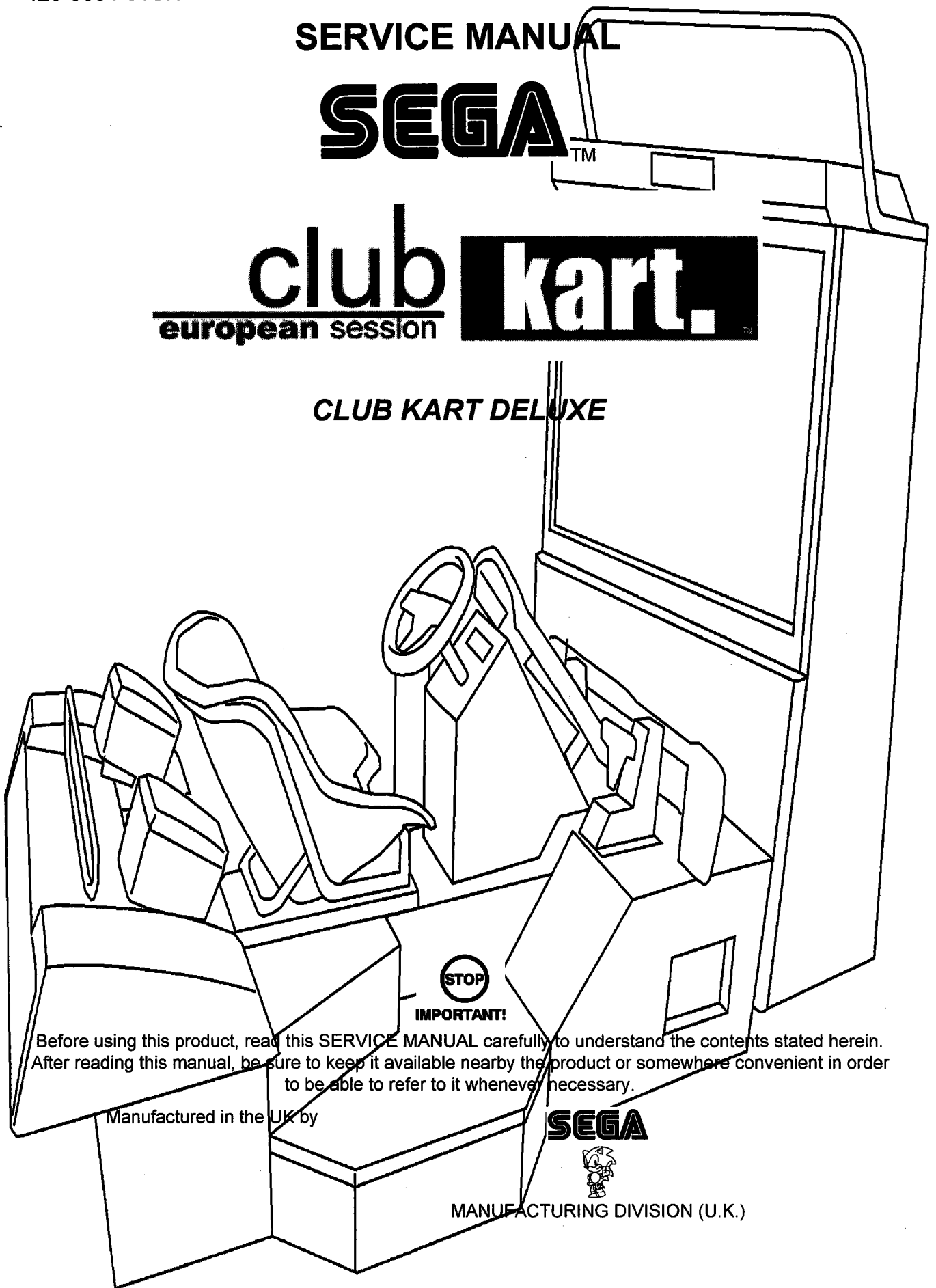420-6634-01UK

REV 0

SERVICE MANUAL

SEGA™

club kart.
european session

CLUB KART DELUXE

(STOP)

IMPORTANT!

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

Manufactured in the UK by

SEGA

MANUFACTURING DIVISION (U.K.)

CONTENTS

1. BEFORE USING THIS PRODUCT

To ensure the safe usage of the product, be sure to read the following before using the product. The following instructions are intended for the use of QUALIFIED SERVICE PERSONNEL ONLY. After carefully reading and sufficiently understanding the instructions should any activity be carried out on the product. Only qualified service personnel should carry out maintenance on the product.

Terms such as WARNING, CAUTION and IMPORTANT are used where an explanation is given which requires special attention, depending on the potential risk. SEGA is not responsible for injury or damage caused by use in a manner contrary to the instructions stated 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.

⚠	⚠
WARNING!	**CAUTION!**
Indicates that mishandling the product by disregarding this warning will cause a potentially hazardous situation which can result in death or serious injury.	Indicates that mishandling the product by disregarding this caution will cause a potentially hazardous situation which can result in personal injury and or material damage.

🛑

IMPORTANT!

This is cautionary information which should be complied with when handling the product. Indicates that mishandling the product by disregarding this will cause a potentially hazardous situation which 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 fuse(s) is fitted to the machine.

Details of the correct fusing of the machine 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 addition, not designated by SEGA are not permitted and will invalidate this product's CE conformity.

The parts of the product also include any warning labels or safety covers for personal protection etc. A potential hazard will be created if the machine is operated while any parts have been removed. Should any doors, lids or protective covers be damaged or lost, do not operate the product. 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 both customers and operators, stickers and printed instructions describing potentially hazardous situations are applied to places where accidents could occur. Ensure that where the product is operated 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 it has been replaced by an identical item.

When handling the monitor, be very careful. (Applies only to product with monitor)

Some of the monitor (TV) parts are subject to high tension voltage. Even after turning off the power some components are still occasionally subject to high tension voltage. Monitor repair and replacement should be performed by qualified service engineers only.

In cases where commercially available monitors and printers are used only the contents relating to this product are stated in this manual. Some commercially available equipment has functions and reactions not stated in this manual. Read this manual in conjunction with the specific manual of such equipment.

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

1

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

(STOP)
IMPORTANT!

> • Inspection should only be carried out by QUALIFIED SERVICE PERSONNEL.

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.

SERIAL NUMBER STICKER (ON BACK)

SERIAL NUMBER STICKER (INSIDE COIN TOWER)

BOTH SIDES

ELEC SPEC STICKER

SERIAL NUMBER STICKER

FORKING STICKER (BOTH SIDES)
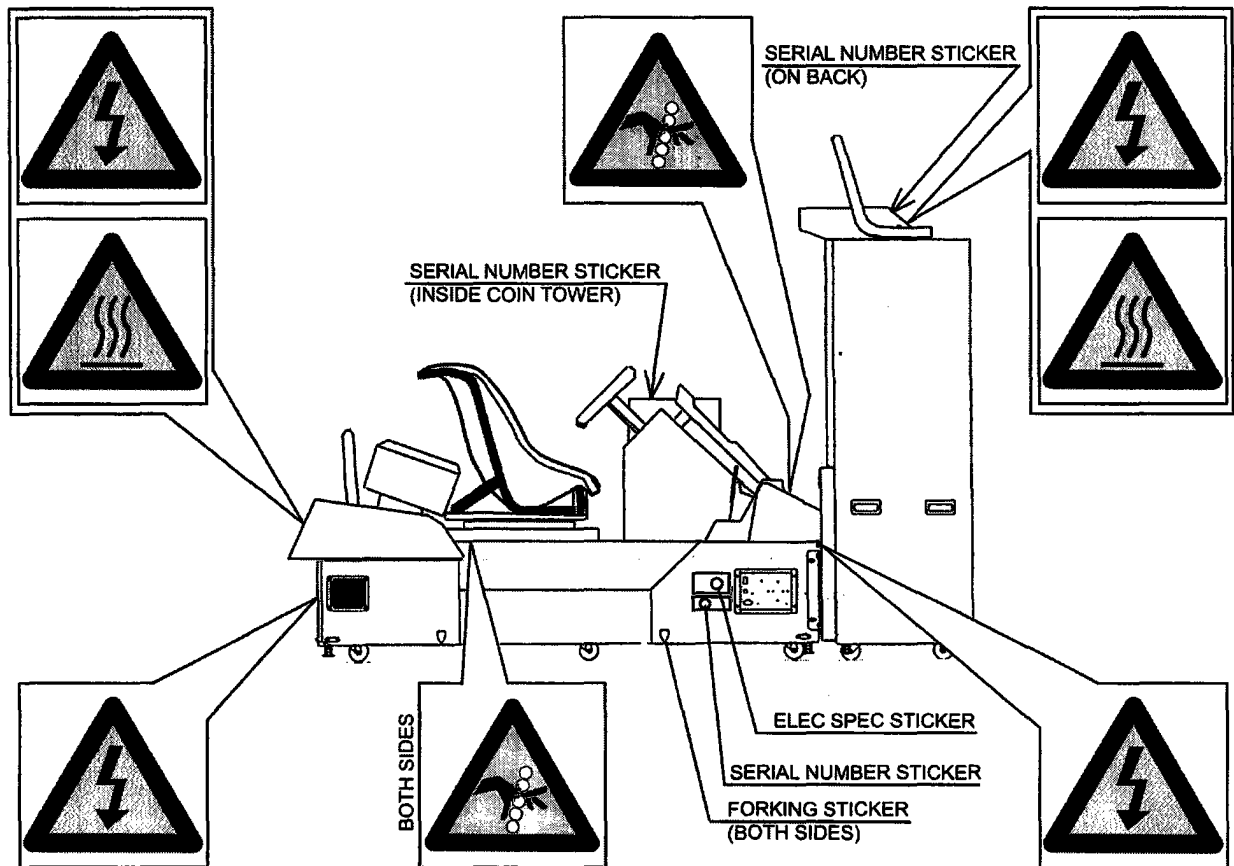
SPECIFICATIONS			
Installation Space (cm):	200W x 260D		
Height (cm):	212		
Weight (kg):	375		
Power, Max:	Rated Voltage (V.AC):	230V 50Hz	
	Rated Current (A):	2.75A	
Operating Temperature Range	5-30°C		

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

2. INTRODUCTION TO THIS SERVICE MANUAL

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

SEGA AMUSEMENTS EUROPE LTD./ SEGA SERVICE CENTRE
Unit 2 Industrial Estate,
Leigh Close,
New Malden,
Surrey,
KT3 3NL,
England.
Telephone: +44(0) 20 8336 1222
Fax: +44(0) 20 8336 1715

3. INSTALLATION AND SERVICE INSTRUCTIONS

STOP

IMPORTANT!

• Installation and commissioning should only be carried out by QUALIFIED SERVICE PERSONNEL.

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 all of the adjusters are in contact with the floor.

Ensure that all of the Adjusters are in contact with the floor.
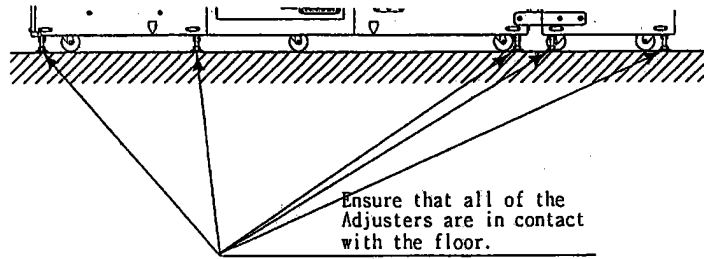
- Injury may result in more than one player using the seat at one time.
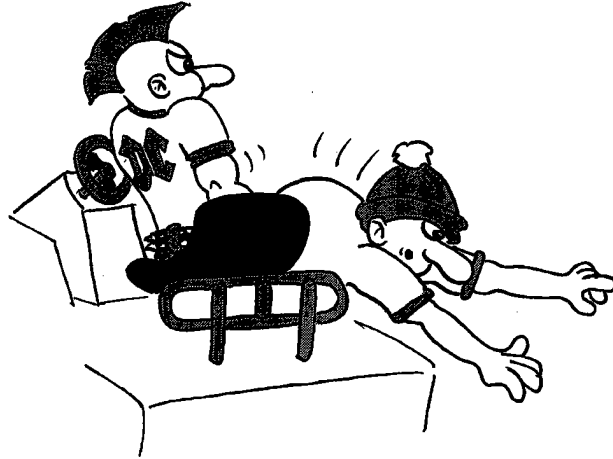
- Bystanders should not touch the machine while in use, as limbs may become trapped.
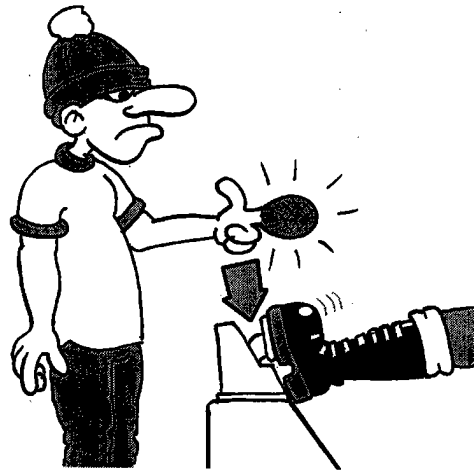
- Do not allow bystanders to enter, or insert limbs into, the space between the seat and rear billboard, as injury may result.
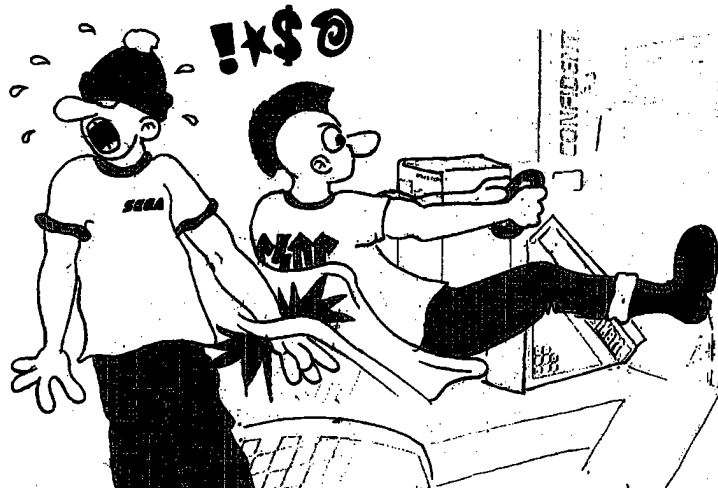
- Ensure that the mains lead is not damaged. If the mains lead is damaged in any way there could be a danger of electric shock or a fire hazard.
- Ensure that the power supply is fitted with circuit protection. Using the power supply without circuit protection is a fire hazard.

3.2. COIN HANDLING

Standard Sega machines are fitted with a C120 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 4. 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:

- Coin controls C120/C220
- Generic mechanical
- Mars (MS111B1 and ME115)
- SECI RM4-G20

3.3. NAME OF PARTS

TOP BILLBOARD

50" PTV

COINCHUTE
TOWER

REAR
BILLBOARD

AC BRKT
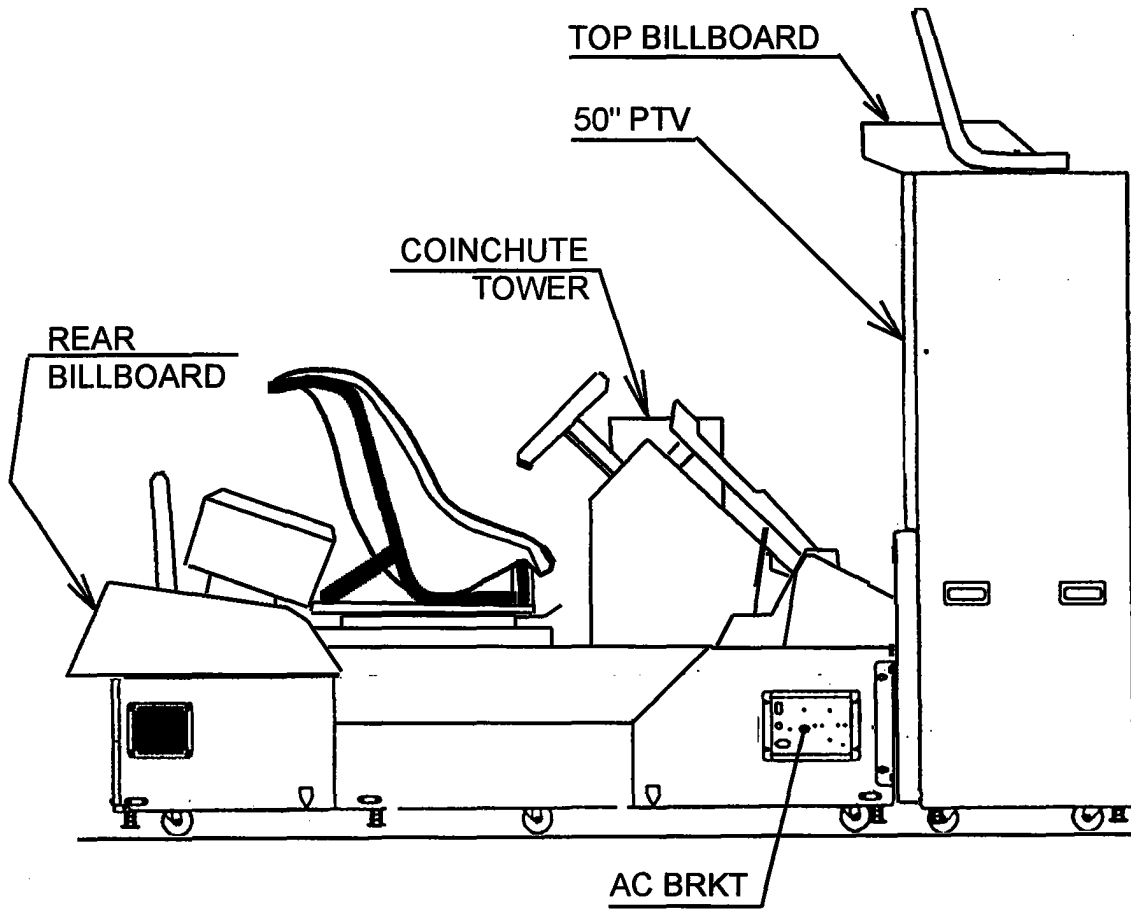
	Width (cm)	Length (cm)	Height (cm)	Weight (kg, approx.)
PTV	114	55.5	167	112
MAIN CABINET	122	193	98	244
BILLBOARD	112	47	45	18
When Assembled	122	248.5	212	374

3.4. ACCESSORIES

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

Indent #	Part No.	Description	Component Ref	Qty
3	CKT-0002	JOINT BRKT CENTER		2
4	CKT-0011UK	STICKER CARD INSTRUCTION		1
5	CKT-0012UK	STICKER CARD SLOT MULTI		1
6	CKT-0013UK	PLAY INSTR CKT DX MULTI		1
7	CKT-0557	NUMBER PLATE BASE		1
8	CKT-0561	STICKER NUMBER		1
17	CKT-0550UK	ASSY BILLBOARD		1
19	CKT-1102	TOWER BASE		1
101	601-11050	CLEANING KIT		1
102	601-11051-01	CARD PACKAGE CKT ENG		3
201	000-T00540-0C	M5X40 MSCR TH CRM	BILLBOARD - 2	2
202	030-000830-SB	M8X30 BLT W/S BLK	(3)-4 INTO F PANEL	4
203	030-000860-SB	M8X60 BLT W/S BLK	(3)-4 INTO MAIN BASE,(19)-4	8
204	068-852216-0B	M8 WSHR 22OD FLT BLK	(3)-8,(19)-4,(CCT)-2	14
205	030-000820-S	M8X20 BLT W/S PAS	(CCT)-2	2
206	031-000620-0B	M6X20 CRG BLT BLK	(19)-2	2
207	050-F00600	M6 NUT FLG SER PAS	(19)-2	2
208	068-651616	M6 WSHR 16OD FLT PAS	(19)-2	2
209	000-T00412-0C	M4X12 MSCR TH CRM	(7)-2	2
401	PK0282	INST KIT BOX CKT DX		1
402	OS1019	SELF SEAL BAG 9X12.3/4		2
407	220-5484	VOL CONT B-5K OHM	FOR STEERING ONLY	1
408	220-5484-H	VOL 5-K-OHM HAPP 50-8026	FOR PEDALS ONLY	1
409	600-6275-0500	CABLE FIBER OPTIC 5mm x		1
410	310-5286-21	STRAIGHT ADAPTOR 25XPG21		2
411	310-5285-210150	FLEX TUBE 21 150CM (25mm		1
414	420-6634-01UK	SERVICE MANUAL CKT DX		1
415	420-5788-31UK	SERVICE MANUAL TOSHIBA 5		1
416	SAECE-076	DECLARATION OF CONFORMIT		1

3.5. HOW TO USE THE GAME BOARD TRANSIT BOX

STOP

IMPORTANT!

- When returning the GAME BOARD for repair or replacement, be sure to package the entire ASSY SHIELD CASE in the original card transit box - THERE ARE NO USER-SERVICEABLE PARTS INSIDE.
- Failure to return the GAME BOARD in this manner may invalidate the warranty.

Wrap the ASSY SHIELD CASE with the packaging material and put it in the original transit box as shown. Putting it upside down or packing otherwise in the manner not shown can damage the GAME BOARD and parts.

'CHECK SIDE' DISPLAY

SERIAL NO.

ASSY SHIELD CASE

SERIAL NO.
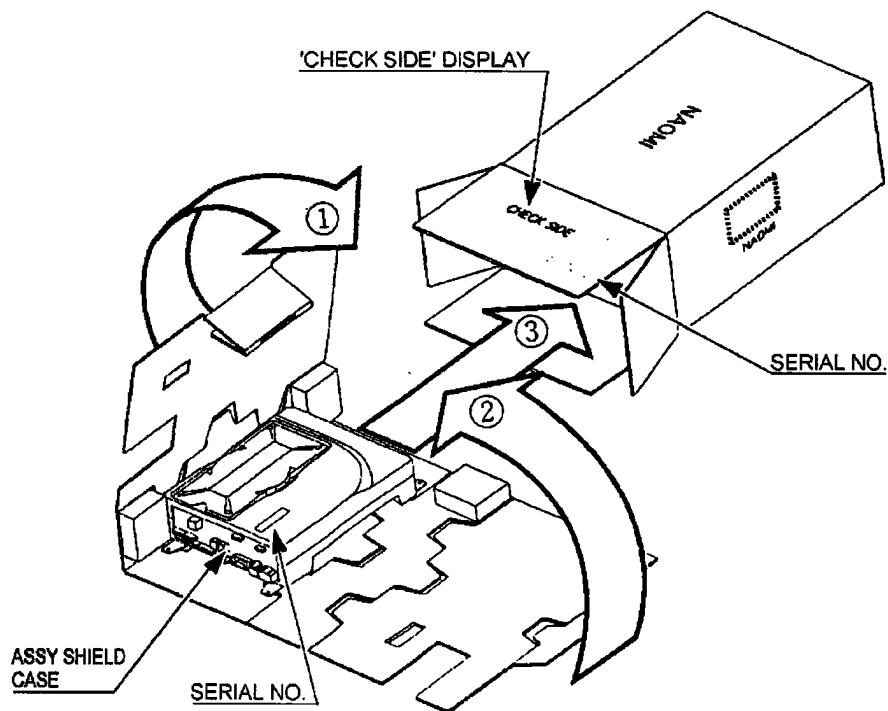
3.6. ASSEMBLY INSTRUCTIONS

WARNING!

• Perform the assembly by following the procedure herein stated. Failure to comply with the instructions, for example, inserting the plug into an outlet at a stage not mentioned in this manual can cause an electric shock
• Assembling should be performed as per this manual. Since this is a complex machine, erroneous assembling can cause damage to the machine, or malfunction to occur.
• Do not attempt to complete this work alone, a minimum of 2 people are required.

IMPORTANT!

• Assembly should only be carried out by QUALIFIED SERVICE PERSONNEL.

When carrying out the assembly work, follow the procedure in the following sequence:

3.6.1 ASSEMBLY CHECK

3.6.2 ASSEMBLING THE PTV TO MAIN CABINET

3.6.3 FITTING COIN CHUTE TOWER

3.6.4 SECURING IN PLACE

3.6.5 COIN HANDLING INSTALLATION.

3.6.6 LOADING CARDS

3.6.7 CONNECTING THE POWER

3.6.8 ASSEMBLING THE PTV

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

3.6.1. ASSEMBLING THE PTV

STOP **IMPORTANT!**

- BE SURE TO CONNECT ALL CONNECTORS CORRECTLY.
- BE SURE TO CONNECT ALL EARTH WIRES CORRECTLY AS INSTRUCTED.

1. Fix the two mask holders onto the PTV top panel with two countersunk head screws in each.

2. Insert the TV Mask as shown, and fix with six screws.

3. Fit Panel Mount Brackets L and R onto the front of the PTV, using two screws in each.

4. Mount the Front Panel onto the front of the PTV and fix using the four truss head screws.

(Note that steps 1-4 may have been carried out by the manufacturer. In this case, proceed to step 5).

FLAT HEAD SCREW (2 each) M4×12

MASK HOLDER

TRUSS SCREW(2)black M5×25, flat washer used.

PANEL MOUNT BRACKET L

SCREW (2 each) M5×16.w/flat & spring washers

PANEL MOUNT BRACKET R

FRONT PANEL

SCREW (4) M5×20, w/flat & spring washers

TRUSS SCREW(4)black M5×25, flat washer used.
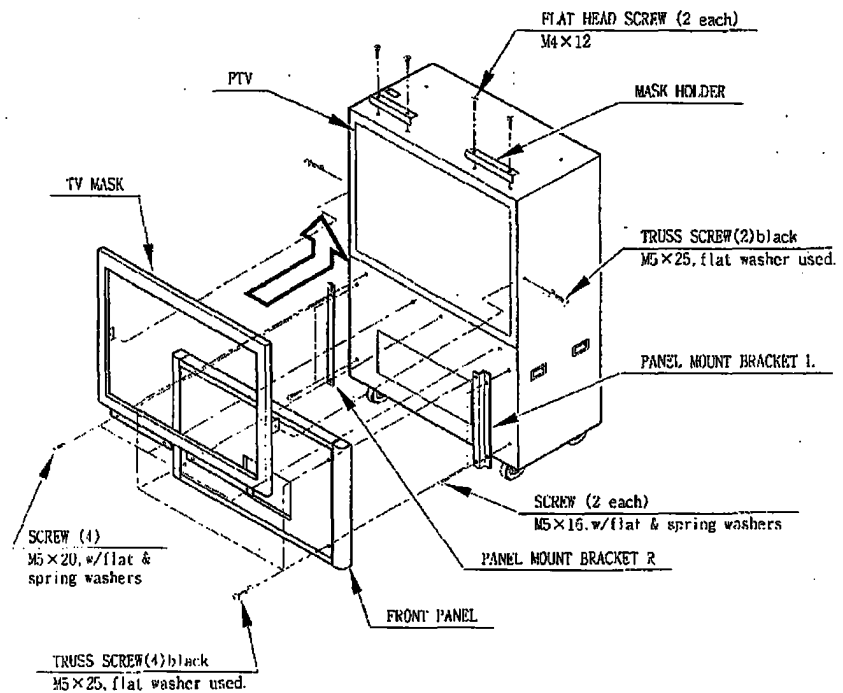
5. The BILLBOARD should be installed using three or more workers. Two workers should support the BILLBOARD on top of the PTV in an inclined position (see diagram at right), while a third worker makes the BILLBOARD power connection. A suitable step should be used to ease access to the BILLBOARD power connection.

6. Engage the BILLBOARD onto the brackets at the front, and secure at the rear using the two M5x40 chrome screws provided.

7. The NUMBER PLATE BASE (CKT-0557) is fixed to the centre of the Billboard pipe with the two M4x12 screws provided.

8. Peel off the appropriate number from CKT-0561 (supplied) and apply to the NUMBER PLATE BASE. See 3.13.2 for further information on steps 7 and 8.

M5 SCREW(2) w/flat & spring washers

BILLBOARD

Connect the Connector.

PTV
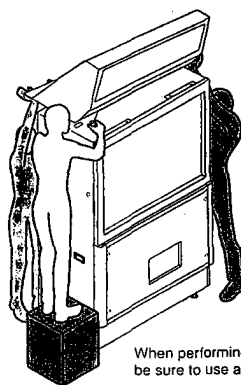
When performing work, be sure to use a step.

3.6.2. ASSEMBLING THE PTV TO MAIN CABINET

WARNING!
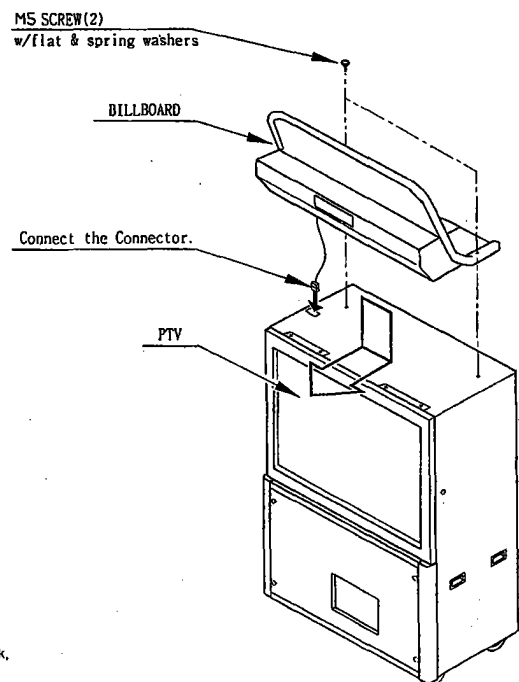
- Ensure earth wire is fixed.

1. Move the Main Cabinet and PTV together, close enough to facilitate connection of the video, power and earth 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.

2. Pull the harnesses through the access hole in the front panel of the Main Cabinet, and connect to their respective sockets 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. *Do not forget to connect the earth wire.*
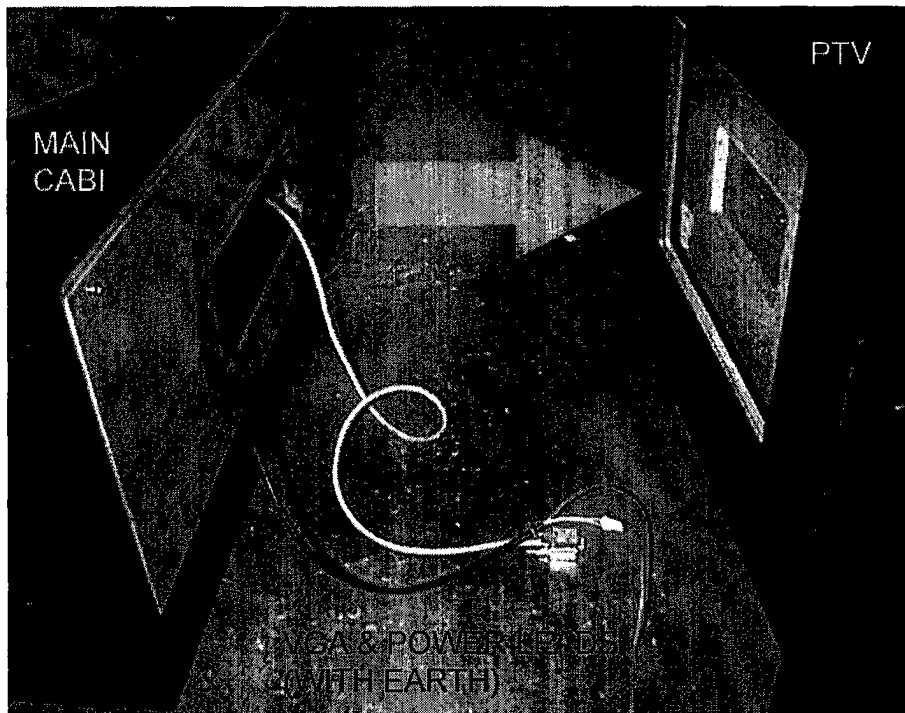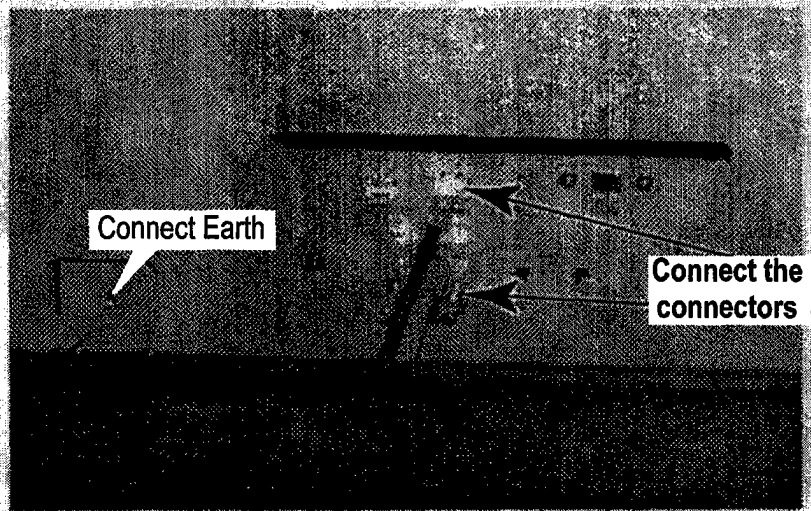
3. Remove the four truss head screws to detach the Service Lid to reveal the access hole.

4. Before the PTV and Main Cabinet are pushed completely together, pull the power, video and earth harnesses back into the Main Cabinet (via the access hole) to prevent them being trapped between the cabinets.

5. Fit the two Joint Brackets between the PTV and Main Cabinet. Fix with four hex head bolts each side.
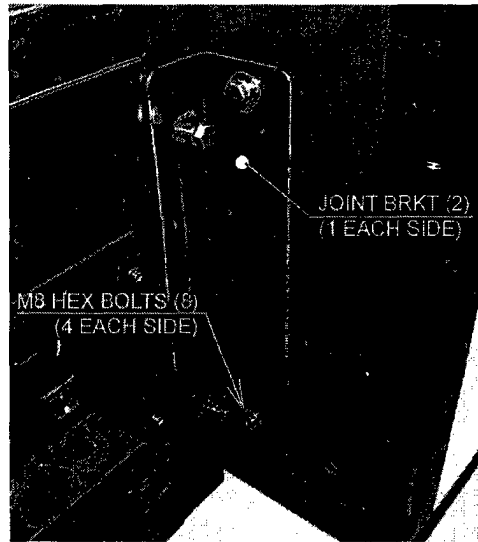
6. Fit the Service Lid, replacing the three truss head screws.

3.6.3. FITTING COIN CHUTE TOWER

WARNING!

- Ensure earth wire is fixed.

Note that if the machine is installed in a tight space, it may prove easier to fit the door prior to fitting the Coin Chute Tower (CCT). In this instance, fit the door as per 3.6.5 before proceeding.

1. Pull Coin Chute wiring (two 12-way U/P connectors and an earth wire) from the access hole, and bolt the Tower Base to the Main Base using four M8x60 hex bolts and washers.

M8 HEX BOLTS (4)

2. Remove the CCT Floor from the CCT by removing the two M4 screws and M4 flange nuts securing it.

3. Place the CCT onto the Tower Base. Pull through and connect the wire harnesses. Connect the earth wire to the M4 stud at the bottom of the CCT using the M4 flange nut.

M4 FLANGE NUT (2)

M4 SCREW (2)

LIFT COINCHUTE TOWER ONTO BASE
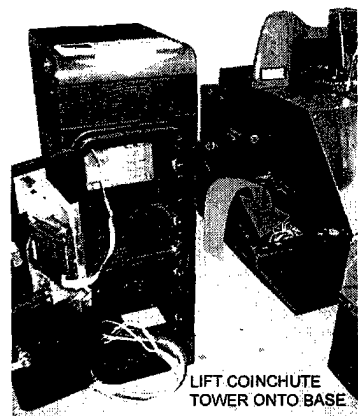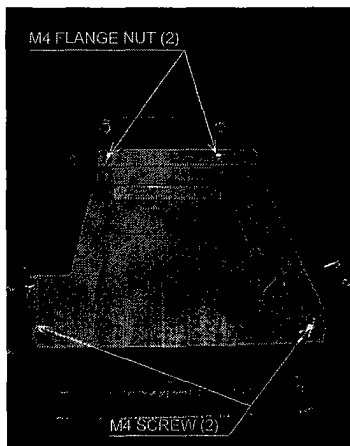
4. Fix the CCT using the two M6 carriage bolts, flange nuts and washers at the rear, and the two M8x20 hex bolts and washers through the inside right hand wall of the CCT. Fit the two M8 hex bolts into the floor.

5. Replace CCT Floor.
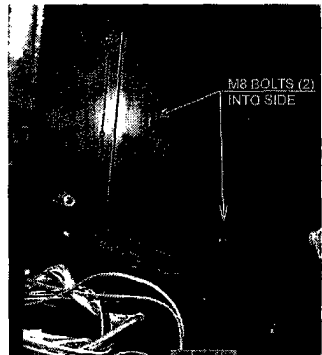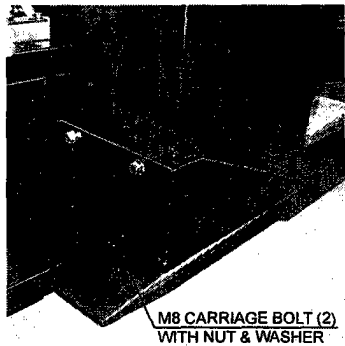
M8 BOLTS (2) INTO SIDE

M8 CARRIAGE BOLT (2) WITH NUT & WASHER

M8 BOLTS (2) INTO FLOOR

3.6.4. SECURING IN PLACE

This machine has 10 castors (4 for the PTV base, 6 for the Main Cabinet) and 10 leg adjusters (4 for the PTV base, 6 Main Cabinet). When the installation position is decided, unscrew the leg adjusters so that they raise each castor a minimum of 5mm from the floor. Make sure the machine is level.

The machine shall only be installed on a horizontal, level surface.

1. Transport the product to the installation position. When installing near a wall, be sure to leave enough space to allow the player to get in the machine.

2. Make all of the adjusters contact the floor by adjusting their height using a wrench ensuring the machine is kept level.

3. After making adjustments secure the leg adjuster in place by fastening the adjuster nut upwards.

CASTER

ADJUSTER

LEG ADJUSTER

FASTEN UPWARD.

CASTER

Approx. 5mm

LEG ADJUSTER
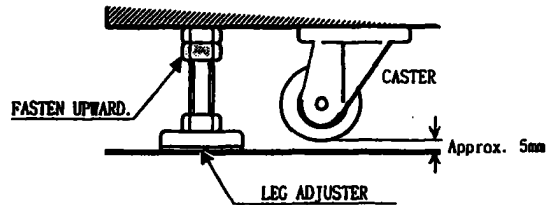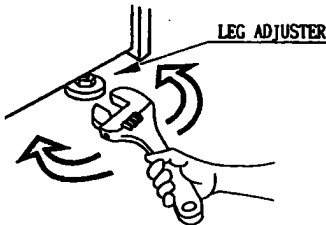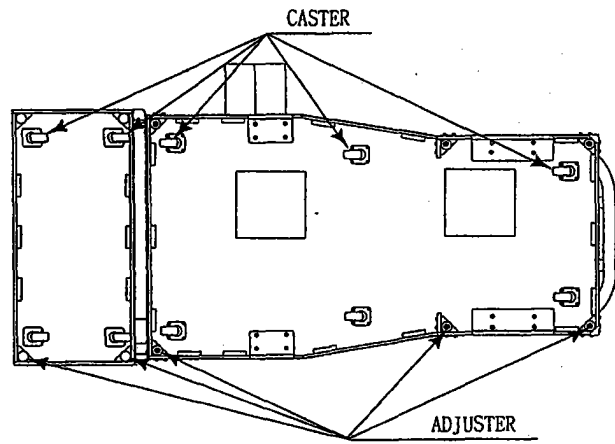
4. Ensure adequate ventilation is provided between the cabinet and wall surface.

(Plan view of machine may differ from the illustration)
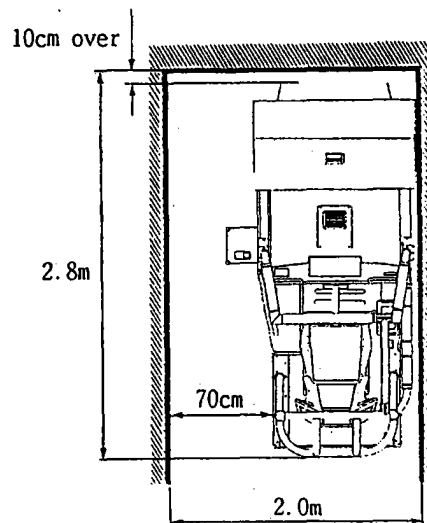
10cm over

2.8m

70cm

2.0m

16

3.6.5. COIN HANDLING INSTALLATION.

When fitting the coin mechanism to the door please refer to the specific manufacturers installation instructions for that coin mechanism. To fit the door to the machine, follow the procedure below. Note that if the machine is installed in a tight space, it may prove to be easier to fit the door prior to fitting the Coin Chute Tower. In this instance, carry out the following procedure before step 3.6.3.
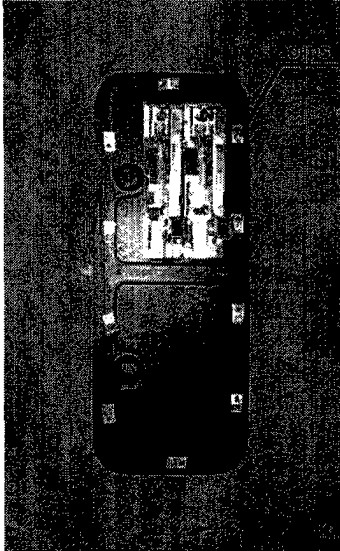
- Loosen all of the bolts on the frame which secure the clips.
- Turn all clips in towards the door.
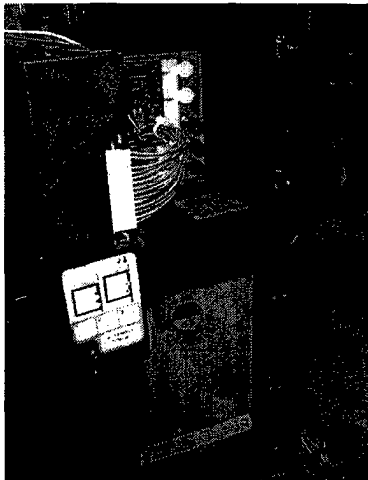
- Position the door into the aperture in the machine.
- Turn the clips around so that they will hold the door in the machine.
- Tighten all of the bolts.

3.6.5.1.WIRING CONNECTIONS.

COIN MECH	LOOM	INSTALLATION
C220B	LM1006IDC LM1006LAMP-0.1	• 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.
GENERIC MECHANICALS	LM1008 LM1008-LAMP	• 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
MARS MS111B1 MARS ME115	LM1007 LM1008-LAMP	• 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.
SECI, C120	OWN LOOM AND LM1006LAMP-0.1	• 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

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3.6.6. LOADING CARDS

STOP

IMPORTANT!

- Be sure to use dedicated cards available for this product (i.e. 601-11051).
- Use of ones other than such dedicated cards may cause a malfunction or failure of the machine.
- Be sure to insert the specified number of cards in the correct orientation by referring to the procedure. Incorrect setting of the cards may cause the machine to fail.
- This machine allows you to insert up to 100 cards at a time; do not insert over 100 cards at a time. Doing so may cause card jamming.
- Use only cards taken from a freshly opened package.
- Use of any deformed or deteriorated card may cause jamming, etc.
- Do not include a corrugated, bent, or used card in the card deck.

The card reader/writer is located on the top of the coin chute tower. Place the cards in the card reader/writer dispenser as follows.

1. Unlock and open the cover to access the card reader/writer. The dispenser is located at the rear of the reader/writer.

TURN KEY CLOCKWISE
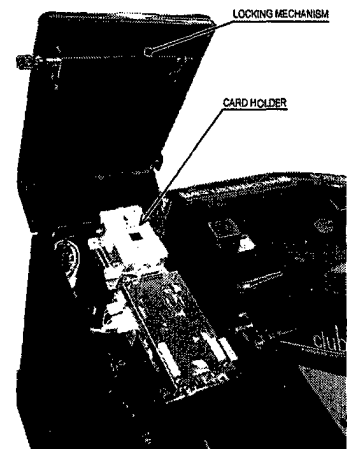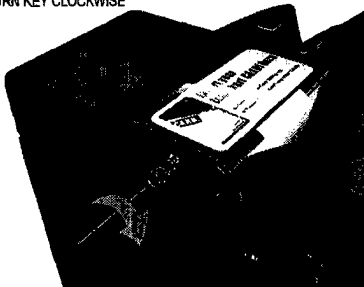
LOCKING MECHANISM

CARD HOLDER

2. Remove the dispenser from the card reader/writer upwards in a straight line.
3. Remove the cover from the back of the dispenser.

4. Place the cards in the dispenser according to the instructions on the sticker next to the dispenser. Ensure correct orientation using the mark located at the corner of the cards. Do not confuse the top/bottom or direction.
5. Reinstall the dispenser cover.
6. Insert the dispenser into the card reader/writer. The dispenser can be inserted only in the correct orientation.
7. Close and lock the cover.

RELEASE LOCKING STRUT
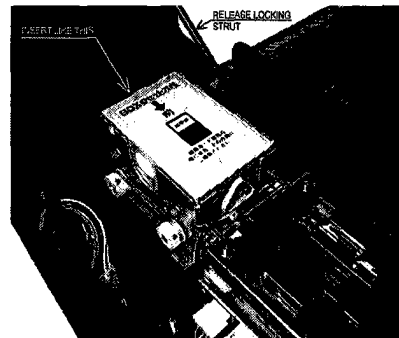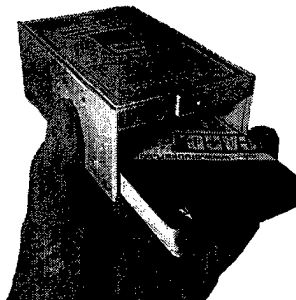
3.6.7. CONNECTING THE POWER

CAUTION!

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

STOP

IMPORTANT!

- 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.
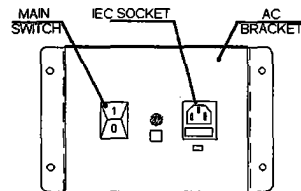
5. Once power is turned on, the fluorescent lamps in the top and rear billboards light up. The Start System Screen displays after a lapse of several seconds. It is followed by the screen that indicates that the network is currently being checked if the communication mode has been set. If there is a bad or improper communication connection, each screen will not proceed to the next, remaining on the currently network-checked screen. If this occurs, resolve the error according to the instructions in this manual.
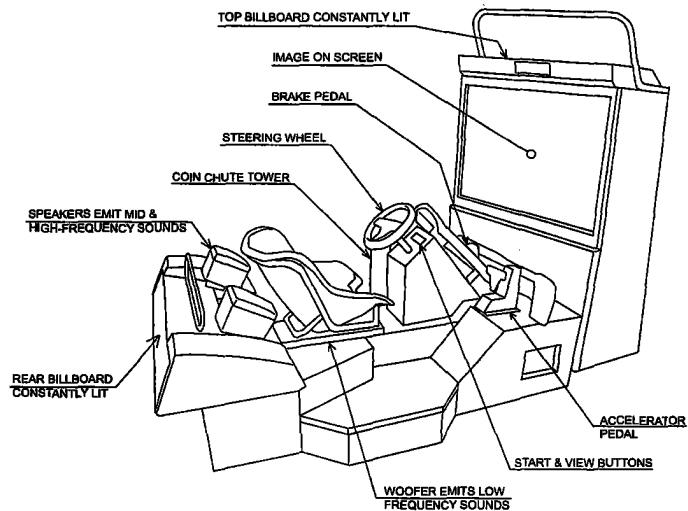
If the communication mode has not been set or the communication check ends normally, the Motor Check Screen returns. While the Motor Check Screen is on-screen, the steering wheel can move either clockwise or counterclockwise. If you touch the wheel, the motor check is hindered and the game will not operate normally. So, you must not touch it at this time. Failures are displayed, if found. Resolve the errors according to the instructions in this document. Pressing the Start button while a failure is on-screen allows you to go to the next screen and start the game without reaction.

Next the Check Card Reader/Writer Screen displays. If cleaning is required or a failure is found, this is indicated on the screen. In this case, resolve the error according to the instructions in this document.

Once all the above steps have been completed, the Advertise Screen displays and voices are output through the left and right loudspeakers, unless you have set the machine so that no voices are output during the Advertise mode.

This product retains the number of credits and the ranking data even after the power is turned off. It does not retain data about the fractional number of coins (i.e. the number of coins not reaching one credit) or the bonus adder count.

3.6.8. ASSEMBLY CHECK

STOP **IMPORTANT!**

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

In the TEST mode ensure the assembly has been made correctly by performing the following checks.

```
                    RAM TEST

        IC15   IC16   IC17S  IC18S  GOOD
        IC22   IC23   IC24S  IC25S  GOOD
        IC28   IC29S                GOOD
        IC41                        GOOD
        IC42                        GOOD
        IC44   IC45S  IC46   IC47S  GOOD
        IC91S  IC92S                GOOD
        IC98                        GOOD

        OPTIONAL SOUND BOARD:
        IC2                         GOOD

        OPTIONAL COMMUNICATION BOARD:
        IC7    IC8    IC9    IC10  GOOD



              PRESS TEST BUTTON TO EXIT
```

Selecting the RAM test on the test mode menu causes the on -board memory to be tested. The game board is satisfactory if the display beside each IC No. shows GOOD

(Illustration is example only).

```
                 C.R.T. TEST 1/2
                 C.R.T TEST

                    RED

                   GREEN

                    BLUE

                   WHITE


            PRESS TEST BUTTON TO CONTINUE
```

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

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

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




             PRESS TEST BUTTON TO EXIT
```

21

```
            SOUND  TEST


   RIGHT SPEAKER  OFF
   LEFT SPEAKER   OFF

 > EXIT


   SELECT WITH SERVICE BUTTON
              AND
      PRESS TEST BUTTON
```

Select SOUND test to test sound BD and wiring connections. Check that the sound is satisfactory from each speaker and the speaker volume is appropriate.

```
            INPUT  TEST

      STEERING: ****
      ACCEL.  : ****
      BRAKE   : ****
      VIEW SW : OFF
      START SW: OFF



   PRESS  TEST  BUTTON  TO  EXIT
```

INPUT TEST tests the input devices. Using this screen, check the input devices periodically. Operate each input device. If the display at the right of the appropriate device changes from OFF to ON, it is diagnosed as being normal. Check that each of the indications at the right of STEERING, ACCEL, and BRAKE change smoothly in response to operations of each of the input devices. Pressing the TEST button returns you to the Game Test Menu Screen. For the coin switch test, insert a coin into the inlet while the cash door is open.

```
              JVS TEST
            > DISPLAY CONFIG
              EXIT

NODE       1/1
SWITCH
    SYSTEM  _____
    PLAYER1 _____
    PLAYER2 _____
COIN
    SLOT1 0000  SLOT2 8000
ANALOG
    CH1 6300 CH2 5A00 CH3 7D00 CH4 8100
    CH5 1F00 CH6 1D00 CH7 1F00 CH8 2000

       SELECT WITH SERVICE BUTTON
                 AND
          PRESS TEST BUTTON
```

If the display beside each item shows ON as the input is made, the switches and wiring connections are satisfactory.

```
            OUTPUT  TEST

   START LAMP       OFF
   VIEW LAMP        OFF

   EXIT




   SELECT WITH SERVICE BUTTON
   AND PRESS TEST BUTTON
```

●Pressing the SERVICE button moves the arrow. With the arrow aligned with the tested lamp item, press the TEST button.
●If the lamp lights up when the indication at the right of each name is ON and goes out when it is OFF, this lamp and wiring connections are normal.
●By selecting EXIT and pressing the TEST button, you return to the Game Test Menu Screen.

3.6.9. 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.

IMPORTANT!

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

On level surfaces, move the machine by causir the Casters to make contact with the surfaci

HOLD ROLL BARS   GRIPS
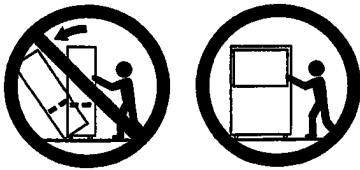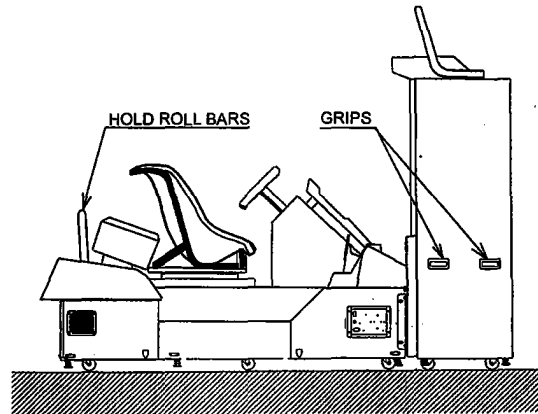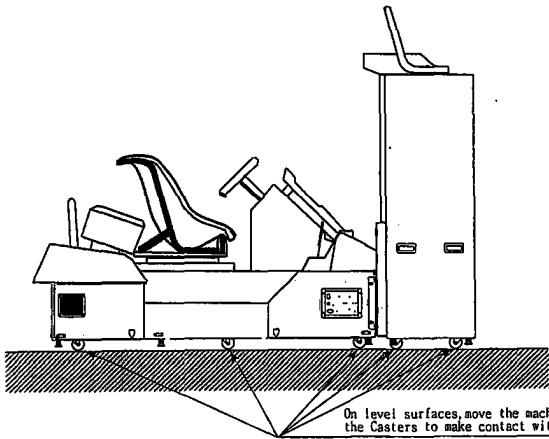
Do not push the PTV from the front or back; always push the PTV from the side. Manoeuvre the machine using hand grips, base and tubular parts only. Do not use force on fragile plastic parts.

3.6.10. FITTING PLAY INSTRUCTIONS

Supplied with this machine are multilingual versions of Play Instructions.

Please select the language of your choice and affix them in the positions shown in Section 6.

3.7. FUSES

WARNING!

| • | 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. |

IMPORTANT!

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

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

PART NUMBER	LOCATION	TYPE & DETAILS	QTY
514-5078-5000	IEC INLET (EP1302)	5x20 HRC SB 5000mA	1
514-5078-4000	400-5397-01 (F1)	5x20 HRC SB 4000mA	1
514-5078-3150	601-10369 (F1&F2)	5x20 HRC SB 3150mA	2
514-5078-6300	610-0609 (F1)	5x20 HRC SB 6300mA	1
514-5033-5000	400-5368-7512(F11)	5x20 glass T 125V 5A	1
514-5080-15000	838-14174(F1)	32x6.35 HRC SB 15000mA	1
514-5078-2500	838-14174(F2)	5x20 HRC SB 2500mA	1

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

3.8. MAINTENANCE

3.8.1. ADJUSTING OR REPLACING THE MECHA VR

If the steering operability is poor, and is not rectified by adjusting the volume setting in TEST MODE, the cause may be meshing failure of the Volume Gears, or failure of the Volume altogether.

3.8.1.1. ADJUSTING THE VOLUME

1. Prepare a Phillips screwdriver and a wrench for an M8 nut.

2. Turn off power.

3. Referring to section 3.6, uncouple the PTV and Main Cabinet, leaving the harnesses still connected.

4. Remove the two truss head screws to detach the Mech Front Lid from the Main Cabinet.

FRONT DOOR
M4 SCREW (2)
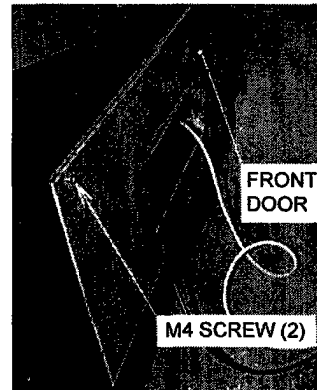
5. The VR is located on the white plastic VR BASE. Loosen the two screws which secure the VR BASE.

6. Optimise the gear engagement by positioning the Steering Wheel in its central position, and ensuring the "D" CUT FACE of the Volume Shaft is orientated as shown below.

VR BRKT & GEAR WHEEL
SHAFT GEAR WHEEL
HANDLE MECHA ASSY

"D"CUT FACE
VR BRACKET
V.R. 220-5473, 220-5484
SCREW (2)
M4×8, w/flat and spring washers
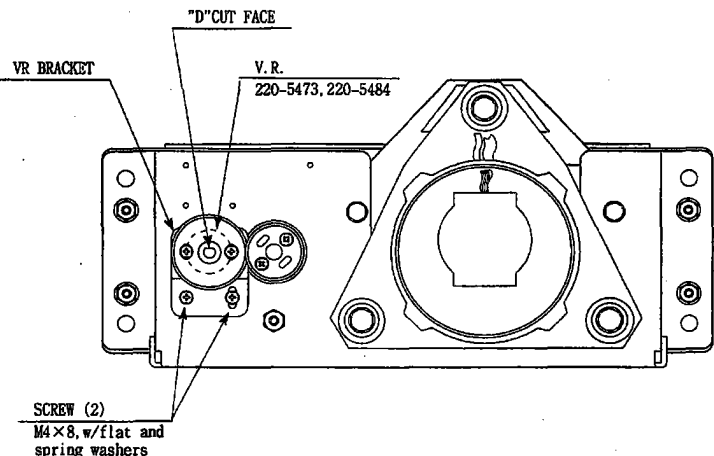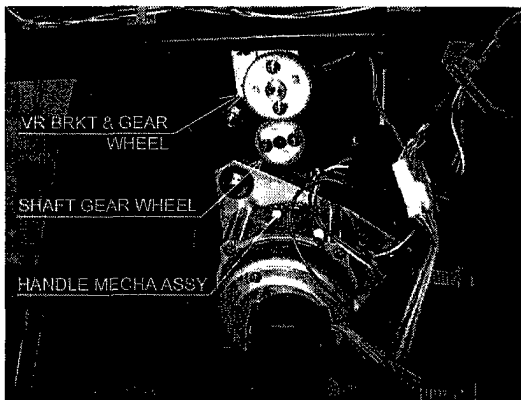
7. Re-tighten the two screws.

8. Turn on power.

9. Set the Centre Value of the Volume in TEST MODE and check that the value varies smoothly as the Steering Wheel is rotated.

3.8.1.2.VOLUME REPLACEMENT.

1. Turn power off
2. Disconnect the Volume connector.
3. Remove the two screws securing the VR BRKT ASSY and remove from the machine.
4. Remove the Volume from the VR Bracket and replace.
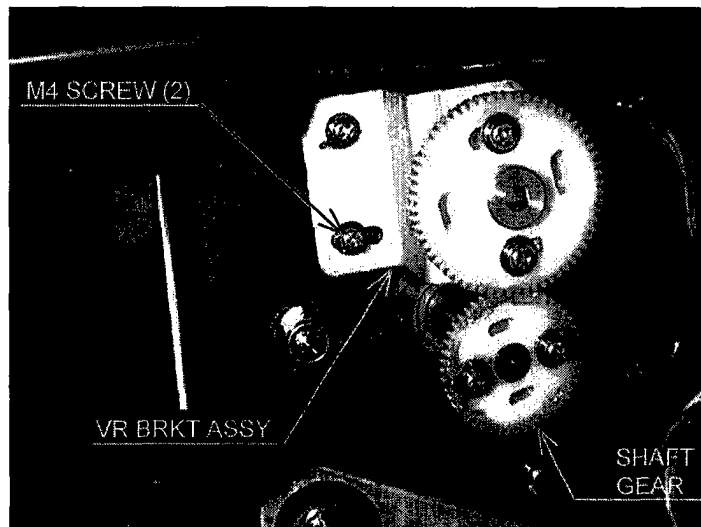
5. After replacing the Volume, align the gears in the orientation shown, and fix the VR Bracket.
6. Turn on power.
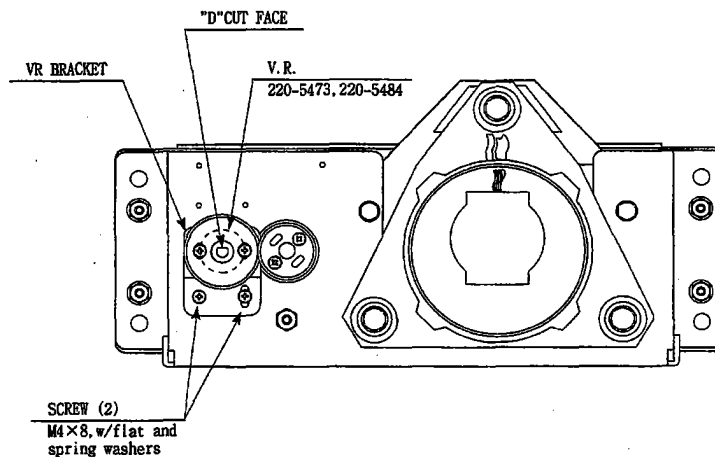
7. Set the Centre Value of the Volume in TEST MODE and check that the value varies smoothly as the Steering Wheel is rotated.

3.8.2. GREASING

- Only grease designated areas. Do not apply grease to other areas as this can cause malfunctioning.
- In order to prevent electric shock turn power off before performing work.
- Use only silicone-based grease.

Apply grease to gear teeth once every three months.

APPLY GREASE TO
MESH PORTIONS
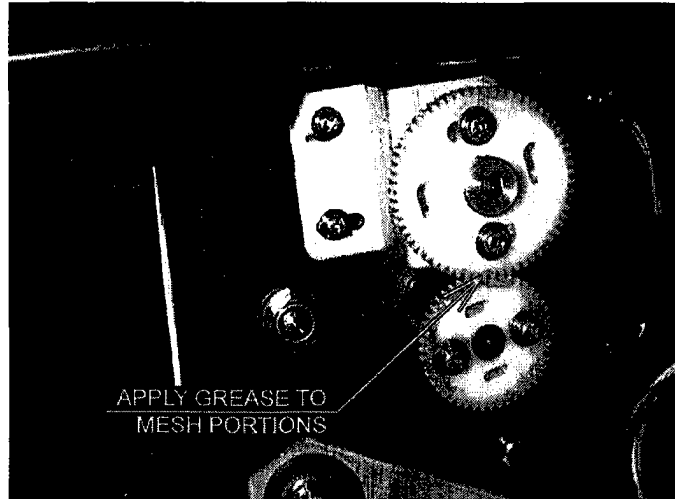
3.8.3. ACCELERATOR & BRAKE

(STOP) IMPORTANT!

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

If the brake or accelerator operation becomes unsatisfactory, the VR installation position may require adjustment or the VR need replacing. Also be sure to apply grease to all moving parts every 3 months.

3.8.3.1.ADJUSTING THE VR

(!) CAUTION!

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

(STOP) IMPORTANT!

• After the replacement or adjustment of the VR be sure to set the values in the INPUT TEST.

The Brake and Accelerator pedals are identical units, therefore these procedures apply to either pedal.

REMOVE DOOR
(2 SCREWS)
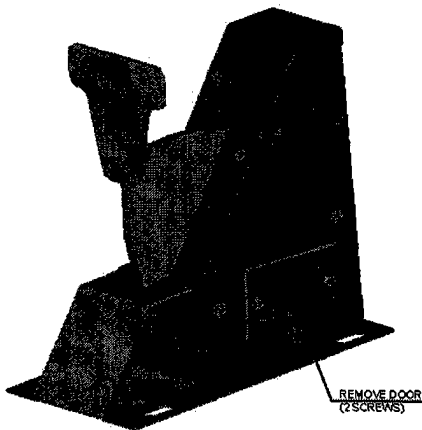
1. Remove the Service Lid from the right hand side of the pedal (two M4 tamperproof screws).

2. Loosen the two M4 machine screws on the right hand side of the pedal to loosen the VR bracket.

3. Move the VR bracket away so as to disengage the VR

4. Gently rotate the VR until its value is within the range of the centring position.

5. Mesh the gears together. Make sure that a correct amount of backlash is maintained.

6. If the required values are achieved, retighten the two machine screws and replace the service lid. If these values cannot be achieved, replace the VR as detailed in the next section.

ADJUST MESHING TO GET
THE CORRECT VR RANGE

RELEASE VR BRKT TENSION
FROM OUTSIDE OF PEDAL
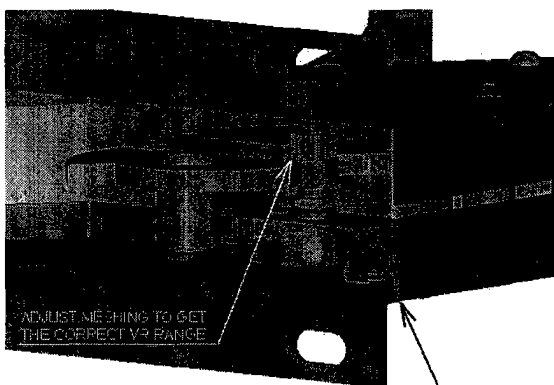
The required values are:

	PEDAL FULLY RELEASED		PEDAL FULLY DEPRESSED
ACC. PEDAL:	Under 30H	⇒	Over C0H
BRAKE PEDAL:	Under 30H	⇒	Over C0H

3.8.3.2.REPLACING THE VR

1. Ensure power to the machine is switched OFF.
2. Loosen the VR bracket as detailed previously. Remove the two screws.
3. Carefully pull the VR assembly through the service hole, to gain access to the VR terminals.
4. Using a hexagon key, loosen the grub screw holding the VR gear onto the VR.
5. Remove the VR gear.
6. Using a spanner, remove the nut holding the VR in position. Remove the VR from its bracket.
7. Desolder the leads from the VR, noting the colours of the wires attached to each terminal.
8. Solder the leads to the new VR in the same orientation as before.
9. Refit the VR to its bracket, and fix to the machine in reverse order of removal.
10. When complete, readjust the VR in accordance with the paragraph above.

3.8.3.3.GREASING

STOP

IMPORTANT!

- Be sure to use a good quality, synthetic lubricant. Using a mineral-based lubricant will cause damage to the plastic parts. An aerosol grease with a long tube nozzle will make access easier.
- 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.

1. Remove the Service Lid as detailed previously.
2. Apply grease to the gear teeth, and to the return spring on the pedal shaft.
3. Refit the Service Lid.
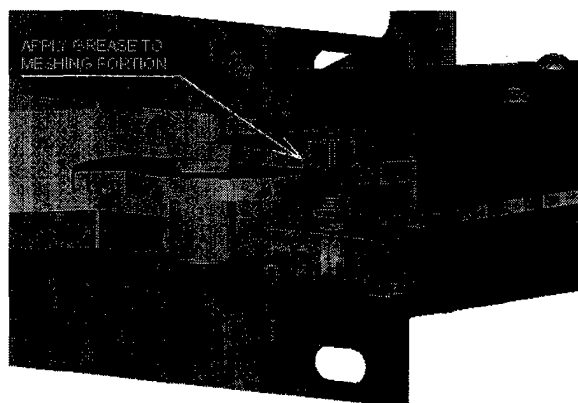
3.8.4. REPLACEMENT OF FLUORESCENT LAMP AND OTHER LAMPS

⚠️ **WARNING!**	• Turn power OFF before replacing 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.
🛑 **IMPORTANT!**	• Lamps should only be replaced by QUALIFIED SERVICE PERSONNEL.

3.8.5. LAMP REPLACEMENT (BILLBOARD)

Remove the Billboard Sash (three M4 chrome screws) and remove the clear FL Cover to gain access to the FL Tube. Replace the Fluorescent Tube by carefully withdrawing it from the two mounting clips.

3-M4 SCREWS

LT1014
TUBE FL 30W 36" DIA25mm

390-5695-30-AUK
FL TRAY 100V 30W
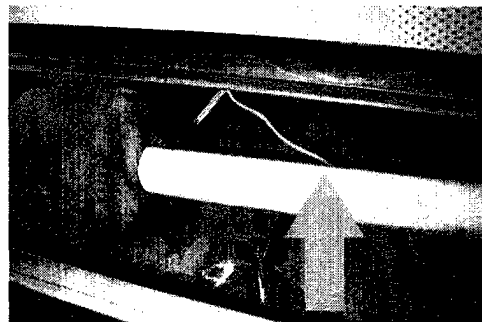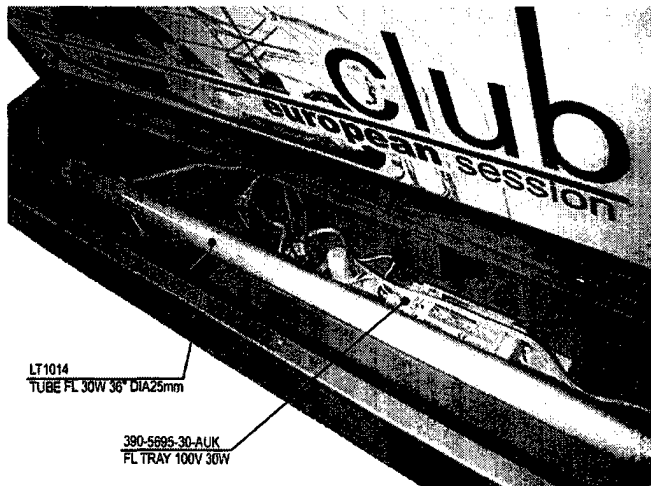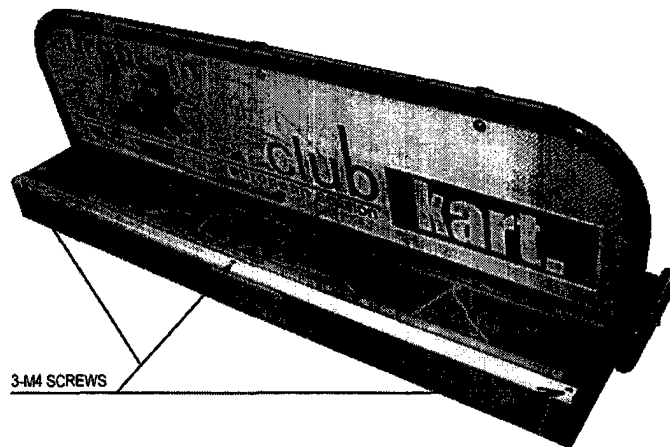
3.8.6. FLUORESCENT LAMP REPLACEMENT (REAR BILLBOARD)

1. Remove the Upper Sash (three M4 chrome screws) and withdraw the Rear Billboard Plate.
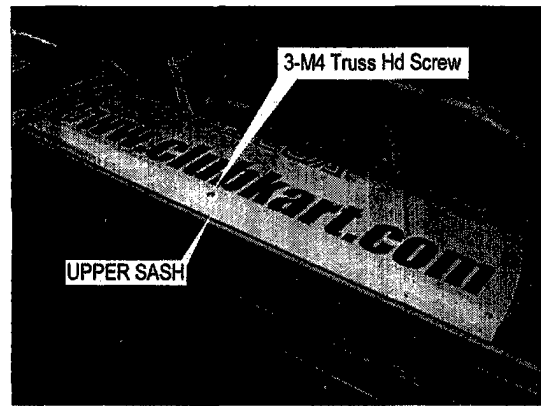
2. Remove the two Socket Covers (two M4 chrome screws each) to gain access to the FL Tube sockets.
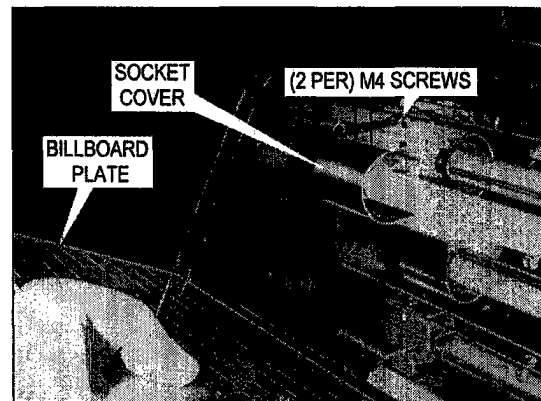
3. Replace the Fluorescent Tube by carefully pressing in the sprung sockets and withdrawing the tube.
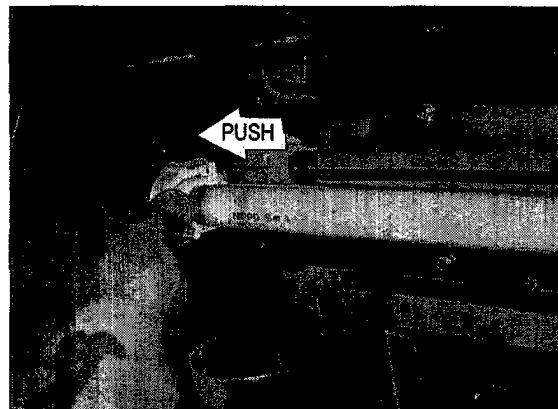
3.8.7. START/VIEW CHANGE BUTTON LAMP REPLACEMENT

1. Turn off power.

2. Take out four screws to remove the Switch Plate from the Control Panel, withdrawing far enough only to access the locking mechanisms of each button.
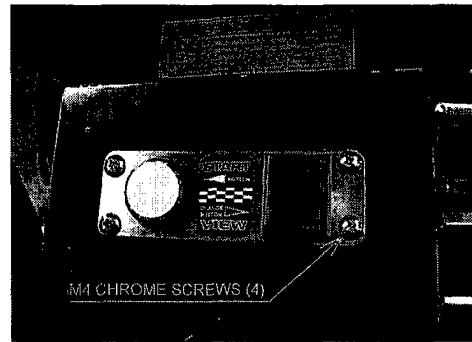
3. Turn the locking mechanism to unlock, and remove the terminal section of the switch from the main button body.

4. The lamp (bulb) is then removed by pushing, then turning the lamp anticlockwise and withdrawing.
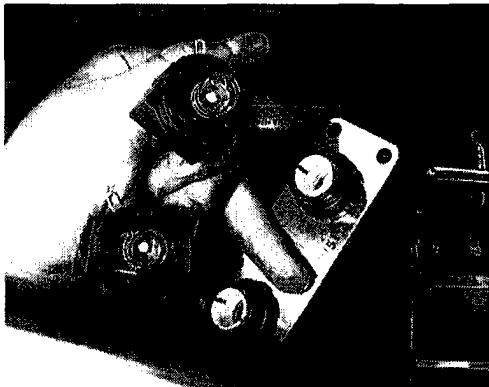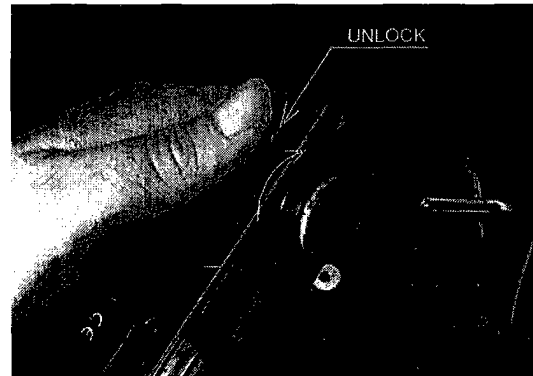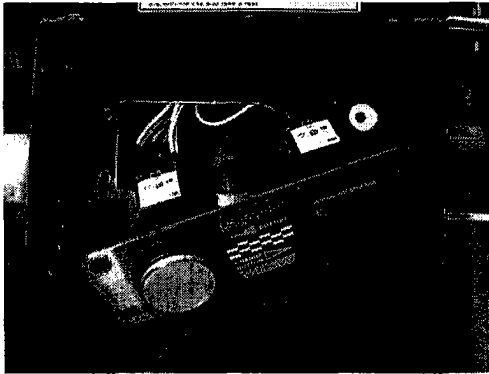
3.9. CARD READER/WRITER UNIT

⚠ CAUTION!

- Take care if you work with the machine, without turning the power, in an attempt to return to the game. In the alive state, the machine may operate suddenly, causing your finger to be pinched or cut.

If a trouble such as card jamming occurs on the card reader/writer, you are notified of the trouble on the screen. You cannot proceed to a play unless you resolve the trouble at this time. First identify the trouble before you begin to take action.
When all cards are used up, you can no longer issue a new card, with the message "Now new Club Kart Card "cannot be created" on-screen, instead of a trouble indication.

To obtain the dedicated or cleaning cards, place an order to the contact point or the dealer from which you purchased the product. In the order form, write down the card name and the amount of cards.
With each of the following part numbers, you can purchase 200 dedicated and 30 cleaning cards.

Dedicated Card
        Part number: 601-11051
        Name: CARD PACKAGE CKT
Cleaning Card
        Part number: 601-11050
        Name: CLEANING KIT

1)   Action in Operation

The game board of this product backs up the data only when the card reader/writer detects a trouble DURING OPERATION and the Error Screen displays. However, no written data is backed up in the following case:

- An action deemed to be illegal was detected while the game or write was in operation.

If backed up data remains when the power is turned on, the Check Card Reader/Writer Screen will be replaced with the Save Data screen. The backed up data is cleared in the following cases:

- After an action was taken against a trouble, normal write ended.
- The backed up data was cleared in the Game Test Mode.
- Data save taking place at power-on time was cancelled, and the succeeding game ended.

If the card reader/writer has not been set as being unused, you will be unable to select any game mode with use of cards while the game will be in progress.
Thus, for the card reader/writer, deal with the player, paying attention to the following points:

- When a trouble occurs during write operation, the retained data can be written for proceeding to the game by resolving the trouble without turning on the power. If you resolved the trouble with power off, write the data according to the instructions on the screen when you attempt to turn on the power.

Even if the player request the system for use of cards when you have set the machine so that the card reader/writer is not used, the request is rejected because of the nature of the system.

3.9.1. REPLACING CARDS

STOP

IMPORTANT!

- Be sure to use dedicated cards available for this product (i.e. 601-11051).
- Use of ones other than such dedicated cards may cause a malfunction or failure of the machine.
- Be sure to insert the specified number of cards in the correct orientation by referring to the procedure. Incorrect setting of the cards may cause the machine to fail.
- This machine allows you to insert up to 100 cards at a time; do not insert over 100 cards at a time. Doing so may cause card jamming.
- Use only cards taken from a freshly opened package.
- Use of any deformed or deteriorated card may cause jamming, etc.
- Do not include a corrugated, bent, or used card in the card deck.

The card reader/writer is located on the top of the coin chute tower. Place the cards in the card reader/writer dispenser as follows.

1. Unlock and open the cover to access the card reader/writer. The dispenser is located at the rear of the reader/writer.

2. Remove the dispenser from the card reader/writer upwards in a straight line.
3. Remove the cover from the back of the dispenser.

4. Place the cards in the dispenser according to the instructions on the sticker next to the dispenser. Ensure correct orientation using the mark located at the corner of the cards. Do not confuse the top/bottom or direction.
5. Reinstall the dispenser cover.
6. Insert the dispenser into the card reader/writer. The dispenser can be inserted only in the correct orientation.
7. Close and lock the cover.

3.9.2. HEAD CLEANING

STOP

IMPORTANT!

- If the head cleaning mode is entered while the power is on, use the head cleaning procedure according to the instructions on the screen. The head cleaning mode cannot be exited unless the head cleaning is completed.
- Be sure to use dedicated cleaning cards (i.e. 601-11050). Use of ones other than these can cause a malfunction or failure of the machine.
- Cleaning cards are disposable. They must not be used more than once.
- Use each cleaning card immediately after it is taken out from an unsealed package. Dried cards are ineffective for cleaning.
- Never use a cleaning procedure not described in this document. This may cause a malfunction or failure of the machine.

This product memorises the number of times the card reader/writer has been used. When the power is turned off and on after the count of use exceeds 100, the head cleaning mode is entered while the Check Card Reader/Writer Screen is on-screen after you turn on the power. At this time, use the cleaning card procedure according to the instructions on the screen. The head cleaning mode cannot be exited unless the head cleaning is completed. You can use the Test Mode to perform head cleaning. For details, see the "Test Mode" section in this document.

Starting the cleaning clears the memory of number of use data, as described above.

① Insert the cleaning card into the slot according to the instructions on the screen. The card is retracted automatically.

② A screen displays that shows that cleaning is in progress.

③ Once the cleaning is completed, the cleaning card is ejected from the slot. Take out the cleaning card.

Cleaning Card Reader/Writer Screen

```
            CARD R/W


            CLEANING
   PLEASE INSERT CLEANING CARD


   PRESS START TO CANCEL
```

| CLEANING PLEASE INSERT CLEANING CARD | Insert the cleaning card into the slot. |

| CLEANING PLEASE WAIT | Now cleaning. Wait for a minute. |

| CARD SYSTEM INITIALIZE PLEASE REMOVE CARD | Cleaning is complete. Take out the card. You cannot proceed to the next step until you take it out. |

3.9.2.1.RECTIFYING CARD JAMS

If card jamming occurs, the error is shown on the screen. Use the procedure to take action against the trouble:

①   Unlock and open the cover.

②   Unlock the hatch by drawing the green shaft attached to the top cover on the card reader/writer. While drawing the shaft, open the cover up.

③   Remove the card jammed in the card reader/writer.

④   While drawing the shaft, close the cover. With the top cover closed, release the green shaft. Check that the top cover has been locked securely.

3.9.2.2.REWRITING DATA ONTO THE CARD

The game board of this product backs up the data only when the card reader/writer detects a trouble DURING OPERATION and the Error Screen displays. However, no written data is backed up in the following case:

• An action deemed to be illegal was detected while the game or write was in operation.

If backed up data remains when the power is turned on, the Check Card Reader/Writer Screen will be replaced with the Save Data screen. Once written onto the card, the backed up data is cleared before the mode ends.
Write the data onto the desired card according to the instructions on the screen.
You can use the Start button to cancel the write.
The backed up data is cleared in the following cases:

• Normal write ended.
• The backed up data was cleared in the Game Test Mode.
• Data save taking place at power-on time was cancelled, and the succeeding game ended.

3.9.2.3.REWRITE DATA ONTO CARD SCREEN

```
CARD R/W


DATA SAVE
PLEASE INSERT CARD


PRESS START TO CANCEL
```

| DATA SAVE
PLEASE INSERT CARD | Insert the cleaning card into the slot. The card is retracted automatically. |

| DATA SAVE
PLEASE WAIT | Now writing data. Wait for a minute. |

| ELECT CARD
PLEASE REMOVE CARD | Data write is complete. Take out the card. You cannot proceed to the next step until you take it out. |

3.9.2.4. TROUBLESHOOTING (CARD READER/WRITER)

*   Card Reader/Writer Trouble

When a card reader/writer failure is detected while the game is in progress, the error type is shown on the screen. Take the appropriate error according to the actions listed below.

The game board of this product backs up the data only when the card reader/writer detects a trouble DURING OPERATION and the Error Screen displays. However, no written data is backed up in the following case:

·   An action deemed to be illegal was detected while the game or write was in operation.

If backed up data remains when the power is turned on, the Check Card Reader/Writer Screen will be replaced with the Save Data screen. The backed up data is cleared in the following cases:

·   After an action was taken against a trouble, normal write ended.
·   The backed up data was cleared in the Game Test Mode.
·   Data save taking place at power-on time was canceled, and the succeeding game ended.

Error	Error condition	Action
"CONNECTION ERROR"	Reader/Writer Communication Error	Check the connection cables and then turn on the power again.
"MECHANIC ERROR1"	DC Motor/Encoder Error	Check the connection cables and then turn on the power again.(Note 1)
"MECHANIC ERROR2"	Thermal Head Elevation Error	Check the connection cables and then turn on the power again.(Note 1)
"CARD STUFFED"	Card Jamming	Remove the card jam.(Note 2)
"MECHANIC ERROR3"	Abnormal Temperature of Thermal Head	Check the connection cables and then turn on the power again.(Note 1)
"CARD EMPTY"	Hopper Card Not Found	Supply cards to the hopper.(Note 2)
"DRAW CARD ERROR"	Error in Taking Out from the Hopper	Remove the card jam and check the hopper. (Note 2)
"CAN'T SAVE"	No Data Can Be Written onto the Card	(Note 3)
"UNKNOWN ERROR"	Error Other Than Above	Check the connection cables and then turn on the power again.
"SCIF ERROR"	SCIF Error	Check the connection cables.

Note 1: If this error reappears frequently, the card reader/writer body may be faulty.

Note 2: After the action has been taken, press the Start button before you follow the instructions on the error screen. Now you can return to the game.

Note 3: If the same error repeats again and again, clean the card reader/writer. If no data can still be written, the card reader/writer body may be faulty.

*   Without entering the Test Mode, turn on the power, again, to the cabinet if the following is included in the "Action" column in the above table: "turn on the power again."

*   If the error is not included in the "Error" column in the above table, merely turn on the power again.

If no improvements result from the appropriate action listed in this document, contact one of the contact points listed in this document or the dealer from which you purchased the product.

3.10. REACTION MOTOR TROUBLE

When a failure is detected on the Check Motor Screen, which appears when the power is turned on.
Use the following procedure to take action:

Error Display 1

STEERING DRIVE BD. IS NOT CONNECTED PRESS START TO CANCEL OR PRESS VIEW TO RETRY	This is an error in communication between NAOMI 2 and the motor driver. Check the wiring. Pressing the Start button starts the game without steering-wheel reaction. Pressing the View button reinitiates the machine.

Error Display 2

STEERING DRIVE BD. DOES NOT WORK PRESS START BUTTON TO CONTINUE WITHOUT REACTION FORCE	This is an error that occurs when the motor could not be initialized properly. Check the wiring between the driver motors. Pressing the Start button starts the game without steering-wheel reaction.

When a failure is detected while the game is in progress, it continues to operate until it ends.

After the game ends, you are brought to the same screen as Check Motor that appeared at power-on time.
If a failure is detected at this time, Error Display 2, above, appears. Take action against it.
Usually, the encoder connected to the motor is used for detection of the steering wheel; however, it will be unavailable if a failure is detected on the motor. The handle mechanism is provided with a spare volume for this reason. When the handle center is set with Set Volume Control Screen in the Test Mode, volume center setting, as well as encoder setting, takes place. However, when you make the machine operate without reaction because of a motor failure, center the volume control again by way of precaution.

3.11. TROUBLESHOOTING

(STOP) IMPORTANT!

•	These procedures should only be carried out by QUALIFIED SERVICE PERSONNEL.

If a problem occurs, first check the wiring connections.

PROBLEMS	CAUSE	COUNTERMEASURES
When the main switch is turned ON, the machine is not activated.	The power is not ON.	Firmly insert the plug into the outlet.
	Incorrect power source/voltage.	Make sure that the power supply/voltage are correct.
	AC Unit CIRCUIT PROTECTION DEVICE (ie fuse) was activated due to an instantaneous over current.	First, remove the cause of over current and reinstate the circuit protection device to its original status. Then identify the cause of the fault on the item which caused the over current & fix.
The colour image on the screen is incorrect.	Incorrect monitor adjustment.	Make appropriate adjustments. See the monitor manual
The on-screen image of the monitor sways and/or shrinks.	The power source and voltage are not correct.	Make sure that the power supply and voltage are correct.
Sound is not emitted.	Sound volume adjustment is not correct.	Adjust the volume setting on the VTS bracket. 5.1.1
	Malfunctioning BD and Amp.	Perform Sound Test to check it. 5.1.2.4
	Connector connection is incorrect.	Check connector connection from Base to Speaker.
Operation of STEERING WHEEL is not satisfactory.	VR position deviated.	Adjust in the test mode. 5.1.4.4
	VR malfunctioning.	Replace the VR. 3.8.1.2
	GEAR engagement is not correct.	Adjust the engagement of GEAR. 3.8.1.1
Force Feedback of STEERING WHEEL is abnormal, or it is not centring.	Failure of power-on checking procedure.	Reconnect the power, and complete the checking procedure.
	The volume is not centred.	Adjust the value in the test mode. 5.1.4
	VR malfunctioning.	Replace the VR. 3.8.1
Force Feedback of STEERING WHEEL is weak.	Ageing of the Force Feedback mechanism.	Reset in test mode. 5.1.4
GAS and/or BRAKE PEDALS do not operate normally.	The volume is not centred.	Adjust the value in the test mode. 3.8.3.1
	VR malfunctioning.	Replace the VR. 3.8.3.2
Card Read/Write unit malfunction.	See Section 3.9	
The FLUORESCENT LAMP (TOP or REAR) does not light up.	FLUORESCENT LAMP needs replacement.	Replace. 3.8.5 (TOP) or 3.8.6 (REAR)
	The connector is disconnected.	Check connector connections in the billboard case.
Interactive play is not possible.	Communication cable is disconnected.	Connect the cable. 3.13.2
	Cable connections are not correct.	Connect the cable correctly. 3.13.2
	Settings for communication play are not correct.	Ensure that GAME ASSIGNMENTS settings are correct. 5.1.4

3.12. GAME BOARD

WARNING!

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

IMPORTANT!

- 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

3.12.1.REMOVING THE GAME BOARD

1. Turn the power off.
2. Remove the tamperproof screw from the Back Lid and unlock to access the Game Board.
3. Disconnect all wiring harnesses between ASSY MAIN BD DX and the main cabinet.
4. Disconnect the fibre optic, the D-SUB 15P and the USB type connections to the shield case.
5. Remove the two wing bolts securing ASSY MAIN BD DX to the floor of the main cabinet.

WING BOLT (2)
M4×25, flat washer used.

Disconnect all the connectors to the filter board.

BACK LID

Unlock.

Disconnect the connector.

ASSY MAIN BD DX

TRUSS SCREW(2)black
M4×30
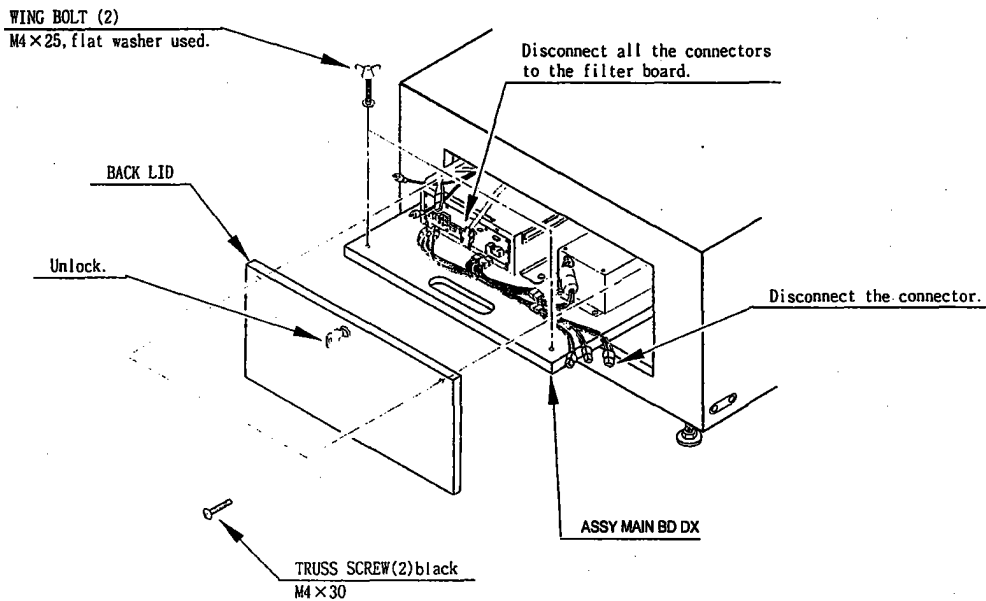
6. Remove the ASSY MAIN BOARD DX from the main cabinet. This assy is heavy, so use two or more workers to prevent wiring damage.
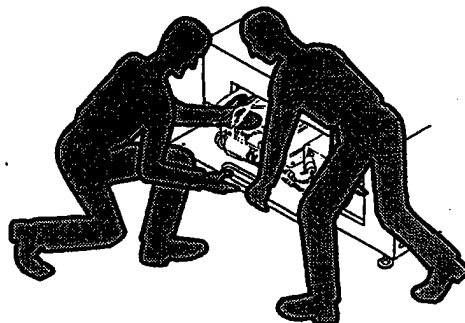
7. Disconnect all Shield Case connections.
8. Remove the Shield Case from the wooden base by removing the four screws securing it.

40

3.12.1.1.COMPOSITION OF THE GAME BOARD

840-0062D-01   ASSY CASE NAT CKT USA : USA
840-0062D-02   ASSY CASE NAT CKT EXP : OTHERS
840-0062D-03   ASSY CASE NAT CKT KOR : KOREA
840-0062D-04   ASSY CASE NAT CKT AUS : AUSTRALIA

SCREW (4)
M3×30,chrome plated

ROM CASE NA02 WRD
840-0046C

DIP SW

840-0062A-01   ASSY CASE NAOMI 2 MAIN BD USA
840-0062A-02   ASSY CASE NAOMI 2 MAIN BD EXP
840-0062A-03   ASSY CASE NAOMI 2 MAIN BD KOR
840-0062A-04   ASSY CASE NAOMI 2 MAIN BD AUS
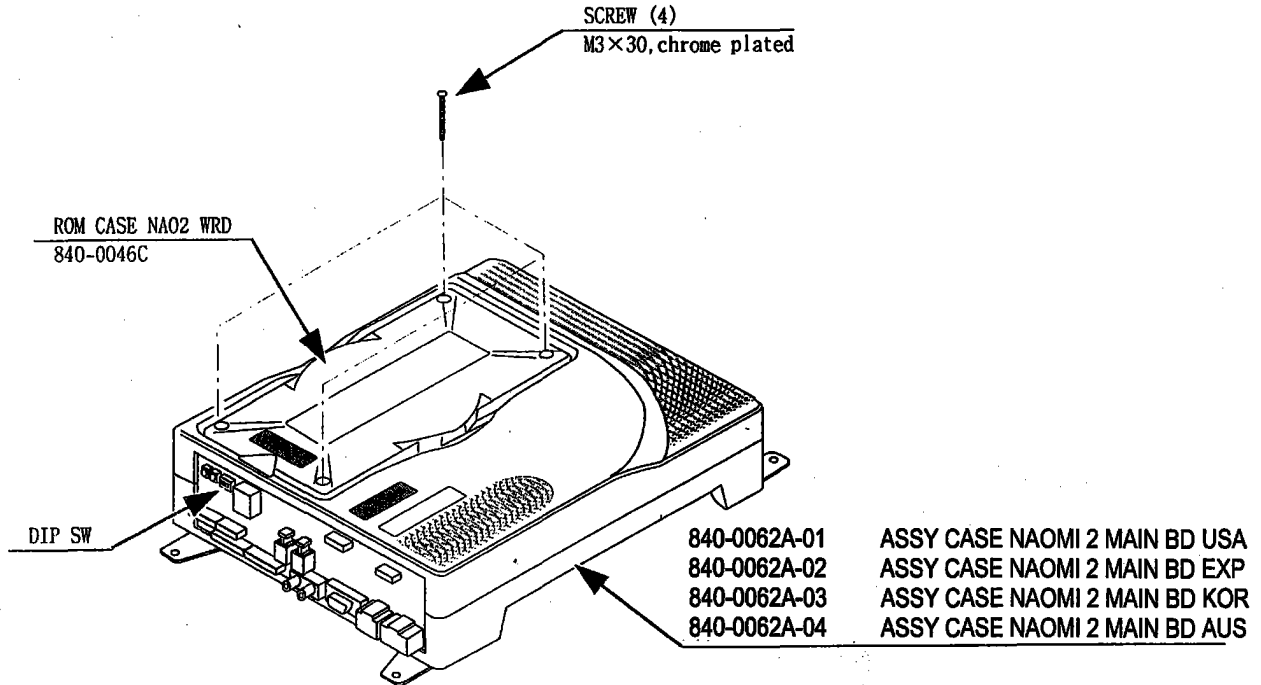
DIP SW SETTING

In the product, set all of the DIP SWes to OFF.

ON
1 2 3 4

41
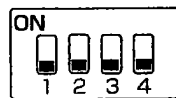
3.13. COMMUNICATION PLAY

(STOP) **IMPORTANT!**	• Linking machines should only be carried out by QUALIFIED SERVICE PERSONNEL. • Use care to ensure wiring is not damaged. • Do not stress/over-bend the fibre optic cables, as this will affect their performance.

Up to 8 machines can be linked together for interactive play, allowing up to 4 players to play simultaneously. Before linking be sure to check there is adequate power to supply 8 machines at once. Also ensure power is OFF to all machines being linked.

3.13.1. INSTALLATION PRECAUTIONS.

Ensure that the machines are installed with 70cm between them to allow players to get in and out of the machines.
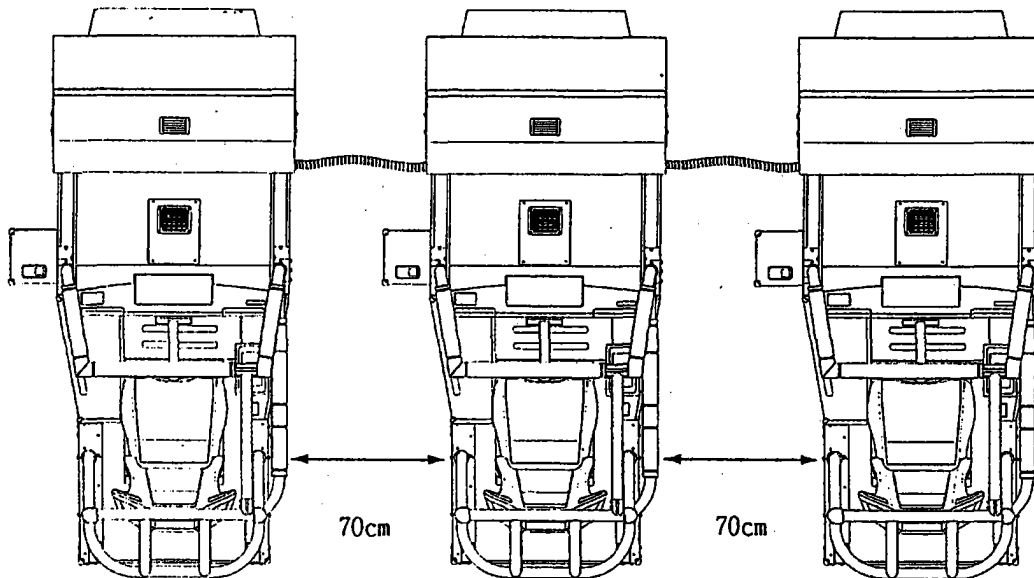
(Actual machines may differ slightly from the illustration).

3.13.2.CONNECTING THE COMMUNICATION CABLE

Link machines for communication play by connecting the Communication Cable to the game board of each linked machine, via the Connector Plate. The wiring between the game board and Connector Plate is already in place. Each Connector Plate is fitted with two connectors: use them to wire the Communication Cables between one game board and the next.

The communication accessories from the Installation Kit should be prepared for use: Flex Tube, Straight Adaptor (2 off), Communication Cable, and sequential Number Stickers to identify each machine.

1. On each machine to be linked, turn off the power and disconnect the IEC lead.

2. Referring to section 3.6.2, uncouple the main cabinet from the PTV/PTV BASE/BILLBOARD. Use care to avoid wiring damage, and only separate enough components to gain access. Beware that the PTV/PTV BASE/BILLBOARD section is now unstable.

3. Remove the 2 M4x12 screws securing the Front Lid and lift it from the machine taking care not to damage the wiring. Remove one or both Hole Lids, depending on how the machine is to linked.

FRONT DOOR

M4 SCREW (2)
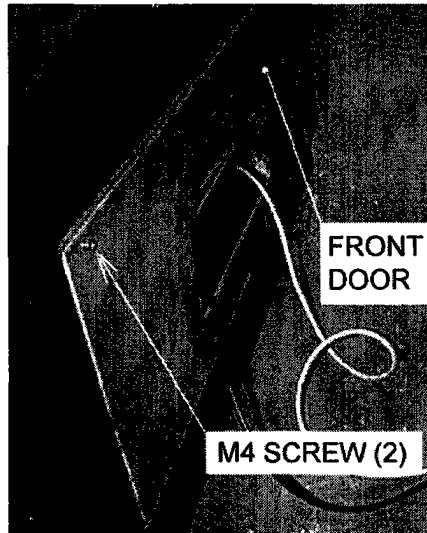
4. Attach a Straight Adaptor to both ends of the Flex Tube.

Straight Adaptor   FLEX TUBE
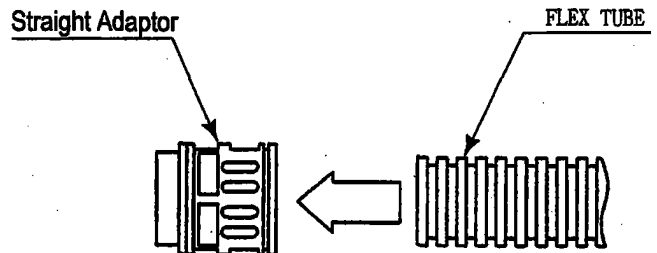
5. Pass the Communication Cable through the Flex Tube.

6. Remove the Lock Nut from the Straight Adaptor.

7. Install Straight Adaptor into the hole in the side of the Main Cabinet and tighten the Lock Nut.

Connect the
Communication cable
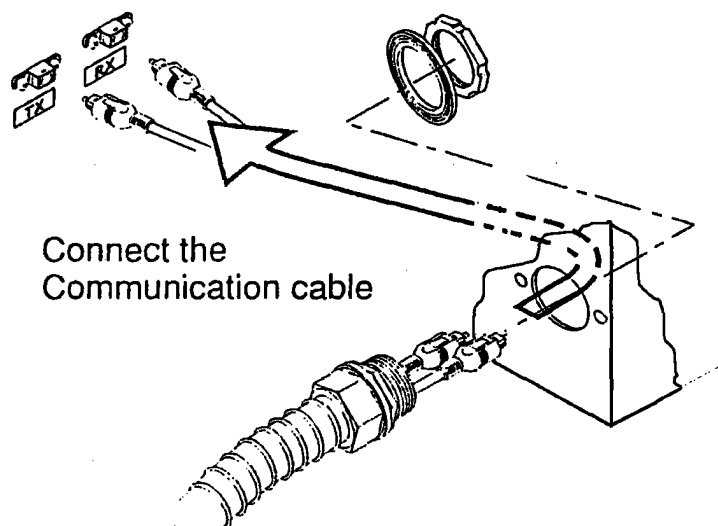
8. Pass the Communication Cable through the machine to the Connector Plate. If wiring in from the right hand side of the cabinet, route the Communication Cable along the front of the Assy Elec Board, securing with existing cable clamps. Refer to the next step before connecting to the Connector Plate.

Communication
Cable
route
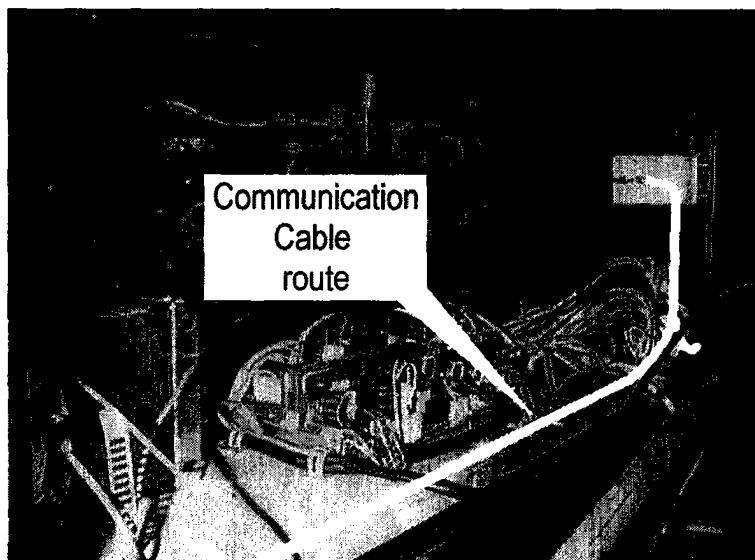
9. Wire the Communication Cables. The wiring method will depend on the number of machines to be linked, so use one of the following illustrations. For numbers other than those shown, always connect the TX of one machine to the RX of the next, to finally make a loop of the Communication Cable.
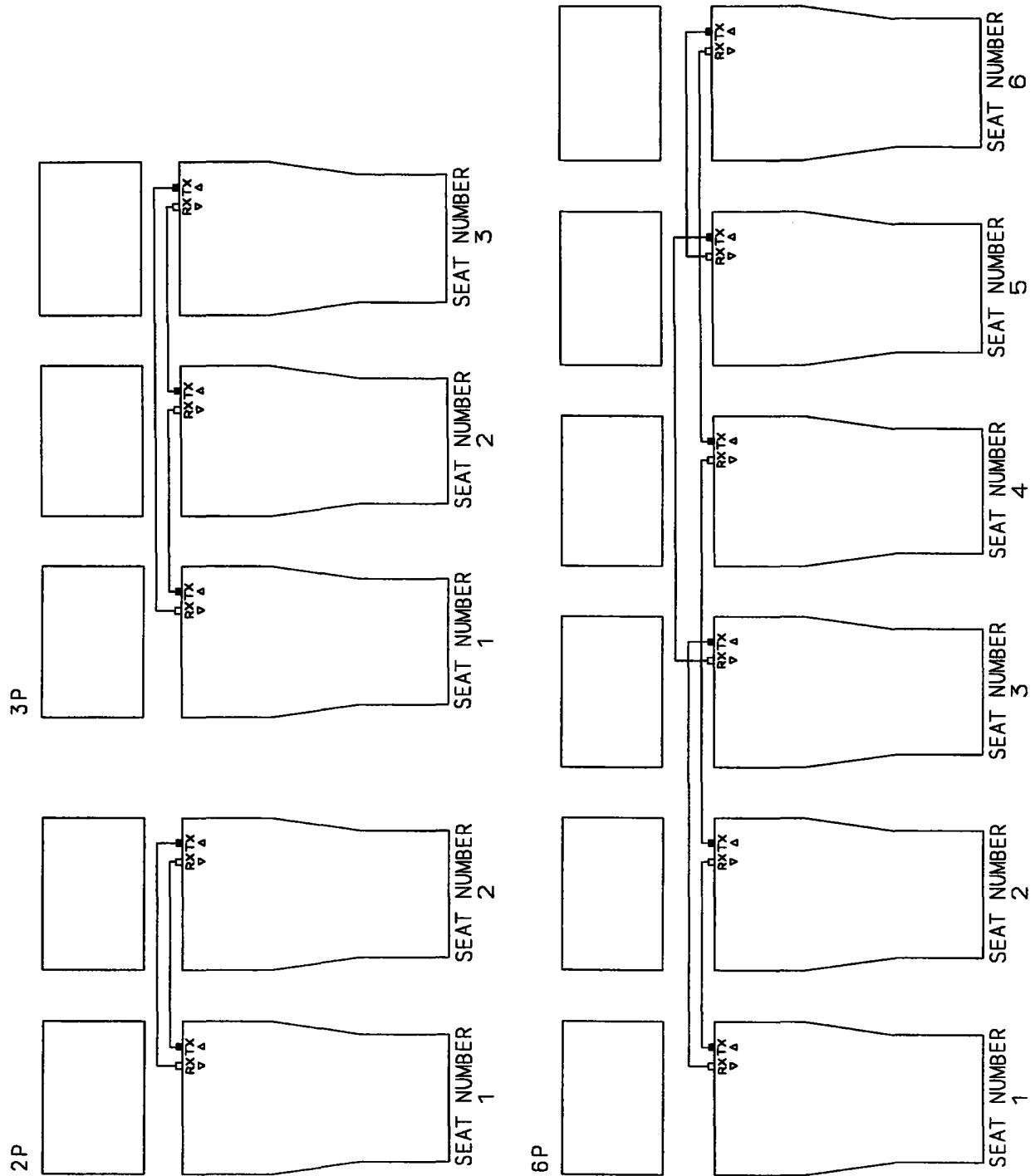
10. Couple the main cabinet and PTV Base/PTV/Billboard and complete the installation as detailed in section 3.

11. Fit the number stickers: the machines should be numbered from '1' upwards from left to right while viewing the PTV screen.

Sticker Number
(Select from
number 1 to 8)

Number Plate
Base

2-M4 Screws
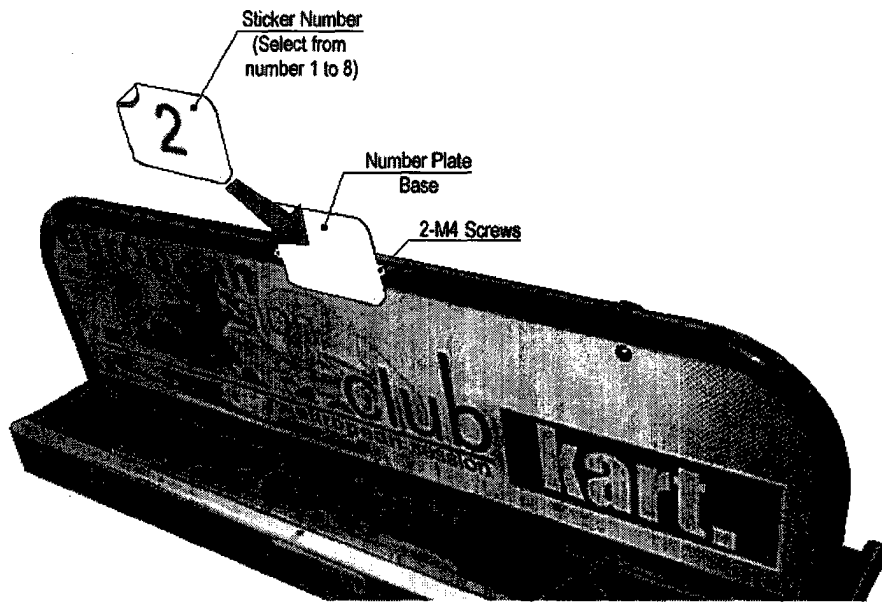
3.13.3.MACHINE SET UP

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
```
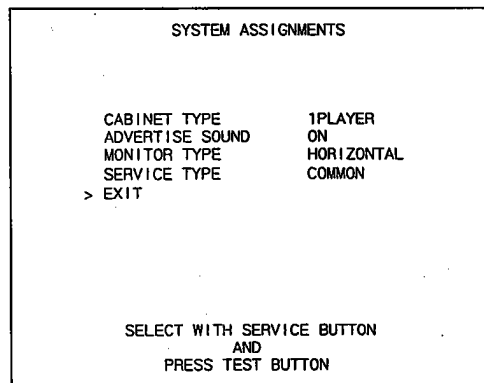
3.13.3.1.SETTING FOR COMMUNICATION PLAY

```
           GAME SETTING



   LINK TYPE: × × × × ×
   STEERING POWER: **************
   STEERING DIRECTION: NORMAL
   CARD SYSTEM:   ENABLE
   BONUS GAMES:   0
   LANGUAGE:   ENGLISH



       SELECT WITH SERVICE BUTTON
         AND PRESS TEST BUTTON
```
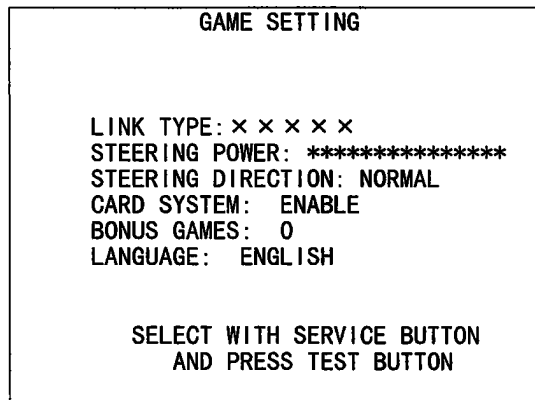
1. Turn all the linked machines on.

2. Enter TEST MODE in all machines.

3. Select SYSTEM ASSIGNMENTS.

4. Perform the COMMUNICATION MODE setting in the SYSTEM ASSIGNMENTS SCREEN. Set one of the machines to MASTER and all others to SLAVE. If one machine is intended to be used as a live monitor, set this one to RELAY (although this happens automatically if that machine is not being used).

5. Exit TEST mode on all machines: the NETWORK CHECK screen should be displayed.

6. If the ADVERTISE screen is displayed on completion of the NETWORK, the communication setting is satisfactory. The NETWORK CHECK normally takes less than one minute. If this is not the case, then recheck settings, connections etc. to determine the cause.

(STOP)

IMPORTANT!

- Perform advertise sound settings on the MASTER seat; all SLAVE machines will adopt these settings.
- If, during communication play, the link is interrupted, the game is discontinued and the NETWORK CHECK is displayed.
- If one linked machine enters TEST mode, all others display NETWORK CHECK, hence be careful not to do this while a linked machine is being played.

Be aware that linked machines are different in operation to independent machines. As per the above, some Game Assignments are set by the MASTER unit. If these settings are changed on a SLAVE machine, the new settings will be ineffectual.

3.14. PERIODIC CHECK AND INSPECTION

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

WARNING!
- Be sure to check monthly 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.

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

DESCRIPTION	WHAT TO CHECK	INTERVAL
CABINET	Adjuster contact with floor	Daily
CONTROL PANEL	Check the VR value	Monthly
	Check adjust gear engagement	Every 3 months
	Greasing of gears/mechanism	Every 3 months
	Lamp and switch operation	Monthly
MONITOR / PROJECTOR	Clean screen (do not use water jet).	Weekly
	Check adjustment	Monthly
SEAT	Rail greasing	Monthly
GAME BD	Memory Test	Monthly
	Game Assignments	Monthly
INTERIOR	Clean (do not use water jet).	Annually
POWER SUPPLY CORD	Check condition	Annually
CABINET SURFACE	Clean (do not use water jet).	As required
COIN MECHANISM	Check SW (If Fitted)	Monthly
CARD READ/WRITE UNIT	Use cleaning card	Every 100 uses

4. HOW TO PLAY

In this game, the players make their karts and enter the race for competing with each other.

By achieving a good score in the Championship Race mode, you can step up from "Class Novice" (at start) to "Class B," "Class A," and "Class S."
When you step up to a higher class, you may get an extended course along which you can drive, or the performance of the kart with your character may vary. The goal is to win in the race in the environment that may vary in such a manner.
By selecting "Practice Race," you can select and run along the course for a series of races, if you desire.

This game allows the data to be retained through the cards system.
In addition to the kart's name, frame, cowl, suits, helmet, etc., information such as the total time, achievements in a series of races, the highest rank by class can be recorded on the "Club Kart Card" (hereafter "CARD").

How to Play the Game --- If you play the Championship Race for the first time:

① Throw coins into the slot. At this time, the value converted for the number of credits is displayed at the bottom right corner of the screen.
When you throw into the slot the number of coins enabling operation of one play session, you go to the screen that asks whether you have a card.
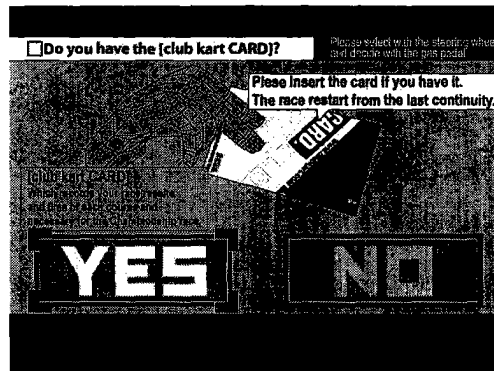
② In response to the inquiry, "Do you want to create a new card?",
• If you answer with "NO," or you do not insert any card after you answer with "YES," Rental Kart is automatically selected as the type of the kart you can use. In this case, you go to selection of either the novice or the middle class.
• If you answer with "YES," you go to Step ③ (creating a new card). One more credit is required in this case.
• If you throw a card into the slot without making the selection, you will go to selection of the Race Mode.

Rental Kart Mode

In the Rental Kart Mode, you select and run along the desired one of four courses for competition in lap time.

You choose either one of two types of karts: for the novice and middle classes. You are required to make the specified number of circuits of the course within the predetermined time-out time.

- Once you complete the first circuit, the remaining time of the time-out time for the first circuit is added to the time-out time for the second circuit.
- When you complete the specified number of circuits of the course within the specified time, the finish takes place. When the time-out time reaches 0, Game Over takes place.

An example where "YES" was selected is described in this document.
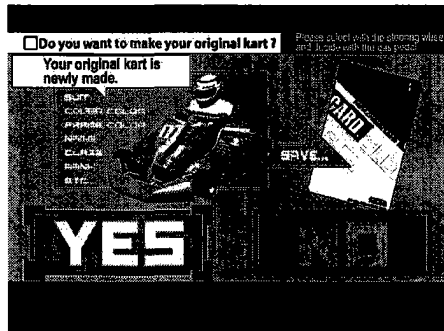
③ Create a new card.

After entering your name, select the cowl, frame, and racing suite colors and the helmet design according to the instructions on the screen.
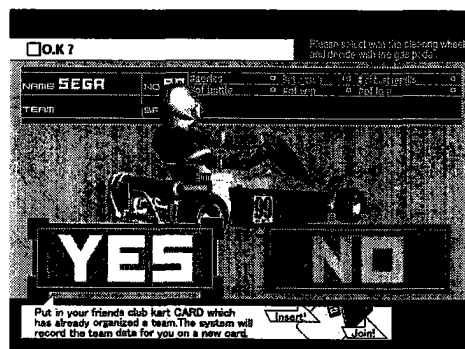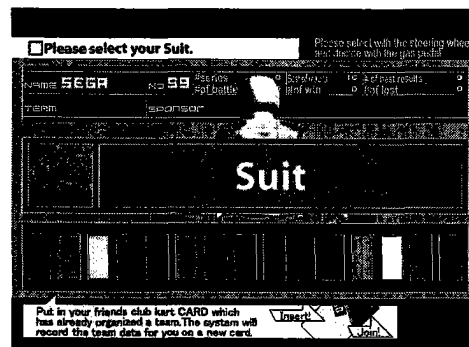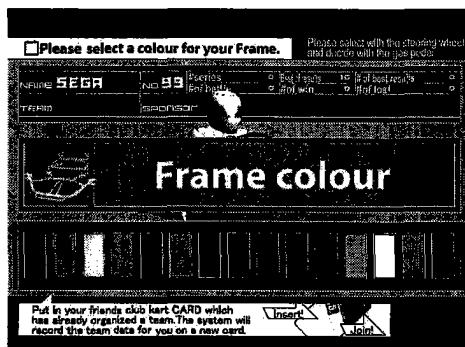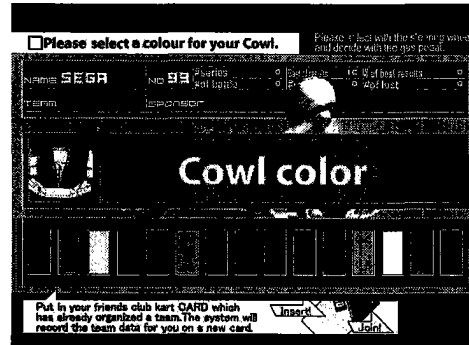
④ After you have entered all the information, you go to the confirmation screen and must make operations according to the instructions on the screen.
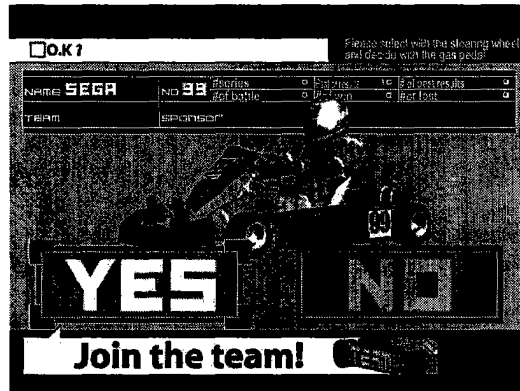
⑤ Select the Race Mode.
You can choose either Championship Race or Practice Race. ("Communicated Race" is additionally displayed when two or more machines are interconnected.) Turn the steering wheel clockwise or counterclockwise for selection. Then, determine the selection by pressing the accelerator pedal.
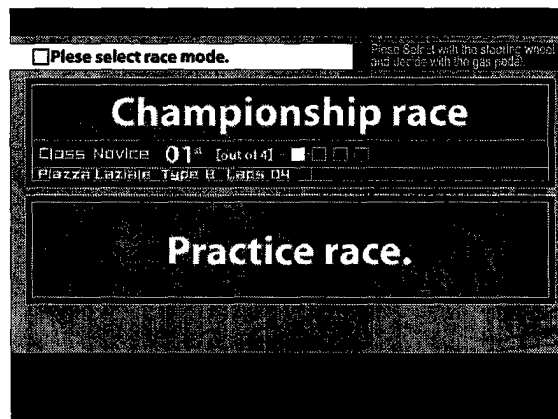
Championship Race
O   In this mode, you compete with the other players for the total achievement of a Series of Races that are done, depending on four classes (Novice, B, A, and S). The race in this mode begins after you have create the feature of creating your own original kart (one of distinctive features of this game) and the card to save the running record.
With the card, you can save the data before completion of the series of races; at the next play time, you can resume the game from the ending point in the previous session of the game.

Practice Race
You can select and run along the desired one of the courses along which you run in a Series of Races.
The number of courses from among which you can select depends on the number of races included in the series, which varies with the class to which you belong (4 for Novice, 6 for B, 8 for Class, and 10 for S).

⑥ Information about the player's kart (class, the number of times won and defeated, the top ranking, the best time, the number of races in the series, etc.) and the course map are displayed before the race starts.
When you created a card for the first time, the player's kart starts at the rearmost position.
You are required to make the specified number of circuits of the course within the predetermined time-out time. Once you complete the first circuit, the remaining time of the time-out time for the first circuit is added to the time-out time for the second circuit. When you complete the specified number of circuits of the course within the specified time, the finish takes place. When the time-out time reaches 0, Game Over takes place.
•   If your kart touches the wall of the course or another kart or goes outside the course while the game is in progress, you feel a reaction through the steering wheel.
•   While the game is in progress, pressing the Viewpoint Change button changes the viewpoint on the screen. The button is continually flashing while the game is in progress.

·　　　While the game is in progress, pressing the Start button toggles between the map that shows the player kart's and the time display that indicates the other karts' positions and the best time in the class and that of your records.

⑦　　　After each race is completed, the Results Screen appears if you have run along the whole course. After the Results Screen appears, the Select Sponsor Screen may appear, depending on the results of the series of races. The number of sponsors, at random, increases or decreases, depending on the achievement. The logo of the sponsor you selected can be attached to the kart if you desire this.

When Select Sponsor Screen appears for the first time, you assign the team name to your kart.
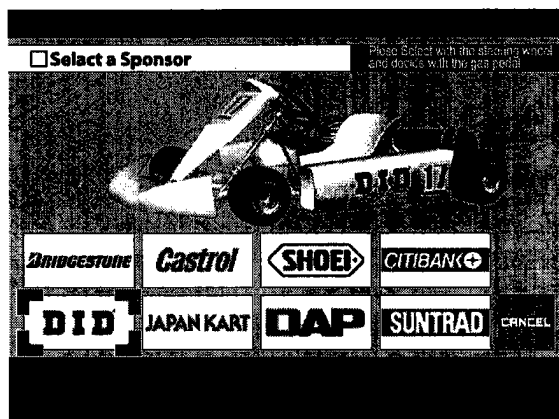
⑧　　　For a Series of Races, the total achievements are listed when the predetermined number of races have been completed for each of the classes. If you have established good achievement, a screen appears that lets you select whether to step up the class.
Select whether to try the next series of races at the current or upper class.
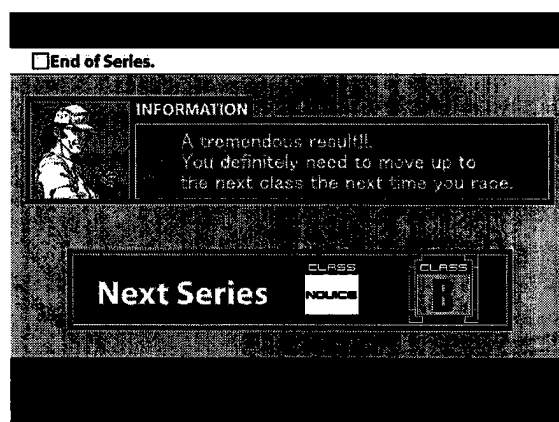
⑨　　　If the Practice Race Mode is entered or all the credits have been exhausted after the data is written onto the card after completion, Game Over takes place. If you are in the Championship Race Mode, you go to the Continue Screen.
If you have still credits for one or more play sessions at this time in the Championship Race Mode, you can go to the next course and enjoy one or more play sessions after jumping to the course map display in Step ⑥.

[Communicated Play]
Communicated Play differs slightly from Single Play regarding the game starting procedure and how to play the game.

①   When coins you throw into the slot the coins with which you can enjoy a play session, the Entry Screen appears and, at the same time, the Start button begins to flash.

②   If you desire a competitive play, throw the appropriate number of coins into the slot at another seat. If you desire the single play mode, press the Start button immediately after the Entry Screen appears.

③   Once the Entry Screen appears, a countdown starts. If a person who desires to compete with you does not appear before the count reaches 0 (zero), you have to enjoy the game in the Single Play Mode.

④   Once the count in the Entry Screen reaches 0, you are brought to the Select Rental Kart Screen. Turn the steering wheel clockwise or counterclockwise to choose either the novice or middle class., and then determine the selection by pressing the accelerator pedal and Start button.
If you have a card, you will be subsequently able to use your own original kart by inserting the card into the slot.
The course assignments to the players are determined by majority of the players.

⑤   Once the course assignments are determined, information about the players' karts (class, the number of times won and defeated, the top ranking, the best time, the number of races in the series, etc.) and the course map are displayed before the race starts.

⑥   In the race, the players compete with each other for their ranks.
Each time the first-rank player completes one circuit of the course, the time that remained is added to that of the next circuit of the course.

When you complete the specified number of circuits of the course within the specified time, the finish takes place. When the time-out time reaches 0, Game Over takes place.

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:

STOP IMPORTANT!

- 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/REF	INTERVAL
INSTALLATION OF THE MACHINE	When the machine is installed perform the following checks: • Check to see that each setting is as per the standard settings input at the time of shipment. • In the INPUT TEST mode, check each switch and VR • In the OUTPUT TEST mode, check each of the lamps. • In the MEMORY TEST mode check all of the IC's on the IC BD.	Monthly
MEMORY	• On the TEST MENU screen choosing the MEMORY TEST allows self test to be performed. In this test RAM & ROM are tested.	Monthly
PERIODIC CHECKS	Periodically perform the following • MEMORY TEST. • Ascertain each setting. • In the INPUT TEST mode, test the control devices. • In the OUTPUT TEST mode, check each of the lamps.	Monthly
CONTROL SYSTEM	• In the INPUT TEST mode, check each switch and VR • Adjust or replace each switch and VR	Monthly
MONITOR	• In the C.R.T. TEST mode, check to ensure the monitor is adjusted correctly • Clean screen (switch off machine and remove the plug)	Monthly Weekly
IC BOARD	• MEMORY TEST • In the SOUND TEST mode, check the sound related ROMs	Monthly
DATA CHECK	• Check such data as held in the bookkeeping screens, relating to number and length of plays	Monthly
EXTERIOR MAINTENANCE	• Clean surfaces • Lubricate seat sliders	Monthly
COIN MECHANISM	• Check switch operation (if fitted)	Monthly

5.1.1. VTS ASSEMBLY

⚠
CAUTION!

• Do not touch places other than those specified. Touching places not specified could cause an electric shock or short circuit.
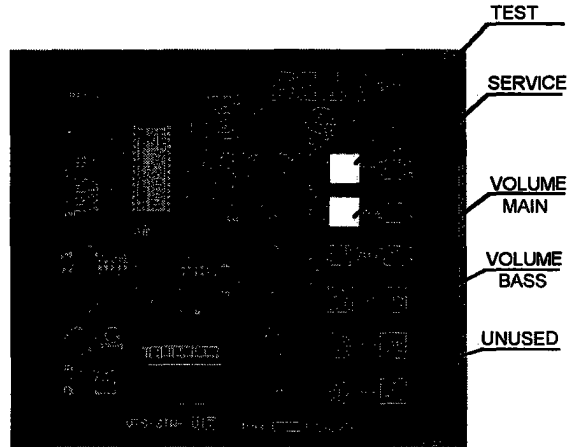
Opening the Coin Chute door will reveal the VTS Assembly shown above. The function of each switch is as follows.

TEST BUTTON
(TEST SW)
Used to enter TEST mode. Also has function during TEST mode. Refer to the later section detailing TEST mode.

SERVICE BUTTON
(SERVICE SW)
Gives credits without registering on the coin counter. Also used during TEST mode.

VOLUME MAIN
Adjusts the volume of the left and right speakers behind the seat.

VOLUME BASS
Adjusts the volume of the woofer under the seat.

UNUSED
The last pot is not used.

5.1.2. SYSTEM TEST MODE

The TEST MODE allows the functioning of each part of the machine to be checked. In addition game configuration and coin configuration changes can be made within TEST MODE.

STOP
IMPORTANT!

> • When setting changes are made within TEST MODE, be sure to exit from TEST MODE using the exit options. If you turn the power off and then on without having exited correctly the changes you made will not take effect.

5.1.2.1.SYSTEM TEST MODE MENU

```
          SYSTEM MENU
         ××××VERSION

         RAM TEST
         JVS TEST
         SOUND TEST
         C.R.T. TEST
         SYSTEM ASSIGNMENTS
         COIN ASSIGNMENTS
         BOOKKEEPING
         BACKUP DATA CLEAR
         ROMBD TEST
         CLOCK SETTING
       > GAME TEST MODE
         EXIT

       SELECT WITH SERVICE BUTTON
                  AND
          PRESS TEST BUTTON
```

```
           GAME TEST MENU

         INPUT TEST
         OUTPUT TEST
         GAME SETTING
         VOLUME SETTING
         CARD R/W TEST
         BOOKKEEPING
         BACKUP DATA CLEAR
      -> EXIT



       SELECT WITH SERVICE BUTTON
         AND PRESS TEST BUTTON
```

Press the TEST BUTTON to bring up the screen shown to the left.

Press the SERVICE BUTTON to move downwards through the list. The current selection is shown by the arrow.

Press the TEST BUTTON to activate the selected test.

To finish TEST MODE, move the arrow to EXIT and press the TEST.

5.1.2.2. RAM TEST

```
                RAM TEST

   IC15   IC16   IC17S  IC18S  GOOD
   IC22   IC23   IC24S  IC25S  GOOD
   IC28   IC29S                GOOD
   IC41                        GOOD
   IC42                        GOOD
   IC44   IC45S  IC46   IC47S  GOOD
   IC91S  IC92S                GOOD
   IC98                        GOOD

   OPTIONAL SOUND BOARD:
   IC2                         GOOD

   OPTIONAL COMMUNICATION BOARD:
   IC7    IC8    IC9    IC10  GOOD




       PRESS TEST BUTTON TO EXIT
```

The memory test mode is for automatically checking the on-board memory IC functioning. "GOOD" is displayed for normal IC's and "BAD " for abnormal IC's

• When the test is completed, if the results are as shown on the left then the Game Board is satisfactory.

• The test should take approximately thirty seconds to complete. If the test exceeds this time the board may have malfunctioned.

• After finishing the test press the TEST BUTTON or START BUTTON to exit.

5.1.2.3. JVS TEST

```
                    JVS TEST
                   INPUT TEST
                  > EXIT

NODE        1/1
NAME        SEGA ENTERPRISES, LTD. ;837-13741
            I/O CONTROL BD2;Ver0.15;99/06
CMD VER     1.1
JVS VER     2.0
COM VER     1.0
SWITCH      2PLAYERS 12BITS
COIN        2SLOTS
ANALOG      8CH
DRIVER OUT  22CH

        SELECT WITH SERVICE BUTTON
                   AND
           PRESS TEST BUTTON
```

• In this test, functioning of the I/O Board connected to the Game Board is displayed, and INPUT TEST can be performed. Select EXIT to return to the MENU screen, or select INPUT TEST to display the second screen.

```
                    JVS TEST
                  > DISPLAY CONFIG
                    EXIT

NODE        1/1
SWITCH ―――――――――――――――――――――――
    SYSTEM    _____
    PLAYER1   _____
    PLAYER2   _____
COIN ―――――――――――――――――――――――
    SLOT1  0000   SLOT2  8000
ANALOG ―――――――――――――――――――――――
    CH1 0000 CH2 0000 CH3 0000 CH4 0000
    CH5 0000 CH6 0000 CH7 0000 CH8 0000

        SELECT WITH SERVICE BUTTON
                   AND
           PRESS TEST BUTTON
```

►With a switch input from the control panel etc., this changes into 1.

►With a coin switch input, this accumulates. And, the coin meter counts.

►Analogue values are displayed between 0000 and FF00.

Select EXIT to return to the MENU screen.

5.1.2.4. SOUND TEST

Select the sound test to check the status of the amplifiers, sound boards and speakers.

Press the SERVICE button or view change button to move the arrow to the desired test item.

Press TEST button to output the sound.

```
                SOUND  TEST


        RIGHT SPEAKER   OFF
        LEFT SPEAKER    OFF
      > EXIT


      SELECT WITH SERVICE BUTTON
                 AND
          PRESS  TEST  BUTTON
```
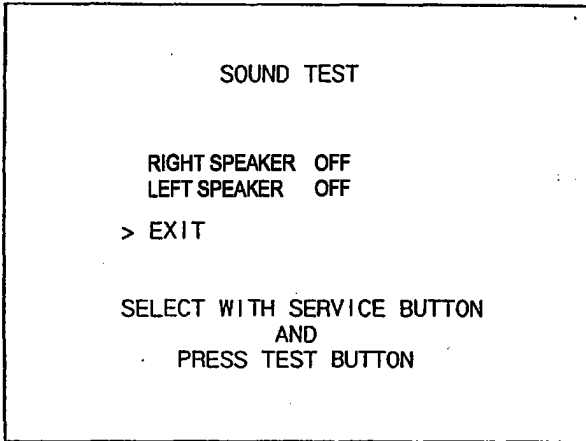
- Select the sound source with SERVICE.
- On pressing TEST, the test sound is emitted from the selected source.

Select EXIT to return to MENU screen.

5.1.2.5. C.R.T TEST
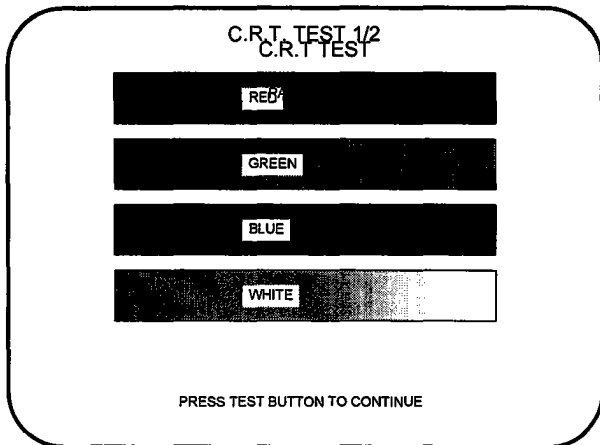
Selecting CRT test allows the projector adjustment to be checked for colour and distortion.

Press the test or start button to have the second CRT test screen appear.
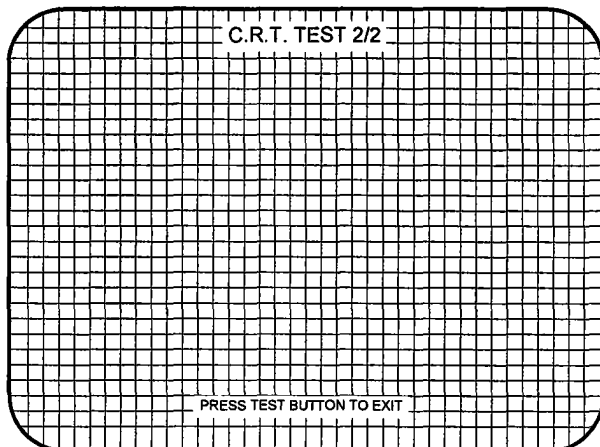
5.1.3. SYSTEM ASSIGNMENTS

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

```
┌─────────────────────────────────────────────────┐
│              SYSTEM  ASSIGNMENTS                  │
│                                                   │
│                                                   │
│         CABINET  TYPE        1PLAYER              │
│         ADVERTISE  SOUND     ON                   │
│         MONITOR  TYPE        HORIZONTAL           │
│         SERVICE  TYPE        COMMON               │
│       > 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.

5.1.3.1.COIN ASSIGNMENTS

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

     COIN CHUTE #2
         1COIN 1CREDIT

    · MANUAL SETTING
      SEQUENCE SETTING
    > EXIT

      SELECT WITH SERVICE BUTTON
                 AND
          PRESS TEST BUTTON
```

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

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

5.1.3.2.COIN/CREDIT SETTING (COIN CHUTE COMMON TYPE)

SETTING	FUNCTIONING OF COIN CHUTE #1		FUNCTIONING OF COIN CHUTE #2	
SETTING #1	1 COIN	1 CREDIT	1 COIN	1 CREDIT
SETTING #2	1 COIN	2 CREDITS	1 COIN	1 CREDIT
SETTING #3	1 COIN	3 CREDIT	1 COIN	1 CREDIT
SETTING #4	1 COIN	4 CREDITS	1 COIN	1 CREDIT
SETTING #5	1 COIN	5 CREDITS	1 COIN	1 CREDIT
SETTING #6	1 COIN	2 CREDITS	1 COIN	2 CREDITS
SETTING #7	1 COIN	5 CREDITS	1 COIN	2 CREDITS
SETTING #8	1 COIN	3 CREDITS	1 COIN	3 CREDITS
SETTING #9	1 COIN	4 CREDITS	1 COIN	4 CREDITS
SETTING #10	1 COIN	5 CREDITS	1 COIN	5 CREDITS
SETTING #11	1 COIN	6 CREDITS	1 COIN	6 CREDITS
SETTING #12	2 COINS	1 CREDIT	2 COINS	1 CREDIT
SETTING #13	1 COIN	1 CREDIT	2 COINS	1 CREDIT
SETTING #14	1 COIN	2 CREDITS	2 COINS	1 CREDIT
SETTING #15	1 COIN 2 COINS	1 CREDIT 3 CREDITS	1 COIN 2 COINS	1 CREDIT 3 CREDITS
SETTING #16	1 COIN	3 CREDITS	1 COIN 2 COINS	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	1 COIN 2 COINS 3 COINS 4 COINS	1 CREDIT 2 CREDITS 3 CREDITS 5 CREDITS	1 COIN 2 COINS 3 COINS 4 COINS	1 CREDIT 2 CREDITS 3 CREDITS 5 CREDITS
SETTING #20	1 COIN	5 CREDITS	1 COIN 2 COINS 3 COINS 4 COINS	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 5 COINS	1 CREDIT 2 CREDITS
SETTING #23	2 COINS 4 COINS 5 COINS	1 CREDIT 2 CREDITS 3 CREDITS	2 COINS 4 COINS 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	1 COIN 2 COINS 3 COINS 4 COINS 5 COINS	1 CREDIT 2 CREDITS 3 CREDITS 4 CREDITS 6 CREDITS
SETTING #27	FREE PLAY		FREE PLAY	

5.1.3.3.COIN/CREDIT SETTING (COIN CHUTE INDIVIDUAL TYPE)

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

5.1.3.4.MANUAL SETTING

```
           COIN ASSIGNMENTS
            MANUAL SETTING

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

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

   SEQUENCE SETTING
 > EXIT

        SELECT WITH SERVICE BUTTON
                 AND
          PRESS TEST BUTTON
```

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

The available combinations are detailed below.

MANUAL SETTING

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

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

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

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5.1.3.5.SEQUENCE SETTING

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

```
                 COIN  ASSIGNMENTS
                 SEQUENCE  SETTING

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

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

           SELECT  WITH  SERVICE  BUTTON
                      AND
              PRESS  TEST  BUTTON
```

5.1.3.6. BOOKKEEPING

```
           BOOKKEEPING PAGE#1

TOTAL TIME      55H27M13S
COIN1           16 SERVICE1       5
COIN2            4 SERVICE2       0
CREDIT          10




TOTAL COIN      20
COIN CREDIT     10
SERVICE CREDIT   5
TOTAL CREDIT    15

   PRESS SERVICE BUTTON TO ANOTHER PAGE
        PRESS TEST BUTTON TO EXIT
```

This mode consists of 2 pages that allow the data relating to credit and game play time to be checked.

In page 1 mode press SERVICE to proceed to page 2, in page 2 mode press TEST to return to the test menu.

* Total time is displayed as XXH XXM XXS and no date will be displayed after exceeding 24 hours.

* The displays for number of coin and number of service vary depending on the CABINET TYPE set in SYSTEM ASSIGNMENTS. Number of credit displays 1 if COIN CHUTE TYPE is set to COMMON in COIN ASSIGNMENTS. If COIN CHUTE TYPE is set to INDIVIDUAL, the applicable number in CABINET TYPE setting will be displayed.

* On the second screen, each sequence displays the frequency of functioning.

```
           BOOKKEEPING PAGE#2

PLAYER1
   SEQ1          1
   SEQ2          0
   SEQ3          1
   SEQ4          0
   SEQ5          0
   SEQ6          0
   SEQ7          0
   SEQ8          0

   PRESS SERVICE BUTTON TO ANOTHER PAGE
        PRESS TEST BUTTON TO EXIT
```

5.1.3.7.BACKUP DATA CLEAR

```
        BACKUP DATA CLEAR


          YES (CLEAR)
       >  NO (CANCEL)




     SELECT WITH SERVICE BUTTON
              AND
        PRESS TEST BUTTON
```

Clears the contents of bookkeeping. When clearing bring the arrow to "YES (CLEAR)" and press the test button. When the data has been cleared "COMPLETED" will be displayed. Bring the arrow to "NO (CANCEL)" and press the test button to return to the menu mode.

Note that this does not clear the contents of BOOKKEEPING in GAME TEST MODE. For this, use the BACKUP DATA CLEAR in GAME TEST MODE.

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5.1.3.8.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.

```
                     ROMBD  TEST
          [ ×××××××××××× ]
             [SEGA  ENTERPRISES, LTD.]

       NO.        TYPE    RESULT   BYTE   WORD
       IC35       32M     ------   XXXX   XXXX
       IC36       32M     ------   XXXX   XXXX
       IC19       128M    GOOD     XXXX   XXXX
       IC20       128M    GOOD     XXXX   XXXX
        .
        .
        .
        .
        .
        .


            PRESS  TEST  BUTTON  TO  EXIT
```

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

5.1.3.9. 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.

```
                     CLOCK SETTING


          2000    7/ 7    7: 7    7   FRI

                          YEAR
                          MONTH
                          DAY
                          HOUR
                         .MINUTE
                          SECOND

                     -> EXIT
                        CANCEL
                              2000   7/ 7   7: 7   ** FRI

          SELECT WITH SERVICE BUTTON
                        AND
              PRESS TEST BUTTON
```

5.1.4. GAME TEST MODE

STOP

IMPORTANT!

- The new settings will not take effect until the Game Test Mode is exited. When you make change to the settings, exit the Game Test Mode by proper operation.
- You must not attempt to demonstrate this game (for the selling purpose) with any other settings other than those specified in this document. Use of such settings may cause malfunctions or bad operation on the machine.

By selecting GAME TEST MODE from the System Test Menu Screen, the Game Test Mode Menu Screen is displayed as follows

Game Test Menu Screen

```
            GAME TEST MENU

        INPUT TEST
        OUTPUT TEST
        GAME SETTING
        VOLUME SETTING
        CARD R/W TEST
        BOOKKEEPING
        BACKUP DATA CLEAR
    ->  EXIT



        SELECT WITH SERVICE BUTTON
        AND PRESS TEST BUTTON
```

- Pressing the SERVICE button moves the arrow on the screen. Move the arrow to select the item you want to run.
- Pressing the TEST button runs the currently selected item. The screen changes to the one for that item, and you can change or adjust the settings.
- Select EXIT and press the TEST button to return to the System Test Menu Screen.

5.1.4.1.INPUT TEST

⚠️ **CAUTION!**

- By selecting INPUT TEST on the Menu Screen and pressing the Test button, the steering wheel is centered automatically as done when the machine is started. To protect persons from accidents, make sure that nobody is in contact with the steering wheel, before pressing the TEST button.
- To prevent accidents, breakage of parts, and malfunctions, do not touch the steering wheel until centering of the steering wheel is completed.

INPUT TEST tests the input devices. Using this screen, check the input devices periodically.
Operate each input device. If the display at the right of the appropriate device changes from OFF to ON, it is diagnosed as being normal.
Check that each of the indications at the right of STEERING, ACCEL, and BRAKE change smoothly in response to operations of each of the input devices.

```
            INPUT  TEST

         STEERING: ****
         ACCEL.   : ****
         BRAKE    : ****
         VIEW SW  : OFF
         START SW : OFF




    PRESS  TEST  BUTTON  TO  EXIT
```

- Pressing the TEST button returns you to the Game Test Menu Screen.

VOLME CONTROL RECOMMENDED SETTINGS

O	Steering wheel: Centered (when traveling in a straight line)	2000H
O	Accelerator:	
	• When the pedal is released	30H
	• When the pedal is pressed fully	C0H
O	Brake:	
	• When the pedal is released	30H
	• When the pedal is pressed fully	C0H

5.1.4.2.OUTPUT TEST

You can monitor the state of the lights.
Use this screen to check the lights periodically.
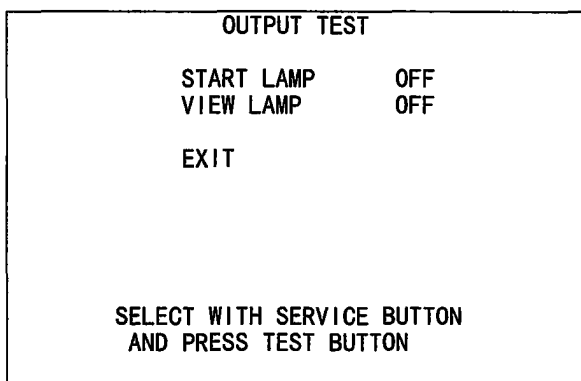
```
            OUTPUT TEST

        START LAMP      OFF
        VIEW LAMP       OFF

        EXIT




        SELECT WITH SERVICE BUTTON
        AND PRESS TEST BUTTON
```

- Pressing the SERVICE button moves the arrow. With the arrow aligned with the tested lamp item, press the TEST button.
- If the lamp lights up when the indication at the right of each name is ON and goes out when it is OFF, this lamp and wiring connections are normal.
- By selecting EXIT and pressing the TEST button, you return to the Game Test Menu Screen.

5.1.4.3.GAME SETTING

You can make the settings about cabinet operations such as the communicated mode or the reaction force of the steering wheel.

```
            GAME SETTING


        LINK TYPE: × × × × ×
        STEERING POWER: **************
        STEERING DIRECTION: NORMAL
        CARD SYSTEM:   ENABLE
        BONUS GAMES:   0
        LANGUAGE:   ENGLISH

    ->  EXIT


        SELECT WITH SERVICE BUTTON
        AND PRESS TEST BUTTON
```
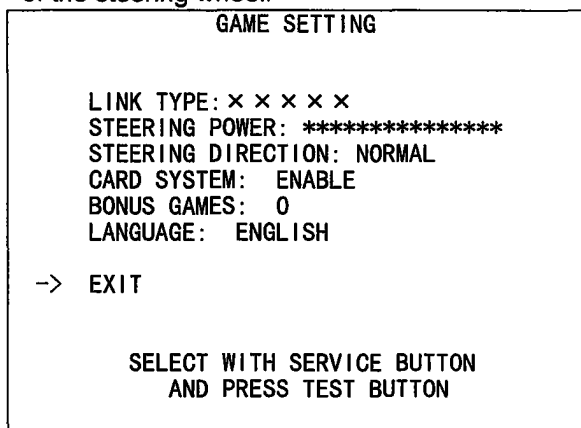
- By pressing the SERVICE button, move the arrow (>) to the desired item to change.
- Pressing the Test button changes the display at the right of the currently selected item. Change the item to the desired display.
- Press the SERVICE button to select EXIT. Then press the TEST button. This returns you to the Game Test Menu Screen.

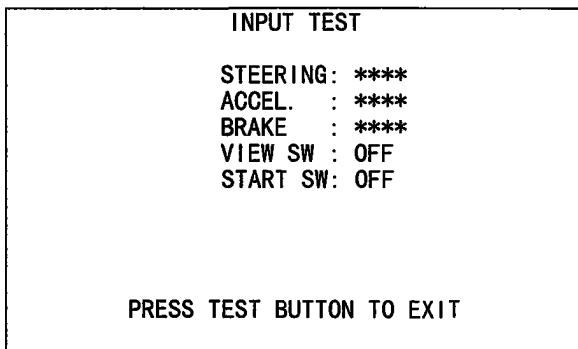| LINK TYPE: | • Used for settings of communicated play. You have four options: MASTER, SLAVE, SATELLITE, and STAND-ALONE.
• If you want to enjoy the game alone, set to STAND-ALONE.
• Setting for communicated play, be sure to set MASTER for only one machine, or seat, and set SLAVE for all the remaining ones.
• SATELLITE is a setting for a relay monitor. |
STEERING POWER:	• Sets reaction for the steering wheel. • Increase or decrease in the number of asterisks (*) is reflected to the reaction force. The more the asterisks, the larger the reaction force.
STEERING DIRECTION:	• Select between NORMAL and REVERSE to change the operation of the steering. Not applicable to this version, select only NORMAL.
CARD SYSTEM:	• Set to ENABLE to have the card sytem operate normally. Set to DISABLE to use only the Rental Kart mode.
BONUS GAMES:	• Free play (bonus game) can be given to the player upon making new card. Then the number of "bonus play" can be set up. Set between 0 and 3 bonus games. Not applicable to this version, set to 0.
LANGUAGE:	• Select from ENGLISH, ESPAÑOL, DEUTSCH, ITALIANO, FRANÇAIS.

5.1.4.4.VOLUME SETTING

⚠️ CAUTION!	• By setting VOLUME SETTING on the Menu Screen and pressing the TEST button, the steering wheel is centered automatically as done when the machine is started. To protect persons from accidents, make sure that nobody is in contact with the steering wheel, before pressing the TEST button. • To prevent accidents, breakage of parts, and malfunctions, do not touch the steering wheel until centering of the steering wheel is completed.
🛑 STOP IMPORTANT!	• No normal play is guaranteed unless the all the input devices are set properly. • Be sure to make the proper settings before you begin demonstration for the selling purpose. • Once you have completed change to the settings, select EXT and press the TEST button. The new settings will not take effect until this mode is exited.

By setting VOLUME SETTING on the Menu Screen and pressing the Test button, centering of the steering wheel is initiated automatically. After the centering is completed, you can use the screen below to set the steering wheel, accelerator, and brake.

If the operability of the steering wheel, accelerator, or brake is poor, use this screen to make the proper settings for the volume control.

```
              VOLUME  SETTING


              MIN        MID        MAX
     [2000]               2000
     STEER:   *---------------------

     [2000]   3000                  A000
     ACCEL:   ---*---------------*--

     [8100]   3000                  A000
     BRAKE:   ---*---------------*--

  ->  EXIT


        SELECT  WITH  SERVICE  BUTTON
          AND  PRESS  TEST  BUTTON
```

1. By moving the SERVICE button to move the arrow, select the input device for which you want to make settings.
2. For either the accelerator or brake, press START without pressing the pedal. This will set the minimum value. (this should be below 3000H)
3. With the pedal pressed fully, press START.
This will set the maximum value.(this should be above A000H)
4. For the steering wheel, press START while supporting it in the centre position.This should be 2000H ± 5. The minimum should be 1E70 ± 10 and the maximum should be 2190H ± 10 above this. The range is therefore aprox 320H around the centre position. Readings outside of these parameters should be investigated as they may indicate an assembly or setup problem.
5. Select EXIT and press the TEST button.
• The setting changes are not updated until you select EXIT. After you make change to the settings, be sure to select EXIT.
• By selecting EXIT and pressing the TEST button, you return to the Game Test Menu Screen.

5.1.4.5.CARD R/W TEST

> • Clean the card reader/writer periodically.

This screen lets you check operation of the card reader/writer (R/W) or clean it.

```
           CARD R/W TEST

  CARD R/W STATUS : *****
          INFOMATION

      INITIALIZE
      CLEANING
      CHECK R/W : ---
  ->  EXIT


      SELECT WITH SERVICE BUTTON
        AND PRESS TEST BUTTON
```

Check operation of the card reader/writer (R/W) and clean it periodically.

The arrow can move to the following items:
- INITIALIZE: Initialization
- CLEANING: Cleaning
- CHECK R/W: R/W Operation Check

Depending on the R/W running mode, one of the following is displayed in "*****" in "CARD R/W STATUS : *****".

READY	Now waiting (Clear to Send Command)
INITIAL	Now initializing (Not Clear to Send Command)
CLEAN	Now cleaning (Not Clear to Send Command)
GET	Cards are being taken out from the hopper (Not Clear to Send Command)
SAVE	Sample data is saved onto the card (Not Clear to Send Command)
LOAD	Load card data and compares it with sample data (Not Clear to Send Command)
OUT	Eject cards (Not Clear to Send Command)
ERROR	Error (Clear to Initialize Command Only)

While a status with a note of "Not Clear to Send Command " in parentheses is on-screen, no operations are accepted. If such a status has occurred, wait until the operation in that status stops automatically and the display comes to READY.
Should you need to cancel the operation forcibly, turn off the power. If you cancel it forcibly, be sure to select and run INITIALIZE after turning on the power.

Occasionally, the "INFORMATION" field on the screen outputs one of the instructions below, although it usually contains nothing.

While cleaning is in progress, waiting in the ready mode for inserting a cleaning card:

-- PLEASE INSERT CLEANING CARD --

After the operation check, waiting for the ready mode for ejecting the card:

-- PLEASE REMOVE CARD --

When an error occurs, its type are displayed in the "INFORMATION" field:

CONNECTION ERROR	Connection Error
MECHANIC ERROR 1	DC Motor / Encoder Error
MECHANIC ERROR 1	Thermal Head Elevation Error
CARD STUFFED	Card Jamming
MECHANIC ERROR 3	Abnormal Temperature of Thermal Head

CARD EMPTY	Hopper Card Empty
DRAW CARD ERROR	Error in Taking Card from Hopper
CAN'T SAVE	Data cannot be written onto the card.
UNKNOWN EROR	Unknown Error
SCIF ERROR	RC-232C Communication Error
NO ERROR	No Error

The "---" field in "CHECK R/W : ---" shows the result of the operation check.

---	Not Checked
OK	No Failure
NG	Failure

The operation check takes out each card from the hopper, and writes the sample data onto it. The check then loads and reads it, and checks whether the read data matches the sample data. Then, the check ejects the card. When you draw out the card at this time, the entire process of the check is completed.

CHECKING R/W OPERATION
1.   Select "CHECK R/W" and press the TEST button.
        R/W operates automatically as follows:
2.   Takes out the card from the hopper: GET is displayed.
3.   Saves the sample data onto the card: SAVE is displayed.
4.   Loads the data on the card for comparison with the sample data: LOAD is displayed.
5.   Ejects the card: OUT is displayed.
6.   Draws out the card. Now the entire process of the check is completed.

If execution of the operation check results in display of NG, check the error condition. If you can take action against the error, execute the operation check again after you take the proper action.
If you cannot take action against the error, repeat the check several times. If the result of the check is still NG, clean the R/W.
If the subsequent execution of the operation check still results in NG, the R/W may be faulty.

If an error occurs, it is cleared by executing the INITIALIZE command.
Note that, when an error has occurred, the R/W only accepts this command (except EXIT).

CLEANING PROCEDURE
1.   Select "CLEANING" and press the TEST button.
        The following message appears to show that the R/W is ready for insertion of the cleaning card:
        -- PLEASE INSERT CLEANING CARD --
2.   Insert the cleaning card into the R/W.
        On the screen, the status display is replaced with "CLEAN", and cleaning begins.
3.   Once cleaning ends after a lapse of a certain time, the R/W automatically ejects the card.

The status display changes from "CLEAN" to "OUT."

5.1.4.6.BOOKKEEPING

In four pages, this screen lists the data about the operation status up to now. Pressing the TEST button brings you to the next page of the screen. When you press the TEST button on Page 4/4 of the screen, you return to the Game Test Menu.

```
BOOKKEEPING 1/4


      NUMBER OF GAMES          0
      NUMBER OF CARD GAMES     0
      NUMBER OF NEW CARDS      0


      PLAY TIME           0D 0H 0M 0S
      AVERAGE PLAY TIME      0H 0M 0S
      LONGEST PLAY TIME      0H 0M 0S
      SHORTEST PLAY TIME     0H 0M 0S


      SELECT WITH SERVICE BUTTON
        AND PRESS TEST BUTTON
```

NUMBER OF GAMES   Number of games played
NUMBER OF CARD GAMES
Number of games played with cards
NUMBER OF NEW CARDSNumber of games for which a new card is created
PLAY TIME   Time played

```
BOOKKEEPING 2/4

          TIME HISTOGRAM
          0M00S - 0M29S    0
          0M30S - 0M59S    0
          1M00S - 1M29S    0
          1M30S - 1M59S    0
          2M00S - 2M29S    0
          2M30S - 2M59S    0
          3M00S - 3M29S    0
          3M30S - 3M59S    0
          4M00S - 4M29S    0
          4M30S - 4M59S    0
          OVER    5M00S    0
```

TIME HISTOGRAM lists the number of plays for each of the play times.

```
BOOKKEEPING 3/4

             PLAYS/CLASS
      RENTAL BEGINNER          *
      RENTAL NORMAL            *
      CLASS  NOVICE            *
      CLASS  B                 *
      CLASS  A                 *
      CLASS  S                 *
      CLASS  SS               *
      CLASS  SSS              *


      SELECT WITH SERVICE BUTTON
        AND PRESS TEST BUTTON
```

PLAY/CLASS shows the count of plays by class.

```
BOOKKEEPING 4/4

          PLAYS/COURSE

          1-A              *
          1-B              *
          1-C              *
          2-A              *
          2-B              *
          2-C              *
          3-A              *
          3-B              *
          3-C              *
          4-A              *
          4-B              *
          4-C              *

      SELECT WITH SERVICE BUTTON
        AND PRESS TEST BUTTON
```

The PLAYS/COURSE Screen lists the count of plays by course.
Pressing the TEST button returns you to the Game Test Menu Screen.

5.1.4.7.BACKUP DATA CLEAR

BACKUP DATA CLEAR deletes data on the Bookkeeping Screen. To delete data about the coins/credits, run BACKUP DATA CLEAR in the System Test Mode.
Clearing the data does not influence any data settings (except the data).

```
            BACKUP  DATA  CLEAR



                 YES (CLEAR)
       ->   NO  (CANCEL)



        SELECT  WITH  SERVICE  BUTTON
        AND  PRESS  TEST  BUTTON
```

To delete the data, use the SERVICE button to align the arrow with CLEAR and press the TEST button. Once the data is deleted, this screen displays "COMPLETED."
Pressing the TEST button again returns you to the Menu Screen.
If you choose not to delete the data, press the TEST button with the arrow aligned with NO. This returns you to the Menu Screen.

CKT-0015UK

CKT-0011UK

SEE COIN TOWER
DETAIL

CKT-2609-C (X2)

CKT-2613

CKT-2610-B
(CKT-2609-B ~ OTHER SIDE)

CKT-2607

CKT-1004-B

CKT-1002-C
(CKT-1002-B ~ OTHER SIDE)

CKT-0012UK

SRT-2151-B

CKT-2010UK

CKT-0013UK

CKT-1005-B

CKT-0559 (X2)

CKT-0555UK

CKT-0557
(No. CKT-0561)

CKT-0552UK

CKT-0558

CKT-2005-C
(CKT-2005-B ~ OTHER SIDE)

CKT-0512
(CKT-0511 ~ OTHER SIDE)

SEE BUMPER DETAIL

CKT-1078-B

CKT-1078-C (X2)
CKT-1078-EUK

CKT-1078-D (X2)

CKT-1078-FUK
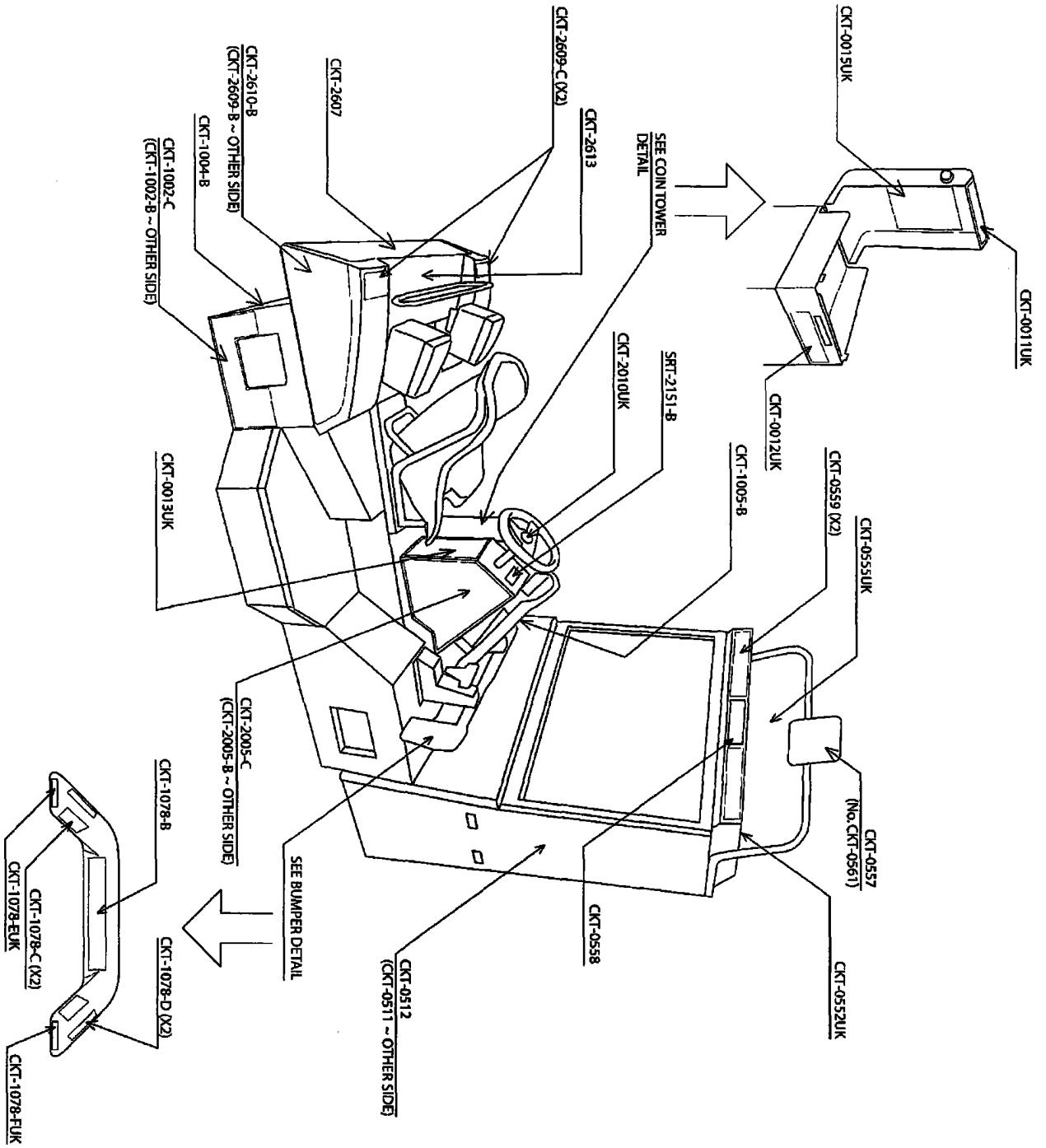
7. PARTS LIST

7.1. CKT-0000UK TOP ASSY CLUB KART DX
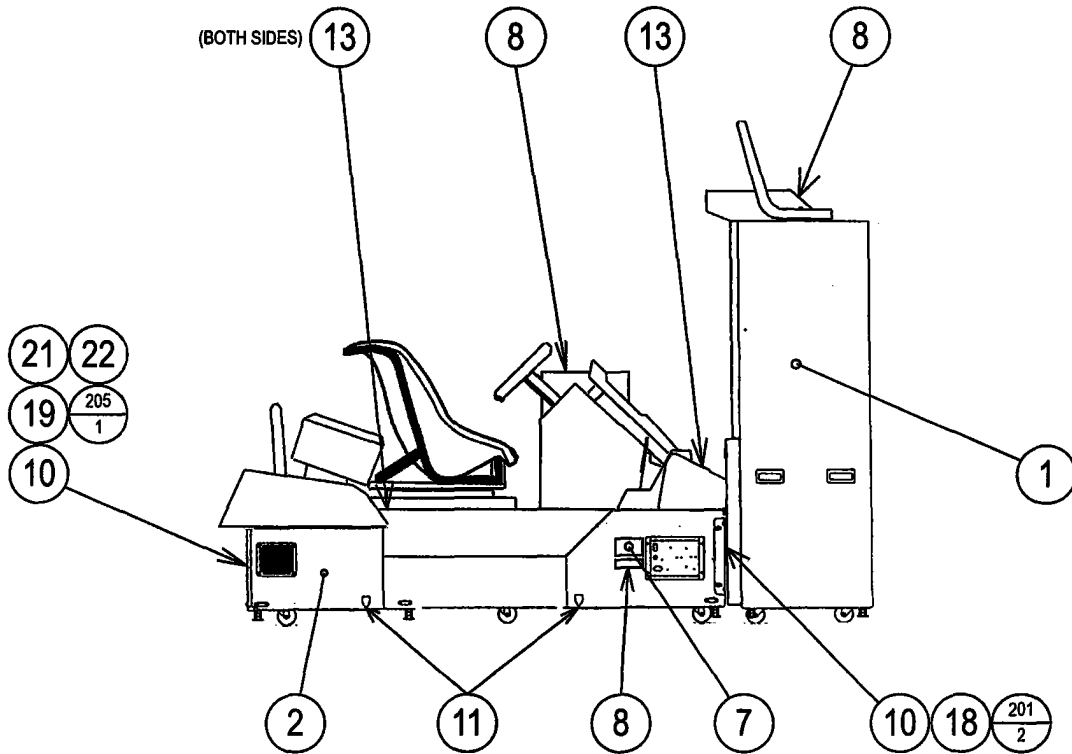
Indent #	Part No.	Description	Component Ref	Qty/ assy
1	CKT-0500UK	ASSY PTV		1
2	CKT-1000UK	ASSY MAIN CABINET		1
3	CKT-INST-DX	ASSY INST KIT CKT DX		1
7	421-7987-CKT-D	STICKER ELEC SPEC CKT D		1
8	421-7988-91UK	STICKER SERIAL NUMBER UK	MAIN, BBD, CCT	3
10	LB1102	STICKER DANGEROUS VOLTAG	F COVER, R COVER	2
11	421-7020UK	STICKER CAUTION FORK	2 EA SIDE	4
13	440-WS00220UK	WARNING STICKER TRAP HAZ	NEXT TO SEAT (2), HANDLE MECHA	3
17	SGM-4365	POLY COVER 1700X2200X170		1
18	CKT-1003UK	FRONT LID		1
19	CKT-1004-AUK	BACK LID BLANK		1
21	DP-1167UK	TNG LKG UK	(19)-1	1
22	220-5575UK	LOCK	(19)-1	1
23	PK0253	PALLET PTV NCR DX		1
24	PK0285	SLEEVE PTV CKT DX		1
25	PK0283	PALLET CKT DX MAIN CABI		1
26	PK0284	SLEEVE CKT DX MAIN CABI		1
27	SGM-4040	POLY COVER 950X1350X1800	PTV	1
28	PK0288	CARTON CCT BOK CKT	FIT CCT INSIDE @ TOP ASSY	1
201	000-T00410-0B	M4X12 MSCR TH BLK	(18)-2	2
205	008-T00430-0B	M4X30 TMP PRF TH BLK	(19)-1	1

7.2. CKT-0500UK ASSY PTV
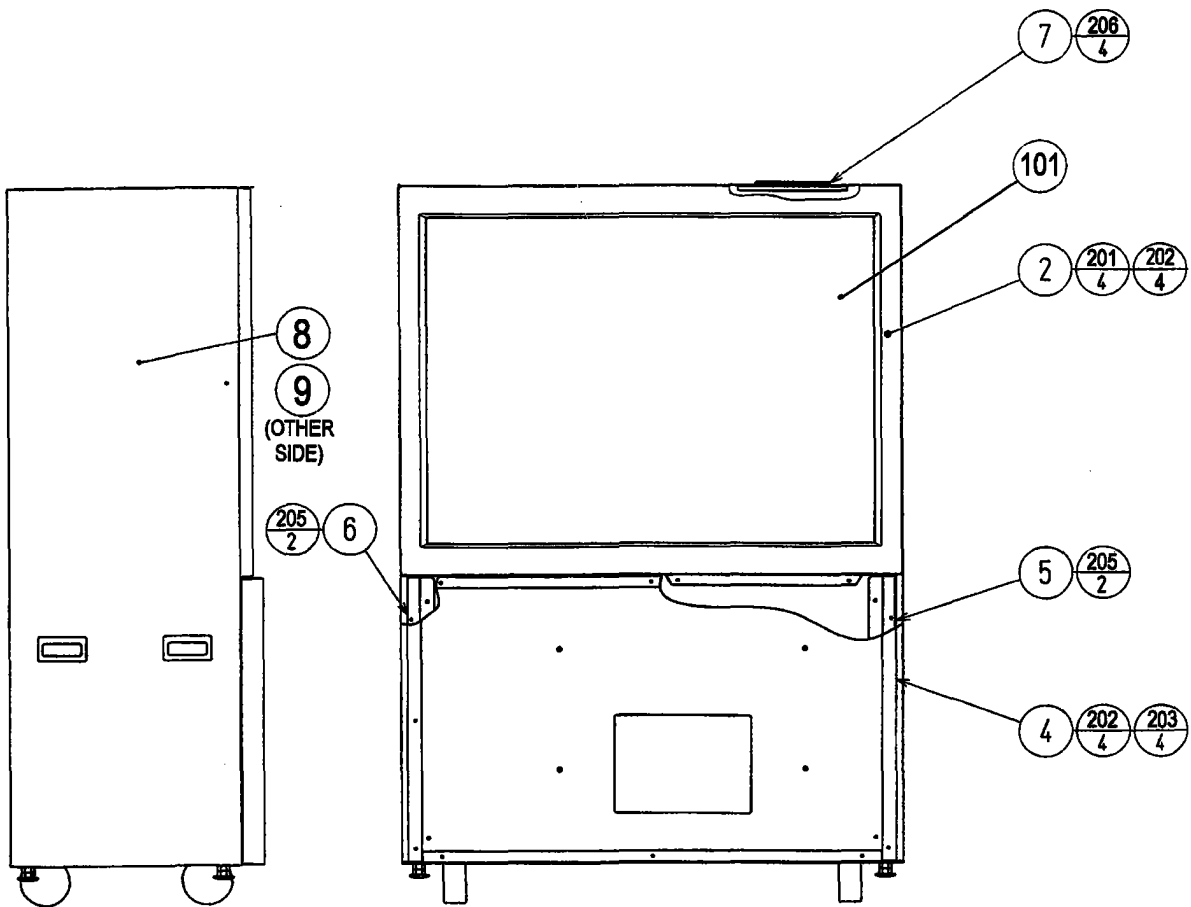
Indent #	Part No.	Description	Component Ref	Qty/ assy
2	MGL-1150	ASSY MASK		1
4	CKT-0600UK	ASSY FRONT PANEL		1
5	DYN-0501	PANEL MOUNT BRKT L		1
6	DYN-0502	PANEL MOUNT BRKT R		1
7	RAL-0501	MASK HOLDER		2
8	CKT-0511	STICKER PTV SIDE L		1
9	CKT-0512	STICKER PTV SIDE R		1
101	200-5788-31	PROJECTION DSPL T 50TYPE		1
201	000-P00520-W	M5X20 MSCR PAN W/S PAS	(2)-4	4
202	000-T00525-0B	M5X25 MSCR TH BLK	(2)-4,(4)-4	6
203	068-552016-0B	M5 WSHR 20OD FLT BLK	(4)-4	4
205	000-P00516-W	M5X16 MSCR PAN W/FS PAS	(5)-2,(6)-2	4
206	000-F00412	M4X12 MSCR CSK PAS	(7)-4	4

7.3. CKT-0550UK ASSY BILLBOARD
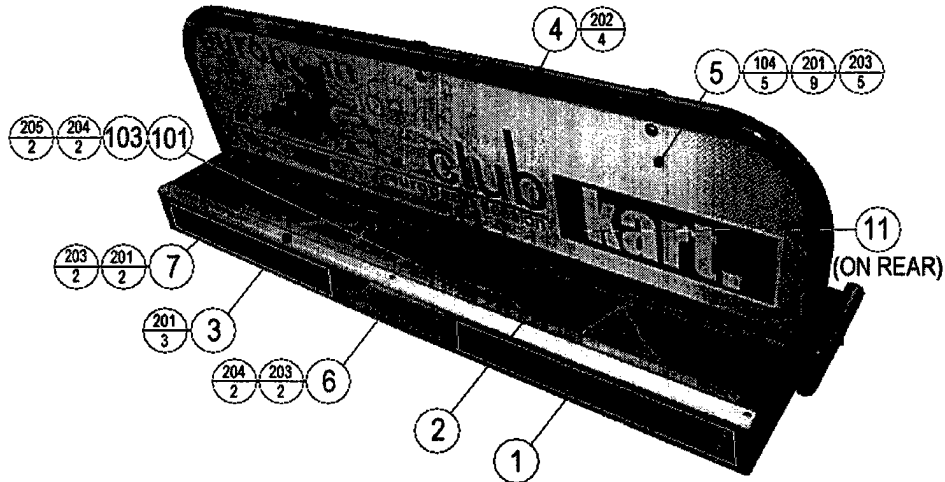
Indent #	Part No.	Description	Component Ref	Qty/ assy
1	CKT-0551UK	BILLBOARD BOX		1
2	CKT-0552UK	FL COVER		1
3	CKT-0553	COVER SASH		1
4	CKT-0554UK	BILLBOARD FRAME		1
5	CKT-0555UK	BILLBOARD PLATE		1
6	CKT-0558	LOGO PLATE		1
7	CKT-0559	STICKER BILLBOARD		2
11	253-5460-01	AIR VENT BLACK		1
12	LB1102	STICKER DANGEROUS VOLTAG		1
13	LB1104	STICKER CAUTION, HOT SUR		1
14	421-7501-16	STICKER 110V 30W	ON FL TRAY	1
101	390-5695-30-AUK	FL TRAY 100V 30W		1
102	280-A01200-A	ROUTER TWIST D12 ADH		5
103	LT1014	TUBE FL 30W 36" DIA25mm		1
104	280-L00805-0M	STANDOFF 8OD 5ID 4.8L	(5)-5	5
201	000-T00410-0C	M4X10 MSCR TH CRM	(3)-3,(5)-9,(7)-2	14
202	000-P00540-0C	M5X40 MSCR PAN CRM	(4)-4	4
203	068-441616-0C	M4 WSHR 16OD FLT CRM	(5)-5,(7)-2,(6)-2	9
204	050-F00400	M4 NUT FLG SER PAS	(6)-2,(101)-2,(301)-1E	5
205	000-P00408	M4X8 MSCR PAN PAS	(103) TERRY CLIPS - 2	2
301	NCR-60420UK	WIRE HARN FL		1

7.4. CKT-0600UK ASSY FRONT PANEL
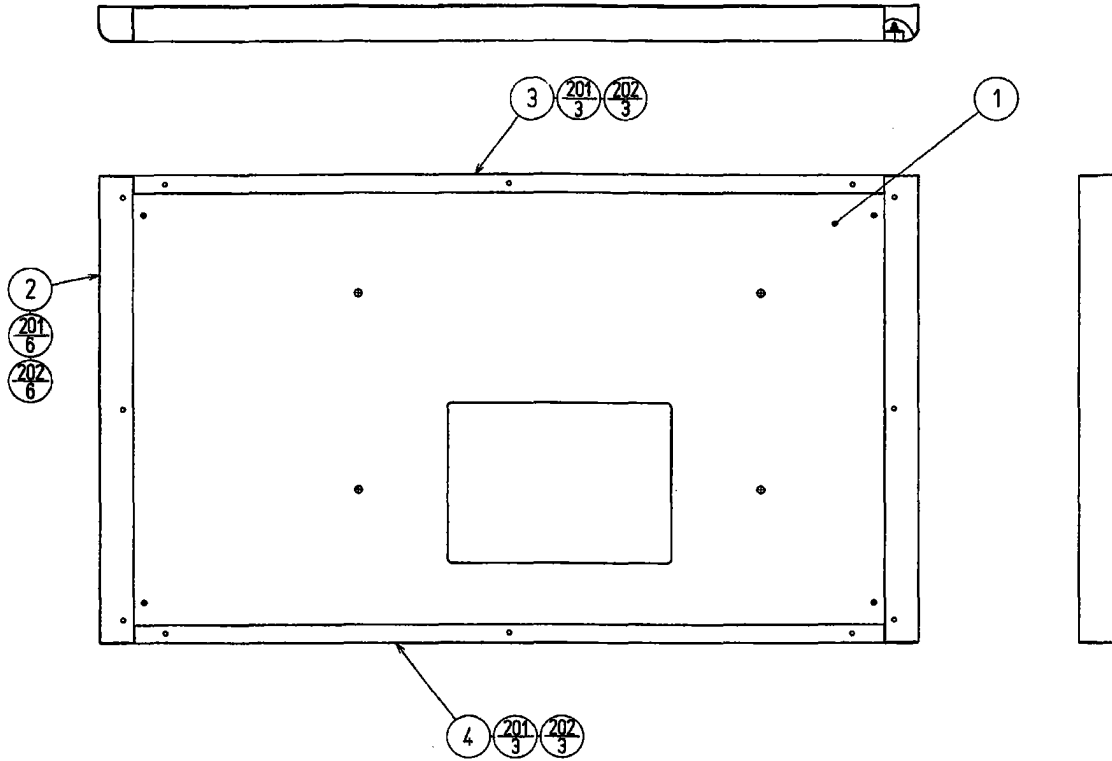
Indent #	Part No.	Description	Component Ref	Qty/ assy
1	CKT-0601UK	FRONT PANEL		1
2	EZT-0603	SIDE BRKT		2
3	EZT-0604	BRKT UPPER		1
4	EZT-0605	BRKT LOWER		1
201	068-552016	M5 WSHR 20OD FLT PAS	(2)-6,(3)-3,(4)-3	12
202	050-F00500	M5 NUT FLG SER PAS	(2)-6,(3)-3,(4)-3	12

7.5. CKT-1000UK ASSY MAIN CABINET
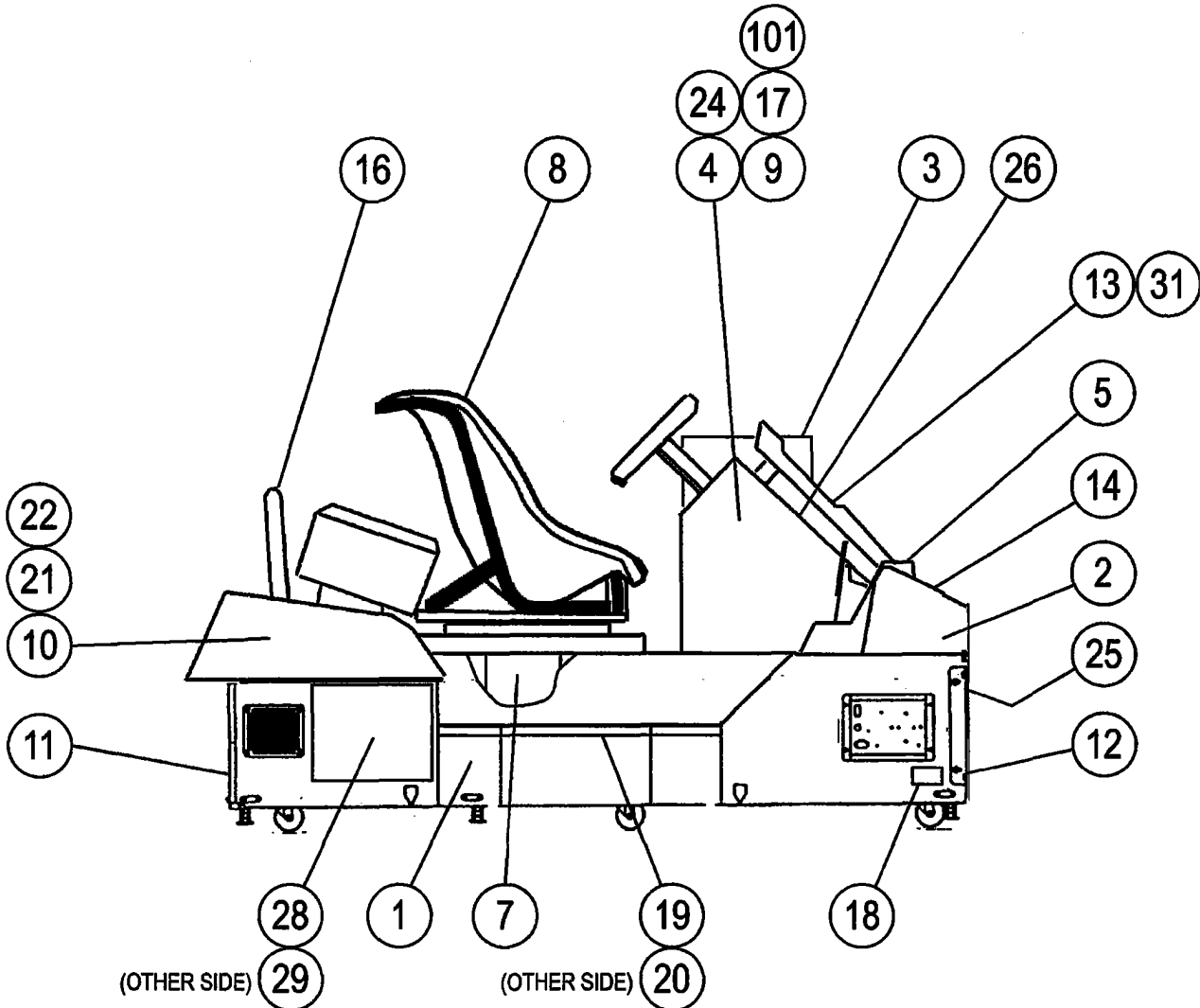
Indent #	Part No.	Description	Component Ref	Qty/ assy
1	CKT-1001UK	ASSY SUB CABI		1
2	CKT-1075UK	ASSY FRONT BUMPER		1
3	CKT-1100UK	ASSY COINCHUTE TOWER		1
4	CKT-2000UK	ASSY STEERING UNIT		1
5	CKT-2100UK	ASSY PEDAL CKT		2
7	CKT-2300UK	ASSY WOOFER		1
8	CKT-2400UK	ASSY SEAT		1
9	SPG-2500	ASSY HANDLE MECHA		1
10	CKT-2600UK	ASSY REAR BILLBOARD		1
11	CKT-4000UK	ASSY MAIN BD DX		1
12	CKT-4200UK	ASSY ELEC		1
13	CKT-1005-A	FRONT PANEL BLANK		1
14	CKT-1006	SERVICE LID		1
16	CKT-1008UK	REAR BAR		1
17	CKT-1009	MOTOR BRKT		1
18	DYN-0009UK	HOLE LID		2
19	CKT-1012	SIDE STEP L		1
20	CKT-1013	SIDE STEP R		1
21	CKT-1021	SUPPORT BRKT		4

22	CKT-1022	JOINT PLATE		2
24	SRT-3206	KEY 5X5X17		1
25	CKT-1080	ASSY CONNECTOR PLATE		1
26	CKT-2008	BOX LID		1
28	CKT-1002-C	STICKER MAIN BASE R		1
29	CKT-1002-B	STICKER MAIN BASE L		1
30	CKT-1004-B	STICKER BACK LID		1
31	CKT-1005-B	STICKER FRONT PANEL		1
101	111-1132	COUPLING MJT-40K-BL 16-1		1
201	030-000630-S	M6X30 BLT W/S PAS	(2)-4	4
202	060-F00600	M6 WSHR FORM A FLT PAS	(2)-4	4
203	030-000820-S	M8X20 BLT W/S PAS	(9)-4	4
204	060-F00800	M8 WSHR FORM A FLT PAS	(9)-4	4
207	030-000820-SB	M8X20 BLT W/S BLK	(4)-10,(5)-8	18
208	060-F00800-0B	M8 WSHR FORM A FLT BLK	(4)10,(8,22)4,(16)6,(5,10,21)8	48
209	000-T00412-0C	M4X12 MSCR TH CRM	(19)-3,(20)-3	6
210	030-000816-SB	M8X16 BLT W/S BLK	(10)-8,(17)-2,(22)-4	14
211	032-000430	M4X30 W/BLT PAS	(11)-2,(12)-2	4
212	068-441616	M4 WSHR 16OD FLT PAS	(11)-2,(12)-2,(19)-3,(20)-3	10
213	000-T00412-0B	M4X12 MSCR TH BLK	(13)-3,(14)-4,(26)-4	11
214	030-000860-SB	M8X60 BLT W/S BLK	(8)-4,(16)-6,(21)-8	18
216	000-P00308-WB	M3X8 MSCR PAN W/FS BLK	(18)-4	4
217	FAS-300014	M6X16 BLT W/FS CRM	(19)-5,(20)-5	10
218	000-P00408-W	M4X8 MSCR PAN W/FS PAS	(7)-4,(25)-2	6

7.6. CKT-1001UK ASSY SUB CABI
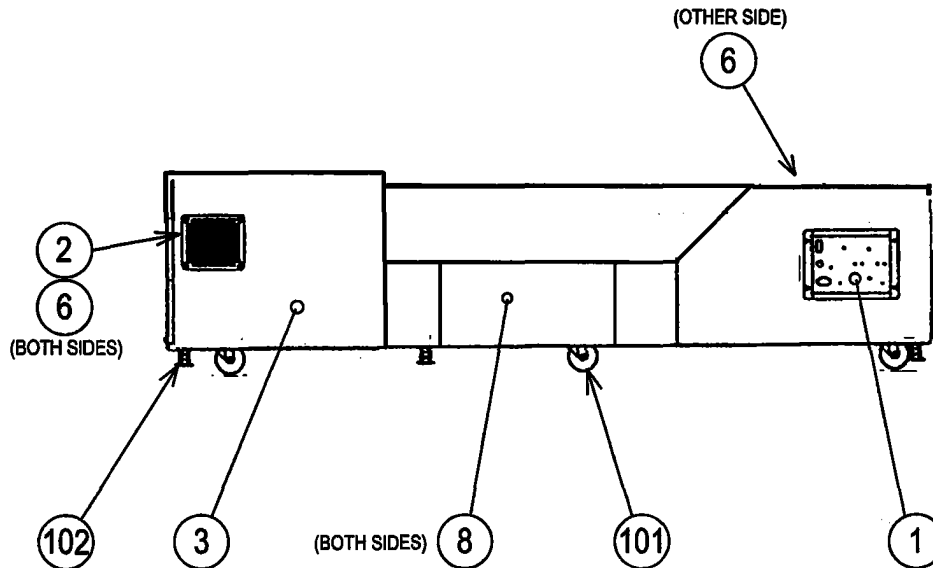
Indent #	Part No.	Description	Component Ref	Qty/assy
1	HOD-1020UK	ASSY AC UNIT UK		1
2	CKT-1070	ASSY FAN UNIT		1
3	CKT-1002-AUK	MAIN BASE BLANK		1
6	253-5460-01	AIR VENT BLACK		3
8	CKT-1011	STEP BOX		2
101	MA1019	CASTER 75		6
102	601-5699X	LEG ADJUSTER BOLT M16x75		6
201	000-T00412-0B	M4X12 MSCR TH BLK	(1)-4,(6)-12	16
202	050-F00400	M4 NUT FLG SER PAS	(2)-4	4
203	050-H01600	M16 NUT PAS	(102)-6	6
204	030-000860-SB	M8X60 BLT W/S BLK	(8)-6	6
205	060-F00800	M8 WSHR FORM A FLT PAS	(8)-6	6
206	030-000620-S	M6X20 BLT W/S PAS	(101)-24	24
207	060-F00600	M6 WSHR FORM A FLT PAS	(101)-24	24
301	CKT-60010UK	WIRE HARN AC EXT		1
302	CKT-60011	WIRE HARN SPEAKER EXT		1
303	CKT-60012	WIRE HARN MIDI EXT		1
304	CKT-60013	WIRE HARN WOOFER EXT		1
305	CKT-60014	WIRE HARN ANALOG EXT		1
306	CKT-60015UK	WIRE HARN TOWER EXT		1
307	CKT-60016	WIRE HARN MOTOR EXT		1
309	CKT-60017	WIRE HARN ENCODER EXT		1
310	600-9030-44K	WIRE HARN EARTH 300mm M4	BASE TO AC BRKT	1
311	600-9050-44K	WIRE HARN EARTH 500mm M4	BASE TO FRONT LID	1

7.7. CKT-1070 ASSY FAN UNIT
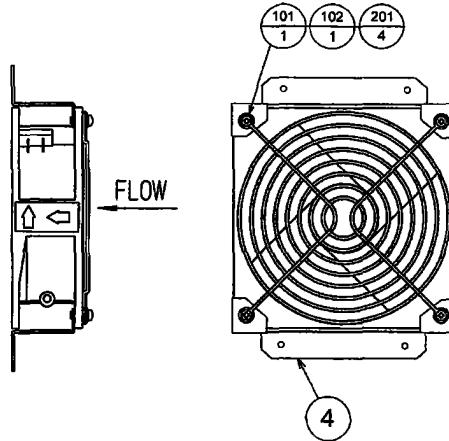
Indent #	Part No.	Description	Component Ref	Qty/ assy
1	CKT-1071	FAN BRKT		2
101	260-0011-02	AXIAL FLOW FAN AC100V 50		1
102	FN1012	MESH GUARD METAL 120mm F		1
201	000-P00312-W	M3X12 MSCR PAN W/FS PAS	(101)-4	4

7.8. CKT-1075UK ASSY FRONT BUMPER
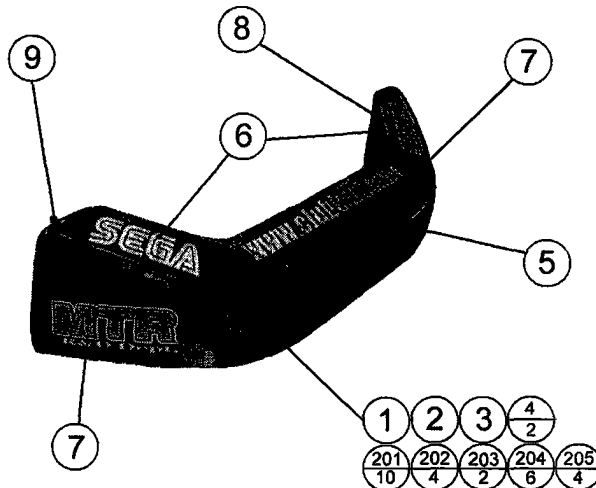
Indent #	Part No.	Description	Component Ref	Qty/ assy
1	CKT-1076UK	BASE		1
2	CKT-1077UK	HOLDER		1
3	CKT-1078-AUK	BUMPER BLANK		1
4	CKT-1079UK	BUMPER BRKT		2
5	CKT-1078-B	STICKER URL		1
6	CKT-1078-C	STICKER LOGOTYPE SEGA		2
7	CKT-1078-D	STICKER LOGOTYPE MTR RED		2
8	CKT-1078-EUK	STICKER BRAKE		1
9	CKT-1078-FUK	STICKER ACCEL		1
201	000-P00416-W	M4X16 MSCR PAN W/FS PAS	(2)-6,(4)-4	10
202	000-T00412-0B	M4X12 MSCR TH BLK	(3)-4	4
203	000-T00420-0B	M4X20 MSCR TH BLK	(3)-2	2
204	068-441616-0B	M4 WSHR 16OD FLT BLK	(3)-6	6
205	050-F00400	M4 NUT FLG SER PAS	(4)-4	4

7.9. CKT-1080 ASSY CONNECTOR PLATE
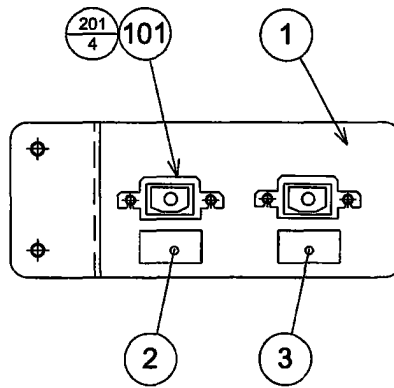
Indent #	Part No.	Description	Component Ref	Qty/ assy
1	CKT-1081	CONNECTOR PLATE		1
2	LB1087	STICKER FIBRE CABLE RX		1
3	LB1088	STICKER FIBRE CABLE TX		1
101	211-5479-01	CONN OPT JOINT PNL-TOCA1		2
201	000-P00312-W	M3X12 MSCR PAN W/FS PAS	(101)-4	4

7.10. CKT-1100UK ASSY COINCHUTE TOWER
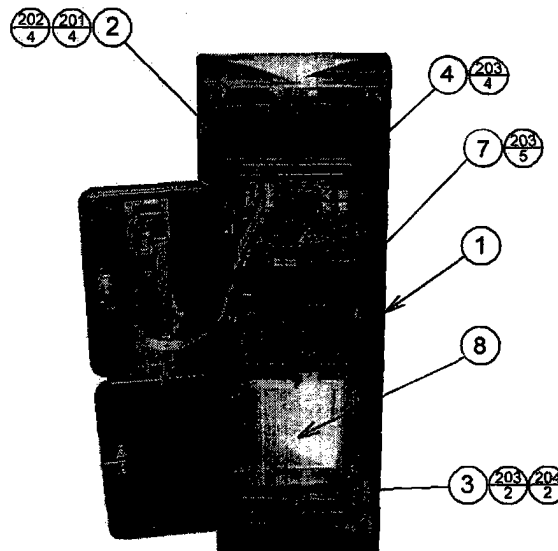
Indent #	Part No.	Description	Component Ref	Qty/ assy
1	CKT-1101UK	COIN CHUTE TOWER		1
2	CKT-1300	ASSY CARD UNIT		1
3	CKT-1103UK	CCT FLOOR		1
4	VTS-HOD-D	VTS BOARD HOD		1
7	DUT-0302UK	COIN PATH PLATE		1
8	PP1087	BOX CASH FOR MINI DOOR		1
201	030-000820-S	M8X20 BLT W/S PAS	(2)-4	4
202	060-F00800	M8 WSHR FORM A FLT PAS	(2)-4	4
203	000-P00408-W	M4X8 MSCR PAN W/FS PAS	(3)-2,(4)-4,(7)-5	11
204	050-F00400	M4 NUT FLG SER PAS	(3)-2	2
301	CKT-60018	WIRE HARN CARD RW TOWER		1
302	CKT-60019UK	WIRE HARN TOWER		1
303	600-9120-44K	WIRE HARN EARTH 1200mm M	COINCHUTE TO AC BRKT	1

7.11. CKT-1300 ASSY CARD UNIT
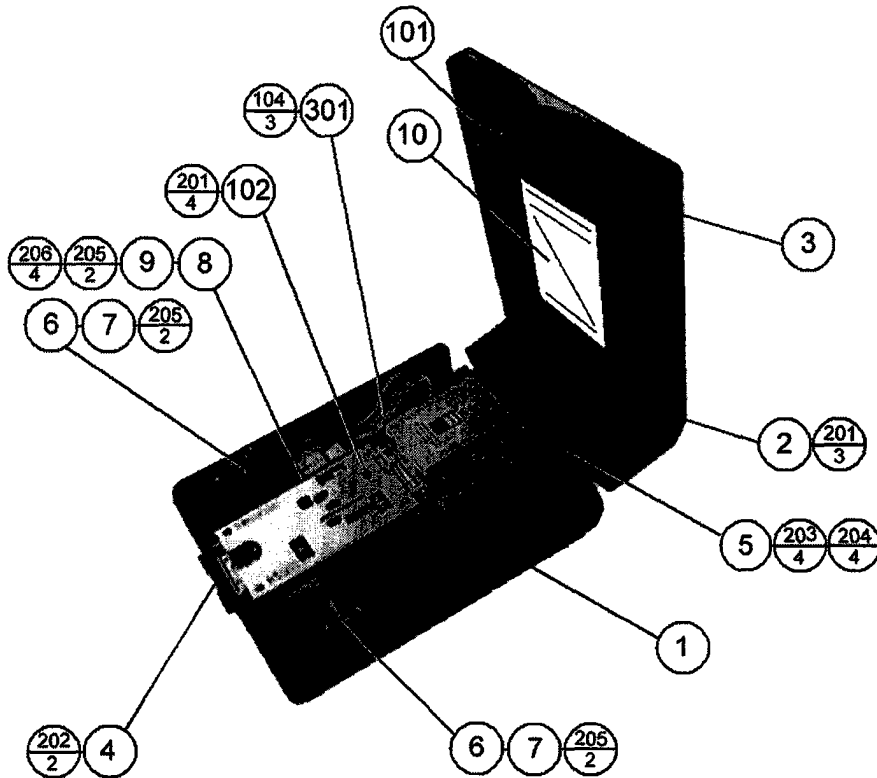
Indent #	Part No.	Description	Component Ref	Qty/ assy
1	CKT-1301UK	CARD R/W BASE		1
2	CKT-1302	CARD R/W COVER		1
3	CKT-1303UK	LOCKING TANG		1
4	253-5512	INNER GUIDE		1
5	CKT-1305	STAY		1
6	CKT-1306	LOCK BRKT		2
7	CKT-1307	STUD PLATE		2
8	CKT-1308	CONN BD HOLDER		1
9	839-1193	CARD R/W CONN BD		1
10	CKT-0015UK	STICKER CARD LOADING INS	(2)-1	1
101	220-5575UK	LOCK		1
	601-11039	CARD R/W UNIT CR-1231R		1
104	280-A01200-A	ROUTER TWIST D12 ADH		3
201	000-P00308-W	M3X8 MSCR PAN W/FS PAS	(2)-3,(102)-4	7
202	FAS-000065	M2.6X8 MSCR CSK BLK	(4)-2	2
203	065-E00500	DIA5 E RING	(5)-4	4
204	068-652016	M6 WSHR 20OD FLT PAS	(5)-4	4
205	050-F00400	M4 NUT FLG SER PAS	(6)-4,(8)-2	6
206	000-P00410-W	M4X10 MSCR PAN W/FS PAS	(9)-4	4
301	CKT-60020	WIRE HARN CARD RW		1

7.12. CKT-2000UK ASSY STEERING UNIT
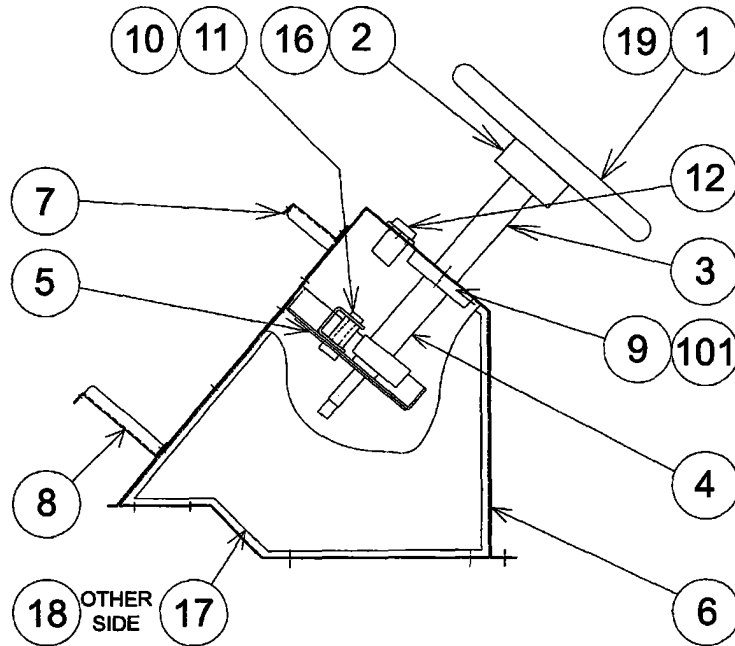
Indent #	Part No.	Description	Component Ref	Qty/ assy
1	DYN-1201UK	STEERING WHEEL ALBERICI		1
2	CKT-2001UK	HANDLE BOSS		1
3	CKT-2002UK	HANDLE COLLAR		1
4	CKT-2003UK	STEERING SHAFT		1
5	CKT-2004	SHAFT BASE		1
6	CKT-2005-A	STEERING BOX BLANK		1
7	CKT-2006	PANEL BRKT A		1
8	CKT-2007	PLATE BRKT B		1
9	CKT-2009	BEARING HOLDER		1
10	SPG-2108	STOPPER BOLT		1
11	SPG-2109	STOPPER RUBBER		1
12	SRT-2150	ASSY SW PLATE		1
16	SRT-3206	KEY 5X5X17		1
17	CKT-2005-B	STICKER STEERING BOX L		1
18	CKT-2005-C	STICKER STEERING BOX R		1
19	CKT-2010UK	STICKER STEERING WHEEL	(1)-1	1
101	100-5112	BEARING 17 (NSK 6003ZZ)		2
102	280-A01200-A	ROUTER TWIST D12 ADH		5
201	030-000816-S	M8X16 BLT W/S PAS	(5)-4	4
202	060-F00800	M8 WSHR FORM A FLT PAS	(5)-4	4
203	020-000620-0Z	M6X20 SKT CAP OZ	(9)-4	4
204	060-F00600-0B	M6 WSHR FORM A FLT BLK	(9)-4	4
205	060-S00600-0B	M6 WSHR SPR BLK	(9)-4	4
206	020-000820-0Z	M8X20 SKT CAP OZ	(2)-1	1
207	060-S00800	M8 WSHR SPR PAS	(2)-1	1
208	000-P00412-WB	M4X12 MSCR PAN W/FS BLK	(7)-4,(8)-2	6
209	020-000620-0Z	M6X20 SKT CAP OZ	(1)-3	3
210	000-T00408-0C	M4X8 MSCR TH CRM	(12)-4	4
211	050-U00800	M8 NUT NYLOK PAS	(10)-1	1
212	068-852216	M8 WSHR 22OD FLT PAS	(2)-1	1
301	CKT-60021	WIRE HARN START EXT		1

7.13. CKT-2300UK ASSY WOOFER
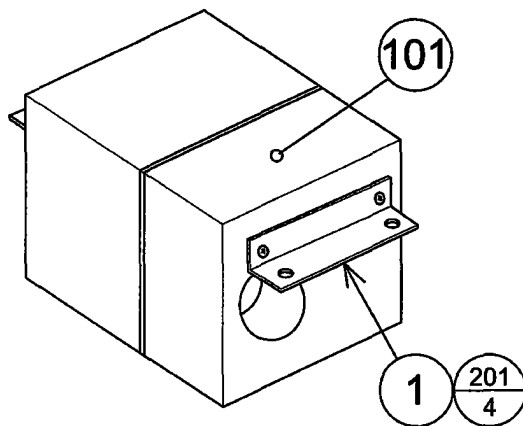
Indent #	Part No.	Description	Component Ref	Qty/assy
1	CKT-2301UK	WOOFER BRKT		2
101	130-5155	SPEAKER BOX SUB WOOFER		1
201	012-P00512	N10X1/2" S/TAP PAN PAS	(1)-4	4

7.14. CKT-2400UK ASSY SEAT
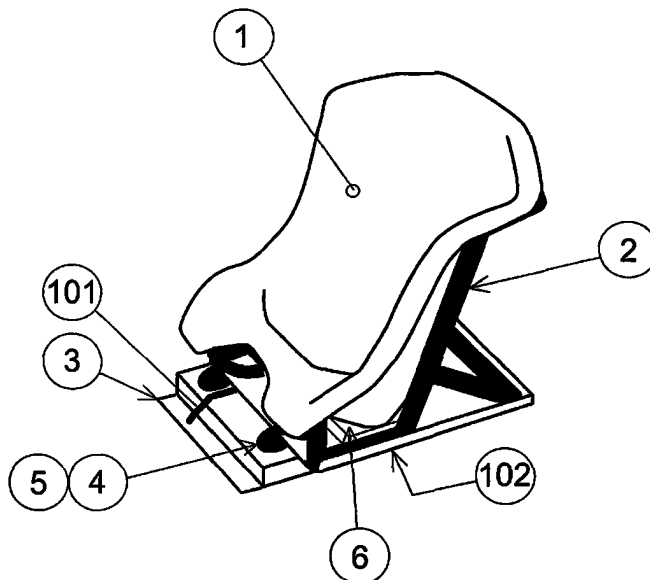
Indent #	Part No.	Description	Component Ref	Qty/assy
1	CKT-2401UK	SEAT CKT		1
2	CKT-2402UK	SEAT FRAME		1
3	CKT-2403UK	SEAT BASE		1
4	CKT-2404UK	PROTECT RUBBER		2
5	CKT-2405UK	RUBBER HOLDER		4
6	CKT-2406UK	SEAT PAD		1
101	601-9059-91	SEAT RAIL L		1
102	601-9060-91	SEAT RAIL R		1
201	050-U00800-0B	M8 NUT NYLOK BLK	(1)-4,(101)-4,(102)-4	12
202	060-F00800-0B	M8 WSHR FORM A FLT BLK	(1)-4,(101)-4,(102)-4	12
203	031-000820-0B	M8X20 CRG BLT BLK	(1)-4	4
204	030-000820-SB	M8X20 BLT W/S BLK	(4)-2	2

7.15. CKT-2600UK ASSY REAR BILLBOARD
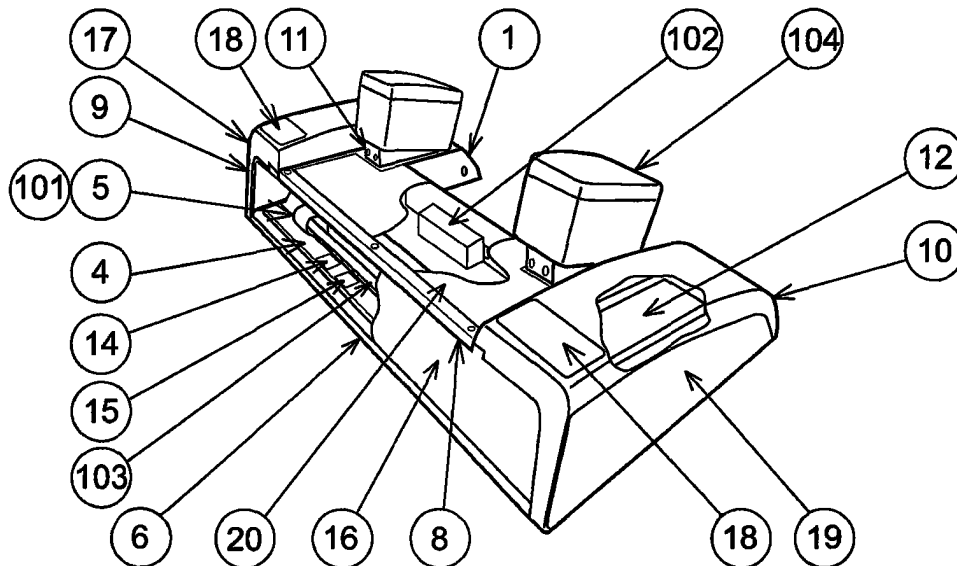
Indent #	Part No.	Description	Component Ref	Qty/ assy
1	CKT-2601UK	REAR BILLBOARD BOX		1
2	CKT-2602	SIDE LID L		1
3	CKT-2603	SIDE LID R		1
4	CKT-2604	FL BASE		1
5	CKT-2605	SOCKET COVER		2
6	CKT-2606	SASH LOWER		1
8	CKT-2608	SASH UPPER		1
9	CKT-2609-A	SIDE COVER L BLANK		1
10	CKT-2610-A	SIDE COVER R BLANK		1
11	CKT-2611	SPEAKER BASE		2
12	CKT-2612	COVER SUPPORT		2
14	LB1104	STICKER CAUTION, HOT SUR		1
15	LB1102	STICKER DANGEROUS VOLTAG		1
16	CKT-2607	REAR BILLBOARD PLATE		1
17	CKT-2609-B	STICKER SIDE L		1
18	CKT-2609-C	STICKER LOGOTYPE MTR BLA		2
19	CKT-2610-B	STICKER SIDE R		1
20	CKT-2613	STICKER REAR BILLBOARD		1
101	214-0223-03	FL SOCKET W/CONN (INSULA		2
102	182-5078-AB-CE	COIL BALLAST AB-116 CE		1
103	390-6579-0999G	FL SLIM TYPE 0999MM GREE		1
104	130-5228	SPEAKER BOX 4OHM 40W		2
201	000-P00408-W	M4X8 MSCR PAN W/FS PAS	(2)-2,(3)-2,(12)-8,(101)-4	16
202	000-T00408-0C	M4X8 MSCR TH CRM	(4)-6,(5)-4,(8)-3	13
203	000-T00408-0B	M4X8 MSCR TH BLK	(6)-4,(9)-4,(10)-4	12
204	050-F00400	M4 NUT FLG SER PAS	(102)-2,(301)-1E	3
205	012-P00512-0B	N10X12" S/TAP PAN BLK	(104)-8	8
206	008-T00412-0B	M4X12 TMP PRF TH BLK	(11)-8	8
301	CKT-60022UK	WIRE HARN SLIM PWR		1
302	CKT-60023UK	WIRE HARN FL SLIM		1
303	CKT-60024	WIRE HARN SPEAKER EXT 2		1

7.16. CKT-4000UK ASSY MAIN BD DX
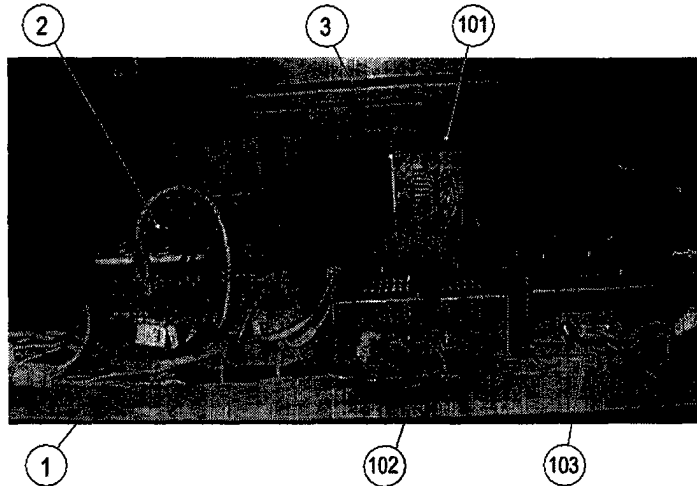
Indent #	Part No.	Description	Component Ref	Qty/ assy
1	CKT-4001UK	WOODEN MAIN BD BASE		1
2	840-0062D-02	ASSY CASE NAT CKT EXP		1
3	APC-4002	SW REGU BRKT		1
4	CKT-4003UK	COVER SUPPORT		3
5	CKT-4004UK	WATER GUARD CE		1
101	400-5397-01	SW REGU FOR JVS VA		1
102	601-10369	STEREO PWR AMP 47		1
103	610-0609	LOWPASS AMP 4OHM 40W		1
104	280-A02064-WX	ROUTER TWIST D20 SO6.4 W		11
105	280-A01264-WX	ROUTER TWIST D12 SO6.4 W		8
106	601-0460	CABLE TIE 100mm		3
107	LB1101	STICKER WARNING BATTERY	SHIELD CASE	1
201	000-P00408-W	M4X8 MSCR PAN W/FS PAS	(101)-4	4
202	000-P00416-W	M4X16 MSCR PAN W/FS PAS	(2)-4,(3)-4	8
204	012-P03512-F	N6X1/2" S/TAP FLG PAS	(102)-6,(103)-6	12
301	CKT-60025UK	WIRE HARN AC MAIN BASE		1
302	CKT-60026	WIRE HARN SPEAKER		1
303	CKT-60027UK	WIRE HARN SIGNAL MAIN BA		1
304	CKT-60028	WIRE HARN AUDIO WOOFER		1
305	CKT-60031	WIRE HARN WOOFER		1
306	600-7159-039	WIRE HARN JVS PWR 039CM		1
307	600-7009-3000	ASSY RGB CA D-SUB 15P 30		1
308	600-7141-250	CABLE JVS TYPE A-B 250CM		1
309	600-7158-0100	CA AUDIO RCA TO RCA 2CH		1

7.17. CKT-4200UK ASSY ELEC
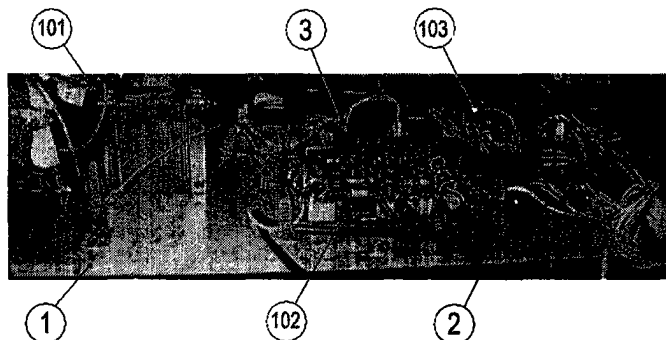
Indent #	Part No.	Description	Component Ref	Qty/ assy
1	CKT-4201UK	WOODEN ELEC BASE		1
2	837-13551-92	I/O CONTROL BD FOR JVS		1
3	838-11856CE-02	CONN BD W/FUSE 6.3A CE		1
101	560-5431UK	XFMR CKT DX		1
102	838-14174	SERVO MOTOR DRIVE BD MID		1
103	400-5368-07512	SW REGU LCA75S-12		1
104	OS1071	FEET P.C.B PKT OF 4	(103)-4	1
105	280-A02064-WX	ROUTER TWIST D20 SO6.4 W		8
106	280-A01264-WX	ROUTER TWIST D12 SO6.4 W		3
201	000-P00416-W	M4X16 MSCR PAN W/FS PAS	(101)-4	4
202	012-P00325	N4X1" S/TAP PAN PAS	(2)-4,(3)-2,(102)-4	10
204	012-P03516	N6X5/8" S/TAP PAN PAS	(103)-4	4
301	CKT-60003UK	WIRE HARN ELEC BASE		1
302	CKT-60004	WIRE HARN RW PWR ELEC BA		1
303	CKT-60005	WIRE HARN MOTOR ELEC BAS		1
304	CKT-60006	WIRE HARN ENCODER ELEC B		1
305	CKT-60007	WIRE HARN MIDI ELEC BASE		1
306	CKT-60008	WIRE HARN ANALOG ELEC BA		1
307	CKT-60009UK	WIRE HARN SIGNAL I/O BD		1
308	CKT-60033UK	WIRE HARN ELEC BASE PTV		1

7.18. CKT-INST-DX ASSY INST KIT CKT DX

Indent #	Part No.	Description	Component Ref	Qty
3	CKT-0002	JOINT BRKT CENTER		2
4	CKT-0011UK	STICKER CARD INSTRUCTION		1
5	CKT-0012UK	STICKER CARD SLOT MULTI		1
6	CKT-0013UK	PLAY INSTR CKT DX MULTI		1
7	CKT-0557	NUMBER PLATE BASE		1
8	CKT-0561	STICKER NUMBER		1
17	CKT-0550UK	ASSY BILLBOARD		1
19	CKT-1102	TOWER BASE		1
201	000-T00540-0C	M5X40 MSCR TH CRM	BILLBOARD - 2	2
202	030-000830-SB	M8X30 BLT W/S BLK	(3)-4 INTO F PANEL	4
203	030-000860-SB	M8X60 BLT W/S BLK	(3)-4 INTO MAIN BASE,(19)-4	8
204	068-852216-0B	M8 WSHR 22OD FLT BLK	(3)-8,(19)-4,(CCT)-2	14
205	030-000820-S	M8X20 BLT W/S PAS	(CCT)-2	2
206	031-000620-0B	M6X20 CRG BLT BLK	(19)-2	2
207	050-F00600	M6 NUT FLG SER PAS	(19)-2	2
208	068-651616	M6 WSHR 16OD FLT PAS	(19)-2	2
401	PK0282	INST KIT BOX CKT DX		1
402	OS1019	SELF SEAL BAG 9X12.3/4		2
407	220-5484	VOL CONT B-5K OHM	FOR STEERING ONLY	1
408	220-5484-H	VOL 5-K-OHM HAPP 50-8026	FOR PEDALS ONLY	1
409	600-6275-0500	CABLE FIBER OPTIC 5mm x		1
410	310-5286-21	STRAIGHT ADAPTOR 25XPG21		2
411	310-5285-210150	FLEX TUBE 21 150CM (25mm		1
414	420-6634-01UK	SERVICE MANUAL CKT DX		1
415	420-5788-31UK	SERVICE MANUAL TOSHIBA 5		1
416	SAECE-076	DECLARATION OF CONFORMIT		1

7.19. HOD-1020UK ASSY AC UNIT
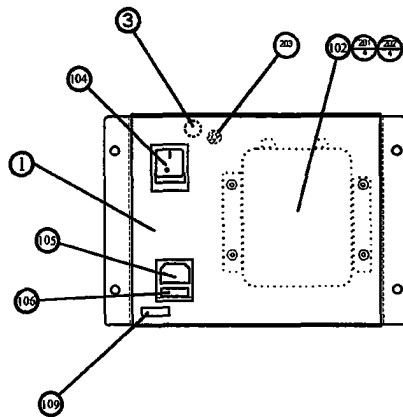
Indent #	Part No.	Description	Component Ref	Qty /assy
1	HOD-1021UK	AC BRKT UK		1
3	LB1096	STICKER PROTECTIVE EARTH	(EARTH STUD)	1
102	EP1379	FILTER EMI 10A ARCOTRONICS		1
104	SW1109	SWITCH ROCKER 250V AC		1
105	EP1302	EUROSOCKET FUSED 10A 250Vac		1
106	514-5078-5000	FUSE 5X20 CERAMIC SB 5000mA		1
107	310-5029-D508	HEAT SHRINK SLEEVING 50.8DIA		0.04
109	421-6595-5000-T	STICKER FUSE 5000mA TYPE T		1
201	FX0399	M3X8 MSCR POSI PAN BZP	(102)-4	4
202	FX0263	M3 WSHR FORM A FLT BZP	(102)-4	4
203	050-F00400	M4 NUT FLG	EARTH STUD	2
301	600-6911-049UK	WIRE HARN AC BRKT (JPT)		1
302	600-7118-002UK	WIRE HARN AC OUT (PRIMARY)		1

7.20. MGL-1150 ASSY MASK
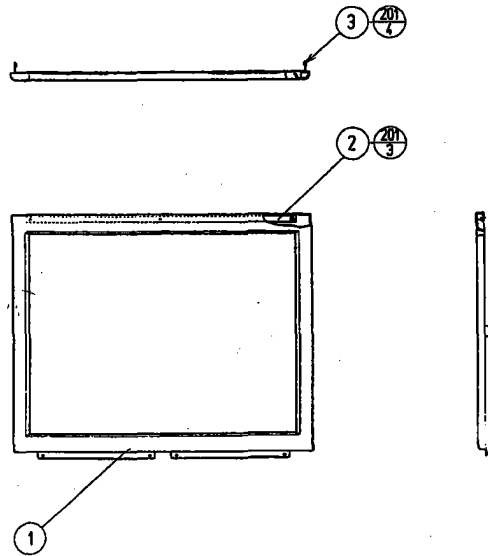
Indent #	Part No.	Description	Component Ref	Qty /assy
1	MGL-1102	TV MASK		1
2	MGL-1151	SLIT PLATE		1
3	MGL-1152	MASK SIDE HOLDER	(1)-2 EACH SIDE	2
201	FX0318	N6X1/2" S/TAP POSI CSK B	(2)-3	3
202	FS1017	M4X8 MSCR POSI CSK BNP	(3)-4	4

7.21. SRT-2150 ASSY SW PLATE
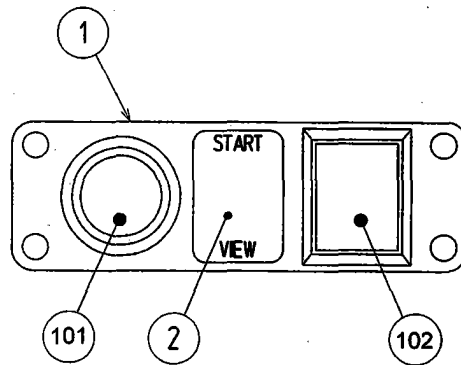
Indent #	Part No.	Description	Component Ref	Qty /assy
1	SRT-2151-A	SW PLATE BLANK		1
2	SRT-2151-B	STICKER START VIEW		1
101	509-5838-Y	SW PB LW1L-15Y-TK1670		1
102	509-5495-05	PUSH BUTTON BLUE		1
103	OS1174	CABLE TIE, NYLON 100mm	WIRE HARNS TOGETHER	1
301	600-7008-079	WIRE HARN BUTTON		1

Attn. Jason

0208 336/490

DRAWING NO. 50-2899-00EX

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	50-2906-00	RIGHT SIDE BRACKET
2	1	50-2905-00	LEFT SIDE BRACKET
3	1	50-2904-00	MAIN WELDED FOOT PEDAL
4	1	50-2903-00	LOWER SS COVER PLATE
5	1	50-2902-00	UPPER COVER PLATE
6	2	50-2587-00	BUSHING FOR PEDAL PIVOT SHAFT
7	8	43-1469-00	M4 X 7MM BHCS
8	2	43-0908-00	M4 X 7MM SCREW PPHMS
9	1	50-8026-00	POT, 5K, 1.125 LG SHFT PEC W/NUT & WSH.
10	1	50-2901-00	SIDE COVER PLATE
11	1	50-2900-00	POT MOUNTING BRACKET
12	1	50-8069-00	GEAR, 1MOD, 12T, .25 BORE DIE CAST
13	1	43-0061-00	GEAR SEG 1MOD 80T
14	1	50-8014-00	SCREW, M4 X 16 MM HHCS
15	1	43-0050-00	HEX NUT, M4
16	2	43-0198-00	WASHER, M4 FLAT WSH DIN 125A
17	1	43-0277-00	SET SCREW, M4X8MM CUP POINT
18	2	43-1470-00	SCREW M5 X 60MM
19	4	50-2912-00	SPACER TUBE
20	2	50-8171-00	BUMPER
21	4	43-0068-00	LOCKWASHER, M5 RIBBED
22	2	43-0175-00	HEX NUT M4 KEPS
23	1	50-2911-00	SPACER TUBE
24	1	43-0125-00	NUT M5
25	1	43-0124-00	ROLL PIN, 3/32" X 1-1/4"
26	1	50-2908-00	SPRING, L.H. HELIX
27	1	43-0995-00	#10 FLAT WASHER

TOLERANCES ARE

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HAPP CONTROLS, Inc.
Manufacturer of Electronic Controls

CLUB KART
PEDAL ASSY

DRAWN FAC   DATE 3/28/01   SCALE NTS   SHEET 1 of 1

DRAWING NO. 50-2899-00EX   B

ORIGINAL

REV.	ZONE	DESCRIPTION	APP'D	BY	DATE
A	-	INITIAL RELEASE	13618	FAC	3/28/01
B	-	UPDATED TO MATCH BOM	13734	FAC	4/10/01

8. APPENDIX A - ELECTRICAL SCHEMATIC

8.1. WIRE COLOURS

THE WIRE COLOUR CODE IS AS FOLLOWS:

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

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

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

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

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

[Example] 51------------ WHITE/RED = WHITE wire with RED stripes
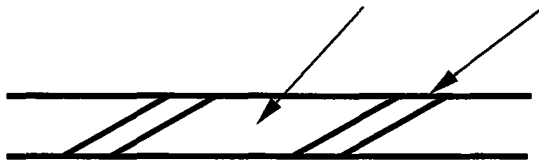
Note 2: The character following the wire colour code indicates the size of the wire.

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

8.2. ELECTRICAL SCHEMATIC

The following pages contain the electrical schematic for this machine.