

**AMANO®**

# **MJR-BIO**

**Biometric Time Recorder**

## **Setup and Operations Manual**



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We recommend that this document be read in its entirety before any attempt is made to operate the equipment.

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# Chapter 1: Introduction

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The MJR-BIO combines a sophisticated, automatically calculating time clock with fingerprint recognition security. Fingerprint recognition security is considered to be the best form of Biometric security because of its accuracy, affordability, and ease-of-use. The MJR-BIO automatically calculates and accumulates hours worked based on your company's payroll policies and separates them into regular and overtime pay categories. It also offers many sophisticated features to simplify payroll preparation such as: Lock Out, Revision, Red Print and Grace Zones; Flexible Rounding Rules; Unpaid and Paid Breaks; Time Card Name Printing; and many more. In addition, easy-to-read management reports are available in hours or dollars giving you more accurate labor information in less time.

In order to use fingerprint recognition, a user must enroll their fingerprint into the fingerprint database. The MJR-BIO's fingerprint reader will record the user's fingerprint template, encrypt it and store the data. When a user presents their finger for verification, a new template is captured and compared to the pre-enrolled fingerprint in the database. If there is a match, the user will be able to use the MJR-BIO.

One of the main benefits of this system is that it eliminates fraudulent punches ("Buddy Punching") and provides a comprehensive and secure method of accurately accounting for employee labor costs.

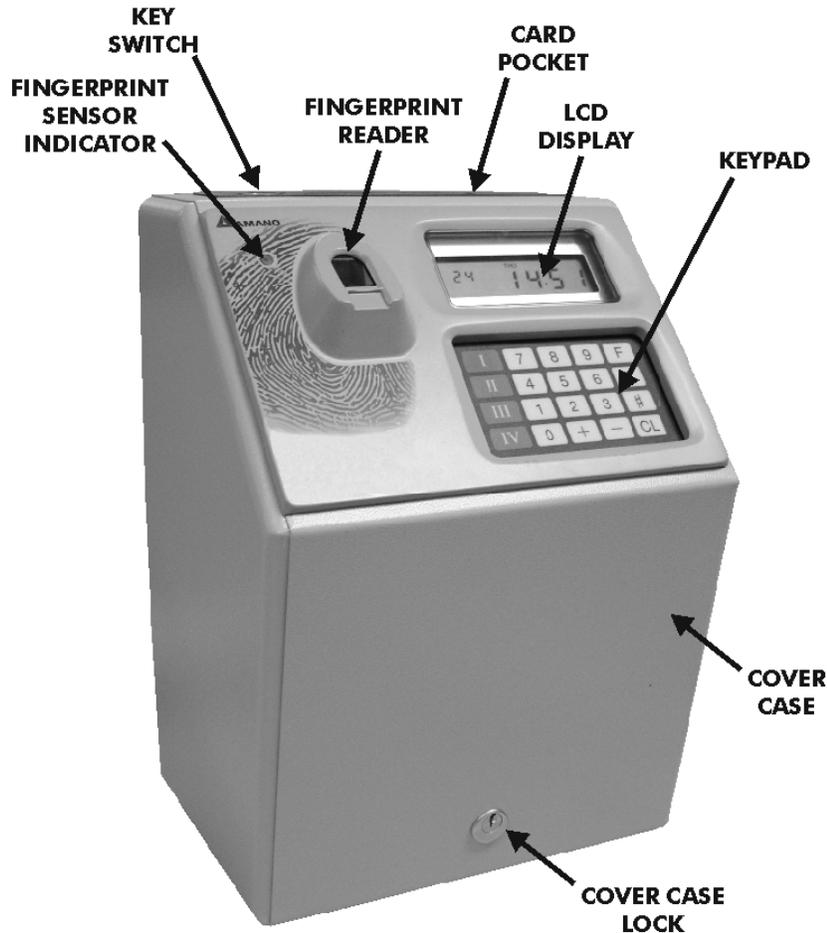
## Components

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- MJR-BIO
- Setup and Operation Manual
- (2) #700 Keys

## Features

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**Fingerprint Sensor Indicator**

Indicates that fingerprint has been scanned.

**Key Switch**

Used for setting the MJR-BIO to Normal Mode (without key) for IN/OUT punches, or Function Mode (with key in and turned to the right) for programming.

**Fingerprint Reader**

Scans fingerprint image.

**Card Pocket**

Automatically transports time cards and report cards.

**LCD Display**

Displays date, day of week, time, AM/PM, program addresses, etc.

**Keypad**

Numeric membrane keypad.

**Cover Case**

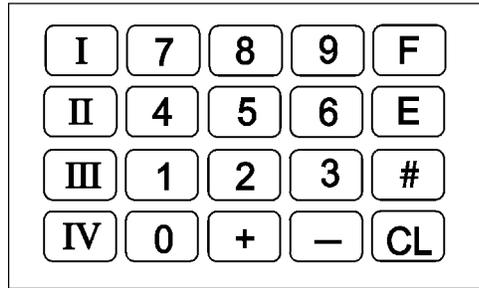
Removable metal housing

**Cover Case Lock**

Unlock/locks the cover case for removal

# Keypad

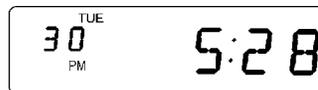
There are 10 numeric keys and 10 additional keys on the membrane keypad.



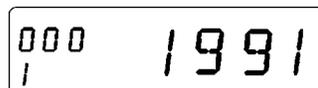
1- 9	<b>Numeric Keys</b>	Used to access program addresses, input of data and user access codes.
#	<b>Number Key</b>	Used to advance to next step within an address and for paid break when activated.
E	<b>Enter Key</b>	Registers data entered from keypad (temporarily) and advances to next program address.
I	<b>Save Key</b>	Saves program data, employee master file data and department data.
C	<b>Clear Key</b>	Clears data incorrectly entered from keypad.
F	<b>Function or Find Key</b>	Locate a specific address number by pressing F, entering in the address number, followed by E
+, -	<b>Plus, Minus Keys</b>	Used for adding or subtracting hours when making data corrections.
AD	<b>Roman Numeral Four Key</b>	Used for generating the sensor test after the memory test is completed in maintenance.
H, G	<b>Roman Numeral Two and Three Keys</b>	Not Used

## LCD Display

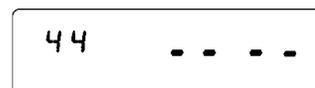
The LCD Display will show the current date, day and time when in the Normal Mode. For example, April 30, 1991 at 5:28 pm:



When in the Function Mode the LCD Display may show access codes, address and step numbers, program data, etc., based on what has been selected. For example, after pressing 10E, the program address 000, step 1, displays the entered data for the year 1991:



Or after pressing 44E (for the accumulated period dollars report) " - - - - " is displayed to show that the password was entered.

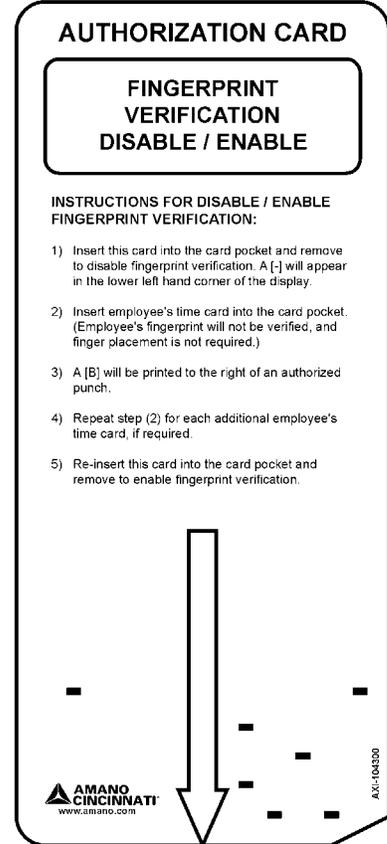
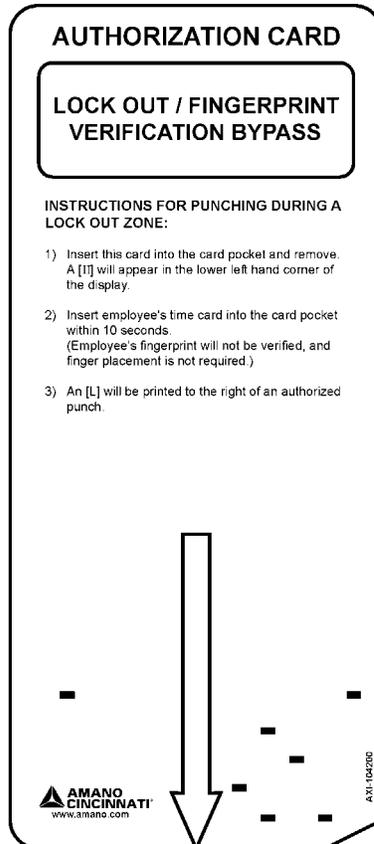
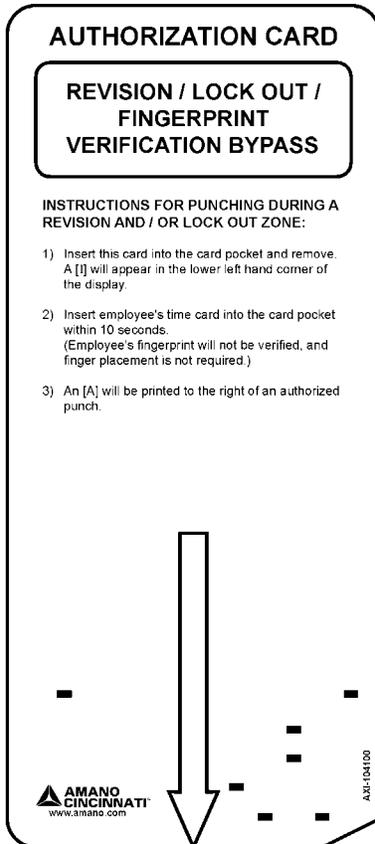




## Authorization Cards

There are (3) types of Authorization Cards used with the MJR-BIO. They are:

- **Revision/Lock Out/Fingerprint Verification Bypass Card:** Used to override programmed revision, Lock Out Zones and bypass fingerprint verification for a single employee.
- **Lock Out/Fingerprint Verification Bypass Card:** Used to override programmed Lock Out Zones and bypass fingerprint verification for a single employee.
- **Fingerprint Verification Disable/Enable Card:** Used to enable or disable fingerprint verification.



# Report Card

The report card is used for all reports and lists that are generated.

MJR SERIES REPORT CARD				
ACC.PERIOD HOURS REPORT (CURRENT)				
9/21/91 17:02 PAGE- 0				
TOTAL	REG.	OT-A.	OT-B.	
DEPT. 000300				
* BIANCA, MARY	001	4335566778		
007 26:32	26:00	0:32	0:00	
STEVENS, MIKE	004	0532190887		
010 32:45	32:30	0:15	0:00	
SPENCER, MAGGIE	248	3449328820		
029 34:00	31:00	3:00	0:00	
93:17	89:30	3:47	0:00	
DEPT. 000350				
TAYLOR, ANNA	003	3422177890		
009 30:00	30:00	0:00	0:00	
WILLIAMS, TERRI	007	0000008770		
013 26:30	26:30	0:00	0:00	
GARRET, JANET	008	3214556678		
014 24:30	24:30	0:00	0:00	
* JERREL, ERIC	020	1423644212		
026 17:18	16:45	0:33	0:00	
CRANE, NANCY	249	4988730217		
027 19:30	19:30	0:00	0:00	
117:48	117:15	0:33	0:00	
DEPT. 000400				
SMITH, MARTY	000	1435566667		
006 22:45	22:45	0:00	0:00	

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MJR SERIES REPORT CARD				
APPROACHING OT.REPORT HOURS > 30:59				
9/21/91 17:03 PAGE- 0				
NAME	FILE#.	ID #.	HOURS	
DEPT. 000300				
STEVENS, MIKE	004	0532190887	32:45	
SPENCER, MAGGIE	248	3449328820	34:00	
SUB TOTAL			66:45	
DEPT. 000350				
SUB TOTAL			0:00	
DEPT. 000400				
SUB TOTAL			0:00	
DEPT. 000450				
* BECKER, SAM	150	5332819543	41:00	
SUB TOTAL			41:00	
DEPT. 000500				
* STEWART, JANICE	200	4323516349	41:00	
SUB TOTAL			41:00	
DEPT. 000550				
PURCELL, JIH	189	2399183756	40:00	

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## Program Check Card

The program check card is used when performing the program print out. It is recommended to print at least three copies of the program after initial setup and whenever program changes are made. One copy should be stored inside the cover case of the clock, another copy should be given to the Amano Representative and another copy should be attached to this manual.

```

PROGRAM U 3.04EM 2/17/ 4 15:57 PAGE- 0
 1  0  0
 2  0  0  0
 3  0  0  0
 4  0  0  0  0
 8  0  0  0  0
12  0  0  0  0
16  0  0  0  0
20  0
21  0  0  0  0  0
23  0  0  0  0  0
25  0  0  0  0  0
27  0  0  0  0  0
29  0  0  0  0  0
31  0  0  0  0  0
33  0  0  0  0  0
35  0  0  0  0  0
37  0  0  0  0  0
39  0  0  0  0  0
41  0  0  0  0  0
43  0  0  0  0  0
45  0  0  0  0  0
47  0  0  0  0  0
49  0  0  0  0  0
51  0
52  0  0  0  0
60  1  2  99  100
64  10 70 20  1
68  9
70  0  0  0  0  0  0
72  0  0  0  0  0  0
74  0  0  0  0  0  0
    
```

```

PROGRAM U 3.04EM 2/17/ 4 15:58 PAGE- 1
100  0  0
101  0  0  0  0
103  0
104  0  0  0
105  0  0  0
106  0  0
107  0  0
108  0  0
109  0  0  0
110  0  0
111  0  0
112  0  0  0
113  0
114  0  0  0  0  0  0
116  0  0  0  0  0  0
118  0  0  0  0  0  0
120  0  0  0  0  0  0
122  0  0  0  0  0  0
124  0  0  0  0  0  0
126  0  0  0  0  0  0
128  0  0  0  0  0  0
130  0  0  0  0  0  0
132  0  0  0  0  0  0
134  0  0  0  0  0  0
136  0  0  0  0  0  0
138  0  0  0  0  0  0
140  0  0  0  0  0  0
142  0  0  0  0  0  0
144  0  0  0  0  0  0
146  0  0  0  0  0  0
148  0  0  0  0  0  0
    
```

```

PROGRAM U 3.04EM 2/17/ 4 15:59 PAGE- 2

ASSIGNMENT METHOD
-----
TYPE 0
STARTING CARD NO. 000
ENDING CARD NO. 249

RAW DATA
-----
DISABLE BUFFER 0
CLK CONTROL CODE 0
ACCUM. PRINTING 0
COST CENTER NO. 0
FUNCTION CODE 0
    
```

## Specifications

---

<b>Power Supply</b>	120 VAC $\pm$ 10%
<b>Ambient Temperature</b>	14°F - 104°F (-10°C - 40°C)
<b>Humidity</b>	20% - 90% (No condensation)
<b>Power Consumption</b>	Normal 25VA, Maximum 75VA
<b>Dimensions</b>	13-1/2" (34.3 cm) H X 9-1/2" (24.1 cm) W X 8" (20.3 cm) D
<b>Weight</b>	17.25 lbs. (7.82 kg)
<b>Employee Capacity</b>	250 employees
<b>Ribbon</b>	Two color cartridge
<b>Ni-CD Battery Backup</b>	Retains data for up to 72 hours
<b>Mounting</b>	Wall or table mount
<b>Full Power Reserve</b>	(Optional) 4 hours or 200 punches
<b>Signals</b>	(Optional) Rings up to 30 signals

# Chapter 2: Installation

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## Remove Packing Materials

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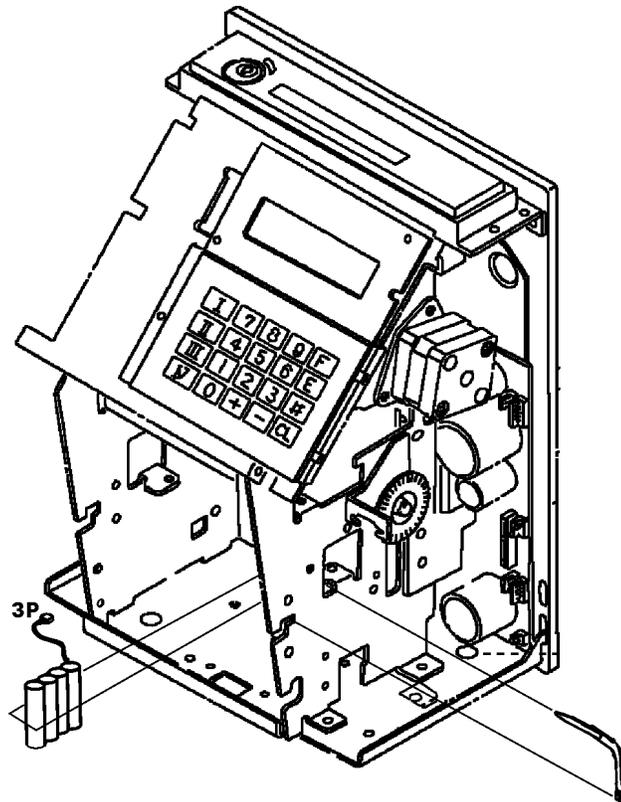
1. Insert key into keyhole on the front of the cover case and turn to the right to unlock.
2. Remove cover case.
3. Remove packing material on ribbon cartridge.
4. Replace cover case and lock.

## Ni-Cd Battery Backup

---

The Ni-CD Battery Backup provided will enable the clock to store all data for up to 72 hours. To connect the Ni-CD Battery Backup:

1. Unlock cover case and remove.
2. Plug in Battery Connector, 3P, to CN-2, on the Main PCB, located inside the lower right frame.



3. Replace cover case and lock.

## Optional Full Power Reserve Kit

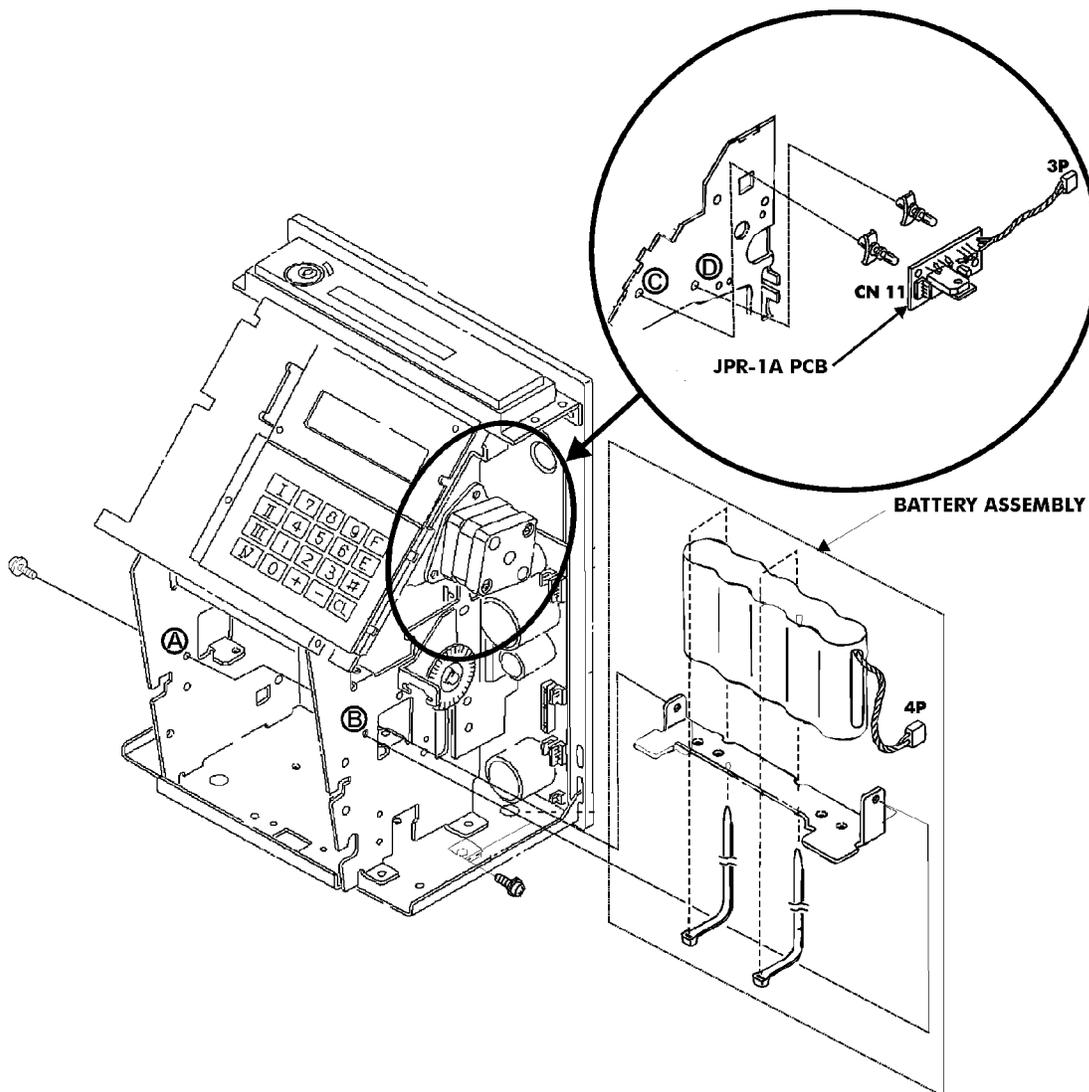
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The Full Power Reserve Kit consists of the following:

- 12 VDC Ni-Cd Battery Assembly
- JPR-1A PCB
- (2) Self-tapping screws

Installation is as follows:

1. Unplug AC power cord, if applicable.
2. Unlock and remove cover case from clock.
3. Install the Ni-Cd Battery Assembly at the front of the main body.
4. Attach the battery mounting plate into (A) and (B) on the frame of the main body with the self-tapping screws.
5. Install the JPR-1A PCB on the right frame of the main body into holes (C) and (D).



6. Plug in the 4P connector from the Ni-Cd battery assembly into CN11 on the JPR-1A PCB
7. Plug in the 3P connector from the JPR-1A PCB into CN5 on the main printed circuit board by passing it under the stepping motor.
8. Replace the cover case and lock it.
9. Plug the power cord into a suitable, grounded AC power outlet charge the battery for 10 hours. The MJR can be used while the battery is charging.

## Optional Signal Kit

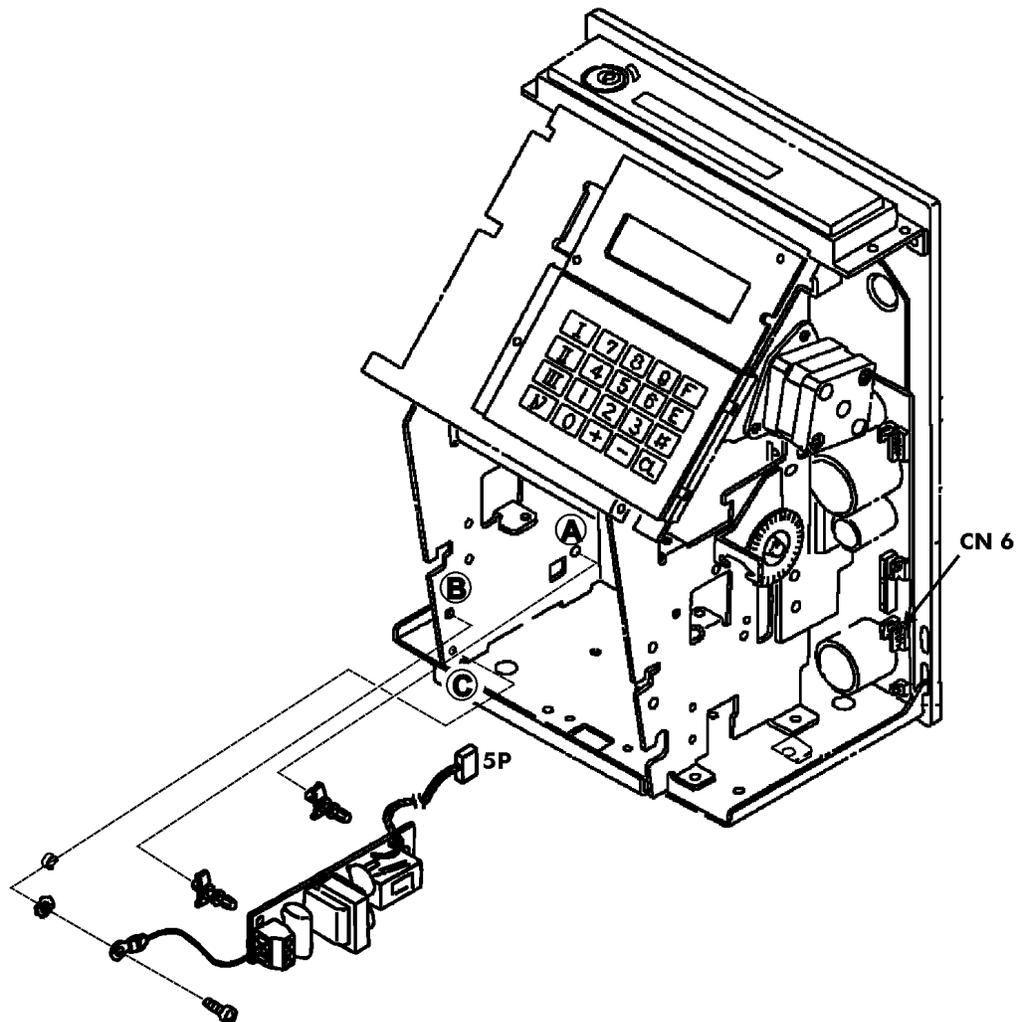
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The optional Signal Kit for the MJR-BIO consists of the following:

- Instruction Sheet (P/N C-348302)
- Wire Holder Hi-Sticker (P/N EHL-200610)
- Signal Assembly Comp. w/Wire (MJR) (P/N IR-632072)
- Screw D-4mm L-6mm (P/N UTJ-4006)
- Washer T-4mm I-mm (P/N WIB-4004)

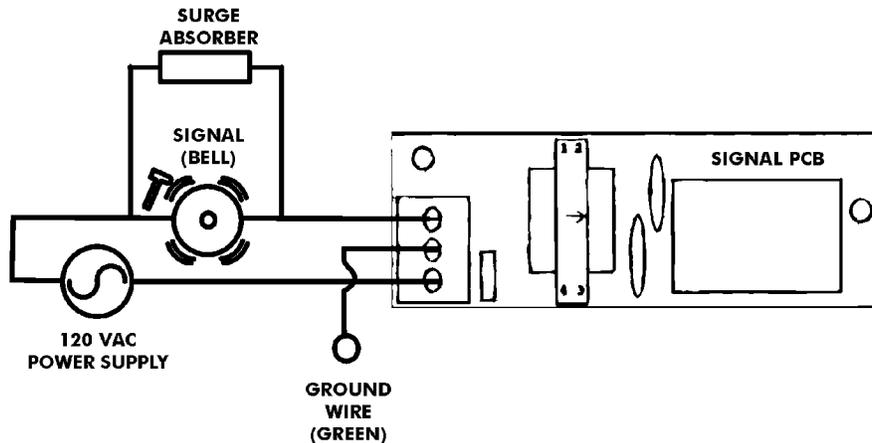
Installation is as follows:

1. Unplug AC power cord, if applicable.
2. Unlock and remove cover case from clock.
3. Install the Signal PCB Assembly on the left frame of the main body. Insert the PCB supports into the holes (A) and (B) of the left frame.

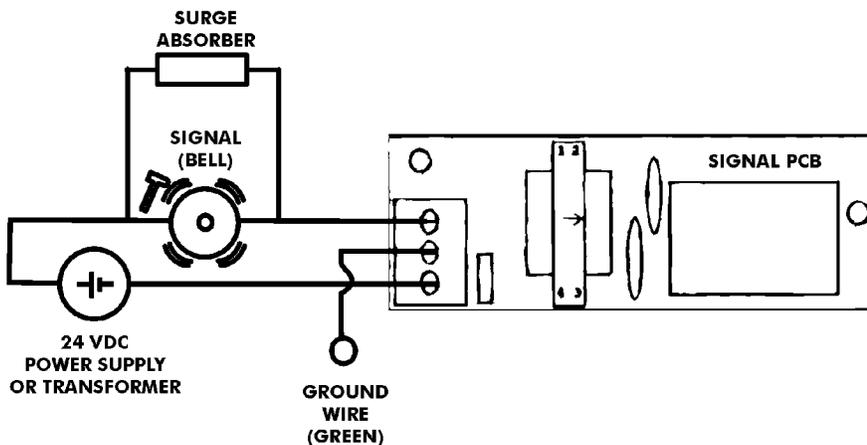


4. Attach the green grounding wire from the terminal block of the Signal PCB to hole (C) of the left frame with the locking washer and self-tapping screw.
5. Thread the brown and red twisted wire behind the transformer, over the Ni-Cd battery assembly, through the large hole (on the right side of the frame under the black ribbon cable), and plug in 5P connector into CN6 on main printed circuit board.

6. For 120 VAC Power Supply:
  - a. Connect external signal (bell) wire to the terminal block on the signal PCB and to the AC 120V power supply.
  - b. Connect a jumper wire from the 120 VAC power supply to the terminal block on the signal PCB.
  - c. Connect a surge absorber (ESA-100010, not included) to the terminal block on the signal PCB.



- d. When finished, replace cover case and lock.
- e. Test the signal by following the program instructions on Page 3-16.
7. For 24 VDC Power Supply:
  - a. Connect external signal (bell) wire to the terminal block on the signal PCB and to the DC side of the transformer or power supply.
  - b. Connect a jumper wire from the DC side of the transformer or power supply to the terminal block on the signal PCB.
  - c. Connect two wires from the AC side of the transformer or DC power supply to the 120 VAC power supply.



- d. Connect a surge absorber (ESA-100010, not included) to the terminal block on the signal PCB.
- e. When finished, replace cover case and lock.
- f. Test the signal by following the program instructions on Page 3-16.

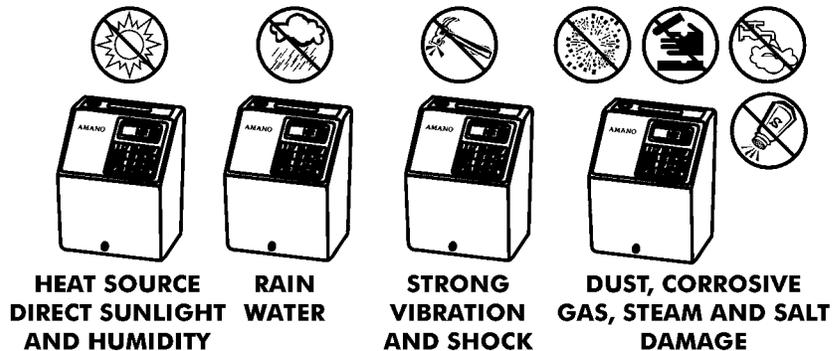
## Mounting

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When choosing a mounting location for your MJR, you should consider the following:

- The mounting surface or hardware must be capable of supporting the unit's weight, 17.25 lbs. (7.82 kg).
- The area must be within the specified operating temperature range: 14°F to 104°F (-10°C to +40°C), 10%Rh~90% Rh.
- The unit should be in close proximity to a power source or wall outlet.

The following conditions should not exist:

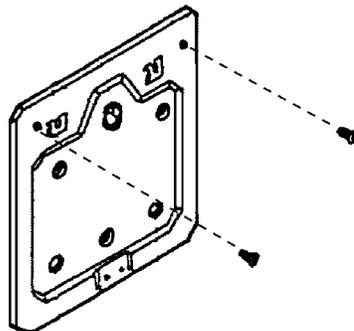


## Desktop Installation

The MJR-BIO should be placed on a level surface.

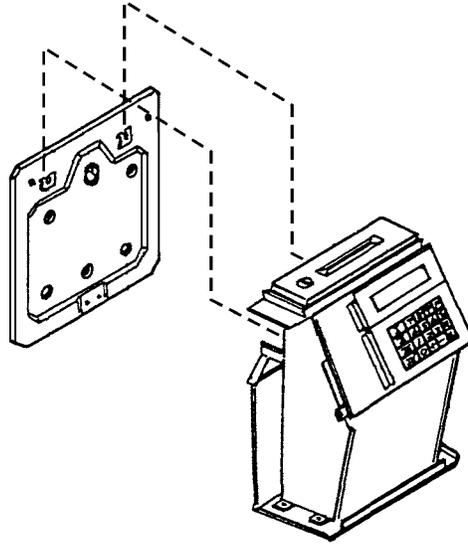
## Wall Mounting

1. Unlock and remove cover case.
2. Remove the two screws that affix the back plate to the body and push the back plate down.
3. Knock out the three holes on the back late. (There are two on the bottom on either side and one in the middle towards the top).
4. Drive one wood screw partially into the wall and hang the back plate by the center hole.



5. After making sure that the back plate is level, firmly secure it to the wall with the remaining screws.

6. Install the body on the back plate. Fit the hanger lips of the body frame into the grooves of the back plate. Then install the two screws to firmly secure the body onto the back plate.



### **Power Connection**

Plug the power cord into a suitable grounded outlet.

When the AC power is properly connected, the MJR will cycle the print mechanism and display the currently programmed day of the week, date and time.

# Chapter 3: Basic Programming

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## Overview

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- The MJR-BIO uses programming areas to enter and store configuration and employee data. Each programming area consists of address numbers and step numbers. The address number indicates where specific data is stored in the MJR-BIO's memory. The step number is where specific data is entered for operation.
- There are different types of specific data that can be entered in a step number.
  - a. **Code Numbers:** Enter a code number that corresponds to the given value. (Example: 0 = 1200 where 0 is the code number which is entered into the step number).
  - b. **Dates:** A year, month and date are entered into the step number. (Example: 1991 for the year, 1225 for the month and date).
  - c. **Hours:** Hours must be entered in 24-hour format (0000 thru 2359).
  - d. **Minutes:** Minutes must be entered in regular minutes (00 thru 59) regardless of how the clock is setup to display and print the hours.

**Note:** If the clock is set up to print in hundredth hours then you must enter hundredth hours when making data corrections.

- Each program area has an address number that will appear in the upper left hand corner of the display with the step number directly beneath it.
  - a. If an address has only 1 step, enter the data followed by the **E** key to advance to the next address number. For example, in address 004 you enter in 101. This address contains only 1 step.

Address No	Step No.	Data	Advance/Save
004	1	101	E

- b. If an address has more than 1 step, enter the data for the first step and press the **#** key to move to the second step within the same address. Enter the data for the second step and then press the **#** key to move to the third step within that same address. Enter the data for the third step and then the **E** key to advance to the next address while temporarily saving the data. For example, in Address 000, you enter in the year (1991), month and date (0430 for April 13th), and the time in 24-hour format (1728 is equivalent to 5:28 PM). This address has 3 steps.

Address No	Step No.	Data	Advance/Save
000	1	1991	#
000	2	0430	#
000	3	1728	E

## Programming Setup Procedure

The chart below outlines the Program Setup Procedure for the MJR-BIO:

Step	Description	User Access Code	Page
1	Initialize the entire MJR-BIO	32E45E	3-2
2	Password Setup	11E	3-3
3	Clock and Calendar Programming	10E	3-4
4	Time Card Number Assignment Configuration Programming	13E	3-5
5	Raw Data Collection Programming	14E	3-13
6	General Programming	20E	3-14
7	Signal Programming (Optional)	21E	3-16
8	Calculation Rules Programming	22E	3-19
9	Program Print Out	23E	3-30
10	Enroll Fingerprint Templates	25E	4-1

### Initialization

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Before you begin using the MJR-BIO, you need to clear the memory by initializing the clock.

1. Plug the power cord into a properly grounded AC power outlet. The printer section will move back and forth several times and the display may show error code "8 – 80". To reset this error code, press the **C** key.
2. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
3. There are (4) Initialization Codes available for clearing the memory in the clock. Enter one of the codes listed below followed by the password (user's password or the default = "6569") and press **E**.
  - Clear All Memory (32E45E): This operation should be performed before you begin using the clock for the first time. **This must be done on initial power up.**
  - Clear Program and Employee Data (32E64E): This operation will clear all program and employee data. Fingerprint templates are not affected.
  - Clear Program Data Only (31E99E): It should be performed only when it is necessary to reprogram the clock without having to clear the employee master files.
  - Clear Employee Data Only (30E88E): This operation will clear all employee master file data. It should be performed only when employee master files need to be re-entered without having to clear out the program data.
4. The display screen will go blank. If you entered 32E45E, this may take up to forty seconds.
5. Turn the key to the left to return to Normal mode.
6. Cycle the power by unplugging the unit and then plugging it in again.

## Password Setup

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For security, certain Program and User Access Codes are password protected. The default password for access to all Program and User Access Codes is 6569. The areas that require a password are:

### Initialization:

Program, Employee data, and Fingerprint Templates	32E45E
Program and Employee data	32E64E
All Employee Data	30E88E
All Program Data	31E99E
Time Card Number Assignment Programming Area	13E
Time Card Number Assignment	82E and 83E
Lists with Pay Rates:	
Employee Lists	64E and 65E
Reports With Pay Rates or Dollar Amounts:	5E and 6E
Accumulated Dollars Reports	44E, 45E, 46E, and 47E
Yesterday's Dollars Report	49E
Today's Dollars Report	51E
Fingerprint Template Deletion	26E
Fingerprint Non-verification List Deletion	27E66E
Fingerprint Non-verification List Delete All	27E77E

If you do not wish to use the default password, you can create your own individual user password. It is not required for you to create another password unless you require extra security.

After the initialization procedure, 32E45E or 32E64E, the user password is set to 0000. (The default password 6569 is not affected).

If you wish to change the user password, perform the following:

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 11E.
3. Enter in the valid existing password number (not default) and press E.
4. Enter in the new password number (4-digits) and press #.
7. Re-enter in the new password number (4-digits) and press E.
8. Turn the key to the left to return to Normal mode.

## Clock and Calendar

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1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 10E, the Year setting will appear in the display.
3. Enter the year in 4-digit format (YYYY) and press #. The display will advance to the Month and Date setting.
4. Enter the month and date (MMDD) and press #. The display will advance to the Hour and Minute setting.
5. Enter the hour and minute in 24-hour format (HH:MM) and press E. The display will go blank and the data entered in this and the previous steps will be saved.
6. Turn the key to the left to return to Normal mode.

# **Time Card Number Assignment Configuration Programming**

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There (3) methods for employee time card number assignment. The method you choose will determine which features and reports are available.

## **File Numbers And Card Numbers**

Each MJR-BIO has a capacity of 250 employees. This means that there are 250 files numbered from 000 to 249 within the clock to store employee information. This information consists of the employee number, employee name, department number, pay rate and all accumulated hours worked.

Time cards are available in different ranges of card numbers. Examples of standard boxes of cards are numbered 000-049, 000-099, 000-199, 000-249 and 000-999. Other ranges of card numbers are also available.

When an employee punches IN or OUT, the time clock reads the punched holes on the bottom of the card (the time card number) and then searches for the file number to which the time card number is assigned. The accumulated hours will then get stored into the memory area of that file number.

The assignment type will determine how the card numbers will be assigned to the file number.

## **Traditional Assignment**

The traditional assignment method allows you to issue time cards to your employees right from the box without having to assign the time cards first. Each pay period simply write the employee's name on the time card, place the card in the card rack and you're ready to go.

In this area you will be required to enter the starting and ending range of time card numbers (the same as the numbers on the time card box). File number 000 will correspond to the card number programmed in the starting card number field in this area. The ending card number is ignored for this type of method. The remaining file numbers will be sequentially assigned until all 250 file numbers are assigned.

Since this assignment method does not include names, departments, or pay rates in the clock, there are a limited number of reports that can be generated. They are:

- Individual Time Card Summary for Current Pay Periods 3E
- Individual Time Card Summary for Previous Pay Period 4E
- Accumulated Period Hours for Current Pay Period 40E
- Accumulated Period Hours for Pervious Pay Period 41E
- Yesterday's Hours 48E
- Today's Hours 50E
- Approaching Overtime 52E
- Punched IN 53E
- Punched OUT 55E

When an attempt is made to generate any other report an error code "2 – 14" will be displayed.

The following User Access codes are available:

- Data Corrections for Current Pay Period 1E
- Data Corrections for Previous Pay Period 2E
- Memory Test 90E
- Printer Test 91E
- Sensor Test 92E

If a semi-monthly or monthly pay period is set up, employees should be issued the same time card number each pay period. The weekly overtime hours will carryover onto the new time card and ensure correct calculation.

If the clock is initialized after setting up the assignment area 13E, you will have to reprogram 13E to re-assign time card numbers to the file numbers.

### **Employee Master File Using The Same Card Numbers**

This method gives you the flexibility to utilize all of the features of the MJR-BIO without having to worry about assigning time cards every pay period. (Initial set up is required.)

In this area you will be required to enter the starting and ending range of time card numbers (the same as the numbers on the time card box). The initial setup requires you to automatically assign time card numbers for all employees all employees (User Access Code 83E). The Starting Card Number entered during 83E must be within the starting and ending range card numbers programmed in this area.

For example:

- 45 employees
- The box of time cards is numbered 000 thru 049 so the starting and ending card number range programmed in this area is 000 thru 049.
- When accessing 83E to automatically assign time numbers, the starting card range number entered 000.
- The clock will assign the cards as follows:

<b>File Number</b>	<b>Card Number</b>
000	000
001	001
.	.
044	044

Card numbers 045 thru 049 will not be used. Card. Card numbers 000 thru 044 will be used each pay period and correspond to the file numbers above.

Since the employee master file is used you will be required to set up departments and employees before assigning the time cards. (User Access Codes 72E and 61E.)

When new employees are added during the pay period they will have to be individually assigned. (User Access Codes 61E or 84E).

During the time card number assignment, 83E, if the ending card number is reached during sequential, incrementing, the next assignment will scroll back to the starting card number.

All of the features and reports are available by using this method.

The following chart guides you through the initial user setup for the Employee Master File Using The Same Card Assignment Method:

Step	Description	User Access Code	Page
1	Add department file numbers	72E	6-1
2	Print List of department file numbers on report card	73E	6-1
3	Add employee master files	61E	6-2
4	Print list of employee master files on report card and\or Print list of employee master files with pay rates on report card	62E  64E	6-2  6-2
5	<b>Current Pay Period:</b> Automatically assign different time card numbers to all employee master files for the current pay period	83E88E	6-4
6	Print list of assigned time card numbers on report card	85E	6-5
7	<b>Current Pay Period:</b> Print employee name on one side of the time card or Print employee name on both sides of the time card and\or <b>Next Pay Period:</b> Print employee name on one side of the time card or Print employee name on both sides of the time car	80E1E 80E2E  81E1E 81E2E	6-6 6-7  6-6 6-7
8	Place all employee time cards in the time card racks and you're ready to begin.		

**Note:** You do not need to assign time card numbers for the next pay period when using this assignment method. The MJR-BIO automatically assigns the same time card numbers to the next pay period.

The following chart guides you through the each subsequent pay period following the initial user setup for the Employee Master File Using The Same Card Assignment Method.

Step	Description	User Access Code	Page
1	Add any new department file numbers	72E	6-1
2	Print List of department file numbers on report card	73E	6-1
3	Add any new employee master files	61E	6-2
4	Print list of employee master files on report card and/or	62E	6-2
	Print list of employee master files with pay rates on report card	64E	6-2
5	For newly added employees: <b>Current Pay Period:</b> Assign specific time card numbers to an individual employee for the current pay period	84E88E	6-5
6	Print list of assigned time card numbers on report card	85E	6-5
7	<b>Current Pay Period:</b> Print employee name on one side of the time card or	80E1E	6-6
	Print employee name on both sides of the time card and/or	80E2E	6-7
	<b>Next Pay Period:</b> Print employee name on one side of the time card or	81E1E	6-6
	Print employee name on both sides of the time car	81E2E	6-7
8	Place all employee time cards in the time card racks and you're ready to begin.		

## Employee Master File Using New Card Numbers

This method gives you the flexibility to utilize all of the features of the MJR-BIO without having to worry about assigning time cards every pay period. This method allows you to maximize your time card usage. By assigning time card numbers each pay period, you will be able to use each and every time card number without waste.

In this area you will be required to enter the starting and ending range of time card numbers (the same as the numbers on the time card box). In addition to the initial setup, it is required to automatically assign time card numbers each pay period for all employees (User Access Codes 82E or 83E). The starting card number entered during 82E or 83E must be within the starting and ending range card numbers programmed in this area. If the ending card number is reached during sequential incrementing, the next assignment will scroll back to the starting card number.

For example:

- Card assignment for (4) consecutive weeks with 75 employees
- The box of time cards is numbered 000 thru 0999 so the starting and ending card number range programmed in this area is 000 thru 0999.
- When accessing 83E88E(for current pay period) to automatically assign time numbers, the starting card range number entered 000.
- The clock will assign the cards as follows:

File Number	Card Number
000	000
001	001
..	...
074	074

- When accessing 83E99E(for next pay period) to automatically assign time numbers, the starting card range number entered 075.
- The clock will assign the cards as follows:

File Number	Card Number
000	075
001	076
..	...
074	149

- When this week becomes the current pay period, access 83E99E(for next pay period) to automatically assign time numbers, the starting card range number entered 150.
- The clock will assign the cards as follows:

File Number	Card Number
000	150
001	151
.	.
074	224

- When this week becomes the current pay period, access 83E99E(for next pay period) to automatically assign time numbers, the starting card range number entered 225.

- The clock will assign the cards as follows:

File Number	Card Number
000	225
001	226
.	.
074	299

Since the employee master file is used you will be required to set up departments and employees before assigning the time cards. (User Access Codes 72E and 61E).

When new employees are added during the pay period they will have to be individually assigned. (User Access Codes 61E and 84E).

During the time card number assignment (83E), if the ending card number is reached during sequential incrementing, the next assignment will scroll back to the starting card number.

Duplicate time card numbers should not be used for (3) consecutive a periods. If time card number is assigned to file number 000 for the current pay period, then the time card number 000 should not be assigned at all for the next or previous pay period.

All of the features and reports are available.

The following chart guides you through the initial user setup for the Employee Master File Using New Card Numbers Method.

Step	Description	User Access Code	Page
1	Add department file numbers	72E	6-1
2	Print list of department file numbers on report card	73E	6-1
3	Add employee master files	61E	6-2
4	Print list of employee master files on report card and\or	62E	6-2
	Print list of employee master files with pay rates on report card	64E	6-2
5	<b>Current Pay Period:</b> Automatically assign different time card numbers to all employee master files for the current pay period and\or	83E88E	6-5
	<b>Next Pay Period:</b> Automatically assign different time card numbers to all employee master files for the next pay period	83E99E	6-4
6	Print list of assigned time card numbers on report card	85E	6-5
7	<b>Current Pay Period:</b> Print employee name on one side of the time card or	80E1E	6-6
	Print employee name on both sides of the time card and\or	80E2E	6-7
	<b>Next Pay Period:</b> Print employee name on one side of the time card or	81E1E	6-6
	Print employee name on both sides of the time car	81E2E	6-7
8	Place all employee time cards in the time card racks and you're ready to begin.		

The following chart guides you through the each subsequent pay period following the initial user setup for the Employee Master File Using The Same Card Assignment Method.

Step	Description	User Access Code	Page
1	Add any new department file numbers	72E	6-1
2	Print List of department file numbers on report card	73E	6-1
3	Add any new employee master files	61E	6-2
4	Print list of employee master files on report card and\or	62E	6-2
	Print list of employee master files with pay rates on report card	64E	6-2
5	For all employees, every pay period <b>Current Pay Period:</b> Automatically assign different time card numbers to all employee master files for the current pay period	83E88E	6-5
	or Automatically assign same time card numbers to all employee master files for the current pay period and\or	82E88E	6-4
	<b>Next Pay Period:</b> Automatically assign different time card numbers to all employee master files for the next pay period and\or	83E99E	6-4
	Automatically assign same time card numbers to all employee master files for the next pay period	82E99E	6-4
6	Print list of assigned time card numbers on report card	85E	6-5
7	<b>Current Pay Period:</b> Print employee name on one side of the time card or	80E1E	6-6
	Print employee name on both sides of the time card and\or	80E2E	6-7
	<b>Next Pay Period:</b> Print employee name on one side of the time card or	81E1E	6-6
	Print employee name on both sides of the time car	81E2E	6-7
8	Place all employee time cards in the time card racks and you're ready to begin.		

**Note:** Current pay period time card assignments only have to be changed if you are assigning time cards to new employees during the current pay period

## Time Card Number Assignment Configuration

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 13E.
3. Enter the user password and press E.
4. Enter the following:

Address	Step	Sample Data					Description and Programming Codes								
13	1				2	#	Assignment Type:								
							<table border="1"> <thead> <tr> <th>Code</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Traditional Assignment</td> </tr> <tr> <td>1</td> <td>Employee Master Files with the Same Time Card Numbers</td> </tr> <tr> <td>2</td> <td>Employee Master Files with the New Time Card Numbers</td> </tr> </tbody> </table>	Code	Description	0	Traditional Assignment	1	Employee Master Files with the Same Time Card Numbers	2	Employee Master Files with the New Time Card Numbers
		Code	Description												
		0	Traditional Assignment												
1	Employee Master Files with the Same Time Card Numbers														
2	Employee Master Files with the New Time Card Numbers														
	2		0	0	0	#	Starting Time Card Number Range: Enter a valid 3-digit number (000 thru 999).								
	3		9	9	9	E	Ending Time Card Number Range: Enter a valid 3-digit number (000 thru 999).								

5. The display will go blank after E is pressed and the settings entered will be saved.
6. Turn the key to the left to return to Normal mode.

## Raw Data Collection Programming

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### Clock Control Code

The Clock Control Code matches the hole that is punched in the fourth row (from the bottom) of the time card. It is used to differentiate the same time card numbers that are assigned to different employees on different clocks. The MJR-BIO will check to make sure that the hole punched in the fourth row from the bottom matches the Clock Control Code before accepting the time card and processing the punch.

For example, there are two time clocks within the same location. Clock 00 uses time card numbers 000 thru 099 and Clock 02 also uses the time card numbers 000 thru 099. The time cards used for Clock 00 will already have the zero (0) hole punched in the fourth row of the time card. The Clock Control Code set up in the Raw Data Collection Programming Area will also be zero (0). The time cards used for Clock 02 will also have the zero (0) hole and an additional hole number hand punched. If you hand punched the two (2) in the fourth row of each time card, then the Clock Control Code setting in the Raw Data Collection Programming Area will also be two (2). With these settings, the employees assigned to Clock 00 will not be able to punch IN or OUT on Clock 02 and vice versa.

The features in the Raw Data Collection Program Area are set as follows:

7. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
8. Press 14E.
9. Enter the user password and press E.
10. Enter the following:

Address	Step	Sample Data				Description and Programming Codes						
14	1			0	#	This address should be set to "0".						
	2			0	#	Clock Control Code: Enter the hole punch number (0 thru 9) in the fourth row of the time card that will be used to identify this clock.						
	3			1	#	Accumulate Hours Printing: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Code</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Disable printing of Accumulated Hours</td> </tr> <tr> <td>1</td> <td>Print Accumulated Hours</td> </tr> </tbody> </table>	Code	Description	0	Disable printing of Accumulated Hours	1	Print Accumulated Hours
	Code	Description										
	0	Disable printing of Accumulated Hours										
1	Print Accumulated Hours											
4			0	E	This address should be set to "0".							
5			0	E	This address should be set to "0".							

11. The display will go blank after E is pressed and the settings entered will be saved.
12. Turn the key to the left to return to Normal mode.

## General Programming Area

This General Programming Area allows you to set the following:

- Daylight Saving Time Start and End Dates
- Hours Imprint and Clock Display format: Either 12-hour (AM/PM), or a 24-hour (military) format.
- Accumulation Imprint format: The format of the minute imprint on the time card, in 1/60<sup>th</sup>'s or 1/100<sup>th</sup>'s of a minute for IN/OUT punches and Accumulated Hours.
- Day of the Week Imprint: How the day of the week will appear on the time card. You can select from English, French, and Spanish or numbered days.
- Up to 16 Holidays

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 20E.
3. Enter the following:

Address	Step	Sample Data					Description and Programming Codes														
001	1		4	0	7	#	Daylight Saving Time Start Date: First Sunday in April (MMDD)														
	2	1	0	2	7	E	Daylight Saving Time End Date: Last Sunday in October (MMDD)														
002							Address automatically skipped														
003	1				1	#	Hours Imprint and Clock Display format: <table border="1" data-bbox="740 940 1367 1047"> <thead> <tr> <th>Code</th> <th>Imprint Type and Display Format</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>24-hour (Military) format</td> </tr> <tr> <td>1</td> <td>12-hour (AM/PM) format</td> </tr> </tbody> </table>	Code	Imprint Type and Display Format	0	24-hour (Military) format	1	12-hour (AM/PM) format								
	Code	Imprint Type and Display Format																			
	0	24-hour (Military) format																			
1	12-hour (AM/PM) format																				
2				0	#	Accumulation and Punch Hours Imprint format: <table border="1" data-bbox="708 1129 1399 1507"> <thead> <tr> <th>Code</th> <th>Imprint Type</th> <th>Imprint</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Regular Minutes for both</td> <td>:00 thru :59</td> </tr> <tr> <td>1</td> <td>Regular Minutes for Punch Hours, 1/100<sup>th</sup>'s for Accumulated Hours</td> <td>:00 thru :59</td> </tr> <tr> <td>2</td> <td>1/100<sup>th</sup>'s for Punch Hours, Regular Minutes, or Accumulated Hours</td> <td>:00 thru :59</td> </tr> <tr> <td>3</td> <td>1/100<sup>th</sup>'s Punch Hours and regular minutes for Accumulated Hours</td> <td>.00 thru .98</td> </tr> </tbody> </table>	Code	Imprint Type	Imprint	0	Regular Minutes for both	:00 thru :59	1	Regular Minutes for Punch Hours, 1/100 <sup>th</sup> 's for Accumulated Hours	:00 thru :59	2	1/100 <sup>th</sup> 's for Punch Hours, Regular Minutes, or Accumulated Hours	:00 thru :59	3	1/100 <sup>th</sup> 's Punch Hours and regular minutes for Accumulated Hours	.00 thru .98
Code	Imprint Type	Imprint																			
0	Regular Minutes for both	:00 thru :59																			
1	Regular Minutes for Punch Hours, 1/100 <sup>th</sup> 's for Accumulated Hours	:00 thru :59																			
2	1/100 <sup>th</sup> 's for Punch Hours, Regular Minutes, or Accumulated Hours	:00 thru :59																			
3	1/100 <sup>th</sup> 's Punch Hours and regular minutes for Accumulated Hours	.00 thru .98																			
3				0	E	Day of the Week Imprint: <table border="1" data-bbox="695 1583 1412 1759"> <thead> <tr> <th>Code</th> <th>Type</th> <th>Imprint</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>English</td> <td>MO, TU, WE, TH, FR, SA, SU</td> </tr> <tr> <td>1</td> <td>Numbered</td> <td>D1, D2, D3, D4, D5, D6, D7</td> </tr> <tr> <td>2</td> <td>French</td> <td>LU, MA, ME, JE, VE, SA, DI</td> </tr> <tr> <td>3</td> <td>Spanish</td> <td>LU, MA, MI, JU, VI, SA, DO</td> </tr> </tbody> </table>	Code	Type	Imprint	0	English	MO, TU, WE, TH, FR, SA, SU	1	Numbered	D1, D2, D3, D4, D5, D6, D7	2	French	LU, MA, ME, JE, VE, SA, DI	3	Spanish	LU, MA, MI, JU, VI, SA, DO
Code	Type	Imprint																			
0	English	MO, TU, WE, TH, FR, SA, SU																			
1	Numbered	D1, D2, D3, D4, D5, D6, D7																			
2	French	LU, MA, ME, JE, VE, SA, DI																			
3	Spanish	LU, MA, MI, JU, VI, SA, DO																			
004	1		1	0	1	E	Month and Date of Public Holiday 1 (MMDD)														
005	1		2	1	8	E	Month and Date of Public Holiday 2 (MMDD)														

Address	Step	Sample Data					Description and Programming Codes
006	1		5	2	7	E	Month and Date of Public Holiday 3 (MMDD)
007	1		7	0	4	E	Month and Date of Public Holiday 4 (MMDD)
008	1		9	0	2	E	Month and Date of Public Holiday 5 (MMDD)
009	1	1	0	1	4	E	Month and Date of Public Holiday 6 (MMDD)
010	1	1	1	2	8	E	Month and Date of Public Holiday 7 (MMDD)
011	1	1	2	2	5	E	Month and Date of Public Holiday 8 (MMDD)
012	1				0	E	Month and Date of Public Holiday 9 (MMDD)
013	1				0	E	Month and Date of Public Holiday 10 (MMDD)
014	1				0	E	Month and Date of Public Holiday 10 (MMDD)
015	1				0	E	Month and Date of Public Holiday 12 (MMDD)
016	1				0	E	Month and Date of Public Holiday 13 (MMDD)
017	1				0	E	Month and Date of Public Holiday 14 (MMDD)
018	1				0	E	Month and Date of Public Holiday 15 (MMDD)
019	1				0	E	Month and Date of Public Holiday 16 (MMDD)

**Note:** Holidays worked can be sorted into regular hours or overtime hours selecting the appropriate pay code located in the Calculation Programming Area (User Access Code 22E, address 105.)

4. Upon completion of the General Programming Area, press I the data entered.
5. Turn the key to the left to return to Normal mode.

## Signal Programming Area

The Signal Programming Area is used to set duration, times, and days of the week that the relay contacts of the optional signal PCB will be activated. These relay contacts can be used to control an external device such as a bell or buzzer. Once a duration is set, up to 30 (Signal 1 thru Signal 30) Times and Days can be programmed.

To set the signal duration and schedule, perform the following:

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 21E.
3. Enter the following:

Address	Step	Sample Data					Description and Programming Codes																			
020	1				5	E	Signal duration (00 to 15 seconds)																			
021	1		1	3	5	#	Enter the code for the day of the week or schedule that you want signal to be activated. You can enter more than one day. For example, for Monday, Wednesday, and Friday, enter 1,3, and 5. When a code is selected, the day will appear in the display.																			
							<table border="1"> <thead> <tr> <th>Code</th> <th>Day/Schedule</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Monday</td> </tr> <tr> <td>2</td> <td>Tuesday</td> </tr> <tr> <td>3</td> <td>Wednesday</td> </tr> <tr> <td>4</td> <td>Thursday</td> </tr> <tr> <td>5</td> <td>Friday</td> </tr> <tr> <td>6</td> <td>Saturday</td> </tr> <tr> <td>7</td> <td>Sunday</td> </tr> <tr> <td>8</td> <td>Monday through Friday</td> </tr> <tr> <td>9</td> <td>Monday through Saturday</td> </tr> </tbody> </table>	Code	Day/Schedule	1	Monday	2	Tuesday	3	Wednesday	4	Thursday	5	Friday	6	Saturday	7	Sunday	8	Monday through Friday	9
Code	Day/Schedule																									
1	Monday																									
2	Tuesday																									
3	Wednesday																									
4	Thursday																									
5	Friday																									
6	Saturday																									
7	Sunday																									
8	Monday through Friday																									
9	Monday through Saturday																									
	2		7	3	0	E	Signal Activation Time (HH:MM)																			
022	1				5	#	Signal Day/Schedule Code Number (1 thru 9)																			
	2		7	5	5	E	Signal Activation Time (HH:MM)																			
023	1				8	#	Signal Day/Schedule Code Number (1 thru 9)																			
	2		8	0	0	E	Signal Activation Time (HH:MM)																			
024	1				8	#	Signal Day/Schedule Code Number (1 thru 9)																			
	2	1	2	0	0	E	Signal Activation Time (HH:MM)																			
025	1				8	#	Signal Day/Schedule Code Number (1 thru 9)																			
	2	1	3	0	0	E	Signal Activation Time (HH:MM)																			
026	1				8	#	Signal Day/Schedule Code Number (1 thru 9)																			
	2	1	6	5	5	E	Signal Activation Time (HH:MM)																			
027	1				8	#	Signal Day/Schedule Code Number (1 thru 9)																			
	2	1	7	0	0	E	Signal Activation Time (HH:MM)																			

Address	Step	Sample Data				Description and Programming Codes
028	1			0	#	Signal Day/Schedule Code Number (1 thru 9)
	2			0	E	Signal Activation Time (HH:MM)
029	1			0	#	Signal Day/Schedule Code Number (1 thru 9)
	2			0	E	Signal Activation Time (HH:MM)
030	1			0	#	Signal Day/Schedule Code Number (1 thru 9)
	2			0	E	Signal Activation Time (HH:MM)
031	1			0	#	Signal Day/Schedule Code Number (1 thru 9)
	2			0	E	Signal Activation Time (HH:MM)
032	1			0	#	Signal Day/Schedule Code Number (1 thru 9)
	2			0	E	Signal Activation Time (HH:MM)
033	1			0	#	Signal Day/Schedule Code Number (1 thru 9)
	2			0	E	Signal Activation Time (HH:MM)
034	1			0	#	Signal Day/Schedule Code Number (1 thru 9)
	2			0	E	Signal Activation Time (HH:MM)
035	1			0	#	Signal Day/Schedule Code Number (1 thru 9)
	2			0	E	Signal Activation Time (HH:MM)
036	1			0	#	Signal Day/Schedule Code Number (1 thru 9)
	2			0	E	Signal Activation Time (HH:MM)
037	1			0	#	Signal Day/Schedule Code Number (1 thru 9)
	2			0	E	Signal Activation Time (HH:MM)
038	1			0	#	Signal Day/Schedule Code Number (1 thru 9)
	2			0	E	Signal Activation Time (HH:MM)
039	1			0	#	Signal Day/Schedule Code Number (1 thru 9)
	2			0	E	Signal Activation Time (HH:MM)
040	1			0	#	Signal Day/Schedule Code Number (1 thru 9)
	2			0	E	Signal Activation Time (HH:MM)
041	1			0	#	Signal Day/Schedule Code Number (1 thru 9)
	2			0	E	Signal Activation Time (HH:MM)
042	1			0	#	Signal Day/Schedule Code Number (1 thru 9)
	2			0	E	Signal Activation Time (HH:MM)
043	1			0	#	Signal Day/Schedule Code Number (1 thru 9)
	2			0	E	Signal Activation Time (HH:MM)
043	1			0	#	Signal Day/Schedule Code Number (1 thru 9)
	2			0	E	Signal Activation Time (HH:MM)

Address	Step	Sample Data					Description and Programming Codes
044	1				0	#	Signal Day/Schedule Code Number (1 thru 9)
	2				0	E	Signal Activation Time (HH:MM)
045	1				0	#	Signal Day/Schedule Code Number (1 thru 9)
	2				0	E	Signal Activation Time (HH:MM)
046	1				0	#	Signal Day/Schedule Code Number (1 thru 9)
	2				0	E	Signal Activation Time (HH:MM)
047	1				0	#	Signal Day/Schedule Code Number (1 thru 9)
	2				0	E	Signal Activation Time (HH:MM)
048	1				0	#	Signal Day/Schedule Code Number (1 thru 9)
	2				0	E	Signal Activation Time (HH:MM)
049	1				0	#	Signal Day/Schedule Code Number (1 thru 9)
	2				0	E	Signal Activation Time (HH:MM)
050	1				0	#	Signal Day/Schedule Code Number (1 thru 9)
	2				0	E	Signal Activation Time (HH:MM)

4. Upon completion of the Signal Programming Area, press the I key to save the data entered.
5. Turn the key to the left to return to Normal mode.

## Calculation Rules Programming

---

The Calculation Rules Programming Area consists of the following:

### Pay Period Type, Pay Period End Day, and Overtime Calculation Type

The Pay Period Type, Pay Period End Day, and Overtime Calculation can be configured to your specific needs. Available Pay Periods are:

- Weekly: Pay Period ends weekly on the day specified using the front side of the card.
- Weekly: Pay Period ends weekly on the day specified using both sides of the card starting on the front side of the card.
- Weekly: Pay Period ends weekly on the day specified using both sides of the card starting on the back side of the card.
- Bi-Weekly (This Week): Pay Period is every two weeks and ends on the next occurrence of the day specified.
- Bi-Weekly (Next Week): Pay Period is every two weeks and ends on the second occurrence of the day specified.
- Semi-Monthly
- Monthly

The ending day or date is dependent on the Pay Period selected. The Pay Ending Date for each Pay Period are as follows:

- Weekly and Bi-weekly: Any day of the week, Monday through Sunday. For Bi-weekly Pay Period, you must specify the Overtime Calculation method.
- Semi-Monthly: You must enter the earlier of the 2 pay ending dates. The second Pay Period is automatically set to occur 15 days from the date entered. You also must work ending day that will be used in the Overtime Calculation method.
- Monthly: Any valid date during the month. You also must work ending day that will be used in the Overtime Calculation method.

This parameter is used to set how Weekly Overtime A and B threshold levels will be calculated for a Bi-Weekly Pay Period Type. If either Bi-Weekly Pay Period Type is selected, the overtime calculation will be based on the threshold level set in the Overtime A and B settings.

### Daily and Weekly Overtime

Overtime can be calculated on a daily or weekly basis; with two levels or categories of overtime, A and B for both daily and weekly overtime. For overtime to be calculated, you must set the number of hours to be worked in a day and/or a week before overtime can be accumulated.

### Line Skipping

This setting allows you to set the number of lines to be skipped after each pair of IN and OUT punches on the time card.

### Paid Break

One Paid Break can be programmed. The break deduction is limited to a maximum of 60 minutes. If the Paid Break is enabled (time is greater than zero), users must press #before either the Break IN or Break OUT punches to be awarded the Paid Break. If the Paid Break is not used, set the time to zero (0) to disable it.

## Pay Rate Multiplier Overtime A and B

The MJR uses a Pay Rate Multiplier to calculate the rate of overtime pay. The rate of each employee's overtime pay is determined by multiplying the Pay Rate Multiplier for each level of overtime by the Pay Rate entered in the Employee Master File.

## Non-working Day Codes

The Non-working Day Codes setting is used to designate those days that are generally non-working days in the Pay Period (such as Saturday and Sunday) and which Pay Rate will be used if employees work on those days.

## Day Change Time, Mode, and Override

The Day Change Time is the time of day that a normal business day ends. It advances the virtual time used for time calculation from the current business day to the next or following business day. The day change time can be set to occur before or at, or after midnight.

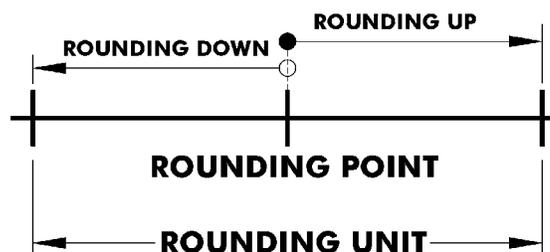
The Day Change Override determines if an employee's OUT punch will correspond to the next or previous day when their shift spans the Day Change Time. It is in this window of time (HH:MM) that an OUT punch must occur to be recorded for the previous day. If the time of the OUT punch does not exceed the Day Change Override window, the OUT punch will be printed for that (previous) day. If the OUT punch exceeds the Day Change Override window, it will be considered an IN punch for the following or next day, and no calculation will be made for the previous day.

## Automatic Break #1 and #2

Up to two Automatic Breaks can be programmed. The amount of time set for each break is automatically deducted provided that the employee works the minimum number of hours to qualify for each break.

## Rounding (Break, IN and OUT Punch)

Rounding is used to simplify the calculation of accumulated hours. When an IN/OUT/Break punch equals or is greater than the Rounding Point, that time is rounded up to the next Rounding Unit. When an IN/OUT/Break punch is less than the Rounding Point, it is rounded down to the previous Rounding Unit.

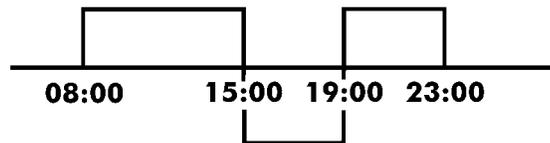


## Minimum Hours Off Between Split Shifts

For split shifts, you can specify the minimum number of off hours required between first OUT and second IN punches for the total number of hours to be calculated as two different shifts.

Example 1:

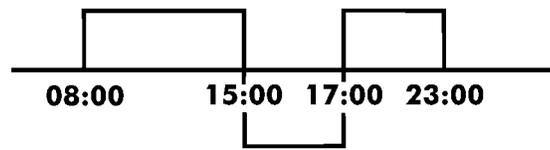
First IN Punch = 08:00      First OUT Punch = 15:00  
Second IN Punch = 19:00      Second OUT Punch = 23:00  
Minimum Hours Off = 03:00



Since the time between the first OUT punch and second IN punch exceeds the Minimum Hours Off, the MJR-BIO will calculate the total number of hours as if (2) different shifts were worked.

Example 2:

First IN Punch = 08:00      First OUT Punch = 15:00  
Second IN Punch = 17:00      Second OUT Punch = 23:00  
Minimum Hours Off = 03:00



Since the time between the first OUT punch and second IN punch is less than the Minimum Hours Off, the MJR-BIO will calculate the total number of hours as if (1) shift was worked.

## Missed Punch Lockout

You can prevent an employee from IN (Lock Out) if they missed the previous day's OUT punch.

## Individual Lock Out (Repeat Punch Protection)

You can specify the amount of time that must pass between the first IN punch and the next OUT punch for the employee time card number. An employee will be unable to punch within the specified time after the first IN punch.

## Lock Out and Red Print Zones

Up to (5) Lock Out or Red Print Zones can be programmed. A Lock Out Zone is a window or period of time in which the employees will be unable to punch IN or OUT. The Lock Out Zone is overridden through the use of "Revision/Lock Out/Fingerprint Verification Bypass Card" or "Lock Out/Fingerprint Verification Bypass Card".

A Red Print Zone is a window or period of time in which all punches will be printed in red ink on the time card.

## Revision, Grace, and Fixed Break Zones

Up to (30) Revision, Grace, or Fixed Break Zones can be programmed in the MJR-BIO. Each of these zones consists of a Punch Type, Start Time, and End Time. The Punch Type specifies the zone type (Revision, Grace, or Fixed Break) and the punch type (First IN punch, OUT punch, or IN punch other than the first). The Start and End Times is the window of time during the day that this zone will be in effect.

### Revision Zone

A Revision Zone is a window of time in which the employee may punch IN or OUT (not both), but the MJR-BIO will not begin or end calculation at the moment of the punch. A punch time in a Revision Zone will be “revised” to a pre-configured time. If the Punch Type is set to IN, then the actual punch time within the Revision Zone will be revised to the Revision Zone End Time. If the Punch Type is set to OUT, then the actual punch time within the Revision Zone will be revised to the Revision Zone Start Time.

When a Revision Zone is enabled, the “revised” punch times are considered to be the official IN or OUT punches. This feature will prevent employees from accumulating extra time by punching in early or punching out late.

Example: IN Punch Revision Zone

Revision 1 Start Time = 7:30    Punch Type = IN

Revision 1 End Time = 8:00    Actual Punch Time (IN1) = 7:39

Since the Punch Type = IN, the Actual Punch Time of 7:39 will be printed out on the time card, and revised internally to 08:00 for calculation purposes.

### Grace Zone

A Grace Zone is a specified length of time before or after the IN or OUT times (or Break times) that the employee's actual time will be adjusted. If the Punch Type is set to an IN punch, the actual punch time within the Grace Zone will be revised to the Grace Zone Start Time. If the Punch Type is set to the OUT punch, the actual punch time within the Grace Zone will be revised to the Grace Zone End Time.

### Fixed Break Zone

A Fixed Break Zone is defined by the Start and End Times entered. The elapsed amount of time between the **Start** and **End Times** will automatically be deducted from the employee's total hours worked.

**Note:** Fixed Break Zones cannot be programmed if Automatic Break #1 or #2 are in use.

To set the parameters in the Calculation Rules Programming Area, perform the following:

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 22E.
3. Enter the following:

Address	Step	Sample Data		Description and Programming Codes																		
100	1			3	#	Pay Period Type <table border="1"> <thead> <tr> <th>Code</th> <th>Pay Period</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Weekly (front side of card only)</td> </tr> <tr> <td>1</td> <td>Weekly (both sides of time card starting on front side)</td> </tr> <tr> <td>2</td> <td>Weekly (both sides of time card starting on back side)</td> </tr> <tr> <td>3</td> <td>Bi-weekly (pay period ends next week)</td> </tr> <tr> <td>4</td> <td>Bi-weekly (pay period ends this week)</td> </tr> <tr> <td>5</td> <td>Semi-monthly</td> </tr> <tr> <td>6</td> <td>Monthly</td> </tr> </tbody> </table>	Code	Pay Period	0	Weekly (front side of card only)	1	Weekly (both sides of time card starting on front side)	2	Weekly (both sides of time card starting on back side)	3	Bi-weekly (pay period ends next week)	4	Bi-weekly (pay period ends this week)	5	Semi-monthly	6	Monthly
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5	Semi-monthly																					
6	Monthly																					
	2			7	#	Pay Ending Day (For Pay Period selected above):  <b>Weekly or Bi-weekly Pay Period:</b>  <table border="1"> <thead> <tr> <th>Code</th> <th>Pay Period Ending Day</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Monday</td> </tr> <tr> <td>2</td> <td>Tuesday</td> </tr> <tr> <td>3</td> <td>Wednesday</td> </tr> <tr> <td>4</td> <td>Thursday</td> </tr> <tr> <td>5</td> <td>Friday</td> </tr> <tr> <td>6</td> <td>Saturday</td> </tr> <tr> <td>7</td> <td>Sunday</td> </tr> </tbody> </table>  <b>Semi-monthly:</b> Enter in the earliest of the 2 pay ending dates (DD) for the month and press # to advance the display to Overtime Calculation setting. The Pay Ending Day is automatically calculated from the date entered. If the Pay Period ends on the 15 <sup>th</sup> and end of the month, enter in 31#. The MJR will automatically adjust for shorter months.  <b>Monthly Pay Period:</b> Enter the Pay Ending and press # to advance the display to the Overtime Calculation setting. For example, if the Pay Period ends on the end of the month, enter in 31#. The MJR will automatically adjust for shorter months.	Code	Pay Period Ending Day	1	Monday	2	Tuesday	3	Wednesday	4	Thursday	5	Friday	6	Saturday	7	Sunday
Code	Pay Period Ending Day																					
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Address	Step	Sample Data					Description and Programming Codes																						
	3				0	E	<p>Overtime Calculation Period:</p> <p><b>Bi-Weekly Pay Period:</b></p> <table border="1"> <thead> <tr> <th>Code</th> <th>Pay Period Ending Day</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Weekly Overtime</td> </tr> <tr> <td>1</td> <td>Bi-weekly Overtime (8/80)</td> </tr> </tbody> </table> <p><b>Semi-monthly or Monthly Pay Period:</b> Enter in the code that corresponds to the workweek-ending day that will be used in the Overtime Calculation and press E.</p> <table border="1"> <thead> <tr> <th>Code</th> <th>Pay Period Ending Day</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Monday</td> </tr> <tr> <td>2</td> <td>Tuesday</td> </tr> <tr> <td>3</td> <td>Wednesday</td> </tr> <tr> <td>4</td> <td>Thursday</td> </tr> <tr> <td>5</td> <td>Friday</td> </tr> <tr> <td>6</td> <td>Saturday</td> </tr> <tr> <td>7</td> <td>Sunday</td> </tr> </tbody> </table>	Code	Pay Period Ending Day	0	Weekly Overtime	1	Bi-weekly Overtime (8/80)	Code	Pay Period Ending Day	1	Monday	2	Tuesday	3	Wednesday	4	Thursday	5	Friday	6	Saturday	7	Sunday
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101	1		8	0	0	#	Daily Overtime A: Enter in the amount of daily hours that must be worked (HH:MM) before hours are sorted to the Overtime A category.																						
	2				0	E	Daily Overtime B: Enter in the amount of daily hours that must be worked (HH:MM) before hours are sorted to the Overtime B category.																						
102	1	4	0	0	0	#	Weekly Overtime A: Enter in the amount of weekly hours that must be worked (HH:MM) before hours are sorted to the Overtime A category.																						
	2				0	E	Weekly Overtime B: Enter in the amount of weekly hours that must be worked (HH:MM) before hours are sorted to the Overtime B category.																						
103	1				0	E	<p>Select the number of lines on the time card you want to skip after each pair of IN and OUT punches:</p> <table border="1"> <thead> <tr> <th>Code</th> <th>Lines Skipped</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>No Lines Skipped</td> </tr> <tr> <td>1</td> <td>1 Line</td> </tr> <tr> <td>2</td> <td>2 Lines</td> </tr> <tr> <td>3</td> <td>3 Lines</td> </tr> </tbody> </table>	Code	Lines Skipped	0	No Lines Skipped	1	1 Line	2	2 Lines	3	3 Lines												
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2	2 Lines																												
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104	1			1	5	#	Paid Break: Enter in the time for the Paid Break (HH:MM). Employees must press # before or after punching for the break. If zero is entered, the Paid Break will be disabled.																						

Address	Step	Sample Data				Description and Programming Codes																				
	2	2	0	0	#	Pay Rate Multiplier for Overtime A: Enter in a number 0000 thru 0255. The last two places of the number are reserved the decimal point.																				
	3			0	E	Pay Rate Multiplier for Overtime B: Enter in a number 0000 thru 0255. The last two places of the number are reserved the decimal point.																				
105	1			6	#	First non-working day  Choose from the following Non-working day codes: <table border="1" data-bbox="847 541 1373 823" style="margin-left: 40px;"> <thead> <tr> <th>Code</th> <th>Non-working Day</th> </tr> </thead> <tbody> <tr><td>1</td><td>Monday</td></tr> <tr><td>2</td><td>Tuesday</td></tr> <tr><td>3</td><td>Wednesday</td></tr> <tr><td>4</td><td>Thursday</td></tr> <tr><td>5</td><td>Friday</td></tr> <tr><td>6</td><td>Saturday</td></tr> <tr><td>7</td><td>Sunday</td></tr> </tbody> </table>	Code	Non-working Day	1	Monday	2	Tuesday	3	Wednesday	4	Thursday	5	Friday	6	Saturday	7	Sunday				
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2			7	#	Second non-working day																					
3			0	E	Pay code for hours worked on non-working days and public holidays <table border="1" data-bbox="760 978 1466 1224" style="margin-left: 40px;"> <thead> <tr> <th>Code</th> <th>Non-working Day</th> <th>Holiday</th> </tr> </thead> <tbody> <tr><td>0</td><td>Overtime A</td><td>Overtime B</td></tr> <tr><td>1</td><td>Overtime A</td><td>Overtime A</td></tr> <tr><td>2</td><td>Overtime B</td><td>Overtime B</td></tr> <tr><td>3</td><td>Regular</td><td>Regular</td></tr> <tr><td>4</td><td>Regular</td><td>Overtime A</td></tr> <tr><td>5</td><td>Regular</td><td>Overtime B</td></tr> </tbody> </table>	Code	Non-working Day	Holiday	0	Overtime A	Overtime B	1	Overtime A	Overtime A	2	Overtime B	Overtime B	3	Regular	Regular	4	Regular	Overtime A	5	Regular	Overtime B
Code	Non-working Day	Holiday																								
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4	Regular	Overtime A																								
5	Regular	Overtime B																								
106	1			0	#	Day Change Override: <table border="1" data-bbox="760 1304 1466 1646" style="margin-left: 40px;"> <thead> <tr> <th>Code</th> <th>Day Change Override</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Day Change Override window, OUT punch 12:59 from last IN punch will be considered OUT punch for previous day.</td> </tr> <tr> <td>1</td> <td>No Day Change Override window, OUT punch crossing Day Change Time will be considered IN punch for next day</td> </tr> <tr> <td>2</td> <td>Day Change Override window, OUT punch 17:59 from last IN punch will be considered OUT punch for previous day.</td> </tr> </tbody> </table>	Code	Day Change Override	0	Day Change Override window, OUT punch 12:59 from last IN punch will be considered OUT punch for previous day.	1	No Day Change Override window, OUT punch crossing Day Change Time will be considered IN punch for next day	2	Day Change Override window, OUT punch 17:59 from last IN punch will be considered OUT punch for previous day.												
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2		1	0	0	E	Day Change Time (HH:MM)																				
107	1	6	0	0	#	Automatic Break #1 Hours to Qualify																				
	2		3	0	E	Automatic Break #1 Deduction																				
108	1	6	0	0	#	Automatic Break #2 Hours to Qualify																				
	2		3	0	E	Automatic Break #2 Deduction																				

Address	Step	Sample Data					Description and Programming Codes									
109	1			0	#	Day Change Mode: 0 = At or after midnight, 1= Before midnight										
	2			1	5	#	Break Rounding Unit (00 thru 60 minutes)									
	3				5	E	Break Rounding Point (00 thru 60 minutes)									
110	1			1	5	#	IN Punch Rounding Unit (00 thru 60 minutes)									
	2				8	E	IN Punch Rounding Point (00 thru 60 minutes)									
111	1			1	5	#	OUT Punch Rounding Unit (00 thru 60 minutes)									
	2				8	E	OUT Punch Rounding Point (00 thru 60 minutes)									
112	1		3	0	0	#	Minimum Hours off for Split Shift calculation (HH:MM)									
	2				1	#	Lock Out if previous day's OUT punch was missed: <table border="1" style="margin-left: 40px;"> <thead> <tr> <th>Code</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>No Lock Out for today's first IN punch</td> </tr> <tr> <td>1</td> <td>Lock Out for today's first IN punch</td> </tr> </tbody> </table>	Code	Type	0	No Lock Out for today's first IN punch	1	Lock Out for today's first IN punch			
	Code	Type														
0	No Lock Out for today's first IN punch															
1	Lock Out for today's first IN punch															
3				5	E	Individual Lock Out (Repeat Punch Protection) (00 thru 60 minutes)										
113	1				1	E	Lock Out or Red Print Zone setting: <table border="1" style="margin-left: 40px;"> <thead> <tr> <th>Code</th> <th>Zone</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Lock Out</td> </tr> <tr> <td>1</td> <td>Red Print</td> </tr> </tbody> </table>	Code	Zone	0	Lock Out	1	Red Print			
Code	Zone															
0	Lock Out															
1	Red Print															
<p><b>Note:</b> The following codes apply to address numbers 114 thru 119:</p> <table border="1" style="margin-left: 40px;"> <thead> <tr> <th>Code</th> <th>Punch Type</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Not used</td> </tr> <tr> <td>1</td> <td>First IN punch</td> </tr> <tr> <td>2</td> <td>OUT punch</td> </tr> <tr> <td>3</td> <td>IN punch other than the first</td> </tr> </tbody> </table>							Code	Punch Type	0	Not used	1	First IN punch	2	OUT punch	3	IN punch other than the first
Code	Punch Type															
0	Not used															
1	First IN punch															
2	OUT punch															
3	IN punch other than the first															
114	1				1	#	Punch Type Code (0 thru 3)									
	2		8	0	8	#	Start of time zone (HH:MM)									
	3		8	2	9	E	End of time zone (HH:MM)									
115	1				2	#	Punch Type Code (0 thru 3)									
	2	1	1	3	0	#	Start of time zone (HH:MM)									
	3	1	1	5	9	E	End of time zone (HH:MM)									
116	1				3	#	Punch Type Code (0 thru 3)									
	2	1	4	0	1	#	Start of time zone (HH:MM)									
	3	1	4	2	9	E	End of time zone (HH:MM)									
117	1				2	#	Punch Type Code (0 thru 3)									
	2	1	6	4	5	#	Start of time zone (HH:MM)									
	3	1	6	5	9	E	End of time zone (HH:MM)									

Address	Step	Sample Data				Description and Programming Codes
118	1			0	#	Punch Type Code (0 thru 3)
	2			0	#	Start of time zone (HH:MM)
	3			0	E	End of time zone (HH:MM)
119	1			0	#	Punch Type Code (0 thru 3)
	2			0	#	Start of time zone (HH:MM)
	3			0	E	End of time zone (HH:MM)

**Note:** Address numbers 120 thru 149 are for Revision, Grace, and Fixed Break Zones. The following codes apply to these address numbers:

Zone	Code	Punch Type
Not Used	0	Not used
Revision	1	First IN punch
Revision	2	OUT punch
Revision	3	IN punch other than the first
Grace	4	First IN punch
Grace	5	OUT punch
Grace	6	IN punch other than the first
Fixed Break	7	Unpaid break zone

**Note:** Fixed Break Zones cannot be programmed if Automatic Break #1 or #2 are in use.

120	1			1	#	Punch Type Code (0 thru 7)
	2	7	3	0	#	Start of time zone (HH:MM)
	3	8	0	0	E	End of time zone (HH:MM)
121	1			2	#	Punch Type Code (0 thru 7)
	2	1	7	0	#	Start of time zone (HH:MM)
	3	1	7	3	E	End of time zone (HH:MM)
122	1			4	#	Punch Type Code (0 thru 7)
	2	8	0	0	#	Start of time zone (HH:MM)
	3	8	1	0	E	End of time zone (HH:MM)
123	1			0	#	Punch Type Code (0 thru 7)
	2			0	#	Start of time zone (HH:MM)
	3			0	E	End of time zone (HH:MM)
124	1			0	#	Punch Type Code (0 thru 7)
	2			0	#	Start of time zone (HH:MM)
	3			0	E	End of time zone (HH:MM)
125	1			0	#	Punch Type Code (0 thru 7)
	2			0	#	Start of time zone (HH:MM)
	3			0	E	End of time zone (HH:MM)

Address	Step	Sample Data					Description and Programming Codes
126	1				0	#	Punch Type Code (0 thru 7)
	2				0	#	Start of time zone (HH:MM)
	3				0	E	End of time zone (HH:MM)
127	1				0	#	Punch Type Code (0 thru 7)
	2				0	#	Start of time zone (HH:MM)
	3				0	E	End of time zone (HH:MM)
128	1				0	#	Punch Type Code (0 thru 7)
	2				0	#	Start of time zone (HH:MM)
	3				0	E	End of time zone (HH:MM)
129	1				0	#	Punch Type Code (0 thru 7)
	2				0	#	Start of time zone (HH:MM)
	3				0	E	End of time zone (HH:MM)
130	1				0	#	Punch Type Code (0 thru 7)
	2				0	#	Start of time zone (HH:MM)
	3				0	E	End of time zone (HH:MM)
131	1				0	#	Punch Type Code (0 thru 7)
	2				0	#	Start of time zone (HH:MM)
	3				0	E	End of time zone (HH:MM)
132	1				0	#	Punch Type Code (0 thru 7)
	2				0	#	Start of time zone (HH:MM)
	3				0	E	End of time zone (HH:MM)
133	1				0	#	Punch Type Code (0 thru 7)
	2				0	#	Start of time zone (HH:MM)
	3				0	E	End of time zone (HH:MM)
134	1				1	#	Punch Type Code (0 thru 7)
	2		7	3	0	#	Start of time zone (HH:MM)
	3		8	0	0	E	End of time zone (HH:MM)
135	1				2	#	Punch Type Code (0 thru 7)
	2	1	7	0	0	#	Start of time zone (HH:MM)
	3	1	7	3	0	E	End of time zone (HH:MM)
136	1				4	#	Punch Type Code (0 thru 7)
	2		8	0	0	#	Start of time zone (HH:MM)
	3		8	1	0	E	End of time zone (HH:MM)
137	1				0	#	Punch Type Code (0 thru 7)
	2				0	#	Start of time zone (HH:MM)
	3				0	E	End of time zone (HH:MM)

Address	Step	Sample Data				Description and Programming Codes
138	1			0	#	Punch Type Code (0 thru 7)
	2			0	#	Start of time zone (HH:MM)
	3			0	E	End of time zone (HH:MM)
139	1			0	#	Punch Type Code (0 thru 7)
	2			0	#	Start of time zone (HH:MM)
	3			0	E	End of time zone (HH:MM)
140	1			0	#	Punch Type Code (0 thru 7)
	2			0	#	Start of time zone (HH:MM)
	3			0	E	End of time zone (HH:MM)
141	1			0	#	Punch Type Code (0 thru 7)
	2			0	#	Start of time zone (HH:MM)
	3			0	E	End of time zone (HH:MM)
142	1			0	#	Punch Type Code (0 thru 7)
	2			0	#	Start of time zone (HH:MM)
	3			0	E	End of time zone (HH:MM)
143	1			0	#	Punch Type Code (0 thru 7)
	2			0	#	Start of time zone (HH:MM)
	3			0	E	End of time zone (HH:MM)
144	1			0	#	Punch Type Code (0 thru 7)
	2			0	#	Start of time zone (HH:MM)
	3			0	E	End of time zone (HH:MM)
145	1			0	#	Punch Type Code (0 thru 7)
	2			0	#	Start of time zone (HH:MM)
	3			0	E	End of time zone (HH:MM)
146	1			0	#	Punch Type Code (0 thru 7)
	2			0	#	Start of time zone (HH:MM)
	3			0	E	End of time zone (HH:MM)
147	1			0	#	Punch Type Code (0 thru 7)
	2			0	#	Start of time zone (HH:MM)
	3			0	E	End of time zone (HH:MM)
148	1			0	#	Punch Type Code (0 thru 7)
	2			0	#	Start of time zone (HH:MM)
	3			0	E	End of time zone (HH:MM)

4. Press I to save your settings and turn the key to the left to return to Normal mode.

## Program Print Out

This selection is used to print out programmed settings. A full printout of programmed settings in the MJR-BIO consists of (3) pages (P-0, P-1, and P-2).

```

PROGRAM V 3.04EM 2/17/ 4 15:57 PAGE- 0
 1  0  0
 2  0  0  0
 3  0  0  0
 4  0  0  0  0
 8  0  0  0  0
12  0  0  0  0
16  0  0  0  0
20  0
21  0  0  0  0  0
23  0  0  0  0
25  0  0  0  0
27  0  0  0  0
29  0  0  0  0
31  0  0  0  0
33  0  0  0  0
35  0  0  0  0
37  0  0  0  0
39  0  0  0  0
41  0  0  0  0
43  0  0  0  0
45  0  0  0  0
47  0  0  0  0
49  0  0  0  0
51  0
52  0  0  0  0
60  1  2  99  100
64 10  70  20  1
68  9
70  0  0  0  0  0
72  0  0  0  0  0
74  0  0  0  0  0
    
```

```

PROGRAM V 3.04EM 2/17/ 4 15:58 PAGE- 1
100 0  0
101 0  0  0  0
103 0
104 0  0  0
105 0  0  0
106 0  0
107 0  0
108 0  0
109 0  0  0
110 0  0
111 0  0
112 0  0  0
113 0
114 0  0  0  0  0
116 0  0  0  0  0
118 0  0  0  0  0
120 0  0  0  0  0
122 0  0  0  0  0
124 0  0  0  0  0
126 0  0  0  0  0
128 0  0  0  0  0
130 0  0  0  0  0
132 0  0  0  0  0
134 0  0  0  0  0
136 0  0  0  0  0
138 0  0  0  0  0
140 0  0  0  0  0
142 0  0  0  0  0
144 0  0  0  0  0
146 0  0  0  0  0
148 0  0  0  0  0
    
```

```

PROGRAM V 3.04EM 2/17/ 4 15:59 PAGE- 2
-----
ASSIGNMENT METHOD
TYPE 0
STARTING CARD NO. 000
ENDING CARD NO. 249
-----
RAW DATA
DISABLE BUFFER 0
CLK CONTROL CODE 0
ACCUM. PRINTING 0
COST CENTER NO. 0
FUNCTION CODE 0
    
```

To obtain a printout of programmed settings:

1. Insert the key into the Key Switch and turn the key to the right to access the Function mode.
2. Press 23E. The Page 1 Indicator (P-0) will appear in the display.
3. To print all (3) pages (P-0, P-1, and P-2):
  - a. Insert a Report Card. When Page 1 has finished printing, the card will be ejected and the Page 2 Indicator (P-1) will appear in the display.
  - b. Insert the same card with the back (blank) side-facing front. When Page 2 has finished printing, the card will be ejected and the Page 3 Indicator (P-2) will appear in the display.
  - c. Insert a new card. When Page 3 has finished printing, the card will be ejected.

To print Page 2 (P-1) only:

- a. Press E to advance the display to the Page 2 (P-1) Indicator.
- b. Insert a Report Card. When Page 2 has finished printing, the card will be ejected and the Page 3 Indicator (P-2) will appear in the display.

To print Page 3 (P-2) only:

- a. Press E twice to advance the display to the Page 2 (P-1) Indicator.
  - b. Insert a Report Card. When Page 2 has finished printing, the card will be ejected.
4. When you have finished printing the desired pages of programming information, turn the key to the left to return to Normal mode.

# Chapter 4: Biometrics

---

## Enrolling Employee Fingerprints

---

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 25E to access the fingerprint enrollment program.

**Note:** If an error occurs, you must power off and power on the unit to re-initialize it.

3. The default employee master file number (000) will be displayed on the LCD screen. There are three ways to enter an employee master file number:
  - a. Press F and type the desired employee master file number. Press E when finished.
  - b. Increase or decrease the employee master file number by using the + and - keys.
  - c. Insert a time card encoded with the desired employee master file number. The employee number will be displayed on the LCD screen.

**Note:** If the inserted card is not assigned to an employee master file number, error code “7 – 82” will be shown on the LCD display. Please refer to Time Card Assignment Configuration on Page 3-5.

4. The red fingerprint sensor indicator will illuminate and the number “1” will be displayed in the lower left-hand corner of the LCD screen. This number indicates that the MJR-BIO is capturing the first of two fingerprint scans.
5. Place the employee’s finger on the top of the sensor. When the fingerprint sensor indicator turns off, remove the finger. If the scan is successful, the word “PASS” will be displayed; otherwise the word “FAIL” will be displayed along with an error code.

**Note:** You have 12 seconds to complete the first fingerprint scan.

6. Press E to capture the second of the two fingerprint scans. The red fingerprint sensor indicator will illuminate and the number “2” will be displayed in the lower left-hand corner of the LCD screen.
7. Place the same employee’s finger on the top of the sensor. When the fingerprint sensor indicator turns off, remove the finger. If the scan is successful, the word “PASS” will be displayed; otherwise the word “FAIL” will be displayed along with an error code.

**Note:** You have 6 seconds to complete the second fingerprint scan. You may scan a different finger at this time if you wish to be identified by more than one fingerprint.

8. If a time card was inserted, it will be ejected. Remove the card out of the card pocket.
9. If the fingerprint enrollment was successful, the master file number will revert back to (000). If the fingerprint enrollment was not successful, the master file number will revert back to the default employee master file number (000).
10. Repeat steps 3 thru 7 for all other employees.
11. When all employees have been enrolled, turn the key to the left to return to Normal mode.

## Deleting Employee Fingerprints

---

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 26E to access the fingerprint delete program.

**Note:** If an error occurs, you must power off and power on the unit to re-initialize it.

3. There are two options available for deleting fingerprints:
  - a. Individual Delete: Delete a specified fingerprint
  - b. Delete All: Delete all fingerprints

### Deleting an Individual Fingerprint

1. To delete an individual fingerprint, press 77E.
2. Enter a valid password number and press E. If the password is valid, the default employee master file number (000) will be displayed on the LCD screen.
3. Enter the desired employee master file number.
4. If the fingerprint is successfully deleted, the word "PASS" will appear on the LCD screen, followed by the default employee master file number (000).
5. If the fingerprint is not successfully deleted, the word "FAIL" will be displayed for three seconds, along with an error code. The default employee master file number (000) will then be displayed.
6. Repeat Step 3 to delete more employee fingerprints.
7. When all employees have been deleted, turn the key to the left to return to Normal mode.

### Deleting All Fingerprints

1. To delete all employee fingerprints, press 88E.
2. Enter a valid password number and press E. If the password is correct, the message "Sure" will be displayed. Press C to confirm or turn key to the left, back to the Normal mode to abort.
3. After approximately 10 seconds, the display will go blank and all employee fingerprints will be deleted.
4. When finished, turn the key to the left to return to Normal mode.

## **Fingerprint Non-Verification List**

---

The Fingerprint Non-Verification List is used to disable fingerprint verification for certain employees. This feature is useful for employees who are having trouble using the fingerprint scanner. Any employee who is added to the Non-Verification List may still have to present their finger for a fingerprint scan, however, the MJR-BIO will ignore the results and always “pass” the employee. This keeps the employee from knowing that they have been added to the Non-Verification List.

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 27E to access the fingerprint Non-Verification List program.

### **Adding An Employee to the Non-Verification List**

1. To add an employee to the list, press 55E. The default employee master file number (000) will be displayed on the LCD screen.
2. Enter the desired employee master file number, and press E when finished.
3. Repeat the step above to add more employees.
4. Press I to save the data into memory. The display will go blank.
5. Turn the key to the left to return to Normal mode.

### **Deleting An Employee from the Non-Verification List**

1. To delete an employee from the list, press 66E. The default employee master file number (000) will be displayed on the LCD screen.
2. Enter a valid password number and press E. If the password is valid, the default employee master file number (000) will be displayed on the LCD screen.
3. Enter the desired employee master file number, and press E when finished.
4. Repeat the step above to add more employees.
5. Press I to save the data into memory. The display will go blank.
6. Turn the key to the left to return to Normal mode.

### **Delete All Employees from the Non-Verification List**

1. To delete an employee from the list, press 77E
2. Enter a valid password number and press E. If the password is correct, the message “Sure” will be displayed. Press C to confirm or turn key to the left, back to the Normal mode to abort.
3. Wait until the display goes blank.
4. Turn the key to the left to return to Normal mode.

## Printing the Employee Non-Verification List

1. To print the employee Non-Verification List, press 88E
2. Insert a report card into the unit. Remove the card when finished printing.
3. If there is an additional page, the display will indicate the next page number on the LCD display. Insert the other side of the report card or insert another card to finish printing.
4. When finished, turn the key to the left to return to Normal mode.

NAME		PAY ENDING DATE			
ID#	DEPT#	FILE#	CARD#		
DATE	IN	OUT	HOURS WORKED	ACCUMULATED HOURS	OVERTIME
FINGERPRINT NON-VERIFICATION LIST					
11/24/3 15:31 PAGE- 0					
FILE NO.	FILE NO.	FILE NO.	FILE NO.		
001	002	003	004		
005	100	123	240		
249					
TOTAL: 009					

Sample Employee Non-Verification List Printout

## Random Fingerprint Verification Mode

The MJR-BIO has the unique ability to randomly select employees for fingerprint verification. This feature is useful in situations where the MJR-BIO must process punches quickly, but still eliminate the possibility of a “Buddy Punch”. Random Fingerprint Verification can be utilized in up to six, customizable time zones.

**Note:** The settings here will take priority over the Global Random Fingerprint Verification settings; see Global Random Fingerprint Verification Setup, Page 4-8 for more information

### Configuring Random Fingerprint Verification Mode

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 28E.
3. Enter the following:

Address	Step	Sample Data					Description and Programming Codes
070	1	0	0	5	0	#	Percentage of Employees to be Randomly Verified: (00 thru 99).
	2	0	7	4	5	#	Start of time zone (HH:MM)
	3	0	8	3	0	E	End of time zone (HH:MM)
071	1				0	#	Percentage of Employees to be Randomly Verified: (00 thru 99).
	2				0	#	Start of time zone (HH:MM)
	3				0	E	End of time zone (HH:MM)
072	1				0	#	Percentage of Employees to be Randomly Verified: (00 thru 99).
	2				0	#	Start of time zone (HH:MM)
	3				0	E	End of time zone (HH:MM)
073	1				0	#	Percentage of Employees to be Randomly Verified: (00 thru 99).
	2				0	#	Start of time zone (HH:MM)
	3				0	E	End of time zone (HH:MM)
074	1				0	#	Percentage of Employees to be Randomly Verified: (00 thru 99).
	2				0	#	Start of time zone (HH:MM)
	3				0	E	End of time zone (HH:MM)
075	1				0	#	Percentage of Employees to be Randomly Verified: (00 thru 99).
	2				0	#	Start of time zone (HH:MM)
	3				0	E	End of time zone (HH:MM)

**Note:** A value of “00” will disable Random Fingerprint Verification. A value of “99” will check all employees.

4. When finished, press I to save the data into memory. The display will go blank.
5. Turn the key to the left to return to Normal mode.

**Note:** Parameter settings can be printed out by selecting 23E (Program Print Out).

## Printing a List of All Enrolled Fingerprints

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 29E to print a list of all enrolled fingerprints. The page number to be printed will be displayed on the LCD Screen.

**Note:** If an error occurs, you must power off and power on the unit to re-initialize it.

3. Insert a report card into the unit. Remove the card when finished printing.
4. If there is an additional page, the display will indicate the next page number on the LCD display. Insert the other side of the report card or insert another card to finish printing.
5. When finished, turn the key to the left to return to Normal mode.

FILE NO.	NAME	PRE.	CUR.	NXT.
001	RYAN, RICHARD	001	005	009
002	SMITH, JOHN	002	006	010
003	LOUIS, KAREN	003	007	011
004	*** NO EMPLOYEE MASTER ***			
005	ANDERSON, DAVID	004	008	012
TOTAL: 005				

### Sample Employee Fingerprint List

**Note:** If a fingerprint template exists with no associated master file, the message “\*\*\* NO EMPLOYEE MASTER \*\*\*” will be printed. To delete orphaned fingerprint templates, see Deleting Employee Fingerprints, 4-2.

## Fingerprint Module Tests

---

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 94E to access the tests for the Fingerprint module.

**Note:** If an error occurs, you must power off and power on the unit to re-initialize it.

3. There are three tests available for the Fingerprint module:
  - a. Hardware/Firmware Test
  - b. Employee Fingerprint Verification Test: This test will verify if an employee matches their registered fingerprint scan.
  - c. Identify Employee by Fingerprint Test: This test will match a fingerprint scan to an employee.

### Hardware/Firmware Test

1. Press 66E to begin the Hardware/Firmware Test. The MJR-BIO will perform the fingerprint hardware test. If the test fails, an error code will be displayed for three seconds.
2. The MJR-BIO will then perform the fingerprint firmware test. An 8-digit firmware number will be displayed on the LCD screen. The first four digits contain the major version number; the last four digits contain the minor version number.
3. When finished, turn the key to the left to return to Normal mode.

### Employee Fingerprint Verification Test

1. To verify an employee fingerprint, press 77E. The default employee master file number (000) will be displayed on the LCD screen.
2. Enter the desired employee master file number, and press E when finished.
3. The red fingerprint sensor indicator will illuminate. Place the employees registered finger on the top of the sensor. When the fingerprint sensor indicator turns off, remove the finger.
4. If the fingerprint is successfully verified, the word "PASS" will appear on the LCD screen, followed by the default employee master file number (000).
5. If the fingerprint is not successfully verified, the word "FAIL" will be displayed for three seconds, along with an error code. The default employee master file number (000) will then be displayed.
6. Repeat steps 2-5 to verify more employees.
7. When finished, turn the key to the left to return to Normal mode.

### Identify Employee by Fingerprint Test

1. To identify an employee by fingerprint, press 88E.
2. When the employee is ready to be scanned, press E.
3. The red fingerprint sensor indicator will illuminate. Place the employees registered finger on the top of the sensor. When the fingerprint sensor indicator turns off, remove the finger.
4. If the fingerprint is successfully identifies, the word "PASS" will appear on the LCD screen, followed by the employee's master file number.
5. If the fingerprint is not successfully identified, the word "FAIL" will be displayed for three seconds, along with an error code.
6. Repeat steps 2-5 to identify more employees.
7. When finished, turn the key to the left to return to Normal mode.

## Advanced Setup Features

---

### Enabling/Disabling Fingerprint Verification

This feature is useful if you wish to temporarily suspend fingerprint verification (for long lines at the time clock).

### Setting the Fingerprint Verification Security Level

This option will set the security level for fingerprint verification. A higher number will implement tighter security. However, fingerprints will be harder to scan. A lower number will implement looser security and fingerprints will be easier to scan.

### Global Random Fingerprint Verification Setup

Random Fingerprint Verification is explained in Random Fingerprint Verification Mode, Page 4-5. To apply this feature globally, you must set the percentage of employees you wish to randomly verify.

**Note:** The exceptions set forth in Random Fingerprint Verification Mode; Page 4-5 will take priority over the settings programmed here.

### Fingerprint Exposure and Quality Settings

The following adjustments should only be performed with the assistance of Amano Support.

#### Fingerprint Brightness

Sets the brightness of the fingerprint exposure.

#### Fingerprint Gain

Sets the gain of the fingerprint exposure.

#### Enrollment Quality

This setting refers to the level of detail captured for the fingerprint exposure. A higher setting will capture more details, a lower level will capture less details.

#### Verification Quality

This setting refers the level of detail to be verified for fingerprint verification. A higher setting will verify more details, a lower setting will less details.

#### High Security Option

This setting flashes the Fingerprint Sensor Indicator during user enrollment or verification to prevent a residual print from being verified.

#### Maximum Number of Scan Attempts

This setting refers to the maximum number of attempts the user can make to scan their fingerprint before the MJR-BIO rejects their card.

To access advanced setup features for the MJR-BIO:

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 24E.
3. Enter the following:

Address	Step	Sample Data					Description and Programming Codes
060	1	0	0	0	1	E	Fingerprint Verification: 0 = Disable, 1= Enable (1 = Default)
061	1	0	0	0	2	E	Security Level: 1 thru 9 (2 = Default)
062	1	0	0	9	9	E	Global Random Fingerprint Verification: 0 thru 99% (99 = Default)
063	1	0	1	0	0	E	Image Brightness: 0 thru 10000 (100 = Default)
064	1	0	0	1	0	E	Image Gain: 0 thru 63 (10 = Default)
065	1	0	0	7	0	E	Enrollment Quality: 30 thru 99 (70 = Default)
066	1	0	0	2	0	E	Verification Quality: 10 thru 99 (20 = Default)
067	1	0	0	0	1	E	High Security Option: 0 = Disable, 1= Enable (1 = Default)
068	1	0	0	0	9	E	Maximum Number of Scan Attempts: 1 thru 9 (9 = Default)

6. When finished, press I to save the data into memory. The display will go blank.
7. Turn the key to the left to return to Normal mode.



# Chapter 5: Operation

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## Using the MJR-BIO

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1. Remove time card from the time card rack.
2. Insert a time card into the card pocket at the top of the clock.
3. The clock will automatically transport the card inside the card throat, and so the card sensor can read the encoded time card number. The time card number will be displayed in the top left hand corner of the LCD display.
4. If the employee has been selected for fingerprint verification, the red fingerprint sensor will illuminate.
5. Have the employee slide their registered finger onto the fingerprint sensor, until their fingertip fully covers the sensor. Have them apply moderate pressure until the fingerprint sensor turns off. Remove the finger.
6. If the fingerprint scan matches the employee's registered fingerprint, the word "PASS" will be displayed and the time card will be printed with the current time. The card will then be returned to the employee.
7. If the fingerprint scan does not match the employee's registered fingerprint, the word "FAIL" will be displayed along with an error code and the time card will be ejected.
8. If the employee has not been selected for fingerprint verification, a "." will be printed in the "CODE" field on the time card.
9. If the employee is in the Non-Verification List, a "..." will be printed in the "NO." field next to the first punch of the pay period.
10. If the employee has reached the maximum number of verification attempts, the time card will be printed with the current time and an "E" will be printed in the "CODE" field.
11. Remove the time card from the clock and return it to the time card rack.

## Fingerprint Black List

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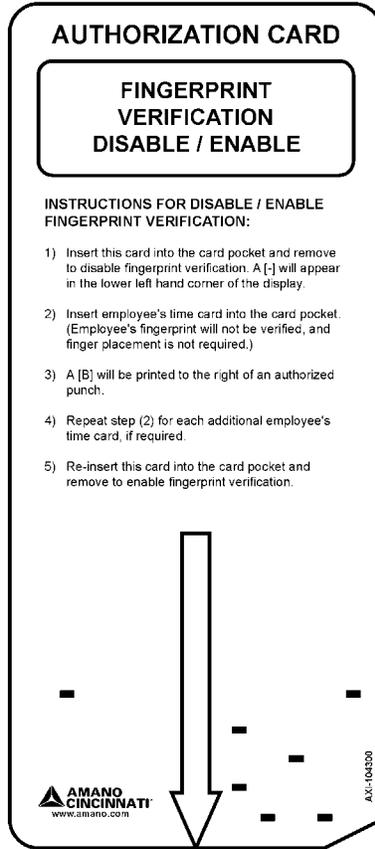
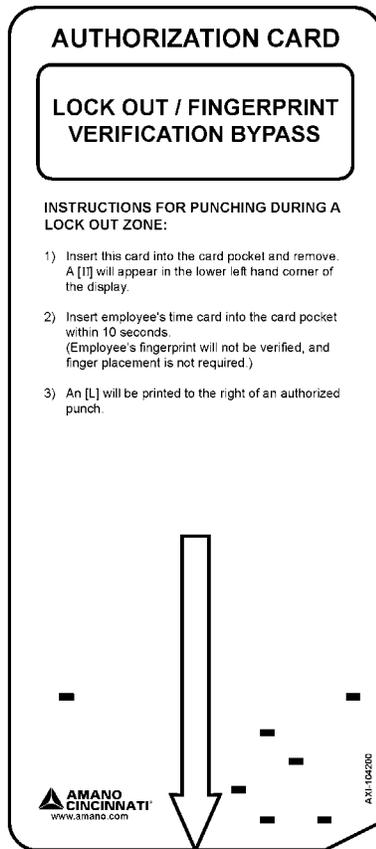
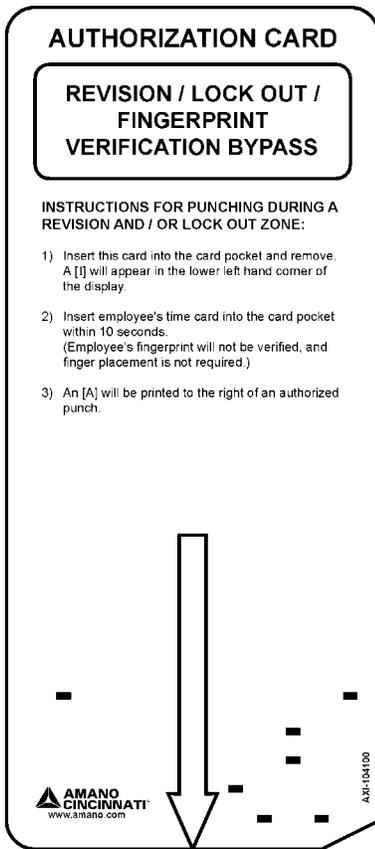
When the Random Fingerprint Verification Percentage is set any other value than 99 (not always activated), a fraudulent user may be able to skip fingerprint verification and successfully punch a time card. To avoid this situation, a "Black List" of such employee master file numbers is kept internally in the MJR-BIO.

When a user inserts a time card and the fingerprint verification module has been activated, the user has to place their finger on the top of the sensor for verification. If the verification fails, the MJR-BIO will place the user's employee master file number in a "Black List".

When a time card is inserted, the MJR-BIO will check if the user's employee master file number is on the Black List. If not, the MJR-BIO will perform fingerprint verification depending on the Random Fingerprint Verification setting. If it is, the MJR-BIO will activate the fingerprint verification module to perform fingerprint verification.

If the verification was successful, the user's employee master file number will be removed from the Black List. Otherwise, the employee file number will be added or remain on the Black List.

# Authorization Cards



## Revision/Lock Out/Fingerprint Verification Bypass Card

This card is used to override programmed revision, lock out zones and bypass fingerprint verification for a single employee.

1. Insert the card into MJR-BIO and remove. A flashing **I** will appear in the lower left hand corner of the display.
2. Insert the employee's time card within 10 seconds. The employee's fingerprint will not be verified (fingerprint scanning is not required).
3. An "A" will be printed on the employee's time card, beside the punch.

## Lock Out/Fingerprint Verification Bypass Card

This card is used to override programmed lock out zones and bypass fingerprint verification for a single employee.

1. Insert the card into MJR-BIO and remove. A flashing "I" will appear in the lower left hand corner of the display.
2. Insert the employee's time card within 10 seconds. The employee's fingerprint will not be verified (fingerprint scanning is not required).
3. An "L" will be printed on the employee's time card, beside the punch.

## **Fingerprint Verification Disable/Enable Card**

This card is used to enable or disable fingerprint verification.

1. Insert the card into MJR-BIO and remove. A “–“ will appear in the lower left hand corner of the display.
2. The employee’s fingerprint will not be verified (fingerprint scanning is not required).
3. A “B” will be printed on the employee’s time card, beside the punch.
4. Repeat step (2) for additional employees.
5. To re-enable fingerprint verification; re-insert the Fingerprint Verification Disable/ Enable Card.



## Department File Maintenance

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### Adding Department Numbers

Up to 50 Department Numbers can be stored in the MJR. To add Department Numbers, perform the following:

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 72E.
3. For each Department, enter in valid 6-digit Department Number (000001 thru 999999) and press E.
4. Press I to save and sort the Department Number(s) into the MJR-BIO's memory.
5. Turn the key to the left to return to Normal mode.

### Print a List of Department Numbers

To printout a list of Department Numbers, perform the following:

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 73E.
3. Insert a report card. The card will be ejected when printing is complete.
4. Turn the key to the left to return to Normal mode.

### Delete Individual Department Numbers

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 71E77E.
3. Type in the desired Department Number and press E.
4. Press I to delete and re sort the Department Number(s) in the MJR-BIO's memory.
5. Turn the key to the left to return to Normal mode.

### Delete All Department Numbers

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 70E77E.
3. The display will scroll through all programmed (000 thru 249) as all department numbers are deleted and reset to 000000 in each Employee File Number.
4. Turn the key to the left to return to Normal mode.

## **Employee Master File Maintenance**

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### **Adding Employee Master Files**

Up to 250 employees can be stored in the MJR. To add employees, perform the following:

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 61E.
3. Enter in valid 3-digit Employee File Number (000 thru 249) and press #.
4. Enter in the employee ID# (up to 10 digits: 0000000000 - 9999999999) and press #.
5. Enter in the employee name by using an ASCII code equivalent (See Appendix A) for each letter and press #.
6. Enter in valid existing Department Number that the employee will belong to and press #.
7. Enter in the employee's pay rate and press E.
8. Insert a report card to print and verify that the employee information entered is correct.
9. Enter the next employee by returning to step 3 or Turn the key to the left to return to Normal mode.

### **Print a List of Employee Master Files (All Departments)**

To printout a list of Employee Master Files for all departments, perform the following:

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 62E.
3. Insert a report card. The card will be ejected when printing is complete.
4. Turn the key to the left to return to Normal mode.

### **Print a List of Employee Master Files (Specific Departments)**

To printout a list of Employee Master Files for specific departments, perform the following:

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 63E.
3. Enter in a valid, existing Department Number and press E.
4. Insert a report card. The card will be ejected when printing is complete.
5. Turn the key to the left to return to Normal mode.

### **Print a List of Employee Master Files with Pay Rates (All Departments)**

To printout a list of Employee Master Files with Pay Rates for all departments, perform the following:

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 64E.
3. Enter in the valid password and press E.
4. Insert a report card. The card will be ejected when printing is complete.
5. Turn the key to the left to return to Normal mode.

## **Print a List of Employee Master Files with Pay Rates (Specific Departments)**

To printout a list of Employee Master Files with Pay Rates for all departments, perform the following:

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 65E.
3. Enter in the valid password and press E.
4. Enter in a valid, existing Department Number and press E.
5. Insert a report card. The card will be ejected when printing is complete.
6. Turn the key to the left to return to Normal mode.

## **Delete an Employee's Accumulated Hours and Time Card Assignment**

Follow the instructions below to delete an individual's accumulated hours and time card number assignment for the previous, current, and next pay periods.

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 60E77E.
3. Enter the Employee Master File Number you wish to delete and press E.
4. Press I.
5. Turn the key to the left to return to Normal mode.

## **Delete an Employee's Entire Employee Master File**

To delete an individual employee's entire employee master file (file number, employee number, employee name, department number, pay rate, accumulated hours, fingerprint templates, and time card number assignment for the previous, current, and next pay periods), perform the following:

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 60E88E.
3. Enter the Employee Master File Number you wish to delete and press E.
4. Press I.
5. Turn the key to the left to return to Normal mode.

## **Delete All Employee's Accumulated Hours and Time Card Assignment**

To delete all employees accumulated hours and time card number assignment for the previous, current, and next pay periods:

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 30E77E.
3. Type in the valid password and press E.
4. When the display goes blank, turn the key to the left to return to Normal mode.

## **Delete All Employee Master Files**

To delete all employees' entire employee master file (file number, employee number, employee name, department number, pay rate, accumulated hours, fingerprint templates, and time card number assignment for the previous, current, and next pay periods), perform the following:

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 30E88E.
3. Enter the Employee Master File Number you wish to delete and press E.
4. Press I.
5. Turn the key to the left to return to Normal mode.

## **Time Card Number Assignment**

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The following will allow you to automatically assign the same time card number or a different time card number for the current or next pay period, manually assign individual time cards for the current or next pay period, and print a list of card numbers.

### **Automatically Assign Same Card Numbers**

#### **Current Pay Period**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 82E88E.
3. Type in the valid password and press E. The display will go blank within 4 seconds.
4. Turn the key to the left to return to Normal mode.

#### **Next Pay Period**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 82E99E.
3. Type in the valid password and press E. The display will go blank within 4 seconds.
4. Turn the key to the left to return to Normal mode.

### **Automatically Assign Different Card Numbers**

#### **Current Pay Period**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 83E88E.
3. Type in the valid password and press E.
4. Type in the starting time card number and press E. The time card number and file numbers will be displayed as they are being assigned in sequential order.
5. When display screen goes blank, turn the key to the left to return to Normal mode.

#### **Next Pay Period**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 83E99E.
3. Type in the valid password and press E.
4. Type in the starting time card number and press E. The time card number and file numbers will be displayed as they are being assigned in sequential order.
5. When display screen goes blank, turn the key to the left to return to Normal mode.

## **Manual Time Card Number Assignment**

### **Current Pay Period**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 84E88E.
3. Press F.
4. Enter in the employee master file of the employee you wish to assign the time card number to.
5. Press E.
6. Insert the time card. The MJR will check the memory to see if that time card number is already in use. If it is not, the time card number will be saved in memory and the clock will automatically increment to the next file number.
7. Assign next time card number or turn the key to the left to return to Normal mode when finished

### **Next Pay Period**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 84E99E.
3. Type in the valid password and press F.
4. Enter in the employee master file of the employee you wish to assign the time card number to.
5. Press E.
6. Insert the time card. The MJR will check the memory to see if that time card number is already in use. If it is not, the time card number will be saved in memory and the clock will automatically increment to the next file number.
7. Assign next time card number or turn the key to the left to return to Normal mode when finished

### **Print a List of Assigned Time Card Numbers**

To printout a list of assigned time card numbers:

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 85E.
3. Insert a report card; the card will be ejected when printing is complete.
4. Turn the key to the left to return to Normal mode.

## Time Card Name Printing

---

The MJR enables you to print the employee name, pay ending date, Employee ID Number, Department Number, Employee File Number, and Time Card Number on one or both sides of the time card for the current or next pay period.

### Printing on One Side of Time Card

#### Current Pay Period

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 80E1E.
3. Press F, then enter in the desired employee master file number
4. Press E.
5. The employee master file number entered will appear in the right hand corner of the display and the time card number will appear in the upper left hand corner. Verify that the actual time card number is the same as the time card number displayed.
6. Insert the time card upside down on Side 1. When printing is complete, the card will be automatically ejected.
7. The display will automatically advance to the next available file number and card number.
8. Insert the next card for the next employee and continue until all name printing is complete.
9. Turn the key to the left to return to Normal mode.

#### Next Pay Period

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 81E1E.
3. Press F, then enter in the desired employee master file number
4. Press E.
5. The employee master file number entered will appear in the right hand corner of the display and the time card number will appear in the upper left hand corner. Verify that the actual time card number is the same as the time card number displayed.
6. Insert the time card upside down on Side 1. When printing is complete, the card will be automatically ejected.
7. The display will automatically advance to the next available file number and card number.
8. Insert the next card for the next employee and continue until all name printing is complete.
9. Turn the key to the left to return to Normal mode.

## **Printing on Both Sides of Time Card**

### **Current Pay Period**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 80E2E.
3. Press F, then enter in the desired employee master file number
4. Press E.
5. The employee master file number entered will appear in the right hand corner of the display and the time card number will appear in the upper left hand corner. Verify that the actual time card number is the same as the time card number displayed.
6. Insert the time card upside down on Side 1. When printing is complete, the card will be automatically ejected.
7. Insert the time card upside down on Side 2. When printing is complete, the card will be automatically ejected.
8. The display will automatically advance to the next available file number and card number.
9. Insert the next card for the next employee and continue until all name printing is complete.
10. Turn the key to the left to return to Normal mode.

### **Next Pay Period**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 81E2E.
3. Press F, then enter in the desired employee master file number
4. Press E.
5. The employee master file number entered will appear in the right hand corner of the display and the time card number will appear in the upper left hand corner. Verify that the actual time card number is the same as the time card number displayed.
6. Insert the time card upside down on Side 1. When printing is complete, the card will be automatically ejected.
7. Insert the time card upside down on Side 2. When printing is complete, the card will be automatically ejected.
8. The display will automatically advance to the next available file number and card number.
9. Insert the next card for the next employee and continue until all name printing is complete.
10. Turn the key to the left to return to Normal mode.

## Data Correction

---

This feature will allow you to correct accumulated hours on an employee's time card for the current or previous pay periods. All corrections will be printed in red. If the MJR is configured to calculate in regular minutes, then the correction data must be entered in regular minutes (:00 thru :59). If the clock is configured to calculate in 1/100<sup>th</sup>'s (hundredths) of an hour, then the correction data should be entered in 1/100<sup>th</sup>'s (.00 thru .99).

### Individual Data Correction For Current Pay Period

For the current pay period, there are (5) Pay Categories for correction. The category number and the amount of hours will appear in the display, with the category number in the upper left hand corner,

Number	Category	Description
1	Daily Net Hours	Adjusts hours for the current day. Hours entered here will be automatically sorted into regular and overtime pay categories (based on the programmed amount of daily hours in address 101), and added to the weekly net hours category.
2	Weekly Net Hours	Adjusts hours for the current week. Hours entered here will automatically be sorted into regular and overtime pay categories (based on the programmed amount of weekly hours in address 102).  For bi-weekly 8/40, semi-monthly and monthly pay periods, sorting of the corrected hours will be based on the hours calculated during the last week of the pay period.
3	Regular Hours	Adjusts hours in the accumulated regular hours pay category for the current week. Hours entered here will be added to the regular hours pay category only.
4	Overtime A Hours	Adjusts hours in the accumulated Overtime A pay category for the current week. Hours entered here will be added to the Overtime A hours pay category only.
5	Overtime B Hours	Adjusts hours in the accumulated Overtime B pay category for the current week. Hours entered here will be added to the Overtime B hours pay category only.

To correct an employee's accumulated hours for the current pay period:

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 1E.
3. Enter the employee master file number for the employee's hours you wish to correct.
4. Press E. Category 1, Daily Net Hours, will appear in the display.
5. Enter in the amount of hours for the correction.
6. Press + to add, or - to subtract the hours entered.
7. Press E to store the hours and advance to the next category.
8. When you are finished making corrections for this employee, insert their time card for the current pay period. Corrections will be printed in red.
9. Enter the next employee master file number you wish to correct or Turn the key to the left to return to Normal mode when finished.

## Individual Data Correction For Current Pay Period

For the current pay period, there are (4) Pay Categories for correction. The category number and the amount of hours will appear in the display, with the category number in the upper left hand corner,

Number	Category	Description
1	Weekly Net Hours	Adjusts hours for the current week. Hours entered here will automatically be sorted into regular and overtime pay categories (based on the programmed amount of weekly hours in address 102).  This category will only be available for weekly and bi-weekly 8/80 pay periods.
2	Regular Hours	Adjusts hours in the accumulated regular hours pay category for the current week. Hours entered here will be added to the regular hours pay category only.
3	Overtime A Hours	Adjusts hours in the accumulated Overtime A pay category for the current week. Hours entered here will be added to the Overtime A hours pay category only.
4	Overtime B Hours	Adjusts hours in the accumulated Overtime B pay category for the current week. Hours entered here will be added to the Overtime B hours pay category only.

To correct an employee's accumulated hours for the previous pay period:

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 2E.
3. Enter the employee master file number for the employee's hours you wish to correct.
4. Press E. Category 1, Daily Net Hours, will appear in the display.
5. Enter in the amount of hours for the correction.
6. Press + to add, or -to subtract the hours entered.
7. Press E to store the hours and advance to the next category.
8. When you are finished making corrections for this employee, insert their time card for the previous pay period. Corrections will be printed in red.
9. Enter the next employee master file number you wish to correct or turn the key to the left to return to Normal mode when finished.



## Individual Time Card Summary

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The Individual Time Card Summary is a summary of total, regular and overtime hours worked on the employee's time card for the current or previous pay periods. This summary can also be printed in dollars. (Hours worked X employee's Pay Rate.)

### Individual Time Card Summary for Current Pay Period

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 3E.
3. Insert the employee's time card. The card will be ejected when printing is complete.
4. Turn the key to the left to return to Normal mode.

### Individual Time Card Summary for Previous Pay Period

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 4E.
3. Insert the employee's time card. The card will be ejected when printing is complete.
4. Turn the key to the left to return to Normal mode.

### Individual Time Card Summary with Dollars for Current Pay Period

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 5E.
3. Enter in the password and press E.
4. Insert the employee's time card. The card will be ejected when printing is complete.
5. Turn the key to the left to return to Normal mode.

### Individual Time Card Summary with Dollars for Previous Pay Period

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 6E.
3. Enter in the password and press E.
4. Insert the employee's time card. The card will be ejected when printing is complete.
5. Turn the key to the left to return to Normal mode.

## Accumulated Hours

---

This series of reports allow you to print out each employee's accumulated total, regular, and overtime hours within a specific department and including department totals. These reports can be generated for a specific department or all departments for the current or previous Pay Periods.

### Accumulated Hours Report for Current Pay Period for All Departments

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 40E.
3. Insert the employee's time card. The card will be ejected when printing is complete.
4. Turn the key to the left to return to Normal mode.

## **Accumulated Hours Report for Previous Pay Period for All Departments**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 41E.
3. Insert the employee's time card. The card will be ejected when printing is complete.
4. Turn the key to the left to return to Normal mode.

## **Accumulated Hours Report for Current Pay Period for Specific Departments**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 42E.
3. Enter in the password and press E.
4. Insert the employee's time card. The card will be ejected when printing is complete.
5. Turn the key to the left to return to Normal mode.

## **Accumulated Hours Report for Previous Pay Period and All Departments**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 43E.
3. Enter in the password and press E.
4. Insert the employee's time card. The card will be ejected when printing is complete.
5. Turn the key to the left to return to Normal mode.

## **Accumulated Dollars**

---

This series of reports allow you to print out each employee's accumulated total, regular, and overtime dollars within a specific department and including department totals. These reports can be generated for a specific department or all departments for the current or previous Pay Periods.

## **Accumulated Dollars Report for Current Pay Period for All Departments**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
  2. Press 44E.
  3. Enter in the password and press E.
  4. Insert the employee's time card. The card will be ejected when printing is complete.
- Turn the key to the left to return to Normal mode.

## **Accumulated Dollars Report for Previous Pay Period for All Departments**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 45E.
3. Enter in the password and press E.
4. Insert the employee's time card. The card will be ejected when printing is complete.
5. Turn the key to the left to return to Normal mode.

## **Accumulated Hours Report for Current Pay Period for Specific Departments**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 46E.
3. Enter in the password and press E.
4. Enter in a valid Department Number and press E.
5. Insert the employee's time card. The card will be ejected when printing is complete.
6. Turn the key to the left to return to Normal mode.

## **Accumulated Hours Report for Previous Pay Period and All Departments**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 47E.
3. Enter in the password and press E.
4. Enter in a valid Department Number and press E.
5. Insert the employee's time card. The card will be ejected when printing is complete.
6. Turn the key to the left to return to Normal mode.

## **Yesterday's Hours and Dollars**

---

The following reports include yesterday's total, regular and overtime in hours worked or in dollars sorted by department number.

### **Yesterday's Hours Report**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 48E.
3. Insert a report card. The card will be ejected when printing is complete.
4. Turn the key to the left to return to Normal mode.

### **Yesterday's Dollars Report**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 49E.
3. Enter in the password and press E.
5. Insert a report card. The card will be ejected when printing is complete.
6. Turn the key to the left to return to Normal mode.

## **Today's Hours and Dollars**

---

The following reports include today's total, regular and overtime in hours worked or in dollars sorted by department number.

### **Today's Hours Report**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 50E.
3. Insert a report card. The card will be ejected when printing is complete.
4. Turn the key to the left to return to Normal mode.

### **Today's Dollars Report**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 51E.
3. Enter in the password and press E.
5. Insert a report card. The card will be ejected when printing is complete.
6. Turn the key to the left to return to Normal mode.

## **Approaching Overtime Report**

---

The Approaching Overtime Report lists those employees that have exceeded a specified amount of hours for the pay period. Only those employees who have exceeded the specified amount of hours will appear in the report.

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 52E.
3. Enter in the amount of weekly hours worked for the pay period that would indicate that the employee is approaching overtime and press E. All employees that have exceeded this amount of hours worked will appear on the report.
4. Insert a report card. The card will be ejected when printing is complete.
5. Turn the key to the left to return to Normal mode.

## **Punched IN Report**

---

The following reports will allow you to generate a print out of all currently punched IN employees or punched IN employees by specific departments, along with the time of their IN punch.

### **All Punched IN Employees**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 53E.
3. Insert a report card. The card will be ejected when printing is complete.
4. Turn the key to the left to return to Normal mode.

### **Punched IN Employees by Department**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 54E.
3. Enter in a valid department number and press E.
4. Insert a report card. The card will be ejected when printing is complete.
5. Turn the key to the left to return to Normal mode.

## **Punched OUT Report**

---

The following reports will allow you to generate a print out of all currently punched OUT employees or punched OUT employees by specific departments, along with the time of their OUT punch.

### **All Punched OUT Employees**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 55E.
3. Insert a report card. The card will be ejected when printing is complete.
4. Turn the key to the left to return to Normal mode.

### **Punched OUT Employees by Department**

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 56E.
3. Enter in a valid department number and press E.
4. Insert a report card. The card will be ejected when printing is complete.
5. Turn the key to the left to return to Normal mode.

# Chapter 8: Maintenance

## Diagnostics

### Memory/Display/Keypad/Sensor Test

These diagnostic routines will test all areas of the MJR-BIO's hardware: Main PCB Memory, keypad, LCD display, and all sensors.

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 90E.
3. The clock will begin checking Memory Area 0. The display will start scrolling down from 100 down to 0 on the left while displaying 0 on the right.
4. The clock will then proceed to check Memory Area 1, with the display scrolling down from 100 down to 0 on the left while displaying 1 on the right.
5. The MJR will then continue the memory test through Memory Area 7, with the display scrolling down from 100 down to 0 on the left while displaying the Memory Area number on the right.

**Note:** If a problem is detected, the display will stop on that number. Please contact your Amano representative for service.

6. When the memory test is complete, the clock will test the employee master file numbers. The display will start counting down from 249 down to 000 on the upper left hand corner. If the display stops at any given number, the employee master file may be corrupt or the Time Card Number Assignment Configuration, Page 3-12, was not setup correctly.
7. The clock will proceed to the LCD Display Test. All the segments in the display will be turned on for approximately 4 seconds.
8. Test the keypad by pressing each key in the prescribed order below. Each key pressed will correspond to a character in the display.

Key	Displayed Character
F	F
E	E
#	d
C	C
9	9
6	6
3	3
-	b
8	8
5	5

Key	Displayed Character
2	2
+	A
7	7
4	4
1	I
0	0
I	L
H	‘ ‘
G	‘ ’
D	P

After the D key is pressed the display will go blank and then the card symbol will appear on the bottom.

9. Insert a report card to print the sensor test.
10. Turn the key to the left to return to Normal mode.

## Printer Test

This routine will test the will test the dot matrix printer and ribbon cartridge.

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 91E.
3. Insert a report card. The clock will print in one line of black ink and then a red one beneath it making sure that all available characters print on every print position on the card. The card will automatically continue to eject and be pulled back into card transport until the entire card is full. You may remove the card at anytime.
4. Turn the key to the left to return to Normal mode.

## Sensor Test

This diagnostics routine will test the home sensor, timing sensor, card sensor, and card reader.

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Press 92E.
3. Insert a report card. The sensor levels will be printed and the card will automatically eject.
4. Remove the card and compare to the normal sensor below:

<b>H</b>	<b>T</b>	<b>C</b>	<b>Y</b>	<b>X</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
7	7	5	4	4	4	4	4	4	4	4	4	4	4	4

Where:

H = Home Sensor: Assures that the print head starts at the left most position.

T = Timing Sensor: Assures that the punch is printed in the proper position on the time card.

C = Card Sensor: Senses when a card is inserted into the clock.

Y thru 9 = Card Reader: Reads the holes on the bottom of the time card to identify employees punching in or out.

If your printout looks different, you should contact your Amano Representative to clean or replace the sensor (s).

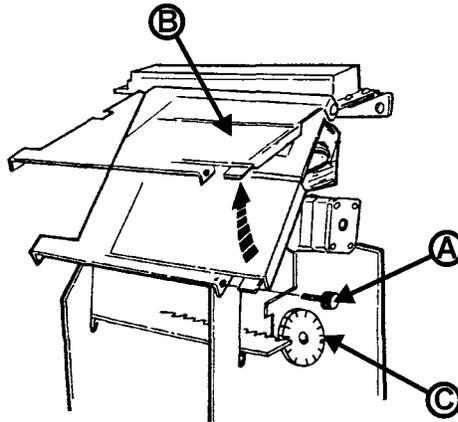
5. Turn the key to the left to return to Normal mode.

## Ribbon Cartridge Replacement

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When the printing on the time card becomes too light, the ribbon cartridge should be replaced. The procedure is as follows:

1. Insert the key into the MJR-BIO and turn the key to the right to access the Function mode.
2. Remove the cover case.
3. Remove the white thumb screw (A) located below the keypad panel.



4. Lift up the keypad panel (B). Rotate the black gear (C) located on the right hand side of the frame, until the ribbon cartridge moves to the right side slightly.
5. To remove the ribbon cartridge, raise the end up and lift it out.
6. Place the new cartridge in the cartridge casing in a slanted position and make sure the protrusions on both ends snap into position.
7. Slowly lower the front portion of the cartridge while turning the knob on the cartridge. Ensure that the ribbon is in the ribbon guide.
8. Check for proper printing by running a printer test. Insert the key in the keyhole next to the card pocket. Turn the key to the right into Function mode and press 91. Insert a report card.
9. Once printing has been verified, turn the key to the left to return to Normal mode and remove it from the keyhole.
10. Replace cover case and lock.

## Error Codes

Error Code	Description	Possible Cause	Possible Solution
0-01	Wrong Side Card	Inserted time card facing the wrong side.	Re-insert the time card facing the correct side.
0-02	Not Enough Room For Printing	<ul style="list-style-type: none"> <li>The time card doesn't have enough room to print the IN punch along with the cost center number on the time card.</li> <li>A different employee inserted their time card while the clock was waiting for the number of the time card shown on the display.</li> </ul>	<ul style="list-style-type: none"> <li>Re-insert the time card on the next side.</li> <li>Re-insert the time card on the next side.</li> </ul>
0-08	Card Is Already Assigned	<ul style="list-style-type: none"> <li>Time card number has already been assigned.</li> <li>Inserted wrong time card for printing of correction hours.</li> </ul>	<ul style="list-style-type: none"> <li>Insert an unassigned time card.</li> <li>Insert correct time card</li> </ul>
0-12	Lock Out	Inserted time card during Lock Out period.	Override Lock Out by using Revision/Lock Out/Fingerprint Verification Bypass Card or Lock Out/Fingerprint Verification Bypass Card
1-20	Invalid Access Code	<ul style="list-style-type: none"> <li>Employee master file number does not exist.</li> <li>Invalid user access code</li> <li>Approaching overtime limit for report is out of range.</li> </ul>	<ul style="list-style-type: none"> <li>Enter correct employee master file number.</li> <li>Enter correct User Access Code.</li> <li>Enter a valid limit 00:00 thru 60:00.</li> </ul>
1-22	Card Is Not Assigned	Incorrect card inserted during card assignment or name printing.	Insert correct time card.
1-30	Card Is Too Short	Improper time card. (Too Short)	Issue and use proper size, properly coded time card.
1-31	Card Is Too Long	Improper time card. (Too Long)	Issue and use proper size, properly coded time card.
1-40	FP Initialize Error	Fingerprint module initialization failed.	Press the Reset button on the Main PCB, or turn the power to the MJR off and then on to re-initialize the fingerprint module.
2-01	Invalid Password	Incorrect password	Enter correct user password

<b>Error Code</b>	<b>Description</b>	<b>Possible Cause</b>	<b>Possible Solution</b>
2-10	Buffer Full	Department buffer full.	Maximum number (50) of Department Numbers stored in memory.
2-11	Dept Already Exists	Department number already exists.	Enter in a different Department Number.
2-12	Dept Does Not Exist	Department number doesn't exist.	Enter in a different, existing Department Number.
2-13	Number Is Out Of Range	Department and/or file number is out of valid range.	Enter a valid Department Number (000001 thru 999999) or Employee Number (000 thru 999)
2-14	Invalid Access Code For Traditional Assignment	Access Code entered is not available for the traditional time card number assignment method.	Input an available Access Code.
7-50	FP Comm Transmitting Error	Fingerprint communication failed.	Press the Reset button on the Main PCB, or turn the power to the MJR off and then on to re-initialize the fingerprint module.
7-60	FP Comm Timeout Error	Fingerprint communication failed.	
7-61	FP Comm Receiving Error	Fingerprint communication failed.	
7-70	FP Response Error	Fingerprint response failed	
7-80	FP Wrong Input Number	Invalid input number for fingerprint operation	Enter a valid number for fingerprint operation.
7-81	FP Wrong Operation	Invalid operation for fingerprint	Enter a valid operation number for fingerprint operation.
7-82	FP No Assignment	No assignment for this card during enrollment.	Assign time card first before fingerprint enrollment.
7-83	List Buffer Full	Non-verification list buffer full.	Maximum number (250) of employee file numbers on non-verification list.
8-80 <sub>x</sub>	Invalid Program Data	Incorrect data programmed.	Clear program memory of applicable area and re-program.
8-85 <sub>x</sub>	Data Read Error	Individual data file reading error.	Insert the key into the MJR-BIO and turn the key to the right to access the Function mode. Press C to clear. Re-enter data as needed.

Error Code	Description	Possible Cause	Possible Solution
8-88 <sub>x</sub>	CPU Defect	CPU (memory) defect.	Insert the key into the MJR-BIO and turn the key to the right to access the Function mode. Press C to clear.
9-50 <sub>x</sub>	Punch Earlier Than Previous Time	Inserted time card for printing earlier than previously printed time.	Press C. Verify that that the MJR-BIO is set to the current time and date.
9-60 <sub>x</sub>	Temporary Defect Software	Temporary defect of software caused by noise or surge from outside power source.	Automatic reset in (3) seconds after error is displayed.
9-61 <sub>x</sub>	Temporary Defect CPU	Temporary defect of CPU caused by noise or surge from outside power source.	Automatic reset in (3) seconds after error is displayed.
9-70 <sub>x</sub>	Hardware Problem	Hardware problem. (Printer, timing impulse, sensor, motor, etc.)	Press C and clean sensors.
9-90 <sub>x</sub>	Card Reading Error	Card reading failure.	Press C and contact your Amano representative for service.
9-91 <sub>x</sub>	Card Sensor Error	Card sensor level defect.	Press C and contact your Amano representative for service.

Error Code	Description	Possible Cause
01 FAIL	Flash Open	Command from Main Controller or host to access flash memory failed due to problem(s) in flash memory.
02 FAIL	Sensor Open	Failure caused by optical unit.
03 FAIL	Register Failed	Fingerprint registration failed
04 FAIL	Verify Failed	Fingerprint verification failed.
05 FAIL	Already Registered User	User ID already exists.
06 FAIL	User Not Found	User ID is not found in (FDA02) database.
08 FAIL	Timeout	Failed to capture fingerprint in preset time.
09 FAIL	Db Full	FDA02 database has insufficient space to enroll a new user.
10 FAIL	Db Wrong User ID	Failure in removing or verifying unregistered user.

<b>Error Code</b>	<b>Description</b>	<b>Possible Cause</b>
11 FAIL	Db No Data	Database has no data.
12 FAIL	Extract Fail	Failed capturing feature points of fingerprint.
16 FAIL	Function Fail	Function call failed.
17 FAIL	Insufficient Data	Received data size doesn't match the size defined in ExtraData.
18 FAIL	Flash Write Error	Writing in Flash Memory failed.
20 FAIL	Invalid Param	Parameter of packet is invalid.
21 FAIL	MasterFP Not Found	Fingerprint of master cannot be found. (Occurs when trying to proceed without master registration.)
22 FAIL	Master Count Exceed	The number of master exceeds five. No more than five masters can be registered.
23 FAIL	Authentication Fail	Verification of Master failed.
27 FAIL	Identify Failed	No fingerprint in database matches fingerprint on input window.
32 FAIL	Invalid Userdata Size	While recording values from FDA02 to host, size of data was exceeded for the user portion.
33 FAIL	Invalid Userdata Address	User portion of data was exceeded while recording values from FDA02 to host.
35 FAIL	Auto On Mode	The size of host user portion is not set.
36 FAIL	Not Auto On Mode	CMD FP AUTO IDENTIFY is now processing; no other operation can be performed.
40 FAIL	Checksum Error	Protocol checksum error.



# Appendix A: ASCII Character Table

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Character	Code
A	65
B	66
C	67
D	68
E	69
F	70
G	71
H	72
I	73
J	74
K	75
L	76
M	77
N	78
O	79
P	80
Q	81
R	82
S	83
T	84
U	85
V	86
W	87
X	88
Y	89
Z	90
Comma (,)	44
Space	32
Period (.)	46
Apostrophe (')	39

**Note:** Letters are uppercase.



# Appendix B: MJR-BIO Quick Reference Charts

**DEPARTMENT MAINTENANCE:**  
 DELETE ALL department numbers = 7 0 F 7 7 F  
 DELETE INDIVIDUAL department number = 7 1 F 7 7 F  
 ADD department numbers = 7 2 F  
 PRINT LIST of department numbers = 7 3 F

**EMPLOYEE MASTER FILE MAINTENANCE:**  
 DELETE ALL employee master files =  
 (Accumulated hours & time card numbers ONLY) 3 0 F 7 7 F X X X X F  
 DELETE ALL employee master files =  
 (Initializes entire file) 3 0 F 8 8 F X X X X F  
 DELETE INDIVIDUAL employee master file =  
 (Accumulated hours & time card numbers ONLY) 6 0 F 7 7 F  
 DELETE INDIVIDUAL employee master file =  
 (Initializes entire file) 6 0 F 8 8 F  
 ADD employee master files = 6 1 F  
 1 - File Number 4 - Department Number  
 2 - Employee Number 5 - Pay Rate  
 3 - Employee Name (Enter ASCII code equivalents)  
 PRINT LIST of employee master files = 6 2 F  
 for ALL DEPARTMENTS  
 PRINT LIST of employee master files = 6 3 F  
 for SPECIFIC DEPARTMENT  
 PRINT LIST of employee master files with = 6 4 F X X X X F  
 PAY RATES for ALL DEPARTMENTS  
 PRINT LIST of employee master files with = 6 5 F X X X X F  
 PAY RATES for SPECIFIC DEPARTMENT

**DATA CORRECTION:**  
 INDIVIDUAL DATA CORRECTION for the CURRENT pay period = 1 F  
 INDIVIDUAL DATA CORRECTION for the PREVIOUS pay period = 2 F

**TIME CARD NUMBER ASSIGNMENT:**  
 AUTOMATICALLY assign SAME time card =  
 numbers to all employee master files for  
 the CURRENT pay period 8 2 F 8 8 F X X X F  
 AUTOMATICALLY assign SAME time card =  
 numbers to all employee master files  
 for the NEXT pay period 8 2 F 9 9 F X X X F  
 AUTOMATICALLY assign DIFFERENT time =  
 card numbers to all employee master files  
 for the CURRENT pay period 8 3 F 8 8 F X X X F  
 AUTOMATICALLY assign DIFFERENT time =  
 card numbers to all employee master files  
 for the NEXT pay period 8 3 F 9 9 F X X X F  
 ASSIGN SPECIFIC time card number to an =  
 individual employee for the CURRENT pay period 8 4 F 8 8 F  
 ASSIGN SPECIFIC time card number to an =  
 individual employee for the NEXT pay period 8 4 F 9 9 F  
 PRINT LIST of assigned time card numbers = 8 5 F

**TIME CARD NAME PRINTING:**  
 NAME PRINTING for CURRENT pay period on ONE SIDE of time card = 8 0 F 1 F  
 NAME PRINTING for CURRENT pay period on BOTH SIDES of time card = 8 0 F 2 F  
 NAME PRINTING for NEXT pay period on ONE SIDE of time card = 8 1 F 1 F  
 NAME PRINTING for NEXT pay period on BOTH SIDES of time card = 8 1 F 2 F

**MAINTENANCE:**  
 Memory Test = 9 0 F  
 Print Test = 9 1 F  
 Cord Sensor Test = 9 2 F  
 Fingerprint Hardware/Firmware Test = 9 4 F 6 6 F  
 Fingerprint Verification Test = 9 4 F 7 7 F  
 Fingerprint Identification Test = 9 4 F 8 8 F

**INDIVIDUAL TIME CARD SUMMARY:**

CURRENT pay period summary =  3  F  
PREVIOUS pay period summary =  4  F  
CURRENT pay period summary with =  3  F  X  X  X  F  
PAY RATE  
PREVIOUS pay period summary with =  6  F  X  X  X  F  
PAY RATE

**ACCUMULATED PAY PERIOD HOURS REPORTS:**

CURRENT pay period for ALL DEPARTMENTS (\* = up-to-the-minute) =  4  0  F  
PREVIOUS pay period for ALL DEPARTMENTS =  4  1  F  
CURRENT pay period for SPECIFIC DEPARTMENT (\* = up-to-the-minute) =  4  2  F  
PREVIOUS pay period for SPECIFIC DEPARTMENT =  4  3  F

**BIOMETRICS OPERATION SUMMARY :**

Enrolling employee fingerprints =  2  5  F  
Delete employee fingerprints - Individual =  2  6  F  7  7  F  
Delete employee fingerprints - All =  2  6  F  8  8  F  
Adding an employee to the non-verification list =  2  7  F  5  5  F  
Deleting an employee from the non-verification list =  2  7  F  6  6  F  
Delete all employees from the non-verification list =  2  7  F  7  7  F  
Printing non-verification list =  2  7  F  8  8  F  
Random fingerprint verification setup =  2  8  F  
Printing enrolled fingerprint employee list =  2  9  F  
Advanced fingerprint setup =  2  4  F

**YESTERDAY'S HOURS/DOLLAR\$ REPORTS:**

HOURS report =  4  X  F  
DOLLAR\$ report =  4  9  F  X  X  X  F

**TODAY'S HOURS/DOLLAR\$ REPORTS:**

HOURS report (\* = up-to-the-minute) =  3  0  F  
DOLLAR\$ report (\* = up-to-the-minute)=  3  1  F  X  X  X  F

**APPROACHING OVERTIME REPORT:**

HOURS report (\* = up-to-the-minute) =  3  2  F

**PUNCHED "IN" REPORTS:**

ALL DEPARTMENTS =  3  3  F  
SPECIFIC DEPARTMENT =  3  4  F

**PUNCHED "OUT" REPORTS:**

ALL DEPARTMENTS =  3  5  F  
SPECIFIC DEPARTMENT =  3  6  F

**ACCUMULATED PERIOD DOLLAR\$ REPORTS:**

CURRENT pay period for ALL DEPARTMENTS =  4  4  F  X  X  F  
(\* = up-to-the-minute)  
PREVIOUS pay period for ALL DEPARTMENTS =  4  5  F  X  X  F  
CURRENT pay period for SPECIFIC DEPARTMENT =  4  6  F  X  X  F  
(\* = up-to-the-minute)  
PREVIOUS pay period for SPECIFIC DEPARTMENT =  4  7  F  X  X  F



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