

SERVICE MANUAL

SEGA®

VIRTUA COP3

UPRIGHT TYPE



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®



CONTENTS

1.	BEFORE USING THIS PRODUCT	1
1.1.	INSPECTIONS IMMEDIATELY AFTER TRANSPORTING THE PRODUCT TO THE LOCATION	2
2.	INTRODUCTION TO THIS SERVICE MANUAL	4
3.	INSTALLATION AND MAINTENANCE INSTRUCTIONS	5
3.1.	HANDLING AND INSTALLATION PRECAUTIONS	5
3.2.	COIN HANDLING	5
3.3.	NAME OF PARTS	6
3.4.	ACCESSORIES	7
3.5.	SHIPPING THE GAME BOARD	8
3.6.	SHIPPING THE MEDIA BOARD	10
3.7.	SHIPPING THE GD-ROM DRIVE	11
3.8.	ASSEMBLY INSTRUCTIONS	12
3.8.1.	INSTALLING THE DISPLAY CARD	13
3.8.2.	INSTALLING THE FLOOR	14
3.8.3.	SECURING IN PLACE (LEG ADJUSTER ADJUSTMENT)	18
3.8.4.	INSTALLING THE FOOT PEDAL	19
3.8.5.	COIN HANDLING INSTALLATION	24
3.8.5.1.	WIRING CONNECTIONS	25
3.8.6.	CONNECTION TO THE POWER SUPPLY	26
3.8.7.	ADJACENT CONTROL INTERFERENCE PREVENTION	27
3.9.	ASSEMBLY CHECK	28
3.9.1.	MEMORY TEST	28
3.9.2.	C.R.T. TEST	29
3.9.3.	INPUT TEST	30
3.9.4.	OUTPUT TEST	30
3.9.5.	GUN ADJUSTMENT	31
3.10.	MOVING THE MACHINE	32
3.11.	CONTROLLER	34
3.11.1.1.	REPLACING THE MICROSWITCH	34
3.11.1.2.	REPLACING THE SENSOR UNIT	38
3.12.	REPLACEMENT OF LED BOARD	39
3.13.	REPLACEMENT OF FLUORESCENT LAMP AND START LAMPS	40
3.13.1.	FLUORESCENT	40
3.13.2.	START LAMP REPLACEMENT	41
3.14.	GAME BOARD	42
3.14.1.	REMOVING THE BOARD	42
3.14.2.	REMOVING THE GD-ROM DRIVE	44
3.15.	COMPOSITION OF THE GAME BOARD	45
3.16.	TROUBLESHOOTING	46
3.17.	FUSES	47
4.	PERIODIC CHECK AND INSPECTION	48
4.1.	CLEANING THE CABINET SURFACES	48
5.	HOW TO PLAY	49
5.1.	GAME CONTENTS	50
5.1.1.	The Main Characters	51
5.1.1.1.	1P Character: RAGE	51
5.1.1.2.	2P Character: SMARTY	51
5.1.2.	Playing Virtua Cop 3	51
5.1.2.1.	Start a New Game	51
5.1.2.2.	Calibrating at the Start of the Game	51
5.1.2.3.	Mission Select	51
5.1.2.4.	Game Screen	52
5.1.2.5.	ES Gauge	53
5.1.3.	Game Over	54
5.1.4.	Continue	54
6.	MAINTENANCE INSTRUCTIONS	55
6.1.	EXPLANATION OF TEST DATA AND DISPLAY	55
6.2.	INTERNAL SWITCHES AND COIN METERS	56
6.3.	SYSTEM TEST MODE	57
6.3.1.	EXPLANATION OF TEST AND DATA DISPLAY	57
6.3.2.	SYSTEM TEST MENU MODE	58

6.3.3.	MEDIA BOARD TEST.....	59
6.3.4.	SYSTEM INFORMATION.....	60
6.3.5.	JVS TEST.....	61
6.3.6.	INPUT TEST Screen.....	62
6.3.7.	SOUND TEST.....	63
6.3.8.	C.R.T. TEST.....	64
6.3.9.	COIN ASSIGNMENTS.....	65
6.3.10.	CLOCK SETTING.....	67
6.3.11.	NETWORK SETTING (CORE).....	68
6.3.12.	NETWORK SETTING (MEDIA).....	69
6.4.	GAME TEST MODE.....	70
6.4.1.	INPUT TEST.....	71
6.4.2.	OUTPUT TEST.....	72
6.4.3.	GAME ASSIGNMENTS.....	73
6.4.4.	GUN ADJUSTMENT.....	74
6.4.5.	BOOKKEEPING.....	75
6.4.6.	BACKUP DATA CLEAR.....	77
7.	COIN MECH INSTALLATION AND CREDIT BOARD SET UP.....	78
7.1.	INTRODUCTION.....	78
7.1.1.	PRICE OF PLAY SETTINGS UK.....	80
7.1.2.	PRICE OF PLAY SETTINGS EURO.....	81
7.1.3.	PRICE OF PLAY SETTINGS Austria-Czech-Denmark-Norway-Israel-France2.....	82
8.	DESIGN RELATED PARTS.....	83
9.	PARTS LIST.....	84
9.1.	VCT-10002UK ASSY CABINET VCT U/R.....	84
9.2.	VCT-11002UK ASSY FRAMEWORK VCT U/R.....	87
9.3.	NOA-1200UK ASSY CRT COVER UK.....	89
9.4.	VCT-1200UK ASSY FOOT PEDAL DX.....	90
9.5.	VCT-1300 ASSY BILLBOARD.....	91
9.6.	VCT-1400UK ASSY CONTROL BOX VCT U/R.....	92
9.7.	VCT-1500UK ASSY FRONT PANEL VCT U/R FST.....	94
9.8.	NOB-1710UK ASSY AC UNIT.....	95
9.9.	NOA-1750UK ASSY SERVICE DOOR.....	95
9.10.	VCT-2100-01 CONTROL UNIT EXP.....	96
9.11.	JPT-2030 SENSOR UNIT.....	97
9.12.	HDT-4100UK ASSY XMFR.....	98
9.13.	CHT-4000UK ASSY ELEC.....	99
9.14.	VCT-4800UK ASSY MAIN BD VCT U/R.....	100
9.15.	VCT-5000UK ASSY FLOOR VCT U/R.....	101
9.16.	VCT-5100UK ASSY CCT VCT U/R.....	102
9.17.	VCT-5150UK ASSY FENCE L U/R.....	104
9.18.	VCT-5170UK ASSY FENCE R U/R.....	105
9.19.	VCT-5200UK ASSY FOOT BASE FRAME L.....	106
9.20.	VCT-5300UK ASSY FOOT BASE FRAME R.....	107
9.21.	HDT-6001UK ASSY WIRE L HDT U/R.....	108
9.22.	HDT-INST-U ASSY INST KIT U/R.....	109
9.23.	VCT-INST-SUB1-U ASSY SUB1 INST.....	109
9.24.	VCT-INST-SUB2-U ASSY SUB2 INST.....	109
10.	APPENDIX A - ELECTRICAL SCHEMATIC.....	110
10.1.	WIRE COLOURS.....	110
10.2.	ELECTRICAL SCHEMATIC.....	110

1. BEFORE USING THIS PRODUCT

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

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

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

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

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



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



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



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

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

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

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

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

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

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

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

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

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

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

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

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

1.1. INSPECTIONS IMMEDIATELY AFTER TRANSPORTING THE PRODUCT TO THE LOCATION



- Only QUALIFIED SERVICE PERSONNEL should carry out inspection.

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

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

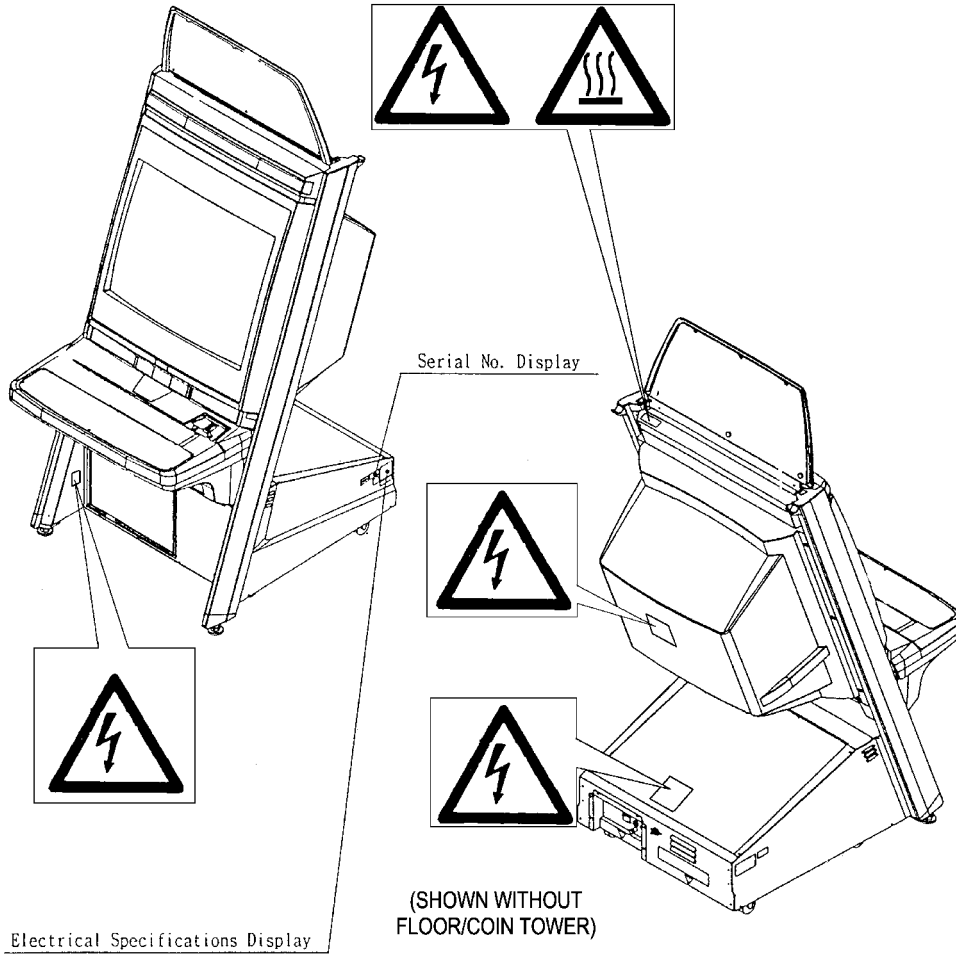
Can all doors and lids be opened with the accessory keys and/or tools?

CONCERNING THE STICKER DISPLAY

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

CONCERNING WARNING STICKERS

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



(Actual machines may differ slightly from the illustration)

SPECIFICATIONS	
Installation Space (cm):	76 (W) x 98 (L) Including Floor and Coin Tower
Height (cm):	210
Weight (kg):	Approx. 152
Rated Voltage (VAC):	230
Rated Current (A):	2
Operating Temperature Range	5 - 40°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, electro-mechanicals, servicing controls, spare parts, etc. as regards this 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 internal systems. Should such a situation arise contact the nearest branch listed below, or our head office.

SEGA AMUSEMENTS EUROPE LTD./ SEGA SERVICE CENTRE

Suite 3a
Oaks House
12 - 22 West Street
Epsom
Surrey
United Kingdom
KT18 7RG

Telephone: +44 (0) 1372 731820

Fax: +44 (0) 1372 731849

3. INSTALLATION AND MAINTENANCE INSTRUCTIONS



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

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:

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



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

3.2. COIN HANDLING

Standard Sega machines are fitted with a SR3 coin mechanism, however, as a service to our customers Sega machines can be supplied with no coin mechanism or door allowing the customer to fit a coin handling option from the approved list. Fit only the coin handling arrangements detailed below and follow the instructions provided in section 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 SR3
- Generic mechanical
- Mars (MS111B1 and ME115)
- SECI RM4-G20

3.3. NAME OF PARTS



	Width (cm)	Length (cm)	Height (cm)
CABINET	76	98	177
FLOOR	63	90	15
WHEN ASSEMBLED	93.5	184	210

3.4. ACCESSORIES

HDT-INST-U ASSY INST KIT U/R

Item	Component Part	Qty.	Description	Component Reference
1	VCT-5000UK	1	ASSY FLOOR VCT U/R	
2	VCT-INST-SUB1-U	1	ASSY SUB1 INST	
3	VCT-INST-SUB2-U	1	ASSY SUB2 INST	
16	PK0323	1	INST KIT PACKING WEDGE	


VCT-INST-SUB1-U ASSY SUB1 INST

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
2	VCT-5100UK	1	ASSY CCT VCT U/R	
3	VCT-5150UK	1	ASSY FENCE L U/R	
4	VCT-5170UK	1	ASSY FENCE R U/R	
6	PK0337	1	INST KIT BOX VCT U/R	

VCT-INST-SUB2-U ASSY SUB2 INST

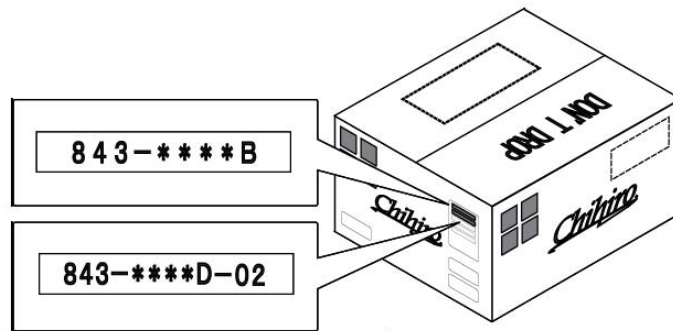
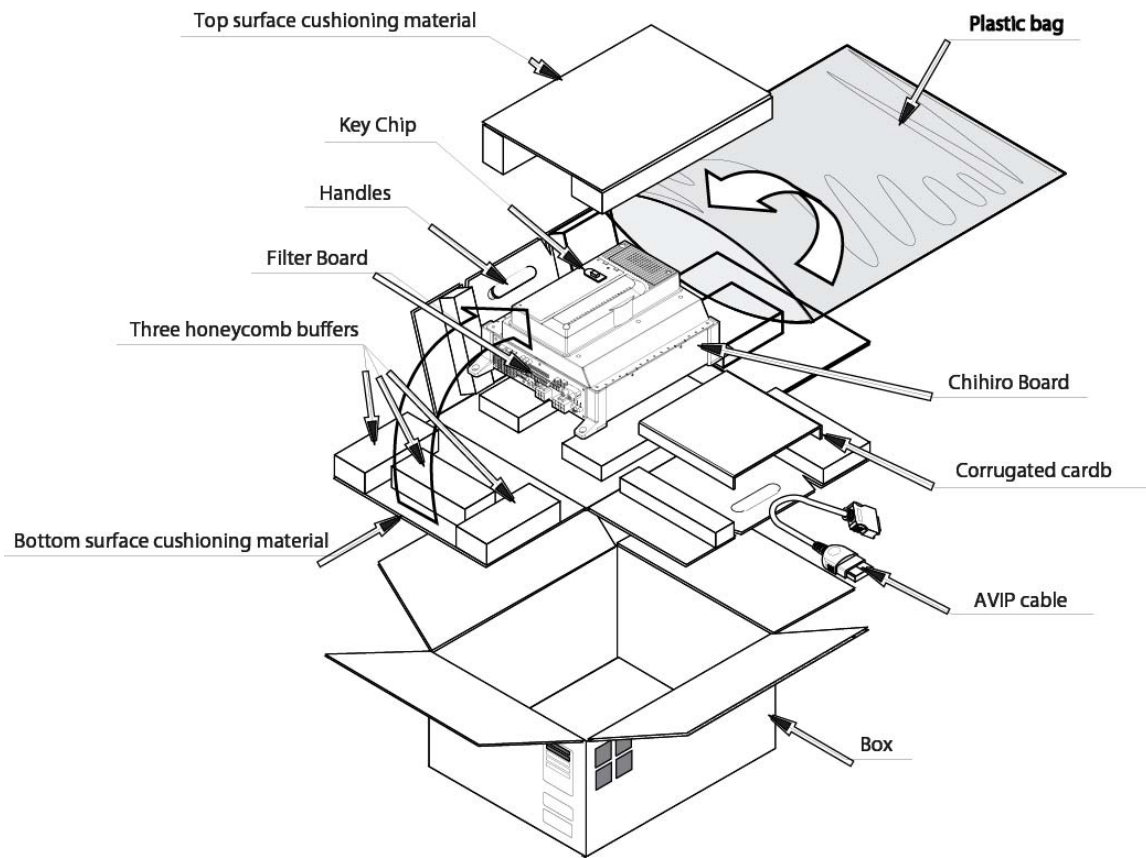
ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	VCT-1200UK	2	ASSEMBLY FOOT PEDAL DX	
2	VCT-5200UK	1	ASSEMBLY FOOT BASE FRAME L	
3	VCT-5300UK	1	ASSEMBLY FOOT BASE FRAME R	
5	SAECE-114	1	DECLARATION OF CONFORMITY	VCTU
7	CTA-0001	1	JOINT BRKT L	
8	CTA-0002	1	JOINT BRKT R	
9	VCT-3013UK	1	STICKER CONTROL PANEL CCT	Multilingual
15	PK0336	1	BOX PEDAL VCT UPRIGHT	
101	540-0006-01	1	WRENCH M4 TMP PRF	
102	540-0015-01	1	WRENCH M6 TMP PRF	
103	514-5078-5000	1	FUSE 5X20 CERAMIC SB 5000mA	
104	OS1019	2	SELF SEAL BAG 9X12.3/4	
105	440-CS0186UK	1	STICKER C EPILEPSY MULTI	
201	030-000820-SB	2	M8X20 BLT W/S BLK	(7)-1,(8)-1
202	068-852216-0B	2	M8 WSHR 22OD FLT BLK	(7)-1,(8)-1
203	008-T00412-0B	2	M4X12 TMP PRF TH BLK	(BILLBOARD)-2
204	SDW-0001UK	4	BLIND CAP UK	(2)-2, (3)-2
301	600-7141-250	1	CABLE JVS TYPE A-B 250CM	
402	420-6759-02UK	1	SERVICE MANUAL VCT U/R	
403	420-5827	1	SERVICE MANUAL SANWA 31K	
404	420-6620UK	1	SERVICE MANUAL GD ROM SYS	
405	509-5080	2	SW MICRO TYPE (SS-5GL2)	

3.5. SHIPPING THE GAME BOARD

 STOP IMPORTANT	<p>Replacement or repair of the Game Board (Chihiro) for this product should be undertaken at the appropriate repair centre. Be sure to follow the specifications below when requesting repairs/sending the board to the repair centre. Not following the specifications may result in the board not being accepted or in extra charges being made.</p> <ul style="list-style-type: none">• Put the game board in the carton box as is. Do not carry out any disassembly or part removal other than that specified.• Follow the procedure and instructions regarding direction below when placing the Game Board in the carton box.• When packing the game board with the Media Board attached, do not remove the Key Chip.• When packing the game board with the Media Board detached, be sure to include the AVIP Cable.• When packing, attach the accessory stickers in the specified places on the Game Board and carton box.
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INSTRUCTIONS

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



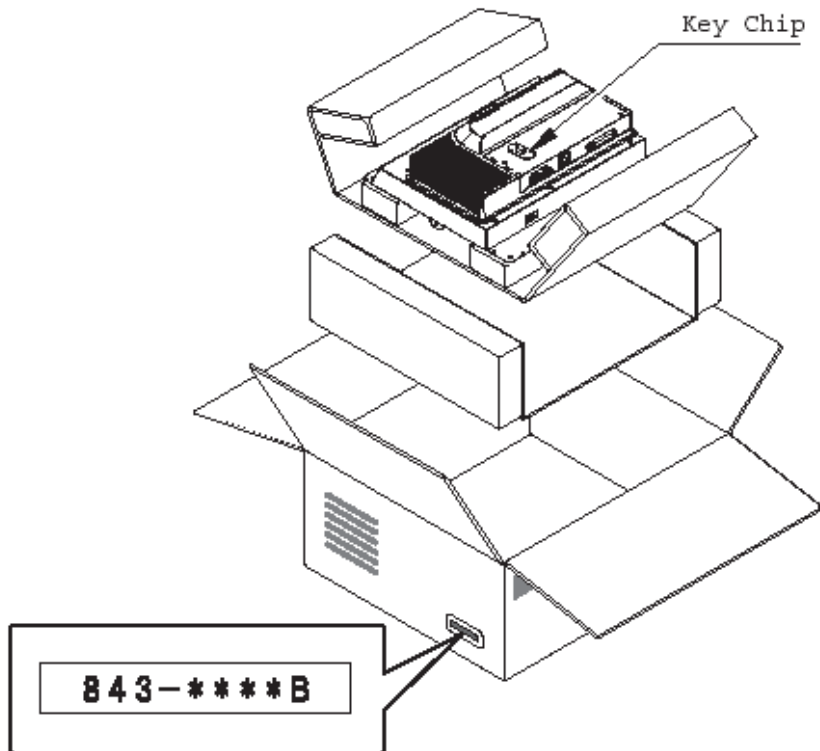
3.6. SHIPPING THE MEDIA BOARD



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

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

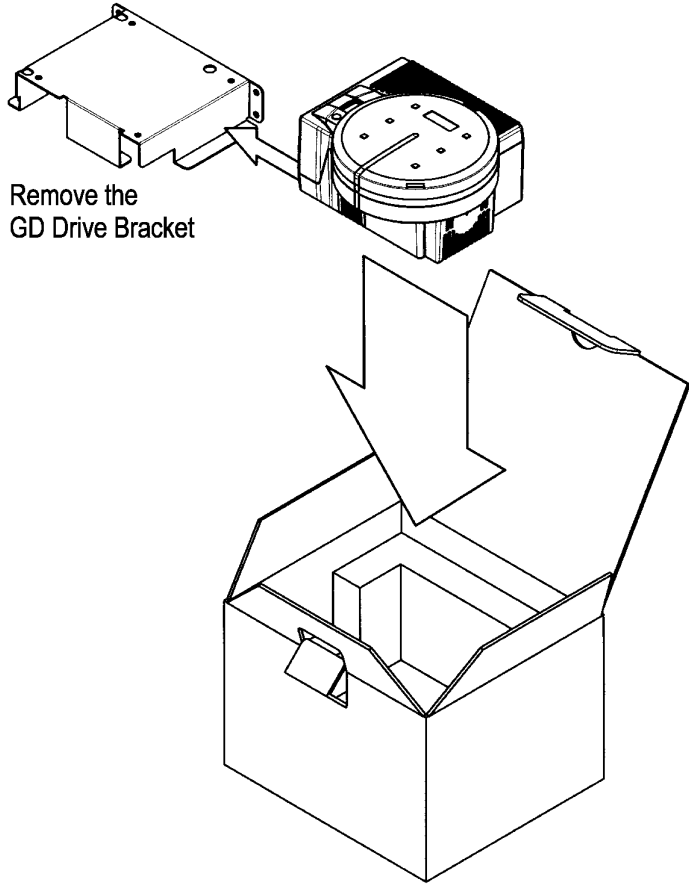
- Be sure to use the special purpose carton box included with this product.
- Do not remove the Key Chip. Send the board with the Key Chip attached.
- Undo the 10 screws holding the Media Board to the Main Board and pack the Media Board. Do not carry out any disassembly or part removal other than that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



3.7. SHIPPING THE GD-ROM DRIVE



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



Remove the
GD Drive Bracket

3.8. ASSEMBLY INSTRUCTIONS



- 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.



- Only QUALIFIED SERVICE PERSONNEL should carry out assembly.

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

STEP 1 INSTALLING THE DISPLAY CARD

STEP 2 INSTALLING THE FLOOR

STEP 3 SECURING IN PLACE (LEG ADJUSTMENT)

STEP 4 INSTALLING THE FOOT PEDAL

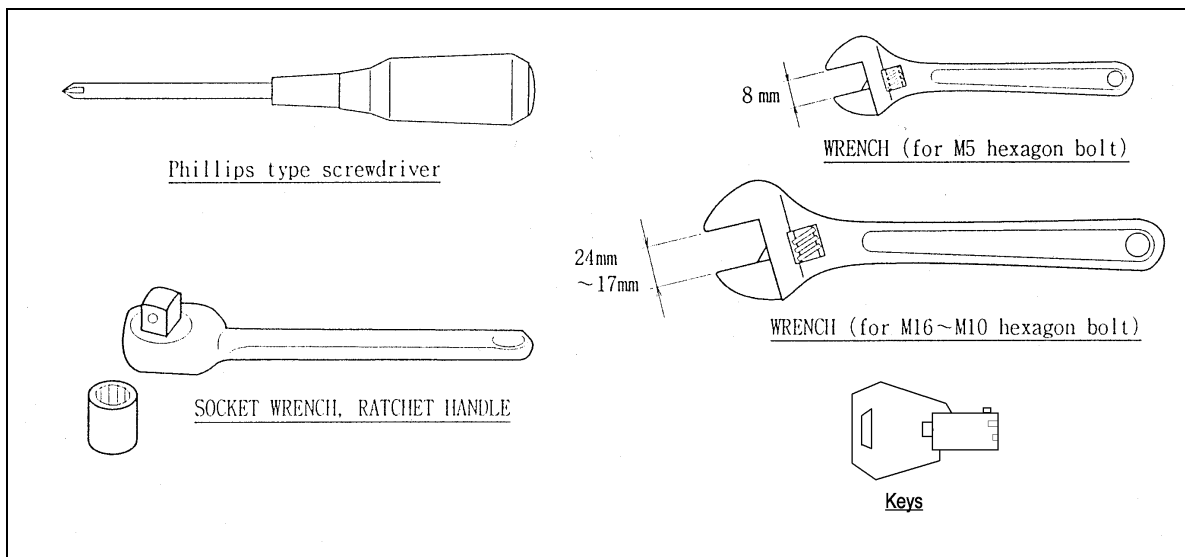
STEP 5 COIN HANDLING INSTALLATION

STEP 6 CONNECTION TO THE POWER SUPPLY

STEP 7 ASSEMBLY CHECK

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

The following tools will be required when installing this machine, in addition to the tools provided with the Installation Kit:

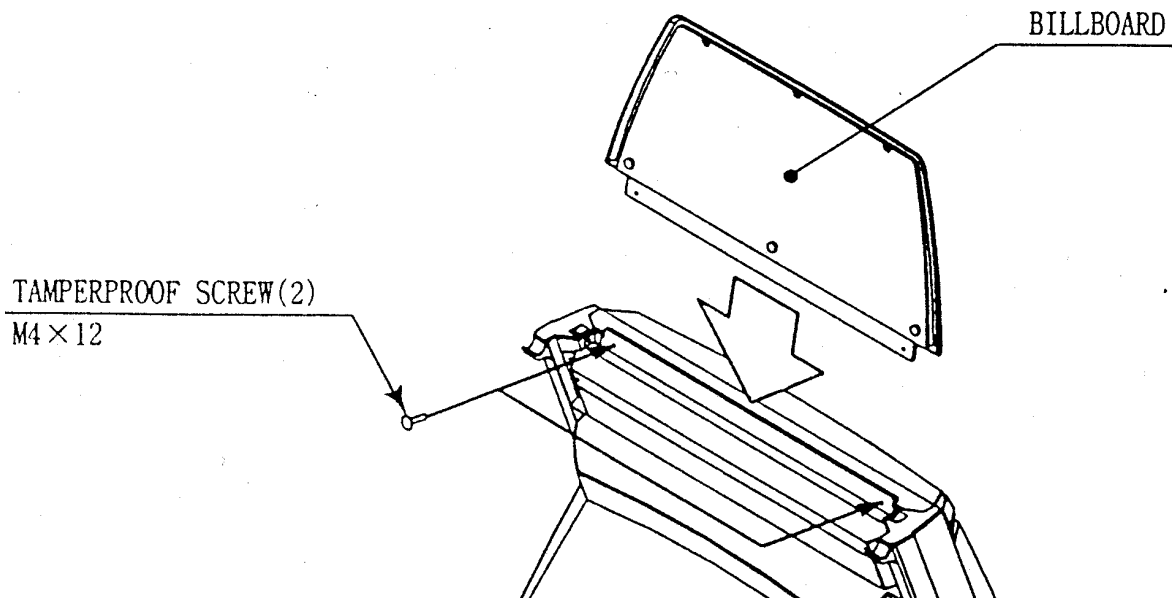


3.8.1. INSTALLING THE DISPLAY CARD



- Only QUALIFIED SERVICE PERSONNEL should carry out this operation.

1. Insert ASSY BILLBOARD to the top part of the cabinet
2. Secure with the two Tamperproof screws.



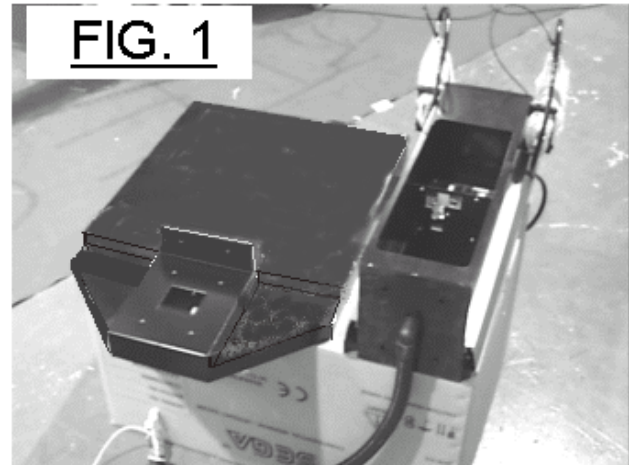
3.8.2. INSTALLING THE FLOOR



- Ensure all connections are secure - poor connections can cause electric shock or short circuit.
- Take care not to damage wiring during installation, as this can cause electric shock or short circuit.
- Please read these instructions carefully and follow them in step by step.
- **IMPORTANT: We recommend that two (2) people carry out this operation, as there are heavy components involved.**

Tools Required: No1 Pozidriver, M8 Wrench or Socket.

1. Open the Installation box and remove its entire contents. Once the box is completely empty fold the four open leaves back into the box (this will help to create a sturdier box as we intend to use it as a makeshift table).
2. Turn the box upside down. Place the Floor Assembly and the Coin Tower onto the box as shown in figure 1.



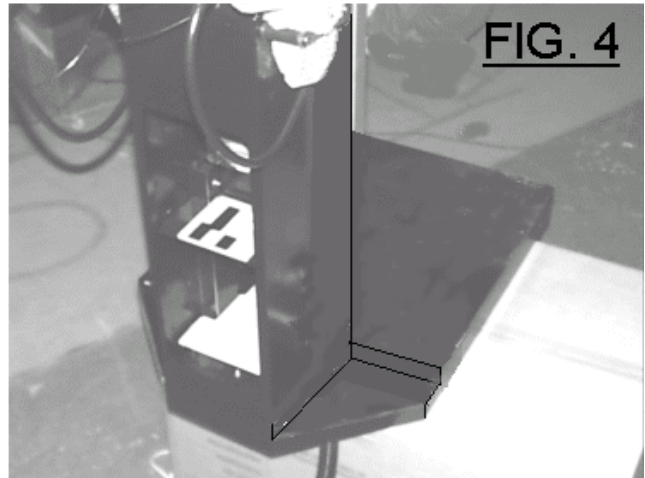
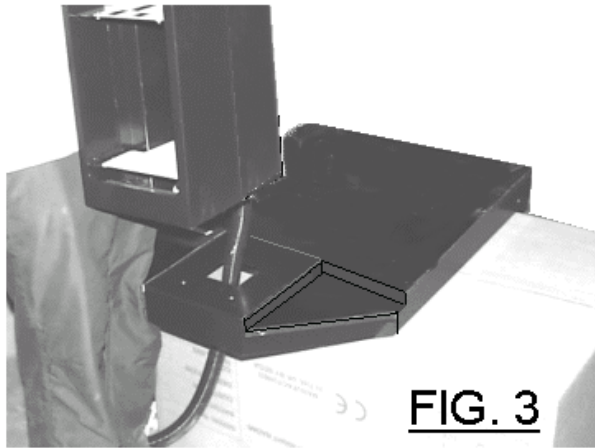
Note:
The coin tower shown is for illustration only and will differ slightly from the actual one used

3. Remove the Cashbox Base Plate by unscrewing the 2 x M4 Pozi Pan screws, located directly inside the Cashbox Door.
4. Remove the Elbow Joint, which is attached to the free end of the Flexipipe.
5. Insert the Flexipipe into the hole located at the front end of the Floor. (Fig 2)

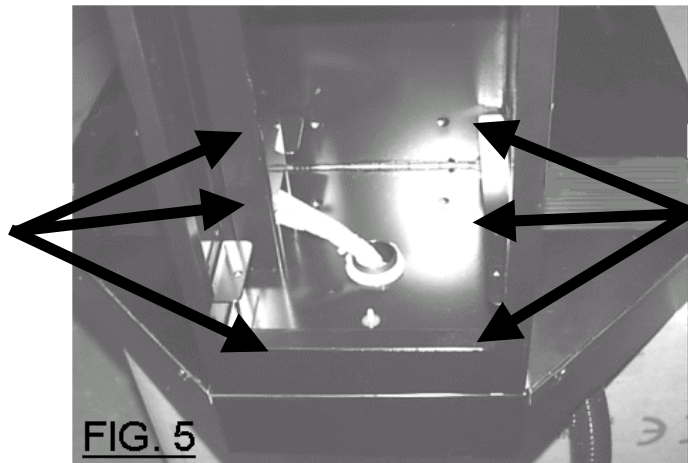


Note:
The coin tower shown is for illustration only and will differ slightly from the actual one used

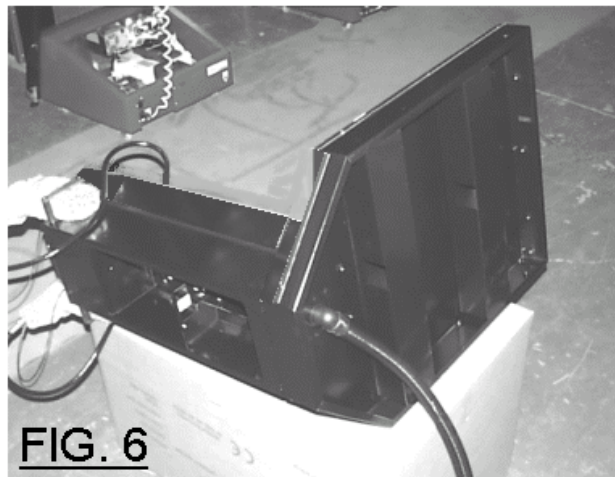
6. Offer the Coin Tower up onto the Floor (Fig 3) ensuring that the Flexipipe continues through the access hole (Fig 4).



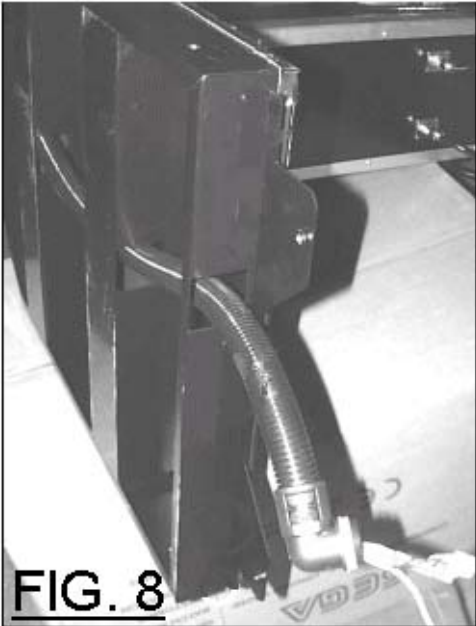
7. Secure the Coin Tower to the Floor using the 6x M8 Hex head bolts and M8 washers (provided) at location shown in fig 5.



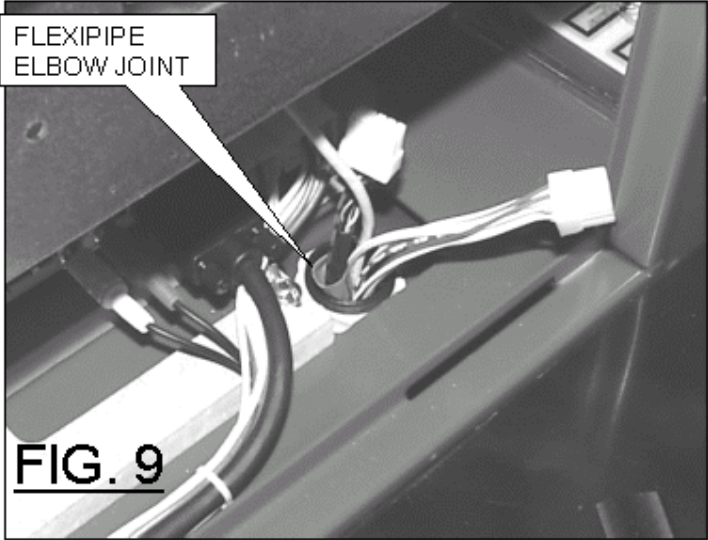
8. Move the Coin Tower and Floor Assembly onto its side (Fig 6) and thread the Flexihose through the ribs on the underside of the Floor. (Fig 7)



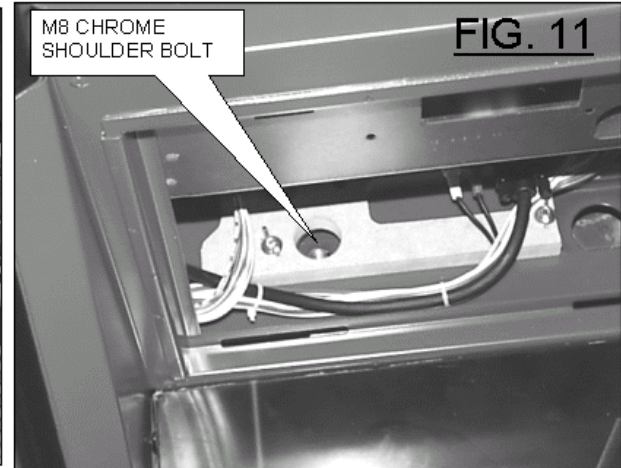
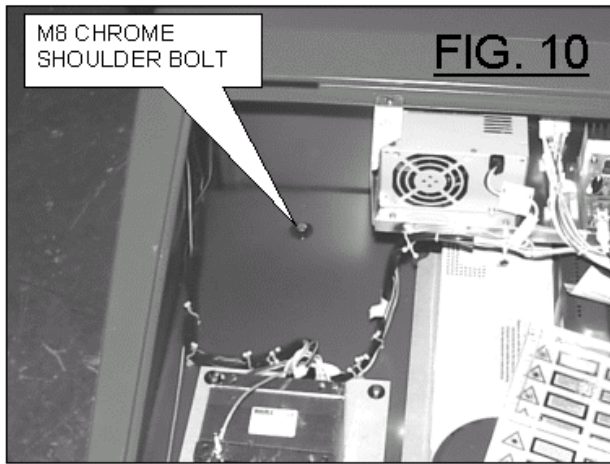
- 9. Refit the Elbow joint onto the open end of the Flexipipe.
- 10. Fit the Joint Bracket onto the machine end of the Floor (Fig 8)



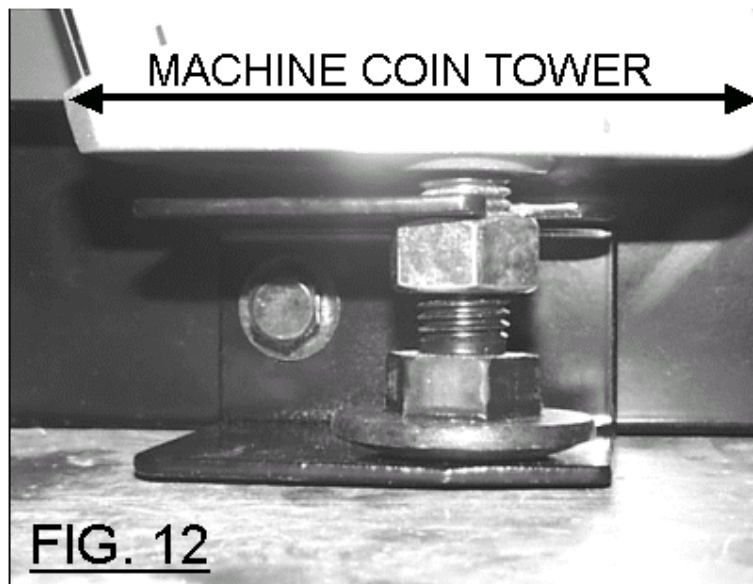
- 11. Offer the Floor to the machine and fit the Flexipipe Elbow Joint into the recess as shown in Fig 9.



12. Push the Floor upright to the machine and secure it using the 2 x M8 Chrome Shoulder Bolts provided (Fig 10 & 11).



13. Finally, secure Joint Brkt L and Joint Brkt R to the Floor and Adjustable feet using 2 x M8 Hex HD Bolts Blk and 2 x M8 Washers Blk (Fig 12).



3.8.3. SECURING IN PLACE (LEG ADJUSTER ADJUSTMENT)

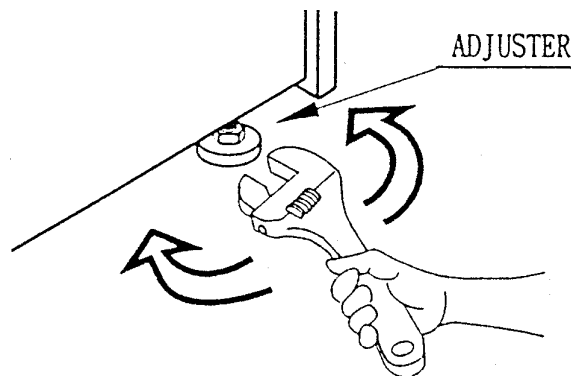
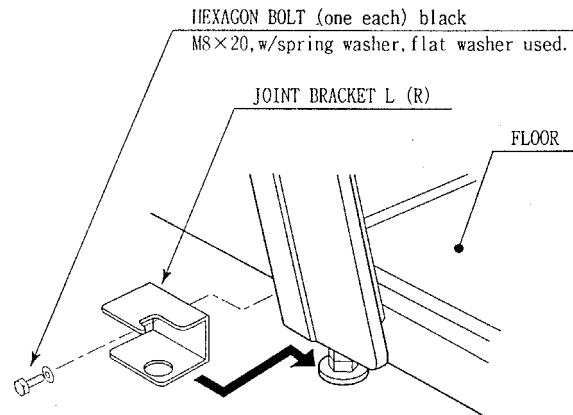


- Make sure all of the leg adjusters are in contact with the floor. If not the machine may move and cause injury. This operation requires 2 people.

- Only QUALIFIED SERVICE PERSONNEL should carry out this operation.

This machine has four castors and two leg adjusters. When the installation position is decided, unscrew the leg adjusters so that they raise both front castors 7mm from the floor. Make sure the machine is level.

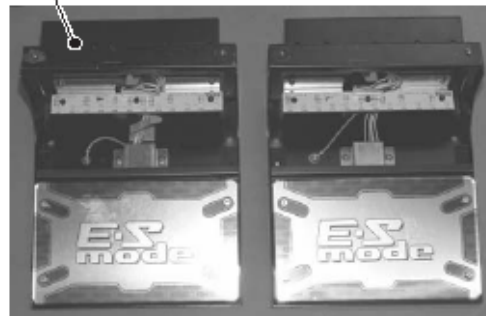
1. Move the product into the installed position.
2. Slightly lower the 2 Adjusters on the cabinet and install Joint Bracket L & R by inserting from the rear, and secure to the floor using M8 hex head bolts as shown. Now tighten the two M8 shoulder bolts.
3. After lowering the Adjusters fully downward, tighten both Adjusters' lock nuts fully upward.
4. The service door can now be refitted.
5. Unscrew the adjusters until they are in contact the floor, and use a wrench to turn them further until the front castors are raised approximately 7mm above the floor.
6. Tighten the locknut on the leg adjusters upwards to lock the legs in position.



3.8.4. INSTALLING THE FOOT PEDAL

1. Attach the pedal and fence to the left and right of the controller cabinet. The foot base and fence have right and left versions; make sure they are aligned correctly before attaching.

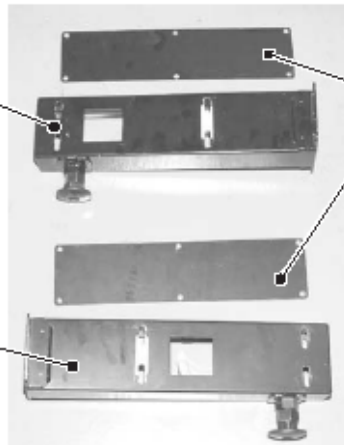
PEDAL (works for both right and left)



FOOT BASE L

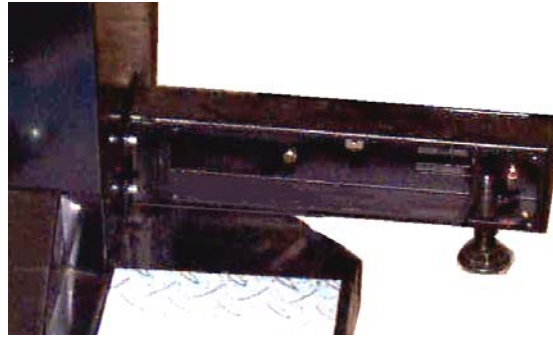
BASE HOLE LID (works for both right and left)

FOOT BASE R



Instructions for attaching the L (left) side are included in this manual. The procedure for attaching the R (right) side is the same.

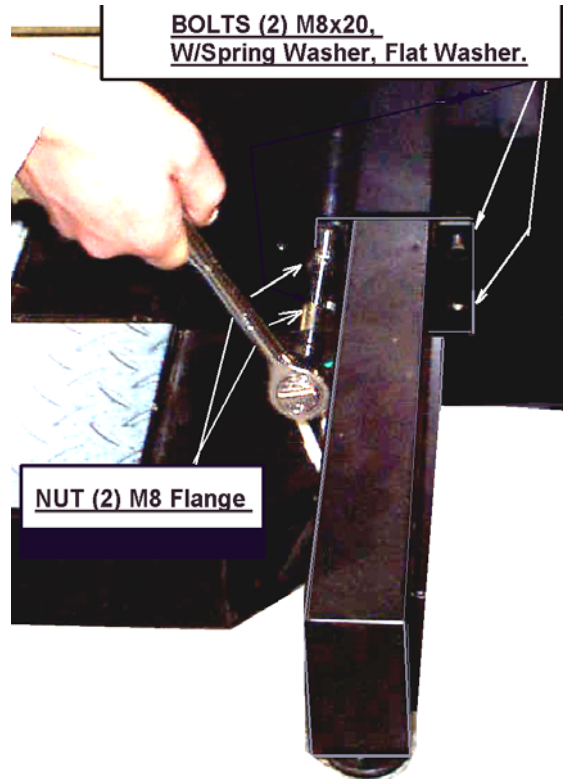
2. Attach the foot base to the U-shaped bracket sticking out from the side of the controller cabinet by inserting it from the side.



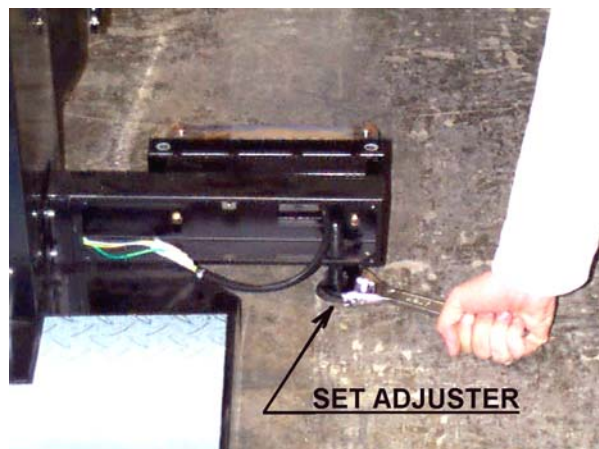
3. Secure the foot base with the following:

BOLTS (2) M8 x 20, w/spring washer, flat washer used).

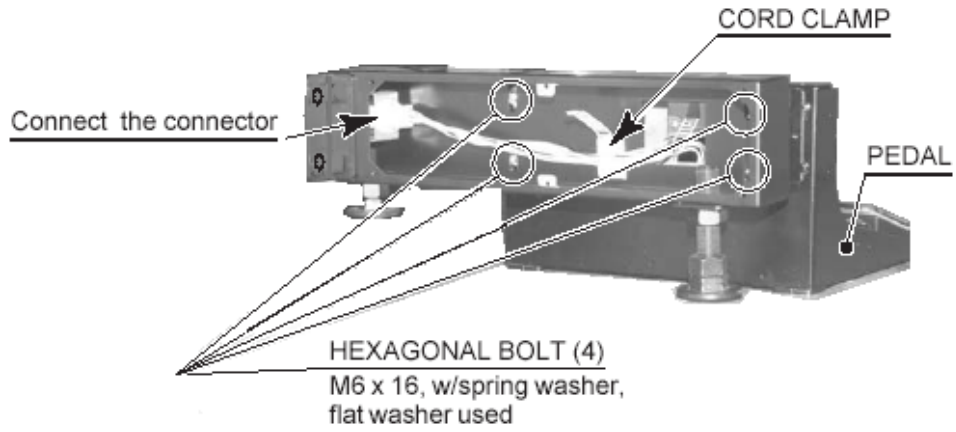
NUTS (2) M8 Flange Nut



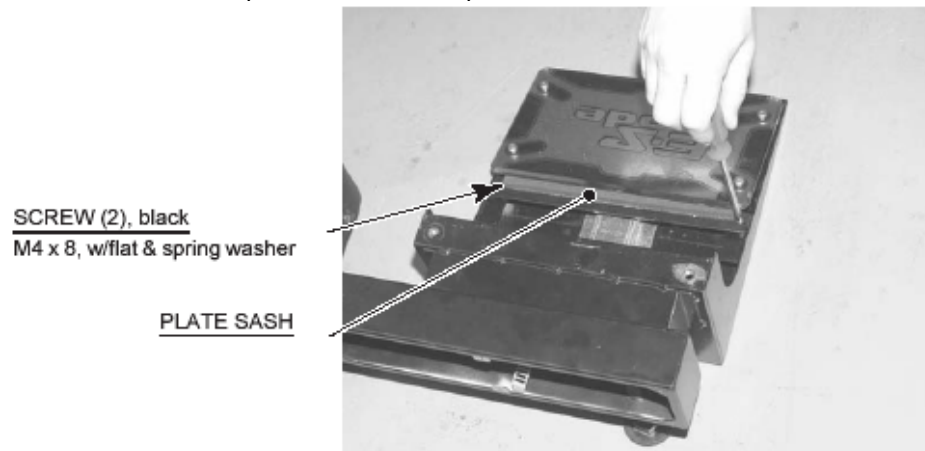
4. Set foot base adjuster.



5. Attach the pedal to the foot base using 4 hexagonal bolts. Be sure not to tighten the hexagonal bolts completely.
6. Pull wire from the pedal to the foot base and connect the connector on the end of the wire to the connector on the U-shaped bracket. Use the cord clamp in the foot base to secure the wire.

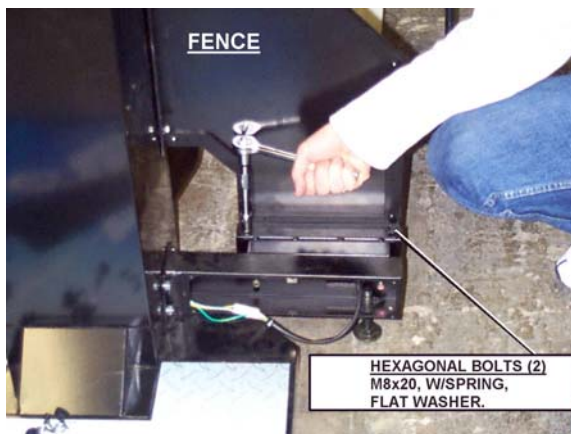
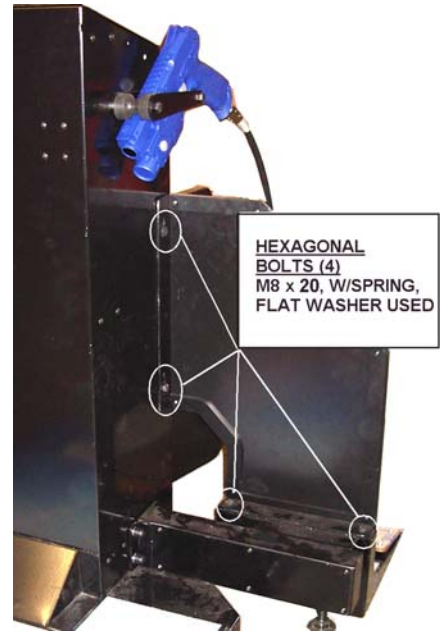


7. Remove the 2 screws and remove the plate sash from the pedal.

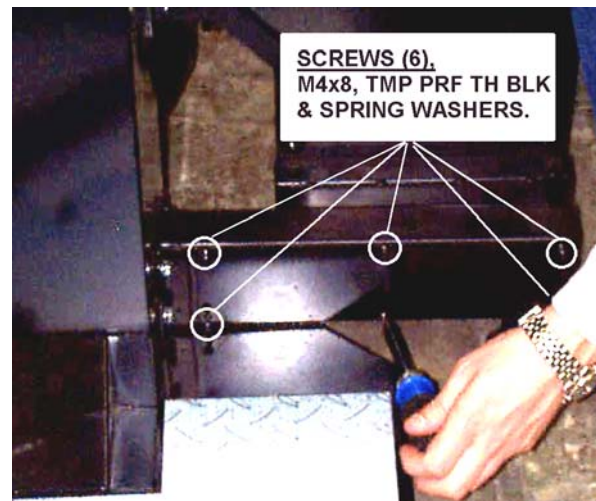


8. Insert the fence into the pedal and attach with 4 hexagonal bolts. Use the large flat washers with the hexagonal bolts used on the cabinet.

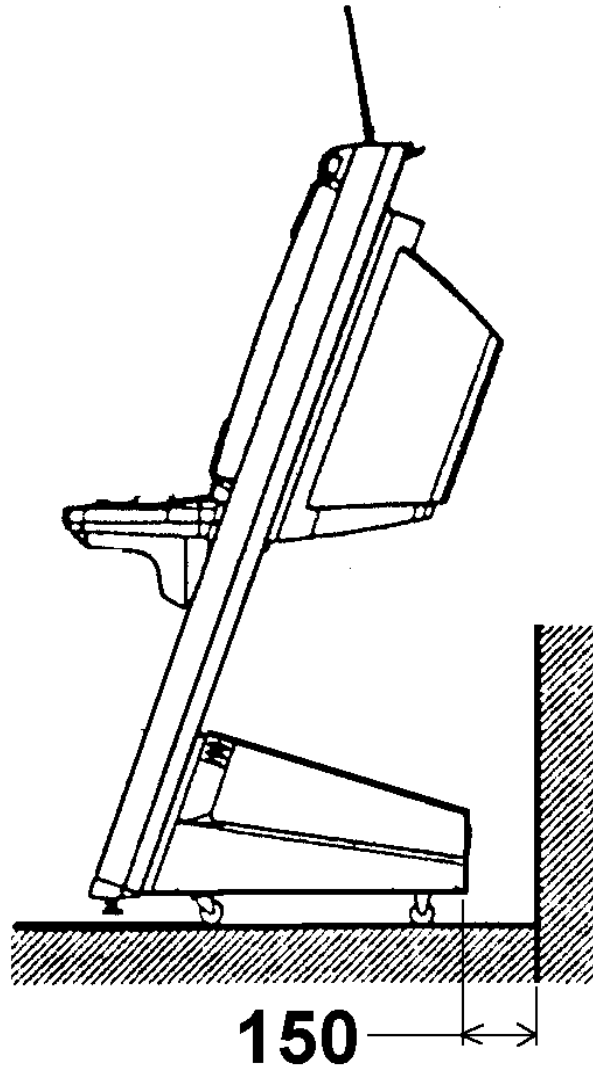
(M8 x 20, W/SPRING WASHER, FLAT WASHER).



9. Reattach the plate sash as it was before.
10. Securely tighten the 4 hexagonal bolts on the pedal.
11. Attach the base hole lid to the foot base and attach 6 screws.



Ensure adequate ventilation is maintained as detailed below:



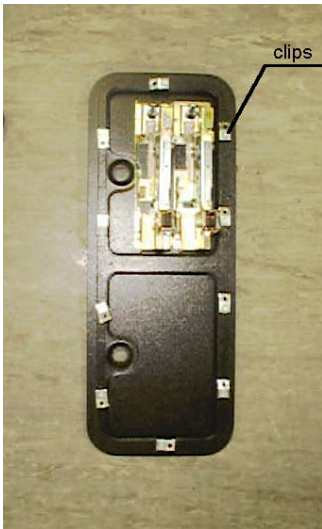
(Actual machines may differ slightly from the illustration)

3.8.5. COIN HANDLING INSTALLATION



- Only QUALIFIED SERVICE PERSONNEL should carry out this operation.

When fitting the coin mechanism to the door please refer to the specific manufacturers installation instructions for that coin mechanism. To fit the door to the machine, follow the procedure below.



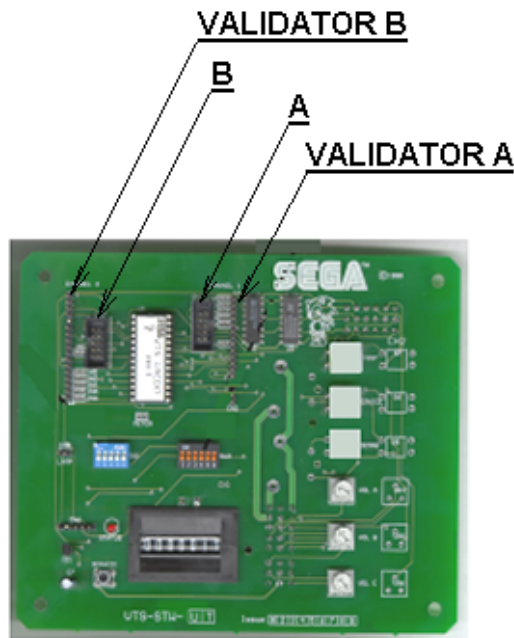
- Loosen all of the bolts on the frame which secure the clips.
- Turn all clips in towards the door.



- 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.

3.8.5.1. WIRING CONNECTIONS.

COIN MECH	LOOM	INSTALLATION
C220B	LM1006IDC LM1006LAMP-0.1	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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, SR3	OWN LOOM AND LM1006LAMP-0.1	<ul style="list-style-type: none"> • 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



VTS credit board assembly

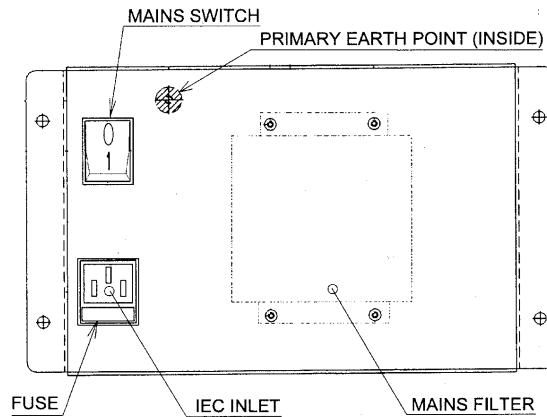
3.8.6. CONNECTION TO THE POWER SUPPLY



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

- Only QUALIFIED SERVICE PERSONNEL should carry out this operation.

1. The AC Unit is located on the right hand side of the base unit, when viewing the screen. It houses the IEC inlet, mains switch and fuse.



2. Ensure that all of the machine's wires have been connected in accordance with the preceding sections and that the mains switch is OFF.
3. Check that the operating voltage of the mains supply matches the machine (section 1.1).
4. Insert the IEC lead into the IEC inlet and the mains plug into a wall socket. If applicable, switch the wall socket ON.
5. Stand clear of the machine and switch the mains switch ON.

3.8.7. ADJACENT CONTROL INTERFERENCE PREVENTION



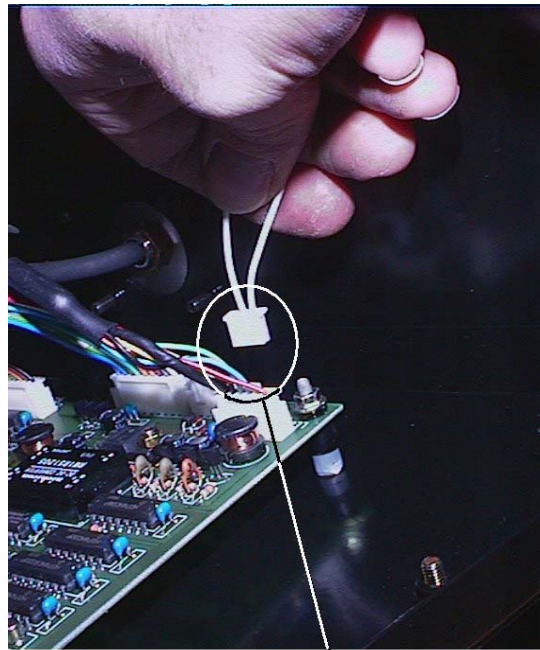
- Be sure that the machine is not connected to the mains supply before attempting this operation.
 - Be careful not to damage wiring.
 - The Game Board area should be accessed only if necessary.
-
- Only QUALIFIED SERVICE PERSONNEL should carry out this operation

When games with the same or similar infrared sensing system are installed side by side, interference may occur causing malfunction or inaccuracy of the sensing system in adjacent games.

A removable wire harness controls the operating frequency of the gun sense system. Removal of this harness switches from the default frequency to an alternate one.

Where game machines of the same or similar type are installed side by side, remove the jumper harness (SPY-60010UK) from every other machine in the line.

1. Turn off the power.
2. Open the Control Panel Cover as detailed in section 3.12 of the Service Manual.
3. Locate the Sensor Board and remove SPY-60010UK WIRE HARNESS HIGH FREQUENCY JUMPER as required.



Disconnect

3.9. ASSEMBLY CHECK



- Only QUALIFIED SERVICE PERSONNEL should carry out this operation.

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

In the test mode, perform the following test:

3.9.1. MEMORY TEST

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

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

```
MEDIA BOARD TEST

VERSION ****
STATUS GOOD
CHECKING 100%

SYSTEM TEST
DIMM0 - GOOD
DIMM1 - GOOD
IC34,35S - GOOD
IC10,11S - GOOD
GD DRIVE - GOOD
-- COMPLETED --

PRESS TEST BUTTON TO EXIT
```

MEDIA BOARD TEST screen

```
SYSTEM INFORMATION

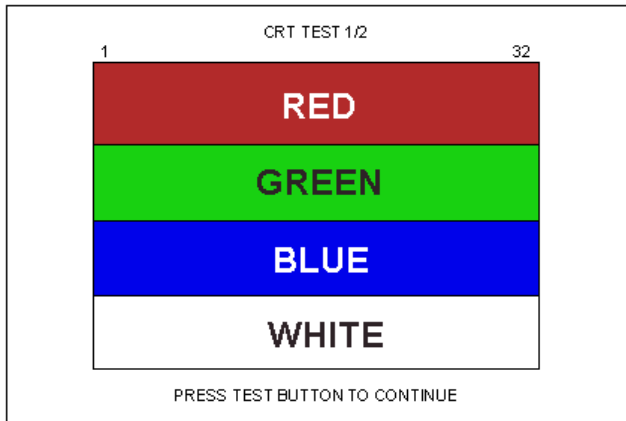
MAIN BOARD
REGION ****
BOOT VERSION ****
QC FIRM VERSION ****
SC FIRM VERSION ****
SERIAL NO. *****

MEDIA BOARD
DIMM BOARD + GDROM
MEMORY SIZE 512MB
FIRM VERSION ****
SERIAL NO. *****

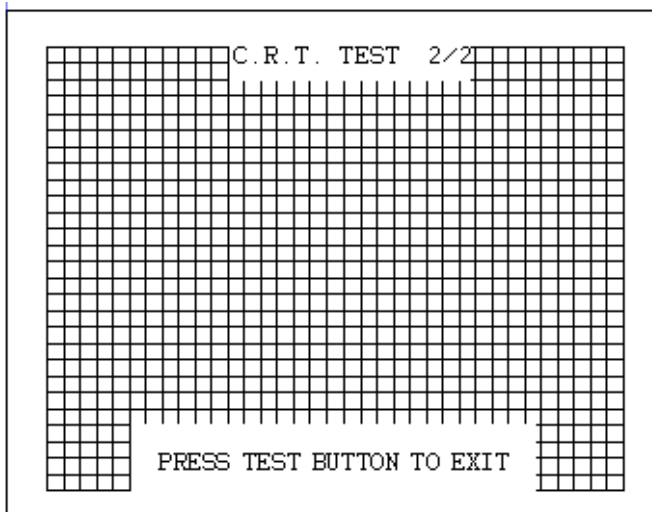
PRESS TEST BUTTON TO EXIT
```

SYSTEM INFORMATION screen

3.9.2. C.R.T. TEST



In the TEST mode menu, selecting C.R.T. TEST allows the screen (on which the monitor is tested) to be displayed. Although the monitor adjustments have been made at the time of shipment from the factory, make judgment as to whether an adjustment is needed by watching the test mode screen. If it is necessary, adjust the monitor by referring to Monitor manual.



3.9.3. INPUT TEST



Selecting the INPUT TEST on the game test mode menu screen causes the screen (on which each switch is tested) to be displayed. Press each switch. If the display beside each switch indicates "ON," the switch and wiring connections are satisfactory.

3.9.4. OUTPUT TEST

Select OUTPUT TEST from the menu in the test mode to cause the screen (on which each lamp and wiring connections are tested) to appear. Ensure that lamp light up satisfactorily.



3.9.5. GUN ADJUSTMENT

Before starting the operation, play the game by yourself and make sure that the gun readjustment is not needed and that you can play the game without a problem. Although completed at the factory, the gun adjustment may be necessary because after the adjustment the product has been disassembled for packing and shipping.



Perform the above inspections also at the time of monthly inspection.
As for the gun adjustment described in above, confirm weekly that the gun is properly adjusted.

3.10. MOVING THE MACHINE



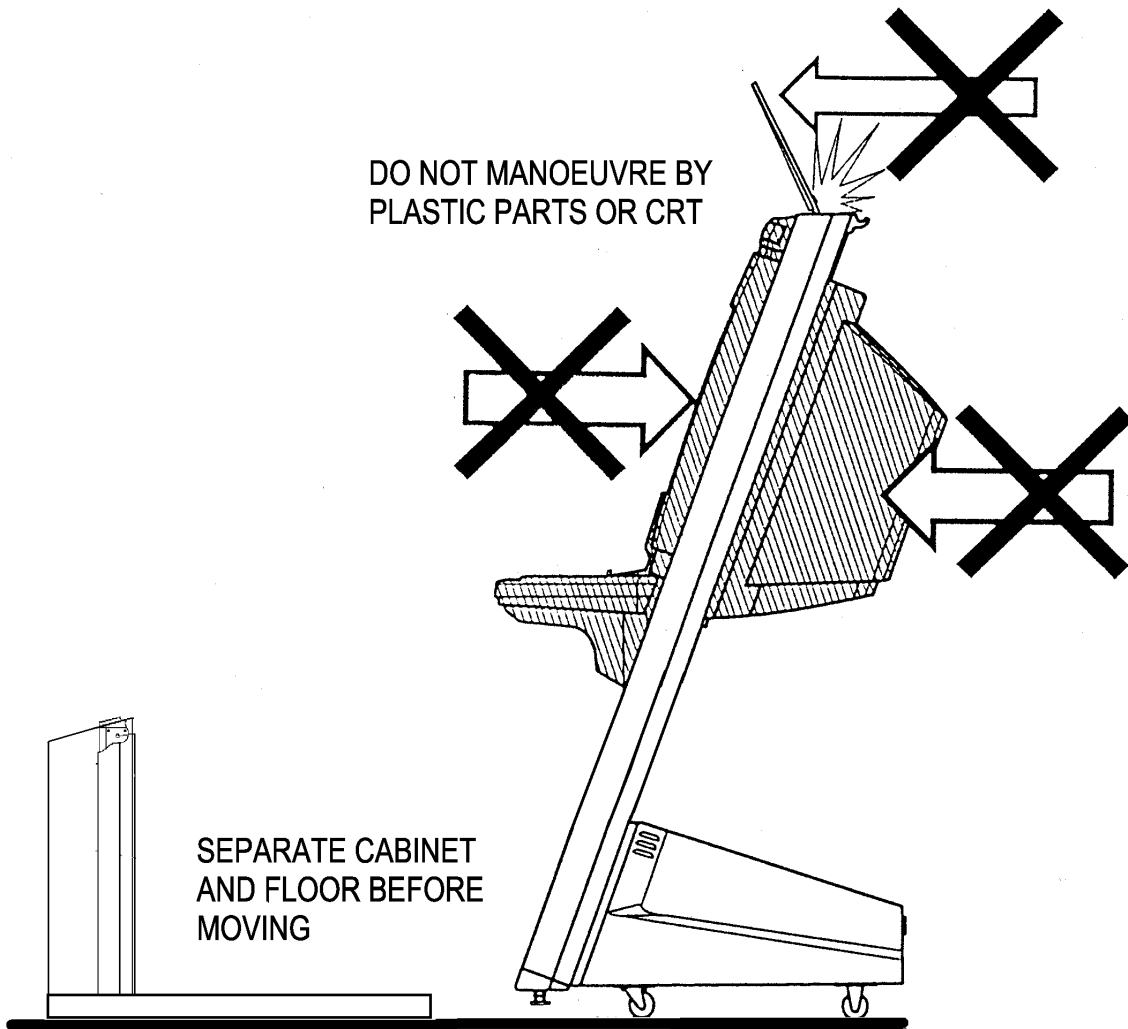
- When moving the machine, be sure to remove the plug from the power supply. Moving the machine with the plug inserted can cause the power cord to be damaged, resulting in a fire or electric shock.
- Separate the floor assembly from the cabinet before moving. Refer to section 3.8.2 for details.
- Retract 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.
- Do not push the upper part of the cabinet. Failure to observe this can cause the cabinet to fall forwards and result in accidents.



- When transporting the machine, be sure to hold the catch portion on the rear of the cabinet with the castors making contact with the surface as shown below. Inclining the machine by holding portions other than the catch or moving the cabinet without retracting the adjusters can damage the cabinet and/or the floor surface.
- Do not push the Billboard. Failure to observe this may damage the installation portions and may cause unexpected accidents.



- Only QUALIFIED SERVICE PERSONNEL should carry out this operation.



(Actual machine may differ slightly from illustration)

3.11. CONTROLLER



IMPORTANT

- Follow these directions carefully to avoid damaging or losing small parts.

In the cases where the gun's operation is not satisfactory or the gun sight deviates from the direction in which the control unit is pointed, the gun's interior parts may have been damaged. Replace the parts by disassembling the gun using the following procedure.

Note: be sure to perform sighting check in the test mode when the gun parts are replaced.

3.11.1.1. REPLACING THE MICROSWITCH

To replace the Gun Controller's internal components, first separate the left shell (Cover L) and right shell (Cover R). The controller's internal components are mounted on the right shell, so work with the gun lying on its right side. To replace the Weapon Change Button microswitch, first remove the Weapon Change Button from the right shell.

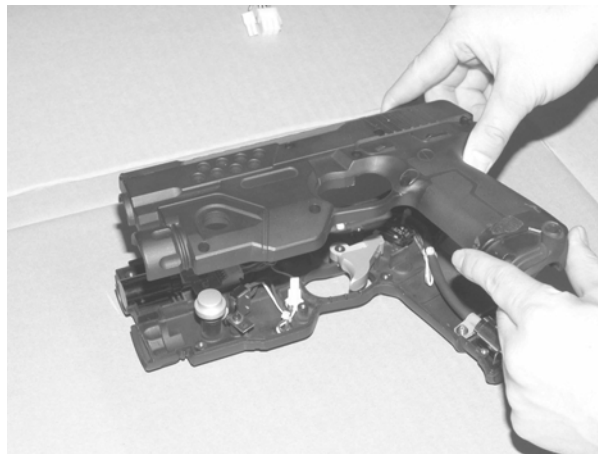
1. Turn power off.
2. Remove the 10 screws to separate the two shells.



SCREW (10), black
M3 x10, w/small flat & spring washers

3. With the right shell lying flat, carefully lift the left shell from the right shell.

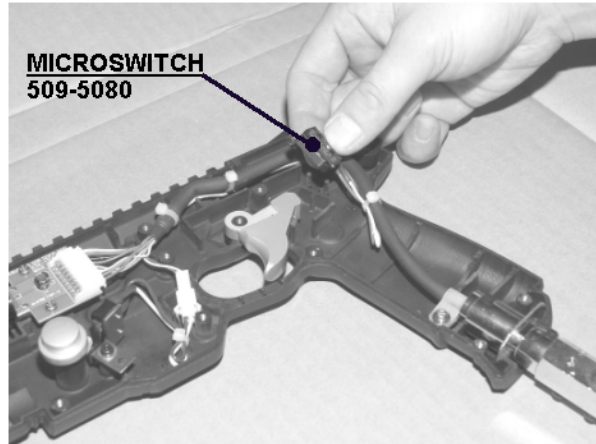
SCREW (10), black / M3 x 10, W/small flat & spring washers



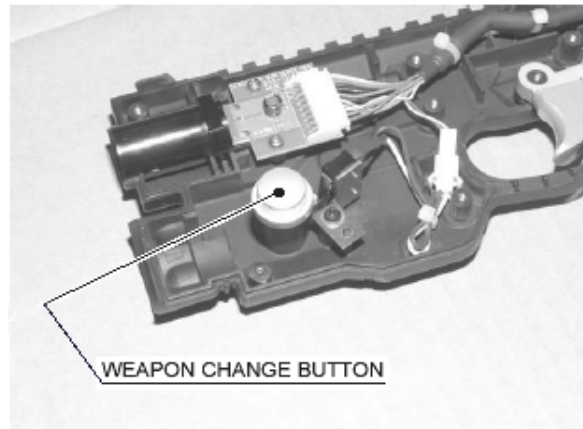
4. Remove the trigger microswitch from the right shell.

[MICROSWITCH / 509-5080](#)

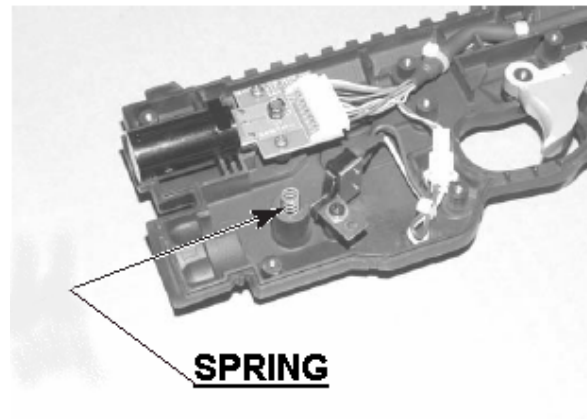
5. Remove the soldering and detach the microswitch.



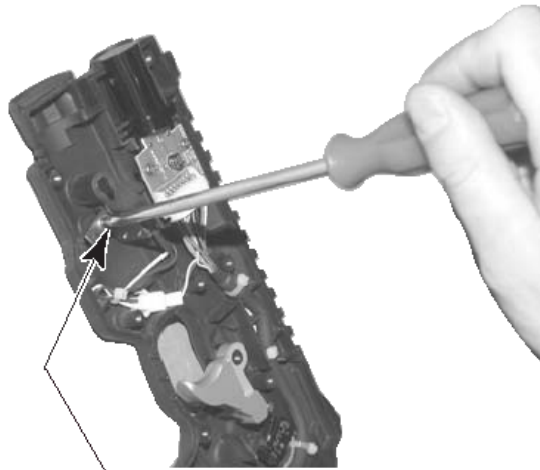
6. Remove the Change Button from the right shell.



7. Remove the spring from the right shell.

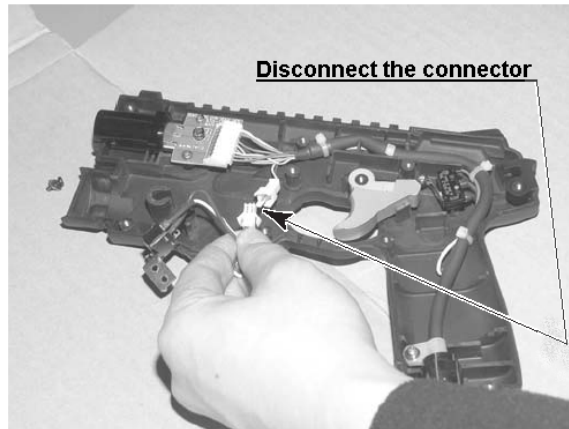


8. Remove 1 screw and detach the microswitch (with SW bracket attached) from the right shell.
SCREW (1) / M3 x 8, W/flat & spring washers



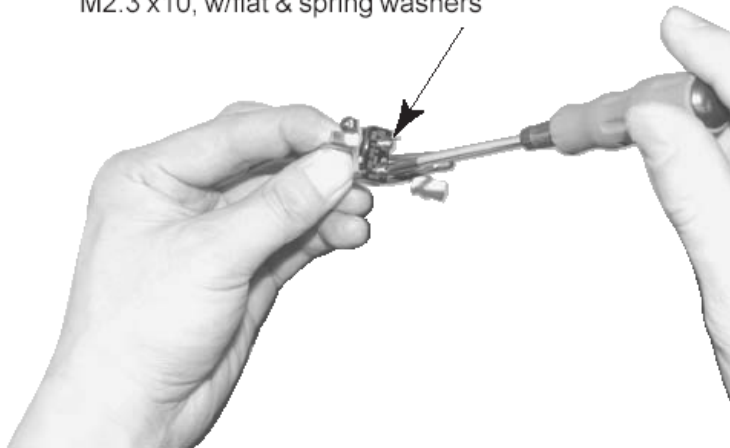
SCREW (1)
M3 x 8, w/flat & spring washers

9. Disconnect the microswitch wire connector.

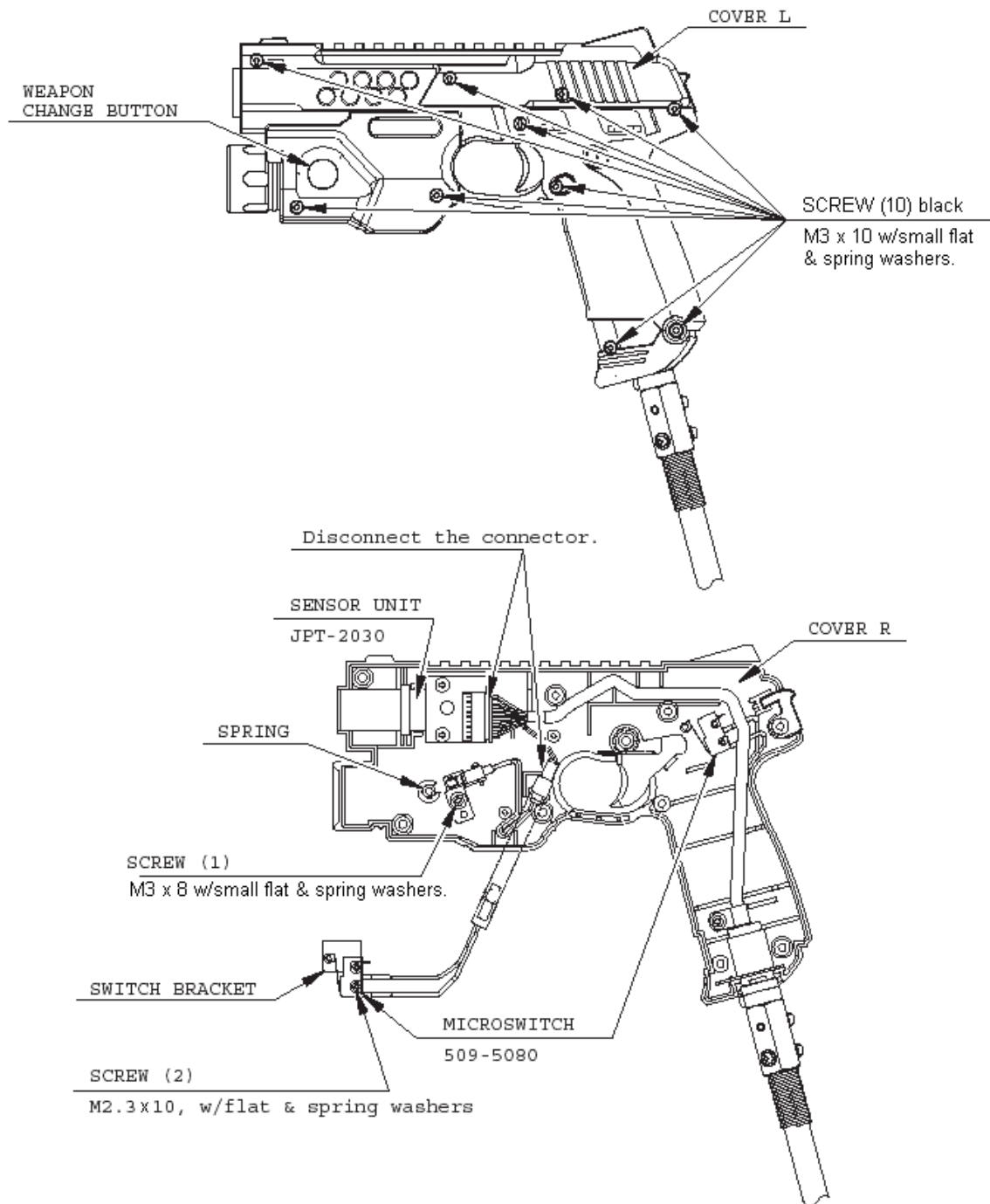


10. Remove the 2 screws and remove the SW bracket from the microswitch.
SCREW (2) / M2 x 10, W/flat & spring washers

SCREW (2)
M2.3 x10, w/flat & spring washers



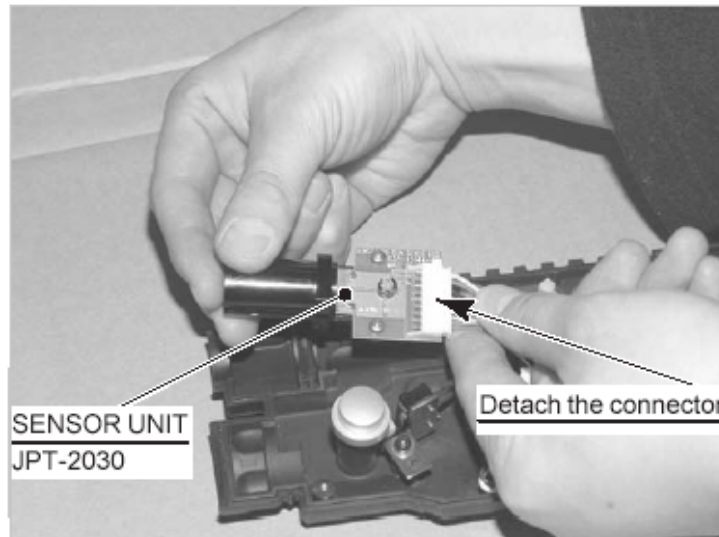
- Remove the soldering and extract the microswitch.



- Solder in the new microswitch and reassemble the Gun Controller. Be careful not to tighten the screws too tightly.
- Test the trigger (or Weapon Change Button) to make sure that the new microswitch functions properly.

3.11.1.2. REPLACING THE SENSOR UNIT

1. Follow instructions (1) – (3) of “Replacing the Microswitch” to remove the left shell.
2. Detach the connector and pull out the sensor unit.
SENSOR UNIT / JPT-2030



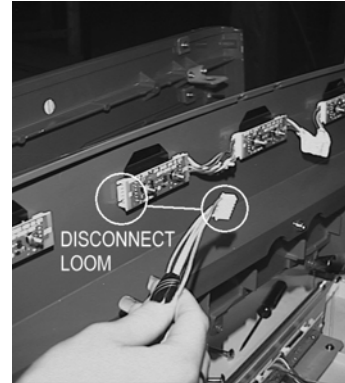
3.12. REPLACEMENT OF LED BOARD



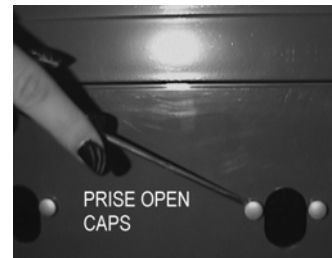
- Only QUALIFIED SERVICE PERSONNEL should carry out these procedures.

The operation of the ten LED boards located around the CRT can easily be checked by viewing from the front with the power switched on. Two red points of light from the LEDs should be visible through each of the ten black lenses: if any of the LEDs are not lit, the corresponding LED board(s) should be replaced as follows.

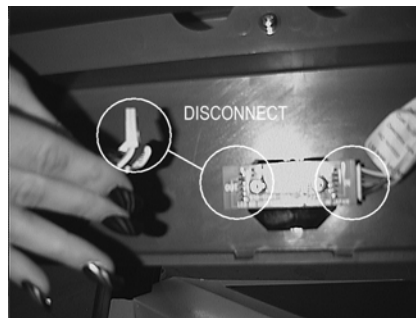
1. Turn the power OFF.
2. Remove the Front Panel as described in section 3.13.1, taking care to disconnect the LED board loom before fully removing the Front Panel (see right).



3. To access the mounting screws for the malfunctioning LED board(s), prise open the screw caps with a small flat head screwdriver as shown.



4. Lay the Front Panel face down on a soft surface (e.g. a blanket) to prevent marking. Disconnect the individual LED board(s) from the loom and remove the two M3 nuts to release the LED board.
5. Fit the replacement LED board and reassemble in reverse order.
6. Adjust the gun calibration in the test mode when the machine has been reassembled (Section **Error!** Reference source not found.)



3.13. REPLACEMENT OF FLUORESCENT LAMP AND START LAMPS



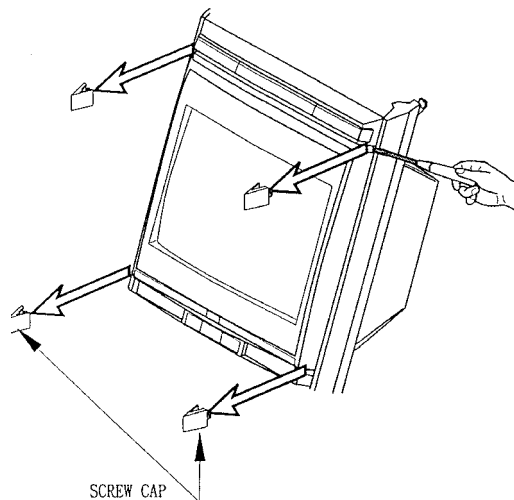
- Never touch places other than those specified. Touching places other than those specified can cause electric shock and short circuit. Disconnect the machine from the supply before attempting the replacement of any lamp.
- When performing work, be sure to turn power off. Working with power on can cause an electric shock or short circuit.
- Hot fluorescent lamps can cause burns. Be very careful when replacing them.
- Use a secure step to improve access to the upper parts of the cabinet.



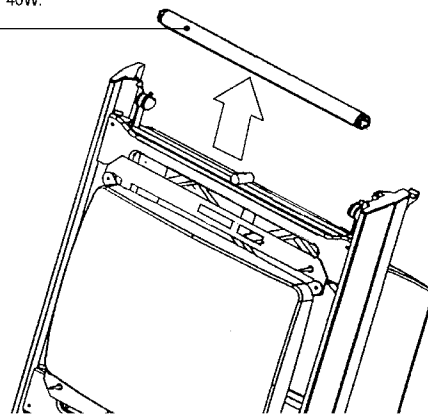
- Only QUALIFIED SERVICE PERSONNEL should replace lamps.

3.13.1. FLUORESCENT

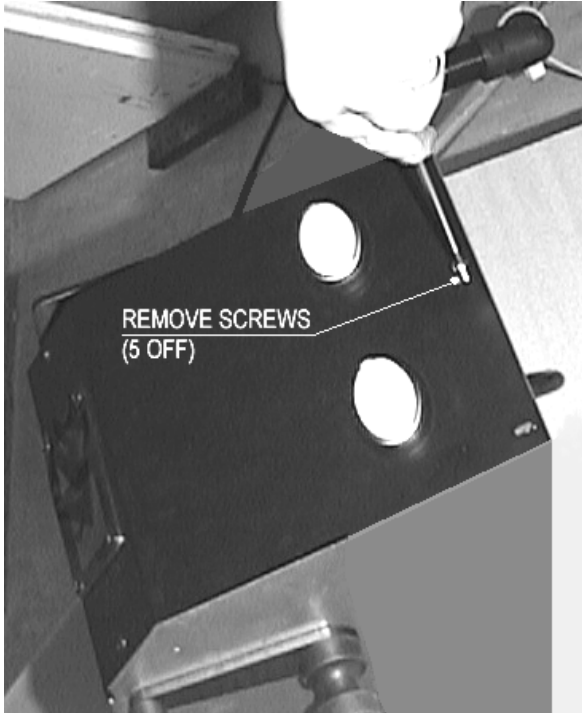
1. Power OFF the machine and remove the IEC lead from the wall outlet.
2. Unlock the lock on the underside of the Control Panel Base, and open the Panel.
3. By using a flat bladed screwdriver, carefully remove the four screw caps from the front panel.
4. Take out the four tamperproof screws and the two lower screws, and carefully take off the Front Panel far enough to disconnect the LED board loom (refer to section 3.12). Once this loom has been disconnected, the Front Panel can be fully removed.
5. Remove the four screws and the Earth Link to allow the Billboard Holder to be removed.
6. Disconnect the two end caps and withdraw the Lamp upwards through the two mounting clips to remove the Fluorescent lamp.
7. After replacing the lamp, reassemble in reverse order, being sure to replace the Earth Link between the Billboard Holder and frame, and the LED board loom.



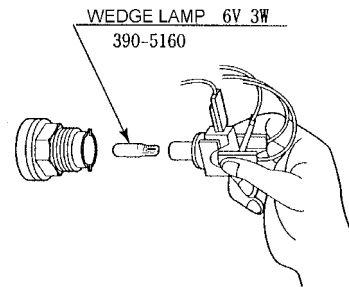
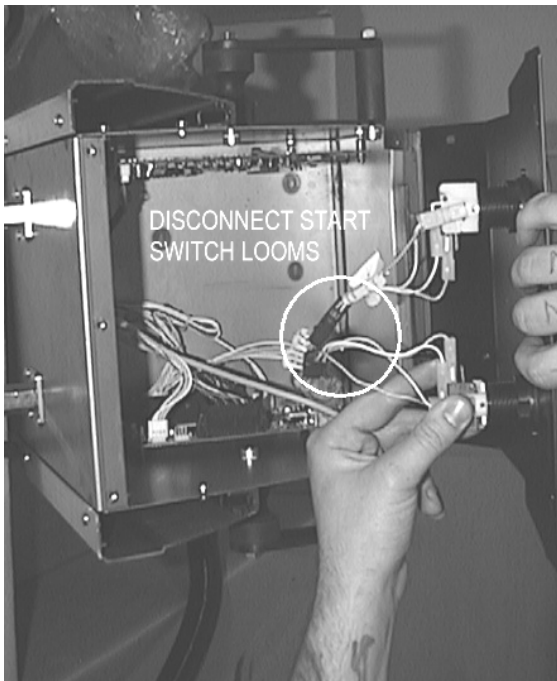
FLUORESCENT LAMP 40W:
390-5695-40-DUK



3.13.2. START LAMP REPLACEMENT



1. Remove the control panel cover as shown by removing the 5 screws holding it in position.
2. Carefully lift the control panel cover up until it is possible to disconnect the wire harness plugs attaching the start switches to the cabinet.
3. Turn the control panel cover over and remove the micro switch from the start switch as shown below.
4. Remove and replace the wedge lamp.
5. Reassemble the control panel cover to the gun cabinet.



Note:
The coin tower shown is for illustration only and will differ slightly from the actual one used

3.14. GAME BOARD



- Turn off the mains power and remove the power cord before opening the machine.
- To prevent risk of shock or fire, be careful not to damage any wiring.

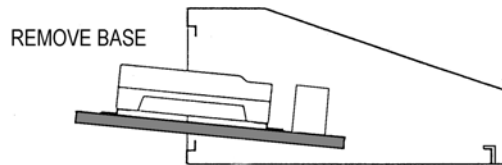
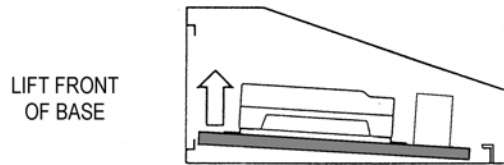
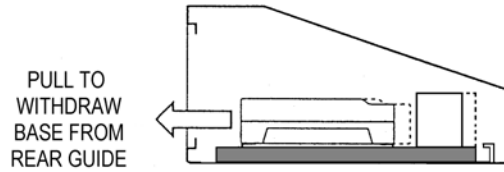
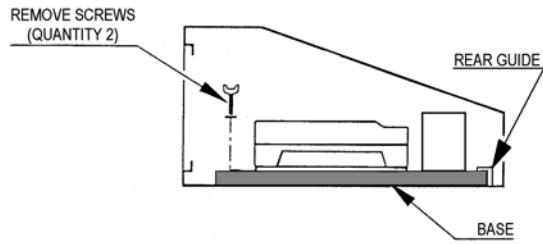
- The GAME BOARD should not require any work to be carried out upon it. All settings and tests can be achieved without access to the GAME BOARD.
- Take anti-static precautions to avoid damaging the electronic parts.
- All work to be carried out by QUALIFIED SERVICE PERSONNEL

The GD-ROM Service Manual supplied with this product instructs you to remove the Key Chip when shipping the Game Board. However, this product employs a dedicated Game Board, therefore do not disassemble the Game Board, or remove the Key Chip.

3.14.1.REMOVING THE BOARD

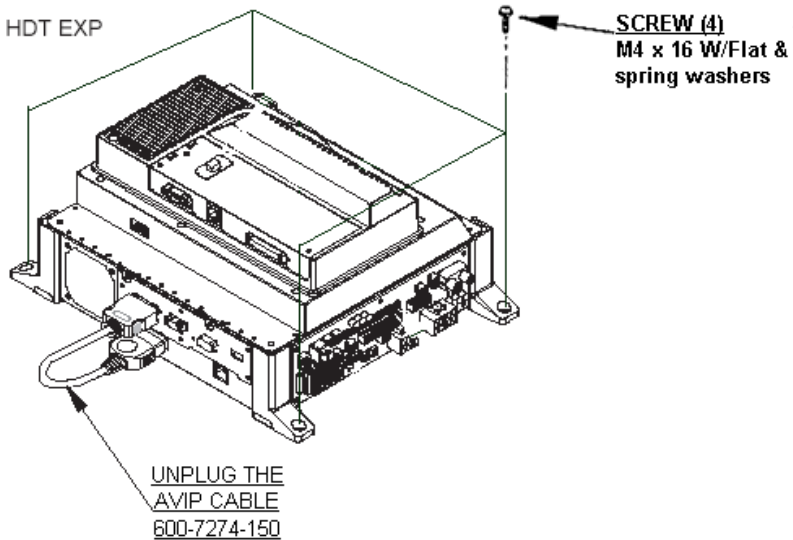


1. Turn off the power.
2. Unlock and remove the Service Door.
3. Disconnect all harnesses linking the Game Board assembly to the cabinet.
4. Remove the two M4 wing bolts and carefully withdraw the assembly upwards and out through the service opening (see following page).



5. Remove all connectors from the filter board of the Game Board. Also remove the GD cable connector from the DIMM Board.
6. Remove four screws securing the Game Board to the base.
7. Reassemble in reverse order.

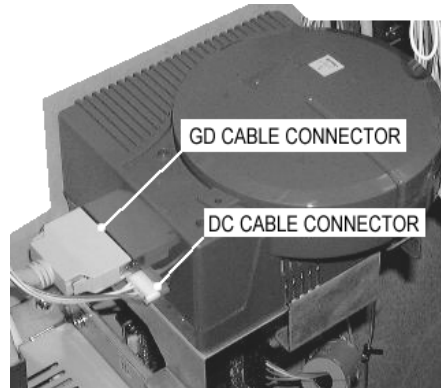
ASSY CASE BOX HDT EXP
843-0001D-12



3.14.2.REMOVING THE GD-ROM DRIVE

Take out the ASSY MAIN BD from the cabinet and remove the GD-ROM Drive from the ASSY MAIN BD as follows:

1. Following the above procedure (steps 1 to 5), take out the ASSY MAIN BD.
2. Remove the GD cable connector and the power cord connector from the GD-ROM Drive.

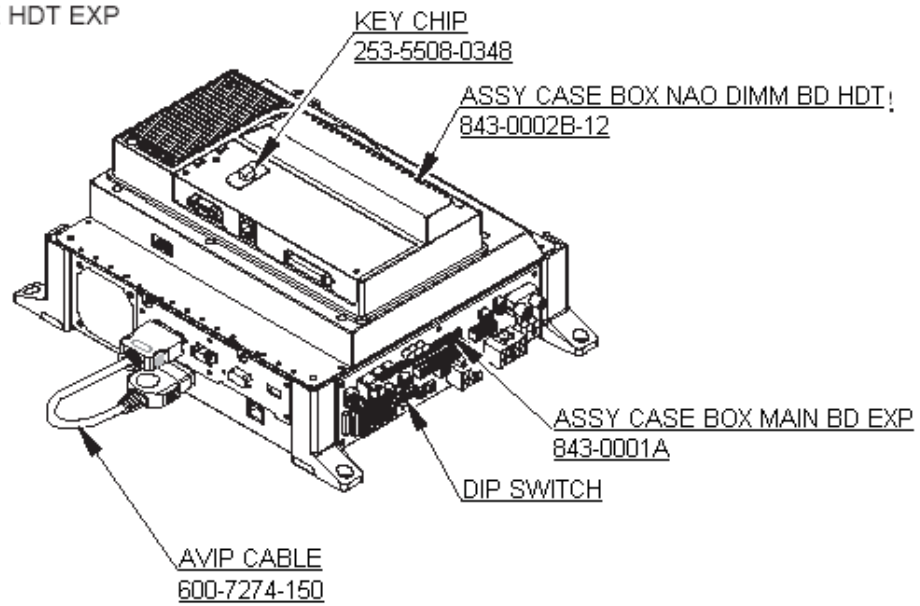


2. To remove the GD-ROM Drive, undo the 3 screws shown.
3. Reassemble in reverse order.



3.15. COMPOSITION OF THE GAME BOARD

ASSY CASE BOX HDT EXP
843-0001D-12



DIP SW SETTING

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



3.16. TROUBLESHOOTING



- Only QUALIFIED SERVICE PERSONNEL should carry out these procedures.

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 (i.e. fuse) was activated due to an instantaneous overcurrent.	First, remove the cause of overcurrent and reinstate the circuit protection device to its original status. Then identify the cause of the fault on the item which caused the overcurrent & fix.
The colour image on the screen is incorrect	Incorrect monitor adjustment.	Make appropriate adjustments. SEE SECTION 6.3.8.
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. SEE SECTION 6.2
	Malfunctioning BD and Amp.	Perform Sound Test to check it. SEE SECTION 6.3.7
	Connector connection is incorrect	Check connector connection from Base to Speaker
Controller operation is not satisfactory	Sighting is inaccurate due to environmental conditions, etc.	Adjust the gun sighting alignment. SEE SECTION Error! Reference source not found.
	Micro-switch malfunctioning	Replace the micro-switch. SEE SECTION 3.11
	Sensor BD is malfunctioning	Replace the Sensor BD. SEE SECTION 3.11
The fluorescent lamp does not light up	Fluorescent lamp needs replacement	Replace the fluorescent lamp. SEE SECTION 3.13.1
	The connector is disconnected	Check connector connections in the billboard case.

3.17. FUSES



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

- Only QUALIFIED SERVICE PERSONNEL should replace FUSES.
- Only replace fuses with ones of the same value and type.

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
514-5078-3150	STEREO AMP REF. F1, F2	5x20mm CERAMIC SB 3.15A	2
514-5078-5000	IEC INLET REF. F1	5x20mm CERAMIC SB 5A	1
838-11856CE-02	CONN. BD. REF. F1	5x20mm CERAMIC SB 6.3A	1

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

4. PERIODIC CHECK AND INSPECTION

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



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

DESCRIPTION	WHAT TO CHECK	INTERVAL
CABINET	Check Adjusters' contact with surface	Daily
MONITOR	Clean CRT face - (Do Not use water jet)	Weekly
	Check settings	Monthly
GAME BD	Setting check	Monthly
CONTROL PANEL	Input test	Monthly
Speaker, sound	Sound test, check volume adjustment	Monthly
COIN SELECTOR	Coin insertion test	Monthly
	Cleaning	Tri-Monthly
POWER SUPPLY CORD	Check condition	Annually
INTERIOR	Clean (Do Not use water jet)	Annually
CABINET SURFACE	Clean (Do Not use water jet)	As required

4.1. CLEANING THE CABINET SURFACES

When the cabinet surfaces are badly soiled, remove stains with a soft cloth dipped in water or chemical detergent (diluted with water) and squeezed dry - **DO NOT USE A WATER JET**. To avoid damaging surface finish, do not use such solvents as thinner, benzene, etc. (other than ethyl alcohol), abrasives or bleaching agents.

5. HOW TO PLAY

Use this section to confirm the machine is operating correctly; if the machine doesn't operate as described there may be a fault.

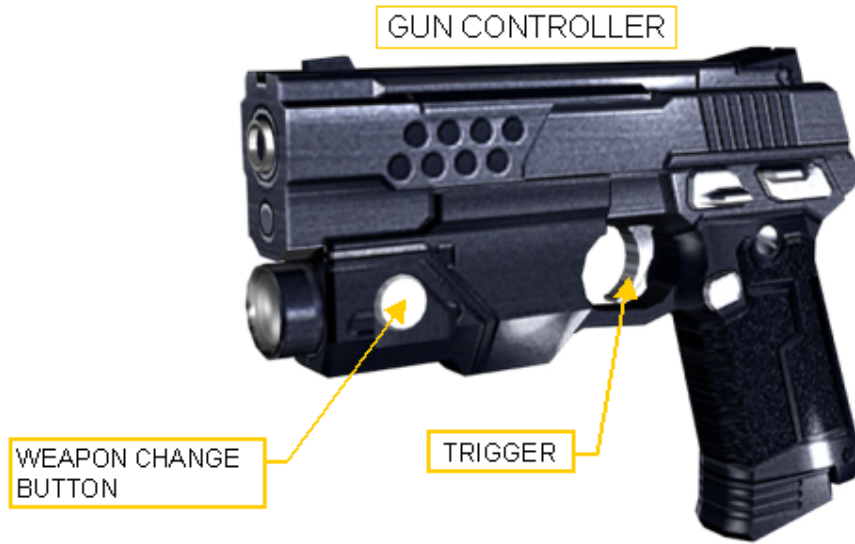
While power is connected, the billboard is continuously lit and demonstration footage and ranking data are displayed on the screen. This 'advertise' mode will be accompanied by sound from both speakers unless set otherwise in the TEST mode.

The 1P and 2P start buttons have integral lights that flash when a credit is inserted.



5.1. GAME CONTENTS

Press the appropriate START button to begin play as 1P or 2P. If enough credits for a game are remaining, the other player's START button will flash. Press the flashing START button to join a game.



5.1.1. The Main Characters

Virtua Cop 3 has two main characters, RAGE (1P) and SMARTY (2P). JANET appears as an allied character during the game but cannot be controlled.

5.1.1.1. 1P Character: RAGE

Strong as an ox and just as uncontrollable, this hothead tends to act before he thinks. That's made him something of a headache for the department.



5.1.1.2. 2P Character: SMARTY

Rage's complete opposite, Smarty is a cautious, brainy type who never loses his cool. He's also the best marksman in the precinct.



5.1.2. Playing Virtua Cop 3

5.1.2.1. Start a New Game

Press the START button to begin a new game. Mission Select follows.

5.1.2.2. Calibrating at the Start of the Game

The availability of calibration at the start of each game may be set in Test Mode. The following applies when calibration on demand is enabled.

To enter the calibration screen, hold down the foot pedal, aim the gun controller at the screen, and press the START button when starting the game. Aim the gun at the centre target and pull the trigger. When calibration is complete, press the START button to exit to Mission Select.

5.1.2.3. Mission Select

Displays the three mission panels, Simple, Normal and Hard. Shoot the desired mission panel to start. Players are free to start any mission they like.

When a mission has been completed, the game returns to Mission Select. The mission panel for the completed mission reads "Complete" and cannot be selected. Select a different mission.

5.1.2.4. Game Screen



1. Points/Point Multiplier Meter

Total points earned are indicated by the eight digit number. After 3-point shots, Justice shots, and other special attacks the name of the attack and points earned are shown beneath the score display.

The more enemies you shoot, the more the gauge above the score display lengthens. When the gauge is completely filled, your level increases. The current level is shown inside the circle. A higher level means more points for killing enemies, but you'll lose a level if you take damage or shoot a civilian!

2. Lock-On Sight

The Lock-On Sight automatically detects armed enemies and tells you when you're being attacked. The Lock-On Sight can lock on multiple enemies simultaneously. When the sight appears, enemies are attacking. If you don't fight back, you're sure to take damage.

3. Bullets Left/Reload

Shows bullets remaining in current gun.

Shoot the gun away from the screen to reload your weapon.

4. Weapon Palette, Weapon Change

The player starts out with a Guardian II (10-round magazine, infinite reloads). Defeat special enemies and destroy background objects to get special weapons. Acquiring a special weapon will add a second weapon to the Weapon Palette. Use the Weapon Change button to switch between the special weapon and the Guardian II. The weapon currently in use is shown on top, above the weapon in stock. Special weapons can only be reloaded a limited number of times and cannot be reloaded once ammunition runs out. Get Ammo items to increase the number of times the weapon may be reloaded.

Special Weapons can be lost in three ways:

- When the reload count hits zero and all ammunition is used up
- When shot and hurt by an enemy
- By shooting a civilian

Knowing when to use which weapon is key.

5. Life

Shows life remaining. Getting shot by an enemy costs one life. Shooting a civilian also costs one life. When all lives have been used up, the game is over.

5.1.2.5. ES Gauge

This shows the remaining energy in ES Mode. The ES Gauge falls during ES Mode and recovers when you defeat enemies.

5.1.2.5.1. ES Mode (Exceeding Sense Mode)

Hold down the foot pedal to activate ES Mode.

ES Mode enhances your character's senses, making time appear to move slower. In ES Mode you can even see your enemies' bullets and shoot them down before they reach you. Red bullets are especially damaging, so try to get them before they get you!



ES Mode consumes the ES Gauge. When the ES Gauge runs out of energy, you will be unable to use ES Mode.



Kill enemies to recover energy for the ES Gauge.



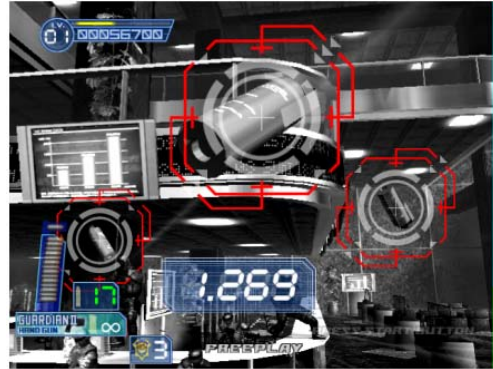
5.1.2.5.2. ES Attack (Exceeding Sense Attack)

ES Attack begins automatically in certain scenes.

ES Attack displays special targeting sights that show points of particular vulnerability for a limited time. Speed and accuracy are essential.

Hit all the targeted areas within the time given to clear the ES Attack. The outcome of an ES Attack affects the rest of the game's story.

When targets are shown with energy gauges, shoot until the energy gauge hits zero to clear the ES Attack.



5.1.3. Game Over

The game ends in one of three ways:

- When all lives have been lost
- When all three missions have been completed
- When the special "Extra Mission"* has been completed

[*]: When both the Simple and Normal missions have been completed successfully (in either order) and the player defeats the boss of the Hard mission, a special scene is shown and the Extra Mission is unlocked.

5.1.4. Continue

When you run out of lives, "Continue" appears on the screen and a countdown begins. To continue, insert sufficient coins and press the START button. If enough credits remain to continue, press the flashing START button.

6. MAINTENANCE INSTRUCTIONS

6.1. EXPLANATION OF TEST DATA AND DISPLAY

Use the switches inside the Control Panel 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:

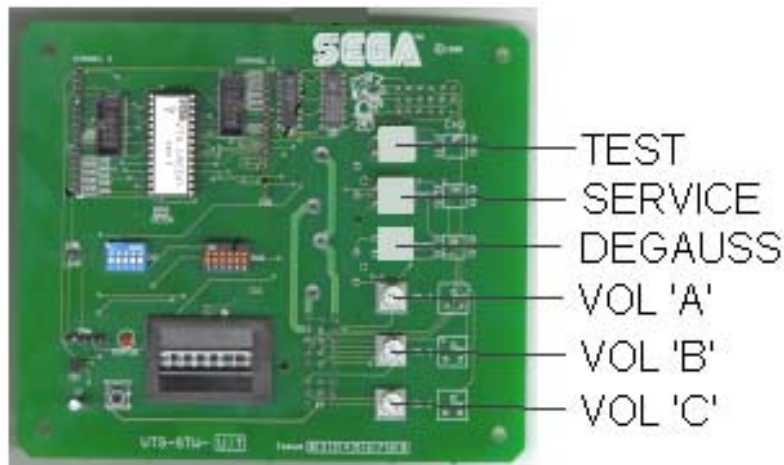
Refer to the service manual supplied with the Monitor for detailed instructions.

ITEM	DESCRIPTION	INTERVAL
INSTALLATION OF THE MACHINE	When the machine is installed perform the following checks: <ul style="list-style-type: none"> • 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 V.R. • 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	<ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • In the INPUT TEST mode, check each switch and V.R. • Adjust or replace each switch and V.R. 	Monthly
MONITOR	<ul style="list-style-type: none"> • In the CRT 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 <ul style="list-style-type: none"> • In the SOUND TEST mode, check the sound related ROM's 	Monthly
DATA CHECK	<ul style="list-style-type: none"> • Check such data as held in the bookkeeping screens, relating to number and length of plays 	Monthly
EXTERIOR MAINTENANCE	<ul style="list-style-type: none"> • Clean surfaces 	Monthly
COIN MECHANISM	<ul style="list-style-type: none"> • Check switch operation (if fitted) 	Monthly

6.2. INTERNAL SWITCHES AND COIN METERS



- Never touch places other than those specified. Touching places not specified can cause electric shock and short circuits
- Be careful not to damage wiring. Damaged wiring can cause electric shock and short circuits.
- Adjust to the optimum sound volume considering the environmental requirements of the installation location.
- If the COIN METER and the game board are electrically disconnected, game play is not possible.



Open the Coin Chute door to access the VTS PCB. 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.
DEMAG	Eliminates colour unevenness from the monitor screen.
VOLUME CONTROL	Adjusts the volume of the speakers.

6.3. SYSTEM TEST MODE

6.3.1. EXPLANATION OF TEST AND DATA DISPLAY

Perform the tests and data check periodically when installing the machine initially or collecting cash, or when the machine does not function correctly. Perform checks in accordance with the explanations given in this section.

The following shows tests and modes that should be utilized as applicable.


This product's basic system consists of the Chihiro game board and the GD-ROM drive. The system enables you to play several games one after the other just by changing a GD-ROM disc that is to be set on the GD-ROM drive.

Therefore the product supports, the following 2 test modes:

(1) System test mode for an automatic self-diagnostic test (generally used by every product that contains the basic system) and a coin assignment (specifically used by this product)

and

(2) Game test mode for testing the input/output control devices and setting the difficulty level (specifically used by this product).

 <p>STOP IMPORTANT</p>	<ul style="list-style-type: none">• Any settings that are changed by users during TEST MODE are saved upon exiting TEST MODE with the EXIT command in the SYSTEM MENU. If the unit is powered off prior to exiting, changes to settings will not take effect.• You may not enter GAME TEST MODE while the unit is reading from or checking the GD-ROM. If error messages are displayed when exiting TEST MODE, you should power the unit off and on again.• In the manual for this product, "Media Board" and "DIMM" are one and the same.• Use with the specified settings. If settings other than those specified are used, inappropriate operations or malfunction may occur.
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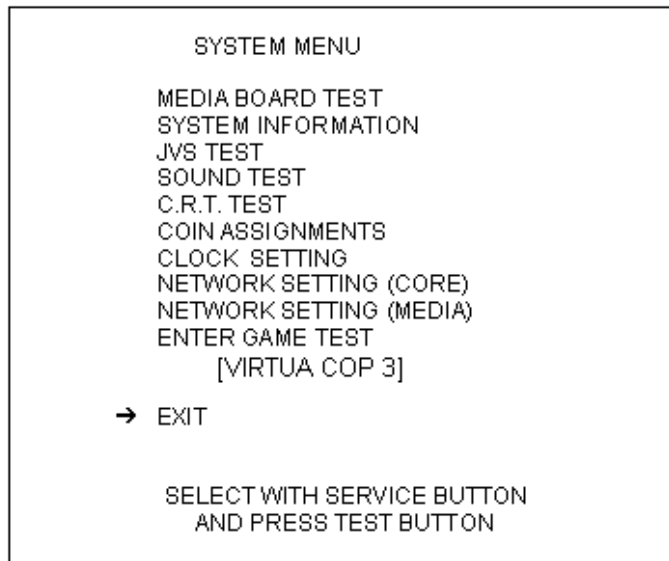
6.3.2. SYSTEM TEST MENU MODE

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

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


SOUND TEST - OUTPUT TYPE: STEREO
COIN ASSIGNMENTS - COIN CHUTE TYPE: COMMON
 - SERVICE TYPE: COMMON
NETWORK SETTING (MEDIA) - NETWORK TYPE: NONE

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



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

6.3.3. MEDIA BOARD TEST

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

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

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

```
MEDIA BOARD TEST

DIMM BOARD(TYPE3)
VERSION ****
STATUS GOOD
CHECKING 100%

DIMM TEST
DIMM0 GOOD
DIMM1 NONE
GD-ROM GOOD

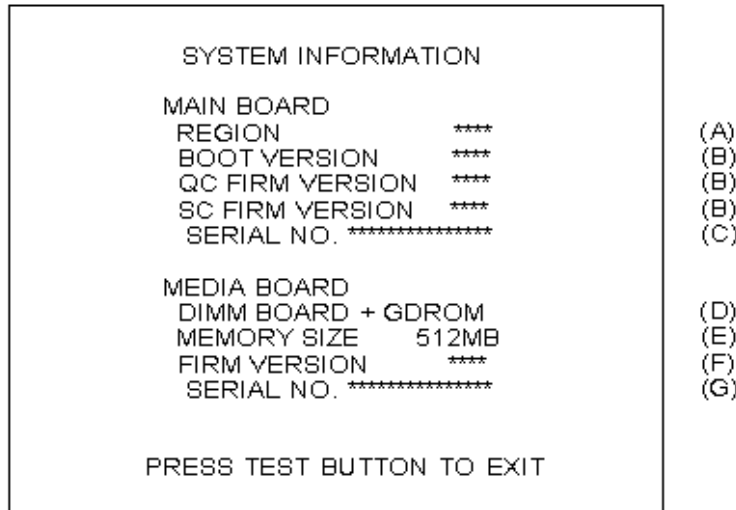
PRESS TEST BUTTON TO EXIT
```

1. MEDIA BOARD TEST begins immediately upon entering this test mode.
2. If "GOOD" is displayed to the right of each item, the MEDIA BOARD components are functioning properly.
3. After the test is complete, move the cursor to EXIT and press the TEST Button to return to the SYSTEM MENU screen.

6.3.4. SYSTEM INFORMATION

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

*The following is the SYSTEM INFORMATION screen for a unit with a DIMM BOARD.



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

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

6.3.5. JVS TEST

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

```

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

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

6.3.6. INPUT TEST Screen

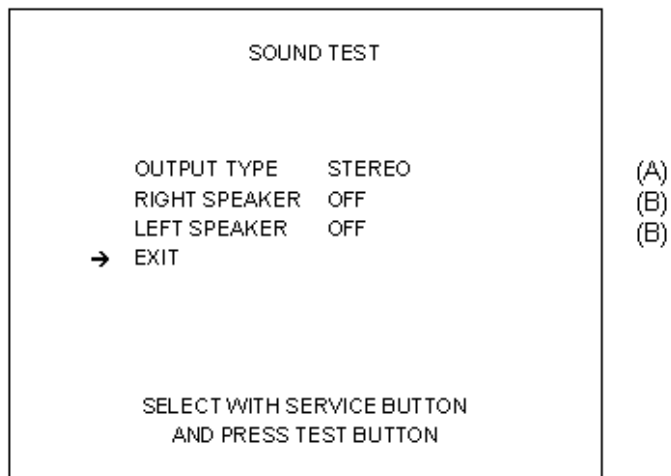
JVS TEST		
INPUT TEST		
NODE	1/1	
SYSTEM	00	(A)
PLAYER 1	0000	(A)
PLAYER 2	0000	(A)
COIN 1	0000	(B)
COIN 2	0000	(B)
ANALOG 1	0000	(C)
ANALOG 2	0000	(C)
ANALOG 3	0000	(C)
ANALOG 4	0000	(C)
ANALOG 5	0000	(C)
ANALOG 6	0000	(C)
ANALOG 7	0000	(C)
ANALOG 8	0000	(C)

PRESS TEST AND SERVICE BUTTON TO EXIT

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

6.3.7. SOUND TEST

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



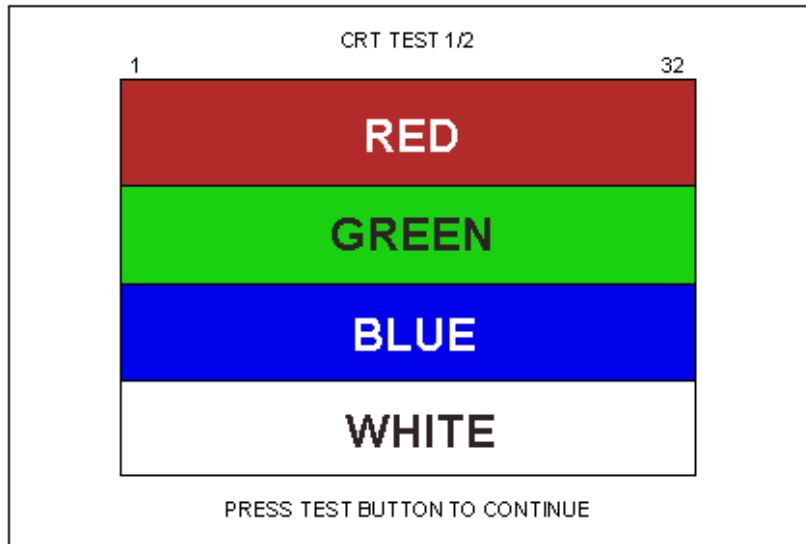
- (1) Use the SERVICE Button to move the cursor to the desired test item.
- (2) Press the TEST Button to enter the selected item.
 - (A) OUTPUT TYPE (STEREO, MONO, SURROUND)
Select the sound output from the I/O PANEL audio output interface setting among STEREO, MONO and SURROUND.
 - (B) RIGHT/LEFT SPEAKER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

6.3.8. C.R.T. TEST

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

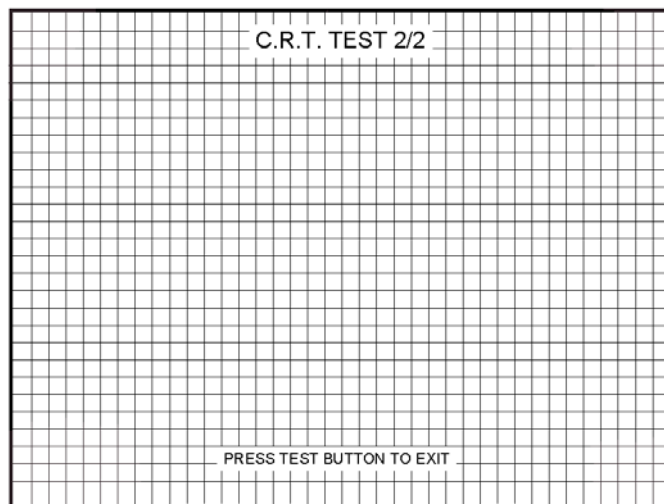
COLOUR CHECK Screen

- (1) Monitor COLOUR CHECK screen is displayed initially.
Each of the colours (red, green and blue) is darkest at the far left and gets progressively lighter (32 steps) towards the right.
Monitor brightness is set correctly if the white colour bar is black at the left edge and white at the right edge.



- (2) Press the TEST Button to proceed to the next page

SIZE CHECK Screen

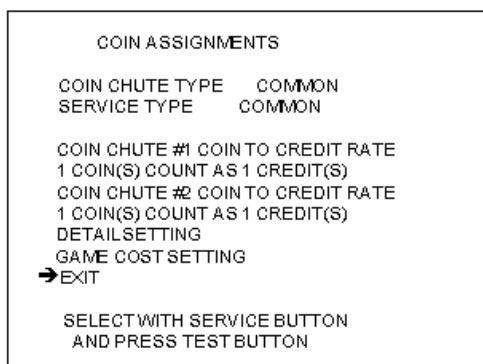


- (3) Adjust the CHECK GRID so that the entire GRID is displayed on the screen.
- (4) Press the TEST Button to return to the SYSTEM MENU screen.

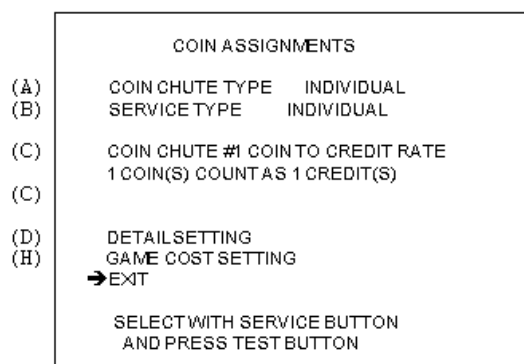
6.3.9. COIN ASSIGNMENTS

Use COIN ASSIGNMENTS to set the credit rate for each coin inserted.

- (1) Use the SERVICE Button to move the cursor to the desired test item.
- (2) Press the TEST Button to change the setting or to open the detailed settings.
- (3) Move the cursor to EXIT and press the TEST Button to return to the SYSTEM MENU screen.



COIN CHUTE TYPE - COMMON



COIN CHUTE TYPE - INDIVIDUAL

(A) COIN CHUTE TYPE (COMMON, INDIVIDUAL)

Adjust settings according to the specs of the cabinet COIN CHUTE.

COMMON

This is for cabinets where a single COIN CHUTE is used by multiple players.

Coins inserted by each player are treated as common credits.

Up to 2 COIN CHUTES (#1 and #2) may be used. The (C) COIN TO CREDIT RATE setting for COIN CHUTE #1 and #2 may be set differently.

INDIVIDUAL

This is for cabinets with individual COIN CHUTES for each player.

Coins inserted by each player are treated as individual player credits.

The (C) COIN TO CREDIT RATE setting is used by all COIN CHUTES.

(B) SERVICE TYPE (COMMON, INDIVIDUAL)

Use this to set the function of each SERVICE Button when there is more than one SERVICE Button.

COMMON

Pressing any SERVICE Button enters service credits for all players.

INDIVIDUAL

Pressing the SERVICE Button enters service credits only for the corresponding player.

- (C) COIN TO CREDIT RATE
 Set the CREDIT RATE for each coin inserted.
 The " Δ COIN(S) COUNT AS \square CREDIT(S)" setting indicates that "Inserting Δ coins equals \square credits".
 Set this to "FREE PLAY" to allow game play without credits.
 When (A) COIN CHUTE TYPE is set to "COMMON", COIN CHUTE #2 settings are restricted to some extent by the settings for COIN CHUTE #1.
- (D) DETAIL SETTING
 This mode allows for more detailed credit rate settings than the (C) COIN TO CREDIT RATE setting.
 Changes made in DETAIL SETTING override any (C) COIN TO CREDIT RATE settings.

DETAIL SETTING Screen

```

    COIN ASSIGNMENTS
    DETAIL SETTING
    COIN CHUTE #1 MULTIPLIER
    1 COIN COUNT AS 1 COIN(S)
    COIN CHUTE #2 MULTIPLIER
    1 COIN COUNT AS 1 COIN(S)
    BONUS ADDER      NO BONUS ADDER
    COIN TO CREDIT  1 COIN(S) 1 CREDIT
    →EXIT
    COIN CHUTE #1 OPERATION
    COIN  1 2 3 4 5 6 7 8 9
    CREDIT 1 2 3 4 5 6 7 8 9
    COIN CHUTE #2 OPERATION
    COIN  1 2 3 4 5 6 7 8 9
    CREDIT 1 2 3 4 5 6 7 8 9
    SELECT WITH SERVICE BUTTON
    AND PRESS TEST BUTTON
  
```

COIN CHUTE TYPE --- COMMON

```

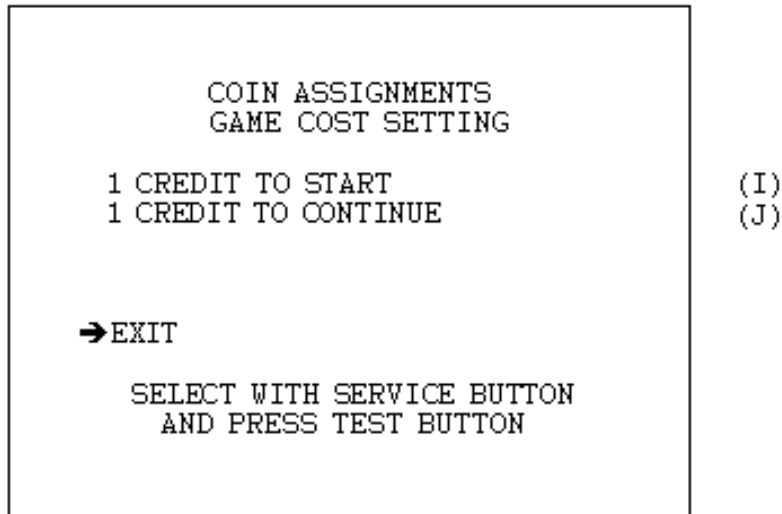
    COIN ASSIGNMENTS
    DETAIL SETTING
    COIN CHUTE #1 MULTIPLIER
    1 COIN COUNT AS 1 COIN(S)
    BONUS ADDER      NO BONUS ADDER
    COIN TO CREDIT  1 COIN(S) 1 CREDIT
    →EXIT
    COIN CHUTE #1 OPERATION
    COIN  1 2 3 4 5 6 7 8 9
    CREDIT 1 2 3 4 5 6 7 8 9
    SELECT WITH SERVICE BUTTON
    AND PRESS TEST BUTTON
  
```

COIN CHUTE TYPE --- INDIVIDUAL

- (E) COIN CHUTE MULTIPLIER
 Use this to set how many coins will be counted for each coin inserted.
 The " 1 COIN COUNT AS Δ COIN(S)" setting indicates that "Each coin will be counted as Δ coins".
 When the (A) COIN CHUTE TYPE is set to "COMMON", the setting may be set individually for COIN CHUTE #1 and #2.
- (F) BONUS ADDER
 Use this to set the number of coins calculated with the (E) COIN CHUTE MULTIPLIER setting that need to be inserted to get 1 bonus coin. When the (A) COIN CHUTE TYPE is set to "COMMON", the sum of the coins for COIN CHUTE #1 and #2 is used for the calculation.
 The " Δ COINS GIVE 1 EXTRA COIN" setting indicates that "For every Δ coins, 1 bonus coin is given".
 Set this to "NO BONUS ADDER" to disable bonus coins entirely.
- (G) COIN TO CREDIT
 Use this to set how many coins calculated with the (F) BONUS ADDER setting count as 1 credit.
 The " Δ COIN(S) 1 CREDIT" setting indicates that "Every Δ coins equals 1 credit."

(H) GAME COST SETTING

Use this mode to set the number of credits required to start a game.
Screens may differ depending on the game.



(I) Set the number of credits required to start a game.

(J) Set the number of credits required to continue a game.

6.3.10.CLOCK SETTING

Use the SERVICE Button to move the cursor to the item to be set.




(1) Move the cursor to the desired item and press the TEST Button to increase values.

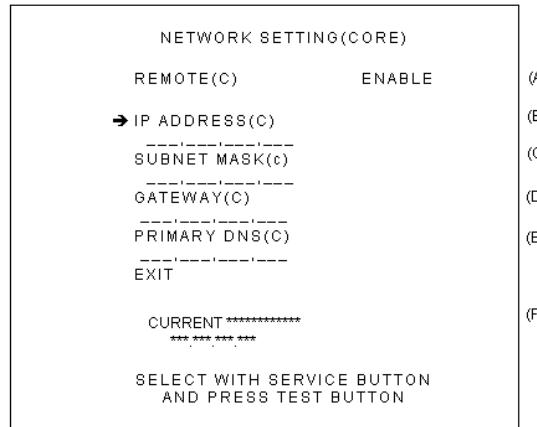
(2) The max value for YEAR is "2099"; further increases return the value to "2000".

(3) Move the cursor to EXIT and press the TEST Button to return to the SYSTEM MENU screen.

6.3.11.NETWORK SETTING (CORE)

Use the LAN PORT attached to the Main Board, and carry out the settings necessary for network communication.

	<p>*This game does not support network communication connections. *</p> <p>THIS OPTION IS FOR POSSIBLE FUTURE GAMES ONLY. SELECT EXIT AND GO DIRECTLY TO THE NEXT TEST MODE.</p>
---	---



- (1) Use the SERVICE Button to move the cursor to the desired test item.
(When setting IP ADDRESS, SUBNET MASK, GAME WAY or PRIMARY DNS, use the underline as a guide.)
 - (2) Press the TEST Button to change the setting.
 - (3) Move the cursor to EXIT and press the TEST Button to return to the SYSTEM MENU screen.
- (A) REMOTE (C)
This sets up whether a communication setting is automatic or manual.
ENABLE: Sets the communication setting automatically.
DISABLE: Sets the communication setting manually.
- (B) IP ADDRESS (C)
This is one of the settings required for communication network. After setting the number, press TEST Button on SET position to memorize the setting. If you set the REMOTE setting to ENABLE, you cannot select this.
- (C) SUBNET MASK (C)
This is one of the settings required for communication network. After setting the number, press TEST Button on SET position to memorize the setting. If you set the REMOTE setting to ENABLE, you cannot select this.
- (D) GATE WAY (C)
This is one of the settings required for communication network. After setting the number, press TEST Button on SET position to memorize the setting. If you set the REMOTE setting to ENABLE, you cannot select this.
- (E) PRIMARY DNS (C)
This is one of the settings required for communication network. After setting the number, press TEST Button on SET position to memorize the setting. If you set the REMOTE setting to ENABLE, you cannot select this.

(F) CURRENT

This displays the present setting value during a set-up of each item [(B), (C), (D), (E)]. Pressing TEST Button on SET position, the settings are memorized and the screen is changed.

6.3.12.NETWORK SETTING (MEDIA)

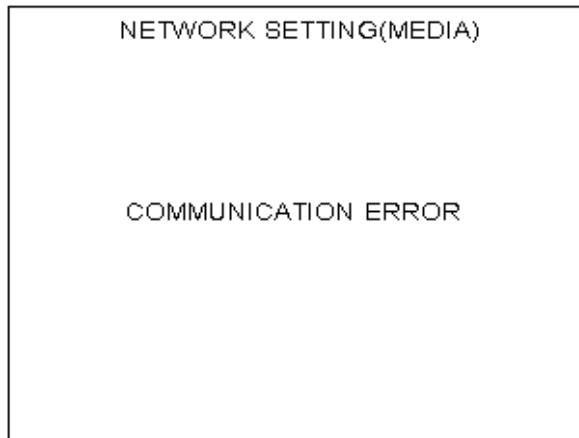


***This game does not support network communication connections. ***


THIS OPTION IS FOR POSSIBLE FUTURE GAMES ONLY.
SELECT EXIT AND GO DIRECTLY TO THE NEXT TEST MODE.
THIS GAME DOES NOT SUPPORT NETWORK COMMUNICATION CONNECTIONS.

Use NETWORK SETTING to establish and test network connections.
This is only displayed when a network enabled MEDIA BOARD is connected to the Chihiro.

In this game only the following error message will be displayed.



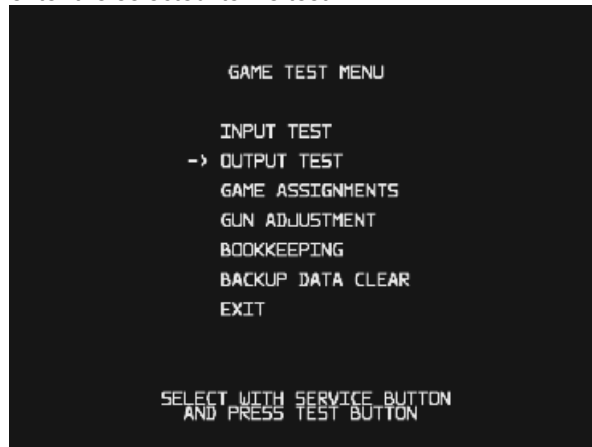
6.4. GAME TEST MODE

 <p>STOP IMPORTANT</p>	<ul style="list-style-type: none">• When changing the game configuration, changes will not take effect until the Game Test Mode has been completed. Be sure to exit the Game Test Mode properly after configuration changes.• Do not configure the game in ways not described in this text. It is possible that the game will not function properly.
---	---

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

Use the SERVICE Button to move the cursor to the desired test item.

Press the TEST Button to enter the selected item's test.



Performs tests, adjustments and settings for each of the Game Test Menu screen items below.

INPUT TEST:	Tests each input device used in the game.
OUTPUT TEST:	Tests each output device used in the game.
GAME ASSIGNMENTS:	Adjusts game settings.
GUN SETTING:	Performs sight settings for the game's Control Unit (Gun).
BOOKKEEPING:	View all recorded game data.
BACKUP DATA CLEAR:	Erase all game records.

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

After performing tests and adjustments, return to the Game Test Menu screen, select EXIT and press the TEST Button.

You will return to the System Menu screen. Move the cursor to EXIT on the System Menu screen and press the TEST Button to return to the Game Play screen.

6.4.1. INPUT TEST

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



The items refer to the following input devices.

- TRIGGER: The gun triggers.
- CHANGE: The controller's weapon change button.
- PEDAL: The foot pedal.
- GUN-X: Ranges between 00 and FF when controller is pointed at screen.
- GUN-Y: Ranges between 00 and FF when controller is pointed at screen.
- SCREEN: Point controller at screen to change from OUT to IN.
- START: The player Start Buttons.
- SERVICE: The SERVICE Button.
- TEST: The TEST Button.

Input is normal if the display to the right of each item changes from OFF to ON when each input device is operated.

Input is normal if the display to the right of SCREEN changes from OUT to IN and GUN-X and GUN-Y show values between 00 and FF when the controller is pointed at the screen.

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

6.4.2. OUTPUT TEST

Select OUTPUT TEST to display the following screen and check the status of each lamp. This test should be used periodically to check that the lamps are functioning correctly. Press the SERVICE Button to move the cursor and the TEST Button to select. Displays ON when selected. Actual screen may differ for depending on cabinet type.

The following is for the STANDARD (Upright) type screen.



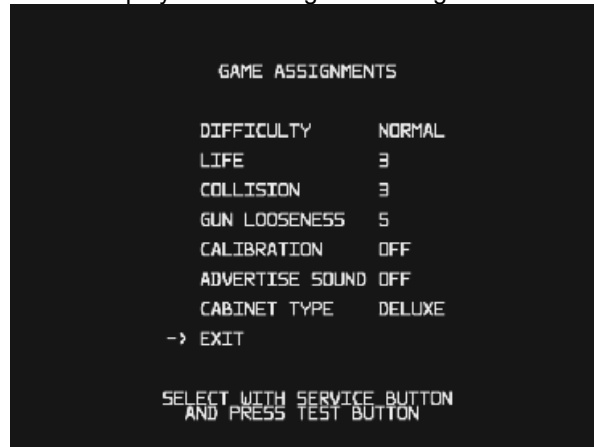
Perform the tests as follows.

- PLAYER 1 START LAMP: Lights up the 1P START button.
- PLAYER 2 START LAMP: Lights up the 2P START button.

Move the cursor to EXIT and press the TEST Button to return to the Game Test Menu screen.

6.4.3. GAME ASSIGNMENTS

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



Perform the following settings for each item.

- **DIFFICULTY:** Set the game's difficulty level. Five settings are available, from VERY EASY to VERY HARD.
- **LIFE:** Set the number of lives each player starts the game with. Nine levels are available.
- **COLLISION:** Set the size of targets. Five levels, from 1 to 5, are available. The higher the level, the easier it is to hit targets.
- **GUN LOOSENESS:** Set gun looseness. Ten levels, from 0 to 9, are available. The higher the level, the easier it is to hit targets.
- **CALIBRATION:** Toggle the availability of user calibration at the start of the game. Three options are available.
 - 1) OFF: Disable calibration.
 - 2) ON (TYPE1): Always calibrate.
 - 3) ON (TYPE2): Allow calibration if command is entered (start game with controller aimed at screen and pedal held down).
- **ADVERTISE SOUND:** Turn advertising sound output ON/OFF.
- **CABINET TYPE:** Set cabinet type. Set to either DELUXE or STANDARD. Be sure to set according to actual cabinet type.

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

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

6.4.4. GUN ADJUSTMENT

Select GUN ADJUSTMENT to display the following screen.

This screen allows you to adjust the gun using the five calibration targets (TOP, LEFT, CENTRE, RIGHT, BOTTOM). Use each target to calibrate as follows.

Use the standard gun controller, carefully aim at the correct target and pull the trigger to calibrate the value. Select between the calibration targets with the 1P and 2P START buttons or SERVICE button.



Details for each item are as follows.

- TOP x y: Set the TOP value.
The number on the left (x) is the horizontal component, and the number on the right (y) is the vertical component. Aim the controller at the TOP target (white circle) and pull the trigger to set the value. This will not affect horizontal calibration.
- LEFT x y: Set the LEFT value.
The number on the left (x) is the horizontal component, and the number on the right (y) is the vertical component. Aim the controller at the LEFT target (white circles) and pull the trigger to set the value. This will not affect vertical calibration.
- CENTRE x y: Set the CENTRE value.
The number on the left (x) is the horizontal component, and the number on the right (y) is the vertical component. Aim the controller at the CENTRE target and pull the trigger to set the CENTRE value.
- RIGHT x y: Set the RIGHT value.
The number on the left (x) is the horizontal component, and the number on the right (y) is the vertical component. Aim the controller at the RIGHT circle and pull the trigger to set the RIGHT value. This will not affect vertical calibration.
- BOTTOM x y: Set the BOTTOM value.
The number on the left (x) is the horizontal component, and the number on the right (y) is the vertical component. Aim the controller at the BOTTOM circle and pull the trigger to set the value. This will not affect horizontal calibration.
- DEFAULT: Restore calibration values to original settings.
- CANCEL: Restore calibration values to previous settings.

- **CURSOR:** Select CURSOR and aim the controller at the screen to display a round cursor (blue for 1P, red for 2P) where the controller hits the screen. Use this cursor to check calibration.
- **OUT OF SCREEN:** Displays "OUT OF SCREEN" when the controller is pointed outside the screen. Values cannot be set when the controller is out of screen.

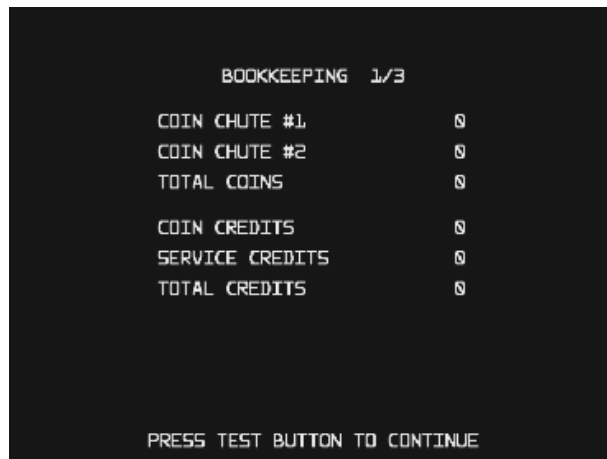
Changes to settings are not enabled until the Test Mode is exited. After changing settings, be sure to exit Test Mode.

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

6.4.5. BOOKKEEPING

Select BOOKKEEPING on the Game Test Menu screen to display the three screens of operating status data.

Press the TEST Button on the BOOKKEEPING 1/3 and BOOKKEEPING 2/3 screens to move to the second and third (BOOKKEEPING 3/3) screens. Press the TEST Button in the third screen to return to the Game Test Menu screen.



The display items for the screen (Page 1 of 3) are as follows.

- **COIN CHUTE #1:** The number of coins inserted into Coin Slot 1.
- **COIN CHUTE #2:** The number of coins inserted into Coin Slot 2.
- **TOTAL COINS:** The total number of coins inserted into the coin slots.
- **COIN CREDITS:** The number of credits for the coins inserted.
- **SERVICE CREDITS:** The number of credits input by the SERVICE Button.
- **TOTAL CREDITS:** Total credits from coins and the SERVICE Button

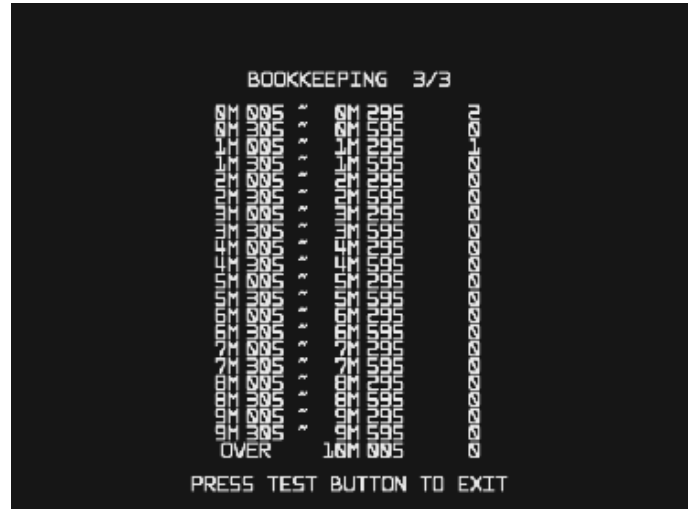
Press the TEST Button to display the next screen.



The display items for the screen (Page 2 of 3) are as follows.

- NUMBER OF GAMES: The total number of games played by 1P and 2P.
- NUMBER OF GAME STARTS: Number of games started.
- NUMBER OF CONTINUES: Number of times game has been continued.
- NUMBER OF JOIN GAMES: Number of two-player games.
- TOTAL TIME □ The amount of time the unit has been in operation.
- PLAY TIME: The sum of 1P's time played and 2P's time played.
- LONGEST PLAY TIME □ The longest play time for one game.
- SHORTEST PLAY TIME □ The shortest play time for one game.
- AVERAGE PLAY TIME: The sum of all play times divided by the total number of games.

Press the TEST Button to display the next screen (Page 3 of 3).



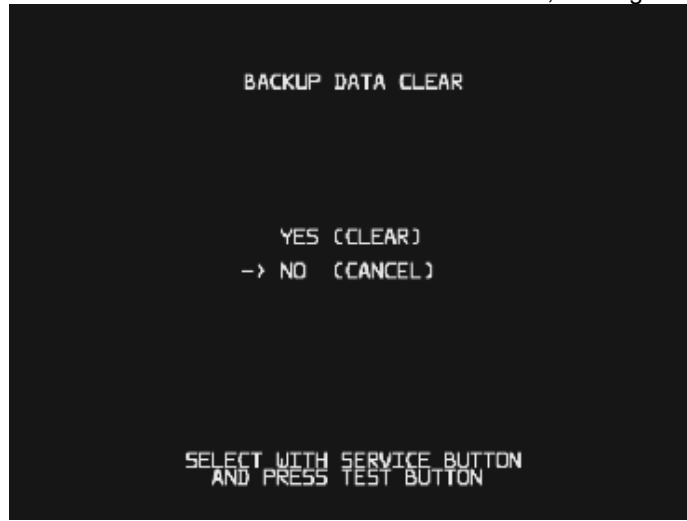
PLAY TIME HISTOGRAM shows the number of plays and the respective play times. This histogram should be referred to when setting the Game Difficulty.

This displays play times on a scale from 0M00S to 9M59S with 30-second intervals. All play times over ten minutes are included in the item OVER 10M00S.

Press the TEST Button after viewing. You will return to the Game Test Menu screen.

6.4.6. BACKUP DATA CLEAR

Select BACKUP DATA CLEAR to clear the contents of BOOKKEEPING, ranking data and coin/credit data.



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

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

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

Note that this operation does not affect GAME ASSIGNMENTS or GUN ADJUSTMENT settings.

7. COIN MECH INSTALLATION AND CREDIT BOARD SET UP

7.1. INTRODUCTION

Game credits between the Coin Mechanism and the game board for this machine are controlled by a VTS board. This electronic circuit allows the price of play to be set for a range of different countries. These functions are set on Dual In Line (DIL) PCB mounted switches.

SW1 is used to set the currency (or coin ratio) and SW3 the price of play. Refer to the Tables on the following pages for the correct settings for your environment.

The VTS board pictured below is mounted in the Coin Chute Tower.

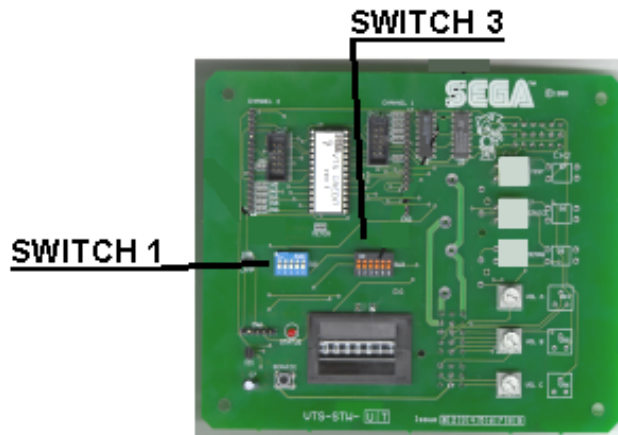
The VTS board is connected to the coin validator and lamps via a dedicated wiring harness depending upon the coin validator used:

Wiring Harness	Validator	
LM1006	Coin Controls	(15 way connector)
LM1007	Mars	(13 way connector)
LM1008	Mechanical	See note 2
N/A	NRI	See note 1

Notes

1. If NRI mechanisms are to be used, these should be ordered with the highest denomination coin on coin path #1 and the lowest denomination on coin path #4. The VTS board should be then be set up for either the UK or Switzerland settings. A minimum connecting lead length of 600mm is required.
2. Mechanical coin mechanisms may be connected in parallel allowing two identical mechanisms to be fitted.

The VTS Board



Credit Board Mode Settings Switch 3																			
Country	Setting	Switch 3 Setting						Coin Validator Programming								C120/SR3 Only			
		SW1	SW2	SW3	SW4	SW5	SW6	COIN1	COIN2	COIN3	COIN4	COIN5	COIN6	COIN7	COIN8	COIN9	COIN10	COIN11	COIN12
UK	Coin Controls C220 Parallel	OFF	OFF	OFF	OFF			£1	50p new	20p	10p	-	50p old	-	-				
UK	Coin Controls C220 Binary	ON	OFF	OFF	OFF			£1	50p new	20p	10p	-	50p old	-	£2				
UK	Coin Controls C220 Binary	OFF	ON	OFF	OFF			£1	50p new	20p	10p	-	£2	-	50p old				
UK	Coin Controls SR3 Parallel	ON	ON	OFF	OFF			£1	50p new	20p	10p	-	£2	-	50p old	-	-	-	
UK Euro	Coin Controls SR3 Parallel	OFF	OFF	ON	OFF			£2 €2	£1 €1	50p new 50¢	20p 20¢	10p 10¢	-	-	-	50p old	-	-	
UK	Mars ME/MS 111 Parallel	ON	OFF	ON	OFF			£1	£2	20p	10p	50p new	50p old						
UK	NRI Parallel	OFF	ON	ON	OFF			10p	20p	50p	£1	£2	-						
Belgium	Parallel	ON	ON	ON	OFF			-	50BFr	20BFr	5BFr								
Holland	Parallel	OFF	OFF	OFF	ON			-	5NLG	2.5NLG	1NLG								
Austria	SR3 Parallel	ON	OFF	OFF	ON			20Sch	10Sch	5Sch	1Sch								
Spain	Coin Controls C220 Binary	OFF	ON	OFF	ON			500Pta	200Pta	100Pta	50Pta	25Pta	200Pt old	50Pta old	25Pta old				
Spain	SR3/NRI Parallel	ON	ON	OFF	ON			500Pta	200Pta	100Pta	50Pta	25Pta	-	-	200Pta	-	50Pta old	25Pta old	
Spain	Coin Controls C220 Parallel	OFF	OFF	ON	ON			100Pta	50Pta new	-	25Pta new	-	50Pta old	-	25Pta old				
Portugal Euro	Parallel	ON	OFF	ON	ON			200Es €1	100Es 50¢	50Es	-	-	-	-	-				
	TBA					OFF		TBA						Please Note The credit board automatically sets the validator for parallel and binary operation through an output on pin 8 of the 17 way pinstrip. For the feature to work it is necessary for the validator interconnecting cable to include at wire at this position					
						ON		TBA											
	Channels						OFF	Direct Mode											
							ON	2 channel Mode											

Note: These switch settings are under constant review and may change due to world currency updates.

- Set SW 1 according to the option settings found in the relevant Price of Play Settings Table on the following pages.
- For Germany (DM), France (Fr) & Switzerland (SFr), use the appropriate existing setting shown above (from another country) that matches the coin ratios programmed into your coin mech.
- Set SW 3 on the VTS /Excel board as shown in the table above corresponding to the country required.

7.1.1. PRICE OF PLAY SETTINGS UK

	Price	Bonus			DIL Switch 1				
					Switch 1	Switch 2	Switch 3	Switch 4	Switch 5
1	10p	No Bonus			OFF	OFF	OFF	OFF	OFF
2	10p	6 = 50p			ON	OFF	OFF	OFF	OFF
3	20p	No Bonus			OFF	ON	OFF	OFF	OFF
4	20p	3 = 50p	6 = £1	12 = £2	ON	ON	OFF	OFF	OFF
5	30p	No Bonus			OFF	OFF	ON	OFF	OFF
6	30p	1.66 = 50p	4 = £1	8 = £2	ON	OFF	ON	OFF	OFF
7	30p	2 = 50p	4 = £1		OFF	ON	ON	OFF	OFF
8	30p	AMLD *	3 = £1	6 = £2	ON	ON	ON	OFF	OFF
9	40p	No Bonus			OFF	OFF	OFF	ON	OFF
10	40p	1.25 = 50p	3 = £1	6 = £2	ON	OFF	OFF	ON	OFF
11	50p	No Bonus			OFF	ON	OFF	ON	OFF
12	50p		3 = £1	6 = £2	ON	ON	OFF	ON	OFF
13	50p		2 = £1	5 = £2	OFF	OFF	ON	ON	OFF
14	60p	No Bonus			ON	OFF	ON	ON	OFF
15	60p		2 = £1	4 = £2	OFF	ON	ON	ON	OFF
16	80p	No Bonus			ON	ON	ON	ON	OFF
17	80p	1.25 = £1	2 = £1.50	2.5 = £2	OFF	OFF	OFF	OFF	ON
18	£1	No Bonus			ON	OFF	OFF	OFF	ON
19	£1		3 = £2		OFF	ON	OFF	OFF	ON
20	£1		2 = £2	5 = £4	ON	ON	OFF	OFF	ON
21	£1.50	No Bonus			OFF	OFF	ON	OFF	ON
22	£1.50		2 = £2		ON	OFF	ON	OFF	ON
23	£2	No Bonus			OFF	ON	ON	OFF	ON
24	£2			3 = £5	ON	ON	ON	OFF	ON
25	£3	No Bonus			OFF	OFF	OFF	ON	ON
26	£3			2 = £5	ON	OFF	OFF	ON	ON
27	£5	No Bonus			OFF	ON	OFF	ON	ON
28	£5			3 = £10	ON	ON	OFF	ON	ON
29	£7.50	No Bonus			OFF	OFF	ON	ON	ON
30	£7.50			2 = £10	ON	OFF	ON	ON	ON
31	£10	No Bonus			OFF	ON	ON	ON	ON
32		Free Play			ON	ON	ON	ON	ON

7.1.2. PRICE OF PLAY SETTINGS EURO

	Price	Bonus			DIL Switch 1				
					Switch 1	Switch 2	Switch 3	Switch 4	Switch 5
1	10¢	No Bonus			OFF	OFF	OFF	OFF	OFF
2	10¢	6 = 50¢			ON	OFF	OFF	OFF	OFF
3	20¢	No Bonus			OFF	ON	OFF	OFF	OFF
4	20¢	3 = 50¢	6 = €1	12 = €2	ON	ON	OFF	OFF	OFF
5	30¢	No Bonus			OFF	OFF	ON	OFF	OFF
6	30¢	1.66 = 50¢	4 = €1	8 = €2	ON	OFF	ON	OFF	OFF
7	30¢	2 = 50¢	4 = €1		OFF	ON	ON	OFF	OFF
8	30¢	AMLD *	3 = €1	6 = €2	ON	ON	ON	OFF	OFF
9	40¢	No Bonus			OFF	OFF	OFF	ON	OFF
10	40¢	1.25 = 50¢	3 = €1	6 = €2	ON	OFF	OFF	ON	OFF
11	50¢	No Bonus			OFF	ON	OFF	ON	OFF
12	50¢		3 = €1	6 = €2	ON	ON	OFF	ON	OFF
13	50¢		2 = €1	5 = €2	OFF	OFF	ON	ON	OFF
14	60¢	No Bonus			ON	OFF	ON	ON	OFF
15	60¢		2 = €1	4 = €2	OFF	ON	ON	ON	OFF
16	80¢	No Bonus			ON	ON	ON	ON	OFF
17	80¢	1.25 = €1	2 = €1.50	2.5 = €2	OFF	OFF	OFF	OFF	ON
18	€1	No Bonus			ON	OFF	OFF	OFF	ON
19	€1		3 = €2		OFF	ON	OFF	OFF	ON
20	€1		2 = €2	5 = €4	ON	ON	OFF	OFF	ON
21	€1.50	No Bonus			OFF	OFF	ON	OFF	ON
22	€1.50		2 = €2		ON	OFF	ON	OFF	ON
23	€2	No Bonus			OFF	ON	ON	OFF	ON
24	€2			3 = €5	ON	ON	ON	OFF	ON
25	€3	No Bonus			OFF	OFF	OFF	ON	ON
26	€3			2 = €5	ON	OFF	OFF	ON	ON
27	€5	No Bonus			OFF	ON	OFF	ON	ON
28	€5			3 = €10	ON	ON	OFF	ON	ON
29	€7.50	No Bonus			OFF	OFF	ON	ON	ON
30	€7.50			2 = €10	ON	OFF	ON	ON	ON
31	€10	No Bonus			OFF	ON	ON	ON	ON
32	Free Play				ON	ON	ON	ON	ON

7.1.3. PRICE OF PLAY SETTINGS Austria-Czech-Denmark-Norway-Israel-France2

	Price	Bonus			Switch 1				
					Switch 1	Switch 2	Switch 3	Switch 4	Switch 5
1	1	No Bonus			OFF	OFF	OFF	OFF	OFF
2	1			11 = 10	ON	OFF	OFF	OFF	OFF
3	1		6 = 5		OFF	ON	OFF	OFF	OFF
4	2	No Bonus			ON	ON	OFF	OFF	OFF
5	2			6 = 10	OFF	OFF	ON	OFF	OFF
6	2		3 = 5		ON	OFF	ON	OFF	OFF
7	3	No Bonus			OFF	ON	ON	OFF	OFF
8	3			4 = 10	ON	ON	ON	OFF	OFF
9	3		2 = 5		OFF	OFF	OFF	ON	OFF
10	4	No Bonus			ON	OFF	OFF	ON	OFF
11	4		3 = 10		OFF	ON	OFF	ON	OFF
12	5	No Bonus			ON	ON	OFF	ON	OFF
13	5			3 = 10	OFF	OFF	ON	ON	OFF
14	6	No Bonus			ON	OFF	ON	ON	OFF
15	6			4 = 20	OFF	ON	ON	ON	OFF
16	8	No Bonus			ON	ON	ON	ON	OFF
17	10	No Bonus			OFF	OFF	OFF	OFF	ON
18	10			3 = 20	ON	OFF	OFF	OFF	ON
19	20	No Bonus			OFF	ON	OFF	OFF	ON
20	20			3 = 50	ON	ON	OFF	OFF	ON
21	30	No Bonus			OFF	OFF	ON	OFF	ON
22	30			2 = 50	ON	OFF	ON	OFF	ON
23	50	No Bonus			OFF	ON	ON	OFF	ON
24	50			3 = 100	ON	ON	ON	OFF	ON
32	Free Play				ON	ON	ON	ON	ON

8. DESIGN RELATED PARTS

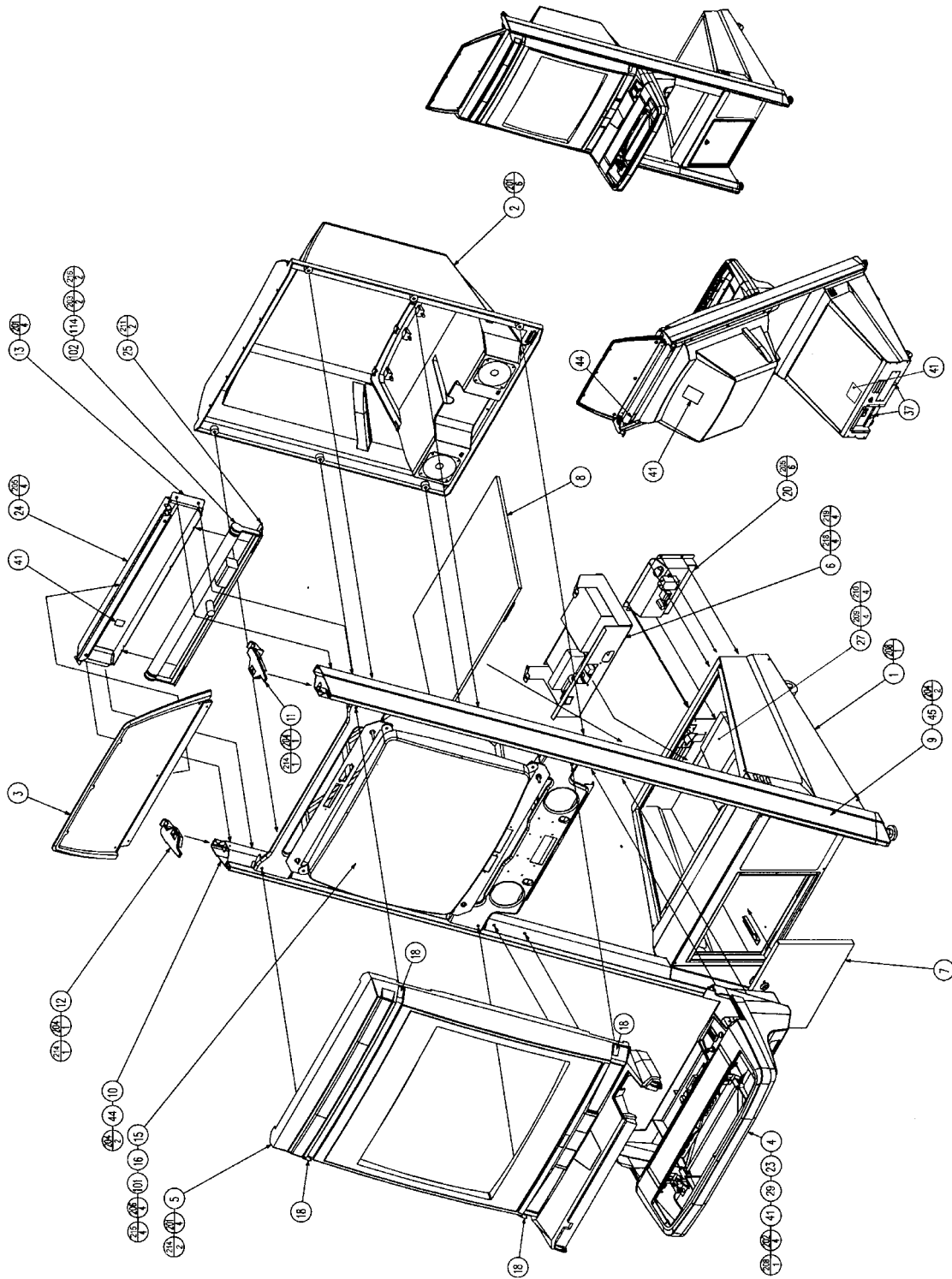
For the Warning stickers refer to Section 1.



No.	PART No.	DESCRIPTION
1	VCT-5151-AUK	STICKER FENCE FRAME L
2	VCT-5171-AUK	STICKER FENCE FRAME R
3	VCT-3001UK	BILLBOARD PLATE U/R
4	VCT-3002UK	STICKER SIDE COVER L
5	VCT-3003UK	STICKER SIDE COVER R
6	VCT-3005UK	STICKER CONTROL PANEL NOB
7	VCT-3011UK	STICKER SERVICE DOOR
8	VCT-3013UK	STICKER CONTROL PANEL CCT
9	VCT-3018UK	STICKER CASH DOOR
10	VCT-5002UK	FLOOR PLATE ARTWORK

9. PARTS LIST

9.1. VCT-10002UK ASSY CABINET VCT U/R



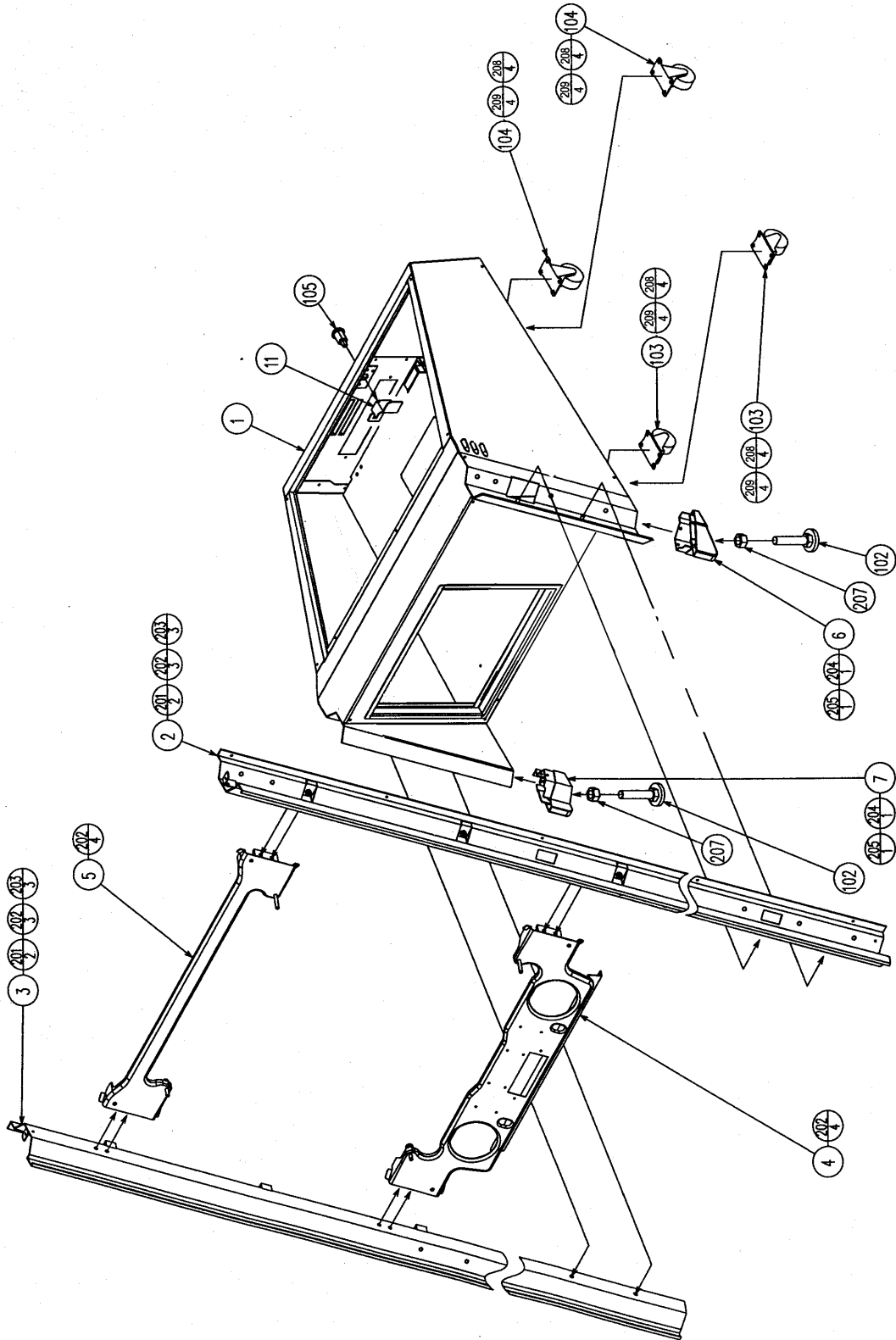
ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	VCT-11002UK	1	ASSY FRAMEWORK VCT U/R	
2	NOA-1200UK	1	ASSY CRT COVER UK	
3	VCT-1300	1	ASSY BILLBOARD	
4	VCT-1400UK	1	ASSY CONTROL BOX HDT U/R	COLOUR CHANGE
5	VCT-1500UK	1	ASSY FRONT PANEL HDT U/R FST	COLOUR CHANGE
6	CHT-4000UK	1	ASSY ELEC	
7	NOA-1750UK	1	ASSY SERVICE DOOR	WHITE
8	NOA-1801UK	1	REAR HATCH	FIX DOWN AT TOP ASSY (WHITE)
9	NOB-1001UK	1	FRAME COVER UR R	
10	NOB-1002UK	1	FRAME COVER UR L	
11	NOA-1003	1	ENDCAP R	
12	NOA-1004	1	ENDCAP L	
13	PTR-1005UK	1	REAR COVER UPPER BLACK	
15	280-6617	4	BUSH FOR TV LONG	
16	280-5113	4	COLLAR FOR NANA0 MONITOR	(101)-4
18	VCT-1006UK	4	SCR CAP	COLOUR CHANGE
20	NOB-1710UK	1	ASSY AC UNIT	WHITE
23	NOA-1009	2	WSHR PLATE	(4)-2
24	RTS-1010UK	1	BILLBD HOLDER	
25	NOA-1011	1	FL BRKT	
27	HDT-4100UK	1	ASSY XFMR	
29	NOB-1117UK	1	WATER GUARD CE	
37	421-7020UK	2	STICKER CAUTION FORK	AT BACK OF BASE BOX
41	LB1102	5	STICKER DANGEROUS VOLTAGE	LID,LEFT OF DOOR,CRT,FL,CP
42	LB1104	1	STICKER CAUTION, HOT SURFACE	FL COVER
44	VCT-3002UK	1	STICKER SIDE COVER L	
45	VCT-3003UK	1	STICKER SIDE COVER R	
51	VCT-3011UK	1	STICKER SERVICE DOOR	
52	VCT-3018UK	1	STICKER CASH DOOR	
101	200-5949	1	ASSY CLR DSPL 29 TYPE 31K UK	
102	390-5695-40-CUK	1	FL TRAY 110V 40W (T12)	
114	390-5695-40-DUK	1	FL TUBE 40W 600L 1.5"DIA	
116	280-A02048-PM	5	ROUTER TWIST D20 SO4.8 PAN LG	
117	280-A02000-A	4	ROUTER TWIST D20 ADH	
118	280-A01248-PM	12	ROUTER TWIST D12 SO4.8 PAN MED	
119	280-A01200-A	3	ROUTER TWIST D12 ADH	
120	280-A00900-A	2	ROUTER TWIST D9 ADH	
121	OS1230	1.18	FOAM STRIP 2mm X 10mm	2X0.59M TO 8
122	601-0460	10	CABLE TIE 100mm	(29)-10
201	008-T00625-0C	14	M6X25 TMP PRF TH CRM	(2)-6,(5)-4,(13)-4
202	030-000620-S	4	M6X20 BLT W/S PAS	(4)-4
203	000-P00408	2	M4X8 MSCR PAN PAS	FL TUBE CLIPS - 2
204	008-T00412-0C	6	M4X12 TMP PRF TH CRM	(9,10)-2,(11,12)-1
205	008-T00412-0B	10	M4X12 TMP PRF TH BLK	(20)-6,(24)-4
206	050-F00600	4	M6 NUT FLG SER PAS	(101)-4
208	008-T00430-0B	2	M4X30 TMP PRF TH BLK	TNG STOPPER CP & REAR LID

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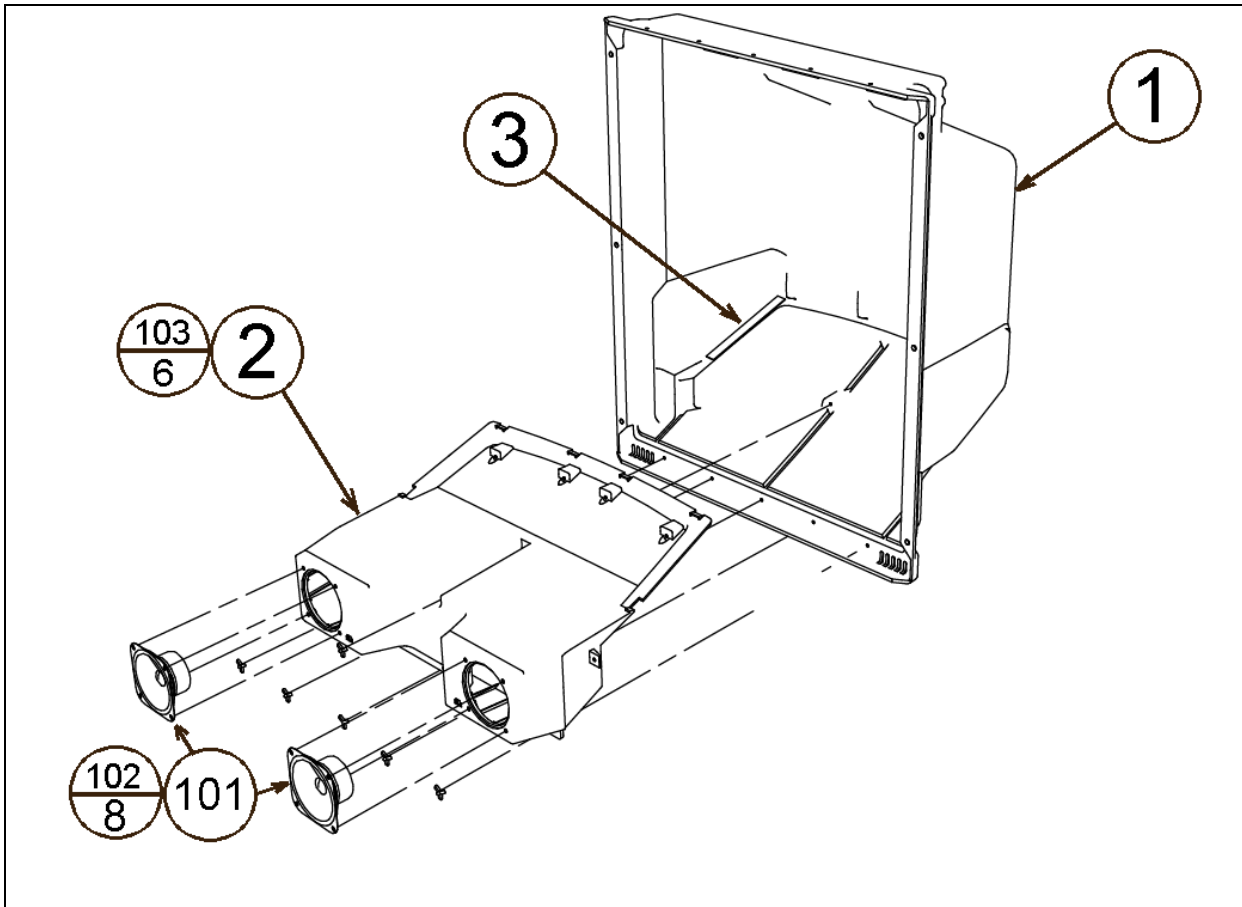
ITEM	PART No.	QTY	DESCRIPTION	COMPONENT REF.
209	030-000630-S	4	M6X30 BLT W/S PAS	(27)-4
210	068-651616	4	M6 WSHR 16OD FLT PAS	(27)-4
211	000-P00408-W	6	M4X8 MSCR PAN W/FS PAS	(25)-2,EARTHS-4
214	000-P00416-W	4	M4X16 MSCR PAN W/FS PAS	(5)-2,(11)-1,(12)-1
215	068-652516	4	M6 WSHR 25OD FLT PAS	(101)-4
216	050-F00400	4	M4 NUT FLG SER PAS	(102)-2,EARTHS-2
217	050-F00500	3	M5 NUT FLG SER PAS	FRAME EARTHS - 3
218	010-P00408	4	M4X8 S-TITE PAN PAS	(6)-4
219	060-F00400	4	M4 WSHR FORM A FLT PAS	(6)-4
301	HDT-6001UK	1	ASSY WIRE L HDT U/R	
302	NOB-60041UK	1	WIRE HARN AC EXT UK	
303	NOA-60025	1	WIRE HARN SPEAKER R	
311	600-7159-070	1	WIRE HARN JVS PWR 070CM	
319	600-9010-44K	1	WIRE HARN EARTH 100mm M4/M4	BBOARD HOLDER TO FL BASE
320	NOB-60201UK	1	WIRE HARN FL NOB	
321	600-9070-45K	1	WIRE HARN EARTH 700mm M4/M5 K	BASE LID TO BASE
322	600-9080-45K	1	WIRE HARN EARTH 800mm M4/M5 K	BASE TO RH FRAME (BOTTOM)
323	600-9025-56U	1	WIRE HARN EARTH 250mm M5/M6	MON CHASSIS TO RH FRAME TEMP
324	600-9055-45K	1	WIRE HARN EARTH 550mm M4/M5 K	BASE TO LH FRAME BOTTOM

9.2. VCT-11002UK ASSY FRAMEWORK VCT U/R



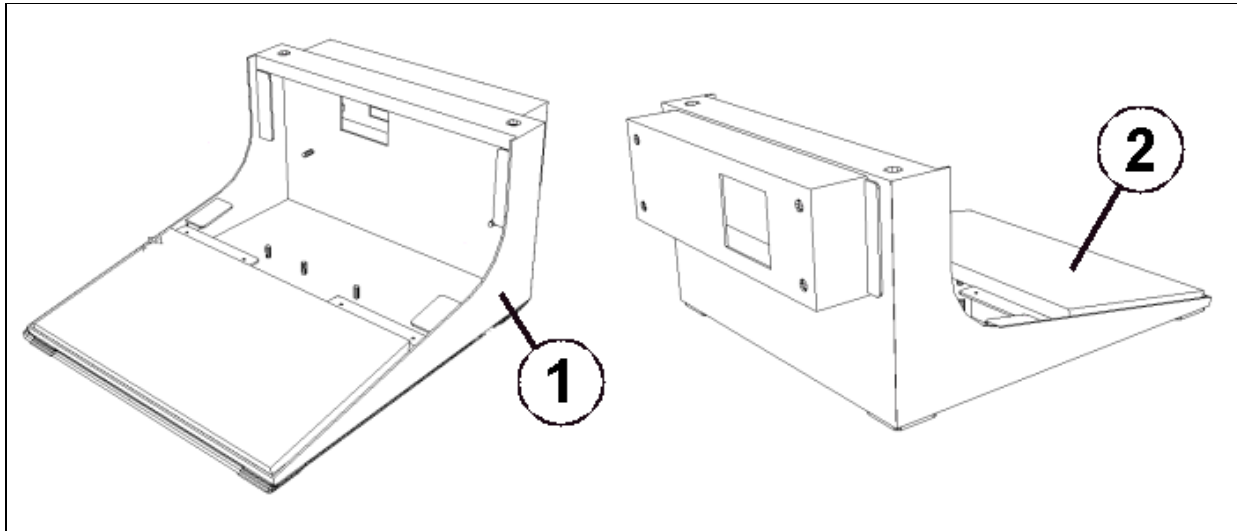
ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	VCT-1601UK	1	BASE BOX	
2	NOB-1101UK	1	MAIN FRAME UR R	
3	NOB-1102UK	1	MAIN FRAME UR L	
4	NOA-1111X	1	LOWER BEAM	
5	NOA-1112X	1	UPPER BEAM	
6	NOA-1113	1	HOOF R	
7	NOA-1114	1	HOOF L	
11	NOA-1115UK	1	TNG REAR HATCH	
102	601-5699X	2	LEG ADJUSTER BOLT M16x75 SEGA	
103	601-10461UK	2	CASTOR 50 SWIVEL	FRONT
104	601-10462UK	2	CASTOR 50 FIXED	REAR
105	220-5575UK	1	LOCK	
201	050-F00600	4	M6 NUT FLG SER PAS	(2)-2,(3)-2
202	030-000620-S	14	M6X20 BLT W/S PAS	(2,3)-3,(4,5)-4
203	068-652016	6	M6 WSHR 20OD FLT PAS	(2)-3,(3)-3
204	050-F00500	2	M5 NUT FLG SER PAS	(6)-1,(7)-1
205	000-P00408-W	2	M4X8 MSCR PAN W/FS PAS	(6)-1,(7)-1
207	050-H01600	2	M16 NUT PAS	(102)-2
208	FAS-200004	16	M6X14 SKT CAP BLK	(103,4)-8EA
209	060-S00600-0B	16	M6 WSHR SPR BLK	(103,4)-8EA

9.3. NOA-1200UK ASSY CRT COVER UK



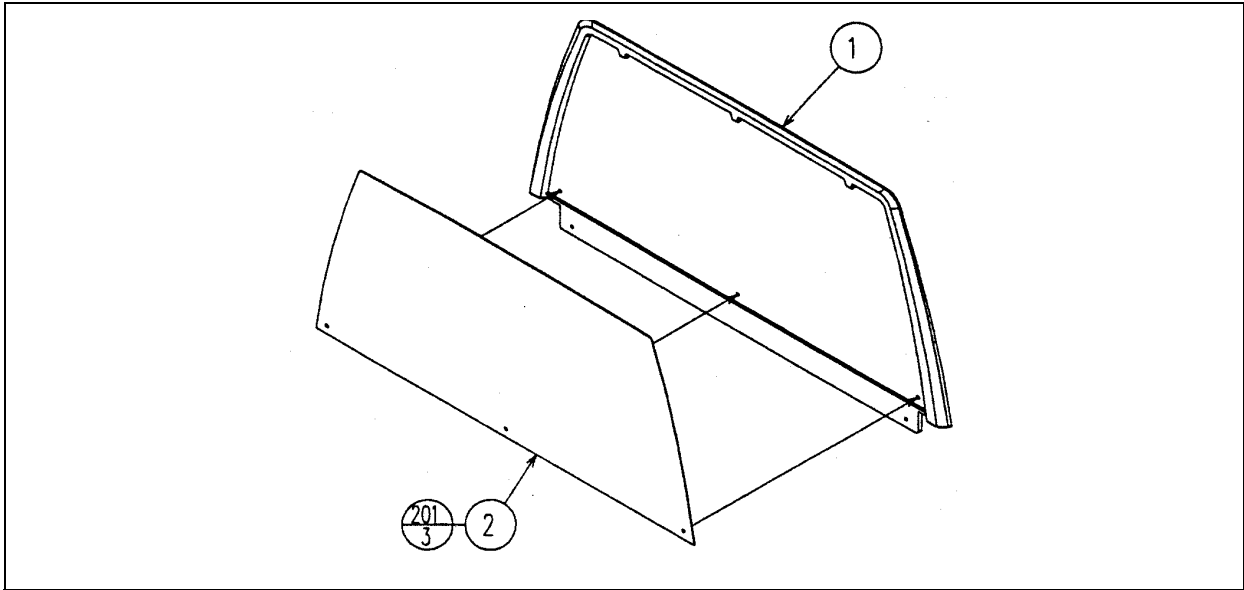
No.	PART NUMBER	QTY	DESCRIPTION	COMPONENT REFERENCE
1	NOA-1201UK	1	CRT COVER	
2	NOA-1202	1	SPEAKER BOX	
3	RND-0037	0.38	TAPE SPEAKER BOX 2 SIDED	(2)-0.19
101	130-5205	2	SPEAKER 40HM 10W 100 W/S	
102	000-P00410-W	8	M4X10 MSCR POSI PAN W/FS	(101)-8
103	340042	6	RIVET BULBEX 3/16 BF01-0630	(2)-6
301	NOA-60031	1	WIRE HARN SPEAKER L	[NOT SHOWN]
302	NOA-60032	1	WIRE HARN SPEAKER R	[NOT SHOWN]

9.4. VCT-1200UK ASSY FOOT PEDAL DX



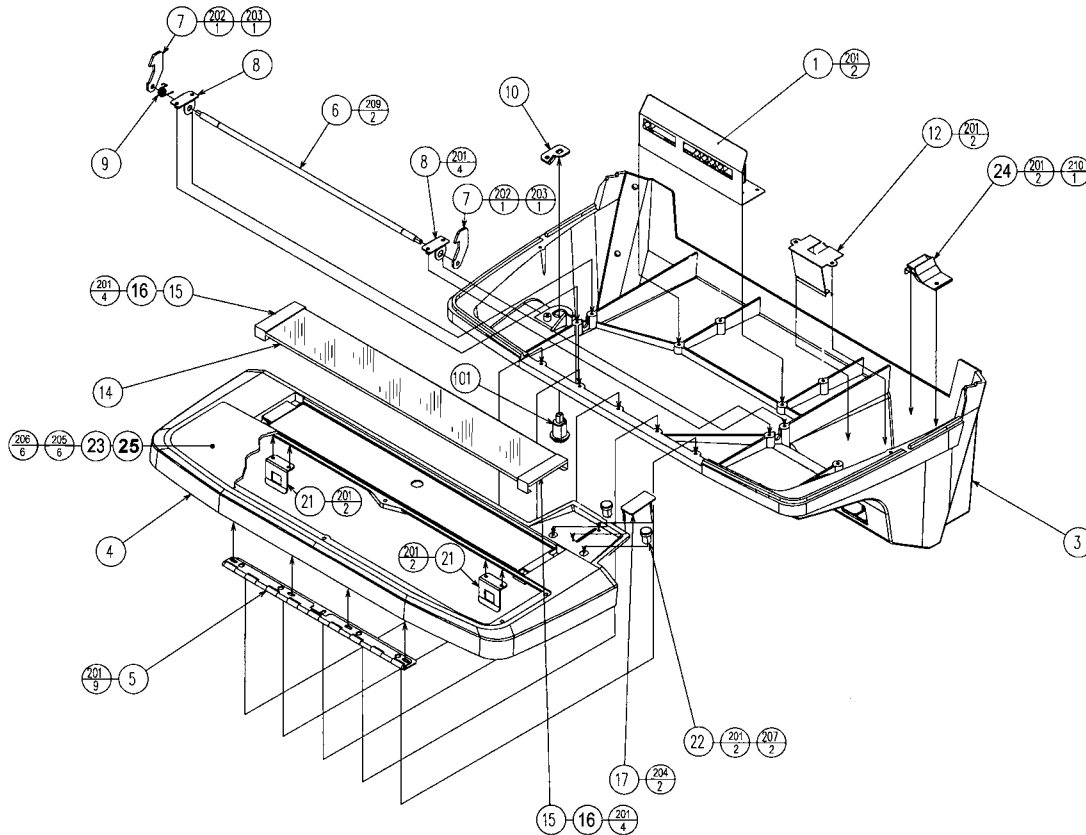
ITEM	PART NUMBER	QTY	DESCRIPTION	COMPONENT REF.
1	VCT-1201UK	1	PEDAL BASE DX	
2	VCT-1202UK	1	PEDAL	
3	VCT-1203UK	1	FOOT PLATE	(ARTWORK)
4	VCT-1204	1	COM SPRING	
5	VCT-1205UK	1	SPRING COVER	
6	VCT-1206UK	1	SHADE PLATE	
7	VCT-1207UK	1	SENSOR BRKT	
8	VCT-1208UK	1	WIRE COVER	
9	VCT-1209	2	STOPPER RUBBER	
10	VCT-1210	2	RUBBER CUSHION	
11	VCT-1211UK	2	RUBBER CASE	
12	VCT-1212UK	2	CUSHION	
13	VCT-1213UK	1	PLATE SASH	
101	370-5226	1	PHOTO SENSOR OMT-01DAMP NEW	
103	280-6622-30030	4	SPACER TUBE	
201	FAS-000102	3	M5X6 MSCR TH BLK	(2)-3
202	FAS-290034	4	M5X15 LH CAP SCR STN	(3)-4
203	000-F00512	2	M5X12 MSCR FH	(5)-2
204	000-P00310	10	M3X10 MSCR PAN W/FS	(11)-4,(7)-4,(12)-4
205	050-F00400	10	M4 FLG NUT	(6)-2,(7)-2,(14)-2,(8)-4
206	000-T00408-0B	2	M4X8 MSCR TH BLK	(13)-2
207	000-P00320-W	3	M3X20 MSCR PR W/FS	(14)-2
208	050-H00400	1	M4 NUT HEX	(1)-1
209	060-F00400	1	M4 FLT WSHR	(1)-1
210	060-S00400	1	M4 SPR WSHR	(1)-1
211	030-000620	1	M6X20 BLT W/S BLK	(1)-4
301	VCT-64002	1	WH FOOT PEDALS	

9.5. VCT-1300 ASSY BILLBOARD



No.	PART NUMBER	QTY	DESCRIPTION	COMPONENT REFERENCE
1	NOA-1301X	1	BILLBOARD PLATE	
2	NOA-1302UK	1	BILLBOARD SHEET	
3	VCT-3001UK	1	BILLBOARD PLATE U/R	NOT SHOWN
201	008-T00408-OC	3	M4X8 MSCR TMP PRF TH CRM	(2)-3

9.6. VCT-1400UK ASSY CONTROL BOX VCT U/R



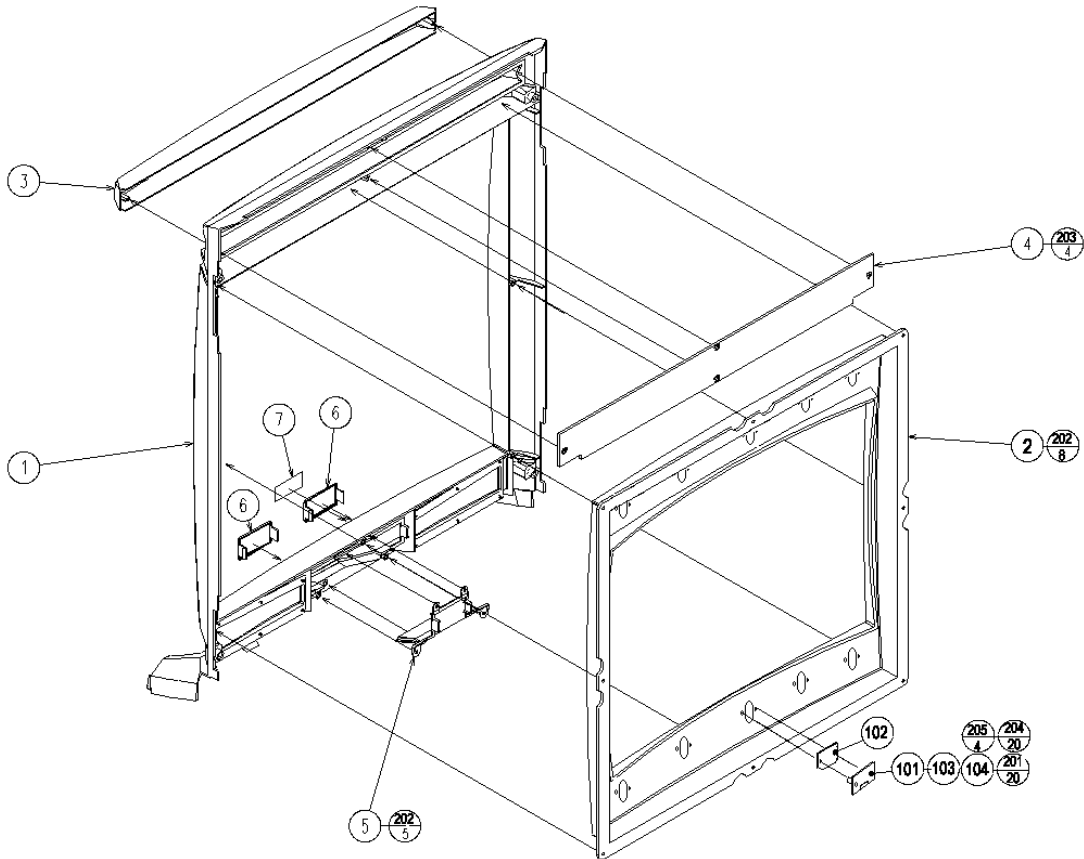
ITEM	PART NUMBER	QTY	DESCRIPTION	COMPONENT REF.
1	SPY-1404UK	1	ADJUST PANEL BRKT	
3	NOA-1401	1	CONTROL BOX LOWER	
4	VCT-1402UK	1	CONTROL BOX UPPER	COLOUR CHANGE
5	CQN-1055X	1	HINGE	
6	NOA-1403	1	SHAFT	
7	HOT-1520	2	LATCH N	
8	HOT-1504	2	LATCH HOLDER	
9	NOA-1404	1	TOR SPRING	
10	HOT-1505UK	1	LKG TNG	(101)-1
12	SPY-1406UK	1	REJECT COVER	
14	VCT-3004UK	1	PANEL INSTRUCTION SPACE	5MM FOAMEX (ARTWORK)
15	NOA-1419	2	BRKT INST COVER	(14)-2
16	NOA-1420	4	L WASHER	(15)-4
17	SPX-1407UK	1	COIN ENTRY COVER	
21	NOA-1415	2	LOCK BRKT	
22	NOA-1418	2	DUMMY BTN	
23	SPX-1403UK	1	CNTRL PANEL PLATE BLANK	
24	SPY-1408UK	1	COIN EXIT COVER	
25	VCT-3005UK	1	STICKER CONTROL PANEL NOB	(23)-1

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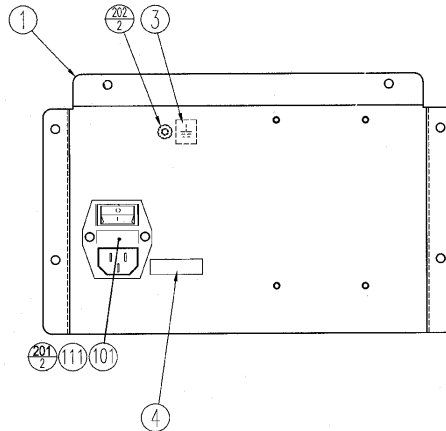
ITEM	PART NUMBER	QTY	DESCRIPTION	COMPONENT REF.
101	220-5575UK	1	LOCK	
102	280-A00900-A	3	ROUTER TWIST D9 ADH	
201	000-P00410-W	27	M4X10 MSCR PAN W/FS PAS	(1,12,22)-2,(8,16,21)-4,(5)-9
202	050-H00600	2	M6 NUT PAS	(7)-2
203	060-S00600	2	M6 WSHR SPR PAS	(7)-2
204	050-F00300	2	M3 NUT FLG SER PAS	(17)-2
205	031-000416-0B	6	M4X16 CRG BLT BLK	(23)-6
206	050-F00400	6	M4 NUT FLG SER PAS	(23)-6
207	068-441616	2	M4 WSHR 16OD FLT PAS	(22)-2
209	065-E00600	2	DIA6 E RING	(6)-2
210	000-P00412-W	1	M4X12 MSCR PAN W/FS PAS	(24)-1
211	008-T00412-0C	1	M4X12 TMP PRF TH CRM	(24)-1

9.7. VCT-1500UK ASSY FRONT PANEL VCT U/R FST



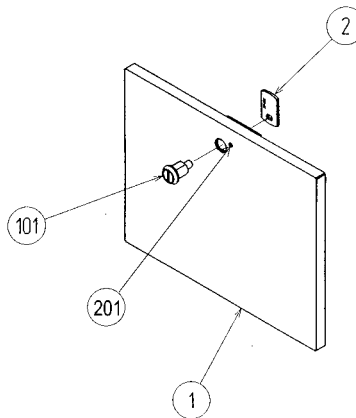
ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	VCT-1501UK	1	FRONT PANEL VCT	COLOUR CHANGE
2	SPY-1502-02UK	1	MASK NF SPY U/R	
3	NOA-1503	1	LIGHT COVER	
4	NOA-1504UK	1	PRISM PLATE	
5	VCT-1505UK	1	LID GC	COLOUR CHANGE
6	VCT-1506UK	2	LID VMS	COLOUR CHANGE
7	NOA-1507	1	EMBLEM NAOMI	
101	838-13145-02	10	LED BD GUN SENSE HOD	
102	JPT-1082	10	IR COVER	
103	SPY-1507-AUK	20	HEAD COVER M3 GREY	(101)-20
104	SPY-1507-BUK	20	HEAD COVER BASE M3	(101)-20
105	280-A00900-A	2	ROUTER TWIST D9 ADH	2-(2)
201	050-U00300	20	M3 NUT NYLOK PAS	(101)-20
202	000-P00410-W	13	M4X10 MSCR PAN W/FS PAS	(2)-8,(5)-5
203	012-P03516	4	N6X5/8" S/TAP PAN PAS	(4)-4
204	000-P00325	20	M3X25 MSCR PAN PAS	(101)-20
205	068-330808-PN	20	M3 WSHR 8OD FLT NYLON	(101)-20
301	SPY-61040UK	7	WIRE HARN MASK SHORT	
302	SPY-61042UK	2	WIRE HARN MASK LONG	
303	SPY-61041UK	1	WIRE HARN IC BD	

9.8. NOB-1710UK ASSY AC UNIT



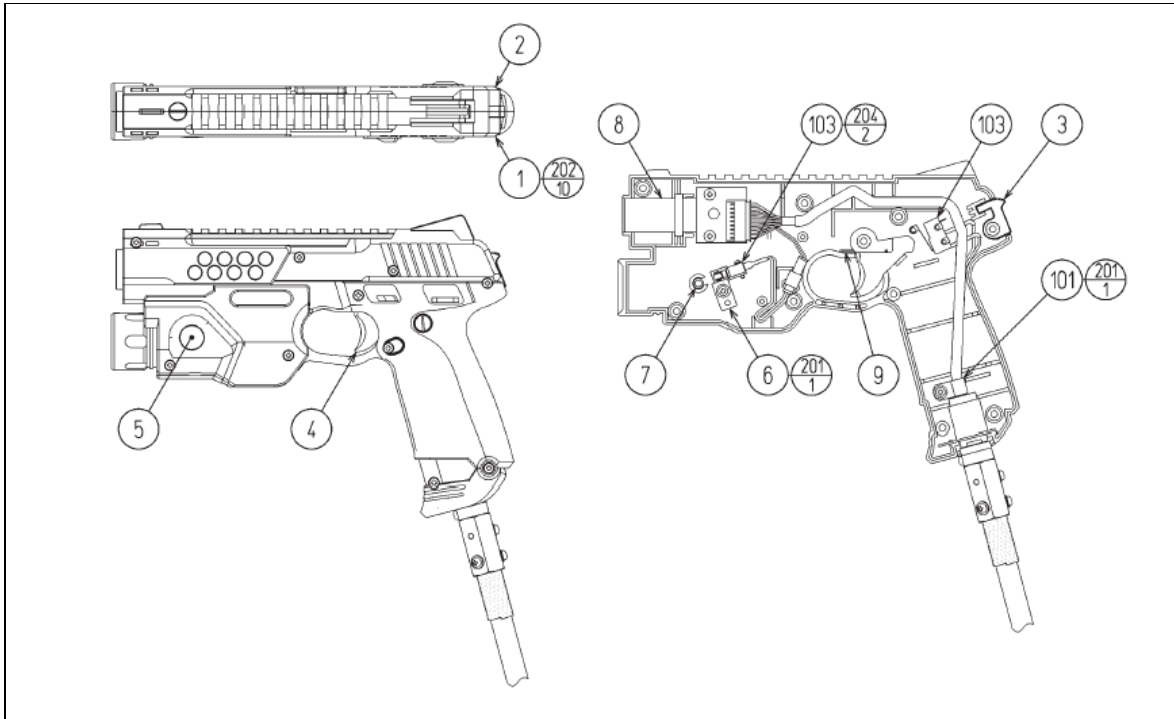
ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	NOB-1711UK	1	AC BRKT NEW	WHITE
3	LB1096	1	STICKER PROTECTIVE EARTH	NEXT TO EARTH STUD ON INSIDE
4	421-6595-5000-T	1	STICKER FUSE 5000mA TYPE T	NEXT TO IEC INLET ON OUTSIDE
101	EP1381	1	FILTER IEC & SW 6A ROXBURGH	
111	514-5078-5000	1	FUSE 5X20 CERAMIC SB 5000mA	
202	050-F00400	2	M4 NUT FLG SER PAS	EARTH - 2
204	000-F00316	2	M3X16 MSCR CSK PAS	(101)-2
301	NOB-60004UK	1	WIRE HARN AC OUT	
303	600-9030-45K	1	WIRE HARN EARTH 300mm M4/M5 K	AC BRKT TO XFMR
305	600-9025-44K	1	WIRE HARN EARTH 250mm M4/M4	AC BRKT TO BASE
306	600-9015-4FK	1	WIRE HARN EARTH 150MM	

9.9. NOA-1750UK ASSY SERVICE DOOR



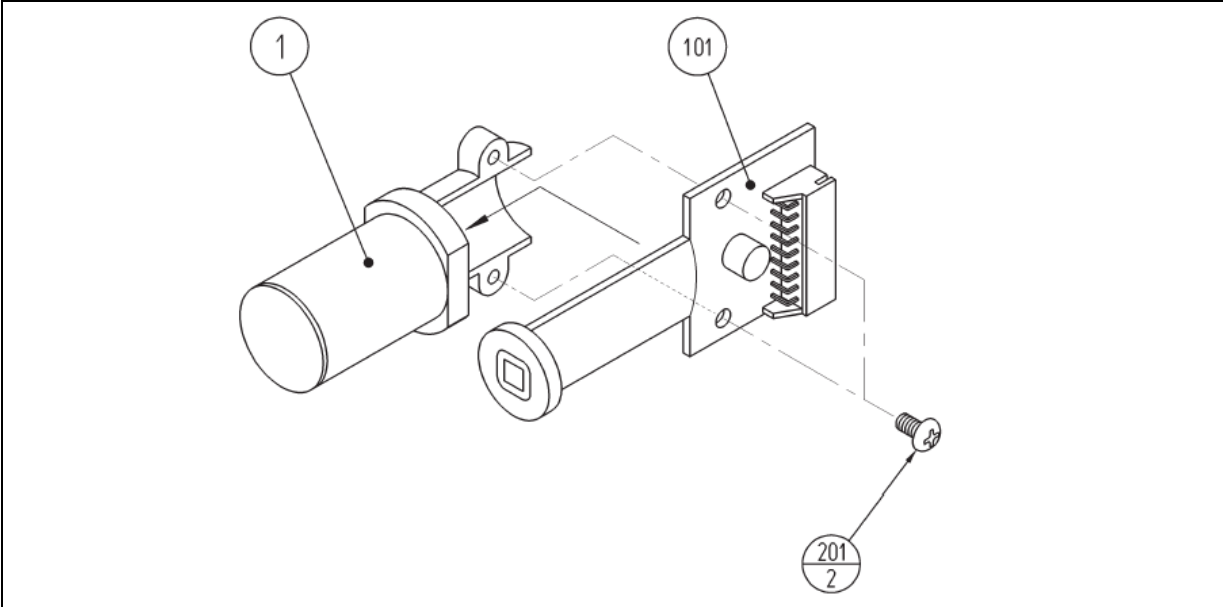
ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	NOA-1751UK	1	SERVICE DOOR	WHITE
2	DP-1167UK	1	TNG LKG UK	
101	220-5575UK	1	LOCK	
201	008-T00430-0C	1	M4X30 TMP PRF TH CRM	DO UP 1/2 WAY SO TNG OPENS

9.10. VCT-2100-01 CONTROL UNIT EXP



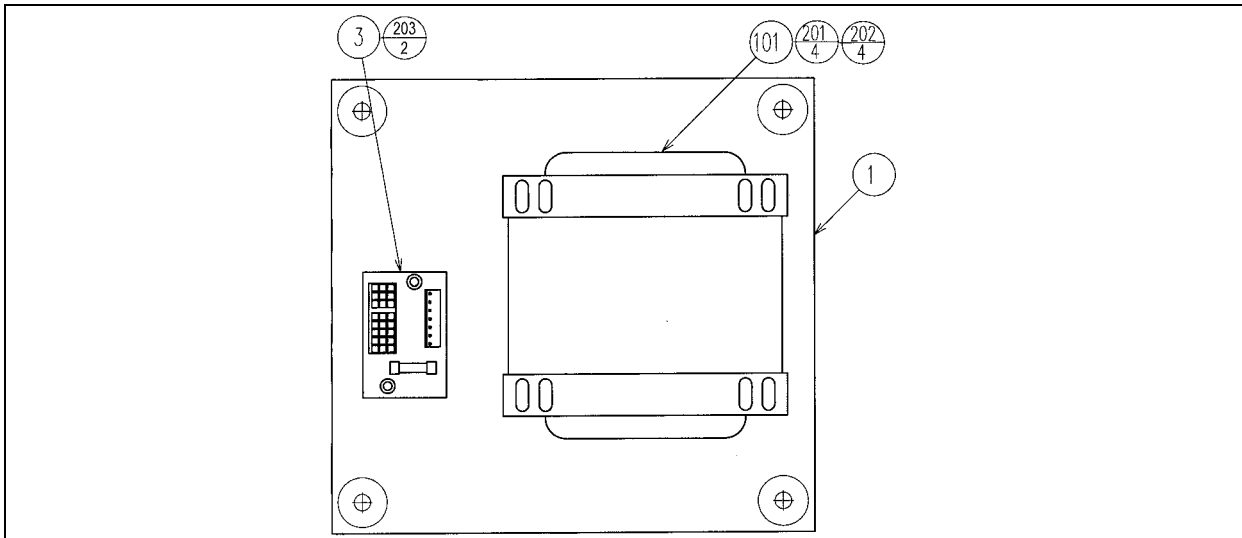
Item	Component Part	Qty	Description	Component Reference
1	VCT-2101-01	1	COVER L EXP	
2	VCT-2102-01	1	COVER R EXP	
3	VCT-2103-01	1	HAMMER EXP	
4	VCT-2104	1	TRIGGER	
5	VCT-2105	1	CHANGE BUTTON	
6	VCT-2106	1	SW BRKT	
7	VCT-2107	1	COM SPRING	
8	JPT-2030	1	SENSOR UNIT	
9	125-5124	1	TORSION SPRING	
101	280-5124-04	1	NYLON CLAMP NK04	
102	310-5029-D20	1	SUMITUBE F D 20MM	
103	509-5080	1	SW MICRO TYPE (SS-5GL2)	
104	601-0460	1	PLASTIC TIE BELT 100 MM	
201	000-P00308-W	2	M SCR PH W/FS M3 x 8	(6)-1, (101)-1
202	FAS-000099	10	M SCR PH W/SMALL FS BLK M3 x10	(1)-10
204	FAS-000101	2	M SCR PH W/FS M2.3 x 10	(103)-2
301	VCT-60011	1	WH CONTROL UNIT	
302	VCT-60012	1	WH CHANGE SW	

9.11. JPT-2030 SENSOR UNIT



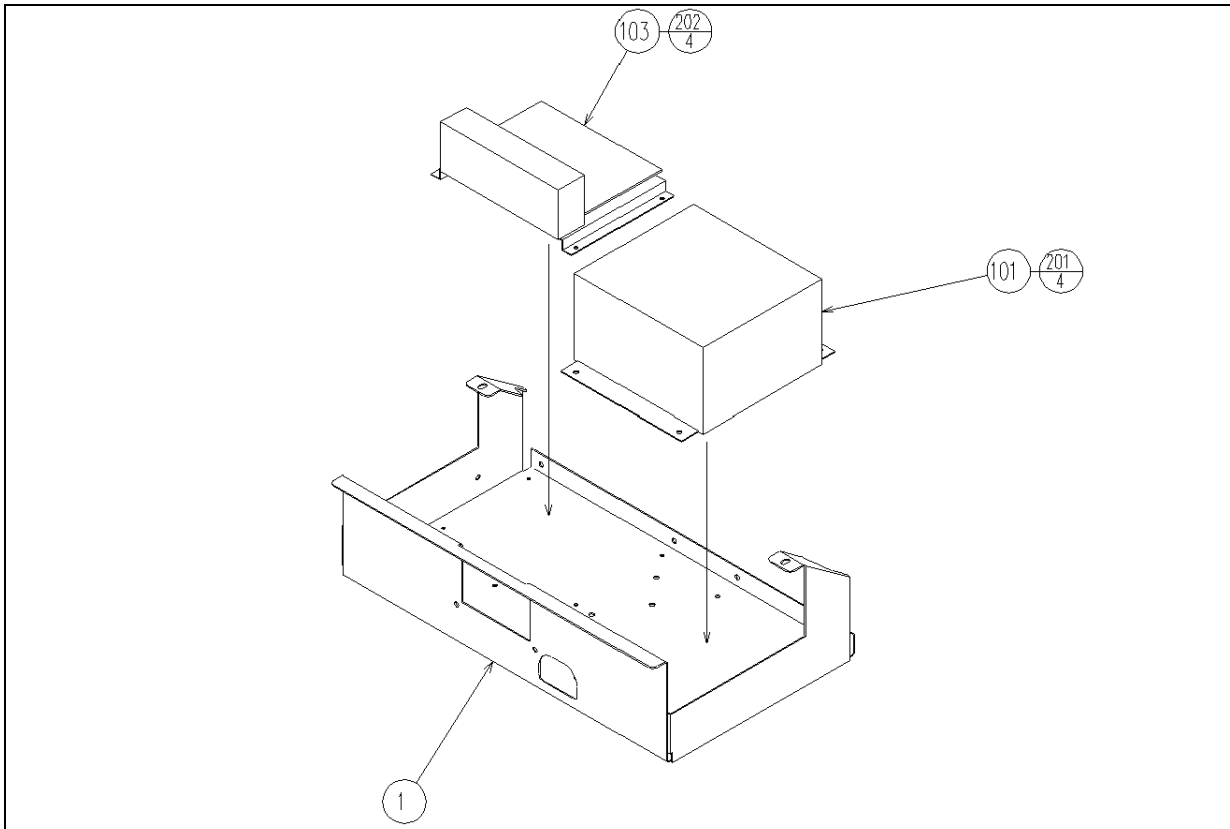
ITEM NO.	PART NO.	DESCRIPTION NOTE
1	JPT-2031	SENSOR HOLDER
101	838-13144	SENSOR BD GUN SENSE
201	012-P00306	TAP SCR #2 PH 3X6

9.12. HDT-4100UK ASSY XMFR



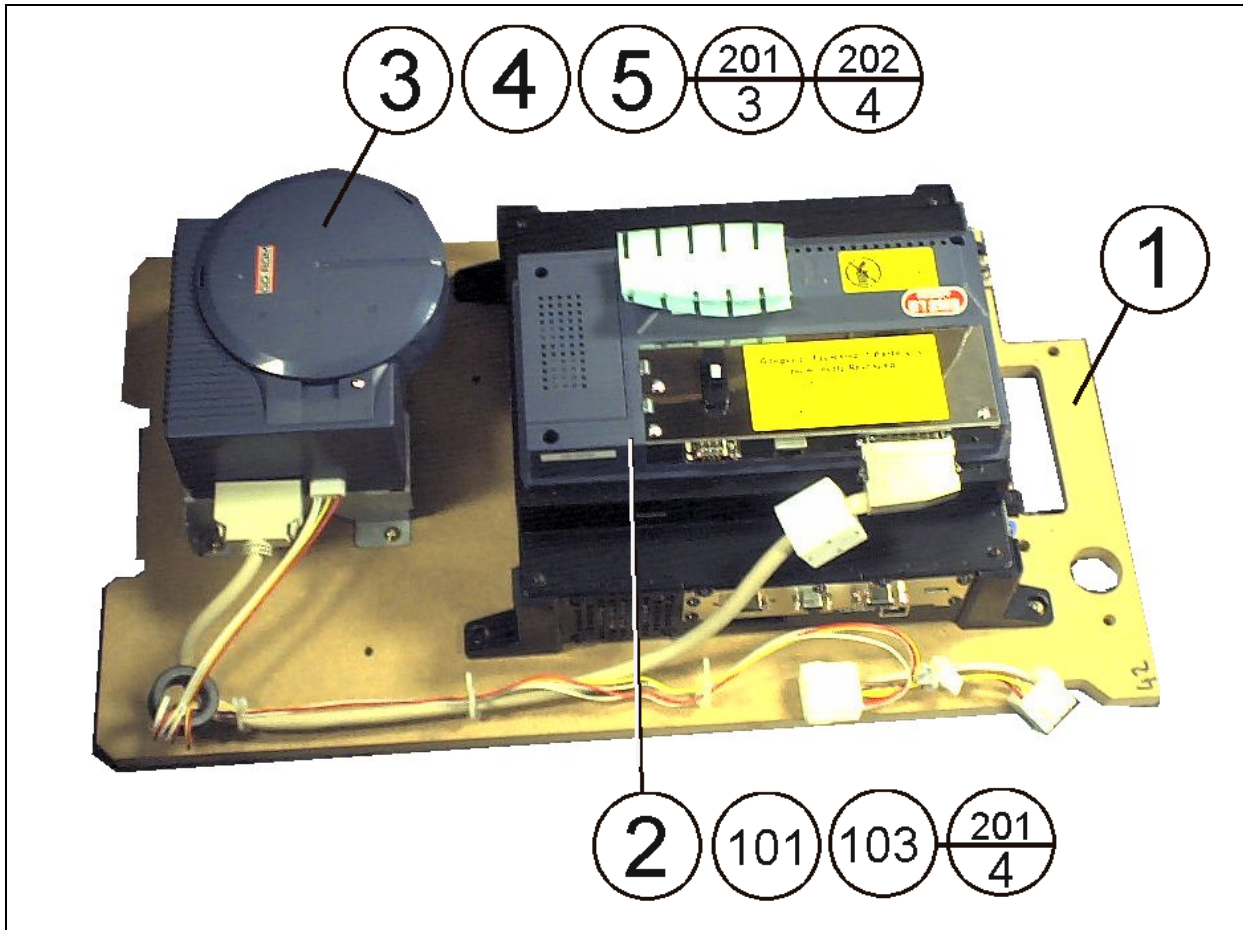
No.	PART NUMBER	QTY	DESCRIPTION	COMPONENT REFERENCE
1	HDT-4101UK	1	XFMR BASE	
3	838-11856CE-02	1	CONN BD W/FUSE 6.3A CE	
101	560-5422UK	1	XFMR NOB	
201	000-P00416-W	4	M4X16 MSCR POSI PAN W/FS	(101)-4
202	068-441616	4	M4 WSHR 16OD FLT PAS	(101)-4
203	012-P00325	2	N4X1" S/TAP POSI PAN PAS	(3)-2 (102)-2

9.13. CHT-4000UK ASSY ELEC



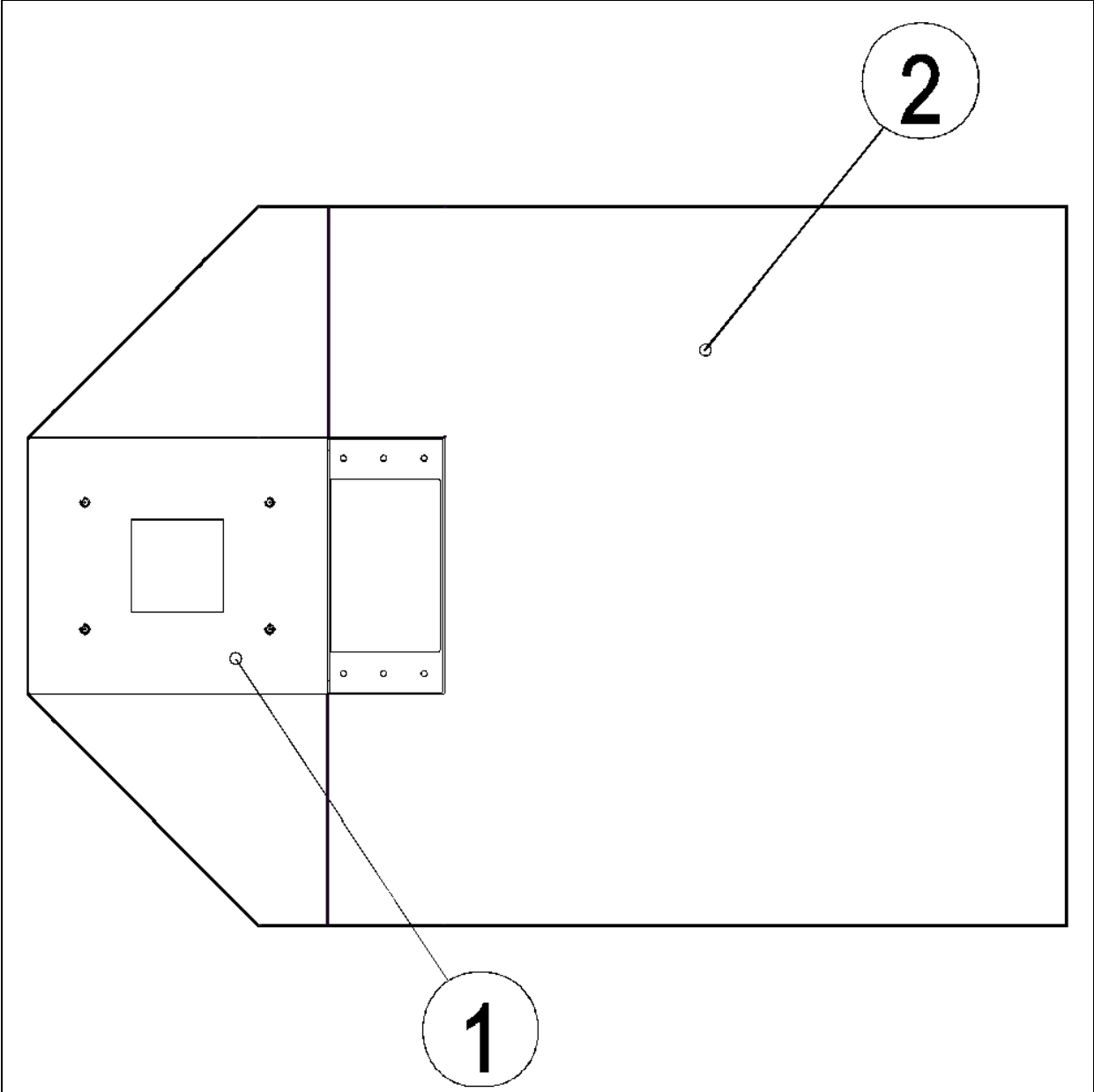
ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF
1	CTH-4001	1	ELEC BASE	
2	NOM-4002	1	BRKT FOR PWR PROTECT UNIT	
101	400-5443	1	SW REGU FOR CHIHURO	
103	838-13616	1	AUDIO POWER AMP 2CH	
107	280-A02048-PM	4	ROUTER TWIST D20 SO4.8 PAN LG	
108	601-6231-B095	9,5	EDGE TRIM NEW TYPE 0.91t	(1) BACK EDGE IN MIDDLE
109	EP1317	1	FERRITE CORE ROUND CABLE CLAMP	SW REGU OUTLET WIRES
110	280-A01248-PM	2	ROUTER TWIST D12 SO4.8 PAN MED	
111	280-A02000-A	1	ROUTER TWIST D20 ADH	
112	EP1364	1	FERRITE CORE ROUND CABLE CLAMP	SW REGU INLET WIRES
113	610-0674	1	PWR PROTECT UNIT FOR CHIHURO	
201	010-P00408	4	M4X8 S-TITE PAN PAS	(101)-4
202	010-P00308	4	M3X8 S-TITE PAN PAS	(103)-4
303	HDT-60013UK	1	WIRE HARN SW REGU + CONDENSER	
304	NOA-60014	1	WIRE HARN I/O BD PWR	
305	NOB-60202UK	1	WIRE HARN AUDIO POWER-IN	
306	600-7159-039	1	WIRE HARN JVS PWR 039CM	

9.14. VCT-4800UK ASSY MAIN BD VCT U/R



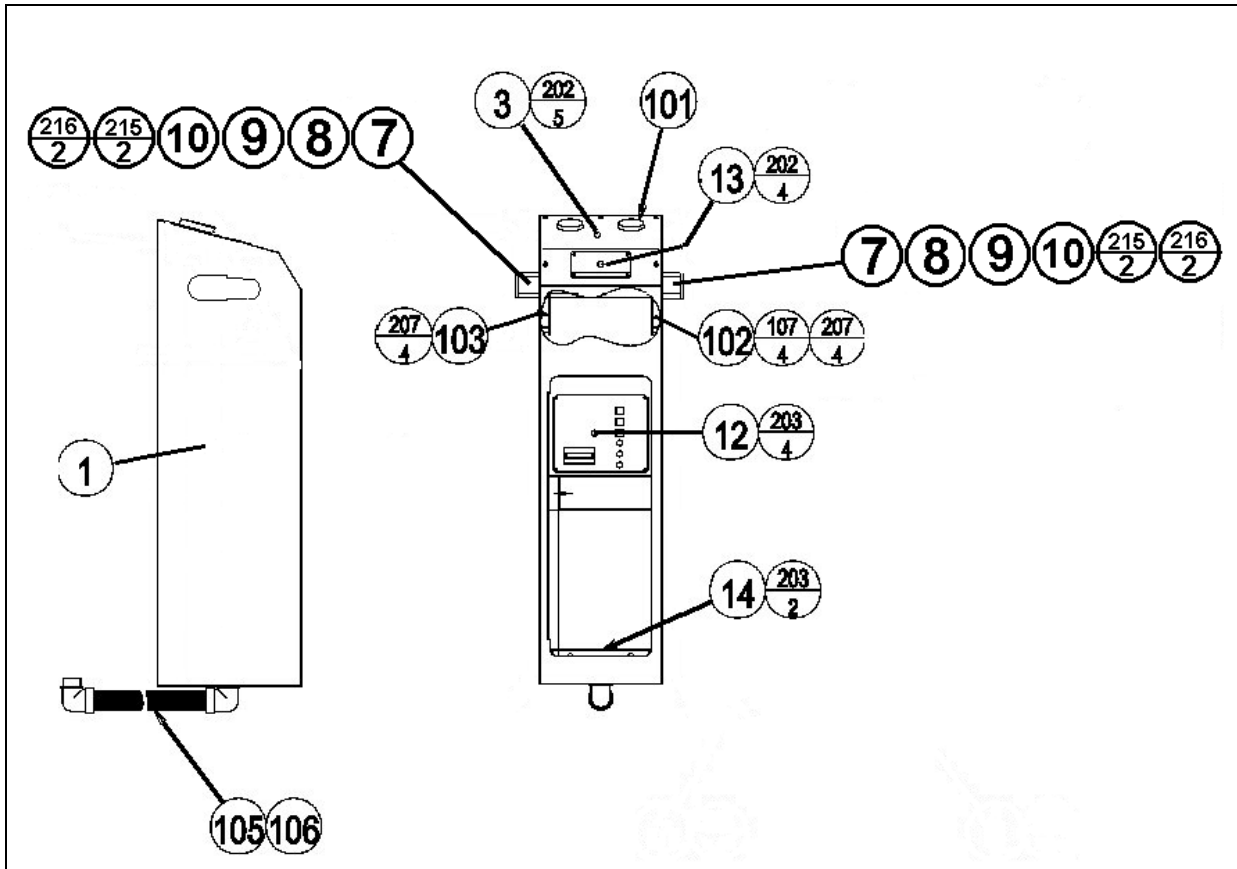
ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	SPY-4801UK	1	WOODEN BASE MAIN	
2	843-0001D-12	1	ASSY CASE BOX COM NAO DIMM EXP	
3	610-0617	1	GD-ROM DRIVE UNIT NAOMI	SHIP BOX WITH MACHINE
4	105-5435	1	GD DRIVE BRKT STD	
5	610-0652-0003	1	GD SOFT VCT	
6	253-5508-0354	1	KEY CHIP	
7	HDT-60100UK	1	WH POWER GD ROM	
101	LB1101	1	STICKER WARNING BATTERY	(2)-1
102	280-A01264-WX	5	ROUTER TWIST D12 SO6.4 WOOD X	
103	LB1111	1	STICKER PLEASE RECYCLE	(2)-1
201	000-P00416-W	7	M4X16 MSCR PAN W/FS PAS	(2)-4,(4)-3
202	012-P00410-F	4	N8X3/8" S/TAP FLG PAS	(3)-4
301	600-7249UK	1	WIRE HARN NAOMI GD DRIVER DC	
307	600-7247-500	1	CABLE SCSI ST-L TYPE2 500MM	

9.15. VCT-5000UK ASSY FLOOR VCT U/R



No.	PART NUMBER	QTY	DESCRIPTION	COMPONENT REFERENCE
1	VCT-5001UK	1	FLOOR BASE	
2	VCT-5002UK	1	FLOOR PLATE ARTWORK	SELF ADHESIVE ON REVERSE

9.16. VCT-5100UK ASSY CCT VCT U/R



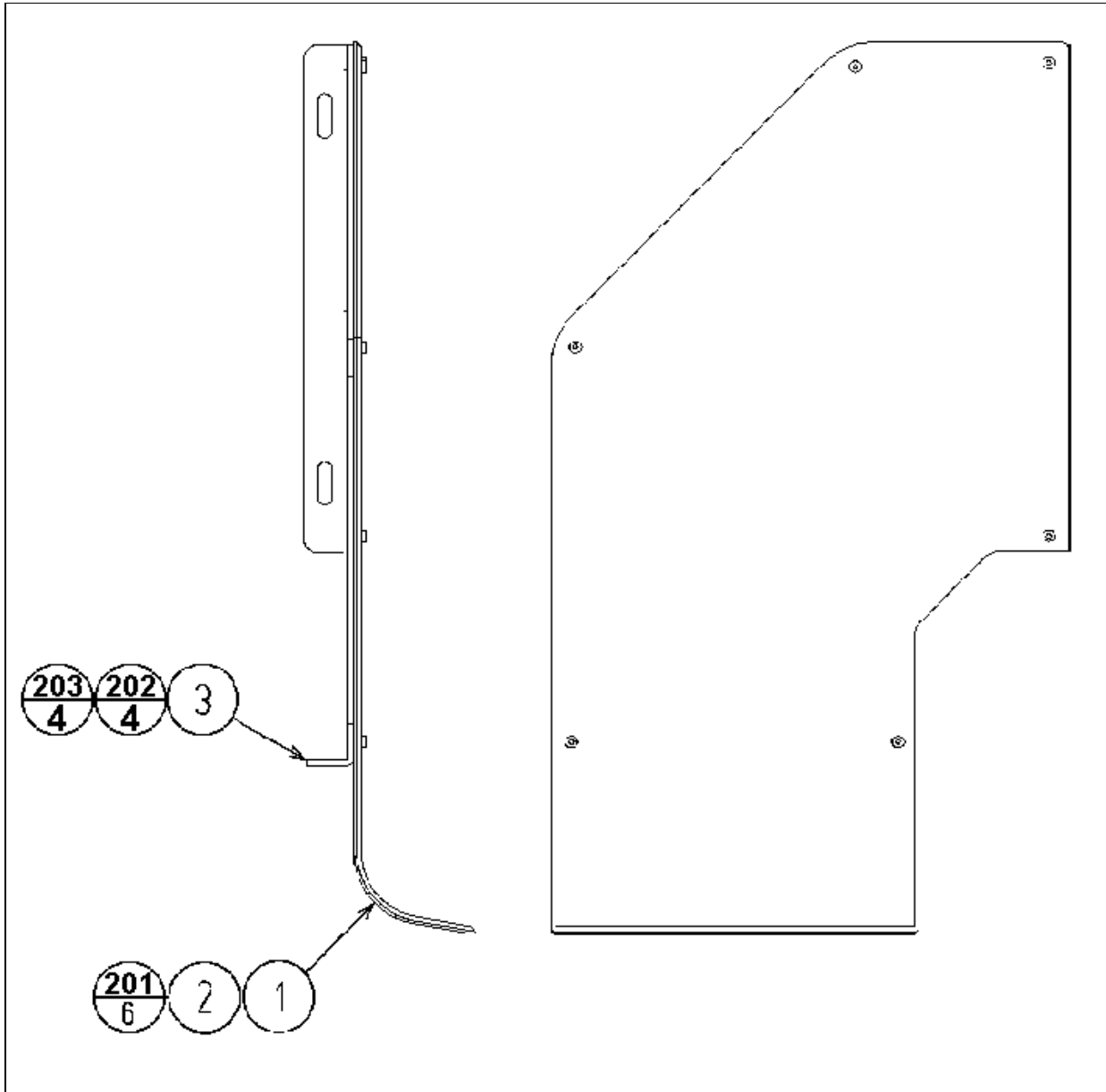
ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	VCT-5101UK	1	COINCHUTE TOWER	
2	VCT-2100-01	2	CONTROL UNIT EXP	NOT SHOWN
3	VCT-5102UK	1	CCT COVER	
5	VCT-2199UK	2	GUN TETHER DX	NOT SHOWN
7	VCT-5103UK	4	GUN HOLDER PLATE	
8	SPY-5104UK	2	GUN CUSHION A	
9	SPY-5105UK	2	GUN CUSHION B	
10	SPY-5110UK	4	CUSHION BAR	
12	VTS-STW-U	1	VTS BOARD UPRIGHT TYPE	
13	DYN-0010UK	1	DENOMI PLATE	
14	NCR-1103UK	1	CCT FLOOR	
15	DUT-0302UK	1	COIN PATH PLATE	
16	PP1087	1	BOX CASH FOR MINI DOOR	
17	105-5216	2	CHAIN BRKT	(2)-2
101	509-SPYU-YE	2	SW PB W/LAMP 6V YELLOW OVAL	
102	838-13143-09	1	IC BD GUN SENSE SPY U/R	
103	837-13551-92	1	I/O CONTROL BD FOR JVS	
105	310-5287-29	2	CONN L29 32mm X PG29	
106	310-5285-290100	1	FLEX TUBE 29 100CM	
107	280-L00709-OS	4	STANDOFF 7OD 4ID 9L	(102)-4

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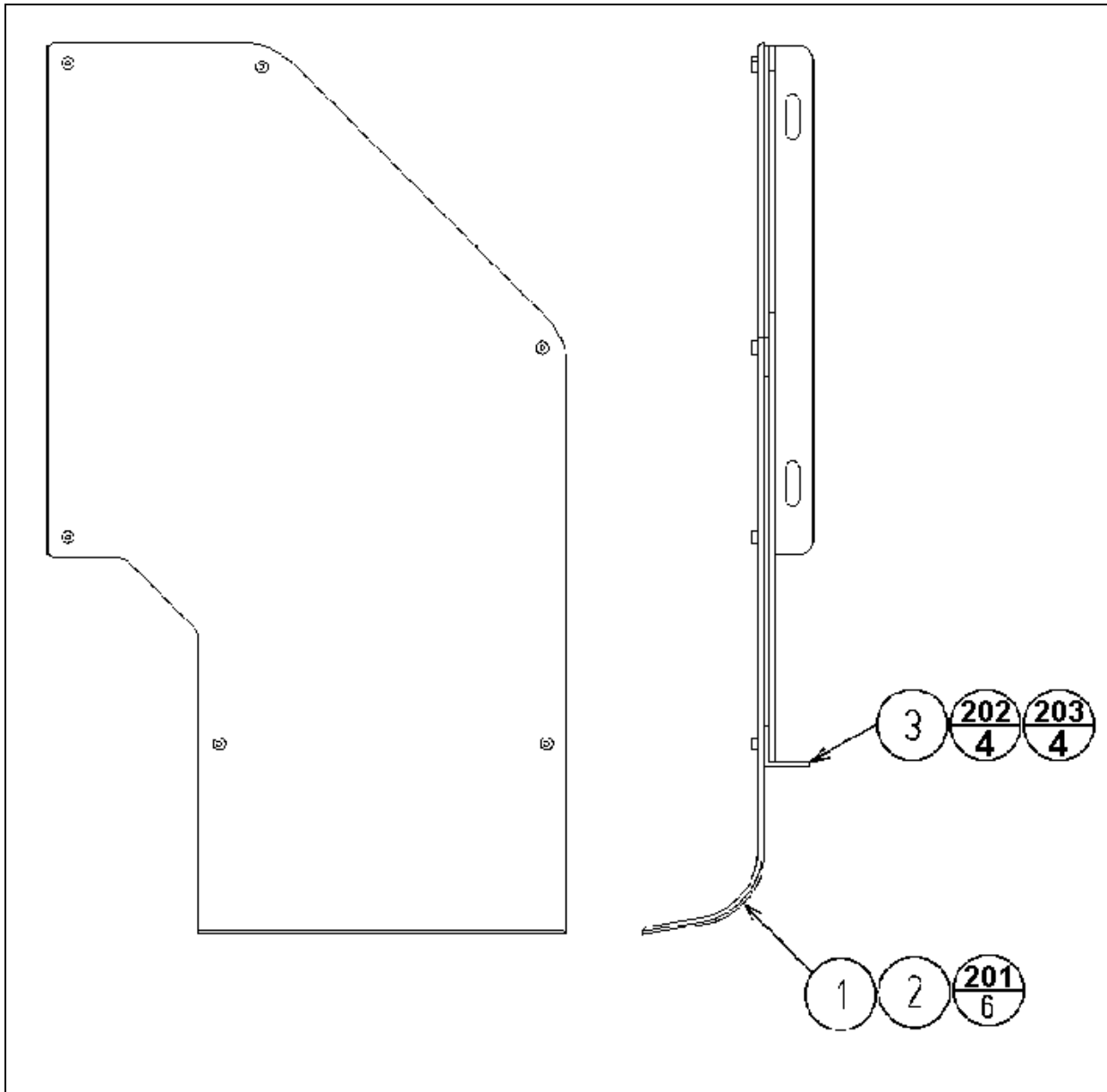
ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
108	280-A02048-PM	3	ROUTER TWIST D20 SO4.8 PAN LG	
109	280-L00805-0M	2	STANDOFF 8OD 5ID 4.8L	(10)-2
110	310-5287-PG29	2	NUT LOCK PG29 BLACK	(105)-1
201	000-T00412-0C	8	M4X12 MSCR TH CRM	(7)-4,(8)-4
202	008-T00412-0B	17	M4X12 TMP PRF TH BLK	(2)-8,(3)-5,(13)-4
203	000-P00416-W	18	M4X16 MSCR PAN W/FS PAS	(9)-12,(12)-4,(14)-2
204	029-B00812-0B	4	M8X12 BLT BH BLK	(4)-2,(5)-2
205	060-S00800-0B	4	M8 WSHR SPR BLK	(4)-2,(5)-2
207	050-F00300	8	M3 NUT FLG SER PAS	(102)-4,(103)-4
208	008-T00408-0C	4	M4X8 MSCR TH CRM	(17)-4
210	000-P00408-W	5	M4X8 MSCR PAN W/FS PAS	(15)-5
211	030-000820-SB	6	M8X20 BLT W/S BLK	(2)-6
212	068-852216-0B	6	M8 WSHR 22OD FLT BLK	(2)-6
213	060-F00300	4	M3 WSHR FORM A FLT PAS	(18)-4
214	050-U00300	4	M3 NUT NYLOK PAS	(18)-4
215	029-B00870-0B	4	M8X70 BLT BH BLK	
216	060-S00800-0B	4	M8 WSHR SPR BLK	
301	SPY-61052UK	1	WIRE HARN TUBE V0L CTRL	
302	SPY-61053UK	1	WIRE HARN VTS SPY (NAO)	
303	VCT-64001UK	1	WH I/O CONTROL	
304	SPY-61044UK	1	WIRE HARN TUBE IC BD & DEMAG	
306	600-6457-10UK	1	WIRE HARN START UK	
307	600-6457-36UK	1	WIRE HARN START EX UK	
308	SPY-60010UK	1	WIRE HARN HIGH FRQNCY JUMPER	
309	600-7141-250	1	CABLE JVS TYPE A-B 250CM	
310	RND-600002	2	WH GUN ADAPTOR	
311	VCT-64003	1	WH EARTH FOOT PEDALS	

9.17. VCT-5150UK ASSY FENCE L U/R



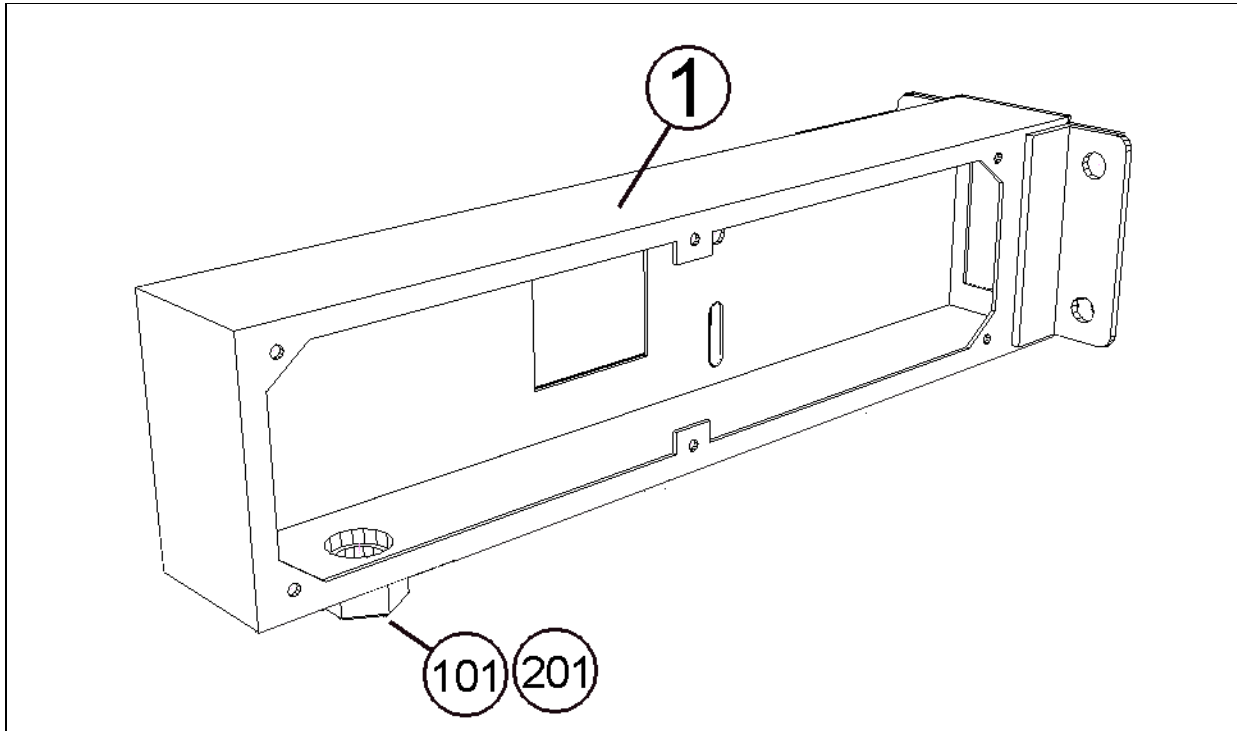
ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	VCT-5151UK	1	DESIGN PLATE LHS	
2	VCT-5151-AUK	1	STICKER DESIGN PLATE LHS	
3	VCT-5152UK	1	FENCE FRAME L	
201	008-T00416-0B	6	M4X8 TMP PRF TH BLK	(1)-6
202	030-000820-SB	4	M8X20 BLT W/S BLK	(2)-4
203	068-852216-0B	4	M8 WSHR 22OD FLT BLK	(2)-4

9.18. VCT-5170UK ASSY FENCE R U/R



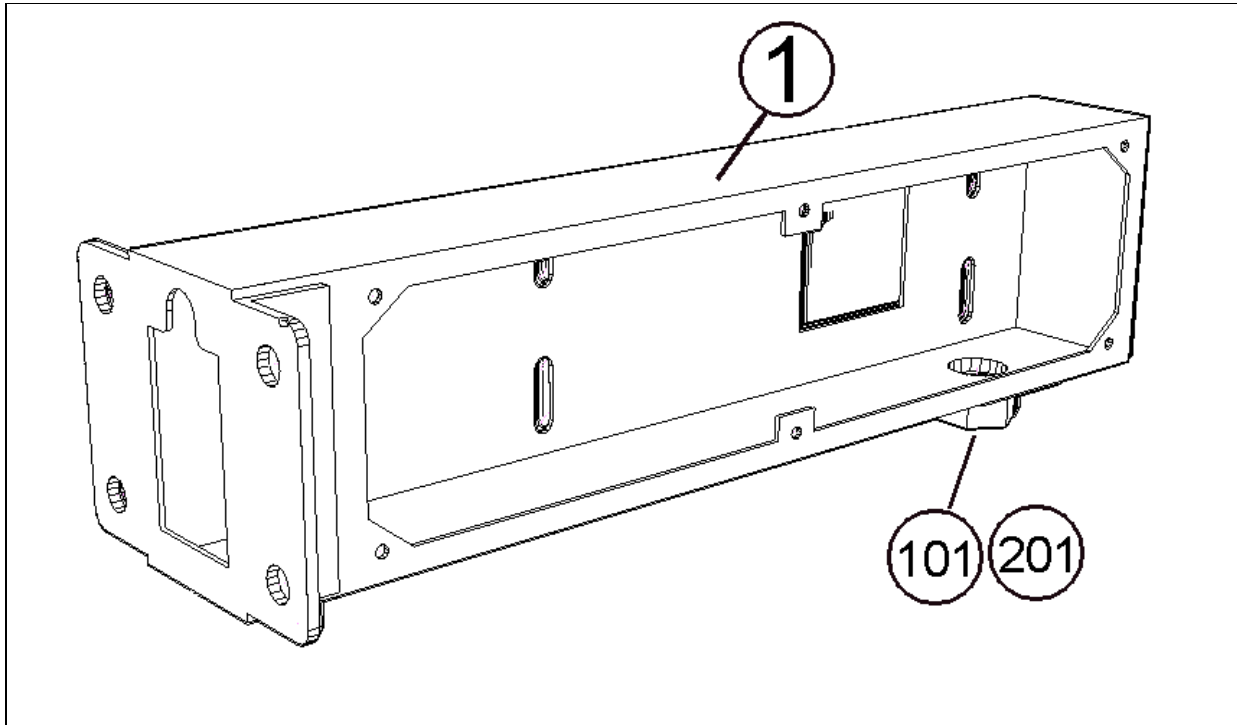
ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	VCT-5171UK	1	DESIGN PLATE RHS	
2	VCT-5171-AUK	1	STICKER DESIGN PLATE RHS	
3	VCT-5172UK	1	FENCE FRAME R	
201	008-T00416-0B	6	M4X8 TMP PRF TH BLK	(1)-6
202	030-000820-SB	4	M8X20 BLT W/S BLK	(2)-4
203	068-852216-0B	4	M8 WSHR 22OD FLT BLK	(2)-4

9.19. VCT-5200UK ASSY FOOT BASE FRAME L



ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	VCT-5201UK	1	FOOT BASE FRAME L	
2	VCT-0003UK	1	BASE HOLE LID	NOT SHOWN
101	601-5699X	1	LEG ADJUSTER BOLT M16 X 75	(1)-1
201	050-H01600-0B	1	M16 HEX NUT BLK	(1)-1
202	068-651616-0B	4	M6 WSHR 16OD FLT BLK	(1)-4
203	030-000616-SB	4	M6X16 BLT W/S BLK	(1)-4
204	008-T00416-0B	6	M4X8 TMP PRF TH BLK	(2)-6
205	030-000820-SB	2	M8X20 BLT W/S BLK	(1)-2
206	050-F00800	2	M8 NUT FLG SER PAS	(1)-2
207	068-852216-0B	4	M8 WSHR 22OD FLT BLK	(1)-4

9.20. VCT-5300UK ASSY FOOT BASE FRAME R



ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF
1	VCT-5311UK	1	FOOT BASE FRAME R	
2	VCT-0003UK	1	BASE HOLE LID	
101	601-5699X	1	LEG ADJUSTER BOLT M16 X 75	(1)-1
201	050-H01600-0B	1	M16 HEX NUT BLK	(1)-1
202	068-651616-0B	4	M6 WSHR 16OD FLT BLK	(1)-4
203	030-000616-SB	4	M6X16 BLT W/S BLK	(1)-4
204	008-T00416-0B	6	M4X8 TMP PRF TH BLK	(2)-6
205	030-000820-SB	2	M8X20 BLT W/S BLK	(1)-2
206	050-F00800	2	M8 NUT FLG SER PAS	(1)-2
207	068-852216-0B	4	M8 WSHR 22OD FLT BLK	(1)-4

9.21. HDT-6001UK ASSY WIRE L HDT U/R

Item	Component Part	Qty	Description	Component Reference
101	601-0460	12	CABLE TIE 100mm	
102	280-N01610-0B	0.40	SLIT HARN WRAP 16mm DIA 1M BLK	
301	600-7009-2500	1	ASSY RGB CA D-SUB 15P 2500MM	
302	NOB-60045	1	WIRE HARN SPEAKER L	
303	NOB-60046	1	WIRE HARN SPEAKER R	
304	SPY-61043UK	1	WIRE HARN IC BD & DEMAG EXT	
305	600-7158-0100	1	CA AUDIO RCA TO RCA 2CH 100CM	
306	HDT-61051UK	1	WIRE HARN DC SPLY & VOL CNTRL	

9.22. HDT-INST-U ASSY INST KIT U/R

Item	Component Part	Qty.	Description	Component Reference
1	VCT-5000UK	1	ASSY FLOOR VCT U/R	
2	VCT-INST-SUB1-U	1	ASSY SUB1 INST	
3	VCT-INST-SUB2-U	1	ASSY SUB2 INST	
16	PK0323	1	INST KIT PACKING WEDGE	

9.23. VCT-INST-SUB1-U ASSY SUB1 INST

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
2	VCT-5100UK	1	ASSY CCT VCT U/R	
3	VCT-5150UK	1	ASSY FENCE L U/R	
4	VCT-5170UK	1	ASSY FENCE R U/R	
6	PK0337	1	INST KIT BOX VCT U/R	

9.24. VCT-INST-SUB2-U ASSY SUB2 INST

ITEM	PART NO.	QTY	DESCRIPTION	COMPONENT REF.
1	VCT-1200UK	2	ASSEMBLY FOOT PEDAL DX	
2	VCT-5200UK	1	ASSEMBLY FOOT BASE FRAME L	
3	VCT-5300UK	1	ASSEMBLY FOOT BASE FRAME R	
5	SAECE-114	1	DECLARATION OF CONFORMITY	VCTU
7	CTA-0001	1	JOINT BRKT L	
8	CTA-0002	1	JOINT BRKT R	
9	VCT-3013UK	1	STICKER CONTROL PANEL CCT	Multilingual
15	PK0336	1	BOX PEDAL VCT UPRIGHT	
101	540-0006-01	1	WRENCH M4 TMP PRF	
102	540-0015-01	1	WRENCH M6 TMP PRF	
103	514-5078-5000	1	FUSE 5X20 CERAMIC SB 5000mA	
104	OS1019	2	SELF SEAL BAG 9X12.3/4	
105	440-CS0186UK	1	STICKER C EPILEPSY MULTI	
201	030-000820-SB	2	M8X20 BLT W/S BLK	(7)-1,(8)-1
202	068-852216-0B	2	M8 WSHR 22OD FLT BLK	(7)-1,(8)-1
203	008-T00412-0B	2	M4X12 TMP PRF TH BLK	(BILLBOARD)-2
204	SDW-0001UK	4	BLIND CAP UK	(2)-2, (3)-2
301	600-7141-250	1	CABLE JVS TYPE A-B 250CM	
402	420-6759-02UK	1	SERVICE MANUAL VCT U/R	
403	420-5827	1	SERVICE MANUAL SANWA 31K	
404	420-6620UK	1	SERVICE MANUAL GD ROM SYS	
405	509-5080	2	SW MICRO TYPE (SS-5GL2)	

10. APPENDIX A - ELECTRICAL SCHEMATIC

10.1. WIRE COLOURS

THE WIRE COLOUR CODE IS AS FOLLOWS:

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

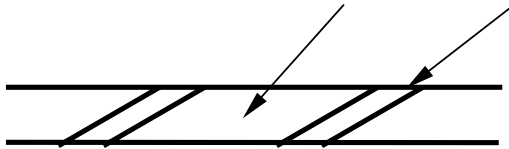
Wires other than those of any of the colours listed above will be displayed by 2 alphanumeric characters:

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

10.2. ELECTRICAL SCHEMATIC

The following pages contain the electrical schematic for this machine.

LOCATE A3 SCHEMATIC DRAWING 1 HERE

LOCATE A3 SCHEMATIC DRAWING 2 HERE

SEGA AMUSEMENTS EUROPE LTD./ SEGA SERVICE CENTRE

Suite 3a
Oaks House
12 - 22 West Street
Epsom
Surrey
United Kingdom
KT18 7RG

Telephone: +44 (0) 1372 731820

Fax: +44 (0) 1372 731849

SEGA[®]



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