

# SERVICE MANUAL



DELUXE



## Ferrari

OFFICIAL LICENSED PRODUCT



**IMPORTANT!**

Before using this product, read this SERVICE MANUAL carefully to understand the contents stated herein.  
After reading this manual, be sure to keep it available nearby the product or somewhere convenient in order to be able to refer to it whenever necessary.

Manufactured in the UK by

## SEGA



MANUFACTURING DIVISION (U.K.)

# CONTENTS

1.	BEFORE USING THIS PRODUCT .....	4
1.1.	Inspections Immediately After Transporting The Product To The Location .....	5
2.	INTRODUCTION TO THIS SERVICE MANUAL .....	7
3.	INSTALLATION AND SERVICE INSTRUCTIONS .....	8
3.1.	Handling And Installation Precautions .....	8
3.2.	Coin Handling.....	9
3.3.	Name of Parts .....	9
3.4.	Accessories .....	10
3.5.	How To Use The Chihiro Board Carton Box.....	11
3.5.1.	Instructions.....	11
3.6.	How To Use The Carton Box (GD-ROM Drive).....	13
3.7.	Assembly Instructions .....	14
3.8.	Assembling The POP To Billboard .....	16
3.9.	Assembling The Billboard To PTV .....	17
3.10.	Assembling PTV To Main Cabinet .....	18
3.11.	Assembling The Coin Tower .....	20
3.12.	Securing In Place .....	21
3.13.	Coin Handling Installation.....	22
3.13.1.	Wiring connections.....	23
3.14.	Turning On The Power .....	24
3.15.	Assembly Check.....	25
3.15.1.	Memory Test .....	25
3.15.2.	CRT Test.....	26
3.16.	Moving The Machine .....	27
3.17.	Fuses.....	28
3.18.	Maintenance .....	29
3.18.1.	Handle Mecha .....	30
3.18.1.1.	Access To The Handle Mecha's VR .....	30
3.18.1.2.	Replacing and Adjusting The Handle Mecha's V.R. ....	30
3.18.1.3.	Adjusting the VR.....	31
3.18.1.4.	Replacing the VR .....	31
3.18.1.5.	Greasing.....	32
3.18.2.	Accelerator & Brake .....	33
3.18.2.1.	Removing the Accelerator & Brake .....	33
3.18.2.2.	Adjusting the V.R.....	34
3.18.2.3.	Replacing the V.R. ....	35
3.18.2.4.	Greasing.....	35
3.18.3.	Paddle Shift .....	36
3.18.3.1.	Replacing Paddle Shift Microswitches .....	36
3.18.4.	Replacement Of Fluorescent And Other Lamps.....	38
3.18.4.1.	Fluorescent Lamp Replacement .....	38
3.18.4.2.	Start / View Change Bulb Replacement.....	39
3.18.4.3.	Brake Light Bulb Replacement.....	40
3.18.4.4.	LED Strip Replacement.....	40
3.18.5.	Cleaning The Cabinet Surfaces .....	41
3.18.6.	Seat (Greasing To Seat Rail Portion) .....	41
3.19.	Troubleshooting.....	42
3.19.1.	Troubleshooting (When No Error Message Is Shown) .....	42
3.20.	Game Board .....	45
3.20.1.	Removing The Game Board Assembly.....	45
3.20.2.	Removing The GD-ROM Drive .....	46
3.20.3.	Removing The Game Board .....	47
3.20.4.	Composition of the Game Board.....	48
3.20.4.1.	Replacing The Main Board Battery .....	49
3.20.4.2.	Replacing The Media Board Battery Pack.....	50
3.20.5.	Shipping The Game Board.....	53
3.20.6.	Shipping The Media Board.....	55
3.20.7.	Shipping The GD-ROM Drive.....	56
3.20.8.	Machine Set Up.....	57
3.20.8.1.	Network Play .....	58
3.21.	Periodic Check and Inspection.....	63

4.	GAME DESCRIPTION.....	64
4.1.	Basic Controls.....	65
4.2.	Game Outline.....	66
4.3.	Setup Screen Order And Contents.....	67
4.3.1.	Versus Mode Entry.....	67
4.3.1.1.	Closing Versus Mode Entry.....	67
4.3.2.	Single Player Setup.....	68
4.3.2.1.	(1) Player's Car Selection.....	68
4.3.2.2.	Changing the Car Colour.....	68
4.3.2.3.	Transmission Selection.....	69
4.3.2.4.	Game Mode Selection.....	70
4.3.2.5.	Game Mode Selection – 15 Continuous Course Mode.....	71
4.3.2.6.	Settings Selection (Time Attack Mode only).....	72
4.3.2.7.	BGM Selection.....	73
4.3.3.	Versus Play Setup.....	75
4.3.3.1.	Versus Stage Selection.....	75
4.3.3.2.	Versus Stage Selection (15-Continuous Course Mode).....	76
4.3.3.3.	Player's Car Selection.....	77
4.3.3.4.	Transmission Selection.....	78
4.3.3.5.	BGM Selection.....	78
4.3.4.	Special Controls.....	78
4.4.	Game Instructions.....	79
4.4.1.	Common Features in All Modes.....	79
4.4.1.1.	Display Breakdown (All Modes).....	79
4.4.1.2.	Game Controls (All Modes).....	80
4.4.2.	Single Player: OutRun Mode.....	81
4.4.2.1.	Display Breakdown.....	81
4.4.2.2.	Game Instructions.....	81
4.4.3.	Single Player: Heart Attack Mode.....	82
4.4.3.1.	Display Breakdown.....	82
4.4.3.2.	Game Instructions.....	82
4.4.4.	Single Player: Time Attack Mode.....	83
4.4.4.1.	Display Breakdown.....	83
4.4.4.2.	Game Instructions.....	83
4.4.5.	Versus Play.....	85
4.4.5.1.	Display Breakdown.....	85
4.4.5.2.	Game Instructions.....	85
4.4.6.	15-Continuous Course Mode.....	86
4.4.6.1.	Display Breakdown.....	86
4.4.6.2.	Game Instructions.....	86
4.4.7.	Game Pause.....	87
4.5.	Name Entry And Internet Ranking.....	88
4.5.1.	1. Name Entry.....	88
4.5.2.	Internet Ranking.....	89
4.6.	Character Introductions.....	90
5.	MAINTENANCE INSTRUCTIONS.....	91
5.1.	Explanation of Test and Data Display.....	91
5.2.	VTS Assembly.....	92
5.3.	System Test Mode.....	93
5.3.1.	System Test Menu Mode.....	93
5.3.1.1.	Media Board Test.....	94
5.3.1.2.	System Information.....	95
5.3.1.3.	JVS Test.....	96
5.3.1.4.	Sound Test.....	98
5.3.1.5.	C. R. T. Test.....	99
5.3.2.	System Assignments.....	100
5.3.2.1.	Coin Assignments.....	100
5.3.2.2.	Coin/Credit Setting (Coin Chute Common Type).....	101
5.3.2.3.	Coin/Credit Setting (Coin Chute Individual Type).....	102
5.3.2.4.	Manual Setting.....	103
5.3.2.5.	Sequence Setting.....	104
5.3.2.6.	Bookkeeping.....	105
5.3.2.7.	Backup Data Clear.....	107

5.3.2.8.	ROM BD Test .....	108
5.3.2.9.	Clock Setting.....	108
5.4.	Game Test Mode .....	109
5.4.1.	Input Test .....	110
5.4.2.	Output Test .....	111
5.4.3.	Drive Board Test .....	112
5.4.4.	Game Assignments.....	113
6.	DESIGN RELATED PARTS .....	116
7.	PARTS LIST .....	117
7.1.	Assembly Structure .....	117
7.2.	ORP-0000UK TOP ASSY OUTFUN SPECIAL TOURS DX.....	118
7.3.	ORP-1000UK ASSY PTV.....	119
7.4.	NCR-0600UK ASSY FRONT PANEL .....	120
7.5.	ORP-2000UK ASSY MAIN CABI .....	121
7.6.	ORP-2050UK ASSY FRONT CABI.....	122
7.7.	ORP-2070UK ASSY AC UNIT .....	125
7.8.	ORP-2027UK CONTROL PANEL COVER R .....	126
7.9.	ORP-2028UK ASSY BULK BOARD COVER .....	127
7.10.	ORP-2080UK ASSY CTRL PANEL COVER F .....	128
7.11.	ORP-2350UK ASSY REAR CABI .....	129
7.12.	ORP-3020UK ASSY BASE BOX.....	131
7.13.	ORP-2260UK FLOOR CENTRE ASSY.....	132
7.14.	ORP-4000UK ASSY MAIN BD .....	133
7.15.	ORP-6001UK ASSY CABLE RUN .....	134
7.16.	ORP-4100UK ASSY AMP BD .....	135
7.17.	ORP-4200UK ASSY ELEC BD .....	136
7.18.	ORP-2400UK ASSY SEAT.....	137
7.19.	ORP-3000UK ASSY FRAME BASE.....	139
7.20.	ORP-INST-D ASSY INSTALLATION KIT ORP DX.....	140
7.21.	ORP-0500UK ASSY BILLBOARD.....	141
7.22.	ORP-3100UK ASSY COIN CHUTE TOWER.....	142
8.	APPENDIX A - ELECTRICAL SCHEMATIC .....	143
8.1.	WIRE COLOURS .....	143
8.2.	ELECTRICAL SCHEMATIC.....	143

# 1. BEFORE USING THIS PRODUCT

To ensure the safe usage, be sure to read the following before using the product. The following instructions are intended for the use of QUALIFIED SERVICE PERSONNEL ONLY.

If any activity is carried out on the product, this should be done only after carefully reading and sufficiently understanding the instructions.

Only qualified service personnel should carry out maintenance on the product.

Depending on the potential risk, terms such as "WARNING!" "CAUTION" and "IMPORTANT!" are used where an explanation is given that requires special attention. SEGA is not responsible for injury or damage caused by use in a manner contrary to the instructions given in this document.

In order to prevent accidents warning stickers and printed instructions are applied in the places where a potentially hazardous situation relating to the product could arise. Be sure to comply with these warnings.



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



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



This is cautionary information that should be complied with when handling the product. Indicates that mishandling the product by disregarding this will cause a potentially hazardous situation that may not result in personal injury but could damage the product.

Be sure to turn off the power and disconnect from the mains supply before working on the machine.

Ensure that the correct fuses are fitted to the machine. Details of these are enclosed in the Service Manual.

Ensure that only qualified Service Engineers perform any maintenance work on the machine.

Specification changes, removal of equipment, conversion and/or additions not designated by SEGA are not permitted and will invalidate this product's CE conformity.

Warning labels or safety covers for personal protection etc, are component parts of the product. A potential hazard will be created if the machine is operated while any parts have been removed. Do not operate the product if any doors, lids or protective covers become damaged or lost. SEGA is not liable in any whatsoever for any injury and/or damage caused by specification changes not designated by SEGA.

Before installing the product, check for the Electrical Specification Sticker, SEGA products have a sticker on which the electrical specifications are detailed. Ensure that the product is compatible with the power supply voltage and frequency requirements of the location in which the machine is to be installed.

Install and operate the machine only in places where appropriate lighting is available, allowing warning stickers to be clearly read.

To ensure maximum safety for customers and operators, stickers and printed instructions describing potentially hazardous situations are applied to potentially hazardous locations. Ensure that the product's operating location has sufficient lighting to allow any warnings to be read. If any sticker or printed warning is removed or defaced, do not operate the machine until an identical item has replaced it.

Exercise great care when handling the monitor (applies only to product with monitor). Some of the monitor (TV) parts are subject to high-tension voltage. Even after turning the power off some components are liable to high-tension voltage. Only qualified service engineers should perform monitor repair and replacement.

In cases where commercially available monitors and printers are used, only the items relating to this product are contained in this manual. Some commercially available equipment will have functions and reactions not referred to in this manual. This manual should be read in conjunction with the specific manufacturer's manual for such equipment.

Descriptions contained herein may be subject to change without prior notification.

The contents described herein are fully prepared with due care. However, should any question arise or errors be found please contact **SEGA AMUSEMENTS EUROPE LTD.**

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The contents described herein are fully prepared with due care. However, should any question arise or errors be found please contact SEGA.

### **1.1. *Inspections Immediately After Transporting The Product To The Location***



- Only QUALIFIED SERVICE PERSONNEL should carry out inspection.

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

- Are there any dented parts or defects (cuts, etc.) on the external surfaces of the product.?
- Are castors and leg adjusters present and undamaged?
- Do the power supply voltage and frequency requirements meet with the local supply?
- Are all wiring connectors correctly and securely connected? Unless connected in the correct direction, connector connections cannot be made successfully. Do not insert connectors forcibly.
- Are all IC's of each IC BD firmly inserted?
- Does the power cord have any cuts or dents?
- Do fuses meet the specified rating?
- Are such units such as monitors, control equipment, IC BD, etc. firmly secured?
- Are all earth wires connected?
- Are all accessories available?
- Can all doors and lids be opened with the accessory keys and/or tools?

### CONCERNING THE STICKER DISPLAY

SEGA product has stickers describing the product manufacture number (Serial Number) and electrical specification. If you require service assistance you will require the Serial Number. Identical machines may have different parts fitted internally. Only by quoting the Serial Number will the correct parts be identified.

### CONCERNING WARNING STICKERS

SEGA product has warning displays on stickers, labels or printed instructions adhered/attached to or incorporated in the places where hazardous situations can arise. The warning displays are intended for the accident prevention of customers and service personnel.



SPECIFICATIONS	
Installation Space:	1280 x 2850 mm
Height:	2500mm (with POP)      2050mm (without POP)
Rated Voltage:	230VAC
Rated Current:	3A
Operating Temperature Range	5-30°C

Note: Descriptions in this manual are subject to change without prior notice.

## **2. INTRODUCTION TO THIS SERVICE MANUAL**

SEGA ENTERPRISES LTD., supported by its experience in electronic high technology of VLSI's, microprocessors etc. and with a wealth of experience, have for more than 30 years been supplying various innovative and popular games to the world market. This Service Manual is intended to provide detailed descriptions together with all the necessary information covering the general operation of electronic assemblies, electromechanicals, servicing controls, spare parts, etc. as regards **OUTRUN 2 SPECIAL TOURS DELUXE**, a new SEGA product. This manual is intended for those who have knowledge of electricity and technical expertise especially in IC's, CRT's, microprocessors etc. Carefully read this manual to acquire sufficient knowledge before working on the machine. Should there be any malfunction, non-technical personnel should under no circumstances touch the interior systems. Should such a situation arise contact the nearest branch listed below or our head office.

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### 3. INSTALLATION AND SERVICE INSTRUCTIONS



- Only QUALIFIED SERVICE PERSONNEL should carry out installation and commissioning.

#### 3.1. Handling And Installation Precautions

When installing or inspecting the machine, be very careful of the following points and pay attention to ensure that the player can enjoy the game safely.

**The game must NOT be installed under the following conditions:**

- Outside, the game is designed for indoor use only.
- In areas directly exposed to sunlight, high humidity, dust, excessive heat or extreme cold.
- In locations that would present an obstacle in the case of an emergency i.e. near fire equipment or emergency exits.
- On unstable surfaces or surfaces subject to vibration.
- Where liquids, other than routine cleaning, may come into contact with the game.

**Important:**

- This machine should only be installed by Qualified Service Personnel.
- Be sure to switch the supply power OFF and remove the mains supply plug from the machine before any work is carried out on the machine.
- Do not attempt to repair the PCB's (Printed Circuit Boards) yourself. This will void the warranty. The PCB's contain static sensitive devices that could be damaged.
- Always return a faulty part to your distributor with adequate packaging and protection.
- When removing the plug from the mains always grasp the plug not the cable.
- Do not use a fuse that does not meet the specified rating.
- Make sure all connections are secure before applying power.



- Ensure that the mains lead is not damaged. If the mains lead is damaged in any way there could be a danger of electric shock or a fire hazard.
- Ensure that the power supply is fitted with circuit protection. Using the power supply without circuit protection is a fire hazard.

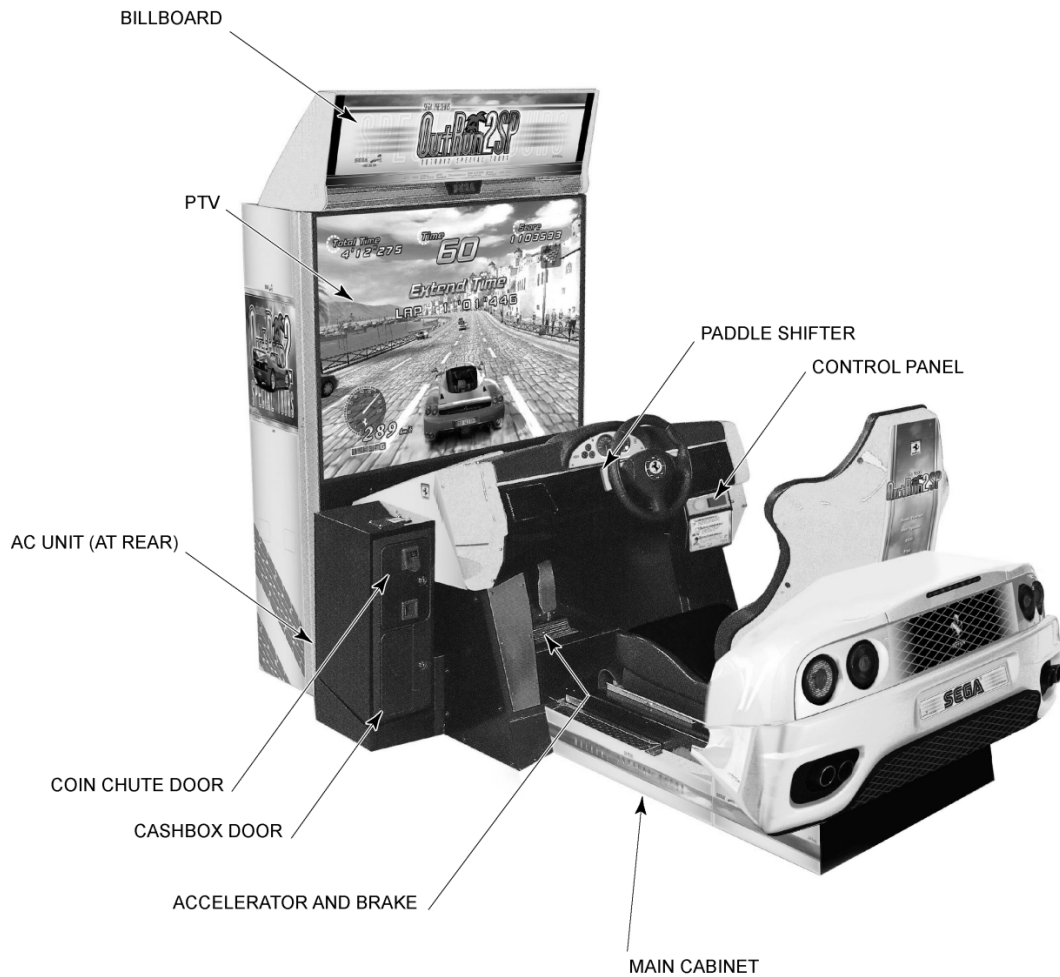
### 3.2. Coin Handling

Standard Sega machines are fitted with a SR3 coin mechanism, however, as a service to our customers Sega machines can be supplied with no coin mechanism or door allowing the customer to fit a coin handling option from the approved list. Fit only the coin handling arrangements detailed below and follow the instructions provided in Section 3.13. Failure to fit the coin handling options detailed or failure to follow the installation instructions will render the machine, under the CE marking directive, void.

Approved coin handling options:

- Generic mechanical
- Mars (MS111B1 and ME115)
- SECI RM4-G20

### 3.3. Name of Parts



	Width (mm)	Length (mm)	Height (mm)
PTV	1220	600	1700
MAIN CABINET	1280	2000	1200
BILLBOARD	1220	400	350 (POP 450)
When Assembled	1280	2700	2050 (POP 2500)

### 3.4. Accessories

The machine is supplied with an installation kit. Please ensure the following parts are supplied:

ITEM	PART NO.	QTY	DESCRIPTION
1	ORP-3100UK	1	ASSY COIN CHUTE TOWER
2	ORP-0500UK	1	ASSY BILLBOARD
4	NCR-0002	2	JOINT BRKT CENTER
6	ORP-0512UK	1	POP PANEL ORP DX
7	ORP-0513UK	1	POP BRKT
8	ORP-3011UK	1	TOWER BASE
9	ORP-0001UK	1	JOINT BRKT FRONT CABI L
10	ORP-0002UK	1	JOINT BRKT FRONT CABI R
20	422-0932DUK	1	PLAY INSTR SH ORP DX MULTI
23	440-CS0186UK	1	STICKER C EPILEPSY MULTI
201	030-000830-SB	14	M8X30 BLT W/S BLK
202	068-852216-0B	14	M8 WSHR 22OD FLT BLK
203	060-F00800	3	M8 WSHR FORM A FLT PAS
207	060-F00600	2	M6 WSHR FORM A FLT PAS
209	050-F00600	2	M6 NUT FLG SER PAS
212	030-000860-SB	3	M8X60 BLT W/S BLK
213	000-P00516-WB	2	M5X16 MSCR PAN W/FS BLK
214	000-P00412-WB	6	M4X12 MSCR PAN W/FS BLK
215	068-441616-0B	6	M4 WSHR 16OD FLT BLK
401	PK0369	1	INST KIT BOX ORP DX
402	OS1019	3	SELF SEAL BAG 9X12.3/4
408	509-5387	1	SW MICRO TYPE (AH71557K)
409	220-5484	1	VOL CONT B-5K OHM
411	600-7269-0500	1	LAN CABLE 500CM
412	420-6830-01UK	1	SERVICE MANUAL ORP DX
413	540-0006-01	1	WRENCH M4 TMP PRF
416	540-0007-01	1	WRENCH M5 TMP PRF
417	540-0009-01	1	WRENCH M8 TMP PRF
418	SAECE-xxx	1	DECLARATION OF CONFORMITY
Item 413-417 - Tamper-proof TORX wrench.			
			

### 3.5. How To Use The Chihiro Board Carton Box

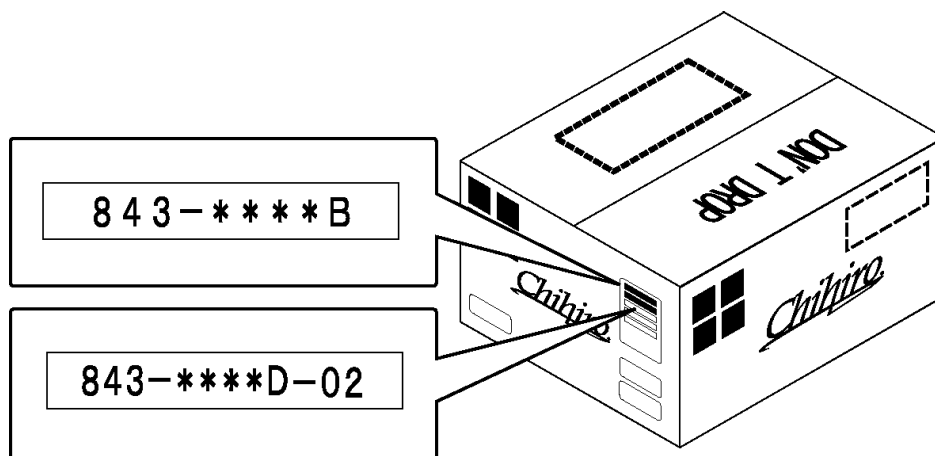
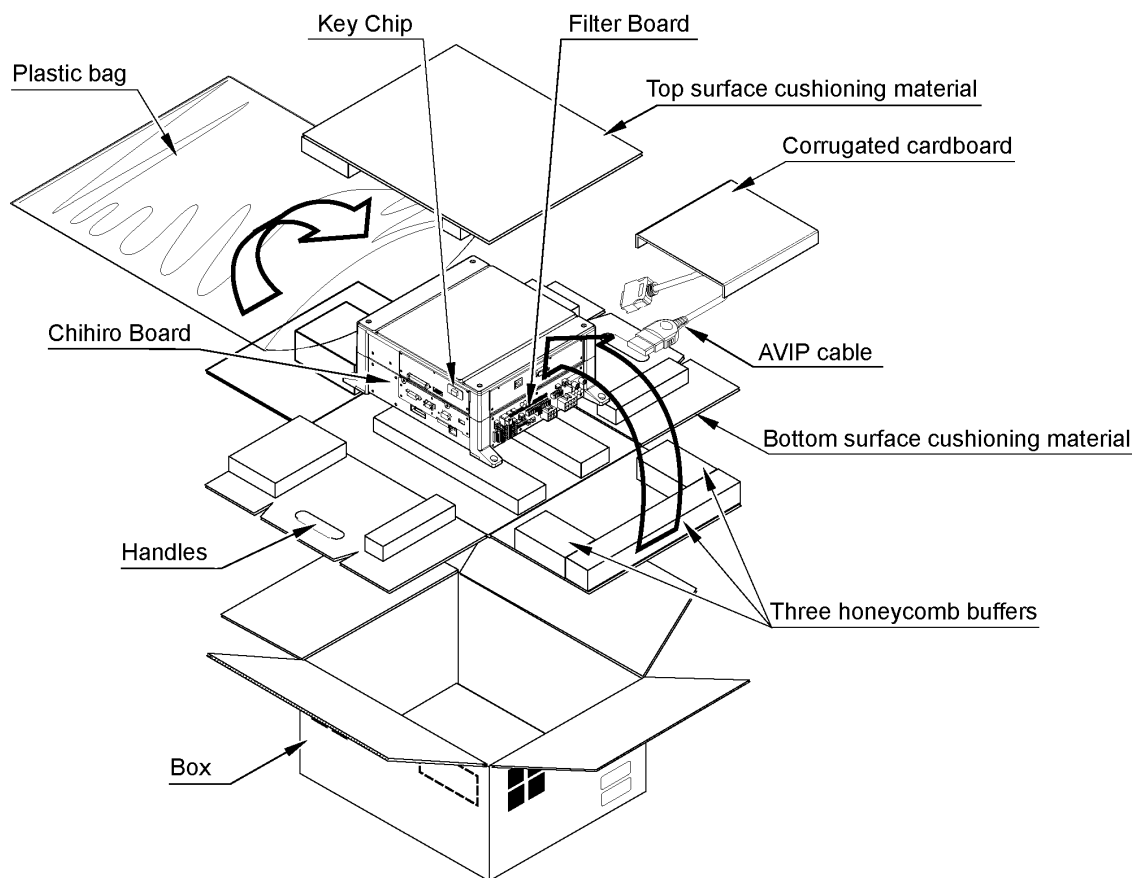


Replacement or repair of the Game Board (Chihiro) for this product should be undertaken at the appropriate repair centre. Be sure to follow the specifications below when requesting repairs/sending the board to the repair centre. Not following the specifications may result in the board not being accepted or in extra charges being made.

- Put the game board in the carton box as is. Do not carry out any disassembly or part removal other than that specified.
- Follow the procedure and instructions regarding direction below when placing the Game Board in the carton box.
- When packing the game board with the Media Board attached, do not remove the Key Chip.
- When packing the game board with the Media Board detached, be sure to include the AVIP Cable.
- When packing, attach the accessory stickers in the specified places on the Game Board and carton box.

#### 3.5.1. Instructions

1. Wrap the Chihiro Board in a plastic bag.
2. Place it on top of the bottom surface cushioning material. Turn the Filter Board to face the side with the three honeycomb buffers. Placing it in the opposite direction may cause damage to the Filter Board.
3. Insert corrugated cardboard into the space between the lateral honeycomb buffers of the bottom surface cushioning material and stow the AVIP cable inside.
4. Place the Chihiro Board wrapped in the bottom surface cushioning material into the carton box. Use the handles on the bottom surface cushioning material.
5. Place the upper surface cushioning material on top of the Chihiro Board. Be sure to align it in the right direction, as it will not fit otherwise.
6. Close the top of the carton box and seal it tightly with adhesive tape.

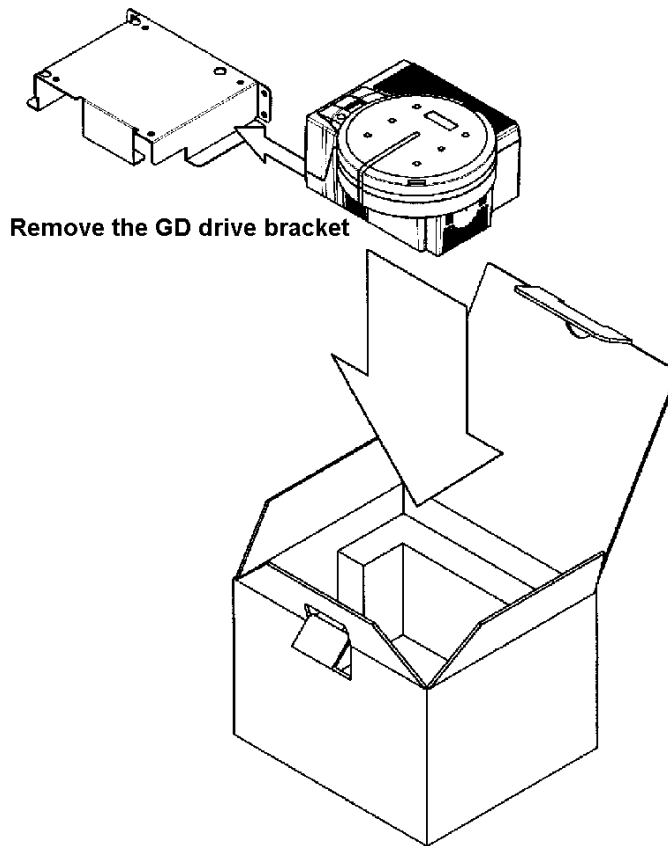


### 3.6. How To Use The Carton Box (GD-ROM Drive)



When you want to order for replacing or repairing service of the GD-ROM drive that is used by the product, pack it in a carton box as instructed below, and then deliver the carton box to a service agent. If you do not observe the instruction, your order may not be accepted or may be charged additionally. If you handle the GD-ROM drive differently from the following instructions, its components may be damaged.

- Contain the GD-ROM drive in a dedicated carton box. Do not disassemble it or remove any part from it unless otherwise instructed.
- Before containing the GD-ROM drive in a dedicated carton box, attach the GD-ROM drive lid (DISC LID) onto the drive and fix the lid with a screw.
- Before containing the GD-ROM drive in a dedicated carton box, remove the GD-ROM disc from the drive. Do not attempt to move the GD-ROM drive with a GD-ROM disc inside.
- Before containing the GD-ROM drive in a dedicated carton box, remove the GD-ROM drive bracket. Carefully keep the GD-ROM drive bracket and the 4 set screws, because they will be reused.
- When inserting the GD-ROM drive into a dedicated carton box, be careful about an inserting direction as illustrated below.
- The packing materials in a carton box are used as a cushion. Use them always when inserting the GD-ROM drive into a dedicated carton box. Do not bend them.



### 3.7. Assembly Instructions



- 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.
- Do not carelessly push the PTV. Pushing the PTV carelessly can cause the PTV to fall down.
- 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.
- Do not use this product with connectors other than those that were connected and used with the Game Board at the time of shipping. Do not carelessly connect wires to connectors that were not used at the time of shipping, as this may cause overheating, smoke or fire damage.



- When handling plastic parts, use care. Do not give a shock or apply excessive load to the fluorescent lamps and plastic parts. Failure to observe this can cause parts damage, resulting in injury due to fragments, cracks and broken pieces.
- 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 assembly work, follow the procedure in the following 6 item sequence

**STEP 1 ASSEMBLING POP TO THE BILLBOARD**

**STEP 2 ASSEMBLING THE BILLBOARD TO PTV**

**STEP 2 ASSEMBLING PTV TO MAIN CABINET**

**STEP 3 ASSEMBLING THE COIN TOWER**

**STEP 4 SECURING IN PLACE**

**STEP 5 COIN HANDLING INSTALLATION**

**STEP 6 TURNING ON THE POWER**

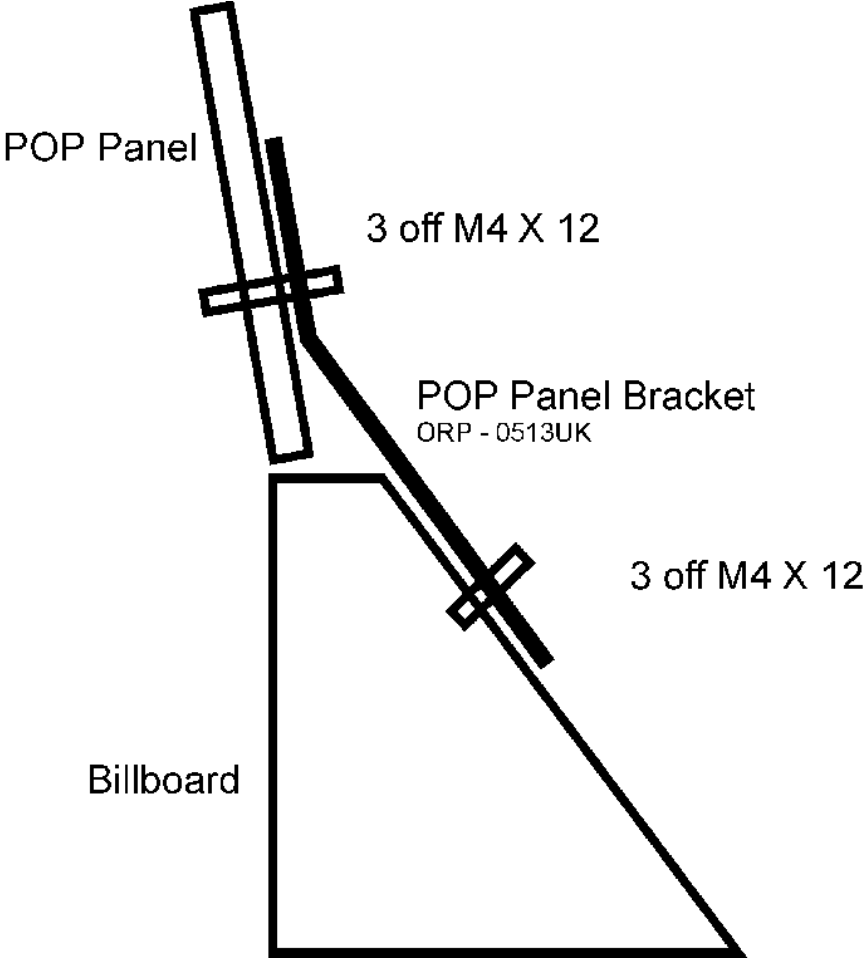
**STEP 7 ASSEMBLY CHECK**

Note that the parts contained within the installation kit are required for the assembly work.



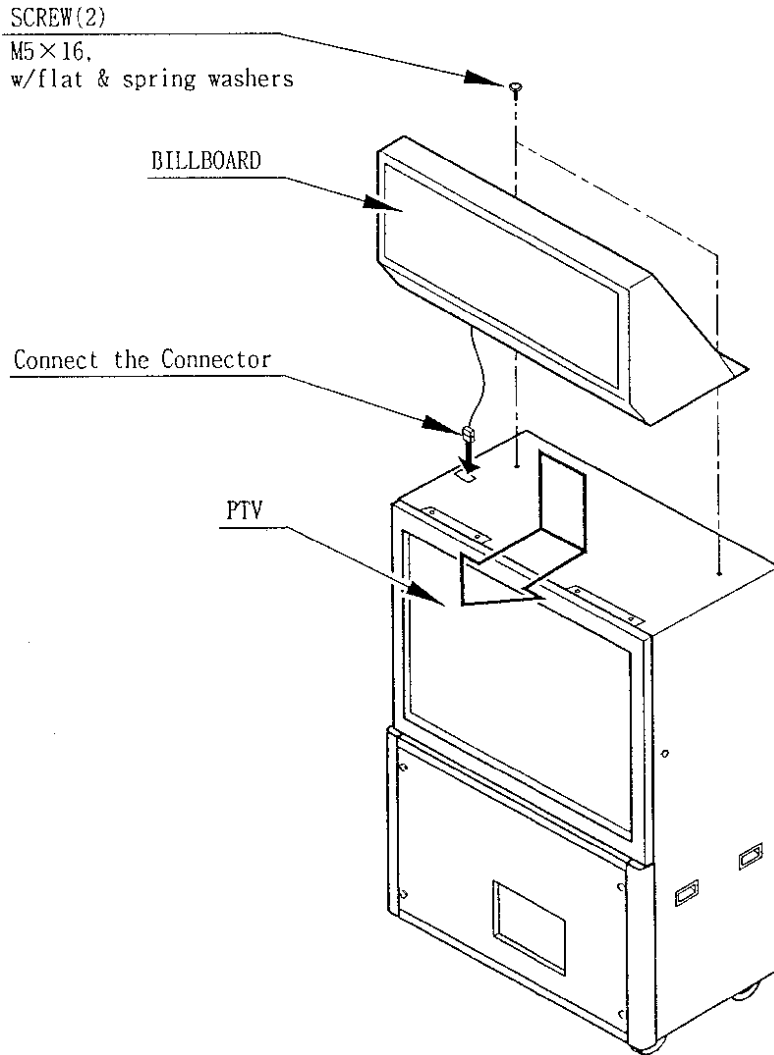
**3.8. Assembling The POP To Billboard**

- 1. Fix the POP Panel Bracket to the Billboard using three M4 x 12 screws with black washers on front.
- 2. Fix the POP Panel to the POP Panel Bracket using three M4 x 12 screws with black washers.



### 3.9. Assembling The Billboard To PTV

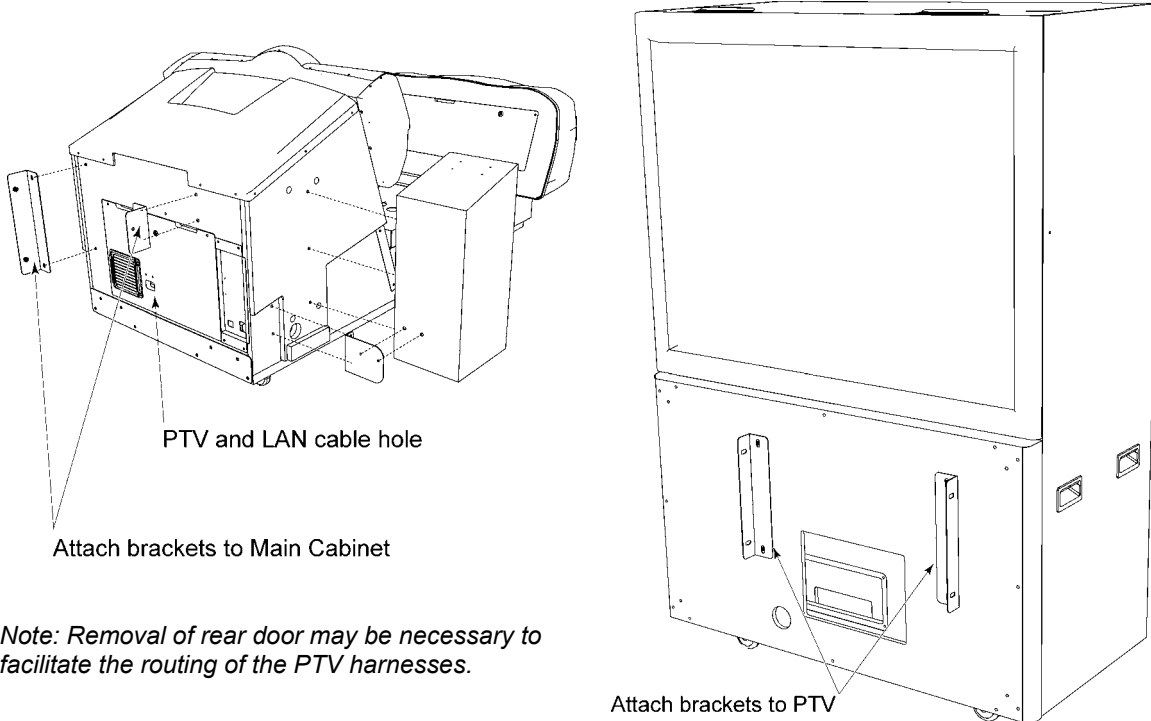
1. The Billboard should be installed using three or more workers. Two workers should support the Billboard on top of the PTV in an inclined position, while a third worker makes the Billboard power connection. A suitable step should be used to ease access to the Billboard power connection.
2. Engage the Billboard onto the brackets at the front, and secure using the two screws provided at the rear.



### 3.10. Assembling PTV To Main Cabinet

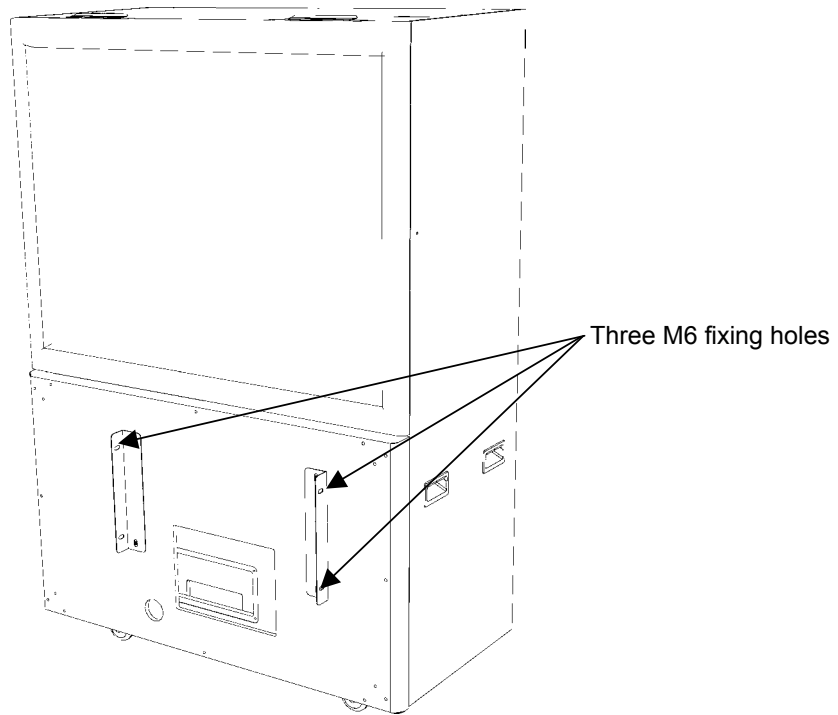
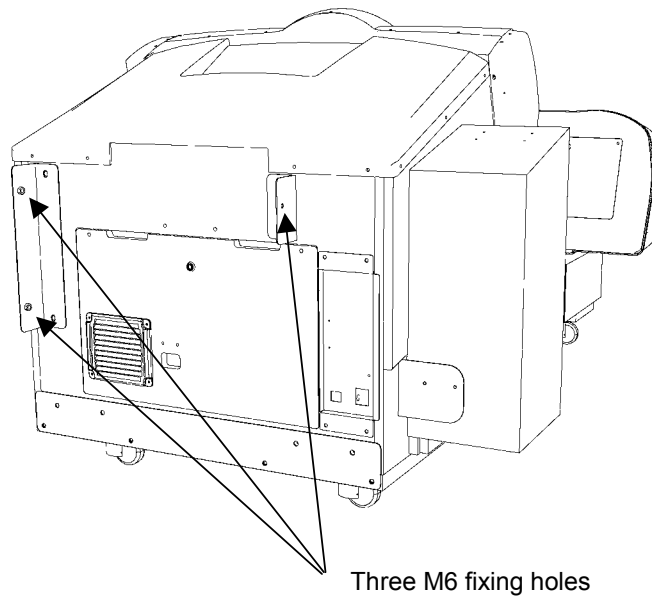
Before you can connect the PTV and Main Cabinet Assembly together, you have to fix two connection brackets to each assembly.

1. Fix the connection brackets to the Main Cabinet Assembly using four M8 screws.
2. Fix the connection brackets to the PTV using four M8 screws.



*Note: Removal of rear door may be necessary to facilitate the routing of the PTV harnesses.*

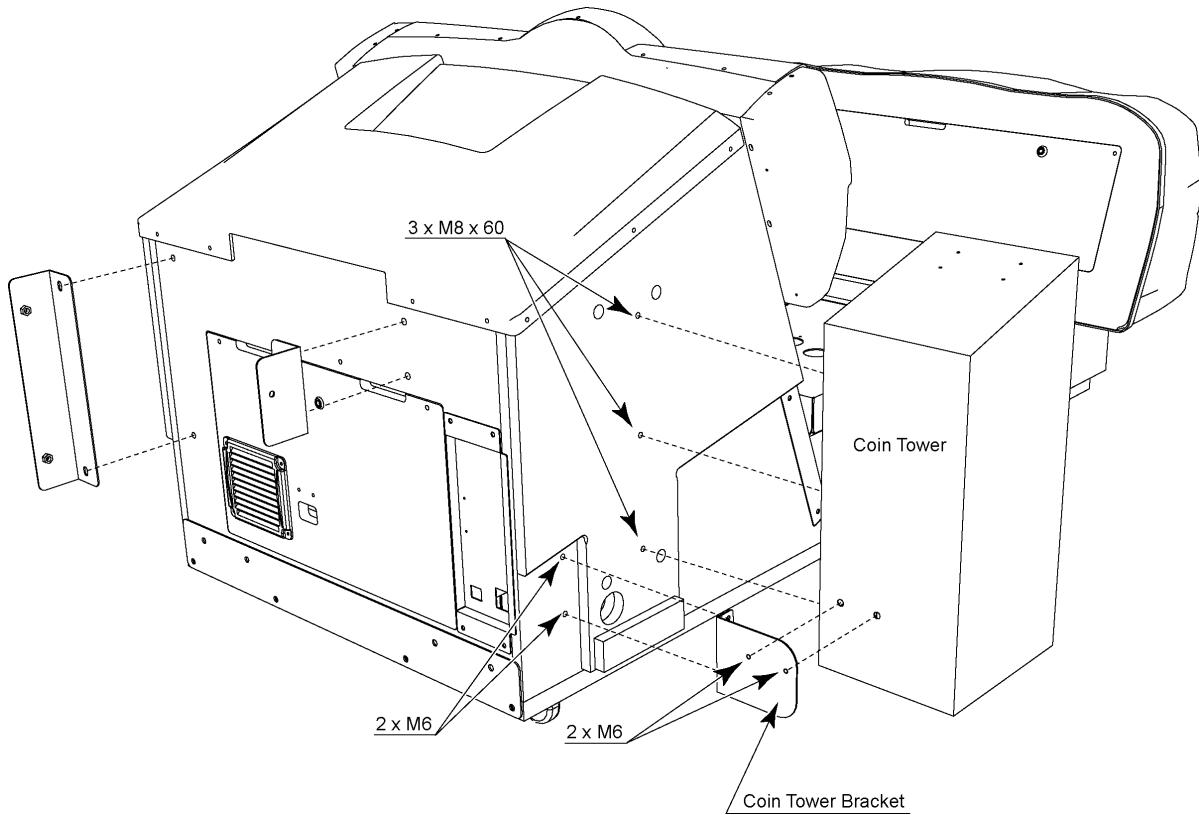
3. Move the Main Cabinet and PTV together, close enough to facilitate connection of the video and power harnesses (stored in the Main Cabinet). Take great care when manoeuvring the PTV as it can be unstable when not secured to the Main Cabinet.
4. Connect these harnesses to their respective sockets on the Connector Panel on the front of the PTV. Observe correct orientation of the connectors when inserting, to avoid damage. Fasten the fixing screws on the video connector once inserted.



5. Carefully slide the Main Cabinet and PTV together until the joint rackets overlap.
6. Use three M8 bolts to lock the brackets together.

### 3.11. Assembling The Coin Tower

1. Fix the Coin Tower Bracket to the Main Cabinet Assembly using two M6 screws.



2. Fix the Coin Tower to the Main Cabinet Assembly using three M8 screws.
3. Fix the Coin Tower to the Coin Tower Bracket using two M6 nuts and washers.

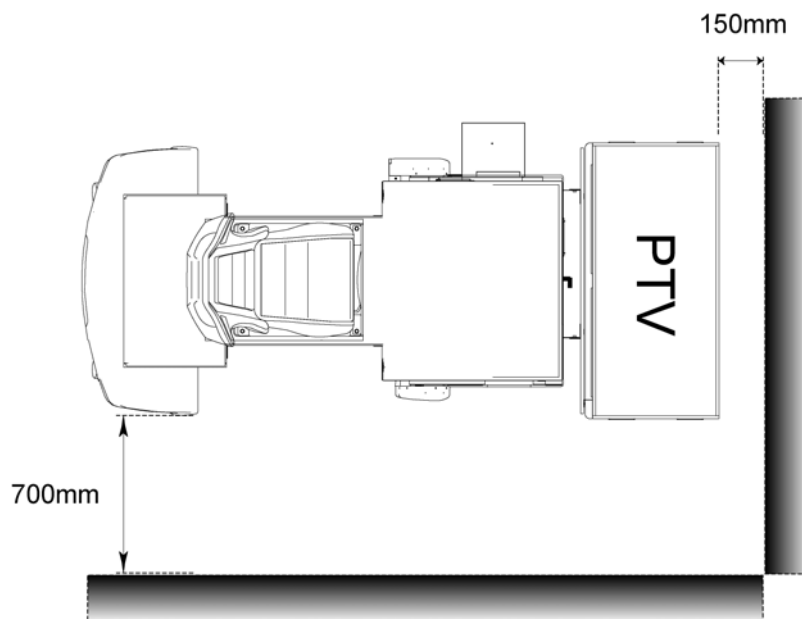
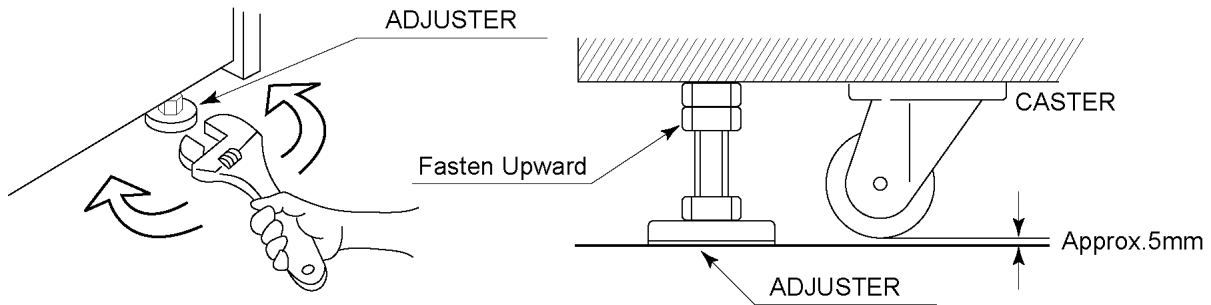
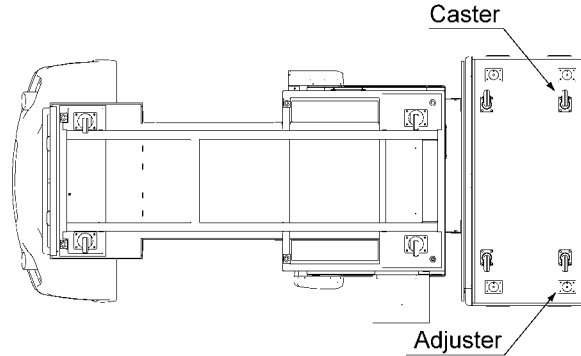
### 3.12. Securing In Place



- 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 8 casters (4 for PTV Base, 4 for MAIN CABINET) and 10 Adjusters (4 for PTV Base, 6 for MAIN CABINET). 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. When contacting the adjusters of the right and left fences onto the floor, manually turn them.
3. After making adjustment, fasten the adjuster nut upward and secure the height of adjuster.



Leave a gap for access and ventilation.

### **3.13. Coin Handling Installation**

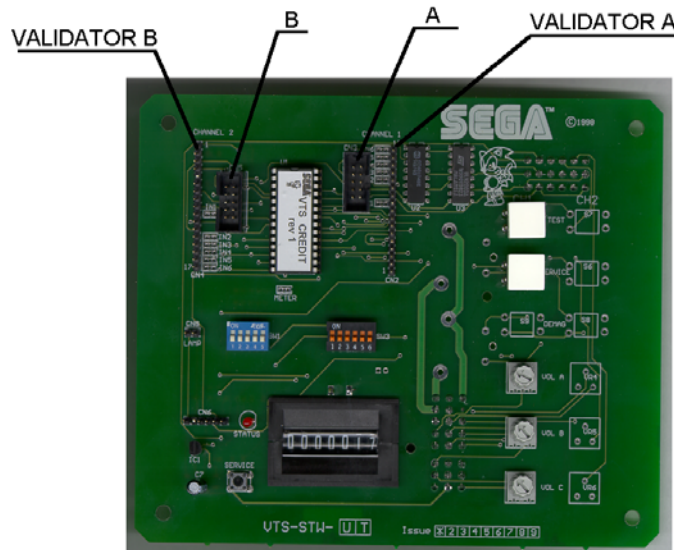


- Only QUALIFIED SERVICE PERSONNEL should carry out this operation.

When fitting the coin mechanism to the door please refer to the specific manufacturers installation instructions for that coin mechanism.

### 3.13.1.Wiring connections

COIN MECH	LOOM	INSTALLATION
C220B	LM1006IDC LM1006LAMP-0.1	<ul style="list-style-type: none"> <li>• Attach the lamp holder to the bracket on the coin return button.</li> <li>• Attach one 15-way connector to the C220 coin mech.</li> <li>• Attach the other 15-way connector to Validator A on the credit board.</li> <li>• Attach the 2-way connector to 'LAMP' on the VTS board.</li> </ul>
GENERIC MECHANICALS	LM1008 LM1008-LAMP	<ul style="list-style-type: none"> <li>• Fit the two lamp holders behind the coin return buttons.</li> <li>• Attach the blue cable and orange cable to one mech's microswitch switch.</li> <li>• Attach the blue/green cable and orange/green cable to the other mech's microswitch.</li> <li>• Attach the 2-way mate and lok plug to the 2-way mate and lok cap provided.</li> <li>• Attach one 15-way connector to Validator A and the other to Validator B on the credit board</li> </ul>
MARS MS111B1 MARS ME115	LM1007 LM1008-LAMP	<ul style="list-style-type: none"> <li>• Fit the lamp holder to the bracket behind the coin return button.</li> <li>• Fit one of the 13-way connectors to the coin mech.</li> <li>• Fit the other 13-way connector to Validator A on the credit board. Note the 13-way connector is keyed and this key must coincide with the key on the credit board.</li> </ul>
SECI, C120, SR3	OWN LOOM AND LM1006LAMP-0.1	<ul style="list-style-type: none"> <li>• Attach the lamp holder to the bracket on the coin return button.</li> <li>• Attach the 2- connector to 'LAMP' on the VTS board.</li> <li>• Attach the validator's own loom to position A on the credit board</li> </ul>





### 3.14. Turning On The Power

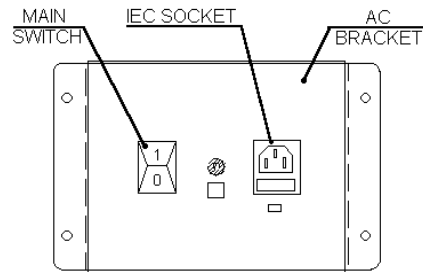


- Be sure that the machine is not already connected to the mains supply before attempting this operation



- This operation should only be carried out by QUALIFIED SERVICE PERSONNEL

1. Insert the mains lead into the wall socket.
2. Insert the IEC plug into the IEC socket on the AC bracket.
3. Switch on the power supply at the wall.
4. Switch on the mains switch on the AC bracket.



When power is supplied, the BILLBOARD fluorescent will light, and the screen will display the system start up sequence. First, the system will conduct an initialisation, during which the steering wheel (Handle) rotates to full left and right lock, before settling in its central position. This allows the system to check its datums. Do not touch the Handle during this initialisation, as this may affect the operation of the Handle during game play. If the initialisation is disturbed, switch off the machine, and leave for five minutes before switching on again.

On completion, ADVERTISE mode will begin, emitting sound from the speakers if this option is set in TEST mode.



Turning off the power will not erase data such as full credits and score information, but data relating to inserted coins less than the value of one credit, and the Bonus Adder, will be lost. If power is restored with enough credits for play remaining, the game will begin automatically.

If two or more machines are linked for communication play, the NETWORK check is performed prior to ADVERTISE mode. Should there be a problem with communication play, the check screen will remain displayed. If an error is found, an error message is displayed for a while before NETWORK check is resumed. A successful NETWORK check takes less than a minute.

### 3.15. Assembly Check

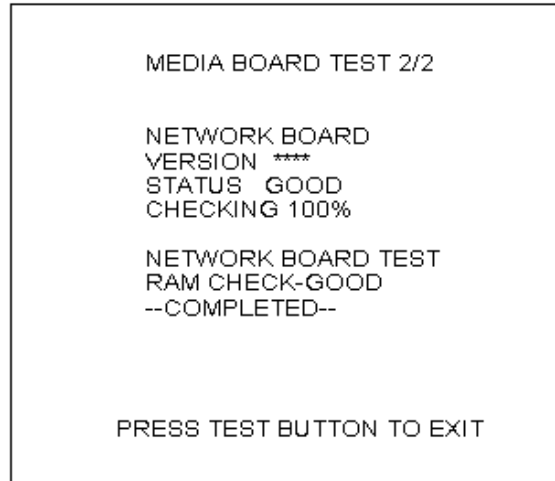
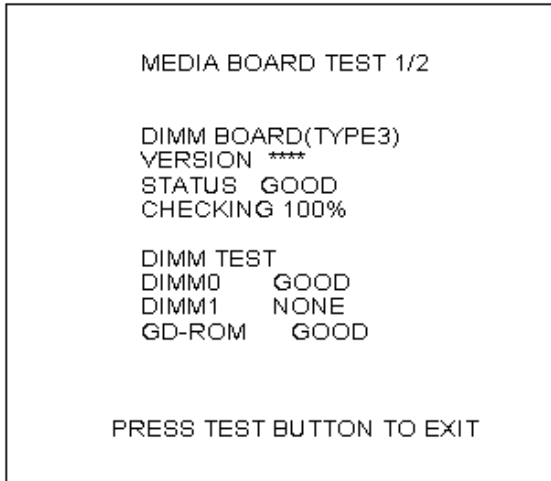
In the TEST MODE, ensure that the assembly has been made correctly and IC BD. is satisfactory (refer to Section 9).

In the test mode, perform the following test:

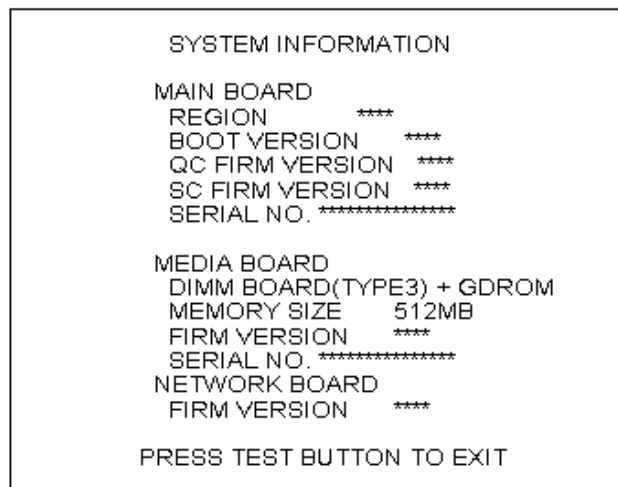
#### 3.15.1.Memory Test

When "MEDIA BOARD TEST" is selected from the System Test Mode Menu Screen the Game Board memory is automatically tested. If the display beside each memory reads "GOOD", the Game Board is functioning correctly.

Also, when "SYSTEM INFORMATION" is selected, Main Board and Media Board data for the Game Board are displayed. If data is displayed correctly, the Game Board is functioning correctly.

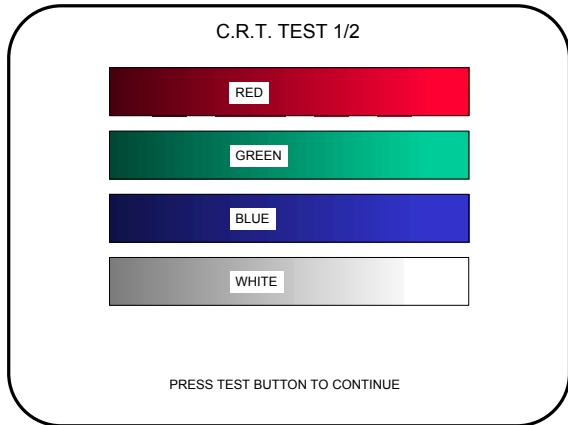


MEDIA BOARD TEST screen



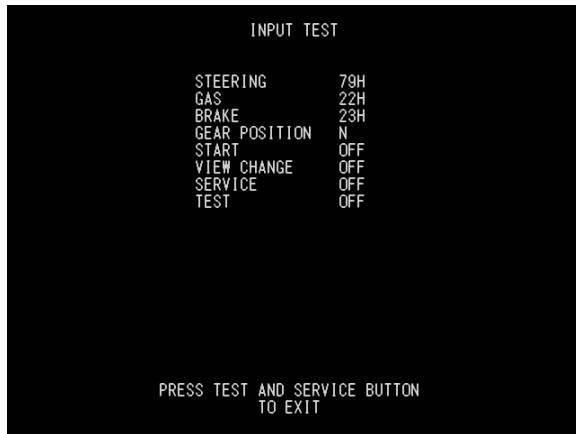
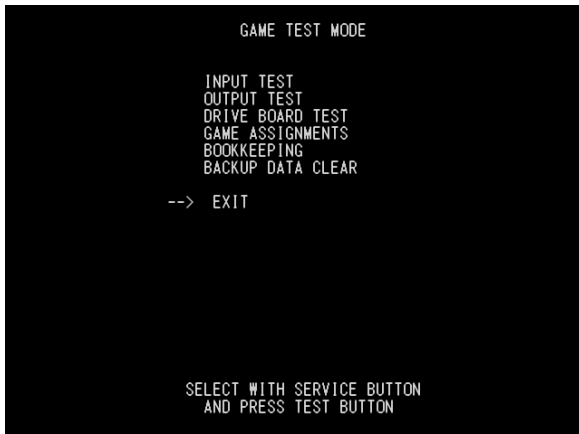
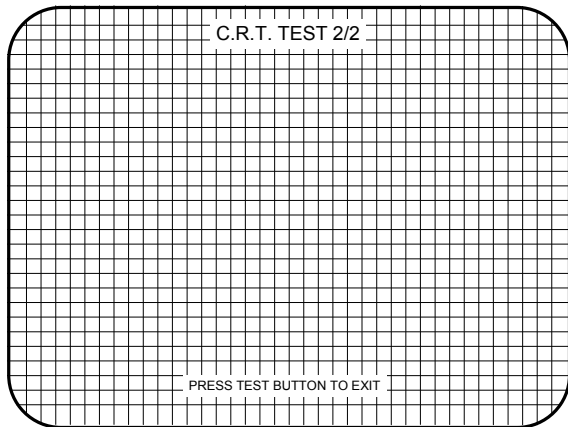
SYSTEM INFORMATION screen

### 3.15.2.CRT Test



In the TEST mode select CRT test to check the screen is satisfactory.

Although the projector has been set up at the factory before shipment, check to see if the screen needs adjustment.



Test the STEERING, GAS (ACCEL) and BRAKE controls to ensure that they are functioning properly and that the parameters change smoothly as each input device is operated.

Display N, UP and DOWN using the GEAR POSITION. N displays that there is no control input. Verify that both UP and DOWN display in sync with the position of the shift knob.

Press the START, CHANGE VIEW, SERVICE and TEST Buttons. If functioning correctly, each indicator will switch from OFF to ON.

Press the SERVICE and TEST Buttons simultaneously to return to the Game Test Menu screen.

### 3.16. Moving The Machine



- When moving the machine, be sure to remove the plug from the power supply. Moving the machine with the plug inserted can cause the power cord to be damaged, resulting in a fire or electric shock.
- When moving the machine, retract the leg adjusters fully and ensure the casters make contact with the floor. During movement pay careful attention so that the casters or leg adjusters do not damage any other cabling laid on the floor. Such damage could result in a fire or electric shock.



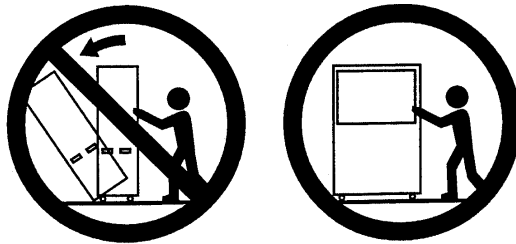
- This operation should only be carried out by QUALIFIED SERVICE PERSONNEL.



- Use extreme care when moving the machine. Avoid using excessive force when pushing any plastic parts.



- YOU MUST UNCOUPLE THE PTV FROM THE MAIN BODY BEFORE MOVING THE MACHINE.



Do not push the PTV from the front or back; always push the PTV from the side.

### 3.17. Fuses



- Never touch places other than those specified. Touching places other than those specified can cause electric shock and short circuit. Disconnect the machine from the supply before attempting the replacement of any fuse.



- FUSES should only be replaced by QUALIFIED SERVICE PERSONNEL.
- FUSES should only be replaced with one of the same type and rating.

There are a number of fuses used on this machine to protect the user and the machine from damage. Only replace the fuse once you have removed the cause of its failure. Detailed below is a list of the fuses used, their location and if relevant PCB reference:

PART NUMBER	LOCATION	TYPE & DETAILS	QTY
514-5078-5000	EP1302 (IEC INLET)	5x20 HRC SB 5000mA	1
514-5078-3150	838-13616 (F1&F2)	5x20 HRC SB 3150mA	2
514-5078-6300	838-13578 (F1)	5x20 HRC SB 6300mA	1
514-5078-6300	838-13142 (F101&F201)	5x20 HRC SB 6300mA	2
514-5078-6300	838-11856CE-02	5x20 HRC SB 6300mA	1

There are also fuses located on the Monitor PCB. Refer to the relevant Monitor manual supplied to reference these fuses.

### 3.18. Maintenance



- Only Qualified Service Personnel must carry out maintenance.
- Ensure that the mains power is switch OFF and disconnected before attempting any work.



- The CONTROL PANEL ASSEMBLY is heavy and may cause injury or damage to the machine if dropped. Use an assistant when removing and replacing it.



- In order to prevent an electric shock and short circuit, be sure to turn power off before performing work by touching the interior parts of the product.
- Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a fire risk.
- Do not touch undesignated places. Touching places not designated can cause electric shock or short circuit.
- This work should be performed by the site maintenance individual or other skilled professional. Performing work by non-technical personnel can cause electric shock hazard.
- Do not perform work other than those specified in this Manual in order to prevent accidents during performing work and operation after performing work. Performing work not specified in this Manual may require special training for this product. If performing work other than those stated in this manual is required for repair, contact the offices herein stated in this manual or where you purchased the product from and ask for repair or inquire how to repair.
- Be very careful when soldering. Handling a soldering iron carelessly may result in a fire or a burn.
- Be extremely careful when heating the heat-shrinkable tube. Failure to do so may result in a fire or burns.



- Do not drop parts when removing them. Dropping parts may damage them or cause sudden accidents.
- To prevent accidents, more than one person must perform these operations.
- Exercise extreme caution when handling the internal parts of the Control Panel. Watch out for damage, warping and loss. The loss of just one piece may result in damage to or lead to faulty operation of the entire unit.
- When securing the plastic-made parts, do not excessively fasten screws and nuts. Failure to observe this may damage the parts and cause injury due to fragments resulting from damage.



- Be sure to perform volume's move value setting in the Volume Setting in the Test Mode after replacing or adjusting the Volume. (See 5.4.1)

### 3.18.1.Handle Mecha

In the TEST MODE, if the steering wheel V.R. variations are not within the allowable limit, the V.R. installation position requires adjustment or the V.R. needs replacement. Also be sure to apply grease every 3 months.

#### 3.18.1.1.Access To The Handle Mecha's VR

Access to the handle mecha's VR can be made via removal of the bonnet cover. The Bonnet Cover is attached using six fixings, three either side.

#### 3.18.1.2.Replacing and Adjusting The Handle Mecha's V.R.



- Never touch places other than those specified. Touching places other than those specified can cause electric shock and short circuit.

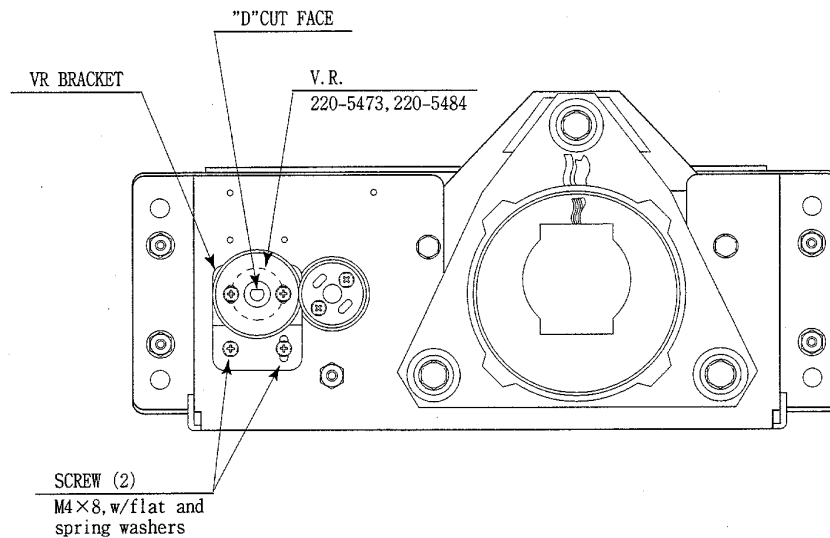


- After the replacement or adjustment of the V.R. be sure to set the Centre of Steer in the DRIVE BOARD TEST.

### 3.18.1.3.Adjusting the VR

Remove the Bonnet Cover as detailed above. Locate the V.R. on the rear surface of the HANDLE MECHA.

1. Using a screwdriver, loosen the 2 machine screws which secure the V.R. Bracket. Move the V.R. Bracket so as to disengage the gears.
2. Gently rotate the V.R. until its value is within the range of the centring position. Position the steering wheel in the centre position.
3. Mesh the gears together. Make sure that a correct amount of backlash is maintained between the gears.
4. If the V.R. value is still not correct make fine adjustments by loosening the 2 machine screws on the V.R. gear. Rotate the gear holder until the correct value is obtained.
5. The value should be adjusted such that with the steering wheel in the centre position the value read during INPUT TEST shall be  $80H \pm 10H$ .
6. Re-set the centre of steer as described in the game test mode (output test).



### 3.18.1.4.Replacing the VR

Remove the Bonnet Cover as detailed above. Locate the V.R. on the rear surface of the HANDLE MECHA.

1. Using a screwdriver, remove the 2 machine screws which secure the V.R. Bracket. Remove the V.R. Bracket so as to disengage the gears.
2. Loosen the hexagon drive grub screws in the collar and gently slide off the V.R.
3. Reassemble is the reverse procedure of steps 1 and 2 above.
4. When complete you must readjust the V.R. in accordance with the paragraph above.

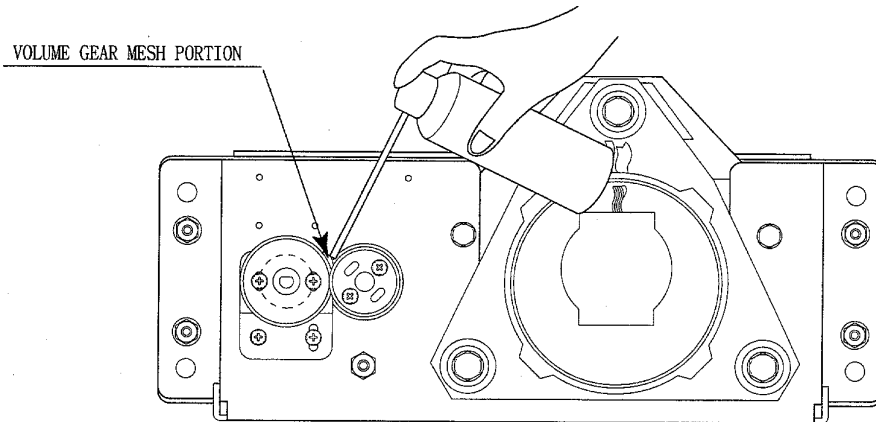


### 3.18.1.5.Greasing



- Be sure to use a good quality, synthetic lubricant. Using a mineral-based lubricant will cause damage to the plastic parts.
- Do not apply lubricant to parts other than those specified. Doing so may cause damage or deterioration of parts.

Apply lubricant to gear mesh portions once every 3 months.



### 3.18.2. Accelerator & Brake

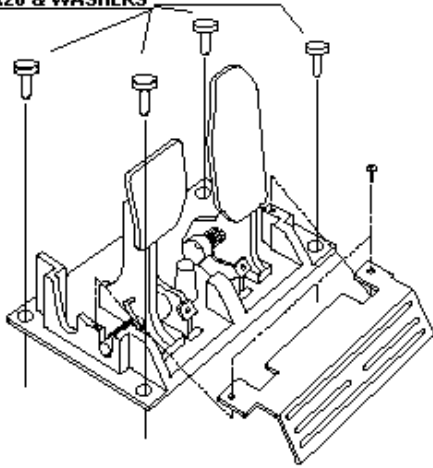


- Only Qualified Service Personnel must carry out maintenance. Ensure that the mains power is switched OFF and disconnected before attempting any work.

In the TEST MODE, if the brake or accelerator V.R. variations are not within the allowable limit, the V.R. installation position requires adjustment or the V.R. needs replacement. Also be sure to apply grease to all moving parts every 3 months.

#### 3.18.2.1. Removing the Accelerator & Brake.

**HEXAGON BOLT, BLACK (4)  
M8 x20 & WASHERS**



1. Turn the POWER switch OFF
2. Remove a total of 4 screws securing the covers over the ACCELERATOR & BRAKE
3. Fine adjustment of the V.R. values is accomplished with just these covers removed.
4. Coarse adjustment requires the ACCELERATOR & BRAKE mounting bolts to be removed. If this is necessary, remove the bolts from the unit, but do not remove the unit from the machine. Take extreme care when operating the unit in this condition as damage to other components can occur.

### 3.18.2.2.Adjusting the V.R.



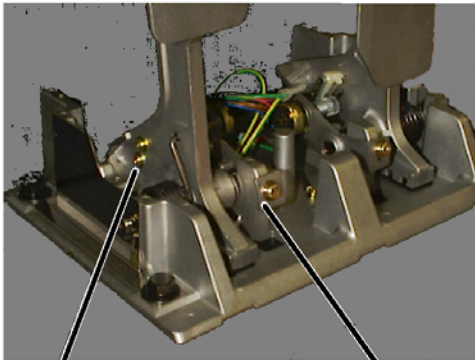
CAUTION



IMPORTANT

- Never touch places other than those specified. Touching places other than those specified can cause electric shock and short circuit.

- After the replacement or adjustment of the V.R. be sure to set the values in the INPUT TEST.



COARSE ADJUST SCREWS

FINE ADJUST SCREW

1. Remove the cover panels as detailed above.
2. Fine Adjustment - By using a screwdriver loosen the 2 machine screws that secure the V.R. arm. Move the V.R. arm to adjust the V.R. value within the relaxed range.
3. Coarse Adjustment - Remove the four hexagon bolts detailed above and remove the side covers of the Accelerator & Brake.
4. Loosen the two machine screws holding the V.R. rack
5. Move the V.R. rack away so as to disengage the V.R.
6. Gently rotate the V.R. until its value is within the range of the centring position.
7. Mesh the gears together. Make sure that a correct amount of backlash is maintained.
8. If the V.R. value is still not correct make fine adjustments as detailed above.

The required values are:

GAS PEDAL:	Under 30H	⇒	Over C0H
BRAKE PEDAL:	Under 30H (THE PEDAL RELEASED)	⇒	Over C0H (THE PEDAL PRESSED)

### 3.18.2.3.Replacing the V.R.

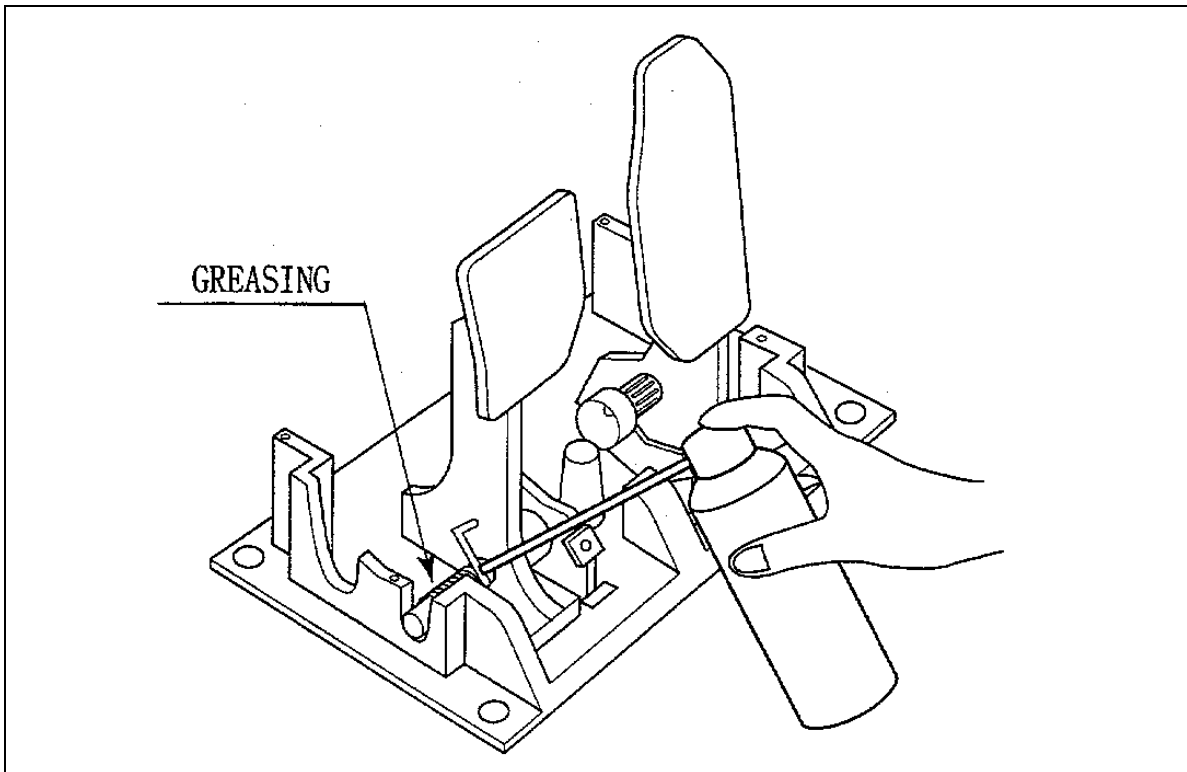
1. Loosen and withdraw the V.R. rack as detailed above.
2. Using a hexagon key loosen the two grub screws holding the V.R. gear onto the V.R.
3. Remove the V.R. gear
4. Using a spanner remove the nut holding the V.R. in position.
5. Gently remove the V.R. and its wire harness.
6. Refit is the reverse of removal.
7. When complete you must readjust the V.R. in accordance with the paragraph above.

### 3.18.2.4.Greasing



- Be sure to use a good quality, synthetic lubricant. Using a mineral-based lubricant will cause damage to the plastic parts.
- Do not apply lubricant to parts other than those specified. Doing so may cause damage or deterioration of parts.

Apply lubricant to gear mesh portions once every 3 months.



### 3.18.3.Paddle Shift



- Maintenance must only be carried out by Qualified Service Personnel. Ensure that the mains power is switch OFF and disconnected before attempting any work.

In the TEST MODE, if the PADDLE SHIFT switches cannot be input correctly, the switch will need to be replaced. Also be sure to apply grease to all moving parts every 3 months.

#### 3.18.3.1.Replacing Paddle Shift Microswitches.

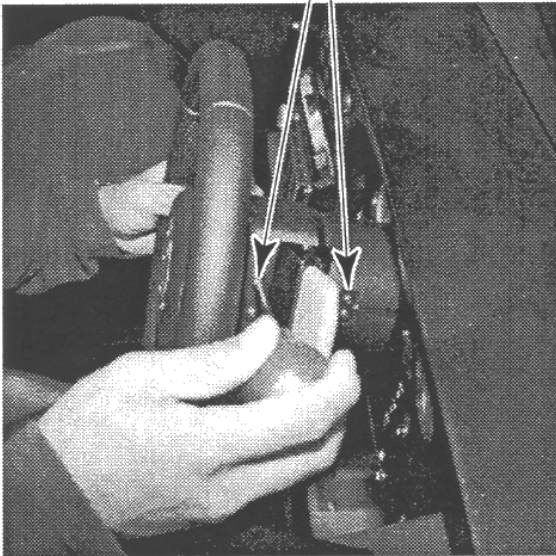


- Never touch places other than those specified. Touching places other than those specified can cause electric shock and short circuit.

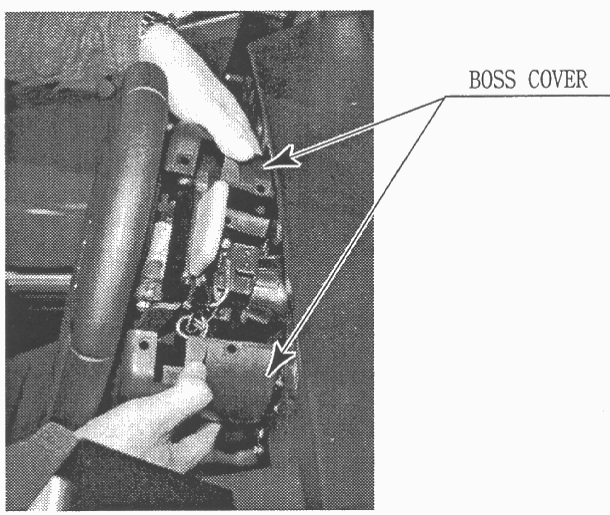


- After the replacement or adjustment of the microswitches check operation using the INPUT TEST.

TRUSS SCREW (4 each)  
M4 × 8

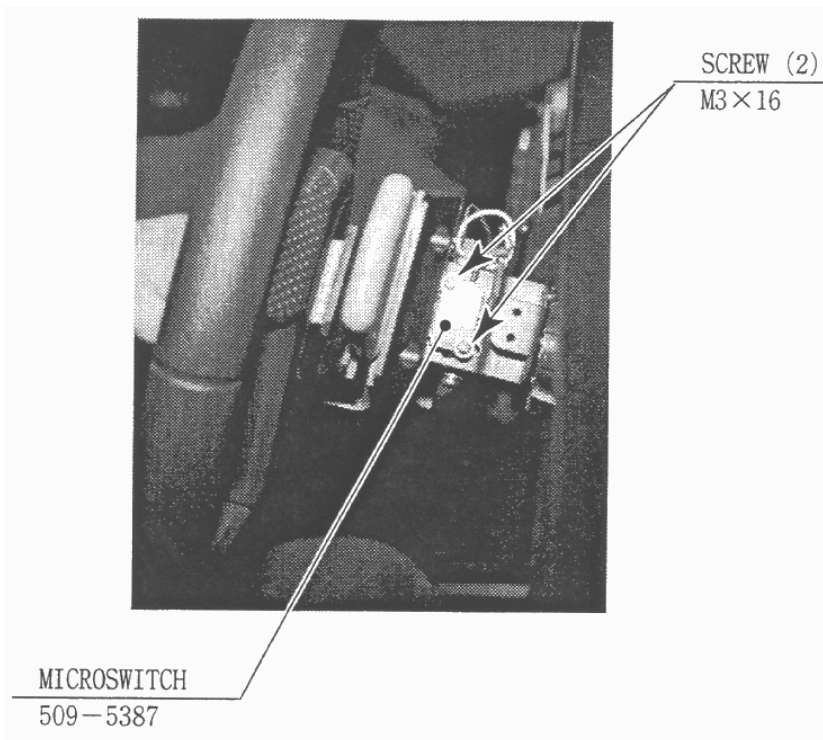


1. Turn the POWER switch OFF.



2. Remove the BOSS COVERS and retain the 4 truss-head screws.

3. Disconnect the wiring to the microswitch.
4. Remove the microswitch and retain the screws.
5. Adjust the microswitch's actuating arm so that it is not depressed until the paddle is moved in that direction.
6. Refit is the reverse of removal.
7. Check the switch operation in the game test mode (input test).



### 3.18.4.Replacement Of Fluorescent And Other Lamps



- Never touch places other than those specified. Touching places other than those specified can cause electric shock and short circuit. Disconnect the machine from the supply before attempting the replacement of any lamp.

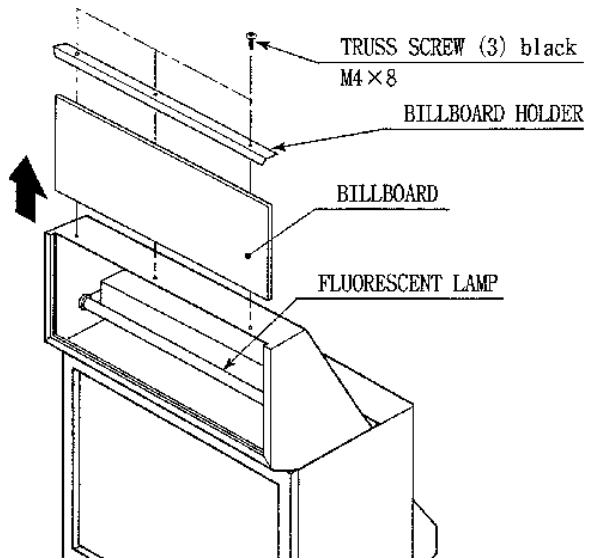


- Lamps should only be replaced by QUALIFIED SERVICE PERSONNEL.

#### 3.18.4.1.Fluorescent Lamp Replacement

*Note: Use a step when performing this procedure.*

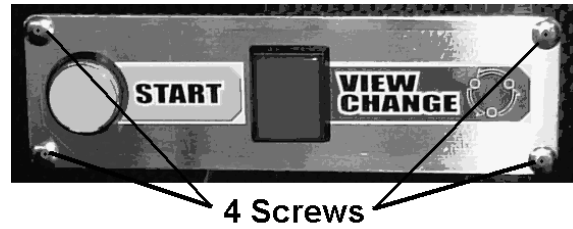
Remove the BILLBOARD HOLDER, slide the BILLBOARD up, and replace the Fluorescent Tube by carefully withdrawing it from the two mounting clips.



*Note: Billboard may differ from that shown..*

### 3.18.4.2.Start / View Change Bulb Replacement

1. Remove 4 screws holding front of Assy Switch Plate



2. Remove the 5 screws holding the Multi Language Play Instructions Panel in place. There are:  
2 screws on the front.  
2 screws underneath.  
1 screw on top.

Access is now available to the rear of the Assy Switch Plate through the front aperture.



Multi-Language Play Instructions Panel

3. The lamp (bulb) is on the inner side of the assembly. Turn the metal locking tag anticlockwise (when viewing the rear of the button) on each button and remove the lamp housings from the assembly.



4. To remove the lamp, press it down and turn anticlockwise.



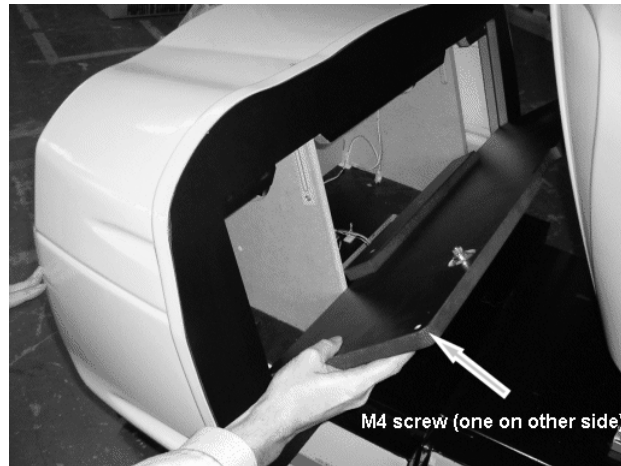


### 3.18.4.3.Brake Light Bulb Replacement

Access to the rear brake lights is gained via the rear door.

**Note:** *The machine uses 12V 2.2W wedge bulbs in 12 positions for brake light activation.*

1. Slide the seat as forward as it will go to increase the access area to the rear door
2. Open the rear door by removing the 2 screws and using the keys.

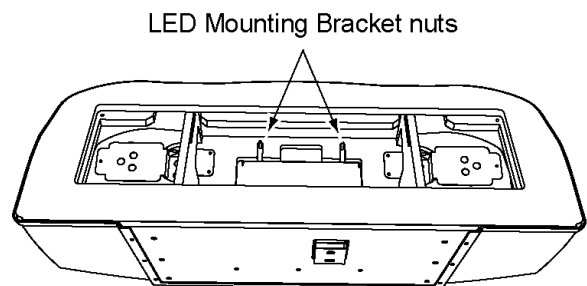


3. For the outer lights, press the bulb holder legs together then remove the bulb holder and bulb.
4. For the inner lights, you can use the same procedure as above but, if access is too difficult, you will have to remove the bulb holder bracket.

### 3.18.4.4.LED Strip Replacement

1. Remove rear door (see above).

2. Loosen the two LED mounting bracket nuts.



View through rear door behind seat

3. The bracket will now slide down if pressure is applied.
4. Completely remove the bracket.
5. Change the LED strip.
6. Replace the bracket and slide it upwards so that the LED strip is located square and central in the rear moulding cut away.
7. Tighten the two LED mounting bracket nuts and replace the rear door.

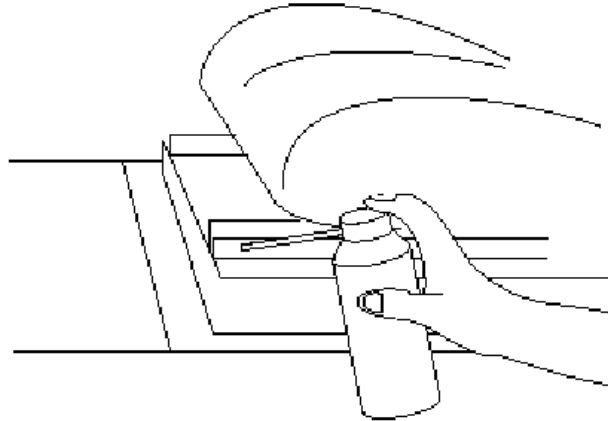
### 3.18.5.Cleaning The Cabinet Surfaces

When the cabinet surfaces are badly soiled, remove stains with a soft cloth dipped in water or diluted (with water) chemical detergent and squeezed dry. To avoid damaging surface finish, do not use such solvents as thinner, benzine, etc. other than ethyl alcohol, or abrasives, bleaching agent and chemical dustcloth.

### 3.18.6.Seat (Greasing To Seat Rail Portion)

Move the Seat to the rearmost position and apply spray greasing to the portion shown at the right once every 3 months by using NOK KLUBER L60 or GREASE MATE SEGA PART No. 090-0066.

After greasing, move the Seat a few times forward and backward so as to allow the grease to be applied all over uniformly. Be sure to wipe grease which attaches to the surfaces of the PROTECT RUBBER on the Seat Rail, or any excess grease.



### 3.19. Troubleshooting



- Only QUALIFIED SERVICE PERSONNEL should carry out these procedures

#### 3.19.1. Troubleshooting (When No Error Message Is Shown)



- In order to prevent electric shock and short circuit, be sure to turn power off before performing work.
- Be careful so as not to damage wirings. Damaged wiring can cause electric shock or short circuit.
- After removing the cause of the functioning of the Circuit Protector, reinstate the Circuit Protector. Depending on the cause of the functioning, using the Circuit Protector as is without removing the cause can cause generation of heat and fire hazard.
- In the event that a problem cannot be resolved by employing the procedures listed in this Manual, be sure to request service from the office shown on this Manual or the dealer from whom the product was originally purchased. Attempts to employ procedures other than those specified in this Manual can cause electrical shock, shorting, or fire.
- In the event of a problem that is not described here, be sure to contact the office shown on this Manual or the dealer from whom the product was originally purchased. Careless attempts at repair can result in electrical shock, shorting, or fire.

If a problem occurs, first check to make sure that the wiring connectors are properly connected.

PROBLEM	CAUSE	COUNTER MEASURES
When the main SW is turned ON, the machine is not activated.	The power is not ON.	Firmly insert the plug into the outlet.
	Incorrect power source/voltage.	Make sure that the power supply/voltage are correct.
	The fuse of the connect board was blown out due to momentary overcurrent.	After eliminating the cause of overload, replace the specified rating fuse.
Fluorescent lamp inside FL box doesn't light up.	Connector connection fault.	Check connector connections between the Cabinet and the FL box.
	Fluorescent lamp and Glow lamp need replacement.	Replace the fluorescent lamp and the glow lamp (See Section 3.18.4.1)
Lamps in control panel or brake lights do not light up.	Connector connection fault.	Check connector connections between the Cabinet and the lamp.
	Lamp needs replacement.	Replace the lamp (See Section 3.18.4.2)

PROBLEM	CAUSE	COUNTER MEASURES
Sound is not emitted.	Sound volume adjustment is not correct.	Adjust the sound adjustment volume . (See Section 5.2)
	Faulty connections for various connectors.	Check the connections for the game board, amp, speakers and Volume connectors.
	Malfunctioning BD, Amp. and Speaker.	Perform SOUND TEST. (See 5.3.1.4)
Sounds are emitted and the lamps are lit, but the screen is black.	Faulty connections for the visual signal connector or the monitor power connector.	Check the connections for the monitor and game board connectors.
	Broken monitor.	Contact the company from whom the unit was purchased.
Colors on the monitor screen are strange.	Faulty connection for the visual signal connector.	Check the visual signal connector connection and make sure it is secured properly.
	Screen adjustment is not appropriate.	Make adjustment appropriately. (See Monitor Manual)
The on-screen image sways and/or shrinks.	The power source and voltage are no correct.	Make sure that the power supply and voltage are correct.
Does not accept input from any switch or volume.	Faulty connector connections.	Check the connection for the I/O Board and Cabinet connector.
		Check the power for the I/O Board.
Does not accept input from the PaddleShift.	Faulty connector connections.	Check the connections for the connectors in the Control Panel and between the Control Panel and the Cabinet.
	Broken Microswitch.	Replace the Microswitch
STEERING (Servomotor) response is incorrect.	Incomplete power on check.	Power on and verify that the power on check completes properly. (See 3.14)
	Deviation of the volume value.	Adjust the volume value in the Test Mode.
	Volume gear engagement fault.	Adjust the engagement of the gear. (See Section 3.18.1.3)
	Volume malfunctioning.	Replace the volume. (See 3.18.1.4)
	Detached wires.	Check for faulty wire connections around moving parts. When replacing wires, secure them so that they do not touch any moving parts.
BASE SHAKER does not react.	Incorrect volume adjustment.	Adjust the volume setting on the VTS board. (See 5.2)

PROBLEM	CAUSE	COUNTER MEASURES
No response from Steering (Servomotor).	Failure of power-on checking procedure.	Reconnect the power and complete a power-on checking procedure. (See Section 3.14)
	Faulty connector connections.	Check the connections for the connectors between the Game Board and Servodriver and between the Servodriver and the Servomotor.
	Thermal element in the Servodriver is operating.	Occurs when the internal temperature reaches 70°C (158°F) and corrects automatically when the unit cools.
	Momentary overload caused a fuse on the Servodriver to blow.	Contact the company from whom the unit was purchased.
Steering (Servomotor) is weak in its force feedback.	Aging of the force feedback mechanism.	Reset in the Test Mode. ( See 5.4.1)
Unsatisfactory Accel and Brake operation.	Incorrect volume setting.	Adjust the volume value in the Test Mode. (See 3.18.2.2)
	Faulty Volume attachment or adjust gear alignment.	Adjust the volume attachment and verify in Test Mode. (See Section 3.18.2.2)
	Faulty connector connection.	Check the connections for the Accel and Brake connectors and the connectors between the Accel, Brake and Cabinet.
	Failure of the volume.	Replace the volume. (See 3.18.2.3)
Start button and Change View button input does not work and they do not flash.	Faulty connector connections.	Check the connections for the connectors between the I/O Board, the Cabinet and the Control Panel and those inside the Control Panel.
Start button and Change View button input works, but they do not flash.	Unverified settings or operation.	The Start button only flashes when Free Play is set. Check the operation in Test Mode. (See Section 5.4.1)
	The lamp is burnt out.	Replace the lamp.
Failure of the network play.	Network play is wrongly set.	Reset correctly. (See Section 3.20.8)
	Communication cables are wrongly connected.	Reconnect the cables. (See Section 3.20.8)
	Communication cables are disconnected.	
	Damage of communication cables.	Reconnect cables correctly. (See Section 3.20.8) Replace the cables. Contact the company from whom the unit was purchased.

### 3.20. Game Board



- Turn off the mains power and remove the power cord before opening the machine.



- The GAME BOARD should not require any work to be carried out upon it. All settings and tests can be achieved without access to the GAME BOARD.
- All work to be carried out by QUALIFIED SERVICE PERSONNEL.

#### 3.20.1. Removing The Game Board Assembly

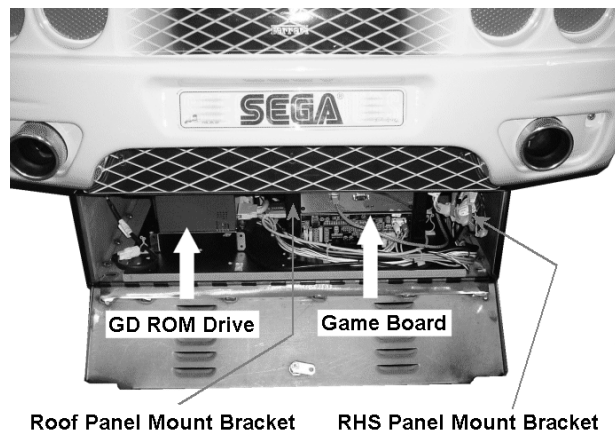
1. Turn power off

2. The lower rear door is located at the back of the main cabinet underneath the fairing.



3. Remove 1 truss screw located next to the lower rear door lock

4. Disconnect the 5 plug breaks on the panel mount bracket on the right hand side.
5. Disconnect 2 plug breaks from the panel mount bracket situated in the roof of the base box (to the left of the game board).

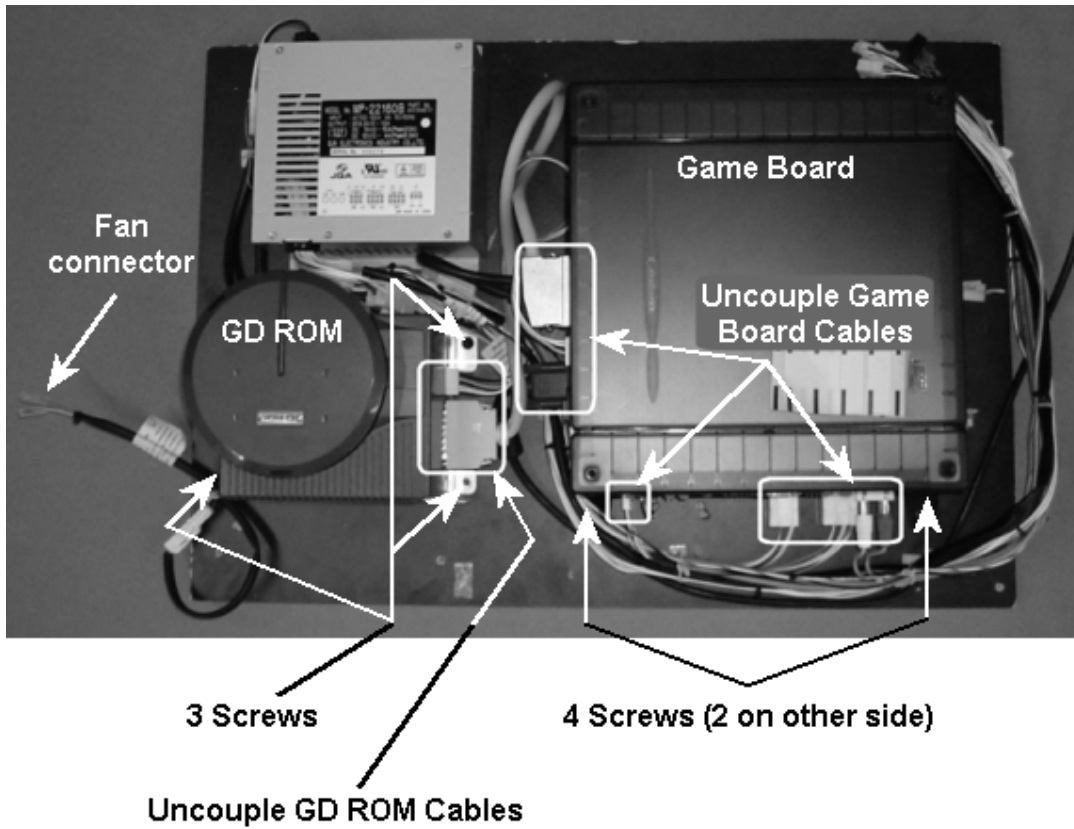


6. Uncouple the fan loom from the lower rear door
7. Disconnect the LAN cable from the game board

8. Disconnect the USB cable from the game board
9. Remove the M6 bolt holding the game board in place. It is situated on the front edge of the board.
10. Slowly remove the game board ensuring that no wires are trapped or still connected.

### 3.20.2. Removing The GD-ROM Drive

1. Before you can remove the GD ROM Drive, you must remove the Game Board Assembly (see 3.20.1).



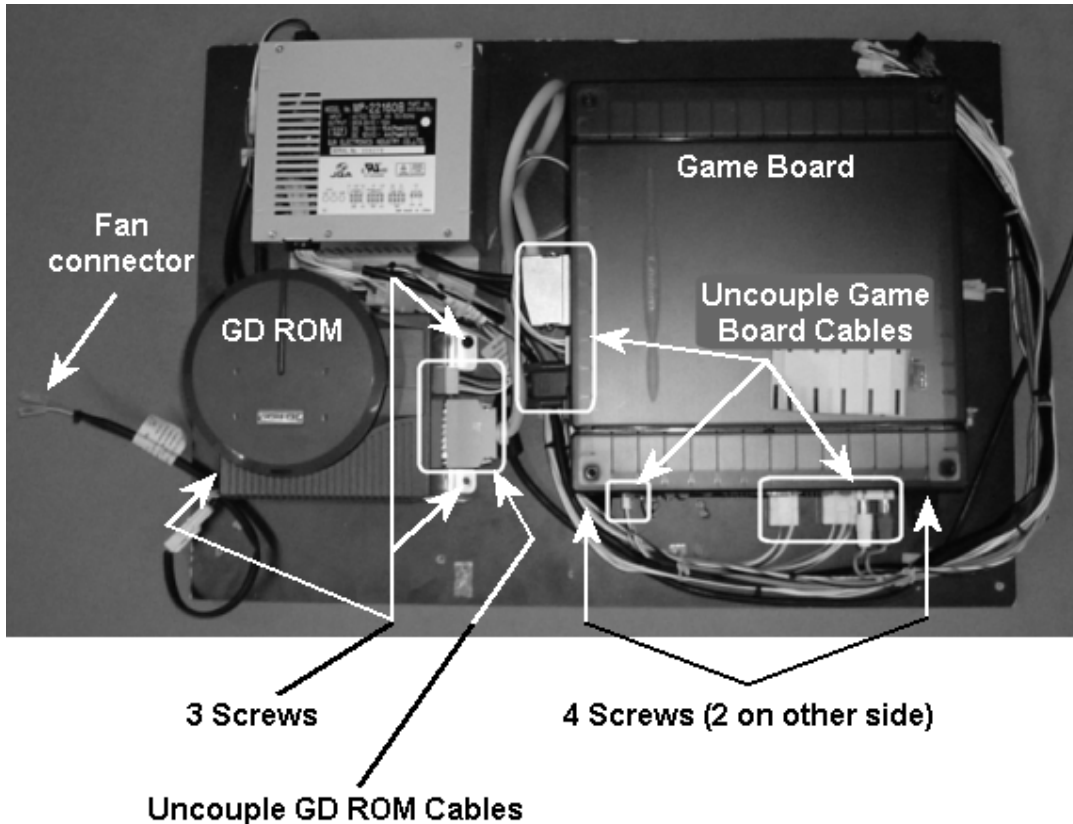
2. Remove the GD cable and power cable from the GD ROM Drive.
3. Remove the 3 screws fixing the drive to the assembly board.

### 3.20.3. Removing The Game Board



- When returning the game board for replacement or repair, make sure that the connectors are attached correctly. Incorrect connections can lead to accidents such as electric shock, short circuits, and/or fire.
- When plugging in connectors, pay close attention to the direction of the connection. The connectors are designed to be connected in a specific direction. Attempting to plug in a connector by applying excessive force may damage the connector or its terminal clasp, possibly resulting in electric shock, short circuits, and/or fire.

1. Before you can remove the GD ROM Drive, you must remove the Game Board Assembly (see 3.20.1).



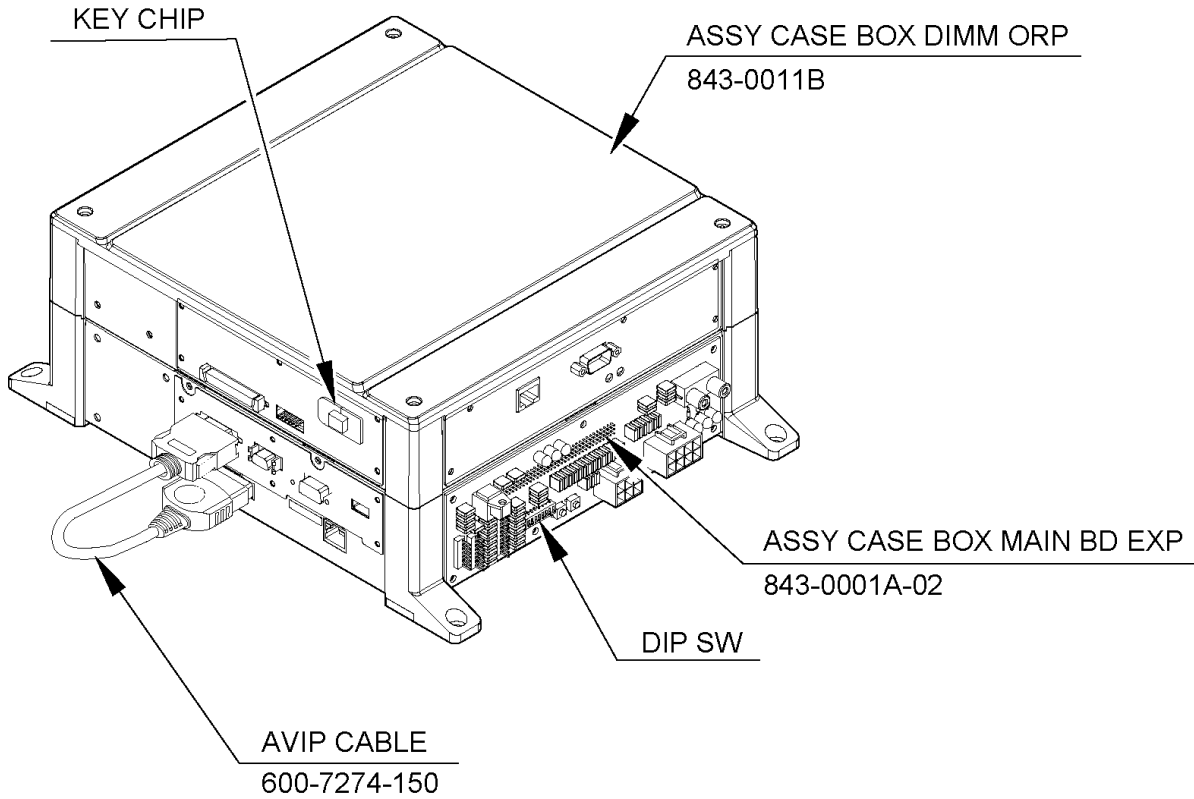
2. Remove all the all cables connected to the Game Board.
3. Remove the 4 screws fixing the drive to the assembly board.



### 3.20.4.Composition of the Game Board

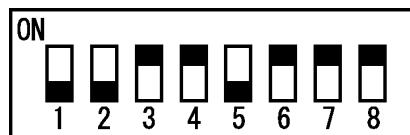
Once the Chihiro Board has the Key Chip inserted, it is this product's specialized Game Board.

ASSY CASE BOX ORP EXP 843-0011D-02



#### DIP SW SETTING

Use this product with the DIP SW settings shown in the figure below.



### 3.20.4.1.Replacing The Main Board Battery



- To prevent overheating, explosion, or fire:
  - Do not recharge, disassemble, heat, incinerate, or short the battery.
  - Do not allow the battery to come into direct contact with metallic objects or other batteries.
  - To preserve or to dispose of the battery, wrap it in tape or other insulating material.
- Follow local regulations when disposing of the battery. Improper disposal can damage the environment.

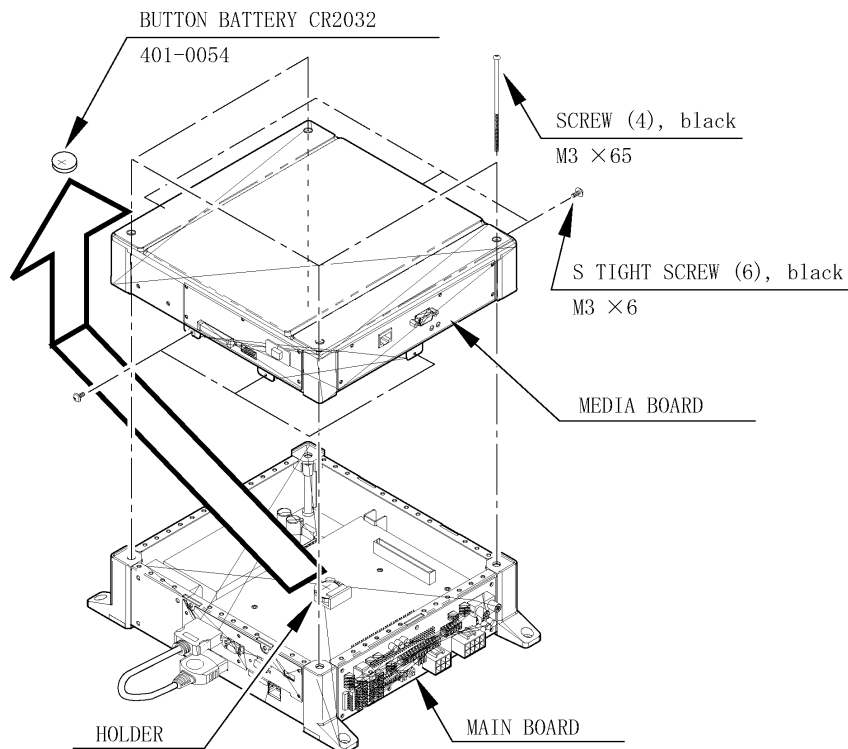


- To avoid risk of malfunction and damage:
  - Make sure the positive and negative ends are aligned correctly.
  - Use only batteries approved for use with this unit.



- If an error appears indicating that the battery power is very low within the first year of use, it is usually an indication of a problem or abnormality with something other than the battery. Be sure to inspect the board that the battery is connected to.

There is a Media Board Button Battery underneath the Media Board.



- Carefully remove the battery from its holder.
- Insert a new battery into the holder with the "+" terminal facing up.

### 3.20.4.2.Replacing The Media Board Battery Pack

#### Prohibitions and Cautions to Handle the Battery Pack

- Be careful when handling the battery pack.
- We bear no responsibility for problems caused by handling clearly contrary to the content of this manual.



- Do not disassemble the battery pack and the batteries.
- If you should fail to observe this instruction, the internal wires and/or protective devices may be damaged; as a result the safety system may not function when discharging and recharging, eventually causing an overheating, fire and explosion. If you should disassemble the batteries, the generated gases may harm your throat and the negative plate may overheat and make a fire.
- Do not make an external short circuit of the battery pack and the batteries. If you should fail to observe this instruction, the batteries may overheat, make a fire, and explode.
- Do not fire the battery pack and the batteries. If you should fail to observe this instruction, the batteries may make a fire and explode.
- Do not leave the battery pack and the batteries nearby the heat source (fire or heater) or under the intense direct sunlight and flaming sun. If you should fail to observe this instruction, the batteries may reduce the service life and in the worst case may overheat, make a fire, and explode.
- Do not leave the battery pack and the batteries in water or seawater. Also do not apply water or seawater onto the battery pack and the batteries. If you should fail to observe this instruction, the internal wires and/or protective devices may be damaged; as a result the safety system may not function when discharging and recharging, eventually causing an overheating, fire and explosion. Also water may be electrolyzed into oxygen and hydrogen, and eventually the battery's sealed section may be corroded and the internal liquid may leak.
- Do not solder on the battery pack's terminals. If you should fail to observe this instruction, the armour may be heated and melted or the internal wires may be damaged, eventually causing an overheating, fire and explosion. Also, when the battery's temperature reaches to 100°C or more, the battery may leak its internal liquid due to destruction of its plastic parts (gasket, separator, etc.), or may overheat, make a fire, or explode due to internal short-circuit.
- Do not insert or connect the battery in a reversal polarity. If you should fail to observe this instruction, the battery may be externally short-circuited and eventually overheat, make a fire, or explode, depending on the device you connect with.



- Do not tightly seal the battery pack when installing it onto an external device.
- Flammable gas is generated from the battery when its safety mechanism has functioned. If you should fail to observe the above-described instruction, sparks from motors, switches, etc. may cause the gas to fire. Therefore, install the battery pack so that the gas can be quickly released from the external device.
- Do not use the battery pack for the device/usage other than this game system. If you should fail to observe this instruction, the battery and/or the device may be damaged due to non-applicable specifications.
- Do not strike a nail in, hammer, step on, or apply any other forms of pressures and shocks on, the battery.  
If you should fail to observe this instruction, the battery may be deformed. As a result, the battery may burst at its sealed sections to leak the internal liquid, or may be short-circuited internally to overheat, make a fire, and explode.
- Do not use a battery charger because any battery charger is not usable for this battery pack.  
If you should fail to observe this instruction, the gas may be suddenly generated in the battery and eventually the battery may overheat, make a fire or explode.
- If the battery in use or in keeping shows an abnormal indication (deformation, change of colour, bursting of the armour cover, etc.), immediately stop using or keeping it. If it leaks and smells abnormally, immediately keep it away from fire and put it in a safety box.
- If the liquid leaks from the battery and gets in your eyes, do not rub your eyes but immediately wash them with clean water (city water etc.); and consult a medical doctor for a treatment. If you should fail to observe this instruction, the liquid may harm your eyes.
- The battery pack armour (a polyvinyl chloride tube) may be damaged or deformed by external force or heat. When transporting the battery pack or replacing it with a new one, therefore, be careful not to drop or excessively shock it. Do not continue to use any damaged or deformed battery pack. If you should fail to observe this instruction, the battery may overheat, make a fire, or explode.
- The battery pack contains a printed circuit board (PCB) for protective circuitry. It may be destroyed by the static electricity. When handling or servicing the battery pack, therefore, take preventive measures against the static electricity.
- If your battery pack has shown destruction of a protective circuitry PCB, do not continue to use it. If you should fail to observe this instruction, the battery may overheat, make a fire, or explode.
- When wiring the battery pack to a device, be careful not to apply excessive force onto the connectors and lead wires. The battery may overheat, make a fire, or explode if the connectors and lead wires are damaged.
- When discarding the battery pack at a disposal specialist, be sure to cover the terminals with tape or some other covering and avoid damage when packing.



- Do not do away with the used battery packs carelessly because they may contaminate the environment. Be sure to dispose of the used battery packs in accordance with the laws/regulations of your country.

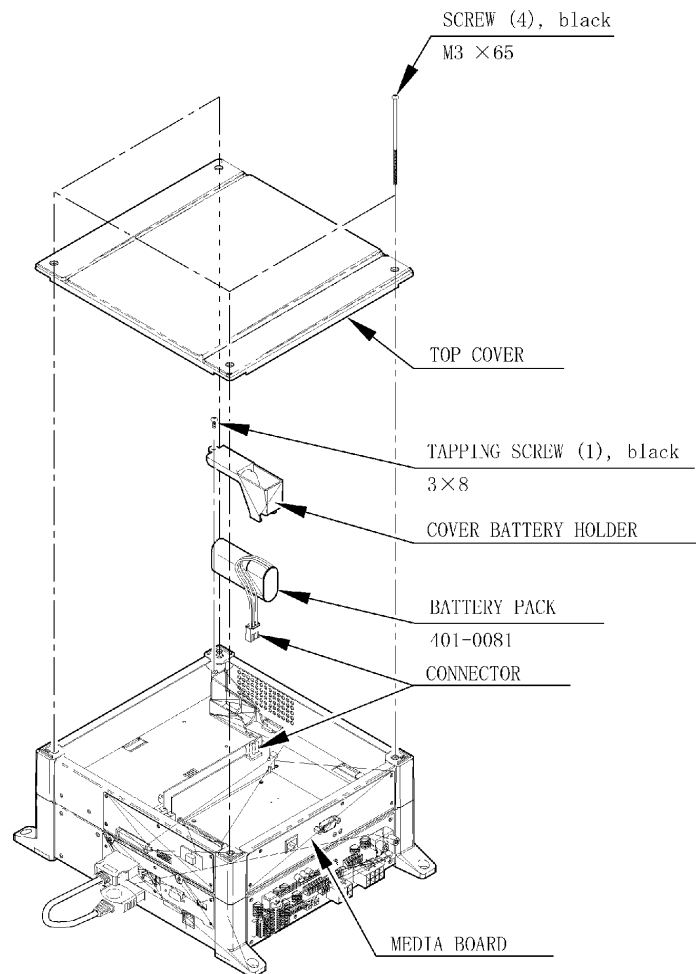
If the GD-ROM read time becomes excessively long, it is likely that the Media Board battery pack life is running low.

No battery pack charger is available.

Follow the procedure to replace the battery pack:

1. Remove 4 screws from the upper face of the board.
2. Remove the top cover.
3. Remove 1 tapping screw and remove the cover battery holder.
4. Disconnect the connector at the end of the wire coming out of the battery pack. Remove by pressing the projection on the connector and pulling.
5. Securely connect the new battery pack.
6. Attach the cover battery holder and top cover.

Submit the used battery packs to an industrial waste disposal plant. Thus they must be disposed according to the local laws and the regulations in your country.



### 3.20.5.Shipping The Game Board

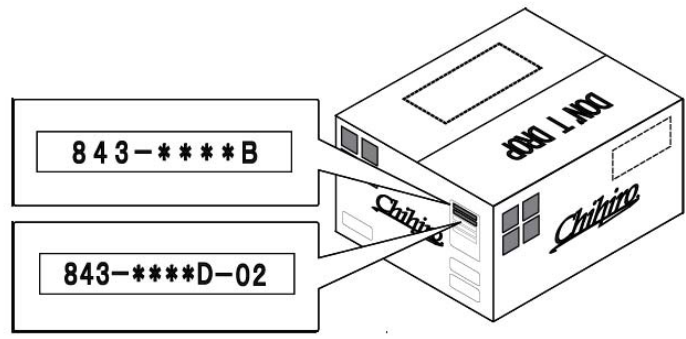
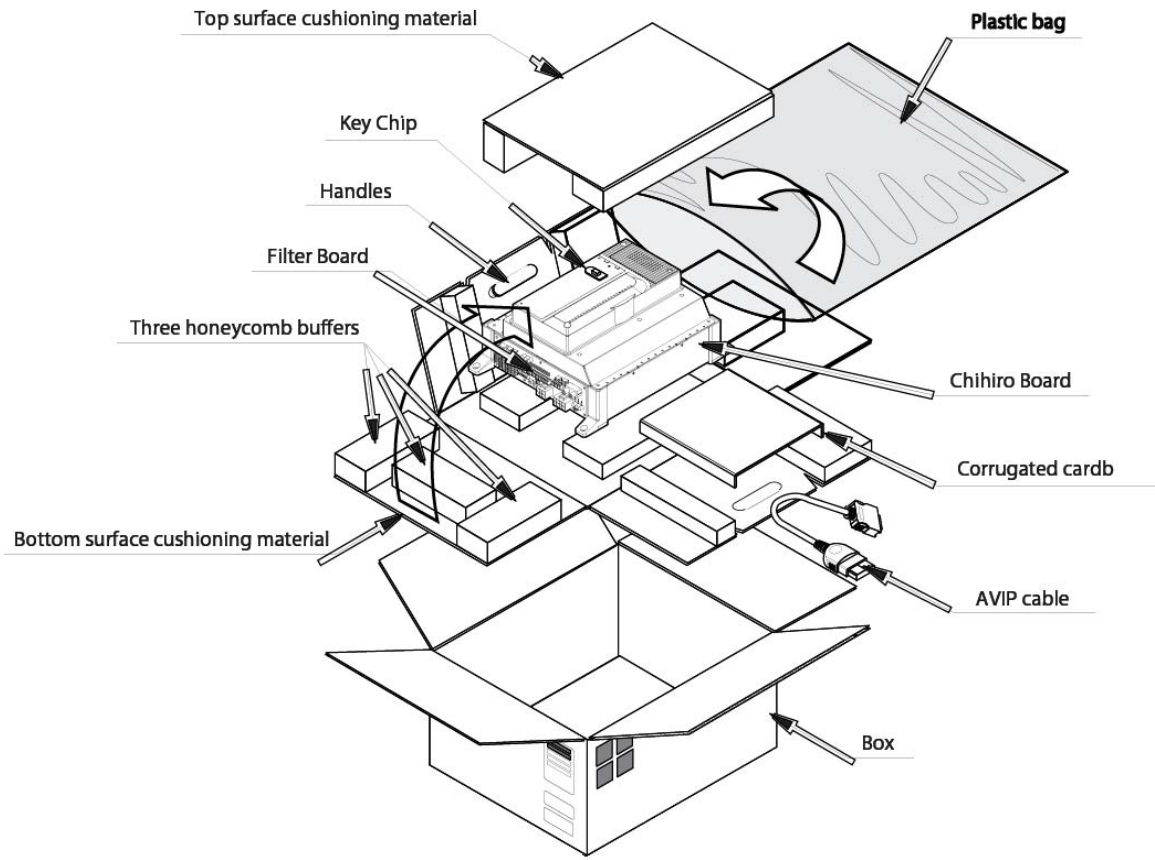


Replacement or repair of the Game Board (Chihiro) for this product should be undertaken at the appropriate repair centre. Be sure to follow the specifications below when requesting repairs/sending the board to the repair centre. Not following the specifications may result in the board not being accepted or in extra charges being made.

- Put the game board in the carton box as is. Do not carry out any disassembly or part removal other than that specified.
- Follow the procedure and instructions regarding direction below when placing the Game Board in the carton box.
- When packing the game board with the Media Board attached, do not remove the Key Chip.
- When packing the game board with the Media Board detached, be sure to include the AVIP Cable.
- When packing, attach the accessory stickers in the specified places on the Game Board and carton box.

#### INSTRUCTIONS

1. Wrap the Chihiro Board in a plastic bag.
2. Place it on top of the bottom surface cushioning material. Turn the Filter Board to face the side with the three honeycomb buffers. Packing it in the opposite direction may cause damage to the Filter Board.
3. Insert corrugated cardboard into the space between the lateral honeycomb buffers of the bottom surface cushioning material and stow the AVIP cable inside.
4. Place the Chihiro Board wrapped in the bottom surface cushioning material into the carton box. Use the handles on the bottom surface cushioning material.
5. Place the upper surface cushioning material on top of the Chihiro Board. Be sure to align it in the right direction, as it will not fit otherwise.
6. Close the top of the carton box and seal it tightly with adhesive tape.



### 3.20.6. Shipping The Media Board

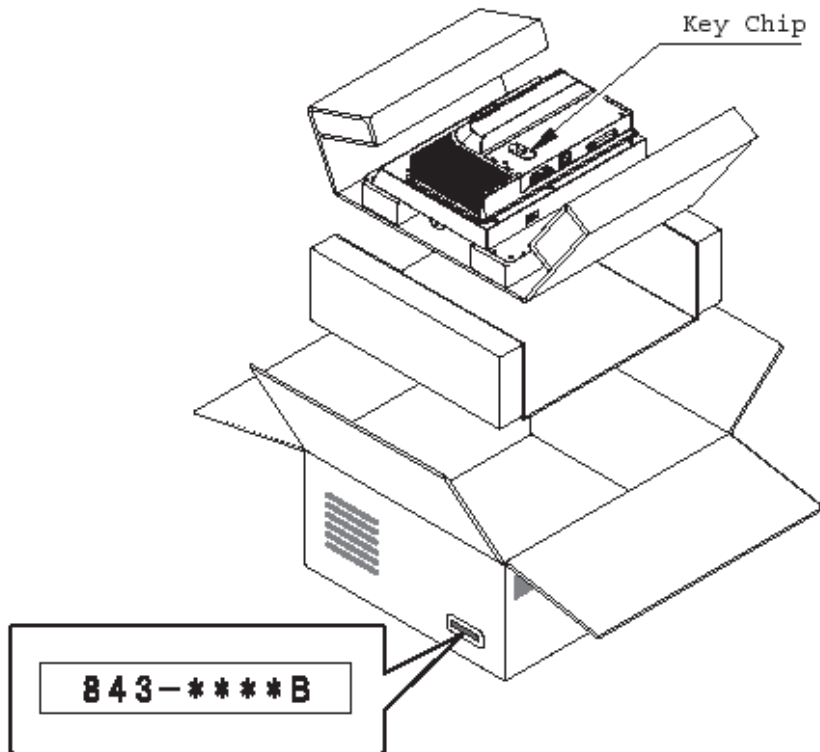


IMPORTANT

When sending the Media Board for repairs, follow the specifications below and request repairs or send the Board to your retailer/the repair centre.

Not following the specifications may result in the board not being accepted or in extra charges being made. Also, mistaken handling can damage or result in loss of parts.

- Be sure to use the special purpose carton box included with this product.
- Do not remove the Key Chip. Send the board with the Key Chip attached.
- Undo the 10 screws holding the Media Board to the Main Board and pack the Media Board. Do not carry out any disassembly or part removal other than that specified in this manual.
- Pack the Media Board in the special purpose carton box as shown in the explanatory diagram.
- The packing material in the carton box has a shock absorbing function. Be sure to use it when packing. Do not bend or fold the material in a direction other than that shown on the diagram.
- Do not pack any wires, cables, or screws together with the Board.
- Be sure to attach the special purpose carton box accessory sticker "843-\*\*\*\*B."

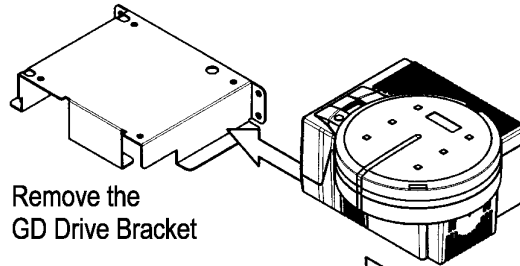




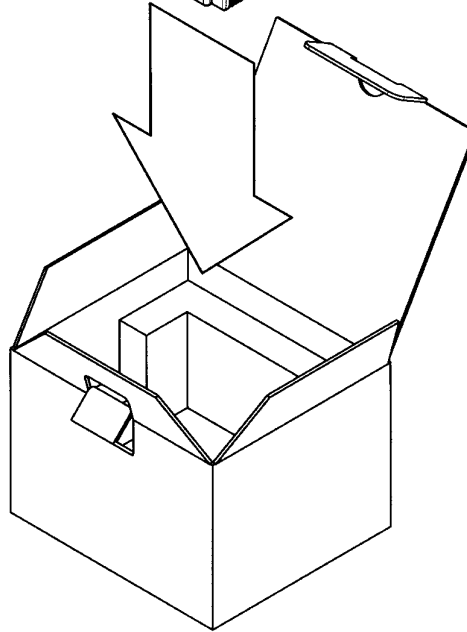
### 3.20.7. Shipping The GD-ROM Drive



- When returning the GD-ROM DRIVE for repair or replacement, be sure to package it in the original card transit box - THERE ARE NO USER-SERVICEABLE PARTS INSIDE.
- Ensure the GD-ROM Disk is removed and the GD-ROM Drive Lid is replaced on the unit, with fixing screw, before packaging. Also, remove the GD-ROM Drive Bracket and store with the four screws for reuse.
- Failure to return the GD-ROM DRIVE in this manner may invalidate the warranty.



Remove the  
GD Drive Bracket



### 3.20.8.Machine Set Up

During linked play, if the test mode is not finished within three minutes on all linked machines, the NETWORK CHECK cannot be performed, causing a NETWORK ERROR.

First, set up each linked machine to meet the requirements of communication play. If the settings are incorrect, communication play is not possible.

SYSTEM ASSIGNMENTS	
CABINET TYPE	1PLAYER
ADVERTISE SOUND	ON
MONITOR TYPE	HORIZONTAL
SERVICE TYPE	COMMON
> EXIT	

SELECT WITH SERVICE BUTTON  
AND  
PRESS TEST BUTTON

### 3.20.8.1. Network Play

Up to 4 machines can be linked for network play. Properly connected network cables and correct network play settings are required for network play.

#### 3.20.8.1.1. Precautions Regarding Network Play Setup



- Before starting to work, ensure that the Power SW is OFF. Failure to observe this can cause electric shock or short circuit.
- Use care so as not to damage wirings. Damaged wiring can cause electric shock or short circuit.
- Do not touch undesignated places. Touching places not designated can cause electric shock or short circuit.
- This work should be performed by the site maintenance individual or other skilled professional. Performing work by non-technical personnel can cause electric shock hazard.
- When linking a number of machines, be sure to supply sufficient power for the corresponding number of machines. Be sure to secure per machine current as stated in this manual. Failure to observe this can cause a fire and an electric shock accident.
- Due to the length of the network cable, the distance in between the machines is limited. However, to avoid accidents, be sure to secure space in excess of 70 cm between the machines.
- 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.



- To perform work safely, be sure to secure the space corresponding to number of machines to be linked. Failure to observe this can cause accident.
- To avoid accidents, use a cable cover that will not cause patrons to trip when laying network cables in areas of heavy foot traffic.
- To prevent accidents and acts of vandalism, cover the network cables with the strongest cover possible.

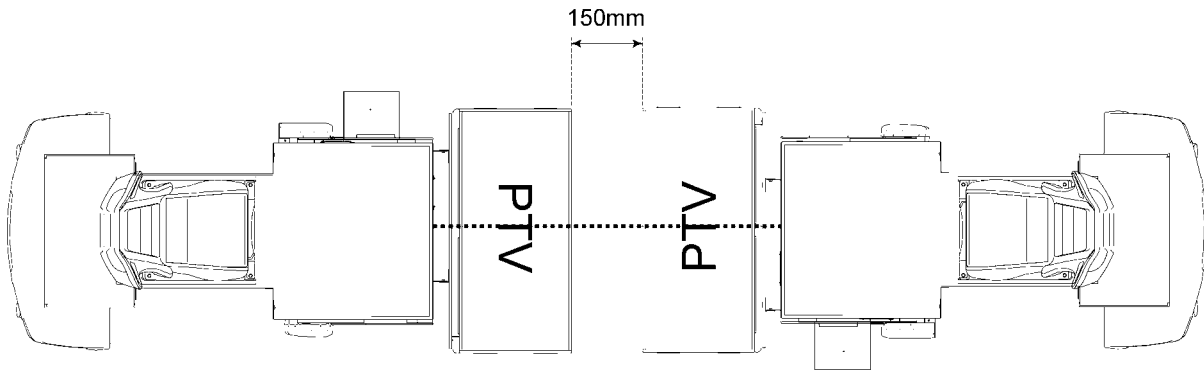


- Network play is not possible between game machines with different cabinet types.

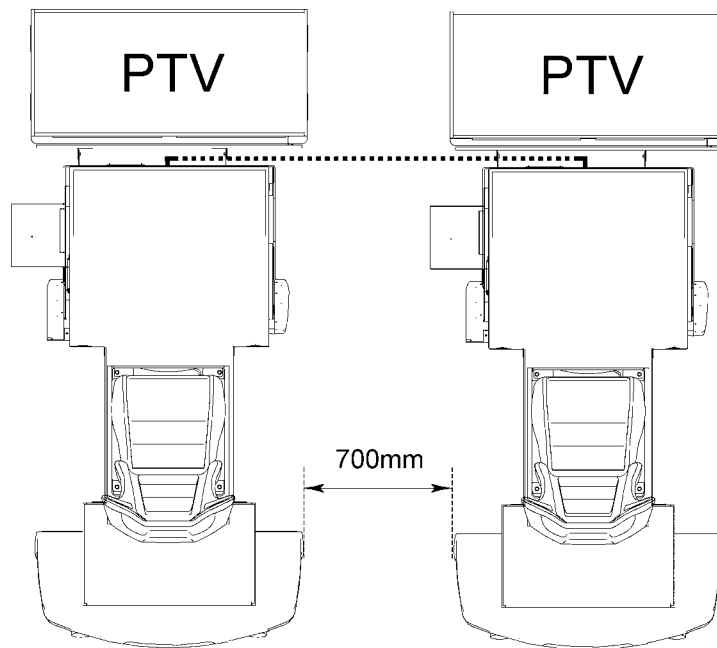
When connecting several games machines together, make sure that a sufficient amount of electrical power is available for each machine. Plan on providing 15A for each machine in 100-120V locations, and 7A in 220-240V locations.

### 3.20.8.1.1. Spacing of Game Machines

Leave at least 15 cm of space between game machines when they are positioned facing each other.



Leave at least 70 cm of space between game machines when they are positioned adjacent to each other.



### 3.20.8.1.2.Connecting Network Cables

To enable network play, the hubs inside each of the game machines involved must be connected with network (LAN) cables. Connect the hub inside one of the machines to the hub in the other machine using LAN cables. There is no need to connect the other machines to each other in any other way.

Do not connect LAN cables between twin machines when they are not used for network play.

1. Turn off the power and unplug the power cord from the outlet. Place the power cord so as not to damage it while working.

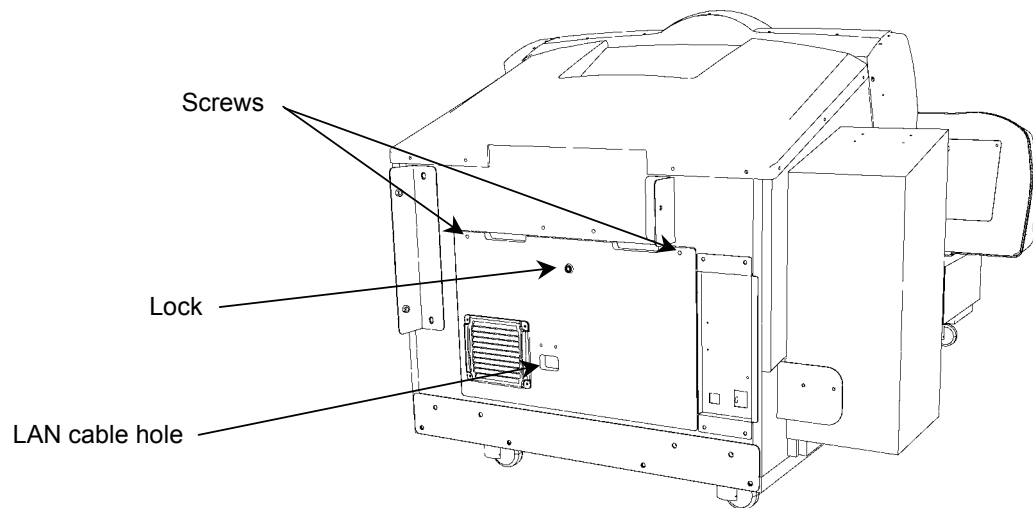


- Use extreme care when moving the machine. Avoid using excessive force when pushing any plastic parts.



- YOU MUST UNCOUPLE THE PTV FROM THE MAIN BODY BEFORE MOVING THE MACHINE.

2. Using the illustrations on the previous page as reference, move the machines so that they are arranged into the correct configuration. Leave enough space to perform the rest of the operations in this procedure.
3. Referring to the diagram below, undo the two screws and use the key to open the door.



4. Route the LAN cable (part of the Installation Kit ORP-INST-D) through the hole in the door and attach it to any of the free connections on the hub.  
*Note: The PTV harnesses also use this hole.*
5. Repeat steps 3 and 4 to connect the other end of the LAN cable to the second machine.
6. Replace the door.
7. Once the machines have been linked for network play, line them up. Leave as much space as possible between the machines.
8. Reconnect the PTV to the Main Assembly. (See 3.10)
9. Secure all leg adjusters on each machine. (See 3.12)
10. Connect the power cord.

### 3.20.8.1.3.Network Play Settings

Each of the linked machines must be set up for network play. If the machines are not set up correctly, network play will not be possible.

#### 3.20.8.1.3.1.How To Set Up A Machine For Network Play

1. Turn off the power on each machine to be used in network play.
2. Enter Test mode on each machine. (See Section 5.1)
3. Select GAME TEST MODE and press the TEST Button. The machine will enter Game Test mode and the screen will display the Game Test menu. (See Section 5.4)
4. Select NETWORK SETTINGS from the Game Test menu and press the TEST Button. The Network Settings screen will appear. Network settings are carried out on this screen.

```
NETWORK SETTING

LINK NUM 2(2`4)
GROUP A(A`Z)
NUMBER 2(1`4)
-> EXIT

SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON
```

5. Set the LINK NUM setting on the Network Settings screen to the number of game machines linked for network play.
6. Set up the GROUP setting on the Network Settings screen. The GROUP setting is used to divide the machines linked for network play into groups. For example, a network of 4 machines could be divided into 2 groups of 2 machines.
7. Set the NUMBER setting on the Network Settings screen so that each machine within a group has a different number. Make sure that one machine in each group is set to "1".
8. Exit Test mode on each machine. Be sure to choose EXIT from the System Test Menu to exit Test mode properly.
9. Once each machine has exited Test mode and gone through initialization, it will begin a network test. During the network test, the monitor will display a network test screen.
10. If there are no problems with network play settings or cable connections, the machine will enter Advertising mode.
11. If the advertising screen appears after the network test is finished, network settings are complete.
12. The network test should last roughly 20 to 30 seconds. If the network test screen fails to disappear, the problem is most likely due to one of the following: incorrect settings, an improperly connected LAN cable, a faulty LAN cable connection, or a severed wire.

#### 3.20.8.1.4.General Precautions Regarding Network Play



- When setting up machines for network play, settings such as the game's difficulty level will be derived from the machine whose "NUMBER" is set to "1". If settings on machine "1" are changed, the other machines will have their settings changed accordingly. On machines other than "1", settings derived from machine "1" will not be displayed on screen and cannot be changed.
- Should a network connection fail during network play, gameplay will be suspended and the Network Error Screen will be displayed.
- If one of the units attached for network play enters Test Mode, the other unit will display the same Test Mode Screen.
- Even when units are connected for network play, each seat, each game may be given different cost settings. Incorrect cost settings may cause budget balancing problems.

Note that when 2 or more machines are linked together for network play, some functions are different than for stand-alone machines.

Whenever Test mode is used on a machine linked for network play, all machines connected to the network will display the network test screen. When patrons are engaged in network play, do not enter Test mode on any of the machines in the network, even if the machine is not in use.

However, machines whose GROUP setting is different from that of the machine entering Test mode will not be affected.

### 3.21. Periodic Check and Inspection

The items listed below require periodic check and maintenance to retain the performance of the machine and ensure safe operation:



- Be sure to check annually to see if the power cords are damaged. The plug is securely inserted and that there is no dust in the interior of the machine or between the socket and the power cord. Using the product in an unclean condition may cause a fire or electric shock.



- Periodic checks should only be carried out by QUALIFIED SERVICE PERSONNEL.

DESCRIPTION	WHAT TO CHECK	INTERVAL
HANDLE MECHA	Check the V.R. value	Monthly
	Check adjust gear engagement	Every 3 months
	Greasing of gears	Every 3 months
ACCELERATOR & BRAKE	Check the V.R. value	Monthly
	Check adjust gear engagement	Every 3 months
	Greasing of gears	Every 3 months
SHIFT LEVER	Check SW	Monthly
	Greasing	Every 3 months
MONITOR / PROJECTOR	Clean screen (do not use water jet)	Weekly
	Check adjustment	Monthly
SEAT	Rail greasing	Monthly
GAME BD	Memory Test	Monthly
	Game Assignments	Monthly
INTERIOR	Clean (do not use water jet)	Annually
POWER SUPPLY CORD	Check condition	Annually
CABINET SURFACE	Clean (do not use water jet)	As required
CONTROL PANEL	Lamp operation	Monthly
	Check switch operation	Monthly
COIN MECHANISM	Check SW (If Fitted)	Monthly



## 4. GAME DESCRIPTION

The following section details the game when it is functioning correctly. If any details are different, there may be a fault. Identify and eliminate the fault to ensure satisfactory operation.

When power is connected, the fluorescent lamp in the FL box is always on. When in an advertising state, the screen displays demonstration pictures and ranking data. Sounds are heard from the speakers on the right and left of the seat. The advertising sounds are not heard if you have set this function to off (disabled). The start button and the change view button on the control panel are illuminated.



## 4.1. Basic Controls



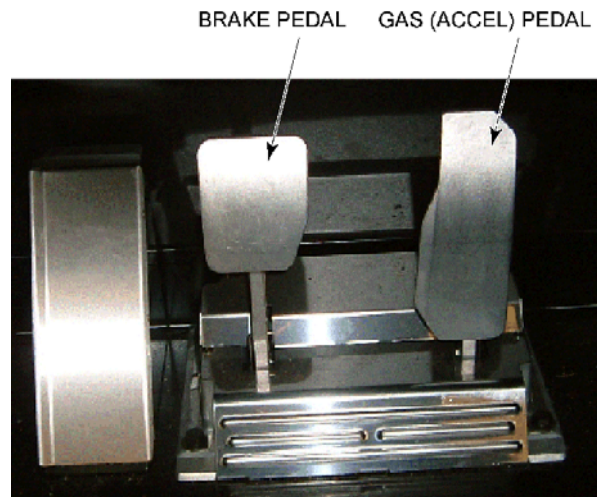
Steering Wheel



START and VIEW CHANGE Buttons



Paddle Shifter



Pedals

Insert a coin and press the Start Button to begin a game.

Choose your car, game mode, background music, and other options. View choices with the Steering Wheel, and enter your selection with the Gas pedal.

During game play with the Steering Wheel, use the Gas pedal to accelerate your car, and the Brake pedal to stop.

The Gear Shifter can be used to shift up and shift down when using Manual transmission.

You can switch between three different view settings with the View Change Button.

## 4.2. Game Outline

This is a driving game.

The player controls a car (Ferrari), listening to great music and enjoying roadside scenery in the company of a gorgeous female passenger, all while racing towards the goal before time is up.

The time limit is extended at each checkpoint.

The game ends when the player runs out of time or reaches the goal.

Each game stage ends with a fork in the road where the player must decide the route using the car during the race. There are a total of fifteen stages, and five separate goal areas. The left-hand routes lead to less difficult stages.

A single course consists of 15 stages, with five separate goal areas.

The game has two courses, the OutRun2SP course and the OutRun2 course (from the previous game).

The three single player game modes are OutRun Mode, Heart Attack Mode, and Time Attack Mode.

The game's Versus Mode accommodates play for up to four players.

### Route Guide with Stage Names – OutRun2 SP

				4A	Lost City	5A	Giant Statues
			3A	Water Falls		5B	Legend
	2A	Bay Area		4B	Casino Town		
1A	Sunny Beach		3B	Big Forest		5C	Floral Village
	2B	National Park		4C	Ice Scape		
			3C	Canyon		5D	Milky Way
				4D	Jungle		
						5E	Skyscrapers

### Route Guide with Stage Names – OutRun2

						5A	Tulip Garden
			3A	Castle Wall		5B	Metropolis
	2A	Deep Lake		4A	Cloudy Highland		
1A	Palm Beach		3B	Coniferous Forest		5C	Ancient Ruins
	2B	Alpine		4B	Industrial Complex		
			3C	Desert		5D	Imperial Avenue
				4C	Snow Mountain		
				4D	Ghost Forest		
						5E	Cape Way



### 4.3. Setup Screen Order And Contents

This section explains the available options and controls for the setup screens.

#### 4.3.1. Versus Mode Entry

If several machines are linked together, inserting a coin and pressing the Start Button on one machine will result in the message "Entry has been closed. Please stand by." to be displayed on the screen, following which opposing players have the chance to enter the race on other machines.



Any linked machines that players can race on display the message, "Waiting for entries." Other players can join the race by inserting a coin and pressing the Start Button.

*Note:* See the later section "Versus Play Setup" for details of game flow after all players have joined the race.



##### 4.3.1.1. Closing Versus Mode Entry

To close Versus Mode entry, press the View Change Button and the Brake pedal at the same time before other players join. (Press the Brake pedal while holding down the View Change Button.)

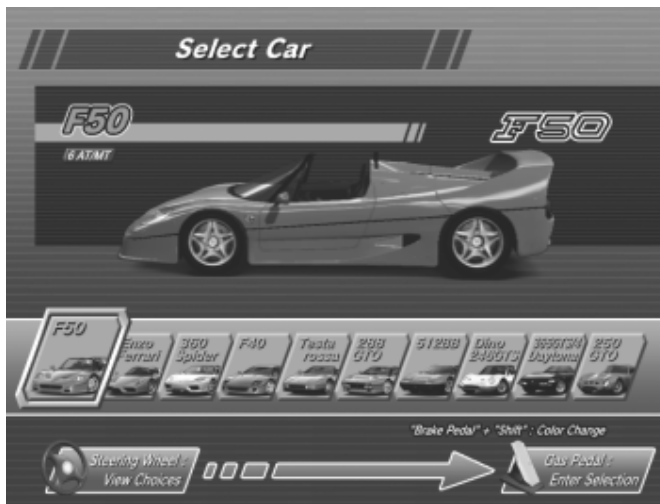
Versus Mode entry time can also be run down to "0" by holding the Start Button, thus closing Versus Mode entry.

By closing Versus Mode entry in either of the above ways, the Single Player mode will commence, provided no players have already joined.

*Note:* See the later section "2. Single Player Setup" for details of game flow after a single player race has been selected.

## 4.3.2. Single Player Setup

### 4.3.2.1.(1) Player's Car Selection



Controls:

Steering Wheel: View Choices, Gas Pedal: Enter Selection, "Brake Pedal" + "Shift": Colour Change

The player can select one of the following 10 cars:

"F50", "Enzo Ferrari", "360 Spider", "F40", "Testarossa", "288 GTO", "512 BB", "Dino 246 GTS", "365 GTS/4, Daytona", "250 GTO"

### 4.3.2.2.Changing the Car Colour



Pressing the Brake pedal displays the available colours for the player's car at the bottom-right of the screen. A colour can be selected by moving the Gear Shifter up or down. In accordance with the selected colour, the colour of the car displayed on the screen also changes.

#### 4.3.2.3. Transmission Selection



#### Controls:

Steering Wheel: View Choices, Gas Pedal: Enter Selection.

After the player has selected a car, they can then choose the type of transmission.

**Automatic Transmission:** Shifting up and down gears is performed automatically (the player does not use the Gear Shifter).

**Manual Transmission:** The player shifts up and down gears using the Gear Shifter.

For Manual Transmission, the number of gears depends on the model of the car.

6-Speed: F50, Enzo Ferrari, 360 Spider

5-Speed: F40, Testarossa, 288 GTO, 512 BB, Dino 246 GTS, 365 GTS/4 Daytona, 250 GTO

#### 4.3.2.4. Game Mode Selection



Controls:

Steering Wheel: View Choices, View Change Button: OutRun2/OutRun2SP, Gas Pedal: Enter Selection.

The player selects which game mode they will play.

- **OutRun Mode:** Try to reach the goal with your girlfriend.  
Earn points by overtaking enemy or rival cars on your way to the finish line.
- **Heart Attack Mode:** Try to get as many "HEARTS" as possible by meeting your girlfriend's demands.  
Carry out the various requests your girlfriend makes and try to accumulate hearts.
- **Time Attack Mode:** Drive against the Ghost Car and challenge for the course record.  
Compete against the fastest time achieved by another player on the machine (the ghost car) to set a new record.

*Note:* See the section *Game Instructions* for further details of each mode.

Pressing the View Change Button allows the player to select the course from the previous game, OutRun2.  
Pressing the View Change Button again allows the player to select the OutRun2SP course.



#### 4.3.2.5. Game Mode Selection – 15 Continuous Course Mode

When the 15-Continuous Course Mode is available, two icons for that mode are added to the game mode selection screen.

*Note: See the section "Test Mode" for information on how to setup 15-Continuous Course Mode.*



Points about the additional 15-Continuous Course Mode:

- OutRun 15-Continuous Course Mode:  
This allows the player to race 15 consecutive stages in OutRun Mode.
- Time Attack 15-Continuous Course Mode:  
This allows the player to race 15 consecutive stages in Time Attack Mode.

*Note: See the section "Game Instructions" for details of the 15-Continuous Course.*

If the player has insufficient credits to play the 15-Continuous Course Mode, the outstanding required credits are displayed above the course icons. In this state, it is not possible to select that mode.





Pressing the View Change Button enables the selection of courses from the previous game, OutRun2. It is possible to select a 15-Continuous Course from OutRun2.



#### 4.3.2.6. Settings Selection (Time Attack Mode only)

In Time Attack Mode, the player proceeds to the car settings screen after selecting the game mode.



#### Controls:

Steering Wheel: View Choices, Gas Pedal: Enter Selection

The following settings are available:

- Normal: Emphasis on handling, with a top speed of 293 km/h.
- Tuned: Emphasis on speed, reaching 300 km/h maximum.

*Note: The Tuned setting is aimed at experienced players as handling is made more difficult.*

#### 4.3.2.7.BGM Selection



Controls:

Steering Wheel: View Choices, View Change Button: Music Change, Gas Pedal: Enter Selection, Brake Pedal + Shift: Sound Balance Change

The in-game background music can be chosen from a total of 14 different tunes. By selecting the RANDOM icon on the far right, the music will be selected at random.

The list of selectable music can be changed by pressing the View Change Button.

BGM List: First screen

- SPLASH WAVE
- MAGICAL SOUND SHOWER
- PASSING BREEZE
- Risky Ride
- Shiny World
- Night Flight (Includes lyrics)
- Life was a bore (Includes lyrics)

BGM List: Second screen

- SPLASH WAVE -1986-
- MAGICAL SOUND SHOWER -1986-
- PASSING BREEZE -1986-
- Shake the Street -1989-
- Rush a Difficulty -1989-
- Who are you -1989-
- Keep Your Heart -1989-



## Sound Balance Adjustment

Pressing the Brake pedal brings up the sound balance window at the bottom right of the screen. The sound balance can be adjusted by moving the Gear Shifter up or down. Depending on the chosen sound balance, the relative volume of the BGM and engine noise varies.



### 4.3.3. Versus Play Setup

#### 4.3.3.1. Versus Stage Selection



#### Controls:

Steering Wheel: View Choices, Gas Pedal: Enter Selection

The player selects which stages the race will contain.

- Special: A course specially designed for versus races. This course combines stages from both OutRun2SP and OutRun2.
- OutRun2SP: The OutRun2SP course.
- OutRun2: The OutRun2 course.

### 4.3.3.2. Versus Stage Selection (15-Continuous Course Mode)

When the 15-Continuous Course Mode is available, two icons for that mode are added to the versus stage selection screen.

Note: See the section "Test Mode" for information on how to setup 15-Continuous Course Mode.



Points about the additional 15-Continuous Course Mode:

- OutRun2SP 15-Continuous Course Mode:  
This allows the player to race 15 consecutive stages in OutRun2SP Mode.
- OutRun2 15-Continuous Course Mode:  
This allows the player to race 15 consecutive stages in OutRun2 Mode.

Note: See the "Game Instructions" section for details of the 15-Continuous Course Mode.

If the player has insufficient credits to play the 15-Continuous Course Mode, the outstanding required credits are displayed above the course icons. In this state, it is not possible to select that mode.



It is only possible to play the 15-Continuous Course Mode if all drivers participating in the race select it.

### 4.3.3.3.Player's Car Selection



#### Controls:

Steering Wheel: View Choices, Gas Pedal: Enter Selection, Brake pedal + Shift: Player Only Mode "PO" Entry, (View Change + Shift: No Handicap "NH" Entry)

As with Single Player mode, there are 10 cars to choose from.

In Versus Play mode, car colours are fixed - Player 1: Red, Player 2: Yellow, Player 3: White or Silver (depending on the car model), Player 4: Black.

#### No Handicap Setup

When a player is in 2nd position or below during Versus Play, they are compensated to help them catch the lead driver more easily.

No Handicap is a mode without this compensation.

Pressing [View Change + Shift] (moving the Gear Shifter while pressing the View Change Button) displays the "NH" icon on the left edge of the screen.

If all players participating in the race perform this operation, the race will take place in No Handicap mode.

#### Player Only Setup

In Player Only mode, no cars appear during the race other than the player's own car.

Pressing [Brake Pedal + Shift] (moving the Gear Shifter while pressing the Brake Pedal) displays the "PO" icon on the left edge of the screen.

If all players participating in the race perform this operation, the race will take place in Player Only mode.



#### 4.3.3.4. Transmission Selection

This operation is carried out in the same way as described in the section "2. Single Player Setup".

#### 4.3.3.5. BGM Selection

This operation is carried out in the same way as described in the section "2. Single Player Setup".

### 4.3.4. Special Controls

#### Shortcut

During setup, the player can choose to start with the same settings as the previous game by performing the following operation:

[Brake + View Change + Shift Up (putting the Gear Shifter in the down position while pressing the Brake Pedal and the View Change Button)].

This combination of controls opens the shortcut window on the screen.



By turning the Steering Wheel to highlight "YES" and selecting it with the Gas pedal, play starts with the same settings as the previous game.

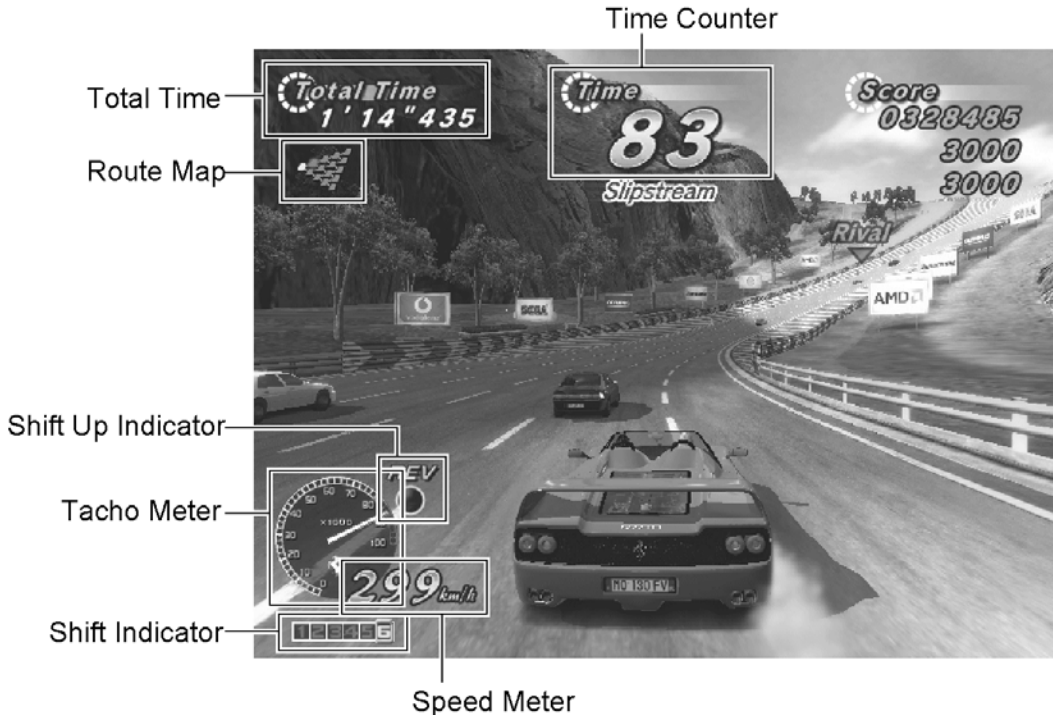
If "NO" is selected, the window closes and the player is returned to the setup screen.

*Note: If the previous game was played in 15-Continuous Course Mode it is not possible to use this shortcut.*

## 4.4. Game Instructions

### 4.4.1. Common Features in All Modes

#### 4.4.1.1. Display Breakdown (All Modes)



The time counter is displayed at the top-centre of the screen.

- If the time counter reaches zero, the game is over.
- Extra time is added when a checkpoint is passed.
- When slipstreaming, "Slipstream" is displayed underneath the time counter.

At the top-left of the screen the total time (in Single Player mode), position (in Versus Play mode) and route map are displayed.

- The total time shows how much time has passed since the start of the game (in Single Player mode).
- The position display shows the position the player is currently in, between the start and the finish line (in Versus Play mode).
- The route map shows the route the player has taken up to this point.
- (An icon is displayed to the side of this at forks indicating the next stage.)

At the bottom-left of the screen the speed meter and tachometer are displayed, as well as the shift and shift-up indicators.

- The speed meter shows the player's current speed.
- (When slipstreaming, the colour of the number changes to blue.)
- The tachometer shows the speed the engine is currently revving at.
- The shift indicator shows the currently engaged gear.
- The shift-up indicator lets the player know the correct time to move up a gear.
- (It flashes red when it is time to shift up a gear.)

*Note: The shift-up indicator is not displayed if the player has selected Automatic Transmission.*



#### 4.4.1.2.Game Controls (All Modes)

##### How to Drift



- 1) After letting go of the Gas pedal, immediately press the Brake pedal.
- 2) Turn the Steering Wheel hard and fast in the direction of a corner and press the Gas pedal.

OR

When using Manual Transmission, drop down a gear just before a corner and turn the Steering Wheel hard in the direction of the corner.

##### Slipstreaming



By driving behind an enemy car or the car of another player, it is possible to pick up a slipstream. When slipstreaming, the player experiences enhanced acceleration and can drive faster than the car's specified top speed.

The following changes are seen when slipstreaming:

- "Slipstream" appears below the time counter.
- The colour of the speed meter display turns blue.
- The engine noise becomes slightly louder.

## 4.4.2. Single Player: OutRun Mode

### 4.4.2.1. Display Breakdown



The score is displayed at the top-right of the screen, underneath this is an animated display of any points received for passing enemy cars.

### 4.4.2.2. Game Instructions

Put simply, this is a mode where you enjoy taking a drive with a girl. Choose either the left or right road when you come to a fork and aim to reach the finish line within the time limit.

There are different endings depending on which finish line you cross.

Your score goes up each time you overtake a faster enemy car.

#### **Hints for attaining a high score**

Among the enemy cars there is a rival car which is marked with the word "RIVAL" above it. The rival car is fast and difficult to pass, but there is a large point bonus if you do manage to.

The score you get for passing enemy cars varies depending on how you take them. Try to find the highest scoring method for overtaking.

### 4.4.3. Single Player: Heart Attack Mode

#### 4.4.3.1. Display Breakdown



The number of hearts collected is displayed at the top-right of the screen.

At the bottom-right of the screen, the total number of hearts collected and a girl's silhouette is displayed. As the total number of hearts collected increases, the girl's silhouette is filled out with colour.

#### 4.4.3.2. Game Instructions

In this mode, you impress a beautiful girl by doing everything she asks. You must collect hearts which give an indication of how impressed the girl is with you. You have to carry out the girl's requests in the interval between "START" and "END" being displayed.

You collect hearts in accordance with how well you carry out the various requests your girl asks of you.

The girl rates your performance in the following levels:  
AAA, AA, A, B, C, D, E

#### **Hints for picking up a lot of hearts**

Crashing or bumping into enemy cars reduces the number of hearts you can get, so drive carefully.

If you continually achieve good ratings you may be given a "Special Request". That's your chance to really impress her and get a triple-A score!

## 4.4.4. Single Player: Time Attack Mode

### 4.4.4.1. Display Breakdown



At the top-right of the screen, the lap time for each stage is displayed. (If the time is faster than the ghost car, it is displayed in green.)

At the bottom-right of the screen, the time for each sector of the stage is displayed.

When each sector is completed, ghost car information is displayed on the centre left and right of the screen.

On the left is data for the ghost car that took the left-hand road at the fork.

On the right is data for the ghost car that took the right-hand road at the fork.

The data is displayed in the following order:

The ghost car icon (model and colour), and the ghost car driver's name.

Ghost: The ghost car's sector completion time.

Player: The player's sector completion time.

Diff: The time difference between the ghost car and player's completion times. (In green if the player is faster than the ghost car or red if the player is slower.)

The car's setup and transmission are shown at the bottom-left of the screen.

### 4.4.4.2. Game Instructions

In this mode you compete against the ghost car's time.

You aim to overtake the ghost car on each course and record your own fastest time to become the ghost car.

The ghost car represents the fastest recorded time on each stage.

If you drive faster than the ghost car, your player data will be recorded as the ghost car data, and any subsequent plays of the same stage will operate with your car as the ghost car.

If you enter your name on the name entry screen you can also add that to the ghost car data. Even if you quit the game part way through, if you have recorded a faster time than the ghost car, you will have the opportunity to enter your name.

Each stage has data for two ghost cars; one which took the left-hand road at the fork and one which took the right-hand road.

The fifth stage has no fork so there is only data for one ghost car.

The fastest player on each course is saved separately as the top ghost car. If you enter the fifth stage within 1 second of the fastest player, the top ghost car appears in addition to the normal ghost car. ("TOP" is shown above the car.) If you beat the top ghost car, you become the fastest player for that course.

Pressing the Start Button toggles the display of the ghost car on and off.

## 4.4.5. Versus Play

### 4.4.5.1. Display Breakdown



Opponent data is displayed at the top-right of the screen. Each player's information is indicated with a face icon, and their current status is shown by the expressions on the faces and with speech. The order of the faces changes to reflect the race order.

### 4.4.5.2. Game Instructions

The starting grid order is determined by the order of entry into the game.

The first player to reach a fork can decide whether the race will continue down the left-hand or right-hand road.

It is possible to set "No Handicap" mode, which eliminates compensation for trailing drivers, or "Player Only" mode, where enemy cars are not displayed.

*Note: See the previous section "Versus Play Setup" for details.*

As soon as one of the competing players passes the finish line, the time counter display shows "Extra Time".

The game is over for players who do not manage to finish within the "Extra Time" period.



#### 4.4.6. 15-Continuous Course Mode

When 15-Continuous Course Mode is enabled, the following game modes are available:

- "OutRun 15-Continuous Course Mode" (Single Player)
- "Time Attack 15-Continuous Course Mode" (Single Player)
- "OutRun2SP 15-Continue Course Mode" (Versus Play)
- "OutRun2 15-Continuous Course Mode" (Versus Play)

The 15-Continuous Course Mode differs from the normal game in the following ways:

##### 4.4.6.1. Display Breakdown



The following differences are exhibited in the 15-Continuous Course Mode:

- The route map changes to the 15-Continuous Course map.
- In Versus Play, the position display is modified.

##### 4.4.6.2. Game Instructions

The 15-Continuous Course is a course combining all 15 stages.

The stages are interconnected in the following order:

1A - 2A - 2B - 3A - 3B - 3C - 4A - 4B - 4C - 4D - 5A - 5B - 5C - 5D - 5E

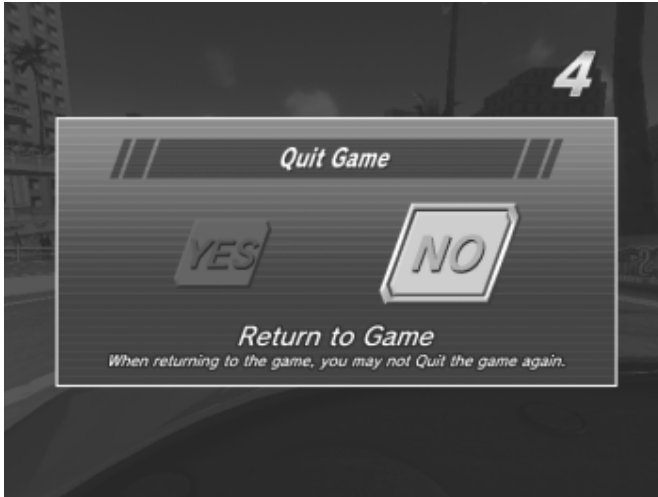
At the end of each stage, both branches of the left-right fork lead to the same stage that follows.

#### 4.4.7. Game Pause

The game can be paused with the following combination of controls (in Single Player mode only):

With the car stopped, press [Brake + View Change + Shift Up (Put the Gear Shifter in the down position while pressing the Brake Pedal and View Change Button down)]

This combination of controls opens the pause window on the screen.



By turning the Steering Wheel to highlight "YES" and selecting it with the Gas pedal, the game comes to an end.

If "NO" is selected game play resumes.

(After "NO" has been selected once, it is no longer possible to use the game pause command again.)

The game pause command will not work in the following circumstances:

- 1) When the player is in the vicinity of the start area.
- 2) When the remaining time is 8 seconds or less.
- 3) When the game has already been paused once before, and "NO" was selected.



## 4.5. Name Entry And Internet Ranking

### 4.5.1. 1. Name Entry



#### Controls:

Steering Wheel: View Choices, Gas Pedal: Enter Selection, Brake Pedal: Delete, Start Button: END  
(Moving the Gear Shifter up and down selects letters.)

This game has a function that can register all Single Player results with an Internet ranking system. After finishing a game in Single Player mode, the player enters their name for Internet ranking purposes, even if they have not achieved a rank on the actual machines they are playing on.

If the player gets into the ranking on the machine they are using, the name they enter will be used in that machine's advertising demo display.

If the player makes a new ghost car record, their name is displayed with the new ghost car data.

## 4.5.2. Internet Ranking



After the player has entered their name, an Internet ranking password is displayed.

Pressing the View Change Button switches to the game's in-depth data display.

Visit the following URL for Internet ranking registration and listings: <http://outrun.jp/>

The Internet ranking is calculated separately for the following game modes and courses:

### OutRun2SP Courses

- |                                  |  |
|----------------------------------|--|
| ▪ OutRun Mode:                   | Each course (A - E) + the 15-Continuous Course |
| ▪ Heart Attack Mode:             | Each course (A - E)                            |
| ▪ Time Attack Mode [Normal, AT]: | Each course (A - E) + the 15-Continuous Course |
| ▪ Time Attack Mode [Normal, MT]: | Each course (A - E) + the 15-Continuous Course |
| ▪ Time Attack Mode [Tuned, AT]:  | Each course (A - E) + the 15-Continuous Course |
| ▪ Time Attack Mode [Tuned, MT]:  | Each course (A - E) + the 15-Continuous Course |

### OutRun2 Courses

- |                                  |  |
|----------------------------------|--|
| ▪ OutRun Mode:                   | Each course (A - E) + the 15-Continuous Course |
| ▪ Heart Attack Mode:             | Each course (A - E)                            |
| ▪ Time Attack Mode [Normal, AT]: | Each course (A - E) + the 15-Continuous Course |
| ▪ Time Attack Mode [Normal, MT]: | Each course (A - E) + the 15-Continuous Course |
| ▪ Time Attack Mode [Tuned, AT]:  | Each course (A - E) + the 15-Continuous Course |
| ▪ Time Attack Mode [Tuned, MT]:  | Each course (A - E) + the 15-Continuous Course |

## **4.6. Character Introductions**

Three major characters appear in the game.

### **1. Driver**

Name: Alberto  
Personal Info: Although easy-going on the outside, he's a real go-getter.  
He has a very distinguished driving sense. He's also quite rich.

### **2. OutRun Mode Lady**

Name: Jennifer  
Personal Info: She's a filthy rich 'princess', always selfishly seeking the next thrill. She's involved with Alberto, his Ferrari a present from her. She has a sharp eye for driving techniques.

### **3. Heart Attack Lady**

Name: Clarissa  
Personal Info: She's peppy and unmistakably sexy. A driving fan, with a weakness for thrill rides.  
She's very demanding, but her sweet character makes her hard to dislike.

## 5. MAINTENANCE INSTRUCTIONS

### 5.1. Explanation of Test and Data Display

Use the switches on the VTS to enter the TEST MODE. This will allow you to carry out post installation and periodic checks and adjustments. The following section details the function of each of the tests:



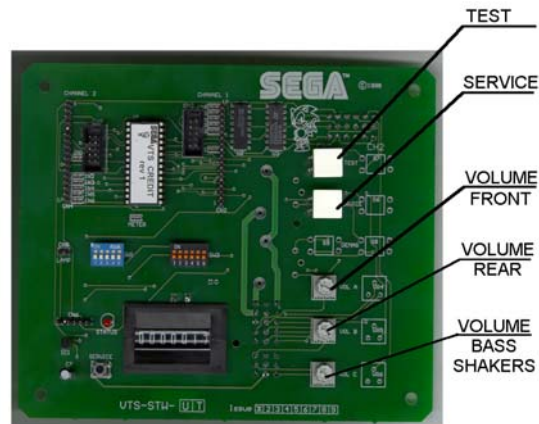
- Be very careful about entering TEST MODE. If the machine you wish to test is linked to other machines, exiting test on your machine will cause a network check to be carried out. This will disable all other machines linked to it.

ITEM	DESCRIPTION / REFERENCE	INTERVAL
INSTALLATION OF THE MACHINE	When the machine is installed perform the following checks: Check to see that each setting is as per the standard settings input at the time of shipment. In the INPUT TEST mode, check each switch and VR. Section 5.4.1 In the OUTPUT TEST mode, check each of the lamps. Section 5.4.2 In the MEMORY TEST mode check all of the IC's on the IC BD. Section 5.3.1	Monthly
MEMORY	On the TEST MENU screen choosing the MEMORY TEST allows self test to be performed. In this test RAM & ROM are tested.	Monthly
PERIODIC CHECKS	Periodically perform the following MEMORY TEST. Section 5.3.1 Ascertain each setting: In the INPUT TEST mode, test the control devices. Section 5.4.1 In the OUTPUT TEST mode, check each of the lamps. Section 5.4.2	Monthly
CONTROL SYSTEM	In the INPUT TEST mode, check each switch and VR. Section 5.4.1 Adjust or replace each switch and VR.	Monthly
MONITOR	In the CRT TEST mode, check to ensure the monitor is adjusted correctly. Section 5.3.1.5 Clean screen (switch off machine and remove the plug)	Monthly Weekly
IC BOARD	MEMORY TEST In the SOUND TEST mode, check the sound related ROMs. 5.3.1.4	Monthly
DATA CHECK	Check such data as held in the bookkeeping screens, relating to number and length of plays. Section 5.3.2.6	Monthly
EXTERIOR MAINTENANCE	Clean surfaces Lubricate seat sliders	Monthly
COIN MECHANISM	Check switch operation (if fitted)	Monthly

## 5.2. VTS Assembly



- Do not touch places other than those specified. Touching places not specified could cause an electric shock or short circuit..



Opening the Coin Chute door will reveal the VTS Assembly shown above. The function of each switch is as follows.

TEST BUTTON (TEST SW):

Used to enter TEST mode. Also has function during TEST mode. Refer to the later section detailing TEST mode.

SERVICE BUTTON (SERVICE SW):

Gives credits without registering on the coin counter. Also used during TEST mode.

VOLUME FRONT:

Adjusts the volume of the left, right and control panel speakers.

VOLUME REAR:

Adjusts the volume of the woofer behind the seat.

VOLUME BASS SHAKER:

Adjusts the output of the control panel bass shaker.

### 5.3. System Test Mode

Any settings that are changed by users during TEST MODE are saved upon exiting TEST MODE with the EXIT command in the SYSTEM MENU. If the unit is powered off prior to exiting, changes to settings will not take effect.



- You may not enter GAME TEST MODE while the unit is reading from or checking the GD-ROM. If error messages are displayed when exiting TEST MODE, you should power the unit off and on again.
- In the manual for this product, "Media Board" and "DIMM" are one and the same.
- Use with the specified settings. If settings other than those specified are used, inappropriate operations or malfunction may occur

#### 5.3.1. System Test Menu Mode

System Test Mode can be used to check that the main circuit operations are correct, adjust Monitor colour, and perform coin/credit settings.

However, this product can only be used with the settings shown below.

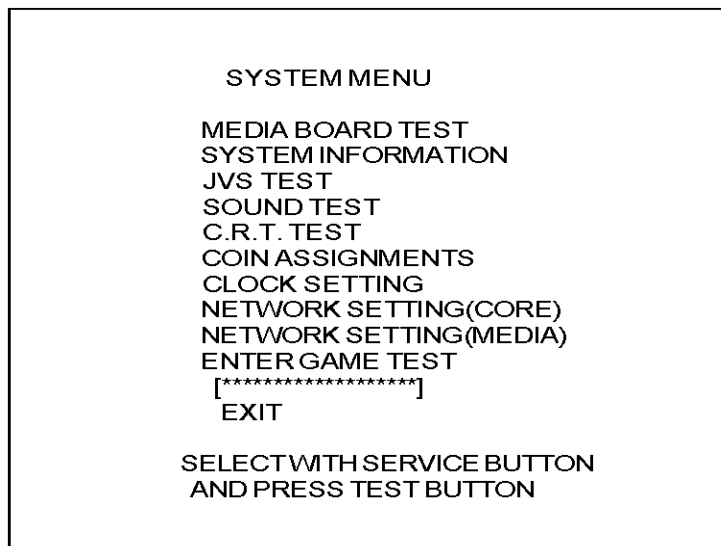
##### SOUND TEST

- OUTPUT TYPE: STEREO

##### COIN ASSIGNMENTS

- COIN CHUTE TYPE: COMMON
- SERVICE TYPE: COMMON

1. Press the TEST Button after powering on the unit to display the following SYSTEM MENU.



2. Press the SERVICE Button to move the cursor to the desired test item.
3. Move the cursor to the desired item and press the TEST Button to display each test screen.
4. Move the cursor to ENTER GAME TEST and press the TEST Button to enter the individual test menus for each game. Refer to "9-3 GAME TEST MODE".
5. When testing is complete, move the cursor to EXIT and press the TEST Button. The game advertisement screen should be displayed.

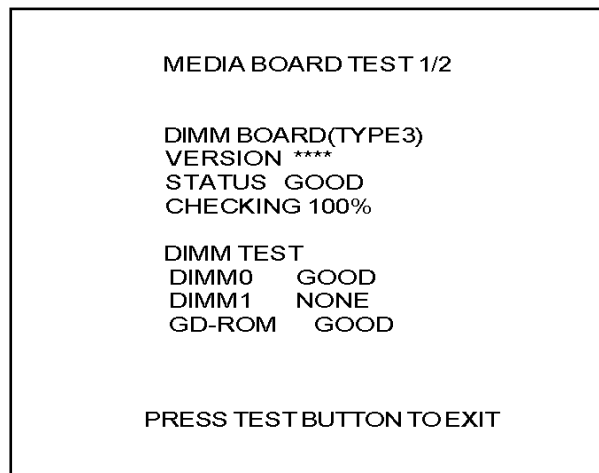
### 5.3.1.1. Media Board Test



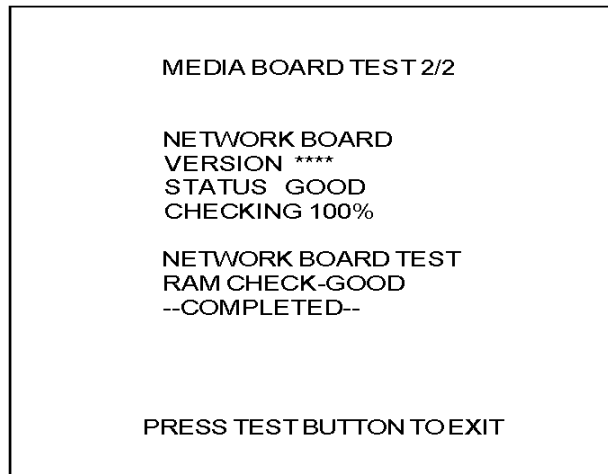
- Powering off the system during the MEDIA BOARD TEST with a DIMM BOARD will erase the game programme data. It may be necessary to reload the data.
- Always wait for the test to complete before attempting to exit.

MEDIA BOARD TEST is used to check the memory and IC on the MEDIA BOARD connected to the Chihiro. Test screens and test times may differ depending on the type of MEDIA BOARD connected to the unit.

*Note: The following is the MEDIA BOARD TEST screen for a unit with a DIMM BOARD.*



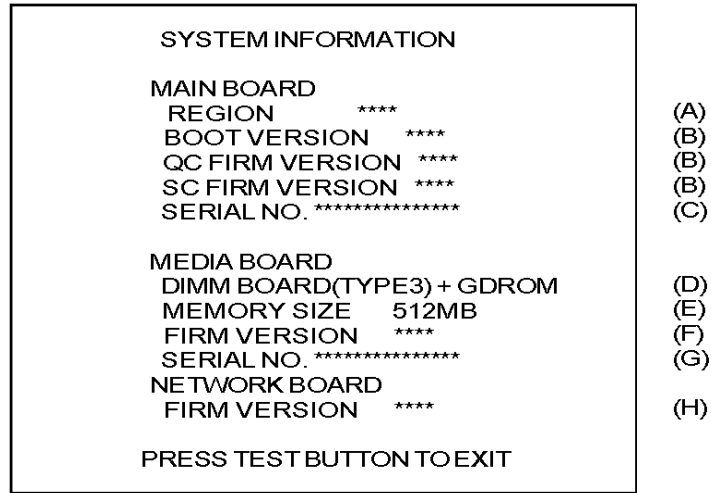
1. MEDIA BOARD TEST begins immediately upon entering this test mode.
2. If "GOOD" is displayed to the right of each item, the MEDIA BOARD components are functioning properly.
3. Press the TEST Button to display the following screen.



4. After the test is complete, move the cursor to EXIT and press the TEST Button to return to the SYSTEM MENU screen.

### 5.3.1.2. System Information

Use SYSTEM INFORMATION to check version and other information for system programmes. Screens may differ depending on the type of MEDIA BOARD connected to the unit.



Press the TEST Button to return to the SYSTEM MENU screen.

- A REGION  
The COUNTRY CODE of the MAIN BOARD.
- B BOOT VERSION, QC FIRM VERSION, SC FIRM VERSION  
Version information for the MAIN BOARD system programmes.
- C SERIAL NO.  
Serial number of the MAIN BOARD.
- D DIMM BOARD + GDROM  
Type of MEDIA BOARD. This example shows a DIMM BOARD with a GD-ROM DRIVE connected.
- E MEMORY SIZE  
Capacity of DIMM memory installed on the DIMM BOARD.
- F FIRM VERSION  
Version information for the DIMM BOARD system programme.
- G SERIAL NO.  
Serial number of the DIMM BOARD.
- H FIRM VERSION  
Version information for the NETWORK BOARD system programme.



### 5.3.1.3.JVS Test

JVS TEST is used to verify the specs of the I/O BOARD connected to the Chihiro and to run input tests. I/O BOARD specs are displayed initially. Screens may differ depending on the type of I/O BOARD connected to the unit.

```
JVS TEST
INPUT TEST
NEXT NODE
EXIT
NODE ****
NAME *****
I/O BD JVS
Ver****
*****
CMD VER 1.1
JVS VER 2.0
COM VER 1.0
SWITCH 2 PLAYER(S) 13 BITS
COIN 2 SLOT
ANALOG 8 CH
ROTARY 0 CH
KEYCODE 0
SCREEN X:0 Y:0 CH:0
CARD 0 SLOT
HOPPER OUT 0 CH
DRIVER OUT 6 CH
ANALOG OUT 0 CH
CHARACTER CHARA:0 LINE:0
BACKUP 0
SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON
```

1. Use the SERVICE Button to move the cursor to the desired test item.
2. Move the cursor to INPUT TEST and press the TEST Button to enter the INPUT TEST screen for the I/O BOARD currently displayed.
3. When 2 or more I/O BOARDS are connected, move the cursor to NEXT NODE and press the TEST Button to enter the test screen for the next I/O BOARD. The lower the NODE number, the further away the node is from the Chihiro.
4. Move the cursor to EXIT and press the TEST Button to return to the SYSTEM MENU screen.

## Input Test Screen

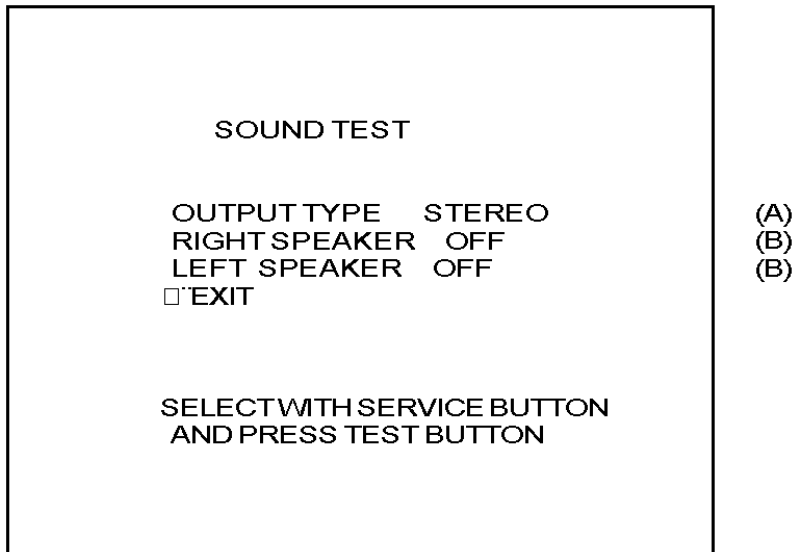
JVS TEST	
INPUT TEST	
NODE	1/1
SYSTEM	00
PLAYER 1	0000
PLAYER 2	0000
COIN 1	0000
COIN 2	0000
ANALOG 1	0000
ANALOG 2	0000
ANALOG 3	0000
ANALOG 4	0000
ANALOG 5	0000
ANALOG 6	0000
ANALOG 7	0000
ANALOG 8	0000
PRESS TEST AND SERVICE BUTTON TO EXIT	

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

- On-screen values change according to the input from switches and the volume.
  - SYSTEM, PLAYER*  
Values change with input from control panel/other switches.
  - COIN*  
Increases with input from the COIN SWITCH. The count is cleared when exiting TEST MODE.
  - ANALOG*  
Displays analog values from "0000" to "FFFF".
- Press the SERVICE and TEST Buttons simultaneously to return to the JVS TEST main screen.

#### 5.3.1.4.Sound Test

Use SOUND TEST to test sound output and to select the stereo/mono/surround setting.



1. Use the SERVICE Button to move the cursor to the desired test item.
2. Press the TEST Button to enter the selected item.
  - A)    OUTPUT TYPE: STEREO, MONO, SURROUND  
Select the sound output from the I/O PANEL audio output interface setting among STEREO, MONO and SURROUND.
  - B)    RIGHT/LEFT SPEAKER: ON, OFF  
When set to "ON", the test sends a beep to each audio output interface. Only the word "SPEAKER" is displayed when the OUTPUT TYPE is set to "MONO", and when set to "ON", the test sends the same beep to both the left/right audio output interfaces.  
To test surround output, it is necessary to use a separate Audio Amp, and receive signal from a terminal not in use at the time of shipping.  
*Note: Not available with this product.*
3. Move the cursor to EXIT and press the TEST Button to return to the SYSTEM MENU screen.

### 5.3.1.5.C. R. T. Test

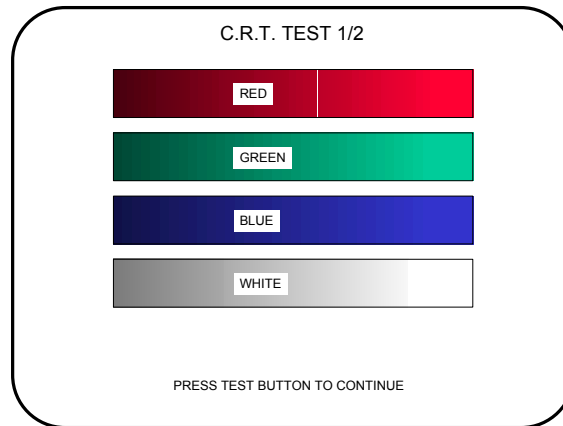
Use the C.R.T. TEST to adjust monitor colours and verify screen size.

#### COLOUR CHECK Screen

1. Monitor COLOUR CHECK screen is displayed initially.

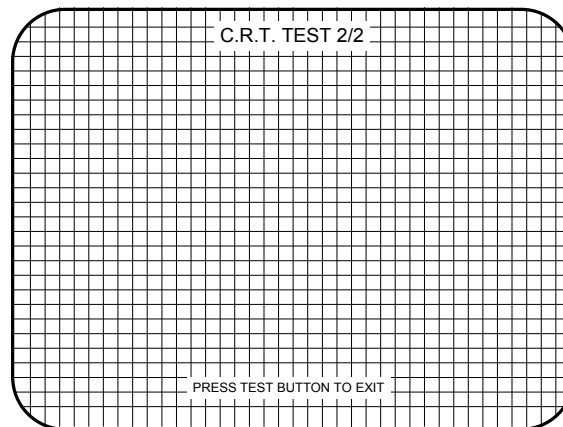
Each of the colours (red, green and blue) is darkest at the far left and gets progressively lighter (32 steps) towards the right.

Monitor brightness is set correctly if the white colour bar is black at the left edge and white at the right edge.



2. Press the TEST Button to proceed to the next page.

#### SIZE CHECK Screen



3. Adjust the CHECK GRID so that the entire GRID is displayed on the screen.
4. Press the TEST Button to return to the SYSTEM MENU screen.

### 5.3.2. System Assignments

Allows system options to be set. Select required setting with SERVICE button, confirm with TEST button. Default settings are indicated in parentheses.

```

                                SYSTEM ASSIGNMENTS

CABINET TYPE                    1PLAYER
ADVERTISE SOUND                  ON
MONITOR TYPE                     HORIZONTAL
DISPLAY MODE                     AUTOSCAN
SERVICE TYPE                     COMMON
COMMUNICATION MODE               MASTER
> EXIT

                                SELECT WITH SERVICE BUTTON
                                AND
                                PRESS TEST BUTTON

```

- CABINET TYPE specifies Control Panel and number of Coin Chutes. The number of players displayed in BOOKKEEPING varies in accordance with the value displayed here. (**1PLAYER**)
- ADVERTISE SOUND allows the sound emission to be turned (**ON**) or OFF during ADVERTISE MODE.
- MONITOR TYPE changes the orientation of the image on the screen (**HORIZONTAL**)
- SERVICE TYPE sets the functioning of the SERVICE button, should several SERVICE buttons exist.  
INDIVIDUAL: Service credit is applied to the machine on which the SERVICE button is pressed.  
(**COMMON**): Service credit is applied to all machines when SERVICE button is pressed.

#### 5.3.2.1. Coin Assignments

```

                                COIN ASSIGNMENTS
COIN CHUTE TYPE                  COMMON
COIN/CREDIT SETTING             #1
COIN CHUTE #1
    1COIN 1CREDIT

COIN CHUTE #2
    1COIN 1CREDIT

MANUAL SETTING
SEQUENCE SETTING
> EXIT

                                SELECT WITH SERVICE BUTTON
                                AND
                                PRESS TEST BUTTON

```

Select the coin assignments mode to set the coin to credit ratios.

This can be any of the pre-set values or can be done manually.

5.3.2.2.Coin/Credit Setting (Coin Chute Common Type)

SETTING	FUNCTIONING OF COIN CHUTE #1		FUNCTIONING OF 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 CREDIT	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	

5.3.2.3.Coin/Credit Setting (Coin Chute Individual Type)

SETTING	FUNCTIONING OF COIN CHUTE #1	
SETTING #1	1 COIN	1 CREDIT
SETTING #6	1 COIN	2 CREDITS
SETTING #8	1 COIN	3 CREDITS
SETTING #9	1 COIN	4 CREDITS
SETTING #10	1 COIN	5 CREDITS
SETTING #11	1 COIN	6 CREDITS
SETTING #12	2 COINS	1 CREDIT
SETTING #15	1 COIN	1 CREDIT
	2 COINS	3 CREDITS
SETTING #17	3 COINS	1 CREDIT
SETTING #18	4 COINS	1 CREDIT
SETTING #19	1 COIN	1 CREDIT
	2 COINS	2 CREDITS
	3 COINS	3 CREDITS
	4 COINS	5 CREDITS
SETTING #21	5 COINS	1 CREDIT
SETTING #22	3 COINS	1 CREDITS
	5 COINS	2 CREDITS
SETTING #23	2 COINS	1 CREDIT
	4 COINS	2 CREDITS
	5 COINS	3 CREDITS
SETTING #25	1 COIN	1 CREDIT
	2 COINS	2 CREDITS
	3 COINS	3 CREDITS
	4 COINS	4 CREDITS
	5 COINS	6 CREDITS
SETTING #27	FREE PLAY	

### 5.3.2.4. Manual Setting

```

COIN ASSIGNMENTS
MANUAL SETTING

COIN TO CREDIT          1
BONUS ADDER             0
COIN CHUTE #1 MULTIPLIER
1 COINCOUNT AS 1COIN
COIN   1  2  3  4  5  6  7  8  9
CREDIT 1  2  3  4  5  6  7  8  9

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

SEQUENCE SETTING
> EXIT

SELECT WITH SERVICE BUTTON
AND
PRESS TEST BUTTON
    
```

Select manual setting to manually set the coin to credit ratios.

The available combinations are detailed below.

#### MANUAL SETTING

COIN TO CREDIT	1 COIN	1 CREDIT
	2 COINS	1 CREDIT
	3 COINS	1 CREDIT
	4 COINS	1 CREDIT
	5 COINS	1 CREDIT
	6 COINS	1 CREDIT
	7 COINS	1 CREDIT
	8 COINS	1 CREDIT
	9 COINS	1 CREDIT

BONUS ADDER	NO BONUS ADDER
	2 COINS GIVE 1 EXTRA COIN
	3 COINS GIVE 1 EXTRA COIN
	4 COINS GIVE 1 EXTRA COIN
	5 COINS GIVE 1 EXTRA COIN
	6 COINS GIVE 1 EXTRA COIN
	7 COINS GIVE 1 EXTRA COIN
	8 COINS GIVE 1 EXTRA COIN
	9 COINS GIVE 1 EXTRA COIN

COIN CHUTE MULTIPLIER	1 COIN COUNTS AS 1 COIN
	1 COIN COUNTS AS 2 COINS
	1 COIN COUNTS AS 3 COINS
	1 COIN COUNTS AS 4 COINS
	1 COIN COUNTS AS 5 COINS
	1 COIN COUNTS AS 6 COINS
	1 COIN COUNTS AS 7 COINS
	1 COIN COUNTS AS 8 COINS
	1 COIN COUNTS AS 9 COINS



### 5.3.2.5.Sequence Setting

Selecting SEQUENCE SETTING allows the number of credits required to start the game to be set. Each sequence can be set between 1 and 5. Select EXIT to return to the first screen.

```
COIN ASSIGNMENTS
SEQUENCE SETTING

SEQUENCE1 *CREDIT
SEQUENCE2 *CREDIT
SEQUENCE3 *CREDIT
SEQUENCE4 *CREDIT
SEQUENCE5 *CREDIT
SEQUENCE6 *CREDIT
SEQUENCE7 *CREDIT
SEQUENCE8 *CREDIT
> EXIT

[ XXXXXXXXXX ]
[ SEGA ENTERPRISES,LTD. ]
DESCRIPTION OF SEQUENCE
SEQ1 TO START
SEQ2 TO CONTINUE
SEQ3 TO MAKE CARD
SEQ4 NOT USED
SEQ5 NOT USED
SEQ6 NOT USED
SEQ7 NOT USED
SEQ8 NOT USED

SELECT WITH SERVICE BUTTON
AND
PRESS TEST BUTTON
```

### 5.3.2.6. Bookkeeping

Select BOOKKEEPING to display the following three operating data screens. Press the TEST Button on the BOOKKEEPING 1/3 and BOOKKEEPING 2/3 screens to move to the second and third (BOOKKEEPING 3/3) screens. Press the TEST Button in the third screen to return to the Game Test Menu Screen.

```
          BOOKKEEPING 1/3
[CREDIT INFO]
COIN1:      0
COIN2       0
TOTAL COINS: 0

COIN CREDITS: 0
SERVICE CREDITS: 0
TOTAL CREDITS: 0

NUMBER OF GAMES : 0
TOTAL TIME      : 0'00"00
PLAY TIME      : 0'00"00
AVERAGE PLAY TIME : 0'00"00

          PRESS TEST BUTTON TO CONTINUE
          SELECT WITH SERVICE BUTTON
```

COIN1:	The number of coins inserted into Coin Slot 1.
COIN2:	The number of coins inserted into Coin Slot 2.
TOTAL COINS:	The total number of coins inserted into the coin slots.
COIN CREDITS:	The number of credits for the coins inserted.
SERVICE CREDITS:	The number of credits input by the SERVICE Button.
TOTAL CREDITS:	Total credits from coins and the SERVICE Button.
NUMBER OF GAMES:	The total number of games played.
TOTAL TIME:	The amount of time the unit has been in operation.
PLAY TIME:	Total playing time.
AVERAGE PLAY TIME:	Total play time divided by the total number of games played.

Press the TEST Button to move to screen 2/3 of BOOKKEEPING.

```

          BOOKKEEPING 2/3
    [GAME MODE INFO(1/2)]

    OUTRUNMODE
    OR2SP GOAL/PLAY: 0/ 0 GOAL AVE TIME: 0'00"000
    OR2   GOAL/PLAY: 0/ 0 GOAL AVE TIME: 0'00"000
    OR2SP-15 GOAL/PLAY: 0/ 0 GOAL AVE TIME: 0'00"000
    OR2-15 GOAL/PLAY: 0/ 0 GOAL AVE TIME: 0'00"000
           SELECT AVE TIME: 0'00"00

    HEARTATTACKMODE
    OR2SP GOAL/PLAY: 0/ 0 GOAL AVE TIME: 0'00"000
    OR2   GOAL/PLAY: 0/ 0 GOAL AVE TIME: 0'00"000
           SELECT AVE TIME: 0'00"00

    PRESS TEST BUTTON TO CONTINUE
    SELECT WITH SERVICE BUTTON
  
```

The number of goals, number of plays, and average time to reach the goal are displayed separately for each of the courses in OutRun Mode and Heart Attack Mode. Use this data as a rough guide when adjusting the difficulty setting.

Press the TEST Button to move to screen 3/3 of BOOKKEEPING.

```

          BOOKKEEPING 3/3
    [GAME MODE INFO(2/2)]

    TIMEATTACKMODE
    OR2SP GOAL/PLAY: 0/ 0 GOAL AVE TIME: 0'00"000
    OR2   GOAL/PLAY: 0/ 0 GOAL AVE TIME: 0'00"000
    OR2SP-15 GOAL/PLAY: 0/ 0 GOAL AVE TIME: 0'00"000
    OR2-15 GOAL/PLAY: 0/ 0 GOAL AVE TIME: 0'00"000
           SELECT AVE TIME: 0'00"00

    VS MODE
    OR2SP GOAL/PLAY: 0/ 0 GOAL AVE TIME: 0'00"000
    OR2   GOAL/PLAY: 0/ 0 GOAL AVE TIME: 0'00"000
    VS-SP GOAL/PLAY: 0/ 0 GOAL AVE TIME: 0'00"000
    OR2SP-15 GOAL/PLAY: 0/ 0 GOAL AVE TIME: 0'00"000
    OR2-15 GOAL/PLAY: 0/ 0 GOAL AVE TIME: 0'00"000
           SELECT AVE TIME: 0'00"00

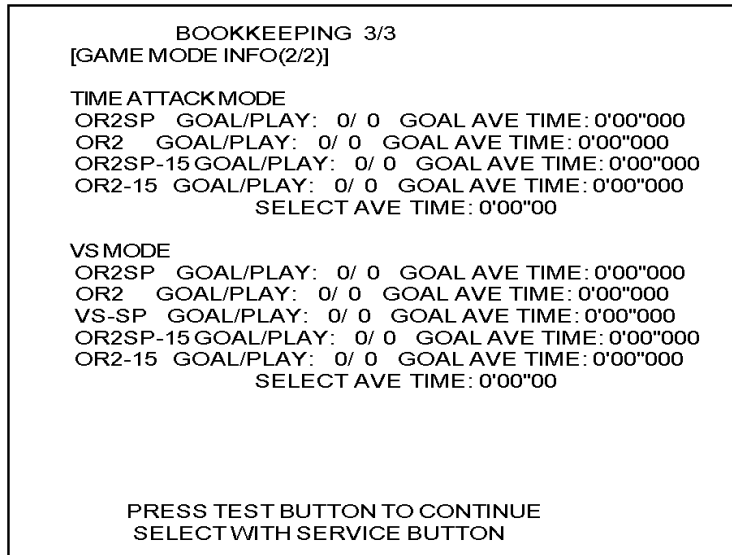
    PRESS TEST BUTTON TO CONTINUE
    SELECT WITH SERVICE BUTTON
  
```

The number of goals, number of plays, and average time to reach the goal are displayed separately for each of the courses in Time Attack Mode and Versus Mode. Use this data as a rough guide when adjusting the difficulty setting.

Press the TEST button to return to the Game Test Menu screen.

### 5.3.2.7.Backup Data Clear

Select BACKUP DATA CLEAR to display the following screen, and you can clear the BOOKKEEPING data, top score ranking data, or coin/credit related data.



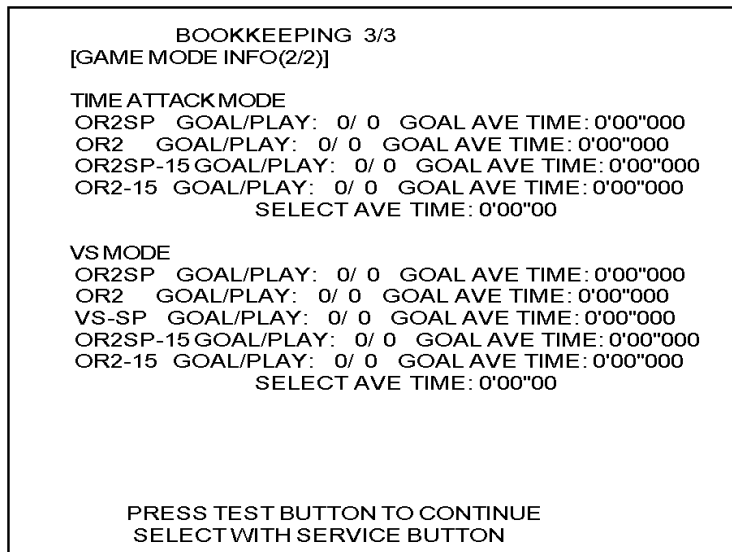
Select the data to clear.

CLEAR ALL BACKUP DATA: Initializes all of the data.

CLEAR RANKING & GHOST CAR DATA ONLY: Only initializes the ranking and ghost car data.

CLEAR BOOKKEEP DATA ONLY: Only initializes the BOOKKEEPING data.

Use the SERVICE Button to move the cursor to the item corresponding to the data to clear, then press the TEST Button. The following confirmation screen is displayed.



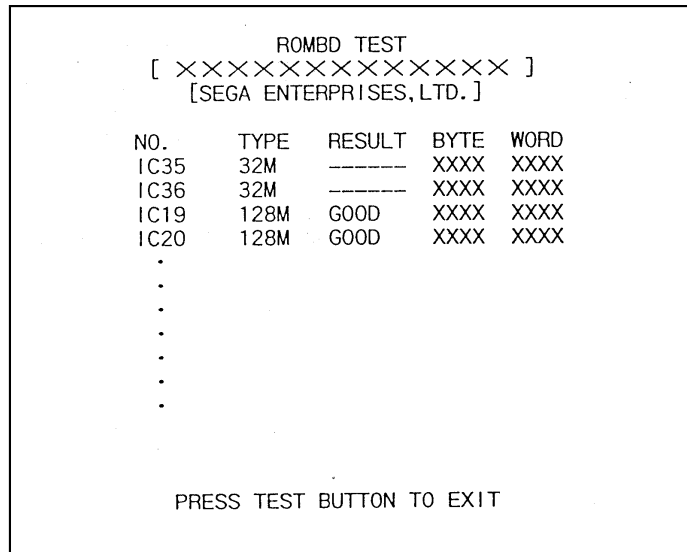
To clear data, use the SERVICE Button to move the cursor to YES (CLEAR) and then press the TEST Button. When the data has been cleared, the message "COMPLETED" will be displayed.

Press the TEST Button again to return to the Game Test Menu screen.

Move the cursor to NO (CANCEL) and press the TEST Button to return to the Game Test Menu screen without clearing the data.

### 5.3.2.8.ROM BD Test

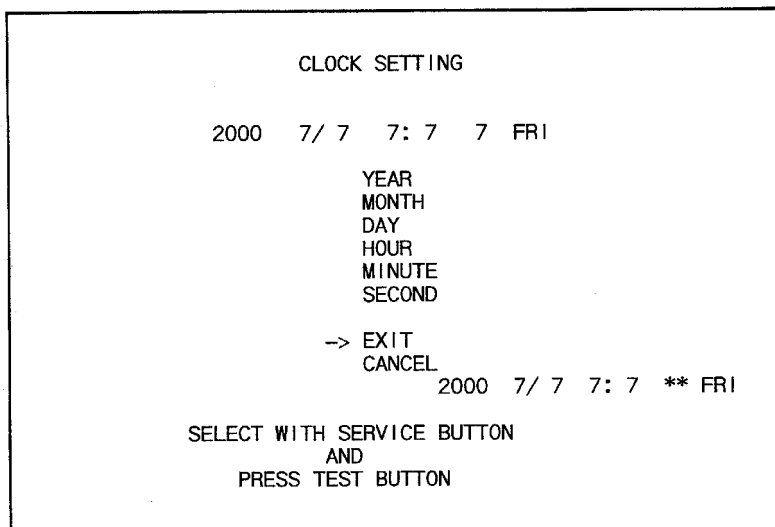
In this test, Game Board ROM is checked. If GOOD is displayed, it is satisfactory. The IC number, TYPE, BYTE and WORD refer to the checksum of each unit. Press TEST to exit.



On above screen, IC35 and IC36 (program ROMs) do not display GOOD or BAD. Press TEST Button to EXIT.

### 5.3.2.9. Clock Setting

YEAR, MONTH, DAY, HOUR and MINUTE are set for SEGA NAOMI BOARD. Select the desired item with SERVICE button and press TEST to increase the value. Select EXIT to return to MENU mode.



## 5.4. Game Test Mode

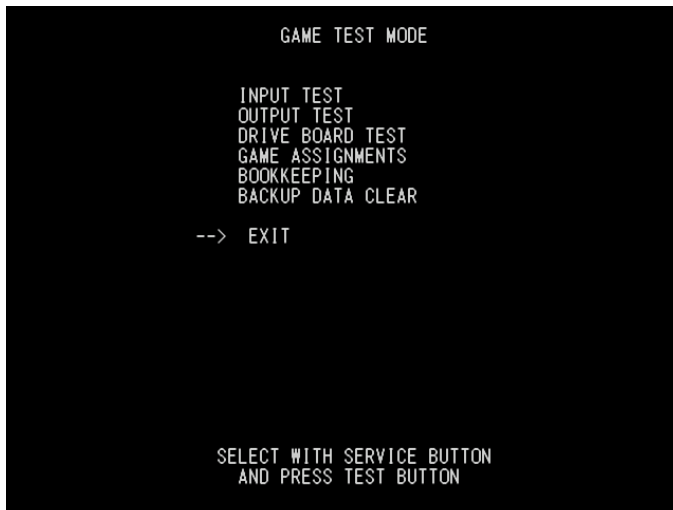
### [IMPORTANT]

When changing the game configuration, changes will not be enabled until the Game Test Mode has been completed. Be sure to exit the Game Test Mode properly after configuration changes.

Select GAME TEST MODE from the System Menu screen to display the Game Test Menu screen as follows.

Use the SERVICE Button to move the cursor to the desired test item. Press the TEST Button to enter the selected item.

*NOTE: In Upright cabinet types, the DRIVE BOARD TEST is not necessary and the option will not be displayed.*

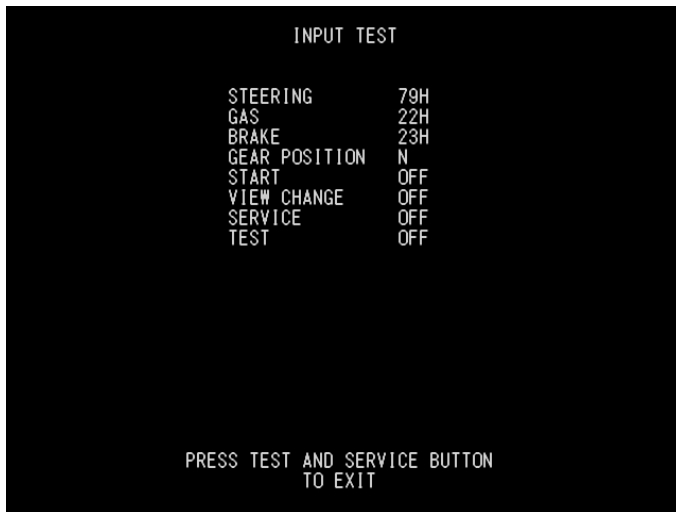


After selecting an item, read the explanations below regarding operation.

After the test is complete, move the cursor to EXIT and press the TEST Button to return to the System Menu screen.

### 5.4.1. Input Test

Select INPUT TEST to display the following screen and check the status of input devices. This test should be used periodically to check that each input device is functioning correctly.



Test the STEERING, GAS (ACCEL) and BRAKE controls to ensure that they are functioning properly and that the parameters change smoothly as each input device is operated.

Display N, UP and DOWN using the GEAR POSITION. N displays that there is no control input. Verify that both UP and DOWN display in sync with the position of the shift knob.

Press the START, CHANGE VIEW, SERVICE and TEST Buttons. If functioning correctly, each indicator will switch from OFF to ON.

Press the SERVICE and TEST Buttons simultaneously to return to the Game Test Menu screen.

## 5.4.2. Output Test

Select OUTPUT TEST to display the following screen and check the status of each lamp. This test should be used periodically to check that the lamps are functioning correctly.

On this screen the cursor will switch automatically between items, lighting up the respective lamps.



- START BUTTON : Lights up the START button.
- VIEW CHANGE BUTTON: Lights up the View Change button.

Press the TEST Button to return to the Game Test Menu screen.

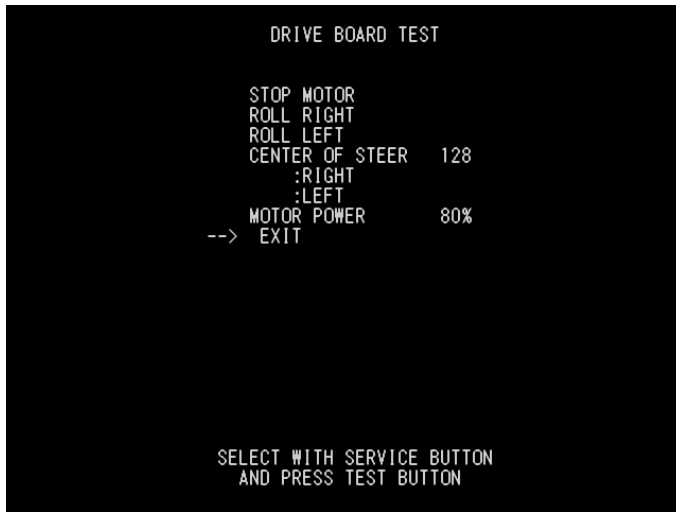


### 5.4.3. Drive Board Test

Select DRIVE BOARD TEST to display the following screen and check the status of steering motor.

Use the SERVICE Button to select the desired test item. Press the TEST Button to activate the selected item.

*NOTE: This test will not be displayed in Upright cabinet types.*



- STOP MOTOR: Halts motor activity.
- ROLL RIGHT: Rotates steering wheel completely to the right.
- ROLL LEFT: Rotates steering wheel completely to the left.
- CENTRE OF STEER: Steering wheel motor's centre of control is displayed.
  - RIGHT: Moves centre of control position to the right.
  - LEFT: Moves centre of control position to the left.
- MOTOR POWER: Sets the steering resistance.
  - There are four levels to choose from, 100% (strong resistance), 90%, 80%, and 60% (weak resistance). (80% is the default setting)

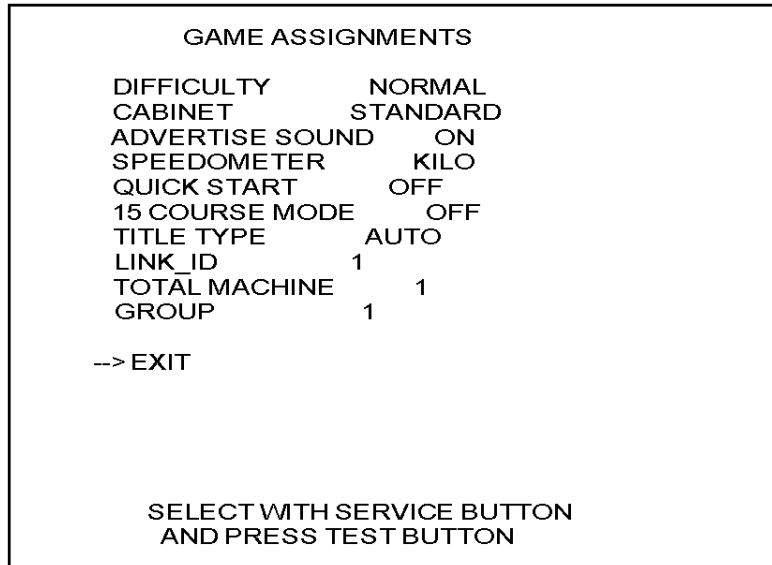
After changing the settings, select EXIT and press the TEST Button to return to the Game Test Menu screen.

#### 5.4.4. Game Assignments

Select GAME ASSIGNMENTS to display the current game settings and make changes.

Changes to settings are not enabled until Test Mode is exited. After changing settings, be sure to exit Test Mode.

NOTE: When adjusting network play settings, DIFFICULTY, ADVERTISE SOUND, LANGUAGE, SPEEDOMETER, and QUICK START items will be decided by the cabinet with LINK\_ID "1". Changes made to the game display or settings during game play do not affect the Game Test Menu settings.



Perform the following settings for each item.

**DIFFICULTY:** The game difficulty setting. There are 5 difficulty levels with VERY EASY being the easiest setting and VERY HARD being the most difficult setting. (Default Setting: NORMAL)

**CABINET:** The game cabinet type setting. Choose from either STANDARD or UPRIGHT.

**ADVERTISE SOUND:** The setting to turn the advertising sound ON/OFF. (Default Setting: ON)

**SPEEDOMETER:** The speed display setting. During game play, KILO will be displayed as "km/h", and MILE as "mph". Choose one of these options. (Default Setting: KILO)

**QUICK START:** Choose OFF or ON. The ON setting takes the player directly to the game selection screen after entering credits into the machine. (Default Setting: OFF)

- 15 COURSE MODE:** This is the 15 Continuous Course Mode setting. The length of time for 1 play is longer than the normal game mode.  
(Default Setting: OFF)  
When this is set to OFF, players cannot play the 15 Continuous Course Modes.  
When this is set to ON CHARGE, players can play the 15 Continuous Course Modes. You should update the additional credit settings in GAME COST SETTING under COIN ASSIGNMENTS in System Test Mode.  
When this is set to ON FREE, players can play the 15 Continuous Course Modes without any additional credits.
- TITLE TYPE:** This is the setting for the type of title screen. There are two types provided for the title screen: the Stars and Stripes or clouds. (Default Setting: AUTO)  
When this is set to AUTO, the type of title screen is determined by the REGION setting on the main board.  
For JAPAN and USA, the Stars and Stripes are selected, and for EXPORT, the clouds are selected.  
When this is set to AMERICA, the Stars and Stripes are selected, and when this is CLOUD, the clouds are selected.
- LINK\_ID:** The setting which determines the Player Number of each cabinet. It assigns unique numbers for cabinets in a single group. Do not assign two or more cabinets the same number. For network play, it is necessary to complete the LINK\_ID, TOTAL MACHINE, and GROUP settings for each cabinet.  
(Default Setting: 1, Maximum: 4)
- TOTAL MACHINE:** The number of network connected game cabinets. (Sets the number of competing cabinets in Versus Mode.) Setting this to "1" limits possible play modes to Single Player mode only.  
(Default Setting: 1, Maximum: 4)
- GROUP:** Used for dividing networked cabinets into groups. For example, to split up a group of four networked machines into two groups of two cabinets, set two cabinets to "1" and the other two cabinets to "2". Generally, setting all cabinets to "1" is recommended.

After changing the settings, select EXIT and press the TEST Button to return to the Game Test Menu screen.

## Network Versus Mode Cabinet Settings

Cases for four cabinets (A, B, C, and D) connected via network cable.

### 4-Cabinet Versus

CABINET	A	B	C	D
LINK_ID	1	2	3	4
TOTAL MACHINE	4	4	4	4
GROUP	1	1	1	1
Status	Four cabinets can compete.			

### 3-Cabinet Versus

CABINET	A	B	C	D
LINK_ID	1	1	2	3
TOTAL MACHINE	1	3	3	3
GROUP	1	2	2	2
Status	Single play only.	Three cabinets can compete.		

### 2-Cabinet Versus

CABINET	A	B	C	D
LINK_ID	1	2	1	2
TOTAL MACHINE	2	2	2	2
GROUP	1	1	2	2
Status	Two cabinets can compete.		Two cabinets can compete.	

## 6. DESIGN RELATED PARTS

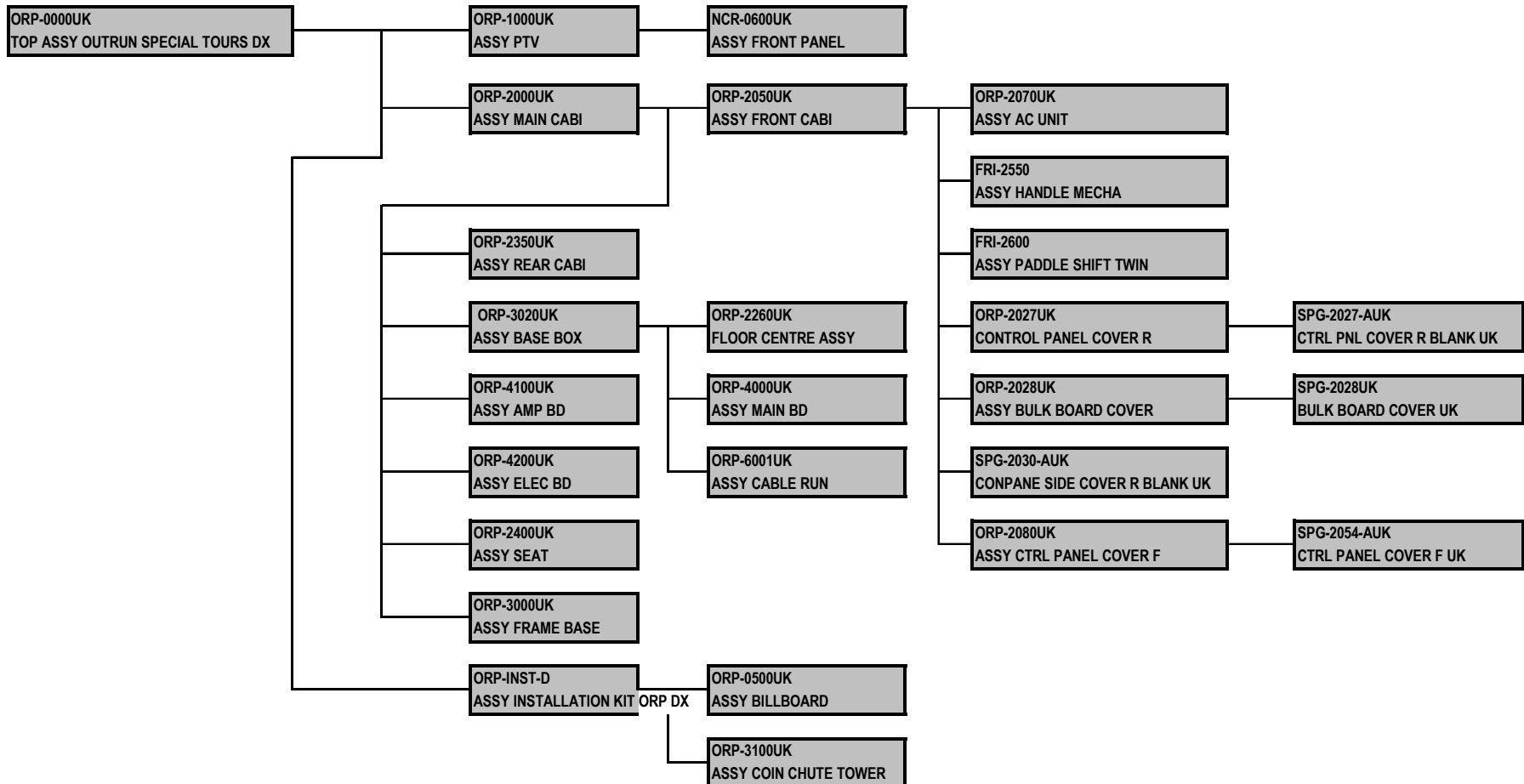


ITEM	PART NO,	DESCRIPTION
1	422-0932DUK	PLAY INSTR SH ORP DX MULTI
2	ORP-0510UK	BILLBOARD PLATE ORP
3	ORP-0511UK	STICKER BILLBOARD F LOWER
4	ORP-0512UK	POP PANEL ORP DX
5	ORP-1011UK	STICKER PTV SIDE L
6	ORP-1012UK	STICKER PTV SIDE R
7	ORP-1013UK	STICKER WEB RANKING
8	ORP-1603-BUK	STICKER SEAT BACK
9	ORP-2027-BUK	METER PANEL A
10	ORP-2027-CUK	METER PANEL B
11	ORP-2031-AUK	STICKER CABI MID BASE BOX L
12	ORP-2031-BUK	STICKER CABI MID BASE BOX R
13	ORP-2031-CUK	STICKER CABI REAR BASE BOX L
14	ORP-2031-DUK	STICKER CABI REAR BASE BOX R
15	ORP-2031-EUK	STICKER CABI UPPER L
16	ORP-2031-FUK	STICKER CABI UPPER R
17	ORP-2031-GUK	STICKER CABI UPPER R DOOR
18	ORP-2365-AUK	REAR LIGHT TOP
19	ORP-2365-BUK	REAR LIGHT BASE
20	ORP-2366UK	STICKER TAIL LIGHT CLUSTER
21	ORP-2367UK	NUMBER PLATE
22	ORP-2369UK	STICKER REAR FAIRING LOWER

## 7. PARTS LIST

### 7.1. Assembly Structure

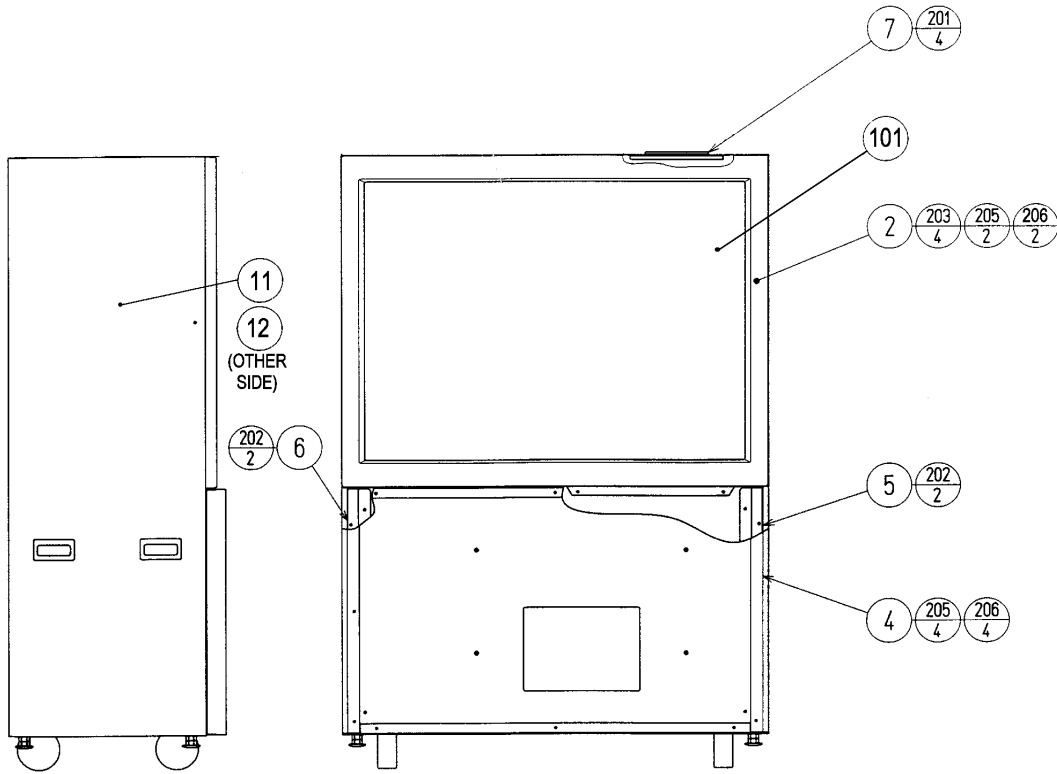
#### ORP BOM STRUCTURE



**7.2. ORP-0000UK TOP ASSY OUTFIT SPECIAL TOURS DX**

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
3	ORP-1000UK	1	ASSY PTV	
4	ORP-2000UK	1	ASSY MAIN CABI	
7	440-WS0220UK	2	WARNING STICKER TRAP HAZARD	BEHIND SEAT
12	421-7987-ORP-D	1	STICKER ELEC SPEC ORP DX	NEXT TO AC INLET
13	421-7988-91UK	2	STICKER SERIAL NUMBER UK	
17	421-7020UK	4	STICKER CAUTION FORK	(3)-2,(4)-2
21	440-CS0221UK	2	CAUTION STICKER KEEP OUT	REAR CORNERS OF MAIN CABINET
26	PK0366	1	SLEEVE PTV ORP DX	
27	PK0253	1	PALLET PTV NCR DX	
29	PK0367	1	SLEEVE ORP DX	
30	PK0368	1	PALLET ORP DX	
31	SGM-4430	1	POLY COVER 2000X1400X1700	
32	SGM-4040	1	POLY COVER 950X1350X1800	
101	LB1046	1	LABEL TESTED FOR ELEC. SAFETY	
102	LB1102	1	STICKER DANGEROUS VOLTAGE	SIDE DOOR
104	LB1110	1	STICKER 5MINS WAIT TURNOFF/ON	BY AC INLET SWITCH
401	ORP-INST-D	1	ASSY INSTALLATION KIT ORP DX	

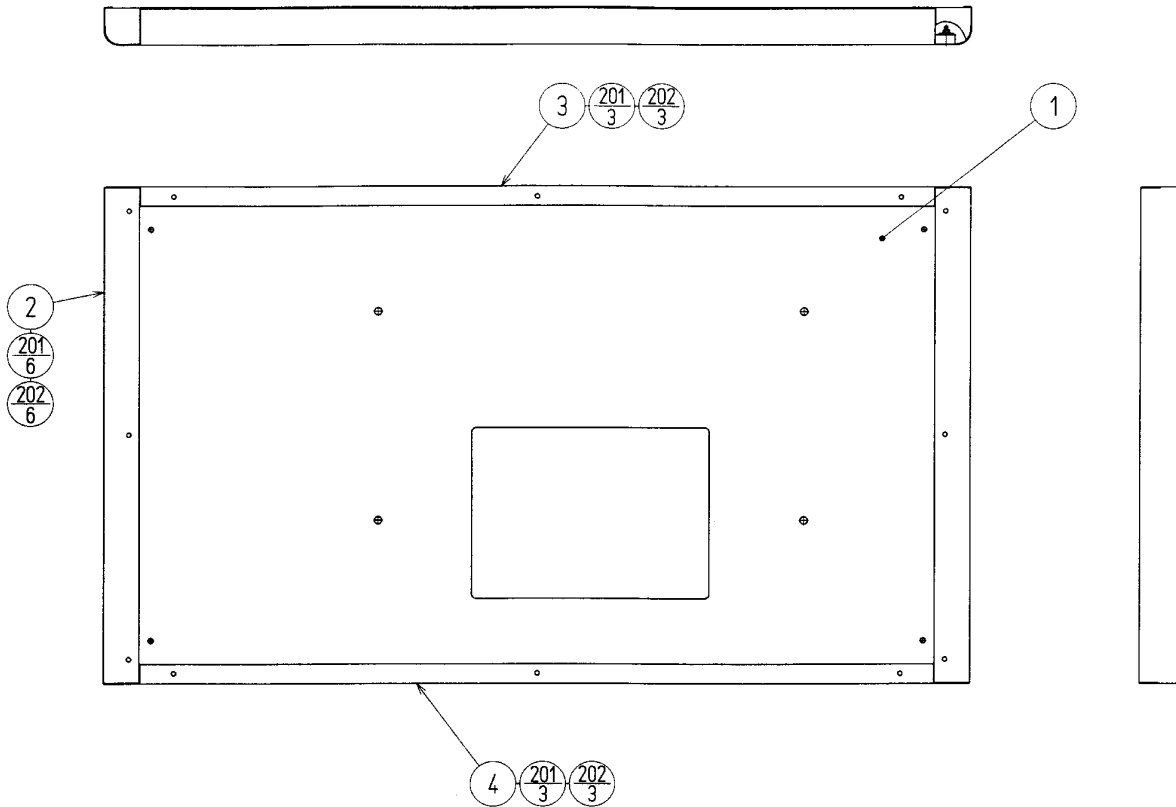
### 7.3. ORP-1000UK ASSY PTV



ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
4	NCR-0600UK	1	ASSY FRONT PANEL	
5	DYN-0501	1	PANEL MOUNT BRKT L	
6	DYN-0502	1	PANEL MOUNT BRKT R	
8	SPX-0532UK	1	PROTECT SCREEN PTV	(101)-1
9	SPX-0533UK	2	RETAINING BRKT HORIZ PTV	(8)-2
10	ORP-1012UK	1	STICKER PTV SIDE R	
12	ORP-1013UK	1	STICKER WEB RANKING	(2)-1
101	200-5788-31	1	PROJECTION DSPL T 50TYPE 31K	
202	000-P00516-W	4	M5X16 MSCR PAN W/FS PAS	(5)-2,(6)-2
203	000-T00520-0B	4	M5X20 MSCR TH BLK	(2)-4
204	000-P00410-W	1	M4X10 MSCR PAN W/FS PAS	EARTH-2
205	000-T00525-0B	6	M5X25 MSCR TH BLK	(2)-2,(4)-4
206	068-552016-0B	6	M5 WSHR 20OD FLT BLK	(2)-2,(4)-4
207	050-F00400	1	M4 NUT FLG SER PAS	EARTH-1
208	000-F00412	4	M4X12 MSCR CSK PAS	(2)-4
301	ORP-60048UK	1	WH PTV EARTH LINK	



**7.4. NCR-0600UK ASSY FRONT PANEL**



ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	NCR-0601UK	1	FRONT PANEL	
2	EZT-0603	2	SIDE BRKT	
3	EZT-0604	1	BRKT UPPER	
4	EZT-0605	1	BRKT LOWER	
201	068-552016	12	M5 WSHR 200D FLT PAS	(2)-6,(3)-3,(4)-3
202	050-F00500	12	M5 NUT FLG SER PAS	(2)-6,(3)-3,(4)-3

### 7.5. ORP-2000UK ASSY MAIN CABI

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	ORP-2050UK	1	ASSY FRONT CABI	
2	ORP-2350UK	1	ASSY REAR CABI	
3	ORP-3020UK	1	ASSY BASE BOX	
4	ORP-4100UK	1	ASSY AMP BD	
5	ORP-4200UK	1	ASSY ELEC BD	MOVE TO 2050
9	ORP-2400UK	1	ASSY SEAT	
11	RAL-2007	1	RUBBER HOLDER R TWIN	(9)-1
12	RAL-2008	1	RUBBER HOLDER L TWIN	(9)-1
58	ORP-3000UK	1	ASSY FRAME BASE	
213	030-000820-S	8	M8X20 BLT W/S PAS	(3)-8
219	060-F00800	14	M8 WSHR FORM A FLT PAS	(1)-6,(3)-8
232	030-000820-SB	5	M8X20 BLT W/S BLK	(9)-5
238	068-852216-0B	5	M8 WSHR 22OD FLT BLK	(9)-5
242	000-T00440-0B	1	M4X40 MSCR TH BLK	(4)-1
243	068-441616	1	M4 WSHR 16OD FLT PAS	(4)-1
244	030-000830-S	6	M8X30 BLT W/S PAS	(1)-6
245	050-F00600	2	M6 NUT FLG SER PAS	(1)-2
246	060-F00600	9	M6 WSHR FORM A FLT PAS	(1)-2,(2)-6,(5)-1
247	030-000630-S	6	M6X30 BLT W/S PAS	(2)-6
248	030-000620-S	1	M6X20 BLT W/S PAS	(5)-1

## 7.6. ORP-2050UK ASSY FRONT CABI

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	ORP-2051UK	1	COCKPIT CABI	
4	ORP-2070UK	1	ASSY AC UNIT	
5	ORP-2054UK	1	CONTROL PANEL BRKT	REF FRI-1202UK
8	FRI-1203	1	HANDLE COLLAR	
9	FRI-2550	1	ASSY HANDLE MECHA	
10	FRI-2600	1	ASSY PADDLE SHIFT TWIN	
11	SPG-2001	1	STEERING WHEEL	
12	FRI-2002	1	EMBLEM	
13	SPG-2039	1	SPACER RING	(11)-1
15	FRI-2055	2	BOSS COVER	
16	DYN-1270	1	STOPPER KEY	(9)-1
29	ORP-2019UK	1	COVER KNEE	
30	ORP-2031-EUK	1	STICKER CABI UPPER L	
31	ORP-2031-FUK	1	STICKER CABI UPPER R	
32	ORP-2031-AUK	1	STICKER CABI MID BASE BOX L	
33	ORP-2031-BUK	1	STICKER CABI MID BASE BOX R	
34	ORP-2031-CUK	1	STICKER CABI REAR BASE BOX L	
35	ORP-2031-DUK	1	STICKER CABI REAR BASE BOX R	
36	ORP-2026UK	1	BULK BOARD BRKT	
37	ORP-2027UK	1	CONTROL PANEL COVER R	REF FRI-1201-02
38	ORP-2028UK	1	ASSY BULK BOARD COVER	
39	SPG-2029-A-YE	1	CONPANE SIDE COVER L BLANK YELLOW	FERRARI LOGO ON SIDE?
40	SPG-2030-AUK	1	CONPANE SIDE COVER R BLANK UK	
*1	SPG-2030-A-YE	1	CONPANE SIDE COVER R BLANK YELLOW	
41	SPG-2031-A-YE	1	BONNET COVER BLANK YELLOW	
42	ORP-2055UK	1	JOINT PLATE REAR	
43	ORP-2056UK	1	JOINT PLATE FRONT L	
44	ORP-2057UK	1	JOINT PLATE FRONT R	
45	ORP-2035UK	1	LENS FLASH	SPG-2035
46	ORP-2036UK	2	HOLDER PIN	SPG-2036
47	ORP-2037UK	1	METER LAMP BRKT	LAMP?
50	ORP-2031-GUK	1	STICKER CABI UPPER R DOOR	
51	ORP-2058UK	1	COVER COCKPIT LOWER L	
52	ORP-2059UK	1	COVER COCKPIT LOWER R	
53	ORP-2060UK	1	BONNET BRKT L	
54	ORP-2061UK	1	BONNET BRKT R	
55	ORP-2062UK	1	FOOTWELL BRKT R	
56	ORP-2063UK	1	PLATE INSTR	
58	ORP-2065UK	2	SPEAKER MTG BRKT	
59	ORP-2066UK	1	COIN TOWER CABI PLATE	
60	ORP-2067UK	1	HUB HOLDER PLATE	
61	ORP-2068UK	1	CONTROL PANEL SUPP L	
69	ORP-2080UK	1	ASSY CTRL PANEL COVER F	
70	ORT-4552UK	1	HUB HOLDER BRKT	MAGNETIC ~ REVERT BACK
71	CFB-4002UK	1	OUTLET BRKT	

Contd.

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
73	DP-1167UK	1	TNG LKG UK	(110)-1
102	280-A01200-A	4	ROUTER TWIST D12 ADH	
103	280-A02000-A	1	ROUTER TWIST D20 ADH	
104	280-A02048-PM	2	ROUTER TWIST D20 SO4.8 PAN LG	
106	580027	2	SPEAKER-ELLIPTICAL-8OHMS 15W	(59)-2
108	601-11071-IS	1	SW HUB PCI FX-08IS	
109	601-6851UK	1	USA MAINS SOCKET CN06442	(71)-1
110	220-5575UK	1	LOCK	
111	253-5460-01	3	AIR VENT BLACK	
201	000-P00412-W	8	M4X12 MSCR PAN W/FS PAS	(106)-8
203	000-T00412-0C	23	M4X12 MSCR TH CRM	(39)-6,(40)-11,(41)-6
206	000-P00320-W	4	M3X20 MSCR PAN W/FS PAS	(47)-4
207	000-T00412-0B	18	M4X12 MSCR TH BLK	(37)-9,(38)-4,(56)-3,(69)-2
208	000-F00410	2	M4X10 MSCR CSK PAS	(38)-2
209	068-441616-0C	7	M4 WSHR 16OD FLT CRM	(39)-2,(40)-5
210	030-000620-S	5	M6X20 BLT W/S PAS	(5)-2,(36)-3
212	060-F00600	15	M6 WSHR FORM A FLT PAS	(36)-3,(51)-2,(52)-2,(55)-4,(59)-4
219	060-F00800	6	M8 WSHR FORM A FLT PAS	(9)-6
226	000-P00512-W	2	M5X12 MSCR PAN W/FS PAS	(47)-2
230	020-000820	1	M8X20 BLT PAS	(11)-1 (USE ANAEROBIC RETAINER)
232	060-S00800	5	M8 WSHR SPR PAS	(9)-4,(11)-1
233	050-U00800	4	M8 NUT NYLOK PAS	(9)-4
234	FAS-200013	4	M4X16 SKT CAP CRM	(12)-4
238	050-F00400	6	M4 NUT FLG SER PAS	(45)-2,(46)-2,EARTHSS - 2
239	000-T00408-0B	8	M4X8 MSCR TH BLK	(15)-8
240	028-A00410-P	1	M4X10 GSCR SKT CUP P	(10)-1
241	050-F00400	2	M4 NUT FLG SER PAS	(70)-2
242	012-P03512-F	16	N6X1/2" S/TAP FLG PAS	(60)-4,(61)-10,(71)-2
243	000-T00440-0B	6	M4X40 MSCR TH BLK	(1)-6 (DOORS)
244	030-000630-S	13	M6X30 BLT W/S PAS	(5)-2,(51)-2,(52)-2,(55)-3,(59)-4
245	030-000820-S	2	M8X20 BLT W/S PAS	(9)-2
246	000-T00530-0B	15	M5X30 MSCR TH BLK	(4)-4,(29)-3,(51)-4,(52)-4
247	030-000820-SB	8	M8X20 BLT W/S BLK	(42)-4,(43)-2,(44)-2
248	030-000830-SB	4	M8X20 BLT W/S BLK	(42)-4
249	000-T00512-0B	4	M5X12 MSCR TH BLK	(43)-2,(44)-2
250	000-F00416	2	M4X16 MSCR CSK	(45)-2
251	068-441616	2	M4 WSHR 16OD FLT PAS	(45)-2
252	000-F00420	2	M4X20 MSCR CSK	(46)-2
253	000-P00420-W	10	M4X20 MSCR PAN W/FS PAS	(53)-3,(54)-3,(58)-4
254	030-000650	1	M6X50 BLT PAS	(55)-1

Contd.

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
255	000-T00616-0B	2	M6X16 MSCR TH BLK	(56)-2
256	060-F00600-0B	2	M6 WSHR FORM A FLT BLK	(56)-2
257	060-F00400-0B	9	M4 WSHR FORM A FLT BLK	(1)-6,(56)-3
258	000-T00420-0B	12	M4X20 MSCR TH BLK	(110)-4x3
301	ORP-60012UK	1	WH HANDLE EXT	
302	ORP-60013UK	1	WH VTS EXT	
303	ORP-60014UK	1	WH BUTTON ASSY EXT	
304	ORP-60027UK	1	WH AUDIO VOLUME EXT	
305	ORP-60029UK	1	WH AMP SPKRS B	
306	ORP-60030UK	2	WH AMP SPKRS C	
307	ORP-60034UK	1	WH FL LAMP 240V	
308	ORP-60035UK	1	WH FL 240 EXT	
309	ORP-60041UK	1	WH XFMR EXT	
310	ORP-60045UK	1	WH CONN BRD EXT A	
312	ORP-60049UK	1	WH MULTI EARTH	

### 7.7. ORP-2070UK ASSY AC UNIT

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	ORP-2071UK	1	AC BRKT UK	
101	EP1379	1	FILTER EMI 10A ARCOTRONICS	
102	EP1302	1	EUROSOCKET FUSED 10A 250Vac	
103	EP1303	1	SWITCH ROCKER DPST 10A 250Vac	
104	514-5078-5000	1	FUSE 5X20 CERAMIC SB 5000mA	
105	310-5029-D508	0.05	HEAT SHRINK SLEEVING 50.8DIA	OVER ITEM 102(50MM OVER SOCKET)
106	421-6595-5000-T	2	STICKER FUSE 5000mA TYPE T	NEXT TO IEC INLET + FUSE HOLDER
107	LB1096	1	STICKER PROTECTIVE EARTH	NEXT TO EARTH STUD
201	060-S00300	4	M3 WSHR SPR PAS	(101)-4
202	060-F00300	4	M3 WSHR FORM A FLT PAS	(101)-4
203	000-P00310	4	M3X10 MSCR PAN PAS	(101)-4
204	050-F00400	3	M4 NUT FLG SER PAS	(INSIDE EARTH)-2,(OUTSIDE)-1
301	ORP-60033UK	1	WH AC OUT PRIMARY	FROM FILTER TO XFMR
302	600-9100-44K	1	WIRE HARN EARTH 1000mm M4/M4 K	AC BRKT TO NCR-1020

**7.8. ORP-2027UK CONTROL PANEL COVER R**

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	SPG-2027-AUK	1	CTRL PNL COVER R BLANK UK	
*1	SPG-2027-A-BL	1	CTRL PNL COVER R BLANK BLACK	
2	ORP-2027-BUK	1	METER PANEL A	
3	ORP-2027-CUK	1	METER PANEL B	
201	008-T00412-0C	4	M4X12 TMP PRF CRM	(2,3)-4
202	050-F00400	4	M4 NUT FLG SER PAS	(2,3)-4
203	060-F00400	4	M4 WSHR FORM A FLT PAS	(2,3)-4

### 7.9. ORP-2028UK ASSY BULK BOARD COVER

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	SPG-2028UK	1	BULK BOARD COVER UK	machine
*1	SPG-2028	1	BULK BOARD COVER	
*2	SPG-2028-BUK	1	PLATE MTG BUTTON PLATE	
4	ORT-2100	1	ASSY SW PLATE	
201	008-T00412-0B	4	M4X12 TMP PRF TH BLK	(2)-2,(3)-2
202	000-T00412-0C	4	M4X12 MSCR TH CRM	(4)-4
203	050-U00400	4	M4 NUT NYLOK PAS	(2)-2,(3)-2
204	060-F00400	4	M4 WSHR FORM A FLT PAS	(2)-2,(3)-2



**7.10. ORP-2080UK ASSY CTRL PANEL COVER F**

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	SPG-2054-AUK	1	CTRL PANEL COVER F UK	
*1	SPG-2054-BL	1	CTRL PANEL COVER F BLACK	
2	ORP-2064UK	1	BOX REAR CRTL PNL COVER	
3	ORP-2081UK	2	SPACER BOX REAR	BETWEEN (1)&(2)
201	050-F00400	4	M4 NUT FLG SER PAS	
202	068-441616	4	M4 WSHR 16OD FLT PAS	

### 7.11. ORP-2350UK ASSY REAR CABI

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	ORP-2351UK	1	ASSY CABI REAR	
2	ORP-2032UK	1	REAR FAIRING	
3	ORP-2353UK	1	BRKT SUPT NUM PL	
4	ORP-2354UK	1	BRKT MTG LED STRIP	
5	ORP-2355UK	2	BRKT MTG TAILPIPE	
6	ORP-2363UK	1	LED BRAKE LIGHT	
7	ORP-2364UK	2	TAILPIPE EXHAUST	
9	ORP-2366UK	1	STICKER TAIL LIGHT CLUSTER	
10	ORP-2367UK	1	NUMBER PLATE	
11	ORP-2368UK	2	BRKT BULB MTG	
12	ORP-2365-AUK	4	REAR LIGHT TOP	
13	ORP-2365-BUK	4	REAR LIGHT BASE	
14	ORP-2369UK	1	STICKER REAR FAIRING LOWER	
15	ORP-2370UK	1	BRKT CONN PNL MOUNT	
16	ORP-2371UK	2	BRKT REINFORCE	
101	400-5421-03012	1	SW REGU LCA30S-12	
102	ORP-A838-001UK	1	ASSY BRAKE LIGHTCONT	
103	220-5575UK	2	LOCK	
104	ORP-2372UK	2	CAM CRKD 9 L34 BATON 690-ZB34	
201	000-T00512-OC	4	M5X12 MSCR POSI TH CRM	?(2)-4
202	000-T00630-OB	3	M6X30 MSCR TH BLK	(2)-3
203	000-T00540-OC	2	M5X40 MSCR TH CRM	(2)-2
204	008-T00625-OC	3	M6X25 TMP PRF TH CRM	(2)-3
205	000-T00620-OC	6	M6X20 MSCR TH CRM	(2)-6
206	000-P00612-W	8	M6X12 MSCR PAN W/FS PAS	(3)-2,(5)-6
207	000-P00408-W	1	M4X8 MSCR PAN W/FS PAS	(6)-1
208	008-T00408-OC	2	M4X8 TMP PRF TH CRM	(10)-2
209	000-P00420-W	6	M4X20 MSCR PAN W/FS PAS	(11)-6
210	008-T00420-OB	8	M4X20 TMP PRF TH BLK	(12,13)-8
211	000-P00412-W	4	M4X12 MSCR PAN W/FS PAS	(15)-4
212	030-000620-S	4	M6X20 BLT W/S PAS	(16)-4
213	060-F00600-OB	3	M6 WSHR FORM A FLT BLK	(2)-3
214	060-F00600	1	M6 WSHR FORM A FLT PAS	(2)-1
215	050-F00600	2	M6 NUT FLG SER PAS	(4)-2
216	068-652516	2	M6 WSHR 25OD FLT PAS	(4)-2

Contd.

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
217	068-441616-0C	2	M4 WSHR 16OD FLT CRM	(10)-2
218	050-U00400	8	M4 NUT NYLOK PAS	(12,13)-8
219	060-F00400	8	M4 WSHR FORM A FLT PAS	(12,13)-8
220	012-P00325	8	N4X1" S/TAP PAN PAS	(101)-4,(102)-4
301	ORP-60037UK	1	WH BRAKE LIGHTS A	
302	ORP-60038UK	1	WH BRAKE LIGHTS POWER	
303	ORP-60039UK	1	WH BRAKE LIGHTS B	
304	ORP-60051UK	1	WH BRAKE LAMPS	

**7.12. ORP-3020UK ASSY BASE BOX**

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	ORP-3021UK	1	BASE BOX	INC . DOOR + HINGE
2	ORP-2260UK	1	FLOOR CENTRE ASSY	
3	ORP-4000UK	1	ASSY MAIN BD	
8	DP-1167UK	1	TNG LKG UK	(101)-1
9	ORP-3022UK	1	PNL MOUNT BRKT	
10	FN1012	1	MESH GUARD METAL 120mm FAN	(102)-1
101	220-5575UK	1	LOCK	
102	260-0011-02	1	AXIAL FLOW FAN AC100V 50-60Hz	AIRFLOW OUT
103	OS1195	4	RIVET SNAP MOSS SR1811	(10)-4
104	280-A02048-PM	3	ROUTER TWIST D20 SO4.8 PAN LG	(1)-3
105	280-A01248-PM	2	ROUTER TWIST D12 SO4.8 PAN MED	(1)-2
201	000-T00616-0B	4	M6X16 MSCR TH BLK	(2)-4
202	012-HB0512	4	N10X1/2" S/TAP HEX B PAS	(102)-4
203	060-F00500	4	M5 WSHR FORM A FLT PAS	(102)-4
204	050-F00400	3	M4 NUT FLG SER PAS	(9)-2,EARTH
205	000-T00430-0B	2	M4X30 MSCR TH BLK	(1)-2
206	068-441616-0B	2	M4 WSHR 16OD FLT BLK	(1)-2
207	030-000620-S	1	M6X20 BLT W/S PAS	(3)-1
208	068-652516	1	M6 WSHR 25OD FLT PAS	(3)-1
209	008-T00430-0B	1	M4X30 TMP PRF TH BLK	LOCK
301	600-7141-250	1	CABLE JVS TYPE A-B 250CM	
302	600-7009-3000UK	1	ASSY RGB CA D-SUB 15P 3000MM	?
303	ORP-6001UK	1	ASSY CABLE RUN	
304	600-7269-0200	1	ASSY LAN CABLE 0200CM	long enough?

**7.13. ORP-2260UK FLOOR CENTRE ASSY**

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	ORP-2261UK	1	FLOOR CENTRE	
2	SPG-2200	1	ASSY ACCEL & BRAKE	
4	SPG-2222UK	1	ANTI FINGER TRAP PLATE LEFT	
5	SPG-2223UK	1	ANTI FINGER TRAP PLATE RIGHT	
6	SPG-2224UK	1	PEDAL GASKET	UNDER (2)-1
7	FRI-2201	1	FOOT REST FRI	
201	068-852216-0B	8	M8 WSHR 22OD FLT BLK	(2)-4,(7)-4
202	030-000820-SB	4	M8X20 BLT W/S BLK	(2)-4
203	050-U00800	4	M8 NUT NYLOK PAS	(7)-4
301	ORP-60011UK	1	WH BRAKE ACC EXT	

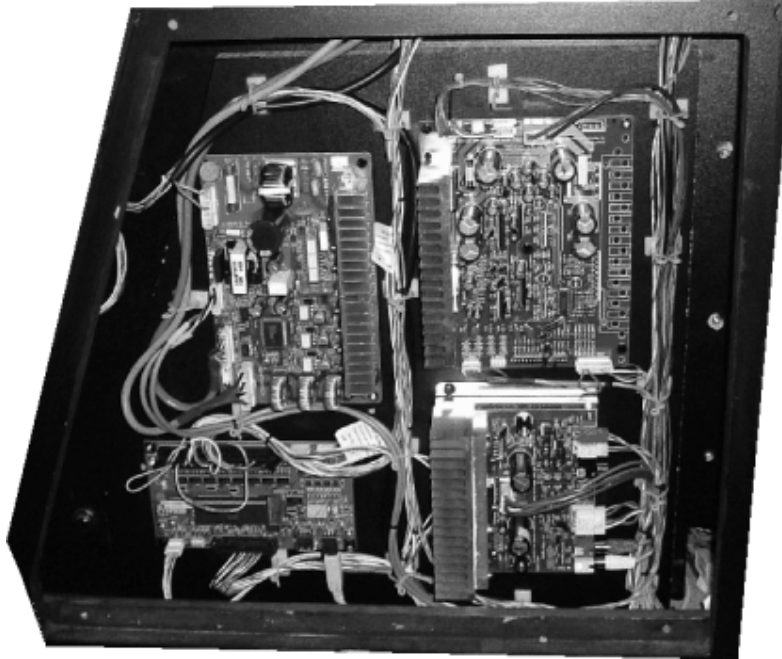
#### 7.14. ORP-4000UK ASSY MAIN BD

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	ORP-4001UK	1	MAIN BD BASE	
2	843-0011D-02	1	ASSY CASE BOX ORP EXP	
4	105-5435	1	GD DRIVE BRKT STD	
5	LB1111	1	STICKER PLEASE RECYCLE	
6	610-0617	1	GD-ROM DRIVE UNIT NAOMI	SHIP BOX WITH MACHINE
7	610-0652-0011	1	GD SOFT ORP	
101	400-5443-01	1	SW REGU FOR CHIHIRO VA	
106	280-A00964-WX	6	ROUTER TWIST D09 SO6.4 WOOD X	size?
107	LB1101	1	STICKER WARNING BATTERY	GAME BD
201	000-P00416-W	11	M4X16 MSCR PAN W/FS PAS	(2)-4,(4)-3,(101)-4
203	012-P00410-F	4	N8X3/8" S/TAP FLG PAS	(6)-4
307	600-7247-500	1	CABLE SCSI ST-L TYPE2 500MM	
308	600-7159-039	1	WIRE HARN JVS PWR 039CM	
309	HDT-60100UK	1	WH POWER GD ROM	
310	ORP-60006UK	1	WH MIDI B	
311	ORP-60016UK	1	WH AUDIO	
312	ORP-60020UK	1	WH I/O BD PWER EXT B	
313	ORP-60021UK	1	WH SWITCH MODE	
314	ORP-60050UK	1	WH BLC SIGNAL	

**7.15. ORP-6001UK ASSY CABLE RUN**

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
301	ORP-60018UK	1	WH I/O BRD PWR EXT	
302	ORP-60036UK	1	WH SIGNAL BRAKE LIGHT	
303	ORP-60017UK	1	WH AUDIO EXT	
304	ORP-60019UK	1	WH MIDI EXT	
305	ORP-60047UK	1	WH SPKR REAR EXT B	
306	ORP-60004UK	1	WH AC SUB CABI EXT	

**7.16. ORP-4100UK ASSY AMP BD**



ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	ORP-4101UK	1	WOODEN AMP BD BASE	
3	838-13578	1	PWR AMP 2CH & MIXER	
5	837-13551-92	1	I/O CONTROL BD FOR JVS	
101	838-13616	1	AUDIO POWER AMP 2CH	
102	838-14174	1	SERVO MOTOR DRIVE BD MIDI	
105	211-5305	2	C JMPR SCKT (IMSA-9206H-GF)	(3)-2
111	280-A01264-WX	11	ROUTER TWIST D12 SO6.4 WOOD X	AMP BD BASE
112	280-A00964-WX	4	ROUTER TWIST D09 SO6.4 WOOD X	AMP BD BASE
203	012-P00325	16	N4X1" S/TAP PAN PAS	(3)-4,(5)-4,(101)-4,(102)-4
301	ORP-60005UK	1	WH MIDI A	
302	ORP-60007UK	1	WH 100V EXT MIDI	
303	ORP-60008UK	1	WH POWER I/O BRD	
304	ORP-60009UK	1	WH I/O BRD A	
305	ORP-60010UK	1	WH I/O BRD A/D	
306	ORP-60022UK	1	WH AUDIO A	
307	ORP-60023UK	1	WH AMPS PWR IN	
309	ORP-60025UK	1	WH AUDIO VOLUMES	
310	ORP-60026UK	1	WH AMP SPKRS	
311	ORP-60028UK	1	WH AMP SPKRS A	
312	FRI-61030UK	1	WH EXT MOTOR A	
313	TOF-60011UK	1	WH EXT ENCODER A	

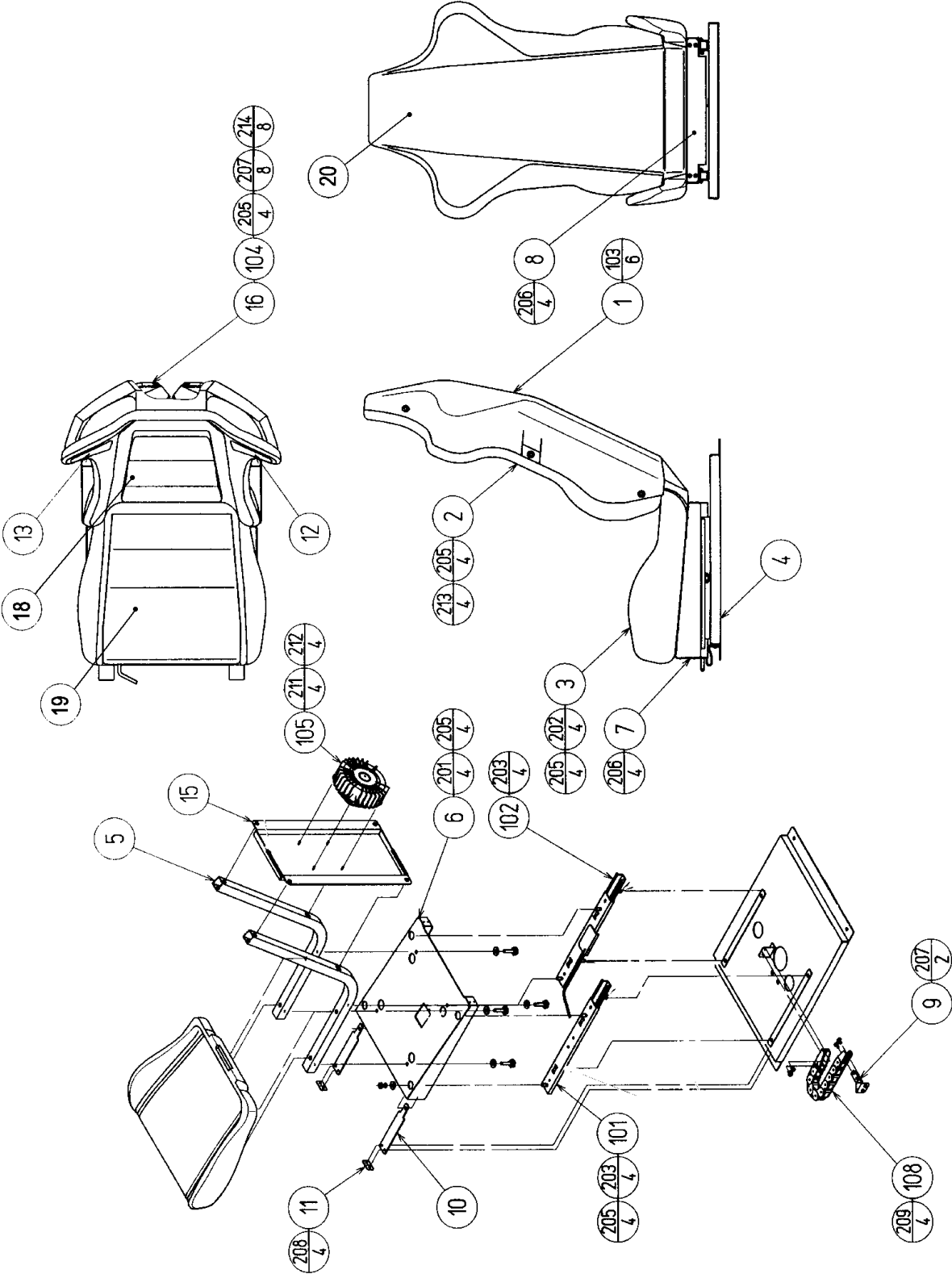


**7.17. ORP-4200UK ASSY ELEC BD**



ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	ORP-4201UK	1	WOODEN BASE ELEC	
2	ORP-4202UK	1	BASE XFMR	
3	ORP-4203UK	1	COVER XFMR	
4	838-13142	1	BASS AMP	
5	SRT-1203UK	1	FAN BRKT UK	
6	FN1012	3	MESH GUARD METAL 120mm FAN	(101)-3
7	JPT-4102UK	1	FAN BRKT	
101	260-0011-02	2	AXIAL FLOW FAN AC100V 50-60Hz	AIRFLOW TOWARDS MOTOR
102	560-5430UK	1	XFMR NCR DX	
105	838-11856CE-02	1	CONNECT BD W/FUSE 6.3A CE	
107	354081	11	TWIST LOK BHKL-450-4	HOLES IN BASE
108	354083	10	(A)TWIST N LOK BHKL-750-4	HOLES IN BASE
109	280-A00964-WX	12	ROUTER TWIST D09 SO6.4 WOOD X	HOLES IN BASE
111	290190	9	TAPE-FOAM-20MM X 4.50MM	-101
201	012-P00325	14	N4X1" S/TAP PAN PAS	(4)-8,(103)-4,(105)-2
203	000-P00416-W	4	M4X16 MSCR PH W/FS PAS	(102)-4
206	068-441616	4	M4 WSHR 16OD FLT PAS	(102)-4
302	ORP-60001UK	1	WH CONN BRD	
303	ORP-60002UK	1	WH CONN BRD B	
305	ORP-60003UK	1	WH XFMR SECONDARY	
306	ORP-60043UK	1	WH AC EXT	
307	ORP-60044UK	1	WH XFMR 100V	

7.18. ORP-2400UK ASSY SEAT



ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	ORP-2401-AUK	1	SEAT REAR COVER BLANK	NCR-2401-AUK check type
2	SPG-2401-AUK	1	UPPER SEAT BLANK	
3	SPG-2402-AUK	1	LOWER SEAT BLANK	
4	ORP-2404UK	1	SEAT BASE	STC-1603/NCR-2405/SPG-2403
5	SRT-2402UK	2	SEAT FRAME	cf STC-1604
6	NCR-2405	1	SEAT SLANT TRAY	STC-1606
7	FRI-3307	1	FRONT TRAY COVER	STC-1613
8	NCR-2406	1	REAR TRAY COVER	STC-1610
9	FRI-3309	1	CABLE BEAR BRKT	
10	STC-1612	2	PROTECT RUBBER	
12	STC-1608	1	SPEAKER NET L	
13	STC-1609	1	SPEAKER NET R	
15	DUT-2205	1	SHAKER BASE REAR	
16	STC-1607	2	SP MOUNT BRKT	
18	SPG-2401-BUK	1	UPPER SEAT INSERT	(2)-1
19	SPG-2402-BUK	1	LOWER SEAT INSERT	(4)-1
20	ORP-1603-BUK	1	STICKER SEAT BACK	
21	SRT-2409	2	SHOULDER PAD	INBETWEEN SPKR NETS & SEAT
101	601-9059-91	1	SEAT RAIL L	
102	601-9060-91	1	SEAT RAIL R	
103	280-5297	6	SCRIVET 8 1K31	(1)-6
104	130-5162-01	2	GULL BOX SPEAKER	
105	130-5172	1	BASS SHAKER	(15)-1
106	280-K02529-WX	18	DRIVE FASTENER 25FH 24L 7.9DIA	(18)-8,(19)-10
108	601-6981-009	1	CABLE BEAR L=009	
109	280-A00900-A	4	ROUTER TWIST D9 ADH	
201	030-000816-S	4	M8X16 BLT W/S PAS	(6)-4
202	030-000850-SB	8	M8X50 BLT W/S BLK	(2)-4,(3)-4
203	050-U00800	8	M8 NUT NYLOK PAS	(101)-4,(102)-4
205	068-852216	20	M8 WSHR 22OD FLT PAS	(2,3,6,101,102)-4EA
206	000-T00408-0B	8	M4X8 MSCR TH BLK	(7)-4,(8)-4
207	000-P00410-W	13	M4X10 MSCR PAN W/FS PAS	(9)-2,(104)-8,(EARTHS)-3
209	000-T00616-0B	4	M6X16 MSCR TH BLK	(108)-4
211	060-F00400	4	M4 WSHR FORM A FLT PAS	(105)-4
212	050-U00400	4	M4 NUT NYLOK PAS	(105)-4
214	012-P03512-F	8	N6X1/2" S/TAP FLG PAS	(16)-8
216	FA400014	6	A NO.8X5/8" POZI FLANGE S/T SW	(12)-3,(13)-3
301	ORP-60031UK	1	WH SPKR REAR EXT	
302	ORP-60032UK	1	WH SPEAKER REAR	

**7.19. ORP-3000UK ASSY FRAME BASE**

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	ORP-3001UK	1	FRAME BASE	
101	601-5699UK13-01	6	LEG ADJ M16X130 1L/NUT	
102	MA1019	4	CASTER 75	
202	030-000620-S	16	M6X20 BLT W/S PAS	(102)-16
203	060-F00600	16	M6 WSHR FORM A FLT PAS	(102)-16

**7.20. ORP-INST-D ASSY INSTALLATION KIT ORP DX**

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	ORP-3100UK	1	ASSY COIN CHUTE TOWER	WRAPPED & PLACED IN FOOTWELL
2	ORP-0500UK	1	ASSY BILLBOARD	
4	NCR-0002	2	JOINT BRKT CENTER	
6	ORP-0512UK	1	POP PANEL ORP DX	
7	ORP-0513UK	1	POP BRKT	
8	ORP-3011UK	1	TOWER BASE	
9	ORP-0001UK	1	JOINT BRKT FRONT CABI L	
10	ORP-0002UK	1	JOINT BRKT FRONT CABI R	
20	422-0932DUK	1	PLAY INSTR SH ORP DX MULTI	
23	440-CS0186UK	1	STICKER C EPILEPSY MULTI	
201	030-000830-SB	14	M8X30 BLT W/S BLK	(4)-8,(8)-2,(9)-2,(10)-2
202	068-852216-0B	14	M8 WSHR 22OD FLT BLK	(4)-8,(8)-2,(9)-2,(10)-2
203	060-F00800	3	M8 WSHR FORM A FLT PAS	(1)-3
207	060-F00600	2	M6 WSHR FORM A FLT PAS	(8)-2
209	050-F00600	2	M6 NUT FLG SER PAS	(8)-2
212	030-000860-SB	3	M8X60 BLT W/S BLK	(1)-3
213	000-P00516-WB	2	M5X16 MSCR PAN W/FS BLK	(2)-2
214	000-P00412-WB	6	M4X12 MSCR PAN W/FS BLK	(6)-3,(7)-3
215	068-441616-0B	6	M4 WSHR 16OD FLT BLK	(6)-3,(7)-3
401	PK0369	1	INST KIT BOX ORP DX	
402	OS1019	3	SELF SEAL BAG 9X12.3/4	BRACKETS, BOLTS & MANUALS
408	509-5387	1	SW MICRO TYPE (AH71557K)	SPARE - PADDLE SHIFTER
409	220-5484	1	VOL CONT B-5K OHM	SPARE - HANDLE MECHA
411	600-7269-0500	1	LAN CABLE 500CM	
412	420-6830-01UK	1	SERVICE MANUAL ORP DX	
413	540-0006-01	1	WRENCH M4 TMP PRF	
416	540-0007-01	1	WRENCH M5 TMP PRF	
417	540-0009-01	1	WRENCH M8 TMP PRF	
418	SAECE-xxx	1	DECLARATION OF CONFORMITY	DECLARATION OF CONFORMITY ORPD

**7.21. ORP-0500UK ASSY BILLBOARD**

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	SPG-0501-YE	1	BILLBOARD SIDE COVER L YELLOW	
2	SPG-0502-YE	1	BILLBOARD SIDE COVER R YELLOW	
3	ORP-0503UK	1	BILLBOARD BOX	
6	ORP-0506UK	1	UPPER SASH	
8	ORP-0508UK	1	HOLE LID BILLBOARD	
9	ORP-0510UK	1	BILLBOARD PLATE ORP	
*1	ORP-0510-AUK	1	BILLBOARD PLATE BLANK	
10	ORP-0511UK	1	STICKER BILLBOARD F LOWER	
101	390-5695-30-AUK	1	FL TRAY 100V 30W	
102	LT1014	1	TUBE FL 30W 36" DIA25mm	
104	LB1102	3	STICKER DANGEROUS VOLTAGE	
105	LB1104	1	STICKER CAUTION, HOT SURFACE	
106	421-7501-16	1	STICKER 110V 30W	
107	280-A00900-A	5	ROUTER TWIST D9 ADH	
201	000-T00408-0C	11	M4X8 MSCR TH CRM	(1)-3,(2)-3,(6)-3,(8)-2
203	050-F00400	3	M4 NUT FLG SER PAS	(101)-2,(EARTH)-1
204	000-F00412	4	M4X12 MSCR CSK PAS	(1)-2,(2)-2
205	068-441616-0C	6	M4 WSHR 16OD FLT CRM	(1)-3,(2)-3
206	068-441616	2	M4 WSHR 16OD FLT PAS	(101)-2
207	000-P00412	2	M4X12 MSCR PAN PAS	(TERRY CLIPS)
301	NCR-60420UK	1	WIRE HARN FL	

**7.22. ORP-3100UK ASSY COIN CHUTE TOWER**

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	VTS-HOD-D	1	VTS BOARD HOD	
2	ORP-3101UK	1	COIN CHUTE TOWER	NCR-1101UK
4	DYN-0010UK	1	DENOMI PLATE	
6	DUT-0302UK	1	COIN PATH PLATE	
7	PP1087	1	BOX CASH FOR MINI DOOR	
10	NCR-1103UK	1	CCT FLOOR	
11	LB1103	2	STICKER CAUTION	(10)-1,(2)-1 INSIDE TOP AREA
201	000-P00408-W	11	M4X8 MSCR PAN W/FS PAS	(1)-4,(6)-5,(10)-2
202	050-F00400	1	M4 NUT FLG SER PAS	COINCHUTE
203	000-T00412-0B	4	M4X12 MSCR TH BLK	(4)-4
301	ORP-60042UK	1	WH VTS	
302	LM1006LOR	1	LOOM COIN MECH LAMP	

## 8. APPENDIX A - ELECTRICAL SCHEMATIC

### 8.1. WIRE COLOURS

THE WIRE COLOUR CODE IS AS FOLLOWS:

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

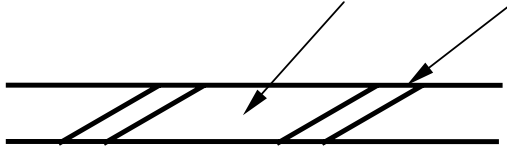
Wires other than those of any of the colours listed above will be displayed by 2 alphanumeric characters:

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

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

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

[Example] 51----- WHITE/RED = WHITE wire with RED stripes



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

K:	AWG18, UL1015
L:	AWG20, UL1007
None	AWG22, UL1007

### 8.2. ELECTRICAL SCHEMATIC

The following pages contain the electrical schematic for this machine.



LOCATE A3 SCHEMATIC DRAWING 1 HERE

LOCATE A3 SCHEMATIC DRAWING 2 HERE

LOCATE A3 SCHEMATIC DRAWING 3 HERE

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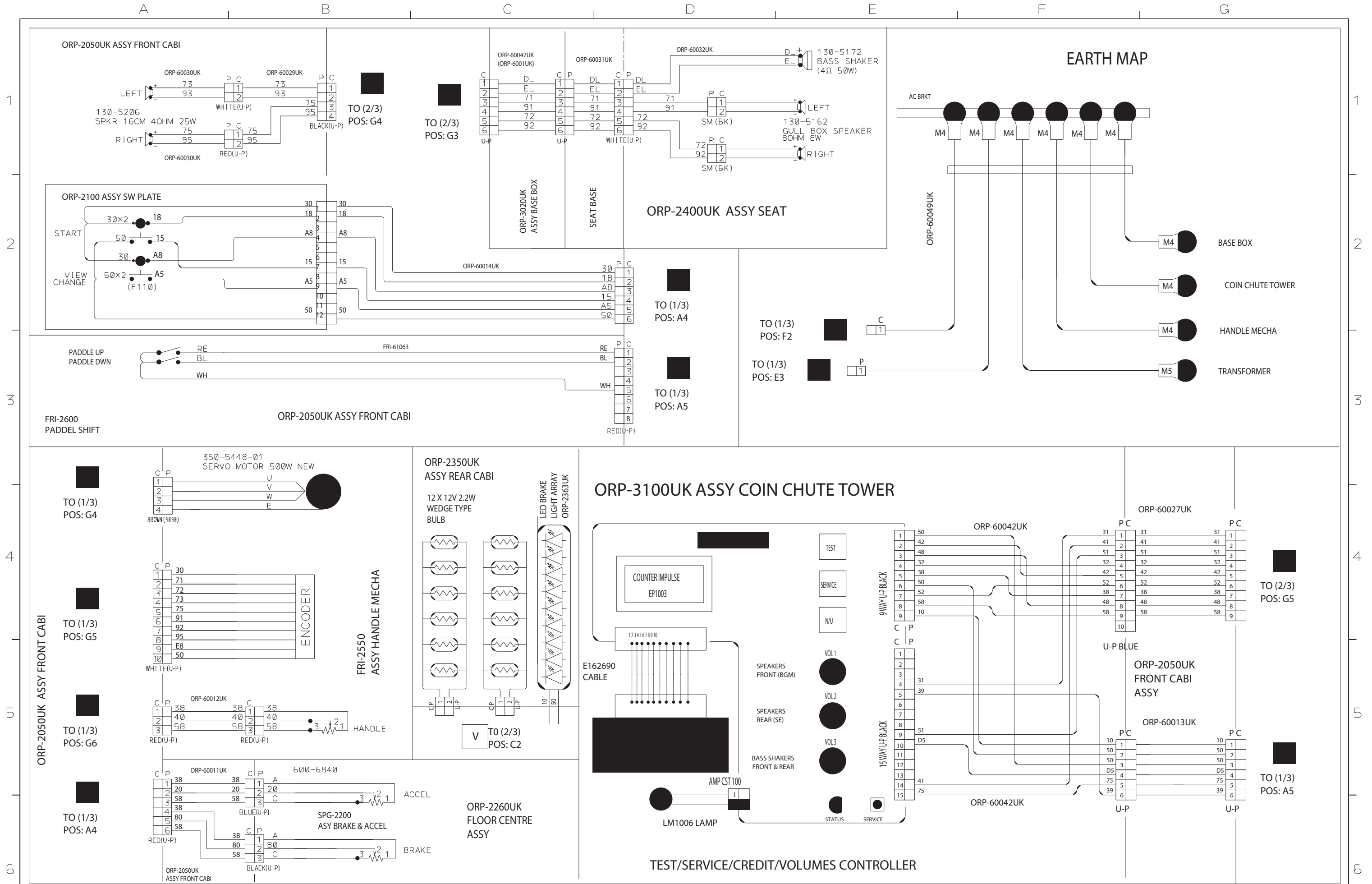
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8	BLACK		50L	WHITE	AWG20
7	ORANGE	E	51	WHITE	RED
5	WHITE	D	50	WHITE	
4	GREEN	C		EXAMPLE	
3	YELLOW	B	U	AWG16	UL1015
2	BLUE	A	K	AWG18	UL1015
1	RED	9	L	AWG20	UL1007
				AWG22	UL1007

ORP-0000UK  
TOP-ASS'Y

DRAWN CHKD  
CW  
09/12/04

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OUTRUN 2 SPECIAL DLX  
DESCRIPTION

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DIAGRAM No.