the card damp?	<b>5</b>
Faint printout	Is the ink ribbon being used too long? Is the ink ribbon cassette inserted correctly?	<b>12</b>

## 17 SPECIFICATIONS

Product description	Max Electronic Time Recorder ER-2700
Power supply	Europe AC230V 50/60Hz 0.2A Other countries AC220/230V 50/60Hz 0.2A
Outside dimensions	241 (H) x 187 (W) x 130 (D) mm
Weight	2.5kg
Clock system	Crystal quartz oscillation Monthly tolerance ±15 seconds (Normal temperature : 25°C / 77°F)
Display	Date, Hour, Minute, AM/PM, Day of week,  ,  ,  , 
Printed information	Date, Hour/minute (Up to 6 columns), Daily Total Hours, Accumulation of Daily Total Hours, Symbol of  ,  ,  , 
Guarantee in case of power failure	Memory backup supported by an internal battery and a clock function guaranteed over a period of 3 years as accumulated power failure after assembling at factory.
Capacity	60, 130 or 150 employees
Printed color	Black and Red
Time card / Ink ribbon	MAX ER-M time card ER-IR102E (Black/Red) ink ribbon cassette
Operating temperature	0°C~40°C / 32 °F~104 °F
Storage temperature	-20°C~60°C / -4°F~140°F
Continuous printing time	15 minutes
Resting time	30 minutes

## EU Declaration of Conformity

December, 11 , 2012

TYPE OF APPLICATION : Declared for the EC directive  
2004/108/EC, 2006/95/EC

APPLICABLE RULES : EN55022:2010  
EN61000-3-2:2006+A2:2009  
EN61000-3-3:2008  
EN55024:2010  
IEC61000-4-2:2008  
IEC61000-4-3:2006+A1:2007+A2:2010  
IEC61000-4-4:2004  
IEC61000-4-5:2005  
IEC61000-4-6:2008  
IEC61000-4-8:2009  
IEC61000-4-11:2004  
EN 60950-1:2006 + A11:2009 +A1:2010 +A12:2011

TYPE OF PRODUCT : Time Recorder

TRADE NAMES : MAX

MODEL NUMBER : ER-2700

APPLICANT : MAX Co., Ltd.  
6-6, Nihonbashi, Hakozaiki-cho,  
Chuo-ku, Tokyo, 103 JAPAN

**I HEREBY STATE THAT** : The measurements / test shown in this application were made in accordance with the procedures indicated and the energy emitted, electromagnetic compatibility and safety by this equipment was found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements /test and vouch for the qualifications of all Persons taking them.

**I FURTHER STATE THAT** : On the basis of the measurements / test made, the equipment tested is capable of operation in accordance with the requirements of the EC directive 2004/108/EC, 2006/95/EC and standards EN55022 Class A limit , EN55024, EN61000-3-2, EN61000-3-3 and EN60950 under normal use and maintenance.

APPROVED BY:

Takashi Sahara

Takashi Sahara / General Manager  
Product Engineering  
MAX Co., Ltd.

ER91201



4010166



•This instruction manual is subject to change without notice due to functional enhancement.



**MAX CO.,LTD.**

6-6, NIHONBASHI HAKOZAKI-CHO, CHUO-KU, TOKYO, JAPAN

POST CODE: #103-8502

TELEPHONE: 81-3-3669-8131 FAX: 81-3-3669-7104

URL: <http://wis.max-ltd.co.jp/int/>

N12ASZ Vol.2