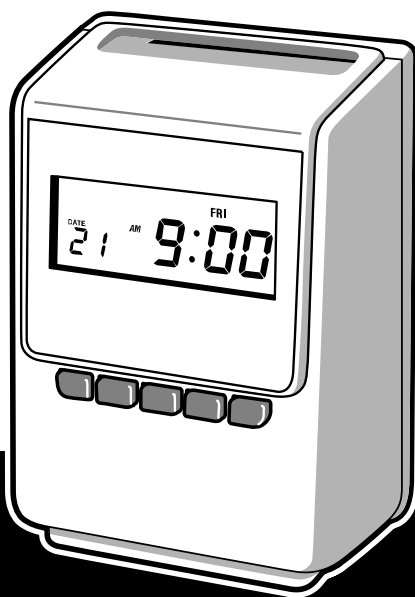


# ELECTRONIC TIME RECORDER

**MAX**®

# ER-1600

**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>	BEFORE USE .....	2
<b>1-1</b>	SAFETY INSTRUCTIONS .....	2
<b>1-2</b>	ACCESSORIES .....	3
<b>1-3</b>	MAIN FEATURES .....	5
<b>2</b>	PARTS DESCRIPTIONS .....	5
<b>3</b>	HOW TO OPEN AND CLOSE FRONT COVER.....	5
<b>4</b>	KEYBOARD AND DISPLAY .....	6
<b>4-1</b>	KEYBOARD LAYOUT .....	6
<b>4-2</b>	DISPLAY LAYOUT.....	7
<b>5</b>	HOW TO OPERATE.....	7
<b>6</b>	SETTING OR CHANGING DATA .....	8
<b>7</b>	SETTING MACHINE MODE, PAY CLOSING DATE, 60 or 100 SCALE, DAILY TOTAL TIME, LCD BACKLIGHT AND PASSWORD (MODE 1) .....	8
<b>8</b>	SETTING YEAR, MONTH, DATE, HOUR, AND MINUTE (MODE 2).....	14
<b>9</b>	SETTING LINE SHIFT TIME, IN/OUT AND DAYLIGHT SAVING TIME (MODE 3) .....	15
<b>10</b>	LATE-IN, EARLY-OUT, OVERTIME WORKING AND NEXT DAY OVERTIME SYMBOLS.....	18
<b>11</b>	REPLACING THE INK RIBBON CASSETTE .....	19
<b>12</b>	WALL MOUNTING AND LAID-DOWN POSITION INSTALLATION .....	20
<b>13</b>	ERROR CODES.....	21
<b>14</b>	CAUTION CODE.....	22
<b>15</b>	TROUBLE SHOOTING .....	22
<b>16</b>	SPECIFICATIONS.....	23

# 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.



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.



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.

### WARNING

	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 the 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.
 	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 the power plug immediately from the socket and contact your dealer/distributor for a repair.

## ▲ CAUTION

	The data stored in the internal memory or the memory card 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 the power plug immediately from the 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 power cord. It could cause damage or a fire.</li></ul>
	<ul style="list-style-type: none"><li>● Never touch the 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 the power cord from the power socket for your safety.</li><li>● When disconnecting the power cord, be sure to hold the power plug. Do not pull on 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



: 2-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-IR103.
- ◆ 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 for 15 minutes.

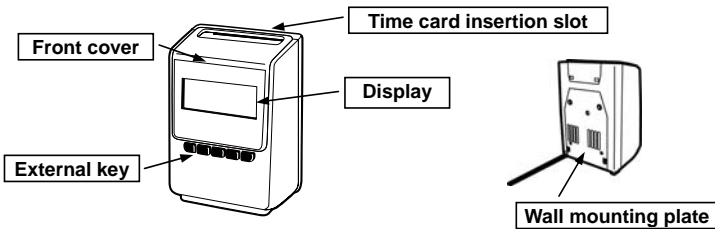
## 1-3 MAIN FEATURES

1. Printing the daily total time for regular working time or overtime (Excluding ER-1600E) .
2. Can select fully automatic or manual operation.
3. Printing regular minutes (1/60) or 1/100<sup>th</sup> of an hour.
4. Printing up to 4 columns (If using daily total printing, up to 5 columns).
5. Up to 150 employees in every time period (If using daily total time, up to 50 employees).
6. Printing the symbols, "Late-in: ▶," "Early-out: ◀," "Overtime: ⚡" and "Next day overtime: ★."
7. Password protection for settings.
8. Three kinds of installation (Table, Wall, and Laid Down Position).
9. Three kinds of pay period formatting (Monthly, Weekly or Bi-weekly).
10. Can select Daylight Saving Time (for summer time).
11. Printing past midnight in the same line of the day by Line Shift Time.
12. Printing the time in the same line of the day after Line Shift Time.
13. Built-in lithium battery protects the clock, calendar and program data for 3 years.
14. Twelve / twenty-four hour display formats.
15. Time / Date / Month / Year are already preset.
16. Backlit LCD display



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

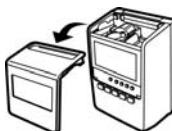
## 2 PARTS DESCRIPTIONS



## 3 HOW TO OPEN AND CLOSE FRONT COVER



Pull as illustrated above.



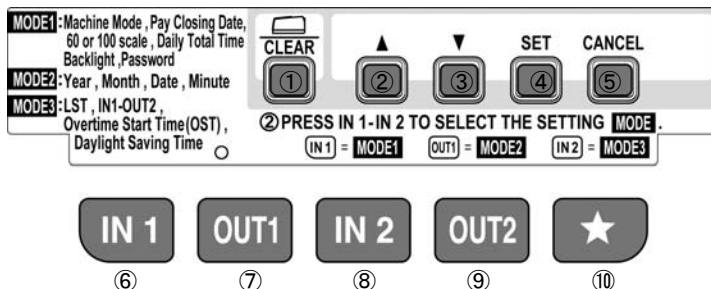
Remove the front cover.









Push as illustrated above.

## 4 KEYBOARD AND DISPLAY

### 4-1 KEYBOARD LAYOUT

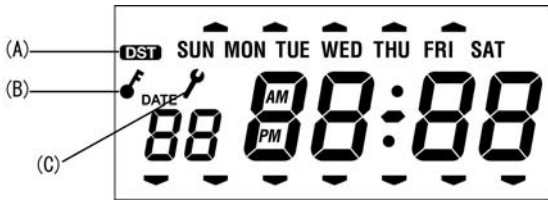




#### Functions of keys

No.	Description	Functions
①	<b>FORWARD KEY</b>	To increase the number when changing settings.
②	<b>BACKWARD KEY</b>	To decrease the number when changing settings.
③	<b>SET KEY</b>	To register figures.
④	<b>CANCEL KEY</b>	To return to the start of setting mode without registration. To enter the setting mode by pressing for 3 sec. and input password.
⑤	 <b>(LAID DOWN POSITION)</b> or <b>CLEAR KEY</b>	To turn the time on the display upside down. To initialize current setting item.
⑥	 <b>MODE1 KEY</b>	To select the “ <b>IN1</b> ” column. To set Machine Mode, Pay Closing Date, 60 or 100 scale, Daily Total Time, LCD Backlight and Password in the setting mode.  (See [7] on page 8)
⑦	 <b>MODE2 KEY</b>	To select the “ <b>OUT1</b> ” column. To set Year, Month, Date and current Time in the setting mode.  (See [8] on page 14)
⑧	 <b>MODE3 KEY</b>	To select the “ <b>IN2</b> ” column. To set Line Shift Time, Working Time(IN1~OUT2, OST) and Daylight Saving Time.  (See [9] on page 15)
⑨	 <b>KEY</b>	To select the “ <b>OUT2</b> ” column.
⑩	 <b>KEY</b> <b>(NEXT DAY OVERTIME KEY)</b>	To print the time in the same line of the day after Line Shift Time.



## 4-2 DISPLAY LAYOUT



- (A) The **DST** symbol appears during the period of Daylight Saving Time.
- (B) The  symbol appears during settings are protected by password.
- (C) The  symbol appears during setting mode.

## 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

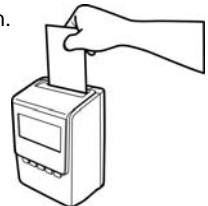
ER-1600 shifts the column for printing automatically in the order of **IN1**, **OUT1**, **IN2** and **OUT2** without the user pressing any external keys.

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-1600 allows manual operation for shifting the column to be printed on.

1. Select a desired column to print on the time card by pressing “**IN1**,” “**OUT1**,” “**IN2**” or “**OUT2**” key.
2. The  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 the small holes at both edges on time card.





1. If “**E-01**” appears on the display, the time card has been inserted incorrectly. (See[13] on page 21)
2. When using Daily Total Time from MODE 1, ER-1600 automatically prints the Total Time in the 5<sup>th</sup> column after printing the time in the 4<sup>th</sup> column.

## **6** SETTING OR CHANGING DATA

---

### **Operation**

1. Press "CANCEL" key for 3 sec. or more. The  symbol appears on the display.
2. After setting or changing data, press the "CANCEL" key again.  
The  symbol disappears.


### **Password protection for settings**

Password is required for settings after you set it up in setting MODE1. (See [6 ] on page 13)

#### **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**

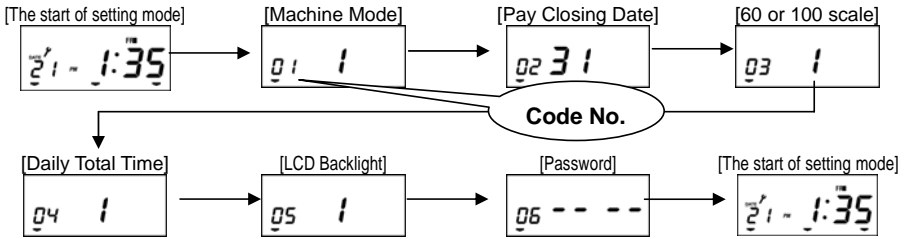
If you do not touch any keys for 60 seconds, the  symbol disappears automatically.

## **7** SETTING MACHINE MODE, PAY CLOSING DATE, 60 or 100 SCALE, DAILY TOTAL TIME, LCD BACKLIGHT AND PASSWORD (MODE 1)

---

### **General Operating Procedure**

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. (See [6 ] on page 13)
2. Press the "IN1" key. The  symbol appears at "MODE 1" on the display.
3. Press the  or  key to change the items.
4. Press the "SET" key after changing each item. The display will move to next item in the order of Machine Mode, Pay Closing Date, 60 or 100 Scale, Daily Total Time, LCD Backlight and Password. When the "SET" key is pressed at the end, the buzzer beeps twice and the display returns to the start of the setting mode.  
"C-05" may be displayed after setting the Daily Total Time and pressing the "SET" key.  
When the "SET" key is pressed, all time data is deleted and the revised data is set.  
When the "CANCEL" key is pressed, the revision is canceled without deleting time data.



Items (MODE 1)	Initial data	Setting range	Code No.
Machine Mode	1	1 to 6	01
Pay Closing Date	31	Depends on Machine Mode Number	02
60 or 100 Scale	1	1 to 5	03
Daily Total Time	1	1 or 2	04
LCD Backlight	1	1 to 3	05
Password	----	0000 to 9999	06



1. If 1 or 2 is selected for Code No.3 (**60 or 100 scale**), the machine doesn't print the **Daily Total Time** and so Code No. 04 (**Daily Total Time**) is not shown on the display.
2. ER-1600E doesn't have the option of the setting of Daily Total Time(Code 04).
3. If the "CANCEL" key is pressed while setting data, the display returns to the start of the setting mode without registering the changes.

### Specific Setting Procedures

#### 1. Setting Machine Mode (Code No: 01)

Press the ▲ or ▼ key to select the desired "Machine Mode" from the following table.

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



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

## 2. Setting Pay Closing Date (Code No: 02)

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

### Monthly

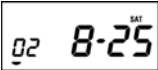
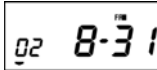
Press the ▲ or ▼ key to select the Pay Closing Date. When the display shows the desired closing date, press the “SET” key.

from  to 

### Weekly

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

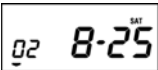
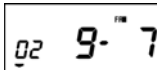
When the display shows the desired closing date, press the “SET” key.

from  to 

### Bi-weekly

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

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

from  to 

## 3. Setting 60 or 100 Scale (Code No: 03)

After setting “Pay Closing Date,” “60 or 100 Scale” is shown on the display.

Select the printing style for the time and the Daily Total Time printing.

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

Number	Time Printing Style	Daily Total Time	Capacity of employees
1	Regular minutes (1/60)	Nothing	150
2	1/100 <sup>th</sup> of an hour	Nothing	150
3	Regular minutes (1/60)	Regular minutes (1/60)	50
4	1/100 <sup>th</sup> of an hour	1/100 <sup>th</sup> of an hour	50
5	Regular minutes (1/60)	1/100 <sup>th</sup> of an hour	50



- When “1” or “2” is selected, ER-1600 does not print the Daily Total Time.
- When using Daily Total Time, the capacity of employees in a day/month is up to 50.
- ER-1600E cannot set “3”, “4” or “5.”
- When using 1/100<sup>th</sup> of an hour as the printing style, ER-1600 prints the minutes as shown on the chart below.

**[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

**4. Setting Daily Total Time (Code No: 04)**

“Daily Total Time” is shown on the display after setting “60 or 100 Scale.”

When “1” or “2” from “CODE 03” or ER-1600E is used, this setting is not displayed.

Select Regular work time or the Overtime work as the Style of Daily Total Time.

The machine automatically prints the Daily Total Time after printing the time in the 4<sup>th</sup> column, using the style that has been selected.

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

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



1. If “2(Overtime work)” is set but the Starting time of Overtime Work is not set in “MODE 3,” ER-1600 prints “0:00” or “0.00” as the Daily Total Time in the 5<sup>th</sup> column.
2. If time is not printed in the 4<sup>th</sup> column, the Daily Total Time is not printed.
3. ER-1600 cannot calculate Monthly Total Time.

**[Printing example of daily total]**

**1. Setting “3” in “CODE NO: 03.”**

Time Printing Style = Regular minutes (1/60)  
 Daily Total Time = Regular minutes (1/60)

D	IN 1	OUT 1	IN 2	OUT 2	IN 3	OUT 3	R
1	↔ 8:24	↔12:08	↔12:58	↔17:11	7:57		
2	↔ 9:11				↔18:11	9:00	
3							

**2. Setting “4” in “CODE NO: 03.”**

Printing Style of the Time = 1/100<sup>th</sup> of an hour  
 Daily Total Time = 1/100<sup>th</sup> of an hour

D	IN 1	OUT 1	IN 2	OUT 2	IN 3	OUT 3	R
1	↔ 8.40	↔12.14	↔12.96	↔17.18	7.95		
2	↔ 9.18				↔18.18	9.00	
3							

**3. Setting “5” in “CODE NO: 03.”**

Time Printing Style = Regular minutes (1/60)  
 Daily Total Time = 1/100<sup>th</sup> of an hour

D	IN 1	OUT 1	IN 2	OUT 2	IN 3	OUT 3	R
1	↔ 8:24	↔12:08	↔12:58	↔17:11	7.95		
2	↔ 9:11				↔18:11	9.00	
3							

**5. LCD Backlight (Code No: 05)**

“LCD Backlight” is shown on the display after setting “Daily Total Time.”

Select the Backlight mode for your style.

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

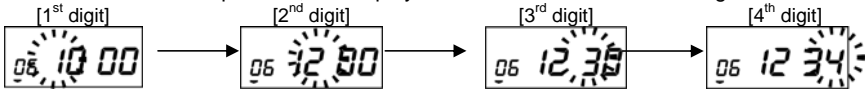
Number	LCD Backlight
1	ON
2	OFF
3	Illuminated only when operation

## 6. Password protection for settings (Code No: 06)


“Password” is shown on the display after setting “LCD Backlight.”

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

1. Press the ▲ or ▼ key to change the number of each digit.
2. Pressing the “SET” key shifts control to the next digit, allowing you to change its number. When the “SET” key is pressed at the 4<sup>th</sup> digit, password setting is completed. After the buzzer beeps twice, the display returns to the start of the setting mode.

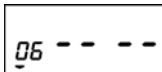


If “C-05” is displayed, press the “SET” key. (See [14] on page 22.)

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]







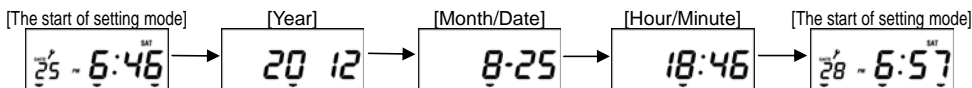
### REQUEST

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









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

### Procedure

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. (See [6 ] on page 13)
2. Press the “OUT1” key. The  symbol appears at “MODE 2” on the display.
3. Press the  or  key to change the Year, Month, Date, Hour and Minute.
4. Press the “SET” key after changing each item. When the “SET” key is pressed at the end, the buzzer beeps twice and the display returns to the start of the setting mode.  
If “C-05” is displayed, press the “SET” key. (See [14] on page 22.)



[Example] 6:57 (PM), 28th August, 2012

Procedure [MODE 2]	Display
Press the “OUT1” key. Current Year is shown on the display.	
Press the “SET” key to register the Year.	
Press the  or  key until the display shows “8” for August. Press the “SET” key to register the Month.	
Press the  or  key until the display shows “28.” Press the “SET” key to register the Date.	
Press the  or  key until the display shows “18.” Press the “SET” key to register the Hour.	
Press the  or  key until the display shows “57.” Press the “SET” key to register the Minute.	
The display returns to the start of setting mode.	







1. The **DST** symbol appears during Daylight Saving Time when it has been set.
2. In Europe, set Date first and Month second.
3. The clock starts at “00” seconds when the “SET” key is pressed at the end.



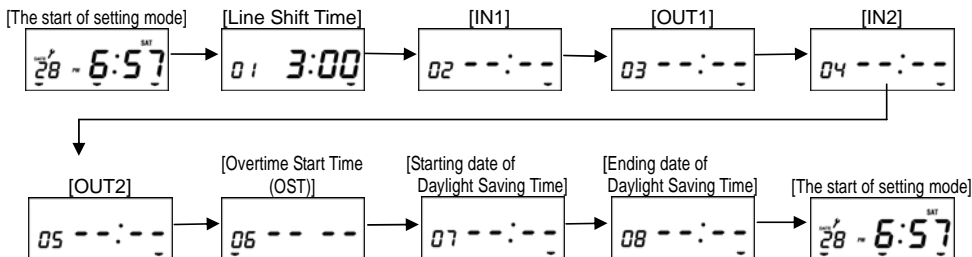
## 9 SETTING LINE SHIFT TIME, IN/OUT AND DAYLIGHT SAVING TIME (MODE 3)

### Procedure

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. (See [6 ] on page 13)
  2. Press the "IN2" key. The  symbol appears at "MODE 3" on the display.
  3. Press the  or  key to change each item.
  4. Press the "SET" key after changing each item. The display moves to next item in the order of Line Shift Time, IN/OUT, Overtime Start Time (OST) and Daylight Saving Time. When the "SET" key is pressed at the end, the buzzer beeps twice and the display returns to the start of the setting mode.
- If "C-05" is displayed, press the "SET" key. (See [14] on page 22)



1. The time is displayed in only 24-hour format.
2. Initial data is displayed by pressing the "Clear" key.




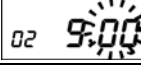

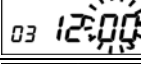

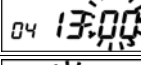
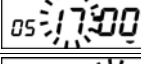
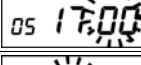
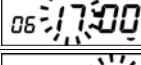
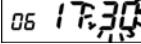


Items (MODE 3)	Initial data	Contents of setting	Code No.
LST	3 : 00	Line Shift Time (Day change time)	01
IN 1	-- : --	Working start time (IN 1)	02
OUT 1	-- : --	Working end time (OUT 1)	03
IN 2	-- : --	Working start time (IN 2)	04
OUT 2	-- : --	Working end time (OUT 2)	05
OST	-- : --	Starting time of Overtime Work	06
Daylight Saving Time Start	-- : --	Starting date of Daylight Saving Time	07
Daylight Saving Time End	-- : --	Ending date of Daylight Saving Time	08

**Procedure**

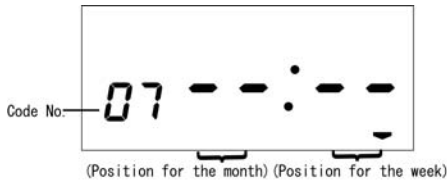
**1. Setting IN & OUT and starting time of Overtime Work**

[Example] 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

Procedure [MODE 3]	Display
Press the "IN2" key. Current Line Shift Time is shown on the display.	
Press the ▲ or ▼ key until the display shows "4:00." Press the "SET" key to register the Line Shift Time.	
Press the ▲ or ▼ key until the display shows "9." Press the "SET" key to register the Hour for "IN1."	
Press the ▲ or ▼ key until the display shows "00." Press the "SET" key to register the Minute for "IN1."	
Press the ▲ or ▼ key until the display shows "12." Press the "SET" key to register the Hour for "OUT1."	
Press the ▲ or ▼ key until the display shows "00." Press the "SET" key to register the Minute for "OUT1."	
Press the ▲ or ▼ key until the display shows "13." Press the "SET" key to register the Hour for "IN2."	
Press the ▲ or ▼ key until the display shows "00." Press the "SET" key to register the Minute for "IN2."	
Press the ▲ or ▼ key until the display shows "17." Press the "SET" key to register the Hour for "OUT2."	
Press the ▲ or ▼ key until the display shows "00." Press the "SET" key to register the Minute for "OUT2."	
Press the ▲ or ▼ key until the display shows "17." Press the "SET" key to register the Hour for "OST."	
Press the ▲ or ▼ key until the display shows "30." Press the "SET" key to register the Minute for "OST."	

## 2. Setting Daylight Saving Time

After setting “Starting time of Overtime work,” the display moves to “Starting Date of Daylight Saving Time.”



	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 4th 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 [MODE 3]	Display
After setting “Starting time of Overtime Work,” the display moves to “Starting Date of Daylight Saving Time.”	07 - - : - -
Press the ▲ or ▼ key until the display shows “3” for March. Press the “SET” key to register the Month.	SUN 07 3 L
Press the ▲ or ▼ key until the display shows “L” for the Last week. Press the “SET” key to register the Week.	SUN 07 3 L
Move the cursor to the position of “SUN” for the day of the week by pressing the ▲ or ▼ key. Press the “SET” key to register the day of the week.	SUN 07 3 L
Press the ▲ or ▼ key until the display shows “10” for October. Press the “SET” key to register the Month.	SUN 08 10 L
Press the ▲ or ▼ key until the display shows “L” for the Last week. Press the “SET” key to register the Week.	SUN 08 10 L
Move the cursor to the position of “SUN” for the day of the week by pressing the ▲ or ▼ key. Press the “SET” key to register the day of the week.	SUN 08 10 L



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

# 10 LATE-IN, EARLY-OUT, OVERTIME WORKING AND NEXT DAY OVERTIME SYMBOLS

ER-1600 can automatically print the symbols **Late-In** (▶), **Early-Out** (◀), **Overtime Work** (♣) at the right position, in accordance with the set time of **IN1 ~ OUT2** (Code No. 02 ~ 05) and the start time of **Overtime Work** (Code No. 06). ( See [9] on page 15)

[Example of using the following data for **MODE 3**]

Items (MODE 3)	Data to be used	Code No.
LST	04 : 00	01
IN 1	09 : 00	02
OUT 1	12 : 00	03
IN 2	13 : 00	04
OUT 2	17 : 00	05
OST	17 : 30	06

(The data used in "MODE 1")

( Printing Style of the Time = Regular minutes (1/60)  
 Daily Total Time = Regular minutes (1/60)  
 Style of Daily Total Time = Overtime work )

[Printing examples]

D	IN 1	OUT 1	IN 2	OUT 2	IN 3	OUT 3	R
1	8:58	11:57	12:54	19:30	2:00		
2	9:08	12:03	13:01	17:21	0:00	Note 1	
3	9:00			18:05	0:35	Note 2	
4	9:05			13:30	0:00		

## ★Note




- (1) The Daily Total Time should be "0:00", because the forth printing time is not beyond the starting time of Overtime work.
- (2) The Daily Total Time is printed after printing in the 4<sup>th</sup> column.

# 11

## REPLACING THE INK RIBBON CASSETTE

Use only **ER-IR103** ink ribbon cassettes.

Replace the ink ribbon cassette using the following procedure, if the printing is too light.

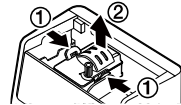
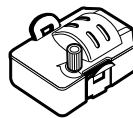
<b>⚠ CAUTION</b>	
	Never touch the printer head. It is very hot just after printing and you could get burned.
	Disconnect the power cord from the plug socket.
	Wash your hands/body immediately with soap if the ink ribbon rubs off on them.

### **Procedure**

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

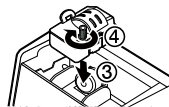


2. Holding (1) as shown, lift the cassette out.



3. Turn the knob (4) of the 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. Then turn the knob again to remove the slack in the ribbon.



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

# 12

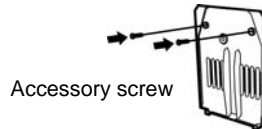
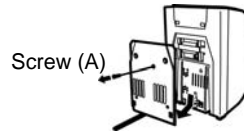
## WALL MOUNTING AND LAID-DOWN POSITION INSTALLATION

<b>⚠ CAUTION</b>	
	If mounting on a wall, make sure the wall is strong enough to hold the mount and recorder.
	Mount ER-1600 by the attached wall mounting plate. Do not use other materials.
	Disconnect the power cord before installing on wall.


### Wall Mounting

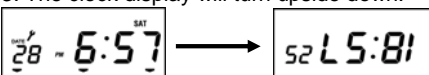
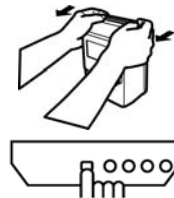
If hanging ER-1600 on a wall, use the following procedure.

1. Remove screw (A) and the attached wall mounting plate as illustrated.
2. Fix the wall mounting plate to the wall with the included 2 screws (accessories).
3. Install ER-1600 into the wall mounting plate as illustrated.



### Laid-Down Position

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

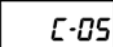


The time on the display shows 24-hour format only.




## 13 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-1600 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>● 4 printings have been already completed in a day.</li> <li>● Improper print was made by manual operation.</li> </ul>	/
E-05	150 or 50 time cards have been already inserted in a day/month.	(ER-1600 can handle up to 150 or 50 time cards a day/month.)
E-08	Time card used last month is inserted.	Insert a new time card.
E-11	When setting ER-1600, invalid value is input in IN-OUT or DST.	Input correct value.
E-69 00	Automatic feed does not carry time card smoothly.	Do not hold time card during printing. Check if time card is bent or damaged.
E-69 01		
E-69 02		
E-EE	Printer malfunction.	Try to get normal printout by disconnecting or connecting the power cord.

## 14 CAUTION CODE

Caution Code	Problem	Solution
	When you try to revise Machine Mode, Pay Closing Date, Date, LST, 60/100 scale or Daily Total Time, 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>








## 15 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>11</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>11</b>



## 16 SPECIFICATIONS

Product description	Max Electronic Time Recorder ER-1600
Power supply	Europe AC230V 50/60Hz 0.2A
	Other countries AC220/230V 50/60Hz 0.2A
Outside dimensions	202 (H) × 140 (W) × 104 (D) mm
Weight	1.8kg
Clock system	Crystal quartz oscillation Monthly tolerance ±15 seconds (Normal temperature : 25 °C / 77 °F)
Display	Date, Hour, Minute, AM/PM, Day of week,  , DST,  ,  .
Printed information	Date, Hour/minute (Up to 4 columns), Daily Total Time 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	50 or 150 employees
Time card / Ink ribbon	MAX ER-M time card ER-IR103 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-1600

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.



ER91101



4010547



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



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