

**SEGA®**



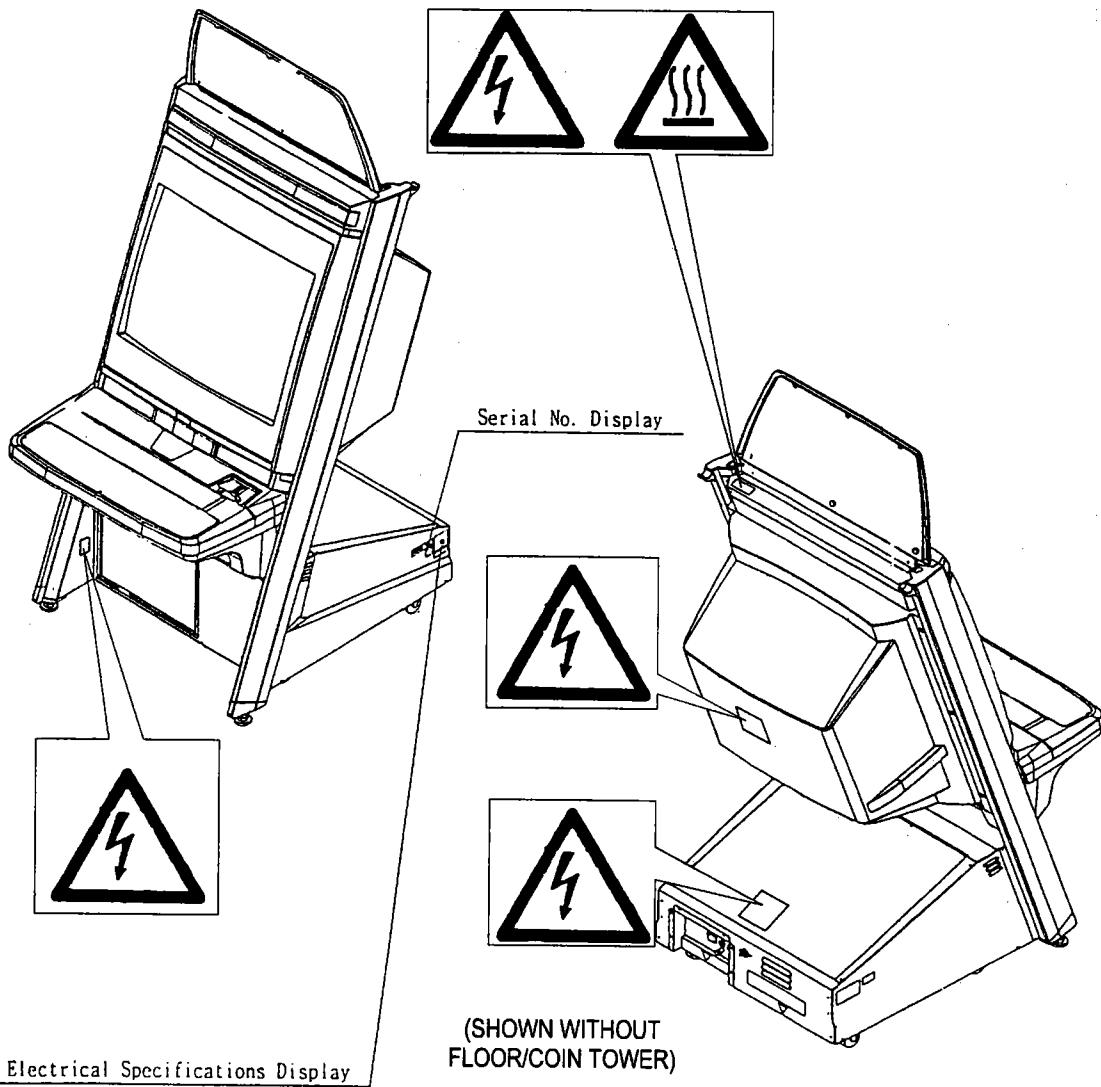
# **CONFIDENTIAL MISSION NAOMI UR MANUAL**

#### **CONCERNING THE STICKER DISPLAY**

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

#### **CONCERNING WARNING STICKERS**

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



## **SPECIFICATIONS**

Installation Space (cm):	76 (W) x 180 (D)	Including Floor and Coin Tower.
Height (cm):	175	
Weight (kg):	Approx. 152	
Power, Max: 414W	Rated Voltage (VAC):	230/50hz
	Rated Current (A):	1.5
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 **CONFIDENTIAL MISSION Upright**, a new SEGA product. This manual is intended for those who have knowledge of electricity and technical expertise especially in IC's, CRT's, microprocessors etc. Carefully read this manual to acquire sufficient knowledge before working on the machine. Should there be any malfunction, non-technical personnel should under no circumstances touch the internal systems. Should such a situation arise contact the nearest branch listed below, or our head office.

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### 3. INSTALLATION AND MAINTENANCE INSTRUCTIONS



**IMPORTANT!**

- Installation and maintenance should only be carried out by **QUALIFIED SERVICE PERSONNEL**.

#### 3.1. HANDLING AND INSTALLATION PRECAUTIONS

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

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

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

**Important:**

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

**IMPORTANT!**

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

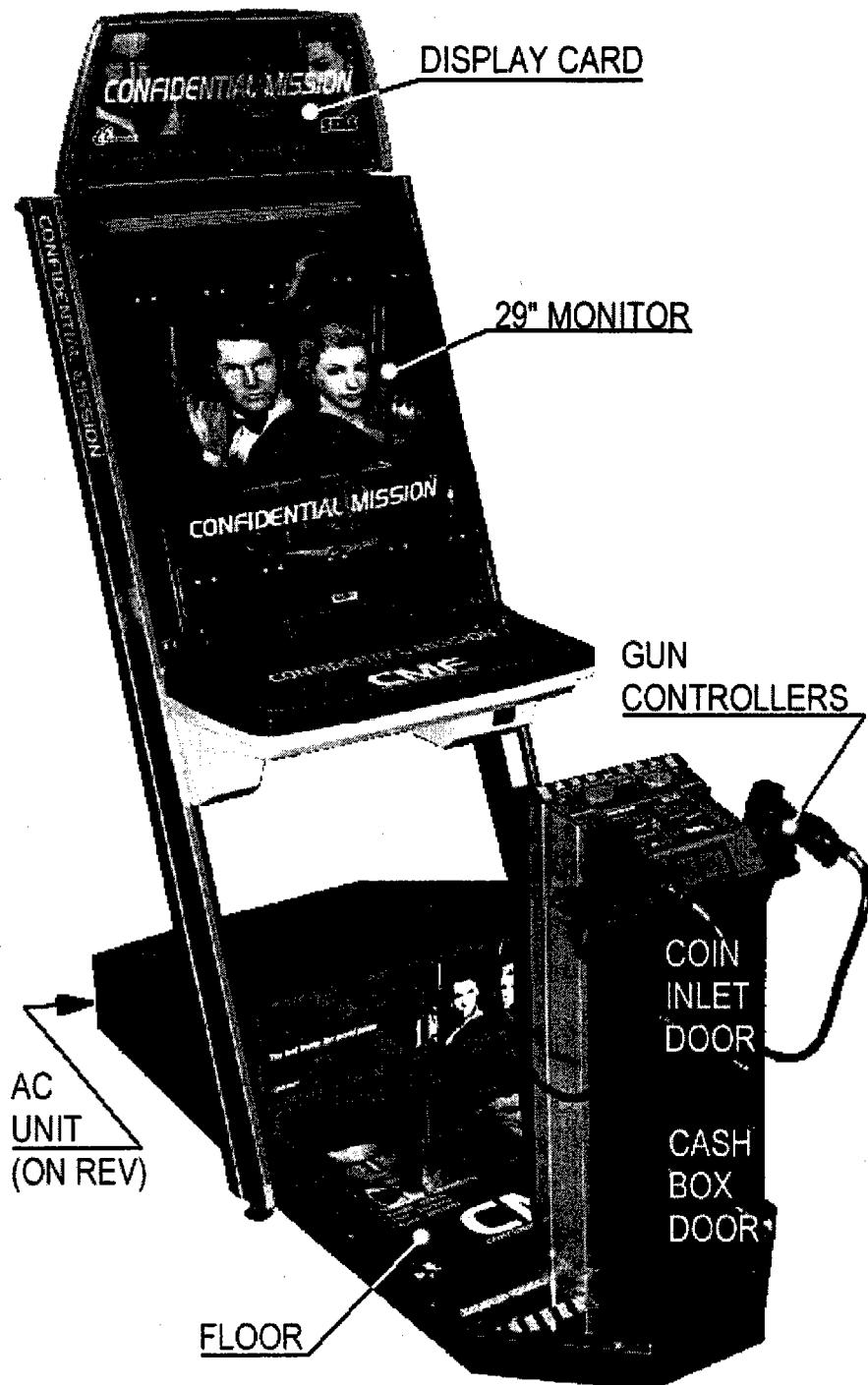
#### 3.2. COIN HANDLING

Standard Sega machines are fitted with a C120 coin mechanism, however, as a service to our customers Sega machines can be supplied with no coin mechanism or door allowing the customer to fit a coin handling option from the approved list. Fit only the coin handling arrangements detailed below and follow the instructions provided in section 4. Failure to fit the coin handling options detailed or failure to follow the installation instructions will render the machine, under the CE marking directive, void.

Approved coin handling options:

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

### 3.3. NAME OF PARTS



	Width (cm)	Length (cm)	Height (cm)
CABINET	76	98	180
FLOOR	63	90	15
WHEN ASSEMBLED	76	177	210

### 3.4. ACCESSORIES

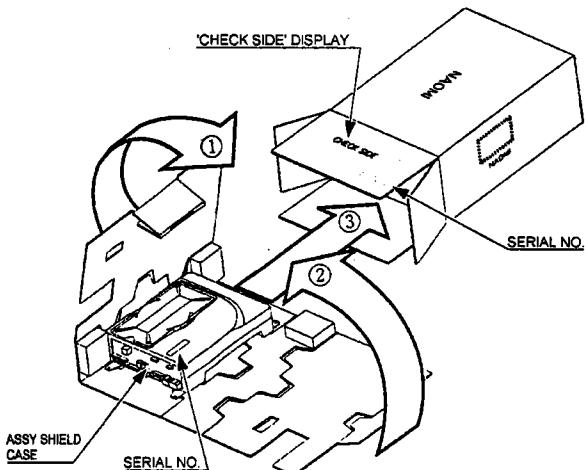
The machine is supplied with an installation kit. Please ensure the following parts are supplied:

No.	PART NUMBER	QTY	DESCRIPTION	COMPONENT REFERENCE
1	SPY-5000UK	1	ASSY FLOOR SPY U/R	
2	SPY-5100UK	1	ASSY CCT SPY U/R	
3	SPY-5007UK	2	SHOULDER BOLT	(4)-2
4	SPY-5008UK	1	FLOOR JOINT BRKT	
5	SAECE-068	1	DECLARATION OF CONFORMIT	
6	PK0271	1	INST KIT BOX SPY U/R	
7	CTA-0001	1	JOINT BRKT L	
8	CTA-0002	1	JOINT BRKT R	
9	SPY-5111UK	1	PLAY INSTR SPY U/R NAOMI	
10	SPY-5112UK	1	DISPLAY CARD SPY U/R NAO	
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 500	
104	OS1019	2	SELF SEAL BAG 9X12.3/4	
201	030-000820-SB	13	M8X20 BLT W/S BLK	(2)-6,(4)-5,(7)-1,(8)-1
202	068-852216-0B	13	M8 WSHR 22OD FLT BLK	(2)-6,(4)-5,(7)-1,(8)-1
203	008-T00412-0B	2	M4X12 TMP PRF TH BLK	(BILLBOARD)-2
301	600-7141-250	1	CABLE JVS TYPE A-B 250CM	
402	420-6601-03UK	1	SERVICE MANUAL SPY U/R N	
403	420-5827	1	SERVICE MANUAL SANWA 31K	
404	420-6620UK	1	SERVICE MANUAL GD ROM SY	

### 3.5. SHIPPING THE GAME BOARD



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

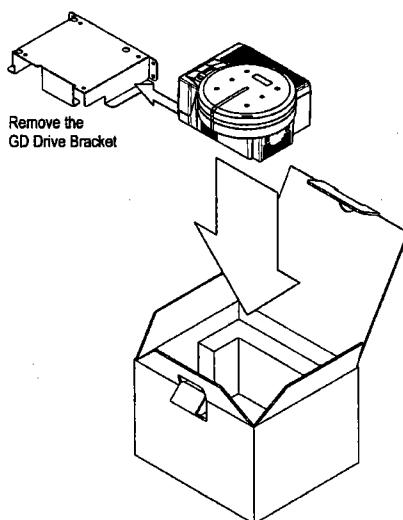


Pack the ASSY SHIELD CASE **ALONG WITH DIMM BOARD** in the original transit box as shown. Putting it upside down or packing otherwise in the manner not shown can damage the GAME BOARD and other parts.

### 3.6. 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.



### 3.7. ASSEMBLY INSTRUCTIONS



**WARNING!**



**IMPORTANT!**

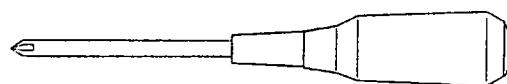
- Perform the assembly by following the procedure herein stated. Failure to comply with the instructions, for example, inserting the plug into an outlet at a stage not mentioned in this manual can cause an electric shock
- Assembling should be performed as per this manual. Since this is a complex machine, 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.
- Assembly should only be carried out by **QUALIFIED SERVICE PERSONNEL**.

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

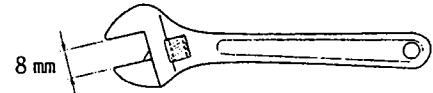
- STEP 1      INSTALLING THE DISPLAY CARD**
- STEP 2      INSTALLING THE FLOOR**
- STEP 3      SECURING IN PLACE (LEG ADJUSTMENT)**
- STEP 4      COIN HANDLING INSTALLATION**
- STEP 5      CONNECTION TO THE POWER SUPPLY**
- STEP 6      ASSEMBLY CHECK**

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

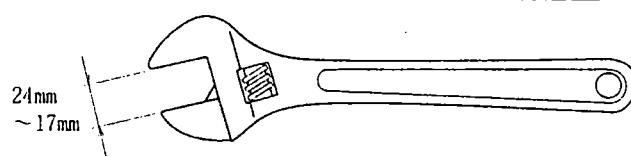
The following tools will be required when installing this machine, in addition to the tools provided with the Installation Kit:



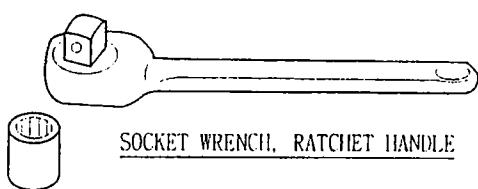
Phillips type screwdriver



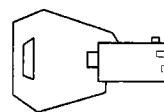
WRENCH (for M5 hexagon bolt)



WRENCH (for M16~M10 hexagon bolt)



SOCKET WRENCH, RATCHET HANDLE



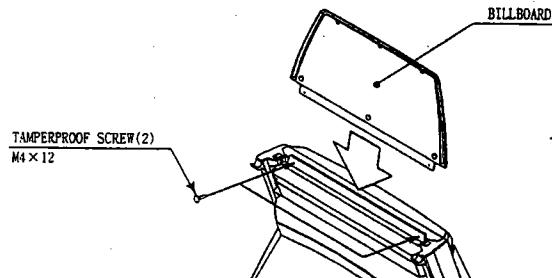
Keys



### 3.7.1. INSTALLING THE DISPLAY CARD

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

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



### 3.7.2. INSTALLATING THE FLOOR

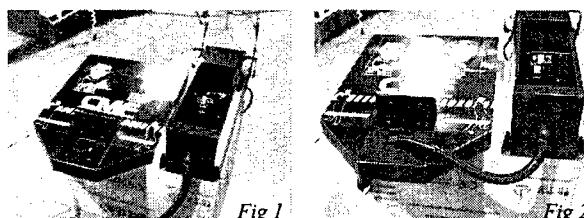


WARNING!

- 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.
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)



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.

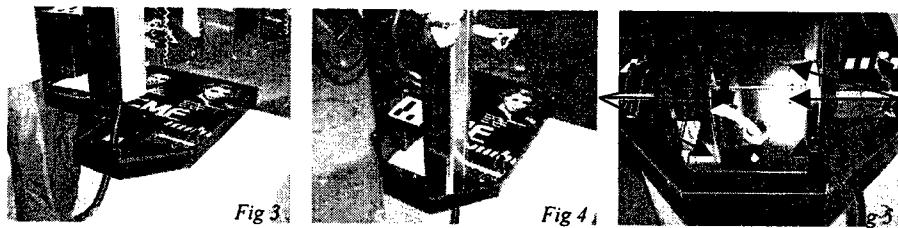


Fig 3

Fig 4

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) using the 5x M8 Hex head bolts and M8 washers (provided).

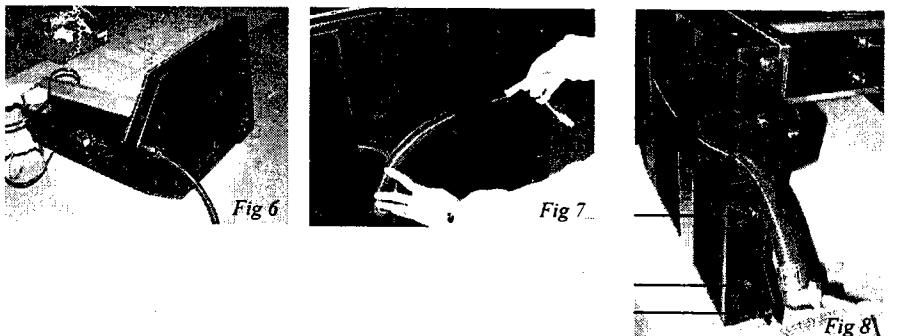


Fig 6

Fig 7

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 uptight 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).



Fig 9

Fig 12

### 3.7.3. SECURING IN PLACE (LEG ADJUSTER ADJUSTMENT)



CAUTION!



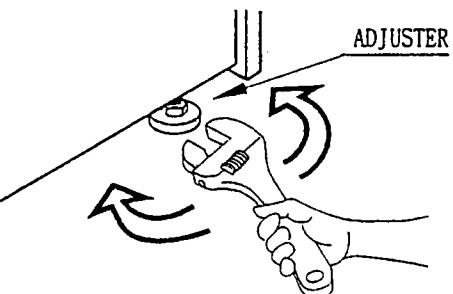
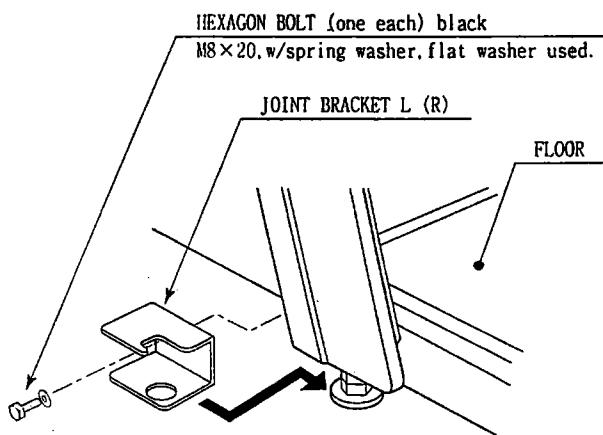
IMPORTANT!

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

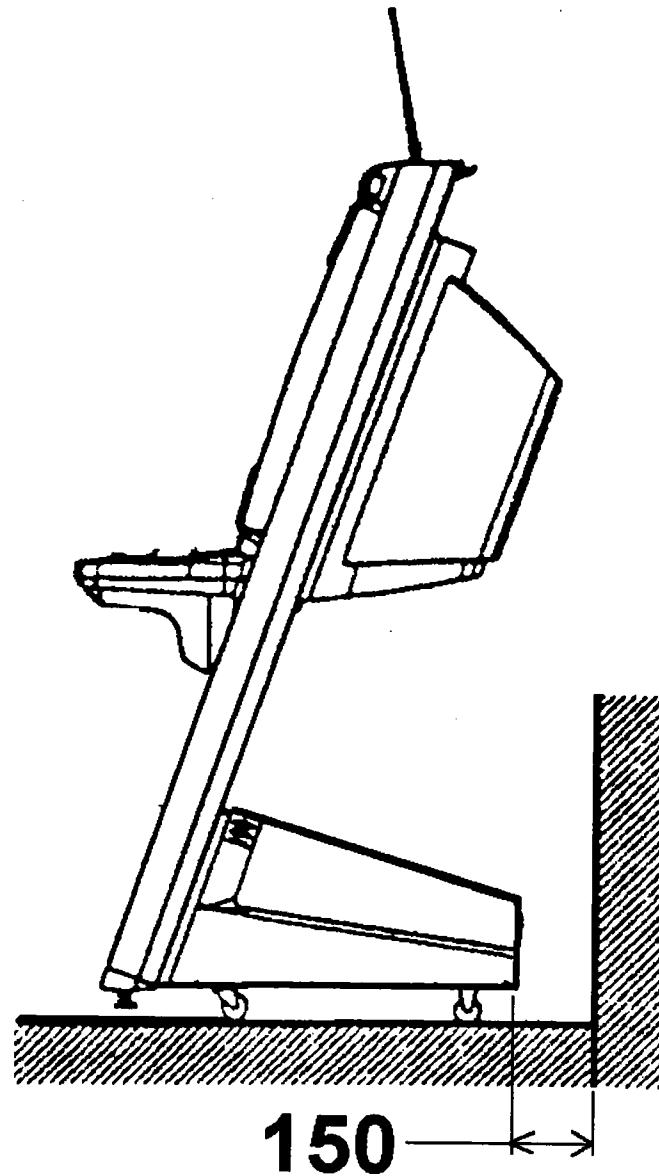
- This operation should only be carried out by **QUALIFIED SERVICE PERSONNEL**.

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 Adjuster's 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.



Ensure adequate ventilation is maintained as detailed below:

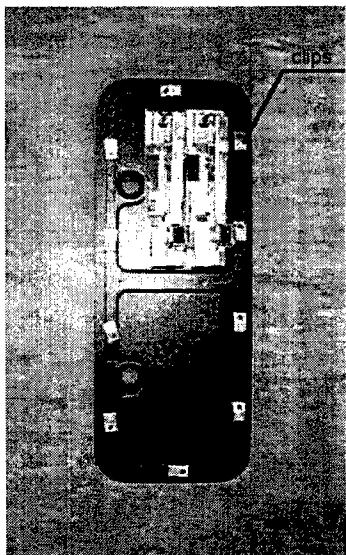


### 3.7.4. COIN HANDLING INSTALLATION.

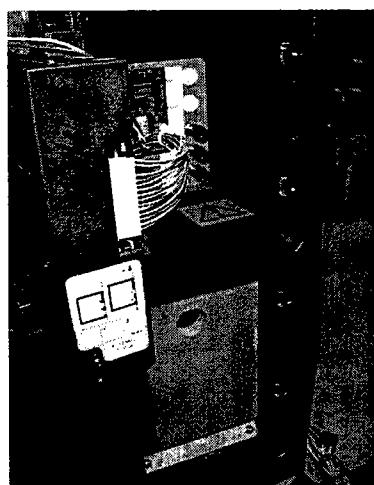


- This operation should only be carried out by QUALIFIED SERVICE PERSONNEL.

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.



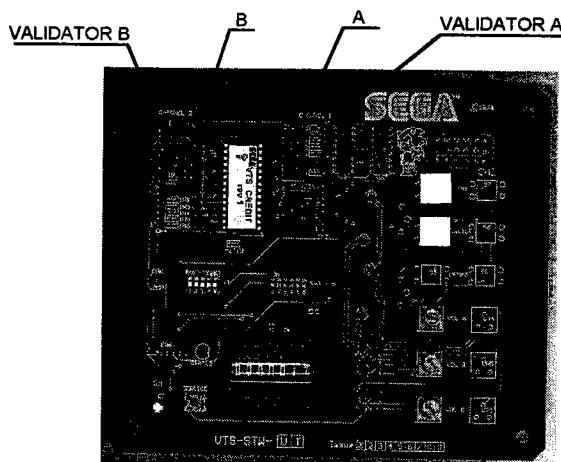
- Loosen all of the bolts on the frame which secure the clips.
- Turn all clips in towards the door.



- 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.

### 3.7.4.1.WIRING CONNECTIONS.

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



VTS credit board assembly

### 3.7.5. CONNECTION TO THE POWER SUPPLY



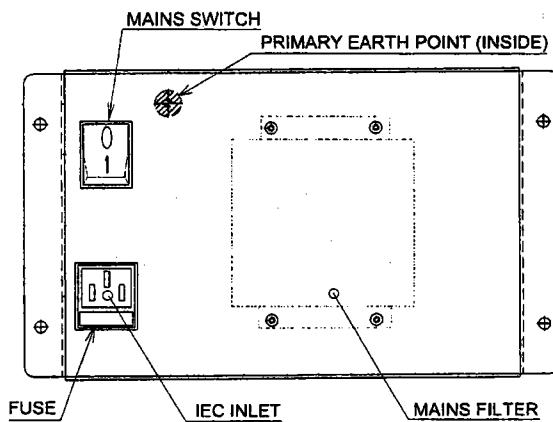
WARNING!



IMPORTANT!

- Be sure that the machine is not connected to the mains supply before attempting this operation
- This operation should only be carried out by **QUALIFIED SERVICE PERSONNEL**.

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.

### 3.7.6. ASSEMBLY CHECK

**IMPORTANT!**



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

When the machine has been installed and power is applied, carry out the following checks in the TEST MODE to ensure that the machine has been assembled correctly and that there are no faults.

#### RAM TEST

IC29	GOOD		
IC35	GOOD		
IC09	GOOD	IC10	GOOD
IC11	GOOD	IC12	GOOD
IC16	GOOD	IC18	GOOD
IC20	GOOD	IC22	GOOD
IC17	GOOD	IC19	GOOD
IC21	GOOD	IC23	GOOD

Selecting the MEMORY TEST on the test mode screen causes the on board memory to be tested automatically. The game board is satisfactory if the display beside each IC No. shows GOOD

PRESS TEST BUTTON TO EXIT

#### DIMM BOARD TEST

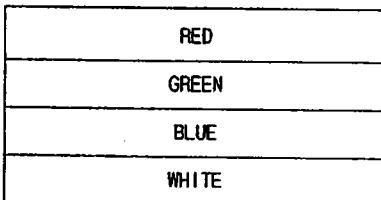
PROGRAM VER : 1.02  
DIMM SLOT 0 : GOOD  
DIMM SLOT 1 : GOOD  
DIMM STATUS : GOOD

CHECKING DIMM BD  
DIMMO - GOOD  
DIMM1 - GOOD  
IC34,35S - GOOD  
IC10,11S - GOOD  
GD DRIVE - GOOD  
--- COMPLETE ---

The DIMM BOARD TEST checks the functionality of the DIMM Board. The DIMM Board is satisfactory when GOOD is displayed as shown.

PRESS TEST BUTTON TO EXIT

C.R.T. TEST PAGE 1/2

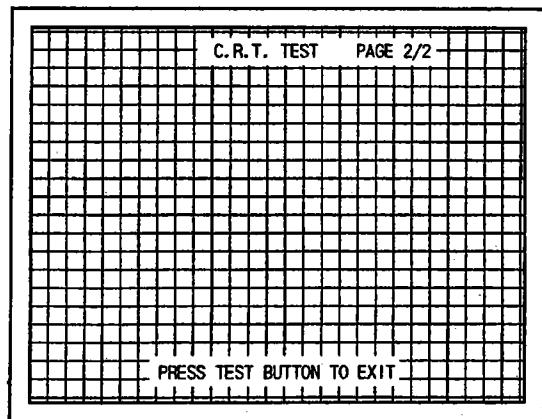


0 15 31

PRESS TEST BUTTON TO CONTINUE

In the TEST mode menu select CRT TEST to check the image quality.

If necessary, adjust the image by referring to the monitor manual supplied.



<b>INPUT TEST</b>		
PLAYER 1    PLAYER 2		
TRIGGER	OFF	OFF
SCREEN-IN	OUT	OUT
GUN-X	0	0
GUN-Y	0	0
START	OFF	OFF

PRESS TEST AND SERVICE BUTTON  
TO EXIT

<b>OUTPUT TEST</b>	
PLAYER 1	
PLAYER 2	
> EXIT	

SELECT WITH SERVICE BUTTON  
AND PRESS TEST BUTTON

Check the switch functions and connections by selecting INPUT TEST and actuating each switch, checking that 'ON' is displayed to indicate satisfactory operation.

Selecting PLAYER 1 or 2 should cause the relevant lamp to light if connections, etc., are satisfactory.

The GUN ADJUSTMENT parameters should now be set. Refer to section 5.2.11 for detailed instructions.

GUN ADJUSTMENT			
PLAYER1	OLD : NOW	PLAYER2	OLD : NOW
> RIGHT	aa bb	> RIGHT	aa bb
LEFT	aa bb	LEFT	aa bb
TOP	aa bb	TOP	aa bb
BOTTOM	aa bb	BOTTOM	aa bb
CENTER X	aa bb	CENTER X	aa bb
Y	aa bb	Y	aa bb
DEFAULT		DEFAULT	
CHECK		CHECK	
<b>SIGHT OUT</b>			
SELECT WITH START BUTTON AND PULL TRIGGER			
PRESS TEST BUTTON TO EXIT			

Perform the above inspections also at the time of monthly inspection..

### 3.8. MOVING THE MACHINE



**WARNING!**

- 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 3.7.2 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.



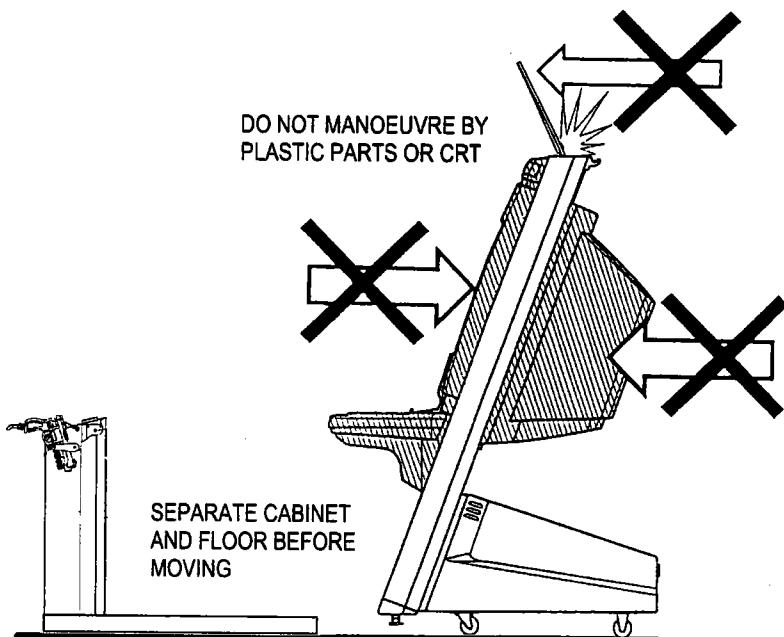
**CAUTION!**

- 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.



**IMPORTANT!**

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



### **3.9. CONTROLLER**



**IMPORTANT!**

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

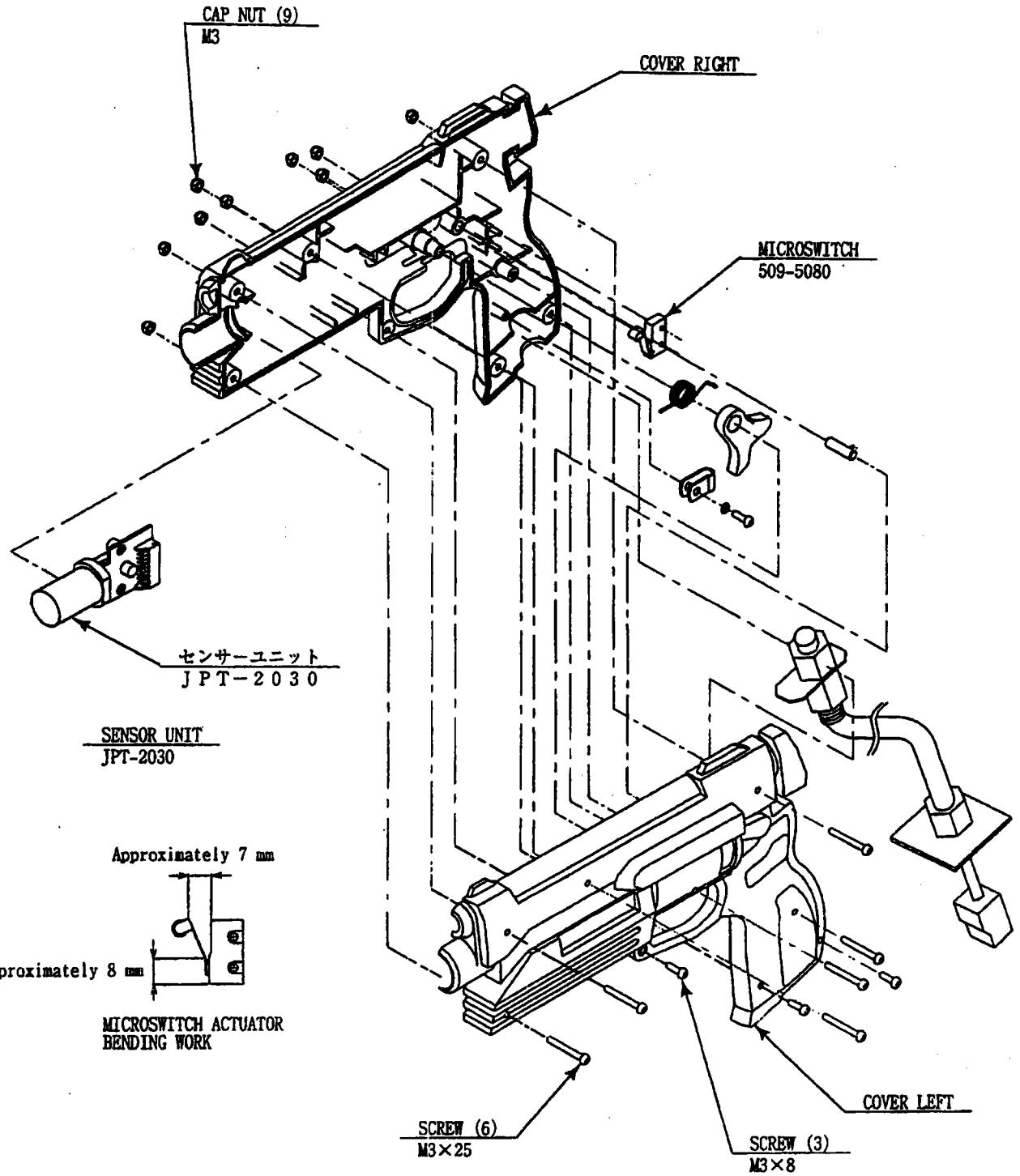
In cases where the controller's operation is not satisfactory or the controller sight deviates from the direction in which it is pointed, first check the operation of the LED Boards (section 3.10). If this is satisfactory, the controller's interior parts may have been damaged. Replace the parts by disassembling the controller by the following procedure. Also, be sure to perform the sighting check in the test mode when the controller parts are replaced. Refer to the diagram on the following page when working on the controllers.

#### **3.9.1. REPLACING THE MICRO-SWITCH.**

1. Disassemble the controller.
2. Pullout the micro-switch from COVER RIGHT
3. Take out the micro-switch by de-soldering it.
4. Bend the new micro-switch actuator as shown.
5. Solder the new micro-switch and assemble the controller.
6. By operating the trigger, check if the micro-switch can be turned ON/OFF correctly.

#### **3.9.2. REPLACING THE SENSOR UNIT**

1. Disassemble the controller unit.
2. Remove the sensor unit from the cover.
3. Replace with the new sensor unit.
4. Reassemble the controller unit.



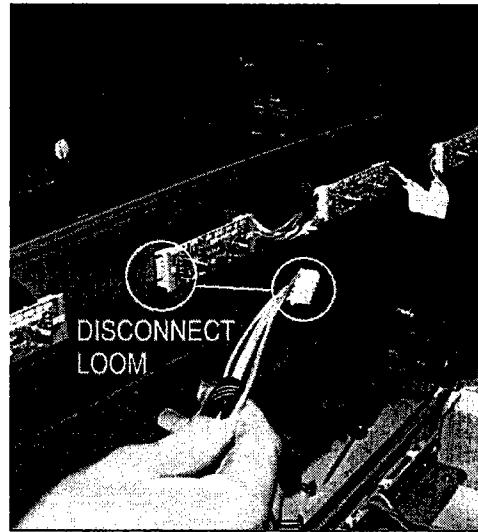
### **3.10. REPLACEMENT OF LED BOARD**



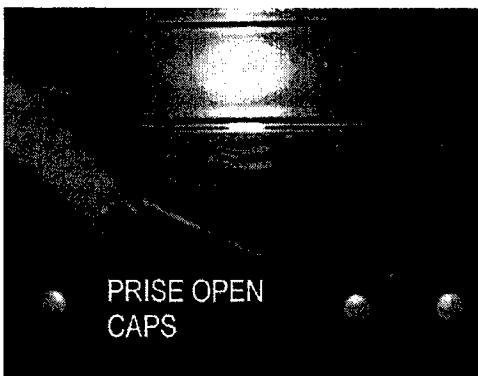
- These procedures should only be carried out by **QUALIFIED SERVICE PERSONNEL**.

The operation of the ten LED boards located around the CRT can easily be checked by viewing from the front with the power 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.

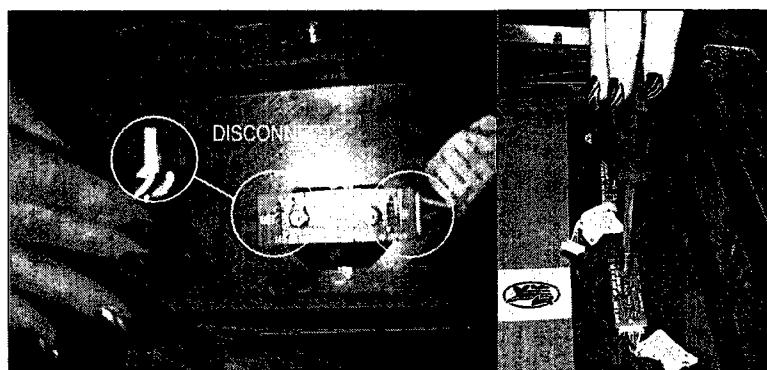
1. Turn the power OFF.
2. Remove the Front Panel as described in section 3.11.1, taking care to disconnect the LED board loom before fully removing the Front Panel (see right).



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 5.2.11)



### **3.11. REPLACEMENT OF FLUORESCENT LAMP AND START LAMPS**



**WARNING!**



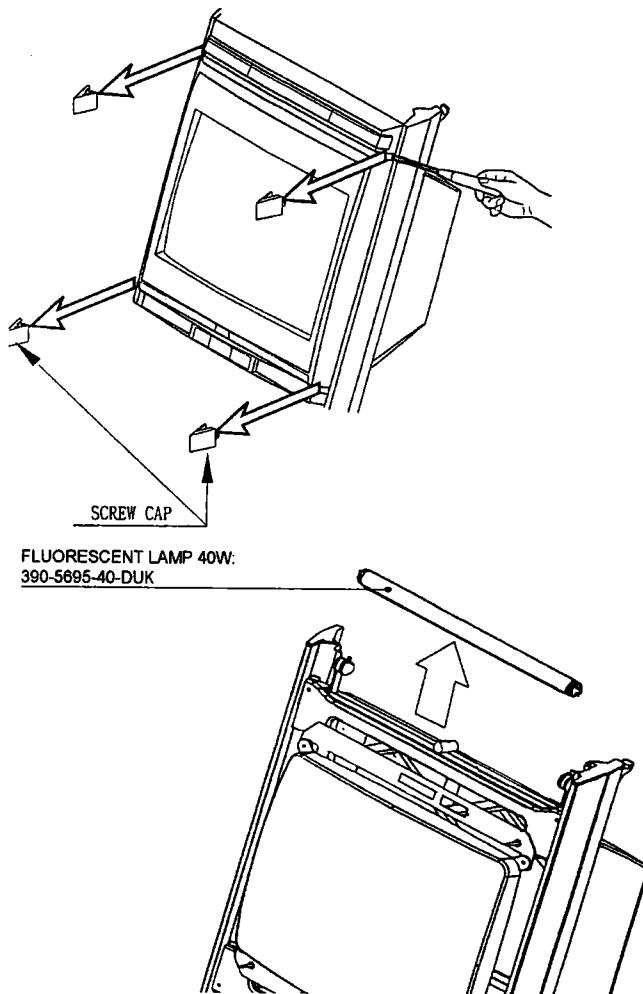
**IMPORTANT!**

- 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.

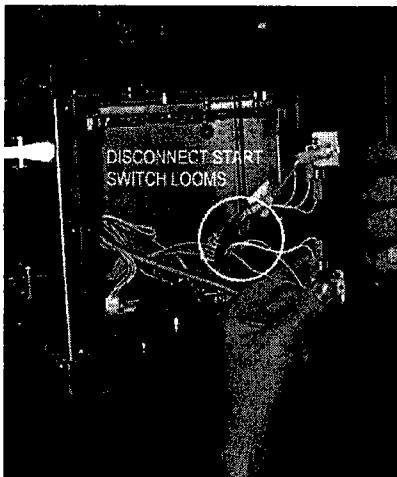
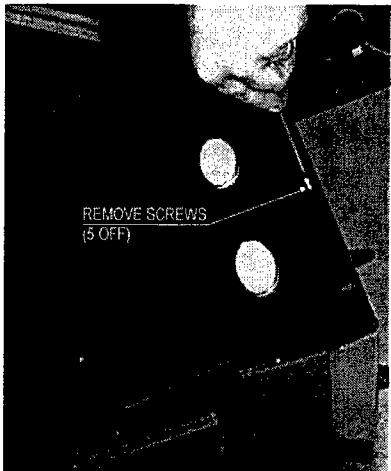
- Lamps should only be replaced by **QUALIFIED SERVICE PERSONNEL**.

#### **3.11.1.FLUORESCENT**

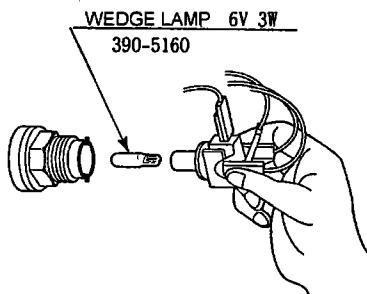
1. Power OFF the machine and remove the IEC lead from the wall outlet.
2. Unlock the lock on the underside of the Control Panel Base, and open the Panel.
3. By using a flat bladed screwdriver, carefully remove the four screw caps from the front panel.
4. Take out the four tamperproof screws and the two lower screws, and carefully take off the Front Panel far enough to disconnect the LED board loom (refer to section 3.10). 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. The Fluorescent lamp can be removed by disconnecting the two end caps and withdrawing the Lamp upwards through the two mounting clips.
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.



### 3.11.2. 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.



### 3.12. GAME BOARD



**WARNING!**



**IMPORTANT!**

- 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.

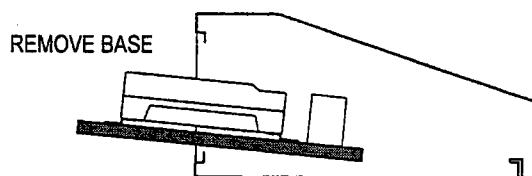
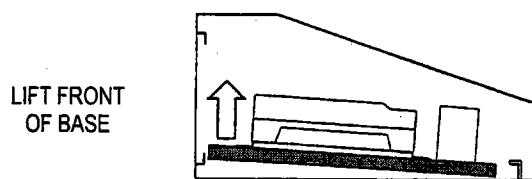
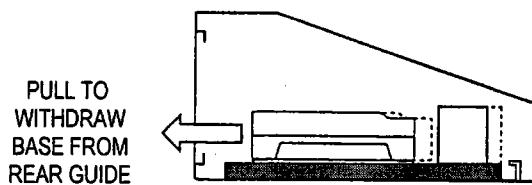
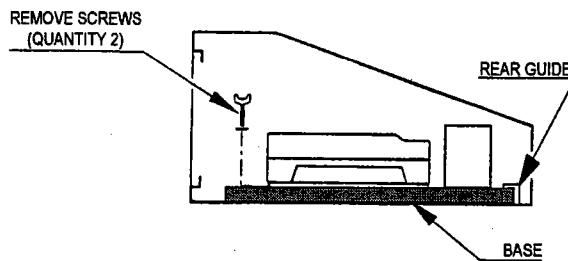
- The GAME BOARD should not require any work to be carried out upon it. All settings and tests can be achieved without access to the GAME BOARD.
- Take anti-static precautions to avoid damaging the electronic parts.
- All work to be carried out by **QUALIFIED SERVICE PERSONNEL**

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

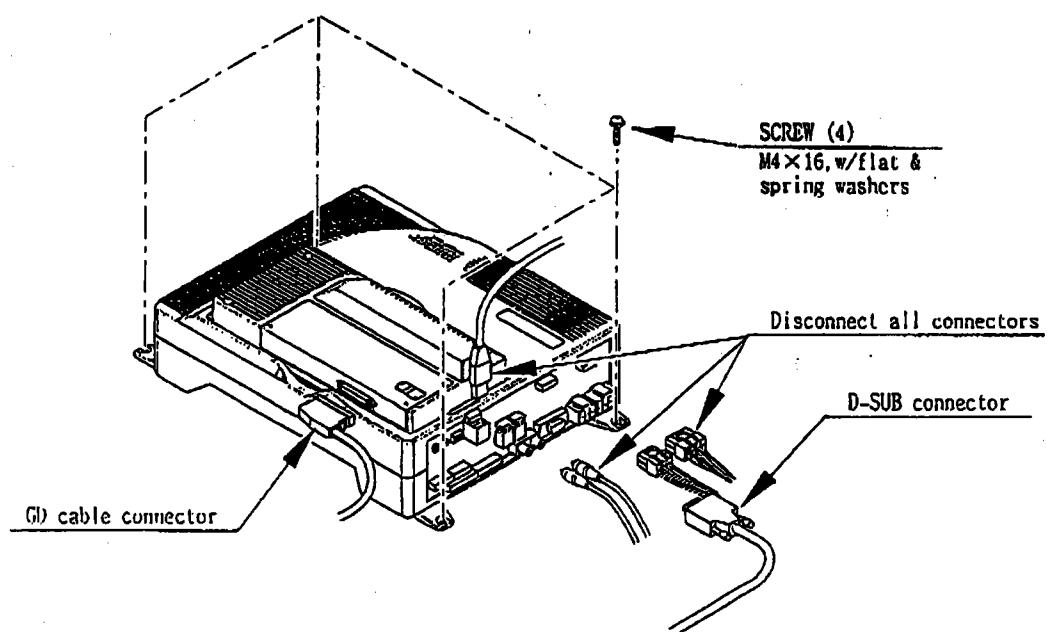
#### 3.12.1.REMOVING THE BOARD



1. Turn off the power.
2. Unlock and remove the Service Door.
3. Disconnect all harnesses linking the Naomi Main 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).



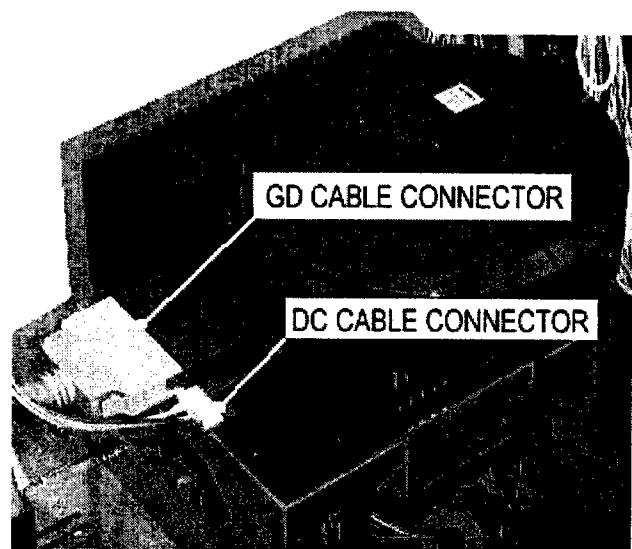
5. Remove all connectors from the filter board of the NAOMI Board. Also remove the GD cable connector from the DIMM Board.
6. Remove four screws securing the NAOMI Board to the base.
7. Reassemble in reverse order.



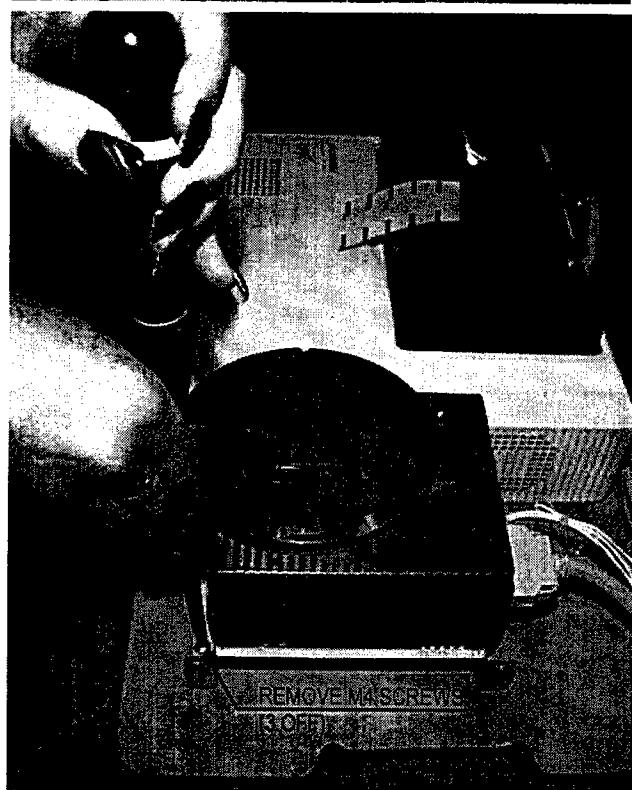
### 3.12.2.REMOVING THE GD-ROM DRIVE

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.

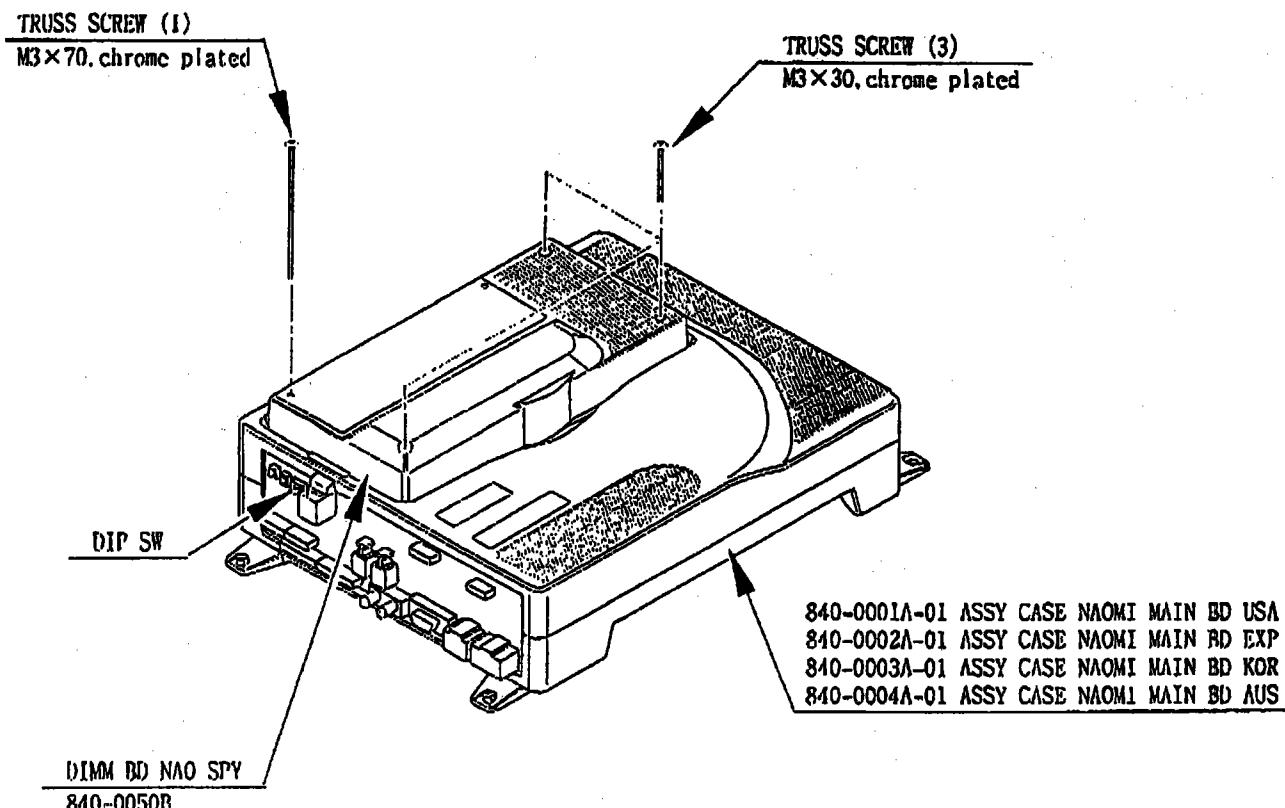


2. To remove the GD-ROM Drive, undo the 3 screws shown.
3. Reassemble in reverse order.



### 3.13. COMPOSITION OF THE GAME BOARD

ASSY CASE NAO GD SPY USA (840-0050D-01):USA  
ASSY CASE NAO GD SPY EXP (840-0050D-02):EXPORT  
ASSY CASE NAO GD SPY KOR (840-0050D-03):KOREA  
ASSY CASE NAO GD SPY AUS (840-0050D-04):AUSTRALIA



#### DIP SW SETTING

In this product, set the DIP SW to OFF.



### 3.14. TROUBLESHOOTING



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

If a problem occurs, first check the wiring connections.

PROBLEMS	CAUSE	COUNTERMEASURES
When the main switch is turned ON, the machine is not activated	The power is not ON.	Firmly insert the plug into the outlet.
	Incorrect power source/voltage.	Make sure that the power supply/voltage are correct.
	AC Unit CIRCUIT PROTECTION DEVICE (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 3.7.6.
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 5.1
	Malfunctioning BD and Amp.	Perform Sound Test to check it. SEE SECTION 5.2.3.
	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 5.2.11
	Micro-switch malfunctioning	Replace the micro-switch. SEE SECTION 3.9.1
	Sensor BD is malfunctioning	Replace the Sensor BD. SEE SECTION 3.9.2
The fluorescent lamp does not light up	Fluorescent lamp needs replacement	Replace the fluorescent lamp. SEE SECTION 3.11.1
	The connector is disconnected	Check connector connections in the billboard case.

### 3.15. FUSES



**WARNING!**



**IMPORTANT!**

- Never touch places other than those specified. Touching places other than those specified can cause electric shock and short circuit. Disconnect the machine from the supply before attempting the replacement of any fuse.
- FUSES should only be replaced by QUALIFIED SERVICE PERSONNEL.
- 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
514-5078-4000	SWITCH REG REF. F1	5x20mm CERAMIC SB 4A	1
514-5078-5000	IEC INLET REF. F1	5x20mm CERAMIC SB 5A	1
514-5078-5000	CONN. BD. REF. F1	5x20mm CERAMIC SB 5A	1

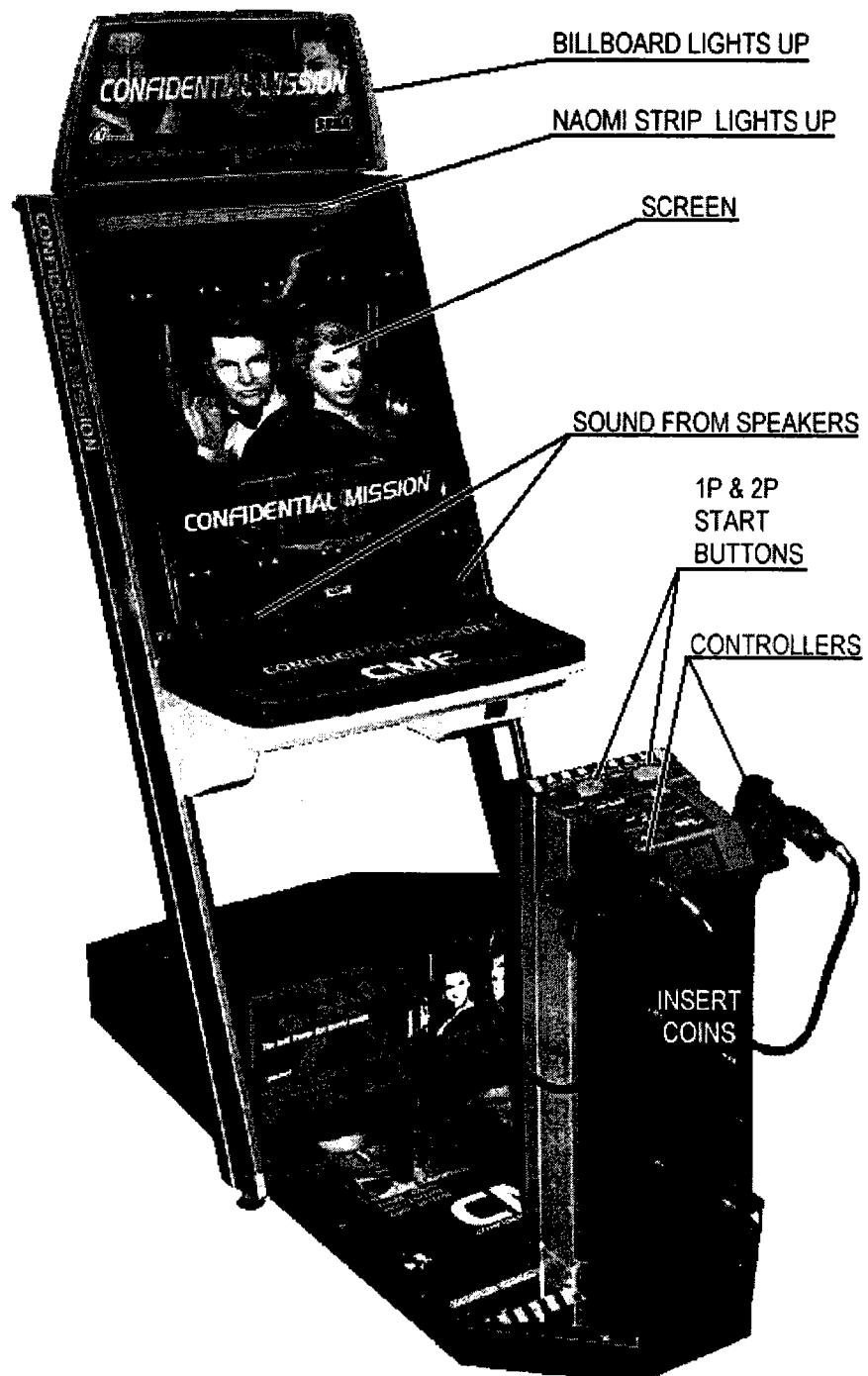
There are also fuses located on the Monitor PCB. Refer to the relevant Monitor manual supplied to reference these fuses.

## 4. 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 which flash when a credit is inserted.



## INTRODUCTION TO THE GAME

Based on a spy story, this is a gun shooting game that enables two players to play simultaneously.

The player must, as an agent, shoot enemies to complete missions during each stage. The game comprises of three stages.

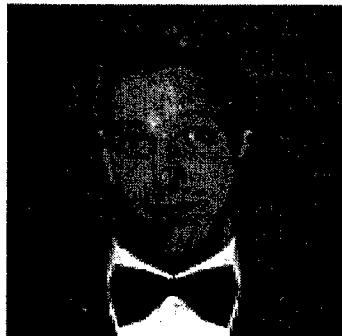
- HOWARD GIBSON [agent code: 6] (Player 1)

Nationality: Unknown

Height: 183cm

Hair: Brown

Eyes: Brown



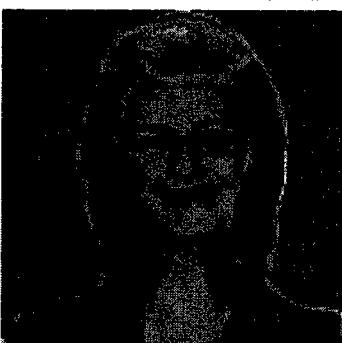
- JEAN CLIFFORD [agent code: 15] (Player 2)

Nationality: Unknown

Height: 172cm

Hair: Blonde

Eyes: Blue



### 4.1.1. MISSIONS

#### STAGE 1:

An unknown group has hijacked a military satellite. Radio signals to the satellite have been detected and traced to the History Museum. Your mission is to penetrate the Museum's security and collect information.

#### STAGE 2:

The information reveals the hijackers to be a group called Agares, and they have taken hostage Ms. Illina Mikahailova, one of the development staff. They have forced Illina to modify the satellite's system. Your mission is to rescue her from the train on which she is captive.

#### STAGE 3:

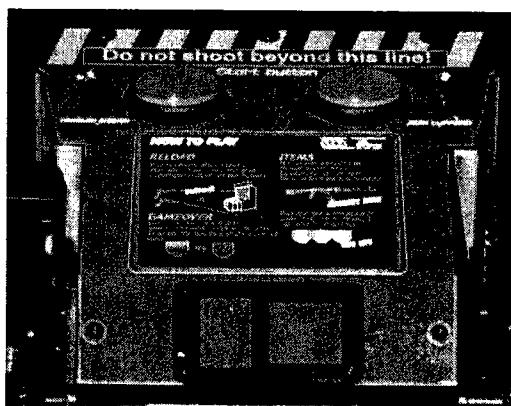
Ms. Mikahailova has cooperated with you to locate the Agares' base. They have moved the satellite control system to their submarines, and are about to leave the base. You must penetrate the base and recover the control system.

#### **4.2. PLAY INSTRUCTIONS**

1. Insert sufficient coins to register the required number of credits to play. The INSERT COIN(S) message disappears and the PRESS START BUTTON message is displayed. At the same time both the start buttons flash.
2. Press either start button, and the following gun adjustment screen is displayed.



Shooting the gun controller at the centre of the target will calibrate the gun system for the player's height/position. **NOTE: THE GUN CONTROLLERS WILL NOT FUNCTION ACCURATELY IF HELD BEYOND THE BLACK AND YELLOW "DO NOT SHOOT BEYOND THIS LINE" MARK.**



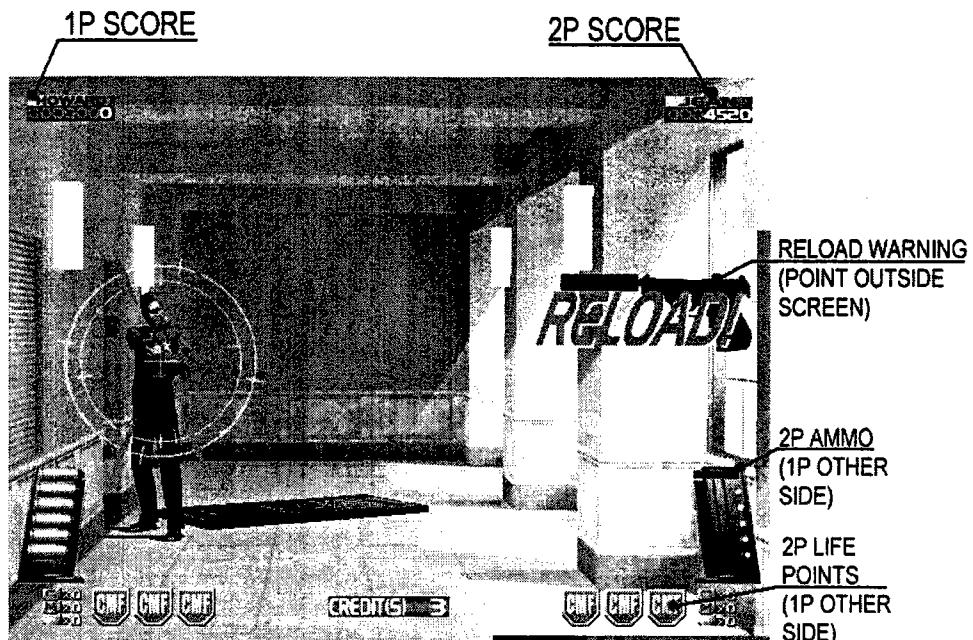
- Holding the guns beyond this line will impair accuracy. There is a corresponding mark printed on the floor.

3. After gun adjustment, a screen will be displayed that explains the mission.
4. Another player may join the game in progress by inserting the required value of coins and pressing the unused start button, which will then flash (if it is already flashing there are already enough credits to play). Press again to join the game.

NOTE: A player cannot join the game while the PLEASE WAIT A MINUTE message is being displayed.

5. When all life points have been used, the game is over unless the player continues by adding further coins and pressing start before the timer reaches zero (if the start button is already flashing there are sufficient credits in the system to continue).
6. Players scoring enough points to place in the top 20 can enter their name in the Internet ranking mode (see section 4.2.8).

#### 4.2.1. GAME SCREEN



The loaded bullets and remaining life for P1 is shown on the left of the screen; P2 is shown on the right.

#### 4.2.2. RELOADING BULLETS

The 'magazine' holds six bullets; once the magazine is empty, reload by aiming the controller outside the screen and pull the trigger. This message will be displayed when the gun requires reloading.



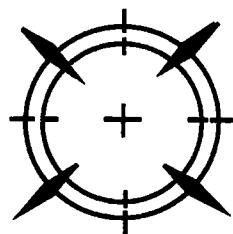
#### 4.2.3. GAME OVER

The game is over when:

- All life points are used,
- Stage 3 is cleared.

#### 4.2.4. LOSING LIFE POINTS

- As enemy soldiers armed with grenades, bombs, knives, etc., appear, they are accompanied by a crosshair (shown at right). Shoot the soldier before the crosshair turns red, otherwise a life point will be lost.
- Shoot missiles thrown by enemy soldiers (grenades, etc.), before they reach you, otherwise a life point will be lost.
- A knife attacker should be shot before he makes contact or a life point will be lost.
- Life points are also lost if civilians are shot.



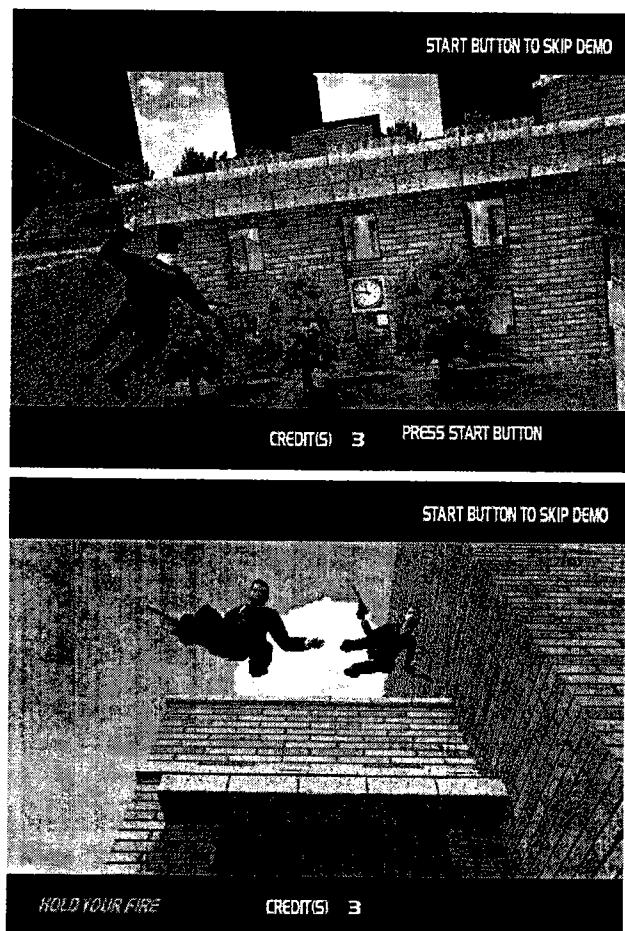
#### 4.2.5. SPECIAL TASKS

Certain tasks are assigned at some points in the game. Completing these tasks successfully will prove beneficial later in the game. If they are failed, the game does not end but the benefits are not gained and the enemy will attack more violently in later stages.

Example:

SHOOTING FROM ROPE SLIDE.

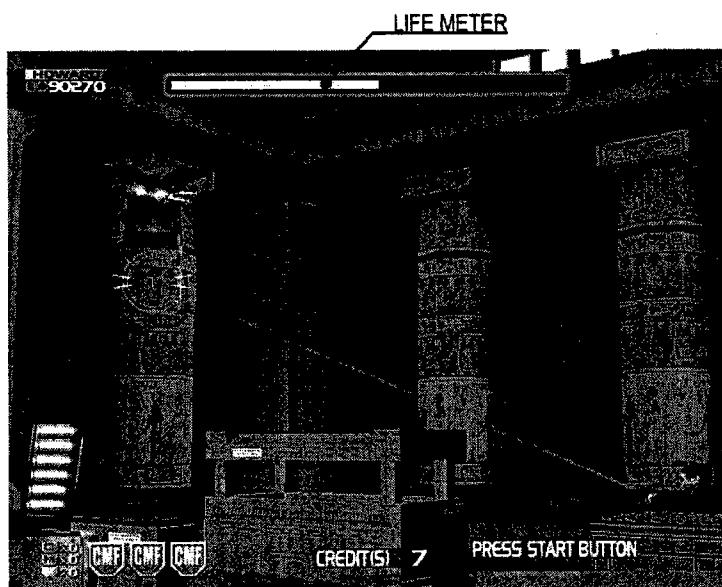
If the task is completed, you enter into pursuit with the enemy boss.



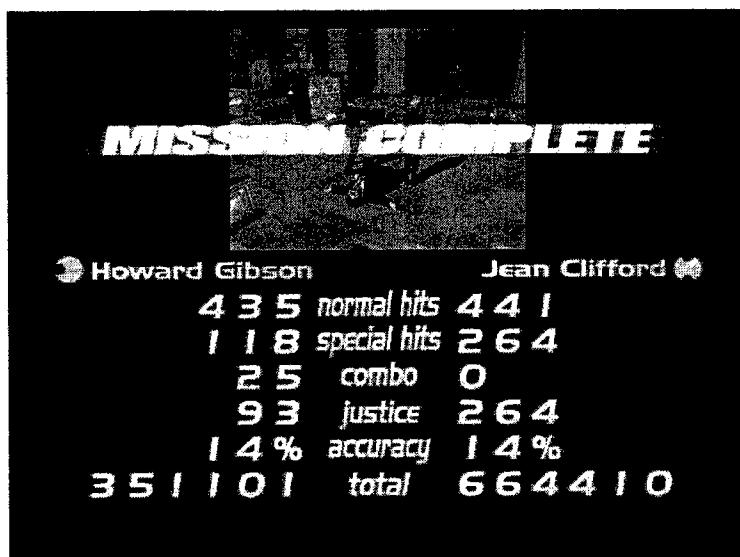
If it is failed, you are attacked and must jump to safety.

#### 4.2.6. CLEARING THE STAGE

- The end of stage boss must be destroyed to clear the stage.
- The boss is destroyed when the Life Meter reaches zero.



- If the stage is cleared, the MISSION COMPLETE screen is displayed.

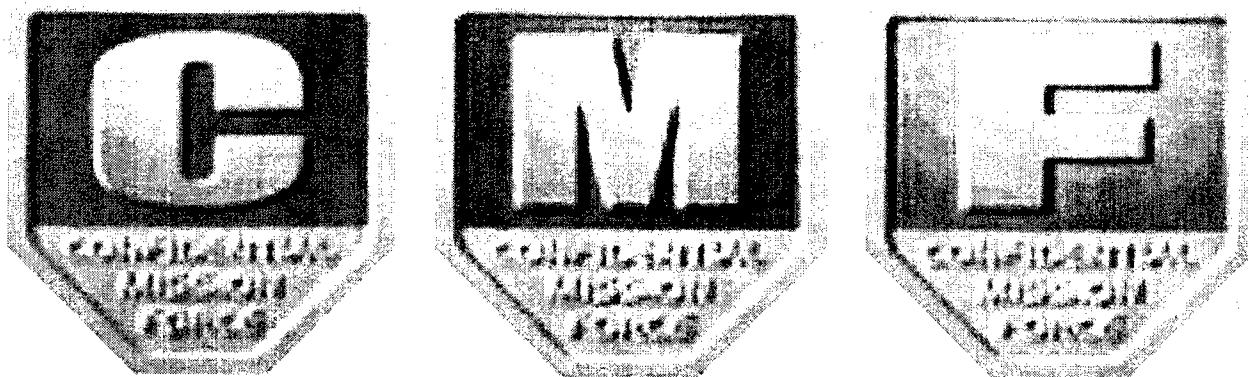


Normal hits:	Indicates the number of hits.
Special hits:	Indicates the total Combo and Justice hits made.
Combo:	Combo hits are made by hitting the enemy more than once before he hits the ground. A maximum of three hits can be made in this way.
Justice:	Justice hits are made by disarming the enemy by shooting the weapon from his hand, thus sparing his life.
Accuracy:	The percentage of shots that were on target.
Total:	The score awarded by combining the above.

#### 4.2.7. AVAILABLE ITEMS

To pick up items, shoot them when they appear on the screen. Picking up items can increase armaments, recover life points or increase scores.

- Life Items



Obtain a complete set of C, M and F marks to gain one life point.

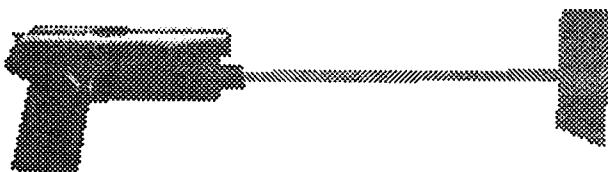
#### ASSAULT RIFLE

This weapon provides 45 rounds of automatic fire. Once the 45 rounds are spent, the player goes back to the pistol.



#### LASER SIGHT

The laser projects a pointer onto the target for a limited time. There isn't a limit on the number of shots that can be fired before the laser sight disappears.



#### BODY ARMOUR

This item protects the player against one shot from the enemy. It disappears when used once.



#### GRENADE

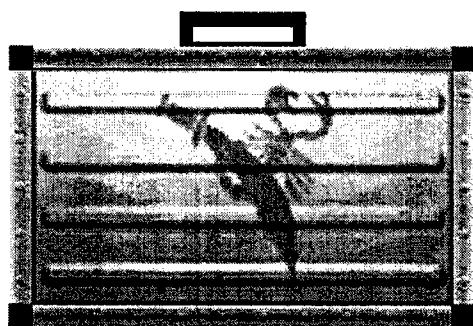
The grenade explodes when shot, causing widespread devastation. Once shot, it disappears.



- POINT ITEMS

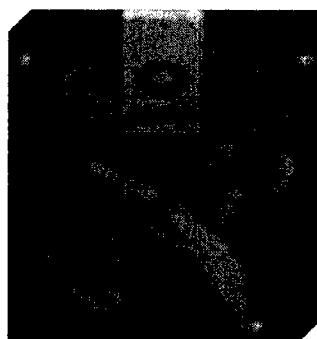
#### ATTACHÉ CASE

Shoot the attaché case for 3,000 points. Once shot, three floppy disks appear (see below).



#### FLOPPY DISK

Shoot these for 5,000 points per disk.



#### 4.2.8. INTERNET RANKING

- If the INTERNET RANKING has been set to ON in GAME ASSIGNMENTS, this message will appear on the advertising display: INTERNET RANKING MODE: PULL TRIGGER AND INSERT COIN.
- To obtain the password for registration in Internet ranking mode:
  - Ensure the Internet ranking is on,
  - Pull the trigger and insert coin as prompted,
  - Enter name.

NOTE: The CONFIDENTIAL MISSION Internet score ranking is operated from the Hitmaker Ltd. home page at <http://www.hitmaker.co.jp>

- When Internet ranking mode is chosen in the above manner, difficulty settings, etc., are overridden and standard settings are substituted.



#### 4.2.9. TIPS FOR HIGH SCORES

- Destroy an enemy as soon as it appears.  
Available points are highest when the enemy appears. When its crosshair is red, points are lower.
- Obtain Special Hit bonuses.  
By despatching enemies with justice and combo hits. See section 4.2.6.
- Obtain bonuses from clearing special stages.  
More points can be had by successfully completing the special stages.

## 5. 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	<p>When the machine is installed perform the following checks:</p> <ul style="list-style-type: none"> <li>• Check to see that each setting is as per the standard settings input at the time of shipment.</li> <li>• In the INPUT TEST mode, check each switch and V.R.</li> <li>• In the OUTPUT TEST mode, check each of the lamps.</li> <li>• In the MEMORY TEST mode check all of the IC's on the IC BD.</li> </ul>	Monthly
MEMORY	<ul style="list-style-type: none"> <li>• On the TEST MENU screen choosing the MEMORY TEST allows self test to be performed. In this test RAM &amp; ROM are tested.</li> </ul>	Monthly
PERIODIC CHECKS	<p>Periodically perform the following</p> <ul style="list-style-type: none"> <li>• MEMORY TEST.</li> <li>• Ascertain each setting.</li> <li>• In the INPUT TEST mode, test the control devices.</li> <li>• In the OUTPUT TEST mode, check each of the lamps.</li> </ul>	Monthly
CONTROL SYSTEM	<ul style="list-style-type: none"> <li>• In the INPUT TEST mode, check each switch and V.R.</li> <li>• Adjust or replace each switch and V.R.</li> </ul>	Monthly
MONITOR	<ul style="list-style-type: none"> <li>• In the CRT TEST mode, check to ensure the monitor is adjusted correctly</li> <li>• Clean screen (switch off machine and remove the plug)</li> </ul>	Monthly Weekly
IC BOARD	<b>MEMORY TEST</b> <ul style="list-style-type: none"> <li>• In the SOUND TEST mode, check the sound related ROM's</li> </ul>	Monthly
DATA CHECK	<ul style="list-style-type: none"> <li>• Check such data as held in the bookkeeping screens, relating to number and length of plays</li> </ul>	Monthly
EXTERIOR MAINTENANCE	<ul style="list-style-type: none"> <li>• Clean surfaces</li> </ul>	Monthly
COIN MECHANISM	<ul style="list-style-type: none"> <li>• Check switch operation (if fitted)</li> </ul>	Monthly

## 5.1. INTERNAL SWITCHES AND COIN METERS

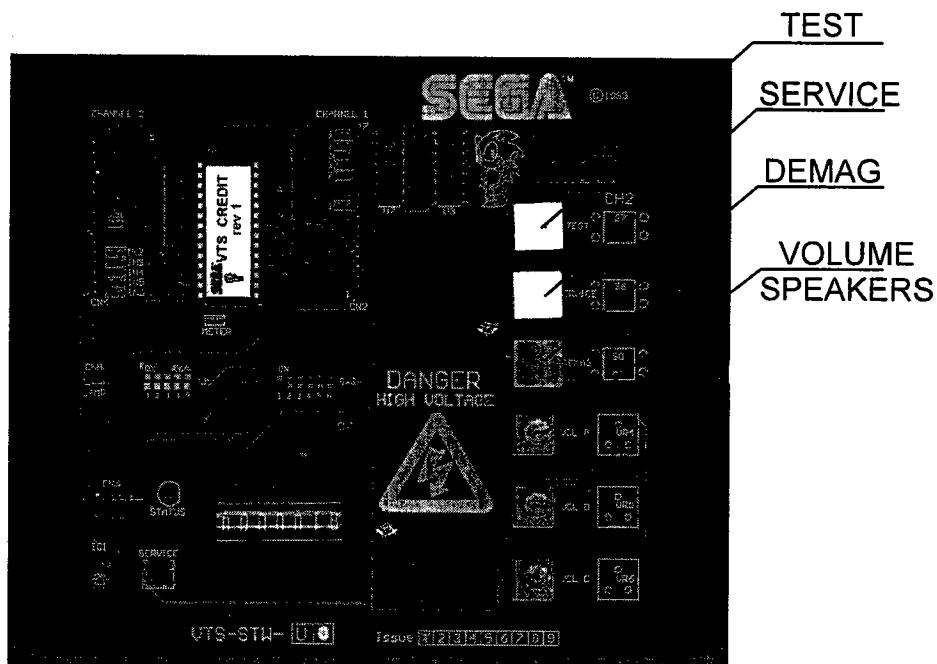


**CAUTION!**



**IMPORTANT!**

- 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.

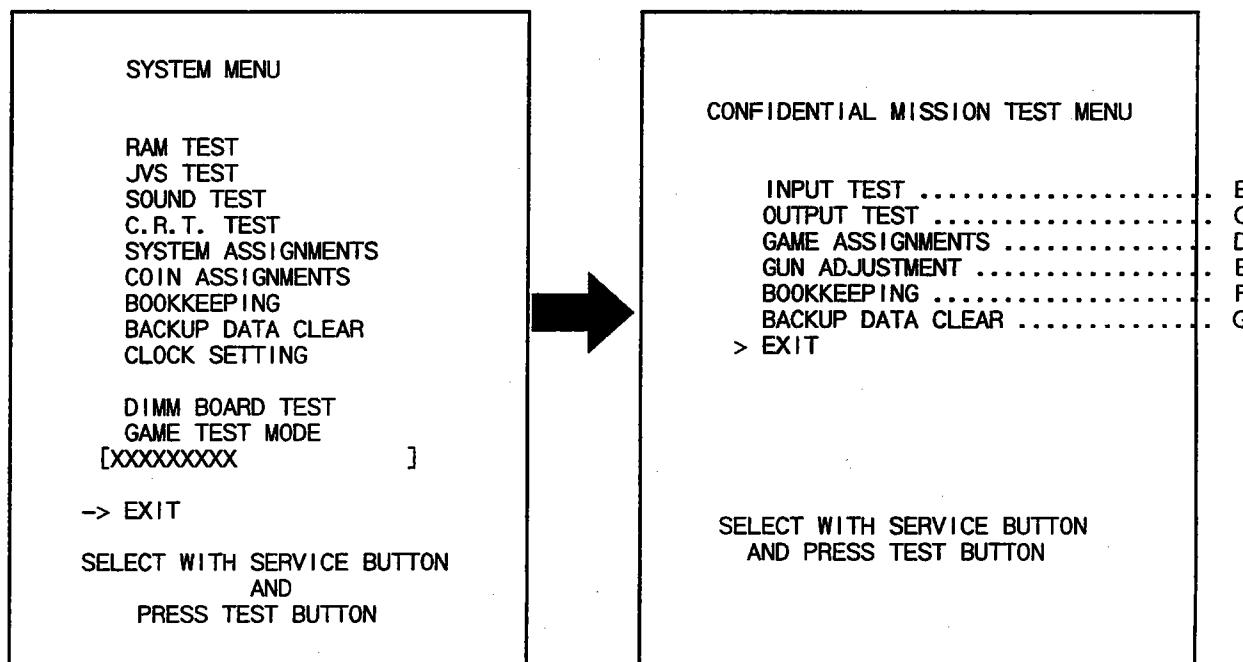
## 5.2. SYSTEM TEST MODE



- Any changes made in SYSTEM TEST MODE will only be stored once the EXIT command is chosen from the SYSTEM MENU. If the power is turned off before this, any changes made are ineffectual.
- Executing BACKUP DATA CLEAR in the SYSTEM TEST MODE does not clear the BOOKKEEPING data in the GAME TEST MODE.
- Entering the SYSTEM TEST MODE clears any coins less than one credit and the BONUS ADDER data.

The SYSTEM TEST MODE mainly allows for IC Board function checks, monitor adjustment, coin assignments, etc. Please also refer to the Monitor Service Manual supplied with this product. The following assignments, however, should be designated as follows for this product:

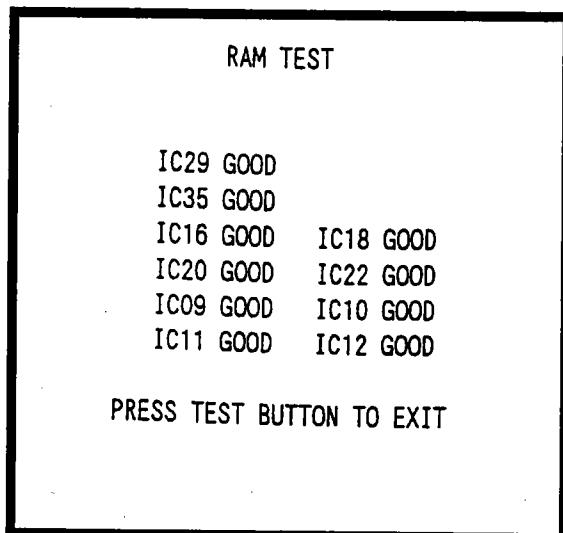
- CABINET TYPE: 2 PLAYER (S)
- MONITOR TYPE: HORIZONTAL
- COIN CHUTE TYPE: COMMON



- Press the TEST button to display the SYSTEM TEST MODE MENU.
- By pressing the SERVICE button, move the cursor (->) to the desired item and select with the TEST button.
- Use the SERVICE button to move the cursor and select the desired item with the TEST button.
- Select EXIT once changes are complete and press the TEST button to return to the normal mode.

### 5.2.1. RAM TEST

This allows the RAM functions to be checked on the Naomi Main Board. 'GOOD' is displayed for satisfactory RAMs, 'BAD' is displayed if any irregularities are found.



During test, 'TESTING NOW' is displayed. Press the TEST button to return to the Menu Mode.

### 5.2.2. JVS TEST

In this test, Specifications of the I/O Board connected to NAOMI can be checked, and INPUT TEST can be performed. First, I/O Board Specifications are displayed.

<pre> JVS TEST INPUT TEST NEXT NODE -&gt; EXIT NODE 1/1 NAME SEGA ENTERPRISES, LTD. I/O 838-18683 VER 1.04 98/12 CMD VER 1.1 JVS VER 2.0 COM VER 1.0 SWITCH 2PLAYER(S) 11BITS COIN 2SLOT ANALOG 8CH ROTARY 8CH KEYCODE 0 SCREEN X:0 Y:0 CH:0 CARD OSLOT HOPPER OUT OCH DRIVER OUT 8SLOT ANALOG OUT OCH CHARACTER CHARA:0 LINE:0 BACKUP 0 </pre> <p style="text-align: center;">SELECT WITH SERVICE BUTTON AND PRESS TEST BUTTON</p>	<div style="display: flex; justify-content: space-between;"> <span>(A)</span> <span>(B)</span> <span>(C)</span> </div> <p style="margin-top: 10px;">} Name and version of I/O BOARD.</p>
---	--

Select with the SERVICE button and press the TEST button.

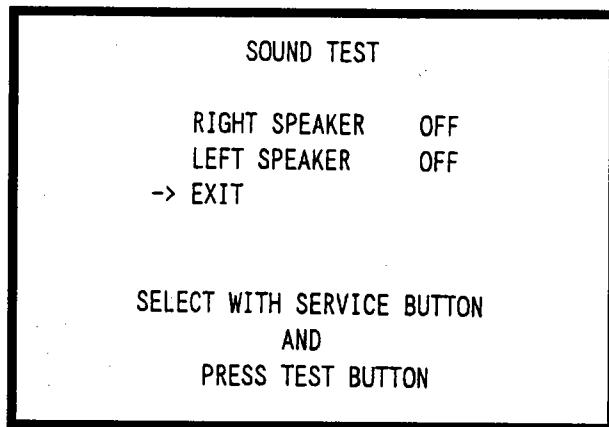
- (A) INPUT TEST: Proceeds to the INPUT TEST of I/O BOARD being displayed.
- (B) NEXT NODE: In the case where more than 2 I/O Boards are connected, proceeds to the next I/O Board.
- (C) EXIT: Returns to the menu mode.

#### INPUT TEST SCREEN

<pre> JVS TEST INPUT TEST NEXT NODE -&gt; EXIT NODE 1/1 SWITCH SYSTEM 00000000 PLAYER1 00000000 00000000 PLAYER2 00000000 00000000 COIN 0000 0000 ANALOG 0000 0000 0000 0000 0000 0000 0000 0000 </pre> <p style="text-align: center;">SELECT WITH SERVICE BUTTON AND PRESS TEST BUTTON</p>	<p>When INPUT is performed for the switches of Control Panel, etc., the value changes to 1 from 0.</p> <p>If the Coin SW is inputted, the value momentarily changes to 1 from 0.</p> <p>Analogue values are displayed between 0000 and FFOO.</p>
---	--

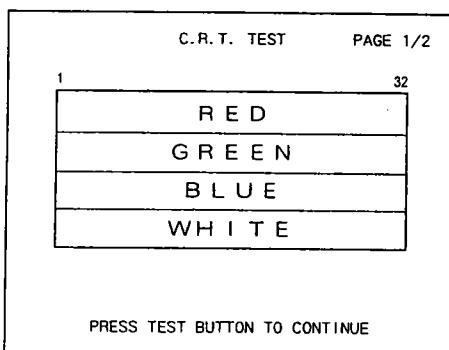
### 5.2.3. SOUND TEST

Sound Output test can be performed by emitting beeps from each speaker in turn.



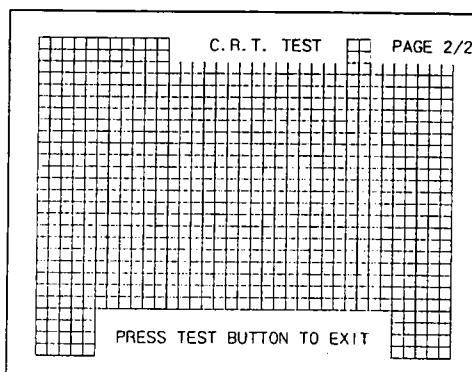
### 5.2.4. CRT TEST

A) RGB COLOUR ADJUSTMENT SCREEN - Allows monitor colour to be checked.



The red, green and blue colour bars are darkest at the leftmost end, becoming brighter towards the right in 31 graduations. Monitor brightness is satisfactory if the white colour bar is black at the leftmost end and white at the rightmost end. Press TEST button to proceed to the next page.

B) MONITOR SIZE ADJUSTMENT SCREEN - Allows monitor size to be checked.



Adjust so that the crosshatches do not go beyond the screen. Press TEST button to return to Menu Mode.

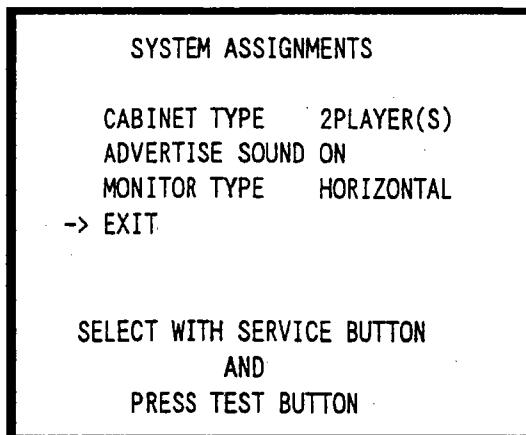
### 5.2.5. SYSTEM ASSIGNMENTS



- If the CABINET TYPE and MONITOR TYPE settings are unsuitable for the connected game, an error message is displayed after turning power on and upon finishing TEST mode, and the game is not playable.

Allows cabinet and board settings to be changed. Refer to Section 5.2.10 for changing the game related assignments such as game difficulty. Factory settings are shown in **BOLD** type.

1. Press the SERVICE button to move the cursor to the desired item.
2. Press the TEST button to change the setting.
3. Upon finishing the settings, move the cursor to EXIT and press the TEST button.

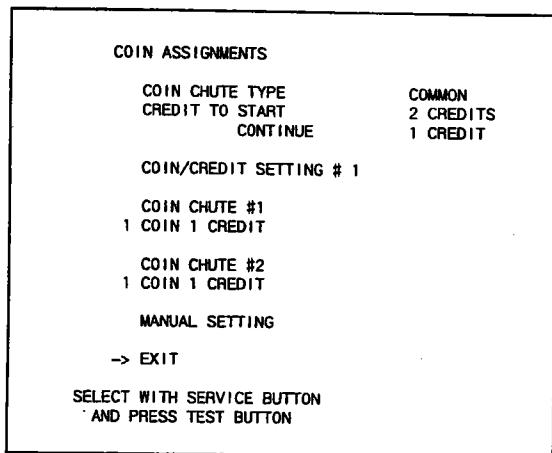


(A) CABINET TYPE (1PLAYER(S), **2PLAYER(S)**, 3PLAYER(S), 4PLAYER(S)) - set the number of players between one and four.

(B) ADVERTISE SOUND (ON, OFF) - Set whether ADVERTISE sound is to be emitted or not.

MONITOR TYPE (HORIZONTAL, VERTICAL) - sets the on-screen display to the orientation of the monitor. The TEST MODE allows the functioning of each part of the machine to be checked. In addition game configuration and coin configuration changes can be made within TEST MODE.

### 5.2.5.1.COIN ASSIGNMENTS



In this mode the setting of credit increments against coin insertion can be changed.

1. Press the service button to bring the arrow to the desired item.
2. Press the test button to change the setting.
3. When the settings are completed move the arrow to EXIT and press the TEST button.

#### COIN CHUTE TYPE (COMMON,INDIVIDUAL)

Set to COMMON

COMMON

Used for the type of cabinet whose coin acceptance is a common type for plural players. Regardless of the number of players COIN1/COIN2 ports are used.

INDIVIDUAL

Not used

#### CREDIT TO START

Sets the number of credits required to start a game.

#### CREDIT TO CONTINUE

Sets the number of credits required to continue a game.

#### CON/CREDIT SETTING (#1~2#27)

Sets the credit increase increment per coin insertion. There are 27 settings from #1 to #26 expressed in #credits as against #coins inserted. #27 refers to FREEPLAY.

### 5.2.5.2.COIN/CREDIT SETTING (COIN CHUTE COMMON TYPE)

SETTING	FUNCTIONING OF COIN CHUTE #1		FUNCTIONING OF COIN CHUTE #2	
SETTING #1	1 COIN	1 CREDIT	1 COIN	1 CREDIT
SETTING #2	1 COIN	2 CREDITS	1 COIN	1 CREDIT
SETTING #3	1 COIN	3 CREDIT	1 COIN	1 CREDIT
SETTING #4	1 COIN	4 CREDITS	1 COIN	1 CREDIT
SETTING #5	1 COIN	5 CREDITS	1 COIN	1 CREDIT
SETTING #6	1 COIN	2 CREDITS	1 COIN	2 CREDITS
SETTING #7	1 COIN	5 CREDITS	1 COIN	2 CREDITS
SETTING #8	1 COIN	3 CREDITS	1 COIN	3 CREDITS
SETTING #9	1 COIN	4 CREDITS	1 COIN	4 CREDITS
SETTING #10	1 COIN	5 CREDITS	1 COIN	5 CREDITS
SETTING #11	1 COIN	6 CREDITS	1 COIN	6 CREDITS
SETTING #12	2 COINS	1 CREDIT	2 COINS	1 CREDIT
SETTING #13	1 COIN	1 CREDIT	2 COINS	1 CREDIT
SETTING #14	1 COIN	2 CREDITS	2 COINS	1 CREDIT
SETTING #15	1 COIN 2 COINS	1 CREDIT 3 CREDITS	1 COIN 2 COINS	1 CREDIT 3 CREDITS
SETTING #16	1 COIN	3 CREDITS	1 COIN 2 COINS	1 CREDIT 3 CREDITS
SETTING #17	3 COINS	1 CREDIT	3 COINS	1 CREDIT
SETTING #18	4 COINS	1 CREDIT	4 COINS	1 CREDIT
SETTING #19	1 COIN 2 COINS 3 COINS 4 COINS	1 CREDIT 2 CREDITS 3 CREDITS 5 CREDITS	1 COIN 2 COINS 3 COINS 4 COINS	1 CREDIT 2 CREDITS 3 CREDITS 5 CREDITS
SETTING #20	1 COIN	5 CREDITS	1 COIN 2 COINS 3 COINS 4 COINS	1 CREDIT 2 CREDITS 3 CREDITS 5 CREDITS
SETTING #21	5 COINS	1 CREDIT	5 COINS	1 CREDIT
SETTING #22	1 COIN	2 CREDITS	3 COINS 5 COINS	1 CREDIT 2 CREDITS
SETTING #23	2 COINS 4 COINS 5 COINS	1 CREDIT 2 CREDITS 3 CREDITS	2 COINS 4 COINS 5 COINS	1 CREDIT 2 CREDITS 3 CREDITS
SETTING #24	1 COIN	3 CREDITS	2 COINS 4 COINS 5 COINS	1 CREDIT 2 CREDITS 3 CREDITS
SETTING #25	1 COIN 2 COINS 3 COINS 4 COINS 5 COINS	1 CREDIT 2 CREDITS 3 CREDITS 4 CREDITS 6 CREDITS	1 COIN 2 COINS 3 COINS 4 COINS 5 COINS	1 CREDIT 2 CREDITS 3 CREDITS 4 CREDITS 6 CREDITS
SETTING #26	1 COIN	6 CREDITS	1 COIN 2 COINS 3 COINS 4 COINS 5 COINS	1 CREDIT 2 CREDITS 3 CREDITS 4 CREDITS 6 CREDITS
SETTING #27	FREE PLAY		FREE PLAY	

### 5.2.5.3.MANUAL SETTING

COIN ASSIGNMENTS	
MANUAL SETTING	
COIN TO CREDIT 1 COIN 1 CREDIT	
BONUS ADDER NO BONUS ADDER	
COIN CHUTE #1 MULTIPLIER 1 COIN COUNT AS 1 COIN	
COIN 1 2 3 4 5 6 7 8 9	
CREDIT 1 2 3 4 5 6 7 8 9	
COIN CHUTE #2 MULTIPLIER 1 COIN COUNT AS 1 COIN	
COIN 1 2 3 4 5 6 7 8 9	
CREDIT 1 2 3 4 5 6 7 8 9	
-> EXIT	
SELECT WITH SERVICE BUTTON AND PRESS TEST BUTTON	

The credits incremental increase settings as against coin insertion are shown in more detail than above. Note that when this MANUAL setting is performed the COIN/CREDIT setting becomes ineffective.

#### COIN TO CREDIT

Determines COIN/CREDIT setting.

#### BONUS ADDER

This sets how many COINS should be inserted to obtain one service coin.

#### COIN CHUTE #1/#2 MULTIPLIER

This sets how many tokens one coin represents.

#### MANUAL SETTING

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

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

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

### 5.2.6. BOOKKEEPING

Selecting this mode allows the BOOKKEEPING data to be accessed via a sequence of two pages. Press the TEST button is pressed, the following page appears. On the third page, pressing the TEST button re-enters the MENU mode.

BOOKKEEPING 1/2

TOTAL TIME  
0D 00H 00M 00S

CREDIT 1	0
CREDIT 2	0
COIN 1	0
COIN 2	0
TOTAL COIN	0
COIN CREDIT	0
SERVICE CREDIT	0
TOTAL CREDIT	0

PRESS TEST BUTTON TO CONTINUE

Number of items displayed depends on the setting of CABINET TYPE in SYSTEM ASSIGNMENTS.

BOOKKEEPING 2/2

P1 SEQ 1	0	P2 SEQ 1	0
P1 SEQ 2	0	P2 SEQ 2	0
P1 SEQ 3	0	P2 SEQ 3	0
P1 SEQ 4	0	P2 SEQ 4	0
P1 SEQ 5	0	P2 SEQ 5	0
P1 SEQ 6	0	P2 SEQ 6	0
P1 SEQ 7	0	P2 SEQ 7	0
P1 SEQ 8	0	P2 SEQ 8	0
P3 SEQ 1	0	P4 SEQ 1	0
P3 SEQ 2	0	P4 SEQ 2	0
P3 SEQ 3	0	P4 SEQ 3	0
P3 SEQ 4	0	P4 SEQ 4	0
P3 SEQ 5	0	P4 SEQ 5	0
P3 SEQ 6	0	P4 SEQ 6	0
P3 SEQ 7	0	P4 SEQ 7	0
P3 SEQ 8	0	P4 SEQ 8	0

PRESS TEST BUTTON TO EXIT

### 5.2.7. BACKUP DATA CLEAR

This allows the BOOKKEEPING data to be cleared. The GAME ASSIGNMENTS settings, and the contents of BOOKKEEPING in the SYSTEM TEST mode are unaffected by this command.

BACKUP DATA CLEAR  
YES (CLEAR)  
-> NO (CANCEL)

When clearing, use the SERVICE BUTTON to bring the cursor to YES (CLEAR) and press the TEST BUTTON. When the data has been cleared, COMPLETED will be displayed.

If clearing of data is not desired, select NO (CANCEL) to return to the MENU MODE.

SELECT WITH SERVICE BUTTON  
AND PRESS TEST BUTTON

### 5.2.8. CLOCK SETTING

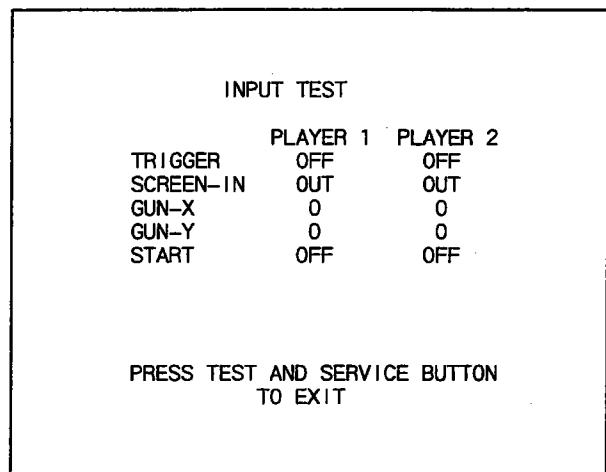
This allows YEAR, MONTH, DAY, HOUR and MINUTE settings to be made.

CLOCK SETTING  
1998 12/02 14:30 33 WED  
YEAR  
MONTH  
DAY  
HOUR  
MINUTE  
-> EXIT  
SELECT WITH SERVICE BUTTON  
AND  
PRESS TEST BUTTON

Select the desired item with the SERVICE button and press the TEST button to increase the value. Upon finishing the SETTING, bring the cursor to EXIT and press the TEST button to return to the Menu Mode.

## 5.2.9. GAME TEST MODE

### 5.2.9.1.INPUT TEST



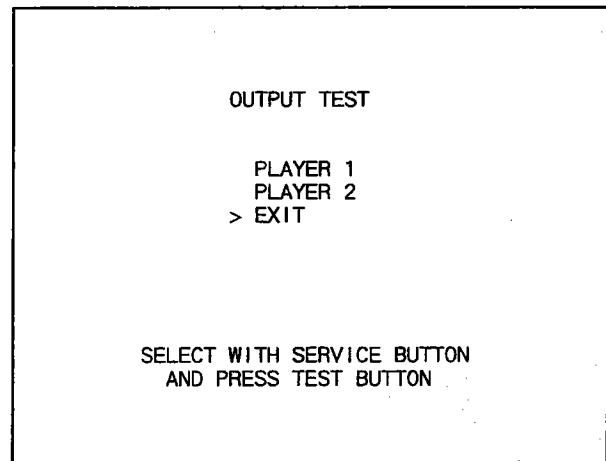
This allows all of the switches and guns to be tested for operation.

Press each switch/trigger in turn to cause the display to change from off to on.

GUN-X and GUN-Y show position of gun when pointed at screen

SCREEN-IN changes from OUT to IN when gun is pointed at screen

### 5.2.9.2. OUTPUT TEST



- PLAYER 1 START LAMP: To check this, select PLAYER 1 and press the TEST button. PLAYER 1 START button will light up.
- PLAYER 2 START LAMP: To check this, select PLAYER 2 and press the TEST button. PLAYER 2 START button will light up.
- EXIT : Returns to TEST MENU

### 5.2.10.GAME ASSIGNMENTS

Use this mode to set certain game parameters. New settings become effective only after exiting the TEST mode completely.

GAME ASSIGNMENTS							
	EASY						HARD
GAME DIFFICULTY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BOSS DIFFICULTY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SHIFTING DIFFICULTY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	NORMAL						LARGE
COLLISION SIZE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LIFE				3			
ADVERTISE CLOCK					ON		
GUN ADJUST MODE					ON		
INTERNET RANKING					ON		
CABINET TYPE						XXXXX	
> EXIT							
SELECT WITH SERVICE BUTTON AND PRESS TEST BUTTON							

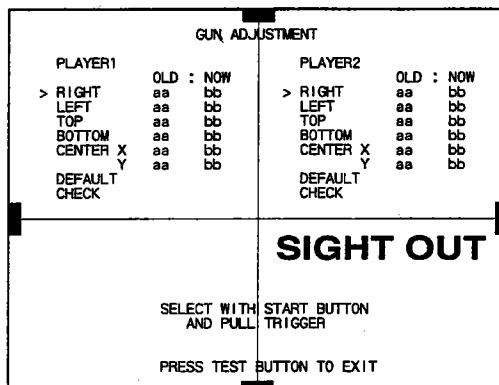
- GAME DIFFICULTY: Select from eight levels of game difficulty.
- BOSS DIFFICULTY: Eight levels, affects the difficulty in defeating the stage's boss.
- SHIFTING DIFFICULTY: Eight levels, affects how the difficulty increases as the game progresses.
- COLLISION SIZE: Eight levels, affects the severity of colliding with an enemy.
- LIFE: Select how many lives are awarded at the beginning of the game, from three to eight.
- ADVERTISE CLOCK: Select whether a clock is shown during ADVERTISE mode.
- GUN ADJUST MODE: Select whether the GUN CONTROLLER ADJUST screen is shown at the beginning of the game.
- INTERNET RANKING: Select whether the Internet score ranking mode is active (running on the Hitmaker Ltd. home page). If set to ON, the following message appears on the upper section of the advertise screen: "INTERNET RANKING MODE: PULL TRIGGER AND INSERT COIN". In this instance, pull the trigger and insert coins to activate Internet score ranking mode. At the end of the game the system displays your password that is used to register the score on the web site. When in this mode, the system sets all the difficulty settings to a standard for the ranking mode.
- CABINET TYPE: Indicates the type of cabinet used: DELUXE (DX TYPE) or STANDARD (U/R TYPE).

### 5.2.11.GUN ADJUSTMENT

Select GUN ADJUSTMENT from the CONFIDENTIAL MISSION TEST MENU. The screen below will be displayed. This screen is used to reset the five correction parameters, namely the centre and right/left/top/bottom extremities of the screen. Follow the procedure to make these settings, ensuring that the controller is pointed at these points to decide each correction value.

Press 1P or 2P Start to select each correction parameter.

New settings only become active once the TEST menu has been correctly exited.



- RIGHT aa bb      Decides a horizontal correction value at the right end. The aa column indicates the values before resetting; the bb column is the value after setting.  
Aim the controller at the square mark at the right of the 'crosshair' and pull the trigger to determine the correction value.  
Vertical correction need not be considered at this point.
- LEFT aa bb      Decides a horizontal correction value at the left end. The aa column indicates the values before resetting; the bb column is the value after setting.  
Aim the controller at the square mark at the left of the 'crosshair' and pull the trigger to determine the correction value.  
Vertical correction need not be considered at this point.
- TOP aa bb      Decides a vertical correction value at the top end. The aa column indicates the values before resetting; the bb column is the value after setting.  
Aim the controller at the square mark at the top of the 'crosshair' and pull the trigger to determine the correction value.  
Horizontal correction need not be considered at this point.
- BOTTOM aa bb      Decides a vertical correction value at the bottom end. The aa column indicates the values before resetting; the bb column is the value after setting.  
Aim the controller at the square mark at the bottom of the 'crosshair' and pull the trigger to determine the correction value.  
Horizontal correction need not be considered at this point.
- CENTER X (Y) aa bb      Decides a correction value at the centre. X indicates a horizontal direction while Y indicates a vertical direction. The aa column indicates the values before resetting; the bb column is the value after setting.  
Aim the controller at the square mark in the centre of the 'crosshair' and pull the trigger to determine the correction value.
- DEFAULT      Selecting this will put the values back to those before resetting.
- CHECK      Selecting CHECK will result in a round cursor (red for 1P and blue for 2P) on the screen corresponding to where the gun is aimed. Refer to the cursor before making adjustments.
- SIGHT OUT      This message appears when the gun is pointed outside the screen.

### 5.2.11.1. BOOKKEEPING

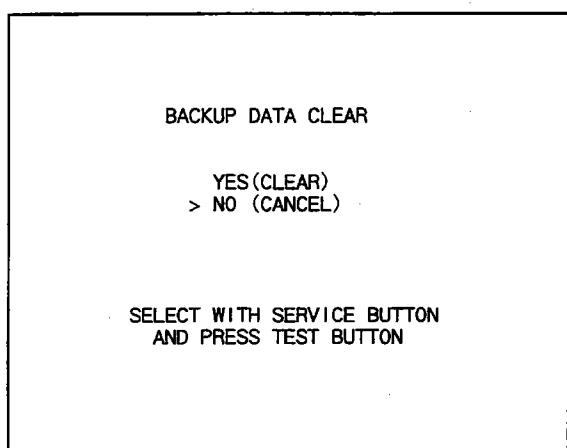
BOOKKEEPING 1/2	
NUMBER OF GAMES	0
TOTAL (POWER ON) TIME	00H 00M 00S
GAME TIME	00H 00M 00S
PLAY TIME	00H 00M 00S
AVERAGE PLAY TIME	00H 00M 00S
LONGEST PLAY TIME	00H 00M 00S
SHORTEST PLAY TIME	00H 00M 00S
PRESS TEST BUTTON TO CONTINUE	

- NUMBER OF GAMES Total number of plays.
- TOTAL (POWER ON) TIME Accumulated power-on hours.
- GAME TIME Accumulated operation hours.
- PLAY TIME Accumulated playing hours (1P+2P).

BOOKKEEPING 2/2	
TIME HISTOGRAM	
0M00S - 0M29S	0
0M30S - 0M59S	0
1M00S - 1M29S	0
1M30S - 1M59S	0
2M00S - 2M29S	0
2M30S - 2M59S	0
3M00S - 3M29S	0
3M30S - 3M59S	0
4M00S - 4M29S	0
4M30S - 4M59S	0
5M00S - 5M29S	0
5M30S - 5M59S	0
6M00S - 6M29S	0
6M30S - 6M59S	0
7M00S - 7M29S	0
7M30S - 7M59S	0
8M00S - 8M29S	0
8M30S - 8M59S	0
9M00S - 9M29S	0
9M30S - 9M59S	0
OVER 10M00S	0
PRESS TEST BUTTON TO EXIT	

Playing frequency bookkeeping is displayed in increments of 30 seconds from 0M00S to 9M59S. Playtime in excess of 10 minutes is displayed in the category of OVER 10M00S.

### **5.2.11.2.BACKUP DATA CLEAR**



Clears BOOKKEEPING DATA in GAME TEST MODE.

When clearing, bring the arrow to "YES" and press the test button.

Move the arrow to "NO" and press the test button to return to the main menu.

## 6. COIN MECH INSTALLATION AND CREDIT BOARD SET UP

### 6.1. 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.

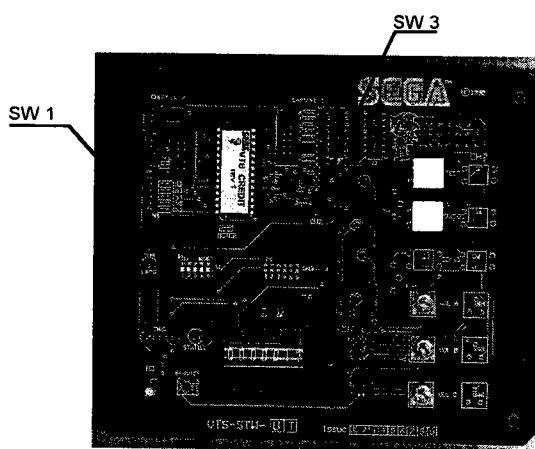
The VTS board is connected to the coin validator and lamps via a dedicated wiring harness depending upon the coin validator used:

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												C120 Only					
Country	Setting	Switch 3 Setting						Coin Validator Programming						C120 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	OFF	OFF	£1	50p new	20p	10p	-	50p old	-	-	-	-	-	
UK	Coin Controls C220 Binary	ON	OFF	OFF	OFF	OFF	OFF	£1	50p new	20p	10p	-	50p old	-	-	£2	-	-	
UK	Coin Controls C220 Binary	OFF	ON	OFF	OFF	OFF	OFF	£1	50p new	20p	10p	-	£2	-	-	50p old	-	-	
UK	Coin Controls C120 Parallel	ON	ON	OFF	OFF	OFF	OFF	£1	50p new	20p	10p	-	£2	-	-	50p old	-	-	
UK	Coin Controls C120 Parallel	OFF	OFF	ON	OFF	OFF	OFF	£2	£1	50p new	20p	10p	-	10p	-	-	50p old	-	-
UK	Mars ME/MS 111 Parallel	ON	OFF	ON	OFF	OFF	OFF	£1	£2	20p	10p	50p new	50p old	-	-	-	-	-	-
UK	NRI Parallel	OFF	ON	ON	OFF	ON	OFF	10p	20p	50p	£1	£2	-	-	-	-	-	-	-
Belgium	Parallel	ON	ON	ON	OFF	ON	OFF	-	50BFR	20BFR	5BFR	-	-	-	-	-	-	-	-
Holland	Parallel	OFF	OFF	OFF	ON	OFF	ON	-	5NLG	2.5NLG	1NLG	-	-	-	-	-	-	-	-
Austria	Parallel	ON	OFF	OFF	ON	ON	ON	20Sch	10Sch	5Sch	1Sch	-	-	-	-	-	-	-	-
Spain	Coin Controls C220 Binary	OFF	ON	OFF	ON	ON	ON	500Pta	200Pta	100Pta	50Pta	25Pta	200Pt	50Pta	25Pta	old	old	old	old
Spain	C120/NRI Parallel	ON	ON	OFF	ON	ON	ON	500Pta	200Pta	100Pta	50Pta	25Pta	-	-	-	200Pta	-	50Pta	-
Spain	Coin Controls C220 Parallel	OFF	OFF	ON	ON	ON	ON	100Pta	50Pta	-	25Pta	-	50Pta	-	-	25Pta	old	old	old
Portugal	Parallel	ON	OFF	ON	ON	ON	ON	200Es	100Es	50Es	-	-	-	-	-	-	-	-	-
	TBA																		
	Channels									ON	TBA								
										OFF	Direct Mode								
										ON	2 channel Mode								

**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

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 me
  - Set SW 3 on the VTS board as shown in the table above corresponding to the country required.

### 6.1.1. 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

**6.1.2. 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

### 6.1.3. PRICE OF PLAY SETTINGS - BELGIUM

	Price	Bonus		DIL Switch 1				
				Switch 1	Switch 2	Switch 3	Switch 4	Switch 5
1	5BFr	No Bonus		OFF	OFF	OFF	OFF	OFF
2	5BFr		11 = 50BFr	ON	OFF	OFF	OFF	OFF
3	5BFr		5 = 20BFr	OFF	ON	OFF	OFF	OFF
4	10BFr	No Bonus		ON	ON	OFF	OFF	OFF
5	10BFr		6 = 50BFr	OFF	OFF	ON	OFF	OFF
6	10BFr		3 = 20BFr	ON	OFF	ON	OFF	OFF
7	15BFr	No Bonus		OFF	ON	ON	OFF	OFF
8	15BFr		4 = 50BFr	ON	ON	ON	OFF	OFF
9	15BFr		7 = 100BFr	OFF	OFF	OFF	ON	OFF
10	20BFr	No Bonus		ON	OFF	OFF	ON	OFF
11	20BFr		3 = 50BFr	OFF	ON	OFF	ON	OFF
12	20BFr		3 = 50BFr	ON	ON	OFF	ON	OFF
13	25BFr	No Bonus		OFF	OFF	ON	ON	OFF
14	25BFr		5=100BFr	ON	OFF	ON	ON	OFF
15	25BFr		3 = 50BFr	OFF	ON	ON	ON	OFF
16	30BFr	No Bonus		ON	ON	ON	ON	OFF
17	30BFr		4=100BFr	OFF	OFF	OFF	OFF	ON
18	30BFr		2=50BFr	ON	OFF	OFF	OFF	ON
19	40BFr	No Bonus		OFF	ON	OFF	OFF	ON
20	40BFr		3=100BFr	ON	ON	OFF	OFF	ON
21	50BFr	No Bonus		OFF	OFF	ON	OFF	ON
22	50BFr		3=100BFr	ON	OFF	ON	OFF	ON
23				OFF	ON	ON	OFF	ON
24				ON	ON	ON	OFF	ON
25				OFF	OFF	OFF	ON	ON
26				ON	OFF	OFF	ON	ON
27				OFF	ON	OFF	ON	ON
28				ON	ON	OFF	ON	ON
29				OFF	OFF	ON	ON	ON
30				ON	OFF	ON	ON	ON
31				OFF	ON	ON	ON	ON
32	Free Play			ON	ON	ON	ON	ON

#### 6.1.4. PRICE OF PLAY SETTINGS - FRANCE

	Price	Bonus			DIL Switch 1				
					Switch 1	Switch 2	Switch 3	Switch 4	Switch 5
1	1Fr	No Bonus			OFF	OFF	OFF	OFF	OFF
2	1Fr	6 = 5Fr			ON	OFF	OFF	OFF	OFF
3	2Fr	No Bonus			OFF	ON	OFF	OFF	OFF
4	2Fr	3 = 5Fr	6 = 10Fr	12 = 20Fr	ON	ON	OFF	OFF	OFF
5	3Fr	No Bonus			OFF	OFF	ON	OFF	OFF
6	3Fr	1.66 = 5Fr	4 = 10Fr	8 = 20Fr	ON	OFF	ON	OFF	OFF
7	3Fr	2 = 5Fr	4 = 10Fr		OFF	ON	ON	OFF	OFF
8	3Fr	**	3 = 10Fr	6 = 20Fr	ON	ON	ON	OFF	OFF
9	4Fr	No Bonus			OFF	OFF	OFF	ON	OFF
10	4Fr	1.25 = 5Fr	3 = 10Fr	6 = 20Fr	ON	OFF	OFF	ON	OFF
11	5Fr	No Bonus			OFF	ON	OFF	ON	OFF
12	5Fr		3 = 10Fr	6 = 20Fr	ON	ON	OFF	ON	OFF
13	5Fr		2 = 10Fr	5 = 20Fr	OFF	OFF	ON	ON	OFF
14	6Fr	No Bonus			ON	OFF	ON	ON	OFF
15	6Fr		2 = 10Fr	4 = 20Fr	OFF	ON	ON	ON	OFF
16	8Fr	No Bonus			ON	ON	ON	ON	OFF
17	8Fr	1.25 = 10Fr	2 = 15Fr	2.5 = 20Fr	OFF	OFF	OFF	OFF	ON
18	10Fr	No Bonus			ON	OFF	OFF	OFF	ON
19	10Fr		3 = 20Fr		OFF	ON	OFF	OFF	ON
20	10Fr		2 = 20Fr	5 = 40Fr	ON	ON	OFF	OFF	ON
21	15Fr	No Bonus			OFF	OFF	ON	OFF	ON
22	15Fr		2 = 20Fr		ON	OFF	ON	OFF	ON
23	20Fr	No Bonus			OFF	ON	ON	OFF	ON
24	20Fr			3 = 50Fr	ON	ON	ON	OFF	ON
25	30Fr	No Bonus			OFF	OFF	OFF	ON	ON
26	30Fr			2 = 50Fr	ON	OFF	OFF	ON	ON
27	50Fr	No Bonus			OFF	ON	OFF	ON	ON
28	50Fr			3 = 100Fr	ON	ON	OFF	ON	ON
29	75Fr	No Bonus			OFF	OFF	ON	ON	ON
30	75Fr			2 = 100Fr	ON	OFF	ON	ON	ON
31	100Fr	No Bonus			OFF	ON	ON	ON	ON
32	Free Play				ON	ON	ON	ON	ON

\*\* This is a special setting which gives no credit until a total of 10Fr is input and then gives three games.

### 6.1.5. PRICE OF PLAY SETTINGS - ITALY

	Price	Bonus	DIL Switch 1				
			Switch 1	Switch 2	Switch 3	Switch 4	Switch 5
1			OFF	OFF	OFF	OFF	OFF
2			ON	OFF	OFF	OFF	OFF
3			OFF	ON	OFF	OFF	OFF
4			ON	ON	OFF	OFF	OFF
5			OFF	OFF	ON	OFF	OFF
6			ON	OFF	ON	OFF	OFF
7			OFF	ON	ON	OFF	OFF
8			ON	ON	ON	OFF	OFF
9			OFF	OFF	OFF	ON	OFF
10	100L	No Bonus		ON	OFF	OFF	ON
11	100L		6 = 500L	OFF	ON	OFF	ON
12	100L		3 = 200L	ON	ON	OFF	ON
13	200L	No Bonus		OFF	OFF	ON	ON
14	200L		3 = 500L	ON	OFF	ON	ON
15	200L		3 = 400L	OFF	ON	ON	ON
16	300L	No Bonus		ON	ON	ON	ON
17	300L		2 = 500L	OFF	OFF	OFF	OFF
18	300L		3 = 600L	ON	OFF	OFF	ON
19	400L	No Bonus		OFF	ON	OFF	ON
20	400L		3 = 1000L	ON	ON	OFF	ON
21	400L		3 = 800L	OFF	OFF	ON	ON
22	500L	No Bonus		ON	OFF	ON	OFF
23	500L		3 = 1000L	OFF	ON	ON	ON
24	500L		5 = 2000L	ON	ON	ON	OFF
25	600L	No Bonus		OFF	OFF	OFF	ON
26	600L		3 = 1200L	ON	OFF	OFF	ON
27	600L		4 = 2000L	OFF	ON	OFF	ON
28	800L	No Bonus		ON	ON	OFF	ON
29	800L		2 = 1000L	OFF	OFF	ON	ON
30	1000L	No Bonus		ON	OFF	ON	ON
31	1000L		2 = 1500L	OFF	ON	ON	ON
32	Free Play			ON	ON	ON	ON

### 6.1.6. PRICE OF PLAY SETTINGS - PORTUGAL

	Price	Bonus			DIL Switch 1				
1	50Esc	No Bonus			OFF	OFF	OFF	OFF	OFF
2	50Esc			5 = 200Esc	ON	OFF	OFF	OFF	OFF
3	50Esc		3=100Esc		OFF	ON	OFF	OFF	OFF
4	100Esc	No Bonus			ON	ON	OFF	OFF	OFF
5	100Esc			5 = 400Esc	OFF	OFF	ON	OFF	OFF
6	100Esc		3 = 200Esc		ON	OFF	ON	OFF	OFF
7	150Esc	No Bonus			OFF	ON	ON	OFF	OFF
8	150Esc			3 = 400Esc	ON	ON	ON	OFF	OFF
9	200Esc	No Bonus			OFF	OFF	OFF	ON	OFF
10	200Esc			6 = 1000Esc	ON	OFF	OFF	ON	OFF
11	200Esc		4 = 600Esc		OFF	ON	OFF	ON	OFF
12	250 Esc	No Bonus			ON	ON	OFF	ON	OFF
13	250 Esc		3 = 500Esc		OFF	OFF	ON	ON	OFF
14	300 Esc	No Bonus			ON	OFF	ON	ON	OFF
15	300 Esc			4 = 1000Esc	OFF	ON	ON	ON	OFF
16	400 Esc	No Bonus			ON	ON	ON	ON	OFF
17	400 Esc			3 = 1000Esc	OFF	OFF	OFF	OFF	ON
32	Free Play				ON	ON	ON	ON	ON

### 6.1.7. PRICE OF PLAY SETTINGS - NETHERLANDS

	Price	Bonus			DIL Switch 1				
		No Bonus			Switch 1	Switch 2	Switch 3	Switch 4	Switch 5
1	1G	No Bonus			OFF	OFF	OFF	OFF	OFF
2	1G		2.5NLG = 2		ON	OFF	OFF	OFF	OFF
3	2G	No Bonus			OFF	ON	OFF	OFF	OFF
4	2G		5NLG = 3		ON	ON	OFF	OFF	OFF
5	3G	No Bonus			OFF	OFF	ON	OFF	OFF
6	3G		5NLG = 2		ON	OFF	ON	OFF	OFF
7	4G	No Bonus			OFF	ON	ON	OFF	OFF
8	4G		10NLG = 3		ON	ON	ON	OFF	OFF
9	5G	No Bonus			OFF	OFF	OFF	ON	OFF
10	5G		10NLG = 3		ON	OFF	OFF	ON	OFF
11	6G	No Bonus			OFF	ON	OFF	ON	OFF
12	6G		15NLG = 3		ON	ON	OFF	ON	OFF
13	8G	No Bonus			OFF	OFF	ON	ON	OFF
14	8G		20NLG = 3		ON	OFF	ON	ON	OFF
15	10G	No Bonus			OFF	ON	ON	ON	OFF
16	10G		20NLG = 3		ON	ON	ON	ON	OFF
17	15G		30NLG = 3		OFF	OFF	OFF	OFF	ON
18	15G	No Bonus			ON	OFF	OFF	OFF	ON
19	20G	No Bonus			OFF	ON	OFF	OFF	ON
32	Free Play				ON	ON	ON	ON	ON

### 6.1.8. PRICE OF PLAY SETTINGS - SPAIN

	Price	Bonus		DIL Switch 1				
				Switch 1	Switch 2	Switch 3	Switch 4	Switch 5
1	25Pta	No Bonus		OFF	OFF	OFF	OFF	OFF
2	25Pta			ON	OFF	OFF	OFF	OFF
3	25Pta		3=50Pta	OFF	ON	OFF	OFF	OFF
4	50Pta	No Bonus		ON	ON	OFF	OFF	OFF
5	50Pta			OFF	OFF	ON	OFF	OFF
6	50Pta		4=150Pta	ON	OFF	ON	OFF	OFF
7	75Pta	No Bonus		OFF	ON	ON	OFF	OFF
8	75Pta			ON	ON	ON	OFF	OFF
9	75Pta		3=200Pta	OFF	OFF	OFF	ON	OFF
10	100Pta	No Bonus		ON	OFF	OFF	ON	OFF
11	100Pta			OFF	ON	OFF	ON	OFF
12	100Pta		3=200Pta	ON	ON	OFF	ON	OFF
13	200Pta	No Bonus		OFF	OFF	ON	ON	OFF
14	200Pta			ON	OFF	ON	ON	OFF
15	200Pta		3=400Pta	OFF	ON	ON	ON	OFF
16	300Pta	No Bonus		ON	ON	ON	ON	OFF
17	300Pta			OFF	OFF	OFF	OFF	ON
18	300Pta		3=600Pta	ON	OFF	OFF	OFF	ON
19	400Pta	No Bonus		OFF	ON	OFF	OFF	ON
20	400Pta			ON	ON	OFF	OFF	ON
21	400Pta		3=800Pta	OFF	OFF	ON	OFF	ON
22	500Pta	No Bonus		ON	OFF	ON	OFF	ON
23	500Pta			OFF	ON	ON	OFF	ON
24	500Pta		2=800Pta	ON	ON	ON	OFF	ON
25	600Pta	No Bonus		OFF	OFF	OFF	ON	ON
26	600Pta			ON	OFF	OFF	ON	ON
27	600Pta		2=1000Pta	OFF	ON	OFF	ON	ON
28	800Pta	No Bonus		ON	ON	OFF	ON	ON
29	800Pta			OFF	OFF	ON	ON	ON
30	1000Pta	No Bonus		ON	OFF	ON	ON	ON
31	1000Pta			OFF	ON	ON	ON	ON
32	Free Play			ON	ON	ON	ON	ON

## 7. 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.

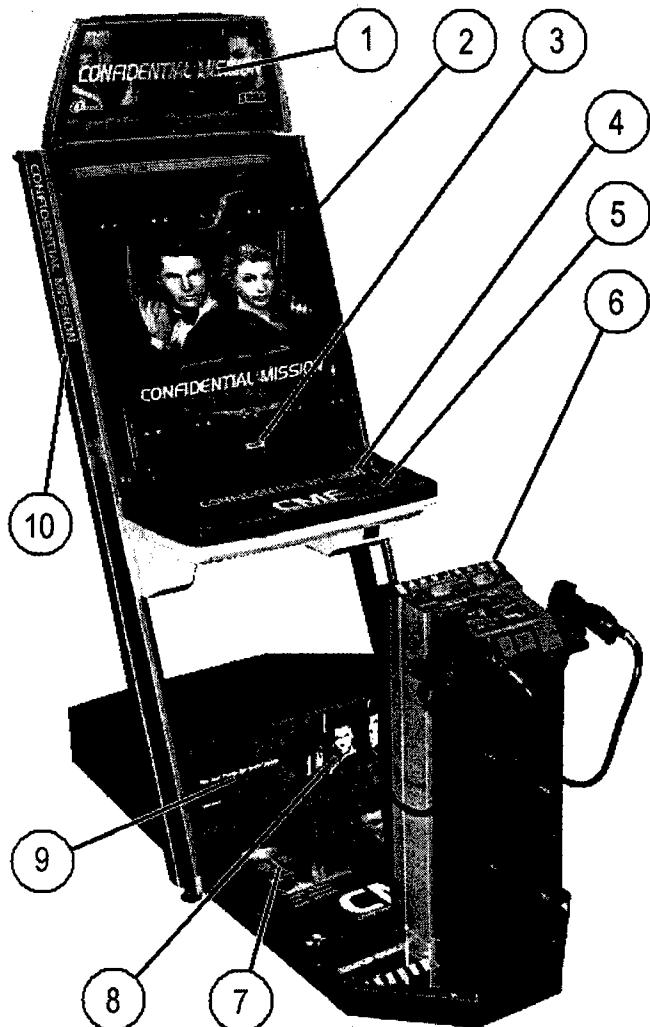
DESCRIPTION	WHAT TO CHECK	INTERVAL
CABINET	Check Adjusters' contact with surface	Daily
MONITOR	Clean CRT face - ( <b>Do Not</b> use water jet)	Weekly
	Check settings	Monthly
GAME BD	Setting check	Monthly
CONTROL PANEL	Input test	Monthly
Speaker, sound	Sound test, check volume adjustment	Monthly
COIN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

### 7.1. 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.

## 8. DESIGN RELATED PARTS

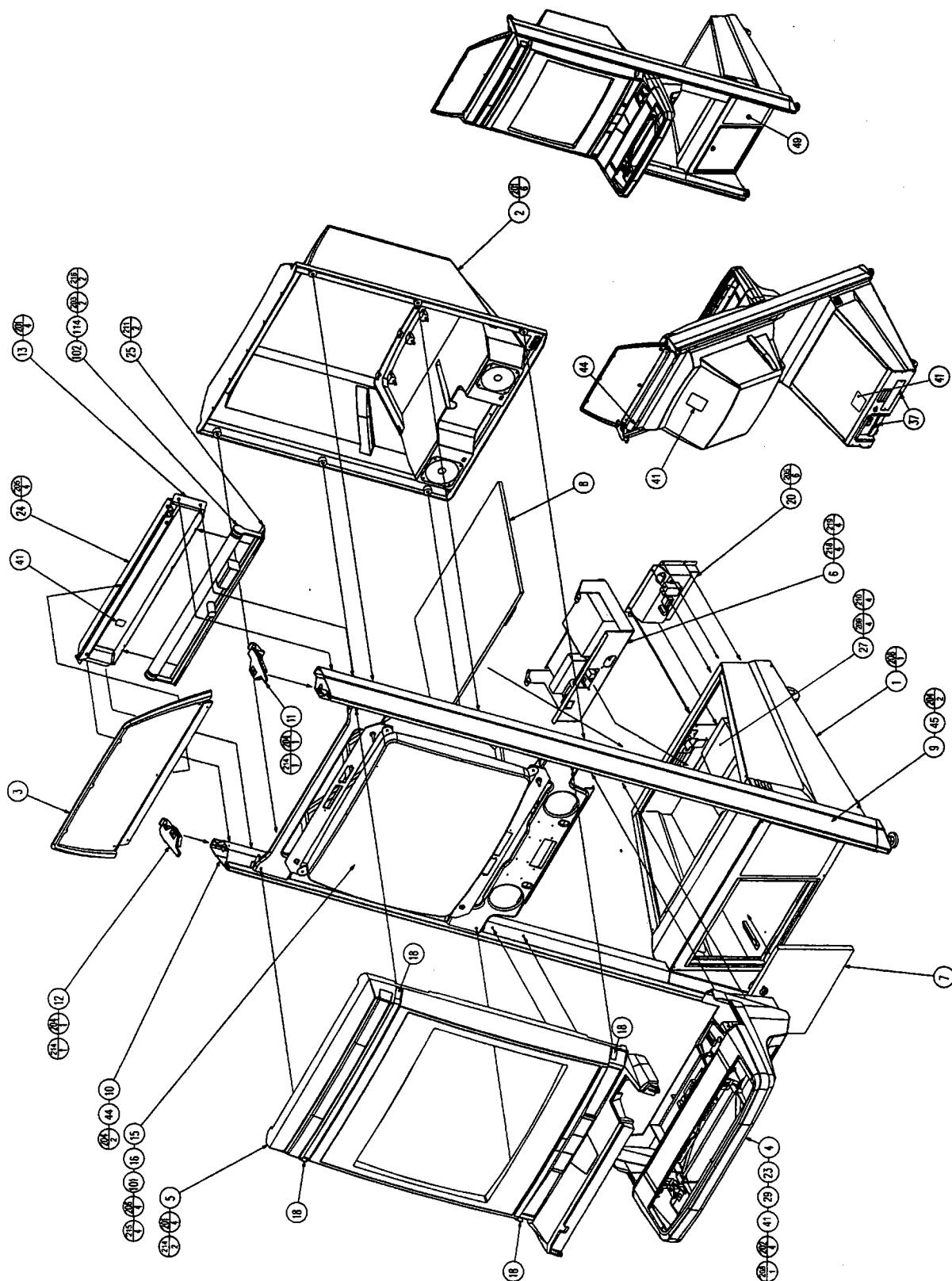
For the Warning stickers refer to Section 1.



No.	PART No.	DESCRIPTION
1	SPY-5112UK	DISPLAY CARD SPY U/R NAOMI
2	SPY-1013UK	STICKER SIDE R
3	NOA-1507	EMBLEM NAOMI
4	SPY-1409UK	INSTRUCTION PANEL ARTWORK
5	SPY-1405UK	STICKER CONTROL PANEL PLATE
6	SPY-5111UK	PLAY INSTR SPY U/R NAOMI
7	SPY-5002UK	FLOOR PLATE ARTWORK
8	SPY-1017UK	STICKER BASE BOX FRONT R
9	SPY-1016UK	STICKER BASE BOX FRONT L
10	SPY-1012UK	STICKER SIDE L

## 9. PARTS LIST

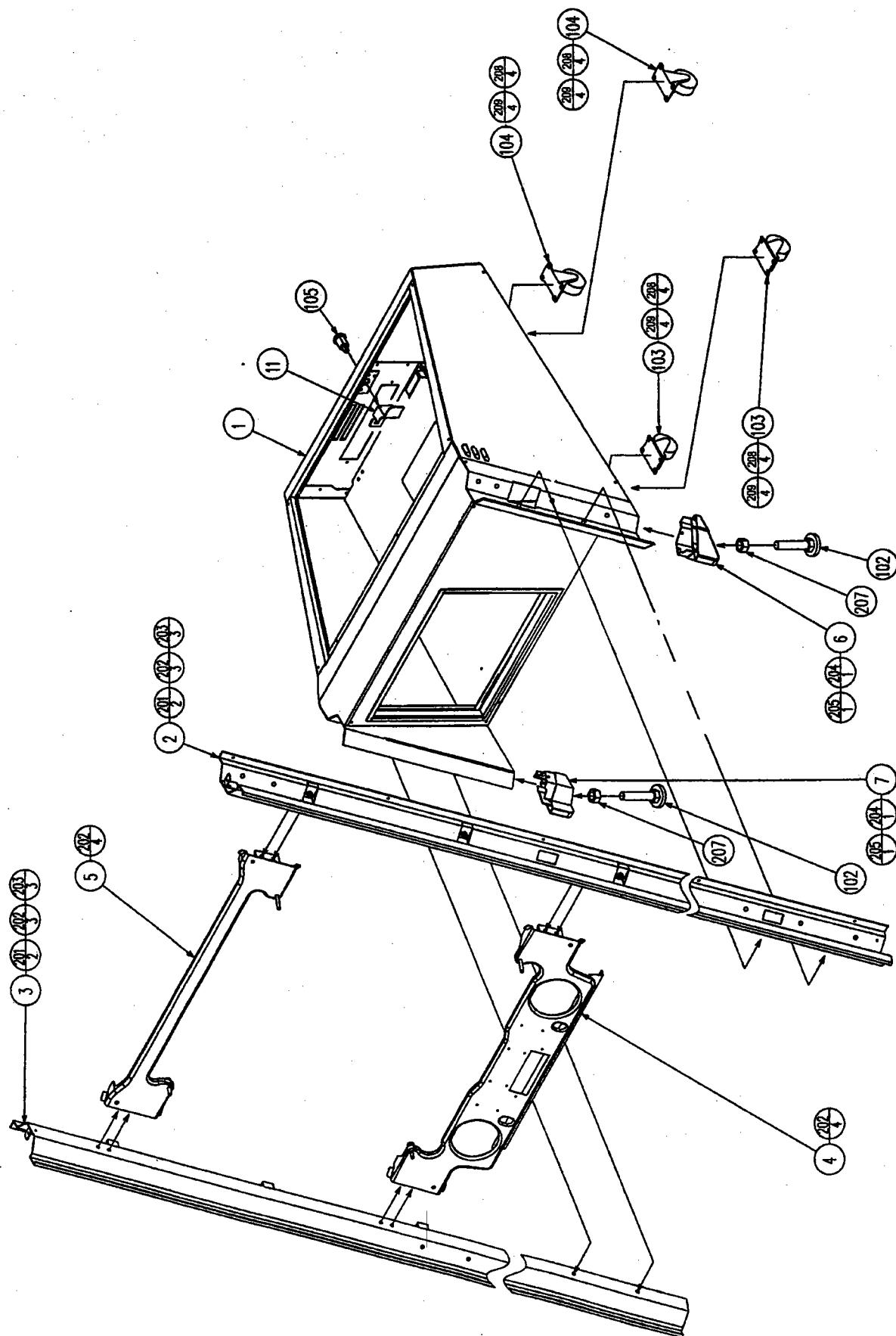
### 9.1. SPY-10002UK ASSY CABINET SPY U/R NAOMI



No.	PART NUMBER	QTY	DESCRIPTION	COMPONENT REFERENCE
1	SPY-11002UK	1	ASSY FRAMEWORK SPY U/R	
2	NOA-1200	1	ASSY CRT COVER	
3	NOA-1300	1	ASSY BILLBOARD	
4	SPY-1400UK	1	ASSY CONTROL BOX SPY U/R	
5	SPY-1500UK	1	ASSY FRONT PANEL SPY U/R	
6	NOA-4000UK	1	ASSY ELEC	
7	SPY-1750UK	1	ASSY SERVICE DOOR	
8	SPY-1801UK	1	REAR HATCH	FIX DOWN AT TOP ASSY
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 NANO MONITOR	(101)-4
18	SPY-1006UK	4	SCR CAP	
20	SPY-1700UK	1	ASSY AC UNIT	
23	NOA-1009	2	WSHR PLATE	(4)-2
24	SPY-1011UK	1	BILLBD HOLDER	
25	NOA-1011	1	FL BRKT	
27	NOB-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 SUR	FL COVER
44	SPY-1012UK	1	STICKER SIDE L	
45	SPY-1013UK	1	STICKER SIDE R	
49	SPY-1017UK	1	STICKER BASE BOX FRONT R	
101	200-5827	1	ASSY CLR DSPL 29TYPE 31K	
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 P	
117	280-A02000-A	4	ROUTER TWIST D20 ADH	
118	280-A01248-PM	12	ROUTER TWIST D12 SO4.8 P	
119	280-A01200-A	3	ROUTER TWIST D12 ADH	
120	280-A00900-A	2	ROUTER TWIST D9 ADH	
121	OS1230	1	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
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

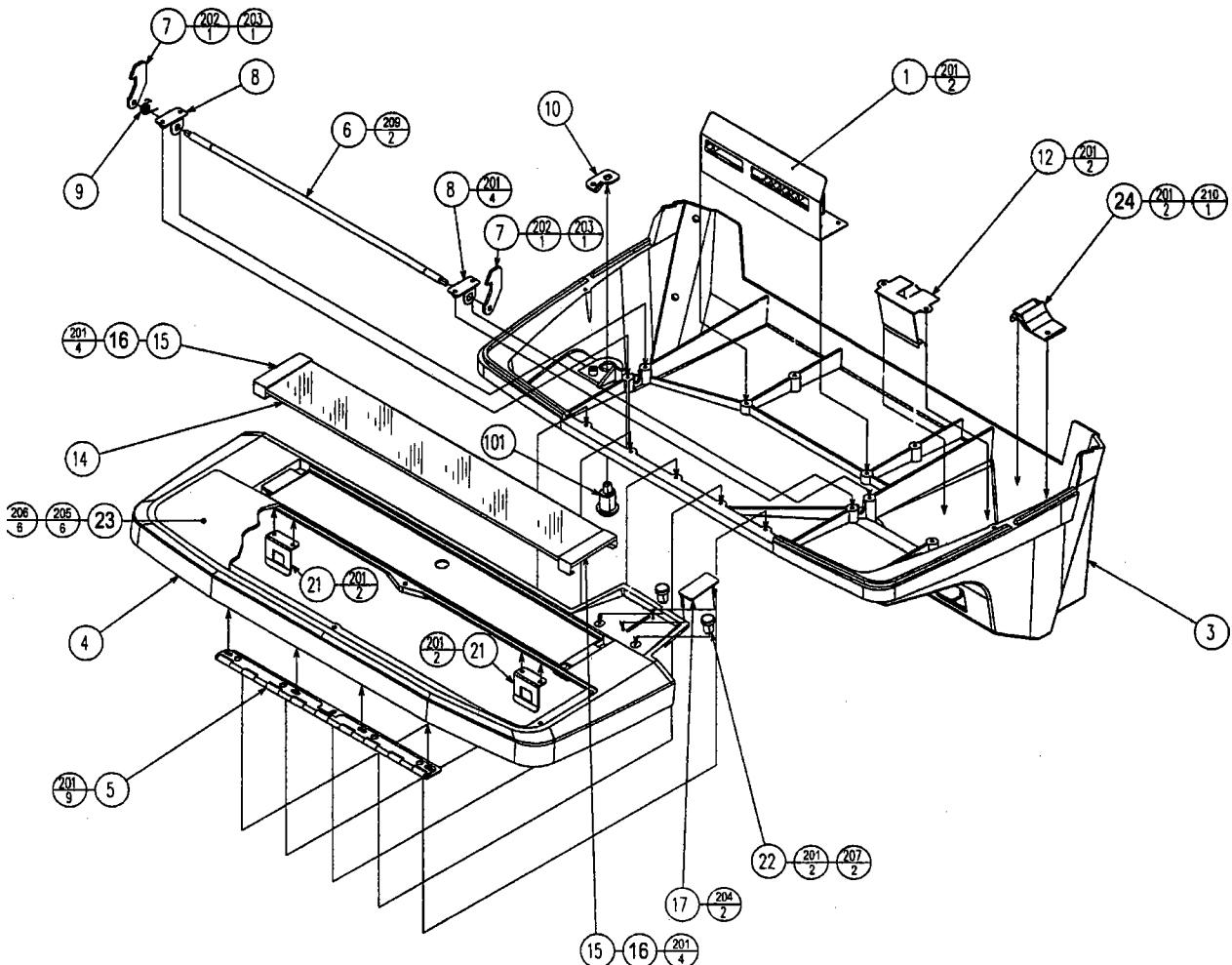
219	060-F00400	4	M4 WSHR FORM A FLT PAS	(6)-4
220	000-P00612-W	1	M6X12 MSCR PAN W/FS PAS	(323)-1 TEMPORARY
301	SPY-6001UK	1	ASSY WIRE L SPY U/R	
302	NOB-60041UK	1	WIRE HARN AC EXT UK	
303	NOA-60025	1	WIRE HARN SPEAKER R	
311	600-7159-070	1	WIRE HARN JVS PWR 070CM	
319	600-9010-44K	1	WIRE HARN EARTH 100mm M4	BBOARD HOLDER TO FL BASE
320	NOB-60201UK	1	WIRE HARN FL NOB	
321	600-9070-45K	1	WIRE HARN EARTH 700mm M4	BASE LID TO BASE
322	600-9080-45K	1	WIRE HARN EARTH 800mm M4	BASE TO RH FRAME (BOTTOM)
323	600-9025-56U	1	WIRE HARN EARTH 250mm M5	MON CHASSIS TO RH FRAME TEMP

**9.2. SPY-11002UK ASSY FRAMEWORK SPY U/R**



No.	PART NUMBER	QTY	DESCRIPTION	COMPONENT REFERENCE
1	SPY-1601UK	1	BASE BOX RED	
2	PTR-1101UK	1	MAIN FRAME U/R R (BLACK)	
3	PTR-1102UK	1	MAIN FRAME U/R 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	
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

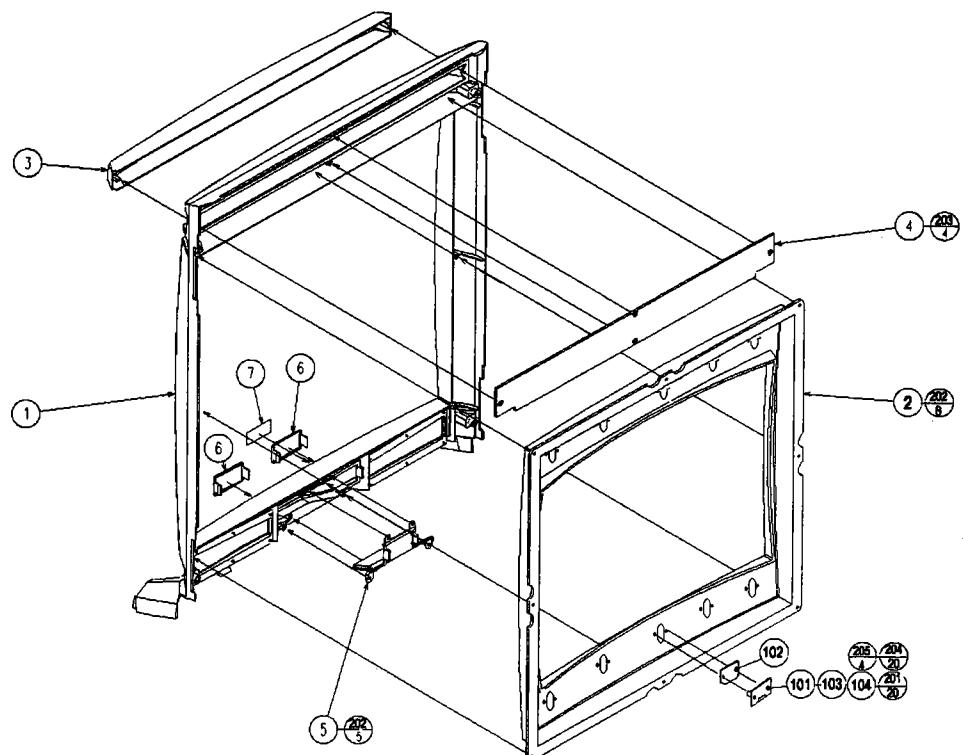
### **9.3. SPY-1400UK ASSY CONTROL BOX SPY U/R**



No.	PART NUMBER	QTY	DESCRIPTION	COMPONENT REFERENCE
1	SPY-1404UK	1	ADJUST PANEL BRKT	
3	NOA-1401	1	CONTROL BOX LOWER	
4	SPY-1402UK	1	CONTROL BOX UPPER	
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	SPY-1409UK	1	INSTRUCTION PANEL ARTWOR	
15	NOA-1419	2	BRKT INST COVER	(14)-2
16	NOA-1420	4	L WASHER	(15)-4
17	SPY-1407UK	1	COIN ENTRY COVER	
21	NOA-1415	2	LOCK BRKT	
22	NOA-1418	2	DUMMY BTN	
23	SPY-1403UK	1	CNTRL PANEL PLATE BLANK	
24	SPY-1408UK	1	COIN EXIT COVER	
25	SPY-1405UK	1	STICKER CONTROL PANEL PL	(23)-1
101	220-5575UK	1	LOCK	
102	280-A00900-A	3	ROUTER TWIST D9 ADH	

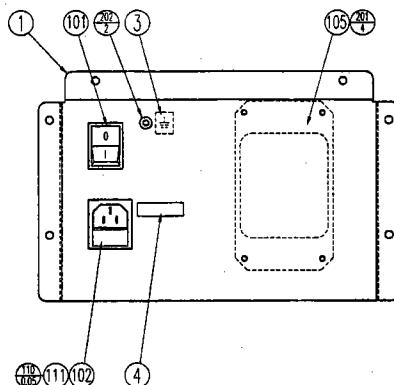
201	000-P00410-W	28	M4X10 MSCR PAN W/FS PAS	(1,12,22)2,(8,16,21)4,(5)9,(24)
202	050-H00600	2	M6 NUT PAS	(7)-2
203	060-S00600	2	M6 WSHR SPR PAS	(7)-2
204	050-F00300	2	M3 NUT FLG SER PAS	(17)-2
205	031-000416-0B	6	M4X16 CRG BLT BLK	(23)-6
206	050-F00400	6	M4 NUT FLG SER PAS	(23)-6
207	068-441616	2	M4 WSHR 16OD FLT PAS	(22)-2
209	065-E00600	2	DIA6 E RING	(6)-2
210	000-T00420-OC	1	M4X20 MSCR TH CRM	(24)-1

#### 9.4. SPY-1500UK ASSY FRONT PANEL SPY U/R



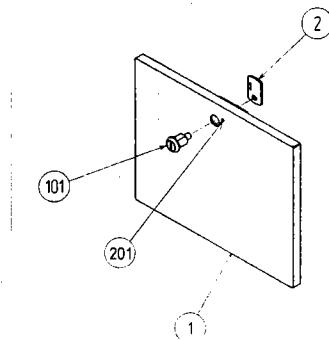
No.	PART NUMBER	QTY	DESCRIPTION	COMPONENT REFERENCE
1	SPY-1501UK	1	FRONT PANEL	
2	SPY-1502-02UK	1	MASK NF SPY U/R	
3	NOA-1503	1	LIGHT COVER	
4	NOA-1504UK	1	PRISM PLATE	
5	SPY-1505UK	1	LID GCS	
6	SPY-1506UK	2	LID VMS	
7	NOA-1507	1	EMBLEM NAOMI	
101	838-13145-02	10	LED BD GUN SENSE HOD	
102	JPT-1082	10	IR COVER	
103	SPY-1507-AUK	20	HEAD COVER M3 GREY	(101)-20
104	SPY-1507-BUK	20	HEAD COVER BASE M3	(101)-20
201	050-U00300	20	M3 NUT NYLOK PAS	(101)-20
202	000-P00412-W	13	M4X12 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	

## 9.5. SPY-1700UK ASSY AC UNIT



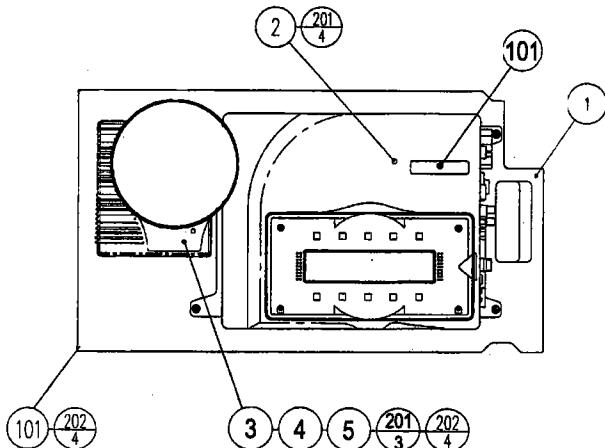
No.	PART NUMBER	QTY	DESCRIPTION	COMPONENT REFERENCE
1	SPY-1701UK	1	AC BRKT	
3	LB1096	1	STICKER PROTECTIVE EARTH	NEXT TO EARTH STUD ON INSIDE
4	421-6595-5000-T	1	STICKER FUSE 5000mA TYPE	NEXT TO IEC INLET ON OUTSIDE
101	SW1021	1	SWITCH ROCKER 250V AC	
102	EP1302	1	EUROSOCKET FUSED 10A 250	
105	EP1379	1	FILTER EMI 10A ARCOTRONI	
110	310-5029-D508	0.05	HEAT SHRINK SLEEVING 50.	(102)-0.05m
111	514-5078-5000	1	FUSE 5X20 CERAMIC SB 500	(102)-1
201	000-P00308-W	4	M3X8 MSCR POSI PAN W/FS	(105)-4
202	050-F00400	2	M4 NUT FLG	EARTH - 2
301	NOB-60001UK	1	WIRE HARN AC BRKT (NOB)	
302	NOB-60004UK	1	WIRE HARN AC OUT	
303	600-9030-45K	1	WIRE HARN EARTH 300mm M4	AC BRKT TO XFMR

## 9.6. SPY-1750UK ASSY SERVICE DOOR



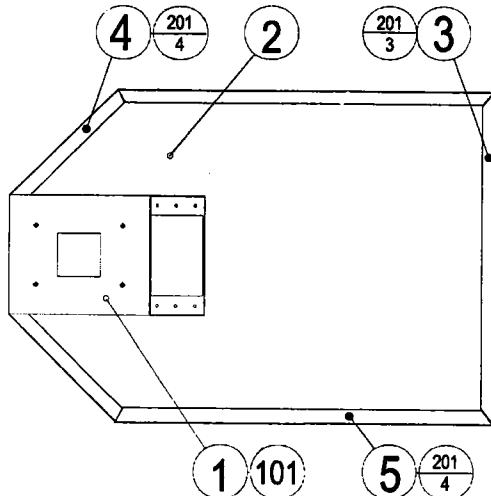
No.	PART NUMBER	QTY	DESCRIPTION	COMPONENT REFERENCE
1	SPY-1751UK	1	SERVICE DOOR	
2	DP-1167UK	1	TNG LKG UK	
3	SPY-1016UK	1	STICKER BASE BOX FRONT L	
101	220-5575UK	1	LOCK	
201	008-T00430-0C	1	M4X30 MSCR TMP PRF TH CR	INSERT HALF WAY SO TNG OPENS

## 9.7. SPY-4800UK ASSY MAIN BD SPY U/R



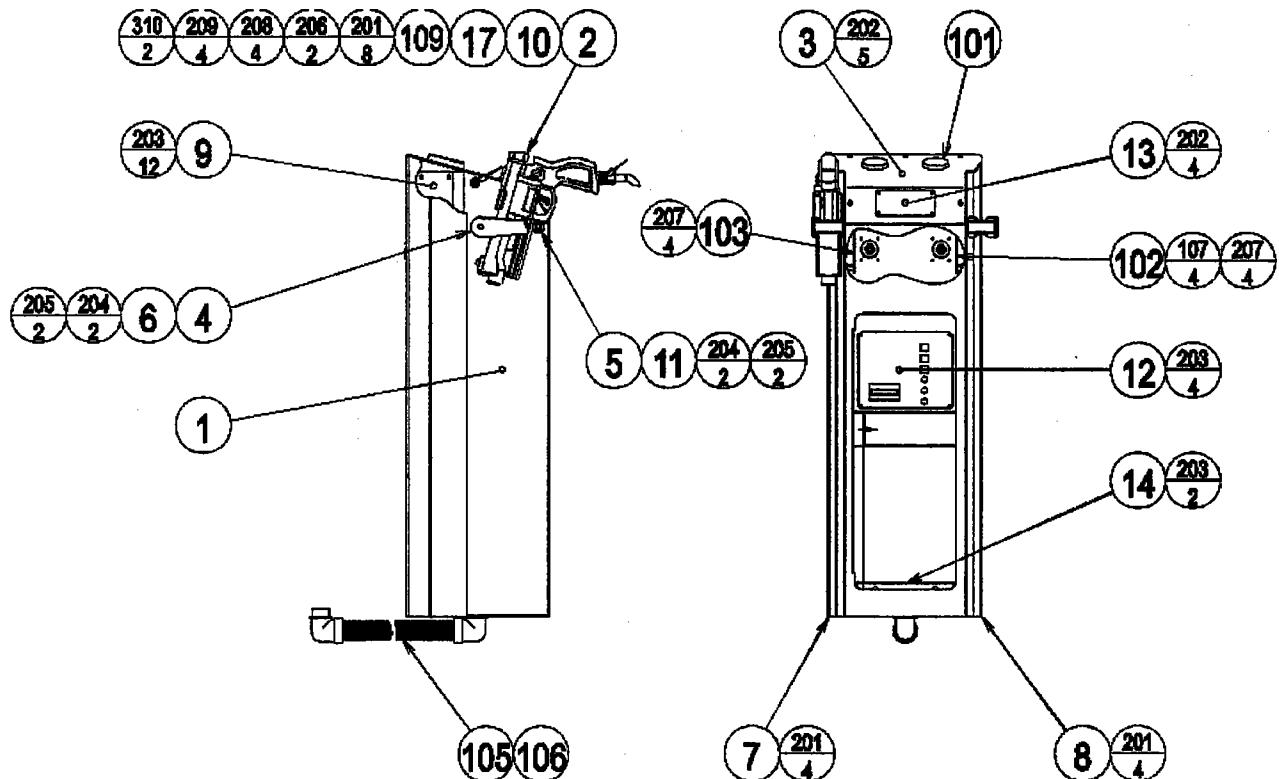
No.	PART NUMBER	QTY	DESCRIPTION	COMPONENT REFERENCE
1	SPY-4801UK	1	WOODEN BASE MAIN	
2	840-0050D-02	1	ASSY CASE NAO GD SPY EXP	
3	610-0617	1	GD-ROM DRIVE UNIT NAOMI	SHIP BOX WITH MACHINE
4	105-5435	1	GD DRIVE BRKT STD	
5	610-0625-0001	1	GD SOFTWARE SPY	
101	LB1101	1	STICKER WARNING BATTERY	(2)-1
102	280-A01264-WX	5	ROUTER TWIST D12 SO6.4 W	
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	600-7249	1	WIRE HARN NAOMI GD DRIVE	
307	600-7247-500	1	CABLE SCSI ST-L TYPE2 50	

## 9.8. SPY-5000UK ASSY FLOOR SPY U/R



No.	PART NUMBER	QTY	DESCRIPTION	COMPONENT REFERENCE
1	SPY-5001UK	1	FLOOR BASE	
2	SPY-5002UK	1	FLOOR PLATE ARTWORK	
3	SPY-5003UK	1	SASH REAR	
4	SPY-5004UK	1	SASH SIDE L	
5	SPY-5005UK	1	SASH SIDE R	
101	OS1177	1	TAPE D/S PVC 50mm X 50 M	(1)-1M
201	000-T00408-0C	11	M4X8 MSCR TH CRM	(3)-3,(4)-4,(5)-4

### 9.9. SPY-5100UK ASSY CCT SPY U/R



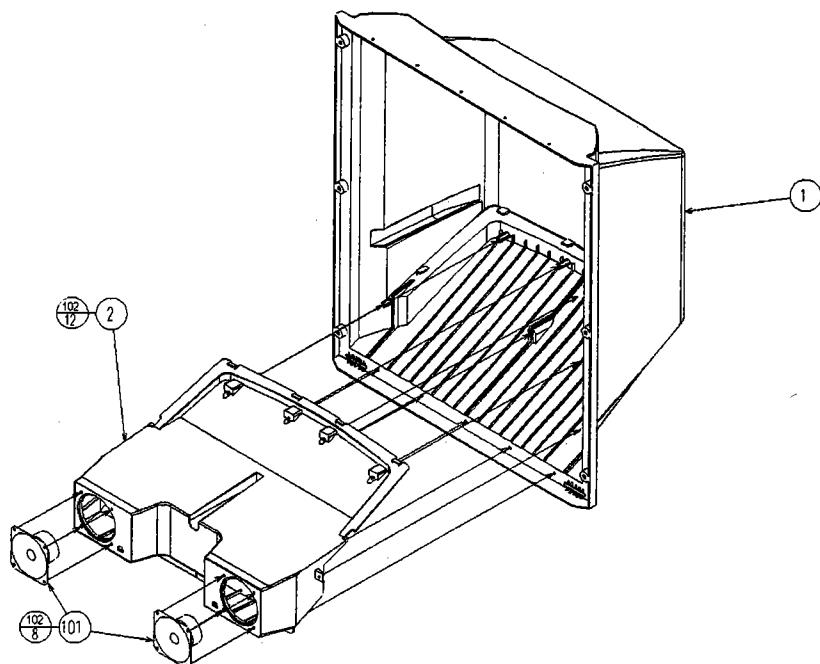
No.	PART NUMBER	QTY	DESCRIPTION	COMPONENT REFERENCE
1	SPY-5101UK	1	COINCHUTE TOWER	
2	SPY-2100	2	ASSY CONTROLLER SPY	
3	SPY-5102UK	1	CCT COVER	
4	SPY-5103UK	4	GUN HOLDER PLATE	
5	SPY-5104UK	2	GUN CUSHION A	
6	SPY-5105UK	2	GUN CUSHION B	
7	SPY-5106UK	1	CCT COVER L	
8	SPY-5107UK	1	CCT COVER R	
9	SPY-5108UK	2	COVER FRAME	
10	SPY-5109UK	2	GUN TETHER	
11	SPY-5110UK	4	CUSHION BAR	(5)-2,(6)-2
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 O	
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	310-5285-290100UK	1	FLEX TUBE 29 100CM	
107	280-L00709-OS	4	STANDOFF 7OD 4ID 9L	(102)-4
108	280-A02048-PM	3	ROUTER TWIST D20 SO4.8 P	
109	280-L00805-0M	2	STANDOFF 8OD 5ID 4.8L	(10)-2

205	060-S00800-0B	4	M8 WSHR SPR BLK	(5)-2,(6)-2
206	020-000512-HZ	2	M5X12 SKT CAP H OZ	(10)-2
207	050-F00300	8	M3 NUT FLG SER PAS	(102)-4,(103)-4
208	000-T00408-0C	2	M4X8 MSCR TH CRM	(10)-2
209	068-551616-0B	4	M5 WSHR 16OD FLT BLK	(10)-4
210	068-441616-0C	4	M4 WSHR 16OD FLT CRM	(10)-4
301	SPY-61052UK	1	WIRE HARN TUBE VOL CTRL	
302	SPY-61053UK	1	WIRE HARN VTS SPY (NAO)	
303	SPY-61055UK	1	WIRE HARN SW/VOL CONTROL	
304	SPY-61044UK	1	WIRE HARN TUBE IC BD & D	
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 JU	

#### 9.10. SPY-INST-U ASSY INST KIT U/R

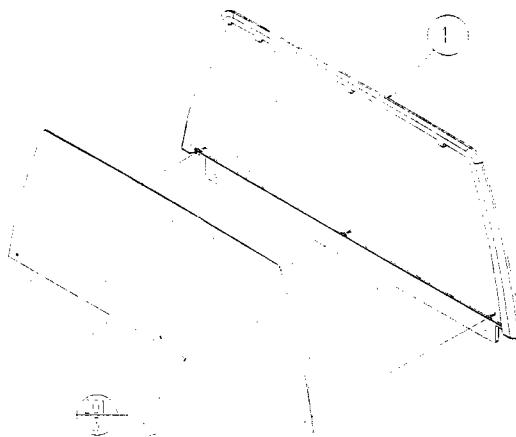
No.	PART NUMBER	QTY	DESCRIPTION	COMPONENT REFERENCE
1	SPY-5000UK	1	ASSY FLOOR SPY U/R	
2	SPY-5100UK	1	ASSY CCT SPY U/R	
3	SPY-5007UK	2	SHOULDER BOLT	(4)-2
4	SPY-5008UK	1	FLOOR JOINT BRKT	
5	SAECE-068	1	DECLARATION OF CONFORMIT	
6	PK0271	1	INST KIT BOX SPY U/R	
7	CTA-0001	1	JOINT BRKT L	
8	CTA-0002	1	JOINT BRKT R	
9	SPY-5111UK	1	PLAY INSTR SPY U/R NAOMI	
10	SPY-5112UK	1	DISPLAY CARD SPY U/R NAO	
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 500	
104	OS1019	2	SELF SEAL BAG 9X12.3/4	
201	030-000820-SB	13	M8X20 BLT W/S BLK	(2)-6,(4)-5,(7)-1,(8)-1
202	068-852216-0B	13	M8 WSHR 22OD FLT BLK	(2)-6,(4)-5,(7)-1,(8)-1
203	008-T00412-0B	2	M4X12 TMP PRF TH BLK	(BILLBOARD)-2
301	600-7141-250	1	CABLE JVS TYPE A-B 250CM	
402	420-6601-03UK	1	SERVICE MANUAL SPY U/R N	
403	420-5827	1	SERVICE MANUAL SANWA 31K	
404	420-6620UK	1	SERVICE MANUAL GD ROM SY	

### 9.11. NOA-1200 ASSY CRT COVER



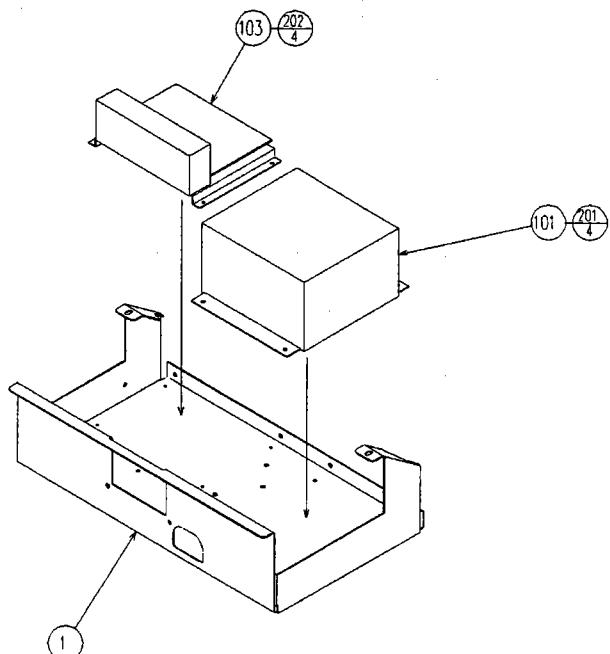
No.	PART NUMBER	QTY	DESCRIPTION	COMPONENT REFERENCE
1	NOA-1201	1	CRT COVER	
2	NOA-1202	1	SPEAKER BOX	
101	130-5205	2	SPEAKER 40HM 10W 100 W/S	
102	000-P00410-W	20	M4X10 MSCR POSI PAN W/FS	(101)-8,(2)-12
301	NOA-60031	1	WIRE HARN SPEAKER L	[NOT SHOWN]
302	NOA-60032	1	WIRE HARN SPEAKER R	[NOT SHOWN]

### 9.12. NOA-1300 ASSY BILLBOARD



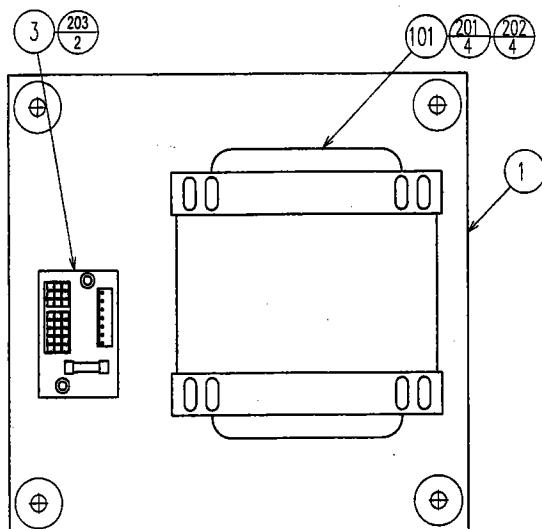
No.	PART NUMBER	QTY	DESCRIPTION	COMPONENT REFERENCE
1	NOA-1301	1	BILLBOARD PLATE	
2	NOA-1302UK	1	BILLBOARD SHEET	
201	008-T00408-OC	3	M4X8 MSCR TMP PRF TH CRM	(2)-3

### 9.13. NOA-4000UK ASSY ELEC



No.	PART NUMBER	QTY	DESCRIPTION	COMPONENT REFERENCE
1	NOA-4001X	1	ELEC BASE	
101	400-5397	1	SW REGU FOR JVS	
103	838-13616	1	AUDIO POWER AMP 2CH	
107	280-A02048-PM	4	ROUTER TWIST D20 SO4.8 P	[NOT SHOWN]
108	601-6231-B095	1	EDGE TRIM NEW TYPE 0.91t	BACK EDGE IN MIDDLE [NOT SHOWN]
109	EP1317	2	FERRITE CORE ROUND CABLE	SW REGU INLET-1, OUTLET-1 [NOT SHOWN]
110	280-A01248-PM	2	ROUTER TWIST D12 SO4.8 P	[NOT SHOWN]
111	280-A02000-A	1	ROUTER TWIST D20 ADH	[NOT SHOWN]
201	010-P00408	4	M4X8 TAPTRITE POSI PAN	(101)-4
202	010-P00308	4	M3X8 TAPTRITE POSI PAN BZ	(103)-4
303	NOB-60013UK	1	WIRE HARN SW REGU INT	[NOT SHOWN]
304	NOA-60014	1	WIRE HARN I/O BD PWR	[NOT SHOWN]
305	NOB-60202UK	1	WIRE HARN AUDIO POWER-IN	[NOT SHOWN]
306	600-7159-039	1	WIRE HARN JVS PWR 039CM	[NOT SHOWN]

#### 9.14. NOB-4100UK ASSY XMFR



No.	PART NUMBER	QTY	DESCRIPTION	COMPONENT REFERENCE
1	NOB-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	
202	FX0301	4	M4 WSHR 16OD FLT BZP	(101)-4
203	FX0151	2	N4X1" S/TAP POSI PAN BZP	(3)-2

## **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

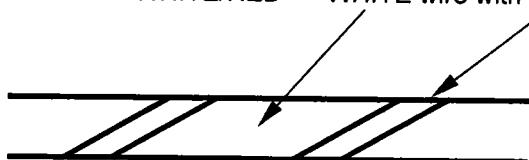
Wires other than those of any of the colours listed above will be displayed by 2 alphanumeric characters:

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.

