

1ST PRINTING APRIL 01

# SEGA

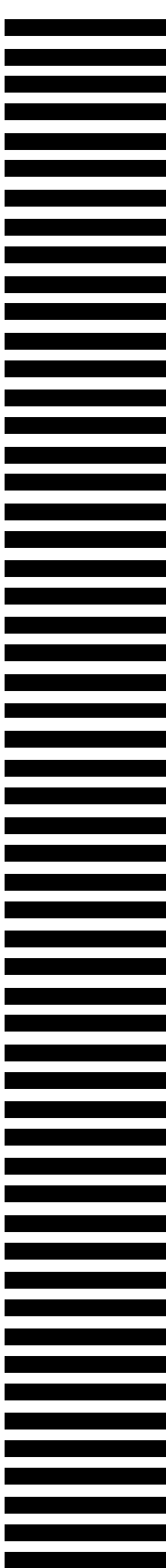


Upright Version  
**Owner's Manual**



SEGA ENTERPRISES, INC. USA

MANUAL NO. 999-1206



## **Warranty**

Your new Sega Product is covered for a period of 90 days from the date of shipment. This certifies that the Printed Circuit Boards, Power Supplies and Monitor are to be free of defects in workmanship or materials under normal operating conditions. This also certifies that all Interactive Control Assemblies are to be free from defects in workmanship and materials under normal operating conditions. No other product in this machine is hereby covered.

Sellers sole liability in the event a warranted part described above fails shall be, at its option, to replace or repair the defective part during the warranty period. For Warranty claims, contact your Sega Distributor.

Should the Seller determine, by inspection that the product was caused by Accident, Misuse, Neglect, Alteration, Improper Repair, Installation or Testing, the warranty offered will be null and void.

Under no circumstances is the Seller responsible for any loss of profits, loss of use, or other damages.

This shall be the exclusive written Warranty of the original purchaser expressed in lieu of all other warranties expressed or implied. Under no circumstance shall it extend beyond the period of time listed above.

## **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 WARNING, CAUTION, etc. are used. Be sure to understand the contents of the displays before reading the text.



**WARNING!**

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



**CAUTION!**

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.

### **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.

#### **○ 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 running 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?



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

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INTRODUCTION OF THE OWNER'S MANUAL

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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.



**IMPORTANT**

- When having connected the power for the first time, open the SYSTEM MENU-GAME TEST MODE-INPUT TEST screen and test the input devices; thereby make sure that they can function normally.
- This game is available only with the NAOMI GD-ROM system. It is not available with other hardware.
- This game is incompatible with the competition connection kit of the NAOMI CABINET or NET CITY and NEW VERSUS CITY. When connecting the wire to the control panel, be sure to connect it to a single I/O board.

## 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.

**LISTED**



**5K92**

**AMUSEMENT MACHINE**

# 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.
- Use NAOMI for the cabinets compatible with JVS. Using NAOMI for the cabinet other than those compatible with JVS can cause generation of heat and a 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 without the Shield Case can cause electric wave trouble. Be sure to use NAOMI together with the accessory Shield Case.

- 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. INSTALLING PROCEDURE



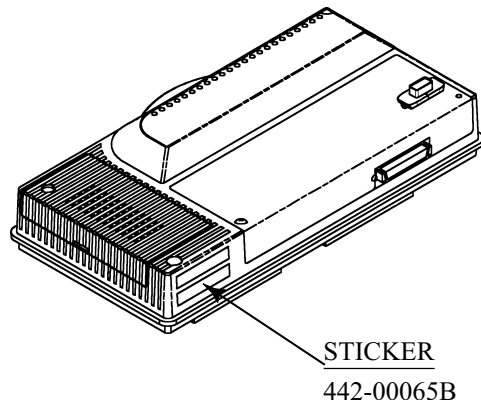
- Perform assembly work by following the procedure herein stated. Failing to comply with the instructions can cause electric shock hazard.
- Assembling should be performed as per this manual. Since this is a complex machine, erroneous assembling can cause an electric shock, machine damage and or not functioning as per specified performance.
- Be careful so as not to damage wiring. Damaged wiring can cause electric shock and short circuit hazards.
- Be sure to turn off the power and disconnect from the mains supply before working on the machine.
- This work should be performed by the Location's Maintenance Man or Serviceman. Working by those who do not have technical expertise can cause such severe accidents as electric shock.



- For the name of parts and the details of handling of the cabinet, refer to each cabinet's manual.
- To perform work, a Phillips type screwdriver and the tools (Master Key, Tamperproof Wrench, etc.) supplied with each cabinet are necessary.
- The setting items vary depending on the game. Before performing work, be sure to read the Service Manual of each game.

### 2 - 1 SET THE GD-ROM DISK

- ① Set the GD-ROM disk (VIRTUA GOLF) onto the GD-ROM drive.
- ② On the NAOMI DIMM Board, paste the accompanying sticker (442-00065B) in the position indicated in the figure below.



### 3. SPECIFICATIONS

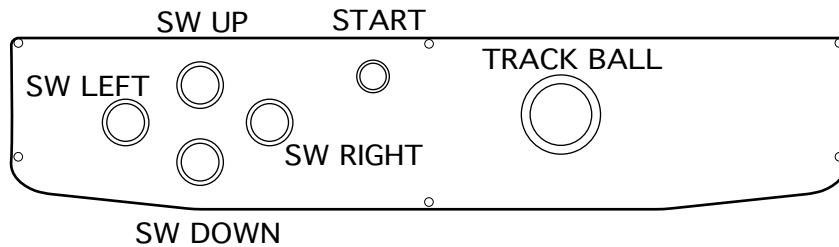
#### ① ON-SCREEN DISPLAY

Monitor Position



Horizontal Synchronous Frequency  
15/31 kHz

#### ② CONTROL PANEL

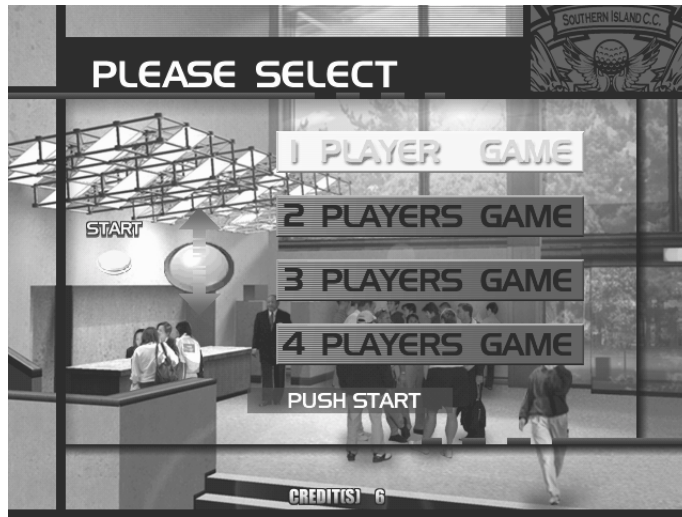


#### ③ Minimum DIMM Memory Capacity

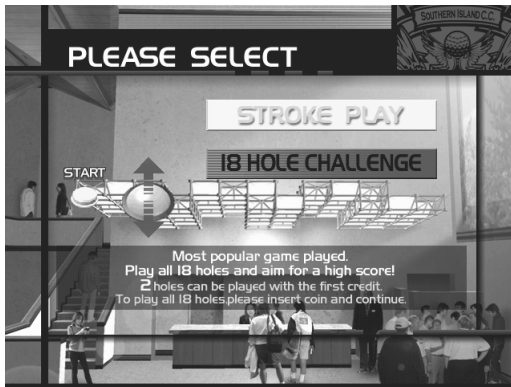
256 MB

# 4. CONTENTS OF GAME

Playable Persons : 1 to 4



Game Modes : "Stroke Play", "Match Play", "Skins Game". "18-Hole Challenge"



Courses : 1 (Selectable among from Start Hole, IN and OUT)

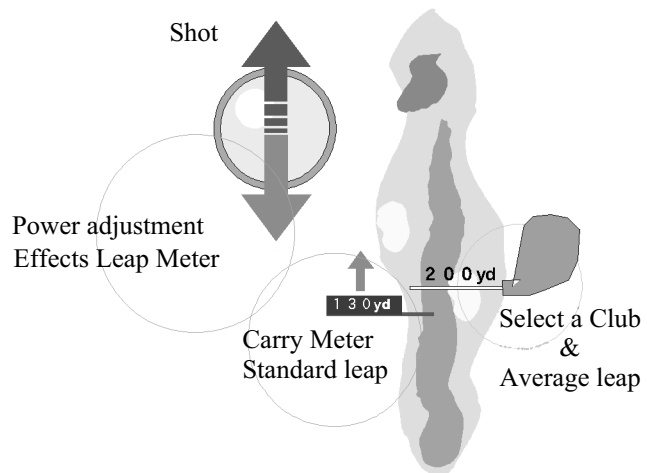


Characters : 4 (with parametric individual variation)



After throwing a coin into the slot, select the number of players, the game mode, the character, and the starting hole. Use the Track Ball to select the desired item before determining it with the Start button.

## BASIC OPERATIONS



You can adjust the power by rolling the Track Ball toward you. Use the indication on the Carry Meter as a guide. Note that the carry value on the Meter is merely a guide. The actual carry greatly depends on the course conditions (i.e., wind and undulation of ground) and the force shot.

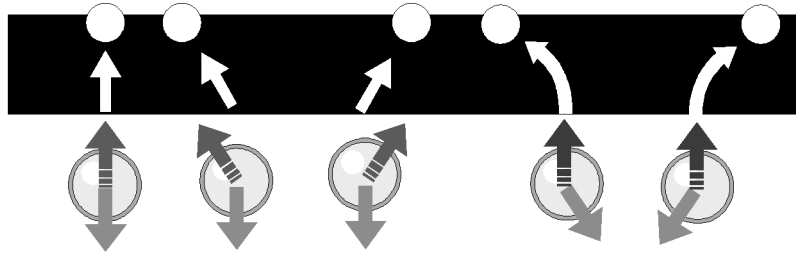


Shot

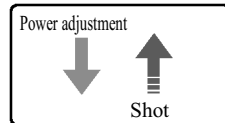
By rolling the Track Ball toward the monitor, you can enjoy a shot with the power adjusted with Power Adjustment. Note that this adjustment does not always cause the adjusted, exact carry. The actual result is determined by the power applied by the player who rolls the Track Ball.

## SPINS

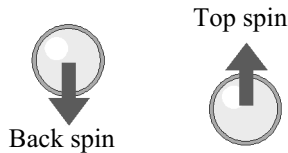
You can spin the ball in the following ways, in addition, make operations as desired ("Spin a little amount," "Spin a large amount," etc):



The spinning is determined by the angle of rolling the Track Ball.



## BACK OR TOP SPIN BY ADDITIONAL INPUT



The spinning can be fine-tuned immediately after shooting.

Note that the effect of this varies greatly, depending on the slope or friction conditions of the location in which the ball falls.

For some clubs, these features may be unavailable.

## 1 TO 4 PERSONS CAN PLAY SIMULTANEOUSLY

You can enjoy a play of up to 2 holes (or of 3 or more holes in the Test Mode) with the predetermined charge, except for 18-Hole Challenge. The play can be CONTINUED.

### Stroke Play (for 1 to 4 players)

This is the most popular mode.

The players play for all the 18 holes, and compete for the final total scores.

### Match Play (only for 2 players)

This mode lets the 2 players compete with each other.

The players play for all the 18 holes. The player who gets more number of wins will be the final winner.

If they got the same number of wins, they start the Sudden Death Play Off match play beginning at the first hole.

The player who gets the first win in the Play Off will be the final winner.

### Skins Game (for 2 to 4 players)

This is the prize mode.

The prize is rewarded for every hole.

The player who achieves the highest score for each hole gets the prize.

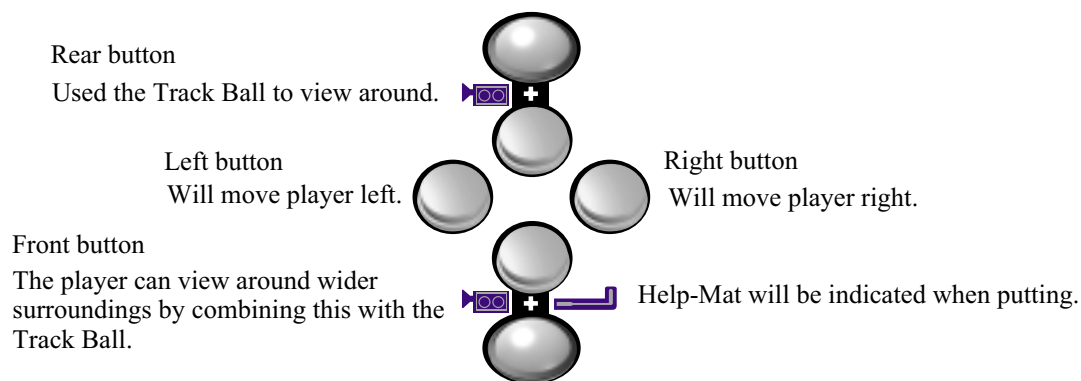
If 2 or more players achieve the highest identical score, the prize is carried over to the next hole (CARRY OVER).

### 18-Hole Challenge (only for 1 player)

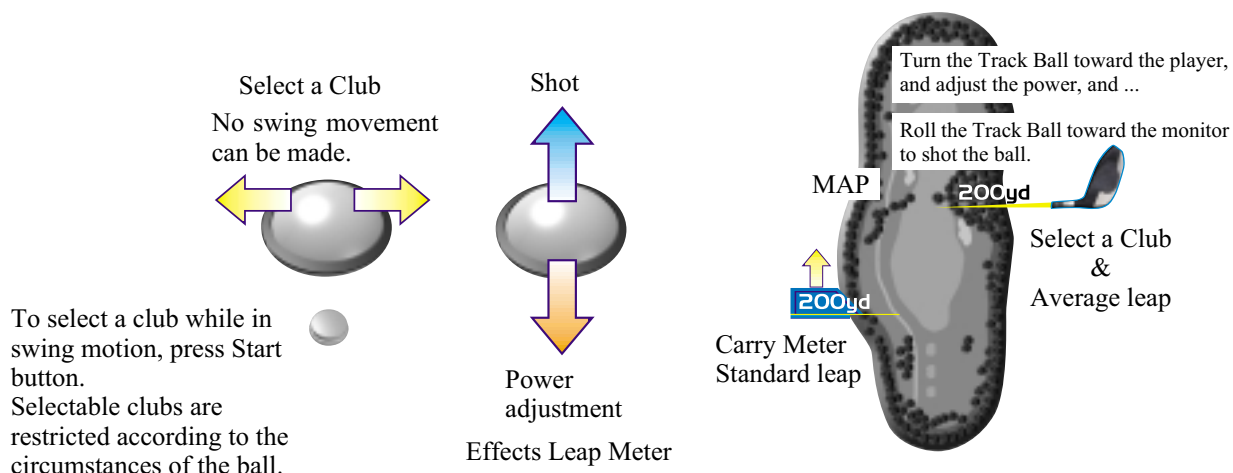
This is the endurance mode.

With a regulated number of shots, the player challenges to clear as many holes as he or she can.

Before you play....



Play !



This system has a special mode as a hidden element. To enter this mode, press the Start button while holding down the left and right buttons simultaneously when selecting the Starting Hole.

This special mode is intended for advanced players and should be used for special events such as grand meetings.

For ranking of this game, the month/day/time information is recorded; therefore, you must have completed matching of the time/calendar for the Board before operation.

#### Ranking Types and Conditions Ranked

- |                         |   |
|-------------------------|---|
| Stroke Rank:            | A score at the end of the 18 holes was ranked.  |
| Prize-based Rank:       | The total of the prizes at the end of the 18 holes was ranked in the prize mode (Skins Game). |
| Near Pin Rank:          | A score for the holes with Near Pin Prize was ranked.   |
| DRACON Rank:            | A score for the holes with DRACON Prize was ranked.   |
| 18-Hole Challenge Rank: | The number of holes through which the player went was ranked.                                 |

## SCREEN DESCRIPTION



### Top left: Player Information

In top-to-bottom order:

Name: Rewritten, depending on name entries that may be made while the game is in progress.

Present Score: Cumulative prize money for the Skins Game, or UP value for Match Play.

Number of Strokes

Pictorial Indication of Number of Strokes: The number of balls increases by 1 each time the player shots the ball.

REST, Remaining Distance Indication: Indicates the distance from the player to the cup.

### Toward the player: Operations Assist

Always displayed for the first hole.

The Button and Track Ball descriptions are displayed alternately.

For all the subsequent holes, the Operations Assist displays if the machine is not operated at all for 10 seconds.

### Rear in the screen:

The DW and UP values indicate the difference of elevation relative to the player position.

The larger the DW value, the longer the carry; the larger the UP value, the shorter the carry.

Example: DW 3.1yd

The cup position is down 3.1 yards relative to the player position.

This changes the indication in ft at the end of putting. When the ball is on the green, this value is indicated in ft instead of yd.

### Right on the screen: Course Information

In top-to-bottom order:

Map Display - See "BASIC OPERATIONS" for Select a Club and Carry Meter.

Wind - Indicates the wind velocity in mph and the direction by the arrow.

Basic Information about Present Hole - Hole No. : Total Length : Par.



## CAMERAS



If you desire to zoom in on a far area, you can use a camera. One of the cameras is raised by pressing the button located toward you (Front button). Then, turn the Track Ball to view around wider surroundings. This function is useful to keep track of the green and the difference of elevation. While the button is held down, the camera is raised to the predetermined distance. The height of the camera is fixed if you roll the Track Ball at the desired height.

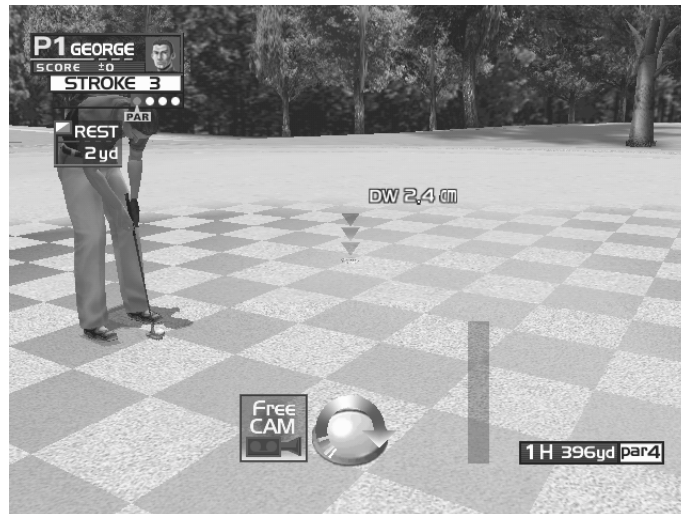
You can enter Semi Player View by pressing the Rear button.

While holding down the button, again you can view around surroundings using the Track Ball.

For example, if, in the top oblique position, there is a tree against which the ball you shoot may hit, this function is useful to examine this.

The camera operated with the Rear button cannot be fixed at a certain height.

## CAMERAS



While you are now selecting a putter, the functions of the Front and Rear button change.

Rear button : By rolling the Track Ball while holding down the button, the screen displays the video image shot by a camera that moves as if it views around the green with the cup in the center.

Front button : Used to show/hide the mat, which allows you to view the shape of the green clearly.



# 5. TEST MODE

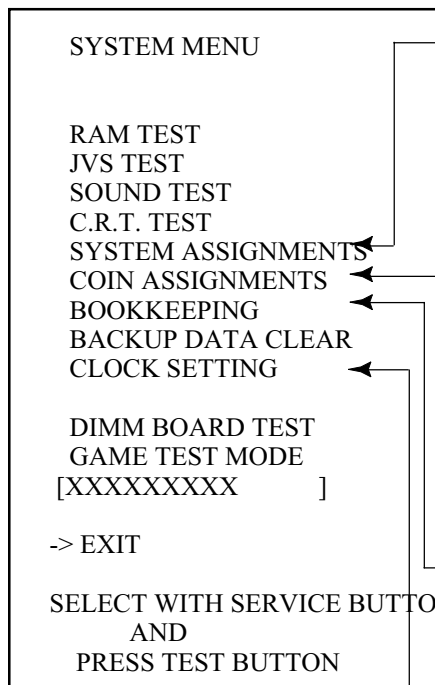
## A. SYSTEM MENU



When settings are changed in SYSTEM ASSIGNMENTS, COIN ASSIGNMENTS, and GAME ASSIGNMENTS of GAME TEST MODE, be sure to exit from the test mode of SYSTEM MENU screen. The contents of setting changes are stored in the IC on the BOARD when exiting from the Test Mode. If the power is turned off in the Test Mode (before exiting), the contents of setting changes are ineffective. In this case, the settings remain unchanged.

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) Connect the power, and press the Test button. Then the following SYSTEM MENU screen appears.



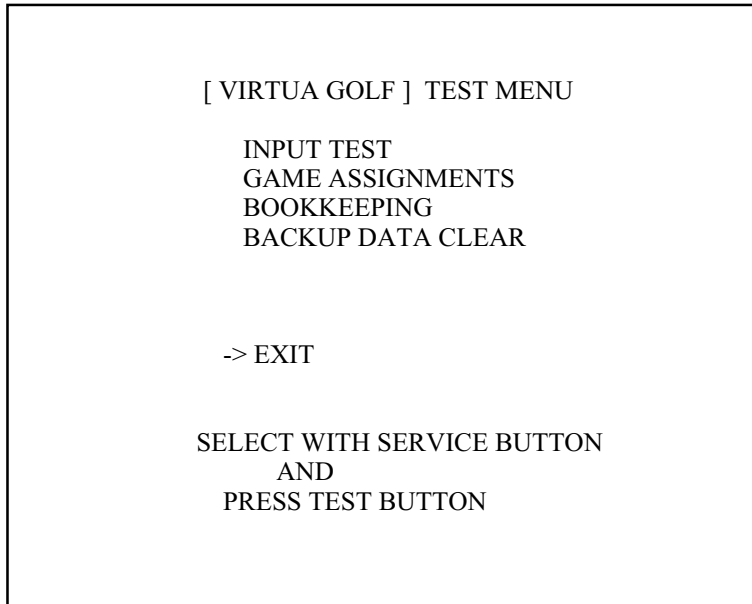
- 1 In the SYSTEM ASSIGNMENTS,
  - 2 CABINET TYPE is set to 1PLAYER(S),
  - 2 MONITOR TYPE is set to HORIZONTAL,
  - 3 and SERVICE TYPE is set to COMMON.
- 1 COIN ASSIGNMENTS initial settings as follows:
  - 4 COIN CHUTE TYPE: COMMON
  - 4 COIN/CREDIT SETTING: #1 (KOREA)
  - 4 #12(USA, AUSTRALIA, OTHERS)
  - 2 COIN CHUTE #1 (#2): 1 COIN 1 CREDIT
  - 4 SEQUENCE SETTING of COIN ASSIGNMENTS functions as follows:
    - 4 SEQUENCE 1: Number of credits required for game start.
    - 4 1 CREDIT(S)
    - 4 SEQUENCE 2: Number of credits required for CONTINUE.
    - 4 1 CREDIT(S)
    - 3 SEQUENCE 3 ~ 8: NOT USED.
- 1 MEANING OF DISPLAY IN BOOKKEEPING 2/2
  - 2 P1 SEQ 1: Play frequency of Player.
  - 2 P1 SEQ 2: Frequency of CONTINUE by Player.
  - 3 P1 SEQ 3 ~ 8: NOT USED.
- 1 For ranking of this game, the month/day/time information is
  - 2 recorded; therefore, you must have completed matching of the
  - 4 time/calendar for the Board before operation.

- 2) Press the Service button to move the -> mark to any desired item, and press the Test button.
- 3) Press the Service button to move the -> mark to GAME TEST MODE item, and press the Test button. Then the GAME TEST MENU screen appears that enables to test the items specific to this game. For the details, see the following pages.
- 4) After testing, select the EXIT and press the Test button. The game advertising screen reappears.

NOTE: For more information about the SYSTEM MENU screen, see the GD-ROM Service Manual (No.: 420-6620-01).

## B. GAME TEST MODE

Press the Service button to move the -> mark to any desired item, and press the Test button. Then the corresponding screen appears.

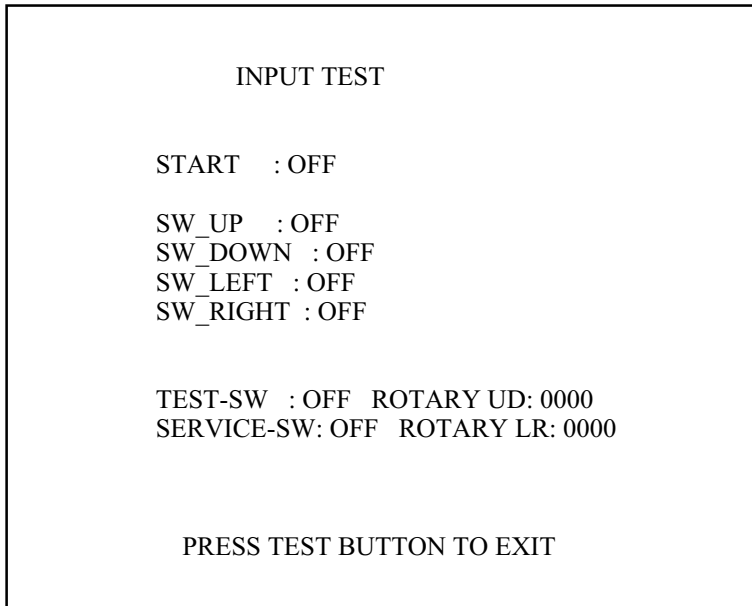


GAME TEST MENU Screen

After testing, select the EXIT and press the Test button. Then the SYSTEM MENU screen reappears.

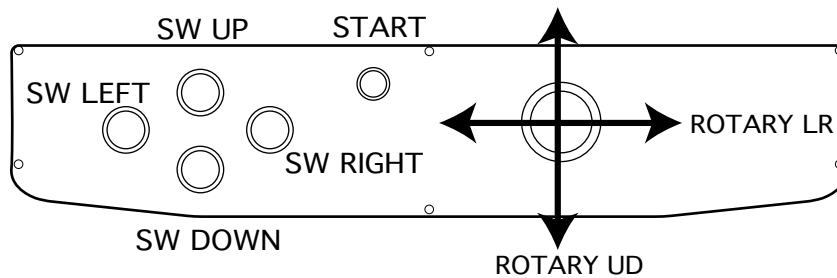
a. INPUT TEST

This screen tests the input devices. Make sure that each of the input devices can change its indication from OFF to ON as you operate the corresponding device. If the ROTARY UD and LR values and the data of the square in the right area on the screen vary according to operations of the Track Ball, this indicates that the input devices and wiring connections are normal.



INPUT TEST Screen

Press the Test button. Then the GAME TEST MENU screen reappears.



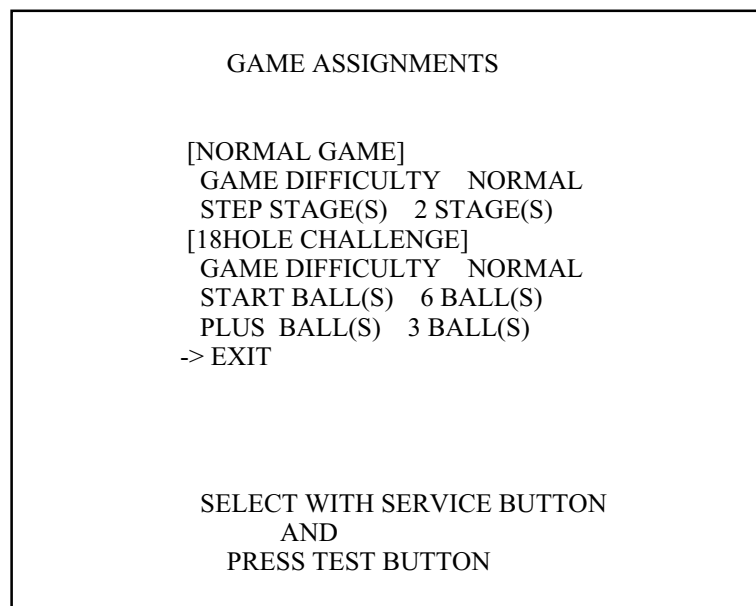
CONTROL PANEL

## b. GAME ASSIGNMENTS

The settings such as the difficulty of the game can be made.

Press the Service button to move the arrow to the item for which you desire to change the setting.

Pressing the Test button changes the display located at the right of the currently selected item, resulting change in setting.



GAME ASSIGNMENTS Screen

### [NORMAL GAME]

Sets the mode that enables you to enjoy a play for the set number of holes with the predetermined number of credits.

This is valid only when you set a game mode other than 18-Hole Challenge.

- **GAME DIFFICULTY:**  
Set one of five levels of VERY EASY, EASY, NORMAL, HARD, and VERY HARD.
- **STEP STAGE(S):**  
Set one of 1 to 6, and 9 for the number of holes this game operates with 1 credit.

### [18HOLE CHALLENGE]

Sets the mode that lets the player challenge to clear as many holes as he or she can, with a regulated number of shots (or balls).

- **GAME DIFFICULTY:**  
Set one of five levels of VERY EASY, EASY, NORMAL, HARD, and VERY HARD.
- **START BALL(S):**  
3 to 10. The number of balls when the play begins.
- **PLUS BALL(S):**  
1 to 10. The number of balls that are added when all the holes are cleared.

c. BOOKKEEPING

The following three BOOKKEEPING screens (PAGE 1/3, 2/3, and 3/3) display the operating data.

BOOKKEEPING	
GAME REPORT	PAGE1/3
NUMBER OF GAMES	0
1P 3P GAMES	0 0
2P 4P GAMES	0 0
NUMBER OF CONTINUE	0
1P 3P GAMES	0 0
2P 4P GAMES	0 0
TOTAL COIN	0
COIN CREDIT	0
SERVICE CREDIT	0
TOTAL CREDIT	0
PLAY TIME	0D 0H 0M 0S
AVERAGE PLAY TIME	0D 0H 0M 0S
LONGEST PLAY TIME	0D 0H 0M 0S
SHORTEST PLAY TIME	0D 0H 0M 0S
PRESS TEST BUTTON TO CONTINUE	

BOOKKEEPING Screen (1/3)

Press the Test button to migrate to the BOOKKEEPING (PAGE 2/3) screen.

"TIME HISTOGRAM" shows the number of players associated with the respective play times and contains the rate graph. The rate graph indicates the rate of the count of plays by play time that is calculated assuming that the play time for the maximum number of plays is 100%. This graph is shown with the corresponding number of asterisks (\*). Use the data to set a difficulty level.

BOOKKEEPING	
TIME HISTOGRAM	PAGE 2/3
0M00S ~ 0M29S	1
0M30S ~ 0M59S	0
1M00S ~ 1M29S	0
1M30S ~ 1M59S	0
2M00S ~ 2M29S	0
2M30S ~ 2M59S	0
3M00S ~ 3M29S	0
3M30S ~ 3M59S	0
4M00S ~ 4M29S	0
4M30S ~ 4M59S	0
5M00S ~ 5M29S	0
5M30S ~ 5M59S	0
6M00S ~ 6M29S	0
6M30S ~ 6M59S	0
7M00S ~ 7M29S	0
7M30S ~ 7M59S	0
8M00S ~ 8M29S	0
8M30S ~ 8M59S	0
9M00S ~ 9M29S	0
9M30S ~ 9M59S	0
OVER 10M00S	0
PRESS TEST BUTTON TO CONTINUE	

BOOKKEEPING Screen (2/3)

Press the Test button to migrate to the BOOKKEEPING (PAGE 3/3) screen.

BOOKKEEPING	
PAGE3/3	
GAME(S)	
STROKE PLAY	: 00001
MATCH PLAY	: 00000
SKINS GAME	: 00000
18HOLE CHALLENGE:	00000
PRESS TEST BUTTON TO EXIT	

BOOKKEEPING Screen (3/3)

This screen lists the count of plays in each mode, shows the rate graph. The rate graph indicates the rate of the count of plays by mode, assuming that the maximum number is 100%, and is shown with the corresponding number of asterisks (\*).

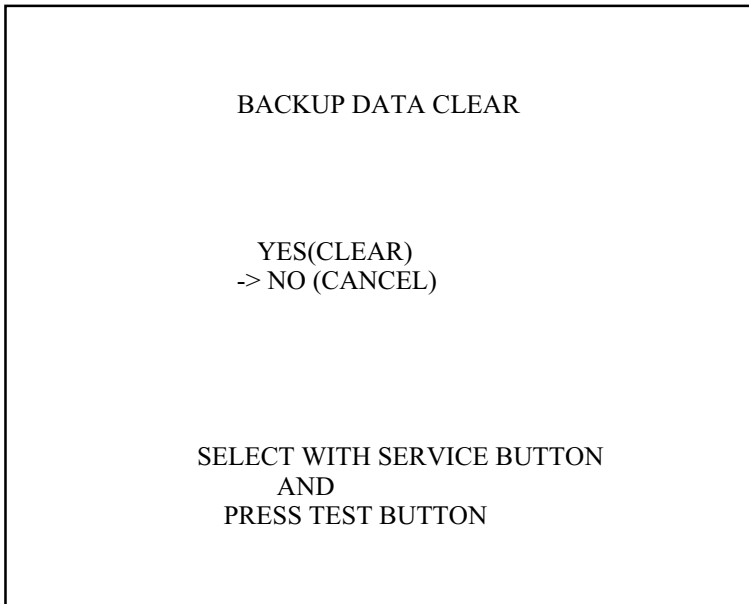
Pressing the Test button returns you to the GAME TEST MENU screen.

#### d. BACKUP DATA CLEAR

This screen is used to clear the data from the Score Ranking and Bookkeeping. You can clear the data by selecting YES (CLEAR) and then pressing the Test button.

Once the data is cleared, "COMPLETED" displays and the GAME TEST MENU screen returns automatically.

If you do not desire to clear the data, select NO (CANCEL) and then press the Test button to return to the GAME TEST MENU screen.

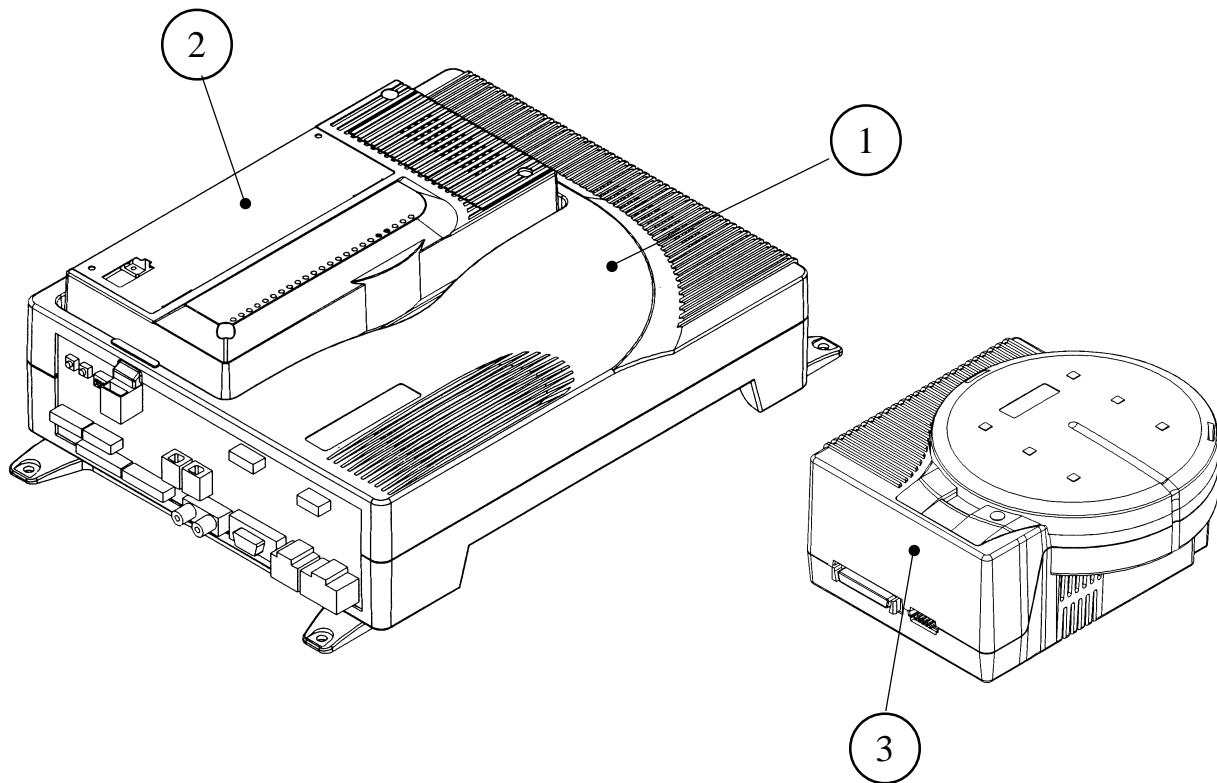


BACKUP DATA CLEAR Screen

## 6. GAME BOARD

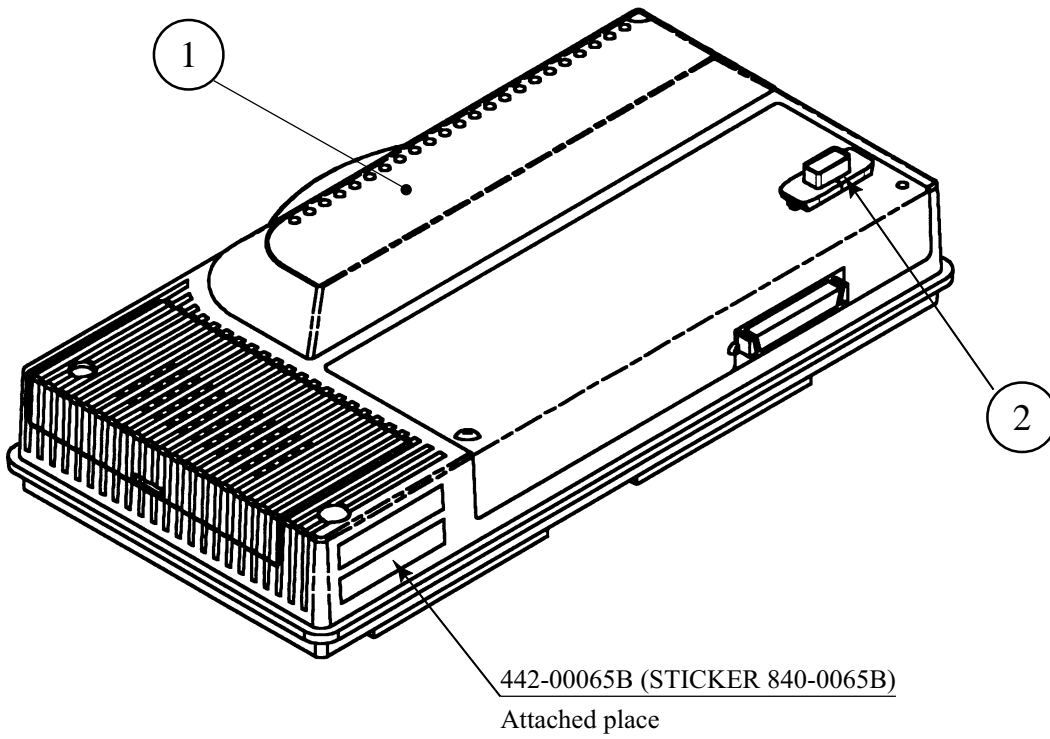


- Do not expose the Game Board so as to avoid causing an accident or malfunctioning.
- Static electricity discharge can damage electronic parts on the IC Board. Before starting work by opening the Shield Case Lid, be sure to touch grounded metallic surfaces to discharge physically charged static electricity.
- When replacing the Game Board, refer to the CVT Manual and Instruction Manual.



	PART NO.	DESCRIPTION
① + ②	840-0051D-01 840-0051D-02 840-0051D-03 840-0051D-04	ASSY CASE NAO PCI DIMM BD USA ASSY CASE NAO PCI DIMM BD EXP ASSY CASE NAO PCI DIMM BD KOR ASSY CASE NAO PCI DIMM BD AUS
①	840-0001A-01 840-0001A-02 840-0001A-03 840-0001A-04	ASSY CASE NAOMI MAIN BD USA ASSY CASE NAOMI MAIN BD EXP ASSY CASE NAOMI MAIN BD KOR ASSY CASE NAOMI MAIN BD AUS
②	840-0001F	ASSY CASE NAO DIMM BD COM
③	610-0617	GD-ROM DRIVE UNIT NAOMI





	PART NO.	DESCRIPTION
①	840-0001F	ASSY CASE NAO DIMM BD COM
②		KEY CHIP
① + ②	840-0065B	DIMM BD NAO DYNAMIC GOLF

## 7. SOFT KIT



### Handling the GD-ROM Disk

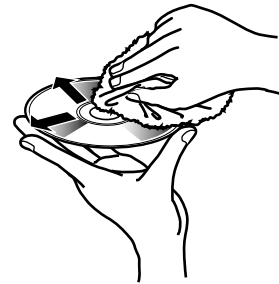
- Do not contaminate the disks with your fingerprints or dust particles. Contaminated disks may lower audio and video quality.
- When cleaning the disks, do not use volatile chemicals (benzine, thinner, etc.), cleaning sprays, and antistatic agents.
- Do not use cracked, warped, or damaged disks.

Do not attach papers or seals onto the disks;  
do not scratch the disks.

Do not use the disks with a sign of peeled seals, tapes, etc.

Observing these instructions, do not insert such a non-usable disk into the GD-ROM drive. Otherwise the inserted disk can not be ejected.

- When cleaning a heavily contaminated disk, use clean cloth that has been soaked in water and squeezed. Then remove moisture with dry cloth.
- When holding a disk, be careful not to contaminate it with your fingerprints.



Use clean cloth to wipe the disk gently and into a radial direction.

### How to Hold a Disk

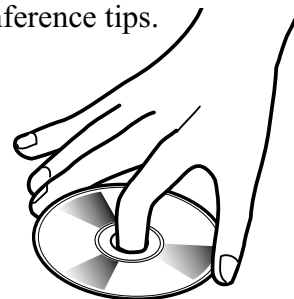
With both hands:

Put your thumbs and forefingers of both hands on the disk's 4 circumference tips.



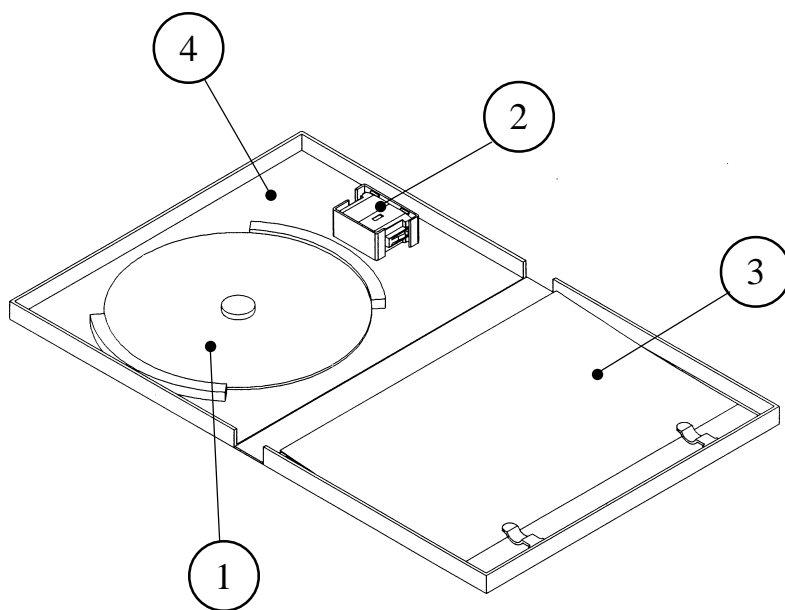
With one hand:

Insert your forefinger into a central hole and at the same time put your thumb and middle finger on the disk's 2 circumference tips.



### How to Handle the Key Chip

- The key chip is a precision device. Handle it carefully because it may be damaged by heat, shock, and static electricity.
- Use the key chip with the GD-ROM disk of the corresponding game that has been shipped together with the key chip.



	PART NO.	DESCRIPTION
①+②+③+④	610-0630-0009	GD SOFT KIT D.GOLF ENG
①	GDS-0009 *	NAOMI GDROM D.GOLF
②		KEY CHIP
③	420-6621-0009E	SERVICE MANUAL D.GOLF ENG
④	253-5507	DISK CASE WITH IC HOLDER

## 8. COIN SELECTOR

### HANDLING THE COIN JAM

If the coin is not rejected when the REJECT button is pressed, open the coin chute door and open the selector gate. After removing the jammed coin, put a normal coin in and check to see that the selector correctly functions.

### CLEANING THE COIN SELECTOR



- Remove and clean smears by using a soft cloth dipped in water or diluted chemical detergent and then squeezed dry.
- Never apply machine oil, etc. to the Coin Selector.
- After cleaning the Coin Selector, insert a regular coin in the normal working status and ensure that the Selector correctly functions.

The coin selector should be cleaned once every 3 months. When cleaning, follow the procedure below:

- ① Turn the power for the machine OFF. Open the coin chute door.
- ② Open the gate and dust off by using a soft brush (made of wool, etc.).
- ③ Remove and clean smears by using a soft cloth dipped in water or diluted chemical detergent and then squeezed dry.
- ④ Remove the CRADLE.  
When removing the retaining ring (E ring), be very careful so as not to bend the rotary shaft.
- ⑤ Remove stain from the rotary shaft and shaft receiving portions by wiping off with a soft cloth, etc.
- ⑥ After wiping off as per ⑤ above, further apply a dry cloth, etc. to cause the coin selector to dry completely.

### COIN INSERTION TEST

Once every month, when performing the Coin SW Test, simultaneously check the following:

- Does the Coin Meter count satisfactorily?
- Does the coin drop into the Cashbox correctly?
- Is the coin rejected when inserted while keeping the Reject Button pressed down?

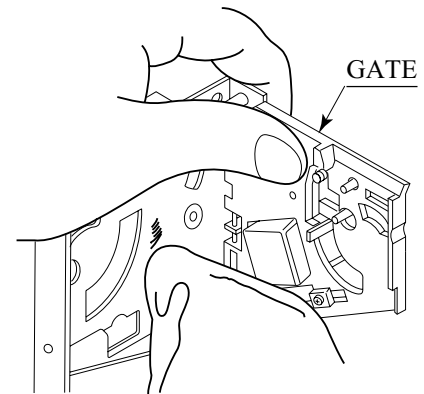


FIG. 8 a

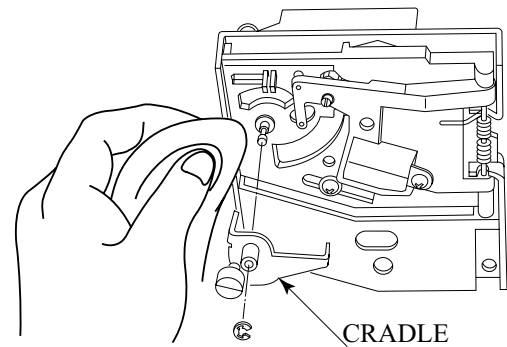


FIG. 8 b

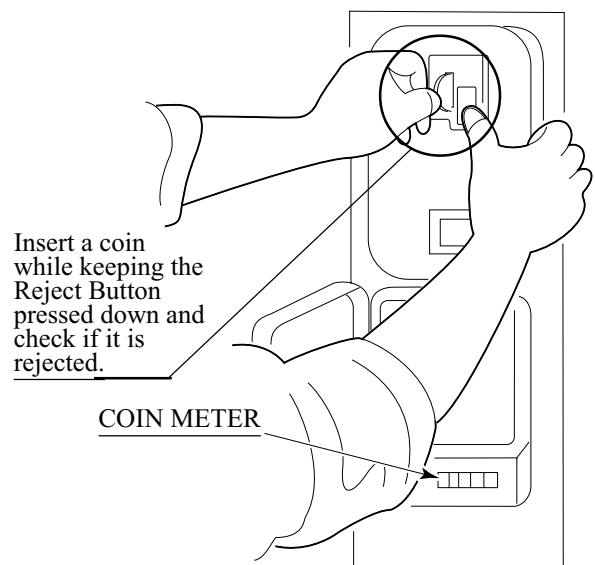


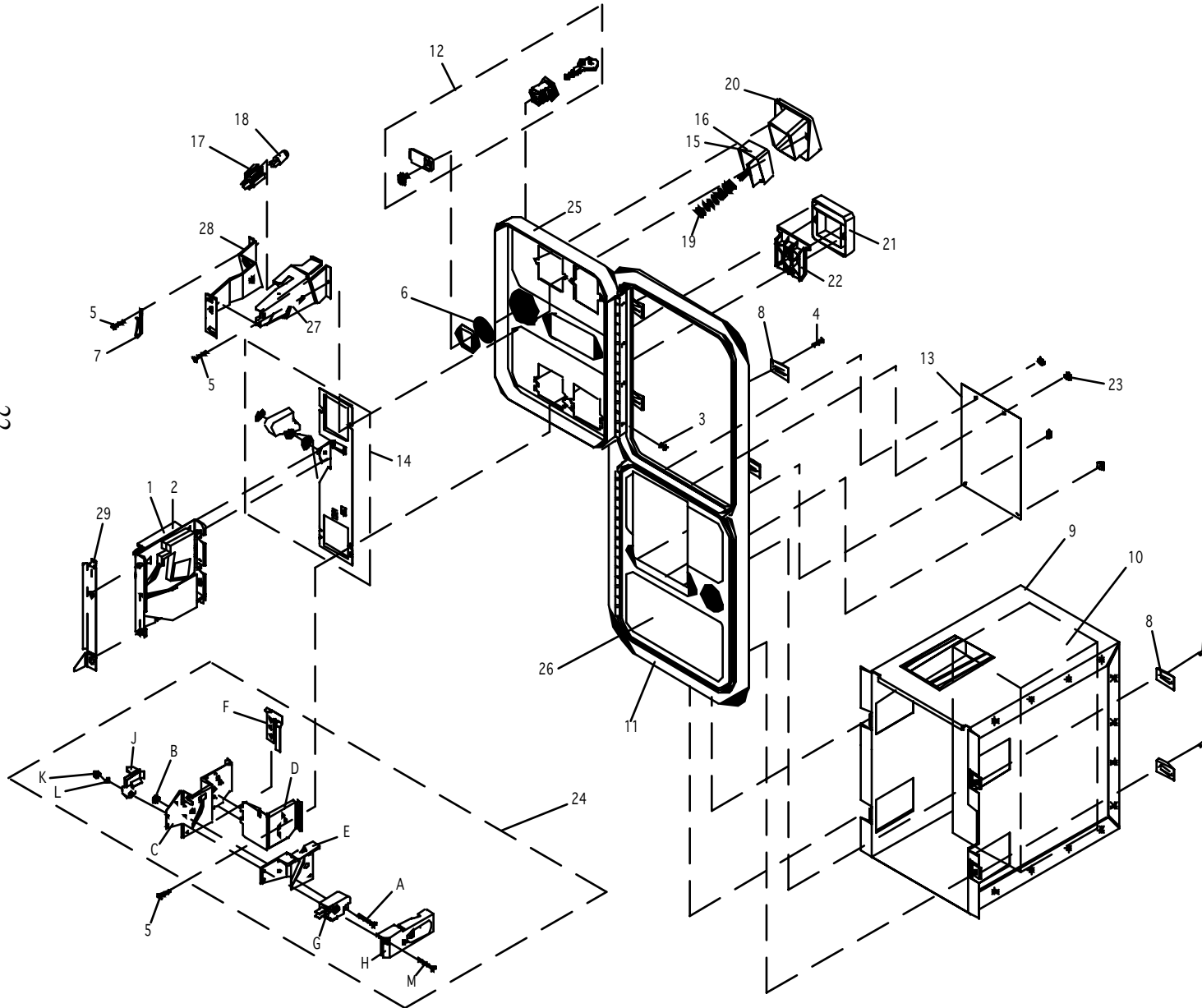
FIG. 8 c

# WELLS-GARDNER ELECTRONICS CORPORATION

2701 N. KILDARE CHICAGO, IL 60639  
1-800-336-6630

WWW.WGEC.COM

## WGD15-2110-01 OVER/UNDER MINI DOOR 2 ENTRIES WITH BILL VALIDATOR BOTTOM DOOR & SPECIAL ENCLOSURE



#	W.G. PART #	DESCRIPTION
1	812-4150-011	S-7 US 25c COIN MECH LEFT
2	812-4050-011	S-10 US \$1 COIN MECH RIGHT
3	890-1002-00	HINGE SCREW
4	890-1003-00	CLAMP SCREW
5	890-1017-00	SCREW TRILOBULAR
6	890-1019-00	WASHER INTERNAL TOOTH 3/4"
7	890-1300-00	KEYHOOK
8	891-0514-00	CLAMP UK 5/8" CABINET
9	025X3711-001	ENCLOSURE W/CHUTE
10	025X3712-001	METAL CASHBOX
11	891-0509-162	DOUBLE FRAME
12	891-0547-00	LOCK SINGLE BIT
13	891-0100-4016	COVER PLATE
14	891-1008-107	BASE PLATE ASSEMBLY
15	891-1113-03	E/R BUTTON US 4x25c/\$1 LEFT
16	891-1113-011	E/R BUTTON US \$1 COIN RIGHT
17	891-1117-00	LAMPHOLDER
18	891-1118-00	LAMP WEDGE BASE 6 VOLT
19	891-1121-00	SPRING, E/R BUTTON
20	891-1311-16	BUTTON BEZEL, NYLON
21	891-1312-16	REJECT BEZEL, NYLON
22	891-1109-16	REJECT FLAP
23	020X1877-005	NUT KEPS #8-32 X 5/16 HEX
24	891-2216-16	MICROSWITCH ASSEMBLY
24A	890-1007-00	SCREW, FLAT HEAD M/S
24B	890-1206-02	KEP NUT
24C	891-1105-01	REJECT CUP SIDE PLATE
24D	891-1106-00	REJECT CUP BASE PLATE
24E	891-1107-00	BRACKET, MICROSWITCH
24F	891-1110-00	ADJUSTER, COIN
24G	891-1116-16	MICROSWITCH, BLACK - MED.
24H	891-1125-00	COVER, PLASTIC
24J	892-1002-07	CLIP, SNAP-ON
24K	892-1002-08	ELASTIC SNAP NUT
24L	892-1002-09	SLEEVE, SNAP-ON
24M	892-1002-11	SCREW, PAN HEAD
25	891-0604-16	MINI DOOR 2 ENTRIES
26	891-0614-16	MINI DOOR W/DBV C/O
27	892-1002-01	BRACKET, LAMP SIDE
28	892-1002-021	BRACKET, COVER SIDE
29	892-1002-10	BRACKET, HOLD DOWN



## OPTIONAL DOLLAR BILL ACCEPTOR

- THE COIN DOOR ASSEMBLY USED ON **VIRTUA GOLF UPRIGHT** COMES EQUIPPED TO ACCEPT A DOLLAR BILL ACCEPTOR. ALL NEEDED WIRING CONNECTIONS ARE CONVIENENTLY LOCATED INSIDE THE GAME FOR THIS APPLICATION.
- THE COIN DOOR CAN ACCCOMMODATE THE FOLLOWING VALIDATOR(S):

FORWARD-MOST  
HOLE POSITION

Mars 2000 series

\*\*42-1155-00            MARS VALIDATOR \$1, 2, 5 300 CAP

The frame and cashbox enclosure on this coindoor has been modified to accomodate a Mars 2000 series upstacker. A 2000 series stacker can be added by simply removing the cut-out plate. This one entry door can be ordered through Happ Controls or one of Happ Controls authorized distributors. The part number is 40-6000-10EX. The Mars stacker can be obtained through an authorized Mars distibutor.

Note: Your game may have either Happ Controls Coin Door Assembly or the Wells Gardner Coin Door Assembly (not shown).

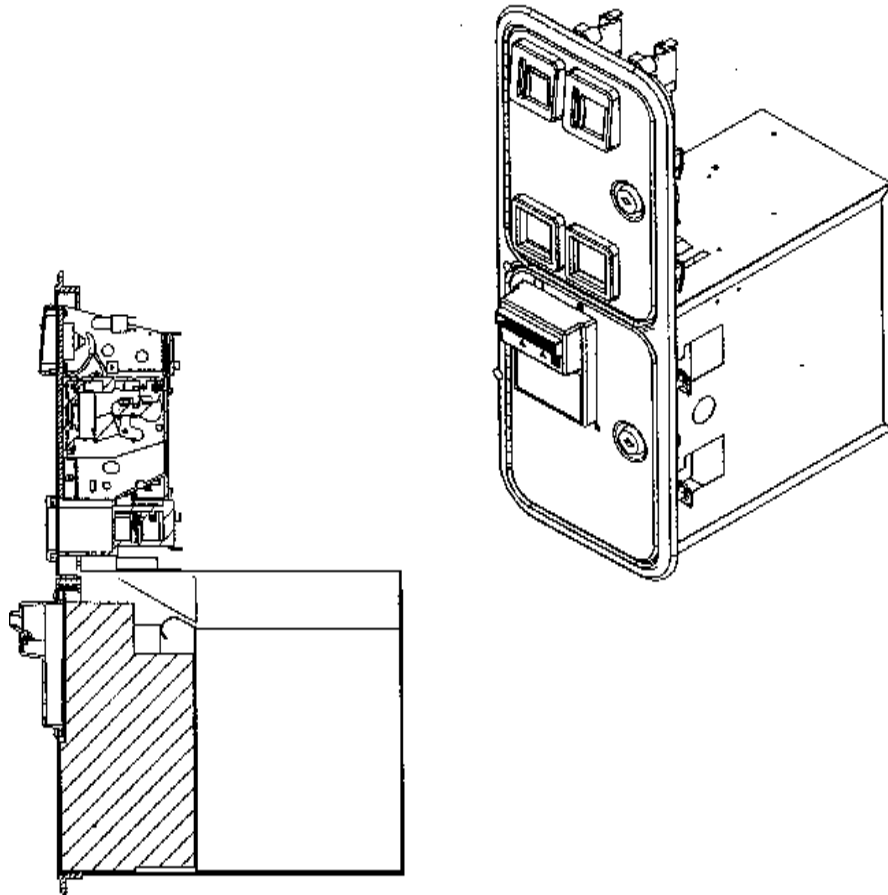
\*\*Happ part number

Security Locking Bar/Bracket Set Part No.# 999-0966

Modified Cash Box (For use when DBA installed)  
Part No. # 999-1106

Plastic Cash Box - Full Size Part No. # 999-1177

**\*\*Coin door shown with optional dollar bill validator inserted\*\***





## 9. DESIGN RELATED PARTS



ITEM NO.	PART NO.	DESCRIPTION
1	999-1199	MARQUEE STYRENE GOLF
2	999-1203	SEGA LOGO STICKER
3	999-1201	DECAL INSTR. #2 CTL PNL GOLF
4	999-1202	DECAL CONTROL PANEL GOLF
5	999-1200	DECAL INSTR. #1 BEZEL GOLF

# 10. PARTS LIST

① TOP ASSY

(D-1/2)



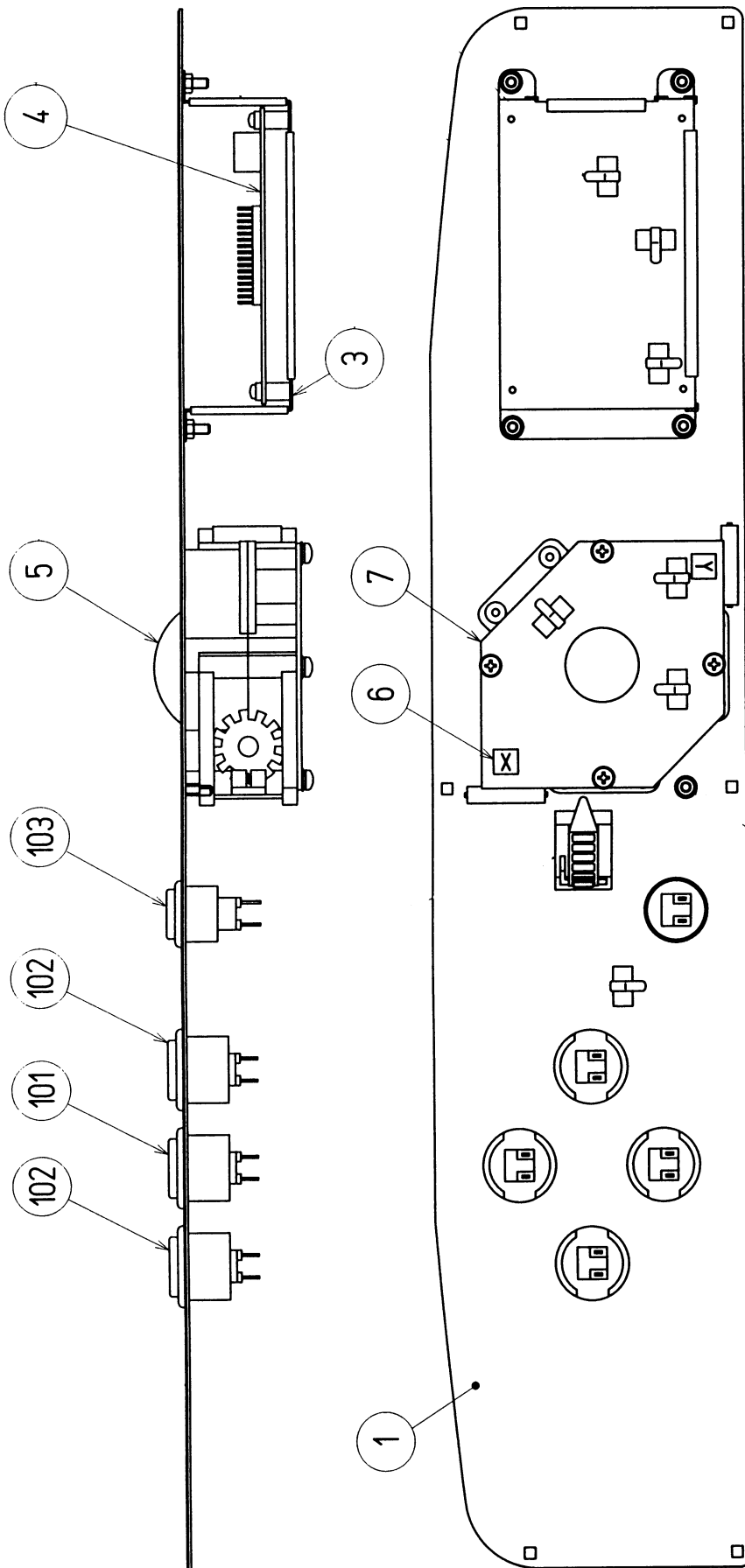
① TOP ASSY

(D-2/2)

ITEM NO.	PART NO.	DESCRIPTION
1	999-1191	WOOD SHELF HOUSING (COBALT BLUE)
2	N/A	CONTOL PANEL
3	999-0167	LEG LEVELER 1/2 - 13
4	999-0169	CASTER 160-2 1/2
5	999-1190	SERVICE COMPARTMENT DOOR
6	999-1196	UPRIGHT LEFT - SILVER METALIC
NOT SHOWN	999-1195	UPRIGHT RIGHT - SILVER METALIC
7	999-1187	MONITOR COVER ASSY
8	999-1198	HEADER GLASS (OVER MARQUEE)
9	LOC. PURCHASE	FLUORESCENT FIXTURE 24" 20 WATT
10	999-1189	BEZEL NAOMI COBALT BLUE
11	999-1193	WOOD PANEL
12	999-1192	SUB ASSY CONTROL SHELF (COBALT BLUE)
13	NOA-1202	SPEAKER BOX
NOT SHOWN	999-1188	SHELF HINGE CTRL PNL (COBALT BLUE)
NOT SHOWN	999-1194	CHAIN CTRL PNL STAY (2 per)

① ASSY CTRL PNL 1T4B ENG (NOA-20007-01)

(D-1/2)

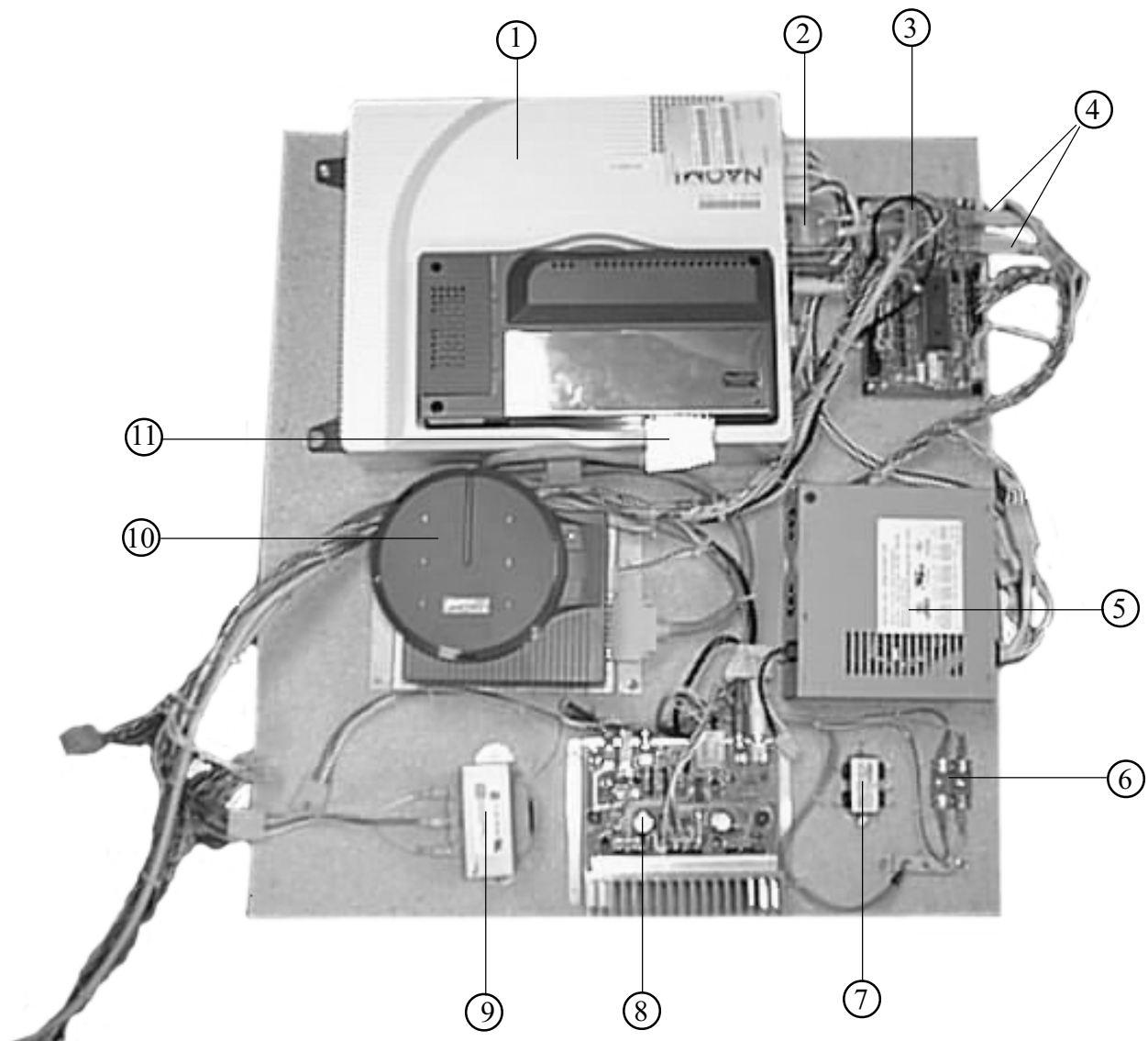


① ASSY CTRL PNL 1T4B ENG (NOA-20007-01)

(D-2/2)

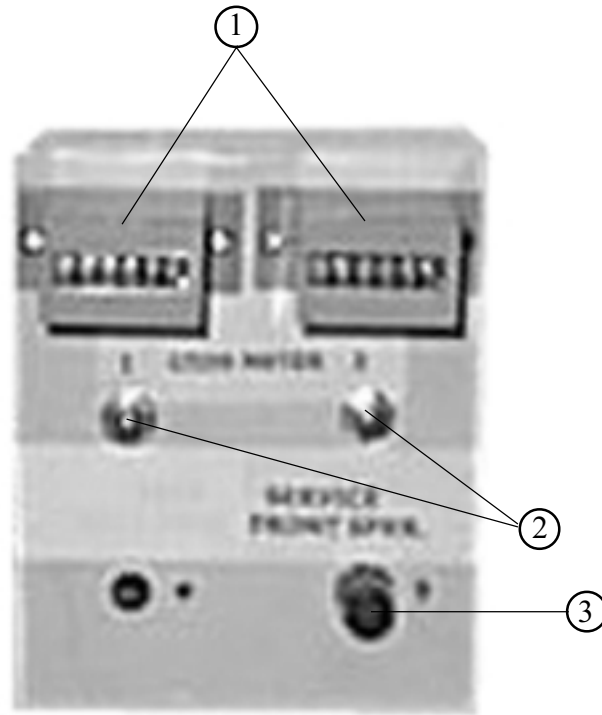
ITEM NO.	PART NO.	DESCRIPTION
1	999-143-000	CTRL PNL BASE 1T4B
3	999-1205	I/O BD BRKT
4	837-13938	I/O CONTROL BD FOR JVS ENCODER
5	610-0595	ASSY TRACK BALL
6	421-11172	STICKER XY
7	MJ-2016	REINFORCE PLATE
101	999-1184	PUSHBUTTON HORIZ. ORANGE MICRO
102	999-1186	PUSHBUTTON HORIZ. GREEN MICRO
103	999-1185	PUSHBUTTON HORIZ. YELLOW MICRO

② ELEC ASSY



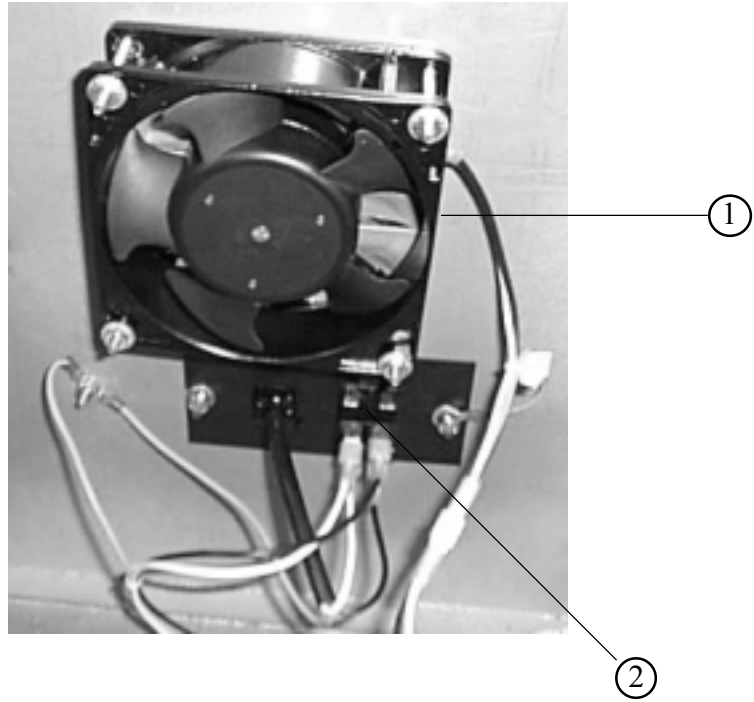
ITEM NO.	PART NO.	DESCRIPTION
1	840-0051D-01	ASSY CASE NAO DIMM BD US
2	600-7009-2500	ASSY RGB CA D-SUB 15P 2500MM
3	837-13551-92	I/O CONTROL BD FOR JVS
4	600-7141-0250	USB CABLE 250CM (2 per)
5	400-5397-01	POWER SUPPLY
6	LOC. PURCHASE	FUSE BLOCK
7	LOC. PURCHASE	LINE FILTER
8	838-13616	AUDIO POWER AMP 2 CH
9	998-0148	TRANSFORMER MCI 4-06-8036
10	XKT-0833	GD-ROM DRIVE KIT
11	600-7247-500	CABLE SCSI ST-L TYPE 2 500CM

③ SW UNIT



ITEM NO.	PART NO.	DESCRIPTION
1	LOC. PURCHASE	6V COIN METER
2	LOC. PURCHASE	PUSHBUTTON SW MOMENTARY
3	LOC. PURCHASE	5K POTENTIOMETER

④ FAN UNIT



ITEM NO.	PART NO.	DESCRIPTION
1	LOC. PURCHASE	4" FAN 120V
2	LOC. PURCHASE	ROCKER SW 15 AMP





## - ATTENTION -

Your Virtua Golf Upright game ships with all necessary conversion parts to make your game into Virtua Tennis. These parts have been included at no additional charge to you.

The Kit contents are as follows:

PART NO.	DESCRIPTION
610-0630-0011	GD SOFT KIT V. TENNIS
999-1207	BLANK - CONTROL SHELF TENNIS
999-1211	MARQUEE STYRENE TENNIS
999-1212	DECAL INSTR. #1 UPPER BEZEL TENNIS
999-1213	DECAL INSTR. #2 LOWER BEZEL TENNIS
999-1214	DECAL CONTROL PANEL TENNIS
999-1208	PUSHBUTTON HORIZ. BLUE MICRO
999-1209	PUSHBUTTON HORIZ. YELLOW MICRO 2 PER
999-1210	PUSHBUTTON HORIZ. GREEN MICRO 2 PER
LOC. PURCHASE	JOYSTICK HAPP ULTIMATE BLACK 2 PER

# 11. WIRE COLOR CODE TABLE

THE WIRE COLOR CODE is as follow:

- A PINK
- B SKY BLUE
- C BROWN
- D PURPLE
- E LIGHT GREEN

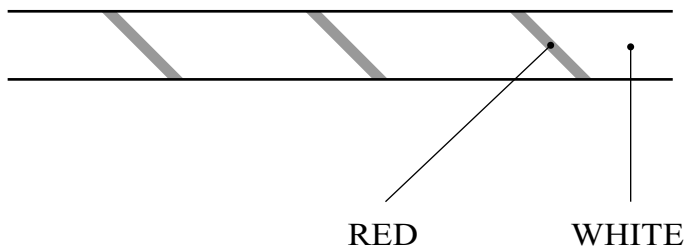
Wires other than those of any of the above 5 single colors will be displayed by 2 alphanumeric characters.

- 1 RED
- 2 BLUE
- 3 YELLOW
- 4 GREEN
- 5 WHITE
- 7 ORANGE
- 8 BLACK
- 9 GRAY

If the right-hand side numeral of the code is 0, then the wire will be of a single color shown by the left-hand side numeral (see the above).

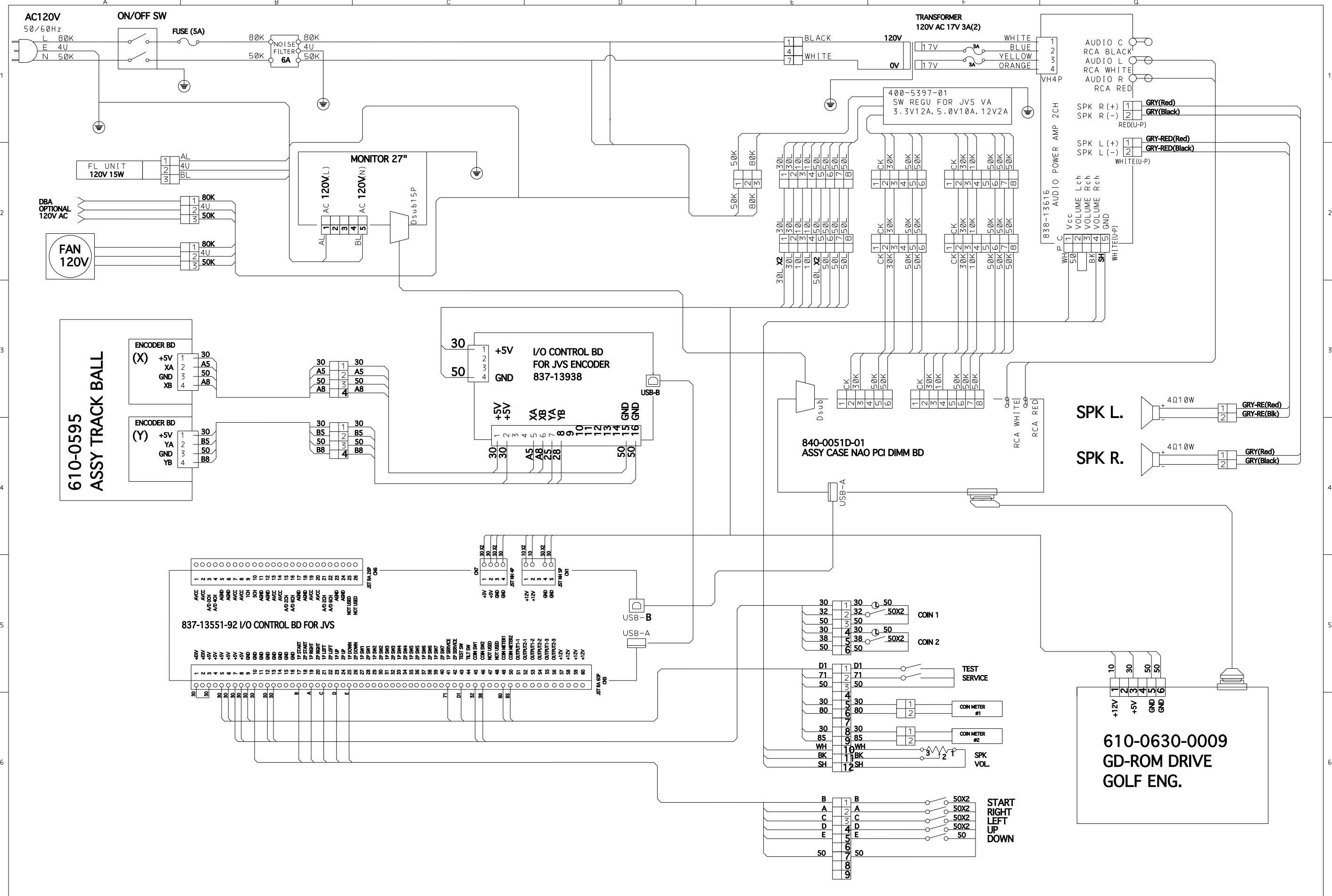
Note 1: If the right-hand side alphanumeric is not 0, that particular wire has a spiral color code. The left-hand side character shows the base color and the right-hand side one, the spiral color.

<Example> 51 ..... WHITE / RED



Note 2: The character following the wire color code indicates the size of the wire.

- U: AWG16
- K: AWG18
- L: AWG20
- None: AWG22



ALTERATION	WIRE COLOR	TOP-ASS'Y
	8 BLACK	50L WHITE AWG20
	7 ORANGE	51 WHITE RED
	5 WHITE	50 WHITE
	4 GREEN	EXAMPLE
	3 YELLOW	U AWG16 UL1015
	2 BLUE	K AWG18 UL1015
	1 RED	L AWG20 UL1007
		AWG22 UL1007

設計	製図	検図	承認
高橋	高橋	後藤	小山
01/12-'01	01/12-'01	01/12-'01	01/12-'01

SEGA SEGA CORPORATION  
**GOLF U/R**

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