

SEGA



SERVICE MANUAL



IMPORTANT!

- Before using this product, read this OWNER'S 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 ENTERPRISES, LTD.

MANUAL NO. 420 - 6310 - 01

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.



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

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.

- **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.

- **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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1. HANDLING PRECAUTIONS



WARNING!

- To avoid an electric shock or IC Board malfunctioning, be sure to turn off the power for the cabinet when installing and removing the IC Board.
- Foreign matter including dust on the IC Board can cause short circuit, etc. resulting in a fire due to generation of heat.



IMPORTANT!

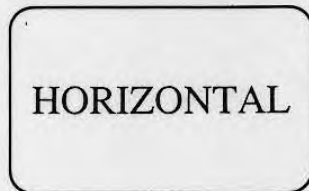
- Completely perform the connections of the IC Board and connectors. Insufficient connector insertion may damage the IC Board, etc.
- Static electricity discharge can damage electronic parts on the IC Board. Before starting work by opening the Shield Case, be sure to touch grounded metallic surfaces to discharge the physically charged static electricity.
- When soldering buttons, etc. to the wire harness, ensure that the wire harness is removed from the IC Board to avoid generation of heat to the IC Board.
- The MODEL-3 (VIRTUA STRIKER 2), when used without the SHIELD CASE, may have a radio wave fault. Therefore, be sure to use the MODEL-3 together with the ancillary SHIELD CASE.
- The monitor frequency compatible with the MODEL 3 (VIRTUA STRIKER 2) is 24.39kHz. Therefore, the game can not be used in any cabinet with a monitor and or projector not compatible with the 24.39kHz frequency.
- When asking for the repair of the MODEL 3 (VIRTUA STRIKER 2), make sure that the MODEL 3 is contained together with the Shield Case in the carton box. Otherwise, the request for repair is not acceptable.

* Descriptions in this manual are subject to changes without prior notice.

2. SPECIFICATIONS

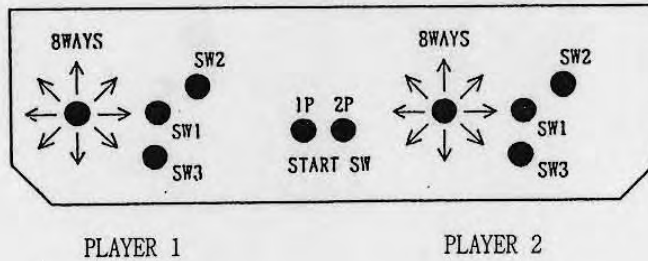
① ON-SCREEN DISPLAY

Monitor Position



Synchronous Frequency
24n.39kHz

② CONTROL PANEL



	The Offence	The Defense	While the soccer ball is in the air
SW2 (RED)	Shoot		Direct Shoot
SW1 (BLUE)	Long Pass Centering		Long Distance Heading
SW3 (GREEN)	Short Pass	Sliding	Short Distance Heading

3. TEST MODE



When changes are made in the settings of GAME ASSIGNMENTS, COIN ASSIGNMENTS, and ALL INITIALIZE, be sure to exit from the Test Mode to return to the Game Mode. (If the power is turned OFF in the Test Mode, the setting changes are not effective.)

This mainly checks if the operation of the game BD is accurate, makes monitor color adjustments, and allows for COIN ASSIGNMENTS/GAME ASSIGNMENTS setting adjustments.

Selection of TEST ITEMS

- 1) After turning the power on, press the TEST button to cause the following TEST ITEM MENU to appear.

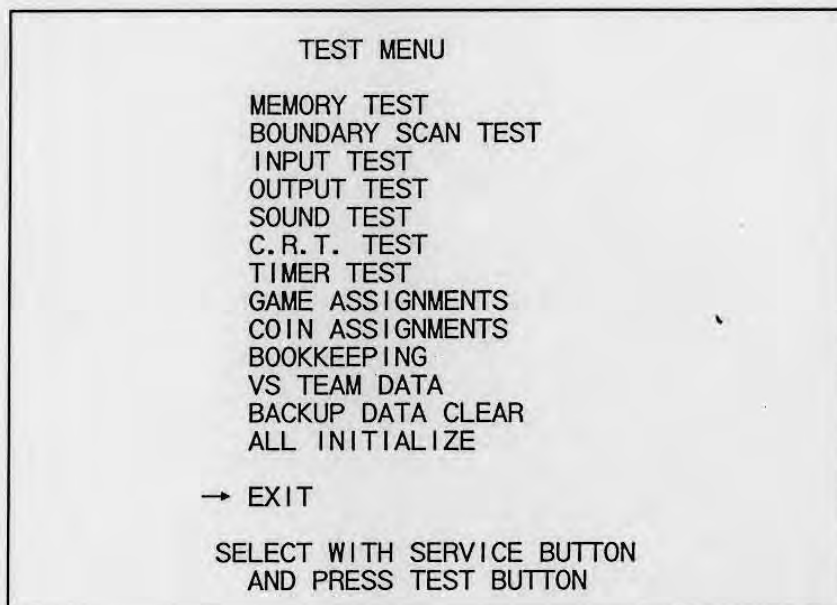


FIG. 3 TEST MENU

- 2) By pressing the SERVICE button, bring the allow mark "→" to the desired item and press the TEST button.
- 3) When the test has been completed, bring "→" to EXIT and press the TEST button. The Game mode returns to the screen.

① MEMORY TEST

Check the operation of CPU MEMORY IC on the IC Board. If the IC Board is satisfactory, "GOOD" will be indicated. If there exists any malfunctioning, "BAD" will be indicated.

CPU RAM TEST			
GOOD (SDRAM)	IC. 13	IC. 15	
GOOD (BACKUP SRAM)	IC. 21	IC. 22	
GOOD (SCROLL SDRAM)	IC. 94	or IC. 19	IC. 20
GOOD (SCROLL SRAM)	IC. 17	IC. 18	

PRESS TEST BUTTON TO CONTINUE

FIG. 3.1a MEMORY TEST (CPU RAM TEST)

When the desired item is selected from the menu screen in the Test Mode, the test starts immediately. During the test, the TESTING NOW message is displayed on the screen. After finishing the test, press the TEST button to proceed to "CPU ROM TEST."

CPU ROM TEST			
GOOD (CROM03 MASK)	IC. 1	XXXX	
GOOD (CROM02 MASK)	IC. 2	XXXX	
GOOD (CROM01 MASK)	IC. 3	XXXX	
GOOD (CROM00 MASK)	IC. 4	XXXX	
GOOD (CROM13 MASK)	IC. 5	XXXX	
GOOD (CROM12 MASK)	IC. 6	XXXX	
GOOD (CROM11 MASK)	IC. 7	XXXX	
GOOD (CROM10 MASK)	IC. 8	XXXX	
GOOD (CROM23 MASK)	IC. 9	XXXX	
GOOD (CROM22 MASK)	IC. 10	XXXX	
GOOD (CROM21 MASK)	IC. 11	XXXX	
GOOD (CROM20 MASK)	IC. 12	XXXX	
GOOD (CROM33 MASK)	IC. 13	XXXX	
GOOD (CROM32 MASK)	IC. 14	XXXX	
GOOD (CROM31 MASK)	IC. 15	XXXX	
GOOD (CROM30 MASK)	IC. 16	XXXX	
GOOD (CROM3 EPROM)	IC. 17	XXXX	
GOOD (CROM2 EPROM)	IC. 18	XXXX	
GOOD (CROM1 EPROM)	IC. 19	XXXX	
GOOD (CROM0 EPROM)	IC. 20	XXXX	

PRESS TEST BUTTON TO CONTINUE

FIG. 3.1b MEMORY TEST (CPU ROM TEST)

After proceeding to this test from the CPU RAM TEST, the test starts immediately. During the test, the TESTING NOW message is displayed on the lower part of the screen. The check sum of each IC is displayed in the corresponding XXXX portion above. After finishing the test, press the TEST button to proceed to "VIDEO BOARD RAM TEST."

This allows the operation of VIDEO MEMORY IC on the IC Board to be checked.

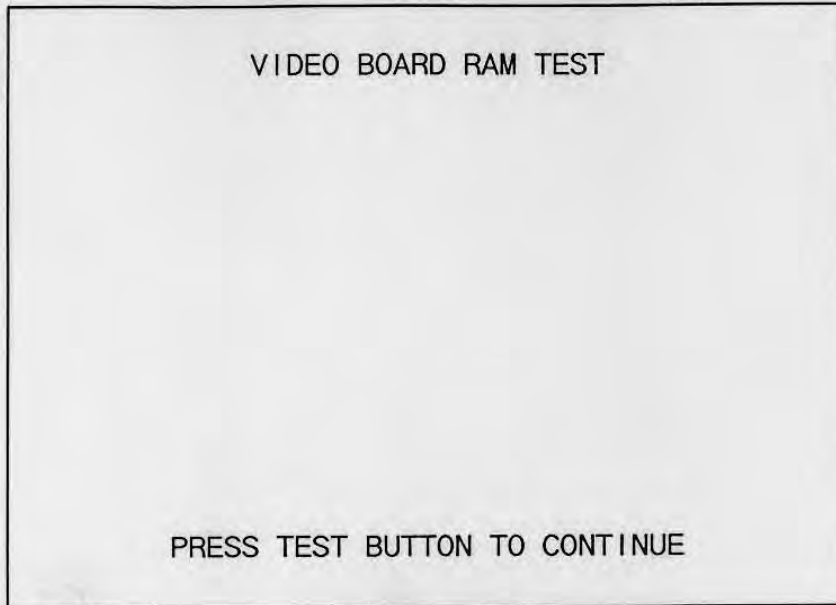


FIG. 3.1c MEMORY TEST (VIDEO BOARD RAM TEST)

After proceeding to this test from the CPU ROM TEST, the test starts immediately. During the test, the TESTING NOW message is displayed on the lower part of the screen. If the test is satisfactory, nothing is displayed. After finishing the test, press the TEST button to proceed to the VIDEO BOARD ROM TEST.



FIG. 3.1d MEMORY TEST (VIDEO BOARD ROM TEST)

This test is started immediately after proceeding from the VIDEO BOARD RAM TEST. "GOOD" is displayed for normal ICs and "BAD" is displayed for abnormal ICs. During the test, the TESTING NOW message is displayed on the lower part of the screen. After finishing the test, press the TEST button to return to the MENU screen.

② BOUNDARY SCAN TEST

Any hardware problems are counted as TOTAL ERRORS and displayed as such.

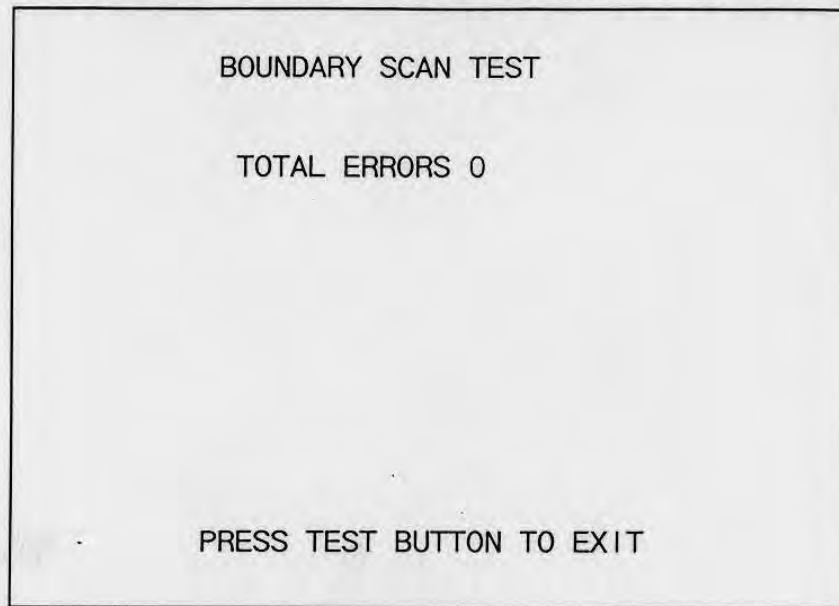


FIG. 3.2 BOUNDARY SCAN TEST

After the test has been completed, press the TEST button to have the MENU mode return to the screen. When this test is performed, be sure to exit from the TEST menu without entering another TEST item.

③ INPUT TEST

This test displays the state of each switch and button. If the switch or button goes ON (from OFF) when activated, it is satisfactory.

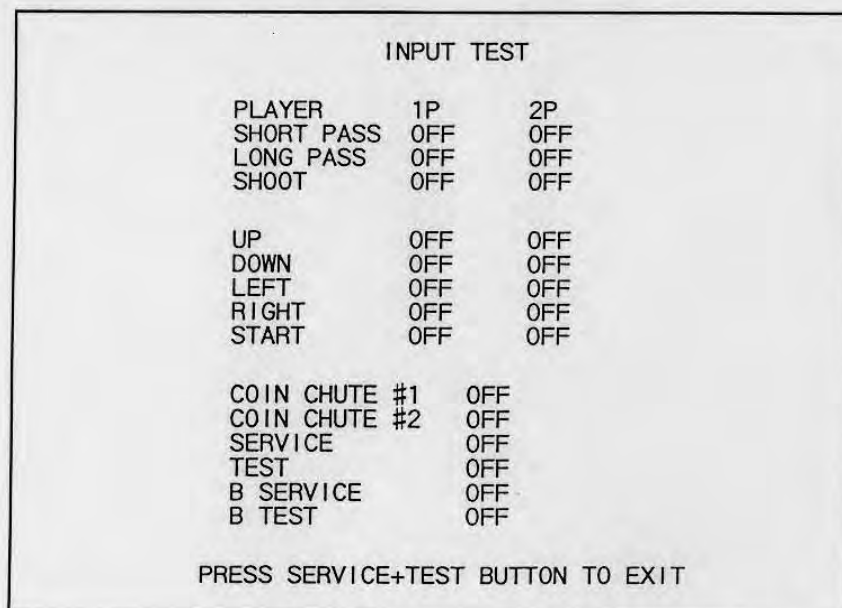


FIG. 3.3 INPUT TEST

Simultaneously press the SERVICE button and TEST button to have the MENU mode return to the screen.

④ OUTPUT TEST

This allows the "versus play" cabinet's Billboard display (WINNER LAMP and 7 SEG display for 1P and 2P) to be checked.

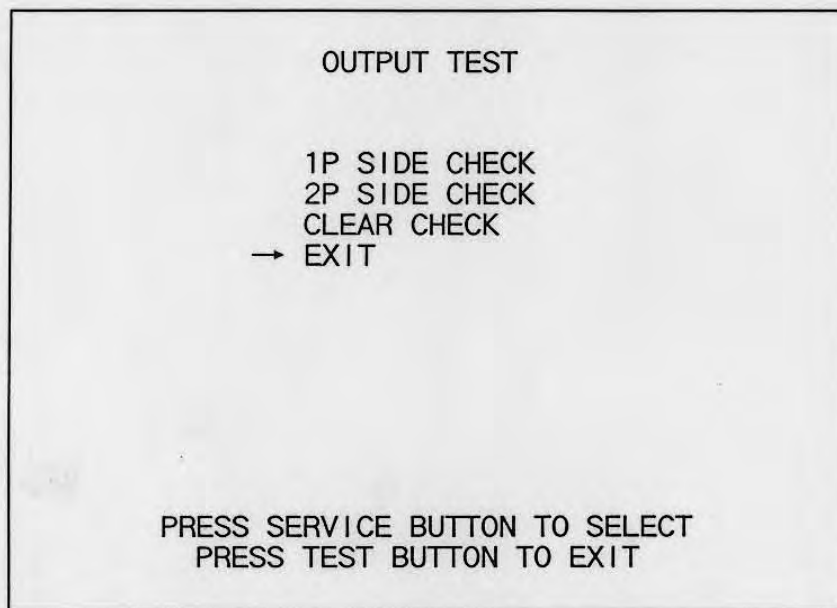


FIG. 3.4 OUTPUT TEST

- 1) Press the SERVICE button to bring the allow "→" to the desired item.
- 2) Press the TEST button to choose the desired test item.

When 1P or 2P SIDE CHECK is chosen, 7SEG display is shown with "WINNER LAMP" flashing. Choose CLEAR CHECK to stop the test.

⑤ SOUND TEST

This allows sound and background music used in the game to be tested.

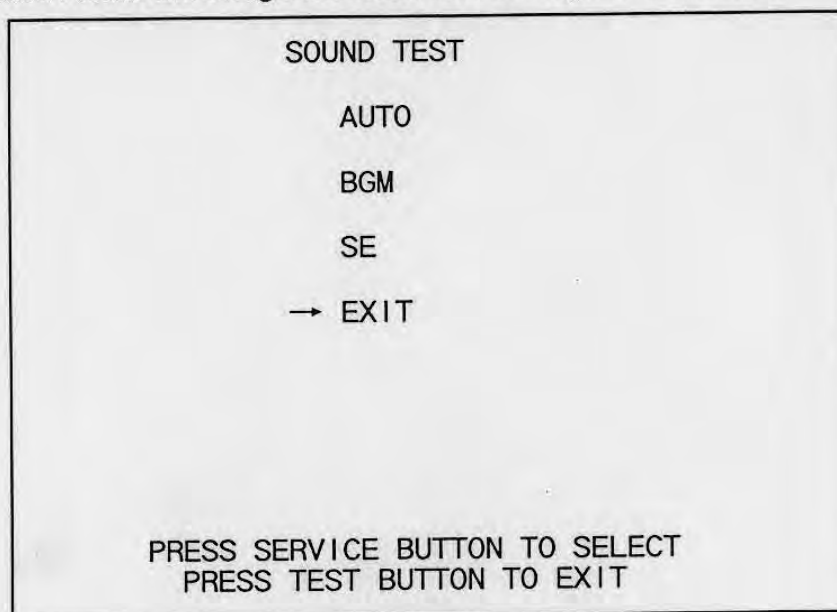


FIG. 3.5a SOUND TEST MENU

- 1) Press the SERVICE button to bring the allow "→" to the desired item.
- 2) Press the TEST button to choose the desired test item.

The above work can also be performed by using the 1P side UP/DOWN lever and the LONG PASS button.

(A) AUTO MODE

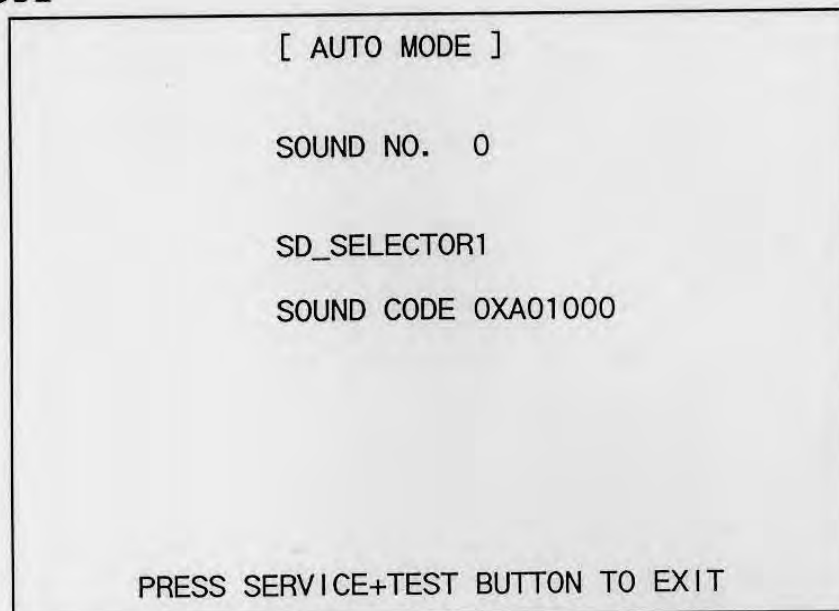


FIG. 3.5b SOUND TEST (AUTO MODE)

The BGM is played for 5 seconds in order and then sound effects are emitted in turn. After performing all the BGM and sound effects, the screen automatically returns to the SOUND TEST menu. The 1P side control panel can also be used. To return to the SOUND TEST menu even in the middle of test, press the TEST button with the SERVICE button pressed down, or press the LONG PASS button.

(B) BGM MODE

```
[ BGM MODE ]  
  
SOUND NO.    0  
SD_SELECTOR  1  
SOUND CODE  0XA01000  
  
PRESS TEST BUTTON TO SEND SOUND CODE  
PRESS SERVICE BUTTON TO SELECT SOUND  
PRESS SERVICE+TEST BUTTON TO EXIT
```

FIG. 3.5c SOUND TEST (BGM MODE)

This test mode allows the BGM used in the game to be checked. Pressing the SERVICE button increases "SOUND NO." by one and pressing the TEST button causes the sound to be emitted. Also, IP side control panel can be used as well. Change the SOUND NO. with the UP/DOWN lever and press the SHOOT button to output the sound. To return to the SOUND TEST menu, press the TEST button with the SERVICE button pressed down, or press the LONG PASS button.

(C) SE MODE

```
[ SE MODE ]  
  
SOUND NO.    30  
SD_JAPAN  
SOUND CODE  0XA01100  
  
PRESS TEST BUTTON TO SEND SOUND CODE  
PRESS SERVICE BUTTON TO SELECT SOUND  
PRESS SERVICE+TEST BUTTON TO EXIT
```

FIG. 3.5d SOUND TEST (SE MODE)

In the SE MODE, sound effects and/or voice can be checked. Pressing the SERVICE button increases "SOUND NO." by one and pressing the TEST button causes the sound to be emitted. Also, IP side control panel can be used as well. Change the SOUND NO. with the UP/DOWN lever and press the SHOOT button to output the sound. To return to the SOUND TEST menu, press the TEST button with the SERVICE button pressed down, or press the LONG PASS button.

⑥ C.R.T. TEST

(A) RGB COLOR ADJUSTMENT SCREEN

This allows the monitor color to be checked.

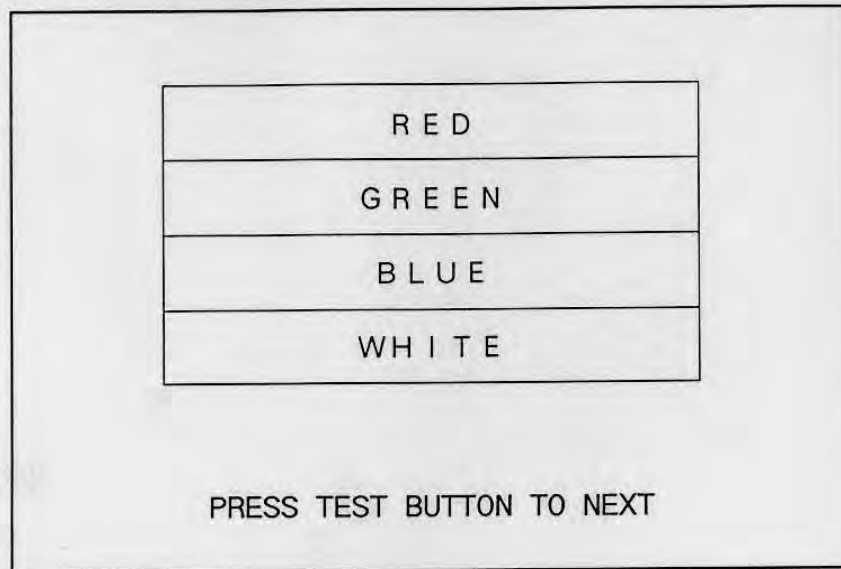


FIG. 3.6a C.R.T. TEST (RGB COLOR ADJUSTMENT)

Each of the R (red), G (green) and B (blue) colors is darkest at the left-hand end and becomes brighter in 32 gradations towards the right-hand end. The monitor brightness is satisfactory if the white color bar is black at the left-hand end and white at the right-hand end. Press the TEST button or the LONG PASS button to proceed to the next screen.

(B) MONITOR SIZE ADJUSTMENT SCREEN

This allows the monitor size to be checked.

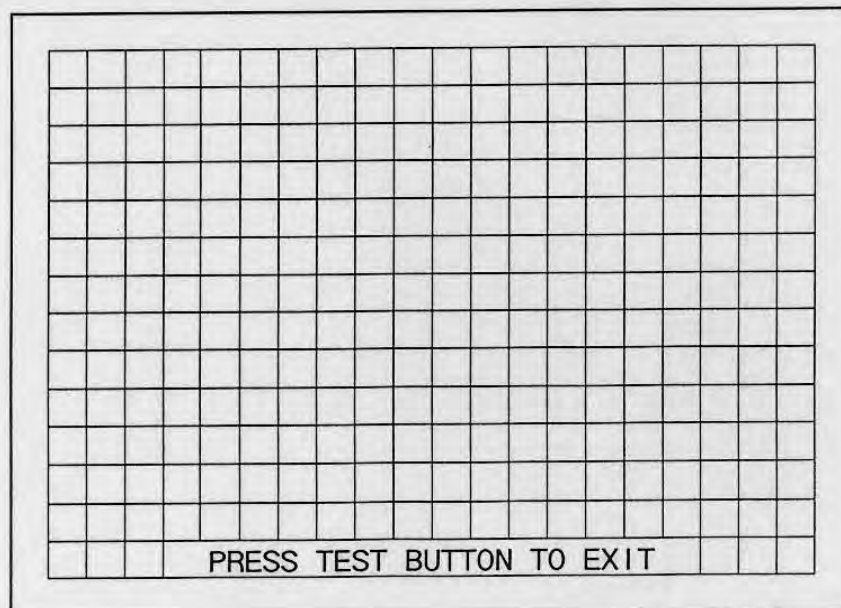


FIG. 3.6b C.R.T. TEST (MONITOR SIZE ADJUSTMENT)

Make adjustments in a manner so that the checkered portions for checking do not go beyond the screen. Press the TEST button to have the MENU mode screen return to the screen.

⑦ TIMER TEST

This test mode allows the date (year, month and day) to be set, and the incorporated battery as well as the real time clock to be checked.

- 1) Press the SERVICE button to move the allow "→." Bring it to the desired item.
 - 2) Press the TEST button to select the item.
- The above can also be performed by using the 1P side LEVER (up/down) and the LONG PASS button.

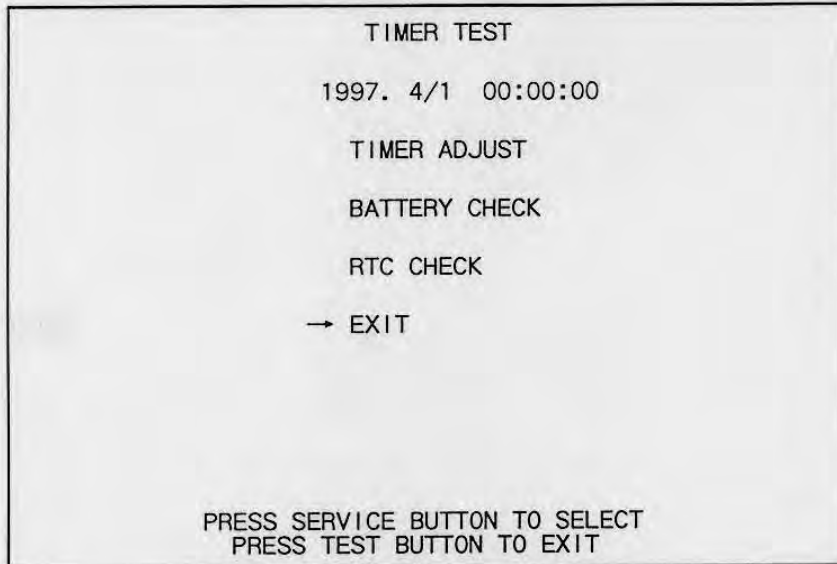


FIG. 3.7a TIMER TEST MENU

(A) TIMER ADJUST

Allows year, month, day, hour, minute and second to be set. Use the TEST button to choose year →month→day→hour→minute→second, and change numerals with the SERVICE button. After the setting has been completed, pressing the TEST button at the position second is set will have the ITEM SELECTION SCREEN return. Press the TEST button and SERVICE button at the same time to exit from this page. The above setting can also be performed by using the 1P side LEVER (up/down) and the LONG PASS button.

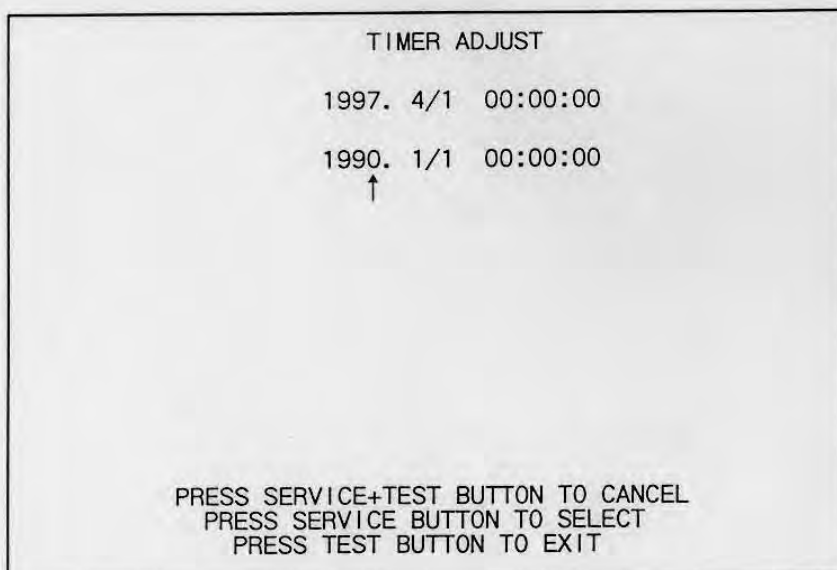


FIG. 3.7b TIMER TEST (TIMER ADJUST)

(B) BATTERY CHECK

This allows the incorporated BATTERY's voltage to be checked. Pressing the TEST button in the ITEM SELECTION screen allows for checking automatically. If the check is satisfactory, "O. K." is displayed. If any error exists, "BATTERY VOLTAGE IS LESS THAN 2.65V" or "BATTERY VOLTAGE IS LESS THAN 2.37V" is displayed. Press the TEST button to have the ITEM SELECTION screen return.

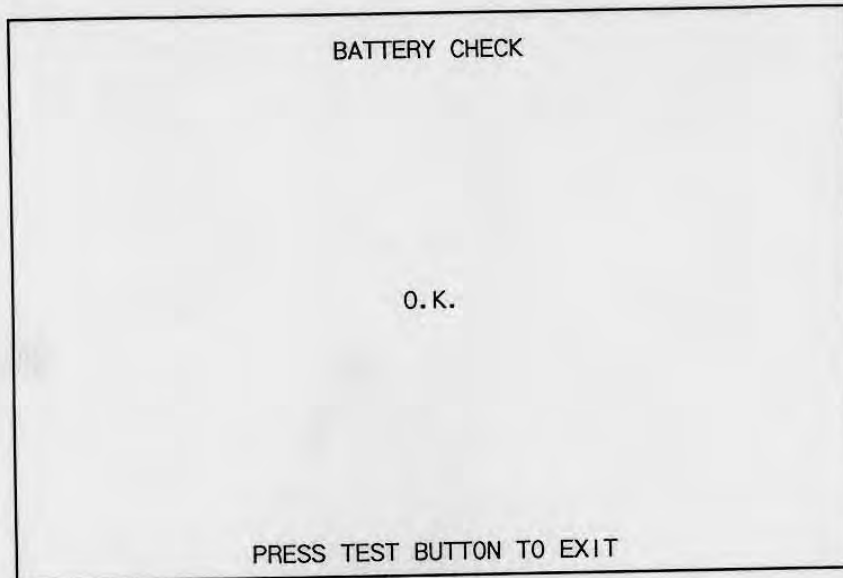


FIG. 3.7c TIMER TEST (BATTERY CHECK)

(C) RTC CHECK

This allows the incorporated REAL TIME CLOCK to be checked. Pressing the TEST button in the ITEM SELECTION screen allows for checking automatically. If any error exists, "RTC IS BROKEN DOWN" is displayed. Press the TEST button to have the ITEM SELECTION screen return.

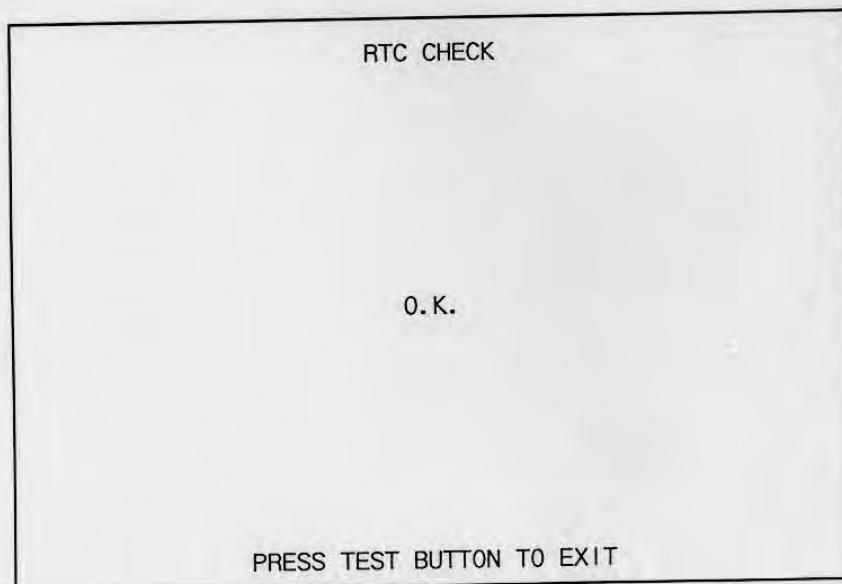


FIG. 3.7d TIMER TEST (RTC CHECK)

⑧ GAME ASSIGNMENTS

In this TEST mode, the settings of game difficulty level, etc. can be changed.

- 1) Press the SERVICE button to move "→" and bring it to the desired item.
- 2) Press the TEST button to change the setting.
- 3) When the setting is completed, move "→" to EXIT and press the TEST button.

The above can also be performed by using the 1P side LEVER (up/down) and the LONG PASS button.

GAME ASSIGNMENTS	
ADVERTISE SOUND	ON
COUNTRY	JAPAN
DIFFICULTY	NORMAL
VIRTUAL TIME	REAL
BILLBOARD	ON
ONE MATCH MODE	OFF
----- 1P SETTING -----	
TIME SET	2' 00"
V GOAL SYSTEM	OFF
PK SYSTEM	OFF
----- VS SETTING -----	
TIME SET	2' 00"
V GOAL SYSTEM	OFF
PK SYSTEM	OFF
→ EXIT	
SELECT WITH SERVICE BUTTON AND PRESS TEST BUTTON	

FIG. 3.8 GAME ASSIGNMENTS

(A) ADVERTISE SOUND

Set this to ON to have sound produced during Advertising mode and to OFF for not producing sound. As a standard, ADVERTISE SOUND is set to "ON."

(B) COUNTRY

Set the game specifications to any one of JAPAN, EXPORT, or U.S.A. as applicable.

(C) DIFFICULTY

Sets the game difficulty level in 4 categories, i.e., EASY, NORMAL, HARD and HARDEST. The standard setting is "NORMAL."

(D) VIRTUAL TIME

Sets how long it takes for a day to pass in the game. Time elapses according to this setting and the graphics gradually change from 'day' to 'evening' and then to 'night' in the game. The standard setting is "REAL." When REAL is chosen, time in the game elapses according to the actual time.

(E) BILLBOARD

Sets whether an institutional ad is on or not. Setting can be done by selecting ON or OFF and setting to OFF displays only SEGA and imaginary signboards in the game. The standard setting is "ON."

(F) ONE MATCH MODE

Sets whether the end of 1 play results in Game Over or not. Setting can be done by selecting ON or OFF, and setting to ON results in Game Over after the end of 1 play. Usually, be sure to set to OFF. Setting to ON is for some sorts of events such as a game competition, etc. Only when the mode is set to ON, a vs. game between teams of the same country is possible. The standard setting is "OFF."

Regarding '1P SETTING' and 'VS SETTING.'

By selecting 1P mode or VS mode, the setting can be varied. A wider variation allows PK to be set only in the VS mode, for example.

(G) TIME SET

The time for 1 play can be set within a range of 1' 15" and 3' 00". The standard setting is 2' 00".

(H) V GOAL SYSTEM

Sets whether to use 'V GOAL SYSTEM' or not. Setting to ON enables an extended game to the extent of [TIME ×' × ×"] following ON if the game ends in a draw when a usual time of game is finished. In this case the game is finished when either side gets a point though the time still remains. If neither of the sides gets a point within the extended time period and the [PK SYSTEM] is not set, the game ends in a draw and is over. "TIME FREE" in the setting items does not let the game end until either side gets a point. Do not set to ON except for some sorts of special events like a game competition. If an item other than Japan is chosen in the COUNTRY setting, [V GOAL] display changes to [G GOAL] display and the sound of the game changes to 'GOLDEN GOAL' as is worldwide so called. The standard setting is "OFF."

(I) PK SYSTEM

Sets whether to use 'PK SYSTEM' or not. Setting to ON enables a PK game within the extent of [MEMBER ×] following ON if the game ends in a draw when a usual time of game is finished. (In case the [V GOAL] is set, when the game is not concluded,) if neither of the sides gets a point by the preset number of players, the PK game ends in a draw and is over. Setting to [REAL PK] causes 5 players from each team to play a PK game until either side wins the game according to the real soccer rules when the game ends in a draw. The standard setting is "OFF."

⑨ COIN ASSIGNMENTS

In this mode, the COIN/CREDIT setting, etc. can be changed

- 1) Press the SERVICE button to move "→" and bring it to the desired setting item.
 - 2) Press the TEST button to cause the setting to change.
 - 3) When the setting has been completed, move "→" to EXIT and press the TEST button.
- The above can also be performed by using the 1P side LEVER (up/down) and the LONG PASS button.

COIN ASSIGNMENTS	
COIN CHUTE TYPE	COMMON
CREDIT TO START	1 CREDIT(S)
CONTINUE	1 CREDIT(S)
COIN/CREDIT SETTING #1	
COIN CHUTE #1	1COIN 1CREDIT
COIN CHUTE #2	1COIN 1CREDIT
MANUAL SETTING	
→ EXIT	
SELECT WITH SERVICE BUTTON AND PRESS TEST BUTTON	

FIG. 3.9a COIN ASSIGNMENTS
(COMMON Setting)

COIN ASSIGNMENTS	
COIN CHUTE TYPE	INDIVIDUAL
CREDIT TO START	1 CREDIT(S)
CONTINUE	1 CREDIT(S)
COIN/CREDIT SETTING #1	
COIN CHUTE	1COIN 1CREDIT
MANUAL SETTING	
→ EXIT	
SELECT WITH SERVICE BUTTON AND PRESS TEST BUTTON	

FIG. 3.9b COIN ASSIGNMENTS
(INDIVIDUAL Setting)

(A) COIN CHUTE TYPE

Set to either of the following as applicable.

COMMON

The cabinet type in which 2 players use a coin chute in common.

INDIVIDUAL

Each of the 2 players use his own coin chute

(Versus City, etc.)

- (B) CREDIT TO 1P START (1~5 CREDITS)
1P CONTINUE (1~4 CREDITS)

Sets the credits required for start/continue for 1 play.

(C) COIN/CREDIT SETTING (#1~#27)

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

(D) MANUAL SETTING

The CREDIT's incremental increase settings as against a coin insertion are shown in further details than in (C) above (refer to Table 3). Note that when this MANUAL SETTING is performed, settings as per (C) COIN/CREDIT SETTING become ineffective.

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	COIN CHUTE FOR EACH SEAT		NAME OF SETTING	COIN CHUTE FOR EACH SEAT	
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 (No. of coins required for one 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 (BONUS COIN)	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) MULTIPLIER (For each coin chute)	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	

⑩ BOOKKEEPING

This test mode allows each of the data such as the number of coins inserted, credits, time and game frequency to be checked.

BOOKKEEPING 1/3	
[GLOBAL DATA 1]	
TOTAL COINS	0
COIN CHUTE #1	0
COIN CHUTE #2	0
TOTAL CREDITS	0
COIN CREDITS	0
SERVICE CREDITS	0
FREE PLAY	0
NUMBER OF GAMES	0
TOTAL TIME	0d 0h 0m 0s
PLAY TIME	0d 0h 0m 0s
1P PLAY TIME	0d 0h 0m 0s
VS PLAY TIME	0d 0h 0m 0s
PLAY TIME RATE	0.0%
TOW PLAYER RATE	0.0%
AVERAGE GAME TIME	0h 0m 0s
LONGEST GAME TIME	0h 0m 0s
SHORTEST GAME TIME	0h 0m 0s

PRESS SERVICE BUTTON TO CONTINUE
PRESS TEST BUTTON TO EXIT

FIG. 3.10a BOOKKEEPING (GLOBAL DATA 1)

- (A) TOTAL COINS
Displays the number of all the coins inserted.
- (B) COIN CHUTE #1
Displays the number of coins inserted in COIN CHUTE #1.
- (C) COIN CHUTE #2
Displays the number of coins inserted in COIN CHUTE #2.
- (D) TOTAL CREDITS
Displays the total number of credits.
- (E) COIN CREDITS
Displays the number of credits as against coins inserted.
- (F) SERVICE CREDITS
Displays the number of credits from the input by using the SERVICE button.
- (G) FREE PLAY
Displays the frequency of game start in FREE PLAY.
- (H) NUMBER OF GAMES
Displays the total number of games played.

(I) TOTAL TIME

Displays the total energized time of the machine.

(J) PLAY TIME

Displays game play time.

(K) 1P PLAY TIME

Displays the play time by 1P (against Computer).

(L) VS PLAY TIME

Displays the vs. play time.

(M) PLAY TIME RATE

Displays the rate (the working ratio) of play time against the total energized time.

(N) TWO PLAYER RATE

Displays the rate of VS. play time against total play time.

(O) AVERAGE GAME TIME

Displays the average time of game play.

(P) LONGEST GAME TIME

Displays the longest time of game played.

(Q) SHORTEST GAME TIME

Displays the shortest time of game played.

Press the SERVICE button to proceed to the next page (2/3).

Press the TEST button to have the MENU mode return to the screen.

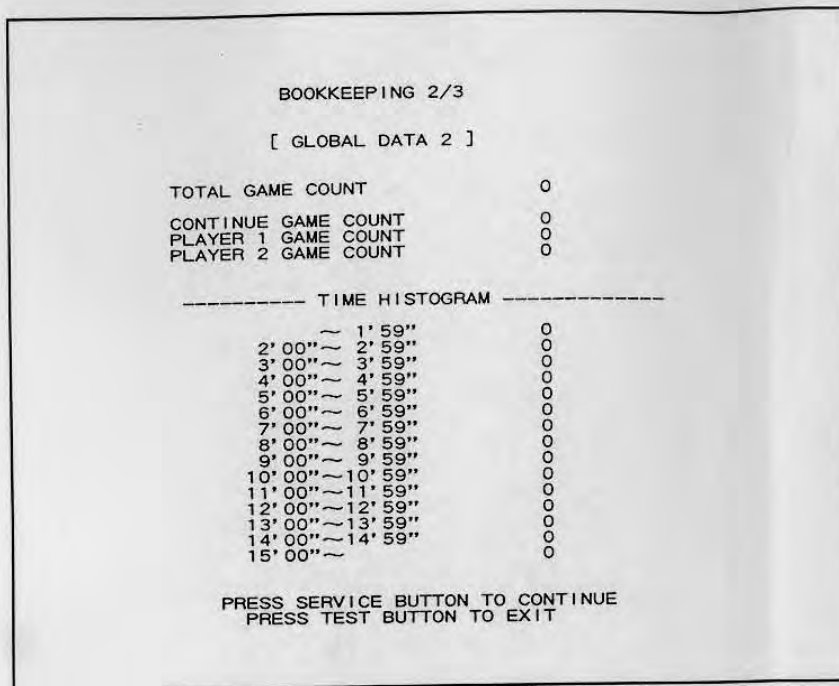


FIG. 3.10b BOOKKEEPING (GLOBAL DATA 2)

- (R) TOTAL GAME COUNT
Displays the total number of games played.
- (S) CONTINUE GAME COUNT
Displays the total number of continued 1P (against CPU) games played.
- (T) PLAYER 1 GAME COUNT
Displays the total number of games played at Player 1 side.
- (U) PLAYER 2 GAME COUNT
Displays the total number of games played at Player 2 side.
- (V) TIME HISTOGRAM
Displays the histogram of play time.

Press the SERVICE button to proceed to the next page (3/3).

Press the TEST button to have the MENU mode return to the screen.

BOOKKEEPING 3/3	
[GAME DATA]	
DRAW COUNT	0
VS WINS MAXIMUM	0
----- VS WINS HISTOGRAM -----	
WINS	COUNT
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10~14	0
15~19	0
20~24	0
25~29	0
30~39	0
40~49	0
50~	0
----- TOURNAMENT REPORT -----	
1ST MATCH	0
2ND MATCH	0
SEMIFINAL	0
FINAL MATCH	0
FINAL WINNER	0
PRESS SERVICE BUTTON TO CONTINUE	
PRESS TEST BUTTON TO EXIT	

FIG. 3.10c BOOKKEEPING (GLOBAL DATA)

(W) DRAW COUNT

Displays the total number of draw games.

(X) VS WINS MAXIMUM

Displays the maximum number of wins in the VS mode.

(Y) VS WINS HISTOGRAM

Displays the histogram of the total number of wins in the VS mode.

(Z) TOURNAMENT REPORT

Displays by-round GAME OVER frequency in the 1 Player Mode (1 Player versus CPU).

Press the SERVICE button to proceed to the next page (1/3).

Press the TEST button to have the MENU mode return to the screen.

① VS TEAM DATA

VS TEAM DATA 1/2 allows the team data in the VS Mode to be checked.

VS TEAM DATA 1/2			
----- TEAM USED RANK -----			
RANK	TEAM_NAME	USED_NUM	USED_RATE
1	BRAZIL	0	0.0%
2	GERMANY	0	0.0%
3	FRANCE	0	0.0%
4	COLOMBIA	0	0.0%
5	SPAIN	0	0.0%
6	RUSSIA	0	0.0%
7	NETHERLANDS	0	0.0%
8	ITALY	0	0.0%
9	MEXICO	0	0.0%
10	ENGLAND	0	0.0%
11	PORTUGAL	0	0.0%
12	BULGARIA	0	0.0%
13	SWEDEN	0	0.0%
14	ARGENTINA	0	0.0%
15	JAPAN	0	0.0%
16	U. S. A	0	0.0%
17	CROATIA	0	0.0%
18	SAUDI ARABIA	0	0.0%
19	GREECE	0	0.0%
20	KOREA	0	0.0%
21	URUGUAY	0	0.0%
22	BELGIUM	0	0.0%
23	YUGOSLAVIA	0	0.0%
24	NIGERIA	0	0.0%
25	F · C SEGA	-	-.-%

PRESS SERVICE BUTTON TO CONTINUE
PRESS TEST BUTTON TO EXIT

FIG. 3.11a VS TEAM DATA (TEAM USED RANK)

TEAM USED RANK displays the ranking data of teams as per team selection frequency.

(A) USED NUM

Displays team selection frequency.

(B) USED RATE

Displays the ratio of selection of each team against all teams.

Press the SERVICE button to proceed to the next page (2/2).

Press the TEST button to have the MENU mode return to the screen.

VS TEAM DATA 2/2							
----- VS WIN RANK -----							
RANK	TEAM_NAME	WIN_RATE	MATCH	WIN	LOSE	DRAW	M_WIN
1	BRAZIL	0.0%	0	0	0	0	0
2	GERMANY	0.0%	0	0	0	0	0
3	FRANCE	0.0%	0	0	0	0	0
4	COLOMBIA	0.0%	0	0	0	0	0
5	SPAIN	0.0%	0	0	0	0	0
6	RUSSIA	0.0%	0	0	0	0	0
7	NETHERLANDS	0.0%	0	0	0	0	0
8	ITALY	0.0%	0	0	0	0	0
9	MEXICO	0.0%	0	0	0	0	0
10	ENGLAND	0.0%	0	0	0	0	0
11	PORTUGAL	0.0%	0	0	0	0	0
12	BULGARIA	0.0%	0	0	0	0	0
13	SWEDEN	0.0%	0	0	0	0	0
14	ARGENTINA	0.0%	0	0	0	0	0
15	JAPAN	0.0%	0	0	0	0	0
16	U. S. A	0.0%	0	0	0	0	0
17	CROATIA	0.0%	0	0	0	0	0
18	SAUDI ARABIA	0.0%	0	0	0	0	0
19	GREECE	0.0%	0	0	0	0	0
20	KOREA	0.0%	0	0	0	0	0
21	URUGUAY	0.0%	0	0	0	0	0
22	BELGIUM	0.0%	0	0	0	0	0
23	YUGOSLAVIA	0.0%	0	0	0	0	0
24	NIGERIA	0.0%	0	0	0	0	0
25	F · C SEGA	--%	-	-	-	-	-

PRESS SERVICE BUTTON TO CONTINUE
PRESS TEST BUTTON TO EXIT

FIG. 3.11b VS TEAM DATA (VS WIN RANK)

VS TEAM DATA 2/2 displays the ranking of each team's victory percentage sequentially in order.

(C) WIN_RATE

Displays each team's percentage in the VS Mode.

(D) MATCH

Displays each team's total number of games played in the VS Mode.

(E) WIN

Displays each team's total number of victories in the VS Mode.

(F) LOSE

Displays each team's total number of losses in the VS Mode.

(G) DRAW

Displays each team's total number of draws in the VS Mode.

(H) M_WIN

Displays each team's maximum number of wins in the VS Mode tournament.

Press the SERVICE button to proceed to the next page.

Press the TEST button to have the MENU mode return to the screen.

⑫ BACKUP DATA CLEAR

Clears the contents of BOOKKEEPING.

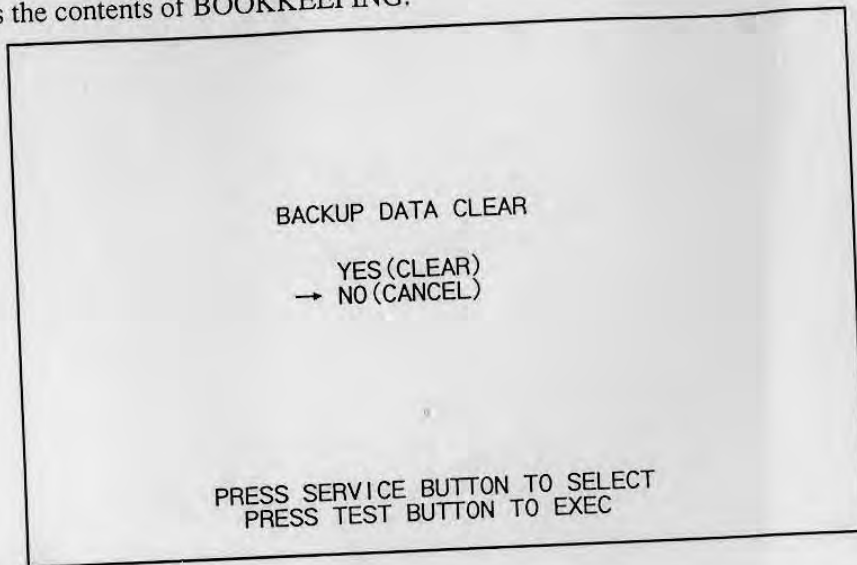


FIG. 3.12 BACKUP DATA CLEAR

When clearing, bring "→" to "YES" by using the SERVICE button and press the TEST button. To have the MENU MODE return to the screen, bring "→" to "NO" and press the TEST button. When clearing has been finished, "COMPLETED" will be displayed. Pressing the TEST button will have the MENU mode return to the screen. The above can also be performed by using the 1P side LEVER (up/down) and the LONG PASS button.

⑬ ALL INITIALIZE

In this TEST mode, the contents of all settings are initialized.

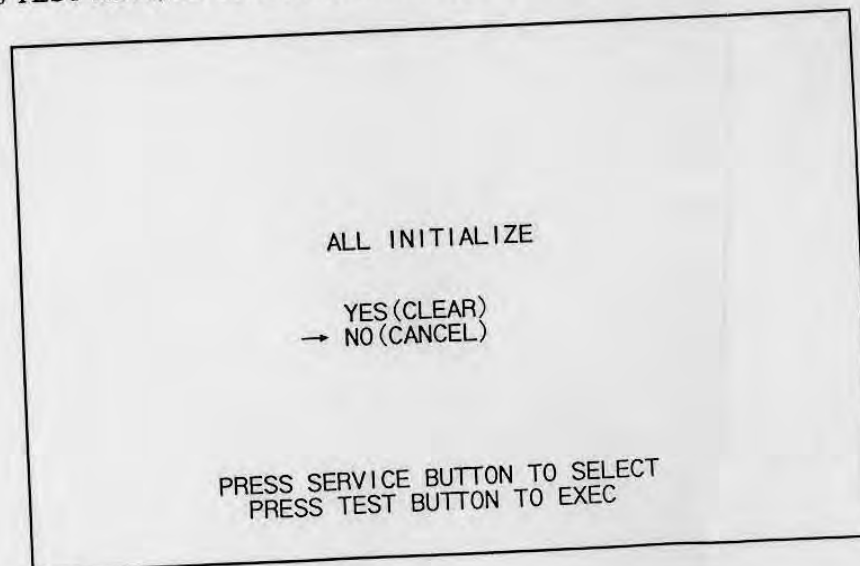


FIG. 3.13 ALL INITIALIZE

When initializing, bring the allow "→" to "YES" by using the SERVICE button and press the TEST button. To have the MENU mode return to the screen, bring "→" to "NO" and press the TEST button. When initialization has been finished, "COMPLETE" will be displayed. Pressing the TEST button will have the MENU return to the screen. The above can also be performed by using the 1P side LEVER (up/down) and the LONG PASS button.

4. 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 Instruction Manual.

833-13089, 833-13089-01
 GAME BD V. STRIKER 2

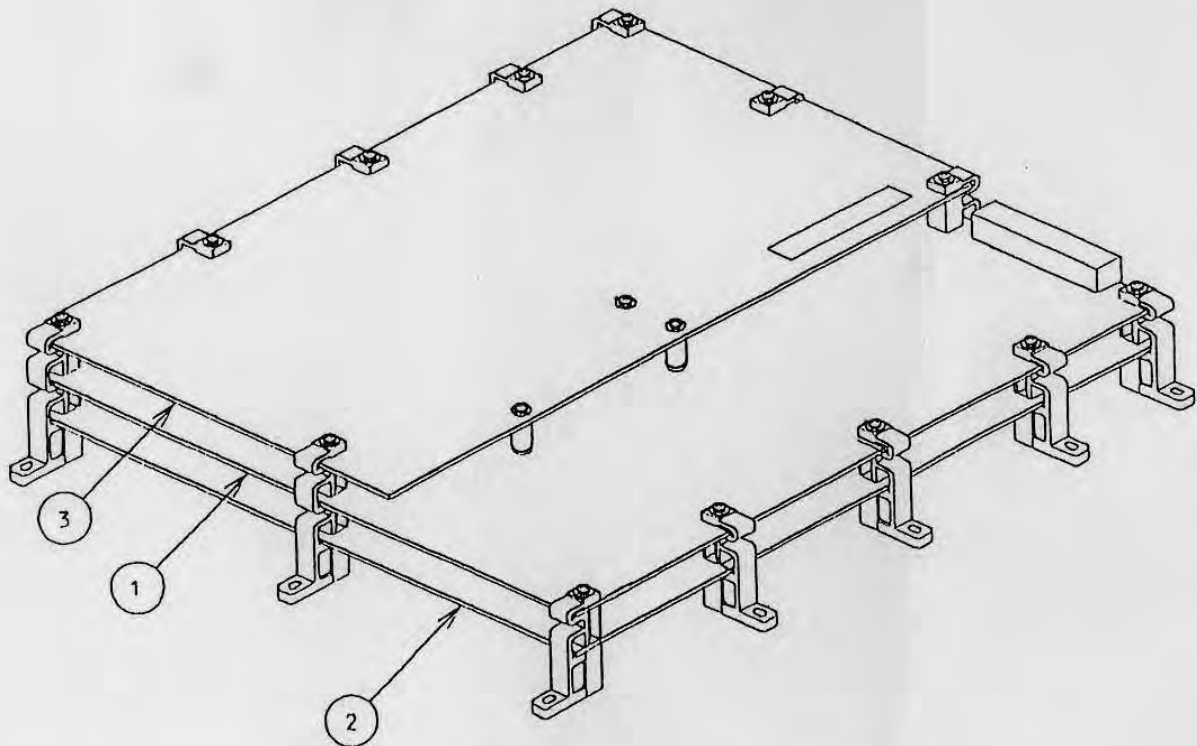
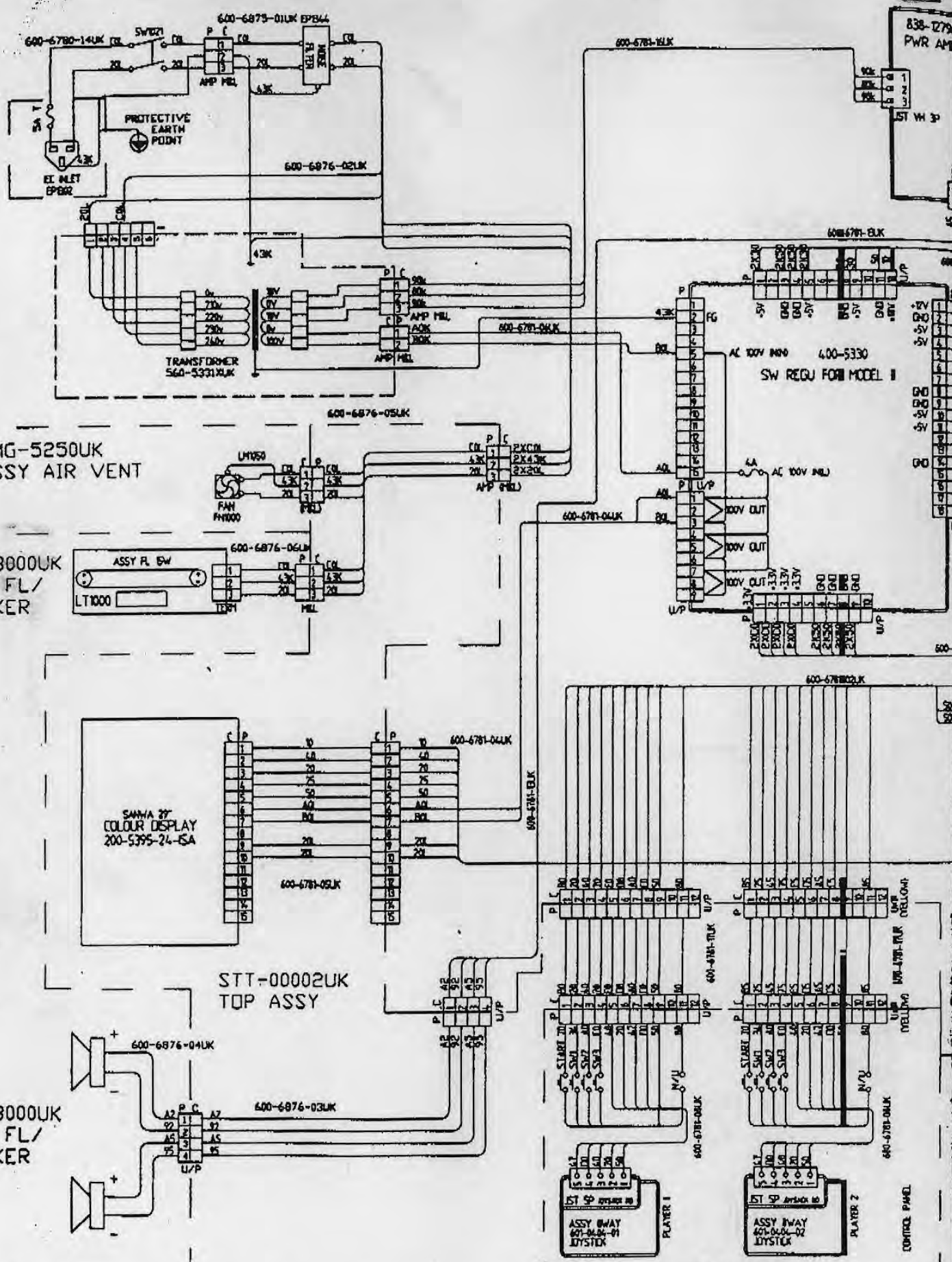


FIG.4 GAME BOARD

No.	PART No.	DESCRIPTION
①	837-12874	MODEL3 STEP1.5 CPU BOARD
②	837-12875	MODEL3 STEP1.5 VIDEO BOARD
③	834-13090, 834-13090-01	ROM BD V.STRIKER 2

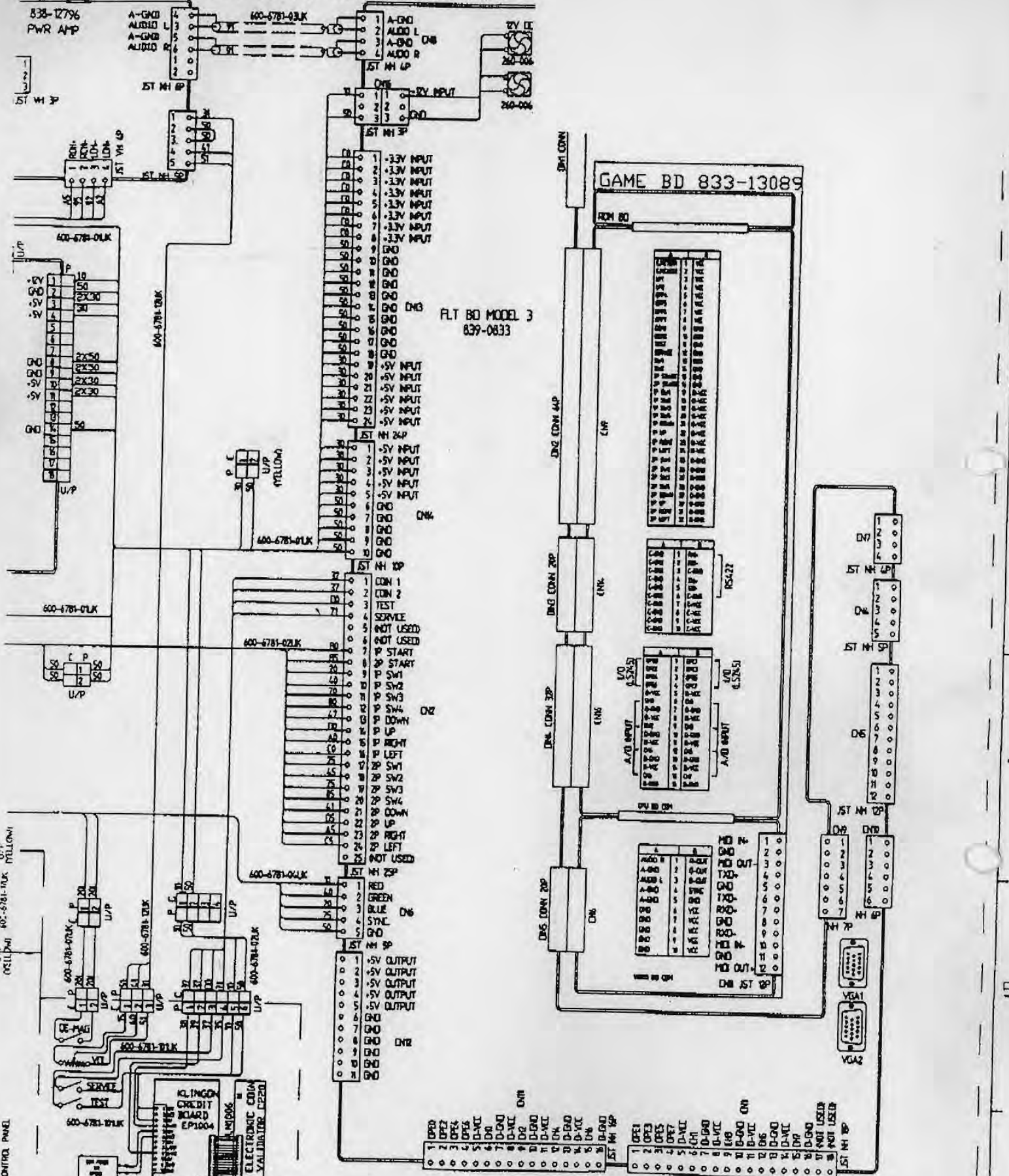


0	BLACK	50	WHITE AWG20	
1	RED	51	WHITE RED	
2	GREEN	52	WHITE GRN	
3	PINK	53	WHITE PINK	
4	GRAY	54	WHITE GRAY	
5	WIRE COLOR	55	WHITE	

STT-00002UK
YGP-ASSY W

18/04/97

STT-1000UK ASSY LOGIC TRAY



SOME MACHINES MAY BE FITTED WITH TWIN MECHANICAL VALIDATORS
STT-1501UK ASSY VTS

DRAWN	CHECKED	D CHECKED	APPROVED
GC			PJE
18/04/97			23/4/97

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SEGA VIRTUA STRIKER 2 U/R

DESCRIPTION STT-00002UK 1/1

DATE: 1/1