



# NAOMI™ 2

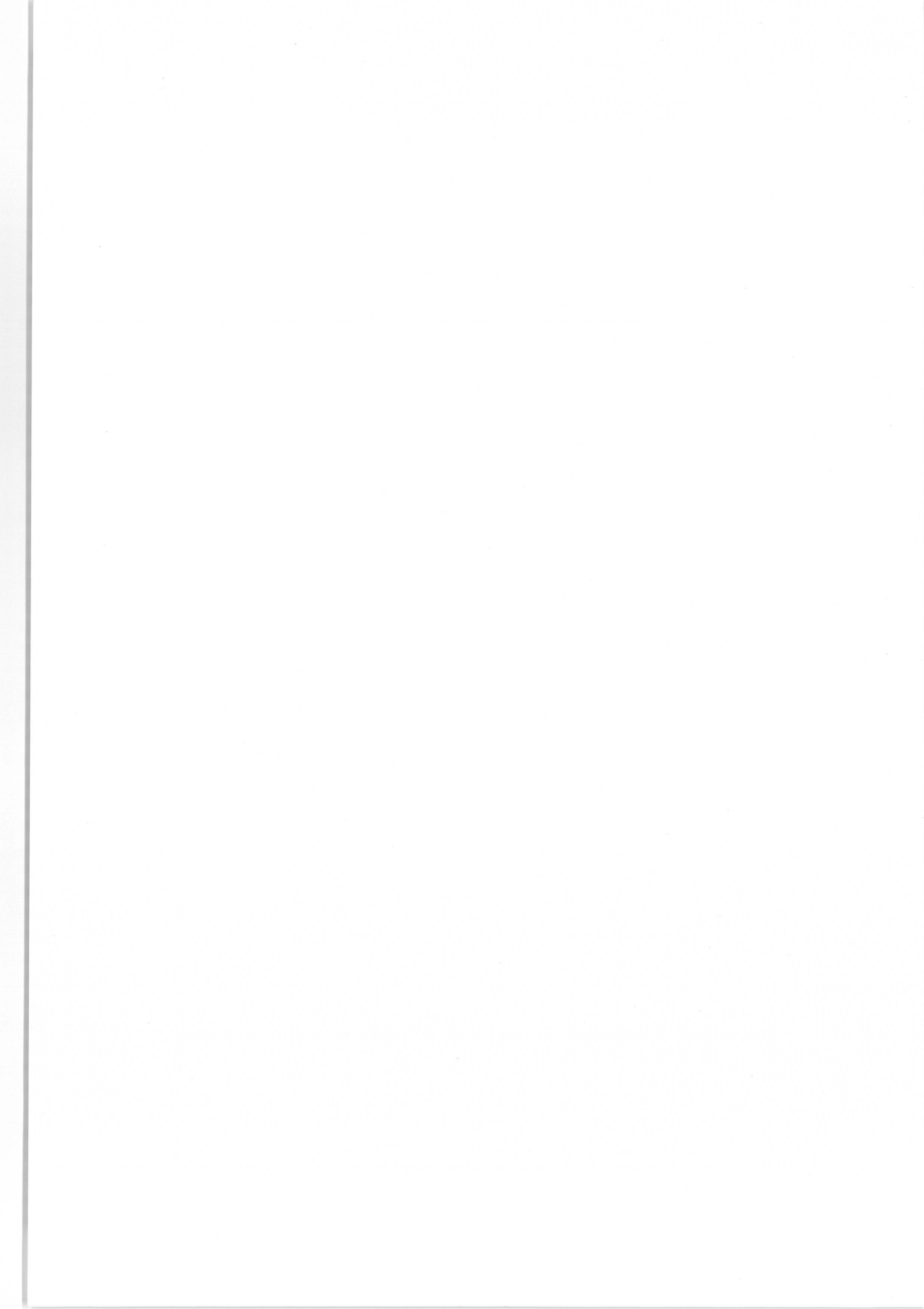
## SERVICE MANUAL



- Before using this product, read this MANUAL carefully to understand the contents herein stated.
- After reading this manual, be sure to keep it available nearby the product or elsewhere convenient for referring to it anytime when necessary.

**SEGA CORPORATION**





# BEFORE USING THE PRODUCT, BE SURE TO READ THE FOLLOWING:

## To maintain the safety:

To ensure the safe usage of the product, be sure to read the following before using the product. The following instructions are intended for the users, operators and the personnel in charge of the operation of the product. After carefully reading and sufficiently understanding the warning displays and cautions, handle the product appropriately. Be sure to keep this manual nearby the product or elsewhere convenient for referring to it when necessary.

Herein, explanations which require special attention are enclosed with dual lines. Depending on the potentially hazardous degrees, the terms of DANGER, WARNING, CAUTION, etc. are used. Be sure to understand the contents of the displays before reading the text.



Indicates that mishandling the product by disregarding this pictograph will cause severe injury or death.



Indicates that mishandling the product by disregarding this caution will cause a slight hazardous situation which can result in personal injury and or material damage.



Indicates that mishandling the product by disregarding this warning will cause a potentially hazardous situation which can result in death or serious injury.

## For the safe usage of the product, the following pictographs are used:



Indicates "HANDLE WITH CARE." In order to protect the human body and equipment, this display is attached to places where the Owner's Manual and or Service Manual should be referred to.



Indicates a "Protective Earth Terminal." Before operating the equipment, be sure to connect it to the Ground.

- **Perform work in accordance with the instructions herein stated.**  
Instructions for work are explained by paying attention to the aspect of accident prevention. Failing to perform work as per the instructions can cause accidents. In the case where only those who have technical expertise should perform the work to avoid hazardous situation, the instructions herein state that the serviceman should perform such work.
- **Be sure to turn off power before working on the machine.**  
To prevent electric shock, be sure to turn off power before starting the work in which the worker touches the interior of the product. If the work is to be performed in the power-on status, the Instruction Manual herein always states to that effect.
- **Be sure to ground the Earth Terminal** (this, however, is not required in the case where a power cord with earth is used).  
This product is equipped with the Earth Terminal. When installing the product, Connect the Earth Terminal to the "accurately grounded indoor earth terminal" by using an earth wire. Unless the product is grounded appropriately, the user can be subject to electric shock. After performing repair, etc. for the Control equipment, ensure that the Earth Wire is firmly connected to the Control equipment.
- **Ensure that the Power Supply used is equipped with an Earth Leakage Breaker.**  
This product does not incorporate the Earth Leakage Breaker. Using a power supply which is not equipped with the Earth Leakage Breaker can cause a fire when earth leakage occurs.
- **Be sure to use fuses which meet the specified rating.** (only for the machines which use fuses).  
Using fuses exceeding the specified rating can cause a fire and electric shock.

- **Specification changes (removal of equipment, conversion and addition) not designated by SEGA are not allowed.**  
The parts of the product include warning labels for safety, covers for personal protection, etc. It is very hazardous to operate the product by removing parts and or modifying the circuits. Should doors, lids and protective parts be damaged or lost, refrain from operating the product, and contact where the product was purchased from or the office herein stated.  
SEGA shall not be held responsible for any accidents, compensation for damage to a third party, resulting from the specifications not designated by SEGA.
- **Ensure that the product meets the requirements of appropriate Electrical Specifications.**  
Before installing the product, check for Electrical Specifications. SEGA products have a nameplate on which Electrical Specifications are described. Ensure that the product is compatible with the power supply voltage and frequency requirements of the location. Using any Electrical Specifications different from the designated Specifications can cause a fire and electric shock.
- **Install and operate the product in places where appropriate lighting is available, allowing warning labels to be clearly read.**  
To ensure safety for the customers, labels and printed instructions describing potentially hazardous situation are applied to places where accidents can be caused. Ensure that where the product is operated has sufficient lighting allowing the warnings to be read. If any label is peeled off, apply it again immediately. Please place an order with where the product was purchased from or the office herein stated.
- **When handling the Monitor, be very careful. (Applies only to the product w/monitor.)**  
Some of the monitor (TV) parts are subject to high tension voltage. Even after turning off power, some portions are still subject to high tension voltage sometimes. Monitor repair and replacement should be performed only by those technical personnel who have knowledge of electricity and technical expertise.
- **Be sure to adjust the monitor (projector) properly. (Applies only to the product w/ monitor.)**  
Do not operate the product leaving on-screen flickering or blurring as it is. Using the product with the monitor not properly adjusted may cause dizziness or a headache to an operator, a player, or the customers.
- **When transporting or reselling this product, be sure to attach this manual to the product.**  
In the case where commercially available monitors and printers are used in this product, only the contents relating to this product are explained herein. Some commercially available equipment has functions and reactions not stated in this manual. Read this manual together with the specific Instruction Manual of such equipment.
  - Descriptions herein contained may be subject to improvement changes without notice.
  - The contents described herein are fully prepared with due care. However, should any question arise or errors be found, please contact SEGA.

## INSPECTIONS IMMEDIATELY AFTER TRANSPORTING THE PRODUCT TO THE LOCATION.

Normally, at the time of shipment, SEGA products are in a status allowing for usage immediately after transporting to the location. Nevertheless, an irregular situation may occur during transportation. Before turning on power, check the following points to ensure that the product has been transported in a satisfactory status.

- Are there any dented portions or defects (cuts, etc.) on the external surfaces of the cabinet?
- Are Casters and Adjusters, damaged?
- Do the power supply voltage and frequency requirements meet with those of the location?
- Are all wiring connectors correctly and securely connected? Unless connected in the correct direction, connector connections can not be made accurately. Do not insert connectors forcibly.
- Do power cords have cuts and dents?
- Do the fuses used meet specified rating? Is the Circuit Protector in an energized status?
- Are all accessories available?
- Can all Doors and Lids be opened with the Accessory keys? Can Doors and Lids be firmly closed?

---

---

## TABLE OF CONTENTS

---

---

BEFORE USING THE PRODUCT, BE SURE TO READ THE FOLLOWING:

### TABLE OF CONTENTS

#### INTRODUCTION OF THE SERVICE MANUAL

|   |         |
|---|---------|
| 1. HANDLING PRECAUTIONS .....                                 | 1       |
| 2. SPECIFICATIONS OF NAOMI 2 .....                            | 2 ~ 5   |
| 2-1 CABINET .....   | 2       |
| 2-2 NAOMI 2 BD CASE AND FILTER BOARD .....                    | 3       |
| 2-3 MONITOR DIRECTION AND HORIZONTAL SCANNING FREQUENCY ..... | 4       |
| 2-4 REPAIR/SERVICING AND CARTON BOX .....                     | 5       |
| 3. ASSEMBLING THE NAOMI 2 .....                               | 6 ~ 10  |
| 3-1 BOOT ROM REPLACEMENT .....                                | 6 ~ 7   |
| 3-2 REMOVING AND REINSTALLING THE ROM BD .....                | 8       |
| 3-3 ROM REPLACEMENT (ROM BD) .....                            | 9       |
| 3-4 BATTERY REPLACEMENT (NAOMI 2 MAIN BD) .....               | 10      |
| 4. ERROR MESSAGE .....  | 11 ~ 14 |
| 5. SYSTEM TEST MODE .....                                     | 15 ~ 27 |
| 5-1 RAM TEST .....  | 16      |
| 5-2 JVS TEST .....  | 17      |
| 5-3 SOUND TEST .....  | 18      |
| 5-4 C.R.T. TEST .....   | 18      |
| 5-5 SYSTEM ASSIGNMENTS .....                                  | 19      |
| 5-6 COIN ASSIGNMENTS .....                                    | 20 ~ 24 |
| 5-7 BOOKKEEPING .....   | 25      |
| 5-8 BACKUP DATA CLEAR .....                                   | 26      |
| 5-9 CLOCK SETTING .....                                       | 26      |
| 5-10 DIMM BOARD TEST .....                                    | 27      |
| 5-10 ROM BOARD TEST .....                                     | 27      |
| 5-11 GAME TEST MODE .....                                     | 28      |

---

---

TABLE OF CONTENTS

BEFORE USING THE PRODUCT, BE SURE TO READ THE FOLLOWING:

TABLE OF CONTENTS

INTRODUCTION OR THE SERVICE MANUAL

1. HANDLING PRECAUTION ..... 2-8

2. PRECAUTIONS OF BATTERY 2 ..... 2-8

3. CARBON PAPER ..... 2-8

4. BATTERY 2 BE CAREFUL WITH THE BATTERY ..... 2-8

5. MONITOR FUNCTION AND HORIZONTAL SCROLLING FREQUENCY ..... 2-4

6. REPAIR PRECAUTION AND CARTON BOX ..... 2-5

7. ASSEMBLING THE FRONT 2 ..... 2-10

8. EJECT ROM REPAIRMENT ..... 2-7

9. FRONT CASE REPAIRMENT AND THE ROM BOARD ..... 2-8

10. ROM REPLACEMENT FROM BOARD ..... 2-9

11. BATTERY REPLACEMENT (BATTERY WITH BDI) ..... 2-10

12. CHECK M-SIGNAL ..... 2-11-14

13. SYSTEM TEST MODE ..... 2-17-22

14. ROM TEST ..... 2-18

15. JWE TEST ..... 2-17

16. SOUND TEST ..... 2-18

17. C.B.T. TEST ..... 2-18

18. SYSTEM ASSIGNMENTS ..... 2-18

19. COIN ASSIGNMENTS ..... 2-20-24

20. BOOKKEEPING ..... 2-25

21. BACKUP DATA CLEAR ..... 2-28

22. CLOCK SETTING ..... 2-28

23. DIMM BOARD TEST ..... 2-27

24. ROM BOARD TEST ..... 2-27

25. GAME TEST MODE ..... 2-28

## INTRODUCTION OF THE SERVICE MANUAL

This Owner's Manual is intended to provide detailed descriptions together with all the necessary information covering the general operation of electronic assemblies, electromechanicals, servicing control, spare parts, etc. as regards the product, **NAOMI 2**.

This manual is intended for the owners, personnel and managers in charge of operation of the product. Operate the product after carefully reading and sufficiently understanding the instructions. If the product fails to function satisfactorily, non-technical personnel should under no circumstances touch the internal system. Please contact where the product was purchased from.

Use of this product is unlikely to cause physical injuries or damages to property. However, where special attention is required this is indicated by a thick line, the word "IMPORTANT" and its sign in this manual.



**IMPORTANT**

Indicates that mishandling the product by disregarding this display can cause the product's intrinsic performance not to be obtained, resulting in malfunctioning.

**SEGA ENTERPRISES, INC. (U.S.A.)/CUSTOMER SERVICE**  
45133 Industrial Drive, Fremont, California 94538, U.S.A.

Phone : (415) 701-6580

Fax : (415) 701-6594

## DEFINITION OF LOCATION MAINTENANCE MAN AND SERVICEMAN



Non-technical personnel who do not have technical knowledge and expertise should refrain from performing such work that this manual requires the location's maintenance man or a serviceman to carry out, or work which is not explained in this manual. Failing to comply with this instruction can cause a severe accident such as electric shock.

Ensure that parts replacement, servicing & inspections, and troubleshooting are performed by the location's maintenance man or the serviceman. It is instructed herein that particularly hazardous work should be performed by the serviceman who has technical expertise and knowledge.

The location's maintenance man and serviceman are herein defined as follows:

### **"Location's Maintenance Man" :**

Those who have experience in the maintenance of amusement equipment and vending machines, etc., and also participate in the servicing and control of the equipment through such routine work as equipment assembly and installation, servicing and inspections, replacement of units and consumables, etc. within the Amusement Facilities and or locations under the management of the Owner and Owner's Operators of the product.

### **Activities of Location's Maintenance Man :**

Assembly & installation, servicing & inspections, and replacement of units & consumables as regards amusement equipment, vending machines, etc.

### **Serviceman :**

Those who participate in the designing, manufacturing, inspections and maintenance service of the equipment at an amusement equipment manufacturer.

Those who have technical expertise equivalent to that of technical high school graduates as regards electricity, electronics and or mechanical engineering, and daily take part in the servicing & control and repair of amusement equipment.

### **Serviceman's Activities :**

Assembly & installation and repair & adjustments of electrical, electronic and mechanical parts of amusement equipment and vending machines.



# 1. HANDLING PRECAUTIONS



- To prevent electric shock or IC Board malfunctioning, be sure to turn off the power for the cabinet when installing or removing the IC Board.
- Extraneous matter such as dust on the IC Board can cause the IC Board to generate heat and result in a fire due to short circuit, etc. Ensure the IC Board surfaces are always kept clean.
- Keep the IC board well cooled.  
The NAOMI 2 board case and GD-ROM drive are provided with Heat Exhaust Fan. Do not block the air outlets of these fans. Also do not place anything closely to the NAOMI 2 board case and GD-ROM drive. Failure to observe these instructions may cause an overheating and fire.



- Be sure to connect the IC Board and connectors completely . Insufficient insertion can damage IC Board, etc.
- For the IC Board circuit inspection, only the use of Logic Tester is permitted.  
The use of ordinary testers is not permitted as these can damage the IC Board.
- Do not subject the IC Board to static electricity when installing the IC Board in the cabinet or when connecting wire harness connectors to the IC Board.
- When soldering buttons, etc. to the wire harnesses, be sure to remove the wire harnesses from the IC Board so as not to subject the IC Board to heat.
- Using NAOMI 2 without the Shield Case can cause electric wave trouble. Be sure to use NAOMI 2 together with the accessory Shield Case.
- The monitor frequency corresponding to NAOMI 2 is 15kHz or 31kHz. NAOMI 2 can not be used for the cabinet incorporating a monitor or projector not corresponding to 15kHz or 31kHz.
- Use the NAOMI 2 board with the JVS-compatible cabinet. Using it with the non-JVS-compatible cabinet may cause an overheating and fire.
- Some parts are the ones designed and manufactured not specifically for this game machine. The manufacturers may discontinue, or change the specifications of, such general-purpose parts. If this is the case, Sega cannot repair or replace a failed game machine whether or not a warranty period has expired.

- Concerning the display of JAMMA VIDEO STANDARD:  
JAMMA VIDEO STANDARD adopted by NAOMI is referred to as JVS. As against this Standard, the conventional JAMMA STANDARD which employs 56P Edge Connectors adopted by ST-V, etc. is displayed as Old JAMMA STANDARD.

The specific Manual attached to each game sometimes displays JVS as JV STANDARD, New JAMMA STANDARD, or JAMMA 2 STANDARD against OLD JAMMA STANDARD as JAMMA STANDARD, JS, etc.

- The contents herein described are subject to change without notice.

## 2. SPECIFICATIONS OF NAOMI 2

### 2-1 CABINET

- Use the NAOMI 2 with the JVS-compatible cabinet.
- If you want to use the NAOMI GD-ROM system with the conventional JAMMA-compatible cabinet, prepare the modification parts (power supply, I/O board, audio amplifier, etc.) and thereby modify the cabinet into a JVS-compatible one.
- Contact a cabinet manufacturer or distributor to check whether or not:
  - the cabinet is JVS-compatible and
  - the cabinet can be modified into a JVS-compatible one and used with the GD-ROM system.
- Some games may require not only a JVS-compatible cabinet but also a dedicated control panel.



## 2-2 NAOMI 2 BD CASE AND FILTER BOARD

- NAOMI 2 Main BD is contained in the Shield Case.  
Use NAOMI 2 in the status with the Main BD as is contained in the Shield Case.
- When using NAOMI 2, ensure that the Ventilation Ports and Heat Exhaust Fan Opening are not obstructed.

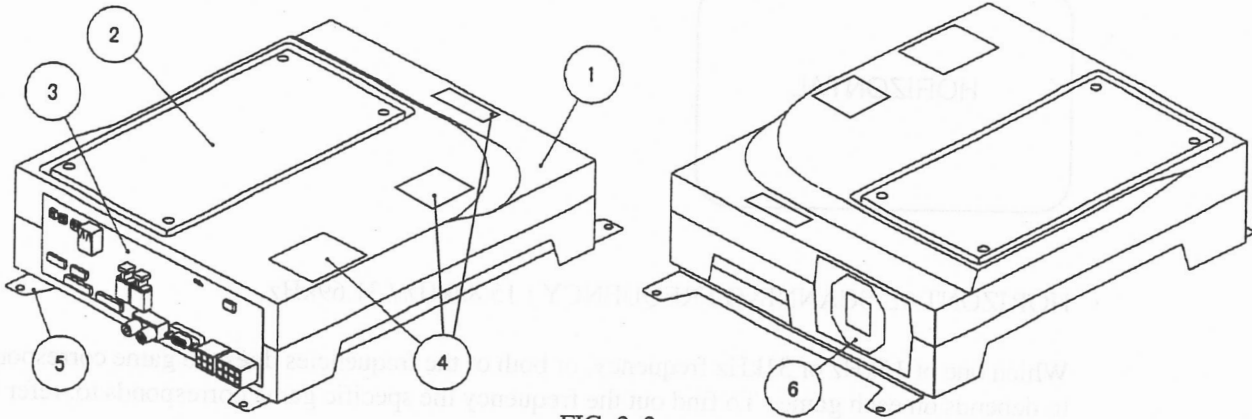


FIG. 2.2 a

- |                       |                            |
|-----------------------|----------------------------|
| ① NAOMI 2 SHIELD CASE | ④ VENTILATION PORT         |
| ② ROM BOARD CASE      | ⑤ LEG BRACKET              |
| ③ FILTER BOARD        | ⑥ HEAT EXHAUST FAN OPENING |

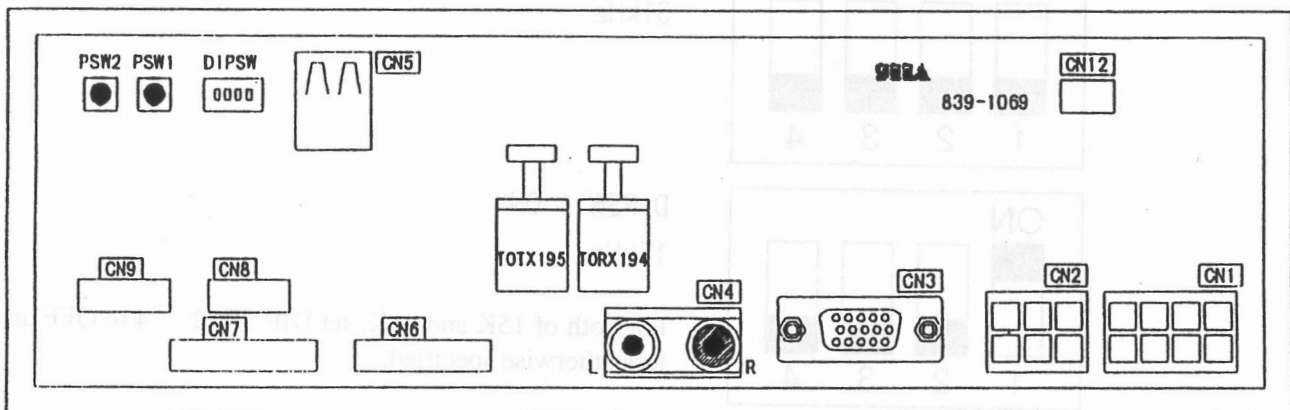


FIG. 2.2 b

CN1: POWER SUPPLY (JST VL 8P) 1: (N.C.) 2: +3.3V 3: +5V 4: +12V 5 ~ 8: GND

CN2: POWER SUPPLY (JST VL 6P) 1: (N.C.) 2: +3.3V 3: +5V 4 ~ 6: GND

CN3: RGB VIDEO OUTPUT (MINI D-SUB 15P)

CN4: STEREO-AUDIO OUTPUT(RCA PIN JACK FEMALE) RED: RIGHT WHITE: LEFT

CN5: STANDARD I/O (SERIES A TYPE) Connected to I/O BD via. USB Cable.

CN6 ~ 9,12: Normally not used.

TORX194,TOTX195: OPTIC FIBER CONNECTOR

Used for communication in-between plural NAOMI.

For application, refer to the Instruction Manual of the game for communication play.

PSW1: Functions as TEST Button.

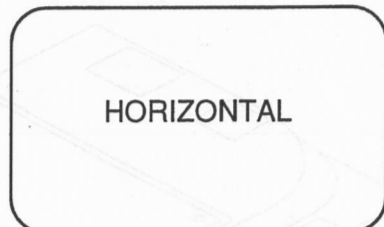
PSW2: Functions as SERVICE Button.

DIPSW: Used for image Frequency change, etc. Refer to 2-3 MONITOR DIRECTION AND HORIZONTAL SCANNING FREQUENCY.

## 2 - 3 MONITOR DIRECTION AND HORIZONTAL SCANNING FREQUENCY

### MONITOR DIRECTION

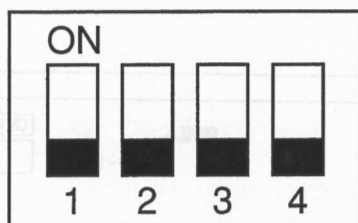
Install the monitor in the positional direction (horizontal or vertical as applicable) suitable for each game. For the monitor direction, refer to the attached manual of the specific game. If the attached Manual does not refer to the monitor direction, position the monitor in the horizontal direction.



### HORIZONTAL SCANNING FREQUENCY : 15.85kHz / 31.69kHz

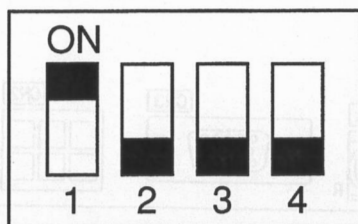
Which one of 15kHz or 31kHz frequency, or both of the frequencies does the game correspond to depends on each game. To find out the frequency the specific game corresponds to, refer to the Manual attached to the game.

The frequency output can be designated by No. 1 SW of DIP SW on the Filter BD.



DIPSW 1 OFF

31kHz



DIPSW 1 ON

15kHz

For both of 15K and 31K, set DIP SW 2 ~ 4 to OFF unless otherwise specified.

FIG. 2.3 FILTER BOARD DIP SW

The actual DIP SW may differ from the above Figure.

Note that due to a certain flickering and blurring, the Interlace display may be slightly inferior as compared to Non-interlace display.

Also, if the cabinet monitor is not corresponding to Interlace display, on-screen noise may appear and display is not satisfactory.

Among the games corresponding to both 15k and 31k, there are some game for which the use of 31k is strongly recommended. If such a game is displayed in 15k, WARNING may be displayed at the time power is turned on.

At the time of the shipment of NAOMI 2 Main BD, which one of 15k or 31k the DIP SW is set to depends on the games contained in the same package. Before installing in the cabinet, be sure to check the setting contents of DIP SW, and change the DIP SW setting if necessary.

## 2 — 4 REPAIR/SERVICING AND CARTON BOX

When transporting NAOMI 2 for repair/servicing, follow the instructions below.  
The accessory carton box is needed when transporting NAOMI 2 for repair/servicing. Be sure to safely store the Carton Box.

- When transporting NAOMI 2 Main BD for the repair/servicing, ensure that the ROM BD used is in an as is installed status.
- When submitting the wire harness and cables for repair, they must be left removed from NAOMI 2.
- Do not disassemble NAOMI 2 indiscriminately. When submitting it for repair, package it in the carton box with its original condition kept.
- When putting NAOMI 2 SHIELD CASE in the carton box, the Leg Bracket need not be removed.
- Write down the game you operated and details of the symptom on paper, and submit it to the designated destination of repair.

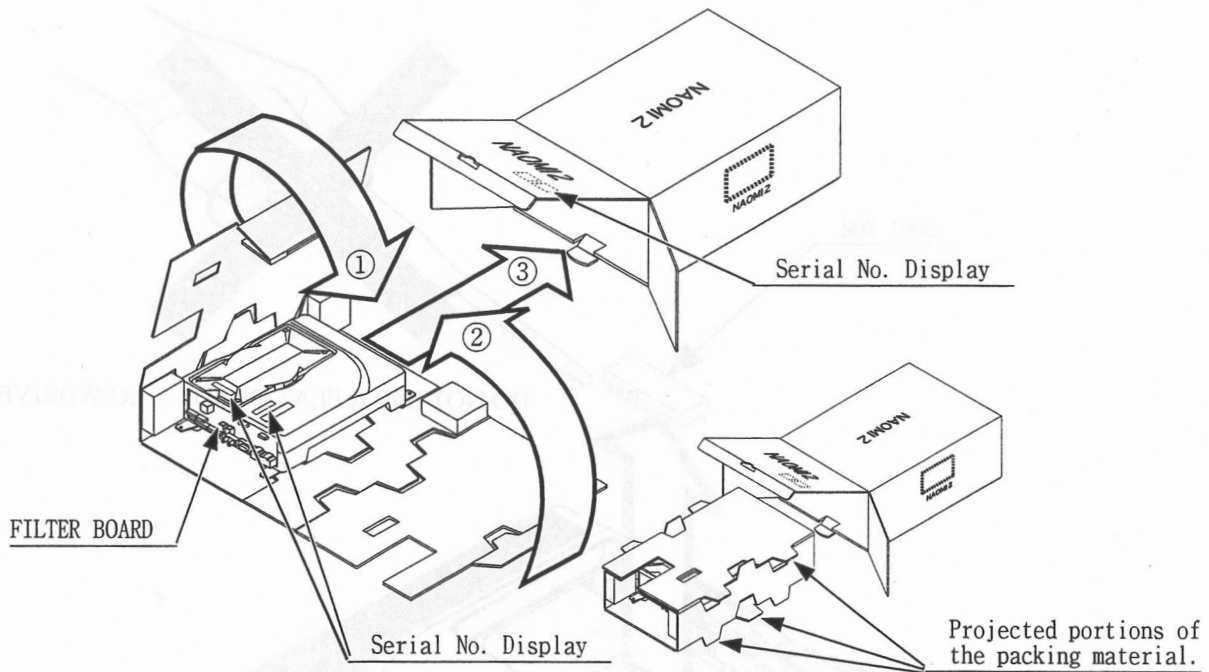


FIG. 2.4 a

### 3. ASSEMBLING THE NAOMI 2

#### 3-1 BOOT ROM REPLACEMENT



- The ROM is a precision device. Handle it carefully because it may be damaged by heat, shock, and static electricity.
- Do not perform this work unless otherwise particularly instructed due to BOOT ROM version change, etc.

① Remove on-socket ROM (IC27) of NAOMI 2 Main BD from the socket by using an IC EXTRACTOR.

- To prevent tearing off on-board patterns, etc., do not use tools such as a flat-blade type screwdriver, etc. other than the IC EXTRACTOR. For malfunctioning resulting from using tools other than the IC EXTRACTOR, repair shall be performed on a pay-basis. Be careful of this point.

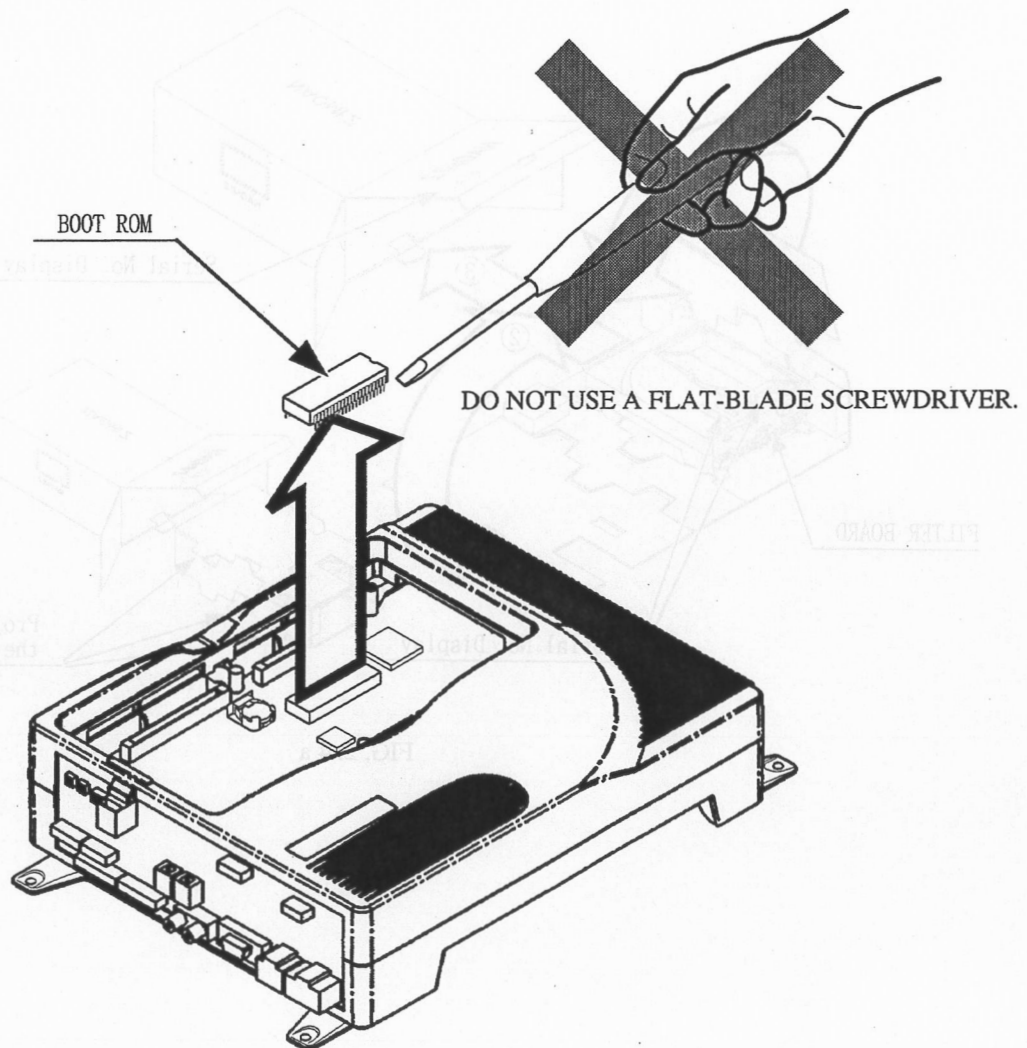


FIG. 3.1 a

② Insert a new ROM into a socket; be careful about an inserting direction in this instance.

- It may be uneasy to insert a ROM, because the width between the two lines of pins on both ends may be larger than required. If this is the case, press the ROM pins onto a flat surface and bend them; thus make the width smaller.
- When inserting the ROM, be very careful to insert it into a correct direction and not to break its pins.

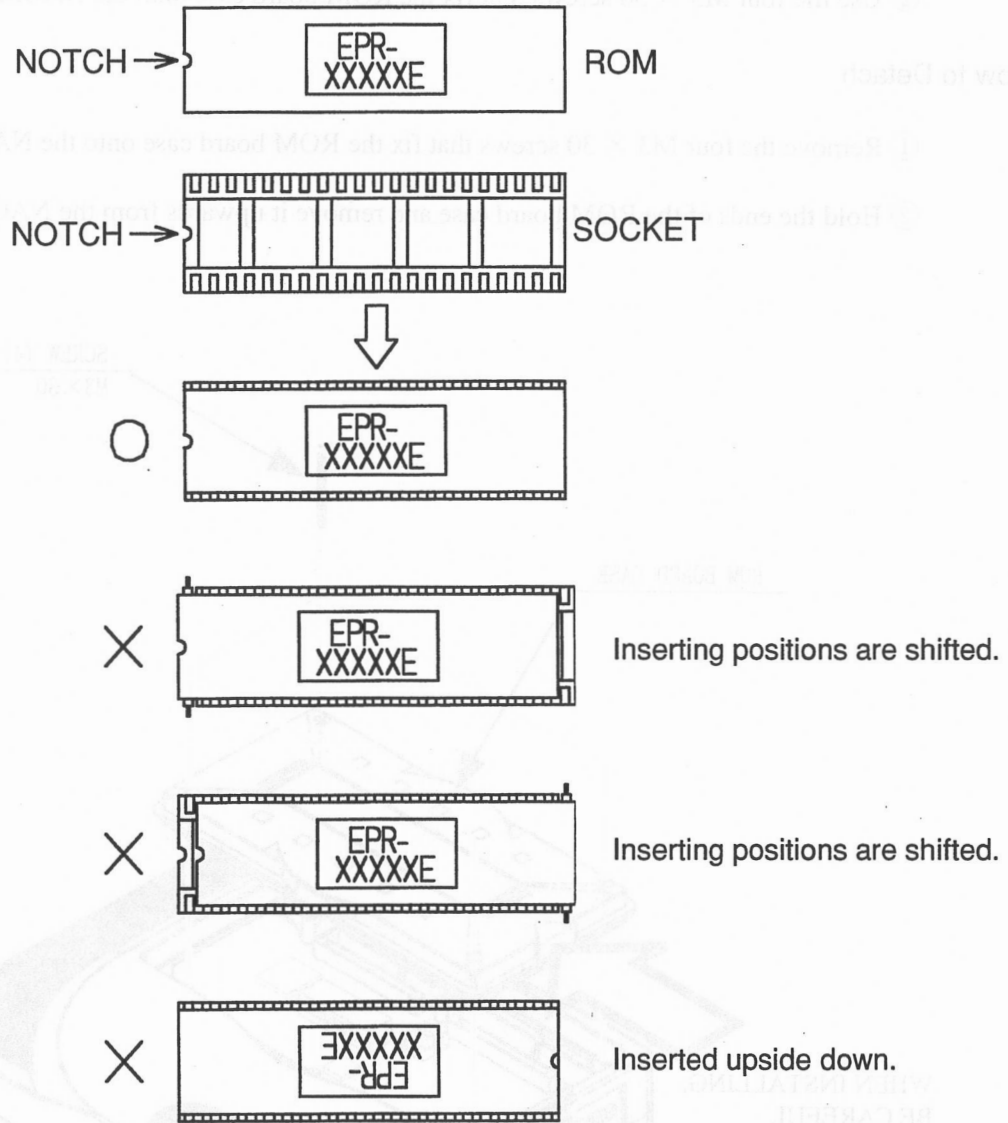


FIG. 3. 1 b

These wrongly inserted ROMs may be damaged when connecting the power.

### 3 — 2 REMOVING AND REINSTALLING THE ROM BD

#### How to Attach

- ① Contact the connectors with each other, and insert the ROM board case into the NAOMI 2 board case; be careful about an inserting direction in this instance. Make sure that the ROM board case is seated firmly and completely.
- ② Use the four M3 × 30 screws that fix the ROM board case onto the NAOMI 2 board case.

#### How to Detach

- ① Remove the four M3 × 30 screws that fix the ROM board case onto the NAOMI 2 board case.
- ② Hold the ends of the ROM board case and remove it upwards from the NAOMI 2 board case.

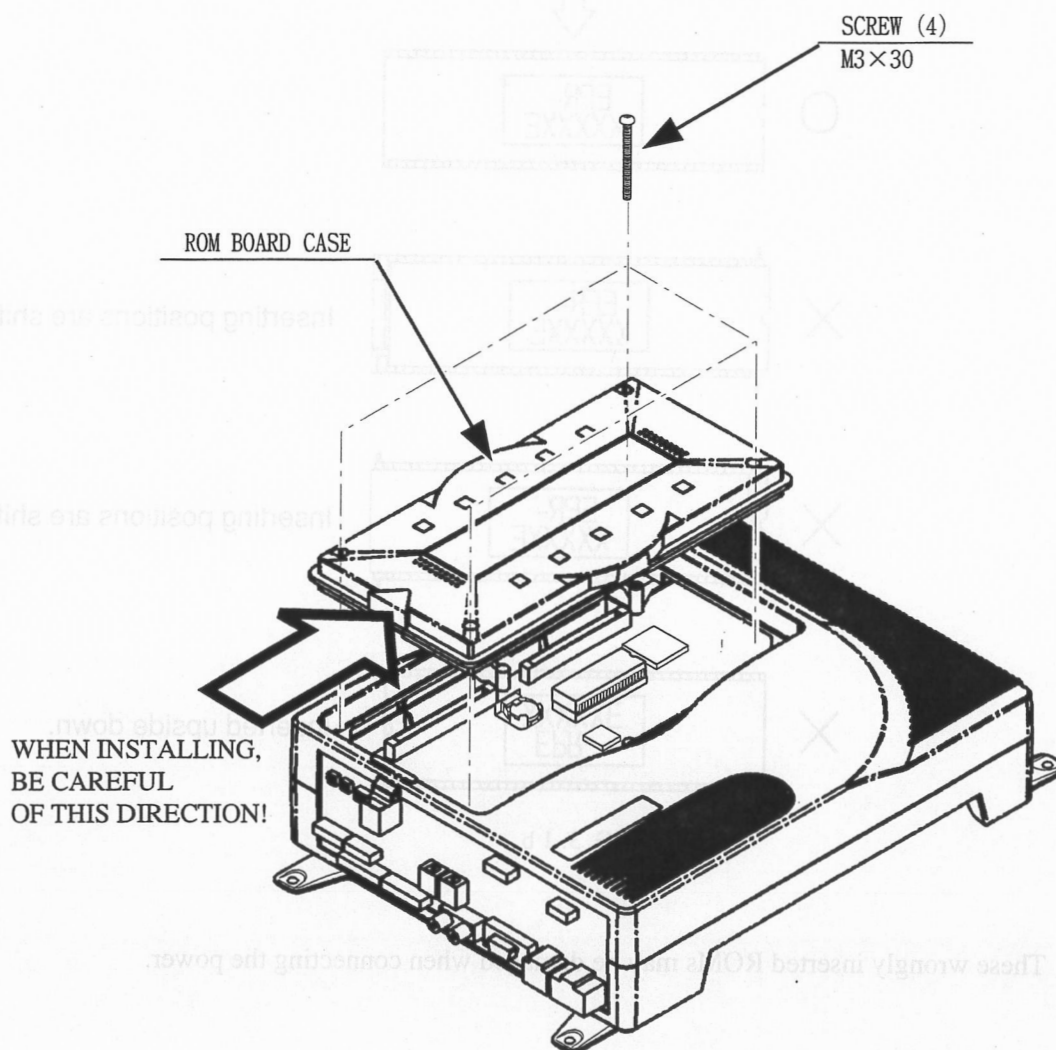


FIG. 3. 2



### 3 - 3 ROM REPLACEMENT (ROM BD)

Do not perform this work unless otherwise particularly instructed due to game version change, etc.

- ① Turn power off, and remove ROM BD Case from NAOMI 2 Case by referring to 3-2 REMOVING AND REINSTALLING THE ROM BOARD above.
- ② Remove the 2 tapping screws from the back of ROM BD Case to remove the ROM BD Case from ROM BD.
- ③ Remove ROM BD surface side on-socket ROM (IC22) from the socket by using an IC EXTRACTOR.

To prevent tearing off on-board patterns, etc., do not use tools such as a flat-blade type screwdriver, etc. other than the IC EXTRACTOR. For malfunctioning resulting from using tools other than the IC EXTRACTOR, repair shall be performed on a pay-basis. Be careful of this point.

- ④ Insert the new ROMs into the socket by paying attention to the inserting direction. In accordance with the instructions of the supplier of new ROMs, take proper action to dispose of the removed old ROMs by sending back, discarding after cutting off pins, or appropriately storing, as applicable. When instructed to change JUMPER SW, change the Jumper SW in accordance with the instructions.
- ⑤ Reinstall ROM BD Case to ROM BD by paying attention to the correct direction of ROM BD and secure with the 2 tapping screws removed as per ② above.
- ⑥ By referring to 3-2 REMOVING AND REINSTALLING THE ROM BOARD, reinstall ROM BD Case to NAOMI 2 Case.

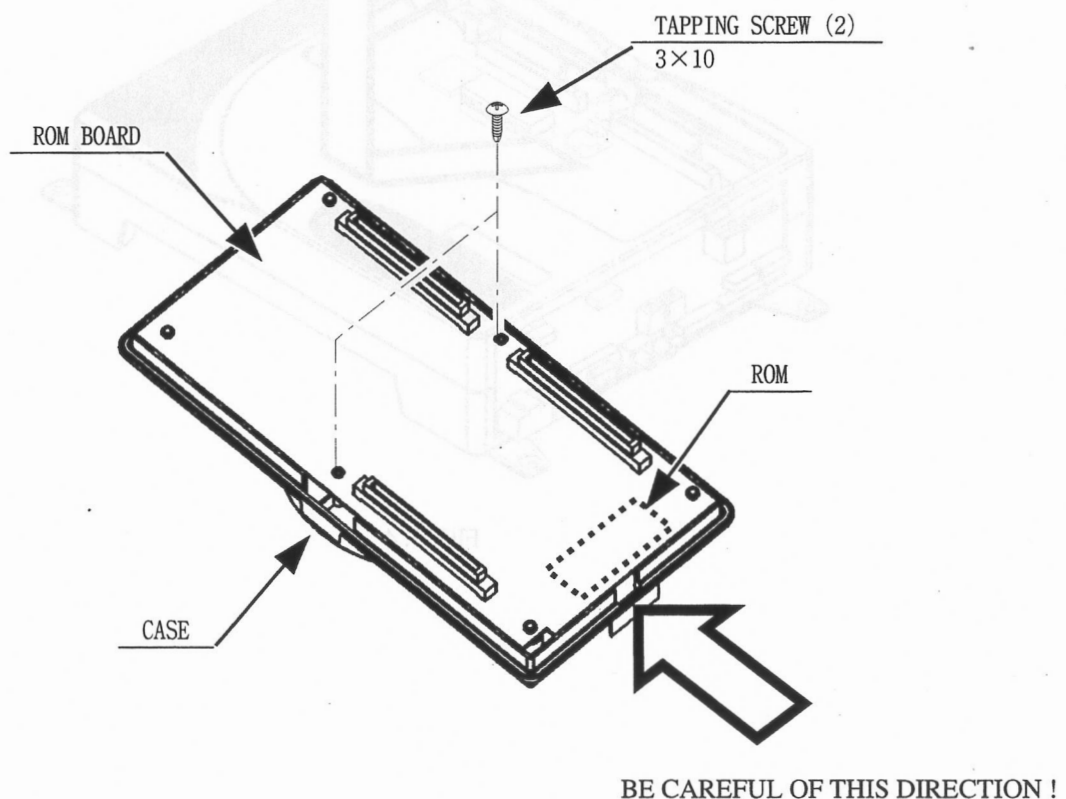


FIG. 3.3

### 3-4 BATTERY REPLACEMENT (NAOMI 2 MAIN BD)

Except for special cases such as using up the battery, etc., do not perform this work.

- ① Turn power off, and remove ROM BD Case from NAOMI 2 Case by referring to 3-2 above.
- ② Carefully remove the battery on the Battery Holder of NAOMI 2 Main BD.
- ③ With the positive pole facing upward, insert the new Battery (CR2032) into the Holder.
- ④ By referring to 3-2 REMOVING AND REINSTALLING THE ROM BD, reinstall ROM BD Case to NAOMI 2 Case.

Dispose the removed batteries according to the local laws and regulations.

NAOMI main Board Battery

SEGA PART No. 401-0054

SEGA PART NAME BATTERY CR2032/1F MATSUSHITA

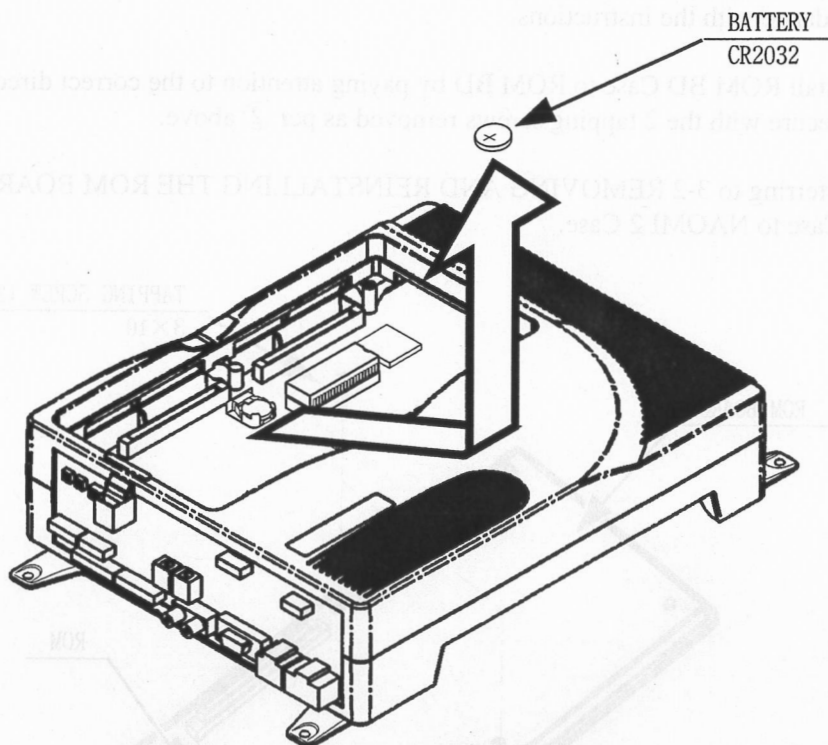


FIG. 3.4

## 4. ERROR MESSAGE

In the following cases, ERROR MESSAGE is displayed at the time power is turned on and the test mode is finished, and the game is not playable.

### ERROR 01

**【DISPLAY】** ERROR 01  
THIS GAME IS NOT ACCEPTABLE  
BY MAIN BOARD.

**【CAUSE】** (1) The ROM BOARD (or DIMM BOARD) is not connected correctly to the MAIN BD.  
(2) The NAOMI 2 ROM board is mounted on the NAOMI main board.

**【COUNTERMEASURES】** (1) First, turn power off, connect the ROM BD (or DIMM BOARD) correctly. If the status is not improved yet, the board may be malfunctioning.  
(2) The NAOMI 2 ROM board software cannot run with the NAOMI main board. If you want to run the NAOMI 2 ROM board software, replace the NAOMI main board with the NAOMI 2 main board.

### ERROR 02

**【DISPLAY】** ERROR 02  
THIS GAME IS NOT ACCEPTABLE  
BY MAIN BOARD.

**【CAUSE】** A game of a certain country's version which is not compatible with the Main BD is connected to the Main BD.

**【COUNTERMEASURES】** Connect a game of a country's version which is compatible with the Main BD. Country setting change can not be performed in the TEST mode.

### ERROR 03

**【DISPLAY】** ERROR 03  
BOARD MALFUNCTIONING.

**【CAUSE】** Main board serial number cannot be read out.

**【COUNTERMEASURES】** With the ROM or DIMM board attached to it, submit the main board for repairing. (See Section 2-4.)

### ERROR 04

**【DISPLAY】** ERROR 04  
BOARD MALFUNCTIONING.

**【CAUSE】** DIMM board or ROM board serial number cannot be read out.

**【COUNTERMEASURES】** Submit the NAOMI 2 board with the DIMM board or ROM board for repairing.

- ERROR 21**  
**【DISPLAY】** ERROR 21  
**THIS GAME IS NOT ACCEPTABLE BY MAIN BOARD.**  
**【CAUSE】** Game data (loaded from the GD-ROM to the DIMM board) are corrupted.  
**【COUNTERMEASURES】** Make sure that the GD-ROM drive is firmly connected to the NAOMI 2 board.  
 Make sure that the GD-ROM disk is not scratched or contaminated.
- ERROR 22**  
**【DISPLAY】** ERROR 22  
**COMMUNICATION ERROR OCCURRED BETWEEN MAIN BOARD AND OPTION BOARD.**  
**【CAUSE】** The NAOMI 2 main board receives no responses from the DIMM board.  
**【COUNTERMEASURES】** Correctly reconnect the DIMM board and the GD interface board. If the problem is still reproduced, replace the DIMM board and/or the GD interface board.
- ERROR 23**  
**【DISPLAY】** ERROR 23  
**GD-ROM DRIVE COVER IS OPEN.**  
**【CAUSE】** The GD-ROM drive cover is open.  
**【COUNTERMEASURES】** Close the cover firmly.
- ERROR 24**  
**【DISPLAY】** ERROR 24  
**GD-ROM IS NOT FOUND.**  
**【CAUSE】** The NAOMI 2 GD-ROM disk can not be recognized.  
**【COUNTERMEASURES】** Reinsert the NAOMI 2 GD-ROM disk.  
 Make sure that the GD-ROM disk is not scratched or contaminated.
- ERROR 25**  
**【DISPLAY】** ERROR 25  
**CAN NOT ACCESS GD-ROM DRIVE.**  
**【CAUSE】** (1) The GD-ROM drive can not be accessed.  
 (2) The GD-ROM drive cover is open.  
**【COUNTERMEASURES】** (1) Correctly reconnect the GD cable and power cord to the GD-ROM drive.  
 If the problem is still reproduced, replace the GD-ROM drive.  
 (2) Close the cover firmly.
- ERROR 26**  
**【DISPLAY】** ERROR 26  
**OPTION BOARD MALFUNCTIONING.**  
**【CAUSE】** The NAOMI 2 board key chip can not be recognized.  
**【COUNTERMEASURES】** Make sure that you are using a correct key chip that meets the GD-ROM disk (If not so, change the present key chip with a correct one). Also make sure that the key chip is firmly inserted.

**ERROR 27**

**【DISPLAY】 ERROR 27**

**DIMM MEMORY IS NOT ENOUGH.**

**【CAUSE】** (1) The capacity of the DIMM memory on the DIMM board is not sufficient.  
(2) The DIMM memory is not firmly connected.

**【COUNTERMEASURES】** (1) Add the memory as required by the software you are using.  
(2) Firmly reconnect the DIMM memory on the DIMM board.

CAUTION 51

**【DISPLAY】**

CAUTION 51  
GAME ASSIGNMENTS ARE  
INCORRECT.  
SET CORRECTLY IN SYSTEM  
ASSIGNMENTS OF TEST MODE.

**【CAUSE】**

CABINET TYPE setting is not correct for the game.

**【COUNTERMEASURES】**

Enter the TEST mode and change the CABINET TYPE setting of SYSTEM ASSIGNMENTS to the setting suitable for the game.  
For the correct setting, refer to the Manual attached to the game.  
Certain games require the replacement of Control Panel.

CAUTION 52

**【DISPLAY】**

CAUTION 52  
CHANGE VIDEO OUTPUT OF  
THIS GAME TO THE SETTING  
CORRESPONDING TO HORIZONTAL  
SCANNING FREQUENCY 15kHz.

**【CAUSE】**

31kHz is employed when the game is corresponding to Horizontal Scanning Frequency of 15kHz only.

**【COUNTERMEASURES】**

Set the monitor to 15kHz, and No. 1 of NAOMI 2 FILTER BD DIP SW to ON.  
For the setting method of monitor's Frequency, refer to the Manual of the cabinet. If the monitor is not corresponding to 15kHz, the game is not playable.

CAUTION 53

**【DISPLAY】**

CAUTION 53  
CHANGE VIDEO OUTPUT OF  
THIS GAME TO THE SETTING  
CORRESPONDING TO HORIZONTAL  
SCANNING FREQUENCY 31kHz.

**【CAUSE】**

15kHz is employed when the game is corresponding to Horizontal Scanning Frequency of 31kHz only.

**【COUNTERMEASURES】**

Set the monitor to 31kHz, and No. 1 of NAOMI 2 FILTER BD DIP SW to OFF.  
For the setting method of monitor's Frequency, refer to the Manual of the cabinet. If the monitor is not corresponding to 31kHz, the game is not playable.

CAUTION 54

**【DISPLAY】**

CAUTION 54  
GAME ASSIGNMENTS ARE  
INCORRECT.  
SET CORRECTLY IN SYSTEM  
ASSIGNMENTS OF TEST MODE.

**【CAUSE】**

The setting of MONITOR TYPE differs from the correct setting of the game.

**【COUNTERMEASURES】**

Enter the TEST mode, and change the MONITOR TYPE setting of MONITOR TYPE in SYSTEM ASSIGNMENTS to the correct setting suitable for the game. For the correct setting, refer to the Manual attached to the game. If necessary, perform Horizontal/Vertical transposition of the monitor, as applicable.

## 5. SYSTEM TEST MODE



- The contents of setting changes in SYSTEM ASSIGNMENTS, COIN ASSIGNMENTS, and GAME TEST MODE are stored when the test mode is EXITed. If the power is turned off before EXITing, the contents of setting changes are ineffective. Be very careful of this point.
- Do not activate a system test mode while the system is reading out and checking the GD-ROM. If you do so, you can not activate a game test mode, or an error message may appear on the screen when you exit a system test mode.

This test mode mainly allows the IC Board to be checked for accurate functioning, monitor color to be adjusted as well as COIN ASSIGNMENTS and GAME ASSIGNMENTS to be adjusted.

- ① After turning power on, press the TEST button to have the following test item menu displayed.

SYSTEM MENU

RAM TEST  
JVS TEST  
SOUND TEST  
C. R. T. TEST  
SYSTEM ASSIGNMENTS  
COIN ASSIGNMENTS  
BOOKKEEPING  
BACKUP DATA CLEAR  
CLOCK SETTING

DIMM BOARD TEST \_\_\_\_\_  
GAME TEST MODE  
[\*\*\*\*\*] \_\_\_\_\_

-> EXIT

SELECT WITH SERVICE BUTTON  
AND  
PRESS TEST BUTTON

This item is indicated as ROM BOARD TEST if a ROM board is connected.

Game name is entered.

- ② Press the SERVICE button to move the arrow. Bring the arrow to the desired item and press the TEST button.
- ③ Select the GAME TEST MODE item and press the TEST button. The system displays a Test Menu screen specific to each game.  
For further information about a system test mode, see the Service Manual that comes with each game.
- ④ Upon finishing the test, bring the arrow to EXIT and press the TEST button to return to the Game mode.

## 5 - 1 RAM TEST

This screen enables to test the performance of the RAM on the NAOMI 2 main board.

Immediately when this screen appears, the system starts to test.

The TESTING NOW message is displayed on the screen while the system is testing.

When you test the NAOMI software with the NAOMI 2 main board, the following screen may appear.

```
RAM TEST

IC29 GOOD
IC35 GOOD
IC09 GOOD IC10 GOOD
IC11 GOOD IC12 GOOD
IC16 GOOD IC18 GOOD
IC20 GOOD IC22 GOOD
IC17 GOOD IC19 GOOD
IC21 GOOD IC23 GOOD

PRESS TEST BUTTON TO EXIT
```

The GOOD message appears on the right of a RAM if it has been judged as normal while BAD if abnormal. It takes about 2 minutes and 20 seconds to complete testing all the RAMs. After testing, press the TEST button to return to the System Menu Screen.

When you test the NAOMI 2 software with the NAOMI 2 main board, the following screen may appear. The test takes approximate 5 minutes and 10 seconds to complete.

```
RAM TEST

IC 29 GOOD
IC 35 GOOD
IC 09 GOOD IC 10 GOOD
IC 11 GOOD IC 12 GOOD
IC 16 GOOD IC 18 GOOD
IC 20 GOOD IC 22 GOOD
IC 17 GOOD IC 19 GOOD
IC 21 GOOD IC 23 GOOD
IC106 GOOD IC107 GOOD
IC108 GOOD IC109 GOOD
IC111 GOOD IC113 GOOD
IC115 GOOD IC117 GOOD
IC112 GOOD IC114 GOOD
IC116 GOOD IC118 GOOD

PRESS TEST BUTTON TO EXIT
```



5 - 2 JVS TEST

In this test, Specifications of the I/O Board connected to NAOMI 2 can be checked, and INPUT TEST can be performed. First, I/O Board Specifications are displayed.

```

                JVS TEST
                INPUT TEST
                NEXT NODE
                -> EXIT
NODE NAME      1/1
                XXXXXXXXXXXX
                I/O XXX-XXXXX
                VER XXXX
                XX/XX

CMD VER       1.1
JVS VER       2.0
COM VER       1.0
SWITCH        2PLAYER(S) 11BITS
COIN          2SLOT
ANALOG        8CH
ROTARY        0CH
KEYCODE       0
SCREEN        X:0 Y:0 CH:0
CARD          0SLOT
HOPPER OUT    0CH
DRIVER OUT    8SLOT
ANALOG OUT    0CH
CHARACTER     CHARA:0 LINE:0
BACKUP        0

SELECT WITH SERVICE BUTTON
                AND
                PRESS TEST BUTTON
    
```

- (A)
- (B)
- (C)

} Name and version of I/O BOARD.

The screen at the left is displayed when a SEGA I/O board is used. If you use an I/O board of another version, a different screen than this one is displayed.

Select with the SERVICE button and press the TEST button.

- (A) INPUT TEST : Proceeds to the INPUT TEST of I/O BOARD being displayed.
- (B) NEXT NODE : In the case where more than 2 I/O Boards are connected, proceeds to the next I/O Board.
- (C) EXIT : Returns to the menu mode.

INPUT TEST SCREEN

```

                JVS TEST
                INPUT TEST
                NEXT NODE
                -> EXIT

NODE 1/1

SWITCH
SYSTEM 00000000
PLAYER1 00000000
        00000000
PLAYER2 00000000
        00000000

COIN 0000 0000
ANALOG 0000 0000 0000 0000
        0000 0000 0000 0000

SELECT WITH SERVICE BUTTON
                AND
                PRESS TEST BUTTON
    
```

When INPUT is performed for the switches of Control Panel, etc., the value changes to 1 from 0.

If the Coin SW is inputted, the count starts. When the TEST MODE is finished, the count is cleared and returned to [0000].

Analogue values are displayed between 0000 and FF00.

### 5 - 3 SOUND TEST

Sound Output test can be performed. Beep sounds can be emitted from each of left/right Speakers.

|  |     |
|--|-----|
| SOUND TEST   |     |
| RIGHT SPEAKER  | OFF |
| LEFT SPEAKER   | OFF |
| -> EXIT  |     |
| SELECT WITH SERVICE BUTTON<br>AND<br>PRESS TEST BUTTON |     |

- ← Emitted from the right-hand side Speaker.
- ← Emitted from the left-hand side Speaker.
- ← Returns to the menu mode.

### 5 - 4 C.R.T. TEST

#### A) RGB COLOR ADJUSTMENT SCREEN

In this page, monitor color can be checked.

|                               |    |
|-------------------------------|----|
| C. R. T. TEST 1/2             |    |
| 1                             | 32 |
| RED                           |    |
| GREEN                         |    |
| BLUE                          |    |
| WHITE                         |    |
| PRESS TEST BUTTON TO CONTINUE |    |

Each of red, green, and blue is the darkest at the leftmost end, and becomes brighter towards the right-hand end in 31 gradations. Monitor brightness is satisfactory if the white color bar is black at the left end and if it is white at the right end. Press the TEST button to proceed to the next page.

#### B) MONITOR SIZE ADJUSTMENT SCREEN

In this page, monitor size can be checked.

|                           |  |
|---------------------------|--|
| C. R. T. TEST 2/2         |  |
| PRESS TEST BUTTON TO EXIT |  |

Adjust so that the checkered patterns do not go beyond the screen. Press the TEST button to return to the menu mode.



If the settings of CABINET TYPE and MONITOR TYPE are not suitable for the connected game, Error Message is displayed after turning power on and upon finishing the TEST mode, and in this case, game is not playable. For the contents of settings suitable for each game, refer to the Instruction Manual attached to the game. Especially, when there is no special notes or descriptions, perform the settings as seen fit by judging from the statuses of cabinet and control panel Specifications.

The settings of cabinet and board can be changed. Game related assignments such as game difficulty, etc. are performed in 5-11 GAME TEST MODE.

- ① Press the SERVICE button to move the arrow. Bring the arrow to the desired item.
- ② Press the TEST button to change the setting.
- ③ Upon finishing the setting, move the arrow to EXIT and press the TEST button.

SYSTEM ASSIGNMENTS

|                 |            |     |
|-----------------|------------|-----|
| CABINET TYPE    | 2PLAYER(S) | (A) |
| ADVERTISE SOUND | ON         | (B) |
| MONITOR TYPE    | HORIZONTAL | (C) |
| SERVICE TYPE    | COMMON     | (D) |
| -> EXIT         |            |     |

SELECT WITH SERVICE BUTTON  
AND  
PRESS TEST BUTTON

(A) CABINET TYPE (1PLAYER(S)、2PLAYER(S)、3PLAYER(S)、4PLAYER(S))

Sets the number of players between 1 and 4.

(B) ADVERTISE SOUND (ON、OFF)

Sets whether ADVERTISE sound is to be emitted or not.

(C) MONITOR TYPE (HORIZONTAL、VERTICAL)

Sets the on-screen display to the positional direction of monitor (HORIZONTAL/VERTICAL)

HORIZONTAL: Normal on-screen display

VERTICAL: On-screen display when the monitor is vertically positioned as against normal HORIZONTAL position.

(D) SERVICE TYPE (COMMON、INDIVIDUAL)

Sets the functioning of when the SERVICE button is pressed, in case that several SERVICE buttons exist.

COMMON: By pressing any SERVICE button, Service credit can be obtained for all Players.

INDIVIDUAL: By pressing SERVICE button, Service credit can be obtained for the Player corresponding to the SERVICE button pressed.

## 5 - 6 COIN ASSIGNMENTS

In this mode, the setting of incremental credit increase as against coin insertion can be changed.

- ① Press the SERVICE button to move the arrow. Bring the arrow to the desired item.
- ② Press the TEST button to change the setting.
- ③ Upon finishing the setting, bring the arrow to EXIT and press the TEST button.

| COIN ASSIGNMENTS           |          |
|----------------------------|----------|
| COIN CHUTE TYPE            | COMMON   |
| COIN/CREDIT SETTING        | #1       |
| COIN CHUTE #1              |          |
| 1 COIN                     | 1 CREDIT |
|                            |          |
| COIN CHUTE #2              |          |
| 1 COIN                     | 1 CREDIT |
|                            |          |
| MANUAL SETTING             |          |
| SEQUENCE SETTING           |          |
| ->EXIT                     |          |
|                            |          |
| SELECT WITH SERVICE BUTTON |          |
| AND                        |          |
| PRESS TEST BUTTON          |          |

FIG. 5 - 6 A (Setting to COMMON)

| COIN ASSIGNMENTS           |            |
|----------------------------|------------|
| COIN CHUTE TYPE            | INDIVIDUAL |
| COIN/CREDIT SETTING        | #1         |
| COIN CHUTE                 |            |
| 1 COIN                     | 1 CREDIT   |
|                            |            |
| MANUAL SETTING             |            |
| SEQUENCE SETTING           |            |
| ->EXIT                     |            |
|                            |            |
| SELECT WITH SERVICE BUTTON |            |
| AND                        |            |
| PRESS TEST BUTTON          |            |

FIG. 5 - 6 B (Setting to INDIVIDUAL)

### (A) COIN CHUTE TYPE (COMMON、INDIVIDUAL)

Perform setting in the manner corresponding to Coin Chute Specifications.

#### COMMON

This setting is for the cabinet which has a coin chute(s) for common use by plural players. Up to 2 Coin Chutes (#1 and #2) can be used and also, (B) COIN/CREDIT SETTING ratio can be set separately for #1 and #2.

#### INDIVIDUAL

This setting is for the cabinet in which each player uses an independent coin chute. Coins inserted by each player are handled as the player's credits. Depending on the CABINET TYPE setting in the SYSTEM ASSIGNMENTS and the functioning of the connected I/O Board, the number of Coin SW INPUT ports varies between 1 and 4. (C) COIN/CREDIT SETTING ratio is common for each Coin Chute.

### (B) COIN/CREDIT SETTING (# 1 ~ # 2 7)

Sets the credit increase increment per coin insertion. There are 27 settings from #1 to #27, expressed in ○○ credit(s) as against ○○ coins inserted. #27 refers to FREE PLAY. For details, refer to Table 1 (COMMON) and Table 2 (INDIVIDUAL).

(C) MANUAL SETTING

The Credit's incremental increase settings as against a coin insertion are shown in further details than in (B) above (refer to Table 3). Also, note that when this MANUAL SETTING is performed, (B) COIN CREDIT setting becomes ineffective.

MANUAL SETTING

```

COIN ASSIGNMENTS
MANUAL SETTING

COIN TO CREDIT      1
BONUS ADDER        NO BONUS ADDER
COIN CHUTE #1 MULTIPLIER
1 COIN COUNT AS 1 COIN
COIN  1 2 3 4 5 6 7 8 9
CREDIT 1 2 3 4 5 6 7 8 9

COIN CHUTE #2 MULTIPLIER
1 COIN COUNT AS 1 COIN
COIN  1 2 3 4 5 6 7 8 9
CREDIT 1 2 3 4 5 6 7 8 9

SEQUENCE SETTING

->EXIT

SELECT WITH SERVICE BUTTON
AND
PRESS TEST BUTTON
    
```

(D)  
(E)

```

COIN ASSIGNMENTS
MANUAL SETTING

COIN TO CREDIT      1
BONUS ADDER        NO BONUS ADDER
COIN CHUTE MULTIPLIER
1 COIN COUNT AS 1 COIN
COIN  1 2 3 4 5 6 7 8 9
CREDIT 1 2 3 4 5 6 7 8 9

SEQUENCE SETTING

->EXIT

SELECT WITH SERVICE BUTTON
AND
PRESS TEST BUTTON
    
```

(G)

FIG. 5 - 6 C (Setting to COMMON)

FIG. 5 - 6 D (Setting to INDIVIDUAL)

(D) COIN TO CREDIT

Determines COIN/CREDIT setting.

(E) BONUS ADDER

This sets how many coins should be inserted to obtain one SERVICE COIN.

(F) COIN CHUTE (# 1 / # 2) MULTIPLIER

This sets how many tokens one coin represents.

Table 1: COIN/CREDIT SETTING (COIN CHUTE COMMON TYPE)

| NAME OF SETTING | COIN CHUTE 1 |           | COIN CHUTE 2 |           |
|-----------------|--------------|-----------|--------------|-----------|
| SETTING #1      | 1 COIN       | 1 CREDIT  | 1 COIN       | 1 CREDIT  |
| SETTING #2      | 1 COIN       | 2 CREDITS | 1 COIN       | 1 CREDIT  |
| SETTING #3      | 1 COIN       | 3 CREDITS | 1 COIN       | 1 CREDIT  |
| SETTING #4      | 1 COIN       | 4 CREDITS | 1 COIN       | 1 CREDIT  |
| SETTING #5      | 1 COIN       | 5 CREDITS | 1 COIN       | 1 CREDIT  |
| SETTING #6      | 1 COIN       | 2 CREDITS | 1 COIN       | 2 CREDITS |
| SETTING #7      | 1 COIN       | 5 CREDITS | 1 COIN       | 2 CREDITS |
| SETTING #8      | 1 COIN       | 3 CREDITS | 1 COIN       | 3 CREDITS |
| SETTING #9      | 1 COIN       | 4 CREDITS | 1 COIN       | 4 CREDITS |
| SETTING #10     | 1 COIN       | 5 CREDITS | 1 COIN       | 5 CREDITS |
| SETTING #11     | 1 COIN       | 6 CREDITS | 1 COIN       | 6 CREDITS |
| SETTING #12     | 2 COINS      | 1 CREDIT  | 2 COINS      | 1 CREDIT  |
| SETTING #13     | 1 COIN       | 1 CREDIT  | 2 COINS      | 1 CREDIT  |
| SETTING #14     | 1 COIN       | 2 CREDITS | 2 COINS      | 1 CREDIT  |
| SETTING #15     | 1 COIN       | 1 CREDIT  | 1 COIN       | 1 CREDIT  |
|                 | 2 COINS      | 3 CREDITS | 2 COINS      | 3 CREDITS |
| SETTING #16     | 1 COIN       | 3 CREDITS | 1 COIN       | 1 CREDIT  |
|                 |              |           | 2 COINS      | 3 CREDITS |
| SETTING #17     | 3 COINS      | 1 CREDIT  | 3 COINS      | 1 CREDIT  |
| SETTING #18     | 4 COINS      | 1 CREDIT  | 4 COINS      | 1 CREDIT  |
| SETTING #19     | 1 COIN       | 1 CREDIT  | 1 COIN       | 1 CREDIT  |
|                 | 2 COINS      | 2 CREDITS | 2 COINS      | 2 CREDITS |
|                 | 3 COINS      | 3 CREDITS | 3 COINS      | 3 CREDITS |
|                 | 4 COINS      | 5 CREDITS | 4 COINS      | 5 CREDITS |
| SETTING #20     | 1 COIN       | 5 CREDITS | 1 COIN       | 1 CREDIT  |
|                 |              |           | 2 COINS      | 2 CREDITS |
|                 |              |           | 3 COINS      | 3 CREDITS |
|                 |              |           | 4 COINS      | 5 CREDITS |
| SETTING #21     | 5 COINS      | 1 CREDIT  | 5 COINS      | 1 CREDIT  |
| SETTING #22     | 1 COIN       | 2 CREDITS | 3 COINS      | 1 CREDIT  |
|                 |              |           | 5 COINS      | 2 CREDITS |
| SETTING #23     | 2 COINS      | 1 CREDIT  | 2 COINS      | 1 CREDIT  |
|                 | 4 COINS      | 2 CREDITS | 4 COINS      | 2 CREDITS |
|                 | 5 COINS      | 3 CREDITS | 5 COINS      | 3 CREDITS |
| SETTING #24     | 1 COIN       | 3 CREDITS | 2 COINS      | 1 CREDIT  |
|                 |              |           | 4 COINS      | 2 CREDITS |
|                 |              |           | 5 COINS      | 3 CREDITS |
| SETTING #25     | 1 COIN       | 1 CREDIT  | 1 COIN       | 1 CREDIT  |
|                 | 2 COINS      | 2 CREDITS | 2 COINS      | 2 CREDITS |
|                 | 3 COINS      | 3 CREDITS | 3 COINS      | 3 CREDITS |
|                 | 4 COINS      | 4 CREDITS | 4 COINS      | 4 CREDITS |
|                 | 5 COINS      | 6 CREDITS | 5 COINS      | 6 CREDITS |
| SETTING #26     | 1 COIN       | 6 CREDITS | 1 COIN       | 1 CREDIT  |
|                 |              |           | 2 COINS      | 2 CREDITS |
|                 |              |           | 3 COINS      | 3 CREDITS |
|                 |              |           | 4 COINS      | 4 CREDITS |
|                 |              |           | 5 COINS      | 6 CREDITS |
| SETTING #27     | FREE PLAY    |           | FREE PLAY    |           |

Table 2: COIN/CREDIT SETTING (COIN CHUTE INDIVIDUAL TYPE)

| NAME OF SETTING | EACH SEAT'S COIN CHUTE | NAME OF SETTING | EACH SEAT'S COIN CHUTE |
|-----------------|------------------------|-----------------|------------------------|
| SETTING #1      | 1 COIN 1 CREDIT        | SETTING #21     | 5 COINS 1 CREDIT       |
| SETTING #2      | 1 COIN 2 CREDITS       | SETTING #23     | 2 COINS 1 CREDIT       |
| SETTING #3      | 1 COIN 3 CREDITS       |                 | 4 COINS 2 CREDITS      |
| SETTING #4      | 1 COIN 4 CREDITS       |                 | 5 COINS 3 CREDITS      |
| SETTING #5      | 1 COIN 5 CREDITS       | SETTING #25     | 1 COIN 1 CREDIT        |
| SETTING #11     | 1 COIN 6 CREDITS       |                 | 2 COINS 2 CREDITS      |
| SETTING #12     | 2 COINS 1 CREDIT       |                 | 3 COINS 3 CREDITS      |
| SETTING #15     | 1 COIN 1 CREDIT        |                 | 4 COINS 4 CREDITS      |
|                 | 2 COINS 3 CREDITS      |                 | 5 COINS 6 CREDITS      |
| SETTING #17     | 3 COINS 1 CREDIT       | SETTING #27     | FREE PLAY              |
| SETTING #18     | 4 COINS 1 CREDIT       |                 |                        |
| SETTING #19     | 1 COIN 1 CREDIT        |                 |                        |
|                 | 2 COINS 2 CREDITS      |                 |                        |
|                 | 3 COINS 3 CREDITS      |                 |                        |
|                 | 4 COINS 5 CREDITS      |                 |                        |

Table 3: MANUAL SETTING

|                                  |                           |
|----------------------------------|---------------------------|
| COIN TO CREDIT                   | 1 COIN 1 CREDIT           |
|                                  | 2 COINS 1 CREDIT          |
|                                  | 3 COINS 1 CREDIT          |
|                                  | 4 COINS 1 CREDIT          |
|                                  | 5 COINS 1 CREDIT          |
|                                  | 6 COINS 1 CREDIT          |
|                                  | 7 COINS 1 CREDIT          |
|                                  | 8 COINS 1 CREDIT          |
|                                  | 9 COINS 1 CREDIT          |
| BONUS ADDER                      | NO BONUS ADDER            |
|                                  | 2 COINS GIVE 1 EXTRA COIN |
|                                  | 3 COINS GIVE 1 EXTRA COIN |
|                                  | 4 COINS GIVE 1 EXTRA COIN |
|                                  | 5 COINS GIVE 1 EXTRA COIN |
|                                  | 6 COINS GIVE 1 EXTRA COIN |
|                                  | 7 COINS GIVE 1 EXTRA COIN |
|                                  | 8 COINS GIVE 1 EXTRA COIN |
|                                  | 9 COINS GIVE 1 EXTRA COIN |
| COIN CHUTE (#1/#2)<br>MULTIPLIER | 1 COIN COUNTS AS 1 COIN   |
|                                  | 1 COIN COUNTS AS 2 COINS  |
|                                  | 1 COIN COUNTS AS 3 COINS  |
|                                  | 1 COIN COUNTS AS 4 COINS  |
|                                  | 1 COIN COUNTS AS 5 COINS  |
|                                  | 1 COIN COUNTS AS 6 COINS  |
|                                  | 1 COIN COUNTS AS 7 COINS  |
|                                  | 1 COIN COUNTS AS 8 COINS  |
|                                  | 1 COIN COUNTS AS 9 COINS  |

## (G) SEQUENCE SETTING

Number of credits required for starting game, etc. can be set.

Function varies depending on the specific games. To find out what kind of functions are allotted to each sequence, or what is the initial value for each sequence, refer to the Manual of the game connected. Each sequence can be set between 1 ~ 5 credit(s).

```
COIN ASSIGNMENTS
SEQUENCE SETTING

SEQUENCE 1      1 CREDIT(S)
SEQUENCE 2      1 CREDIT(S)
SEQUENCE 3      1 CREDIT(S)
SEQUENCE 4      1 CREDIT(S)
SEQUENCE 5      1 CREDIT(S)
SEQUENCE 6      1 CREDIT(S)
SEQUENCE 7      1 CREDIT(S)
SEQUENCE 8      1 CREDIT(S)
-> EXIT
  [XXXXXXXXXXXX]
DESCRIPTION OF SEQUENCE
1 CREDIT TO START
2 CREDIT TO CONTINUE
3 NO USE
4 NO USE
5 NO USE
6 NO USE
7 NO USE
8 NO USE

SELECT WITH SERVICE BUTTON
AND
PRESS TEST BUTTON
```

This portion varies depending on specific games.

### (EXAMPLE 1)

In cases of video games such as SPORTS JAM, ect. :

SEQUENCE 1 : Number of credits required for game start (initial value=1)  
SEQUENCE 2 : Number of credits required for CONTINUE (initial value=1)  
SEQUENCE 3~8 : NOT USED.

### (EXAMPLE 2)

In the case NAOMI 2 is used as vending machines:

SEQUENCE 1~4 : Number of credits required for purchasing product 1~4 (Initial value=1)  
SEQUENCE 5~8 : Number of credits required for purchasing product 5~8 (Initial value=1)



5 - 7 BOOKKEEPING

• BOOKKEEPING 1/2

This allows such data as operating time/No. of coins inserted/ No. of credits to be checked.

|                               |   |
|-------------------------------|---|
| BOOKKEEPING 1/2               |   |
| TOTAL TIME                    |   |
| OD 00H 00M 00S                |   |
| CREDIT                        | 0 |
| COIN 1                        | 0 |
| COIN 2                        | 0 |
| COIN 3                        | 0 |
| COIN 4                        | 0 |
| TOTAL COIN                    | 0 |
| COIN CREDIT                   | 0 |
| SERVICE CREDIT                | 0 |
| TOTAL CREDIT                  | 0 |
| PRESS TEST BUTTON TO CONTINUE |   |

(A)

(B)

(A) CREDIT

(B) COIN 1, 2, 3, 4

Press the TEST button to proceed to BOOKKEEPING 2/2.

• BOOKKEEPING 2/2

Each sequence displays the frequency of functioning. The contents of each sequence vary depending on specific games. For the contents of each sequence, refer to the Manual of the game connected.

Display Items vary depending on the setting of CABINET TYPE in the SYSTEM ASSIGNMENTS.

|                           |   |          |   |
|---------------------------|---|----------|---|
| BOOKKEEPING 2/2           |   |          |   |
| P1 SEQ 1                  | 0 | P2 SEQ 1 | 0 |
| P1 SEQ 2                  | 0 | P2 SEQ 2 | 0 |
| P1 SEQ 3                  | 0 | P2 SEQ 3 | 0 |
| P1 SEQ 4                  | 0 | P2 SEQ 4 | 0 |
| P1 SEQ 5                  | 0 | P2 SEQ 5 | 0 |
| P1 SEQ 6                  | 0 | P2 SEQ 6 | 0 |
| P1 SEQ 7                  | 0 | P2 SEQ 7 | 0 |
| P1 SEQ 8                  | 0 | P2 SEQ 8 | 0 |
| P3 SEQ 1                  | 0 | P4 SEQ 1 | 0 |
| P3 SEQ 2                  | 0 | P4 SEQ 2 | 0 |
| P3 SEQ 3                  | 0 | P4 SEQ 3 | 0 |
| P3 SEQ 4                  | 0 | P4 SEQ 4 | 0 |
| P3 SEQ 5                  | 0 | P4 SEQ 5 | 0 |
| P3 SEQ 6                  | 0 | P4 SEQ 6 | 0 |
| P3 SEQ 7                  | 0 | P4 SEQ 7 | 0 |
| P3 SEQ 8                  | 0 | P4 SEQ 8 | 0 |
| PRESS TEST BUTTON TO EXIT |   |          |   |

(EXAMPLE) In cases of video games such as SPORTS JAM, etc. :

P1(P2) SEQ 1 : Play frequency of Player 1 (Player 2)

P1(P2) SEQ 2 : Frequency of CONTINUE by Player 1 (Player 2)

P1(P2) SEQ 3 ~ 8 : NOT USED.

## 5 — 8 BACKUP DATA CLEAR

Clears the contents of BOOKKEEPING.

```
BACKUP DATA CLEAR

YES (CLEAR)
-> NO (CANCEL)

SELECT WITH SERVICE BUTTON
      AND
PRESS TEST BUTTON
```

When clearing, bring the arrow to YES by using the SERVICE button and press the TEST button. Bring the arrow to NO and press the TEST button to have the menu mode return without clearing the data. COMPLETED is displayed when clearing is completed. Press the TEST button to return to the menu mode.

## 5 — 9 CLOCK SETTING

Set YEAR, MONTH, DAY, HOUR, and MINUTE for NAOMI 2 Main BD.

```
CLOCK SETTING

2000 11/15 05:10 32 WED

YEAR
MONTH
DAY
HOUR
MINUTE
-> EXIT

SELECT WITH SERVICE BUTTON
      AND
PRESS TEST BUTTON
```

Select the desired item with the SERVICE button and press the TEST button to increase the value. Upon finishing the SETTING, bring the arrow to EXIT and press the TEST button to return to the menu mode.

## 5 - 10 DIMM BOARD TEST

This DIMM BOARD TEST screen appears only when a DIMM board is connected to the NAOMI 2. The ROM BOARD TEST screen appears instead when a ROM board is connected to the NAOMI 2.

This screen tests the DIMM memories and ICs on the DIMM board. When any problem is detected by the test, GOOD is displayed on the right of each testing item.

```

DIMM BOARD TEST

PROGRAM VER : 1.02
DIMM SLOT 0 : GOOD
DIMM SLOT 1 : GOOD
DIMM STATUS : GOOD

CHECKING DIMM BD
DIMMO - GOOD
DIMM1 - GOOD
IC34, 35S - GOOD
IC10, 11S - GOOD
GD DRIVE - GOOD
----- COMPLETE -----

PRESS TEST BUTTON TO EXIT
    
```

After finishing the test, press the TEST button to return to the Menu screen.

## 5 - 10 ROM BOARD TEST

In this test, on-ROM-BD ROM check is executed. Depending on the types of game, one of the following 2 screens is displayed. The IC NO. display is different. If GOOD is displayed below RESULT, it is satisfactory.

BYTE and WORD refers to the check sum of each unit.

```

GAME ROM TEST
[XXXXXXXXXXXX]

NO.  TYPE  RESULT  BYTE  WORD
IC22 16M  -----  0123  4567
IC1  64M  GOOD    0123  4567
IC2  64M  GOOD    0123  4567
IC3  64M  GOOD    0123  4567
IC4  64M  GOOD    0123  4567
IC5  64M  GOOD    0123  4567
IC6  64M  GOOD    0123  4567
IC7  64M  GOOD    0123  4567
IC8  64M  GOOD    0123  4567
IC9  64M  GOOD    0123  4567
IC10 64M  GOOD    0123  4567
      :
IC21 64M  GOOD    0123  4567

PRESS TEST BUTTON TO EXIT
    
```

← Displays the name of game.

```

GAME ROM TEST
[XXXXXXXXXXXX]

NO.  TYPE  RESULT  BYTE  WORD
IC16 16M  -----  0123  4567
IC17 64M  GOOD    0123  4567
IC18 64M  GOOD    0123  4567
IC19 64M  GOOD    0123  4567
IC20 64M  GOOD    0123  4567
      :
      :
      :
IC36 64M  GOOD    0123  4567
IC37 64M  GOOD    0123  4567
IC38 64M  GOOD    0123  4567

PRESS TEST BUTTON TO EXIT
    
```

← Displays the name of game.

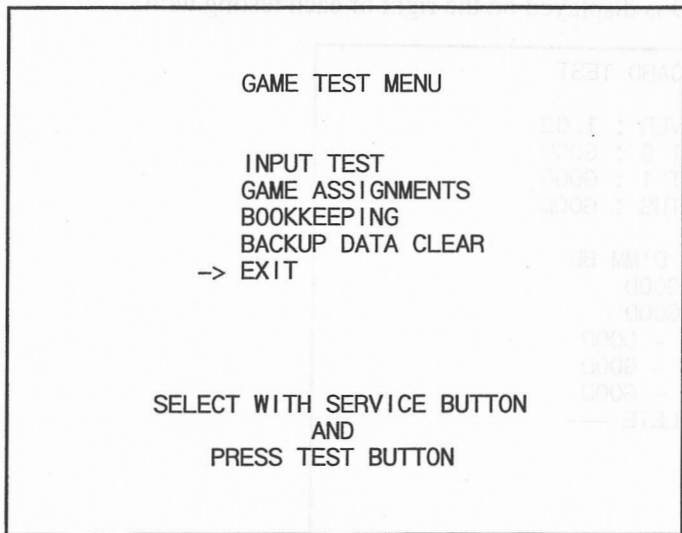
In case of above screen, Program ROM (IC22 or IC1) do not display GOOD or BAD.

In case of above screen, Program ROM (IC 16 or IC17) do not display GOOD or BAD.

The number of ROMs depends on each game.  
Press the TEST button to return to the menu mode.

5 - 11 GAME TEST MODE

Enters the TEST mode of the game connected. The TEST mode includes INPUT test, GAME ASSIGNMENTS such as game difficulty and others, BOOKKEEPING, etc. Depending on specific games, necessary items are added and unnecessary items removed. As such, the contents thereof may be changed. For details, refer to the attached Manual.



In the test on ROM-EEP ROM board is executed. Depending on the types of game, one of the following 2 screens is displayed. The CPU display is different. If GOOD is displayed below RESULT, it is satisfactory. BYTE and WORD refers to the check unit of each unit.

Displays the name of game.

GAME ROM TEST  
[XXXXXXXXXX]

| NO.  | TYPE | RESULT | BYTE WORD |
|------|------|--------|-----------|
| IC18 | RAM  | GOOD   | 0123 4567 |
| IC17 | RAM  | GOOD   | 0123 4567 |
| IC18 | RAM  | GOOD   | 0123 4567 |
| IC19 | RAM  | GOOD   | 0123 4567 |
| IC20 | RAM  | GOOD   | 0123 4567 |
| ...  | ...  | ...    | ...       |
| IC36 | RAM  | GOOD   | 0123 4567 |
| IC37 | RAM  | GOOD   | 0123 4567 |
| IC38 | RAM  | GOOD   | 0123 4567 |

PRESS TEST BUTTON TO EXIT

Displays the name of game.

GAME ROM TEST  
[XXXXXXXXXX]

| NO.  | TYPE | RESULT | BYTE WORD |
|------|------|--------|-----------|
| IC22 | RAM  | ---    | 0123 4567 |
| IC1  | RAM  | GOOD   | 0123 4567 |
| IC2  | RAM  | GOOD   | 0123 4567 |
| IC3  | RAM  | GOOD   | 0123 4567 |
| IC4  | RAM  | GOOD   | 0123 4567 |
| IC5  | RAM  | GOOD   | 0123 4567 |
| IC6  | RAM  | GOOD   | 0123 4567 |
| IC7  | RAM  | GOOD   | 0123 4567 |
| IC8  | RAM  | GOOD   | 0123 4567 |
| IC9  | RAM  | GOOD   | 0123 4567 |
| IC10 | RAM  | GOOD   | 0123 4567 |
| IC21 | RAM  | GOOD   | 0123 4567 |

PRESS TEST BUTTON TO EXIT

In case of above screen, Program ROM (IC22 or IC1) do not display GOOD or BAD. The number of ROMs depends on each game. Press the TEST button to return to the main screen.



SEGA CORPORATION

12-14, Higashikohjiya 2-Chome,  
Ohta-ku, Tokyo, Japan 144-8532

○ TEL : (03) 5737-7544

○ FAX : (03) 5737-7746

© SEGA 2001

Printed in Japan