## SERVICE MANUAL <br> SEGペ



## DELUXE



## Ferrari

Official Licensed Product

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．

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## 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.

| Indicates that mishandling the product by disregarding this warning will cause a potentially <br> hazardous situation that can result in death or serious injury. |
| :--- |
| Indicates that mishandling the product by disregarding this caution will cause a potentially <br> 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. <br> Indicates that mishandling the product by disregarding this will cause a potentially hazardous <br> 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.
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.

### 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 then 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: | $1280 \times 2850 \mathrm{~mm}$ |
| Height: | 2500 mm (with POP) |
| Rated Voltage: | 23050 mm (without POP) |
| Rated Current: | 3 A |
| Operating Temperature Range | $5-30^{\circ} \mathrm{C}$ |

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, nontechnical 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

IMPORTANT

- 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. $\quad$ 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 $M 4 \times 12$ screws with black washers on front.
2. Fix the POP Panel to the POP Panel Bracket using three M4 $\times 12$ 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 fix two connecction 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.
WARNING

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 |
| :--- | :--- |
| C220B | LM1006IDC |
|  | LM1006LAMP- 0.1 |


| GENERIC | LM1008 |
| :--- | :--- |
| MECHANICALS | LM1008-LAMP |


| MARS | LM1007 |
| :--- | :--- |
| MS111B1 | LM1008-LAMP |

MARS ME115

SECI, C120, SR3

OWN LOOM AND
LM1006LAMP-0. 1

INSTALLATION

- Attach the lamp holder to the bracket on the coin return button.
- Attach one 15-way connector to the C220 coin mech.
- Attach the other 15-way connector to Validator A on the credit board.
- Attach the 2-way connector to 'LAMP' on the VTS board.
- Fit the two lamp holders behind the coin return buttons.
- Attach the blue cable and orange cable to one mech's microswitch switch.
- Attach the blue/green cable and orange/green cable to the other mech's microswitch.
- Attach the 2-way mate and lok plug to the 2-way mate and lok cap provided.
- Attach one 15-way connector to Validator A and the other to Validator B on the credit board
- Fit the lamp holder to the bracket behind the coin return button.
- Fit one of the 13-way connectors to the coin mech.
- 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.
- Attach the lamp holder to the bracket on the coin return button.
- Attach the 2- connector to 'LAMP' on the VTS board.
- Attach the validator's own loom to position A on the credit board



### 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



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



CAUTION

- 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.


CAUTION

- 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.

IMPORTANT

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) | $5 \times 20$ HRC SB 5000mA | 1 |
| $514-5078-3150$ | $838-13616$ (F1\&F2) | $5 \times 20$ HRC SB 3150mA | 2 |
| $514-5078-6300$ | $838-13578$ (F1) | $5 \times 20$ HRC SB 6300mA | 1 |
| $514-5078-6300$ | $838-13142$ (F101\&F201) | $5 \times 20$ HRC SB 6300mA | 2 |
| $514-5078-6300$ | $838-11856$ CE-02 | $5 \times 20$ 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



CAUTION


WARNING


- 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 $80 \mathrm{H} \pm 10 \mathrm{H}$.
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.

IMPORTANT
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.


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.



- 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

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 30 H | $\Rightarrow$ | Over C0H |
| :--- | :--- | :--- | :--- |
| BRAKE PEDAL: | Under 30H | (THE PEDAL | $\Rightarrow$ |
| Over C0H |  |  |  |
|  | RELEASED) |  | (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.

CAUTION


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..

1. Remove 4 screws holding front of Assy Switch Plate

2. Remove the 5 screws holding the Multi Language Play Instrustions 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.

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 12 V 2.2 W 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.

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.


- 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 <br> turned ON, the machine <br> is not activated. | The power is not ON. | Firmly insert the plug into the outlet. |
|  | Incorrect power source/voltage. | Make sure that the power <br> supply/voltage are correct. |
|  | The fuse of the connect board was blown <br> out due to momentary overcurrent. | After eliminating the cause of <br> overload, replace the specified rating <br> fuse. |
| Fluorescent lamp inside <br> FL box doesn't light up. | Connector connection fault. | Check connector connections <br> between the Cabinet and the FL box. |
|  | Fluorescent lamp and Glow lamp need <br> replacement. | Replace the fluorescent lamp and the <br> glow lamp (See Section 3.18.4.1) |
| Lamps in control panel or <br> brake lights do not light <br> up. | Connector connection fault. | Check connector connections <br> between the Cabinet and the lamp. |
|  | Lamp needs replacement. | Replace the lamp (See Section <br> $3.18 .4 .2)$ |


| 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. <br> 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 $70^{\circ} \mathrm{C}\left(158^{\circ} \mathrm{F}\right)$ 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 week 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. <br> (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) <br> Replace the cables. Contact the company from whom the unit was purchased. |

### 3.20. Game Board



- 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. Remove 1 truss screw located next to the lower rear door lock
3. Disconnect the 5 plug breaks on the panel mount bracket on the right hand side.
4. Disconnect 2 plug breaks from the panel mount bracket situated in the roof of the base box (to the left of the game board).

5. Uncouple the fan loom from the lower rear door
6. Disconnect the LAN cable from the game board
7. Disconnect he USB cable from the game board
8. Remove the M6 bolt holding the game board in place. It is situated on the front edge of the board.
9. 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.


CAUTION

- 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 Ž 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 shortcircuited 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 fore, 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 fore, 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 if 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

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－米米米米B．＂


### 3.20.7.Shipping The GD-ROM Drive



IMPORTANT

- When returning the GD-ROM DRIVE for repair or replacement, be sure to package it in the original card transit box - THERE ARE NO USERSERVICEABLE 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.



### 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.

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 arranged into the correct configuration. Leave enough space to perform the rest of the operations in this procedure.
3. Referring the to 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 adjustors 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\bullet`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.


| DESCRIPTION | WHAT TO CHECK | INTERVAL |
| :--- | :--- | :--- |
| HANDLE MECHA | Check the V.R. value <br> Check adjust gear engagement <br> Greasing of gears | Monthly <br> Every 3 months <br> Every 3 months |
| ACCELERATOR \& BRAKE | Check the V.R. value <br> Check adjust gear engagement <br> Greasing of gears | Monthly <br> Every 3 months <br> Every 3 months |
| SHIFT LEVER | Check SW <br> Greasing | Monthly <br> Every 3 months |
| MONITOR / PROJECTOR | Clean screen (do not use water jet) <br> Check adjustment | Weekly <br> Monthly |
| SEAT | Rail greasing | Monthly |
| GAME BD | Memory Test <br> Game Assignments | Monthly <br> 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 |  |
| 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

Paddle Shifter


START and VIEW CHANGE Buttons



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


Route Guide with Stage Names - OutRun2


### 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: $\quad$ 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 <br> 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 $293 \mathrm{~km} / \mathrm{h}$.
- Tuned: Emphasis on speed, reaching $300 \mathrm{~km} / \mathrm{h}$ maximum.

Note: $\quad$ 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 tacho meter 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 tacho meter 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: $\quad$ 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:
$1 A-2 A-2 B-3 A-3 B-3 C-4 A-4 B-4 C-4 D-5 A-5 B-5 C-5 D-5 E$
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:
- Heart Attack Mode:
- Time Attack Mode [Normal, AT]:
- Time Attack Mode [Normal, MT]:
- Time Attack Mode [Tuned, AT]:
- Time Attack Mode [Tuned, MT]:

Each course (A-E) + the 15-Continuous Course Each course (A - E)
Each course (A - E) + the 15-Continuous Course Each course (A - E) + the 15-Continuous Course Each course (A - E) + the 15-Continuous Course Each course (A - E) + the 15-Continuous Course

Each course (A-E) + the 15-Continuous Course Each course (A - E)
Each course (A - E) + the 15-Continuous Course Each course (A - E) + the 15-Continuous Course Each course (A-E) + the 15-Continuous Course 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. <br> He has a very distinguished driving sense. He's also quite rich. |

## 2. OutRun Mode Lady

$\begin{array}{ll}\text { Name: } & \text { Jennifer } \\ \text { Personal Info: } & \text { She's a filthy rich 'princess', always selfishly seeking the next thrill. She's involved with } \\ & \text { Alberto, his Ferrari a present from her. She has a sharp eye for driving techniques. }\end{array}$

## 3. Heart Attack Lady


#### Abstract

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: <br> Check to see that each setting is as per the standard settings input at the time of shipment. <br> In the INPUT TEST mode, check each switch and VR. Section 5.4.1 <br> In the OUTPUT TEST mode, check each of the lamps. Section 5.4.2 <br> In the MEMORY TEST mode check all of the IC's on the IC BD. <br> 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 <br> MEMORY TEST. Section 5.3.1 <br> Ascertain each setting: <br> In the INPUT TEST mode, test the control devices. Section 5.4.1 <br> 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 <br> Clean screen (switch off machine and remove the plug) | Monthly <br> Weekly |
| IC BOARD | MEMORY TEST <br> 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 <br> Lubricate seat sliders | Monthly |
| $\begin{aligned} & \text { COIN } \\ & \text { MECHANISM } \end{aligned}$ | 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):
SERVICE BUTTON (SERVICE SW):
VOLUME FRONT:
VOLUME REAR:
VOLUME BASS SHAKER:

Used to enter TEST mode. Also has function during TEST mode. Refer to the later section detailing TEST mode.
Gives credits without registering on the coin counter. Also used during TEST mode.
Adjusts the volume of the left, right and control panel speakers.
Adjusts the volume of the woofer behind the seat.
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.

|  |
| :---: |
| SYSTEM MENU |
| MEDIA BOARD TEST |
| SYSTEM INFORMATION |
| JVS TEST |
| SOUND TEST |
| C.R.T. TEST |
| COINASSIGNMENTS |
| CLOCK SETTING |
| NETWORK SETTING(CORE) |
| NETWORK SETTING(MEDIA) |
| ENTER GAME TEST |
| [*******************] |
| EXIT |
| SELECTWITHSERVICE BUTTON |
| ANDPRESS TESTBUTTON |

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.

- 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.

MEDIA BOARD TEST 1/2

DIMM BOARD(TYPE3)
VERSION ****
STATUS GOOD
CHECKING 100\%
DIMM TEST
DIMMO GOOD
DIMM1 NONE
GD-ROM GOOD

PRESS TESTBUTTON TOEXIT

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.

MEDIA BOARD TEST $2 / 2$

NETWORK BOARD
VERSION ****
STATUS GOOD
CHECKING 100\%
NETWORK BOARD TEST
RAM CHECK-GOOD
--COMPLETED--

PRESS TESTBUTTON TOEXIT
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.

| SYSTEM INFORMATION |
| :---: |
| MAINBOARD |
| REGION |
| QCFIRM VERSION **** |
| SCFIRM VERSION *** |
| SERIAL NO. |
| MEDIA BOARD |
| DIMM BOARD(TYPE3) + GDROM |
|  |
| FIRM VERSION |
| NETWORKBOARD |
| FIRM VERSION **** |
| PRESS TESTBUTTON TOEXIT |

(A)
(B)
(B)
(B)
(C)
(D)
(E)
(F)
(G)
(H)

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.


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

```
MVS TEST
```

(A)
(A)
(A)
(B)
(B)
(C)
(C)
(C)
(C)
(C)
(C)
(C)
(C)
5. On-screen values change according to the input from switches and the volume.
A) SYSTEM, PLAYER

Values change with input from control panel/other switches.
B) COIN

Increases with input from the COIN SWITCH. The count is cleared when exiting TEST MODE.
C) ANALOG

Displays analog values from "0000" to "FFFF".
6. 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) $\quad$ 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 | IPLAYER |
| 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



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 | FUNCTIONIN | 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 | $\begin{array}{\|l\|} \hline 1 \text { COIN } \\ 2 \text { COINS } \\ \hline \end{array}$ | 1 CREDIT 3 CREDITS | 1 COIN 2 COINS | 1 CREDIT 3 CREDITS |
| SETTING \#16 | 1 COIN | 3 CREDITS | $\begin{aligned} & 1 \text { COIN } \\ & 2 \text { COINS } \end{aligned}$ | 1 CREDIT 3 CREDITS |
| SETTING \#17 | 3 COINS | 1 CREDIT | 3 COINS | 1 CREDIT |
| SETTING \#18 | 4 COINS | 1 CREDIT | 4 COINS | 1 CREDIT |
| SETTING \#19 | $\begin{aligned} & 1 \text { COIN } \\ & 2 \text { COINS } \\ & 3 \text { COINS } \end{aligned}$ $4 \text { COINS }$ | 1 CREDIT 2 CREDITS 3 CREDITS 5 CREDITS | 1 COIN <br> 3 COINS | 1 CREDIT 2 CREDITS 3 CREDITS 5 CREDITS |
| SETTING \#20 | 1 COIN | 5 CREDITS |  | 1 CREDIT 2 CREDITS 3 CREDITS 5 CREDITS |
| SETTING \#21 | 5 COINS | 1 CREDIT | 5 COINS | 1 CREDIT |
| SETTING \#22 | 1 COIN | 2 CREDITS | 3 COINS | 1 CREDIT 2 CREDITS |
| SETTING \#23 | 2 COINS <br> 4 COINS <br> 5 COINS | 1 CREDIT 2 CREDITS 3 CREDITS | 2 COINS <br> 4 COINS <br> 5 COINS | 1 CREDIT 2 CREDITS 3 CREDITS |
| SETTING \#24 | 1 COIN | 3 CREDITS | 2 COINS 4 COINS 5 COINS | 1 CREDIT 2 CREDITS 3 CREDITS |
| SETTING \#25 | 1 COIN 2 COINS 3 COINS 4 COINS 5 COINS | 1 CREDIT 2 CREDITS 3 CREDITS 4 CREDITS 6 CREDITS | 1 COIN 2 COINS 3 COINS 4 COINS 5 COINS | 1 CREDIT 2 CREDITS 3 CREDITS 4 CREDITS 6 CREDITS |
| SETTING \#26 | 1 COIN | 6 CREDITS | $\begin{aligned} & 18 \text { COIN } \\ & 2 \mathrm{COINS} \\ & 3 \mathrm{COINS} \\ & 4 \text { COINS } \\ & 5 \text { COINS } \end{aligned}$ | 1 CREDIT 2 CREDITS 3 CREDITS 4 CREDITS 6 CREDITS |
| SETTING \#27 | FREE PLAY |  | FREE PLA |  |

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 PLA |  |

5.3.2.4.Manual Setting


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.


### 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
[CREDITINFO]
COIN1: 
TOTAL COINS: 0
COIN CREDITS: O
SERVICE CREDITS: 0
TOTAL CREDITS: 0
NUMBER OFGAMES : O
TOTAL TIME : O'00"00
PLAY TIME : O'00"00
AVERAGE PLAY TIME : O'OO"OO
```

PRESS TEST BUTTON TO CONTINUE
SELECTWITH SERVICE BUTTON

COIN1: $\quad$ The number of coins inserted into Coin Slot 1.
COIN2: $\quad$ 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: O'00"000
OR2 GOAL/PLAY: O/ O GOAL AVE TIME:O'OO"OOO
OR2SP-15 GOAL/PLAY: 0/ 0 GOAL AVE TIME: O'00"000
OR2-15 GOAL/PLAY: O/ O GOAL AVE TIME:O'00'000
                                    SELECT AVE TIME: O'OO"OO
HEART ATTACKMODE
OR2SP GOAL/PLAY: 0/ 0 GOAL AVE TIME:O'00"OOO
OR2 GOAL/PLAY: 0/ 0 GOAL AVE TIME: O'00"000
SELECT AVE TIME: O'00"OO
```

PRESS TESTBUTTON TO CONTINUE
SELECTWITH 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)]

```
TIME ATTACK MODE
OR2SP GOAL/PLAY: O/ 0 GOAL AVE TIME: O'00"000
OR2 GOAL/PLAY: 0/ 0 GOAL AVE TIME: O'OO"OOO
OR2SP-15 GOAL/PLAY: 0/ 0 GOAL AVE TIME: O'00"000
OR2-15 GOAL/PLAY: O/ O GOAL AVE TIME: \(0^{\prime} 00^{\circ} 000\)
                    SELECT AVE TIME: O'00"OO
VSMODE
OR2SP GOAL/PLAY: 0/ O GOAL AVE TIME: O'OO"OOO
OR2 GOAL/PLAY: 0/ 0 GOAL AVE TIME: O'00"000
VS-SP GOAL/PLAY: 0/ 0 GOALAVE TIME: 0'00"000
OR2SP-15 GOAL/PLAY: 0/ O GOAL AVE TIME: 0'00"000
OR2-15 GOAL/PLAY: 0/ 0 GOAL AVE TIME: 0'00"000
                SELECT AVE TIME: O'00"00
```

PRESS TESTBUTTON 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.

BOOKKEEPING $3 / 3$
[GAME MODE INFO(2/2)]
TIME ATTACK MODE
OR2SP GOAL/PLAY: 0/ O GOAL AVE TIME: O'00"000
OR2 GOAL/PLAY: 0/ 0 GOAL AVE TIME: O'00"000 OR2SP-15 GOAL/PLAY: 0/ O GOAL AVE TIME: O'00"000 OR2-15 GOAL/PLAY: 0/ 0 GOAL AVE TIME: O'00"000

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

PRESS TEST BUTTON TO CONTINUE SELECT WITH SERVICE BUTTON

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.

```
    BOOKKEEPING 3/3
[GAME MODE INFO(2/2)]
TIME ATTACK MODE
OR2SP GOAL/PLAY: 0/ O GOAL AVE TIME: O'00"000
OR2 GOAL/PLAY: 0/ 0 GOAL AVE TIME: O'00"000
OR2SP-15 GOAL/PLAY: 0/ 0 GOAL AVE TIME: O'00"000
OR2-15 GOAL/PLAY: 0/ O GOAL AVE TIME: O'OO"OOO
    SELECT AVE TIME: O'00"00
VSMODE
OR2SP GOAL/PLAY: 0/ O GOAL AVE TIME: O'00"000
OR2 GOAL/PLAY: 0/ 0 GOAL AVE TIME: O'00"000
VS-SP GOAL/PLAY: O/ O GOAL AVE TIME: O'00"000
OR2SP-15 GOAL/PLAY: 0/ O GOAL AVE TIME: O'OO"000
OR2-15 GOAL/PLAY: 0/ O GOAL AVE TIME: O'00"000
                                    SELECT AVE TIME: O'OO"OO
```

PRESS TEST BUTTON TO CONTINUE
SELECTWITH SERVICE BUTTON

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.

## GAME TEST MODE

INPUT TEST
OUTPUT TEST
DRIVE BOARD TEST
GAME ASSIGNWENTS
BOOKKEEPING
BACKUP DATA CLEAR
--> EXIT

SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON

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.

OUTPUT TEST

START BUTTON
--> VIE" CHANGE BUTTON

PRESS TEST BUTTON TO EXIT

- START BUTTON :
- VIEW CHANGE BUTTON:

Lights up the START 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.

## GAME ASSIGNMENTS

| DIFFICULTY | NORMAL |
| :--- | :---: |
| CABINET | STANDARD |
| ADVERTISE SOUND ON |  |
| SPEEDOMETER | KILO |
| QUICK START | OFF |
| 15 COURSE MODE | OFF |
| TITLE TYPE | AUTO |
| LINKID |  |
| TOTALMACHINE |  |
| GROUP | 1 |

--> EXIT

SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON

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 <br> longer than the normal game mode. <br> (Default Setting: OFF) <br> When this is set to OFF, players cannot play the 15 Continuous Course Modes. <br> 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. |  |

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



## 7. PARTS LIST

7.1. Assembly Structure ORP BOM STRUCTURE


### 7.2. ORP-0000UK TOP ASSY OUTRUN SPECIAL TOURS DX

| ITEM | PART NO. | QTY | DESCRIPTION | COMPONENT REF. |
| :--- | :--- | :---: | :--- | :--- |
| 3 | ORP-1000UK | 1 | ASSY PTV |  |
| 4 | ORP-2000UK | 1 | ASSY MAIN CABI |  |
| 7 | $440-W S 0220 U K$ | 2 | WARNING STICKER TRAP HAZARD | BEHIND SEAT |
| 12 | $421-7987-$ ORP-D | 1 | STICKER ELEC SPEC ORP DX | NEXT TO AC INLET |
| 13 | $421-7988-91$ UK | 2 | STICKER SERIAL NUMBER UK |  |
| 17 | $421-7020 U K$ | 4 | STICKER CAUTION FORK | $(3)-2,(4)-2$ |
| 21 | $440-$ CS0221UK | 2 | CAUTION STICKER KEEP OUT | REAR CORNERS OF <br> 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 ASSYPTV

| ITEM | PART NO. | QTY | DESCRIPTION | COMPONENT REF. |
| :--- | :--- | :---: | :--- | :--- |
| 4 | NCR-0600UK | 1 | ASSY FRONT PANEL |  |
| 5 | DYN-0001 | 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 | $000-T 00520-0 B$ | 4 | M5X20 MSCR TH BLK | $(2)-4$ |
| 204 | $000-$ P00410-W | 1 | M4X10 MSCR PAN W/FS PAS | EARTH-2 |
| 205 | $000-T 00525-0 B$ | 6 | M5X25 MSCR TH BLK | (2)-2,(4)-4 |
| 206 | $068-552016-0 B$ | 6 | M5 WSHR 20OD FLT BLK | (2)-2,(4)-4 |
| 207 | $050-$ F00400 | 1 | M4 NUT FLG SER PAS | EARTH-1 |
| 208 | $000-F 00412$ | 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 20OD FLT PAS | $(2)-6,(3)-3,(4)-3$ |
| 202 | $050-F 00500$ | 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 | MOVE TO 2050 |
| 5 | ORP-4200UK | 1 | ASSY ELEC BD |  |
| 9 | ORP-2400UK | 1 | ASSY SEAT | $(9)-1$ |
| 11 | RAL-2007 | 1 | RUBBER HOLDER R TWIN | $(9)-1$ |
| 12 | RAL-2008 | 1 | RUBBER HOLDER L TWIN |  |
| 58 | ORP-3000UK | 1 | ASSY FRAME BASE | $(3)-8$ |
| 213 | $030-000820-S$ | 8 | M8X20 BLT W/S PAS | $(1)-6,(3)-8$ |
| 219 | $060-$ F00800 | 14 | M8 WSHR FORM A FLT PAS | $(9)-5$ |
| 232 | $030-000820-$-SB | 5 | M8X20 BLT W/S BLK | $(9)-5$ |
| 238 | $068-852216-0 B$ | 5 | M8 WSHR 22OD FLT BLK | $(4)-1$ |
| 242 | $000-$ T00440-OB | 1 | M4X40 MSCR TH BLK | $(4)-1$ |
| 243 | $068-441616$ | 1 | M4 WSHR 16OD FLT PAS | $(1)-6$ |
| 244 | $030-000830-S$ | 6 | M8X30 BLT W/S PAS | $(1)-2$ |
| 245 | $050-$ F00600 | 2 | M6 NUT FLG SER PAS | $(1)-2,(2)-6,(5)-1$ |
| 246 | $060-$ F00600 | 9 | M6 WSHR FORM A FLT PAS | $(2)-6$ |
| 247 | $030-000630-S$ | 6 | M6X30 BLT W/S PAS | $(5)-1$ |
| 248 | $030-000620-S$ | 1 | M6X20 BLT W/S PAS |  |

### 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-ELIPTICAL-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,EARTHS - 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 160D 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-OB | 2 | M6X16 MSCR TH BLK | $(56)-2$ |
| 256 | O60-F00600-OB | 2 | M6 WSHR FORM A FLT BLK | $(56)-2$ |
| 257 | 060-F00400-OB | 9 | M4 WSHR FORM A FLT BLK | $(1)-6,(56)-3$ |
| 258 | $000-$ T00420-OB | 12 | M4X20 MSCR TH BLK | $(110)-4 \times 3$ |
| 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 1OA <br> 250Vac | SWITCH ROCKER DPST 10A <br> 250Vac |
| 103 | EP1303 | 1 | FUSE 5X20 CERAMIC SB 5000mA |  |
| 104 | $514-5078-5000$ | 1 | FUEAT SHRINK SLEEVING 50.8DIA | OVER ITEM 102(50MM OVER <br> SOCKET) |
| 105 | $310-5029-D 508$ | 0.05 | HEAT |  |
| 106 | $421-6595-5000-T$ | 2 | STICKER FUSE 5000mA TYPE T | NEXT TO IEC INLET + FUSE <br> HOLDER |
| 107 | LB1096 | 1 | STICKER PROTECTIVE EARTH | NEXT TO EARTH STUD |
| 201 | $060-$ S00300 | 4 | M3 WSHR SPR PAS | (101)-4 |
| 202 | $060-F 00300$ | 4 | M3 WSHR FORM A FLT PAS | (101)-4 |
| 203 | $000-P 00310$ | 4 | M3X10 MSCR PAN PAS | (101)-4 |
| 204 | $050-F 00400$ | 3 | M4 NUT FLG SER PAS | (INSIDE EARTH)-2,(OUTSIDE)-1 |
| 301 | ORP-60033UK | 1 | WH AC OUT PRIMARY | FROM FILTER TO XFMR |
| 302 | $600-9100-44 K$ | 1 | WIRE HARN EARTH 1000mm <br> 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 | $(2,3)-4$ |
| 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 |  |

### 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 | $008-T 00412-0 B$ | 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-A838001UK | 1 | ASSY BRAKE LIGHTCONT |  |
| 103 | 220-5575UK | 2 | LOCK |  |
| 104 | ORP-2372UK | 2 | $\begin{aligned} & \text { CAM CRKD } 9 \text { L34 BATON 690- } \\ & \text { ZB34 } \end{aligned}$ |  |
| 201 | 000-T00512-OC | 4 | M5X12 MSCR POSI TH CRM | ?(2)-4 |
| 202 | 000-T00630-0B | 3 | M6X30 MSCR TH BLK | (2)-3 |
| 203 | 000-T00540-0C | 2 | M5X40 MSCR TH CRM | (2)-2 |
| 204 | 008-T00625-0C | 3 | M6X25 TMP PRF TH CRM | (2)-3 |
| 205 | 000-T00620-0C | 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-T00408-0C | 2 | M4X8 TMP PRF TH CRM | (10)-2 |
| 209 | 000-P00420-W | 6 | M4X20 MSCR PAN W/FS PAS | (11)-6 |
| 210 | 008-T00420-0B | 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-F00600-0B | 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 250D FLT PAS | (4)-2 |

Contd.

| ITEM | PART NO. | QTY | DESCRIPTION | COMPONENT REF. |
| :--- | :--- | :---: | :--- | :--- |
| 217 | $068-441616-0 C$ | 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 | $012-P 00325$ | 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 | $(101)-1$ |
| 8 | DP-1167UK | 1 | TNG LKG UK |  |
| 9 | ORP-3022UK | 1 | PNL MOUNT BRKT | $(102)-1$ |
| 10 | FN1012 | 1 | MESH GUARD METAL 120mm FAN |  |
| 101 | $220-5575 U K$ | 1 | LOCK | AIRFLOW OUT |
| 102 | $260-0011-02$ | 1 | AXIAL FLOW FAN AC100V 50-60Hz | $(10)-4$ |
| 103 | OS1195 | 4 | RIVET SNAP MOSS SR1811 | $(1)-3$ |
| 104 | $280-A 02048-P M$ | 3 | ROUTER TWIST D20 SO4.8 PAN LG | $(1)-2$ |
| 105 | $280-A 01248-P M$ | 2 | ROUTER TWIST D12 SO4.8 PAN MED | $(2)-4$ |
| 201 | $000-T 00616-0 B$ | 4 | M6X16 MSCR TH BLK | $(102)-4$ |
| 202 | $012-H B 0512$ | 4 | N10X1/2" S/TAP HEX B PAS | $(9)-2$, EARTH |
| 203 | $060-F 00500$ | 4 | M5 WSHR FORM A FLT PAS | $(1)-2$ |
| 204 | $050-$ F00400 | 3 | M4 NUT FLG SER PAS | $(1)-2$ |
| 205 | $000-T 00430-0 B$ | 2 | M4X30 MSCR TH BLK | $(3)-1$ |
| 206 | $068-441616-0 B$ | 2 | M4 WSHR 16OD FLT BLK | $(3)-1$ |
| 207 | $030-000620-S$ | 1 | M6X20 BLT W/S PAS | LOCK |
| 208 | $068-652516$ | 1 | M6 WSHR 25OD FLT PAS |  |
| 209 | $008-T 00430-0 B$ | 1 | M4X30 TMP PRF TH BLK | $?$ |
| 301 | $600-7141-250$ | 1 | CABLE JVS TYPE A-B 250CM |  |
| 302 | $600-7009-3000 U K$ | 1 | ASSY RGB CA D-SUB 15P 3000MM | $?$ |
| 303 | ORP-6001UK | 1 | ASSY CABLE RUN | long enough? |
| 304 | $600-7269-0200$ | 1 | ASSY LAN CABLE 0200CM |  |

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 | $068-852216-0 B$ | 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 | $843-0011 D-02$ | 1 | ASSY CASE BOX ORP EXP |  |
| 4 | $105-5435$ | 1 | GD DRIVE BRKT STD |  |
| 5 | LB1111 | 1 | STICKER PLEASE RECYCLE | SHIP BOX WITH MACHINE |
| 6 | $610-0617$ | 1 | GD-ROM DRIVE UNIT NAOMI |  |
| 7 | $610-0652-0011$ | 1 | GD SOFT ORP | size? |
| 101 | $400-5443-01$ | 1 | SW REGU FOR CHIHIRO VA | GAME BD |
| 106 | $280-A 00964-W X$ | 6 | ROUTER TWIST D09 SO6.4 WOOD X | $(2)-4,(4)-3,(101)-4$ |
| 107 | LB1101 | 1 | STICKER WARNING BATTERY | $(6)-4$ |
| 201 | $000-P 00416-W$ | 11 | M4X16 MSCR PAN W/FS PAS |  |
| 203 | $012-P 00410-F$ | 4 | N8X3/8" S/TAP FLG PAS |  |
| 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 | $280-A 01264-$ 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 | $012-P 00325$ | 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 |  | 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 | (101)-3 |
| 6 | FN1012 | 3 | MESH GUARD METAL 120mm FAN |  |
| 7 | JPT-4102UK | 1 | FAN BRKT | HOLES IN BASE |
| 101 | $260-0011-02$ | 2 | AXIAL FLOW FAN AC100V 50-60Hz | AIRFLOW TOWARDS MOTOR |
| 102 | $560-5430 U K$ | 1 | XFMR NCR DX | HOLES IN BASE |
| 105 | $838-11856$ CE-02 | 1 | CONNECT BD W/FUSE 6.3A CE |  |
| 107 | 354081 | 11 | TWIST LOK BHKL-450-4 | $(4)-8,(103)-4,(105)-2$ |
| 108 | 354083 | 10 | (A)TWIST N LOK BHKL-750-4 | $(102)-4$ |
| 109 | $280-A 00964-W X$ | 12 | ROUTER TWIST D09 SO6.4 WOOD X | $(102)-4$ |
| 111 | 290190 | 9 | TAPE-FOAM-20MM X 4.50MM |  |
| 201 | $012-P 00325$ | 14 | N4X1" S/TAP PAN PAS |  |
| 203 | $000-P 00416-W$ | 4 | M4X16 MSCR PH W/FS PAS |  |
| 206 | $068-441616$ | 4 | M4 WSHR 16OD FLT PAS |  |
| 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 81 K 31 | (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 220D 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 | $601-5699$ UK13-01 | 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 <br> 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 | $422-0932 D U K$ | 1 | PLAY INSTR SH ORP DX MULTI |  |
| 23 | $440-C S 0186 U K$ | 1 | STICKER C EPILEPSY MULTI | $(4)-8,(8)-2,(9)-2,(10)-2$ |
| 201 | $030-000830-$ SB | 14 | M8X30 BLT WIS BLK | $(4)-8,(8)-2,(9)-2,(10)-2$ |
| 202 | $068-852216-0 B$ | 14 | M8 WSHR 22OD FLT BLK | $(1)-3$ |
| 203 | $060-$ F00800 | 3 | M8 WSHR FORM A FLT PAS | $(8)-2$ |
| 207 | $060-$ F00600 | 2 | M6 WSHR FORM A FLT PAS | $(8)-2$ |
| 209 | $050-$ F00600 | 2 | M6 NUT FLG SER PAS | $(1)-3$ |
| 212 | $030-000860-$ SB | 3 | M8X60 BLT W/S BLK | $(2)-2$ |
| 213 | $000-P 00516-$ WB | 2 | M5X16 MSCR PAN W/FS BLK | $(6)-3,(7)-3$ |
| 214 | $000-P 00412-$ WB | 6 | M4X12 MSCR PAN W/FS BLK | $(6)-3,(7)-3$ |
| 215 | $068-441616-0 B$ | 6 | M4 WSHR 16OD FLT BLK |  |
| 401 | PK0369 | 1 | INST KIT BOX ORP DX | BRACKETS, BOLTS \& MANUALS |
| 402 | OS1019 | 3 | SELF SEAL BAG 9X12.3/4 | SPARE - PADDLE SHIFTER |
| 408 | $509-5387$ | 1 | SW MICRO TYPE (AH71557K) | SPARE - HANDLE MECHA |
| 409 | $220-5484$ | 1 | VOL CONT B-5K OHM |  |
| 411 | $600-7269-0500$ | 1 | LAN CABLE 500CM |  |
| 412 | $420-6830-01 U K$ | 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 |
|  |  |  |  |  |

### 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 | $390-5695-30-A U K ~$ | 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 | $(1)-3,(2)-3,(6)-3,(8)-2$ |
| 107 | $280-A 00900-A$ | 5 | ROUTER TWIST D9 ADH | $(101)-2,(E A R T H)-1$ |
| 201 | $000-T 00408-0 C$ | 11 | M4X8 MSCR TH CRM | $(1)-2,(2)-2$ |
| 203 | $050-F 00400$ | 3 | M4 NUT FLG SER PAS | $(1)-3,(2)-3$ |
| 204 | $000-F 00412$ | 4 | M4X12 MSCR CSK PAS | $(101)-2$ |
| 205 | $068-441616-0 C$ | 6 | M4 WSHR 16OD FLT CRM | $($ TERRY CLIPS) |
| 206 | $068-441616$ | 2 | M4 WSHR 16OD FLT PAS |  |
| 207 | $000-P 00412$ | 2 | M4X12 MSCR PAN PAS |  |
| 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 | $(10)-1,(2)-1$ INSIDE TOP |
| 11 | LB1103 | 2 | STICKER CAUTION | AREA |
| 201 | $000-P 00408-W$ | 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-OB | 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] $\qquad$ 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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