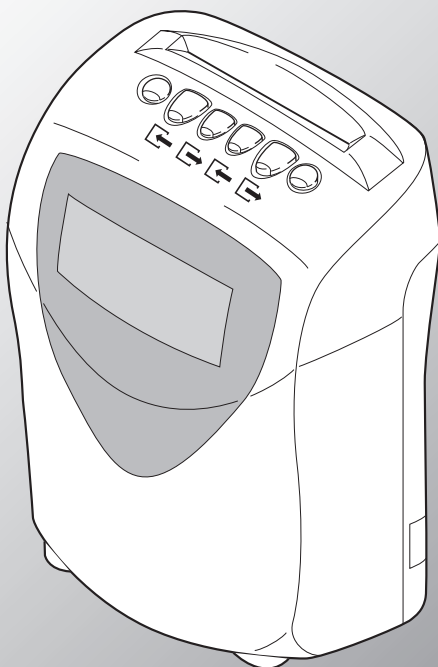# AMANO®

Calculating Time Recorder

MX-300

Operation Manual

IMPORTANT SAFETY OPERATION ‥

To ensure safe operation, please carefully read the following warnings and cautions prior to using the MX-300.

⚠ **WARNING**	This symbol is used throughout this manual to indicate that misuse may result in death or serious injury due to electrocution, et al.

- ■ Do not use a voltage other than the power source voltage specified for use with product.
- ■ Do not attempt to insert or unplug the power plug with wet hands.
- ■ Do not place heavy objects on, jam, pull or bend the power cord.
- ■ Do not remove other than the top cover. (There are high-voltage components inside that can cause electrocution.)
- ■ If any abnormality occurs such as heating-up or strange odor emission, or if any foreign matter (metal, water, liquid) gets inside the MX-300, immediately disconnect the power plug from the power outlet and contact your local Amano service dealer or representative.

Note: "Serious injury" includes loss of eyesight, burns (of varying severity) , electrocution, bone fracture, poisoning and other that have serious after-effects or any other injury that requires workers to be hospitalized and/or receive prolonged medical treatment.
"Personal injury" includes burns, electrocution and other that do not require hospitalization and/or prolonged medical care.

⚠ **CAUTION**	This symbol is used throughout this manual to indicate that misuse can result in personal injury or damage due to fire, electrocution, et al.

- ■ Do not use a voltage other than the power source voltage specified for use with product.
- ■ Do not attempt to insert or unplug the power plug with wet hands.
- ■ Do not place heavy objects on, jam, pull or bend the power cord.
- ■ Do not removing anything other than the top cover. (There are high-voltage components inside that can cause electrocution.)
- ■ If any abnormality occurs such as heating-up or strange odor emission, or if any foreign matter (metal, water, liquid) gets inside the MX-300, immediately disconnect the power plug from the power outlet and contact your local Amano service dealer or representative.

Note: "Damage" includes damage to house, household goods, livestock and pets.

POWER RELATED PRECAUTIONS
■ The power requirements for the MX-300 are AC220 to 240 V ± 10% (50/60Hz). Please use a stable power supply that matches these requirements.
■ Please provide the MX-300 with a stable and dedicated 24/7 power supply that is not shared with other devices.
■ The time recorder unit is equipped with a lithium battery. In the event of a power failure, the internal clock will be maintained by power from the battery. However, the MX-300 is not capable of processing time cards during a power failure.
■ When performing maintenance that involves opening the time recorder unit's cover (such as replacing the ribbon cartridge), the operator should ground him/herself to a large metal object (such as a desk). Failure to do so could result in the time recorder unit malfunctioning.

Safety Icons Used Throughout This Manual

The △ symbol denotes a warning or caution. The specific warning or caution is illustrated within the symbol.

RISK OF
ELECTROCUTION!

The ⊘ symbol denotes a prohibited action. The specific action prohibited is illustrated within the symbol.

DO NOT
DISMANTLE!

The ● symbol denotes an action that is absolutely necessary and should be strictly enforced. The specific action required is illustrated within the symbol.

UNPLUG THE
PLUG!

Attention

• Please note that specifications, appearance and description of the MX-300 as found in this manual are subject to change without notice due to product enhancements.

• This manual has been prepared carefully in every detail. However, if you find any errors or unclear passages, please contact your local Amano service dealer or representative.

GUIDELINES FOR SAFE OPERATION • •

To ensure safe operation, please carefully read the following **warnings** and **cautions** prior to using the MX-300.

⚠ **WARNING**

USE ONLY SPECIFIED VOLTAGE!	・Do not use a voltage other than the power source voltage specified for use with product. Doing so could result in fire or electrocution.
DO NOT OVERLOAD THE OUTLET!	・Do not overload on one power outlet. Doing so could result in fire or electrocution.
NO WET HANDS!	・Do not attempt to insert or unplug the power plug with wet hands. Doing so could result in fire or electrocution.
PROHIBITED!	・Do not harm or damage any cords, such as power cable, etc. Also, note that putting a heavy object on them, pulling them or bending them forcibly will damage the power cables, possibly causing fire or electrocution.
DO NOT DISMANTLE!	・Do not dismantle or contact anything unless clearly instructed to in this manual. There are high-voltage components inside that can cause electrocution.
DO NOT DISMANTLE!	・Do not attempt to modify the MX-300 in any way. Doing so could result in fire or electrocution.
UNPLUG THE PLUG!	・If any abnormality is found with the MX-300 such as smoke, strange odor, heating-up or other, immediately turn off the MX-300's power, disconnect the power plug from the outlet and contact your local Amano service dealer or representative. If you continue to use the MX-300 under such conditions, it could result in fire or electrocution.
UNPLUG THE PLUG!	・If any foreign matter (metal, water, liquid) gets inside the MX-300, immediately turn off the MX-300's power, disconnect the power plug from the power outlet and contact your local Amano service dealer or representative. If you continue to use the MX-300 under such conditions, it could result in fire or electrocution.

⚠ **CAUTION**

PROHIBITED!	・Do not place the MX-300 on an uneven or inclined surface. 　If the MX-300 is placed on such a surface it might tip over or fall, resulting in damage 　or injury.
PROHIBITED!	・Do not place any container filled with water or metal ware on the MX-300. 　If water spills or enters the MX-300, it could result in fire or electrocution.
NO MOISTURE OR DUST!	・Do not place the MX-300 near a kitchen table or humidifier from where oily 　smoke or moisture is emitted, or place the MX-300 in dusty locations. 　Doing so could result in fire or electrocution
USE A FIXTURE!	・Prepare a fixture suited to the wall material that is capable of sufficiently 　bearing the weight of the MX-300. 　If the MX-300 is not correctly mounted, it might fall, resulting in damage and/or injury.
HOLD THE PLUG WHEN UNPLUGGING!	・When disconnecting a power plug be sure to hold the plug, not the cord. 　Pulling the power cord might damage it, possibly causing fire or electrocution.
HOLD THE PLUG WHEN UNPLUGGING!	・Unplug the power cord from the outlet prior to attempting to replace the fuse or 　perform wiring. 　Leaving it plugged in could result in fire or electrocution.

Attention

Battery for memory backup is consumable article.

Please contact the sales company when it is necessary to replace them.

For disposing the used articles, please follow the rules and regulations of the local government or contact the sales outlet.

The power supply cord is intended to serve as the disconnect device.

The socket-outlet shall be near the equipment and shall be easily accessible.

Electromagnetic Compatibility and the Low Voltage Directive

This apparatus has been verified for compliance with EU (European Union) directives 2004/108/EC for electromagnetic compatibility (EMC) for operation at 220-240V / 50Hz and with the low voltage directive 2006/95/EC. It bears the CE mark.

CONTENTS ···

BEFORE YOU START ··························

This chapter covers package contents and component names and functions.

What's in the Box

The following items should have been included in the MX-300 package you purchased. Please make sure that all the following items are included.

MX-300 (1 unit)	Report/Registration,Totalization card (1 card)	Programming cards (set of 4 cards)
MRX time cards (30 cards)	This manual (1 copy)	Fuse (1 pc.) (250V/T500mA; Time Lag with a low breaking capacity)

Component Names and Functions

This section provides a summary of the names and functions of the time recorder unit's components.

FRONT

① Button
(Refer to page 47.)

Top Cover

LCD Display
Displays the time, and programming data.

Card Slot
Insert time cards and programming cards here.
When making changes, insert the appropriate programming card.

⑥ Button
(Refer to page 48.)

②③④⑤ Buttons
Not used in normal operations.
* If No Calculation mode is enabled: Press the corresponding button and then insert the time card.
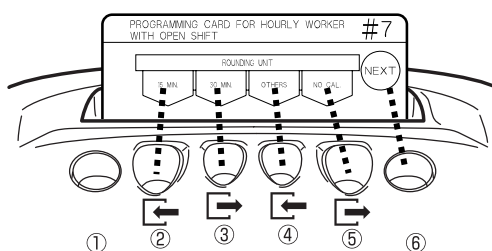
Button Functions

As pictured above, the function of the MX-300's ②, ③, ④, ⑤ and ⑥ buttons change to reflect the corresponding functions listed in the headings of the programming card currently being used. Hence, explanations in this manual involving the functional name of these buttons will change with card being discussed.

Using the card pictured above as an example, the following table corresponds to the **Rounding Unit** Date parameter of BASIC PROGRAMMING CARD #7. (*Refer to page 38.*)

Button	Button name used in this manual based on corresponding card heading	Function
①	*not used*	*Not available for use with this programming card.*
②	15 min. ② button	Press this button to configure the rounding unit to 15 minutes.
③	30 min. ③ button	Press this button to configure the rounding unit to 30 minutes.
④	OTHER ④ button	Press this button to scroll through all the options (1, 5, 10, 15, 20, 30 and 60) until you reach the desired setting.
⑤	NO CAL ⑤ button	Press this button to configure no rounding (display = "0").
⑥	NEXT ⑥ button	Press this button to confirm the setting and move onto the next item.

2

The LCD Display
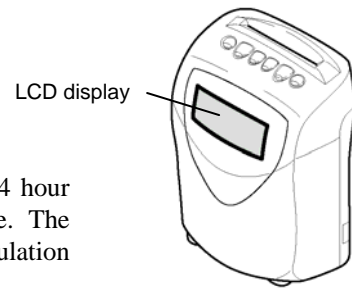
LCD display

◆**Display during normal operation**

During normal operation, the LCD displays the date and time (24 hour format (HH:MM)) and the currently selected calculation mode. The arrow pattern ▲ along the top indicate the currently selected calculation mode.

Display during "REGULAR EMPLOYEES & HOURLY WORKERS WITH FIXED SHIFT" mode

Date Display
Displays the current date.

```
14   9:30
```

Time Display
Displays the current time (HH:MM).

Display during "HOURLY WORKERS WITH FIXED SHIFT" time punching

```
CP   9:30
```

Combined Hourly Worker Mode
Displays the hourly worker category in the date display segment when punching the time on hourly worker time cards.

Display during "REGULAR EMPLOYEES & HOURLY WORKERS WITH OPEN SHIFT" mode

```
▲              ▲
14   9:30
```

Display during "HOURLY WORKERS WITH OPEN SHIFT" time punching

```
▲              ▲
FP   9:30
```

Calculation Mode Display
The calculation mode configured using the programming card is displayed. The top of the display (arrow pattern ▲) indicate the currently selected calculation mode.

Display during "NO CALCULATION"

```
▲ ▲ ▲   ▲ ▲ ▲
14   9:30
```

3

◆ **Display when using a programming card, Report/Registration card or totalization card**

(PROGRAMMING CARD FOR REGULAR EMPLOYEES #3:

"OVERTIME BEGINNING TIME")

> The top of the display (arrow pattern ▲) indicates the item currently selected.

> The bottom of the display (rectangle pattern ■) indicates the type of card currently being used.
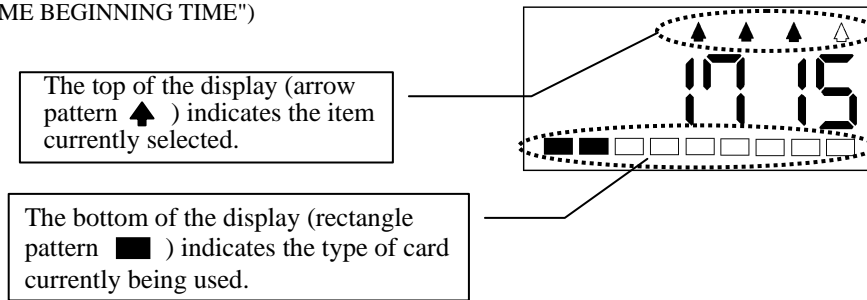
◆ **Display when the case top cover is open (during ribbon cartridge replacement, et al)**

(→ page 67)

(The word "OPEN" flashes)

oPEn
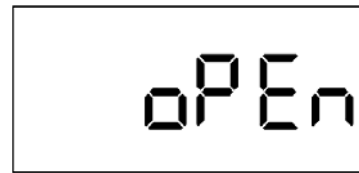
◆ **Display when an error is generated**

("Error Codes" → page 64)

(Ex.: Error E-15)

E- 15
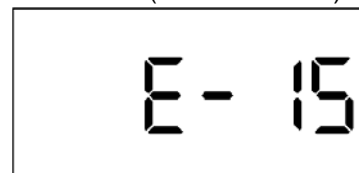
◆ **Display when a parameter error is generated**

("Error codes" → page 66)

(Ex.: Error P-12)

Err P- 12

4
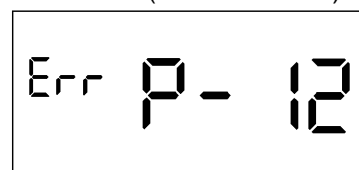
GETTING THE MOST OUT OF YOUR MX-300

Calculate Work Hours

The MX-300 makes it possible to calculate work hours for regular employees and hourly workers. There are two types of hourly work totaling methods available: **Fixed Shift** and **Open Shift**. The MX-300 also enables you to select between two combined mode options: **Regular Employees & Hourly Workers with Fixed Shift** or **Regular Employees & Hourly Workers with Open Shift**. (It is also possible to select **Only Regular Employees** and **Only Hourly Workers**.)
(The MX-300 can handle up to 50 employees (including both regular employees and hourly workers.)
See "How to Change the Calculation Mode" ⇨ page 22

Calculating Work Hours for Regular Employees

Time for regular employees can be totaled separately from hourly worker by registering the corresponding time cards as Regular Employee Time Cards.
  (See "Regular Employee Time Card Registration" ⇨ page 53)
You can configure the Shift Beginning Time and Shift End Time to establish the shift schedule and then add Overtime Beginning Time, Midnight Shifts and Fixed Breaks (up to four hours a day).
If an employee clocks in after the configured Shift Beginning Time, they will be treated as having arrived late (Late-Arrival) and the corresponding mark will be added to their time card ("L"). Likewise, if an employee clocks out before the configured Shift End Time, they will be treated as having left early (Early-Leave) and the corresponding mark will be added to their time card ("E").
The daily total prints the number of overtime hours worked. The monthly total prints the accumulated number of hours and days (count) individually for Late-Arrivals and Early-Leaves, Out-for-Personal-Errand, overtime and midnight shifts (if configured). (⇨ Page 56)

(Weekday)

Break Time Zone   Overtime Zone

5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 1 2 3 4
Day Change Time   Day Change Time minus 1 minute

*1   Regular Shift   Overtime   Midnight Shift

Shift End Time
Shift Beginning Time   Overtime Beginning Time   Midnight Shift Beginning Time   Midnight Shift End Time

*1 During weekdays, any punches made between the Day Change Time and the Shift Beginning Time are calculated from the set Shift Beginning Time. (e.g.; If you clock in at 7:30, it is calculated as if you clocked at 8:30.)

*2 The time between the Shift End Time and the Overtime Beginning Time is treated as a break time zone.

Calculating Work Hours for Hourly Workers with Fixed Shift

Hourly Workers with Fixed Shift mode is a convenient calculation mode designed to total differing wages based on the configured shift schedules.
Hourly worker shifts can be configured in segments of up to four hours a day. The daily total prints the number of hours worked that day. The monthly total can print the number of hours work per shift. (⇨ Page 56)
Breaks for Hourly Workers with Fixed Shift: The configured amount break time (up to four hours a day) is automatically deducted from the time worked that day with the resulting total time worked being printed.

5

Example: If you configured the four hour shifts for 5:00 to 8:59, 9:00 to 16:59, 17:00 to 21:59, and 22:00 to 4:59 (the next day):

(Day Change Time = 5:00)

If an hourly worker worked the following four-day schedule, the daily and monthly cumulative totals would be totaled as illustrated below:

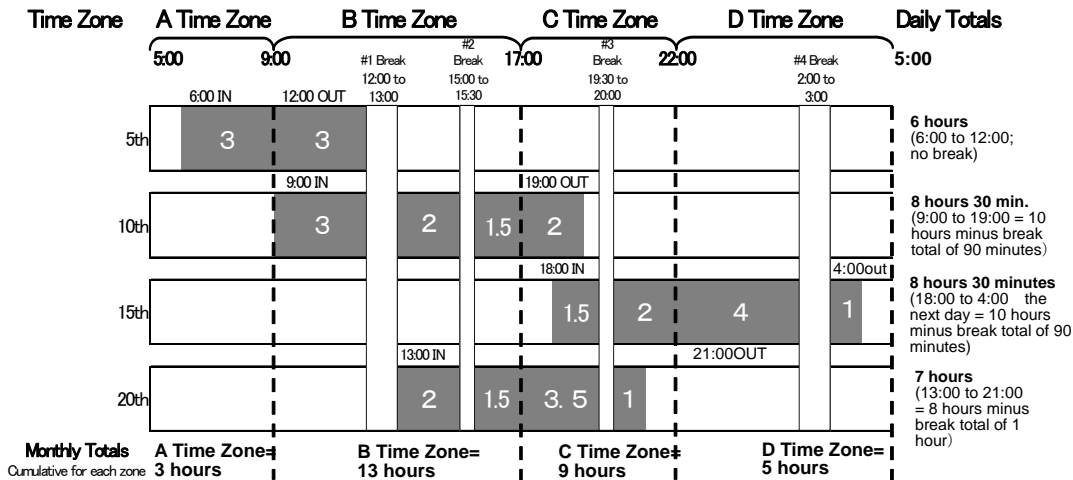| Time Zone | A Time Zone | | B Time Zone | | C Time Zone | | D Time Zone | Daily Totals |

Calculating Work Hours for Hourly Workers with Open Shift

Hourly Workers with Open Shift mode enables you to configure a threshold for the hours to be worked in a given day ("The Number of Regular Hours") and then have the MX-300 automatically treat any time worked beyond the that threshold as overtime and total it separately in the monthly totals.

Breaks for Hourly Workers with Open Shift: When a worker exceeds the Basic Hours for Break as configured for the Number of Regular Hours to be worked in a given day, the MX-300 automatically deducts the corresponding break time from the total time worked.

(This can be configured in two stages)

Example: Basic Hours for Break 1 = 6:00   Break Time 1 = 0:45

Break Hours 2 = 8:00   Break Time 1+2 = 1:00

In this configuration example, if a worker were to start work at 09:00, the first break will be six hours later from 15:00 to 15:45 (45 minutes) and then the second break will be from 17:45 (= 09:00 + 45 minutes + 8 hours) to 18:00 (15 minutes). In other words, the second break is determined to start at 17:45 by deducting 45 minutes for the first break and then adding number of hours to be worked, for a total break time of 1 hour.

Example: The Number of Regular Hours = 6 Hours

6
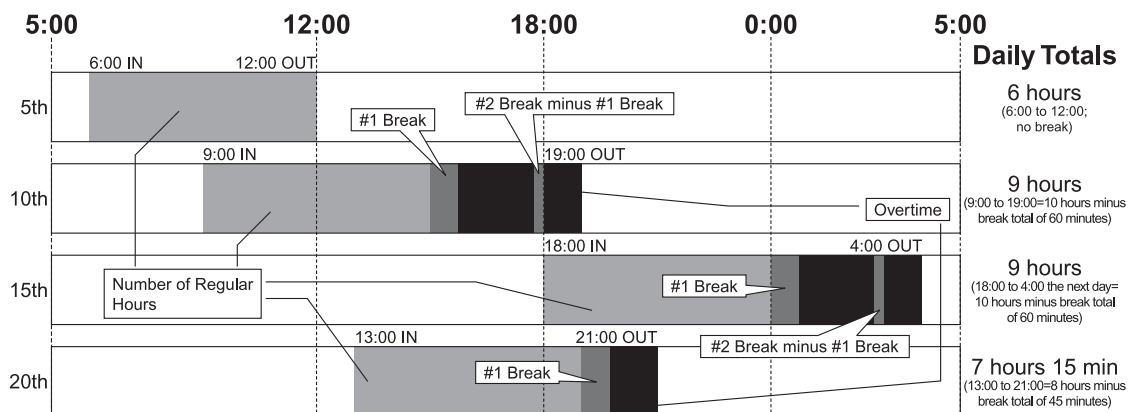
All-Night Hours (Working Past the Day Change Time Threshold)

The MX-300 is capable of treating shifts that extend over the configured Day Change Time setting as one day ("Day Before") by keeping the In and Out times on the same row and totaling them as one day. The "Day Change Time" is the time of day that a normal business day starts. The MX-300 is shipped with the Day Change Time configured to 3:00. Left as is, this means that all work performed from 3:00 to 2:59 the next day is treated as one day and the corresponding times are printed and totaled on the same row on the time card.

Example: Day Change Time = 5:00

An employee clocks out at 4:59 on the 17th. Their OUT time is kept on the same row the IN from the same day because the next day had not started yet. (TOTAL shown here will vary due to other time configurations.)

An employee clocks out at 6:25 on the 17th. Since the employee has crossed over the Day Change Time threshold, their OUT time will be treated as the IN time on the next day, resulting in the MX-300 not being able to total their time for the corresponding shift.

If an employee needs to clock out on or after the Day Change Time threshold, the employee simply needs to first press the corresponding button (①) and then the corresponding OUT time will be punched on the same line as the IN time from the same day. The corresponding all-night work hours will be calculated separately in the monthly totals.

Example: An employee clocks in at 8:25 on the 16th and then clocks out at 6:25 on the 17th when the Day Change Time is set to 5:00.

Employee clocks out without pressing button ①

Since the employee has crossed over the Day Change Time threshold, their OUT time will be treated as the IN time on the next day.

This results in the MX-300 not being able to total their time for the corresponding shift.

Employee presses button ① and then clocks out

Even if it is after the Day Change Time, the employee simply needs to press button ① and then their OUT time is kept on the same row as the IN from the same day and the "all-night" mark (A) will appear after the OUT time.

If the employee presses button ① their time and overtime will be totaled (normal hours for hourly workers as they don't have "all-night" time). (TOTAL shown here will vary due to other time configurations.)

Special Day Hours

The MX-300 can treat holidays and irregular days (e.g., days when the hourly wage is different than normal) as "Special Days" (that will be marked with an "S" on the time card) and then perform individual monthly totals for the regular hours and overtime of all days designated as "Special."

No programming is necessary to use this feature. All that is required is for employees to press button ⑥ when clocking into work on a "Special" day. The hours worked that day will then be treated as "Special" during totaling. (This feature can be used by both regular employees and hourly workers.)

An "S" mark is added.

PROGRAMMING THE MX-300 BEFORE YOU USE IT

The MX-300 can be programmed to perform calculations according your configurations.
Use to the MX-300 Programming Sheets found on pages 75 and 76 when configuring the MX-300 to your operations.
Also, please configure all prerequisite settings as instructed below:

When adjusting these settings, be sure to make the changes when no one is clocked in. (If you change these settings when one or more employees is clocked it, it may affect their totals.)

Insert BASIC PROGRAMMING CARD #1 (front side).
("How to Insert a Card" → page 44)

<BASIC PROGRAMMING>

Time Setting

The MX-300's clock is adjusted to the current time when it is shipped. Press Next (button ⑥) to continue onto the next setting. (If the clock is off, adjust it to the current time.)

Date Setting

The MX-300's calendar is adjusted to the current date when it is shipped. Press Next (button ⑥) to continue onto the next setting. (If the calendar is off, adjust it to the current date.)

Pay Period Type and Ending Day/Date

The MX-300 calculates the monthly, Weekly and Bi-Weekly periods from the day after the Pay Period Ending Date to the Pay Period Ending Date of the next period.

Example: If the Pay Period Ending Date is set to the 20th.

|←——— One month ———→|
21st   20th (Pay Period Ending Date)

Insert BASIC
PROGRAMMING CARD #1

↓

Factory Setting
Already adjusted to
current time.

Adjust   Don't adjust

Go to Page 17   Press Next
"How to Adjust the Time   (button ⑥)
(Clock)"

Factory Setting
Already adjusted to current date.

Adjust   Don't adjust

Go to Page 18   Press Next
"How to Adjust the Date"   (button ⑥)

Factory Setting
Monthly, End of month

Adjust   Don't adjust

                Press Next
                (button ⑥)

Go to Page 19
How to Adjust the Pay
Period Ending Date"

BASIC PROGRAMMING CARD #1
is ejected. Insert #8

Day Change Time

MX-300 is shipped with the Day Change Time configured to 3:00. Left as is, this means that all work performed from 3:00 to 2:59 the next day is treated as one day and the corresponding times are printed and totaled on the same row on the time card.

If an employee needs to clock out on or after the Day Change Time threshold, the employee simply needs to first press the corresponding button (①) and then their IN, OUT and TOTAL times will be kept on the same row.

When you complete the Day Change Time setting the programming card is ejected.

Next, turn the card over the back side to insert BASIC PROGRAMMING CARD #2.n

Selecting the Type of Hourly Worker

When you select Hourly Workers with Fixed Shift, the MX-300 will operate in "Regular Employees & Hourly Workers with Fixed Shift" mode and if you select Hourly Workers with Open Shift, the MX-300 will operated in "Regular Employees & Hourly Workers with Open Shift" mode. When Open Shift is selected Fixed Shift is disabled and when Fixed Shift is selected Open Shift is disabled. (It isn't necessary to select a regular employee mode as the MX-300 recognizes regular employees based on their time cards.)

*NO CALCULATION setting →page 63

The MX-300 is a time recorder equipped with the ability to total times, however, if you wish to disable time totaling, you can select the "1 ON" option for the "NO CALCULATION" parameter.

Daylight Saving Time

If you enable Daylight Saving Time (DST), the clock will be automatically moved forward by one hour at 2:00 AM on the starting day of DST and moved back by one hour at 2:00 AM on the ending day of DST.

The clock will automatically change from 1:59 AM to 3:00 AM on the starting day of DST.

The clock will automatically change from 1:59 AM to 1:00 AM on the ending day of DST.

When you press Next (button ⑥) the programming card is ejected.

Factory Setting
5:00

Adjust — Don't adjust

Go to Page 21
"How to Adjust the Day Change Time"

Press Next (button ⑥)

BASIC PROGRAMMING CARD #8 is ejected.

Insert BASIC PROGRAMMING CARD #2

Factory Setting
HOURLY WORKERS WITH **OPEN** SHIFT

Adjust — Don't adjust

Go to Page 22
"How to Change the Calculation Mode"

Press Next (button ⑥)

NO CALCULATION / 1 ON

HOURLY WORKERS WITH FIXED SHIFT

HOURLY WORKERS WITH OPEN SHIFT

Setting complete.

Factory Setting
DST disabled (not configured)

Configure — Don't configure

Go to Page 23
"How to Configure Daylight Saving Time"

Press Next (button ⑥)

Press Next (button ⑥)

BASIC PROGRAMMING CARD #2 is ejected.

9

Insert PROGRAMMING CARD FOR REGULAR EMPLOYEES #3.

<PROGRAMMING FOR REGULAR EMPLOYEES>

Time Rounding

The MX-300 is capable of using a specified "rounding unit" to round off the IN, OUT and Out-for-Personal-Errand times for calculation of work hours on a daily basis.

● **Calculating Late-Arrivals and Early-Leaves** (e.g., IN: 8:35, OUT: 16:50)
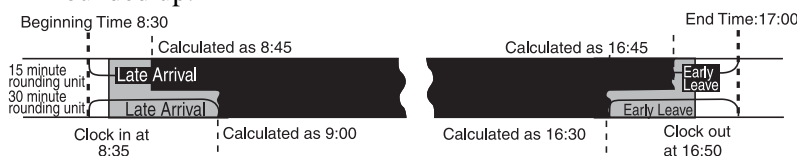The difference between the Shift Beginning Time and Late-Arrival Time and the difference between the Shift Ending Time and the Early-Leave Time are rounded up.

● **Calculating Overtime**
The time from Overtime Beginning Time (if not configured then Shift End Time is used) to the Clock Out Time is rounded down to the rounded unit.
Example: Overtime Beginning Time = 18:00; Clock Out Time = 18:55
If the rounding unit is 15 minutes: Overtime = 45 minutes
If the rounding unit is 30 minutes: Overtime = 30 minutes

● **Calculating Time Spent on Personal Errands (during normal hours on weekdays)**
The time spent on personal errands (time from GO-OUT to BACK) is calculated in single minute units. This time is rounded up.
Example: GO OUT: 10:10   BACK: 10:51 ⇨ The net errand time = 41 minutes
If the rounding unit is 15 minutes: Errand time = 45 minutes
If the rounding unit is 30 minutes: Errand time = 60 minutes

Shift Beginning and End Times

The Regular Hours Time Zone for regular employees is determined by the Shift Beginning and End Times. If the Overtime Beginning Time isn't configured, then by default, the time from Shift End Time to one minute before Day Change Time is treated as an Overtime Zone.

Example: Factory Setting

10
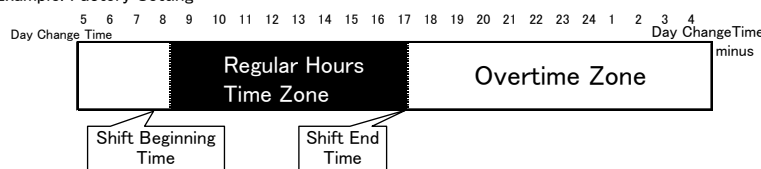
Insert PROGRAMMING CARD FOR REGULAR EMPLOYEES #3

Factory Setting
30 minutes

Adjust | Don't adjust

Go to Page 28
"How to Adjust the Rounded Unit for Time Rounding"

Press Next (button ⑥)

Rounding Unit
No calculation | Other

Go to Page 22
"How to Change the Calculation Mode"

| HOURLY WORKERS WITH FIXED SHIFT | HOURLY WORKERS WITH OPEN SHIFT |

Hourly Worker with Fixed Shift ⇨ Page 12

Hourly Worker with Open Shift ⇨ Page 14

Factory Setting
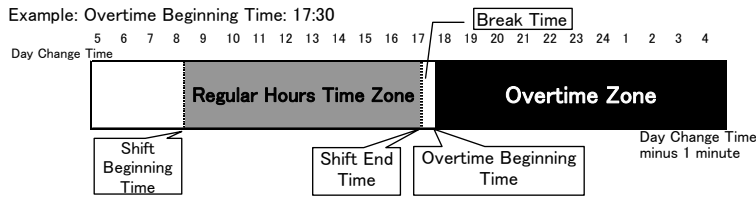Beginning: 8:30, End: 17:00

Adjust | Don't adjust

Go to Page 29
"How to Adjust the Shift Beginning and End Times"

Press Next (button ⑥)

Overtime Beginning Time

When an Overtime Beginning Time is configured, the time from the corresponding start time to a minute prior to Day Change Time is treated as an Overtime Zone.

If the Overtime Beginning Time is set to a time other than the Shift End Time, then the time between the two is treated as break time.

Example: Overtime Beginning Time: 17:30

Day Change Time
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 1 2 3 4

Break Time

Regular Hours Time Zone   Overtime Zone

Day Change Time minus 1 minute

Shift Beginning Time   Shift End Time   Overtime Beginning Time

Midnight Time Zone

When a Midnight Shift Beginning and End time is configured, the corresponding time zone is treated as a Midnight Time Zone and is the corresponding hours worked during that time is calculated separately from overtime hours in the monthly totals. (The daily totals for both overtime and midnight hours are printed as one total.)

Example: Midnight Shift Time Zone: 22:00 to 4:00

Day Change Time
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 1 2 3 4

Break Time   Overtime Zone

Day Change Time minus 1 minute

Regular Hours Time Zone   Overtime Zone   Midnight Shift Time Zone

Shift Beginning Time   Shift End Time   Overtime Beginning Time   Midnight Shift Beginning Time   Midnight Shift End Time
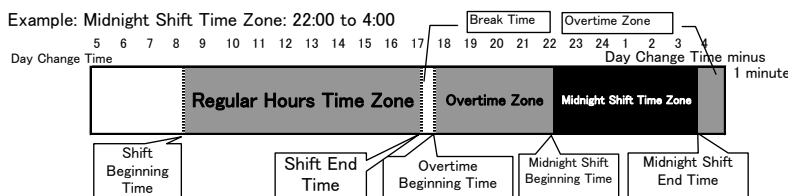
When you finish configuring the Midnight Shift Time Zone the programming card is ejected.
Next, turn the card over the back side to insert PROGRAMMING CARD FOR REGULAR EMPLOYEES #4.
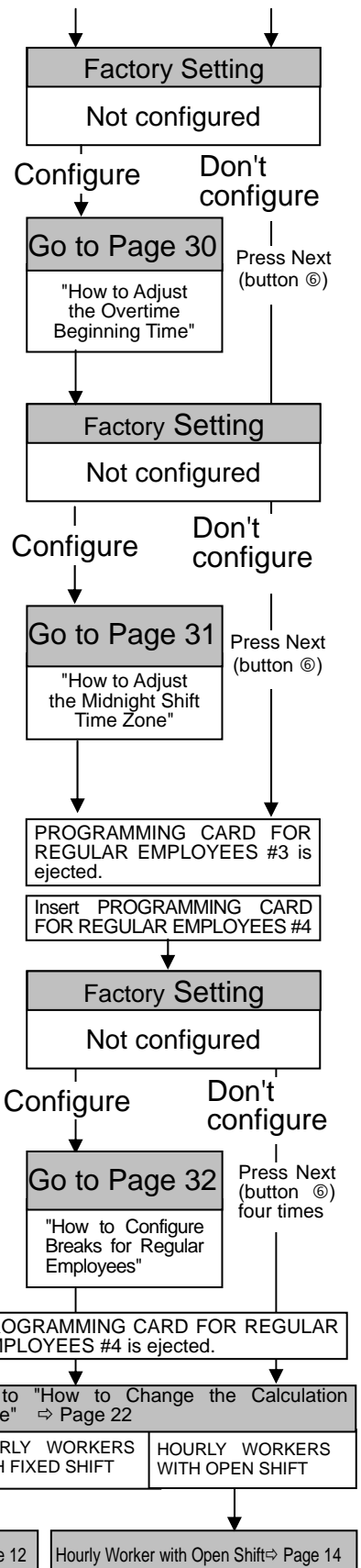
Breaks for Regular Employees

You can configure up to four scheduled ("fixed") breaks a day for regular employees. The time zone for a given break is determined by the Fixed Break Beginning and End Time.

* You may not configure breaks so that they run back to back or overlap each other!

NG   #1 Fixed Break   #2 Fixed Break   NG   #1 Fixed Break   #2 Fixed Break
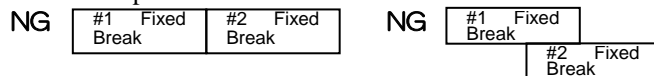
* Also, you may not configure breaks so that they overlap Shift Beginning and End Times.

★ The following setting is a detail example of page 22's "How to Change the Calculation Mode" when selecting the option for hourly workers. The settings are only valid for the type of hourly worker selected.

Factory Setting
Not configured

Configure   Don't configure

Go to Page 30
"How to Adjust the Overtime Beginning Time"

Press Next (button ⑥)

Factory Setting
Not configured

Configure   Don't configure

Go to Page 31
"How to Adjust the Midnight Shift Time Zone"

Press Next (button ⑥)

PROGRAMMING CARD FOR REGULAR EMPLOYEES #3 is ejected.

Insert PROGRAMMING CARD FOR REGULAR EMPLOYEES #4

Factory Setting
Not configured

Configure   Don't configure

Go to Page 32
"How to Configure Breaks for Regular Employees"

Press Next (button ⑥) four times

PROGRAMMING CARD FOR REGULAR EMPLOYEES #4 is ejected.

Go to "How to Change the Calculation Mode" ⇨ Page 22

HOURLY WORKERS WITH FIXED SHIFT   HOURLY WORKERS WITH OPEN SHIFT

Hourly Worker with Fixed Shift ⇨ Page 12   Hourly Worker with Open Shift ⇨ Page 14

Insert PROGRAMMING CARD FOR HOURLY WORKER WITH FIXED SHIFT SCHEDULE #5.

The following settings are only valid if HOURLY WORKERS WITH FIXED SHIFT is selected as the calculation mode. (Refer to "How to Change the Calculation Mode" ⇨ Page 22.)

<PROGRAMMING FOR HOURLY WORKERS WITH FIXED SHIFT>

Time Rounding

The MX-300 is capable of using a specified "rounding unit" to round off the IN, OUT and Out-for-Personal-Errand times for calculation of work hours on a daily basis.

This time is rounded up · This time is rounded · This time is rounded down
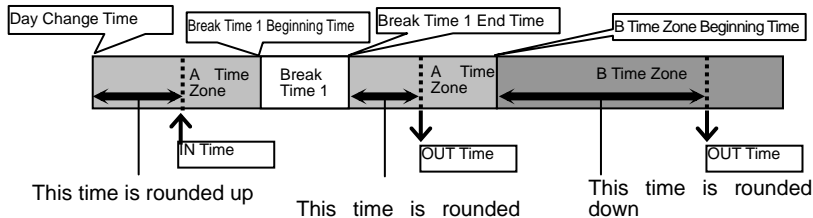
Calculating Time Spent on Personal Errands
The time spent on personal errands (time from GO-OUT to BACK) is calculated in single minute units. This time is rounded up.
Example: GO OUT: 10:10   BACK: 10:51 ⇨ The net errand time = 41 minutes
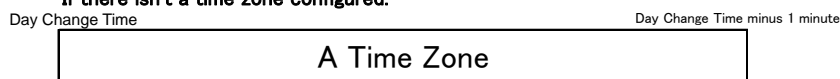If the rounding unit is 15 minutes: Errand time = 45 minutes
If the rounding unit is 30 minutes: Errand time = 60 minutes
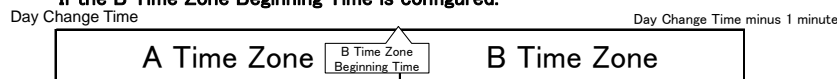
Fixed Shift Time Zone for Hourly Workers

You can configure up to four types of times zones whose cumulative totals can be calculated individually during monthly totaling.

If there aren't any time zones configured, then the whole day starting from Day Change Time to one minute prior to the next day Day Change Time is treated as the A Time Zone. If you configure a Beginning Time for the B, C and D Time Zones, then the A Time Zone is reduced to the time from the start of Day Change Time to the start of the next time zone. The remaining zones likewise extend until the start of another time zone.
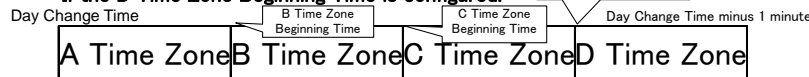

If there isn't a time zone configured:
Day Change Time — A Time Zone — Day Change Time minus 1 minute

If the B Time Zone Beginning Time is configured:
Day Change Time — A Time Zone | B Time Zone Beginning Time | B Time Zone — Day Change Time minus 1 minute

If the C Time Zone Beginning Time is configured:
Day Change Time — A Time Zone | B Time Zone | C Time Zone — Day Change Time minus 1 minute

If the D Time Zone Beginning Time is configured:
Day Change Time — A Time Zone | B Time Zone | C Time Zone | D Time Zone — Day Change Time minus 1 minute

Insert PROGRAMMING CARD FOR HOURLY WORKER WITH FIXED SHIFT SCHEDULE #5

↓

Factory Setting
15 minutes

Adjust / Don't adjust

Go to Page 34
"How to Adjust the Rounded Unit for Time Rounding"

Press Next (button ⑥)

Rounding Unit
No calculation | Other

Settings completed

Factory Setting
Not configured

Configure / Don't configure

Go to Page 35
"How to Configure Fixed Shift Time Zones for Hourly Workers"

Press Next (button ⑥) three times

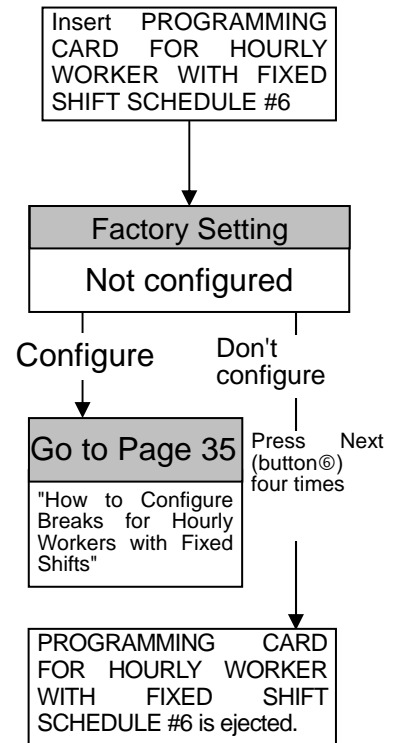PROGRAMMING CARD FOR HOURLY WORKER WITH FIXED SHIFT SCHEDULE #5 is ejected.

12

When you finish configuring the settings for Hourly Workers with Fixed Shift the programming card is ejected.
Next, turn the card over the back side to insert PROGRAMMING CARD FOR HOURLY WORKER WITH FIXED SHIFT SCHEDULE #6.

Breaks for Hourly Workers with Fixed Shifts

You can configure up to four scheduled ("fixed") breaks a day for hourly workers with fixed shifts. The time used for this breaks is automatically deducted from the hours clocked by the workers.

When you finish configuring the settings the programming card is ejected.

```
Insert  PROGRAMMING
CARD   FOR   HOURLY
WORKER  WITH  FIXED
SHIFT SCHEDULE #6
```

↓

```
Factory Setting
Not configured
```

Configure   Don't configure

```
Go to Page 35
"How to Configure
Breaks  for  Hourly
Workers  with  Fixed
Shifts"
```

Press Next (button©) four times

```
PROGRAMMING    CARD
FOR HOURLY WORKER
WITH    FIXED    SHIFT
SCHEDULE #6 is ejected.
```

13

Insert PROGRAMMING CARD FOR HOURLY WORKER WITH OPEN SHIFT #7.

The following settings are only valid if HOURLY WORKERS WITH OPEN SHIFT is selected as the calculation mode. (Refer to "How to Change the Calculation Mode" ⇨ Page 22.)

<PROGRAMMING FOR HOURLY WORKERS WITH OPEN SHIFT>

Time Rounding

The MX-300 is capable of using a specified "rounding unit" to round off the IN, OUT and Out-for-Personal-Errand times for calculation of work hours on a daily basis.

Example: Rounded Unit is set to 15 Minutes
8:40 clock-in ⇨ Treated as an 8:45 clock-in
19:25 clock-out ⇨ Treated as a 19:15 clock-out

*Calculating Time Spent on Personal Errands

The time spent on personal errands (time from GO-OUT to BACK) is calculated in single minute units. This time is rounded up.

Example: GO OUT: 10:10   BACK: 10:51 ⇨ The net errand time = 41 minutes
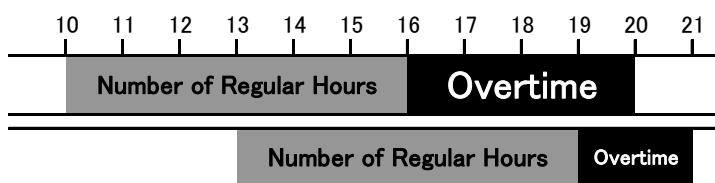If the rounding unit is 15 minutes: Errand time = 45 minutes
If the rounding unit is 30 minutes: Errand time = 60 minutes

The Number of Regular Hours

You can configure the Number of Regular Hours for hourly workers with open shift and thereafter any time that they work beyond that total will be calculated individually during monthly totaling as overtime.

Example: Number of Regular Hours = 6
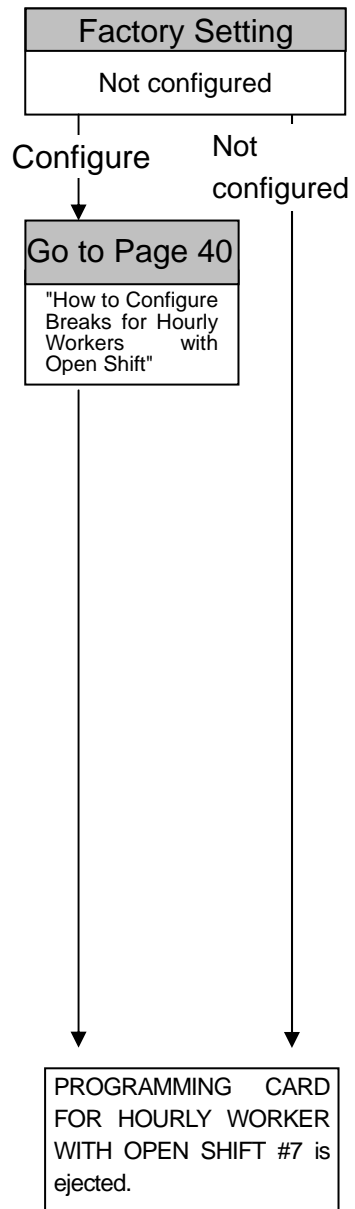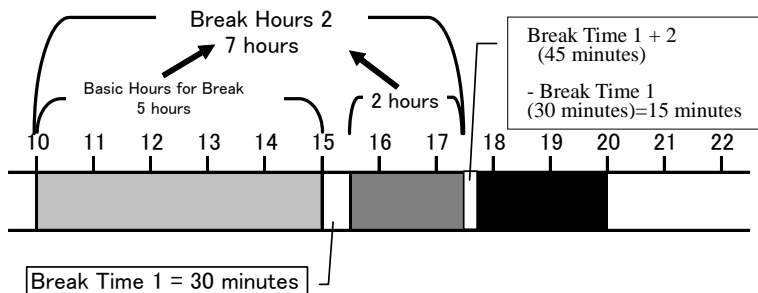

14

Breaks for Hourly Workers with Open Shift

Whenever an hourly worker with open shift works longer than the configured Basic Hours for Break in a given day, that extra time is automatically adjusted for break time. (Configurable in up to two stages.)

Example:

Basic Hours for Break 1 = 5:00   Break Time 1 = 0:30
Break Hours 2 = 7:00   Break Time 1+2 = 0:45

If a worker were to clock in at 10:00 with the above settings in place:

- If the worker were to work until 15:00, and therefore not exceed **Basic Hours for Break 1**, then break time would not be deducted.
10:00 clock-in	13:00 clock-out	Total hours = 3:00
10:00 clock-in	15:00 clock-out	Total hours = 5:00

- If the worker were to work beyond Basic Hours for Break 1, but remain under **Break Hours 2** (15:01 to 17:30), then **Break Time 1** (0:30) would be deducted.
10:00 clock-in	16:00 clock-out	Total hours = 5:30
10:00 clock-in	17:30 clock-out	Total hours = 7:00

- If the worker were to work beyond the **Break Hours 2** (17:31 and beyond), then **Break Time 1 + 2** (0:45) would be deducted.
10:00 clock-in	18:00 clock-out	Total hours = 7:15
10:00 clock-in	20:00 clock-out	Total hours = 9:15

Factory Setting
Not configured

Configure   Not configured

Go to Page 40
"How to Configure Breaks for Hourly Workers with Open Shift"

PROGRAMMING CARD FOR HOURLY WORKER WITH OPEN SHIFT #7 is ejected.

Break Hours 2
7 hours

Basic Hours for Break
5 hours

2 hours

Break Time 1 + 2
(45 minutes)

- Break Time 1
(30 minutes)=15 minutes

10 11 12 13 14 15 16 17 18 19 20 21 22

Break Time 1 = 30 minutes

When you finish configuring the settings the programming card is ejected.

15

BASIC PROGRAMMING ······················

You can use Basic Programming Cards 1 and 2 to do the following:

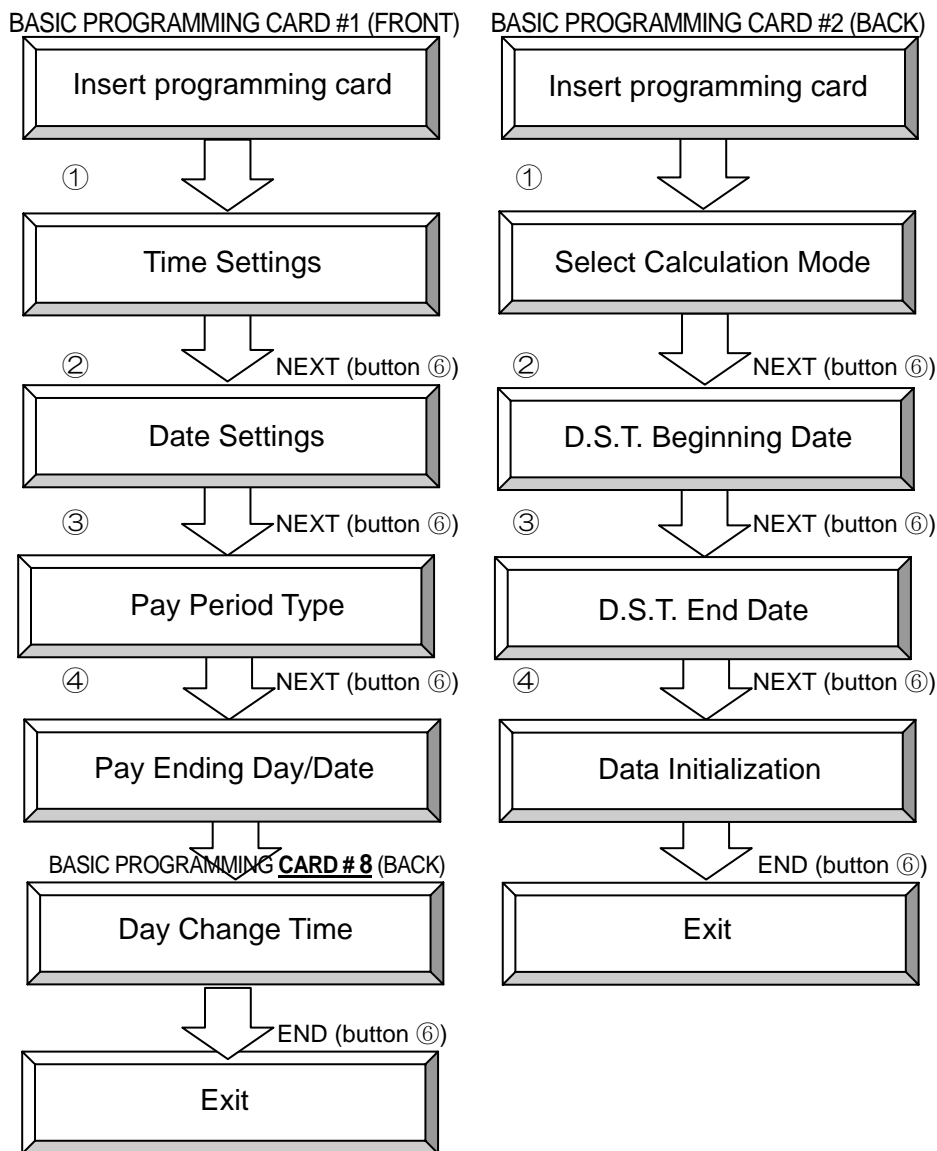## How to Use Basic Programming Cards #1, #2 and #8

Configurable/Adjustable Items:

BASIC PROGRAMMING CARD #1: ① Time Settings, ② Date Settings, ③ Pay Period

BASIC PROGRAMMING CARD #8: ① Day Change Time

BASIC PROGRAMMING CARD #2: ① Calculation Mode Selection, ② D.S.T. Beginning Date, ③ D.S.T. End Date, ④ Data Initialization

For example, if you wanted to go from item ① to item ②, simply press NEXT (button ⑥).

BASIC PROGRAMMING CARD #1 (FRONT)   BASIC PROGRAMMING CARD #2 (BACK)

Insert programming card	Insert programming card
①	①
Time Settings	Select Calculation Mode
② NEXT (button ⑥)	② NEXT (button ⑥)
Date Settings	D.S.T. Beginning Date
③ NEXT (button ⑥)	③ NEXT (button ⑥)
Pay Period Type	D.S.T. End Date
④ NEXT (button ⑥)	④ NEXT (button ⑥)
Pay Ending Day/Date	Data Initialization
BASIC PROGRAMMING **CARD # 8** (BACK)	END (button ⑥)
Day Change Time	Exit
END (button ⑥)	
Exit	

16

How to Adjust the Time (Clock)

This section explains how to adjust the MX-300's clock when the clock display is ahead or behind the current time.

| Note | If you attempt to move the clock forward or backward beyond the actual time the MX-300 might not be able to punch the same time card. For example, if you move the MX-300's clock back after it punched a time card, the MX-300 will generate error E-17 (CLOCK TAMPERING ERROR) and will not be able to punch the time card. |

1 Insert BASIC PROGRAMMING CARD #1

• The card is automatically scrolled to the TIME SETTINGS position and the current time is displayed.
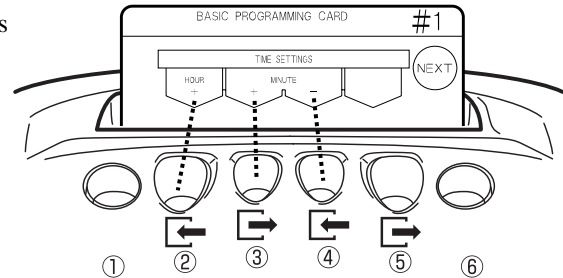
2 Adjust the time.

• Press HOUR + (button ②) to increase the time one hour at a time.
• Press MINUTE + (button ③) to increase the time one minute at a time.
• Press MINUTE - (button ④) to decrease the time one minute at a time.
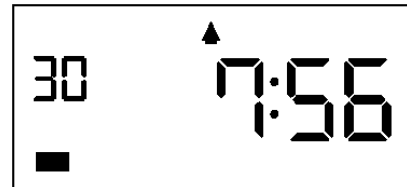
| Note | The clock's seconds are automatically reset to 0, so set the clock one minute ahead of the current time. |

3 Press NEXT (button ⑥).

・At the same instant when you press NEXT (button ⑥), the clock new time is started with its seconds reset to 0. (If you changed the minutes.)

| Note | If you don't change the clock's minutes but only the hours, then the clock's seconds won't be reset to 0 when you press NEXT (button ⑥). |
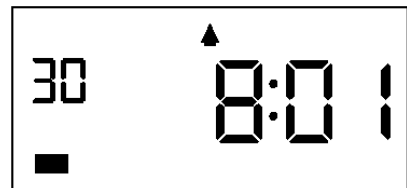
4 Press NEXT (button ⑥) two times and then press END (button ⑥) to exit.

・The programming card is ejected and the new time is displayed.

| Note | If you lose or can't find BASIC PROGRAMMING CARD #1, but still need to adjust the clock right away, see "If You Lose a Card" on page 59 for details. |

17

How to Adjust the Date

This section explains how to adjust the MX-300's calendar when the date is incorrect.

1 Insert BASIC PROGRAMMING CARD #1 and then scroll to DATE SETTINGS.

・Insert the card and then press NEXT (button
⑥) once to the DATE SETTINGS position.
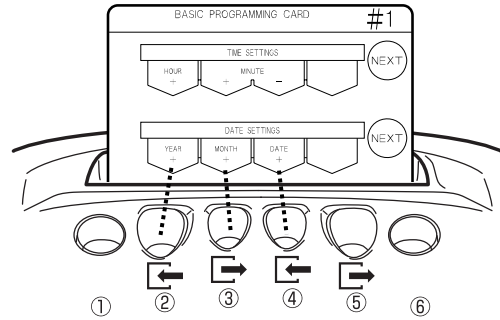
2 Adjust the year, month and date.

・Press YEAR + (button ②) to increase the year one year at a time (returns to 2000 after 2050).
・Press MONTH + (button ③) to increase the month one month at a time (returns to 1 after 12).
・Press DATE + (button ④) to increase the date one day at a time (returns to 1 after the last day of the corresponding month).

| Note | Keep the corresponding button pressed to speed scroll.

3 Press NEXT (button ⑥).

・The new date is registered and the card is scrolled to the
next setting (Pay Period Ending Date).
Example: November 19, 2001
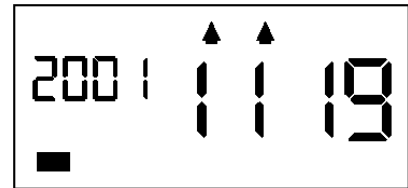
4 Press NEXT (button ⑥) and then press END (button ⑥) to exit.

・The programming card is ejected and the current time is displayed.

18

How to Adjust the Pay Period Type and Day/Date

This section explains how to adjust the Pay Period Type, Pay Ending Day/Date.

| Note | The factory setting for the Pay Period Ending Date is Monthly and the end of the month.

| IMPORTANT! | Incorrect adjustment of the Pay Period Type and Ending Day/Date might result in incorrect totals. Please follow these instructions when attempting to change the Pay Period Type and Ending Day/Date. |

① Total all time cards currently in use (TOTAL HOURS PRINT - THIS MONTH → page 57).
② Total any time cards that have with times punchs from this month but that yet to be totaled (TOTALIZATION → page 55)
③ Initialize employee registrations (EMPLOYEE REGISTRATION INITIALIZATION → page 26)
④ Change the Pay Period Type and Ending Day/Date (steps **1** to **4** below).
⑤ As necessary, register new time cards for regular employees (EMPLOYEE CARD REGISTRATION → page 53)

1 Insert BASIC PROGRAMMING CARD #1 and then scroll to PAY PERIOD TYPE.

・Insert the card and then press NEXT (button ⑥) **twice**.
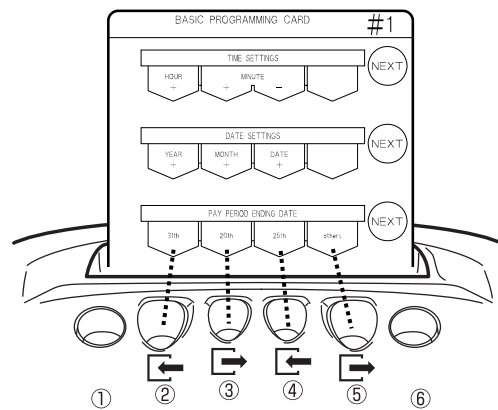
2 Select the Pay Period Type.

・Press Weekly (button ②) to set the Weekly Pay Period.
・Press Bi-Weekly 1st (button ③) to set the Bi-Weekly pay period (pay ending day is next week).
・Press Bi-Weekly 2nd (button ④) to set the Bi-Weekly pay period (pay ending day is this week).
・Press Monthly (button ⑤) to scroll through all the possible dates (1 to 31) until the desired date is reached.

3 Press NEXT (button ⑥).

・The Pay Period Type is registered and then the card is scrolled to the next setting (Pay Period Ending Day/Date).

Example: If the Monthly Pay Period is selected. The display shows "3".
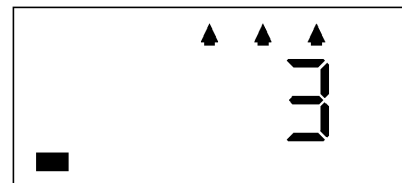
4 Setting the Pay Ending Day/Date

・Press Sunday (button ②) to set Sunday is the Pay Ending Day. (Weekly/Bi-Weekly Period)

・Press Saturday (button ③) to set Saturday is the Pay Ending Day. (Weekly/Bi-Weekly Period)

・Press Friday (button ④) to set Friday is the Pay Ending Day. (Weekly/Bi-Weekly Period)

・Press Others+ (button ⑤) to set the other days for Weekly/Bi-Weekly and any date of month for Monthly Pay Period pay period .

Note Keep OTHER pressed to speed scroll. (Only available for the OTHER button.)

5 Press NEXT (button ⑥).

・The Pay Period Ending Day/Date registered and then the programming card is rejected.

Example: Pay Ending Date is end of month. The display shows "31" .
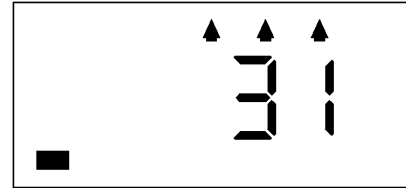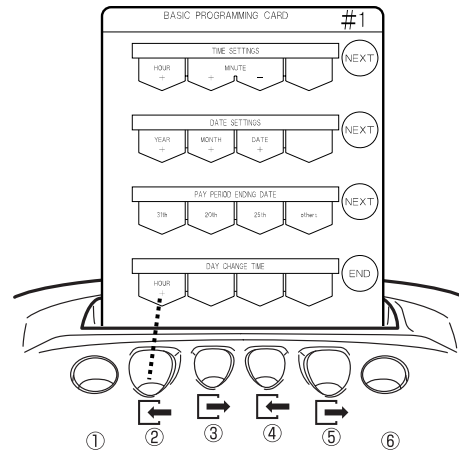
How to Adjust the Day Change Time

This section explains how to adjust the Day Change Time.

The "Day Change Time" is the time of day that a normal business day starts. The MX-300 is shipped with the Day Change Time configured to 5:00. This means that all work performed from 5:00 to 2:59 the next day is treated as one day and the corresponding times are printed and totaled on the same row on the time card.

・If an employee needs to clock out on or after the Day Change Time threshold, the employee simply needs to first press the corresponding button (①) and then their times for that shift will be kept on the same row.

1 Insert BASIC PROGRAMMING CARD #8 and then scroll to DAY CHANGE TIME.

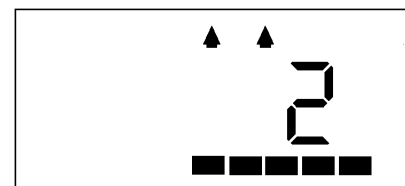・Insert the card and then press NEXT (button ⑥)
once.

2 Adjust the Day Change Time.

・Press HOUR + (button ②) to increase the time one hour at a time.
  * The Day Change Time can only be configured in units of hours, not minutes.

3 Press END (button ⑥).

・The Day Change Time is registered and then the programming card is ejected.

Example: 2 AM
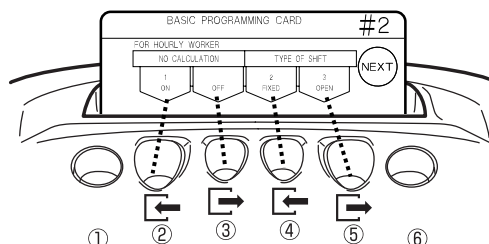
How to Change the Calculation Mode

This section explains how to change the calculation mode (select a type of shift) for hourly workers. (For details regarding calculation mode, see pages 5 to 6).

When you select Hourly Workers with Fixed Shift, the MX-300 will operate in "**Regular Employees & Hourly Workers with Fixed Shift**" mode and if you select Hourly Workers with Open Shift, the MX-300 will operate in "**Regular Employees & Hourly Workers with Open Shift**" mode. (It isn't necessary to select a regular employee mode as the MX-300 recognizes regular employees based on their time cards.) When Open Shift is selected, Fixed Shift is disabled and when Fixed Shift is selected, Open Shift is disabled.

  * If the "1 ON'" option of "NO CALCULATION" parameter is selected, then none of the regular employee and hourly working settings are necessary and will be disabled. (See page 61 for more information regarding "NO CALCULATION / 1 ON.")

1 Insert BASIC PROGRAMMING CARD #2.

・The card is automatically scrolled to the calculation mode selection ("FOR HOURLY WORKERS") position and the currently selected mode is displayed.


2 Select the calculation mode.

・Select the "1 ON" option (button ②) to enable No Calculation mode.
・Select the "OFF" option (button ③) to restore the previously selected type of shift (either "2 FIXED" or "3 OPEN").
・Select the "2 FIXED" (button ④) to enable HOURLY WORKERS WITH FIXED SHIFT mode.
・Select the "3 OPEN" (button ⑤) to enable HOURLY WORKERS WITH OPEN SHIFT mode.

3 Press NEXT (button ⑥).

・The selected calculation mode is registered and then the card is scrolled to the next setting (Daylight Saving Time)

   Example: "2 FIXED" option is selected (HOURLY WORKERS WITH FIXED SHIFT mode)
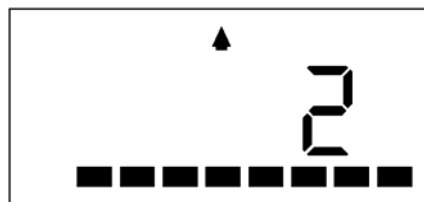
4 Press NEXT (button ⑥) two times and then press END (button ⑥) to exit.

・The programming card is ejected and the current time is displayed.

How to Configure Daylight Saving Time

This section explains how to configure Daylight Saving Time. If you activate Daylight Saving Time (D.S.T.), the clock will be automatically moved forward by one hour at 2:00 AM on the starting day of D.S.T. and moved back by one hour at 2:00 AM on the ending day of D.S.T..
    ・The clock will automatically change from 1:59 AM to 3:00 AM on the starting day of D.S.T..
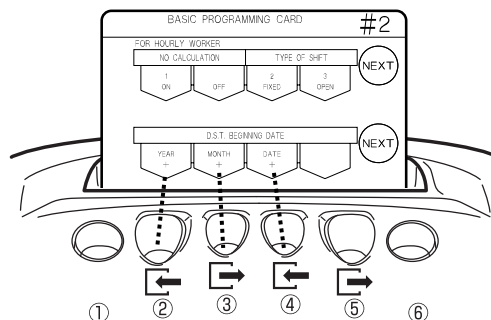   ・The clock will automatically change from 1:59 AM to 1:00 AM on the ending day of D.S.T..
Once activated, D.S.T. will stay activated until deactivated.

1   Insert BASIC PROGRAMMING CARD #2 and then scroll to D.S.T. BEGINNING TIME.

・Insert the card and then press NEXT (button ⑥) one time.
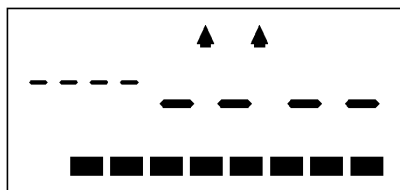
Example of display when DST not configured

2   Configure the D.S.T. Beginning Time.

・Press YEAR + (button ②) to increase the year one year at a time.
・Press MONTH + (button ③) to increase the month one month at a time.
・Press DATE + (button ④) to increase the date one day at a time.
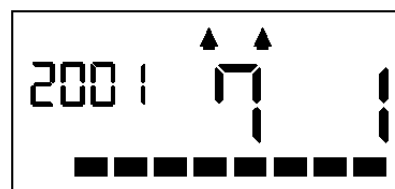
3   Press NEXT (button ⑥).

・The displayed D.S.T. Beginning Time is registered and then the card is scrolled to the next setting (D.S.T. End Date.)
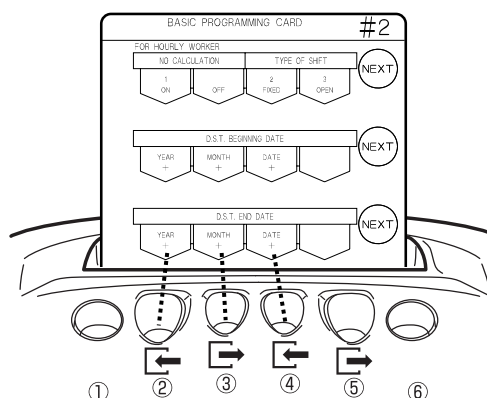
23

4 Configure the D.S.T. End Time.

- ・Press YEAR + (button ②) to increase the year one year at a time.
- ・Press MONTH + (button ③) to increase the month one month at a time.
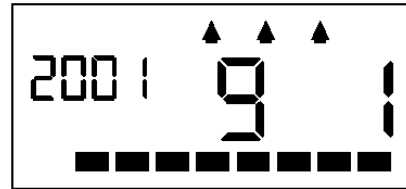- ・Press DATE + (button ④) to increase the date one day at a time.

```
2001    9    1
■■■■■■■
```

5 Press NEXT (button ⑥) and then press END (button ⑥).

- ・The displayed D.S.T. End Time is registered.
- ・The programming card is ejected and the current time is displayed.
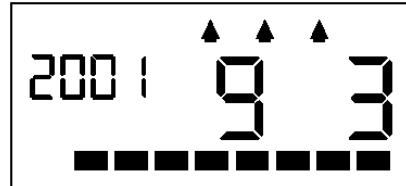
```
2001    9    3
■■■■■■■
```

* To disable Daylight Saving Time:
If you wish to disable Daylight Saving Time, simply set the same date as the D.S.T. Beginning and End Date and then current D.S.T. will be disabled.

Note Hours from shifts that overlap the actual D.S.T. Beginning and End Date threshold (2 AM for either date) will not be totaled correctly.

24

How to Perform Data Initialization

IMPORTANT! If you perform Data Initialization, time cards in use won't be correctly totaled or printed. Do not attempt this operation unless instructed to do so by your local Amano service representative.

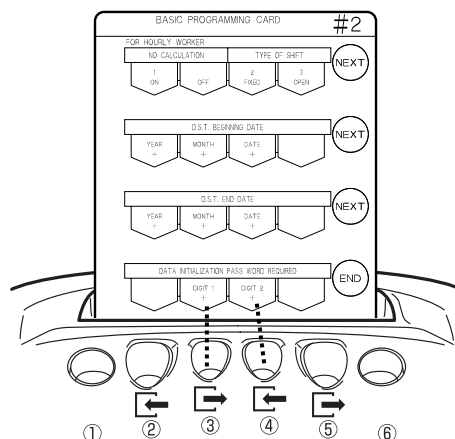This section explains how to initialize setlings and delete all the individual data.

Data Initialization

This is the method for restoring the factory settings (except for the time and date settings.)

1 Insert BASIC PROGRAMMING CARD #2 and then scroll to DATA INITIALIZATION.

・Insert the card and then press NEXT (button ⑥) three times.

2 Enter the password ("44").

・Press DIGIT 1 + (button ③) to increase the first digit.
・Press DIGIT 2 + (button ④) to increase the second digit.
・Adjust to "44."
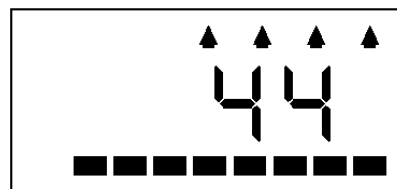
3 Press NEXT (button ⑥).

・The MX-300's settings are restored to the factory settings. (A monotone beep is sounded to confirm that the operation has been executed.)
・The programming card is ejected and the current time is displayed.

* If you enter the wrong password:
A two-tone beep is sounded and "ERR" is displayed on the LCD to indicate an error.
Press button ⑥. The programming card is ejected and the current time is displayed. Try again from step **1** .

* If you want to abort the operation:
To abort the operation, enter the password "00" or "99" and then press button ⑥. The programming card is ejected and the current time is displayed.

25
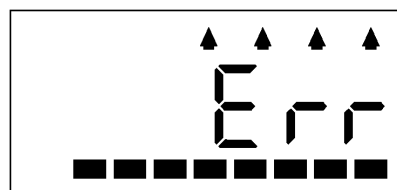
Employee Registration Initialization

Employee Registration Initialization erases all individual data. Use this operation when changing the Pay Period Ending Date (as instructed on page 19). When you perform the Employee Registration Initialization operation, all registration and time punch data will be deleted. Please total any such necessary personal data prior to executing this operation.

1 Insert BASIC PROGRAMMING CARD #2 and then scroll to DATA INITIALIZATION.

・Insert the card and then press NEXT (button ⑥) three times.
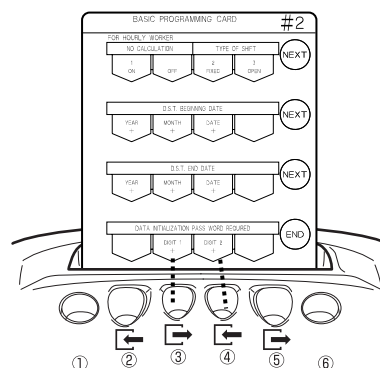
2 Enter the password ("61").

・Press DIGIT 1 + (button ③) to increase the first digit.
・Press DIGIT 2 + (button ④) to increase the second digit.
・Adjust to "61."
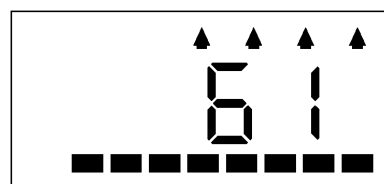
3 Press button ⑥.

・The display appears as shown on the right when you press button ⑥.
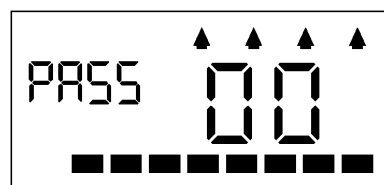
4 Enter the password ("33").

・Press DIGIT 1 + (button ③) to increase the first digit.
・Press DIGIT 2 + (button ④) to increase the second digit.
・Adjust to "33."
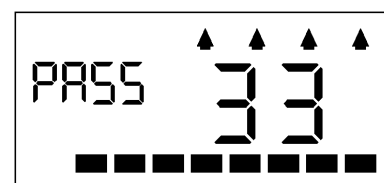
5 Press END (button ⑥).

・The individual data (time punch data) is all deleted. (A monotone beep is sounded to confirm that the operation has been executed.)
・The programming card is ejected and the current time is displayed.

* If you enter the wrong password: See the corresponding note on the previous page.
* **If you want to abort the operation:** To abort the operation, enter a number other than "61" and "33" and then press button ⑥. "ERR" will be displayed and the programming card is ejected and the current time is displayed.

26

PROGRAMMING FOR REGULAR EMPLOYEES

You can use Programming Cards for Regular Employees 3 and 4 to do the following:

How to Use Programming Cards for Regular Employees 3 and 4

Configurable/Adjustable Items:
PROGRAMMING CARD FOR REGULAR EMPLOYEES #3: ①Rounding Unit, ② Shift Beginning and End Time, ③ Overtime Beginning Time, ④ Midnight Shift Beginning and End Time
PROGRAMMING CARD FOR REGULAR EMPLOYEES #4: Scheduled (Fixed) Breaks (up to four breaks possible)
For example, if you want to go from item ① to item ②, simply press NEXT (button ⑥).

PROGRAMMING CARD FOR REGULAR EMPLOYEES #3 (FRONT)
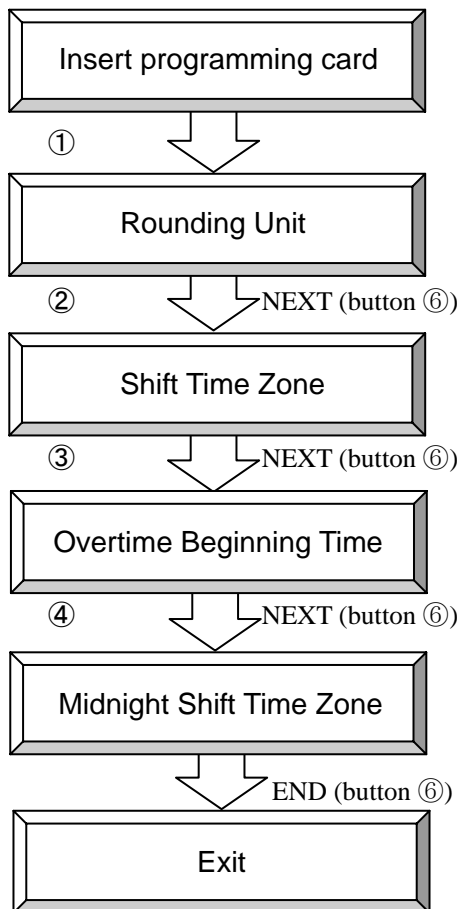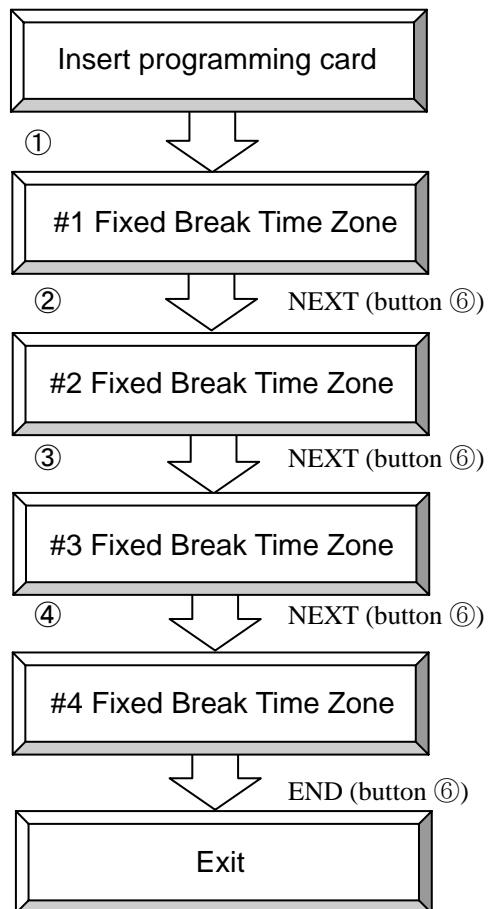
Insert programming card

① ↓

Rounding Unit

② ↓ NEXT (button ⑥)

Shift Time Zone

③ ↓ NEXT (button ⑥)

Overtime Beginning Time

④ ↓ NEXT (button ⑥)

Midnight Shift Time Zone

↓ END (button ⑥)

Exit

PROGRAMMING CARD FOR REGULAR EMPLOYEES #4 (BACK)

Insert programming card

① ↓

#1 Fixed Break Time Zone

② ↓ NEXT (button ⑥)

#2 Fixed Break Time Zone

③ ↓ NEXT (button ⑥)

#3 Fixed Break Time Zone

④ ↓ NEXT (button ⑥)

#4 Fixed Break Time Zone

↓ END (button ⑥)

Exit

27

How to Adjust the Rounded Unit for Time Rounding

The "rounding unit" is used to round off the IN, OUT and Out-for-Personal-Errand times for calculation of work hours on a daily basis.

● Calculating Late-Arrivals and Early-Leaves during Weekdays
  Difference between the Shift Beginning Time and Late-Arrival Time and the difference between the Shift Ending Time and the Early-Leave Time are rounded up.
  Example: Clock in at 8:35, Clock out at 16:50

	Beginning Time: 8:30	Calculated as 8:45		Calculated as 16:45		End Time: 17:00
15 minute rounding unit:	Late-Arrival				Early-Leave	
30 minute rounding unit:	Late-Arrival				Early-Leave	
	Clock in at 8:35	Calculated as 9:00		Calculated as 16:30	Clock out at 16:50	

● Calculating Overtime during Weekdays
  The time from Overtime Beginning Time (if not configured then Shift End Time is used) to the Clock Out Time is rounded down to the rounded unit.
  Example: Overtime Beginning Time = 18:00; Clock Out Time = 18:55
  If the rounding unit is 15 minutes: Overtime = 45 minutes
  If the rounding unit is 30 minutes: Overtime = 30 minutes

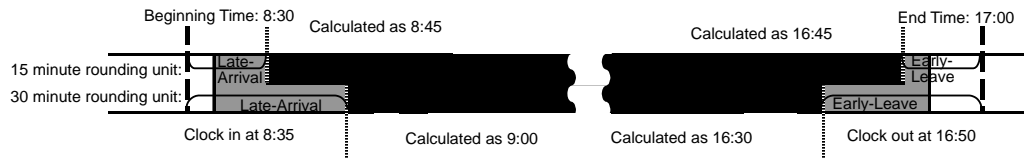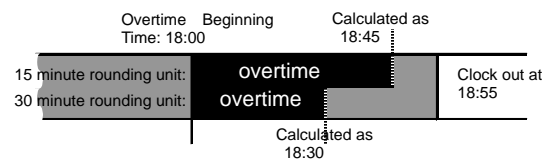|	Overtime Beginning Time: 18:00	Calculated as 18:45	
15 minute rounding unit:	overtime		Clock out at 18:55
30 minute rounding unit:	overtime		
		Calculated as 18:30	

1 Insert PROGRAMMING CARD FOR REGULAR EMPLOYEES #3.

・The card is automatically scrolled to the ROUNDING UNIT position.

2 Adjust the rounding unit.

・Press 15 MIN (button ②) to configure the rounding unit to 15 minutes.
・Press 30 MIN (button ③) to configure the rounding unit to 30 minutes.
・Press OTHER (button ④) to scroll through all the options (1, 5, 10, 15, 20, 30 and 60) until you reach the desired setting.

Note Keep OTHER pressed to speed scroll. (Only available for the OTHER button.)

・Press NO CAL (button ⑤) to unconfigure this setting (display = "0"). Time will not be totaled, but the MX-300 will automatically locate and move to the corresponding printing position (Auto-Column-Shifting function remains enabled).

3 Press NEXT (button ⑥).

・The Rounding Unit setting is confirmed then the card is scrolled to the next setting (Shift Schedule Beginning Time).

Note If NO CAL is selected, then all the settings covered up to page 32 will be disabled.

4 Press NEXT (button ⑥) two times and then press END (button ⑥) to exit.

・The programming card is ejected and the current time is displayed.

28

How to Adjust the Shift Beginning and End Times

This section explains how to adjust the Shift Beginning and End Times.
The Regular Hours Time Zone for regular employees is determined by the Shift Beginning and End Times. If the Overtime Beginning Time isn't configured, then by default, the time from Shift End Time to one minute before Day Change Time is treated as an Overtime Zone.

Note Factory Setting: Shift Beginning Time: 8:30, Shift End Time: 17:00

Example: Factory Setting

```
   5  6  7  8  9  10 11 12 13 14 15 16 17 18 19 20 21 22 23 24  1  2  3  4
Day Change Time                                              Day Change Time minus
                                                                      1 minute
```

| | Regular Hours Time Zone | Overtime Zone |

Shift Beginning Time   Shift End Time

---
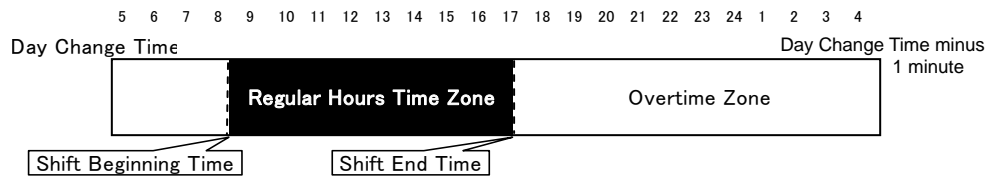
1 Insert PROGRAMMING CARD FOR REGULAR EMPLOYEES #3 and then scroll to SHIFT SCHEDULE BEGINNING TIME / END TIME.

・Insert the card and then press NEXT (button ⑥).

---
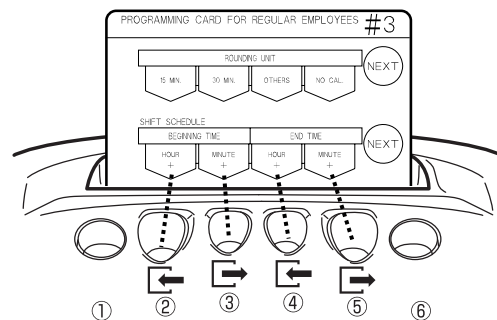
2 Adjust the Shift Beginning and End Times.

・Press HOUR + (button ②) to increase the Shift Beginning Time one hour at a time.
・Press MINUTE + (button ③) to increase the Shift Beginning Time one minute at a time.
・Press HOUR + (button ④) to increase the Shift End Time one hour at a time.
・Press MINUTE + (button ⑤) to increase the Shift End Time one minute at a time.

End Time

Beginning Time

Note Keep the corresponding button pressed to speed scroll.

---

3 Press NEXT (button ⑥).

・The Shift Beginning and End Times are confirmed and the card is scrolled to the next setting (Overtime Beginning Time).

---

4 Press NEXT (button ⑥) and then press END (button ⑥) to exit.

・The programming card is ejected and the current time is displayed.

How to Adjust the Overtime Beginning Time

This section explains how to adjust the Overtime Beginning Time.
When an Overtime Beginning Time is configured, the time from the corresponding start time to a minute prior to Day Change Time is treated as an Overtime Zone.
If the Overtime Beginning Time is set to a time other than the Shift End Time, then the time between the two is treated as break time.
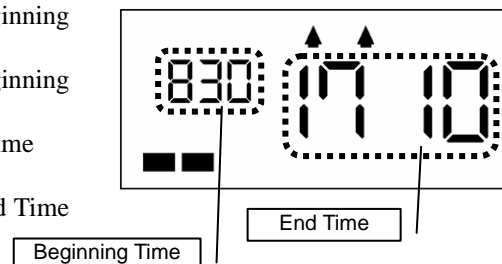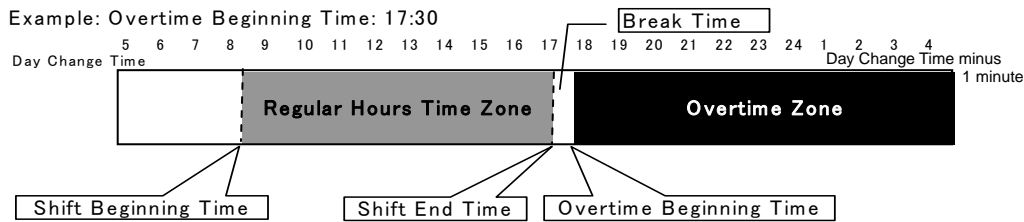
Example: Overtime Beginning Time: 17:30

---

1 Insert PROGRAMMING CARD FOR REGULAR EMPLOYEES #3 and then scroll to OVERTIME BEGINNING TIME.

・Insert the card and then press NEXT (button ⑥) two times.

---
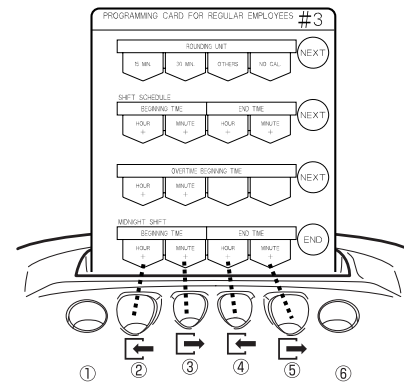
2 Adjust the Overtime Beginning Time.

・Press HOUR + (button ②) to increase the Overtime Beginning Time one hour at a time.

| Note | ・・・21→22→23→"----" (not configured: as displayed on the right) 00→01→02→・・・display repeats in this order |

・Press MINUTE + (button ③) to increase the Overtime Beginning Time one minute at a time.

| Note | Keep the corresponding button pressed to speed scroll. |
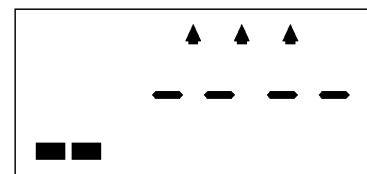
Not configured (factory setting). Select this if you don't wish to specify an Overtime Beginning Time.

---

3 Press NEXT (button ⑥).

・The Overtime Beginning Time is confirmed and the card is scrolled to the next setting (Midnight Shift).

---

4 Press END (button ⑥) to exit.

・The programming card is ejected and the current time is displayed.

30

How to Adjust the Midnight Shift Time Zone

This section explains how to adjust the Midnight Shift Beginning and End Times.
When a Midnight Shift Beginning and End time is configured, the corresponding time zone is treated as a Midnight Shift Time Zone and is the corresponding hours worked during that time is calculated separately from overtime hours in the monthly totals.
(The daily totals for both overtime and midnight hours are printed as one total.)

Example: Midnight Shift Time Zone: 22:00 to 4:00
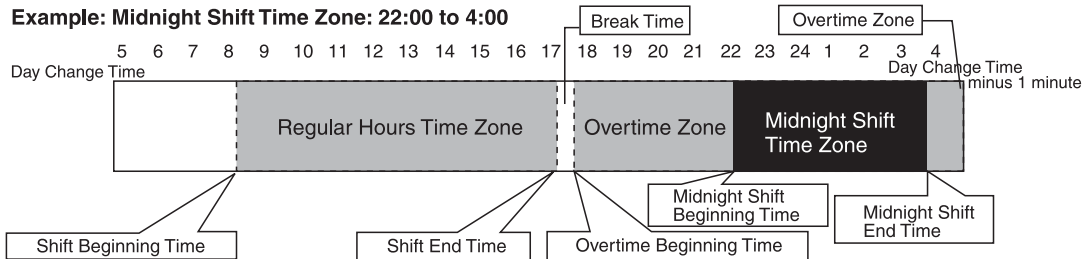
1 Insert PROGRAMMING CARD FOR REGULAR EMPLOYEES #3 and then scroll to MIDNIGHT SHIFT BEGINNING TIME / END TIME.

・Insert the card and then press NEXT (button ⑥) three times.

Not configured (factory setting). Select this if you don't wish to specify a Midnight Shift Beginning Time.
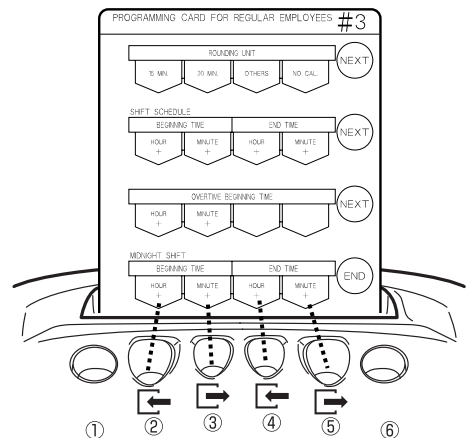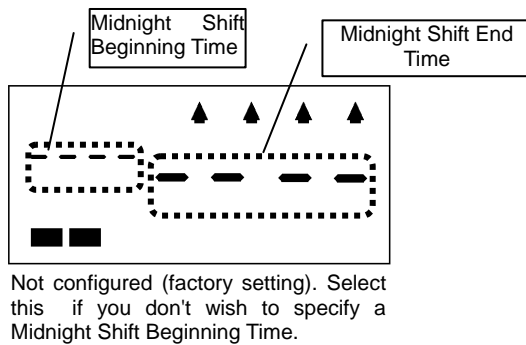
2 Adjust the Midnight Shift Beginning and End Times.

・Press HOUR + (button ②) to increase the Midnight Shift Beginning Time one hour at a time.

Note Select "----" if you don't wish to specify a Midnight Shift Beginning Time.

・Press MINUTE + (button ③) to increase the Midnight Shift Beginning Time one minute at a time.
・Press HOUR + (button ④) to increase the Midnight Shift End Time one hour at a time.
・Press MINUTE + (button ⑤) to increase the Midnight Shift End Time one minute at a time.

Note Keep the corresponding button pressed to speed scroll.

3 Press END (button ⑥) to exit.

・The Midnight Shift Time Zone is registered and the programming card is ejected.

31

How to Configure Breaks for Regular Employees

This section explains how to configure breaks for regular employees. (You can configure up to four scheduled ("fixed") breaks a day for regular employees.)

Note · You may not configure breaks so that they run back to back or overlap each other!
· Also, you may not configure breaks so that they overlap Shift Beginning and End Times.
(See page 42 for details.)

1 Insert PROGRAMMING CARD FOR REGULAR EMPLOYEES #4.

· The card is automatically scrolled to the #1 FIXED BREAK position.

Not configured (default setting)
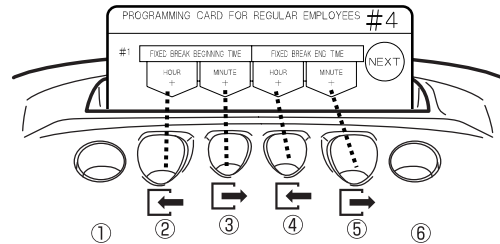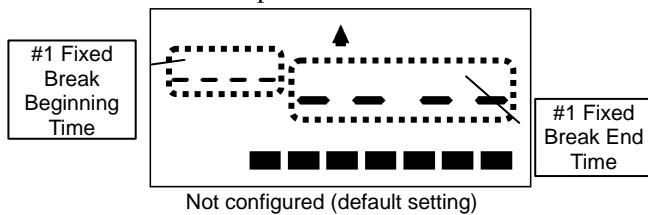
2 Configure the #1 Fixed Break Time Zone.

· Press HOUR + (button ②) to increase the #1 Fixed Break Beginning Time one hour at a time.

Note Select "----" if you don't wish to specify a #1 Fixed Break Beginning Time.
· Press MINUTE + (button ③) to increase the #1 Fixed Break Beginning Time one minute at a time.
· Press HOUR + (button ④) to increase the #1 Fixed Break End Time one hour at a time.
· Press MINUTE + (button ⑤) to increase the #1 Fixed Break End Time one minute at a time.

Note Keep the corresponding button pressed to speed scroll.

3 Press NEXT (button ⑥).

· The #1 Fixed Break Beginning and End Times are confirmed and the card is scrolled to the next setting (#2 Fixed Break). (The card is automatically scrolled to the #2 FIXED BREAK position.)

<To Set Multiple Breaks>
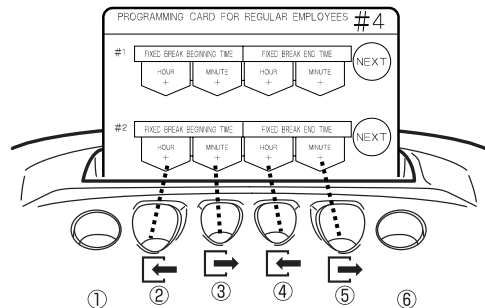
4 Repeat steps 2 and 3 for #2, #3 and/or #4 Fixed Breaks.

· Press NEXT (button ⑥) to scroll to the break you wish to configure and then repeat the instructions from step 2 and 3 and then press button ⑥ to confirm the setting.

5 Press NEXT (button ⑥) until the card is positioned to # 4 Fixed Break and then press END (button ⑥) to exit.

· The programming card is ejected and the current time is displayed.

PROGRAMMING FOR HOURLY WORKERS WITH FIXED SHIFT ··············

The following settings are only valid if HOURLY WORKERS WITH FIXED SHIFT is selected as the calculation mode. (Refer to "How to Change the Calculation Mode" ⇨ Page 22.) (If HOURLY WORKERS WITH OPEN SHIFT is selected as the calculation mode, then the settings in this section will be disabled.)
You can use Programming Cards for Hourly Workers with Fixed Shift 5 and 6 to do the following:

How to Use Programming Cards for Hourly Workers with Fixed Shift 5 and 6

Configurable/Adjustable Items:
PROGRAMMING CARD FOR HOURLY WORKERS WITH FIXED SHIFT #5:
①Rounding Unit, ② Fixed Shift Time Zones
PROGRAMMING CARD FOR HOURLY WORKERS WITH FIXED SHIFT #6:
Fixed Breaks for Hourly Workers with Fixed Shift
For example, if you want to go from item ① to item ②, simply press NEXT (button ⑥).

PROGRAMMING CARD FOR HOURLY WORKERS WITH FIXED SHIFT #5 (FRONT)
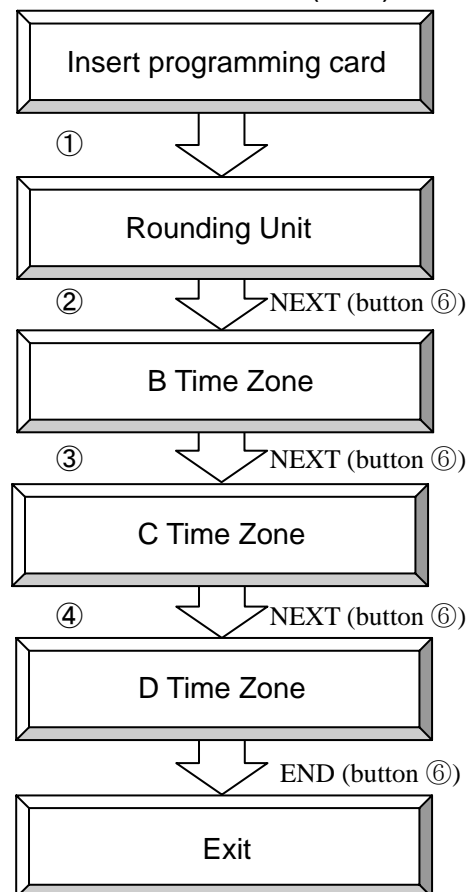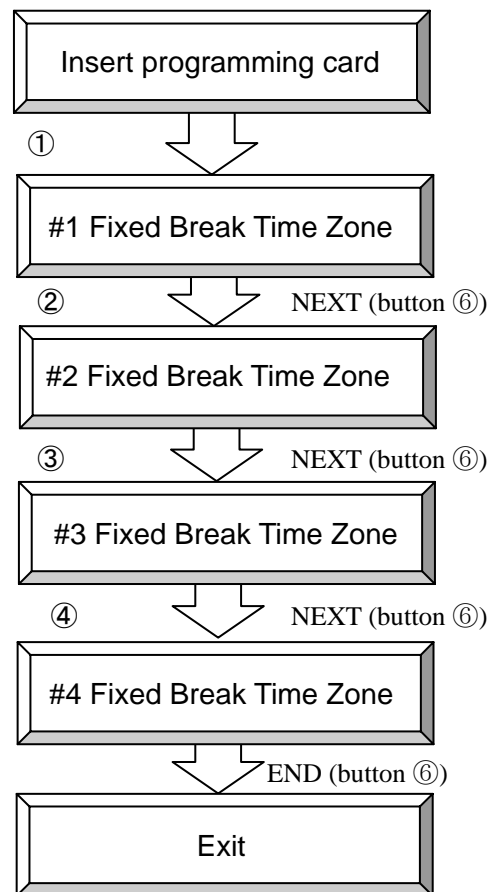
Insert programming card

①

Rounding Unit

② NEXT (button ⑥)

B Time Zone

③ NEXT (button ⑥)

C Time Zone

④ NEXT (button ⑥)

D Time Zone

END (button ⑥)

Exit

PROGRAMMING CARD FOR HOURLY WORKERS WITH FIXED SHIFT #6 (BACK)

Insert programming card

①

#1 Fixed Break Time Zone

② NEXT (button ⑥)

#2 Fixed Break Time Zone

③ NEXT (button ⑥)

#3 Fixed Break Time Zone

④ NEXT (button ⑥)

#4 Fixed Break Time Zone

END (button ⑥)

Exit

33

How to Adjust the Rounded Unit for Time Rounding

The "rounding unit" is used to round off the IN, OUT and Out-for-Personal-Errand times for calculation of work hours on a daily basis.
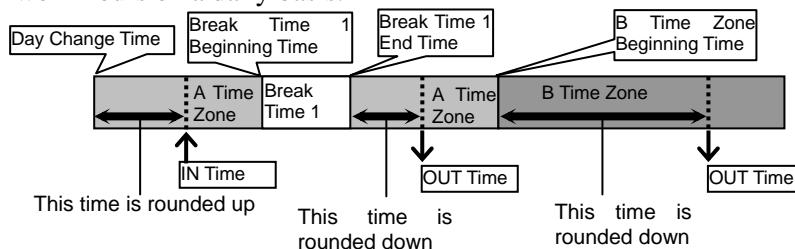
1 Insert PROGRAMMING CARD FOR HOURLY WORKERS WITH FIXED SHIFT #5.

The card is automatically scrolled to the ROUNDING UNIT position.

2 Adjust the rounding unit.

・Press 15 MIN (button ②) to configure the rounding unit to 15 minutes.
・Press 30 MIN (button ③) to configure the rounding unit to 30 minutes.
・Press OTHER (button ④) to scroll through all the options (1, 5, 10, 15, 20, 30 and 60) until you reach the desired setting.

> **Note** Keep OTHER pressed to speed scroll. (Only available for the OTHER button.)

・Press NO CAL (button ⑤) to unconfigure this setting (display = "0"). Time will not be totaled, but the MX-300 will automatically locate and move to the corresponding printing position (Auto-Column-Shifting function remains enabled).

3 Press NEXT (button ⑥).

・The Rounding Unit setting is confirmed then the card is scrolled to the next setting (B Time Zone Beginning Time).

> **Note** If NO CAL is selected, then all the settings covered up to page 36 will be disabled.

4 Press NEXT (button ⑥) two times and then press END (button ⑥) to exit.

・The programming card is ejected and the current time is displayed.

34

How to Configure Fixed Shift Time Zones for Hourly Workers

This section explains how to configure time zones. You can configure up to four types of times zones. (See page 5 for more information regarding time zones.)

If there aren't any time zones configured, then the whole day starting from Day Change Time to one minute prior to the Day Change Time the next day is treated as the A Time Zone. If you configure a Beginning Time for the B, C and D Time Zones, then the A Time Zone is reduced to the time from the start of Day Change Time to the start of the next time zone. The remaining zones likewise extend until the start of another time zone.

If there is'nt a time zone configured:

Day change Time — A Time Zone — Day Change Time minus 1 minute
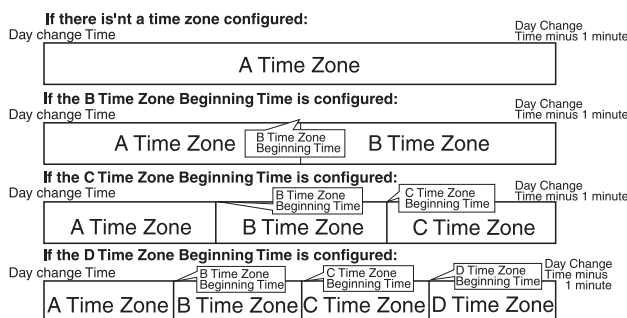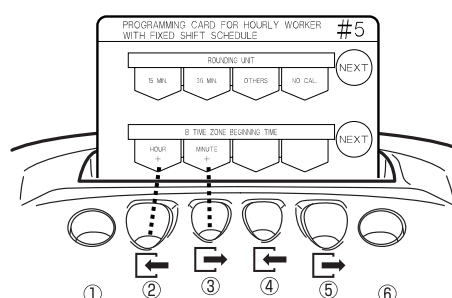
If the B Time Zone Beginning Time is configured:

Day change Time — A Time Zone | B Time Zone Beginning Time | B Time Zone — Day Change Time minus 1 minute

If the C Time Zone Beginning Time is configured:

Day change Time — A Time Zone | B Time Zone Beginning Time | B Time Zone | C Time Zone Beginning Time | C Time Zone — Day Change Time minus 1 minute

If the D Time Zone Beginning Time is configured:

Day change Time — A Time Zone | B Time Zone Beginning Time | B Time Zone | C Time Zone Beginning Time | C Time Zone | D Time Zone Beginning Time | D Time Zone — Day Change Time minus 1 minute

---

1 Insert PROGRAMMING CARD FOR HOURLY WORKERS WITH FIXED SHIFT #5 and then scroll to B TIME ZONE BEGINNING TIME.

・Insert the card and then press NEXT (button ⑥).

---

2 Adjust the B Time Zone Beginning Time.

・Press HOUR + (button ②) to increase the B Time Zone Beginning Time one hour at a time.

Note Select "----" if you don't wish to specify a B Time Zone Beginning Time.
・Press MINUTE + (button ③) to increase the B Time Zone Beginning Time one minute at a time.

Note Keep the corresponding button pressed to speed scroll.

---

3 Press NEXT (button ⑥).

・The B Time Zone Beginning Time is confirmed and the card is automatically scrolled to the C Time Zone Beginning Time position.

---
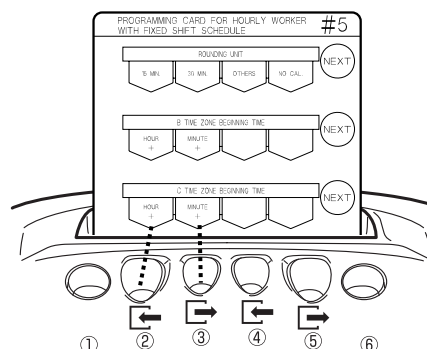
4 To configure C and D Time Zones, repeat steps 2 and 3.

・Press NEXT (button ⑥) to scroll to the time zone you wish to configure (C or D Time Zone) and then repeat the instructions from step 2 and 3 and then press button ⑥ to confirm the setting.

---

5 To exit, press button ⑥ until the card ejected.

・Press NEXT (button ⑥) until the card is positioned to D Time Zone then press END (button ⑥) to exit. The programming card is ejected and the current time is displayed.

How to Configure Breaks for Hourly Workers with Fixed Shifts

This section explains how to configure breaks for hourly workers with fixed shifts.
You can configure up to four scheduled ("fixed") breaks a day for hourly workers with fixed shifts. The time used for this breaks is automatically deducted from the hours clocked by the workers.

1 Insert PROGRAMMING CARD FOR HOURLY WORKERS WITH FIXED SHIFT #6.

・The card is automatically scrolled to the #1 FIXED BREAK position.
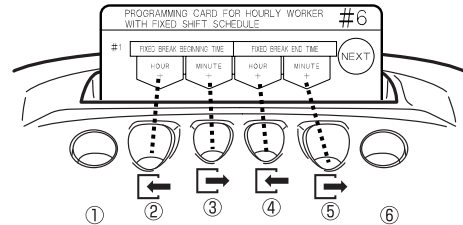
2 Configure the Fixed Break Time Zone.

・The operation is the same as for that for regular employee breaks. (See page 32 for details.)

PROGRAMMING FOR HOURLY WORKERS WITH OPEN SHIFT ・ ・ ・ ▪

The following settings are only valid if HOURLY WORKERS WITH OPEN SHIFT is selected as the calculation mode. (Refer to "How to Change the Calculation Mode" ⇨ Page 22.) (If HOURLY WORKERS WITH FIXED SHIFT is selected as the calculation mode, then the settings in this section will be disabled.)

You can use Programming Card for Hourly Workers with Open Shift 7 to do the following:

How to Use Programming Card for Hourly Workers with Open Shift 7

Configurable/Adjustable Items:

PROGRAMMING CARD FOR HOURLY WORKERS WITH OPEN SHIFT #7: ①Rounding Unit, ②
The Number of Regular Hours ③ Basic Break Hours

For example, if you wanted to go from item ① to item ②, simply press NEXT (button ⑥).

PROGRAMMING CARD FOR HOURLY WORKERS WITH OPEN SHIFT #7

```
            ┌──────────────────────────────┐
            │   Insert programming card    │
            └──────────────────────────────┘
    ①                    │
                          ▽
            ┌──────────────────────────────┐
            │        Rounding Unit         │
            └──────────────────────────────┘
    ②                    │  NEXT (button ⑥)
                          ▽
            ┌──────────────────────────────┐
            │    Number of Regular Hours   │
            └──────────────────────────────┘
    ③                    │  NEXT (button ⑥)
                          ▽
            ┌──────────────────────────────┐
            │     Basic Hours for Break 1  │
            └──────────────────────────────┘
    ④                    │  NEXT (button ⑥)
                          ▽
            ┌──────────────────────────────┐
            │        Break Hours 2         │
            └──────────────────────────────┘
                          │  END (button ⑥)
                          ▽
            ┌──────────────────────────────┐
            │            Exit              │
            └──────────────────────────────┘
```
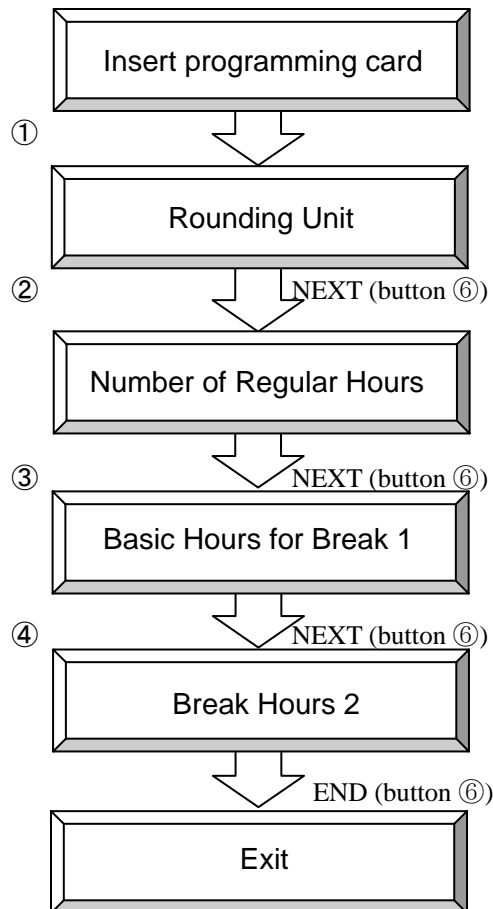
How to Adjust the Rounded Unit for Time Rounding

The "rounding unit" is used to round off the IN, OUT and Out-for-Personal-Errand times for calculation of work hours on a daily basis.

Example: Rounded Unit is set to 15 Minutes
8:40 clock-in   ⇨ Treated as an 8:45 clock-in
19:25 clock-out   ⇨ Treated as a 19:15 clock-out
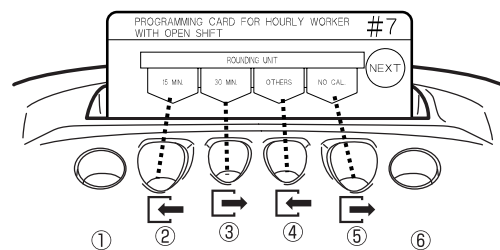
Example: Rounded Unit is set to 30 Minutes
8:40 clock-in   ⇨ Treated as a 9:00 clock-in
19:25 clock-out   ⇨ Treated as a 19:00 clock-out

	Calculated as 8:45	Calculated as 19:15	
15 minute rounding unit	8:40 clock-in		19:25 clock-out
30 minute rounding unit			
	Calculated as 19:00	Calculated as 19:00	

1 Insert PROGRAMMING CARD FOR HOURLY WORKERS WITH OPEN SHIFT #7.

・The card is automatically scrolled to the ROUNDING UNIT position.

2 Adjust the rounding unit.

・Press 15 MIN (button ②) to configure the rounding unit to 15 minutes.

・Press 30 MIN (button ③) to configure the rounding unit to 30 minutes.

・Press OTHER (button ④) to scroll through all the options (1, 5, 10, 15, 20, 30 and 60) until you reach the desired setting.

Note Keep OTHER pressed to speed scroll. (Only available for the OTHER button.)

・Press NO CAL (button ⑤) to unconfigure this setting (display = "0"). Time will not be totaled, but the MX-300 will automatically locate and move to the corresponding printing position (Auto-Column-Shifting function remains enabled).

3 Press NEXT (button ⑥).

・The Rounding Unit setting is confirmed then the card is scrolled to the next setting (Number of Regular Hours).

Note If NO CAL is selected, then all the settings covered up to page 41 will be disabled.

4 Press NEXT (button ⑥) two times and then press END (button ⑥) to exit.

・The programming card is ejected and the current time is displayed.

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How to Configure the Number of Regular Hours for Hourly Workers with Open Shift

This section explains how to configure the Number of Regular Hours for hourly workers with open shifts. You can configure the Number of Regular Hours for hourly workers with open shifts and thereafter any time that they work beyond that total (regardless of the time they start and stop working) will be calculated individually during monthly totaling as overtime.
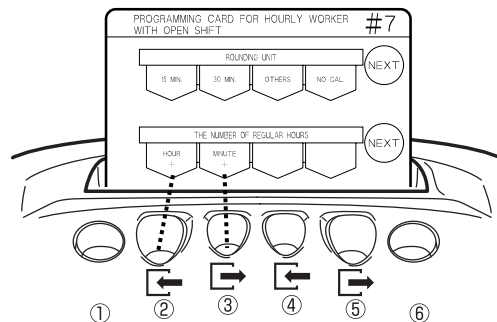
Example: Number of Regular Hours = 6

10	11	12	13	14	15	16	17	18	19	20	21

Number of Regular Hours   Overtime

Number of Regular Hours   Overtime
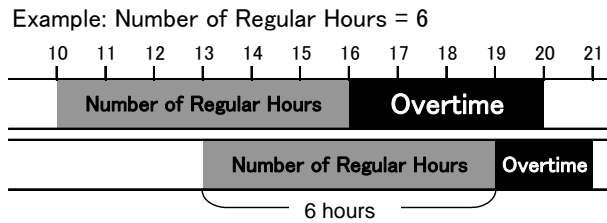
6 hours

Note The factory setting is "0:00," which = unconfigured. If the factory setting is used, then all the hours worked are treated as regular work hours.

---

1 Insert PROGRAMMING CARD FOR HOURLY WORKERS WITH OPEN SHIFT #7 and then scroll to THE NUMBER OF REGULAR HOURS.

・Insert the card and then press NEXT (button ⑥).

PROGRAMMING CARD FOR HOURLY WORKER #7
WITH OPEN SHIFT

ROUNDING UNIT

15 MIN.   30 MIN.   OTHERS   NO CAL.   NEXT

THE NUMBER OF REGULAR HOURS

HOUR +   MINUTE +   NEXT

① ② ③ ④ ⑤ ⑥

---

2 Configure the Number of Regular Hours.

・Press HOUR + (button ②) to increase the Number of Regular Hours one hour at a time.
・Press MINUTE + (button ③) to increase the Number of Regular Hours one minute at a time.

---

3 Press NEXT (button ⑥).

・The Number of Regular Hours is registered and then the card is scrolled to the next setting (Basic Hours for Break).

▲ ▲

600
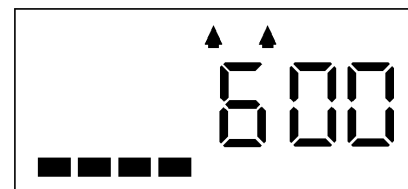
Example: Number of Regular Hours configured to 6 hours.

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How to Configure Breaks for Hourly Workers with Open Shifts

This section explains how to configure breaks for hourly workers with open shifts.

Whenever an hourly worker with open shifts works longer than the configured Number of Regular Hours in a given day, that extra time is automatically adjusted for break time. (Configurable in up to two stages.)

Example:

|	
Basic Hours for Break 1 = 6:00	Break Time 1 = 0:45
Break Hours 2 = 8:00	Break Time 1+2 = 1:00

If a worker were to clock in at 10:00 with the above settings in place, then Break 1 would be six hours later from 16:00 to 16:45 (45 minutes):, and Break 2 would be from 18:45 (= 10:00 + 45 minutes + 8 hours) to 19:00 (15 minutes). In other words, the second break is determined to start at 18:45 by deducting 45 minutes for the first break and then adding number of hours to be worked, for a total break time of 1 hour.
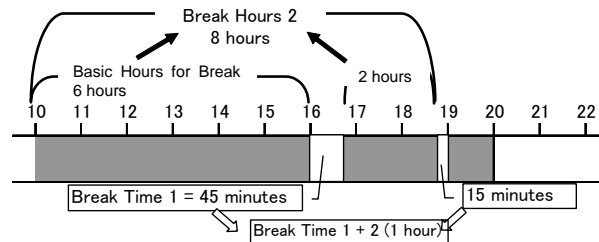
1 Insert PROGRAMMING CARD FOR HOURLY WORKERS WITH OPEN SHIFT #7 and then scroll to BREAK HOURS FOR BREAK 1.

・Insert the card and then press NEXT (button ⑥) two times.
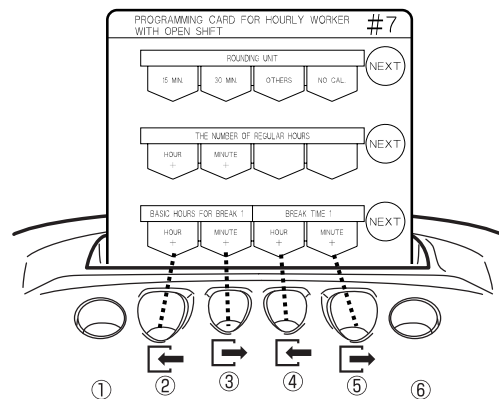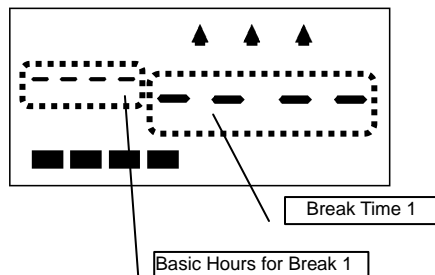
2 Adjust Basic Hours for Break 1 and Break Time 1.

・Press HOUR + (button ②) to increase the Basic Hours for Break 1 one hour at a time.

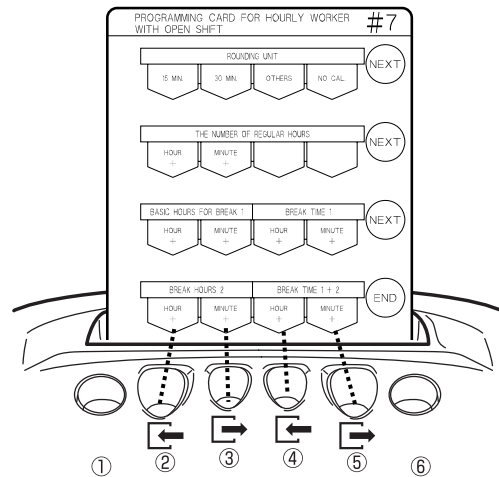**Note** Select "----" if you don't wish to specify Basic Hours for Break 1.

・Press MINUTE + (button ③) to increase the Basic Hours for Break 1 one minute at a time.

・Press HOUR + (button ④) to increase Break Time 1 one hour at a time.

・Press MINUTE + (button ⑤) to increase Break Time 1 one minute at a time.

Note Keep the corresponding button pressed to speed scroll.

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3 Press NEXT (button ⑥).

・The Basic Hours for Break 1 and Break Time 1 are confirmed and then the card is scrolled to Break Hours 2.


```
PROGRAMMING CARD FOR HOURLY WORKER    #7
WITH OPEN SHIFT
        ROUNDING UNIT                      NEXT
  15 MIN.  30 MIN.  OTHERS  NO CAL.

     THE NUMBER OF REGULAR HOURS            NEXT
  HOUR    MINUTE
   +       +

  BASIC HOURS FOR BREAK 1   BREAK TIME 1    NEXT
  HOUR    MINUTE    HOUR    MINUTE
   +       +         +       +

     BREAK HOURS 2        BREAK TIME 1 + 2   END
  HOUR    MINUTE    HOUR    MINUTE
   +       +         +       +
```

① ② ③ ④ ⑤ ⑥

4 Repeat steps **2** and **3** to configure Break Hours 2 and Time 1 + 2

Note You can't set Break Hours 2 and Time 1 + 2 to a shorter time than Basic Hours for Break 1 and Break Time 1.

5 Press END (button ⑥) to exit.

・The configured break time is registered and the programming card is ejected.

AVOIDING PROGRAMMING CONFLICTS

This section explains how to avoid conflicts that will result in programming errors.

If there is a conflict in the parameters, a programming error will be generated and an two-tone alarm will be sounded. If this should occur, check the parameters for any possible conflicts and then make corrections as necessary. This section provides a few basics guidelines to avoid programming conflicts.

### <PROGRAMMING GUIDELINES AND RULES>

The following examples are designed as representative examples of conflict related errors commonly encountered during the programming the MX-300, but this section is no way intended to serve as an exhaustive guide to dealing with all possible programming errors.

■ **Basic Programming Rules for Both Regular Employee and Hourly Worker Parameters**
   * A single work day is defined by the Day Change Time parameter. Therefore, it is critical that all other time zone parameters are configured within the threshold of the Day Change Time. Failure to abide by this basic rule is to open the doors to programming error after programming error.

   Example of This Kind of Conflict:

   | Break Beginning Time | 17:30 | | Break End Time | 18:15 |

   | Day Change Time | 18:00 |
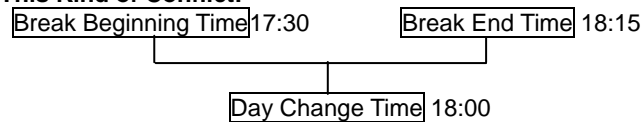
   * When configuring multiple breaks, it is absolutely vital to avoid overlapping. Failure to do so will result in a programming error.

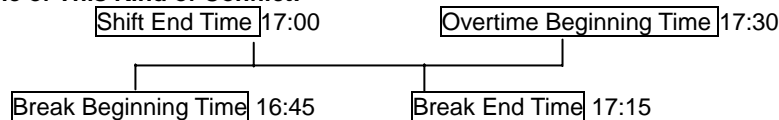   **Example of This Kind of Conflict:**

   | # 1 Break Beginning Time | 12:00 | | # 1 Break End Time | 13:00 |

   | # 2 Break Beginning Time | 12:30 | | # 1 Break End Time | 13:30 |

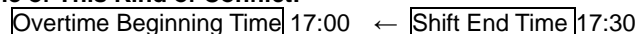■ **Basic Programming Rules for Regular Employee Parameters**
   * Configuring a Break Time Zone between the Shift End Time and the Overtime Beginning Time will result in a programming error.
   Likewise, configuring Break Time Zone that extends over a Shift Beginning Time or Shift End Time will result in a programming error.
   Also, configuring the Shift End Time to the same time as a given Break Beginning or End Time will result in a programming error.

   Example of This Kind of Conflict:

   | Shift End Time | 17:00 | | Overtime Beginning Time | 17:30 |

   | Break Beginning Time | 16:45 | | Break End Time | 17:15 |

   * Configuring the Overtime Beginning Time earlier than the Shift End Time will result in a programming error. (However, configuring them to the same time is okay.)

   Example of This Kind of Conflict:

 | Overtime Beginning Time | 17:00 | ← | Shift End Time | 17:30 |

   * Configuring the Shift End Time or Overtime Beginning Time to the same time as the Day Change Time will result in a programming error.

   Example of This Kind of Conflict:

 | Shift End Time | 20:00 |
   | Day Change Time | 20:00 |
   | Overtime Beginning Time | 20:00 |

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* Configuring a Break Time Zone that extends over the Shift Time Zone and the Overtime Zone will result in a programming error.

Example of This Kind of Conflict:

| Shift End Time | 17:00 | | Overtime Beginning Time | 17:30 |

| Break Beginning Time | 16:45 | | Break End Time | 17:45 |
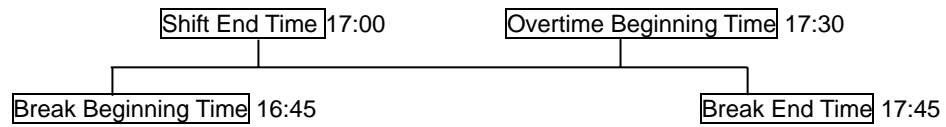
* Configuring a Break Time Zone that includes a Midnight Shift Time Zone will result in a programming error. Likewise, configuring a Break Time Zone that includes the Overtime Beginning Time will result in a programming error.

Example of This Kind of Conflict:

| Shift End Time | 17:00 | | Overtime Beginning Time | 18:00 |

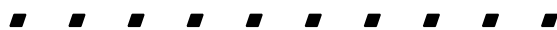| Break Beginning Time | 17:30 | | Break End Time | 18:30 |
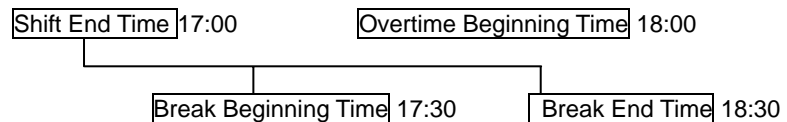
■ **Basic Programming Rules for Hourly Worker Parameters**
   * Configuring the same Beginning Time for the B, C and/or D Time will result in a programming error.

Example of This Kind of Conflict:

| B Time Zone Beginning Time | 13:00 |

| C Time Zone Beginning Time | 13:00 | | D Time Zone Beginning Time | 21:00 |

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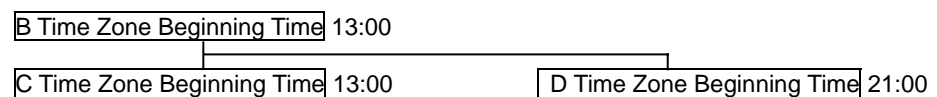
EVERYDAY USE ▪ ▪ ▪ ▪ ▪ ▪ ▪ ▪ ▪ ▪

This section covers how to properly insert time cards, totalization cards and programming cards and how to perform daily care of the MX-300.

How to Insert a Card

Gently insert the card into the card slot and let go of it.
The card will be automatically fed in, printed and then ejected.

> **Note**
> • Make sure the card is perpendicular to the card slot when inserting it.
> • If you attempt to force a card in diagonally, the printing will be off and led to a card reading error. (→ page 63)
> • Only use MRX time cards with the MX-300.

> **IMPORTANT!**
> Failure to observe the following might cause the MRX-30 to malfunction:
> • Never attempt to use bent cards.
> • Never attempt to force a card into or out of the MX-300.

Daily Care (Always be sure to unplug the MX-300 prior to attempting maintenance!)

⚠ **WARNING**   🚫 NO WET HANDS!   Do not attempt to insert or unplug the power plug with wet hands. Doing so could result in fire or electrocution.

⚠ **CAUTION**   GENTLY UNPLUG THE PLUG!   Always unplug the power cord gently. Ripping the cord out of the outlet might damage the cord and possibly result in fire or electrocution.

• If the case gets dirty, gently wipe it with a soft cloth moistened with either water or a neutral cleaning agent.
• Do not use benzine thinner etc. to clean the MX-300.

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■Employee Operations

This section provides instructions regarding how employees are to operate the MX-300.

Clocking In and Out in Normal Mode

During the normal mode of operations, the MX-300 will automatically position the time card to the proper print zone based on the number of punches already made on a given employee's time card. This means that employees need not fumble with any of the operation buttons but only insert their time card into the card slot to clock in and clock out. (Buttons ② and ⑤ will not light up.)

The employee inserts their time card.

The time card is automatically fed in, positioned to the proper print zone, and then punched with the corresponding time.

If the "NO CAL" option is enabled (→ page 61), an asterisk (*) will be punched in the DAILY NET column.

←	→	←	→		
8:01	17:20				
8:23	16:30E				
8:12	19:36T			2:00	
12:59				✱	

* If either button ②, ③, ④ or ⑤ light up and then the employee inserts the time card, the punch will occur at the corresponding column. (For example, if the first punch is made in the IN column (the column to the furthest left) and then later on that day the employee pushes button ⑤ for the second punch, the corresponding punch will be made directly right of the first punch.)

The Auto-Column-Shifting function is what enables the MX-300 to determine the proper time zone to punch in throughout the day as the employee clocks in and out. For example, when this function is enabled, the MX-300 knows to treat the first punch of the first day[*] as an IN punch and the second punch as an OUT punch and move to the corresponding print zone for punching the respective times. (Or, in the case of three or more punches in the same day, the second punch is treated as GO-OUT, the third punch as BACK and the fourth punch as OUT). Therefore, if an employee forgets to punch their time card when they should, the Auto-Column-Shifting function will likely result in later punches getting punched in the wrong column.

 * For purposes of using the MX-300, the term "day" is generally defined as the time period starting from the configured Day Change Time to one minute before the corresponding Day Change Time threshold on the next day (23 hours and 59 minutes later)).

When an employee forgets to punch their card for the second punch, resulting in only the first and third punch being punched, a calculation error will result preventing the daily total from being calculated for that day. If you would like to correct such a mistake, press the button that corresponds to the column you wish to have punched, wait for the button to light up, and then insert the corresponding time card. If you fail to insert the card within 10 seconds after pressing the button, the corresponding LED will go off. Also, if you press the button again while the corresponding LED is on, it will go off and the operation will be disabled.

Note	**<Clocking Out for a Personal Errand>**

When a regular employee presses button ③ during normal weekday hours, waits for the button to light up and then inserts their time card (that is registered as a regular employee time card), an "O" will be added next to the corresponding time. If a regular employee attempts the same operation during overtime or other exceptional time zone, an "O" will not be added (only the time will be punched).

> **IMPORTANT!**
> Failure to observe the following might case the MRX-30 to malfunction:
> • Never attempt to use bent cards (so as to prevent the card from getting jammed in the MRX-30).
> • Never attempt to force a card into or out of the MX-300.

Note	• If you insert the wrong side of the time card, "E-01" will appear on the display, a two-tone beep will be sounded and the time card will not be printed.

(Card-Side-Determined function)

Clocking In and Out in No Calculation Mode

During No Calculation mode (see page 61), employees will need to check the IN/OUT LED position when clocking in and out. At that time, if the LED that is on doesn't match the column that the employee wants punched, the employee will need to press the button that corresponds to the desired column.

Note	Buttons ① and ⑥ are only enabled as long as their LED is on. If you fail to insert the card within 10 seconds after pressing the button, the corresponding LED will go off. Also, if you press the button again while the corresponding LED is on, it will go off and the operation will be disabled.

1 Check LED ② and ⑤.

The time card will be punched in the column that corresponds to the LED that is lit up (②, ③, ④ or ⑤). If the LED that is on doesn't match the column that you want punched, you need to press the button that corresponds to the desired column. (The same applies for GO-OUT and BACK when stepping out for a personal errand.)

Check the "IN/OUT" LED.
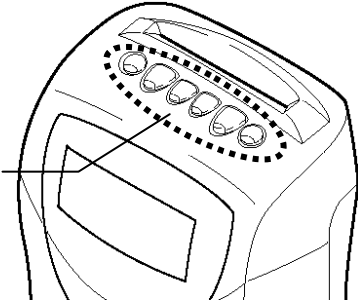
2 Insert the time card.

The time card is automatically fed in and punched in the column selected in step 1.

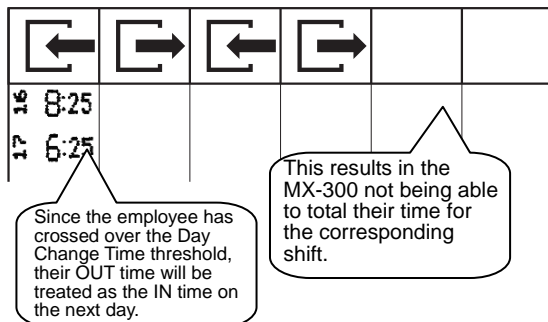| IMPORTANT!	Failure to observe the following might cause the MRX-30 to malfunction: • Never attempt to use bent cards (so as to prevent the card from getting jammed in the MRX-30). • Never attempt to force a card into or out of the MX-300.

Note	· If you insert the wrong side of the time card, "E-01" will appear on the display, a two-tone beep will be sounded and the time card will not be printed. (Card-Side-Determined function)

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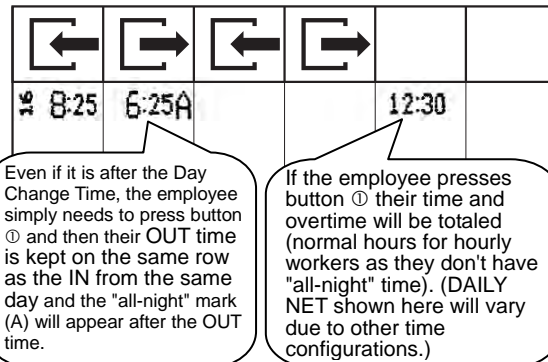# Clocking Out after an All-Night (Working Past the Day Change Time Threshold)

If an employee needs to clock out on or after the Day Change Time threshold, the employee simply needs to first press the corresponding button (①) and then the corresponding OUT time will be punched on the same line as the IN time from the same day and then calculated.

Example: An employee clocks in at 8:25 on the 16th and then clocks out at 6:25 on the 17th when the Day Change Time is set to 5:00.

Employee clocks out without pressing button ①

Since the employee has crossed over the Day Change Time threshold, their OUT time will be treated as the IN time on the next day.

This results in the MX-300 not being able to total their time for the corresponding shift.

Employee presses button ① and then clocks out

Even if it is after the Day Change Time, the employee simply needs to press button ① and then their OUT time is kept on the same row as the IN from the same day and the "all-night" mark (A) will appear after the OUT time.

If the employee presses button ① their time and overtime will be totaled (normal hours for hourly workers as they don't have "all-night" time). (DAILY NET shown here will vary due to other time configurations.)

How the Time is Calculated for Each Type of Employee （→ page 56）

- **Regular Employees:** The time worked from the Day Change Time threshold until the employee clocked out (break time is not deducted) is calculated as all-night time. This time is included in the daily overtime total, but is totaled and printed separately as all-night time in the monthly totals.
- **Hourly Workers with Fixed Shift:** This time is included in the daily total and totaled and printed in the corresponding time zone for monthly totals. All-night time calculation is not performed for these workers.
- **Hourly Workers with Open Shift:** This time is included in the daily total. For monthly totals, it is separated between regular hours and overtime and then totaled and printed in the corresponding time zone. All-night time calculation is not performed for these workers.

1 Press button ① to light up its LED.

During No Calculation mode (see page 61), check for button ⑤'s LED to go on. If button ⑤'s LED doesn't go on, press for button ⑤. During No Calculation mode, the IN and OUT time is punched on the same line, but it will not be totaled.
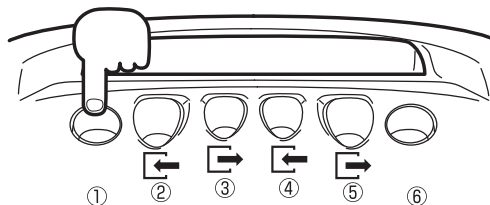
2 Insert the time card.

The time card is automatically fed in and the OUT time is punched on the same line as the IN time.
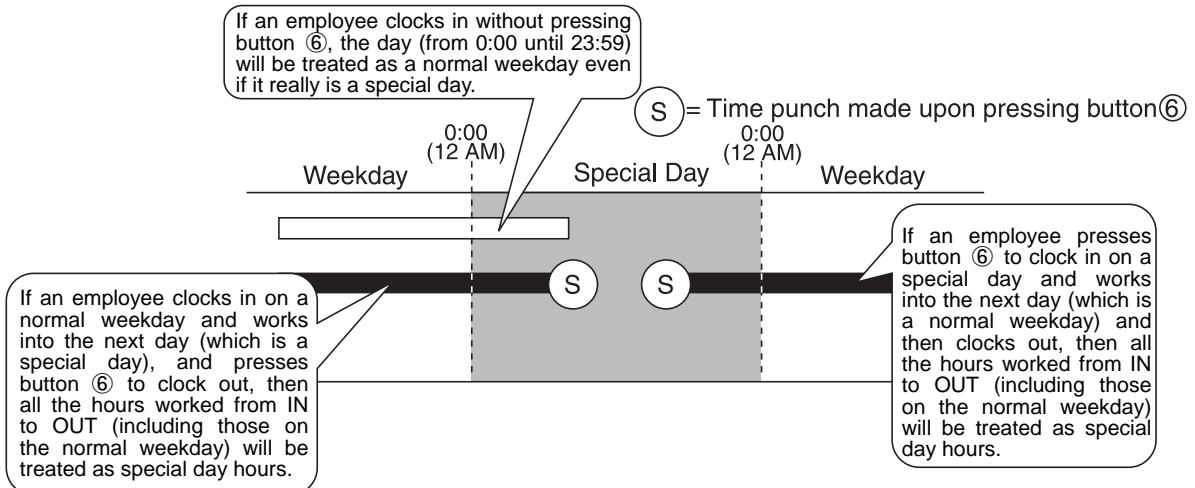
Note
- This operation only applies to the person who presses button ①. It will not stay in effect for the next person.
- Button ① is only enabled as long as it LED is on. If you fail to insert the card within 10 seconds after pressing the button, the corresponding LED will go off. Also, if you press the button again while the corresponding LED is on, it will go off and the operation will be disabled.
- Abnormally long shifts that extend past the Day Change Time twice can't be processed. (e.g., an employee clocks in at 8:30 on the 15th but doesn't clock out until 6:30 on the 17th when the Day Change Time is 5:00.)
- If both button ① and button ⑥ are pressed at the same time, the corresponding punch will have and "M" added to it.
  * If this is the case, the whole shift for that day (from the time the employee clocked in until the time the employee clocked out) will be calculated as "special day" hours (regardless of the actual date).

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Clocking-In on a Special Day

The MX-300 can treat holidays and irregular days (e.g., days when the hourly wage is different than normal) as "Special Days." When an employee works on a normal weekday, anytime worked beyond the regular hours is treated as overtime, but when an employee works on a special day, all the time worked that day is treated as "special day" hours.
(Special day time calculations will not be made if No Calculation mode or the "NO CAL" option is enabled (see page 61).)

* The work hours punched when button ⑥ is pressed will be calculated as "special day" hours regardless of the actual date.

If an employee clocks in without pressing button ⑥, the day (from 0:00 until 23:59) will be treated as a normal weekday even if it really is a special day.

Ⓢ = Time punch made upon pressing button⑥

0:00 (12 AM)

0:00 (12 AM)

Weekday   Special Day   Weekday

If an employee clocks in on a normal weekday and works into the next day (which is a special day), and presses button ⑥ to clock out, then all the hours worked from IN to OUT (including those on the normal weekday) will be treated as special day hours.

If an employee presses button ⑥ to clock in on a special day and works into the next day (which is a normal weekday) and then clocks out, then all the hours worked from IN to OUT (including those on the normal weekday) will be treated as special day hours.

---

1 Press button ⑥ to light up its LED when clocking IN.

During No Calculation mode (see page 61), press button ② and then button ⑥.

① ② ③ ④ ⑤ ⑥

---
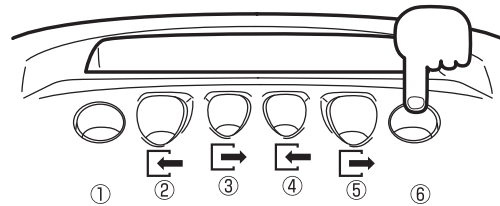
2 Insert the time card.

The time card is automatically fed in and an "S" is added to right of the time.

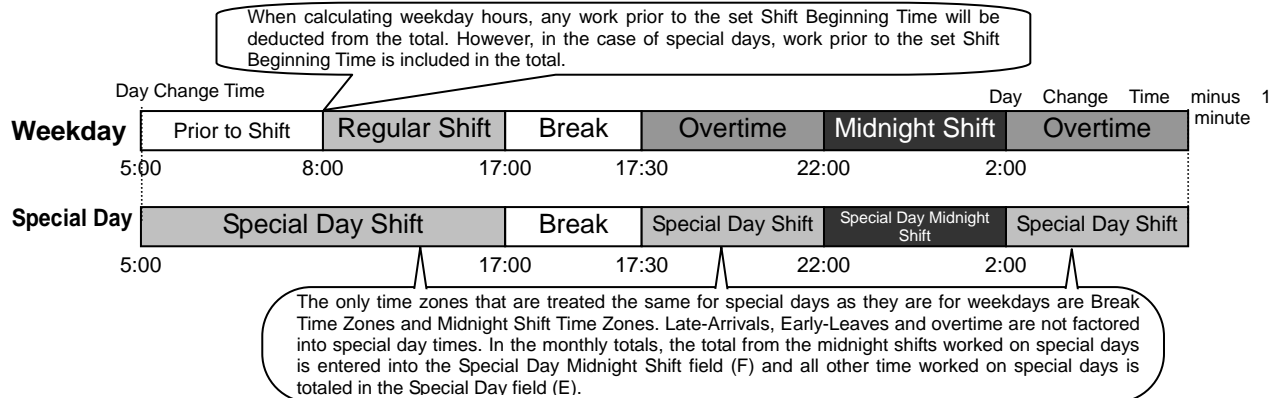| ←	→	←	→		
8:21S	17:42			8:00	

An "S" mark is added.

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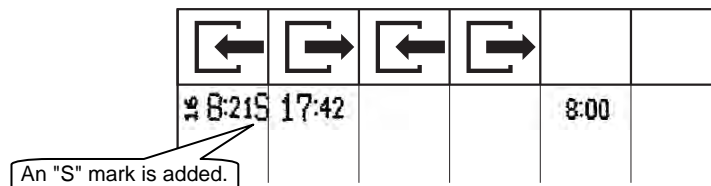
Note
- This operation only applies to the person who presses button ⑥. It will not stay in effect for the next person.
- Button ⑥ is only enabled as long as it LED is on. If you fail to insert the card within 10 seconds after pressing the button, the corresponding LED will go off. Also, if you press the button again while the corresponding LED is on, it will go off.
- As a rule, press button ⑥ when clocking in. However, if you forget to press this button when clocking in, you can still press it later (when clocking in or out for a personal errand and/or when clocking out for the day) and have the day treated as a special day

How the Time is Calculated for Each Type of Employee （→ page 56）

- **Regular Employees:** The time worked is included in the daily overtime total, but is totaled and printed along with the accumulated all-night time in the monthly totals.

Regular Employee Calculations: The Difference between Weekdays and Special Days

When calculating weekday hours, any work prior to the set Shift Beginning Time will be deducted from the total. However, in the case of special days, work prior to the set Shift Beginning Time is included in the total.

Day Change Time · Day Change Time minus 1 minute

Weekday

Prior to Shift	Regular Shift	Break	Overtime	Midnight Shift	Overtime

5:00　　　8:00　　　17:00　17:30　　22:00　　2:00

Special Day

Special Day Shift	Break	Special Day Shift	Special Day Midnight Shift	Special Day Shift

5:00　　　　17:00　17:30　　22:00　　2:00

The only time zones that are treated the same for special days as they are for weekdays are Break Time Zones and Midnight Shift Time Zones. Late-Arrivals, Early-Leaves and overtime are not factored into special day times. In the monthly totals, the total from the midnight shifts worked on special days is entered into the Special Day Midnight Shift field (F) and all other time worked on special days is totaled in the Special Day field (E).

- **Hourly Workers with Fixed Shift:** During monthly calculations, the time worked on special days is totaled and printed in the corresponding time zone.
- **Hourly Workers with Open Shift:** For monthly totals, the time worked on special days is separated between regular hours and overtime and then totaled and printed in the corresponding time zone.

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CONVENIENT FEATURES ‧ ‧ ‧ ‧ ‧

Daily Totals

The MX-300 totals and prints the overtime worked by regular employees and the time worked by hourly workers on a daily basis.

(Calculations will not be made if No Calculation mode or the "NO CAL" option is enabled (see page 61).)

- If there are only 1 or 3 punches when the MX-300 attempts to total the daily times, an error will be generated and the corresponding calculation will not be made.

Print Example   **Regular Employee Time Card**

If an employee clocks out before Shift End Time ("Early-Leave") the OUT punch will be marked with an "E"

If an employee works overtime and then clocks out the OUT punch will be marked with a "T" and the amount of overtime will be printed in the total column.

If an employee forgets a punch which results in only 1 or 3 punches on their card for that day, the MRX-30 can't calculate for that day. An "X" will be added to the last punch if the employee finishes a work pattern that can't be calculated and then they press a button. (The example shown here is of an employee that forgot to punch back in when coming back from a personal errand and then pressed button ⑤ when clocking out for the day.)

If an employee clocks in after Shift Beginning Time ("Late-Arrival") the IN punch will be marked with an "L"

If an employee forgets to press button ③ when clocking out for a personal errand ("out-for-personal-errand") it will be treated as an "Early-Leave" and the OUT punch will be marked with an "E." However, this will be corrected by a recalculation if the employee clocks back in after their errand and then out again at the end of their shift.

If an employee works past the Day Change Time threshold (works an "all-night") and then presses button ① when clocking out the OUT punch will be marked with an "A" and the amount of overtime will be printed in the total column.

If an employee presses button ⑥ when clocking out the day will be treated as a "special day" and the total amount of work that day will be printed in the total column.

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Hourly Worker with Fixed Shift Time Card

←	→	←	→		
16 8:02	17:19			7:30	
17 8:29	16:30			7:00	
19 9:10	19:36			9:00	
20 8:24	10:22	11:22	16:30	1:30	6:00

The daily total is calculated and printed here.

On the second punch, the MX-300 assumes the day has ended for this worker and totals the hours to that point. However, if the worker clocks back in and out again, the second punch and third punches are treated as a GO-OUT and BACK (a clock-in and out for a personal errand) and then the fourth punch is treated as the OUT punch and the daily total is calculated again. (If the worker had pressed button ③ when clocking out for their personal errand, than the MX-300 would not have calculated the daily total at that time.)

Hourly Worker with Open Shift Time Card

←	→	←	→		
16 8:02	17:19			7:30	
17 8:29	16:30			7:00	
19 9:10	19:36T			9:00	

The daily total is calculated and printed here.

If the worker has worked longer than the set Number of Regular Hours the OUT punch will be marked with a "T"

Time Print When the Clock Gets Changed

If the time is changed more than 5 minutes via either of the following methods then the first punch (and only the first punch) after the change will result in the hour portion being printed in a slightly smaller font size and being underlined:

・Time Settings operation using Basic Programming Card #1 (see page 17), or a

・Time Settings operation via the interior operation panel when the programming card is missing (see page 59) (However, if the time is changed back before a punch is made then this feature won't be executed.)

Normal Time Print

20:38

Time Print after Clock Has been Changed

20:38

Report of Grand Total of Overtime for Regular Employees and Total Hours for Hourly Workers (Display Only)

You can use the special combination programming card's REPORT CARD (ON DISPLAY) feature to view the grand total of overtime for regular employees and total hours for hourly workers for the previous month and this month. (These stats aren't printed.)

**1** Insert the REPORT CARD (ON DISPLAY) / REGISTRATION CARD (REG. EMPLOYEES) #9 side of the special combination card.

The card is automatically scrolled to the G. TOTAL OF OT / TOTAL HOURS OF WORKERS position.
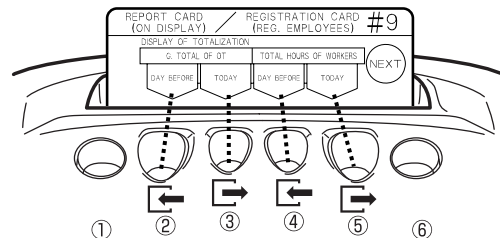
2 Press the button that corresponds to the content you wish to view.

・**G. TOTAL OF OT / DAY BEFORE:** Press button ② to view the grand total of overtime of the regular employees that clocked in yesterday.

* If there are any regular employees that pressed button ⑥ (special day work), then their entire work time from yesterday is included in this total.

・**G. TOTAL OF OT / TODAY:** Press button ③ to view the grand total of overtime of the regular employees that clocked in today.

* If there are any regular employees that pressed button ⑥ (special day work), then their entire work time from today is included in this total.

・**TOTAL HOURS OF WORKERS / DAY BEFORE:** Press button ④ to view the total hours of the hourly workers that clocked in yesterday.

・**TOTAL HOURS OF WORKERS / TODAY:** Press button ⑤ to view the total hours of the hourly workers that clocked in today.

Example: 1789 hours 30 minutes

hours   minutes
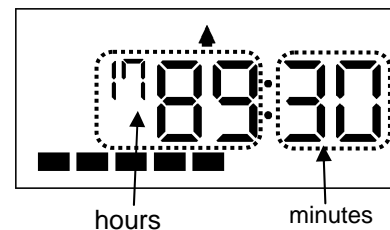
Note	・If there are any employees that haven't clocked out yet today then the totals for the TODAY option will not be accurate.

・If there are any programming changes today then the totals for the TODAY option might not be accurate.

・Also, if the clock as been changed to a past or future time then the totals might be displayed as "0."

3 Press NEXT (button ⑥) two times and then press END (button ⑥) to exit.

・The programming card is ejected and the new time is display

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MONTHLY OPERATIONS ・ ・ ・ ・ ・ ・

Regular Employee Time Card Registration

You need to pre-register the time cards to be used by regular employees prior to having the regular employees use their time cards.

Note | * If No Calculation mode or the "NO CAL" option is enabled (see page 61) then it isn't necessary to register employee time cards.

If a given time card isn't registered as a regular employee time card, then by default it will be treated as a time card for the type of hourly worker (either fixed or open shift) selected using the "TYPE OF SHIFT" option of the Basic Programming Card #2.

As a rule, you should register regular employee time cards prior to the month they will be using them.

→ **To register for next month, follow these instructions:** **1** → **A** → **2**

Sometimes you will have an employee start mid-month.

→ **To register for this month, follow these instructions** **1** → **B** → **2**

Note | "Month" used here is defined as the time period from the day after the Pay Period Ending Date to the Pay Period Ending Date of the next month.
Example: If the Pay Period Ending Date is configured to the 20th:

THIS MONTH (current month)   **NEXT MONTH**

20th 21st   20th 21st   20th

April   **May**   **June**
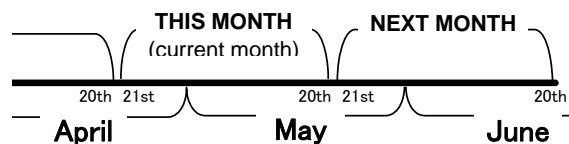
・ If the pay period that extends from April 21 to May 20 has already started and you have a new regular employee in need of a time card, use the THIS MONTH option in the EMPLOYEE CARD REGISTRATION parameter.

・ If you want to register time cards for the pay period that extends from May 21 to June 20 while it is still the April 21 to May 20 pay period, use the NEXT MONTH option in the EMPLOYEE CARD REGISTRATION parameter.

1 Insert the REPORT CARD (ON DISPLAY) / REGISTRATION CARD (REG. EMPLOYEES) #9 side of the special combination card and then press button ⑥.

・ The card is automatically scrolled to the EMPLOYEE CARD REGISTRATION / TOTAL HOURS PRINT position.

Whenever performing a registration or calculation operation using this card, the number of items will be displayed here. The position of the number will vary (as shown below) with the type of month.
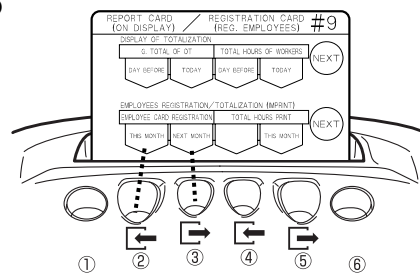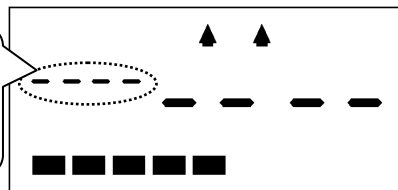
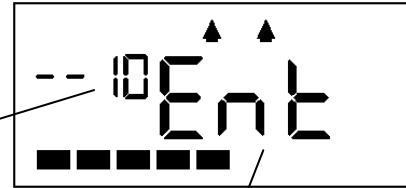Previous month's number of items   This month's number of items   Next month's number of items

A Next Month Registration

(1) EMPLOYEE CARD REGISTRATION / NEXT MONTH:

Press button ③. The card is ejected and the display appears as shown on the right.

Next month's number of regular employee time cards

The display flashes.

05.18 10:59N

(2) Insert the new time card with the blue (front) side showing. As show on the right, an "N" mark ("next" month) with the registration date/time will be printed on the right corner of the card's button and then the card will be ejected.
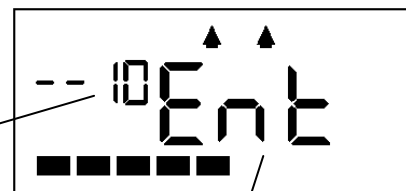
(You can continue with the next time card.)

B Current Month Registration

(1) EMPLOYEE CARD REGISTRATION / THIS MONTH:

Press button ②. The card is ejected and the display appears as shown on the right.

This month's number of regular employee time cards

The display flashes.

05.18 09:42C

(2) Insert the new time card with the blue (front) side showing. As shown on the right, a "C" mark ("current" (this) month) with the registration date/time will be printed on the right corner of the card's button and then the card will be ejected.

(You can continue with the next time card.)

2 Press any button or reinsert the REPORT CARD (ON DISPLAY) / REGISTRATION CARD (REG. EMPLOYEES) #9 side of the special combination card. (The card will be automatically ejected.)

・The current time is displayed signifying the completion of the respective operation.

IMPORTANT!

If a regular employee time card that is registered for next month gets accidentally used during the current pay period (prior to the Pay Period End Date), the corresponding time card will be treated as an hourly worker time card for the current pay period and no longer be usable for next month. Should this happen, dispose of the corresponding card and re-register a new time card for next month.

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How to Print the Monthly Totals for the Previous Pay Period

This section explains how to print the totals for the previous pay period.

> * Calculation can't be performed for cards that have been punched but that are currently missing (lost). Also, bent or dirty cards might not work with this function. (See page 73.)

1 Insert the TOTALIZATION CARD (PREVIOUS PAY PERIOD) #10 side of the special combination card.

・The card is automatically ejected and the display appears as show on the right.

・Remove the card.

> Number of punched time cards from previous pay period.
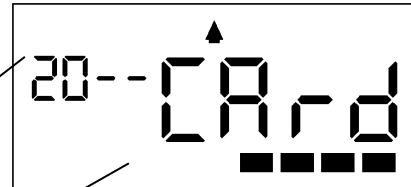
The display flashes.

2 Insert a time card from the previous pay period and the MX-300 will calculate its monthly totals.

・Insert the time card with the orange (back) side showing. The monthly totals will be printed.

(You can continue with the next time card.)

3 Press any button or reinsert the TOTALIZATION CARD (PREVIOUS PAY PERIOD) #10 side of the special combination card. (The card will be automatically ejected.)

・The current time is displayed signifying the completion of the respective operation.
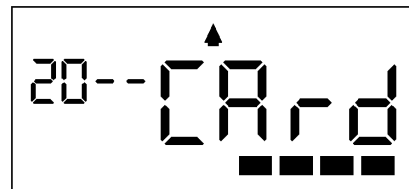
Note The monthly totals will be underlined if there were any days on the card that couldn't be calculated due to missing punches, et al.

> Day that couldn't be calculated.

> The monthly totals are printed here.

←	→	←	→		
8:01	17:20				
8:23	16:30E				
8:12	19:36T			2:00	
8:21	17:42				
8:23	10:20O		X18:35		

A	10:30	7	B	24:45		C	31:00
D	4:45		E	3:30	1	F	5:00
G	7:00		H	1:15		CP	07.08 22P

MRX CARD

Example of Monthly Totals

Regular Employee Time Card Monthly Totals

Regular Hours / Days   Overtime Hours / Days   Midnight Shift Hours / Days

Late-Arrivals & Early-Leaves Hours / Count

A	64:00 21	B	10:30 3	C	12:00 2
D	1:30 2	E	8:00 1	F	0:00
G	2:30 3	H	1:00 1	R	05.01 17 P

MRX CARD

Special Day Overtime Hours

Special Day Hours / Days

Month Type
P = Previous;
C = Current

Personal Errands Hours / Count

All-night Hours (work past the Day Change Time threshold) / Days

Employee Type (R = Regular Employee)

Month, Date and Hour when Calculation was made

Hourly Worker with Fixed Shift Time Card Monthly Totals

A Time Zone Hours / Days (weekdays)   B Time Zone Hours (weekdays)   C Time Zone Hours (weekdays)

D Time Zone Hours (weekdays)

A	10:00 16	B	50:00	C	10:00
D	7:00	E	0:00 1	F	6:30
G	2:00	H	0:00	CP	05.01 17 P

MRX CARD

A Time Zone Hours / Days (special days)

B Time Zone Hours (special days)

Month Type
P = Previous;
C = Current

C Time Zone Hours (special days)

D Time Zone Hours (special days)

Employee Type (CP = Closed Part Time = Hourly Worker with Fixed Shift)

Month, Date and Hour when calculation was made

Hourly Worker with Open Shift Time Card Monthly Totals

Regular Hours / Days (weekdays)   Overtime Hours / Days (weekdays)

A	96:00 12	B	10:00 5	C	
D		E	8:00 1	F	0:30
G		H		FP	05.01 17 P

MRX CARD

Overtime Hours / Days (special days)

Month Type
P = Previous;
C = Current

Regular Hours / Days (special days)

Employee Type (FP = Free Part Time = Hourly Worker with Open Shift)

Month, Date and Hour when Calculation was made

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# How to Print the Monthly Totals for Current Month

The option to print monthly totals for the current month is available for employees that quite during prior to the end of the pay period.

Note As a rule, you should perform monthly totals for the previous month once the pay period has ended.

* Calculation can't be performed for cards that have been punched but that are currently missing (lost). Also, bent or dirty cards might not work with this function. (See page 73.)

1 Insert the REPORT CARD (ON DISPLAY) / REGISTRATION CARD (REG. EMPLOYEES) #9 side of the special combination card.

・Press NEXT (button ⑥).
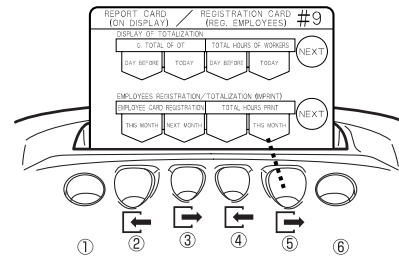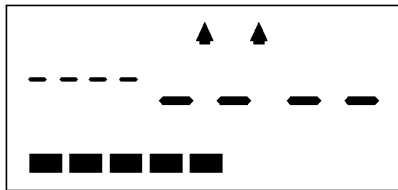
2 Select THIS MONTH (button ⑤).

・The card is ejected. Remove the card.

・The display appears as shown on the right.

The display flashes.

Number of punched time cards from current pay period.
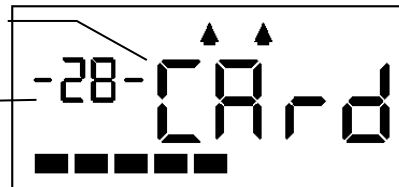
3 Insert a time card from the current pay period and the MX-300 will calculate its monthly totals.

・Insert the time card with the orange (back) side showing. The monthly totals will be printed.

(You can continue with the next time card.)

4 Press any button or reinsert the REPORT CARD (ON DISPLAY) / REGISTRATION CARD (REG. EMPLOYEES) #9 side of the special combination card. (The card will be automatically ejected.)

・The current time is displayed signifying the completion

of the respective operation.
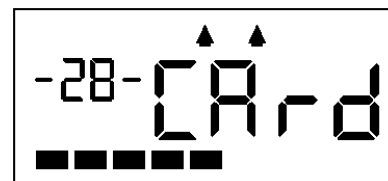
Note ・If any programming changes have been made this month, the calculations might not be affected.

・To interpret the monthly totals, refer to the monthly total examples (previous pay period) on the previous page.

*The only difference is that "C" will be printed instead of "P" to indicate the totals are for the current month.

How to Delete Employee Registration Data (Initialization)

This section explains how to delete employee registration data stored in the time recorder for regular employee time cards.

| **Note** | Initialization can't be performed for time cards that have been punched but that are currently missing (lost). Time cards that have been initialized can be re-registered for use as time cards again. If the time card has already been punched, it will be overwritten (punched) from the top line. |
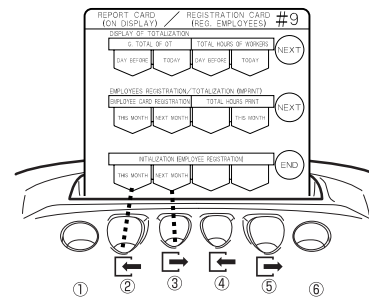
1 Insert the REPORT CARD (ON DISPLAY) / REGISTRATION (REG. EMPLOYEES) #9 side of the special combination card.

・Press NEXT (button ⑥) twice to scroll to the INITIALIZATION (EMPLOYEE REGISTRATION) setting of the card.

2 Delete the individual registration data.

・**Deleting This Month's Registrations**

Select THIS MONTH (button ②). The special combination card is ejected and the display appears as shown on the right. Insert the time card you wish to initialize. The card is fed in and initialized and then ejected. The display appears as shown on the right and a monotone beep is sounded to confirm that the operation has been executed. The number of cards displayed is flashed every two seconds.

The display flashes.
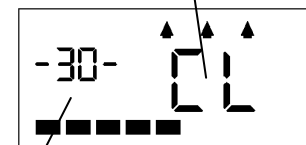
Number of punched time cards from current pay period.

・**Deleting Next Month's Registrations**

Select NEXT MONTH (button ③). The special combination card is ejected and the display appears as shown on the right. Insert the time card you wish to initialize. The card is fed in and initialized and then ejected. The display appears as shown on the right and a monotone beep is sounded to confirm that the operation has been executed. The number of cards displayed is flashed every two seconds.

The display flashes.
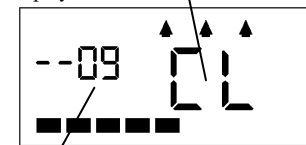
Next month's number of regular employee time cards

When a regular employee time card has been initialized in this manner, a couple of rows of asterisks (*****) will be printed on the front (blue) side as shown on the right. (This applies to the initialization of hourly worker cards as well.

| **Note** | ▪ This operation can't be used to initialize one card after another. To initialize multiple cards, you will need to repeat from step 1 for each time card.
▪ Press any button when "CL" is displayed and the current time is displayed signifying the completion of the respective operation.
▪ Also, if the MX-300 is left alone for a minute or two, it will automatically abort this operation and display the current time. |
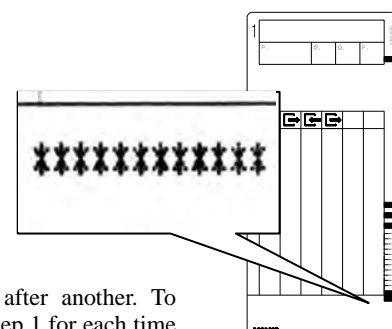
IF YOU LOSE A CARD··························

In the event that you should lose Basic Programming Card #1 or the special combination card, it is still possible to perform a few operations using the operation panel inside the MX-300's top cover. Follow the corresponding steps to perform the desired operation:

- **Time Settings:** `1` → `A` → `2`
- **Employee Card Registration:** `1` → `B` → `2`
- **Total Hours Print:** `1` → `C` → `2`

> **IMPORTANT!** ⚠ **CAUTION**
> - The methods discussed in this section are intended only for emergency situations and should not be used if you have the necessary card.
> - Some of these operations involving printing on cards while the top cover is open so be extra careful not to get your fingers caught in the MX-300.

If you lose the special combination card or any of the programming cards, please purchase the "MX-300 Programming Card Set" from your local Amano service dealer or representative.

1 While the power is still on, remove the top cover.

ATTENTION!

- Prior to opening the top cover, be sure to first ground yourself (e.g.; touch a large metal object such as a steel desk) to remove static electricity from your body to avoid shocking the MX-300. This is particular important during when the humidity is low (winter, et al). Failure to remove static electricity could result in mechanical failure.

| Press your thumbs here. |
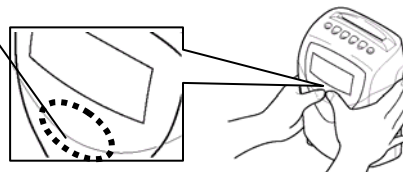
- Press your thumbs (somewhat firmly) just below the LCD display (in the location illustrated) to remove the top cover.
- When you remove the top case, the word "OPEN" flashes on the display.

A Time Settings

① **Press and hold down the Clock Min(+) button for two seconds.**
  - When you hold down the Clock Min(+) button for two seconds, a monotone beep will sound and the current time will be displayed.
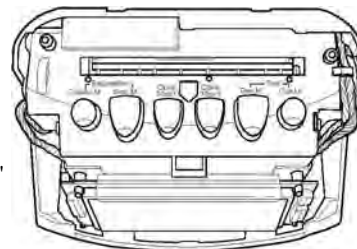
② **Adjust the time.**
  - Press the Clock Min(+) button to increase the time one minute at a time.
  - Press the Clock Min(-) button to decrease the time one minute at a time.

Note
  o The moment you press either button the seconds are reset to "0."
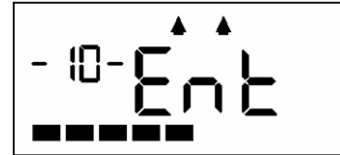 o Keeping either button pressed will not enable speed scrolling.

→ Go to step `2`

B Employee Card Registration

Employee Card Registration for Current Month

・Hold down the Registration Current M button for two seconds. A

beep will sound and the display will appear as shown on the right.

・Insert a new time card.

・The card will be registered (imprinted) and then ejected.

Employee Card Registration for Next Month

・Hold down the Registration Next M button for two seconds. A beep will sound and

the display will appear as shown on the right.

・Insert a new time card.

・The card will be registered (imprinted) and then ejected.

Note	・For details regarding "Current Month" and "Next Month" please see page 53.
	・You can continue with the next time card.

→ Go to step **2**

## C Total Hours Print

Total Hours Print for Previous Month

・Hold down the Total Prev. M button for two seconds. A beep will

sound and the display will appear as shown on the right.

・Insert an imprinted time card from last month.

・The total hours will be calculated and printed and then the card will be ejected.
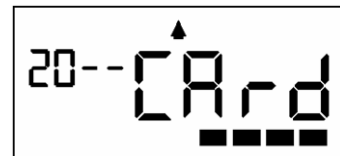
Note	You can continue with the next time card.

Total Hours Print for Current Month

・Hold down the Total / Curr. M button for two seconds. A beep will

sound and the display will appear as shown on the right.

・Insert a time card currently being used.

・The total hours will be calculated and printed and then the card will be ejected.
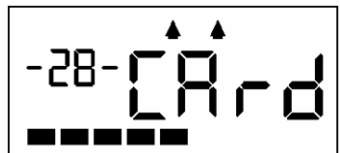
Note	You can continue with the next time card.

→ Go to step **2**

2 Close the top cover.

・The current time is displayed signifying the completion of the respective operation.

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DISABLING THE CALCULATION FEATURE··········

The MX-300 is a time recorder equipped with the ability to calculate times, but there may be times in the course of your operations where you will find it useful to disable the calculation feature. There are two basic ways of disabling the MX-300's calculation feature:

● THE "NO CAL" SETTING

When this setting is enabled, the MX-300 doesn't calculate working hours but only punches the IN/OUT times on the time card. Different from when the NO CALCULATION / ON setting is enabled, **the MX-300 will continue to perform Auto-Column-Shifting, keeping it unnecessary for workers to use the operation buttons.** (Maximum No. of Employees: 50). In addition, the NO CAL setting can be enabled for both regular employees and hourly workers or for only one or the other.

* While the NO CAL setting is enabled for a given type of employee (regular employee, hourly worker with fixed shift and hourly worker with open shift), the all other corresponding settings are disabled.

● THE "NO CALCULATION / ON" SETTING

When this setting is enabled, the MX-300 doesn't calculate working hours but only punches the IN/OUT times on the time card. Also, depending on the number of time punches, **the MX-300 won't perform Auto-Column-**Shifting. Therefore when this setting is enabled, all employees will need to check and select the print zone.

> * While the NO CALCULATION / ON setting is enabled, all the regular employee, hourly worker with fixed shift and hourly worker with open shift settings are disabled.

The following combinations are available:

A. **Time punch only (no calculation) for regular employees and hourly workers; Auto-Column-Shifting disabled:**
→ Select the 1 ON option of the NO CALCULATION

B. **Time punch only (no calculation) for regular employees and hourly workers; Auto-Column-Shifting enabled:**
→ Hourly Workers: Select the NO CAL option of the ROUNDING UNIT setting for the type of hourly worker selected for the TYPE OF SHIFT setting (Refer to "How to Change the Calculation Mode" on page 22)
→ Regular Employees: Skip employee card registration.

C. **Calculation for regular employees, but time punch only (no calculation) for hourly workers:**
→ Hourly Workers: Select the NO CAL option of the ROUNDING UNIT setting for the type of hourly worker selected for the TYPE OF SHIFT setting (Refer to "How to Change the Calculation Mode" on page 22)

D. **Calculation for hourly workers, but time punch only (no calculation) for regular employees:**
→ Regular Employees: Select the NO CAL option of the ROUNDING UNIT setting

How to Enable the NO CALCULATION / ON Setting

1 Insert BASIC PROGRAMMING CARD #2.

▪ The card is automatically scrolled to the calculation mode selection ("FOR HOURLY WORKERS") position and the currently selected mode is displayed.
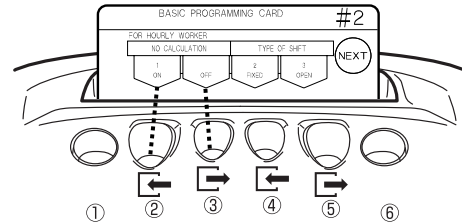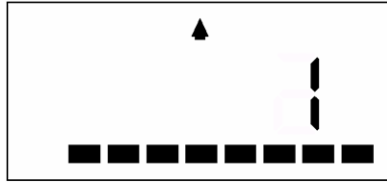
2 Select the "1 ON" option (button ②).

**3** Press NEXT (button ⑥) three times and then press END (button ⑥) one time to exit.

・The NO CALCULATION / ON setting is enabled.
・The programming card is ejected and the current time is displayed.

How to Enable the NO CAL Setting

・Select the NO CAL option can be enabled for the type of hourly worker (fixed or open shift) selected using the TYPE OF SHIFT setting (refer to "How to Change the Calculation Mode" on page 22) and regular employees.

1 Insert the corresponding programming card for the type of employee you wish to enable the NO CAL setting for (differs for regular employee, hourly worker with fixed shift and hourly worker with open shift).

・The card is automatically scrolled to the ROUNDING UNIT position.
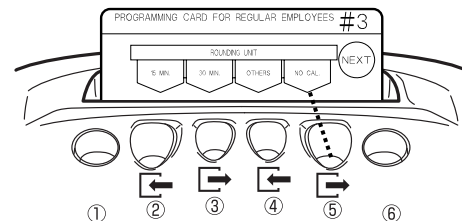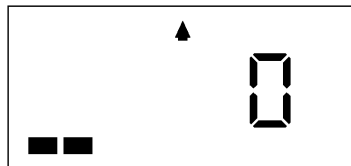
(Example: PROGRAMMING CARD FOR REGULAR EMPLOYEES #3)

2 Select the "NO CAL" option (button ⑤).

3 Press button ⑥ until the programming card is ejected.

・The NO CAL setting is enabled.
・The programming card is ejected and the current time is displayed.

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TROUBLESHOOTING · · · · · · ·

Refer to this table for troubleshooting problems with the MX-300.

Problem	Possible Cause and Solution
The card won't go in.	The power is out (power failure, et al.). ⇨ Wait until the power is restored. The power plug is loose. ⇨ Plug the power plug firmly into the outlet.
The card ejected without being printed.	The card is facing the wrong direction. ⇨ Insert the card again facing the correct direction. The card wasn't inserted correctly. ⇨ Lightly tap the card into the card slot.
The time is ahead or behind the actual time.	The TIME SETTINGS parameter isn't correct. ⇨ Adjust the time (clock). *(Refer to page 17.)*
The date is wrong.	The DATE SETTINGS setting isn't correct. ⇨ Adjust the calendar. *(Refer to page 18.)*
The printing is too light.	The ribbon cartridge is worn out. ⇨ Replace the ribbon cartridge. *(Refer to page 64.)*
The printing is missing in some places.	The ribbon cartridge isn't inserted correctly. ⇨ Insert the ribbon cartridge correctly. *(Refer to page 64.)*
The printing is in the wrong place.	The PAY PERIOD ENDING DATE setting is incorrect. ⇨ Correct the PAY PERIOD ENDING DATE setting *(Refer to page 19.)* The DAY CHANGE TIME setting is incorrect. ⇨ Adjust the DAY CHANGE TIME setting. *(Refer to page 21.)*
The printed numbers are streaked.	This is likely due to improper use, such as jerking the time card out while it is being printed. (NOTE: Continued improper use might cause the MX-300 to malfunction.)
The printed time is too small.	A mark was added to the IN time ("S" ,"L" et al.) ⇨ *This is not a malfunction.* The time was corrected. ⇨ When the time is corrected, the print will be smaller than normal. *This is not a malfunction.*
An asterisk (*) is printed in the TOTAL column.	The "NO CAL" option has been enabled for the corresponding type of time card. *This is not a malfunction. (Refer to page 62.)*
IN punch won't work on the day after the PAY PERIOD ENDING DATE	The time card wasn't punched on the corresponding Pay Period Ending Date. Perform a Previous Month Total Hours Print for the corresponding time card. *(Refer to page 55.)*
An error code appears on the display (E-XX).	Refer to "Error Codes" (next page).

Error Codes

When the MX-300 generates an error, a two-tone or monotone beep is sounded and the accompanying error code appears on the display (E-XX). Likewise, if there is a conflict in the settings, the MX-300 generates a parameter error, a monotone beep is sounded and the accompanying error code appears on the display (P-XX). In either case, refer to the following error code tables to check for the corresponding action to take to resolve the error.

Sample Display of an Error Code (E-09)
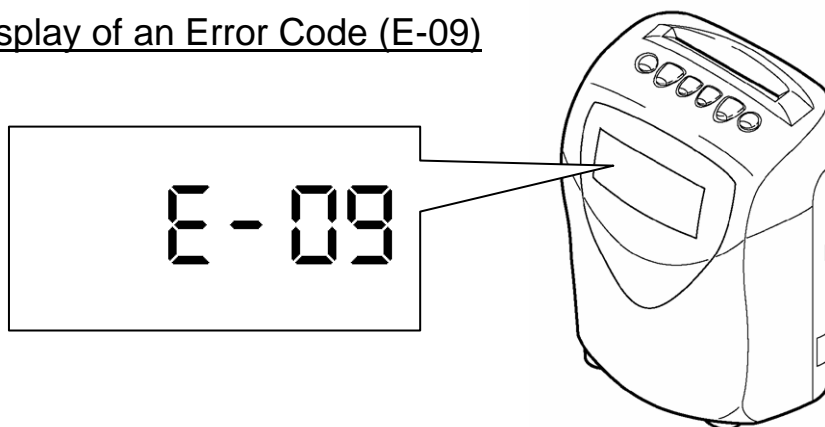
Error Code Tables

・If an error only occurs for a given time card, replace it with a new time card.

・If the same error occurs for all time cards, please contact your local Amano service dealer or representative.

・If an error occurs that is suspected to be mechanical in nature, you might be able to recover the MX-300 by unplugging it for about 10 seconds and then plugging it back on again. If this doesn't work, please contact your local Amano service dealer or representative.

ERROR CODE	DESCRIPTION, POSSIBLE CAUSE AND SOLUTION
E-00, E-02, E-03 E-04 (MECHANICAL ERROR)	These are errors related to the mechanical operation of the MX-300 (e.g.; memory related errors, printer related errors, et al.). Try unplugging the MX-300 for about 10 seconds and then plugging it back on again. If this doesn't work, please contact your local Amano service dealer or representative.
E-01, E-05, E-06, E-07, E-08, E-09 (TIME CARD ERROR)	Check the front and back of the time card to make sure that it is in good condition and then reinsert the time card. If the time card is damaged (dust, dirt, marks, bent, et al) replace it with a new time card.
E-10 (BUTTON NOT PRESSED YET)	Press the corresponding button (IN, OUT, et al) and then reinsert the time card.
E-12 (INVALID CARD)	An invalid kind of card was inserted. Insert a correct type of time card.

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ERROR CODE	DESCRIPTION, POSSIBLE CAUSE AND SOLUTION
E-13 (CARD NOT REMOVED PROPERLY)	The card was removed too soon, et al. Reinsert the time card and WAIT for the MX-300 to eject it before removing it from the card slot.
E-14 (5-SECOND RULE ERROR)	The same time card was inserted within five seconds of being punched. Wait five seconds until reinserting the same time card.
E-15 (4-PUNCH RULE)	The time card has already been punched four times this day.
E-16 (OVERPRINT PREVENTION)	Someone tried to clock in with a time card that was already clocked in for the day by pressing the IN button again. The MX-300 will not print over of an already punched time. Try another button. The same applies for clocking in and out for personal errands and clocking out for the day.
E-17 (CLOCK TAMPERING ERROR)	Someone tried to tamper with the clock (set it back, et al) and then clock in, out, et al. Readjust the clock to the correct time.
E-18 (CALCULATION MODE INCORRECT)	This error occurs when you attempt to change the time card's hourly worker shift type (fixed ⇨ open OR open ⇨ fixed) in the middle the month. Try another time card instead.
E-19 (TOO LATE TO CLOCK OUT FOR PREVIOUS DAY'S ALL-NIGHT)	This error occurs when you attempt to clock out for an all-night that began the previous day after the same time card has been clocked in for today. The MX-300 can only punch the OUT time for an all-night at the time it ends.
E-20 (ALREADY REGISTERED)	Someone tried to register an already registered card.
E-21 (NO CARD DATA)	There is no data for time card currently inserted.
E-22 (50-ITEM REGISTRATION RULE)	The number of items registered has exceeded the 50 item limit.
E-23 (DUPLICATE CARD NUMBER)	Due to a change in the Pay Period Ending Date setting, the same card number was generated twice. Use a new time card.

* The following parameter errors will occur when there is a conflict in the parameter settings:

ERROR CODE	DESCRIPTION, POSSIBLE CAUSE AND SOLUTION
P-12 (REGULAR SHIFT TIME ZONE PARAMETER ERROR)	1) You attempted to configure the Shift End Time to a time earlier than the Shift Beginning Time. 2) You attempted to configure the Shift End Time to a time that extends over the Day Change Time. 3) You attempted to configure the Shift End Time to the same time as the Shift Beginning Time. 4) You attempted to configure the Shift End Time to the same time as the Day Change Time.
P-13 (OVERTIME ZONE PARAMETER ERROR)	1) You attempted to configure the Overtime Beginning Time to a time earlier than the Shift End Time. (It is okay to configure the Shift End Time and Overtime Beginning Time to the same time.)
P-14 (MIDNIGHT SHIFT TIME ZONE PARAMETER ERROR)	1) You attempted to configure the Midnight Shift End Time to a time earlier than the Midnight Shift Beginning Time. 2) You attempted to configure the Midnight Shift End Time to the same time as the Day Change Time.
P-15 ~ P-18 (REGULAR EMPLOYEE BREAK TIME ZONE PARAMETER ERROR)	1) You attempted to configure the Break End Time to a time earlier than the Break Beginning Time. 2) You attempted to configure overlapping breaks. 3) You attempted to configure a break in between the Shift End Time and Overtime Beginning Time. 4) You attempted to configure a break that extends over the Day Change Time. 5) You attempted to configure a break that extends over the Shift Beginning Time. 6) You attempted to configure a break that extends over the Shift End Time. 7) You attempted to configure a break that starts or ends at same time as the Shift End Time. 8) You attempted to configure a break that encompasses the Shift Time Zone. 9) You attempted to configure a break that encompasses the Shift Time Zone and Midnight Time Zone.
P-23 ~ P-24 (HOURLY WORKER FIXED SHIFT TIME ZONE PARAMETER ERROR)	1) You attempted to configure the C Time Zone Beginning Time to the same at the B Time Zone Beginning Time. 2) You attempted to configure the D Time Zone Beginning Time to the same at the B Time Zone Beginning Time. 3) You attempted to configure the D Time Zone Beginning Time to the same at the C Time Zone Beginning Time.
P-25 ~ P-28 (HOURLY WORKER FIXED SHIFT BREAK TIME ZONE PARAMETER ERROR)	1) You attempted to configure the Break End Time to a time earlier than the Break Beginning Time. 2) You attempted to configure overlapping breaks. 3) You attempted to configure a break that extends over the Day Change Time. 4) You attempted to configure a break that encompasses the Shift Time Zone.
P-33 ~ P-34 (HOURLY WORKER OPEN SHIFT TIME ZONE PARAMETER ERROR)	1) You attempted to configure the number of break hours to the same amount of time as the Number of Regular Hours. 2) You attempted to configure the number of break hours to an amount of time greater than the Number of Regular Hours.

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REPLACING THE RIBBON CARTRIDGE

WARNING ⊘ Do not attempt to insert or unplug the power plug with wet hands.
NO WET HANDS! Doing so could result in fire or electrocution.

CAUTION ⚡ Always unplug the power cord gently. Ripping the cord out of the
GENTLY UNPLUG THE PLUG! outlet might damage the cord and possibly result in fire or
electrocution.

Replace the ribbon cartridge when the imprint becomes too light.

> **ATTENTION!**
>
> ・Prior to opening the top cover to replace the ribbon cartridge, be sure to first ground yourself (e.g.; touch a large metal object such as a steel desk) to remove static electricity from your body to avoid shocking the MX-300. This is particular important when the humidity is low (winter, et al). Failure to remove static electricity could result in mechanical failure.

Note The ribbon cartridge model number is CE319250.

(This model number is subject to change without notice when new cartridges are produced.

When purchasing ribbon cartridges, be sure to check whether they are compatible for use with

the MX-300.)

1 While the power is still on, remove the top cover.

・Press your thumbs (somewhat firmly) just below the LCD display (in the location illustrated) to remove the top cover.

Press your thumbs here.
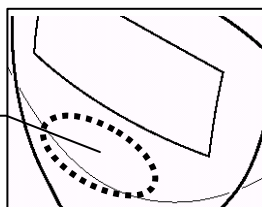
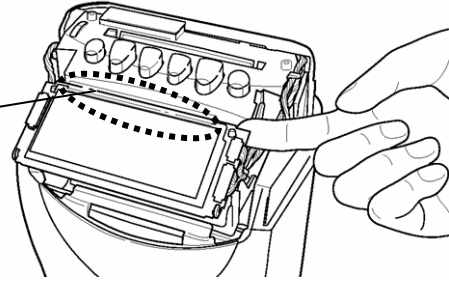・When you remove the top case, the word "OPEN" flashes on the display.

oPEn

2 Unplug the power cord from the outlet.
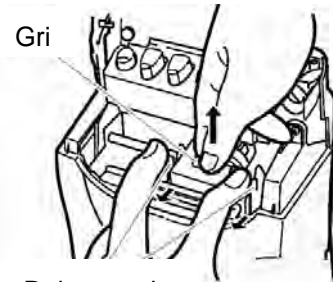
3 Lift the display up.

・Lift the display up as shown below.

Be careful not to touch with this area!

### 4 Remove the old ribbon cartridge.

・As illustrated, place two fingers on the ribbon cartridge release tabs, push down and then toward the case. While holding down the tabs with one hand, remove the ribbon cartridge by its grip with the other hand.

Gri

Release tabs

5 Insert the new ribbon cartridge.

・Insert the new ribbon cartridge between the ribbon guide and printer head. Press down the ribbon cartridge until it clicks into place.
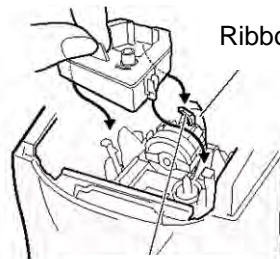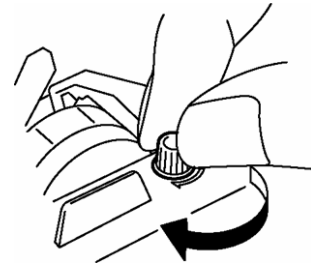
Ribbon guide

Knob

Printer head

6 Remove the slack in the ribbon.

・Turn the knob clockwise to remove any slack in the ribbon.

7 Put the top cover back on.

8 Plug the power cord back into the outlet.

・The display will show the current time.

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INSTALLATION · · · · · · · · · · ·

Installation Precautions

Failure to note the following precautions regarding installation might cause your MX-300 to malfunction.

・Do not install in a location subject to direct sunlight or next to heat generating sources!

・Do not install in a location subject to rain.

・Do not install in a location subject to strong vibrations or direct impact.

・Do not install in a location subject to corrosive gases, steam or salt water damage.

⚠️**CAUTION**

🚫 NO DIRECT SUNLIGHT!   🚫 NO MOISTURE OR DUST!   🚫 NO STRONG VIBRATIONS OR IMPACT!

How to Install

If you wish to place the MX-300 on a table, the recommend height is 75 cm.

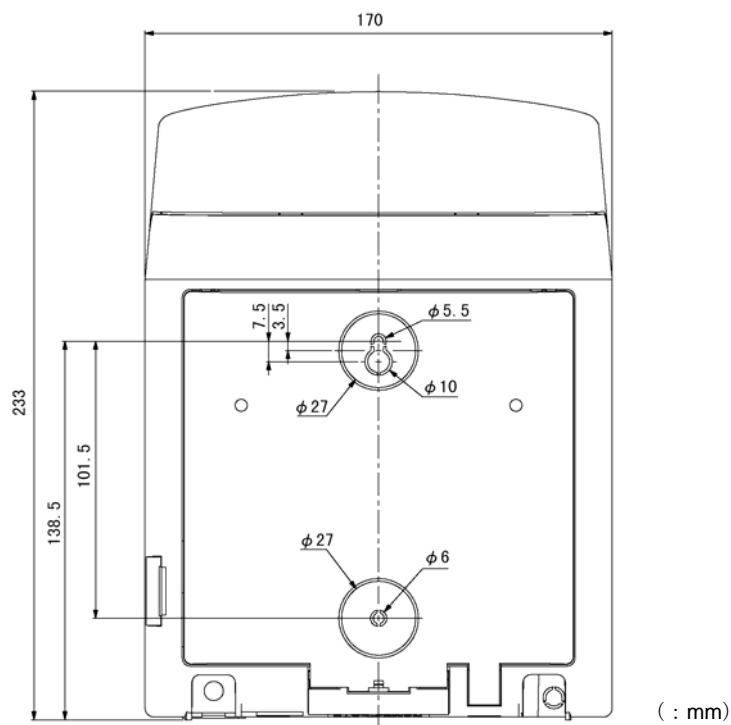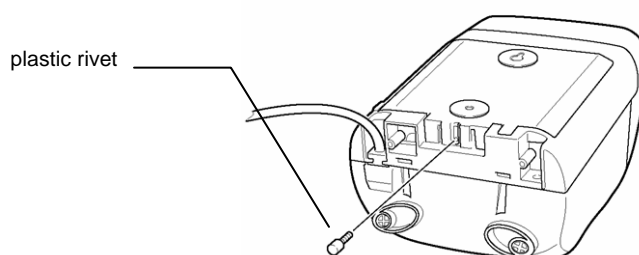⚠️**CAUTION**

🚫 NO WOBBLING!   ❗ USE A FIXTURE!

> The MX-300 can also be wall mounted. For instructions on wall mounting, see the next page.

Wall Mounting

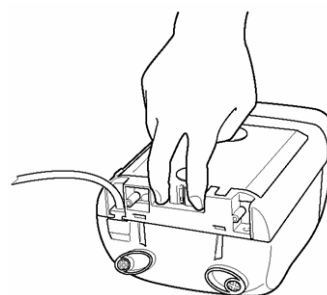Prepare two wood screws or a mounting fixture that can sufficiently bear the MX-300's weight.

(：mm)

1 As illustrated below, remove the plastic rivet on the bottom of the unit.

plastic rivet

2 Remove the back panel.

As illustrated below, place two fingers on the tabs and lift the back panel from the unit.
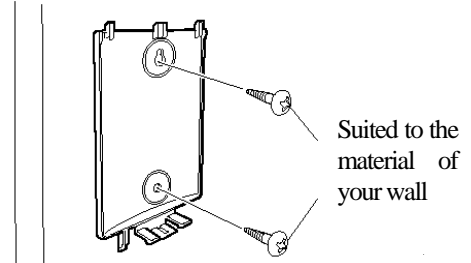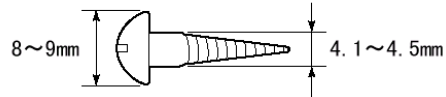

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3 Use a screwdriver to remove the center material from the mounting holes in the back panel.

4 Mount the back panel to the wall.

Use the two wood screws to mount the back panel to the wall. Be sure to select the type of screw best suited to the material of your wall.

8～9mm   4. 1～4. 5mm

Suited to the material of your wall

5 Reattach the MX-300 to its back panel.

As illustrated below, first carefully snap the top side of the MX-300 into place first and then the bottom should fit into place.
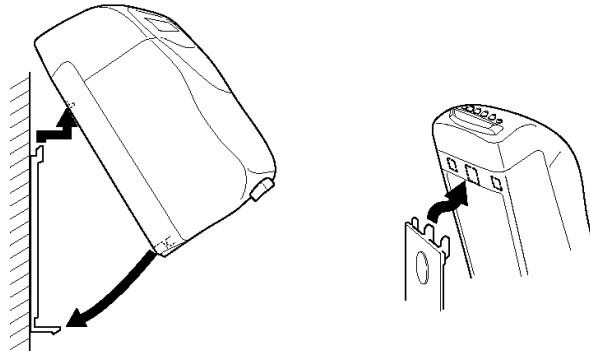
6 Secure the plastic rivet into the bottom of the MX-300.

IMPORTANT!

・If the MX-300 is not correctly mounted, it might fall, resulting in damage and/or injury.
・Be sure to use the appropriate kind of screws when mounting the MX-300 on a concrete wall or a wall with some other kind of special material.

Power Connection

When the MX-300 is shipped, its clock is set to the current time.
Plug the power cord into a AC220-240V outlet.
The clock will display the current time.
If you don't need to change any of the settings, you can begin using the MX-300 right away.

WARNING

DO NOT OVERLOAD THE OUTLET!　　NO WET HANDS!　　USE ONLY SPECIFIED VOLTAGE!

A Word about Power

Please provide the MX-300 with a stable and dedicated power supply that is not shared with other devices.

A Word about the Lithium Battery

The built-in lithium battery provides power for powering the internal clock in the event of a power failure. The battery is designed to last up to 3 years of cumulative power failure time to preserve the MX-300's settings whenever you need to unplug it to move it and/or due to power failure.

Compatible Time Cards

The MX-300 can use MRX formatted time cards, various MRX programming cards and a special combination MRX card (report/registration/totalization).

Time Cards

Time cards are the cards used by employees and hourly workers. Only regular employee cards need to be registered prior to use. See page 53 for additional information regarding regular employee registration.

Front Side (Blue)   **Back Side (Orange)**

Barcode margin

Special Note about the Care of the Barcode Margin
Improper handling of the barcode margin might result in misreads and prevent accurate calculation of hours.
・ Please keep the barcode margin on either side of the time card free from all manner of dust, dirt, pen marks, post-its, white-out correction ink, et al.
・ Do not bend or cut the card.

Programming Cards and the Special Combination Card

There are four programming cards designed for configuration a variety of settings including setting the time and date of the MX-300's clock and calendar. Use these cards for making changes to MX-300 parameters. (Refer to pages 16 to 41 for step-by-step instructions to programming methods using the programming cards.)

In addition, there is a special combination card that can be used for totaling work hours and registering regular employees. (Refer to pages 52 - 58 for step-by-step instructions for the combination card).

Programming Cards

Special Combination Card
Front: REPORT CARD (ON DISPLAY)
& REGISTRATION CARD (REG.
EMPLOYEES) #9
(PREVIOUS PAY PERIOD) #10)

PROGRAMMING CARD FOR HOURLY WORKER WITH OPEN SHIFT #7
PROGRAMMING CARD FOR HOURLY WORKER WITH FIXED SHIFT SCHEDULE #5
PROGRAMMING CARD FOR REGULAR EMPLOYEES #3
BASIC PROGRAMMING CARD #1

TIME SETTINGS
HOUR + MINUTE + − (NEXT)

DATE SETTINGS
YEAR + MONTH + DATE + (NEXT)

PAY PERIOD ENDING DATE
31th 20th 25th others (NEXT)

DAY CHANGE TIME
HOUR + (END)

DEFAULT SETTING
−DD MM YY TT (CURRENT DATE)
−PAY PERIOD ENDING DATE (31th)
−DAY CHANGE TIME (3:00 AM)

AMANO

REPORT CARD (ON DISPLAY) / REGISTRATION CARD (REG. EMPLOYEES) #9

DISPLAY OF TOTALIZATION
C. TOTAL OF OT | TOTAL HOURS OF WORKERS
DAY BEFORE | TODAY | DAY BEFORE | TODAY (NEXT)

EMPLOYEES REGISTRATION/TOTALIZATION (IMPRINT)
EMPLOYEE CARD REGISTRATION | TOTAL HOURS PRINT
THIS MONTH | NEXT MONTH | THIS MONTH (NEXT)

INITIALIZATION (EMPLOYEE REGISTRATION)
THIS MONTH | NEXT MONTH (END)

PRE−REGISTRATION IS NECESSARY FOR REGULAR EMPLOYEES

AMANO

Barcode margin

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APPENDIX ···

MX-300 Programming Sheets

Fill in the programming sheets with your MX-300 settings and keep them stored in a safe place. Please have these sheets ready when contacting your local Amano service dealer or representative.

★ When contacting your local Amano service dealer or representative:
  ① Have the model name ready. (MX-300)
  ② Have these programming sheets ready so that you can respond to potential questions from your service dealer or representative.
  ③ Have the error code ready (if any). (e.g., E-02, P-13, et al.)

BASIC PROGRAMMING

Item		Your Setting	Factory Setting	Setting Range
P-03	PAY PERIOD TYPE		Monthly	1st to 31st
P-04	PAY ENDIING DAY/DATE		**31 (End of Month)**	0 to 23
P-05	CALCULATION MODE (*1)		3 - HOURLY WORKERS WITH OPEN SHIFT	1: NO CALCULATION MODE ON 2: HOURLY WORKERS WITH FIXED SHIFT 3: HOURLY WORKERS WITH OPEN SHIFT
P-06/07	DAYLIGHT SAVING TIME	BEGINNING		---- (not configured)	
		END		---- (not configured)	
P-40	PASSWORD		- - - -	
P-41	DAY CHANGE TIME		5:00	0:00 to 23:29
P-42	Minute Indication/Imprint		60/60	60/60 60/100 100/100
P-43	Time Signal Duration		1 Second	0 to 99 Seconds

PROGRAMMING FOR REGULAR EMPLOYEES

Item		Your Setting	Factory Setting	Setting Range
P-11	ROUNDING UNIT		30 minutes	1, 5, 10, 15, 20, 30, 60 / 0 (NO CAL)
P-12	SHIFT SCHEDULE	BEGINNING		8:30	0:00 to 23:59
		END		17:30	0:00 to 23:59
P-13	OVERTIME BEGINNING TIME		- -:- - (not configured)	0:00 to 23:59 / - -:- -
P-14	MIDNIGHT SHIFT	BEGINNING		- -:- - (not configured)	0:00 to 23:59 / - -:- -
		END		- -:- - (not configured)	0:00 to 23:59 / - -:- -
P-15	# 1 FIXED BREAK	BEGINNING		- -:- - (not configured)	0:00 to 23:59 / - -:- -
		END		- -:- - (not configured)	0:00 to 23:59 / - -:- -
P-16	# 2 FIXED BREAK	BEGINNING		- -:- - (not configured)	0:00 to 23:59 / - -:- -
		END		- -:- - (not configured)	0:00 to 23:59 / - -:- -
P-17	# 3 FIXED BREAK	BEGINNING		- -:- - (not configured)	0:00 to 23:59 / - -:- -
		END		- -:- - (not configured)	0:00 to 23:59 / - -:- -
P-18	# 4 FIXED BREAK	BEGINNING		- -:- - (not configured)	0:00 to 23:59 / - -:- -
		END		- -:- - (not configured)	0:00 to 23:59 / - -:- -

PROGRAMMING FOR HOURLY WORKERS WITH FIXED SHIFT

*1: These settings are only valid when 2 - HOURLY WORKERS WITH FIXED SHIFT is selected as the calculation mode.

	Item		Your Setting	Factory Setting	Setting Range
P-21	ROUNDING UNIT			15 minutes	1, 5, 10, 15, 20, 30, 60 / 0 (NO CAL)
P-22	B TIME ZONE	BEGINNING		- -:- - (not configured)	0:00 to 23:59 / - -:- -
		END		- -:- - (not configured)	0:00 to 23:59 / - -:- -
P-23	C TIME ZONE	BEGINNING		- -:- - (not configured)	0:00 to 23:59 / - -:- -
		END		- -:- - (not configured)	0:00 to 23:59 / - -:- -
P-24	D TIME ZONE	BEGINNING		- -:- - (not configured)	0:00 to 23:59 / - -:- -
		END		- -:- - (not configured)	0:00 to 23:59 / - -:- -
P-24	# 1 FIXED BREAK	BEGINNING		- -:- - (not configured)	0:00 to 23:59 / - -:- -
		END		- -:- - (not configured)	0:00 to 23:59 / - -:- -
P-26	# 2 FIXED BREAK	BEGINNING		- -:- - (not configured)	0:00 to 23:59 / - -:- -
		END		- -:- - (not configured)	0:00 to 23:59 / - -:- -
P-27	# 3 FIXED BREAK	BEGINNING		- -:- - (not configured)	0:00 to 23:59 / - -:- -
		END		- -:- - (not configured)	0:00 to 23:59 / - -:- -
P-28	# 4 FIXED BREAK	BEGINNING		- -:- - (not configured)	0:00 to 23:59 / - -:- -
		END		- -:- - (not configured)	0:00 to 23:59 / - -:- -

PROGRAMMING FOR HOURLY WORKERS WITH OPEN SHIFT

*1: These settings are only valid when 3 - HOURLY WORKERS WITH OPEN SHIFT is selected as the calculation mode.

	Item	Your Setting	Factory Setting	Setting Range
P-31	ROUNDING UNIT		15 minutes	1, 5, 10, 15, 20, 30, 60 / 0 (NO CAL)
P-32	NUMBER OF REGULAR HOURS		0:00	0:00 (not configured) / 0:01 to 23:29
P-33	BASIC HOURS FOR BREAK 1		- -:- - (not configured)	0:00 to 23:59 / - -:- -
	BREAK TIME 1		- -:- - (not configured)	0:00 to 23:59 / - -:- -
P-34	BREAK HOURS 2		- -:- - (not configured)	0:00 to 23:59 / - -:- -
	BREAK TIME 1 + 2		- -:- - (not configured)	0:00 to 23:59 / - -:- -

PROGRAMMING FOR TIME SIGNAL SCHEDULES

Step No.	Days							Time	Setting Range
	MO	TU	WE	TH	FR	SA	SU		
01								:	
02								:	
03								:	Days : ON = Enable, OFF = Disable
⋮								:	Time : 00:00 - 23:59. - - : - - (deactivattion)
								:	
								:	
19								:	
20								:	
	ON	ON	ON	ON	ON	OFF	OFF	- - : - -	(Default Setting)

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Time Card Marks

The following marks are used for marking time cards to indicate when an exception to standard clocking practice has been used:

EXAMPLE OF ACTUAL MARK	MARK	EXPLANATION
L	L	**Late-Arrival**: An employee clocked in after the set Shift Beginning Time.
E	E	**Early-Leave**: An employee clocked out prior to the set Shift End Time.
T	T	Over**t**ime: An employee clocked out after the set Overtime Beginning Time. Also used to mark when an hourly worker with open shift works beyond the set Number of Regular Hours.
O	O	**O**ut-for-Personal-Errand: An employee pressed the corresponding button for clocking out for a personal errand on a weekday and then clocked out.
A	A	**A**ll-night: An employee worked past the set Day Change Time threshold, pressed the corresponding button for clocking out after the set Day Change Time threshold and then clocked out.
S	S	**S**pecial Day: An employee pressed the corresponding button for working on special days and then clocked in.
M	M	Co**m**bined All-night and Special Day: An employee pressed the corresponding button for clocking out after the set Day Change Time threshold and the corresponding button for working on special days.
X	X	Can't-Calculate-These-Hours: When an employee finishes a work pattern that can't be calculated and then they press a button this mark will be added.

How to Print Out the Settings for Reference

You can use the following method for printing out your MX-300 settings onto a time card for easy reference.
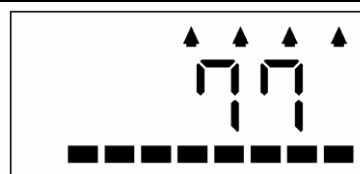
1 Insert BASIC PROGRAMMING CARD #2 and then scroll to DATA INITIALIZATION.

・Insert the card and then press NEXT (button ⑥) three times.
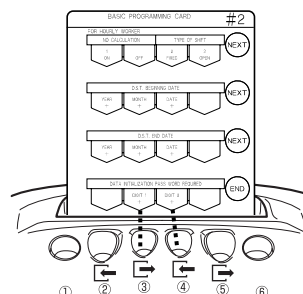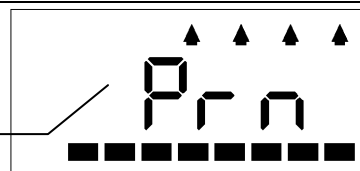

2 Enter the password ("77").

・Press DIGIT 1 + (button ③) to increase the first digit.
・Press DIGIT 2 + (button ④) to increase the second digit.
・Adjust to "77."

3 Press END (button ⑥).

・The programming card is ejected, the display appears as illustrated on the right and the ②③④⑤ buttons light up in order.

The display flashed "PRN"

4 Insert a new time card (front or back is okay).

・Your MX-300's settings are printed onto the time card.

・When printing is completed, the programming card is ejected and the current time is displayed.

Note If you attempt to use a time card that is has already been used last month, this month or next month for a regular employee or hourly worker, error E-12 will be generated and the settings will not be printed out. (The card will be automatically ejected.) However, you can print over a card that only has punchs made during No Calculation mode.

* If you enter the wrong password:

A two-tone beep is sounded and "ERR" is displayed on the LCD to indicate an error.

Press button ⑥. The programming card is ejected and the current time is displayed. Try again from step **1**.
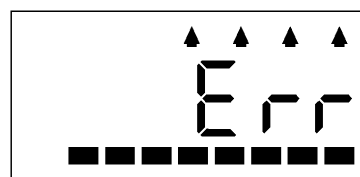
* If you want to abort the operation:

・ To abort the operation, enter the password "00" or "99" and then press button ⑥. The programming card is ejected and the current time is displayed.

・ To abort the operation while "PRN" is displayed on the LCD, simply press button ⑥. The operation is aborted and the current time is displayed.

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Sample Print Out

・The content of the print out is numbered using an item number that corresponds to the parameter number.

・You can cross reference with the parameter numbers ("P-XX") listed on the programming sheets on page 75 and 76.

・Parameters that aren't configured are printed as "**" (The Number of Regular Hours for hourly workers with open shift is printed as "0:00" when the parameter isn't configured.)

First Page of Print Out

TIME OF PRINT OUT

DATE OF PRINT OUT

D.S.T. BEGINNING DATE

REGULAR EMPLOYEE ROUNDING UNIT

OVERTIME BEGINNING TIME

REGULAR EMPLOYEE # 1 FIXED BREAK

REGULAR EMPLOYEE # 3 FIXED BREAK

FIXED SHIFT HOURLY WORKER ROUNDING

C TIME ZONE

FIXED SHIFT HOURLY WORKER # 1 FIXED BREAK

FIXED SHIFT HOURLY WORKER # 3 FIXED BREAK

OPEN SHIFT HOURLY WORKER ROUNDING UNIT

OPEN SHIFT HOURLY WORKER # 1 BREAK

Type of Minute

ITEM NUMBER (corresponds to parameter number)

PAY PERIOD ENDING

CALCULATION MODE

SETTING VALUE

D.S.T. END DATE

SHIFT SCHEDULE

MIDNIGHT SHIFT

REGULAR EMPLOYEE # 2 FIXED BREAK

REGULAR EMPLOYEE # 4 FIXED BREAK

B TIME ZONE

D TIME ZONE

FIXED SHIFT HOURLY WORKER # 2 FIXED BREAK

FIXED SHIFT HOURLY WORKER # 4 FIXED BREAK

NUMBER OF REGULAR HOURS

BREAK HOURS 2

DAY CHANGE TIME

Time Signal Duration

Second Page of Print Out
(Time Signal Schedules)

Step Number

Day of week

Time of Schedule

Last Schedule

TERMINOLOGY

Some information regarding of MX-300 terms as used in this manual:

PAY PERIOD ENDING DATE	The MX-300 uses this parameter to determine when a time card is completed for a given month and so the last entry for a month ends up on the bottom (orange side, bottom row) of the time card.
DAY CHANGE TIME	The "Day Change Time" is the time of day that a normal business day starts. The factory setting for the Day Change Time is 5:00. If an employee needs to clock out on or after the set Day Change Time threshold, the employee simply needs to first press the corresponding button and then their times for that shift will be kept on the same row.
DAYLIGHT SAVING TIME	If you wish to disable Daylight Saving Time, simply set the same date as the D.S.T. Beginning and End Date and then current D.S.T. will be disabled. If you enable Daylight Saving Time (D.S.T.), the clock will be automatically moved forward by one hour at 2:00 AM on the starting day of D.S.T. and moved back by one hour at 2:00 AM on the ending day of D.S.T..
CALCULATION MODE	In addition to Regular Employee mode, the MX-300 can function in either Hourly Workers with Fixed Shift mode or Hourly Workers with Open Shift mode. Each mode is designed for different approaches to tabulating worker times. The total daily time for hourly workers is printed on the time card after subtracting break time.
HOURLY WORKERS WITH FIXED SHIFT MODE	This mode is optimized for managing part time workers that have various hourly wages. Up to four time zones can be configured for these hourly workers and calculations can be made individually for each zone.
HOURLY WORKERS WITH OPEN SHIFT MODE	This mode is designed for configuring a set Number of Regular Hours and then treating anytime worked beyond those hours as overtime.
NO CALCULATION	This mode disables the calculation function. In this mode, the MX-300 will only print the check-in and check-out times and won't automatically move to the calculation column. The ALL-NIGHT button (①) and SPECIAL DAY button (⑥) work in this mode. When this mode is activated, none of the settings made using the regular employee and hourly worker programming cards are necessary.
ROUNDING UNIT	The "rounding unit" is used to round off the daily times for calculation of work hours. For example, if the rounding unit is set to 15 minutes, the times will be rounded off to intervals of 15 minutes and then calculated.
NO CAL	Like No Calculation mode, when this is configured, the calculation function is disabled and the MX-300 will only print the times. However, unlike No Calculation mode, the MX-300 will still perform Auto-Column-Shifting to position at the appropriate print zone.
NUMBER OF REGULAR HOURS	This parameter is used to configure the number of hours to be treated as a regular shift so that overtime can be calculated based on time worked beyond this parameter.
ALL-NIGHT	If an employee needs to clock out on or after the Day Change Time threshold, the employee simply needs to first press the corresponding button (①) and then their time for that shift will be kept on the same row with the check-out time being marked with an "A." ("M" if it was an all-night that started on a "Special Day.")
SPECIAL DAYS	If an employee works on a day designated as being special (holiday, et al), they can press the corresponding button (⑥) to have their time identified with an "S" mark so the time for that day will be calculated separately from weekday hours.

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Signal Device Connection

Wiring Diagram of Time Signal Output.
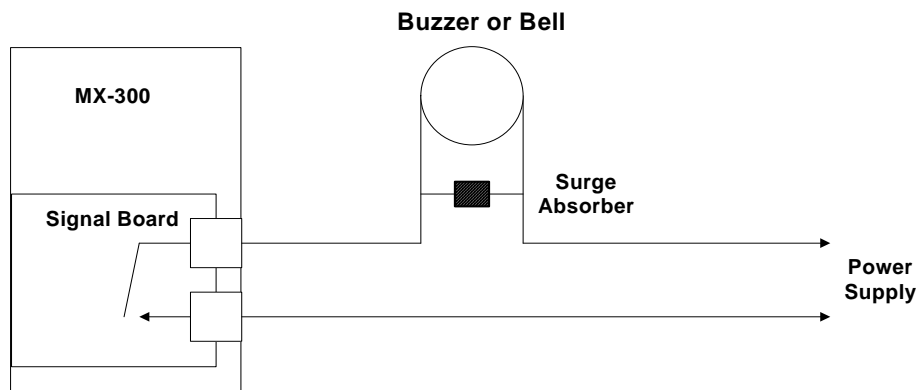
Output Contact Specification

Dry Contact: Normal Open Circuit
Contact Rating:
      250VAC 2A or Less (Inductive Load)
      30 VDC 3A or Less (Inductive Load)

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SPECIFICATIONS······································

Compatible Time Cards:	Proprietary Amano MRX time cards
Display:	digital liquid crystal display
Printer:	9-pin dot impact printer
Clock:	A crystal oscillation clock with a weekly accuracy of ± 3 seconds (25°C ± 5°C when power is on).
Memory Preservation:	The built-in lithium battery provides power for preserving clock and programming data for up to 3 years of cumulative power failure time.
Employee Capacity:	50 (regular employees and hourly workers)
Installation:	Simply rest unit on a flat surface (wall mount also possible).
Operating Conditions: (Indoor use only)	Temperature: -10° to 45°C Humidity: 10% to 90% (no condensation permitted)
Power Requirements:	AC220 to 240 V ± 10% (50/60Hz)
Dimensions:	170 mm (W) × 115 mm (D) × 233 mm (H)
Rated Current:	0.2 A
Weight:	2.2 kg