6. ASSEMBLY AND INSTALLATION

⚠️
WARNING

● Perform assembly work by following the procedure herein stated. Failing to comply with the instructions can cause electric shock hazard.

● Perform assembling as per this manual. Since this is a complex machine, erroneous assembling can cause an electric shock, machine damage and or not functioning as per specified performance.

● When assembling, be sure to use plural persons. Depending on the assembly work, there are some cases in which working by one person alone can cause personal injury or parts damage.

● Ensure that connectors are accurately connected. Incomplete connections can cause electric shock hazard.

● Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a fire risk.

● This work should be performed by the site maintenance individual or other skilled professional. Performing work by non-technical personnel can cause a severe accident such as electric shock. Failing to comply with this instruction can cause a severe accident such as electric shock to the player during operation.

● Provide sufficient space so that assembling can be performed. Performing work in places with narrow space or low ceiling may cause an accident and assembly work to be difficult.

● To perform work safely and avoid serious accident such as the cabinet's falling down, do not perform work in places where step-like grade differences, a ditch, or slope exist.

● The seat will continue to move even if it comes into contact with persons other than the player. In order to ensure a safe operating environment, place the machine so that one side is adjacent to the back of another game machine or to the wall.

● If the machine is placed so that people will be passing through the vicinity, leave at least 70 cm of space around the machine. If this space is too narrow, persons other than the player may brush against or collide with the machine, possibly resulting in accidents.

● Do not leave power cords, grounding wires, or network cables exposed in areas of heavy foot traffic. Doing so may cause them to become damaged, possibly resulting in electric shock and/or short circuits. When laying wiring across the floor, always use safety covers to protect the wires. (Wiring diameter: power cable - approx. ϕ 8; network cable - approx. ϕ 5)

CAUTION

● Handle molded parts with care. Undue weight or pressure may cause them to break and the broken pieces may cause injury.
● To perform work safely and securely, be sure to prepare a step which is in a secure and stable condition. Performing work without using the step can cause violent falling down accidents.
● Make sure that the GD cable connector is inserted parallel to the plug. Improper insertion may cause damage to the connector and present a fire risk.

When carrying out the assembling and installation, follow the following 6-item sequence.

| 1 | INSTALLING THE COIN CHUTE TOWER, AND THE POP/POP CARD |

| 2 | SECURING IN PLACE（ADJUSTER ADJUSTMENT） |

| 3 | INSTALLING THE GD-ROM DRIVE（SETTING THE GD-ROM DISC） |

| 4 | POWER SUPPLY, AND EARTH CONNECTION |

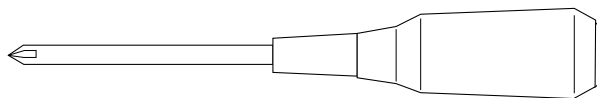| 5 | TURNING THE POWER ON |

| 6 | ASSEMBLING CHECK |

The master key (accessories) in addition to the tools such as a Phillips type screwdriver and wrench are required for the assembly work.

KEY MASTER

24mm
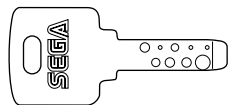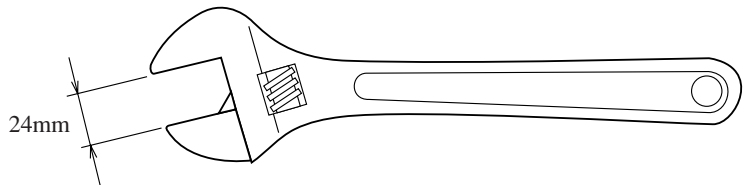
WRENCH (for M16 hexagon-head bolt)

Phillips type screwdriver

1 INSTALLING THE COIN CHUTE TOWER, AND THE POP/POP CARD

INSTALLING THE COIN CHUTE TOWER

① First, remove the cash box and then close and relock the cash box door. Accidents may occur if the door is free to swing open or closed.

② Spread a blanket or other soft surface on the floor next to where the coin chute tower is to be installed, and place the coin chute tower on top.

PHOTO 6. 1 a

③ Plug in the 3 wire connectors linking the coin chute tower and the base.
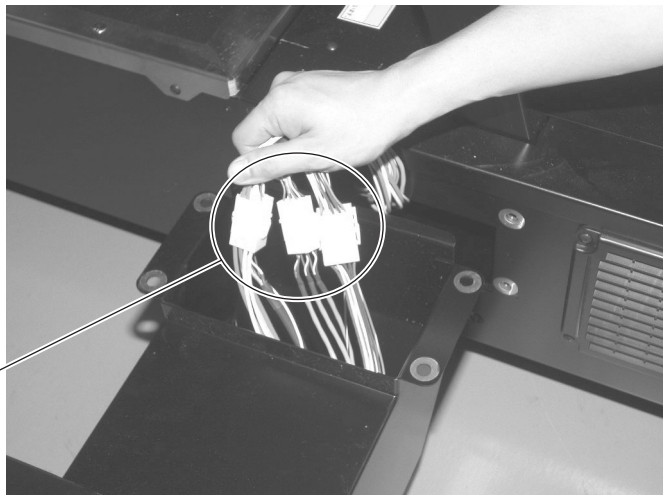
Connect the connector (3)

PHOTO 6. 1 b

④ Install 6 hexagonal bolts on the pillar side of the coin chute tower. Taking care not to damage the wiring, have one person support the coin chute tower while another installs the bolts.

HEXAGONAL BOLT (2), black
M8×50, w/spring washer, flat washer used

HEXAGONAL BOLT (4), black
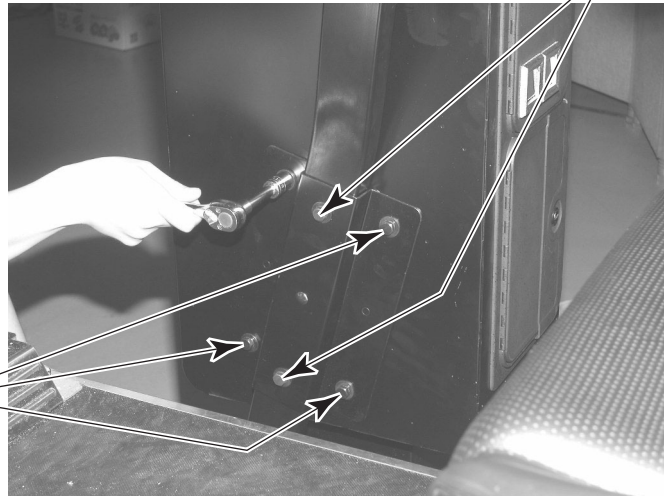M8×20, w/spring washer,
flat washer used

PHOTO 6. 1 c

HEXAGONAL BOLT (4), black
M8×20, w/spring washer, flat washer used

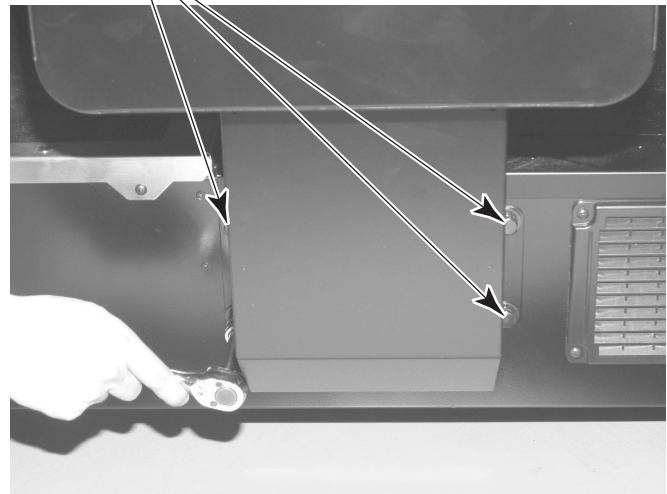⑤ Install 4 hexagonal bolts on the bottom of the coin chute tower.

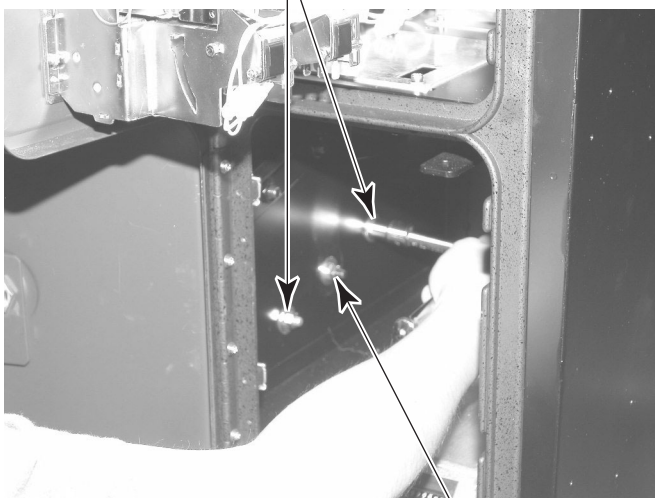PHOTO 6. 1 d

HEXAGON NUT (2)
M6, flat & spring washers used

⑥ Unlock the coin chute and cash box doors and install 3 hexagon nuts on the base side of the interior of the cash box door.

⑦ Return the cash box to its original position and lock the door.

PHOTO 6. 1 e

INSTALLING THE POP AND THE POP CARD

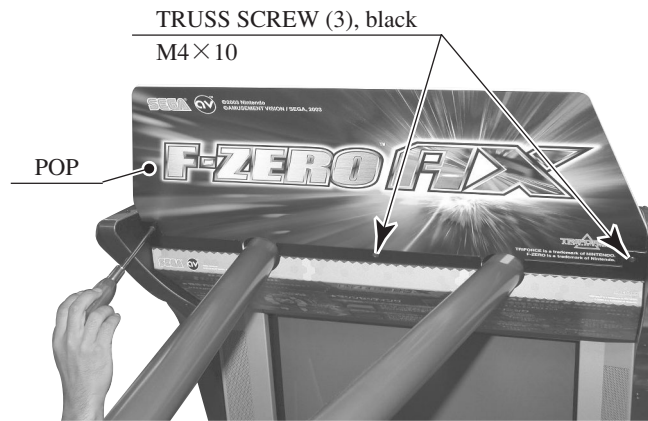① Plug the POP into the ceiling of the monitor box.

② Tighten the 3 truss screws.

TRUSS SCREW (3), black
M4×10

POP

PHOTO 6. 1 f

③ Assemble the POP card as shown in the diagram and attach it to the card reader/writer.

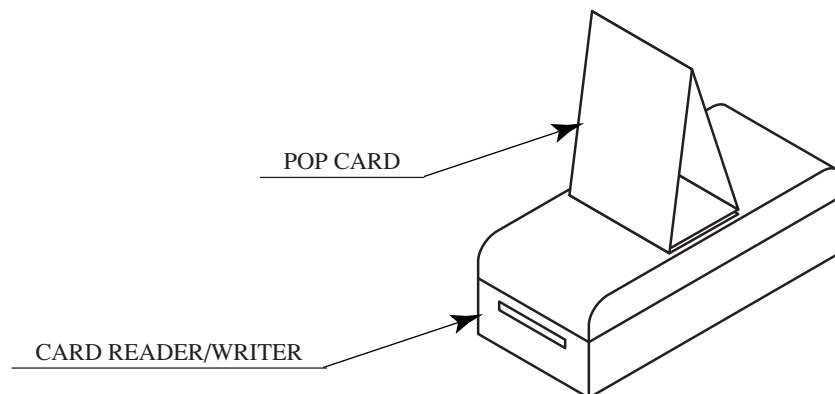POP CARD

CARD READER/WRITER

FIG. 6. 1

2 SECURING IN PLACE (ADJUSTER ADJUSTMENT)

⚠ **WARNING**

Make sure that all of the adjusters are in contact with the floor. If they are not, the cabinet can move and cause an accident.

This product has 6 casters and 4 Adjusters. (FIG. 6. 2 a) When the installation position is determined, cause the adjusters to come into contact with the floor directly, make adjustments in a manner so that the casters will be raised approximately 5 mm from the floor and make sure that the machine position is level.

① Transport the product to the installation position.

② Have all of the Adjusters make contact with the floor. Adjust the Adjuster's height by using a wrench so that the machine position is kept level.

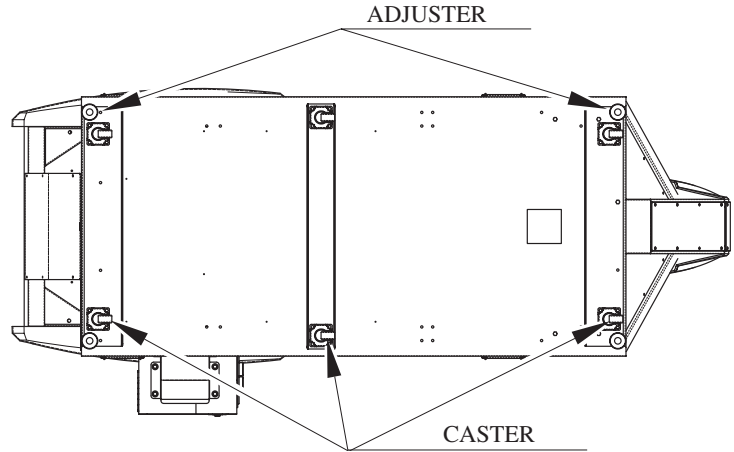③ After making adjustment, fasten the Adjuster Nut upward and secure the height of Adjuster.
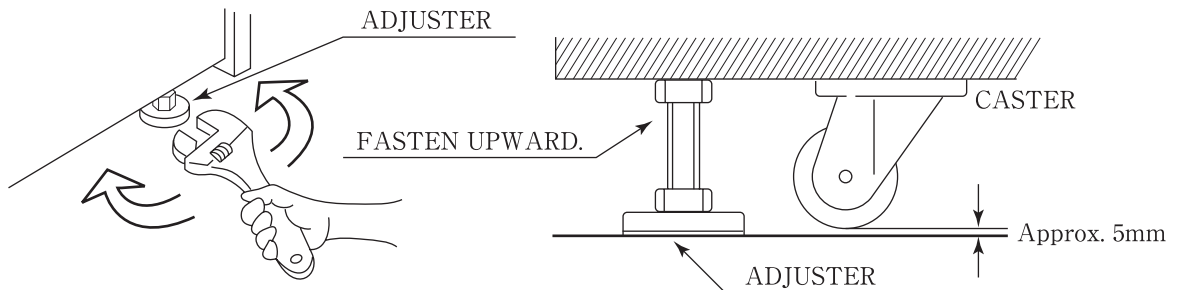
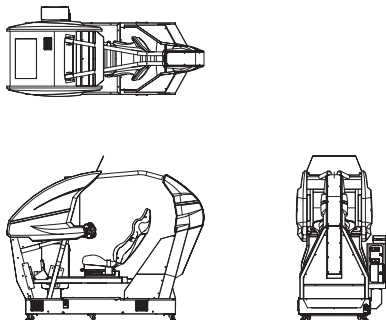FIG. 6. 2 a   BOTTOM VIEW

FIG. 6. 2 b   ADJUSTER

FIG. 6. 2 c

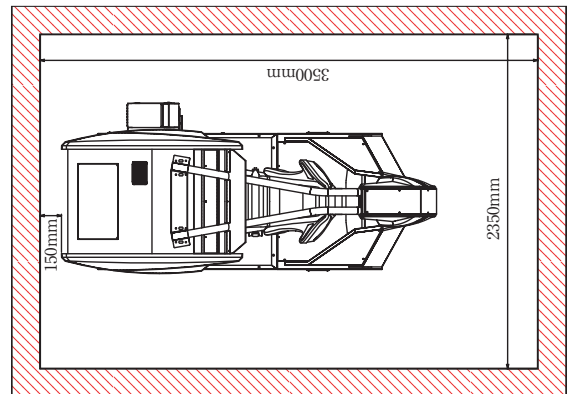Refer to this Fig. (Scale:1/100) for the layout of the place of installation.

FIG. 6. 2 d
Provide ventilation space for the ventilation opening.
Allow more than 70 cm (approx. 28 in) of space for customer traffic.

— 27 —

STOP

IMPORTANT

● Carefully handle the GD-ROM drive so as not to contaminate the disc and the readout lens with stains and dust particles.
● Do not continue to use the scratched GD-ROM disc. The scratched GD-ROM disc may cause the system to malfunction.
● Set the GD-ROM disc onto the GD-ROM drive with its labeled side facing upward.
● The key chip is a precision device. Handle it carefully and avoid exposure to heat, shock and static electricity, as these may cause damage to the device.
● The key chip is contained in the GD-ROM disc case. Always use them as a set.

① Unpack the shipping crate, and take out the GD-ROM drive, GD-ROM drive bracket, and GD-ROM disc.
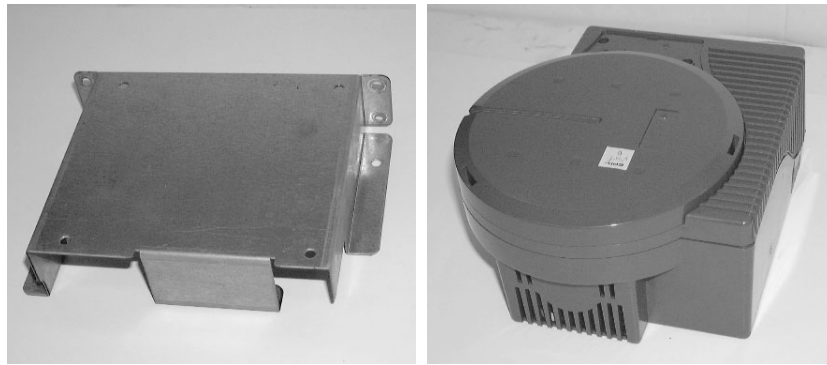
GD DRIVE BRACKET   GD-ROM DRIVE

PHOTO 6. 3 a

② Use the 4 tapping screws to fix the GD-ROM drive bracket onto the GD-ROM drive. Be careful about a fixing direction.

TAPPING SCREW (4)
M4×8

GD DRIVE BRACKET

GD-ROM DRIVE

FIG. 6. 3 a

Application diagram

Ⓑ

Ⓐ

INVISIBLE LASER RADIATION.
DO NOT STARE INTO BEAM OR
VIEW DIRECTLY WITH OPTICAL
INSTRUMENTS.
CLASS 3A LASER PRODUCT.

Ⓑ

DO NOT STARE INTO BEAM
OR VIEW DIRECTLY WITH
OPTICAL INSTRUMENTS.
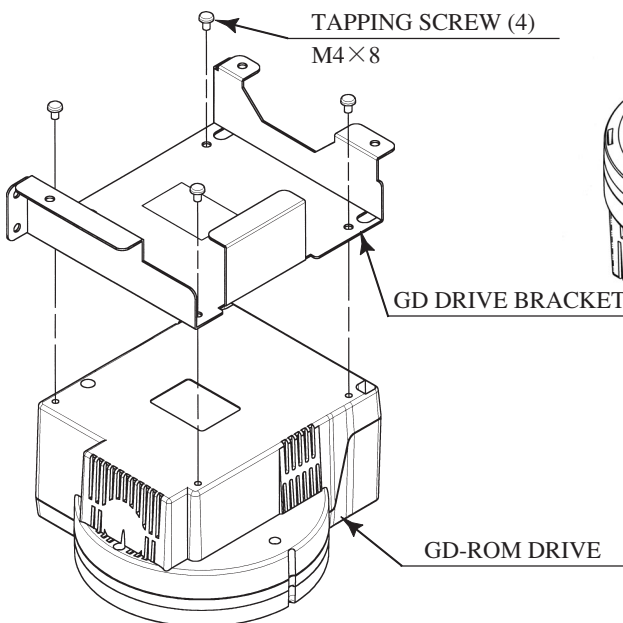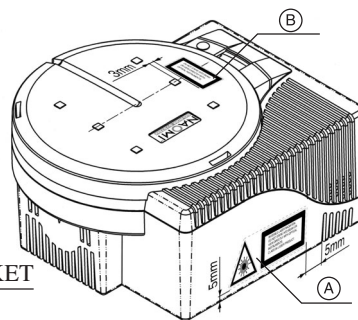
Please follow the drawing and place the sticker with the right language.

FIG. 6. 3 b

CAUTION for U. S. A., Europe, and Australia:
Attach the 2 caution stickers for a laser ray onto the GD-ROM drive.

— 28 —
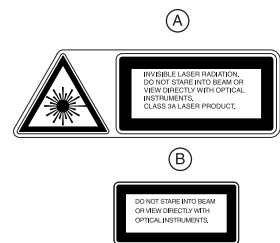
③ Remove the 1 truss head screw that fixes the GD-ROM drive lid (DISC LID). And turn clockwise the lid to remove.

TRUSS SCREW (1)
M3×8
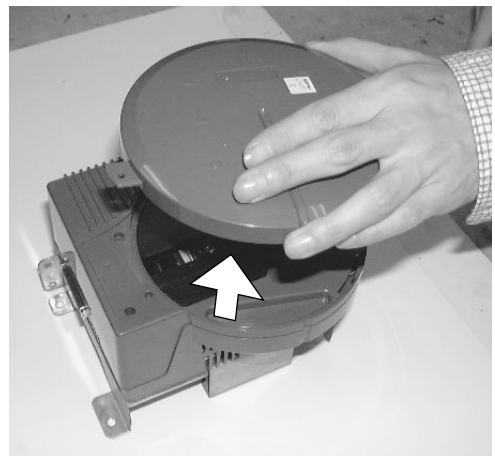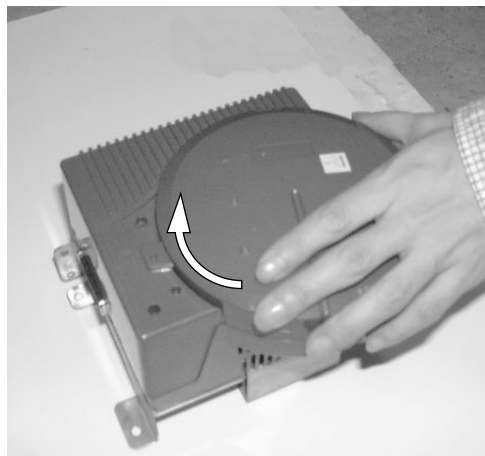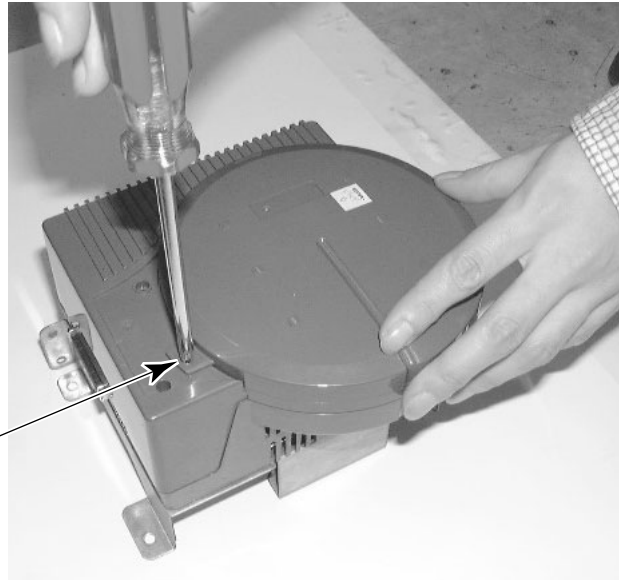
PHOTO 6. 3 b

④ Set the GD-ROM disc onto the GD-ROM drive with its labeled side facing upward.

⑤ Return the lid to its original place, and fix it with 1 truss head screw. Be careful not to fasten the screw too tightly.
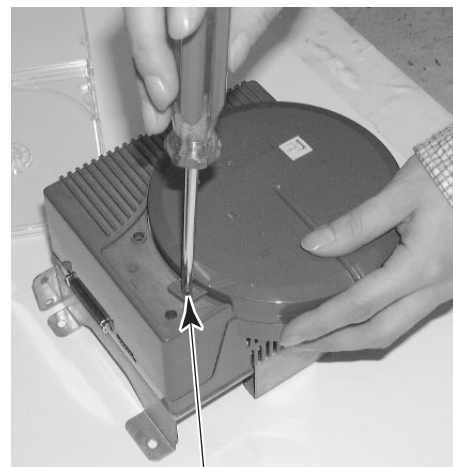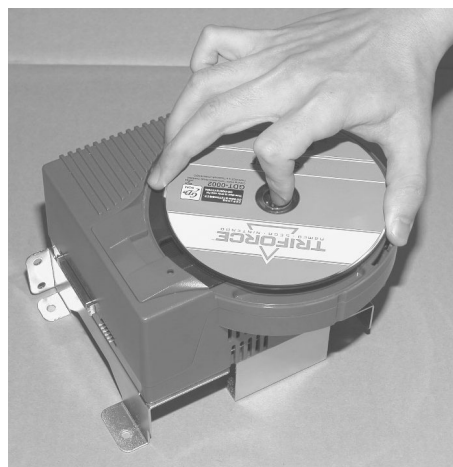
PHOTO 6. 3 c

TRUSS SCREW (1)
M3×8

⑥ Remove Floor R from the coin chute tower side of the base.
   Unlock it and remove the 2 truss screws.

Unlock.

TRUSS SCREW (2)
M4×8, chrome

FLOOR R
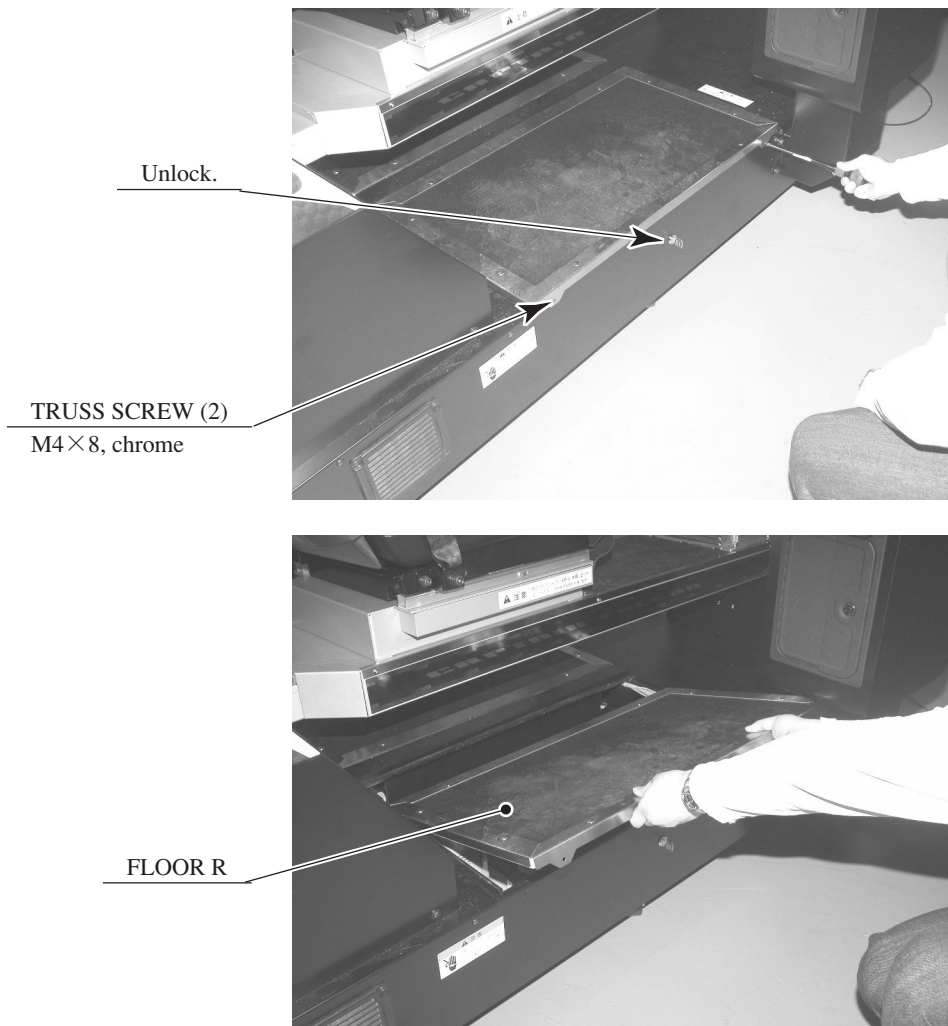
PHOTO 6. 3 d

⑦ Affix the GD-ROM drive with 3 screws.

SCREW (3)
M4×16, w/flat & spring washers
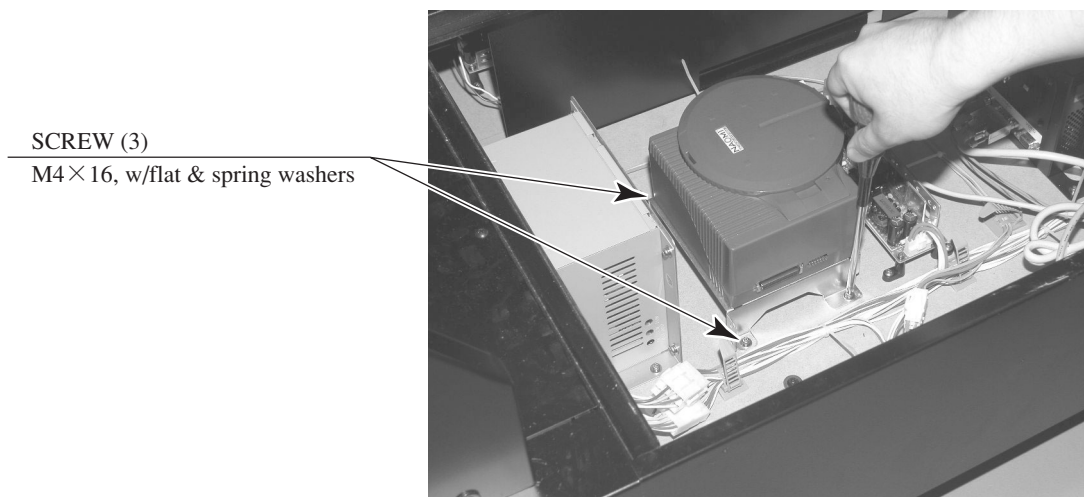
PHOTO 6. 3 e

⑧ Connect the power cable connector to the GD-ROM drive. The GD-ROM drive power cable will already be attached to the inside of the base. Plug the connector in securely, making sure it is connected in the proper direction.

GD-ROM DRIVE

POWER CABLE CONNECTOR
JST NH6P
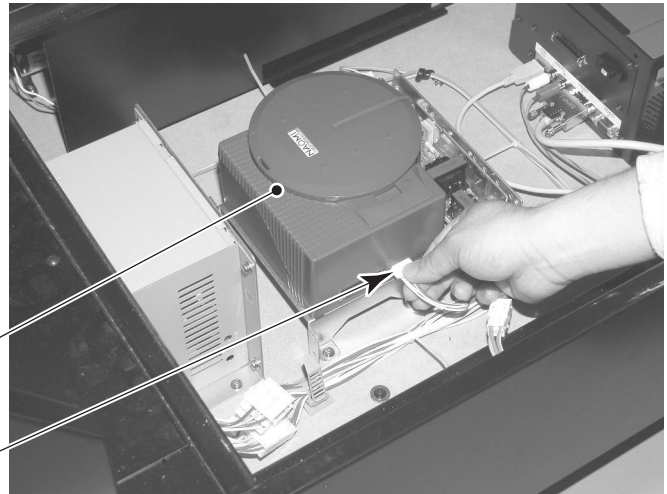
PHOTO 6. 3 f

⑨ Connect the GD cable to the GD-ROM drive and the TRIFORCE board. Plug the connectors in securely, making sure they are connected in the proper direction.

TRIFORCE BOARD

GD-ROM DRIVE

GD CABLE
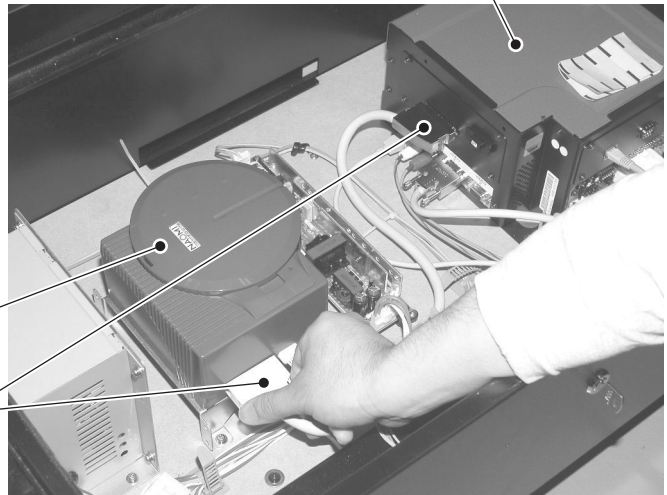
PHOTO 6. 3 g

⑩ Unfasten the 2 cord clamps that are holding the wiring inside the base in place, place the GD cable in the clamps with the other wires, and secure the clamps again.

CORD CLAMP

GD CABLE

PHOTO 6. 3 h

⚠ WARNING
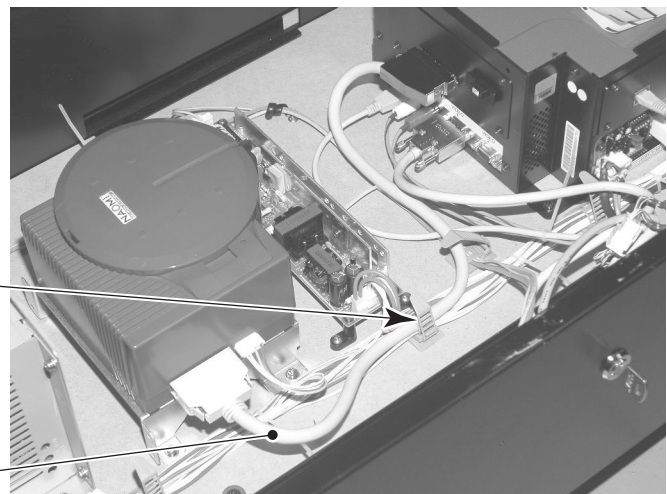
● Be sure to independently use the power supply socket outlet equipped with an Earth Leakage Breaker. Using a power supply without an Earth Leakage Breaker can cause a fire when electric leakage occurs.
● Ensure that the "accurately grounded indoor earth terminal" and the earth wire are available (except in the case where a power cord plug with earth is used). This product is equipped with the earth terminal. Connect the earth terminal and the indoor earth terminal with the prepared cable. If the grounding work is not performed appropriately, customers can be subjected to an electric shock, and the product's functioning may not be stable. <For Taiwan>
● Ensure that the power cord and earth wire are not exposed on the surface (passage, etc.). If exposed, they can be caught and are susceptible to damage. If damaged, the cord and wire can cause electric shock and short circuit accidents. Ensure that the wiring position is not in the customer's passage way or the wiring has protective covering.
● After wiring power cord on the floor, be sure to protect the power cord. Exposed power cord is susceptible to damage and causes an electric shock accident.

The AC Unit is located on one side of Monitor on the Base. The AC Unit has Main SW, Earth Terminal and the Inlet which connects the Power Cord.

① Ensure that the Main SW is OFF.

MAIN SW

CIRCUIT PROTECTOR

Main SW off

INLET

EARTH TERMINAL <For Taiwan>
Connect with the indoor earth terminal.

AC Cable (Power Cord)
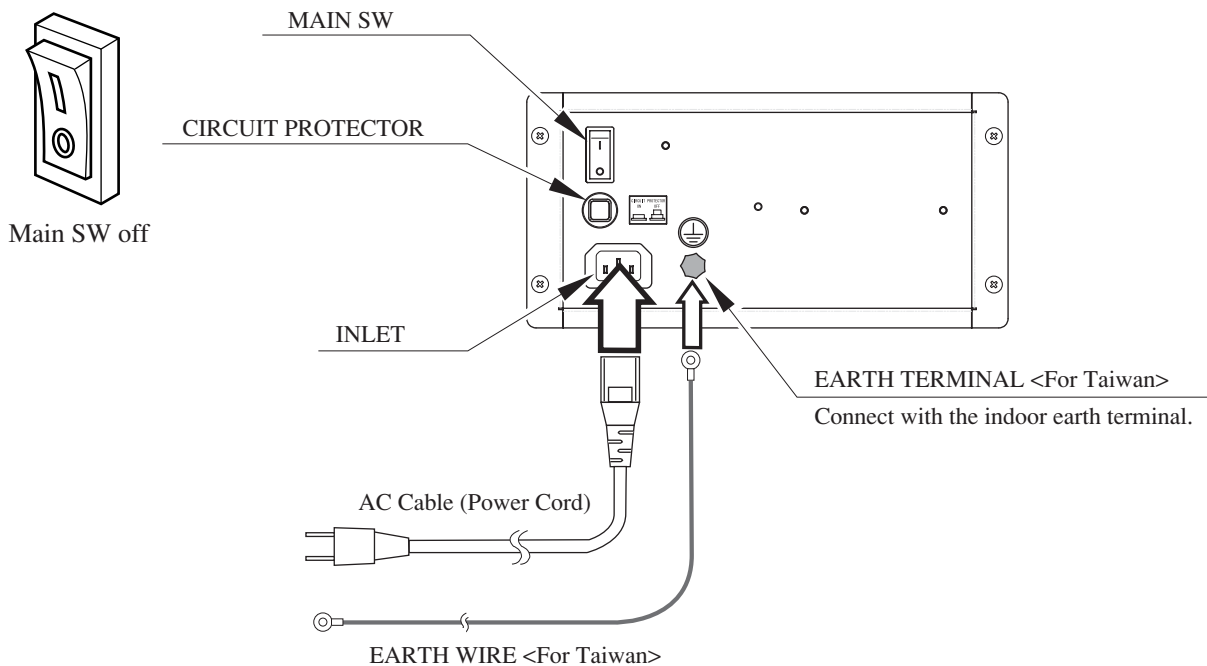
EARTH WIRE <For Taiwan>

FIG. 6. 4 a   AC UNIT

② Connect one end of the earth wire to the AC Unit earth terminal, and the other end to the indoor earth terminal. The AC Unit earth terminal has a Bolt and Nut combination. Take off the Nut, pass the end of earth wire through the Bolt, and fasten the Nut. <For Taiwan>

*Note that the Earth Wire is incorporated in the Power Cord for the Areas of AC 120 V (USA) and AC 220 ～ 240 V, and therefore, this procedure is not necessary.

Connect the Earth Wire to the Earth Terminal.
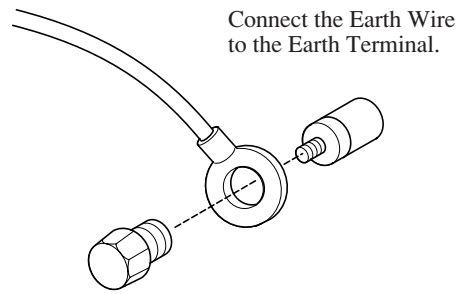
FIG. 6. 4 b   *Earth Wire Connection

③ Firmly insert the power plug into the socket outlet.
Insert the opposite side of Power Cord plug to the AC Unit's connector ("INLET").

④ Perform wiring for the Power Cord and Earth Wire. Install protective covering for the Power Cord and Earth Wire.

Wiring Cover
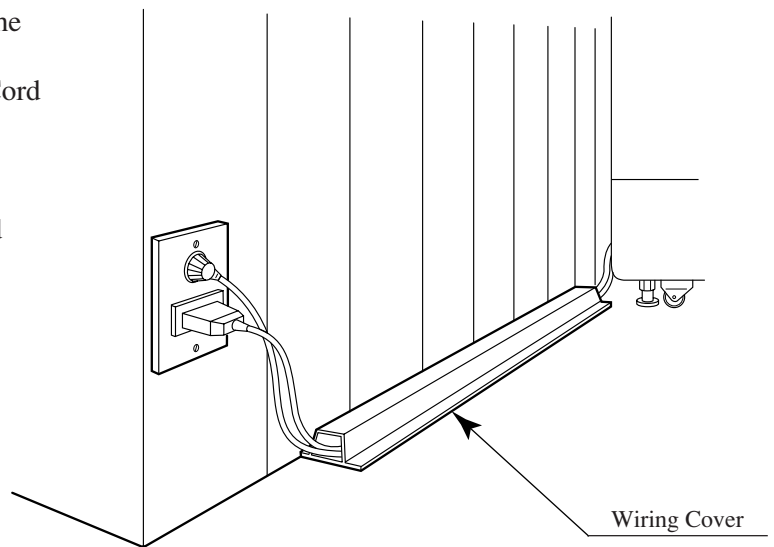
FIG. 6. 4 c   Connecting Power Cord and Earth Wire
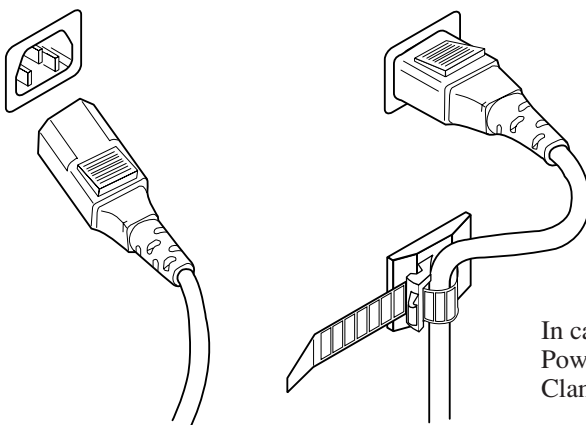
In case the Power Plug is apt to come out of place, secure the Power Cord to the periphery of the AC Unit with the Cord Clamp (an accessory).

HOW TO USE THE CORD CLAMP

⚠ **WARNING**

Make sure the surrounding area is secure before turning the power on. The machine will automatically go through an initialization process after being turned on. The seat will move left and right, and persons standing in the vicinity of the machine may be struck or knocked down.

⚠ **CAUTION**

Do not touch the machine until it has competed the initialization process and the advertising screen has appeared. Doing so may cause the person touching the machine to be struck by the seat. It may also prevent the machine from initializing properly. Failure to initialize properly can lead to control malfunction and other problems.

Turn the main switch on the AC unit ON to turn on the power. The 2 fluorescent lamps will light up when the power is turned on.
After displaying the system startup screen, the monitor will indicate that the card reader/writer and motor, in that order, are being tested.
Next, the initialization screen will be displayed, and the initialization process will begin. Initialization consists of the following steps, with each part moving and coming to rest in the preset position and direction automatically.

1) The seat moves left and right.

2) The seat comes to rest in a level position.

3) The steering wheel rotates left and right.

4) The steering wheel comes to rest in a 12 o'clock position.

When the initialization process is complete, the machine will go into Advertising mode. The monitor will display the demo screen, and the speakers to the left and right of the monitor and on the left and right of the seat's headrest will begin sound output. If the "no sound during Advertising mode" option is selected, sound output will be turned off.

When a sufficient number of credits have been inserted, the "Start" button on top of the control panel will flash. After the race begins, the "View Change" button for the currently selected mode will light up. The buttons will not be lit up during Advertising mode when no credits have been inserted.

After displaying the initialization screen, if the machine is set for network play, the monitor will indicate that the network is being tested.
If there are no problems with the network play connection and settings, the machine will enter Advertising mode.

If there is a problem with game board system, an error message will be displayed on the screen. If there is a problem with steering unit response or seat motion, an error message will be displayed. Refer to the on-screen error message to locate and resolve the problem.

If, after the initialization process is complete, the seat comes to rest at an angle or the steering unit comes to rest in a position other than straight, turn the power off and back on and have the machine go through initialization again.

If the seat or steering unit continues to come to rest at an angle after going through initialization again, there is likely a problem such as bad VR settings or a glitch in the initialization process. Refer to the drive board's 7-seg display to locate and resolve the problem.

If there are any defects or abnormalities in the network play connection or settings, the machine will continue to display the network test screen. Check the network play cable connection and settings.

The machine will save the number of credits inserted and rankings data even when the power is turned off. Fractions of credits (i.e. any coins inserted that do not add up to a full credit) and bonus adder count data will not be saved.
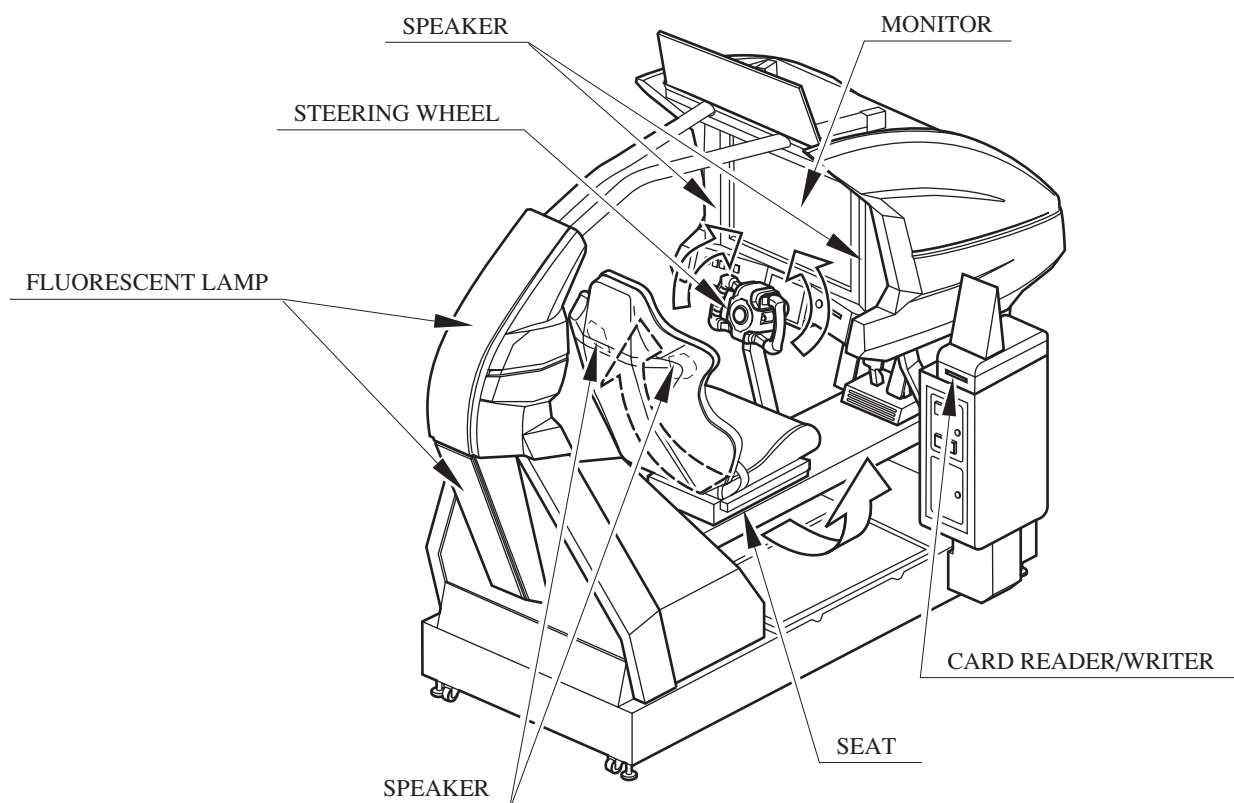
FIG. 6. 5

6 ASSEMBLY CHECK

In the TEST MODE, ascertain that the assembly has been made correctly and IC BD. is satisfactory (refer to Section 10).
In the test mode, perform the following test:

（1）MEMORY TEST

Selecting RAM TEST or MEDIA BOARD TEST from the menu screen in System Test mode will cause the machine to automatically perform a test of the memory on the game boards. If "GOOD" is displayed next to the number of each memory segment, the game boards are working properly.
Select SYSTEM INFORMATION to display information on the main game board and the media board. If the information is displayed correctly, this indicates that the game boards are functioning properly.

```
            RAM TEST


        AUX MEMORY      GOOD




        PRESS TEST BUTTON TO EXIT
```

```
    MEDIA BOARD TEST  1/2

     DOMM BOARD(TYPE 3)
     VERSION  ****
     STATUS   GOOD
     CHECKING 100%

     DIMM TEST
     DIMM0      - GOOD
     DIMM1      - NONE
     GD-ROM     - GOOD




        PRESS TEST BUTTON TO EXIT
```

```
     MEDIA BOARD TEST  2/2

     NETWORK BOARD
     VERSION  ****
     STATUS   GOOD
     CHECKING 100%

     NETWORK BOARD TEST
     RAM CHECK _ GOOD
       --  COMPLETED  --



        PRESS TEST BUTTON TO EXIT
```

```
         SYSTEM INFORMATION

     MAIN BOARD
       REGION         ****
       BOOT VERSION   ****
       FIRM VERSION   ****
       FPGA VERSION   ****
       SERIAL NO. ***************

     MEDIA BOARD
       DIMM BOARD(TYPE 3)+ GDROM
       MEMORY SIZE    512MB
       FIRM VERSION   ****
       SERIAL NO. ***************
       NETWORK BOARD
       FIRM VERSION   *****


     PRESS TEST BUTTON TO EXIT
```

(2) INPUT TEST

Select INPUT TEST from the menu screen in either System Test mode or Game Test mode to bring up a test screen for the input devices.

Test the input on each device. If "ON" is displayed next to each device as it is tested and the numbers change smoothly in accordance with the input, the input devices and their wiring connections are working properly.

```
              JVS TEST
             INPUT TEST

      NODE      1/1
        SYSTEM     00
        PLAYER 1   0000
        PLAYER 2   0000
        COIN 1     0000
        COIN 2     0000
        ANALOG 1   0000
        ANALOG 2   0000
        ANALOG 3   0000
        ANALOG 4   0000
        ANALOG 5   0000
        ANALOG 6   0000
        ANALOG 7   0000
        ANALOG 8   0000

     PRESS TEST AND SERVICE BUTTON TO EXIT
```

```
                    INPUT TEST

    STEERING   X    0(～FF)      SEAT MOTION    0(～FF)
    STEERING   Y    0(～FF)      MOTION STOP    OFF(ON)
    PADDLE   LEFT   OFF(ON)      SEATBELT       OFF(ON)
    PADDLE   RIGHT  OFF(ON)      SENSOR LEFT    OFF(ON)
    BOOST           OFF(ON)      SENSOR RIGHT   OFF(ON)
    GAS             0(～FF)      SERVICE        OFF(ON)
    BRAKE           0(～FF)      TEST           OFF(ON)
    START BUTTON
    VIEW CHANGE 1   OFF(ON)
    VIEW CHANGE 2   OFF(ON)
    VIEW CHANGE 3   OFF(ON)
    VIEW CHANGE 4   OFF(ON)

          PRESS TEST AND SERVICE BUTTON TO EXIT
```

⑶ SOUND TEST

```
            SOUND TEST


   OUTPUT TYPE      STEREO
   RIGHT SPEAKER    OFF
   LEFT  SPEAKER    OFF
  →EXIT



   SELECT WITH SERVICE BUTTON
    AND PRESS TEST BUTTON
```
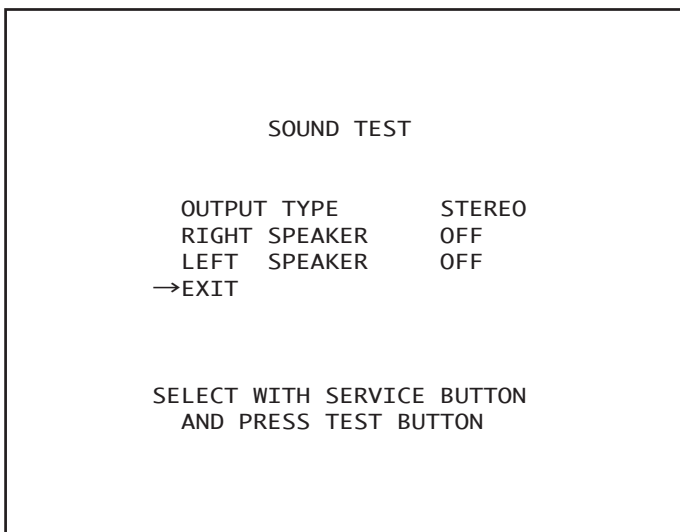
In the system test mode, selecting SOUND TEST causes the screen (on which sound related BD and wiring connections are tested) to be displayed.
Check if the sound is satisfactorily emitted from each speaker and the sound volume is appropriate.

⑷ C.R.T. TEST

```
        C.R.T. TEST 1/2
             EDIT
1            →NEXT            32
           RED

           GREEN

           BLUE

           WHITE

   SELECT WITH SERVICE BUTTON
    AND PRESS TEST BUTTON
```

In the system test mode menu, selecting C.R.T. TEST allows the screen (on which the monitor is tested) to be displayed. Although the monitor adjustments have been made at the time of shipment from the factory, color deviation, etc., may occur due to the effect caused by geomagnetism, the location building's steel frames and other game machines in the periphery. By watching the system test mode screen, make judgment as to whether an adjustment is needed. If it is necessary, adjust the monitor by referring to Chapter 15.

```
          C.R.T. TEST 2/2








     PRESS TEST BUTTON TO EXIT
```

（5） OUTPUT TEST

```
          OUTPUT TEST

   START BUTTON          OFF(ON)
   VIEW CHANGE 1         OFF(ON)
   VIEW CHANGE 2         OFF(ON)
   VIEW CHANGE 3         OFF(ON)
   VIEW CHANGE 4         OFF(ON)
   BOOST                 OFF(ON)
   STEERING
     CENTER              OFF(ON)
     LEFT                OFF(ON)
     RIGHT               OFF(ON)
   SEAT
     LOCK                OFF(ON)
     CENTER              OFF(ON)
     LEFT                OFF(ON)
     RIGHT               OFF(ON)
-> EXIT

   SELECT WITH SERVICE BUTTON
     AND PRESS TEST BUTTON
```
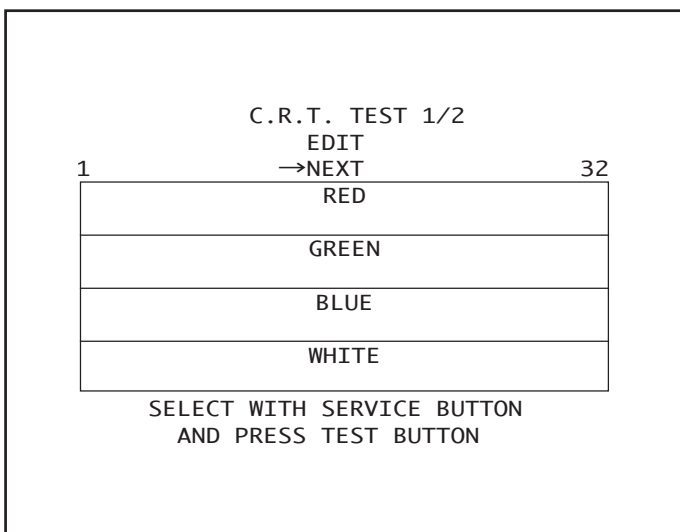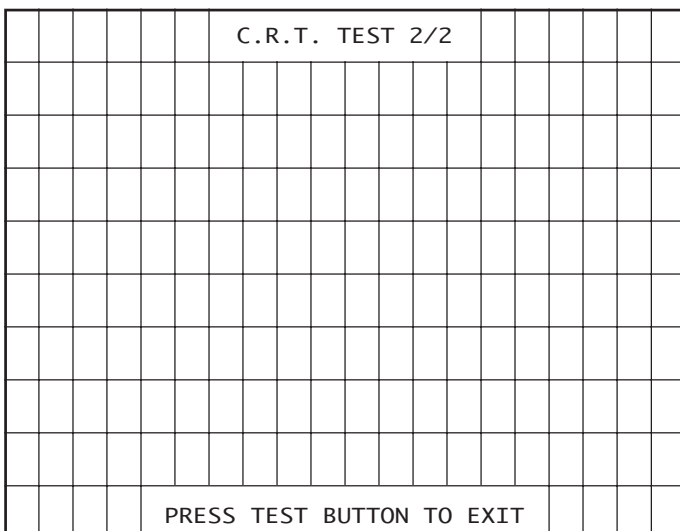
Select OUTPUT TEST from the menu screen in Game Test mode to bring up a test screen for the output devices (lamps, etc.) If each output device activates correctly, the output devices and their wiring connections are working properly.

Perform the above inspections also at the time of monthly inspection.

7. CARD READER/WRITER

7－1 SETTING DEDICATED CARDS

STOP

IMPORTANT

● Be sure to use dedicated cards available for this product.
Use of ones other than such dedicated cards may cause a malfunction or failure of the machine.
● Be sure to set the specified number of card in the specified orientation by using the specified procedure. Wrong setting of the cards may cause the machine to fail.
● This machine allows you to set up to 100 cards at a time. You must not set over 101 cards at a time. If you do so, a trouble such as card jamming may occur.
● Set virgin cards taken out from a container that was unpacked immediately before use.
Use of any deformed or deteriorated card may cause a trouble.
● Do not include a corrugated, bent, or used card in the card deck.

When the unit is out of cards, a message will be displayed at the center of the screen. Follow the instructions below to restock the system with cards. Cards may be stocked when the unit is on or off.

① Remove the truss screw.

② Unlock and open the cover to find the card reader/writer.
The dispenser on which you should place the cards is located at the rear of the reader/writer.

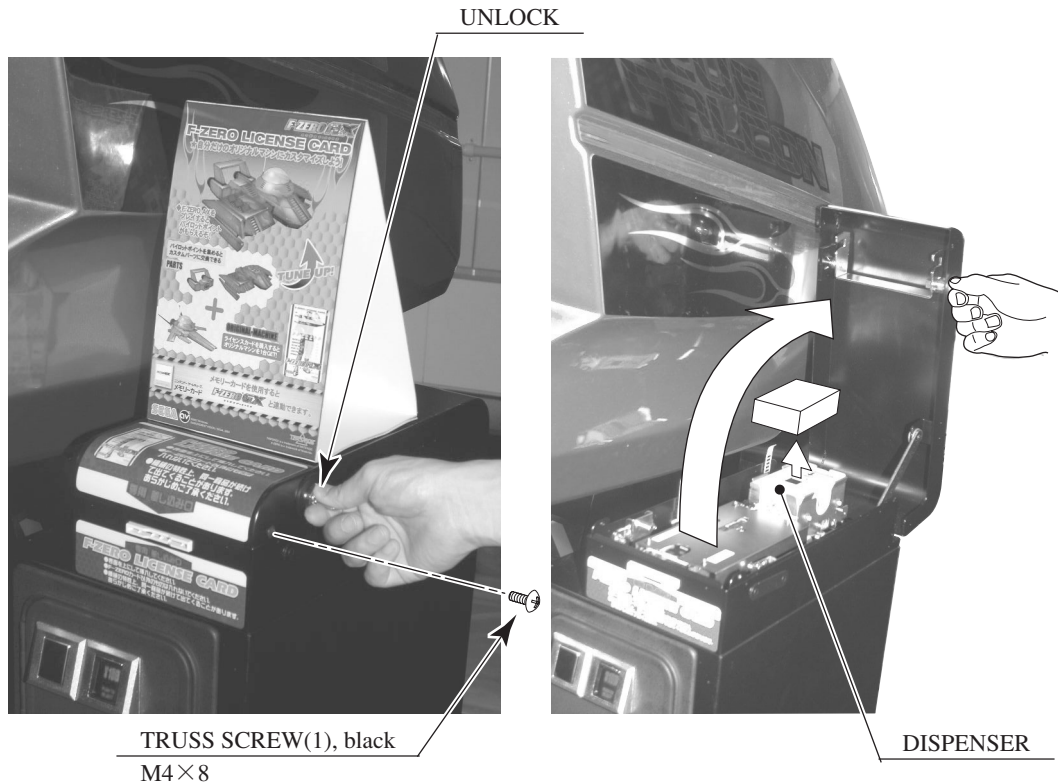③ From the card reader/writer, take out the dispenser upward in a straight line.

UNLOCK

TRUSS SCREW(1), black
M4×8

DISPENSER

PHOTO 7. 1

④ Remove the cover from the back of the dispenser.

Be careful of instructions of the sticker.

Dedicated Cards

Remove the dispenser's cover.

Be sure to set the cards orientation.

Close the cover, and reinstall the dispenser.

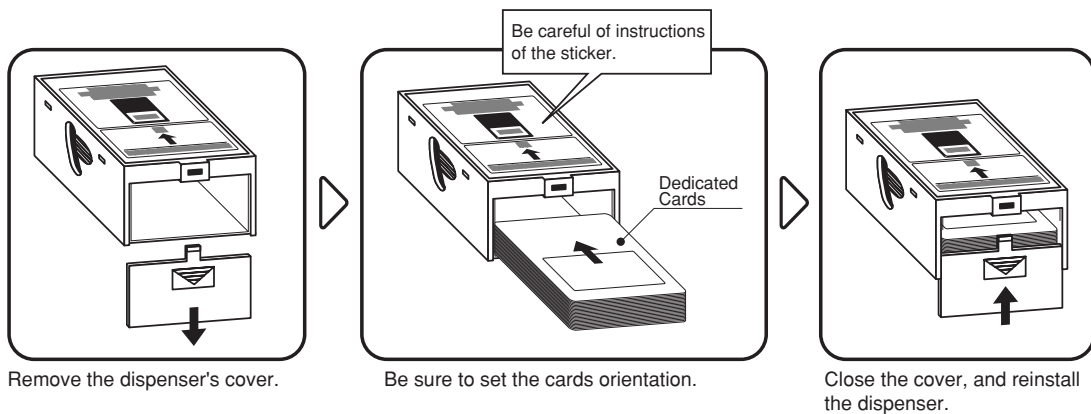FIG. 7. 1 a

⑤ Place the cards into the dispenser according to the instructions on the sticker annexed to the dispenser. Refer to the diagram shown on the sticker attached to the Dispenser and insert the cards into the Dispenser. Be careful not to insert the cards in the wrong direction or with the wrong side facing up.
The Dispenser can only hold 100 cards. Do not attempt to insert more than 100 cards. Too many cards may cause the Dispenser to jam or result in other problems.
Insert magnetic cards into the Dispenser in complete packs of 100 or after carefully counting the number of cards (not to exceed 100).

Load cards in the correct orientation.
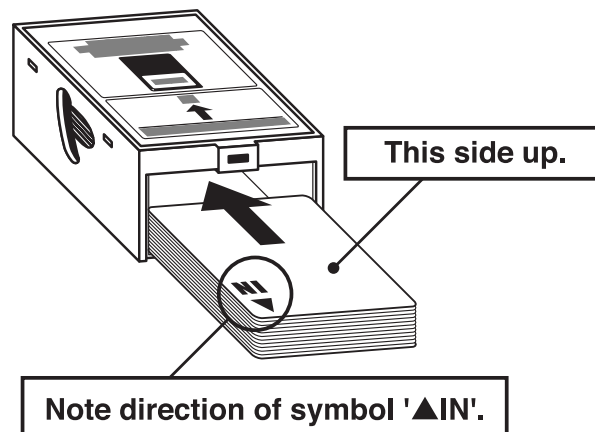
This side up.

Note direction of symbol '▲IN'.

FIG. 7. 1 b

⑥ Reinstall the cover to the dispenser.

⑦ Insert the dispenser into the card reader/writer. The dispenser can be inserted only in the predetermined orientation.

⑧ Close and lock the cover.

⑨ Secure with the truss screw

STOP **IMPORTANT**

- The unit enters Head Cleaning Mode when any of the following conditions are met:
  ・At power-up if the Card Reader/Writer has operated 150 times or more
  ・At boot time after performing Backup Data Clear
- Once the unit enters Head Cleaning Mode, follow the on-screen instructions and perform Head Cleaning. The unit will not exit Cleaning Mode (i.e. games may not be played) until head cleaning is complete.
- Always use the designated Cleaning Card. Using anything other than the designated card or carrying out any other procedure other than the one outlined in the manual may cause faulty printing, faulty operation and/or unit failure.
- Cleaning Cards may only be used once. Dispose of them after use.
- Cleaning Cards should be used immediately after removal from the package.
  Cleaning Cards will not clean effectively if dried out.
- Perform head cleaning only when there are cards in the Card Reader/Writer Dispenser. If the Dispenser is empty, the part that secures the cards inside the Dispenser may touch the rotating part of the Card Reader/Writer and cause noise.
- Always remember to remove the Cleaning Card after completing head cleaning.
- After head cleaning, wait for the "SEGA LOGO" to be displayed at least twice before resuming gameplay.

This machine records the number of times the Card Reader/Writer is used.
The Card Reader/Writer writes data to and reads data from cards. Each write and read is counted, so the Card Reader/Writer usage count will not be the same as the number of times the game is played.
Once head cleaning of the Card Reader/Writer is complete, the unit will exit this mode.
Follow the on-screen instructions to carry out cleaning.

CLEANING CARD

PHOTO 7. 2

| Insert the CLEANING CARD. |

Insert the Cleaning Card into the card slot.

↓

| (NO MESSAGE) |

The unit is undergoing cleaning. Wait for cleaning to be completed.

↓

| Retrieve the CLEANING CARD. |

Do not forget to remove the Cleaning Card.
The unit exits to normal mode after cleaning is complete.
Wait for the "SEGA LOGO" to be displayed at least twice before resuming gameplay after cleaning.
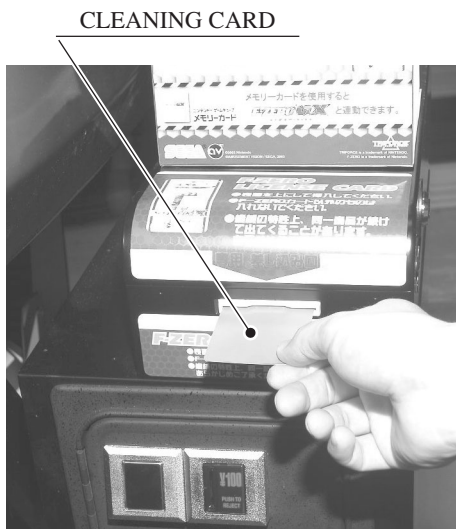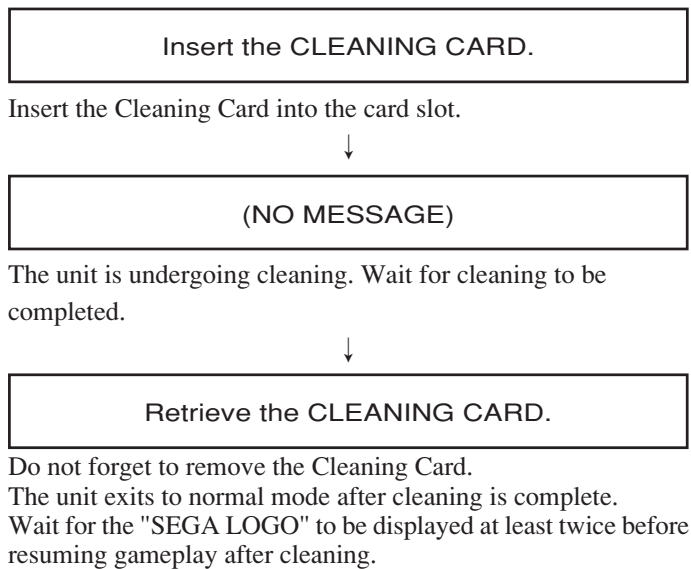
The Card Reader/Writer usage count described above is reset when cleaning is performed.

Manual head cleaning may also be performed from Test Mode. Refer to Test Mode <10-3F> for more details.

<table>
<tr><td>⚠
CAUTION</td><td>When attempting to perform this operation without powering down so that gameplay can be restored, exercise extreme caution. Machine parts may move unexpectedly when the power is ON. This may result in fingers being caught or severed and other injuries.
Verify the Stay Lock on the top cover before attempting this procedure. If the top cover closes during the procedure, it may result in serious injury.</td></tr>
</table>

If a trouble such as card jamming occurs on the card reader/writer, you are notified of the trouble on the screen. You cannot proceed to a play unless you resolve the trouble at this time. First identify the trouble before you begin to take action.

An error message is displayed at the top of the screen when cards become jammed.
When not discharging a card, follow the instructions below to remove the card. Removing the card may force the game to shut down. If the game shuts down, existing customer game data will not be saved.

① Remove the truss screw.

② Unlock and open the cover.

PHOTO 7. 3 a

③ Unlock the hatch by drawing the green shaft attached to the top cover on the card reader/writer. While drawing the shaft, open the cover up.

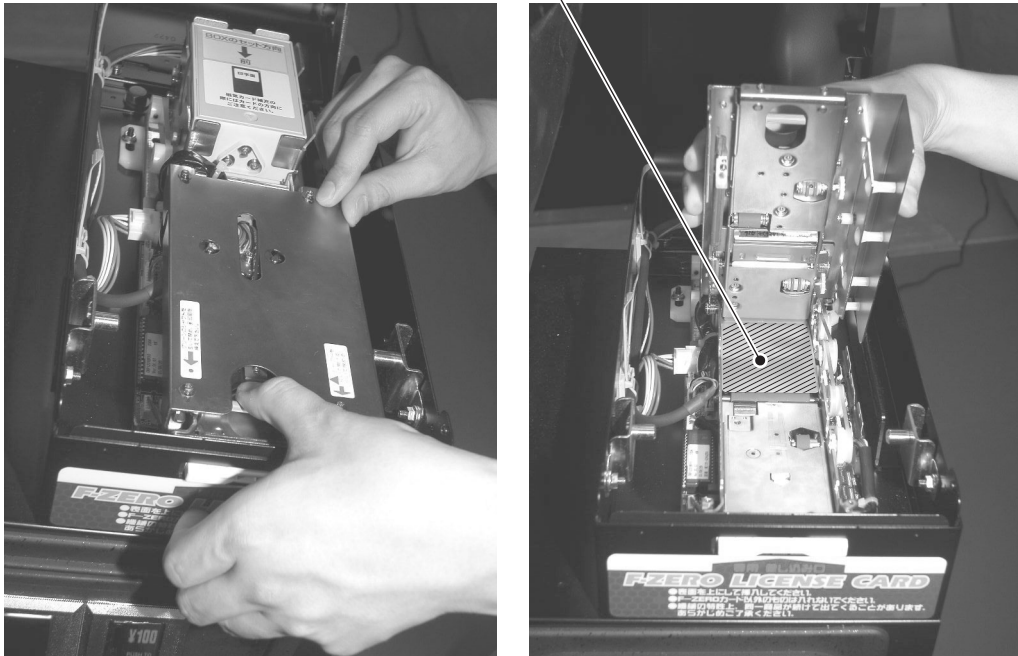④ Remove the card jammed in the card reader/writer.

Remove the card jammed.

PHOTO 7. 3 b

⑤ While drawing the shaft, close the cover. With the top cover closed, release the green shaft. Check that the top cover has been locked securely.

⑥ Close and lock the cover.

⑦ Secure with the truss screw.