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1ST PRINTING

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RAMBO DELUXE

OWNERS MANUAL

420-7148-01UK

OWNER'S MANUAL

IMPORTANT

- Before using this product, read this manual carefully to understand the contents herein stated.
- After reading this manual, be sure to keep it near the product or in a convenient place for easy reference when necessary.

BEFORE USING THIS PRODUCT

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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INTRODUCTION

This manual is intended to provide detailed descriptions together with all the necessary information covering the general operation of electronic and electro-mechanical assemblies, servicing control, spare parts, etc. for the product, "RAMBO DELUXE"

This manual is intended for the owners, personnel and managers in charge of operation of the product. Operate the product after carefully reading and sufficiently understanding the instructions
.
In the unlikely event that the product does not function correctly, DO NOT allow anyone other than a technician to touch the internal system. Turn off the power to the machine, making sure to unplug the electrical cord from the outlet, and contact the office listed below or the point of purchase for this product.

Use of this product is unlikely to cause physical injuries or damage to property. However, points that require special attention are indicated by bold text, the word "IMPORTANT" and the symbol below.

STOP IMPORTANT

Indicates important information that, if ignored, may result in the mishandling of the product and cause faulty operation or damage to the product.

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SPECIFICATIONS

MACHINE DETAILS

Width :	1500 mm	(59.05 inches)
Depth :	1839 mm	(72.40 inches)
Height :	2326 mm	(91.57 inches)
Weight :	300 kg	(661.3 lbs)
Power, Current :	575 W.	2.5 Amps
Voltage :	220 - 230 Vac	50Hz
Monitor Type :	SAMSUNG 56" DLP	

NOTE : The contents herein described are subject to change without notice.

Definition of 'Site Maintenence Personnel or Other Qualified Individuals

STOP IMPORTANT

Procedures not described in this manual or marked as 'to be carried out by site maintenance personnel or other qualified professionals' should not be carried out by personnel without the necessary skill or technology. Work carried out by unqualified persons may cause serious accidents, including electrocution.

Parts replacement, maintenance inspections and troubleshooting should be carried out by site maintenance personnel or other qualified professionals. This manual includes directions for potentially dangerous procedures which should only be carried out by professionals with the appropriate specialised knowledge.

The site maintenance personnel or other qualified professionals mentioned in this manual are defined as follows:

Site maintenance personnel:
Individuals with experience in maintaining amusement equipment, vending machines, etc., working under the supervision of the owner/operator of this product to maintain machines within amusement facilities or similar premises by carrying out everyday procedures such as assembly, maintenance inspections, and replacement of units/expendable parts.

Activities to be carried out by site maintenance personnel:
Amusement equipment/vending machine assembly, maintenance inspection and replacement of units/expendable parts.

Other qualified professionals:
Persons employed by amusement equipment manufacturers, or involved in design, production, testing or maintenance of amusement equipment. The individual should have either graduated from technical school or hold similar qualifications in electrical/electronics/mechanical engineering.

Activities to be carried out by other qualified professionals:
Amusement equipment/vending machine assembly, repair/adjustment of electrical/electronic/mechanical parts.

1 HANDLING 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.
Non-compliance with the following points or inappropriate handling running counter to the cautionary matters herein stated can cause personal injury or damage to the machine.

⚠ WARNING

- Before performing work, be sure to turn the power off. Performing the work without turning the power off can cause an electric shock or short circuit. In the case work should be performed in the status of power on, this manual always states to that effect.
- To avoid an electric shock or short circuit, do not plug in or unplug quickly.
- To avoid an electric shock, do not plug in or unplug with a wet hand.
- Do not expose power cords or earth wires on the surface, (floor, passage, etc.). If exposed, the power cords and earth wires are susceptible to damage. Damaged cords and wires can cause an electric shock or short circuit.
- To avoid causing a fire or an electric shock, do not put things on or damage the power cords.
- When or after installing the product, do not unnecessarily pull the power cord. If damaged, the power cord can cause a fire or an electric shock.
- In case the power cord is damaged, ask for a replacement through where the product was purchased from or the office herein stated. Using the cord as is damaged can cause fire, an electric shock or leakage.
- Be sure to perform grounding appropriately. Inappropriate grounding can cause an electric shock.
- Be sure to use fuses meeting the specified rating. Using fuses exceeding the specified rating can cause a fire or an electric shock.
- Be sure that connections such as IC BD are made properly. Insufficient insertion can cause an electric shock.
- Specification changes, removal of equipment, conversion and/or addition, not designated by SEGA are not permitted.

- Failure to observe this may cause a fire or an electric shock. Non-compliance with this instruction can have a bad influence upon physical conditions of the players or the onlookers, or result in injury during play.
- SEGA shall not be held responsible for damage, compensation for damage to a third party, caused by specification changes not designated by SEGA.

- If work or parts replacement not indicated in this manual is carried out, an accident may occur. If it is necessary to carry out work not indicated in this manual, be sure to have it done by the office indicated in this manual or by the point of purchase. Also, please inquire regarding details of the work involved.
- Be sure to perform periodic maintenance inspections herein stated.

STOP IMPORTANT

- For the IC board circuit inspections, only the logic tester is allowed. The use of a multiple-purpose tester is not permitted, so be careful in this regard.
- When cleaning the CRT surfaces, use a soft and dry cloth. Do not apply chemicals such as thinners, benzene, etc.
- Static electricity from your body may damage some electronics devices on the IC board. Before handling the IC board, touch a grounded metallic surface so that the static electricity can be discharged.
- Do not turn the power on and off continuously. Repeatedly turning the power on and off may cause product malfunction or parts damage.
- Some parts are not designed and manufactured specifically for this game machine. The manufacturers may discontinue, or change the specifications of such general-purpose parts. If this is the case, SEGA cannot repair or replace a failed game machine whether or not a warranty period has expired.

CONCERNING THE STICKER DISPLAY

This SEGA product has stickers attached describing the product manufacture No. (Serial No.) and Electrical Specifications. It also has a Sticker describing where to contact for repair and for purchasing parts.
When inquiring about or asking for repairs, mention the Serial No. and Name of Machine indicated on the Sticker. The Serial Number indicates the product register. Identical machines could have different parts depending on the date of production. Also, improvements and modifications might have been made after the publication of this manual. In order to ensure you order the correct parts, mention the Serial No. when contacting the applicable places.

CONCERNING THE WARNING LABELS

This SEGA product has warning displays on stickers, labels and/or printed instructions adhered/attached to or incorporated in the places where a potentially hazardous situation could arise. The warning displays are intended for accident prevention for customers and for avoiding hazardous situations relating to maintenance and servicing work. Some portions of the cabinet contain high voltage and may cause accidents if touched.
When performing maintenance, be very careful of the warning displays. It is especially important that any complex repair and replacement work not mentioned herein should be performed by those technical personnel who have knowledge of electricity and technical expertise. In order to prevent accidents, caution any customer ignoring the warnings to cease and desist immediately

STICKER DISPLAY AND WARNING LABEL INFORMATION

RMB-0000UK

8	LB1046	LABEL TESTED FOR ELEC. SAFETY	1
9	LB1102	STICKER DANGEROUS VOLTAGE	2
10	421-7988-91UK	STICKER SERIAL NUMBER UK	2
11	421-7020UK	STICKER CAUTION FORK	6
17	440-CS0186UK	STICKER C EPILEPSY MULTI	1
19	LB1130	LABEL WEEE WHEELIE BIN	1

RMB-0550UK

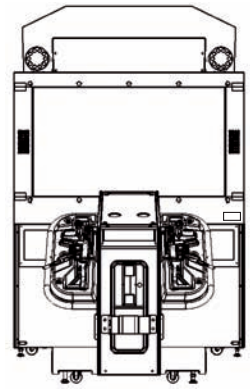
16	421-7501-10	STICKER FL 40W	1
17	LB1104	STICKER CAUTION, HOT SURFACE	1
18	LB1102	STICKER DANGEROUS VOLTAGE	1

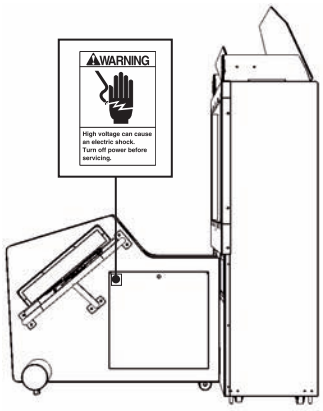
RMB-0670UK

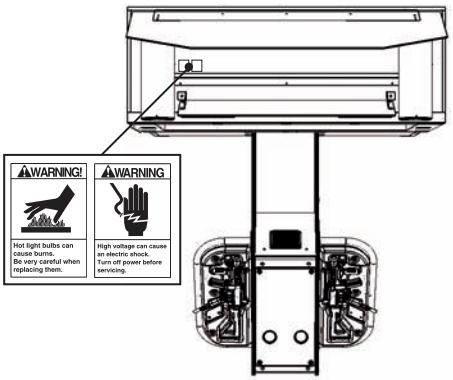
3	LB1096	STICKER PROTECTIVE EARTH	1

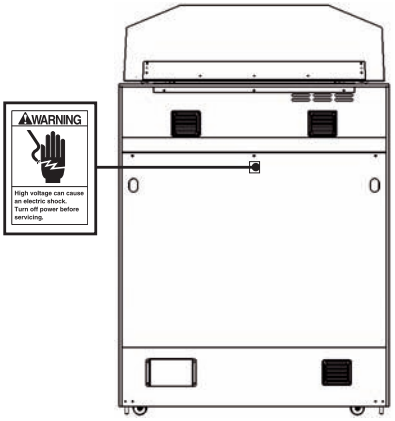
RMB-4000UK

3	LB1096	STICKER PROTECTIVE EARTH	1
107	LB1101	STICKER WARNING BATTERY	1









2 PRECAUTIONS REGARDING INSTALLATION LOCATION

⚠ WARNING

This product is an indoor game machine. Do not install it outside. Even indoors, avoid installing in places mentioned below so as not to cause a fire, electric shock, injury and/or malfunction.

- Places subject to rain or water leakage, or places subject to high humidity in the proximity of an indoor swimming pool and/or shower, etc.
- Places subject to direct sunlight, or places subject to high temperatures in the proximity of heating units, etc.
- Places filled with inflammable gas or vicinity of highly inflammable/volatile chemicals or hazardous matter.
- Dusty places.
- Sloped surfaces.
- Places subject to any type of violent impact.
- Vicinity of anti-disaster facilities such as fire exits and fire extinguishers.
- Areas where the temperature exceeds the applicable temperature (ambient temperature range of 5 to 30 degrees centigrade.

2-1 LIMITATAION OF USE

⚠ WARNING

Be sure to check the Electrical Specifications. Ensure that this product is compatible with the location' s power supply, voltage, and frequency requirements. A plate describing Electrical Specifications is attached to the product. Non-compliance with the Electrical Specifications can cause a fire and electric shock.

This product requires a breaker and earth mechanism as part of the location facilities. Using the product without these can cause a fire and electric shock.

Ensure that the indoor wiring for the power supply is rated at 15 A or higher (AC single phase 100 V ~ 120 V area), and 7 A or higher (AC 220 V ~ 240 V area). Non-compliance with the Electrical Specifications can cause a fire and electric shock.

Be sure to use an independent power supply equipped with an earth leakage breaker. Using a power supply without an earth leakage breaker can cause an outbreak of fire if a power surge occurs.

Putting many loads on one electrical outlet can cause generation of heat and a fire resulting from overload.

When using an extension cord, ensure that the cord is rated at 15 A or higher (AC 100 V ~ 120 V area) and 7 A or higher (AC 220 V ~ 240 V area). Using a cord rated lower than the specified rating can cause a fire and electric shock.

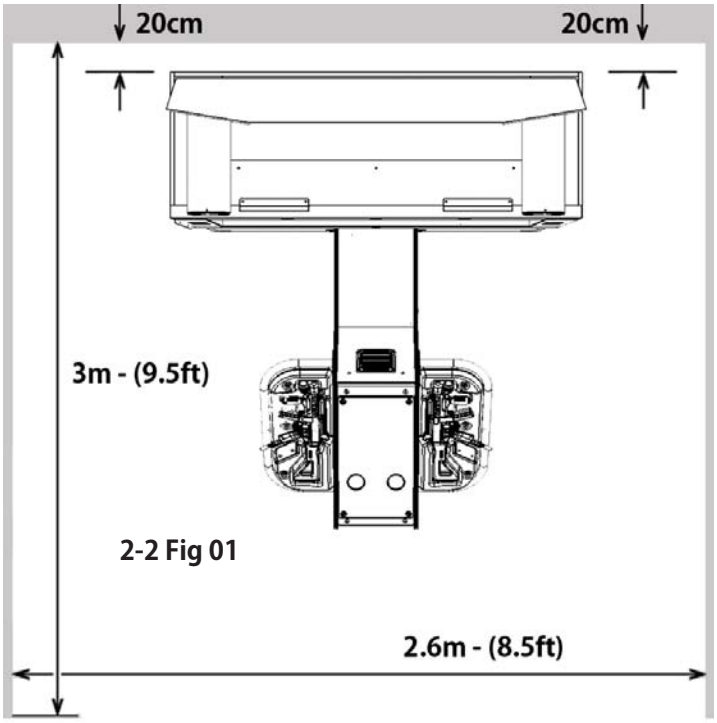
ELECTRICITY CONSUMPTION
MAX : 2.5A (AC 240V ~ 50Hz)

2-2 OPERATIONAL AREA

⚠ WARNING

- For the operation of this machine, secure a minimum area of 2.6 m [W] x 3 m [D].
  The dimensions of the base periphery are established in consideration of ventilation, maintenance and customer passage. And if they fall and hit their head, there could be a very serious injury. Be sure to always secure enough space as prescribed in this manual.
- Be sure to provide sufficient space specified in this manual. Do not allow objects to block the ventilation ports. It can cause generation of heat and a fire.
- SEGA shall not be held responsible for damage or compensation for damage to a third party, resulting from the failure to observe this instruction.

INSTALLATION SPACE

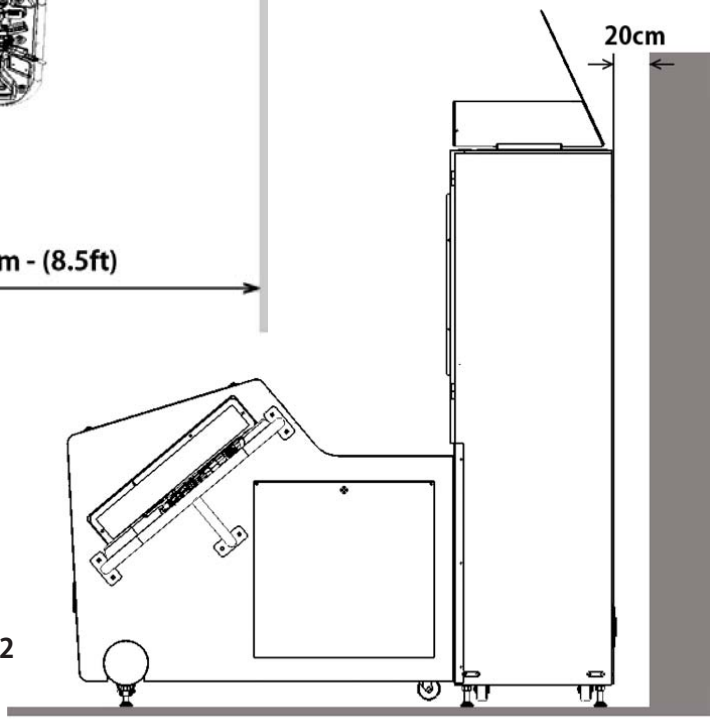


2-2 Fig 01

STOP IMPORTANT

In order to transport the machine into a building, the minimum necessary dimensions of the opening (of doors, etc,) are

1.3m (W), and 2.1m (H).



2-2 Fig 02

Before leaving the machine after Installation, make sure that the Castor Lift Adjusters are firmly positioned on the ground and that the machine is totaly stable.

3 PRECAUTIONS REGARDING PRODUCT OPERATION

3-1 BEFORE OPERATION

To avoid injury and trouble, be sure to pay attention to the behavior of visitors and players

⚠ WARNING

In order to avoid accidents, check the following before starting the operation:

● To ensure maximum safety for the players and the customers, ensure that where the product is operated has sufficient lighting to allow any warnings to be read. Operation under insufficient lighting can cause bodily contact with each other, hitting accident, and/or trouble between customers.

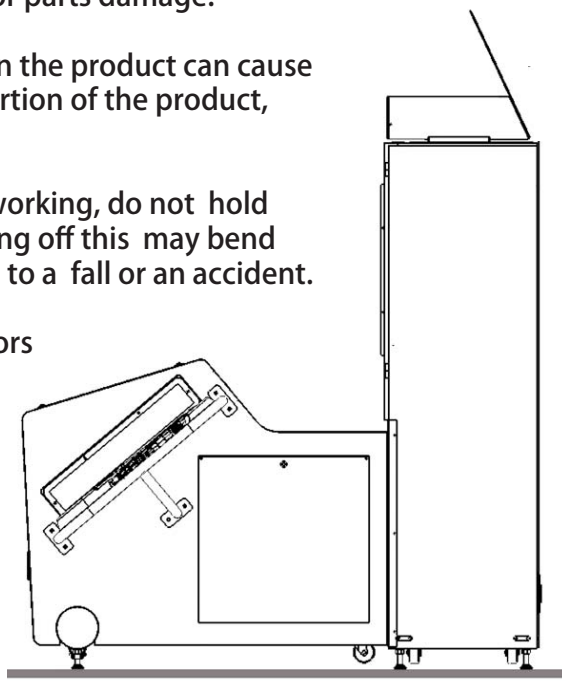
● Be sure to perform appropriate adjustment of the monitor (projector). For operation of this machine, do not leave monitor flickering or deviation as is. Failure to observe this can have a bad influence upon the players' or the customers' physical conditions.

● It is suggested to ensure a space allowing the players who feel sick while playing the game to take a rest.

● Do not put any heavy item on this product. Placing any heavy item on the product can cause a falling down accident or parts damage.

● Do not climb on the product. Climbing on the product can cause falling down accidents. To check the top portion of the product, use a step ladder.

● When using a stepladder or stool while working, do not hold onto the billboard carrier. Holding or hanging off this may bend it out of shape or damage it, and could lead to a fall or an accident.



● To avoid electric shock, check that all doors and covers are fitted correctly.

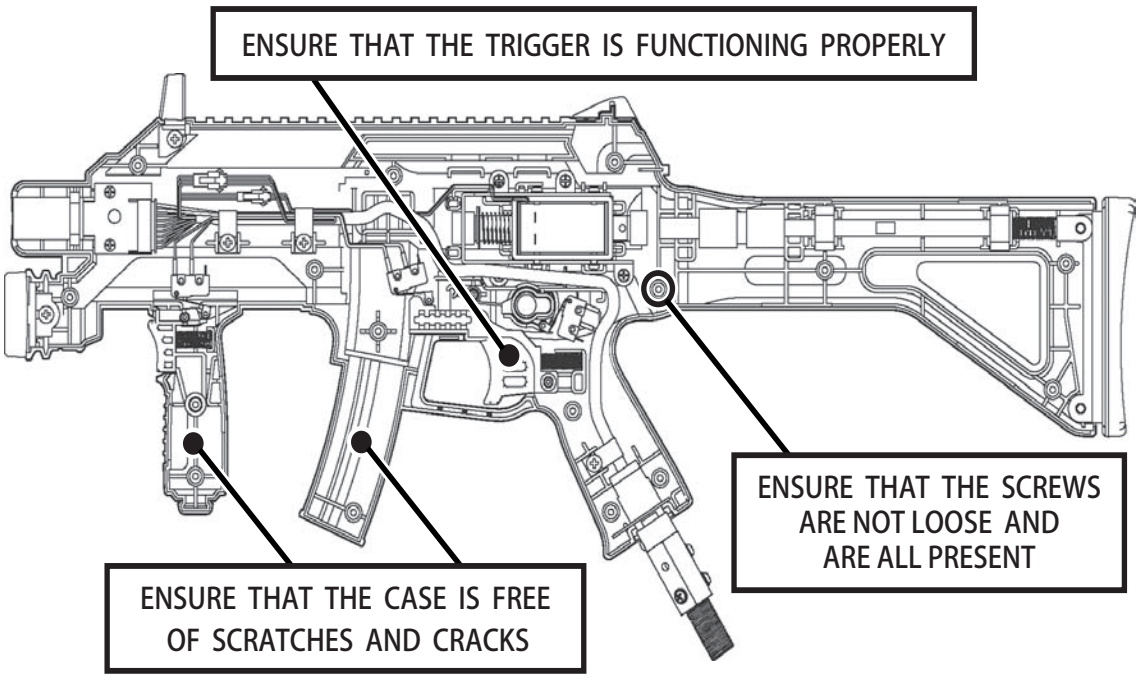
● To avoid electric shock, short circuit and/or parts damage, do not put the following items on or in the periphery of the product. (Flower vases, flowerpots, cups, water tanks, cosmetics, and receptacles/containers/vessels containing chemicals and water.)

● Check if all of the adjusters are in contact with the surface. If they are not, the Cabinet can move and cause an accident.

3-1 BEFORE OPERATION

⚠CAUTION

- To avoid injury, be sure to provide sufficient space by considering the potentially crowded situation at the installation location. Insufficient installation space can cause contact, collisions and or trouble between customers.
- Do not attempt to clean this product using pressurised equipment such as a jet wash or hose. If for any reason this product becomes wet, do not use until it has completely dried.
- During daily cleaning be sure to check the surface of the Guns and other parts that the player touches with his hands for damage, cracks or loose screws. If a player uses the machine while it is damaged, cracked or has a loose screw, the player may become injured.



STOP IMPORTANT

To ensure customers enjoy playing the game, clean the Control Unit regularly. If there is any dirt buildup, the trigger may not return properly after being pulled.

Players hold the controller with their bare hands so it is recommended that wet towels (paper towels) be provided.

3-2 PAYING ATTENTION TO CUSTOMERS DURING OPERATION

To avoid injury and trouble, be sure to pay attention to the behavior of visitors and players.

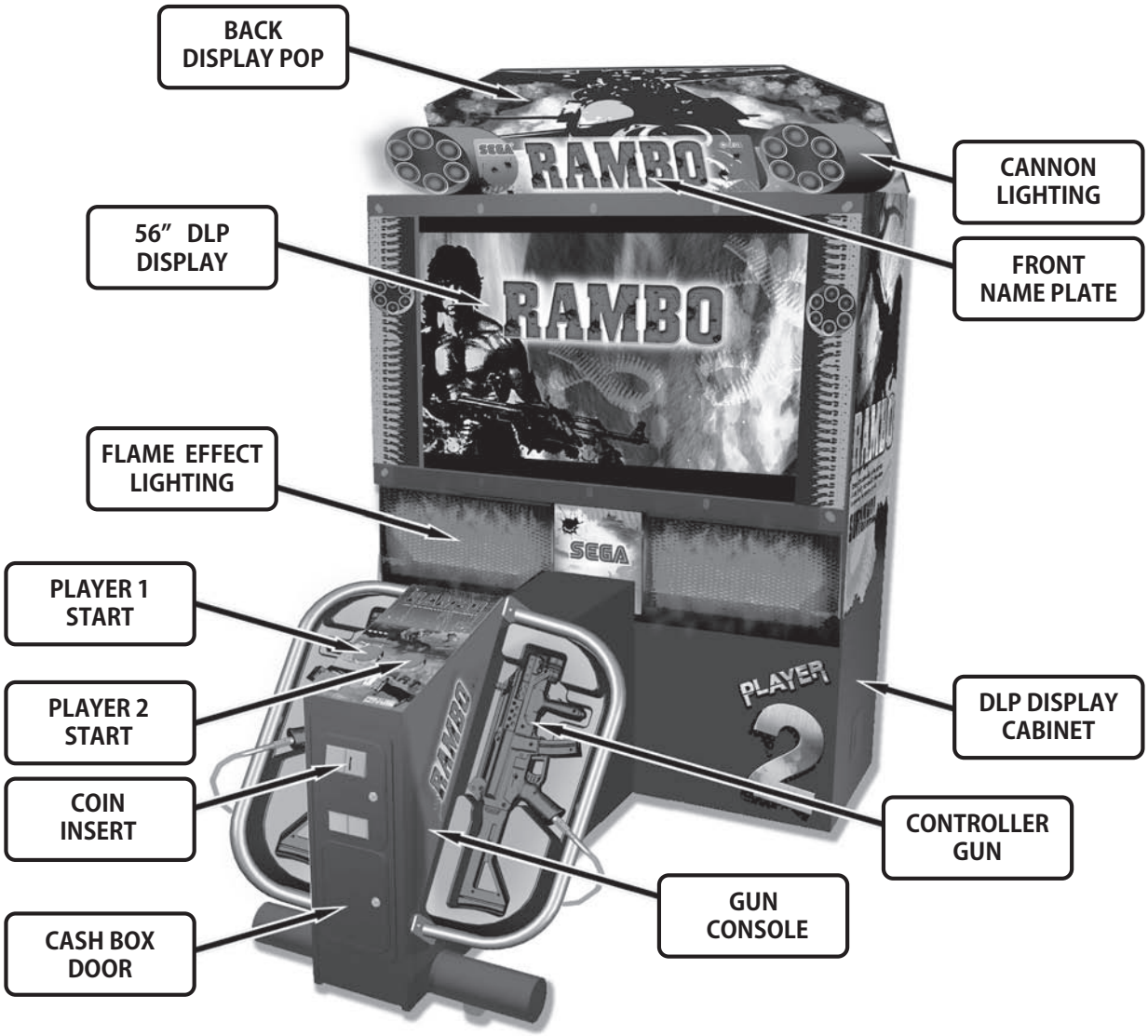
⚠ WARNING

- For safety reasons, do not allow any of the following people to play the game.
  - Those who need assistance when walking.
  - Those who have high blood pressure or heart problems.
  - Those who have a neck or spinal cord problem.
  - Those who have experienced muscle convulsion or loss of consciousness while playing video games, etc.
  - Those who are intoxicated or under the influence of drugs.
  - Pregnant women.
  - Those who are not in good health.
  - Those who do not follow the attendants instructions.
  - Those who cannot grasp the controller unit securely because of immobility in fingers, hands or arms.
  - Persons who disregard the products warning labels.
- Even players who have never been adversely affected by light stimulus might experience dizziness or headaches depending on their physical condition when playing the game. Small children are especially likely to experience these symptoms. Caution guardians of small children to keep watch on their children during play.
- Instruct those who feel sick during pay to seek medical advice or examination.
- To avoid injury from falling objects or electric shock hazard from split drinks, instruct the player not to place drinks or heavy items on the product.
- To avoid electric shock hazard and short circuit hazard, do not allow customers to put hand or fingers or any other extraneous matter in to the openings of the product or small openings on or around the doors.
- To avoid falls resulting in injury, immediately stop the customer from leaning against or climbing on the product.
- To avoid electric shock and/or short circuit hazard, do not allow customers to unplug the power plug without a justifiable reason.

⚠ CAUTION

Immediately stop such violent acts as hitting and kicking the product. Such violent acts can cause parts damage or cause the cabinet to fall over, resulting in injury.

4 PART DESCRIPTIONS



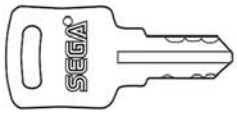
ITEM	WIDTH (mm)	DEPTH (mm)	HEIGHT (mm)	WEIGHT (kg)
VIDEO CABINET	1500	560	2025	192kg
GUN CONSOLE	980	1272	1060	108kg
BILLBOARD	1450	212	455	-
WHEN ASEMBLED	1500	1820	2310	300kg

5 ACCESSORIES

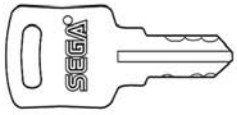
Confirm that the accessories list in the table below are present when setting up the product. Accessories marked "Spare" in the note column are consumable items but included as spares.

TABLE 5A - ACCESSORIES

DESCRIPTION OWNERS MANUAL
PT NUMBER (QTY) 420-7148-01UK (1)
NOTE This Manual
Parts not labeled with part numbers are as yet unregistered or cannot be registered.
Be sure to handle all parts with care, as some parts are not available for purchase as separate items.



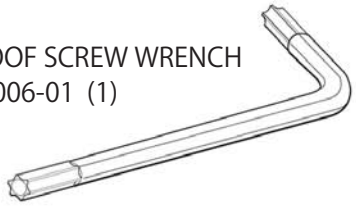
KEY MASTER
220-5793 (J9117) (2)
For opening/closing the doors



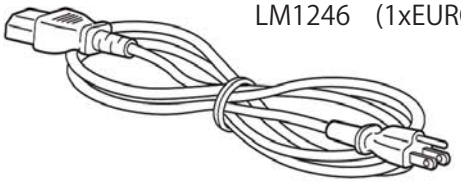
KEY (2)
CASHBOX DOOR

LINDBERGH RED SERVICE MANUAL
420-7032-A001 (1)
Explanation of built in Game Board

TAMPER PROOF SCREW WRENCH
M4 540-0006-01 (1)



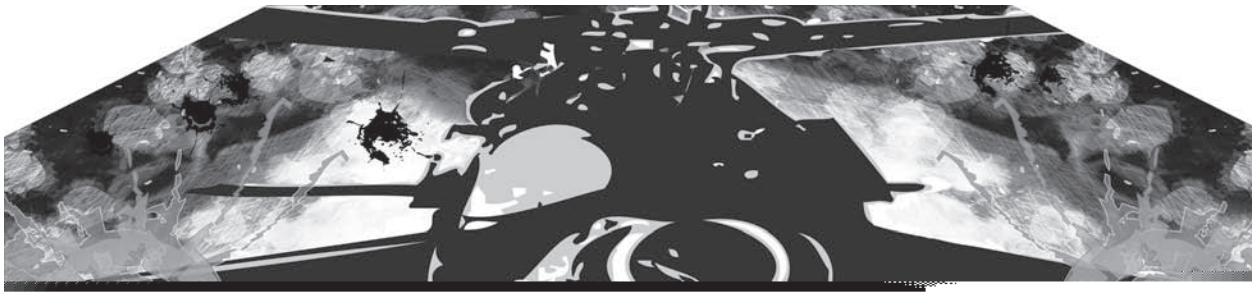
MAINS LEADS
LM1227 (1xUK)
LM1246 (1xEURO)



SEQ	NUMBER	DESCRIPTION	QUANTITY	NOTE
1	PK0455	BOX RMB INST KIT	1	Spare
2	420-7148-01UK	OWNERS MANUAL RMB DX	1	
3	RMB-1001UK	STICKER INSTRUCTION MULTI RMB	1	
4	509-5080	SW MICRO TYPE (SS-5GL2)	2	
5	420-7032-01UK	LINDBERGH RED MANUAL	1	
6	OS1019	SELF SEAL BAG 9X12.3/4	2	Spare
7	610-0727-5003	DVD SOFT KIT RMB	1	
10	LM1227	UK MAINS LEAD 10A WITH PLUG	1	
11	LM1246	EUROLEAD 10A EUROPEAN SOCKET	1	
12	SAECE-XXX	DECLARATION OF CONFORMITY XXX	1	
21	RMB-0556UK	BILLBOARD FRONT PLATE	1	
22	RMB-0557UK	BILLBOARD STAY	1	
23	RMB-0558UK	BILLBOARD POP	1	
24	RMB-0559UK	POP BRKT POP HOLDER	1	
25	CTF-1002UK	WASHER CTF	2	
201	FAS-290034	HEX SKT LH CAP SCR STN M5X10	2	

5 ACCESSORIES

*21 RMB-0558UK BILLBOARD FRONT PLATE



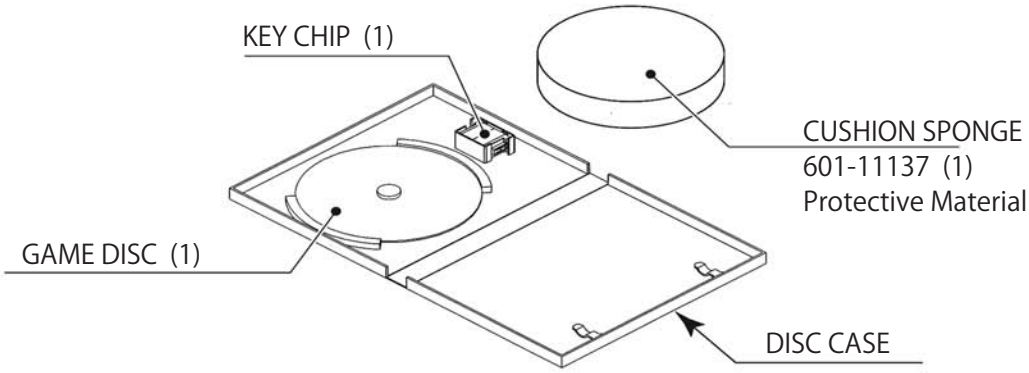
*23 RMB-0558UK BILLBOARD POP

5 ACCESSORIES

Confirm that the accessories list in the table below are present when setting up the product. Accessories marked "Spare" in the note column are consumable items but included as spares.

TABLE 5B - ACCESSORIES

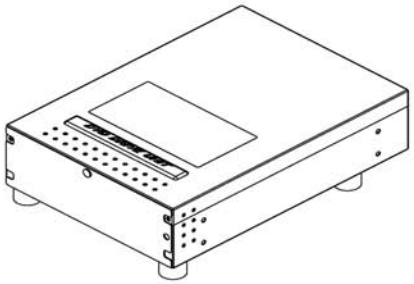
To order a duplicate "GAME DISC" DVD only, Please quote the following :
Part Number : 610-0726-0048 : DVD SOFT ADH



NOTE : The KEY CHIP has been already fitted into the LINDBERGH Game Board and the GAME SOFTWARE has been pre-installed. Only use the "GAME DISC" DVD when necessary, for some reason such as replacing the LINDBERGH. However to Install the Software you will require a DVD DRIVE and USB Cable (mini type). If you do not have these available, a "DVD DRIVE KIT" has been made available for purchase from your supplier.
See below for kit details.

TABLE 5C XKT-1515-01 : DVD DRIVE KIT FOR LINDBERGH.

SERVICE MANUAL
420-6923-01 (1)



DVD DRIVE
610-0719-01-91 (1)
For software installation.
See "Chapter 17"

DVD WIRE
605-0094 (1)
For software installation.

6 ASSEMBLY & INSTALLATION

⚠ WARNING

- This work should be carried out by site maintenance personnel or other qualified professionals. Work performed by non-technical personnel can cause a severe accident such as electric shock. Failing to comply with this instruction can cause a severe accident such as electric shock to the player during operation. If no one with proper technological expertise is available, request service from the office indicated in this document or the point of purchase so as to ensure safety.
- Perform assembly work by following the procedure herein stated. Failure to comply with the instructions can cause electric shock.
- Perform assembling as per this manual. Since this is a complex machine, incorrect assembling can cause an electric shock, machine damage and/or improper functioning as per specified performance.
- When assembling, more than one person is required. Depending on the assembly work, there are some cases in which working by one person alone can cause personal injury or parts damage.
- Ensure that connectors are properly connected. Improper connections can cause electric shock.
- Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a risk of fire.
- Provide sufficient space so that assembling can be performed. Performing work in places with narrow space or low ceiling may cause an accident and assembly work to be difficult.
- To perform work safely and avoid serious accident such as the cabinet falling down, do not perform work in places where step-like grade differences, a ditch, or slope exist.
- Do not leave power cords, ground wires or network cables in areas of heavy foot traffic. Doing so may cause them to become damaged, possibly resulting in electric shock and/or short circuits. When leaving wiring across a floor, always use a safety covers to protect the wires. (Wiring diameter : Power Cables - approx 0.8, Network Cable approx 0.5)
- The power cord for this product has a ground terminal. Make sure to use this ground termination when plugging it into an indoor outlet. Failure to ground the product could lead to electrocution. It can also cause malfunction.
- Do not use connectors other than those connected to and used by the game board at the time of shipment. Do not connect wires to unused connectors. This could cause the generation of heat or smoke, or a burnout.

⚠ CAUTION

- Wear appropriate work clothing so that work can be performed safely. Use gloves and safety shoes to prevent accidents or injuries.
- When installing a wire protection cover over a floor, use a material shaped so that no one passing by will stumble over it. Using a material that could be stumbled over might lead to an accidental fall.
- Handle plastic parts with care. Excessive weight or pressure may cause them to break and the broken pieces may cause injury.
- When opening/closing, attaching/removing doors or lids, be careful that your hands or fingers etc, does not get caught in the apparatus.

Installation and assembly of this product should take place in the following sequence.

6-1 GENERAL ASSEMBLY INFORMATION

6-2 FITTING THE BILLBOARD AND POP

6-3 FIXING THE GUN CONSOLE TO THE VIDEO CABINET

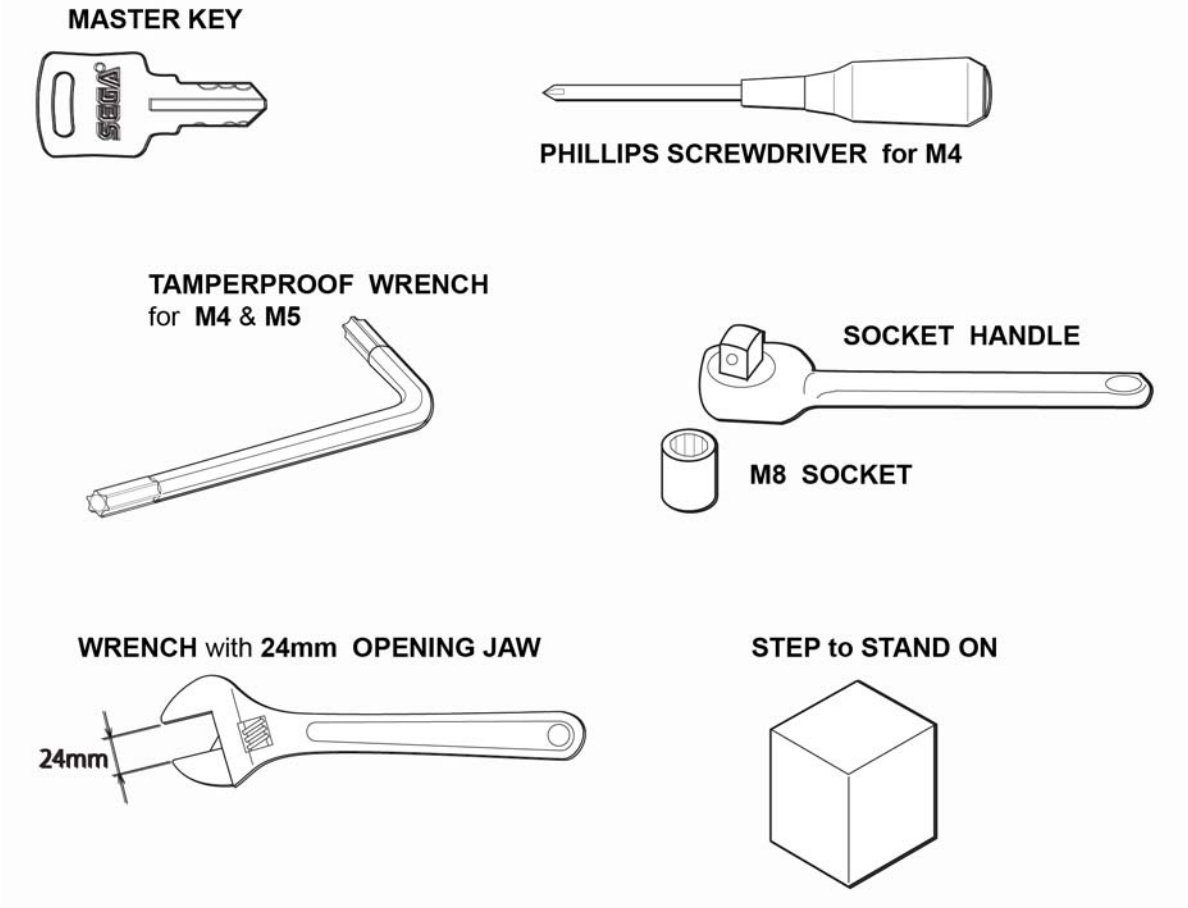
6-4 INSTALLATION AND SECURING IN PLACE

6-5 CONNECTING POWER CABLE AND GROUND

6-6 CHECKING ASSEMBLY (SET UP)

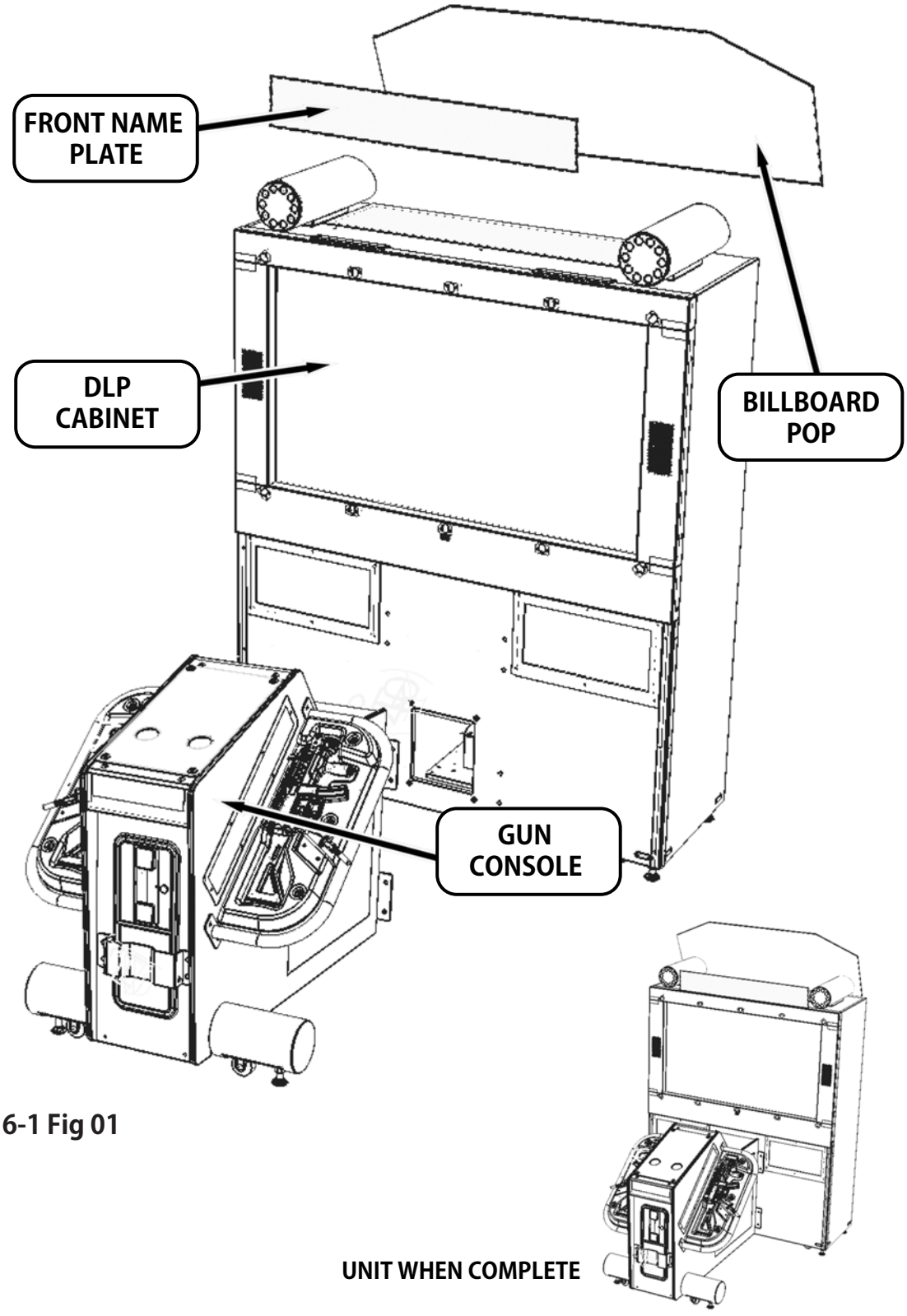
TOOLS NECESSARY FOR WORK

6-0 Flg 01



6-1 GENERAL ASSEMBLY INFORMATION

There are Two MAIN Assemblies plus Billboard Components supplied, that have to be fitted together in order to complete the built of this machine :



6-1 Fig 01

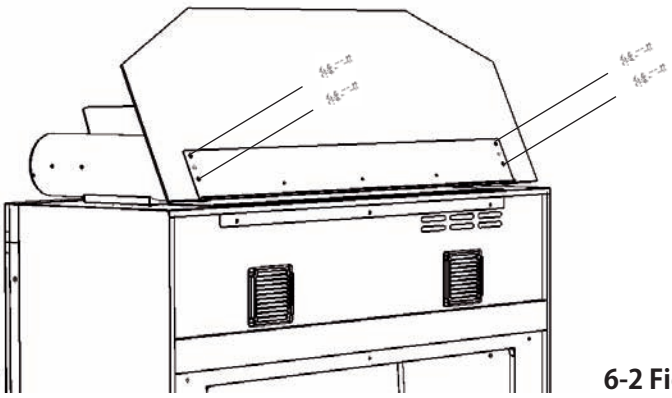
6-2 FITTING THE BILLBOARD AND POP

⚠ WARNING

WORK SHOULD NOT BE UNDERTAKEN ON TOP OF THE CABINET WITHOUT THE USE OF A SUITABLE STEP OR FOOT STOOL.

1

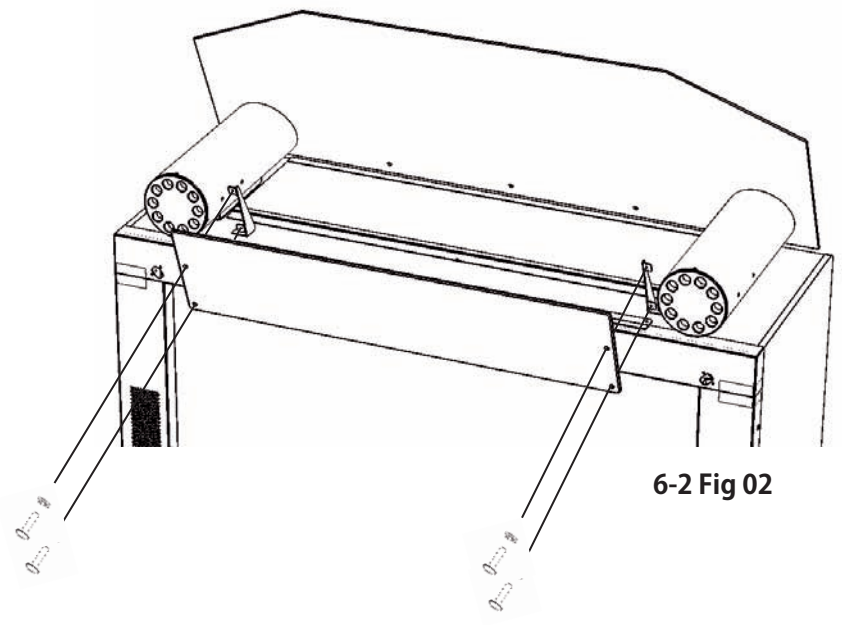
Fit and secure the Rear POP Panel to the rear of the "Rocket Tube Launchers" using 4x M8x20 BLK Hex Bolts (supplied).



6-2 Fig 01

2

Fit and secure the Front POP Panel to the rear of the "Rocket Tube Launchers" using 4x CTF-1002UK (WASHER CTF) and 4x FAS-290034 HEX SOCKET CAP SCREW M5x10 (supplied).



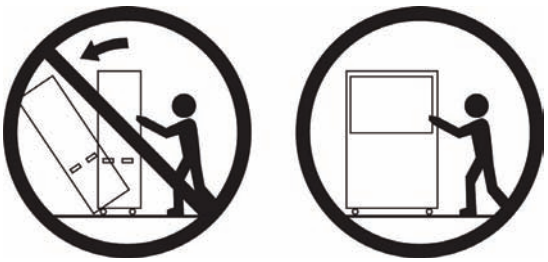
6-2 Fig 02

6-3 FIXING THE GUN CONSOLE TO THE VIDEO CABINET

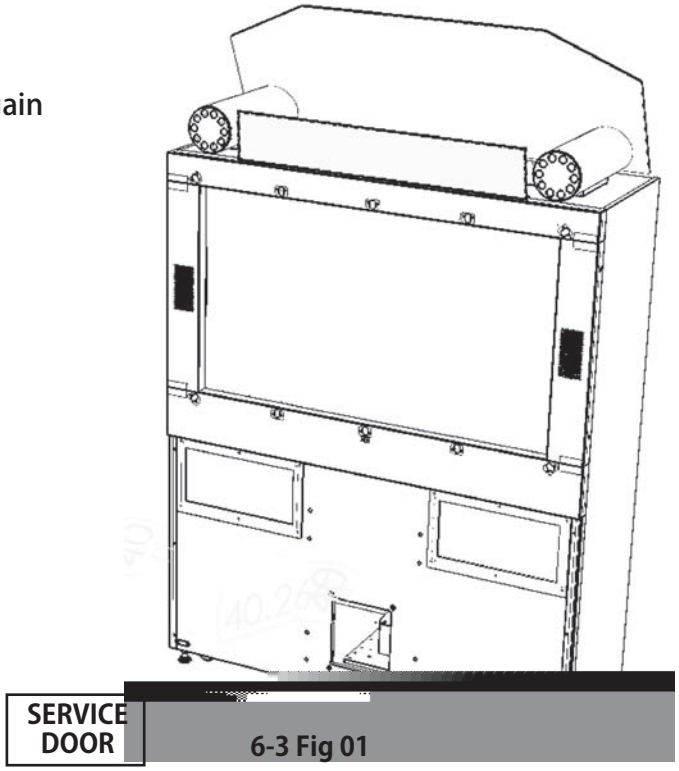
⚠ WARNING

The MAIN VIDEO Cabinet with BILLBOARD Fitted is very heavy therefore a minimum of two people are required when moving this unit. Great care should be taken when handling or moving the DLP unit otherwise personal Injury may occur.

Whenever moving the unit, manipulate the movement from either end of the cabinet. Never push or pull the unit from the front or backside, as this can cause the unit to topple over causing damage to the unit and possible injury to any persons in the locality.



1 Position both Video Cabinet and Gun Console in the approx area of operation, allowing room to gain access from all sides.



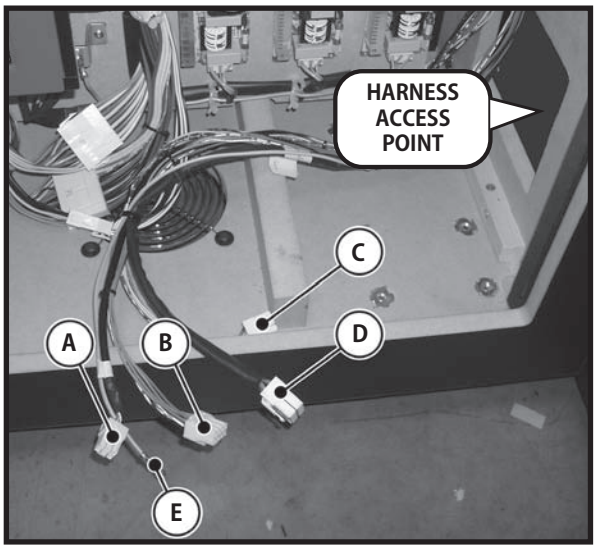
6-3 Fig 01

Remove the SERVICE DOOR from the side of the Gun Console.

6-3 Fig 02

6-3 FIXING THE GUN CONSOLE TO THE VIDEO CABINET

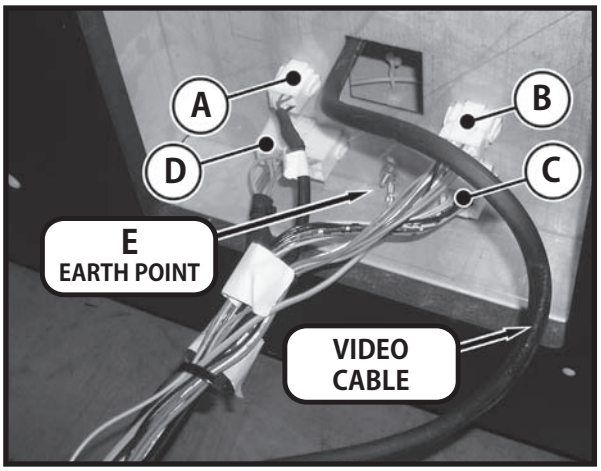
2 Pass the Harness Connectors A to E through the Harness Access Point and position the unit close to the DLP CABINET.



6-3 Fig 03

3 Locate the Connector Plate in the front panel on the DLP Cabinet. Take the EARTH Wire 'E' and securely attach it to the EARTH POINT on the Plate.

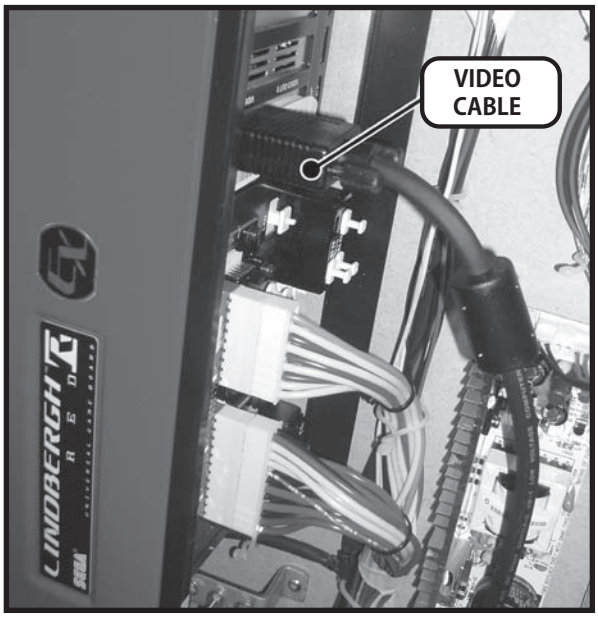
Take the remaining four Connectors A to D and plug them to the positions shown on the Connector Plate.



6-3 Fig 04

4 Take the VIDEO Cable that fitted through the Connector Plate and pass it through the Harness Access Point into the Weapon Cabinet.

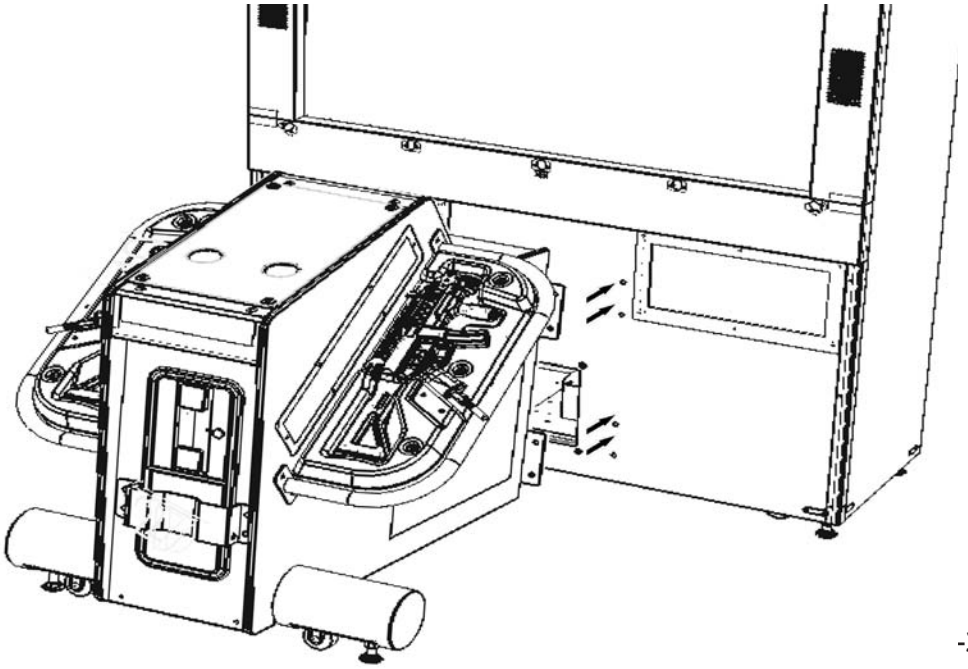
Once inside the Cabinet, take the VIDEO Cable and attach it to the Video Output Connector on the LINDBERGH Game Box.



6-3 Fig 05

6-3 FIXING THE GUN CONSOLE TO THE VIDEO CABINET

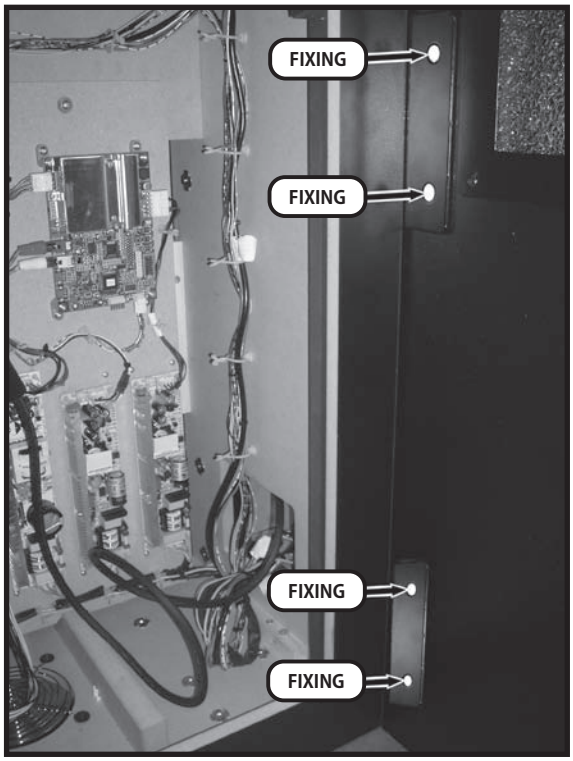
5 Once the wiring between the two units is complete, remove the eight fixing bolts from the DLP Cabinet and close the gap between the Weapon Cabinet and DLP Cabinet making sure that none of the interconnecting cables get trapped..



-3 Fig 06

6 When the Cabinets are together, line up the holes in the Weapon Cabinet bracket with the fixing holes located in the DLP Cabinet.

Refit and tighten the eight bolts earlier removed from the DLP Cabinet.



6-3 Fig 07

6-4 INSTALLATION AND SECURING IN PLACE

⚠ WARNING

During Installation, make sure that all the adjusters are in contact the floor.
Otherwise the cabinet could move, causing an accident.

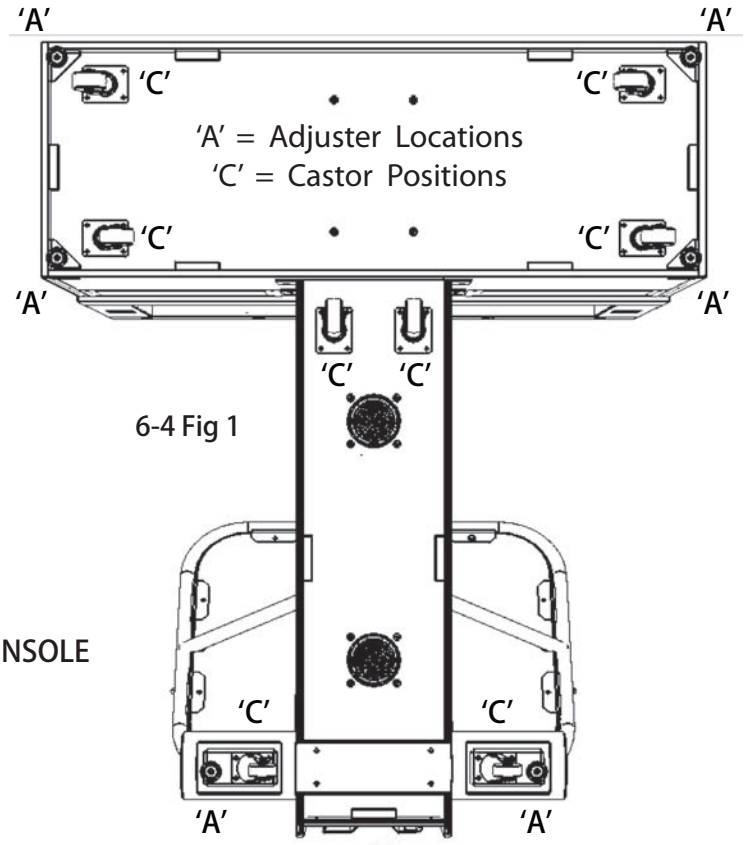
.

RAMBO Deluxe consists of two Main Base Units : Main Video Cabinet and Gun Console.

6-4 Fig 01 - Shows the location of the Castors (C) and Fixing Adjusters (A).
During the installation of each unit, the Fixing Adjustment should be performed to ensure that the units are stable.

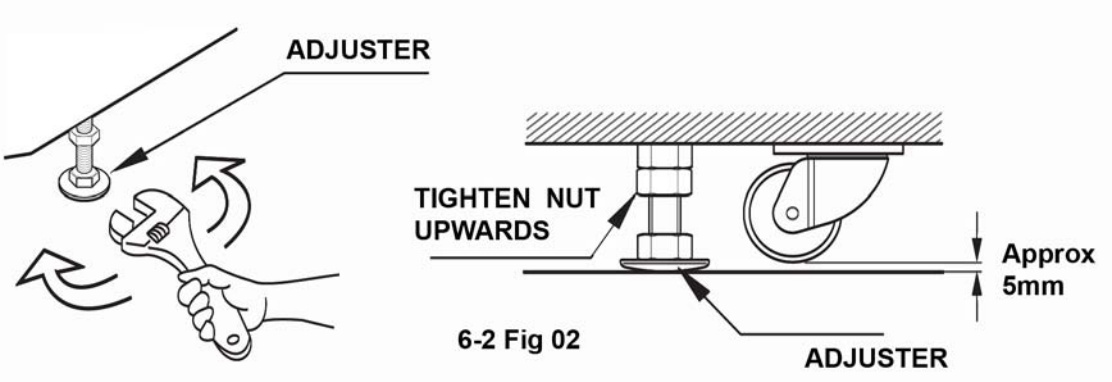
VIDEO UNIT

GUN CONSOLE



6-4 Fig 1

6-4- Fig 02 - Showing the correct details for Adjustment.



6-2 Fig 02

6-5 CONNECTION OF POWER AND GROUND

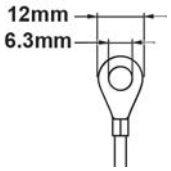
⚠ WARNING

- Use the power supply equipped with an earth leakage breaker. Use of power supply without such a breaker could result in fire if there is a current leakage.
- This product MUST be EARTHED. Ensure that the unit is properly connected to the INDOOR GROUND. Without proper grounding, customers could be electrocuted, product operation may not always be stable, and also introducing a risk of fire.
- Do not expose the power cords. If these are exposed, customers could stumble over them, for instance, and easily damage them. Additionally, if these lines are damaged, there could be a risk of electrical shock or short circuit. Set these lines at locations where they will not interfere with customer traffic, or attach covers to them.
- After laying out the power cord on the floor, be sure to always protect it. If the power cord is left exposed, it can easily be damaged, resulting in electrical shock.
- This product comes complete with POWER CORDS for the UK and EUROPEAN destinations, be sure to use the power cords supplied. If a power cord is to be replaced, be sure to replace it with the same specification as the one provided.

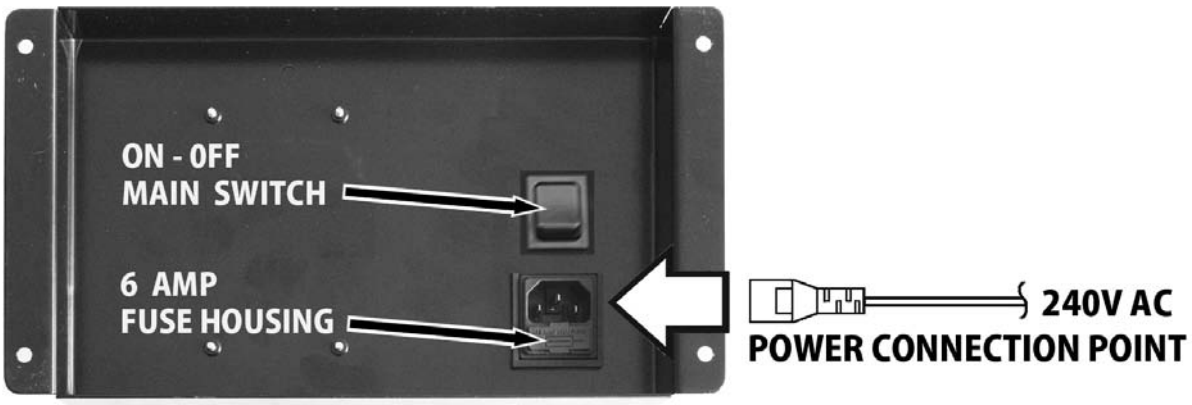
STOP IMPORTANT

If grounding has been established with the ground wire inside the power cord, do not perform grounding with the AC unit ground terminal. Conversely, if the AC unit ground terminal has been used for grounding, do not establish ground with the ground wire in the power cord. Otherwise there could be faulty or erroneous operations.

When using the product' s AC Ground Terminal, use a ground wire with a circular terminal as shown in the illustration, and establish the ground securely. Avoid indiscriminate grounding operations such as the use of a wire with only the sleeve peeled off.

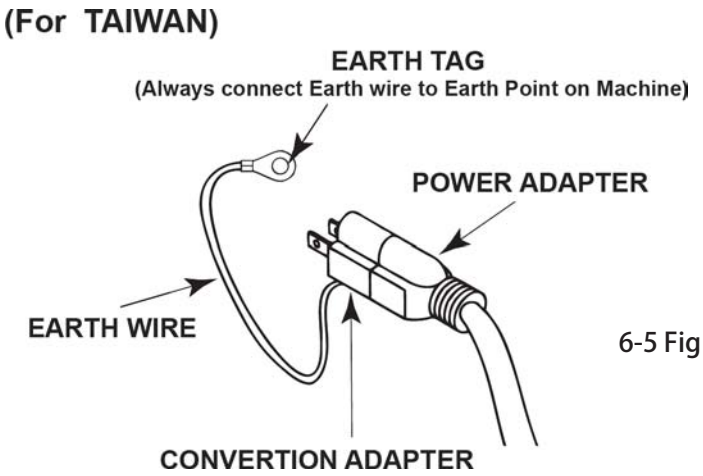


1 Confirm that the MAINS SWITCH is set to OFF



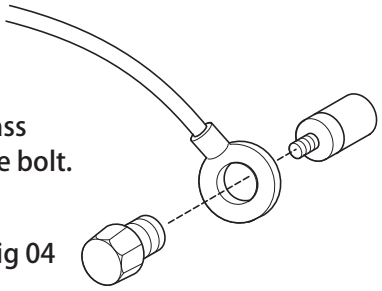
6-5 CONNECTION OF POWER AND GROUND

2 · The accessory power cord has a ground wire inside it. Connect the power cord to the AC unit then insert the power cord plug into a "power outlet with ground terminal." If there is no "power outlet with ground terminal," be sure to establish ground by some other means; for example, by connecting the AC unit ground terminal to a ground wire with a ground mechanism prepared separately.
If you use a conversion adapter sold on the market to supply power, connect the ground wire terminal of the adapter to a "securely grounded ground terminal." <For Taiwan>



6-5 Fig 03

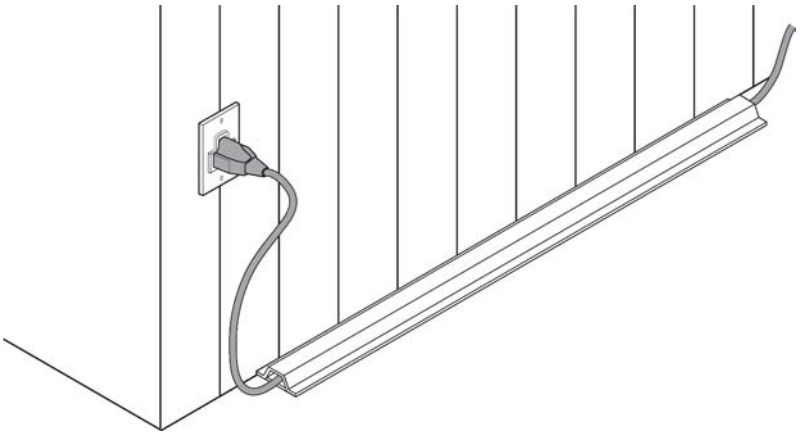
3 When using a ground wire made available separately, connect one end of the wire to the AC unit ground terminal and the opposite end to an indoor ground terminal. The AC unit ground terminal is a bolt-and-nut combination. Remove the nut and pass the bolt through the ground terminal, then secure the nut to the bolt. <For Taiwan>



6-5 Fig 04

4 The power cord is laid out indoors. Protect the power cord by attaching wire cover to it.

If ground will be established with a ground wire made available separately, lay out the ground wire indoors and have it protected. <Taiwan>



6-5 Fig 05

6-6 CHECKING ASSEMBLY - SET UP

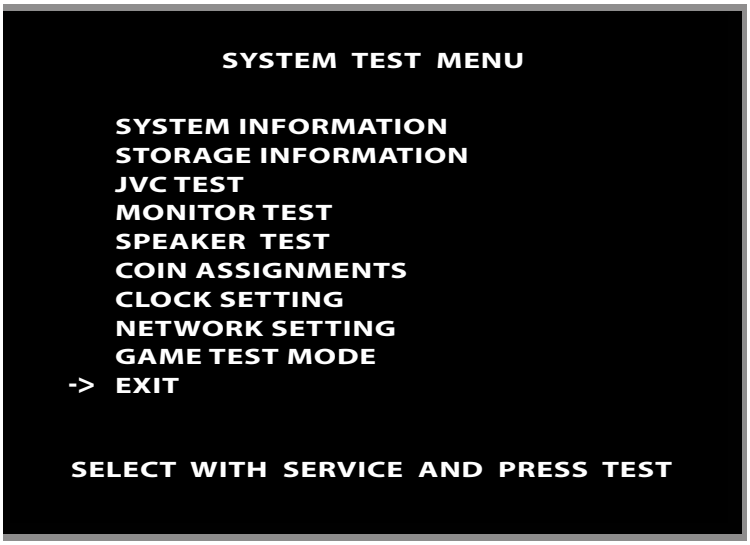
THE MACHINE COMES WITH PRE-INSTALLED SOFTWARE, WHICH ALLOWS YOU TO GO STRAIGHT INTO CHECKING ASSEMBLY - SET UP. HOWEVER IF THERE IS A REQUIREMENT TO RE-INSTALL SOFT WARE FOR ANY REASON - SEE "CHAPTER 17" FOR DETAILS.

The Installation 'TEST MODE' ensures that the assembly has been made correctly and the IC BD is satisfactory (refer to Chapter 9).
Refer to the LINDBERGH Service manual for details on "SYSTEM TEST MODE" and "Chapter 9-3. GAME TEST MODE" for details on the |Game Test.

SYSTEM TEST MENU

The System Test Menu can be used to check the information or the operation of the LINDBERGH Board, adjust Monitor Colour, and perform Coin Credits settings

1 Press the TEST Button after powering up the machine and the following SYSTEM TEST MENU will be displayed. .



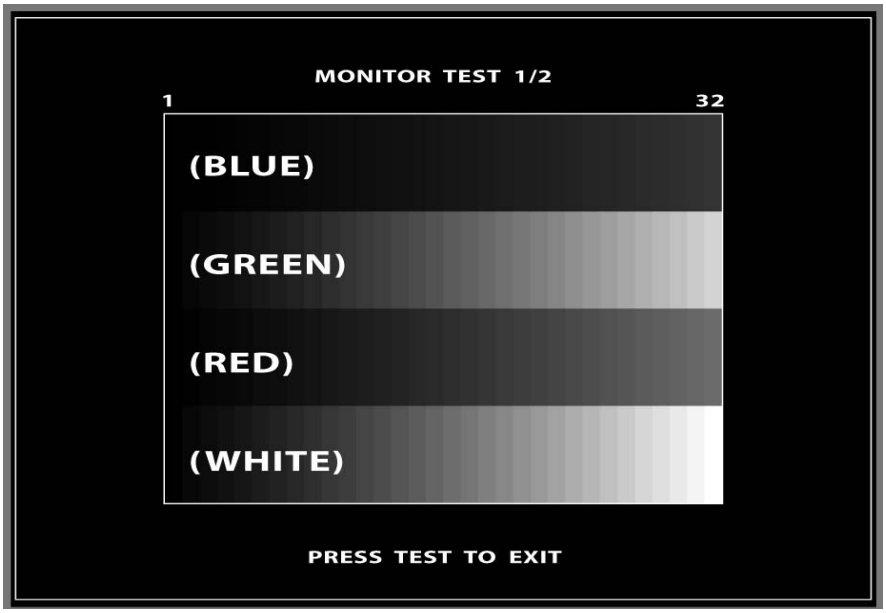
2 Use the SERVICE Button to move the Cursor to the desired option, and press TEST to action the Option selected.

SYSTEM INFORMATION -	See LINDBERGH Manual CH 4-A
STORAGE INFORMATION -	See LINDBERGH Manual CH 4-B
JVS TEST -	See LINDBERGH Manual CH 4-C
MONITOR TEST -	This Chapter Section A
SPEAKER TEST -	This Chapter Section B
COIN ASSIGNMENTS -	This Chapter Section C
CLOCK SETTINGS -	This Chapter Section D
NETWORK SETTINGS -	This Chapter Section E
GAME TEST MODE -	Advance to the GAME TEST MODE Menu
EXIT -	Exit the SYSTEM TEST MENU and return to GAME

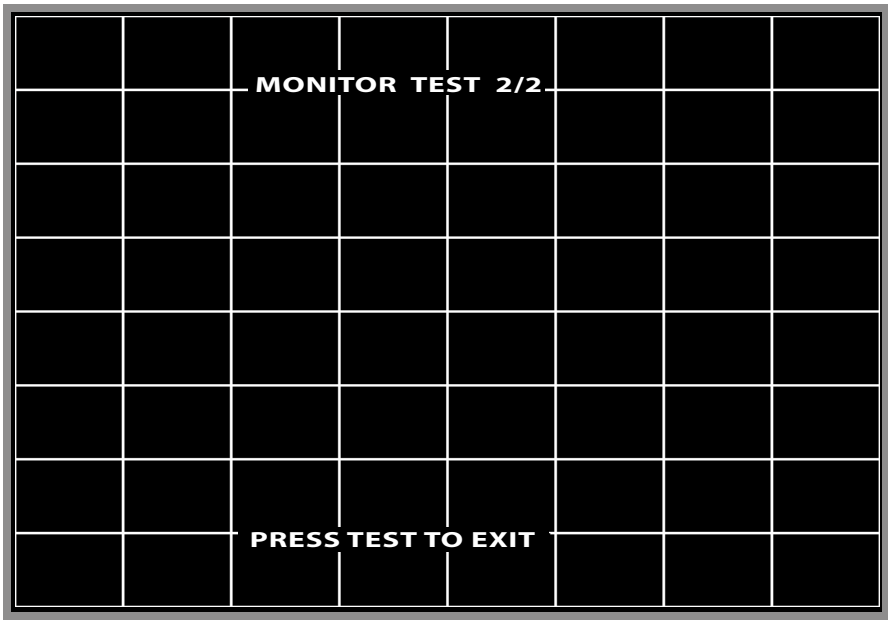
3 After completing the Initial SYSTEM TEST MENU set up, advance to the GAME TEST MENU and complete the following checks described in this chapter.

A • DISPLAY TEST

When the 'MONITOR TEST' is selected from the 'System Test Menu Screen' a screen to test the CRT Monitor will be displayed. Though the DISPLAY is pre-adjusted at the time of shipment from the factory, view the test screen to determine whether or not adjustment is necessary. If so refer to Chapter 9 and adjust the display.



6-6 Fig 01



6-6 Fig 02

B • SPEAKER TEST

When selected from the 'System Test Menu' the SPEAKER TEST Menu will be displayed.

6-6 Fig 03

Use the SERVICE button to step to the speaker required to be checked and then press the TEST Button to change their respective settings from OFF to ON or ON to OFF.

When set in ON position the selected Speaker will emit a TEST Sound.

It is possible to set more than one Speaker ON at the same time.

Some of these options may not be displayed depending on the type of game fitted. On this model only the RIGHT SPEAKER and LEFT SPEAKER are used, which are located either side of the Screen.

Move the Cursor to EXIT and press TEST to return to the SYSTEM TEST MENU.

C • COIN ASSIGNMENTS

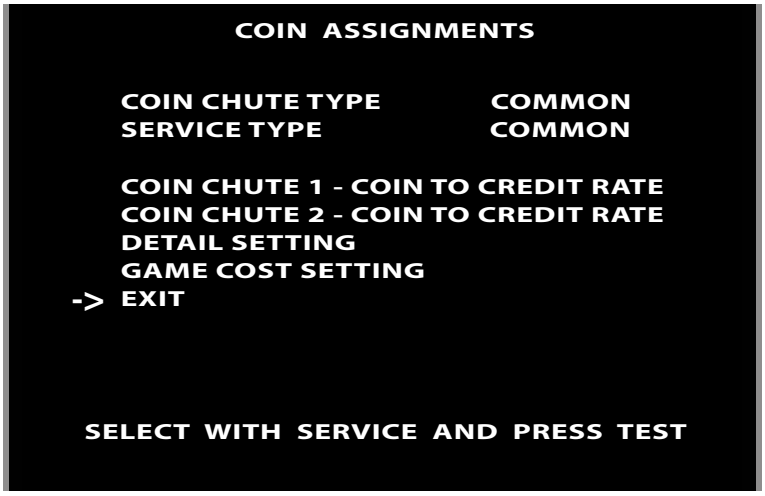
When selected from the 'System Test Menu' the COIN ASSIGNMENT Menu is displayed.

6-6 Fig 04

Use the SERVICE button to Select the Option and then press the TEST to change the settings. For this GAME the following should be selected.

COIN CHUTE TYPE
Set - COMMON

SERVICE TYPE
Set - COMMON



For Information on the other Settings, Refer to the LINDBERGH Manual CH4-F.

Move the Cursor to EXIT and press TEST to return to the SYSTEM TEST MENU.

D • CLOCK SETTING

When selected from the 'System Test Menu' the CLOCK SETTING Menu will be displayed.

6-6 Fig 05

Use the SERVICE button to move the Cursor to the Category that you wish to change then press the TEST Button to INCREASE the VALUE

Holding the TEST down will cause the VALUE to Continuously Increase.

Any changes made will come into effect when you EXIT from the routine.

Move the Cursor to EXIT and press TEST to return to the SYSTEM TEST MENU.

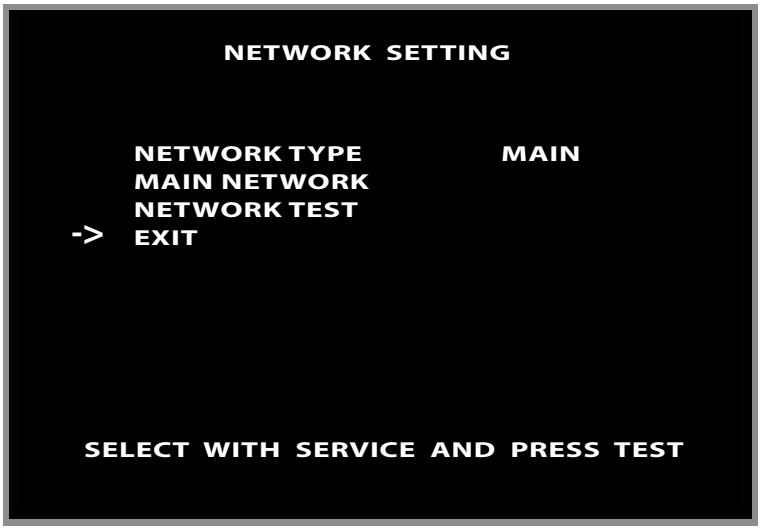
E • NETWORK SETTING

When selected from the 'System Test Menu' the NETWORK SETTING Menu is displayed.

6-6 Fig 06

Use NETWORK SETTING to determine Network Set Up or to TEST the Network.

There is no need to alter these settings for a Game that does not use a Network



For Information for other Network Settings, Refer to the LINDBERGH Manual CH4-H.

Move the Cursor to EXIT and press TEST to return to the SYSTEM TEST MENU.

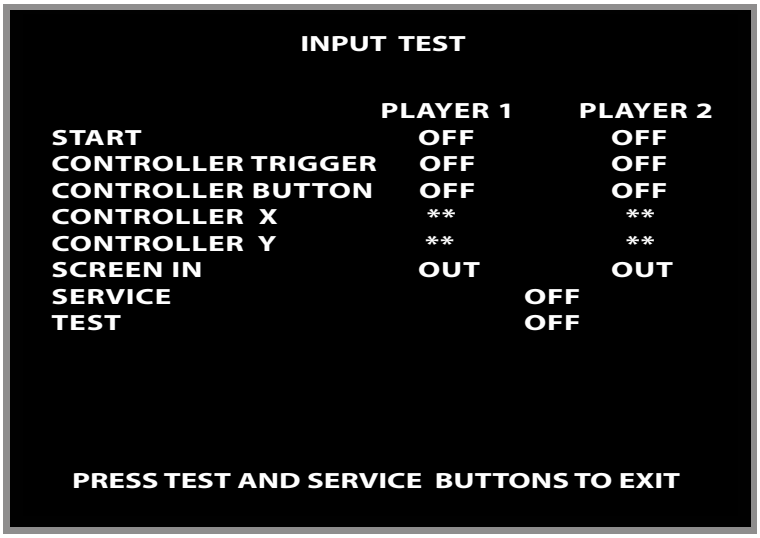
F • GAME TEST MODE

To complete the Installation, select the GAME TEST MODE and complete the following TESTS

1 • INPUT TEST

When the 'INPUT TEST' is selected from the System Test Menu Screen' a screen to test the Games Switches will be displayed.

6-6 Fig 07



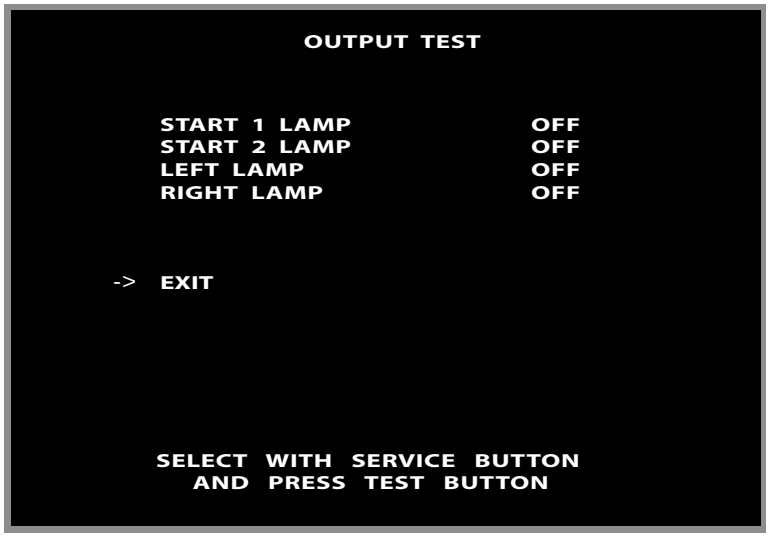
Flip each of the switches shown, if the display to the right of the switch changes to 'ON' or indicates a change in value, the switch and the wiring are operational.

Aim and Fire this GUN at the Screen, the Controller X and Controller Y position values are given to show the Sight position.

For information on Calibrating the 'GUN SIGHT' go to Chapter 9-3-4, Gun Adjustment

2 • OUTPUT TEST

6-6 Fig 08



When the 'OUTPUT TEST' is selected from the System Test Menu Screen' a screen to test the Games Lamps will be displayed.

Use the SERVICE button to step to the output required to be checked and then press the Test Button.

If the output selected lamp illuminates, the wiring and lamp are both operational.

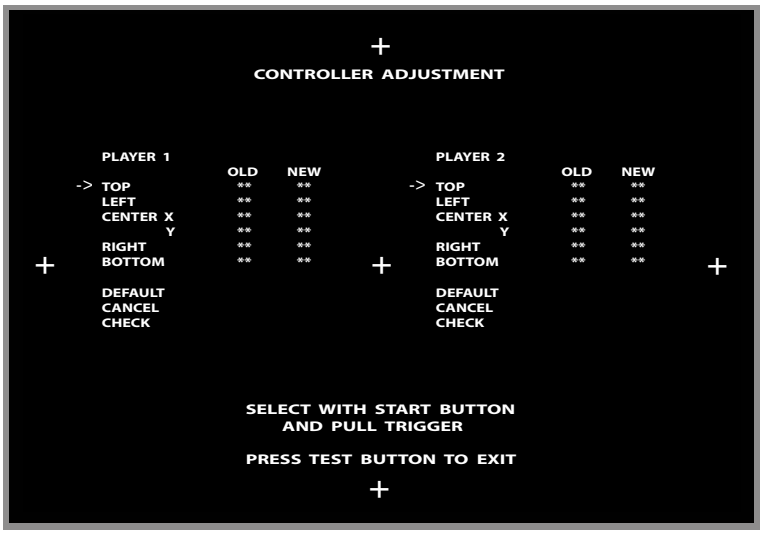
'CONTROLLER (GUN) ADJUSTMENT' - METHOD

HOW TO AIM

A - Align the top of the groove on the controller' s rear sight with the horizontal line of the plus sign on the screen.

B - Align the top of the controller' s front sight with the horizontal line as well.

C - Pull the trigger when the top of the rear sight and top of the front sight line up with the center of the plus sign on the screen.



6-6 Fig 09

.

1	**TOP adjustment**	Select TOP, AIM at the TOP MARK, and pull the TRIGGER. The new value will appear in the NEW column. The previous value will be shown in the OLD column.
2	**LEFT adjustment**	Select LEFT, AIM at the LEFT SIDE MARK, and pull the TRIGGER. The new value will appear in the NEW column. The previous value will be shown in the OLD column.
3	**CENTER adjustment**	Select CENTER, AIM at the CENTRE MARK, and pull the TRIGGER. The new values for X and Y will appear in the NEW column. The previous X and Y values will be shown in the OLD column. ..
4	**RIGHT adjustment**	Select RIGHT, AIM at the RIGHT SIDE MARK, and pull the TRIGGER The new value will appear in the NEW column. The previous value will be shown in the OLD column..
5	**BOTTOM adjustment**	Select BOTTOM, AIM at the BOTTOM MARK, and pull the TRIGGER. The new value will appear in the NEW column. The previous value will be shown in the OLD column.
6	Use the CHECK option to CHECK the DETECTION POSITIONS	

For information on ADJUSTING THE GUN SIGHTS go to Chapter 9-3-4 Gun Adjustment

PERFORM THE ABOVE INSTALLATION TEST INSPECTIONS EVERY MONTH

SETTINGS AT TIME OF INSTALLATION

Refer to the "LINDBERGH Service Manual" for details on the "SYSTEM TEST MODE" and "Chapter 4-F GAME TEST" for the "GAME TEST MODE."

Using "TEST MODE" Set, Adjust and Confirm the following settings shown below.

1 • COIN ASSIGNMENTS

Set up the Coin Settings under - COIN ASSIGNMENTS

COIN CHUTE TYPE	-	COMMON
SERVICE TYPE	-	COMMON

2 • NETWORK SETTING

Select the MAIN NETWORK and set it up in the following manner:

DHCP	-	DISABLE

There is no need to set a specific value for the IP address.
Leave the display IP address as is and exit the settings.

7 PRECAUTIONS WHEN MOVING THE MACHINE

⚠ WARNING

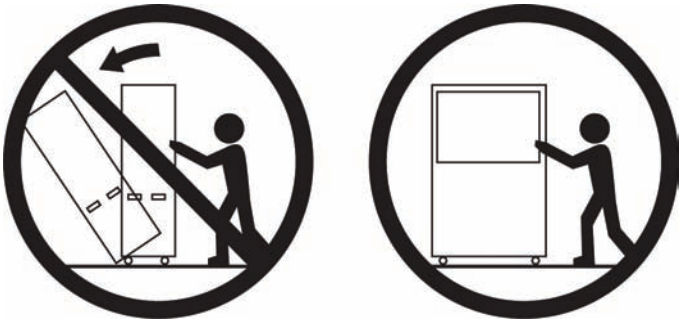
- Always disconnect the power cable before moving the product. If it is moved with the power cable connected, the cable could be damaged, causing fire or electric shock.
- To move the unit over the floor, pull in the adjustors and have the casters contact the floor. While moving the unit, be careful that the casters do not roll over the power cord or the ground wire. If cord or wire is damaged, there could be electrical shocks and/or short circuits.
- When crossing a sloped or stepped area, disconnect the PTV from the Main Cabinet. If you tilt them while connected together, the connection points may be damaged and personnel could be injured.
- When lifting the cabinet up steps, you must hold it by the designated handles or by the bottom surface. Lifting it by any other area may lead to damage or dis-figuration to that part or surrounding parts due to the weight of the cabinet and could also lead to injury of personnel.
- When tilting the cabinet to move it across a sloped or stepped area, always use at least two people. Attempting such an operation alone can lead to accident or injury.
- When moving the components separately, take care concerning the direction you push the DLP and Controller Cabinet in. These elements may fall over, causing damage or an accident.
- When detached always keep the cabinet on a level surface and make sure that it does not to lean in either direction whilst working on it. Danger of the Cabinet falling over and causing Unit Damage and possible injury of personnel.

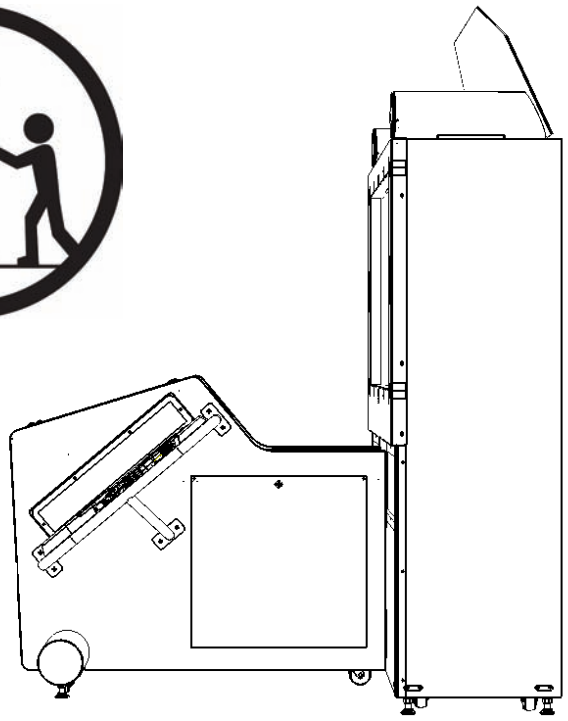
STOP IMPORTANT

- When moving the cabinet, do not hold, push or pull the Control Units. This may disfigure or damage them.
- If you need to move components through a narrow or low door and the only way to get the separated components through is to turn them on their side, or if a separation method other than those described in this manual is required, either make a request to the office listed in this document or the place of purchase to perform the operation or contact them regarding how to perform it. Carelessly turning the components onto their side or separating them in ways other than those depicted in this manual may lead to unrepairable damage.
- Do not use the Controller Holders to move the cabinet, in doing so may damage or disfigure them.

⚠CAUTION

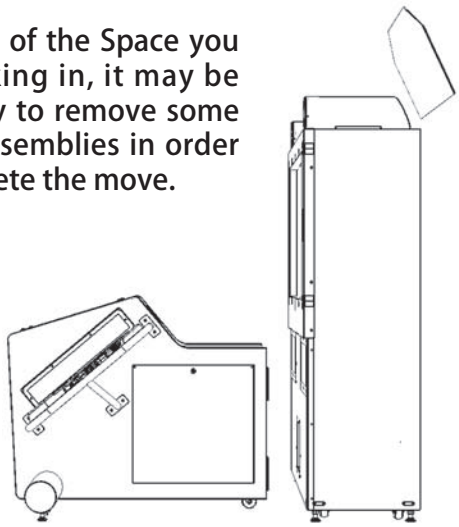
- **Due to the poor stability of the VIDEO Cabinet when 'NOT' Connected to the GUN CONSOLE , moving this unit should NOT be undertaken single handed, a minimum of two persons are required. '**
- **When moving it, manipulate the movement from either end of the Unit' DO NOT' under any circumstances Push of Pull the unit from either the Front or Rear sides, as this may result in the unit falling over and causing Damage to the unit and possible serious injury to persons in the locality.**





RAISE THE ADJUSTERS AS HIGH AS POSSIBLE

- Before attempting to move the machine, make sure that the MAIN VOLTAGE Supply is removed.
- Always raise the Adjusters up as high as they will go.
- Never attempt to move a machine unaided.
- Be aware of the Space you are working in, it may be necessary to remove some of the Assemblies in order to complete the move.



- HEIGHT PROBLEM

  To remove the Billboard POP go to Chapter 6-2 See 6-2 Fig02

- WIDTH PROBLEM

  To remove the Gun Console go to Chapter 6-3 and work Sections - 6 > 5 > 4 > 3.

8 GAME DESCRIPTION

The following explanations apply when the product is functioning satisfactory.
Should the be any actions different from the following contents, some sort of fault may have occurred. Immediately look into the cause of the fault and eliminate the cause thereof to ensure satisfactory operation.

8-1 GAME OVERVIEW

1 CREDIT
2 START
3 GAME SCREEN
4 RELOAD
5 RAGE MODE
6 DEFENCE
7 ITEMS
8 TASKS
9 BATTLE WITH THE BOSSES
10 GAME OVER
11 ADDITIONAL PLAYER
12 CONTINUE PLAY
13 TOP 10 - NAME ENTRY

8-2 HINTS FOR PLAYING THE GAME

SIX TOP HINTS GIVEN TO PLAY THE GAME

8-1 GAME OVERVIEW

1 When you insert coins, they will be counted in the credit display at the bottom of the screen. When you insert enough coins for a game, the message at the bottom will change from "INSERT COIN (S)" to "PRESS START BUTTON," and the start buttons on either side will flash.

Up to 9 credits can be counted at once. Coins inserted after 9 credits are recorded will not be counted or returned. However, the number of coins inserted will be counted in the data display and the coin meter

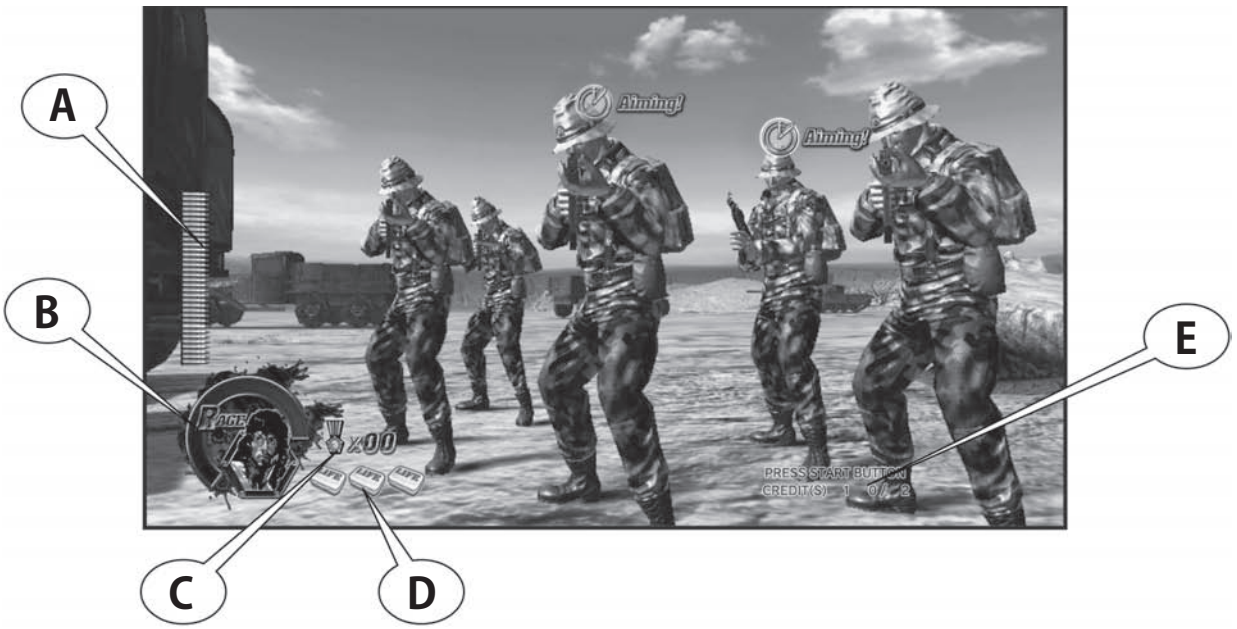
2 Which start button you press will determine which side you will play on. Once you press the start button, the game will begin.

3 Once the game starts, the video demonstration will play, followed by the stage title, and then it will go to the actual game.

GAME SCREEN (8-1 Fig 01)

The LIFE, AMMO REMAINING, RAGE GAUGE and MEDALS of the player playing on the left (Player 1) are shown at the bottom left of the screen, while those of the player playing on the right (Player 2) are shown at the bottom right of the screen. When no players are playing, the number of CREDITS are displayed.

A : AMMO REMAINING
B : RAGE GAUGE
C : MEDAL
D : LIFE
E : CREDITS.



4 RELOAD (8 -1 Fig 02)

When the player fires all AMMO REMAINING, the Gun will be EMPTY, and the "RELOAD" message will appear on the screen. The player can then reload the weapon by aiming it outside the screen. The player can reload this way even if there are still bullets left. The weapon is also reloaded automatically once a certain period of time has passed.

A : RELOAD

5 RAGE MODE (8-1 Fig 03)

The player enters RAGE MODE after pressing the RAGE MODE activation button. The player can use RAGE MODE for a set amount of time depending on the level displayed in the RAGE GAUGE. When RAGE MODE is activated, the power of the bullets and the automatic firing speed increase. If it is activated when the RAGE GAUGE is on MAX, the player will become invincible for a brief period of time.

A : RAGE ACTIVATION BUTTON

NOTE: The Rage Gauge fills up quicker when the player defeats enemies efficiently. The gauge also fills when the player is hit by an enemy attack or through items.

6 DEFENCE

Players can defend themselves from enemy hand grenades and missiles by shooting them down.

7 ITEMS

Items sometimes appear when the player shoots wooden boxes and drums in the background. The player can acquire the items by shooting them. The items fill the RAGE GAUGE, increase the player's Medals or recover LIFE.

FIRST AID KIT - LARGE
Adds 2 to the LIFE Total

FIRST AID KIT - SMALL
Adds 1 to the LIFE Tota

However, it will not increase the number of LIFE past the MAX
(See 9-3-4 for details on the MAX LIFE setting.)

DOUBLE MEDAL
Adds 2 to the MEDAL Total

SINGLE MEDAL
Adds 1to the MEDAL Total
.

The more medals a player collects, the higher the grade at the end of the stage.
Medals are obtained by completing tasks or shooting items.

RAMBO' S HEADBAND
Fills the RAGE GAUGE completely.

8 TASKS

As the game progresses, Rambo is faced with various tasks, such as defeating enemies with a knife or running away from bombs dropped from the air. Follow the on-screen instructions to complete the task

The instructions will vary depending on the task, such as shooting a target within a designated time limit or pressing the START button repeatedly. If the player fails at the task, the player's health may be damaged, possibly to the point of losing LIFE, or the player may be diverted to a path of the game where a large number of enemies appear and launch a massive attack.

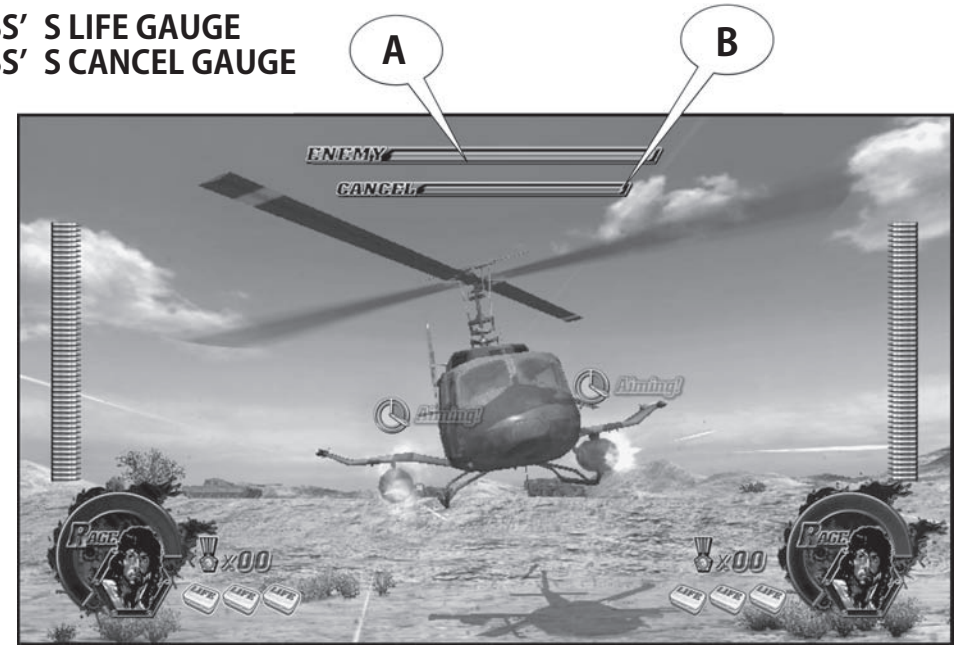
9 BATTLES WITH THE BOSSES

A unique boss awaits the player at the end of each stage. The way to defeat them varies and will be revealed in the form of on-screen instructions.

A: INSTRUCTIONS

The boss' s life gauge will decrease when the player attacks according to the instructions.
The player defeats the boss by successfully carrying out all of the instructions.
When the boss begins an attack, sometimes a cancel gauge will appear. The boss' s attack can then be avoided by forcing the cancel gauge down to zero.

A : BOSS' S LIFE GAUGE
B : BOSS' S CANCEL GAUGE



10 GAME OVER

If both players run out of LIFE, the game will END.
LIFE is shown as FIRST AID Kits.

11 ADDITIONAL PLAYER

If you want to join the game during play, insert coins and press the START button at any time. If there are enough credits remaining to play again, the START button on the side with no one playing will continue to flash. Joined the game by pressing the flashing START button.

12 CONTINUED PLAY

When all LIFE is lost, the CONTINUE message will be displayed. If you wish to CONTINUE, insert the required number of coins and press the START button again. If there are enough credits remaining to CONTINUE, you can join again by pressing the START button

.

13 TOP 10 NAME ENTRY

If your total points are within the TOP 10 after completing all the stages in the game, you will be able to enter your name.

8-2 HINTS FOR PLAYING THE GAME

1 Aim and shoot at the weapons

If you shoot the enemies' weapons, they can be defeated with a single shot. Even the large enemies with lots of strength can be quickly eliminated if you aim at their weapons

2 Defeat enemies with SUPERSHOTS!

When you defeat enemy with a SUPERSHOT, your Rage Gauge will fill quicker, and you will receive a higher grade at the end of the stage. There are three types of SUPERSHOTS: CRACK SHOTS, which are when you shoot an enemy' s weapon, FAST SHOTS, which are when you defeat an enemy soon after he appears on the screen, and HEROIC SHOTS, which are when you defeat an enemy soon after he/she appears on the screen by shooting his weapon. You' ll get through the game like a pro by making these SUPERSHOTS in succession.

3 Complete the tasks!

Various tasks will arise within the stages. If you fail at a task, your health may be damaged or you may be diverted to a more difficult path. Successfully completing the tasks is the key to better performance.

4 If you are low on LIFE, shoot items that will give you more!

When you are hit by enemy attacks, you will lose LIFE, but there are items within the stage that can increase your LIFE. You will also get more LIFE based on your performance after you clear a stage. Play often to improve your skills at getting more LIFE. Note that you will not be able to increase your LIFE past the MAX. (See 9-3-4 for details on the MAX LIFE setting.)

5 Make effective use of RAGE MODE!

If you press the RAGE MODE activation button when you have something in your RAGE GAUGE, you will enter RAGE MODE for the amount of time corresponding to what is left in your RAGE GAUGE. While in RAGE MODE, the power of your bullets and the automatic firing speed will increase, and you will not need to reload. Use RAGE MODE if you get surrounded by a large number of enemies or come up against an enemy that you are not good at defeating. If you enter RAGE MODE after filling your RAGE GAUGE completely, you will be invincible. You can fill your RAGE GAUGE quicker by defeating your enemies with SUPERSHOTS. The gauge will also fill when you are hit by enemy fire or acquire items.

6 Follow the instructions for defeating bosses carefully!

The way to defeat the boss varies for each stage. Some of them can be defeated by hitting a target with a single shot, while others have to be shot with a large number of bullets within a certain amount of time. Remember the way to defeat them and fight them accordingly.

NOTES ON THE GAME

9 EXPLANATION OF TEST AND DATA DISPLAY

⚠ WARNING

Never touch places other than those specified. Touching places not specified can cause electric shock and short circuit accidents.

⚠ CAUTION

Be careful that a finger or hand does not get caught when opening/closing the coin chute door.

STOP IMPORTANT

- **When you enter the Test Mode, fractional coin and bonus adder data is erased.**
- **Adjust the sound to the optimum volume, taking into consideration the environmental requirements of the installation location.**
- **Removing the Coin Meter circuitry renders the game inoperable.**

9 TEST MODE

Perform periodic tests and data checks using the TEST and SERVICE buttons inside the cabinet. Follow the instructions in this chapter to conduct checks when the game machine is first installed, when money is being collected, or when the game machine does not operate properly.

Shown below are the tests and screens to be used for different problems.
This product uses a LINDBERGH game board and a DVD DRIVE. In the system, a different game can be played by putting a different DVD ROM in the DVD DRIVE.

For this reason, the product' s Test Mode consists of two modes: a System Test Mode for systems in which coin settings, for instance, are made for products that use the same system, and the Game Test Mode for setting of difficulty level, etc., and for input/output test of operational units used exclusively with this product.

9 TABLE 01 EXPLANATION OF TEST MODE

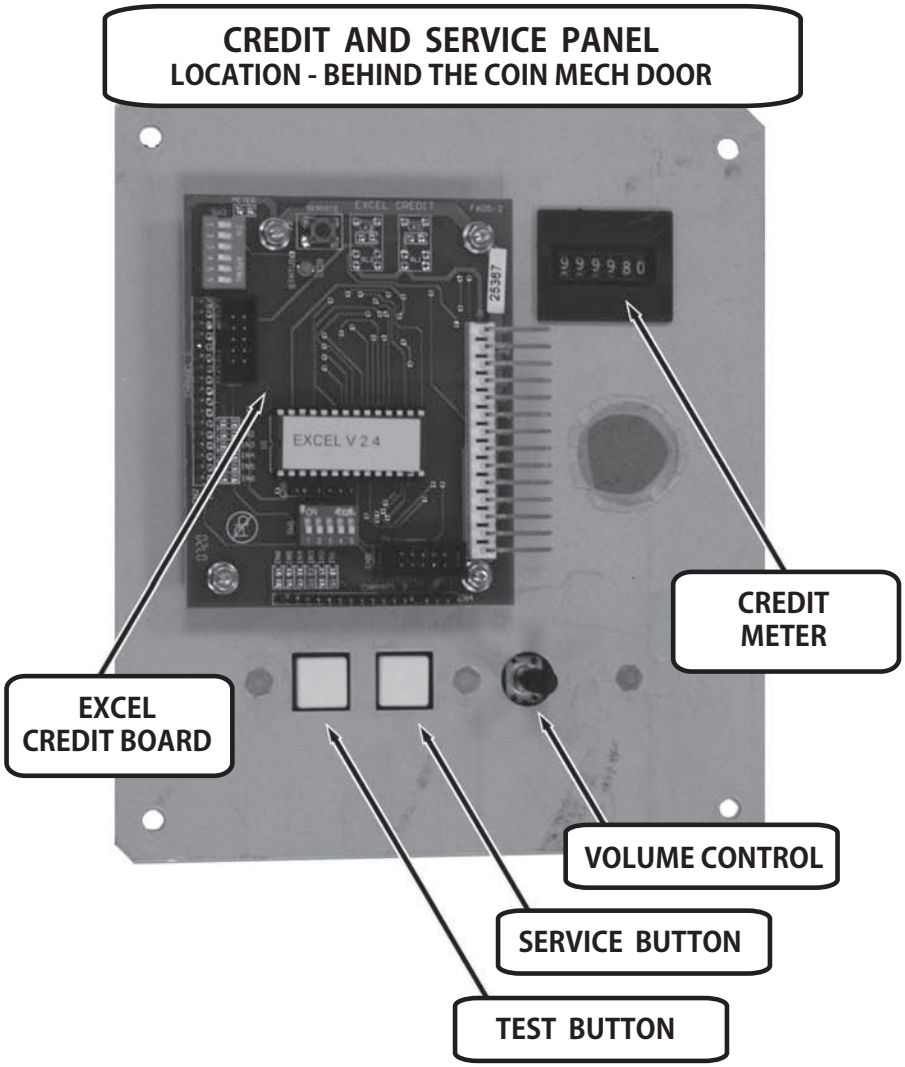
ITEMS	DESCRIPTION	REFERENCE SECTIONS
INSTALLATION OF MACHINE	1. Confirm that the Information Display Screen appears in normal fashion.	S/M Chapter 4 Chapter 9
	2. Check each Input equipment in the INPUT TEST mode.	S/M Chapter 4, Chapter 9
	3. Check each Output equipment in the OUTPUT TEST mode.	S/M Chapter 4, Chapter 9
PERIODIC MAINTENANCE	1. Check Settings.	S/M Chapter 4, Chapter 9
	2. To test each Input equipment in the INPUT TEST mode.	S/M Chapter 4, Chapter 9
	3. To test each Output equipment in the OUTPUT TEST mode.	S/M Chapter 4, 6Chapter 9
CONTROL SYSTEM	1. To check each Input equipment in the INPUT TEST mode.	S/M Chapter 4, Chapter 95
	2. Adjust or replace each Input equipment. and examine the mechanical operation of each device.	Chapter 10,
MONITOR	In the Monitor Adjustment mode, check to see if Monitor (Projector) adjustments are appropriate.	S/M Chapter 4, chapter 11
IC BOARD	1. Information Display Screen	S/M Chapter 4
	2. SPEAKER TEST	S/M Chapter 4
DATA CHECK	Check such data as game play time and histogram to adjust the difficulty level, etc.	9-3-7

NOTE: "S/M" in the table denotes LINDBERGH service manual, which is provided separately.

9-1 SWITCH UNIT AND COIN METER

The SWITCH UNIT AND COIN METER Panel is located behind the Coin Mech Door. Unlock and open the coin chute door. Inside is a switch unit.

A	TEST BUTTON :	Allows access to the machines 'TEST MODE' routine. Becomes the button to confirm selections in Test Mode
B	SERVICE BUTTON :	Gives credits without registering on the coin meter. Becomes the button to select items in Test Mode.
C	VOLUME CONTROL :	Adjusts sound volume of the Left and Right Speakers located inside the Monitor Cabinet. Turn Clockwise to increase the Volume



E	CREDIT METER :	Records the Total Number of Games Played resulting from Coins being Inserted for Play.

9-2 SYSTEM TEST MODE

IMPORTANT

● The details of changes to Test Mode settings are saved when you exit from Test Mode by selecting EXIT from the system Test Mode menu. Be careful because if the power is turned off before that point, changes to the settings will be lost.

● Use with the specified settings. If settings other than those specified are used, inappropriate operations or malfunction may occur.

● Go to BOOKKEEPING in GAME TEST MODE to access this product' s data.

● Read the LINDBERGH RED EX service manual that comes with the product for details on the System Test Mode. However, you should perform the settings for this product according to the manual you are reading.

In the System Test Mode, the main activities include checking LINDBERGH RED EX information and actions and the setting of coin/credit. Also, a screen appears for checking screen adjustments. For details, see the LINDBERGH RED EX service manual, which is provided with the product.

Use the following settings with this product. If the settings are not as specified, error messages might appear and operations might not be normal.

NOTE : If you proceed to the game screen using different settings, you will get an "Error 200" message on the screen. If that happens, go back to the SYSTEM TEST MENU and change the settings to the following:

COIN ASSIGNMENTS :	COIN CHUTE TYPE	(Type of Coin Chute used)	-	COMMON
	SERVICE TYPE	(Type of Service Button used)	-	COMMON

IMPORTANT

- **When changing the game configuration, changes will not take effect until the Game Test Mode properly after configuration changes. Be sure to exit the Game Test Mode properly after configuration changes.**
- **Do not configure the game in ways not described in this text. It is possible that the game will not function properly.**

9-2 'SYSTEM TEST MODE' Menu

9-2 Fig 01

1 When the TEST Button is pressed, the System Test Menu Screen (SYSTEM TEST MENU) appears.

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

3 Press the TEST Button to confirm selection of the item.

4 When testing and checking are completed, select EXIT and press the TEST Button. The System Test Menu Screen reappears.

5 When all tests are completed, select EXIT and press the TEST Button. The Game Screen reappears.

9-3 'GAME TEST MODE' Menu

IMPORTANT

When changes to the Game Configuration are made, they will not take effect unless the Game Test Mode is exited properly. If this exit routine is not completed correctly, the Game Configuration will remain unchanged.

Do not configure the game in ways not described in this text. It is possible that the game will not function properly.

1 Select GAME TEST MODE from the System Test Menu Screen to display the Game Test Mode Menu .

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

3 After the test is complete, move the cursor to EXIT and press the TEST Button to return to the GAME TEST Menu Screen.

9-3 Fig 01

4 The following is available to be checked during the GAME TEST MODE :

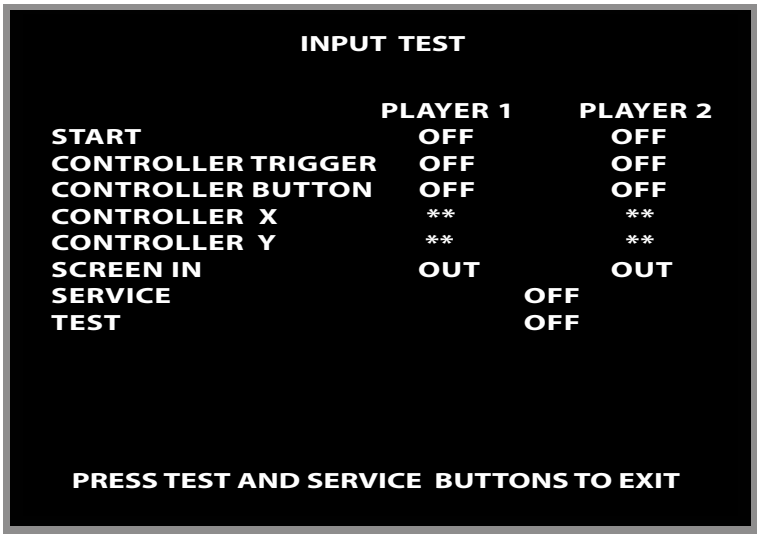
9-3-1	INPUT TEST	Test each Input.
9-3-2	OUTPUT TEST	Test each Output.
9-3-3	GAME ASSIGNMENTS	Adjust Game Settings.
9-3-4	CONTROLLER ADJUSTMENT	Adjust the Gun Aim Settings.
9-3-5	BOOK KEEPING	View Game Backup Data.
9-3-6	BACKUP DATA CLEAR	Clear Game Backup Data.
9-3-7	EXIT	Go back to the System Test Menu.

5 During the GAME TEST MODE, select EXIT and pressing the TEST Button to step back to the SYSTEM TEST MENU, selecting EXIT and pressing the TEST Button again will exit the routine and the GAME SCREEN reappears.

9-3 GAME TEST MODE

9-3-1 'INPUT TEST MODE' Menu

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



9-3-1 Fig 01

Use the SERVICE Button to Select the Input to be tested and the TEST Button to action the test. - PLAYER 1 refers to the Gun on the LEFT,
- PLAYER 2 refers to the Gun on the RIGHT

1. START - This will say ON when the START buttons are being pressed and OFF when they are released

2. CONTROLLER TRIGGER - This will say ON when the triggers on the controllers are being pulled and OFF when they are released.

3. CONTROLLER BUTTON - This will say ON when the buttons on the controllers are being pressed and OFF when they are released.

4. CONTROLLER X - This shows the aim location for the X direction on the controllers. .

5. CONTROLLER Y - This shows the aim location for the Y direction on the controllers.

6. SCREEN IN - This will say IN when the controllers are aimed inside the screen and OUT when they are aimed outside the screen.

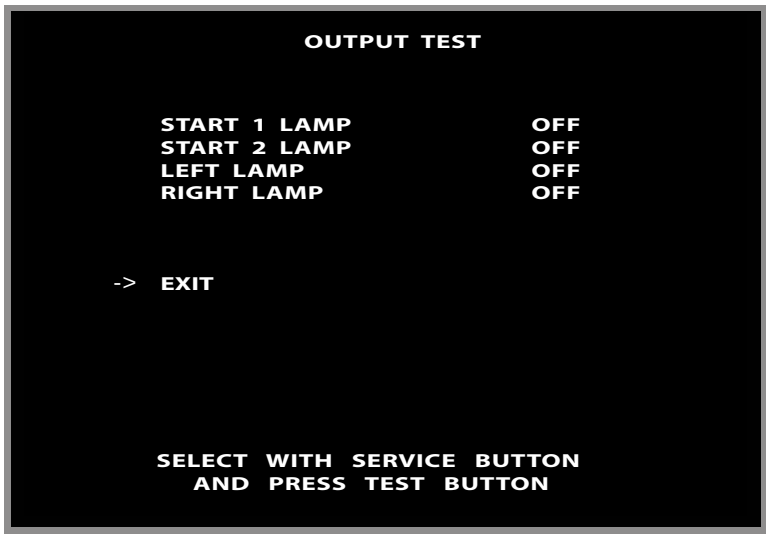
7. SERVICE - This will say ON when the SERVICE button is being pressed and OFF when it is released.

8. TEST - This will say ON when the TEST button is being pressed and OFF when it is released.

9. When all checks are completed, press the TEST Button and the SERVICE Button simultaneously. The GAME TEST MODE screen reappears.

9-3-2 'OUTPUT TEST MODE' Menu

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



9-3-2 Fig 01

1. Press the SERVICE Button and move the cursor to select the output device to be Tested.

2. When the TEST Button is pressed, the Output next to the cursor is tested and the device operates. Confirm that the output device behaves in compliance with manipulations.

3. **START1 LAMP** This will say ON when you select START1 LAMP and press the TEST button. The Player 1 START button on the cabinet will then light up.
Press the TEST button again to turn it OFF.

4. **START2 LAMP** This will say ON when you select START2 LAMP and press the TEST button. The Player 2 START button on the cabinet will then light up.
Press the TEST button again to turn it OFF.

5. **LEFT LAMP** When you select LEFT LAMP and press the TEST button, the number will change sequentially, and the LEFT LAMP on the cabinet will flash on/off or light according to that number. Press the TEST button again to turn it OFF.

6. **RIGHT LAMP** When you select RIGHT LAMP and press the TEST button, the number will change sequentially, and the RIGHT LAMP on the cabinet will flash on/off or light according to that number. Press the TEST button again to turn it OFF

7. Move the arrow to EXIT and press the TEST Button to return to the GAME TEST Menu Screen.

9-3-3 'GAME ASSIGNMENTS'

Select GAME ASSIGNMENTS' to display the following screen and check the GAME SETTINGS. This test should be used periodically to check that each output device is functioning correctly.

Press the SERVICE Button to step the Arrow around to select the function required, then press the TEST Button to gain entry.

1 GAME DIFFICULTY Set the level of difficulty to one of five levels ;
VERY EASY -> MEDIUM EASY ->NORMAL -> MEDIUM HARD -> VERY HARD.

2 LIFE SETTING - INITIAL LIFE The number of lives the player will start the game with, can be set between 1 and 9. However, it cannot be set higher than the MAX LIFE setting when the MAX LIFE setting is lower than 9.

3 LIFE SETTING - MAX LIFE The maximum number of lives a player may have. can be set between 1 and 9.

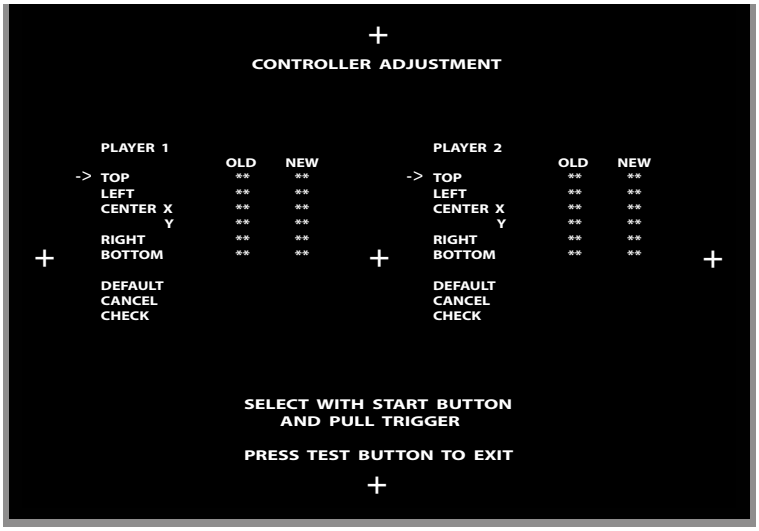
4 LIFE SETTING - FREE CONTINUE LIFE The number of LIFE the player will have to CONTINUE. Can be set between 0 and 4. The total value for INITIAL LIFE and FREE CONTINUE LIFE cannot exceed the MAX LIFE setting.

5 ADVERTISE SOUND Set the sound level for the advertisements to one of five levels :
"ON" -> "7/10" -> "5/10" -> "3/10" -> "OFF."
The closer you get to OFF, the lower the volume.

6 When all setting adjustments are completed, select EXIT and press the TEST Button. The GAME TEST MODE screen reappears.

9-3 GAME TEST MODE

9-3-4 'CONTROLLER (GUN) ADJUSTMENT' - GENERAL



TO ADJUST THE CONTROLLER CALIBRATION :
Use the Player 1 START Button to move the cursor when setting up the Left Hand Controller.
Use the Player 2 START Button to move the cursor when setting up the Right Hand Controller.

1 Press each player START button and move the cursor to select an item, then press the TEST Button to test the item.

2 **TOP** — **Sets the TOP correction value for the UP and DOWN direction.**

3 **LEFT** — **Sets the LEFT side correction value for the LEFT and RIGHT direction..**

4 **CENTER** — **Sets the center correction value. CENTER X is for the** LEFT and RIGHT **direction, and CENTER Y is for the UP and DOWN direction.**

5 **RIGHT** — **Sets the RIGHT side correction value for the LEFT and RIGHT direction.**

6 **BOTTOM** — **Sets the BOTTOM correction value for the UP and DOWN direction.**

7 **DEFAULT** — Sets the value for the player detection position to the default setting.

8 **CANCEL** — **Returns the values to the previous settings.**

9 **CHECK** — **Checks the detection position.**

10 **When all setting adjustments are completed, select EXIT and press the TEST Button. The GAME TEST MODE screen reappears.**

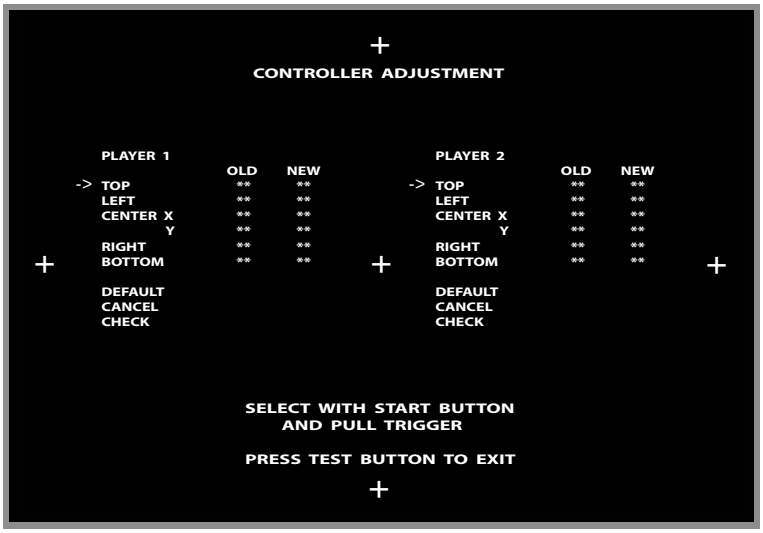
9-3-4 'CONTROLLER (GUN) ADJUSTMENT' - METHOD

HOW TO AIM

A - Align the top of the groove on the controller' s rear sight with the horizontal line of the plus sign on the screen.

B - Align the top of the controller' s front sight with the horizontal line as well.

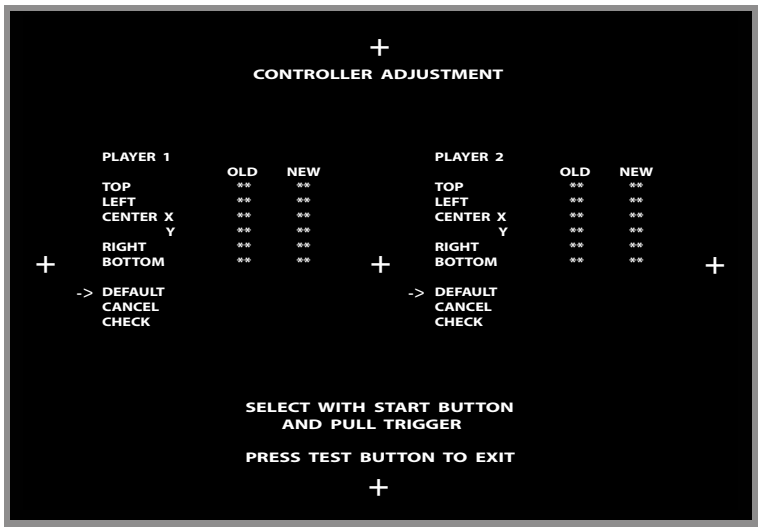
C - Pull the trigger when the top of the rear sight and top of the front sight line up with the center of the plus sign on the screen.



.

1	**TOP adjustment**	Select TOP, AIM at the TOP MARK, and pull the TRIGGER. The new value will appear in the NEW column. The previous value will be shown in the OLD column.
2	**LEFT adjustment**	Select LEFT, AIM at the LEFT SIDE MARK, and pull the TRIGGER. The new value will appear in the NEW column. The previous value will be shown in the OLD column.
3	**CENTER adjustment**	Select CENTER, AIM at the CENTRE MARK, and pull the TRIGGER. The new values for X and Y will appear in the NEW column. The previous X and Y values will be shown in the OLD column. ..
4	**RIGHT adjustment**	Select RIGHT, AIM at the RIGHT SIDE MARK, and pull the TRIGGER The new value will appear in the NEW column. The previous value will be shown in the OLD column..
5	**BOTTOM adjustment**	Select BOTTOM, AIM at the BOTTOM MARK, and pull the TRIGGER. The new value will appear in the NEW column. The previous value will be shown in the OLD column.
6	Use the CHECK option to CHECK the DETECTION POSITIONS	

9-3-4 'CONTROLLER (GUN) ADJUSTMENT' - DEFAULT



EXPLANATION OF DEFAULT

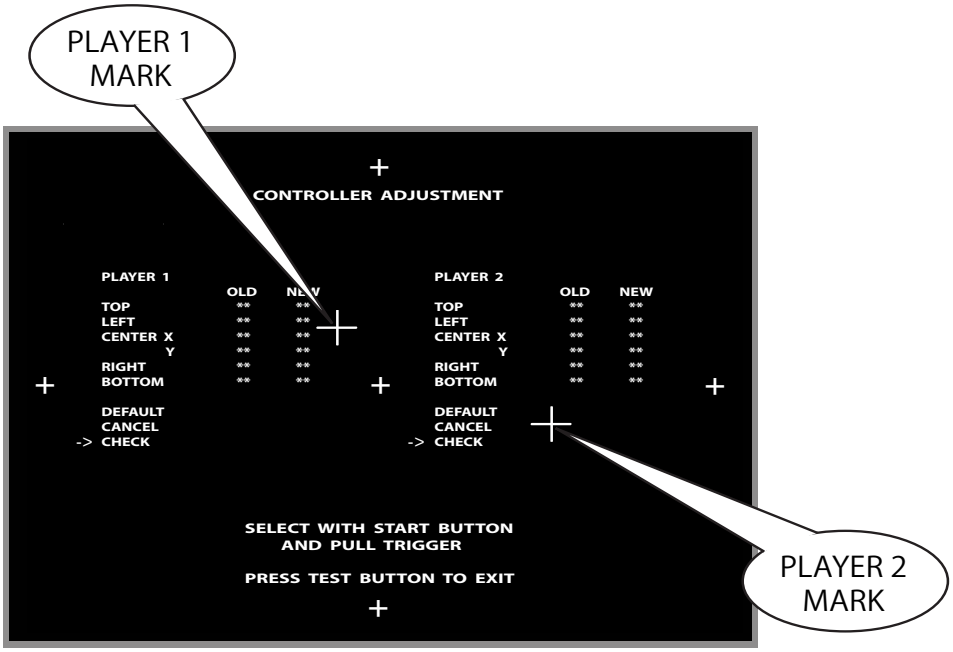
Sets the value for the player detection position to the default.

1 Pull the trigger on the controller after selecting DEFAULT on the CONTROLLER ADJUSTMENT screen to set the detection position to the default settings.

2 Use the CHECK option to check the detection position.

3 When all checks are completed, press the TEST Button. The GAME TEST MODE screen reappears after saving the setting data

9-3-4 'CONTROLLER (GUN) ADJUSTMENT' - CHECK



EXPLANATION OF CHECK

Checks the detection position of the controller.

PLAYER 1 Gun Cross	This is displayed when the control unit is pointed at the screen.
PLAYER 2 Gun Cross	This is displayed when the control unit is pointed at the screen.

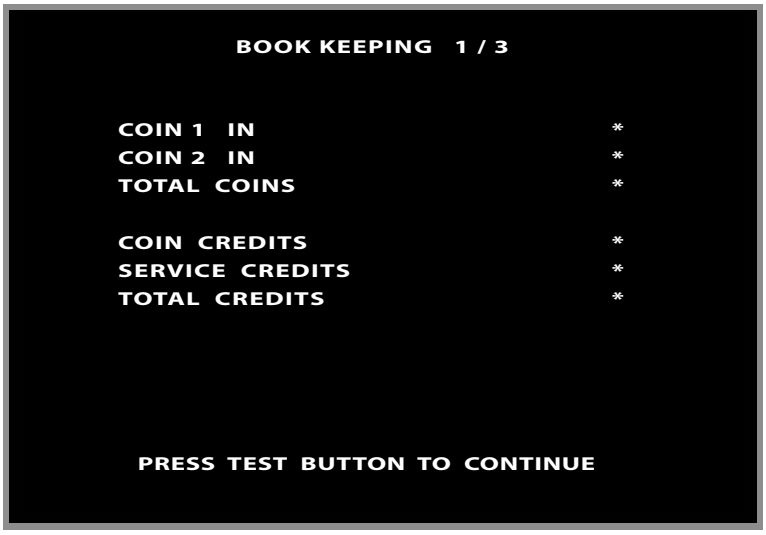
1 Select CHECK on the CONTROLLER ADJUSTMENT screen to check the detection position.

2 If you point the Controller at the Screen, the GUN MARK (cross hairs) for each of the players will be shown on the screen. Use this screen to check whether or not the detection position is correct.

3 When all checks are completed, press the TEST Button. The GAME TEST MODE screen reappears after saving the setting data

9-3-5 'BOOK-KEEPING' (ONE)

Selecting 'BOOKKEEPING' from the GAME TEST MENU will display GAME OPERATION DATA. This Data is displayed over a series of three screens, and pressing the Test Button will advance to the next Screen. Pressing the Test Button on the third screen will EXIT the BOOKKEEPING Mode and return the Display to the GAME TEST MENU.



1 BOOK KEEPING (Screen 1/3) - COINS and CREDIT

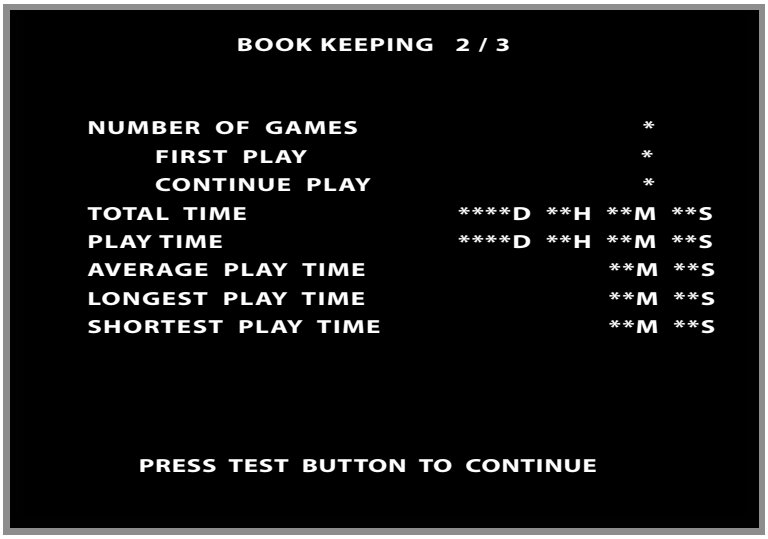
Displays information on the following :

COIN 1 IN - Records the number of GAMES PLAYED against the inserted Coin Value.
COIN 2 IN - Not fitted as standard. (If fitted, it operates the same as COIN 1 IN)
TOTAL COINS - Records the TOTAL GAMES PLAYED from all Coins Inserted.

COIN CREDIT - Records the number of Credits entered by the COINS IN.
SERVICE CREDIT - Records the number of Credits entered by the SERVICE Button.
TOTAL CREDITS - Records the TOTAL NUMBER OF CREDITS that were entered..

9-3-5 'BOOK-KEEPING' (TWO)

Press 'TEST' Button to advance to the next Screen - BOOK-KEEPING 1/2.



2 BOOK KEEPING (Screen 2/3) - GAME TIMINGS

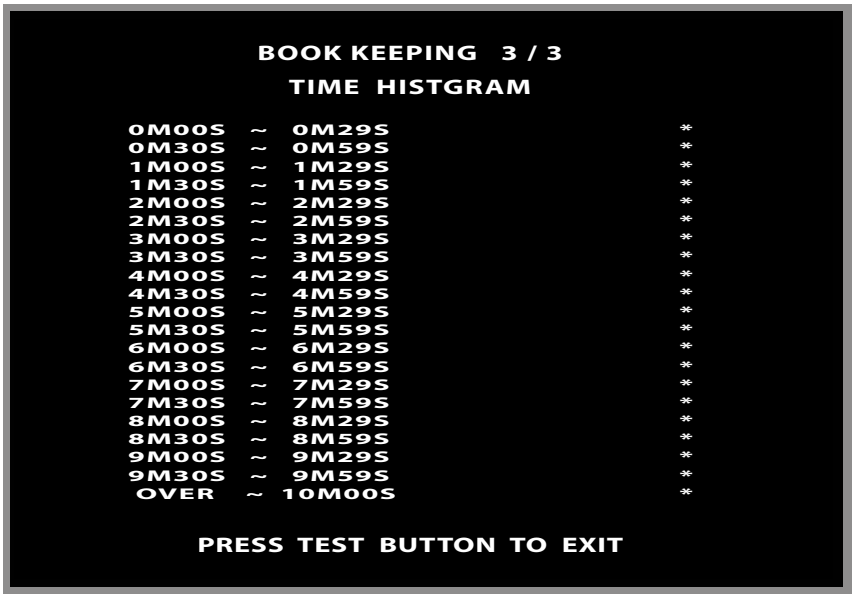
Displays information on the following :

NUMBER OF GAMES	Total number of games played by Player 1 and Player 2.
FIRST PLAY	Total number of first time plays by Player 1 and Player 2.
CONTINUE PLAY	Total number of times Player 1 and Player 2 opted to continue.
TOTAL TIME	Amount of time the cabinet has been in operation. (Does not count TEST MODE)
PLAY TIME	Amount of time game has been played.
AVERAGE PLAY TIME	Average play time for one game.
LONGEST PLAY TIME	Longest play time for one game
SHORTEST PLAY TIME	Shortest play time for one game.

In the above Table the following will apply : * = THE NUMBER
D = DAYS
H = HOURS
M = MINUTES
S = SECONDS

9-3-5 'BOOK-KEEPING' (THREE)

Press 'TEST' Button to advance to the next Screen - BOOK-KEEPING 3/3.



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3 BOOK KEEPING (Screen 3/3) - TIME HISTOGRAM

The GAME HISTOGRAM displays how many times a play ended within certain time intervals. Use this as a reference when determining settings such as difficulty level.

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

In the above Table the following will apply : M = MINUTES S = SECONDS

Press 'TEST' Button to Exit BOOK-KEEPING 3/3 and Return to the GAME TEST MENU.

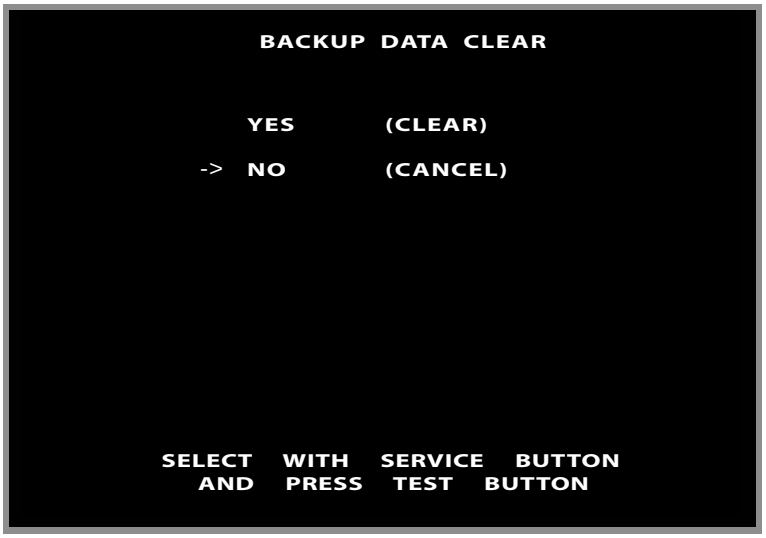
9-3-6 'BACK UP DATA CLEAR'

Press the 'SERVICE' Button to select 'BACKUP DATA CLEAR' from the GAME TEST MENU and then press the TEST Button, to gain entry to the 'BACKUP DATA CLEAR' Menu

1 Press the 'SERVICE' Button to select 'YES' followed by the TEST Button, will automatically CLEAR the BACK UP DATA and reset all readings to '0' The BACK UP DATA Screen will change to the 'COMPLETED' Screen to confirm that the Data is Cleared. Pressing the TEST Button will EXIT the BACK UP DATA CLEAR routine and Return the Screen to the GAME TEST Menu.

2 Press the 'SERVICE' Button to select 'NO' followed by the TEST Button, will automatically EXIT the BACKUP DATA CLEAR and return the Machine to the GAME TEST Menu without changing any of the DATA Records.

BACKUP DATA CLEAR MENU - Screen



BACKUP DATA COMPLETED - Screen

9-3-7 'INTERFERENCE PREVENTION WIRING'

⚠ WARNING

- "Store maintenance man" or "Engineer" must be doing of this work. When it works by there are neither knowledge nor a technology, it causes the breakdown.
- Please work after cutting the power on/off switch without fail. It causes the electric shock and the short-circuit accident.
- Please do not damage wiring. When wiring is damaged, it causes the electric shock and the short-circuit accident.

When the game machines of a same or similar type are installed side by side, their sensors may interfere with each other. To reject the interference, follow the procedure below. The following game machines employ a same or similar type of sensor. If interference happens to the sensors, operation of the games may be mutually disturbed.

- THE HOUSE OF THE DEAD 2, U/R type, DX type and Super DX type
- DEATH CRIMSON, U/R type and DX type
- THE LOST WORLD, U/R type, DX type and Super DX type
- BRAVE FIRE FIGHTERS
- CONFIDENTIAL MISSION, U/R type and DX type
- SHAKATTO TAMBOURINE
- LUPIN THE 3RD THE SHOOTING, U/R type and DX type
- THE MAZE OF THE KINGS, U/R type and DX type
- THE HOUSE OF THE DEAD 3, U/R type and DX type
- VIRTUA COP 3, U/R type and DX type
- GHOST SQUAD, U/R type and DX type
- THE HOUSE OF THE DEAD 4, SPECIAL, U/R type and DX type
- 2 SPICY, U/R type

1. Please turn off power.

2. The coin door is opened. The wire with the tag of "FREQ" is a prevention of getting entangled wire

3. Please display the game machine that connects the prevention of getting entangled wire and the game machine that pulled out the wire alternately when the same kind of game machine is arranged and set up. Please keep the removed wire safe.

10 CONTROL UNIT

⚠ WARNING

- When working with the product, be sure to turn the power off. Working with the power on may cause an electric shock or short circuit.
- Be careful not to damage the wires. Damaged wires may cause an electric shock, short circuit or present a risk of fire.
- Do not touch any parts that are not specified in these directions. Touching unspecified locations may lead to electric shock or cause short circuits.
- This work should be performed by site maintenance personnel or other skilled professionals. Work performed by non-technical personnel can cause a severe accident such as an electric shock.
- Exercise due caution in performing soldering procedures. If soldering iron is handled carelessly, there could be fires or burns.
- Proceed very carefully when heating thermal contraction tube. Careless operations can result in fires or burns.

⚠ CAUTION

- When fastening plastic parts, be careful not to tighten screws and nuts excessively. Otherwise parts may be damaged, resulting in injuries from fragments, etc.
- Be careful not to get hand or finger caught when removing or attaching the parts.
- Disconnection and connection of connectors will be performed within the narrow cabinet space. Take due care not to scratch or otherwise injure yourself.

STOP IMPORTANT

- After adjusting or replacing a microswitch, always check ON/OFF function of the switch on the input test screen of the test mode.

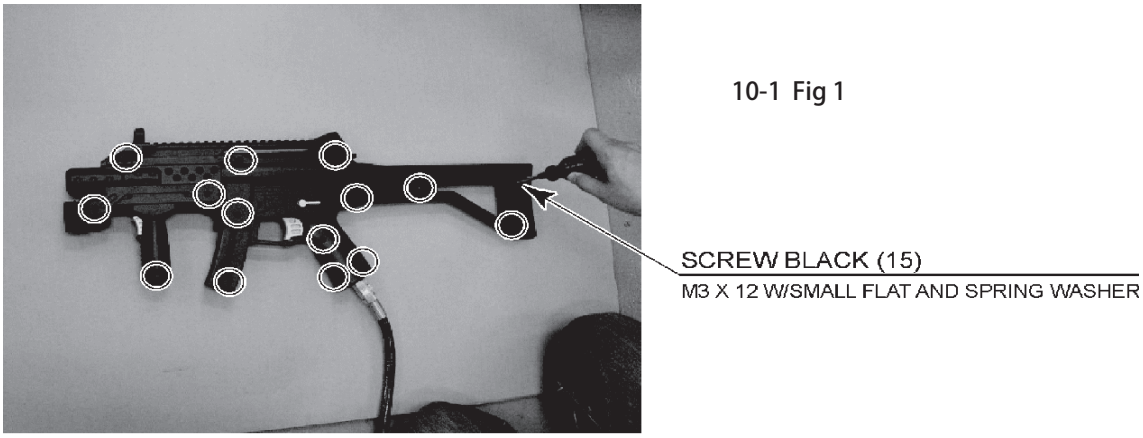
10.1 HOW TO REPLACE THE MICROSWITCH

If the operability of the Control Unit is unsatisfactory, or if settings on the test mode calibration screen are ineffective, the problem could be a defective mechanism, displacement of the position where sensor or microswitch has been fastened, or malfunctioning of the sensor or microswitch. Carry out the following procedure to replace Control Unit sensor or microswitch.

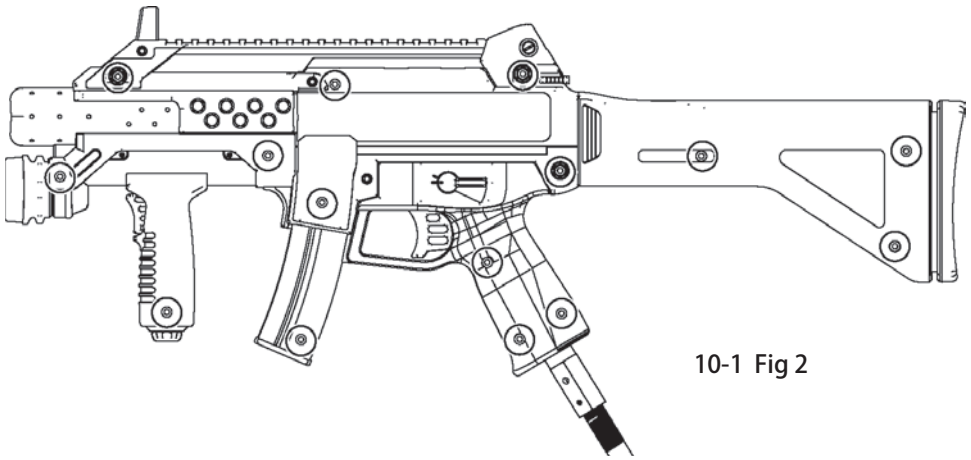
To replace the Gun Controls internal components, first separate the left shell (Cover L) from right shell (Cover R). The controls internal components are mounted on the right shell, so work with the gun lying on its right side. To replace the Shot Selector button microswitch, first remove the Shot Selector button from the right shell.

1 Turn off the power.

2 Remove the 15 screws to separate the two shells.



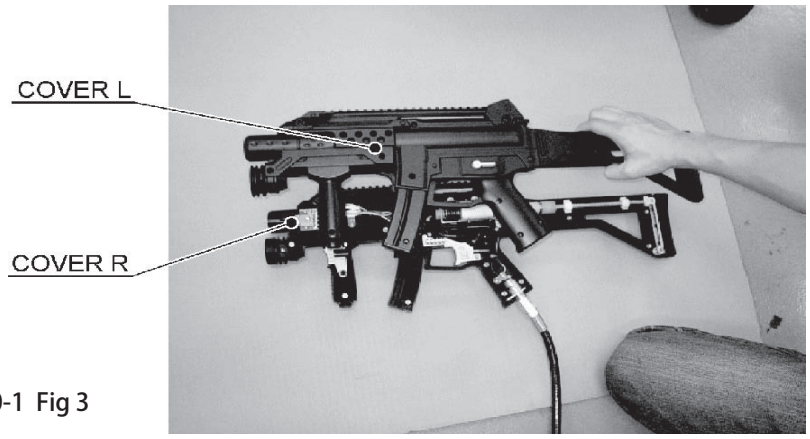
10-1 Fig 1



10-1 Fig 2

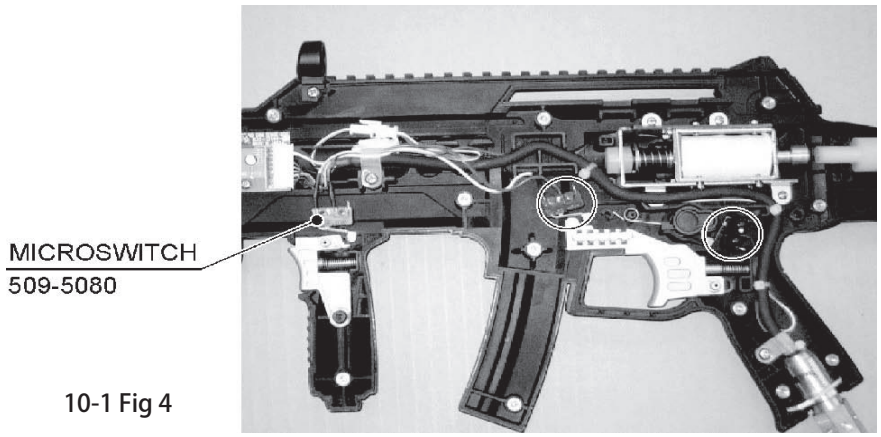
10.1 HOW TO REPLACE THE MICROSWITCH

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



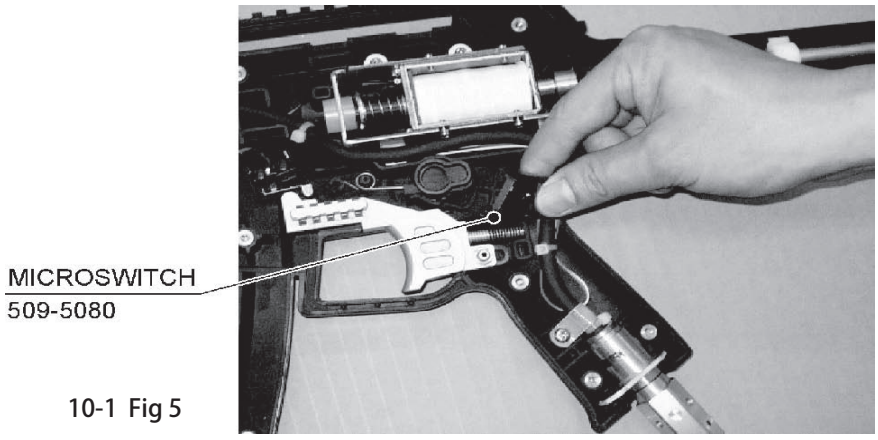
10-1 Fig 3

4 Remove the microswitch to be replaced from cover R. There are a total of three microswitches.



10-1 Fig 4

5 Remove the soldering to take out the microswitch.

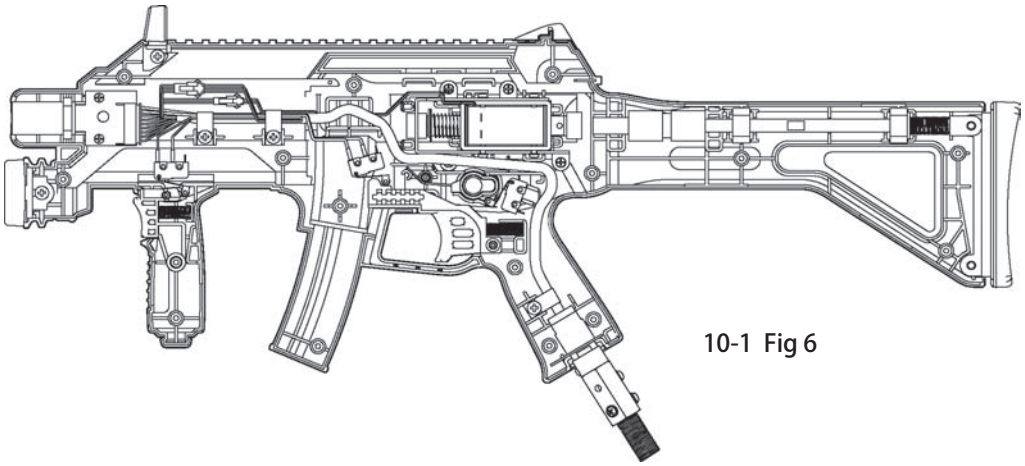


10-1 Fig 5

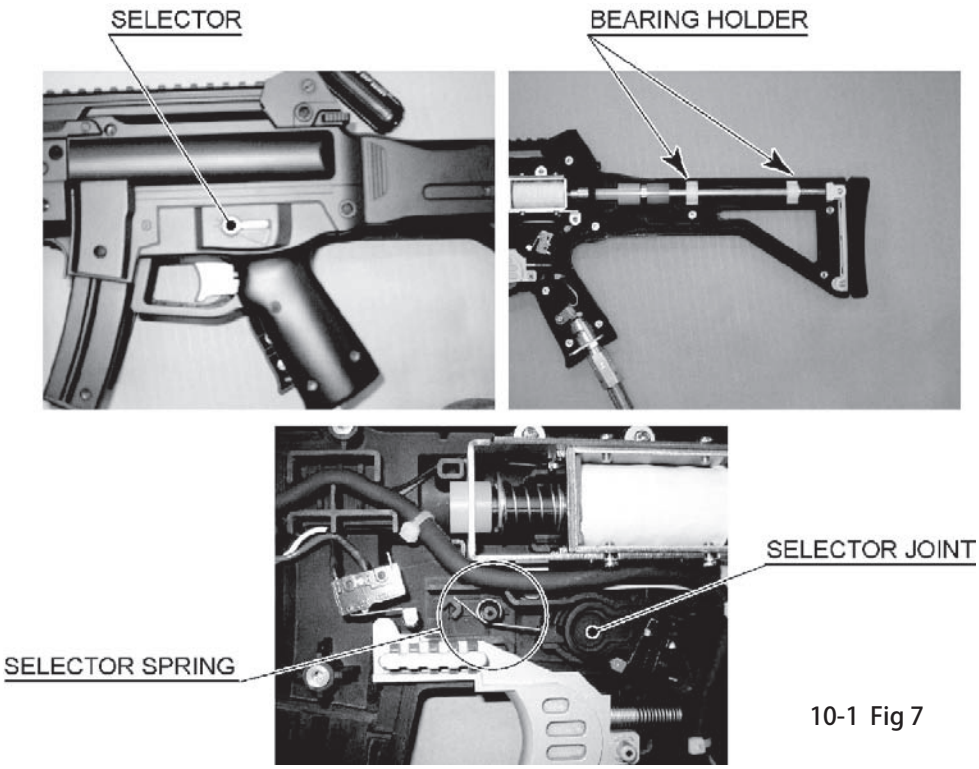
10.1 HOW TO REPLACE THE MICROSWITCH

6 Solder the new microswitch in place to reconstruct the gun controller. When performing this step, verify the points listed below before reattaching Cover L and Cover R.

- The wires and connectors are laid out correctly in Cover R.
- The bearing holder is securely in place when the pad assembly spring is compressed.
- The selector is laid out horizontally.
- The selector joint and selector spring are properly set.



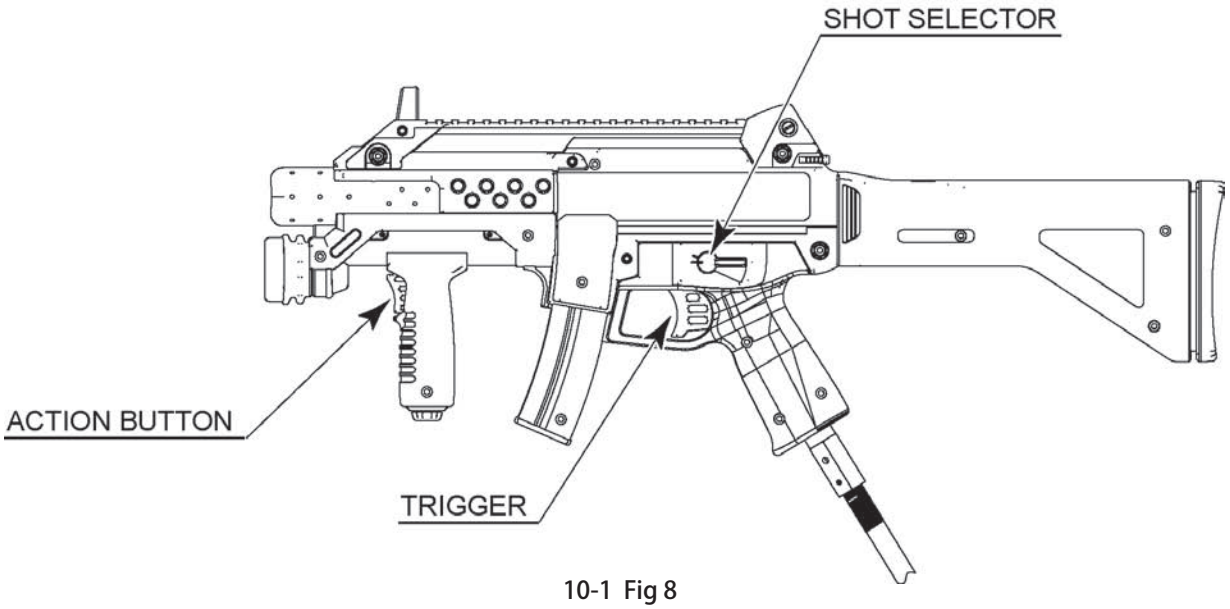
10-1 Fig 6



10-1 Fig 7

10.1 HOW TO REPLACE THE MICROSWITCH

7 Operate the TRIGGER, SHOT SELECTOR and ACTION buttons to make sure that the microswitches turn ON/OFF correctly.



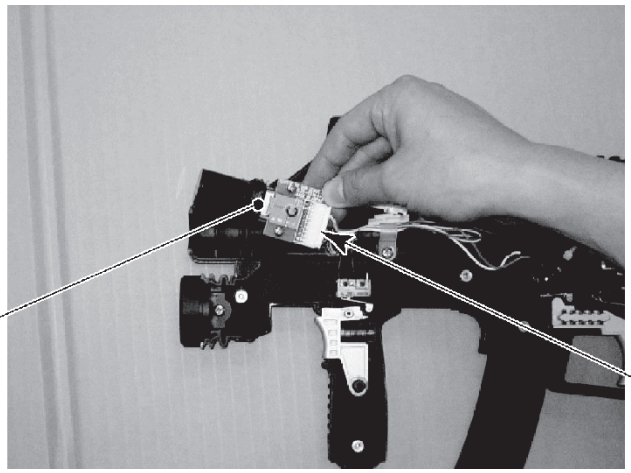
10-1 Fig 8

8 After replacement, perform an INPUT TEST, referring to the instruction in the "GAME TEST MODE"

10-2 REPLACING THE SENSOR UNIT

1 Follow the instructions 1 to 3 of “Replacing the Microswitch” to remove the Cover L ('10-1')

2 Remove the connector to replace the sensor unit.



10-2 Fig 1

3 Replace the sensor unit, refit the connector and re-attach the unit into the Right hand cover.

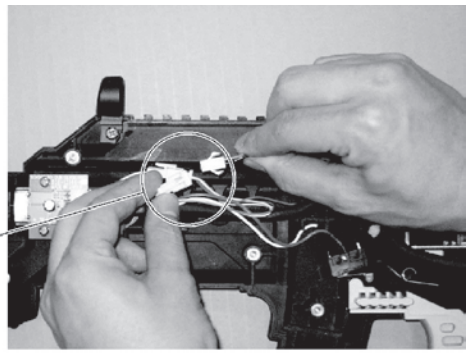
4 Reassemble the gun paying particular attention to the placement of components listed in 10-1 Fig 7, and attach Cover R while being careful of each of these parts.

5 After replacement, perform the GUN ADJUSTMENT set up, referring to the instructions in “Game Test Mode”

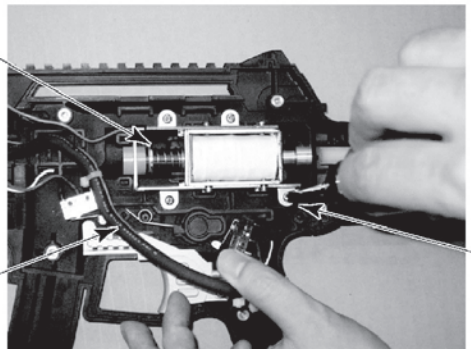
10-3 REPLACING THE SOLENOID

1 Follow the instructions 1 to 3 of “Replacing the Microswitch” to remove the Cover L ('10-1')

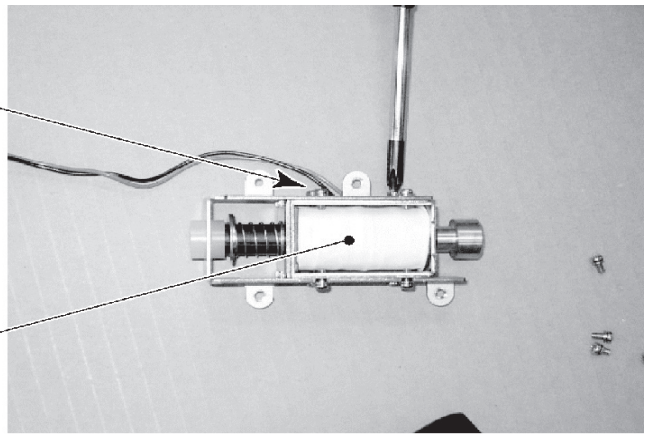
2 Remove the 2 pin connector, wire and 4 screws to remove the solenoid assembly.



10-3 Fig 1



3 Remove the 8 screws and replace the solenoid.



10-3 REPLACING THE SOLENOID

4 Secure the solenoid assembly with 4 screws and replace the connector. When doing this, make sure not to damage the wiring.

5 Reassemble the gun paying particular attention to the placement of components listed in 10-1 Fig 7, and attach Cover R while being careful of each of these parts.

6 After replacement, perform the OUTPUT TEST, sequence referring to the instructions in "GAME TEST MODE"

11 MONITOR (56” DLP)

11-1 SAFETY PRECAUTIONS WHEN HANDLING THE MONITOR

⚠ WARNING

Responding to breakdown or abnormality

- **If smoke or a strange odor appears, immediately unplug the power cable from the power source.**

  Continuing to use the product may cause a fire or an electric shock. Ensure that smoke is no longer emitted, and contact the point of purchase.

- **If nothing displays on the screen, immediately unplug the power cable from the power source.**

  Continuing to use the product may cause a fire or an electric shock. Contact the point of purchase and request an inspection.

- **If water or a foreign object enters the monitor’s interior, immediately unplug the power cable from the power source.**

  Continuing to use the product may cause a fire or an electric shock. Contact the point of purchase and request an inspection.

- **If the monitor is dropped or the cabinet is damaged, immediately unplug the power cable from the power source.**

  Continuing to use the product may cause a fire or an electric shock. Contact the point of purchase and request an inspection.

During operation

- **Do not repair, reconstruct, or disassemble the monitor.**

  The monitor’s interior contains high voltage parts. A fire or an electric shock could result.

  For inspections, adjustments, and repair of the monitor’s interior, request work from the point of purchase.

- **Do not insert foreign objects.**

  If metal objects or flammable materials such as paper are inserted into the interior through ventilation openings or other apertures, an electric shock could result.

- **In the event of a thunder storm, do not touch the product or the power cable. An electric shock could result.**

- **Make sure to perform appropriate adjustments. Do not operate the product when the screen is flickering, distorted, or experiencing other abnormalities. Images from an improperly adjusted screen could cause players and other customers to experience dizziness, headaches, and other ailments.**

11-2 CLEANING THE SCREEN SURFACE

⚠CAUTION

- **Use a soft, dry cloth (flannel-type) to wipe away dirt. Do not use materials such as coarse mesh gauze.**
- **Alcohol (ethanol) is the recommended solvent for removing dirt. When using a cleaning agent, follow the precautions below.**
  - **Dilute neutral cleaning agents for home use with water. Soak a soft cloth in the solution, and wring it thoroughly before wiping the screen.**
  - **Do not use abrasive cleaning agents or powders, or cleaning agents containing bleach.**
  - **Do not use alkaline cleaning agents such as glass cleaners, or solvents such as thinners.**
- **Do not scrub or scratch the screen surface with abrasive materials such as brushes or scrub brushes.**

CLEAN THE SCREEN SURFACE ONCE A WEEK.

11-3 ADJUSTMENT METHOD

IMPORTANT

All adjustment values are set accurately at the time of shipping from the factory. Do not readjust these values needlessly or apply adjustments not specified in this manual. The display may not appear properly if the values are incorrect.

Remote Control

You can use the remote control up to a distance of about 23 feet from the TV.

1 **POWER**
Turns the TV on and off.

2 **TV**
Selects the TV mode directly.

3 **NUMERIC BUTTONS**
Press to change the channel.

4 [-]
Press to select additional channels (digital and analog) being broadcast by the same station. For example, to select channel "54-3", press "54", then press "[-]" and "3".

5 **MUTE**
Press to temporarily cut off the sound.

6 [+] **VOL** [-]
Press to increase or decrease the volume.

7 **SOURCE**
Press to display and select the available video sources.

8 **CH LIST**
Used to display Channel Lists on the screen.

9 **TOOLS**
Use to quickly select frequently used functions.

0 **UP▲ / DOWN▼ / LEFT◄ / RIGHT► / ENTER**
Use to select on-screen menu items and change menu values.

! **INFO**
Press to display information on the TV screen.

@ **COLOR BUTTONS**
Use these button in the CH LIST and W.LINK.

CC
Controls the caption decoder.

$ **E.MODE**
Press to select the preset display and sound modes for sports, cinema and games.

% Use these buttons in the DMA, W.LINK and Anynet+ modes. ([●] : This remote can be used to control recording on Samsung recorders with the Anynet+ feature)

^ **ON/OFF**
Press to backlight the buttons on the remote.
This function is convenient for using at night or when the room is dark. (Using the remote control with the light button set to On will reduce the battery usage time.)

& **PRE-CH**
Tunes to the previous channel.

* **CH**
Press to change channels.

(**MENU**
Displays the main on-screen menu.

) **W.LINK (WISELINK)**
This function enables you to view and play photo and music files from an external USB device. (Refer to pages 70 (Photo) and 79 (Music))

a **RETURN**
Returns to the previous menu.

b **EXIT**
Press to exit the menu.

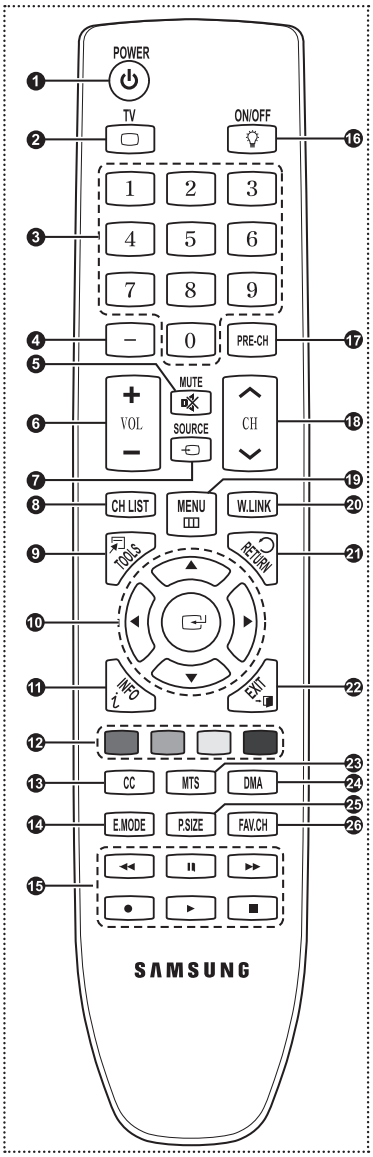
c **MTS**
Press to choose stereo, mono or Separate Audio Program (SAP broadcast).

d **DMA (Digital Media Adapter)**
Use this when connecting a Samsung DMA device through an HDMI interface and switching to DMA mode.
For more information on the operating procedures, refer to the user manual of the DMA.

This button is available when "Anynet(HDMI-CEC)" is "On".

e **P.SIZE**
Picture size selection.

f **FAV.CH**
Press to switch to your favorite channels.



The performance of the remote control may be affected by bright light.

11-3 ADJUSTMENT METHOD

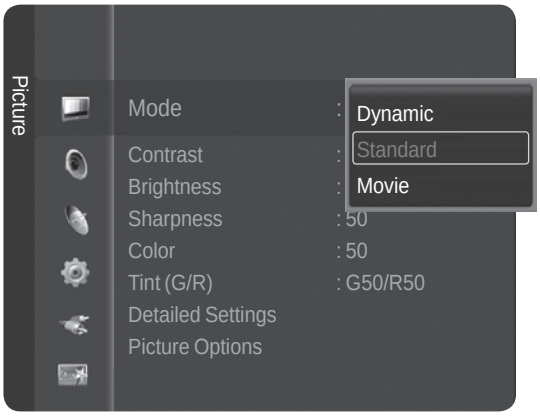
1 CHANGING THE PICTURE STANDARD

You can select the type of picture which best corresponds to your viewing requirements.

A : Press the **MENU** button to display the menu. Press the **ENTER** button to select **Picture.**

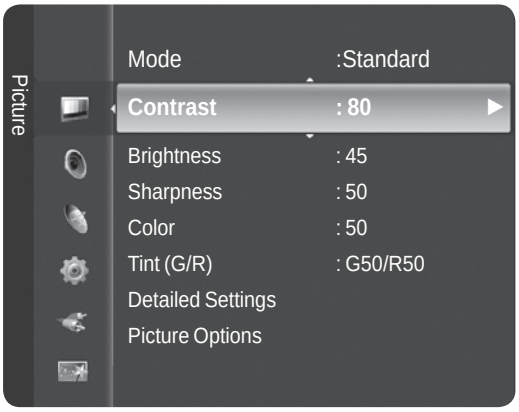
B : Press the **ENTER** button to select **Mode.** Press the ▲ or ▼ button to select **Dynamic, Standard,** or **Movie**. Press the **ENTER** button.

C : Press the **EXIT** button to exit.



- **Dynamic :** Select the picture for high-definition in bright room.
- **Standard :** Select the picture for the optimum display in the normal environment.
- **Movie :** Select the picture for viewing movies in a dark room.

2 CUSTOMIZING THE PICTURE SETTINGS



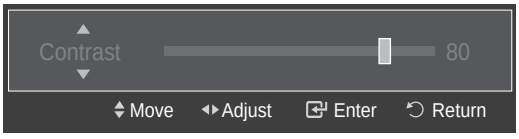
A : Press the **MENU** button to display the menu. Press the **ENTER** button to select **Picture.**

B : Press either the ▲ or ▼ buttons to select **Contrast, Brightness, Sharpness, Color, or Tint (G/R)**, then press the **ENTER** button.

C : Press the **<** or **>** button to decrease or increase the value of a particular item.

D : Press the **ENTER** button.

E : Press the **EXIT** button to exit.



- **Contrast :** Adjusts the 'Contrast' level of the picture.
- **Brightness :** Adjusts the 'Brightness' level of the picture.
- **Sharpness :** Adjusts the 'Edge Definition' of the picture.
- **Colour :** Adjusts the 'Colour Saturation' of the picture.
- **Tint(G/R) :** Adjusts the 'Colour Tint' of the picture by compensating the red and green colour.

- When you make changes to **Contrast, Brightness, Sharpness, Colour, or Tint (G/R)** the OSD will be adjusted accordingly.
- When in PC mode, Tint(G/R), Sharpness and Color are not available.
- Each adjusted setting will be stored separately according to its input mode.

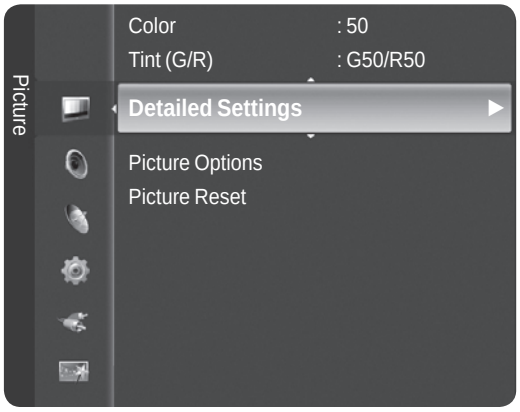
3 ACTIVATING DETAILED SETTINGS

Allow you to make even more precise picture settings, to activate Detail Settings :

A : Press the **MENU** button to display the menu.
Press the **ENTER** button to select **Picture.**

B : Press the **ENTER** button to select **Mode.**
Press the ▲ or ▼ button to select **Standard** or **Movie,** then press the **ENTER** button.

C : Press the ▲ or ▼ button to select **Detailed Settings,** then press the **ENTER** button.



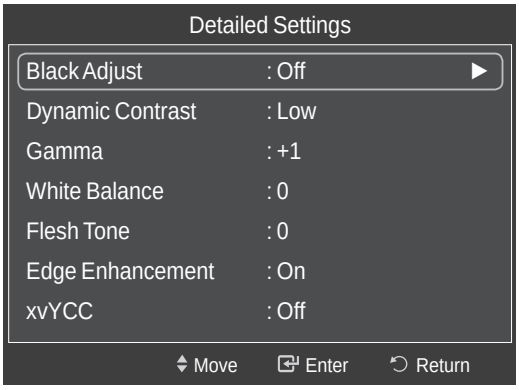
4 ACTIVATING BLACK ADJUST

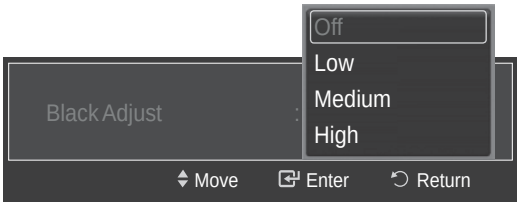
You can select the black level on the screen to adjust the screen depth.

A : Press the ▲ or ▼ button to select **Black Adjust**, then press the ENTER button.

B : Press the ▲ or ▼ button to select **Off, Low, Medium** or **High,** then press the **ENTER** button.

- **Off :** Turns off the black adjustment function.
- **Low :** Sets the black color depth to low.
- **Medium :** Sets the black color depth to medium.
- **High :** Sets the black color depth to high.





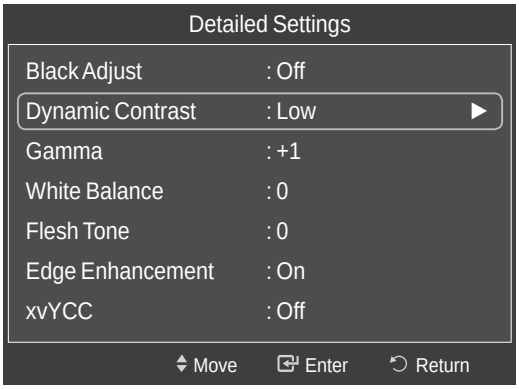
5 ACTIVATING DYNAMIC CONTRAST

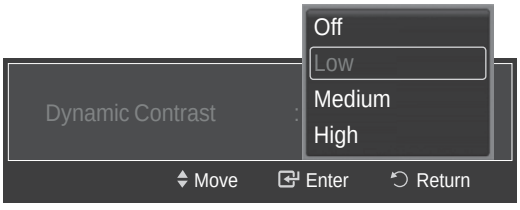
You can adjust the screen contrast so that the optimal contrast is provided.

A : Press the ▲ or ▼ button to select **Dynamic Contrast**, then press the **ENTER** button.

B ; Press the ▲ or ▼ button to select **Off, Low, Medium** or **High,** then press the **ENTER** button.

- **Off :** Turns off the dynamic contrast adjustment function.
- **Low :** Sets the dynamic contrast to low.
- **Medium :** Sets the dynamic contrast to medium.
- **High :** Sets the dynamic contrast to high.



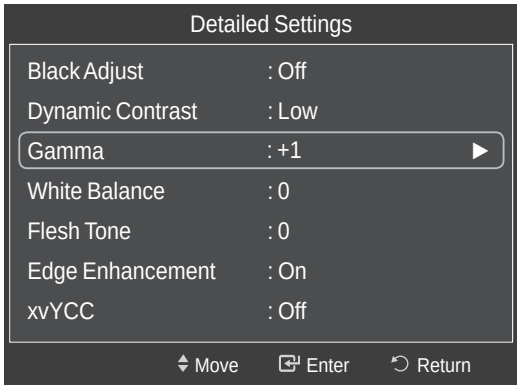


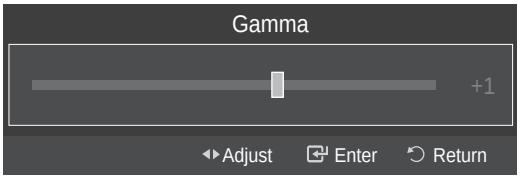
6 ACTIVATING GAMMA

You can adjust the Primary Color (Red, Green, Blue) Intensity. (-3 ~ +3)
:

A : Press the ▲ or ▼ button to select **Gamma,** then press the **ENTER** button

B : Press the < or > button to decrease or increase the value and press the **ENTER** button.





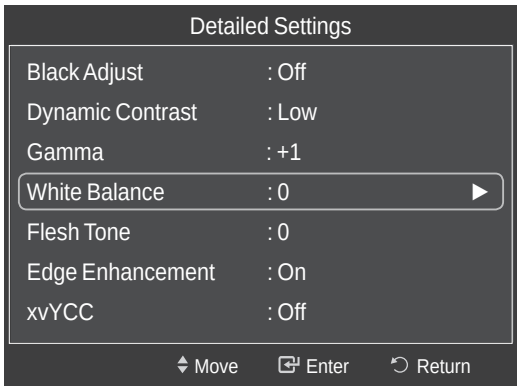
7 ACTIVATING WHITE BALANCE

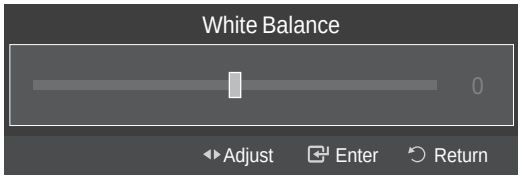
You can adjust the color temperature for more natural picture colors.

A : Press the ▲ or ▼ button to select **White Balance,** then press the **ENTER** button.

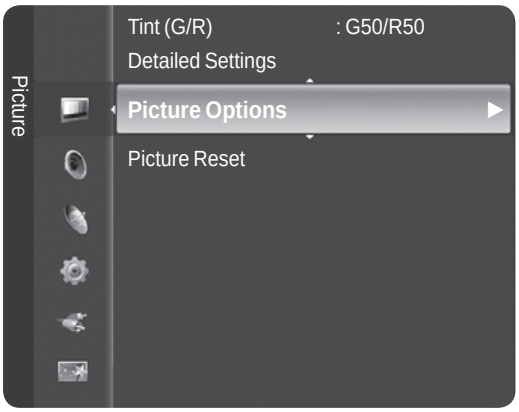
B : Press the < or > button to decrease or increase the value of a particular item. (-10~+10) then press the ENTER button.

Changing the adjustment value will refresh the adjusted screen.





10 CONFIGURING PICTURE OPTIONS



Activating Picture Options

A : Press the **MENU** button to display the menu.
Press the **ENTE**R button to select **Picture.**

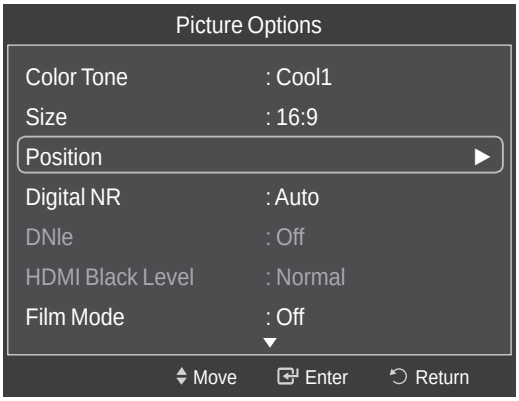
B : Press the ▲ or ▼ button to select **Picture Options**, then press the **ENTER** button

C : Press the ▲ or ▼ button to select a particular item and press the **ENTER** button.

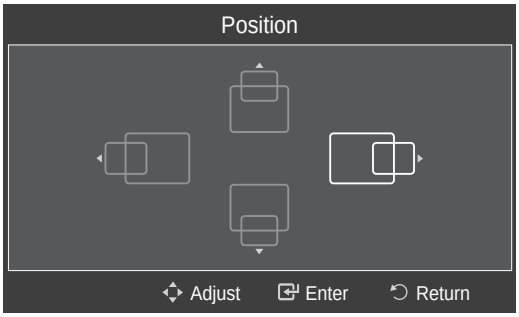
D : When you are satisfied with your setting, press the **ENTER** button.

11 ADJUSTING THE SCREEN POSITION

You can adjust the horizontal and vertical position of the screen.



A : From the above Menu press the ▲ or ▼ button to select **Picture Options**, then press the **ENTER** button..



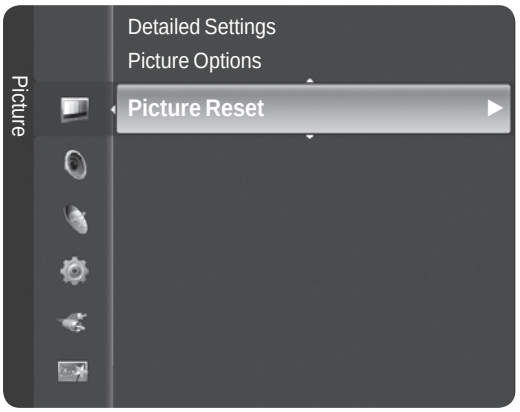
B : Press the ▲ or ▼ button to select Posion, then press the **ENTER** button.

12 RESETTING THE PICTURE

Resetting the Picture Settings to the Factory Defaults.

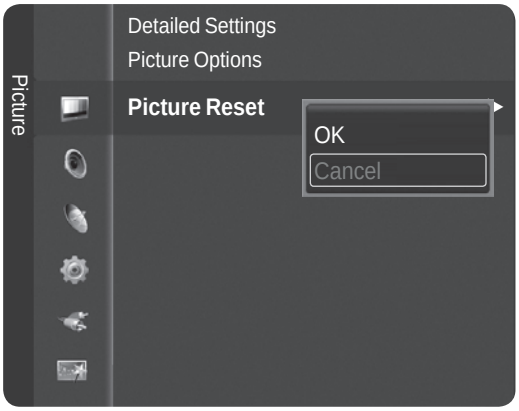
A : To select the desired picture **Mode**, follow the **Changing the Picture Standard**, Instructions (SECTION 1 - This Chapter).

B : Press the ▲ or ▼ button to select **Picture Reset**, then press the **ENTER** button.



C : Press the < or > button to select **OK** or **Cancel** then press the **ENTER** button.

D : Press the **EXIT** button to exit.



Each **Mode** can be reset individually.

FOR ADDITIONAL INFORMATION ON DLP ADJUSTMENT OR SERVICE, PLEASE CONSULT THE

SAMSUNG - SERIES 650 DLP TV USER MANUAL

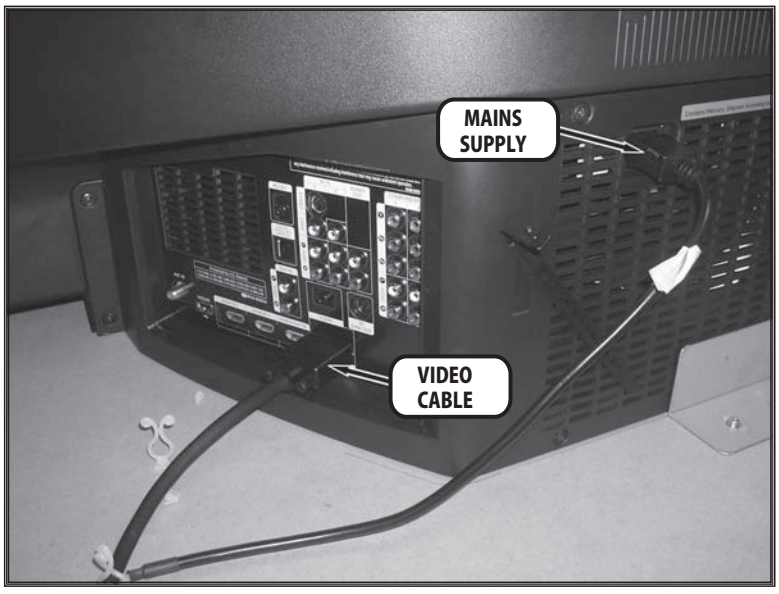
SUPPLIED WITH THIS MACHINE.

11-4 TROUBLESHOOTING

11-1 TABLE 01 - TROUBLESHOOTING TABLE : DLP DISPLAY

PROBLEMS	POSSIBLE SOLUTION
Remote control malfunctions	Replace the remote control batteries. Clean the upper edge of the remote control (transmission window). Check the battery terminals. Press the TV button to put your remote control in the TV mode. Make sure the remote has batteries. Check the "+" and "-" ends of the batteries are inserted correctly.
No picture	Make sure the TV is plugged in. Check the Video Cable connection
Picture rolls vertically.	Check all connections
The TV operates erratically	Unplug the TV for 30 seconds, then try operating it again.
The TV won' t turn on.	Make sure the wall outlet is working
The image is too light or too dark.	Adjust the Brightness and Contrast.
Screen is black and power indicator light blinks steadily.	Check Power and Signal Cable. The TV is using its power management system. Press the Source button on the panel or remote control. Turn the TV off and on.
The "Resets all settings to the default values" message appears.	This appears when you press and hold the EXIT button for a while. the product settings are reset to the factory defaults

DLP CONNECTOR INFORMATION



11-5 LAMP REPLACEMENT PROCEDURE

⚠ WARNING

- To prevent electric shock or fire hazards, only perform this operation after turning off the main power switch and removing the power cord from the socket.
- Never put anything metal or flammable in to the interior of the DLP. Using it with such objects inside the cabinet may lead to an electric shock or fire hazard.
- Make sure the lamp is firmly in place. If the lamp is loose then it will become a fire hazard, and it also may not operate.
- The lamp becomes very hot during use and remains hot for a while afterwards. Attempting to change the lamp before it has sufficiently cooled may lead to burns and other injuries.
- If the lamp shatters, fragments of the glass will remain inside the lamp Never shake a shattered lamp or hold/place one higher than eye level. Doing so could lead to a serious accident.
- Never touch the lamp directly as this can impair the life expectancy. Always wear surgical gloves if handling the lamp.

⚠ CAUTION

- When opening the rear panel or lamp cover to change the lamp, do not touch or remove any parts that are unrelated to the lamp changing process. Doing so may lead to injury and could also harm the efficient working of the product

⚠ WARNING

- Do not remove any screws other than those specified below. Doing so could harm the efficient working of the product..

Always perform the lamp changing operation with the power turned off.
Once you have inserted a new lamp, only apply power to the DLP once the lamp exchange cover is in place.

REPLACING THE LAMP

Why do I need to replace the lamp?

The lamp used in a DLP TV has a limited lifespan. For the best screen quality it needs to be replaced periodically. After replacing the lamp, the screen quality will be bright and clear as new.

When do I need to replace it?

- It should be replaced when the screen becomes darker, less clear or when all three LEDs on the front (STAND BY/TEMP, LAMP, and TIMER) are flashing.

Check before lamp replacement

- The lamp must be the same code number and type.
- The lamp type is indicated on the right side of the TV. It is also indicated on the lamp case.
- After checking the code number for the lamp, give the code number to the store where you purchased the TV or to a Samsung Service Center.

Caution

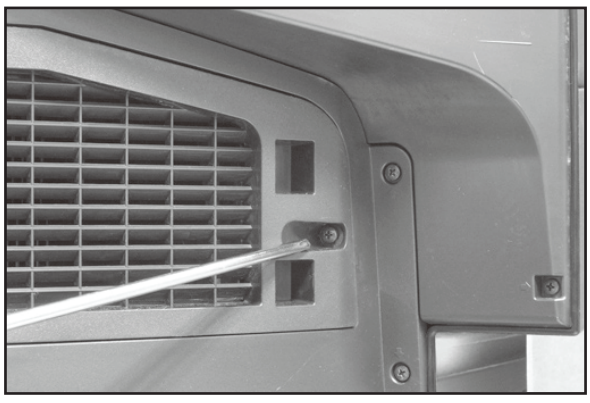
- Replace with the correct code numbered(BP96-01653) lamp to avoid damage to the TV.
- Turn the power off and wait for 30 minutes before replacing the lamp as it will be hot.
- Do not touch the glass part of the lamp with your bare hands or insert any foreign object inside the cover as it may cause poor screen quality, electric shock or fire.
- Do not place the old lamp near flammable objects or within the reach of children.
- Be sure to connect this TV directly to an AC wall outlet. If the TV' s AC plug is connected to a cable box or other source, it will not allow for proper cool down time.

- **For replacement, you will need a 5.91-Inch screwdriver and a pair of gloves.**

1 Make sure that the DLP Unit is isolated from the Mains Supply.

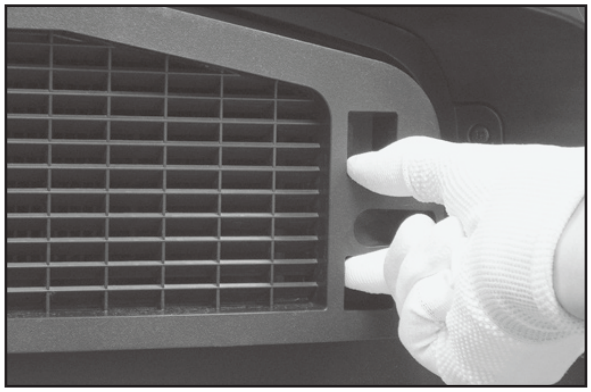
2 Remove the Back Service Door on the DLP Cabinet.

3 Using a screwdriver, remove the fixing screws holding the cover in place,.

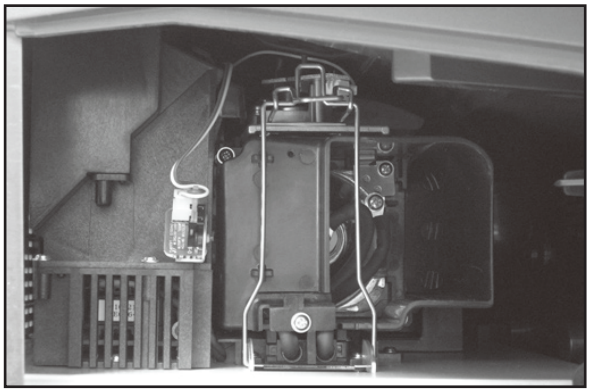


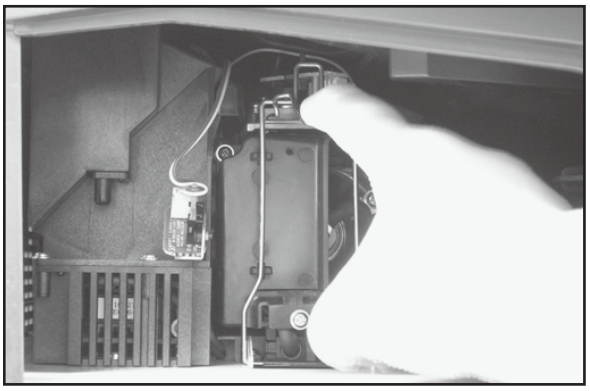
11-5 LAMP REPLACEMENT PROCEDURE

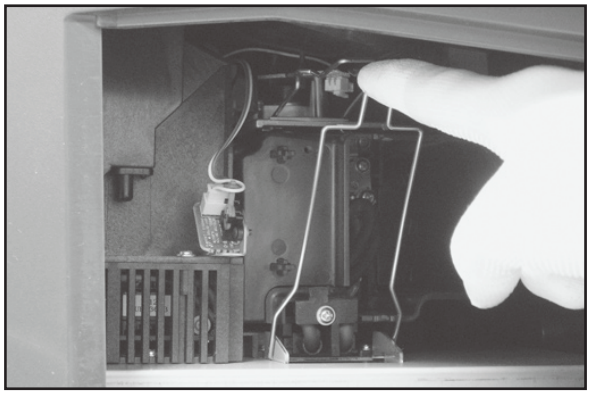
4 Remove the Lamp Cover.



5 Push the clip and pull down the Lamp Cover.

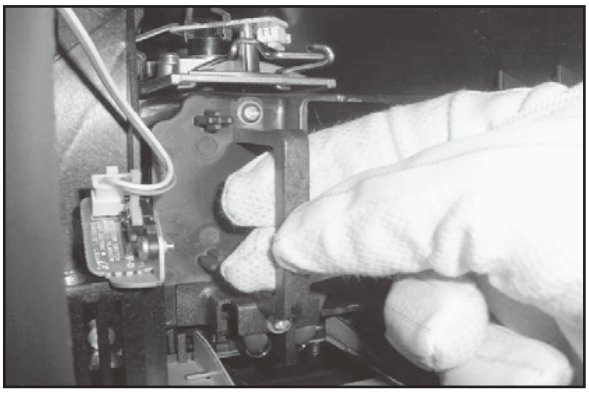






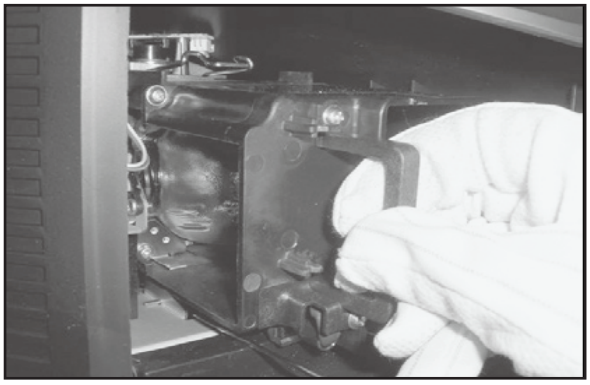
11-5 LAMP REPLACEMENT PROCEDURE

6 Separate the Lamp from the engine by holding the handle and pulling it out.



7 Replacing the Lamp.

- Be sure the replacement Lamp is the same type.
- After replacing the lamp, align the lamp cover with the groove and secure the screws
- The TV will not turn on if the lamp cover is not correctly closed (as this will activate the protective circuit).



8 Re-Assembling the Unit.

Once the Lamp as been replaced, rebuilt the Unit in the reverse order.

SAMSUNG DLP - SERIES 650 TECHNICAL SPECIFICATION

The descriptions and characteristics in these owner' s instructions are given for information purposes only and are subject to modification without notice.are subject to modification without notice.

Model Name	HL56A650C1F
Screen Size (Diagonal)	56 inch
PC Resolution	1920 x 1080 @ 60 Hz
Sound (Output)	10W X 2
Dimension (W x H x D)	50.4 x 34.9 x 14.0 inches (1281 x 887 x 356 mm)
Weight	60.6 lbs (27.5 kg)
Environmental Considerations	
Operating Temperature	50 ° F to 104 ° F (10 ° C to 40 ° C)
Operating Humidity	10% to 80%, non-condensing
Storage Temperature	-4 ° F to 113 ° F (-20 ° C to 45 ° C
Storage Humidity	5% to 95%, non-condensing

This device is a Class B digital apparatus.

Design and specifications are subject to change without prior notice.

For the power supply and Power Consumption, refer to the label attached to the product.

12 COIN HANDLING

Handling the Coin Jam

If the coin is not rejected when the REJECT button is pressed, open the coin chute door and open the selector gate. After removing the jammed coin, put a normal coin in and check to see that the selector correctly functions.

12-1 CLEANING THE COIN SELECTOR

STOP IMPORTANT

- **Remove and clean smears by using a soft cloth dipped in water or diluted chemical detergent and then squeezed dry.**
- **Never apply machine oil, etc. to the Coin Selector.**
- **After cleaning the Coin Selector, insert a regular coin in the normal working status and ensure that the selector correctly functions.**

The Coin Selector should be cleaned once every 3 months.
When cleaning, follow the procedure below:

1. Turn the power for the machine OFF. Open the coin chute door.
2. Remove the Coin Selector from the coin chute door.
3. Open the gate and dust off by using a soft brush (made of wool, etc.).

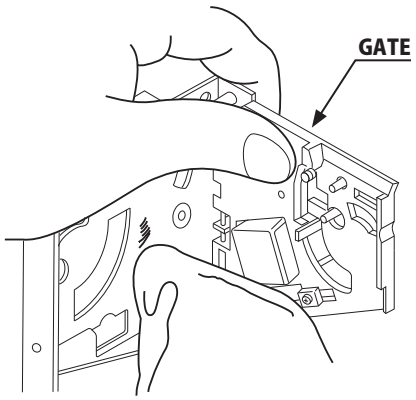


FIG. 12 a

12-1 CLEANING THE COIN SELECTOR

4 Remove and clean smears by using a soft cloth dipped in water or diluted chemical detergent and then squeezed dry.

5 Remove the CRADLE.
When removing the retaining ring (E ring), be very careful so as not to bend the rotary shaft.

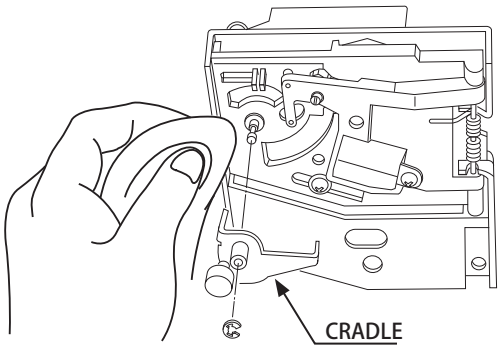


FIG. 12b

6 Remove stain from the rotary shaft and shaft receiving portions by wiping off with a soft cloth, etc.

7 After wiping off as per previous step, further apply a dry cloth, etc. to cause the Coin Selector to dry completely.

Coin Insertion Test

Once every month, when performing the Coin SW Test, simultaneously check the following:

Does the Coin Meter count satisfactorily?

Does the coin drop into the cashbox correctly?

Is the coin rejected when inserted while keeping the REJECT Button pressed down?

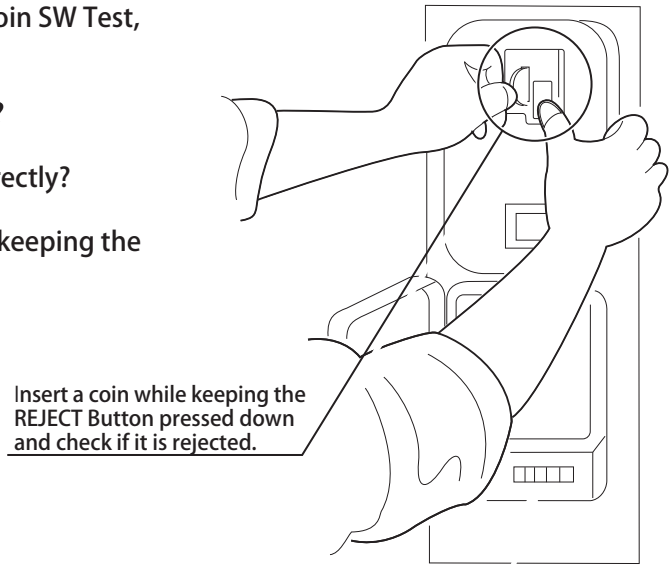


FIG. 12 c

12-2 ADJUSTING THE PRICE OF PLAY

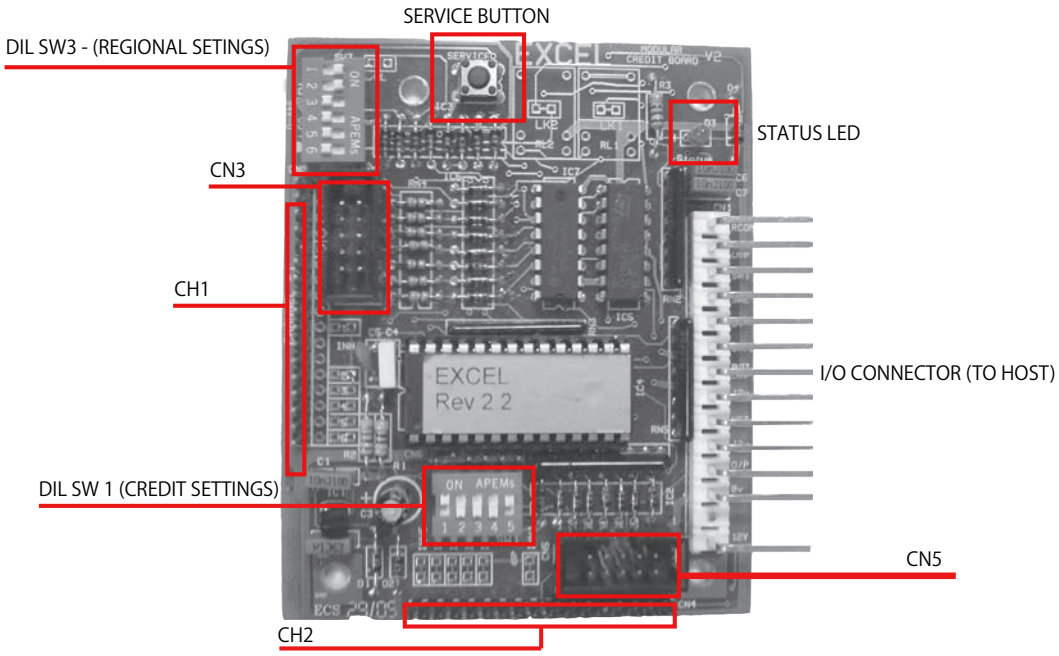
This product comes equipped with a Money Controls SR3 Coin Acceptor. To adjust the price of play ALL credit setting are adjusted via the EXCEL CREDIT BOARD.

IMPORTANT!

The CREDIT SETTINGS within the SYSTEM TEST MODE must be set to 1 coin 1 credit to allow the CREDIT BOARD to function correctly.

The EXCEL CREDIT board houses 2 DIL Switches. These allow the operator to select the price of play, type of coin acceptor and region.

EXCEL Credit Board



DIL SW3 (Regional Settings)	Adjust these switches to specify the type of Coin Acceptor used and currency. Default = SW1 & SW2 ON - SR3 in parallel made, Sterling.
SERVICE BUTTON	Provides a service credit when pressed.
Status LED	Flashes when functioning.
O/I Connector	Inputs and Outputs to and from host.
CN5	To secondary SR3 Coin Acceptor.
CH2	To secondary Coin Acceptor (Mars, NRI, ect.)
DIL SW1 (credit settings)	Adjust to required price of pay.
CH1	To primary Coin Acceptor (Mars, Nri, ect.)
CN3	To primary SR3 Coin Acceptor.

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

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

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

STERLING PRICE OF PLAY SETTINGS (SW1)

	Price	Bonus			DIL Switch 1				
					1	2	3	4	5
1	10p	50p = 5 plays	£1 = 10 plays	£2 = 20 plays	OFF	OFF	OFF	OFF	OFF
2	10p	50p = 6 plays @ 8.33p per play	£1 = 12 plays @ 8.33p per play	£2 = 24 plays @ 8.33p per play	**ON**	OFF	OFF	OFF	OFF
3	20p	50p = 2.5 plays	£1= 5 plays	£2 = 10 plays	OFF	**ON**	OFF	OFF	OFF
4	20p	50p = 3 plays @ 16.66p per play	£1 = 6 plays @ 16.66p per play	£2 = 12 plays @ 16.66p per play	**ON**	**ON**	OFF	OFF	OFF
5	30p	50p = 1.66 plays	£1 = 3.33 plays	£2 = 6.66 plays	OFF	OFF	**ON**	OFF	OFF
6	30p	50p = 1.66 plays	£1 = 4 plays @ 25p per play	£2 = 8 plays @ 25p per play	**ON**	OFF	**ON**	OFF	OFF
7	30p	50p = 2 plays @ 25p per play	£1 = 4 plays @ 25p per play	£2 = 8 plays @ 25p per play	OFF	**ON**	**ON**	OFF	OFF
8	30p	50p = 2 plays @ 25p per play	£1 = 3 plays @ 33.33p per play	£2 = 6 plays @ 33.33p per play	**ON**	**ON**	**ON**	OFF	OFF
9	40p	50p = 1.25 plays	£1 = 2.5 plays	£2 = 5 plays	OFF	OFF	OFF	**ON**	OFF
10	40p	50p = 1.25 plays	£1 = 3 plays @ 33.3p per play	£2 = 6 plays & 33.3p per play	**ON**	OFF	OFF	**ON**	OFF
11	50p	50p = 1 play	£1 = 2 plays	£2 = 4 plays	OFF	**ON**	OFF	**ON**	OFF
12	50p	50p = 1 play	£1 = 3 plays @ 33.3p per play	£2 = 6 plays @ 33.3p per play	**ON**	**ON**	OFF	**ON**	OFF
13	50p	50p = 1 play	£1 = 2 plays	£2 = 5 plays @ 40p per play	OFF	OFF	**ON**	**ON**	OFF
14	60p	50p = 0.83 play	£1 = 1.66 plays	£2 = 3.33 plays	**ON**	OFF	**ON**	**ON**	OFF
15	60p	50p = 0.83 play	£1 = 2 plays @ 50p per play	£2 = 4 plays @ 50p per play	OFF	**ON**	**ON**	**ON**	OFF
16	80p	50p = 0.62 play	£1 = 1.25 plays	£2 = 2.5 plays	**ON**	**ON**	**ON**	**ON**	OFF
17	80p	£1 = 1.25 plays	£1.50 = 2 plays @ 75p per play	£2 = 2.5 plays	OFF	OFF	OFF	OFF	**ON**
18	£1	2x50p = 1 play	£1 = 1 play	£2 = 2 plays	**ON**	OFF	OFF	OFF	**ON**
19	£1	2x50p = 1 play	£1 = 1 play	£2 = 3 plays @ 66.6p per play	OFF	**ON**	OFF	OFF	**ON**
20	£1	2x50p = 1 play	£2 = 2 plays	£4 = 5 plays @ 80p per play	**ON**	**ON**	OFF	OFF	**ON**
21	£1.50	3x50p = 1 play	£1 = 0.66 plays	£3 = 2 plays	OFF	OFF	**ON**	OFF	**ON**
22	£1.50	3x 50p = 1 play	£1 = 0.66 plays	£2 = 2 plays @ £1 per play	**ON**	**OFF**	**ON**	OFF	**ON**
23	£2	4x 50p = 1 play	£1 = 0.5 play	£2 = 1 play	OFF	**ON**	**ON**	OFF	**ON**
24	£2	4x 50p = 1 play	£1 = 0.5 play	£5 = 3 plays @ £1.66 per play	**ON**	**ON**	**ON**	OFF	**ON**
25	£3	6x50p = 1 play	£1.50 = 0.5 play	£3 = 1 play	OFF	OFF	OFF	**ON**	**ON**
26	£3	6x50p = 1 play	£1.50 = 0.5 play	£5 = 2 plays @ £2.50 per play	**ON**	OFF	OFF	**ON**	**ON**
27	£5	£1 = 0.2 play	£5 = 1 play	£10 = 2 plays	OFF	**ON**	OFF	**ON**	**ON**
28	£5	£1 = 0.2 play	£5 = 1 play	£10 = 3 plays @ £3.33p per play	**ON**	**ON**	OFF	**ON**	**ON**
29	£7.50	£5 = 0.66 play	£10 = 1.33 plays	£15 = 2 plays	OFF	OFF	**ON**	**ON**	**ON**
30	£7.50	£5 = 0.66 play	£10 = 1.33 plays	£10 = 2 plays @ £5 per play	**ON**	OFF	**ON**	**ON**	**ON**
31	£10	£10 = 1 play	£20 = 2 play	£30 = 3 play	OFF	**ON**	**ON**	**ON**	**ON**
32	Free Play				**ON**	**ON**	**ON**	**ON**	**ON**

	Price	Bonus			DIL Switch 1				
					1	2	3	4	5
1	10¢	50¢ = 5 plays	€1 = 10 plays	€2 = 20 plays	OFF	OFF	OFF	OFF	OFF
2	10¢	50¢ = 6 plays @ 8.33p per play	€1 = 12 plays @ 8.33¢ per play	€2 = 24 plays @ 8.33¢ per play	**ON**	OFF	OFF	OFF	OFF
3	20¢	50¢ = 2.5 plays	€1= 5 plays	€2 = 10 plays	OFF	**ON**	OFF	OFF	OFF
4	20¢	50¢ = 3 plays @ 16.66¢ per play	€1 = 6 plays @ 16.66¢ per play	€2 = 12 plays @ 16.66¢ per play	**ON**	**ON**	OFF	OFF	OFF
5	30¢	50¢ = 1.66 plays	€1 = 3.33 plays	€2 = 6.66 plays	OFF	OFF	**ON**	OFF	OFF
6	30¢	50¢ = 1.66 plays	€1 = 4 plays @ 25¢ per play	€2 = 8 plays @ 25¢ per play	**ON**	OFF	**ON**	OFF	OFF
7	30¢	50¢ = 2 plays @ 25¢ per play	€1 = 4 plays @ 25¢ per play	€2 = 8 plays @ 25¢ per play	OFF	**ON**	**ON**	OFF	OFF
8	30¢	50¢ = 2 plays @ 25¢ per play	€1 = 3 plays @ 33.33¢ per play	€2 = 6 plays @ 33.33¢ per play	**ON**	**ON**	**ON**	OFF	OFF
9	40¢	50¢ = 1.25 plays	€1 = 2.5 plays	€2 = 5 plays	OFF	OFF	OFF	**ON**	OFF
10	40¢	50¢ = 1.25 plays	€1 = 3 plays @ 33.33¢ per play	€2 = 6 plays @ 33.33¢ per play	**ON**	OFF	OFF	**ON**	OFF
11	50¢	50¢ = 1 play	€1 = 2 plays	€2 = 4 plays	OFF	**ON**	OFF	**ON**	OFF
12	50¢	50¢ = 1 play	€1 = 3 plays @ 33.33¢ per play	€2 = 6 plays @ 33.33¢ per play	**ON**	**ON**	OFF	**ON**	OFF
13	50¢	50¢ = 1 play	€1 = 2 plays	€2 = 5 plays @ 40¢ per play	OFF	OFF	**ON**	**ON**	OFF
14	60¢	50¢ = 0.83 play	€1 = 1.66 plays	€2 = 3.33 plays	**ON**	OFF	**ON**	**ON**	OFF
15	60¢	50¢ = 0.83 play	€1 = 2 plays @ 50¢ per play	€2 = 4 plays @ 50¢ per play	OFF	**ON**	**ON**	**ON**	OFF
16	80¢	50¢ = 0.62 play	€1 = 1.25 plays	€2 = 2.5 plays	**ON**	**ON**	**ON**	**ON**	OFF
17	80¢	£1 = 1.25 plays	€1.50 = 2 plays @ 75¢ per play	€2 = 2.5 plays	OFF	OFF	OFF	OFF	**ON**
18	€1	2x50¢ = 1 play	€1 = 1 play	€2 = 2 plays	**ON**	OFF	OFF	OFF	**ON**
19	€1	2x50¢ = 1 play	€1 = 1 play	€2 = 3 plays @ 66.6¢ per play	OFF	**ON**	OFF	OFF	**ON**
20	€1	2x50¢ = 1 play	€2 = 2 plays	€4 = 5 plays @ 80¢ per play	**ON**	**ON**	OFF	OFF	**ON**
21	€1.50	3x50¢ = 1 play	€1 = 0.66 plays	€3 = 2 plays	OFF	OFF	**ON**	OFF	**ON**
22	€1.50	3x 50¢ = 1 play	€1 = 0.66 plays	€2 = 2 plays @ €1 per play	**ON**	**OFF**	**ON**	OFF	**ON**
23	€2	4x 50¢ = 1 play	€1 = 0.5 play	€2 = 1 play	OFF	**ON**	**ON**	OFF	**ON**
24	€2	4x 50¢ = 1 play	€1 = 0.5 play	€5 = 3 plays @ €1.66 per play	**ON**	**ON**	**ON**	OFF	**ON**
25	€3	6x50¢ = 1 play	€1.50 = 0.5 play	€3 = 1 play	OFF	OFF	OFF	**ON**	**ON**
26	€3	6x50¢ = 1 play	€1.50 = 0.5 play	€5 = 2 plays @ €2.50 per play	**ON**	OFF	OFF	**ON**	**ON**
27	€5	€1 = 0.2 play	€5 = 1 play	€10 = 2 plays	OFF	**ON**	OFF	**ON**	**ON**
28	€5	€1 = 0.2 play	€5 = 1 play	€10 = 3 plays @ 3.33¢ per play	**ON**	**ON**	OFF	**ON**	**ON**
29	€7.50	€5 = 0.66 play	€10 = 1.33 plays	€15 = 2 plays	OFF	OFF	**ON**	**ON**	**ON**
30	€7.50	€5 = 0.66 play	€10 = 1.33 plays	€10 = 2 plays @ €5 per play	**ON**	OFF	**ON**	**ON**	**ON**
31	€10	€10 = 1 play	€20 = 2 play	€30 = 3 play	OFF	**ON**	**ON**	**ON**	**ON**
32	Free Play				**ON**	**ON**	**ON**	**ON**	**ON**

12-3 SR3 OPTIONS - TEACH AND RUN PROGRAMMING

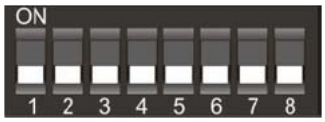
SELECTING STERLING / EURO OPTION

The SR3 coin acceptor (supplied) is programmed to accept UK Sterling and the Euro. Factory setting is for the UK Sterling. If the configuration needs to change to the Euro, then please follow the instructions below for changing over to the Euro and visa versa.

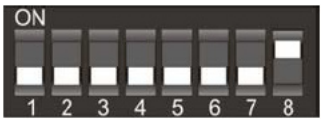
BANK SELECT

This function allows you to enable both or individual select banks of coins via switches 7 and 8 on the 8 way DIL switch.
This enables the selection of 2 different currencies, one in each bank, or 12 coins/tokens in both banks from the same country.

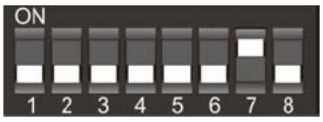
To enable/disable the banks set the switches as show below.



Both Banks ON (enabled) - Sterling and Euro's



Bank 1 ON (enabled) and Bank 2 OFF (disabled) - Sterling ONLY



Bank 1 OFF (disabled) and Bank 2 ON (enabled) - Euro's ONLY

Please remove power from the SR3 before changing the status on the DIP SW.

12-3 SR3 OPTIONS - TEACH AND RUN PROGRAMMING

TEACH AND RUN PROGRAMMING (SR3)

If the machine is positioned in location where only tokens are used, then the SR3 Coin Acceptor can be programmed to accept and credit special coins/tokens.

Please follow the instructions below to enable and program the TEACH & RUN facility.

Table 1: Teach & Run Programming Bank 1.

Coin Number	SW1	SW2	SW3	SW4	SW5	SW6
1	off	off	off	ON	ON	off
2	off	off	ON	off	ON	off
3	off	off	ON	ON	ON	off
4	off	ON	off	off	ON	off
5	off	ON	off	ON	ON	off
6	off	ON	ON	off	ON	off

Bank 2

Table 2: Teach & Run Programming Bank 2

Coin Number	SW1	SW2	SW3	SW4	SW5	SW6
7	off	ON	ON	ON	ON	off
8	ON	off	off	off	ON	off
9	ON	off	off	ON	ON	off
10	ON	off	ON	off	ON	off
11	ON	off	ON	ON	ON	off
12	ON	ON	off	off	ON	off

Teach and Run EXAMPLE. (To teach coin channel 12 for £1)

Switch off the power to the SR3 and set the Program DIL switches to:-

MSB SW1	SW2	SW3	LSB SW4	TOTAL	SW5	SW6
ON	ON	OFF	OFF	12	ON	OFF

Switch on the power to the SR3.
Press the reject lever within 20 seconds. The LED will turn RED.
Start entering £1 coins until the LED flashes GREEN, typically after 8 to 10 insertions.

NOTE: If the LED turns GREEN after the 1st coin, then the Teach & Run is DISABLED.

Press the reject lever and the LED will turn GREEN. The coin channel has now been programmed.

SET ALL SWITCHES TO THE OFF POSITION.

13 FLUORESCENT LAMP REPLACEMENT

⚠WARNING

- **When working with the product, be sure to turn the power off. Working with the power on may cause an electric shock or short circuit.**
- **There is danger that hot lamps can cause burns. Exercise due caution when replacing lamps.**
- **Use lamps of the specified ratings. Using lamps with different ratings may cause fires or damage.**
- **Such things as deteriorated insulation in lighting fixtures can cause a short circuit and/or smoke. Make sure there are no abnormalities. For example, check if you can smell anything burning, if any sockets have been discolored and if the lamp has to be replaced frequently.**

⚠CAUTION

- **Be careful when handling parts made of plastic or glass, for example be careful not to tighten screws excessively. If such parts are damaged, injuries could be caused by fragments, cracks, etc.**
- **To perform the operation safely and accurately you must use a safe, steady step or footstool. Working without this may lead to a fall and possible injury.**
- **When performing the fluorescent lamp replacement, do not hold onto the Billboard carrier (the round pipe section). Holding or hanging off this may bend it out of shape or damage it, and could lead to a fall or an accident.**

STOP **IMPORTANT**

PLEASE WEAR PROTECTIVE CLOTHING / EQUIPMENT WHEN CHANGING FLUORESCENT LAMPS. PROTECTIVE GLOVES AND EYE WEAR ARE RECOMMENDED

⚠ WARNING

- **Do not attempt to remove the fluorescent lamp whilst the machine is powered up. Always disconnect the machine from the main power supply before changing the lamp.**

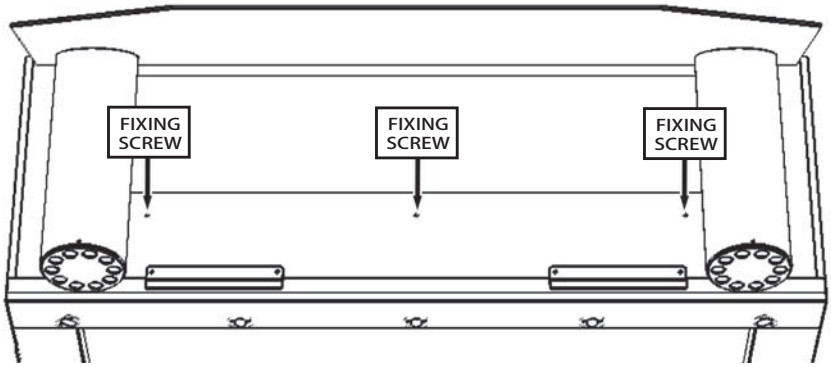
Follow the instructions below to safely replace the fluorescent lamp.
Always replace the lamp with one of the same type and specification.

1

- Turn the POWER OFF

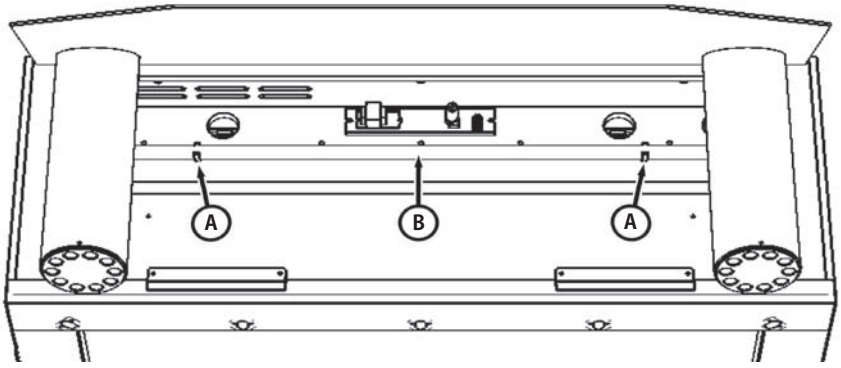
2

- Use a Stool or Step when working on Top of the Cabinet. Remove the three screws from the top of the Billboard Box.
- Remove the Fluorescent Tube cover plate to reveal the Fluorescent Lamp.



3

- Remove the Fluorescent Tube 'B' , by carefully un-clipping from the two Terry Clips 'A' then disconnect the flying lead connector from either end of the tube.
- Carefully remove the Fluorescent Tube.



4

- Replace the Fluorescent Tube for one of the same type.

Part No. 390-5695-40-GUK FL TUBE 40W 1200x38MM T12

5

- Rebuild the Billboard by following steps 1 > 3 in reverse order

14 PERIODIC INSPECTION

In order to maintain the performance of this product and operate it safely, inspect the following items routinely and perform maintenance.
The players come in direct contact with the GUN (controller). You should therefore make an effort to clean the Gun often and provide hand wipes, etc. for the amenity of the players.

⚠ WARNING

- Once a year, check to see if power cords are damaged, the plug is securely inserted, dust is accumulated between the socket outlet and the power plug, etc. Using the product with accumulated dust in the interior may cause fire or electric shock.
- Never use a water jet, etc. to clean the inside and outside of the cabinet. If wetness occurs for any reason, do not use the product until it has completely dried.
- Once a year, request the office shown on this manual or the dealer from whom the product was originally purchased to perform the internal cleaning. Using the product with accumulated dust in the interior may cause fire or other accidents.

  Note that you are liable for the cost of cleaning the interior parts.
- There is the danger of accidents involving electrical shorts circuits or fire caused by factors such as the deterioration of insulation in electrical and electronic equipment over time. Check that there are no abnormalities such as odors from burning.

14-1 PERIODIC INSPECTION TABLE

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

When handling the controller, the player will be in direct contact with it. In order to always allow the player to enjoy the game, be sure to clean it regularly. Also, it is advisable to provide wet tissue, etc. available for player use.

ITEMS	DESCRIPTION	PERIOD	REFERENCE
CABINET	Confirm that adjusters contact floor	Daily	Chapter 3
MONITOR - PROJECTOR	Screen Cleaning	Weekly	Chapter 11
	Check Screen Adjustments	Monthly	Chapter 11
CONTROL UNIT (GUN)	Cleaning, Looking for Damage	Daily	
	Sight Adjustment	Weekly	Chapter 9
GAME BOARD	Individual Test	Monthly	SM-Chapter 4
	Confirm settings	Monthly	Chapter 9
COIN SELECTOR	Coin insertion test	Monthly	Chapter 12
	Selector cleaning	Every 3 months	Chapter 12
FLUORESCENT LIGHT	Inspection of Lighting Fixtures	Ass appropriate	Chapter 13
POWER CABLES	Inspection, Cleaning	1 year	Last page
CABINET INTERIOR	Cleaning	1 year	Last page
CABINET SURFACES	Cleaning	As appropriate	See below

SM-Chapter 4 - Referred to in the above table is the LINDBERGH Service Manual, which is provided separately.

Cleaning the Cabinet Surfaces

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

Some general-purpose household, kitchen and furniture cleaning products may contain strong solvents that degrade plastic components, coatings, and print. Before using any cleaning product, read the product's cautionary notes carefully and test the product first on a small area that is not highly visible.

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15 TROUBLESHOOTING

⚠ WARNING

- The work described below should be carried out by the site maintenance personnel or other qualified professional. Work carried out by personnel without the necessary skill or technology can cause accident.
- If no improvements can be noted even after the following measures have been taken, disengage the power and contact the point of purchase or the office indicated in these instructions. If the power is left on while there is an abnormality, a fire, electric shock or other serious accident can occur.
- When working with the product, be sure to turn the power 'OFF' . Working with the power 'ON' may cause an electric shock or short circuit.
- Be careful not to damage the wires. Damaged wires may cause an electric shock, short circuit or present a risk of fire.
- If problems other than those covered in this manual arise, or if no improvements can be noted after measures given in this manual have been taken, do not take measures indiscriminately. Cut off the power immediately and contact the office shown in this manual or the dealer from whom the product was originally purchased. Indiscriminate countermeasures could lead to unforeseeable accidents. They could also result in permanent damages.
- If an error message is displayed, have the problem looked at by a store maintenance person or a technician. Unless the problem is addressed by someone with specialized knowledge or skills, there could be electrical shock, short circuits or fire. If there are no store maintenance people or technicians, or moving mechanisms are involved, cut off the power immediately and contact the office shown in this manual or the dealer from whom the product was originally purchased.
- Once the reason that the breaker or circuit protector activated has been removed, restore the breaker or circuit protector to its original condition. If the product is used while the reason for activation has not yet been removed, heat and/or fire could be generated.

STOP IMPORTANT

An Error Message indicates an error with the Game Board. Check the separate LINDBERGH Service Manual for more details.

15-1 TROUBLE NOT RELATED TO THE GAME BOARD

If a problem has occurred, first inspect the connection of the wiring connectors.

15-1 TABLE 01 - TROUBLESHOOTING TABLE

PROBLEMS	CAUSE	COUNTERMEASURES
When the main SW is turned ON, the machine is not activated.	The power is not ON.	Firmly insert the plug into the Power Outlet.
	Incorrect power source/voltage.	Make sure that the power supply/voltage are correct.
	Loose FUSE or wire around the AC Power line and harness.	Check Fuses, AC Power harness, wiring and connectors.
The Projector does not project an image	The VGA cable may not be fitted correctly.	Check the VGA connection at both Lindbergh and at the PTV, ensure that the 2 thumbscrews are secure at each end.
No sound output.	Volume is not adjusted properly.	Adjust the volume. (See Chapter 9.)
	Board or Amplifier malfunction.	Check by performing a speaker test. (See Chapter 9.)
The Control Unit (GUN) does not target correctly.	Due to external or environmental factors the targeting is off.	Perform the Gun Adjustment in the Test Mode. (See Chapter 9.)
	LED Board malfunction	Check that the LED lights up. If not does not light up, replace it.
	Sensor may be faulty	Replace the Optic Sensor.
	LED Board and Cover are contaminated	Clean off soiled surface.
	Fuse on the Sensor Unit has blown due to a momentary Electrical Overload	Fix the source of the Overload, then replace the Fuse.
The Control Unit (GUN) does not appear to be operating correctly	A fault with the Microswitch	Check ON/OFF function in the Input Test, and if not working exchange the Microswitch
	A fault with the LED Board	Check that the LEDs are ON. If not exchange them.
	The Sensor Unit is Broken	Exchange the Sensor Unit
The lights in the cabinet does not come on.	The fluorescent light is dead.	Exchange the fluorescent light. (See Chapter 13.)

15-2 ERROR DISPLAY

⚠ WARNING

- If an error is displayed, have the site maintenance personnel or other qualified individuals resolve it. If someone without specialized or technical knowledge attempts to rectify the problem, electric shock, short circuits or fire may result.

  If there is no site maintenance personnel or other qualified individuals available, turn off the power and contact your retailer or the office listed in this manual.
- If a problem not described in this manual and the LINDBERGH service manual occurs, or the resolution to a problem described in this manual is not effective, do not make further attempts to resolve the problem yourself. Immediately turn off the power and contact your retailer or the office listed in this manual. Any unguided attempts to solve such problems may lead to a serious accident.

This product displays the following messages when it detects an error. Read the error description and follow the steps indicated. Refer to the LINDBERGH Service Manual for details on error messages displayed with the LINDBERGH Logo.

STOP IMPORTANT

If an error number or message not listed below appears, cease using the product immediately and send the LINDBERGH board in for repairs.

The LINDBERGH board is equipped to display various errors on-screen to help solve any problems. If an error is displayed the game cannot be used. Use the following table of causes and resolutions to solve the problem.

Error 1

DISPLAY	Game Program Not Found.
CAUSE	The key chip is not connected.
COUNTERMEASURES	Check that the key chip is connected correctly. Check that the key chip from a different system is not inserted.

Error 2

DISPLAY	Game Program Not Available.
CAUSE	The key chip is not supported.
COUNTERMEASURES	Send the LINDBERGH board in for repair with the key chip still in place.

Error 5

DISPLAY	Wrong Region.
CAUSE	The game is for a foreign region.
COUNTERMEASURES	Use a domestic game.

Error 6

DISPLAY	I/O Device Not Found.
CAUSE	The LINDBERGH board' s I/O board cannot be found.
COUNTERMEASURES	Send the LINDBERGH board in for repair with the key chip still in place.

15-2 ERROR DISPLAY

Error 7

DISPLAY	Graphic Card Not Found.
CAUSE	The LINDBERGH board' s graphics card cannot be found.
COUNTERMEASURES	Send the LINDBERGH board in for repair with the key chip still in place.

Error 8

DISPLAY	Sound Card Not Found.
CAUSE	The LINDBERGH board' s sound card cannot be found.
COUNTERMEASURES	Send the LINDBERGH board in for repair with the key chip still in place.

Error 9

DISPLAY	System Memory Not Enough.
CAUSE	The LINDBERGH board does not have enough memory.
COUNTERMEASURES	Send the LINDBERGH board in for repair with the key chip still in place.

Error 10

DISPLAY	Unexpected Game Program Failure.
CAUSE	The game program crashed due to an unexpected error.
COUNTERMEASURES	Turn the power off and then restart.

Error 11

DISPLAY	JVS I/O board is not connected to main board.
CAUSE	(1) The I/O board is not connected. (2) Unreliable connection between the main board and the I/O board.
COUNTERMEASURES	(1) Connect the I/O board to the main board. Verify that the power cable is connected to I/O board. (2) Reconnect or replace the JVS cable that connects the I/O board to the main board.

Error 12

DISPLAY	JVS I/O board does not fulfill the game spec.
CAUSE	The correct I/O board is not connected.
COUNTERMEASURES	Use an I/O board that provides the proper input/output for the game.

Error 15

DISPLAY	Game Program Not Found.
CAUSE	The key chip is not connected.
COUNTERMEASURES	Check that the key chip is connected correctly. Check that the key chip from a different system is not inserted.

Error 21

DISPLAY	Game Program Not Found on Game Disk.
CAUSE	There is no program image on the game disk.
COUNTERMEASURES	Check that a game disk corresponding to the key chip is inserted into the drive.

Error 22

DISPLAY	Game Program Not Found on Device.
CAUSE	There is no game image on the game installer device.
COUNTERMEASURES	Perform a reinstall from the game disk.

Error 24

DISPLAY	DVD Drive Not Found.
CAUSE	The DVD drive cannot be found.
COUNTERMEASURES	Connect the DVD drive.

15-2 ERROR DISPLAY

Error 25

DISPLAY	Game Disk Not Found.
CAUSE	The game disk cannot be found.
COUNTERMEASURES	Insert the game disk.

Error 26

DISPLAY	Storage Device Not Found.
CAUSE	The program installer device cannot be found.
COUNTERMEASURES	Send the LINDBERGH board in for repair with the key chip still in place.

Error 27

DISPLAY	Storage Device is Not Acceptable.
CAUSE	The program installer device does not have enough space.
COUNTERMEASURES	Send the LINDBERGH board in for repair with the key chip still in place.

Error 28

DISPLAY	This Game Disk is Not Acceptable.
CAUSE	The game disk cannot be read correctly.
COUNTERMEASURES	Exchange the game disk for a proper game disk. Check that the game disk is not scratched, damaged or dirty.

Error 29

DISPLAY	Cannot Control DVD Drive.
CAUSE	The DVD drive cannot be controlled.
COUNTERMEASURES	The DVD drive may be damaged.

Error 31

DISPLAY	Storage Device Not Enough.
CAUSE	The program installer device does not have enough space.
COUNTERMEASURES	Send the LINDBERGH board in for repair with the key chip still in place.

Error 32

DISPLAY	Installing Game Program Failed.
CAUSE	Transfer of the program failed.
COUNTERMEASURES	Check that the DVD drive is connected correctly. Check that the game disk is not scratched, damaged or dirty.

Error 33

DISPLAY	Storage Device is Not Acceptable.
CAUSE	The program installer device cannot be found.
COUNTERMEASURES	Send the LINDBERGH board in for repair with the key chip still in place.

Error 34

DISPLAY	Storage Device Not Found.
CAUSE	The program installer device cannot be found.
COUNTERMEASURES	Send the LINDBERGH board in for repair with the key chip still in place.

Error 35

DISPLAY	Storage Device is Not Acceptable.
CAUSE	The program installer device does not have enough space.
COUNTERMEASURES	Send the LINDBERGH board in for repair with the key chip still in place.

15-2 ERROR DISPLAY

Error 36

DISPLAY	Storage Device May be Broken.
CAUSE	The program installer device is broken.
COUNTERMEASURES	Send the LINDBERGH board in for repair with the key chip still in place.

Error 37

DISPLAY	Verifying Game Program Failed.
CAUSE	The program image is unverified due to the program image not existing on the game disk or server.
COUNTERMEASURES	Check that the correct game disk is inserted.

Error 41

DISPLAY	Server Not Respond.
CAUSE	The server is not responding.
COUNTERMEASURES	Check the network settings. Set IP Address and other settings. Check that the network cable has not been pulled out.

Error 42

DISPLAY	Server Mount Failed.
CAUSE	The server directory is could not be reached.
COUNTERMEASURES	Check the network settings. Set IP Address and other settings. Check that the network cable has not been pulled out.

Error 43

DISPLAY	IP Address Not Assigned.
CAUSE	An IP Address could not be obtained from the DHCP server.
COUNTERMEASURES	Check the network settings. Check that the network cable has not been pulled out. Check that the DHCP server is running.

Error 44

DISPLAY	Game Program Not Found on Server.
CAUSE	No program image on the network server.
COUNTERMEASURES	Check that the game title, place on the network server, and the key chip correspond to each other.

Error 51

DISPLAY	Wrong Resolution Setting.
CAUSE	The game does not support the current resolution settings.
COUNTERMEASURES	Change the DIP SW to the correct settings and restart.

Error 52

DISPLAY	Wrong Horizontal/Vertical Setting.
CAUSE	The monitor horizontal/vertical settings are incorrect.
COUNTERMEASURES	Change the DIP SW to the correct settings and restart.

NOTES

16 GAME BOARD

⚠ WARNING

- When working with the product, be sure to turn the power off. Working with the power on may cause an electric shock or short circuit.
- Be careful not to damage the wires. Damaged wires may cause an electric shock, short circuit or present a risk of fire.
- Do not use this product with connectors other than those that were connected and used with the game board at the time of shipping. Do not carelessly connect wires to connectors that were not used at the time of shipping, as this may cause overheating, smoke or fire damage
- When returning the game board after making repairs or replacements, make sure that there are no errors in the connection of connectors. Erroneous connections can lead to electrical shock, short circuits or fires.
- When connecting a connector, check the direction carefully. Connectors must be connected in only one direction. If indiscriminate loads are applied in making connections, the connector or its terminal fixtures could be damaged, resulting in electrical shock, short circuits or fires..

⚠ CAUTION

In this product, setting changes are made during the test mode. The game board need not be operated. Use the game board, etc. as is with the same setting made at the time of shipment so as not to cause electric shock and malfunctioning.

Static electricity from your body may damage some electronics devices on the IC board. Before handling the IC board, touch a grounded metallic surface so that the static electricity can be discharged..

STOP IMPORTANT

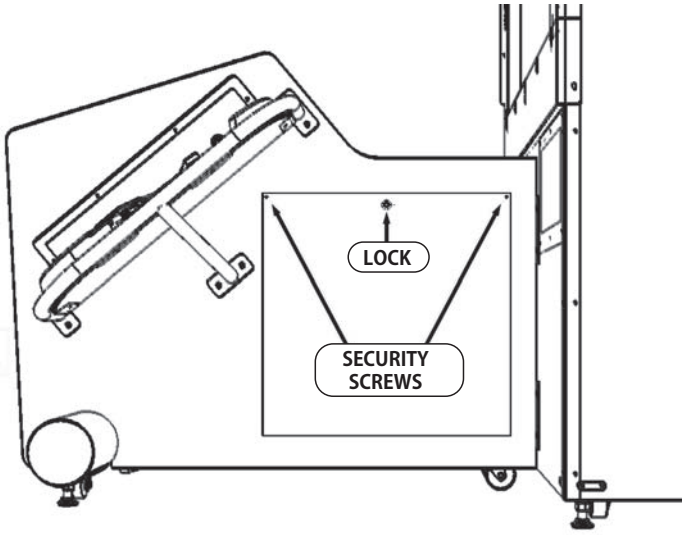
- When a Game Board is to be replaced, put the old Game Board with anomaly into a special box for the replacement of Game Boards. If the special box is not available or it as been damaged, arrange to obtain a box with the following Part Number : 601-11691 / CARTON BOX LBG.
- For replacement or repair, pack the board and send it without disassembling it Order for servicing might not be accepted if any part of the Game Board has been removed. If any part is removed, a service fee will be charged even if the warranty period has not expired.
- DO NOT REMOVE THE KEY CHIP FROM THE BOARD BEFORE SENDING THE BOARD FOR SERVICING

16-1 REMOVING THE GAME BOARD

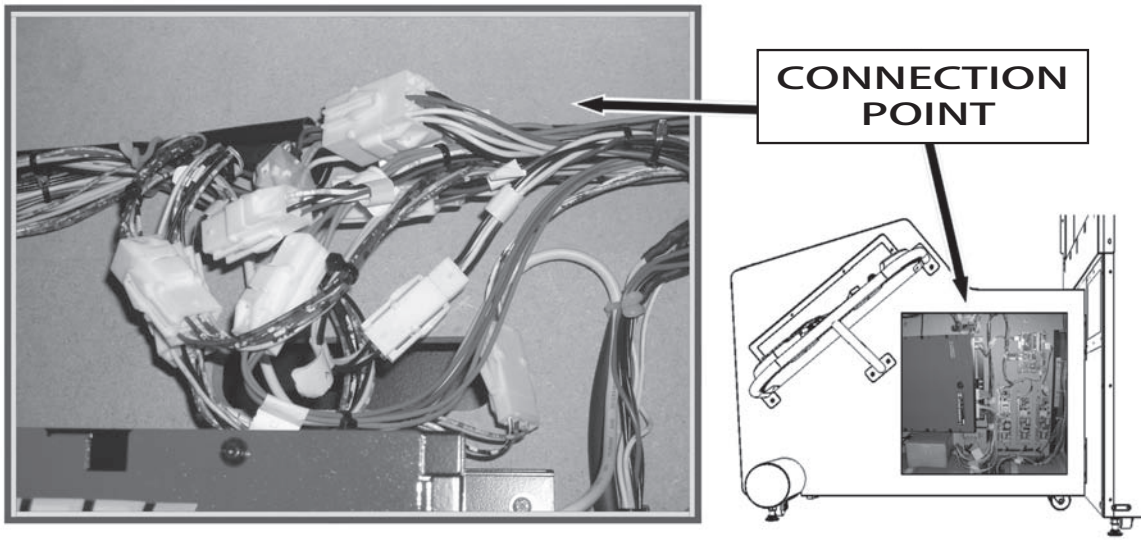
1 Switch off the main unit.

2 Remove the security screws and unlock the Service Door located on the Left Hand side of the Gun Console.

Remove the Service Door.



3 Locate the group of Connectors fitted above the LINDBERGH Game Board. Carefully separate each pair connectors, releasing the Clip - Lock that holds both halves of the connectors together. Always disconnect by holding the connectors moulding and never pull on the wire, as this can damage wiring and connector terminations..



16-1 REMOVING THE GAME BOARD

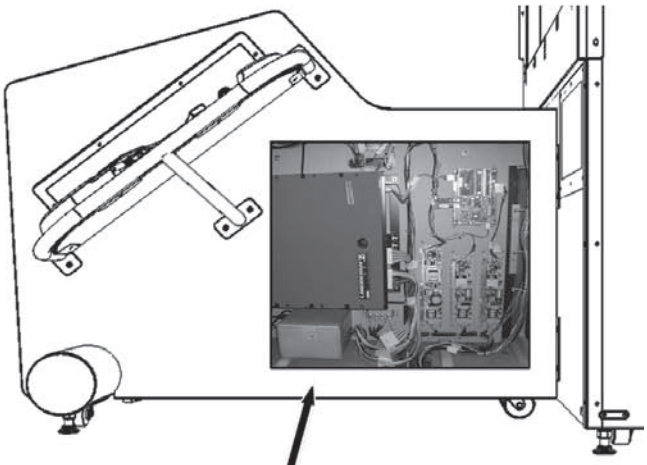
3 Check that all Connectors at the Connection Point have been disconnected, and that the Wiring Harness attached to the CABINET is separated from the Wiring Harness attached to the MAIN BOARD ASSEMBLY,

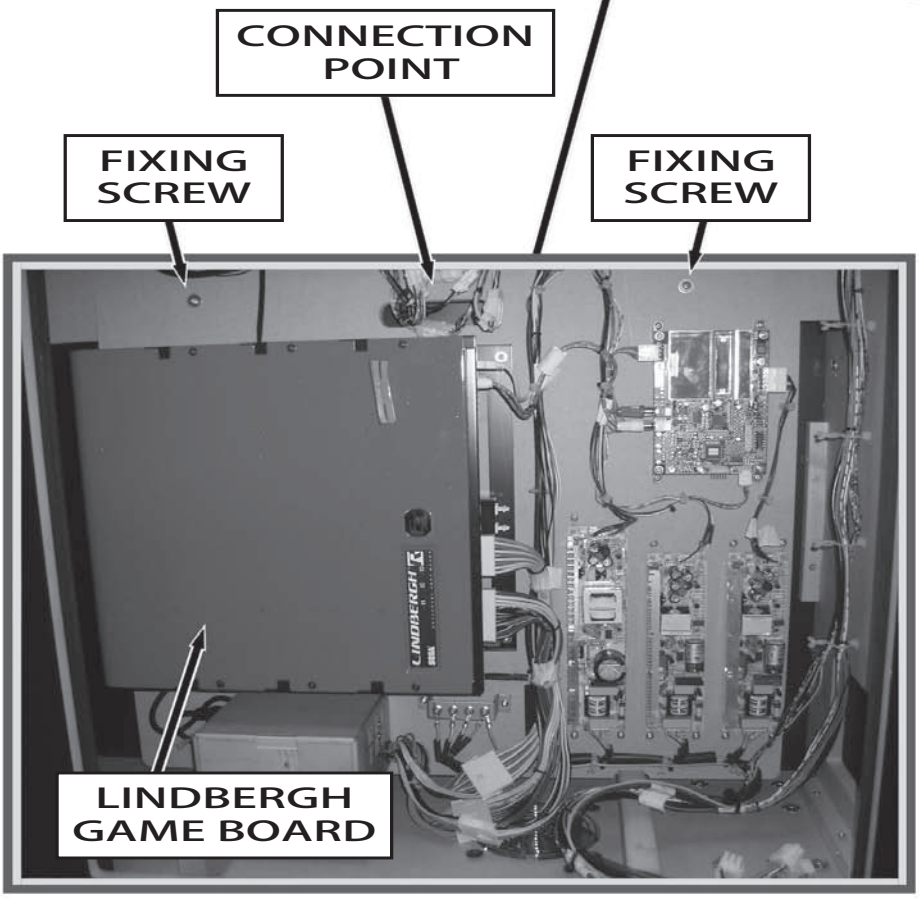
Remove the VIDEO CABLE from the LINDBERGH Game Board.

4 Remove the two Fixing Screws securing the Main Board Assembly in place. Tilt the Main Board outwards and lift it from the fixing guide at the bottom and remove it fron the Cabinet.

With the Main Board removed from the cabinet, disconnect the Wiring Harness from the LINDBERGH Game Board.

Remove the four fixing screws one located on each corner of the LINDBERGH.

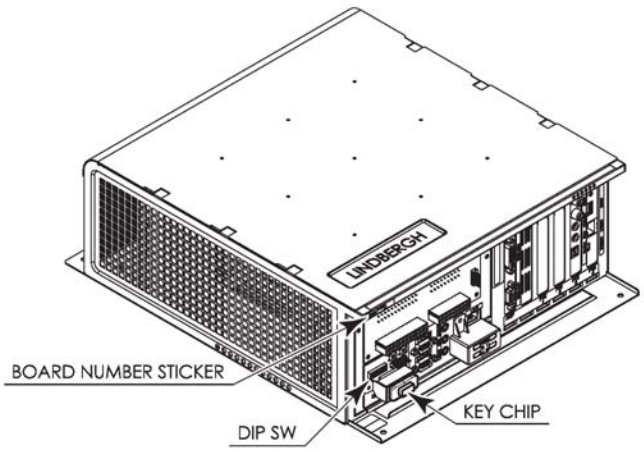




16-2 COMPOSITION OF GAME BOARD

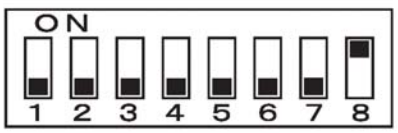
STOP IMPORTANT

- **With the key chip inserted into it, this board serves as a special-purpose game board for the product.**
- **Use with the dip switches (DIP SW) on the board at the prescribed settings. If settings do not match the product, an error message will be displayed. In some cases, the game cannot be started.**



DIP SW Setting

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



17 SOFTWARE INSTALLATION

17-1 ATTACHING THE DVD DRIVE AND KEY CHIP

⚠ WARNING

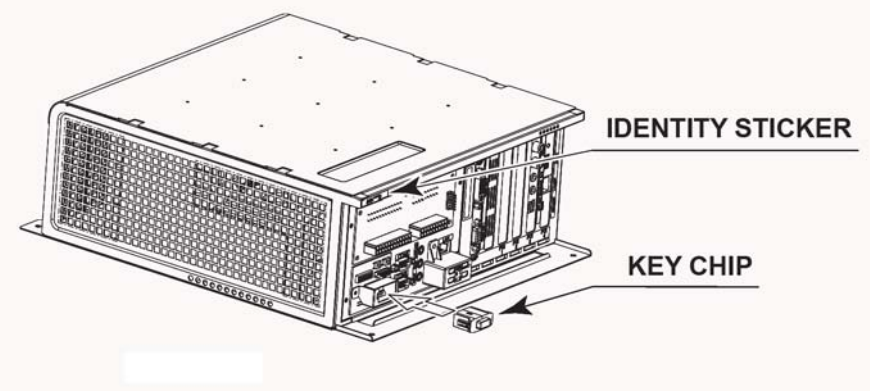
- When connecting the DVD wire connector, check the orientation carefully and connect securely. The connector must be connected in the proper direction. If it is connected in the wrong direction or indiscriminately at an incline so that if a load is applied, the connector or its terminal pins could break, possibly causing a short circuit or fire.
- Be careful not to damage the DVD wire by getting it caught between object, etc. Doing so may cause a short circuit or fire.

STOP IMPORTANT

- The KEY CHIP is a precision device. It can be damaged by heat, impact and static electricity. exercise caution in handling this equipment.
- The KEY CHIP must be used as a set with the DVD-ROM disc included in the package.
- Prepare the separately sold DVD Drive and the DVD Wire (2M) supplied with this product. Connect the LINDBERGH (Game Board) and the DVD drive with the DVD wire in order to install software.
- For your Safety and to prevent Malfunction, do this before plugging in the power cord.

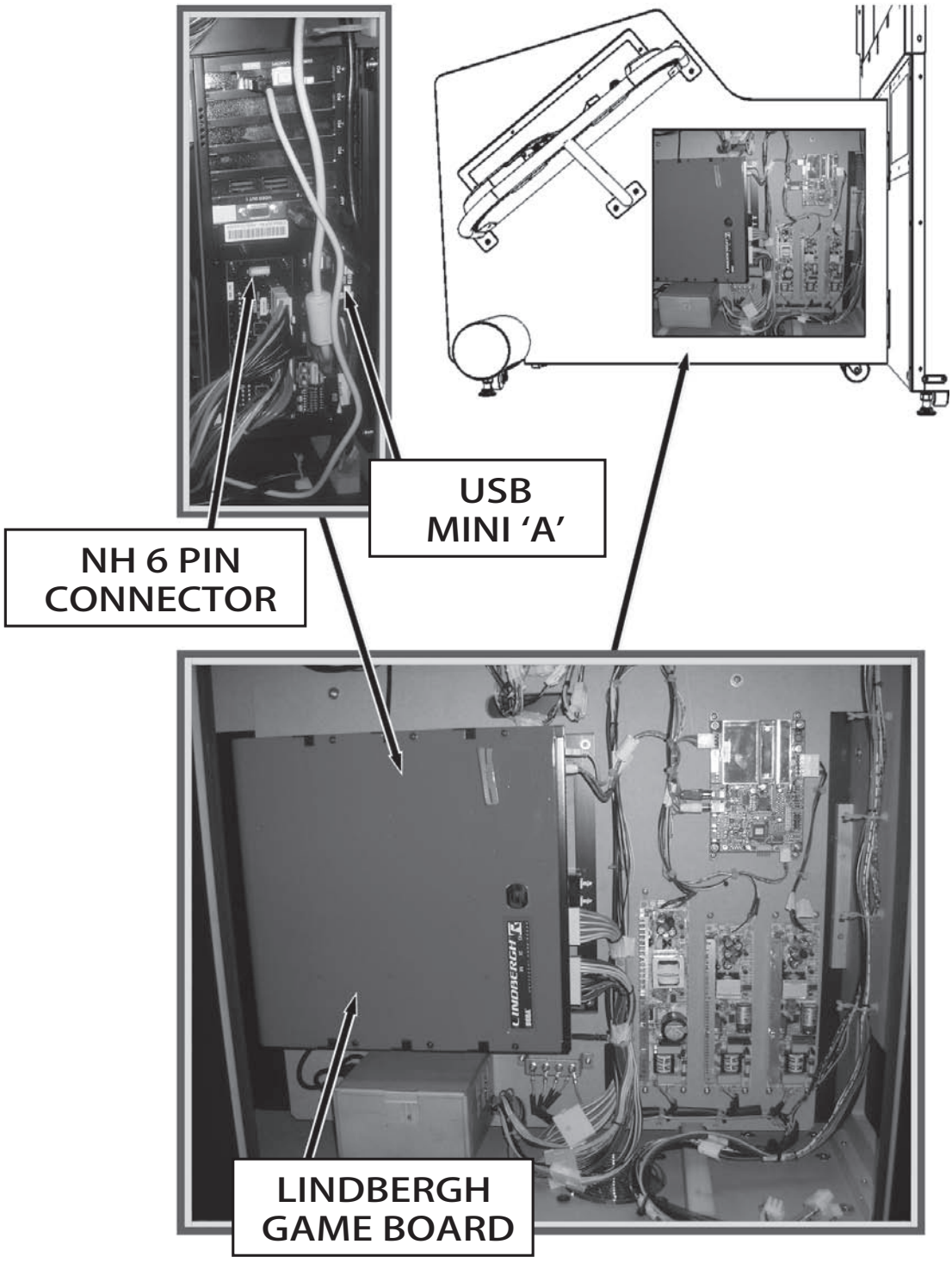
1 Remove the Service Door on the Left Hand side of the Gun Console to reveal the LINDBERGH Game Board.

2 Remove the 'KEY CHIP' from the 'DVD' Software Kit, and insert the Key Chip into the 'LINDBERGH' . At this point, make sure to insert the Key Chip in the right direction and pushed all of the way in. At this time also attach the 'IDENTITY STICKER' to the Lindbergh.



17-1 ATTACHING THE DVD DRIVE AND KEY CHIP

3 Connect the DVD Wire (2 Metres) to the LINDBERGH connect the connector on the side with the LINDBERGH tag. The 'USB MINI A' can be connected to any of the ports 1 - 4. (See below)



17-2 TURNING POWER ON - SOFTWARE INSTALLATION

⚠WARNING

- Be careful not to damage the DVD wire by getting it caught between objects, etc. Doing so may cause a short circuit or fire.
- The following explanation assumes that the product has been assembled properly as explained above. If there is an error or if the product operates in a manner other than as indicated below, cut off the power supply immediately. Failure to do so may result in a fire or electrical shock.
- If you look directly at the laser beam in the DVD DRIVE, you could suffer vision impairment. Do not look inside the DVD DRIVE.

STOP IMPORTANT

- Do not use or store the DVD Drive or DVD Wire in any of the following locations, as this may result in serious damage.
  - Anywhere which may vibrate or shock the equipment.
  - In direct sunlight.
  - In damp or dusty places.
  - In places with a sharp change in temperature.
  - Close to anything that gives of heat. (Heater etc.)
  - Close to anything with a strong magnetic field. (magnets, monitors, speakers radio, etc)
  - Anywhere that is likely to get wet.
  - Anywhere with a slope or incline.
  - Anywhere with corrosive in the air. (Chlorine, hydrogen sulfide, ammonia, sulphur dioxide etc)
  - Anywhere with strong static electricity.

[Do not use in these locations]

  - Close to anything that is highly retentive of heat. (carpets, sponge, cardboard, etc.)
  - Anywhere that blocks the DVD air vent.
- The DVD is a delicate piece of equipment. Avoid the following.
  - Dropping or shaking it violently,
  - Getting water or liquids on top of it.
  - Placing small or large items on top of it
  - Drinking of smoking close to the DVD Drive.
- Do not turn off the power to the DVD when it' s Access Lamp is on or flashing, as this could cause damage to the device.
- Do not allow any foreign objects, such as liquids, metals, or smoke inside the DVD drive.

IMPORTANT

- Use a soft dry cloth to wipe off any dirt or marks on the DVD Drive.
  - If you need to use a cleaning agent, always use a “neutral” agent diluted in water.
  - Never use products or cleaning agent containing benzene, alcohol, thinners, etc.
- Do not touch the LENS inside the DVD Drive. Doing so may prevent it from reading accurately.
- The chip components on the IC board can be damaged by electrostatic discharge from the human body, before handling an IC board always neutralize any static charge in the body by touching grounded metal surface.
- Some parts are not designed and manufactured specifically for the Software Kit . Manufactures may discontinue, or change the specification of such general purpose parts. In which case, SEGA cannot repair or replace a failed component whether of not the warranty period has expired.

HANDLING THE DVD-ROM DISC

IMPORTANT

- Do not use a DVD with a damaged Face. This may cause a malfunction.
- Insert the DVD ROM into the DVD Drive with the label facing upwards.
- Do not get finger prints or dust particles on the disc. Contaminated discs may lower audio and video quality, and may result in read malfunctions.
- When cleaning the disc, do not use volatile chemicals (benzene, thinners, cleaning sprays, or antistatic agents, etc.).
- Do not use a cracked, warped, or damaged disc.
- Do not attach papers or seals onto the disc to avoid scratching it.
- Do not use a disc with signs of peeled seals, tape, etc
- If such a disc is placed the DVD ROM Drive, malfunctions, such as the inability to remove the disc from the drive, may result.
- When cleaning a contaminated disc, use a soft cloth that has been soaked in water and squeezed. After wiping, remove any remaining moisture with a clean dry cloth. (See 6-5 Fig 01)
- When handling a Disc be careful not to contaminate it with your fingerprints.

HANDLING THE DISC

1 • To clean a disc, wipe it with a soft cloth, from the centre outwards.

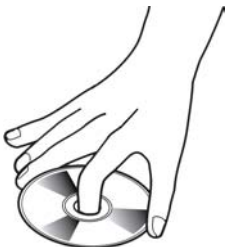
17-2 Fig 01

2 • When handling a disc, using both hands, put your thumbs and forefingers on the opposite sides of the disc.

17-2 Fig 02

3 • Placing the DVD ROM into the DVD Drive, with one hand, put your forefinger into the centre hole while placing your thumb and middle finger on opposite sides of the disc. When inserting a DVD ROM into the Drive make sure that the label is facing upwards.

17-2 Fig 03



IMPORTANT

- The software is not installed on the game board (LINDBERGH RED) when the power supply is engaged, so the "Error 22" message is not a malfunction.

  However, if there is another error display, or if there is no video output at all, there might have been an error in product assembly, wiring connections might be faulty, or the LINDBERGH RED might not be functioning properly.
- After the power supply is engaged, wait for "Error 22" message to be displayed. If the product is indiscriminately operated in any way beforehand, there could be unexpected problems or malfunctions, as well as damage to parts.
- Once "Error 22" is displayed, set the DVD-ROM in the DVD DRIVE and re-engage the power supply. Installation takes place.
- After the power supply is engaged, the DVD DRIVE tray will not come out for about 30 seconds even if you press the switch. This is due to DVD DRIVE initialization.
- The DVD DRIVE tray can come out or return only while the power supply is engaged. The tray cannot be opened or closed while the power is off.
- Even after the software has been installed, store the DVD software kit, DVD DRIVE and DVD wire in a secure location.
- If for any reason installation cannot be completed, an error is displayed. Refer to the service manual and take corrective action.

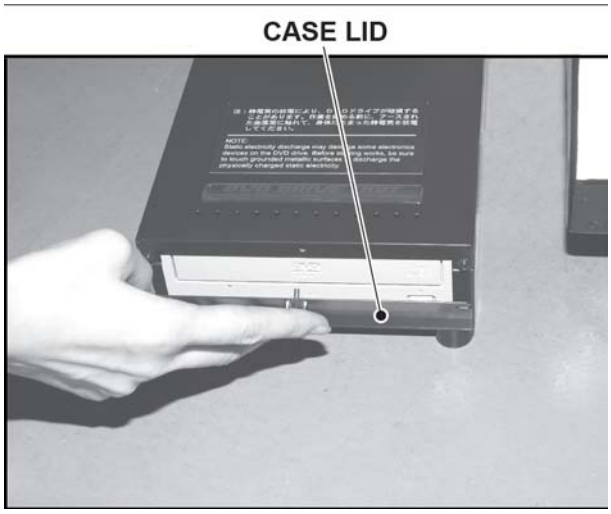
SOFTWARE INSTALLATION

Take out the DVD Software Kit provided.

1 • Switch ON the MAIN POWER Switch on the AC Unit.

2 • The LINDBERGH starts up and an image appears on the screen (However, this may take several minutes depending on the type of display used), then an ERROR will occur. Check that it is "ERROR 22" and proceed to the next operation. If it' s not "ERROR 22" take corrective measures as indicated in the LINDBERGH Service Manual.

3 • Remove 1 urea (Resin Head) Screw, and then remove the DVD Case.



17-2 Fig 04

4 • Press the DVD Drive switch and the DVD Drive tray will open. Set the DVD ROM from the DVD Software Kit into the Tray. Always have the DVD label facing upwards.

17-2 Fig 05

5 • Press the DVD Drive switch and the DVD Drive tray will close

6 • Reset Power, Turn the MAIN POWER Switch OFF, wait a while and then turn it back on again.

7 • The Software installs Automatically from the DVD ROM to the LINDBERGH, In some cases, it may take up to 30 minutes for the installation to the LINDBERGH to be complete.

8 • After the software installation, the Game Image will appear automatically.

GAME IMAGE

17-2 Fig 06

9 • Press the DVD Drive switch to open the tray, and remove the DVD ROM.

10 • Press the DVD Drive switch again to close the tray, When the power is off, the tray can not be moved.

11 • Set the MAIN POWER Switch OFF'

12 • Remove the DVD Wire (2m) from the DVD DRIVE.

13 • Refer to steps 1-13 in "6-3 ATTACHING THE DVD DRIVE AND KEY CHIP" and follow the steps in reverse order to detach the DVD Wire (2m) from the cabinet.

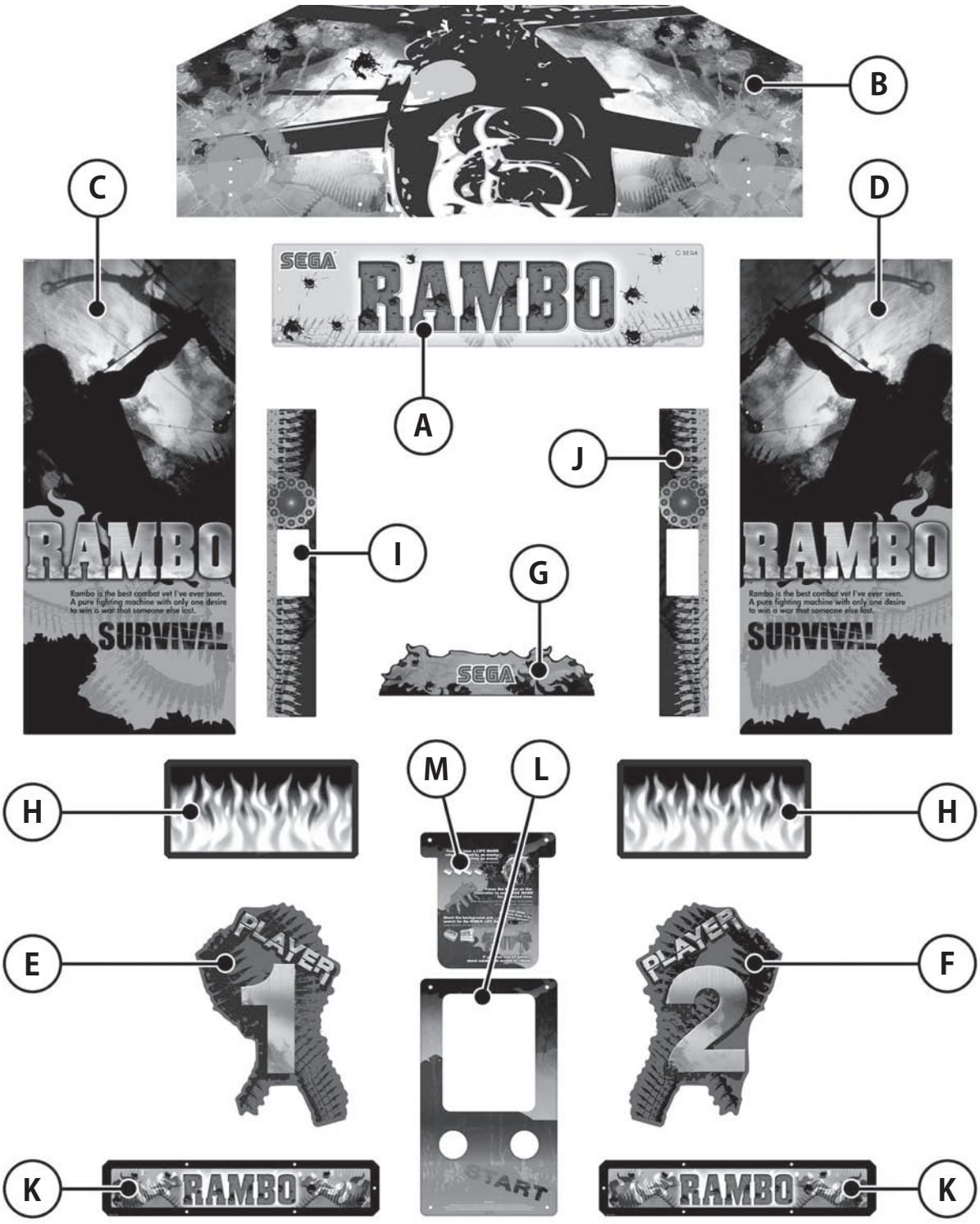
14 • Attach the DVD Drive case lid and fasten it with 1 urea (Resin Head) Screw. Store the DVD Drive and DVD Software Kit at a location where there is no dust or cigarette smoke.

15 • Turn ON the MAIN POWER Switch on the AC unit. When the Game Image appears, installation is complete. (See 6-5 Fig 06)

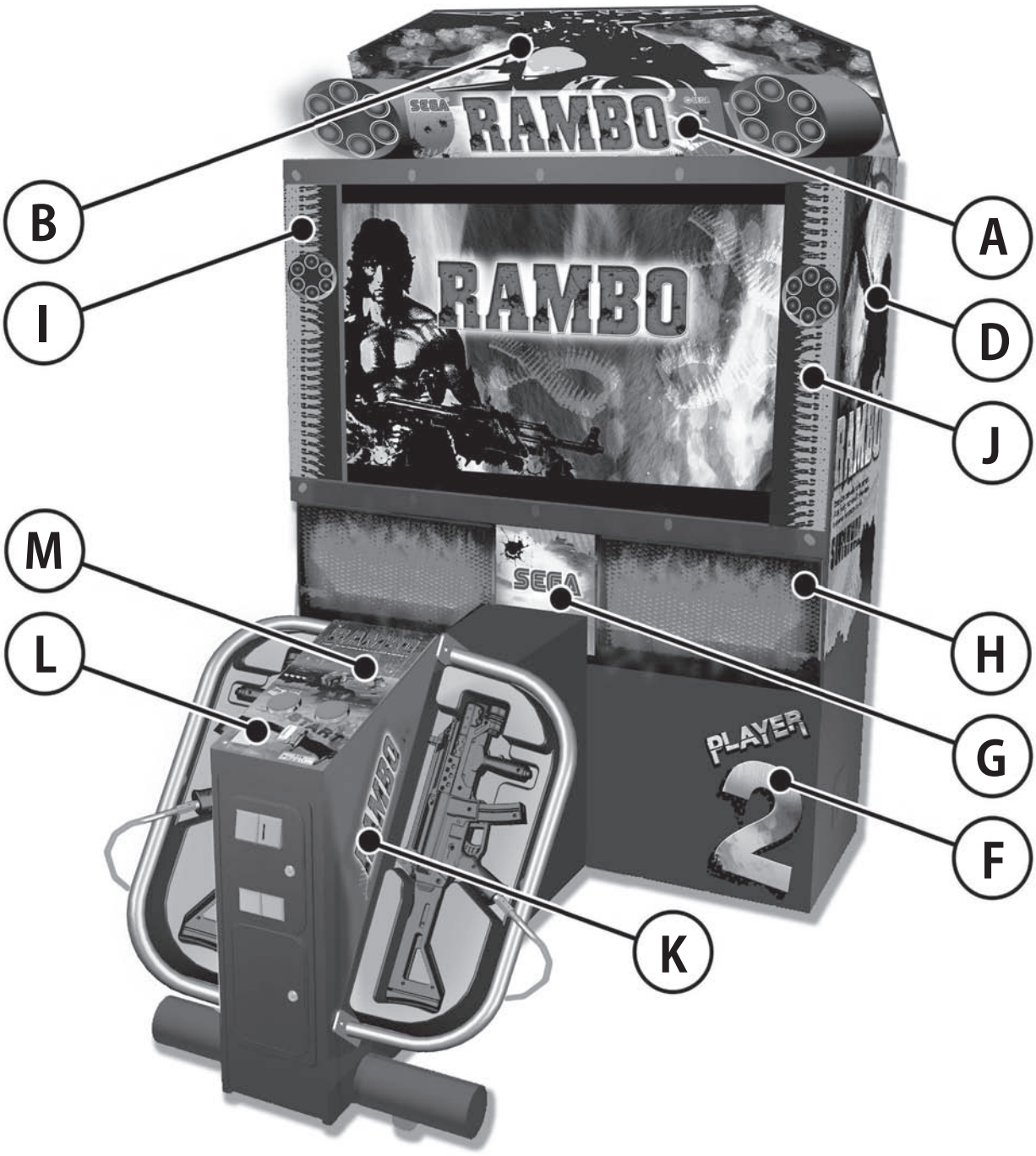
18 DESIGN-RELATED PARTS

For the warning display stickers, refer to Section 1.

No.	Number	Description	Quantity	Assembly
A	RMB-0556UK	BILLBOARD FRONT PLATE	1	RMB-INST-DX / 21
B	RMB-0558UK	BILLBOARD POP	1	RMB-INST-DX / 23
C	RMB-0511UK	STICKER - DLP SIDE L	1	RMB-0500UK / 11
D	RMB-0512UK	STICKER - DLP SIDE R	1	RMB-0500UK / 12
E	RMB-0513UK	STICKER - DLP FRONT L	1	RMB-0500UK / 13
F	RMB-0514UK	STICKER - DLP FRONT R	1	RMB-0500UK / 14
G	RMB-0515UK	STICKER - DLP FRONT CENTRE	1	RMB-0500UK / 15
H	RMB-0516UK	PLAQUE - FLAMES	2	RMB-0500UK
I	RMB-0535UK	STICKER - MASK L	1	RMB-0503UK / 6
J	RMB-0536UK	STICKER - MASK R	1	RMB-0503UK / 7
K	RMB-1116UK	PLAQUE - CONTROLLER RAMBO	2	RMB-1100UK
L	RMB-2002UK	STICKER - CONTROL PANEL	1	RMB-1100UK
M	RMB-1001UK	STICKER - INSTRUCTIONS		RMB-1100UK

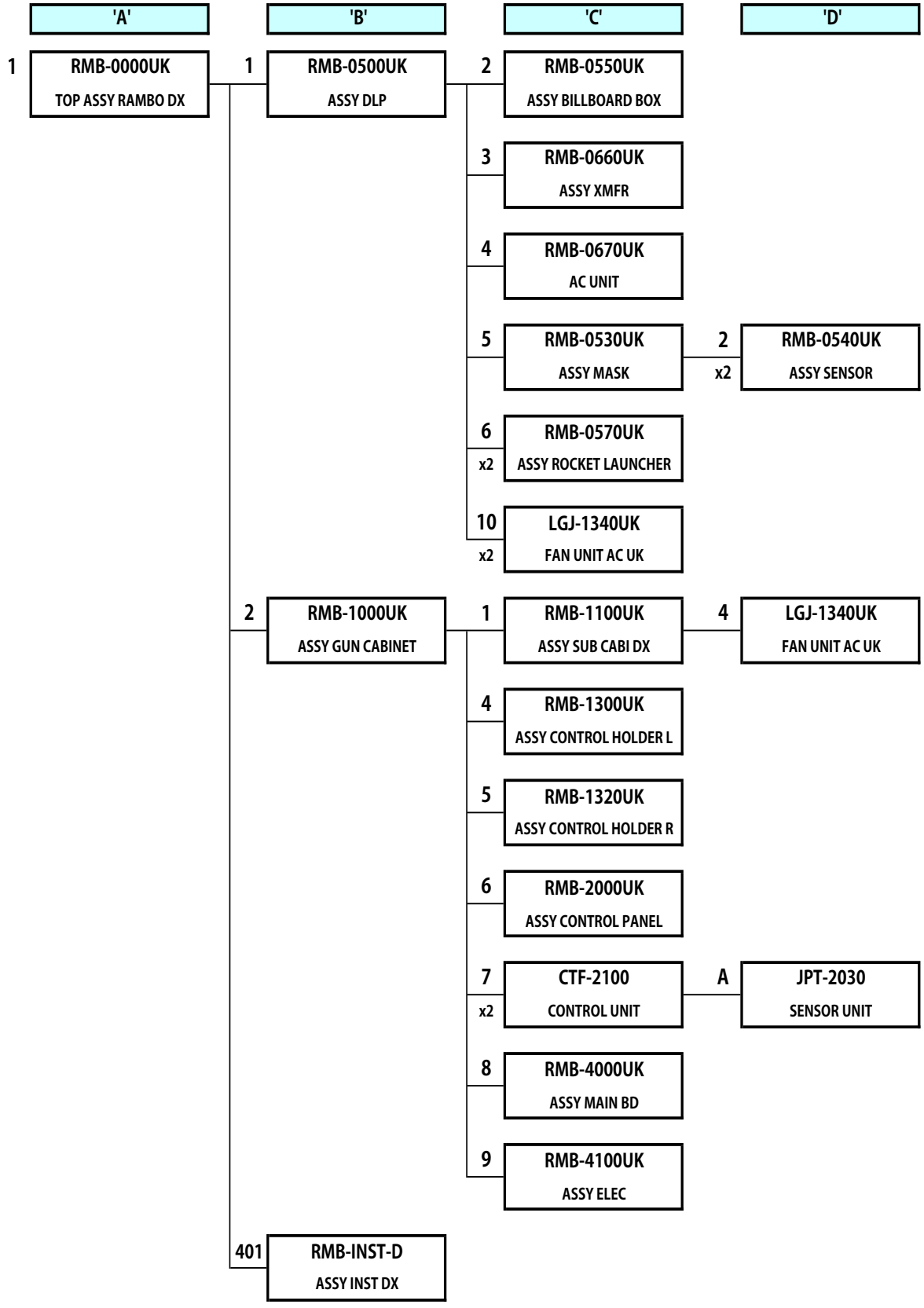

B
C
D
SEGA
RAMBO
A
J
I
G
RAMBO
Rambo is the best combat vet I've ever seen.
A pure fighting machine with only one desire
to win a war that someone else lost.
SURVIVAL
SEGA
RAMBO
Rambo is the best combat vet I've ever seen.
A pure fighting machine with only one desire
to win a war that someone else lost.
SURVIVAL
H
M
L
H
E
PLAYER 1
PLAYER 2
F
START
K
RAMBO
RAMBO
K

18 DESIGN RELATED PARTS



19 PARTS LIST BRAKEDOWN ON ALL SUB ASSEMBLIES

RAMBO DELUXE - ASSY STRUCTURE



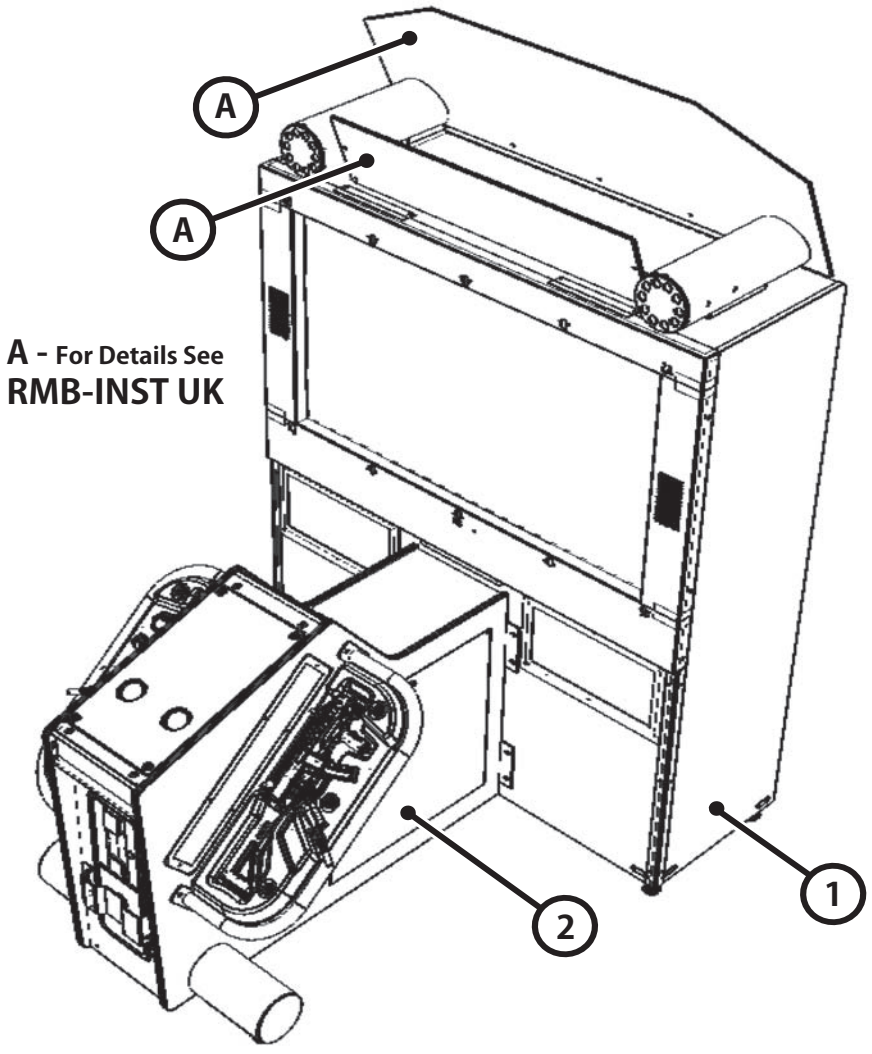
A B C D

1

TOP ASSEMBLY (RMB-0000UK)

No.	Component Part	Description	Quantity	
1	RMB-0500UK	ASSY DLP	1	
2	RMB-1000UK	ASSY GUN CABINET	1	
8	LB1046	LABEL TESTED FOR ELEC. SAFETY	1	*
9	LB1102	STICKER DANGEROUS VOLTAGE	2	*
10	421-7988-91UK	STICKER SERIAL NUMBER UK	2	*
11	421-7020UK	STICKER CAUTION FORK	6	*
17	440-CS0186UK	STICKER C EPILEPSY MULTI	1	*
19	LB1130	LABEL WEEE WHEELIE BIN	1	*
20	PK0451	PALLET DLP RMB DX	1	*
21	PK0452	SHRINK BAG DLP RMB DX	1	*
22	PK0453	PALLET MAIN RMB DX	1	*
23	PK0454	SHRINK BAG MAIN RMB DX	1	*
201	030-000840-SB	M8X40 BLT W/S BLK	6	*
202	060-F00800-0B	M8 WSHR FORM A FLT BLK	6	*
401	RMB-INST-D	ASSY INST DX	1	*

* N



A B C D

1 1 ASSY - DLP (RMB-0500UK)

No.	Component Part	Description	Quantity	
1	RMB-0501UK	DLP CABI	1	
*2	ARC-1006	LEG BRKT	4	
*3	117-5233UK	PLATE LEG BRKT	8	
*4	RMB-0502UK	DOOR BACK DLP	1	
*101	MA1019	CASTOR 75	4	*
*102	601-5699UK13-01	LEG ADJ M16X130 1L/NUT	4	*
*201	030-000816	M8X16 BLT PAS	16	*
*202	060-S00800	M8 WSHR SPR PAS	16	*
*203	029-B00625-0B	M6X25 SKT BH BLK	16	*
3	RMB-0660UK	ASSY XMFR	1	
4	RMB-0670UK	AC UNIT	1	
5	RMB-0530UK	ASSY MASK	1	
6	RMB-0570UK	ASSY ROCKET LAUNCHER	2	
10	LGJ-1340UK	FAN UNIT AC UK	2	
11	RMB-0511UK	STICKER, DLP SIDE L	1	*
12	RMB-0512UK	STICKER, DLP SIDE R	1	*
13	RMB-0513UK	STICKER, DLP FRONT L	1	*
14	RMB-0514UK	STICKER, DLP FRONT R	1	*
15	RMB-0515UK	STICKER, DLP FRONT CENTRE	1	*
16	421-7501-10	STICKER, FL 40W	1	*
17	LB1104	STICKER, CAUTION HOT SURFACE	1	*
18	LB1120	STICKER, DANGEROUS VOLTAGE	1	*
20	253-5460-01	AIR VENT BLACK	2	
21	RMB-0552UK	BILLBOARD BOX LID	1	
22	RMB-0516UK	DIFFUSER FIRE EFFECT	2	
23	RMB-0517UK	RETAINER DIFFUSER	2	
24	RMB-0518UK	SASH DLP SIDE	2	*
25	RMB-0505UK	CONN PLATE	1	
26	RMB-0553UK	SASH BILLBOARD LID FRONT	1	*
27	RMB-0554UK	SASH BILLBOARD LID REAR	1	*
28	RMB-0504UK	BRKT JOINT	4	*
29	RMB-0506UK	DLP RETAINING BRKT REAR	1	*
30	RMB-0507UK	DLP RETAINING BRKT FRONT	1	*
31	RMB-0509UK	BRKT RETAINING DLP TOP L	1	*
32	RMB-0510UK	BRKT RETAINING DLP TOP R	1	*
101	200-6056-SMGSNG	DISPLAY 56" DLP SAMSUNG	1	
102	130-04030-E	SPKR ELIP 4OHM 30W VIS DX4x6P	2	
103	838-14851	RED LED BD 40EA RMB	2	
104	390-5695-40-CUK	FL TRAY 110V 40W	1	*
105	390-5695-40-GUK	FL TUBE 40W 1200x38MM T12	1	*
106	280-A01264-WX	ROUTER TWIST D12 SO6.4 WOOD X	4	*
107	290194	TAPE FOAM 25MM X 6MM X 12M	60	*

A B C D

1 1 ASSY - DLP (RMB-0500UK)

No.	Component Part	Description	Quantity	
201	000-T00630-0B	M6X30 MSCR TH BLK	3	*
202	060-F00600-0B	M6 WSHR FORM A FLT BLK	3	*
203	030-000830-S	M8X30 BLT W/S PAS	6	*
204	068-852216	M8 WSHR 22OD FLT PAS	6	*
205	000-P00425-W	M4X25 MSCR PAN W/FS PAS	4	*
206	068-441616	M4 WSHR 16OD FLT PAS	4	*
207	000-T00420-0B	M4X20 MSCR TH BLK	12	*
208	000-T00412-0B	M4X12 MSCR TH BLK	28	*
209	000-P00420-W	M4X20 MSCR PAN W/FS PAS	4	*
210	012-P03516	N6X5/8" S/TAP PAN PAS	8	*
211	012-P00325	N4X1" S/TAP PAN PAS	12	*
212	012-P03512-F	N6X1/2" S/TAP FLG PAS	4	*
213	000-T00416-0B	M4X16 MSCR TH BLK	16	*
214	030-000620-S	M6X20 BLT W/S PAS	4	*
215	068-652016	M6 WSHR 20OD FLT PAS	4	*
301	RMB-60006UK	WH AC MAIN	1	*
302	RMB-60007UK	WH DLP AC IN	1	*
303	RMB-60035UK	WH SPK & LED	1	*
304	RMB-60036UK	WH LED BD	1	*
305	LGJ-60036UK	WH BILLBOARD FAN AC	3	*
306	SRS-60020UK	WH SPEAKER	2	*
307	600-7009-3000UK	ASSY RGB CA D SUB 15	1	*
308	600-9100-44K	WH EARTH 100CM M4 M4	2	*
309	SRS-65016UK	WH AC GAME BOARD	1	*
310	600-9250-44K	WH EARTH 250CM M4 M4	1	*
311	RMB-60009UK	WH FL UNIT	1	*
312	RMB-60049UK	WH AC BILLBOARD	1	*

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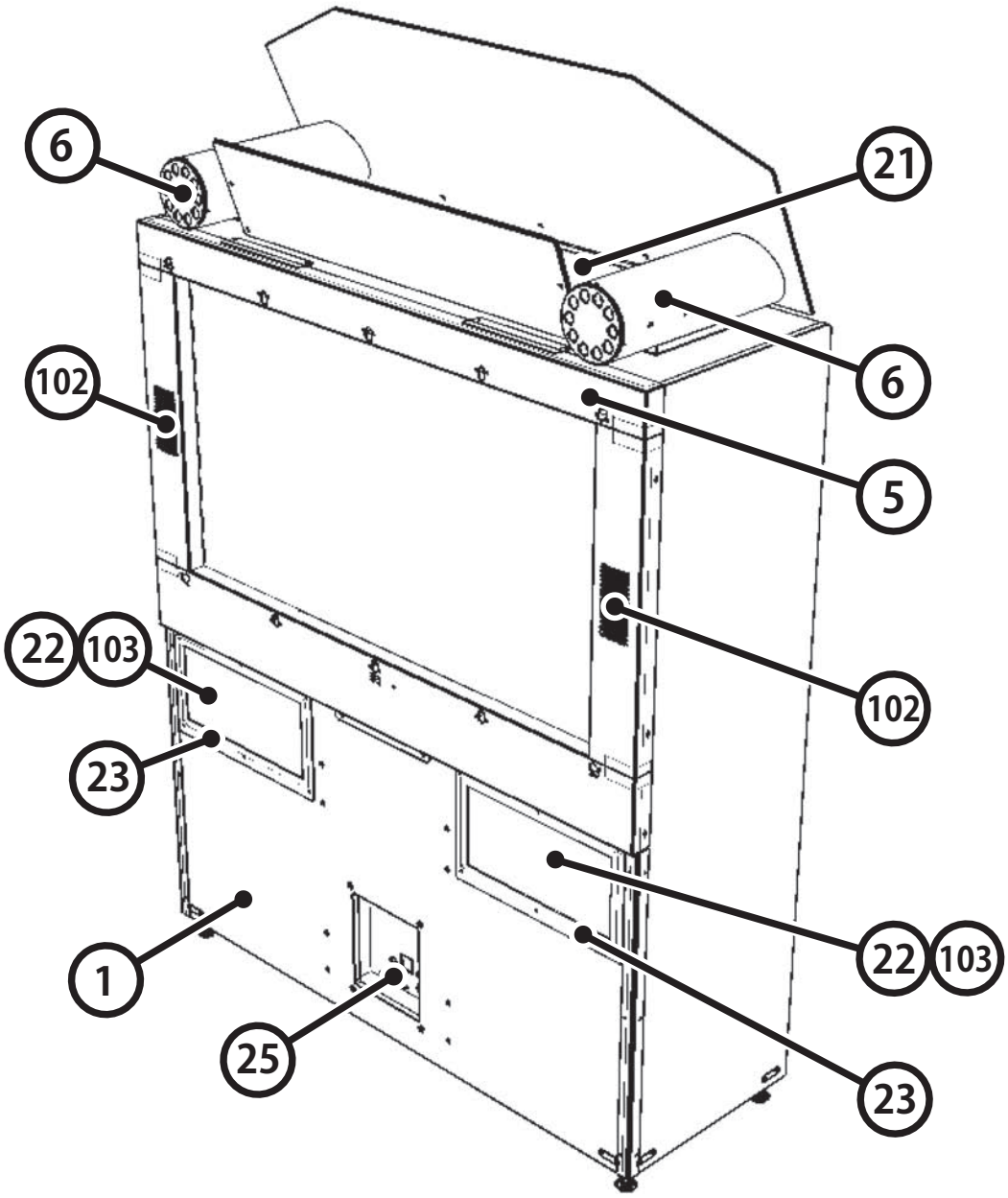
1 1

ASSY - DLP (RMB-0500UK)



COMPONENTS IDENTIFIED ON THIS PAGE

1	RMB-0501UK	DLP CABI	1
5	RMB-0530UK	ASSY MASK	1
6	RMB-0570UK	ASSY ROCKET LAUNCHER	2
21	RMB-0552UK	BILLBOARD BOX LID	1
22	RMB-0516UK	DIFFUSER FIRE EFFECT	2
23	RMB-0517UK	RETAINER DIFFUSER	2
25	RMB-0505UK	CONN PLATE	1
102	130-04030-E	SPKR ELIP 4OHM 30W VIS DX4x6P	2
103	838-14851	RED LED BD 40EA RMB	2

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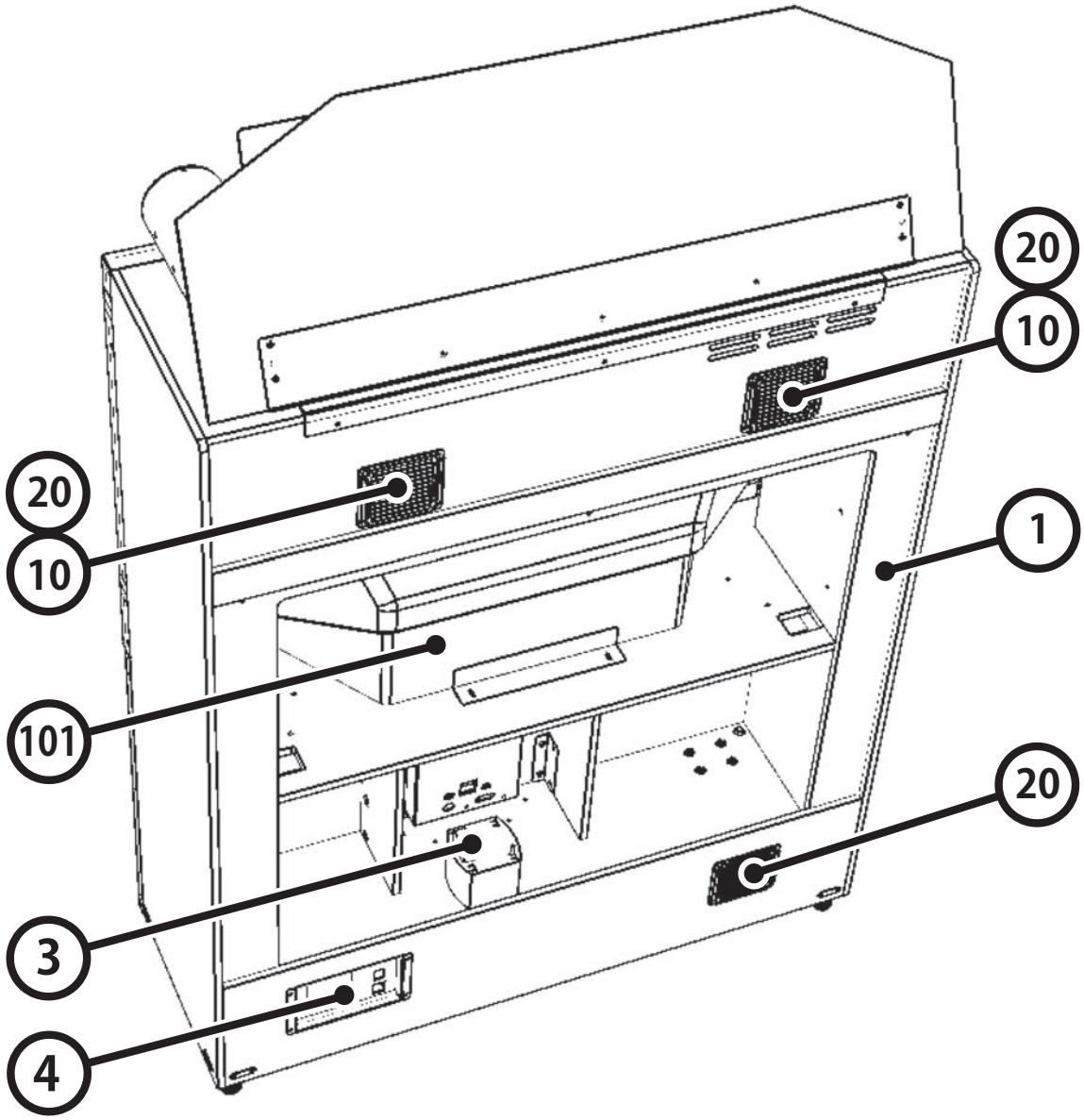
1 1

ASSY - DLP (RMB-0500UK)

COMPONENTS IDENTIFIED ON THIS PAGE

1	RMB-0501UK	DLP CABI	1
3	RMB-0660UK	ASSY XMFR	1
4	RMB-0670UK	AC UNIT	1
10	LGJ-1340UK	FAN UNIT AC UK	2
20	253-5460-01	AIR VENT BLACK	2
101	200-6056-SMGSNG	DISPLAY 56" DLP SAMSUNG	1



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1 1 3 ASSY - XMFR (RMB-0660UK)

No.	Component Part	Description	Quantity	
1	ADH-4201UK	WOODEN BASE TRANS BD	1	
101	560-LBGH-01UK	TRANSFORMER 100V	1	
102	838-14551-02UK	AC DISTRIBUTION BD	1	
201	000-P00416-W	M4X16 MSCR PAN W/FS PAS	4	*
202	068-441616	M4 WSHR 16OD FLT PAS	4	*
203	050-F00400	M4 NUT FLG SER PAS EARTH	4	*
301	RMB-60044UK	WH EARTH XFMR	1	*

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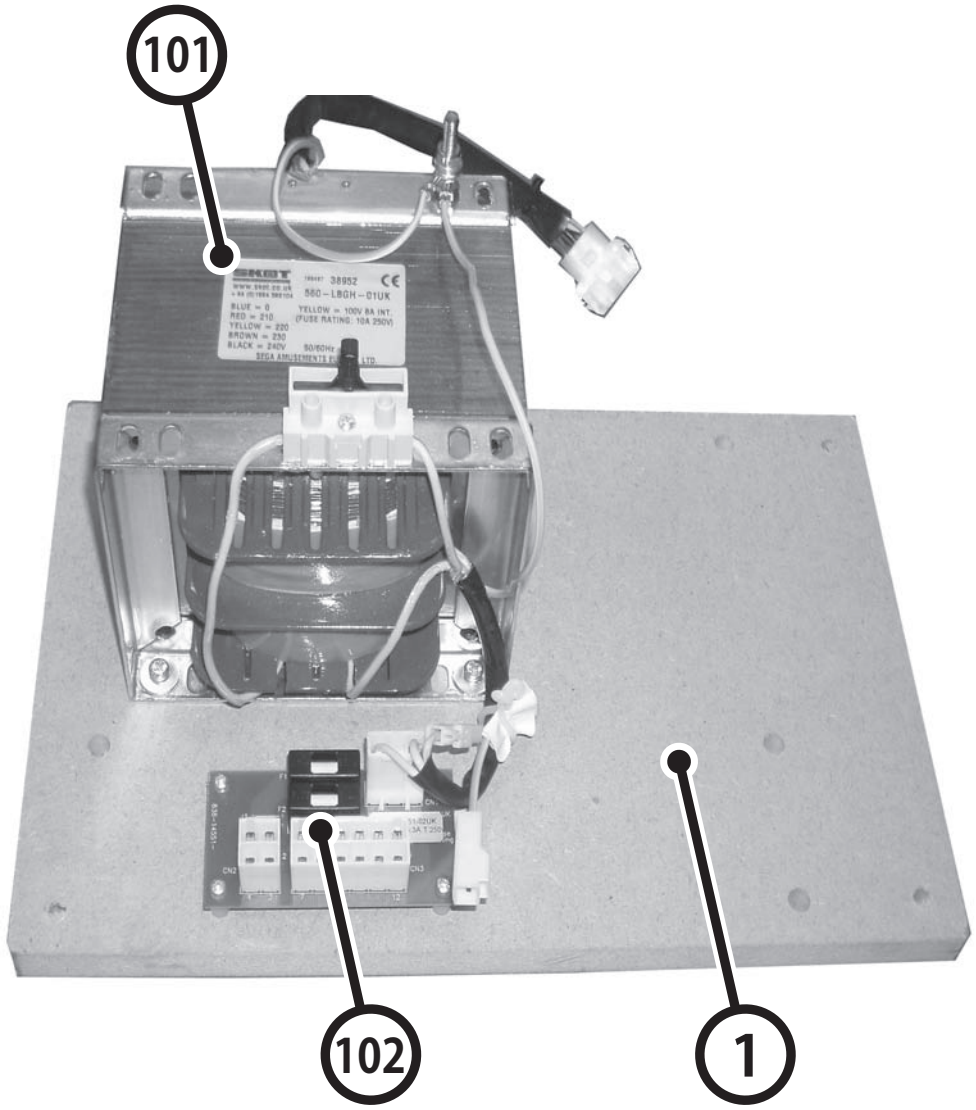
1 1 3 ASSY - XMFR (RMB-0660UK)



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1	1	4	

ASSY - AC UNIT (RMB-0670UK)

No.	Component Part	Description	Quantity	
1	HOD-1021UK	AC BRKT UK	1	
3	LB1096	STICKER PROTECTIVE EARTH	1	
101	EP1382	FILTER SCHAFFNER FN682-10/06	1	
102	SW1109	SW ROCKER	1	
103	EP1302	IEC INLET FUSED	1	
107	310-5029-D508	HEAT SHRINK SLEEVING 50.8DIA	4	
201	000-P00308	M3X8 MSCR PAN PAS	4	*
203	050-F00400	M4 NUT FLG SER PAS	2	*
301	TFF-60001UK	WH AC IN	1	*

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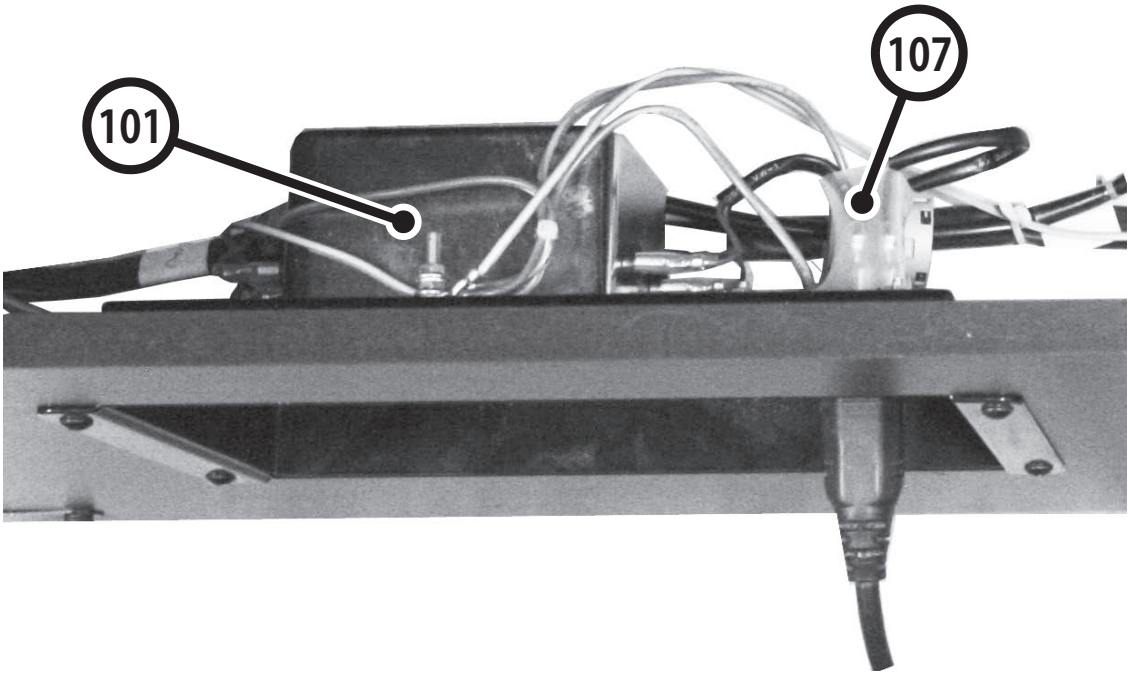

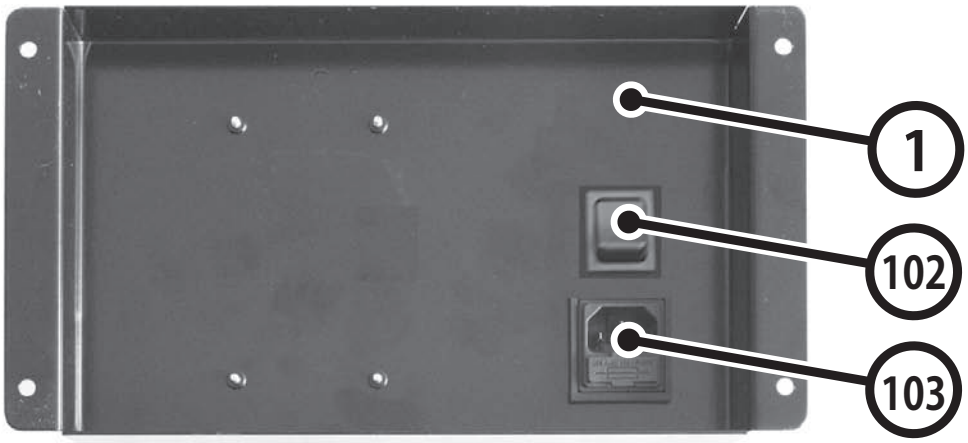

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1	1	5	

ASSY - MASK (RMB-0530UK)

No.	Component Part	Description	Quantity	
1	RMB-0531UK	MASK BASE	1	
3	RMB-0532UK	PROTECT SCREEN DLP	1	
6	RMB-0535UK	STICKER MASK L	1	*
7	RMB-0536UK	STICKER MASK R	1	*
8	PT-1082X	IR COVER	10	
101	838-13145R02	LED BD GUN SENSE HOD	10	
201	000-P00410-W	M4X10 MSCR PAN W/FS PAS	20	
202	060-F00400	M4 WSHR FORM A FLT PAS	16	*
204	050-U00300	M3 NUT NYLOK PAS	20	*
205	068-330808-PN	M3 WSHR 8OD FLT NYLON	20	*
301	RMB-60041UK	WH LED MASK EXT	1	*
302	HDF-65010UK	WH MASK EXT 2 62	2	*
303	HDF-65011UK	WH MASK SENSE LINK 62	7	*

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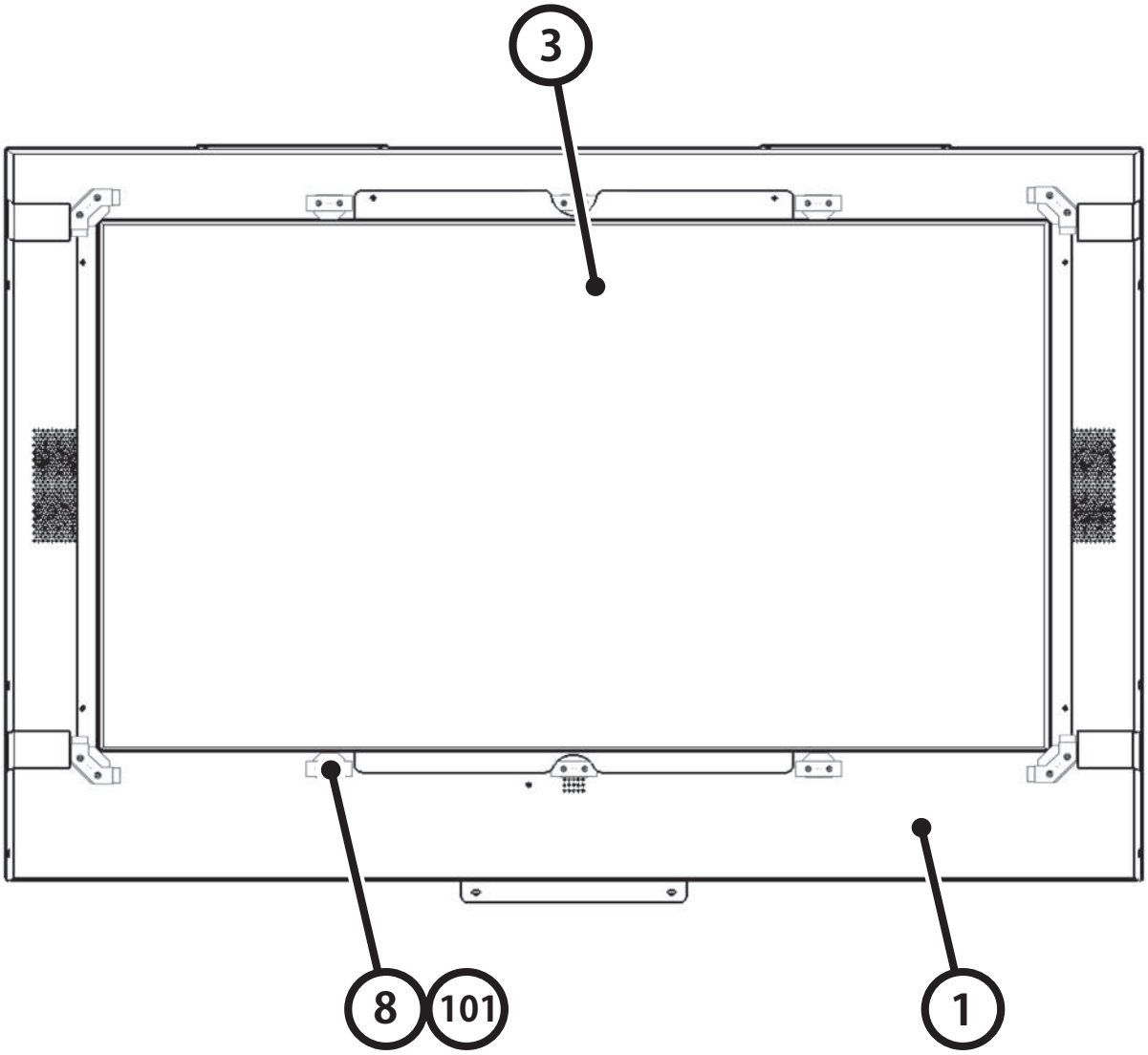

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1 1 6 ASSY - ROCKET LAUNCHER (RMB-0570UK)

No.	Component Part	Description	Quantity	
1	RMB-0571UK	TUBE LAUNCHER	1	
2	RMB-0572UK	TUBE NOZZLE	1	
3	RMB-0573UK	PLATE DIFFUSER	1	
101	838-0013UK	LED GUN BD	1	
201	008-T00412-0B	M4X12 TMP PRF TH BLK	3	*
202	000-P00310-W	M3X10 MSCR PAN W/S PAS	3	*
203	000-P00325	M3X25 MSCR PAN PAS	3	*
204	068-330808-PN	M3 WSHR 8OD FLT NYLON	3	*
301	RMB-60045UK	WH LED GUN	2	*

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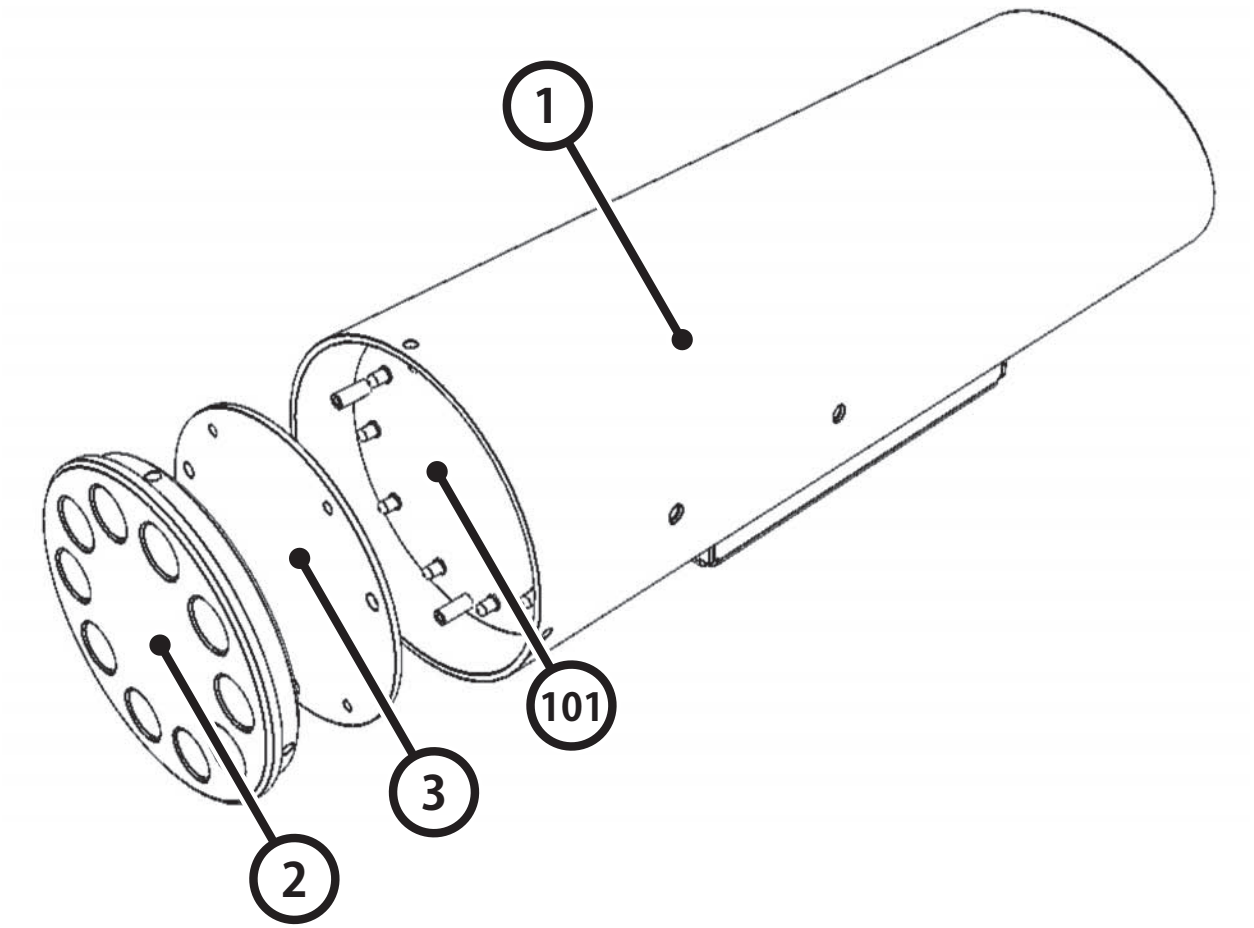

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1 1 10

ASSY - FAN UNIT AC UK (LGJ-1340UK)

No.	Component Part	Description	Quantity	
1	105-5340-01	FAN BRKT LONG	2	
2	260-0011-02	FAN AC100V 50-60HZ (SP100A-112	1	
101	FN1012	FAN GUARD METAL 120MM (FG-12)	1	
201	000-P00312-W	M3X12 MSCR PAN W/FS PAS	4	*
301	LGJ-60036UK	WH AC FAN	1	*

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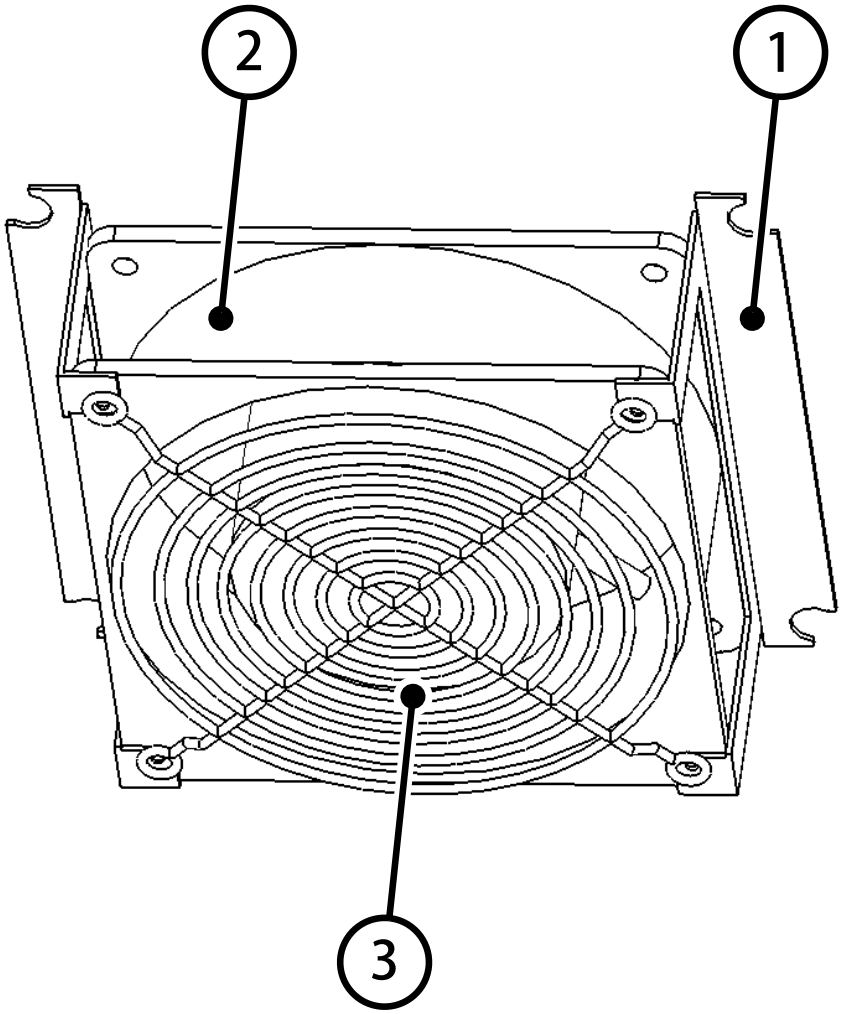

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1 2

ASSY - GUN CABINET (RMB-1000UK)

No.	Component Part	Description	Quantity	
1	RMB-1100UK	ASSY SUB CABI DX	1	
4	RMB-1300UK	ASSY CONTROLLER HOLDER L	1	
5	RMB-1320UK	ASSY CONTROLLER HOLDER R	1	
6	RMB-2000UK	ASSY CONTROL PANEL	1	
7	CTF-2100	CONTROL UNIT	2	*
8	RMB-4000UK	ASSY MAIN BD	1	*
9	RMB-4100UK	ASSY ELEC	1	*
12	RMB-1004UK	LOCKING HASP	1	
13	RMB-1005UK	BRKT PADLOCK	1	
22	PP1087	BOX CASH FOR MINI DOOR	1	*
101	220-5374-01	DOOR DFMD W/FR&LOCK C120 UNIV	1	
102	220-5574UK	LOCK (J9117) KEY TO LIKE 22MM W CAM	1	
103	220-5727-01B	DOOR CASH H.S. STS	1	
104	LM1006LOR	LOOM COIN MECH LAMP	1	*
105	220-5610-02	SR3 COIN MECH	1	
201	030-000830-SB	M8X30 BLT W/S BLK	12	*
202	068-852216-0B	M8 WSHR 22OD FLT BLK	16	*
203	008-B00830-0B	M8X30 TMP PRF BH BLK	4	*
204	000-T00412-0C	M4X12 MSCR TH CRM	8	*
205	032-000430	M4X30 W/BLT PAS	4	*
206	068-441616	M4 WSHR 16OD FLT PAS	4	*
207	050-U00800	M8 NUT NYLOK PAS	4	*
208	068-852216	M8 WSHR 22OD FLT PAS	4	*

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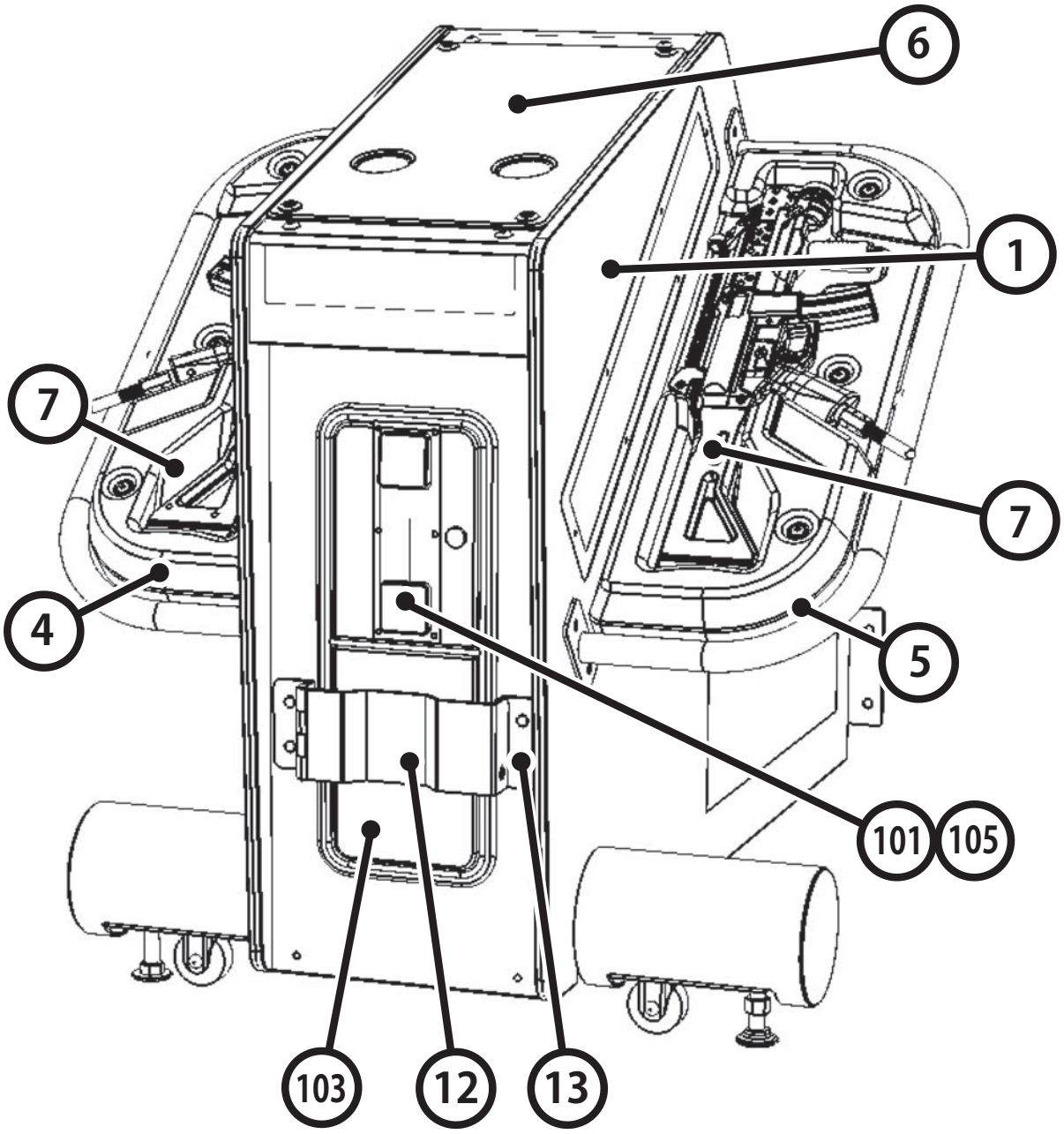
1 2

ASSY - GUN CABINET (RMB-1000UK)



A B C D

1 2 1 ASSY - SUB CABI DX (RMB-1100UK)

No.	Component Part	Description	Quantity	
1	RMB-1101UK	CABINET DX	1	
2	RMB-1102UK	BRKT FRONT SUPPORT	1	
3	RMB-1103UK	SIDE DOOR R	1	
4	LGJ-1340UK	FAN UNIT AC UK	1	
5	RMB-1118UK	BRKT SWITCH HOLDER	1	*
8	RMB-1106UK	FOOT BASE	1	
9	RMB-1107UK	PIPE SUPPORT	1	
15	CTF-1113UK	JOINT BRKT LOWER	3	*
17	RMB-1115UK	WINDOW HOLDER	2	
18	RMB-1116UK	WINDOW RAMBO	2	
19	RMB-1117UK	ENCLOSURE WINDOW LIGHTING	2	
20	LCA-2040UK	INVERTER COVER	2	
30	DUT-0302UK	COIN PATH PLATE	1	
32	DP-1167UK	TNG LKG UK	1	*
34	253-5460-01	AIR VENT BLACK	2	
36	FN1012	FAN GUARD METAL 120MM (FG-12)	2	*
101	MA1007	CASTOR SWIVEL 63mm NYLON	2	
102	MA1019	CASTOR 75	2	*
103	601-5699UK-01	LEG ADJ M16X100 1L/NUT	2	
104	220-5575-280UK	LOCK (J9117) 28MM W/O CAM	1	
106	838-14548-01UK	SW & VOL CTL BD	1	*
107	EP-1380-01	EXCELL CREDIT BD	1	*
108	220-5643UK	COIN METER 12V	1	*
109	OS1230	FOAM STRIP 2mm X 10mm	2.4	*
110	280-L007006PM	STANDOFF 6.4MM HOLE PM	4	*
111	280-A01013-PM	ROUTER TWIST D10 SO12.7 PAN M	4	*
112	390-8300-WHT-UK	CCFL KIT 300MM WHT	4	*
201	030-000616-SB	M6X16 BLT W/S BLK	12	*
202	060-F00600	M6 WSHR FORM A FLT PAS	24	*
203	000-T00440-0B	M4X40 MSCR TH BLK	2	*
204	068-441616-0B	M4 WSHR 16OD FLT BLK	2	*
205	000-P00420-W	M4X20 MSCR PAN W/FS PAS	9	*
206	030-000835-S	M8X35 BLT W/S PAS	10	*
207	060-F00800	M8 WSHR FORM A FLT PAS	13	*
208	030-000635-S	M6X35 BLT W/S PAS	4	*
209	030-000645-SB	M6X45 BLT W/S BLK	8	*
210	068-652016-0B	M6 WSHR 20OD FLT BLK	12	*
211	050-F00400	M4 NUT FLG SER PAS	12	*
212	060-F00400	M4 WSHR FORM A FLT PAS	12	*
213	000-P00412-W	M4X12 MSCR PAN W/FS PAS	12	*
214	000-T00430-0B	M4X30 MSCR TH BLK	4	*
215	030-000630-S	M6X30 BLT W/S PAS	8	*
216	000-P00308-W	M4X20 MSCR PAN W/FS PAS	3	*
217	**030-000830-S**	**M8X30 BLT W/S PAS** 218	8	*
218	**050-H01600**	**M16 NUT PAS**	**2**	*

A B C D

1 2 1 ASSY - SUB CABI DX (RMB-1100UK)

No.	Component Part	Description	Quantity
301	RMB-60048UK	WH FAN EXT	1
302	RMB-60011UK	WH MASK LED BASE CABI	1
303	SRS-65016UK	WH AC GAME BOARD	1
304	RMB-60031UK	WH LED BD EXTN	1
305	RMB-60047UK	WH COIN + VTS	1
306	600-9150-45K	WH EARTH 150CM M4 M5	1
307	600-9080-44K	WH EARTH 80 CM M4 M4	1

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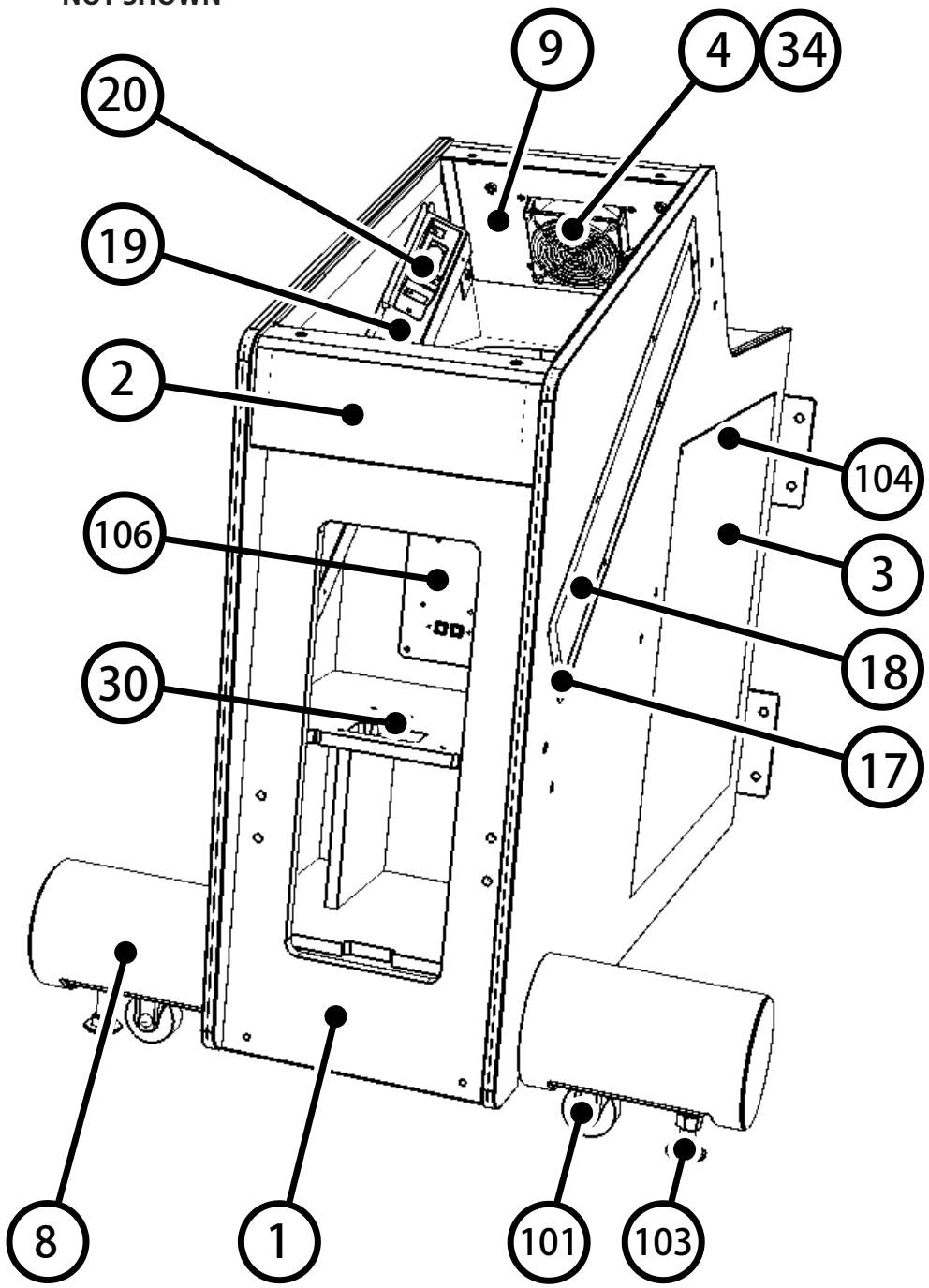

A B C D
1 2 1 4 **ASSY - FAN UNIT AC UK (LGJ-1340UK)**

No.	Component Part	Description	Quantity	
1	105-5340-01	FAN BRKT LONG	2	
2	260-0011-02	FAN AC100V 50-60HZ (SP100A-112	1	
101	FN1012	FAN GUARD METAL 120MM (FG-12)	1	
201	000-P00312-W	M3X12 MSCR PAN W/FS PAS	4	*
301	LGJ-60036UK	WH AC FAN	1	*

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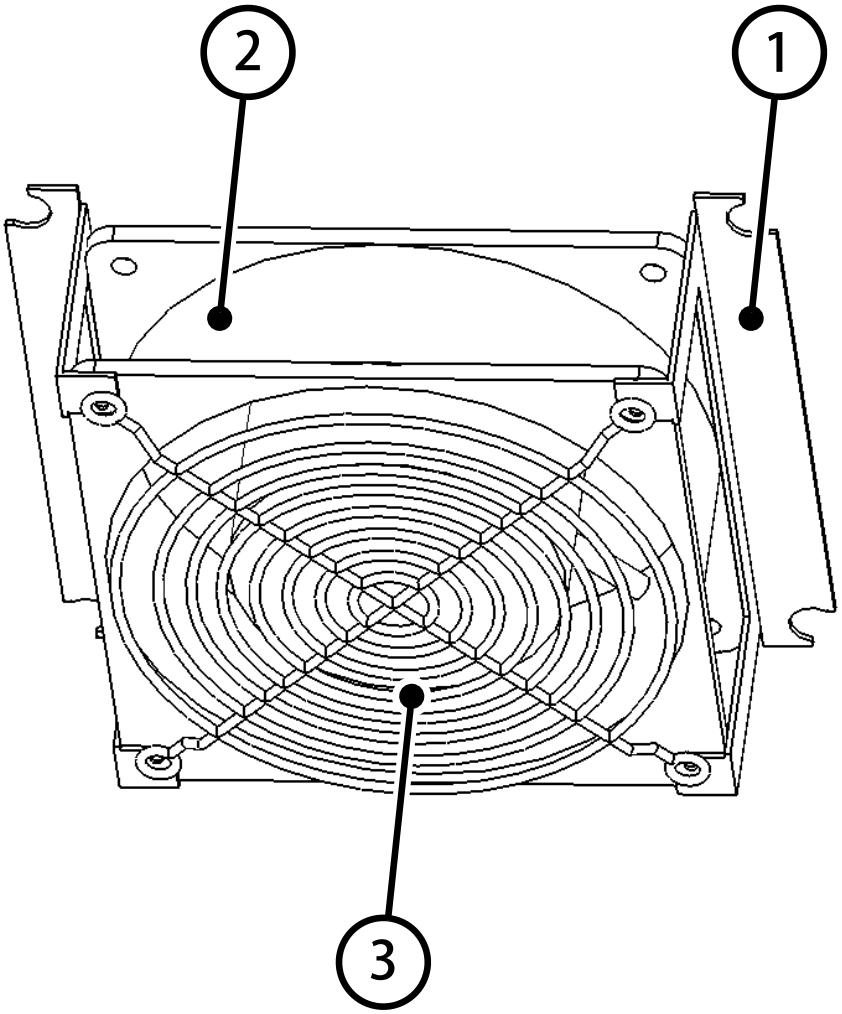

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1 2 4

ASSY - CONTROL HOLDER L (RMB-1300UK)

No.	Component Part	Description	Quantity	
1	RMB-1301UK	CONTROLLER HOLDER BASE L	1	
2	RMB-1302UK	CONTROLLER HOLDER SUPPORT	1	
3	RMB-1303UK	CONTROLLER HOLDER L	1	
201	030-000620-SB	M6X20 BLT W/S BLK	4	*
202	068-652016-0B	M6 WSHR 20OD FLT BLK	7	*
203	000-T00616-0B	M6X16 MSCR TH BLK	1	*
204	000-T00630-0B	M6X30 MSCR TH BLK	2	*
205	000-T00410-0B	M4X10 MSCR TH BLK	7	*

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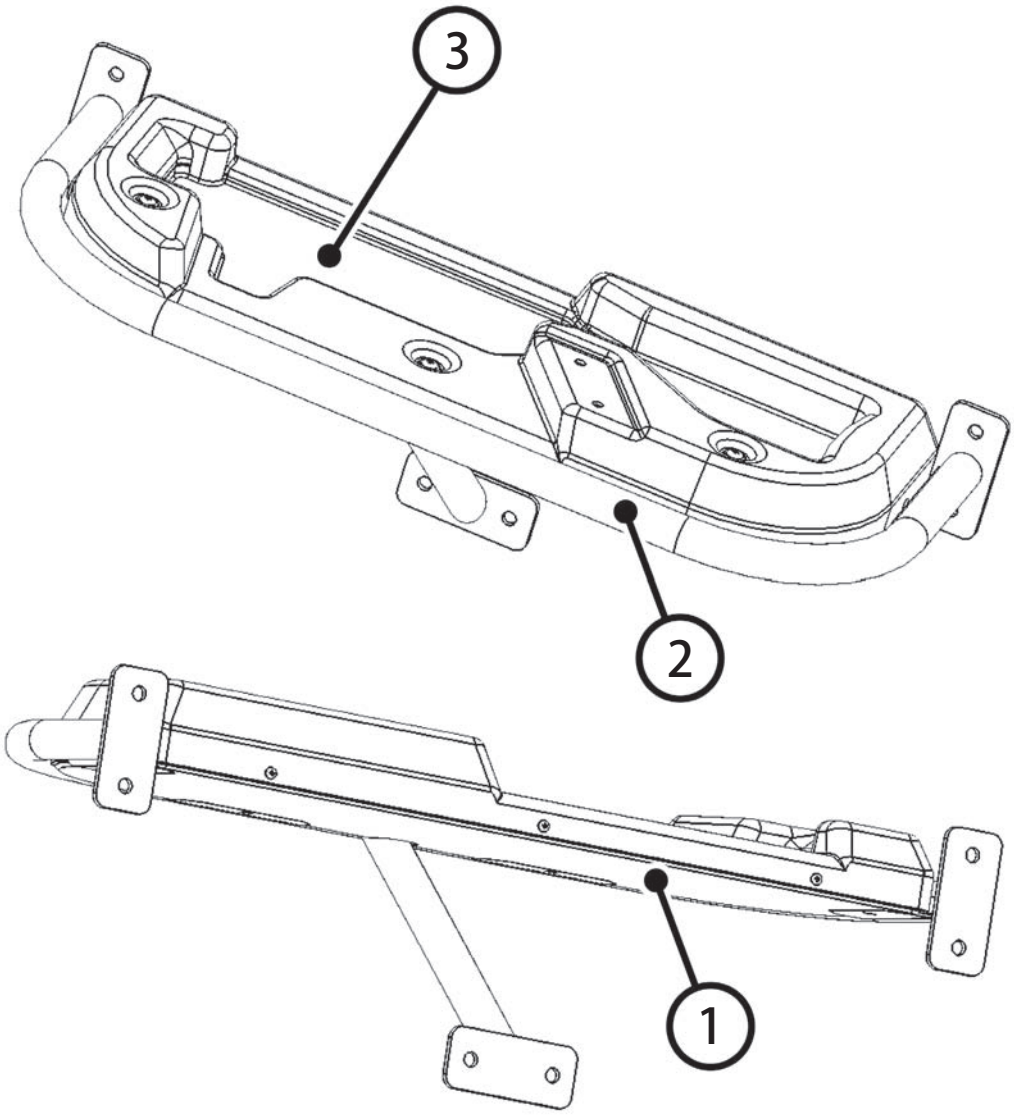

A B C D

1 2 5 ASSY - CONTROL HOLDER R (RMB-1320UK)

No.	Component Part	Description	Quantity	
1	RMB-1321UK	CONTROLLER HOLDER BASE R	1	
2	RMB-1302UK	CONTROLLER HOLDER SUPPORT	1	
3	RMB-1323UK	CONTROLLER HOLDER R	1	
201	030-000620-SB	M6X20 BLT W/S BLK	4	*
202	068-652016-0B	M6 WSHR 20OD FLT BLK	7	*
203	000-T00616-0B	M6X16 MSCR TH BLK	1	*
204	000-T00630-0B	M6X30 MSCR TH BLK	2	*
205	000-T00410-0B	M4X10 MSCR TH BLK	7	*

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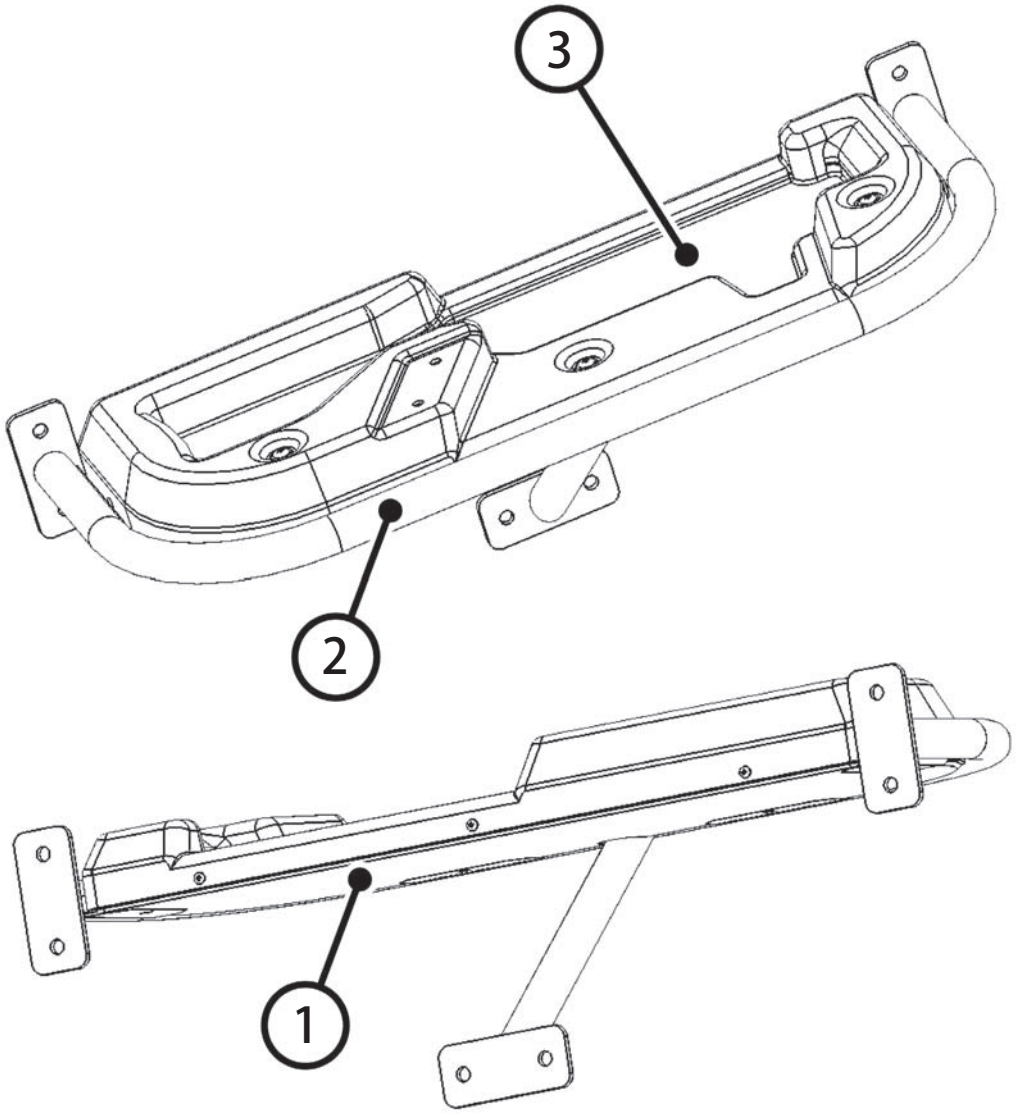

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ASSY - CONTROL PANEL (RMB-2000UK)

No.	Component Part	Description	Quantity	
1	RMB-2001UK	CONTROL PANEL BASE	1	
2	RMB-2002UK	CONTROL PANEL COVER	1	
3	CTF-1002UK	WASHER CTF	4	*
101	509-6217-RW	SW OBSA-60UM-R-1FLED-W-12V	2	
201	FAS-290034	HEX SKT LH CAP SCR STN M5X10	4	*
202	050-F00400	M4 NUT FLG SER PAS	1	*
301	RMB-60037UK	WH START BUTTON	1	*

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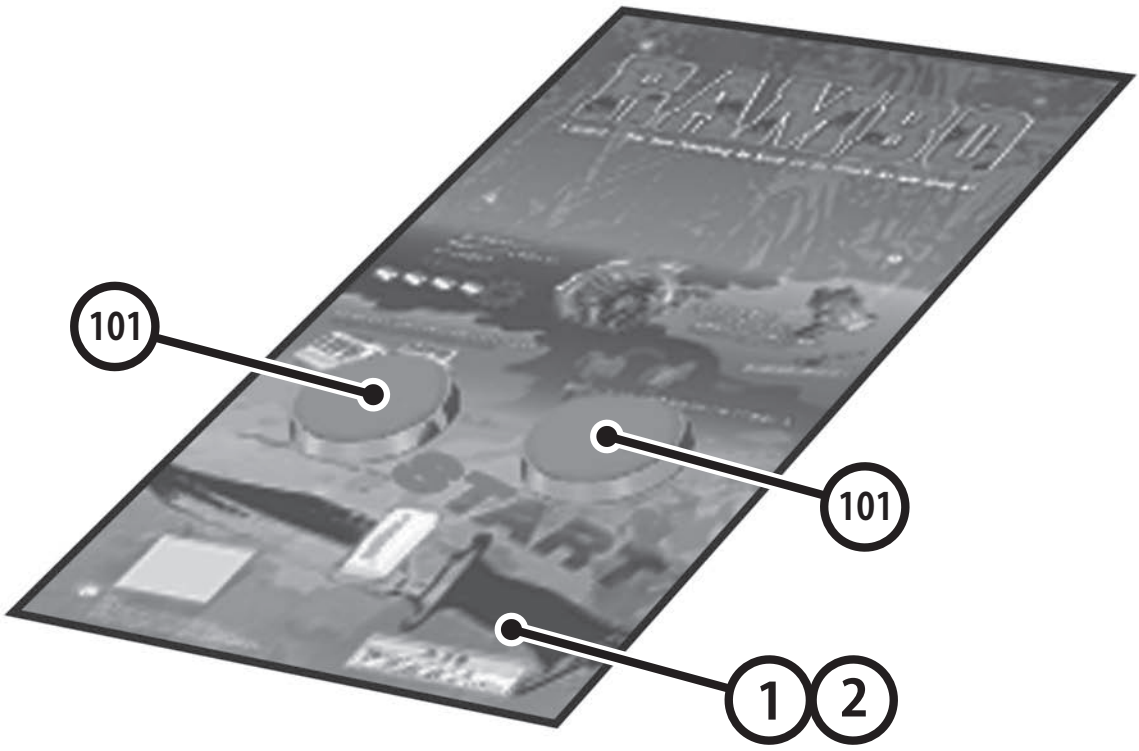
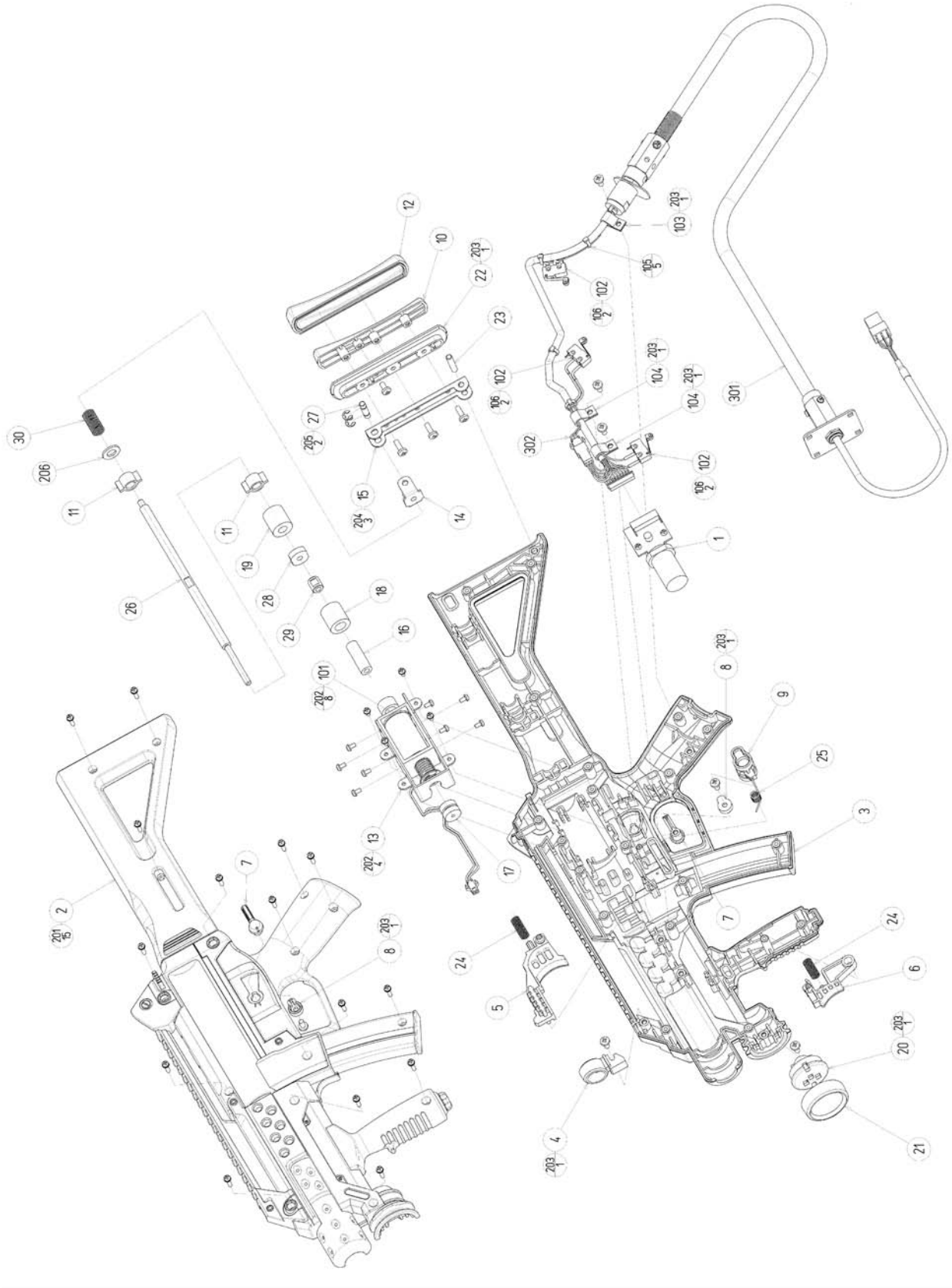


A B C D

1 2 7 ASSY - CONTROL UNIT (RMB-2100UK)

No.	Component Part	Description	Quantity



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1 2 7 A

ASSY - CONTROL UNIT (RMB-2100UK)

No.	Component Part	Description	Quantity
1	JPT-2030	SENSOR UNIT	1
2	CTF-2101	COVER L	1
3	CTF-2102	COVER R	1
4	CTF-2103	FRONT SIGHT	1
5	CTF-2104	MAIN TRIGGER	1
6	CTF-2105	SUB TRIGGER	1
7	CTF-2106	SELECTOR	2
8	CTF-2107	SELECTOR HOLDER	2
9	CTF-2108	SELECTOR JOINT	1
10	CTF-2109	PAD BASE	1
11	CTF-2110	BEARING HOLDER	2
12	CTF-2111	PAD	1
13	CTF-2112	SOLENOID FRAME	1
14	CTF-2113	SHAFT JOINT	1
15	CTF-2114	PAD FRAME	1
16	CTF-2115	RECOIL DAMPER	1
17	CTF-2116	SOLENOID DAMPER	1
18	CTF-2117	SHAFT DAMPER F	1
19	CTF-2118	SHAFT DAMPER R	1
20	CTF-2119	CAP BASE	1
21	CTF-2120	LIGHT CAP	1
22	CTF-2121	PAD BEZEL	1
23	CTF-2122	PAD PIN	1
24	CTF-2123	TRIGGER SPRING	2
25	CTF-2124	SELECTOR SPRING	1
26	CTF-2125	SHAFT	1
27	CTF-2126	JOINT PIN	1
28	CTF-2127	SHAFT STOPPER	1
29	CTF-2128	DAMPER BASE	1
30	CTF-2129	RETURN SPRING	1
101	124-5097	SOLENOID	1
102	509-5080	SW MICRO TYPE (SS-5GL2)	3
103	280-5124-04	NYLON CLAMP	1
104	280-5124-05	NYLON CLAMP	2
105	601-0460	PLASTIC TIE	5
106	310-5029-D20	SUMITUBE F D 20MM	6
201	FAS-000100	MSCR PH W/SMALL FS BLK M3X12	15
202	000-P00306-S	MSCR PH W/S M3X6	12
203	FAS-120029	TAP SCR P-TITE PH 4X8	8
204	FAS-120030	TAP SCR P-TITE PH BLK 4X12	3
205	065-E00400	E RING 4MM	2
206	FAS-600020	FLT WSHR NORM A M8	1
301	CTF-60032	WH CONTROLLER MAIN EXT	1
302	CTF-60033	WH CONTROLLER SW EXT	1

A B C D

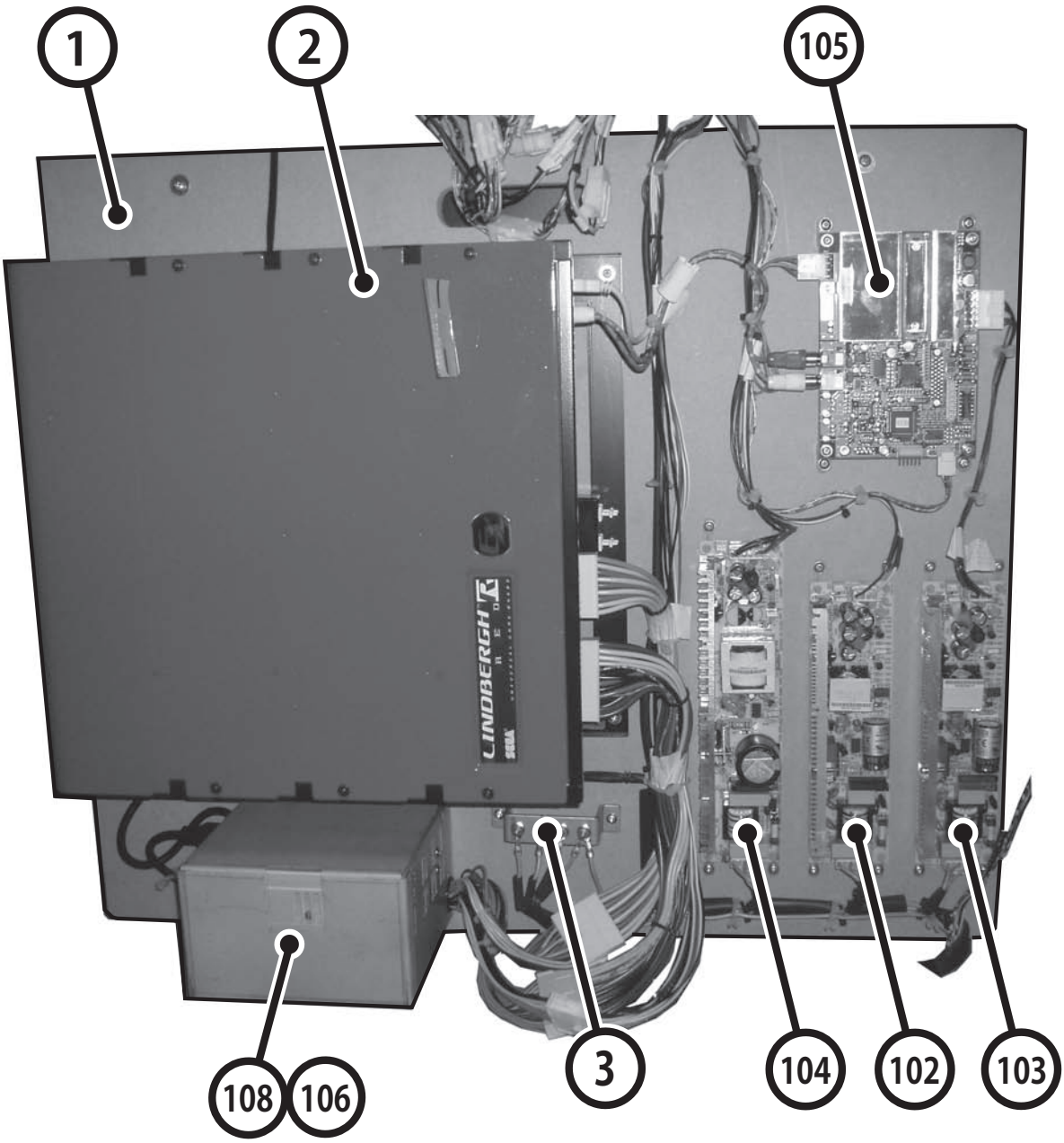
1 2 8 ASSY - MAIN BOARD (RMB-4000UK)

No.	Component Part	Description	Quantity	
1	RMB-4001UK	WOODEN BASE MAIN	1	
2	845-0001D-12	ASSY CASE LBJ L 1GB W/S EX	1	
3	CFB-4003-01UK	EARTH PLATE	1	
5	LB1111	STICKER PLEASE RECYCLE	1	*
107	LB1101	STICKER WARNING BATTERY	1	*
102	400-050-012-01	PSU 12VDC 50W MW LPS-50-12	1	
103	400-050-024-01	PSU 24VDC 50W MW LPS-50-24	1	
104	400-075-024-01	PSU 24VDC 75W MW LPS-75-24	1	
105	838-14515-A0191	SOUND AMP ANALOG IN	1	
106	ADH-1002UK	BRKT PWR	1	
108	400-5457-300UK	PSU ATX 300W	1	
110	OS1011	PCB FEET RICHCO LCBS-L-5-01	16	*
111	280-A01264-WX	ROUTER TWIST D12 SO6.4 WOOD X	6	*
112	280-A02064-WX	ROUTER TWIST D20 SO6.4 WOOD X	7	*
201	000-P00416-W	M4X16 MSCR PAN W/FS PAS	4	*
202	012-P03512-F	N6X1/2" S/TAP FLG PAS	2	*
204	012-P03506-F	N6X1/4" S/TAP FLG PAS	16	*
301	RMB-60012UK	WH SPEAKER ELEC BD	1	*
302	RMB-60013UK	WH AC ELEC BD	1	*
303	RMB-60014UK	WH 24V DC ELEC BD	1	*
304	RMB-60018UK	WH AUDIO ELEC BD	1	*
305	RMB-60023UK	WH 5V/12V DC MAIN BD	1	*
306	RMB-60042UK	WH VOLUME	1	*
307	600-7361-0300UK	WH PSU LGBH B	1	*
308	600-7360-0300UK	WH PSU LGBH A	1	*
309	600-7141-100UK	CABLE JVS TYPE A-B 2	1	*
310	RMB-60051UK	WH DC 24V	1	*

* NOT SHOWN

A B C D
1 2 8

ASSY - MAIN BOARD (RMB-4000UK)



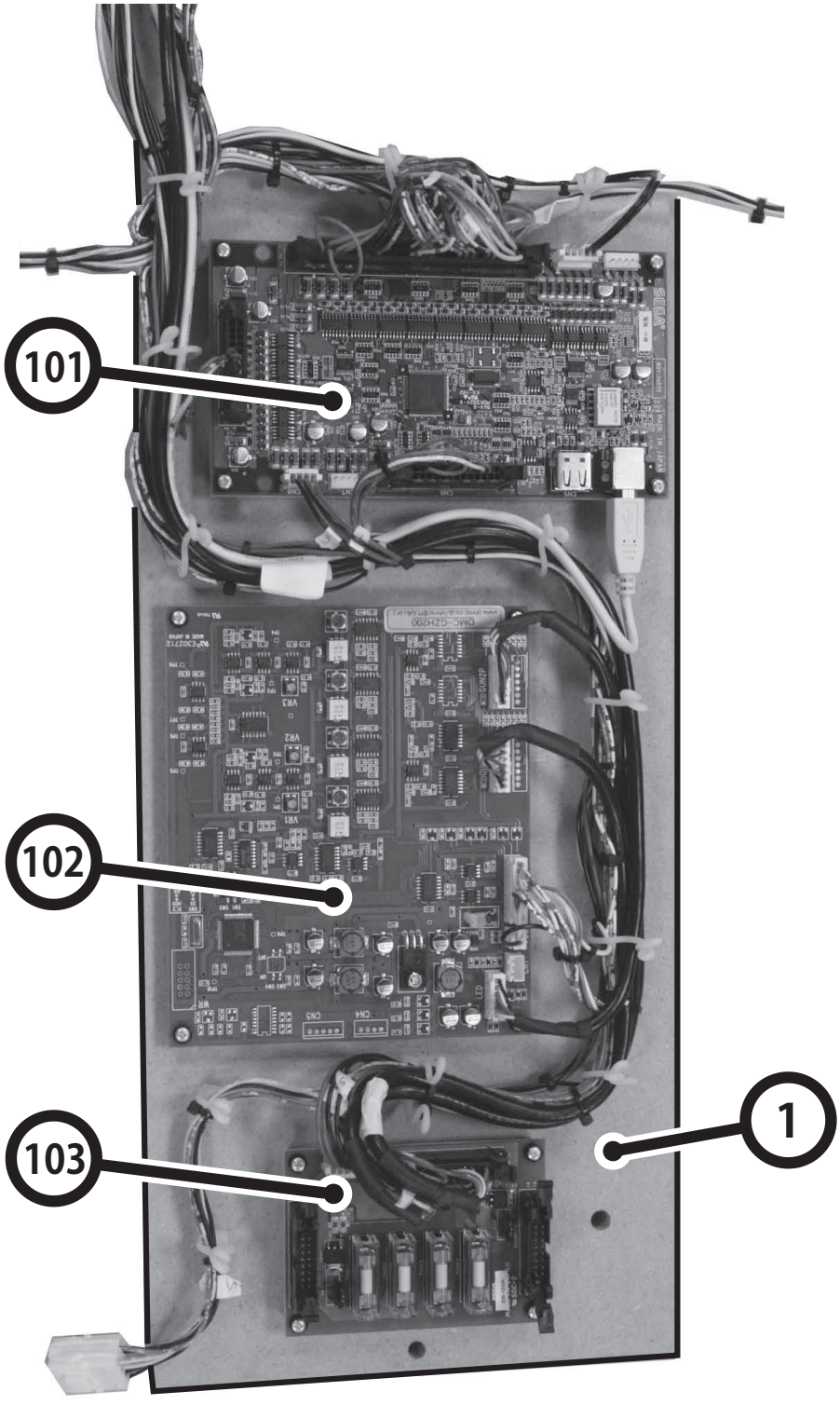
A B C D

1 2 9 ASSY - ELEC (RMB-4100UK)

No.	Component Part	Description	Quantity	
1	RMB-4101UK	WOODEN BASE ELEC	1	
101	837-14572	I/O CONTROL BD 3 FOR JVS COM	1	
102	838-14465R	IC BD GUN SENCE NEW EDIT DX	1	
103	839-1243R	FUSE BD CTF	1	
105	280-A01264-WX	ROUTER TWIST D12 SO6.4 WOOD X	15	*
201	012-P00325	N4X1" S/TAP PAN PAS	12	*
301	RMB-60015UK	WH I/O ELEC BD	1	*
302	RMB-60017UK	WH LED I/O BASE	1	*
303	RMB-60019UK	WH DC I/O BASE	1	*
304	RMB-60043UK	WH SENSE I/O BD	1	*
305	GE-60013UK	WH SENSOR FREQ	1	*

* NOT SH0WN

A B C D
1 2 9 ASSY - ELEC (RMB-4100UK)



A B
1 401 ASSY - INST DX (RMB-INST DX)

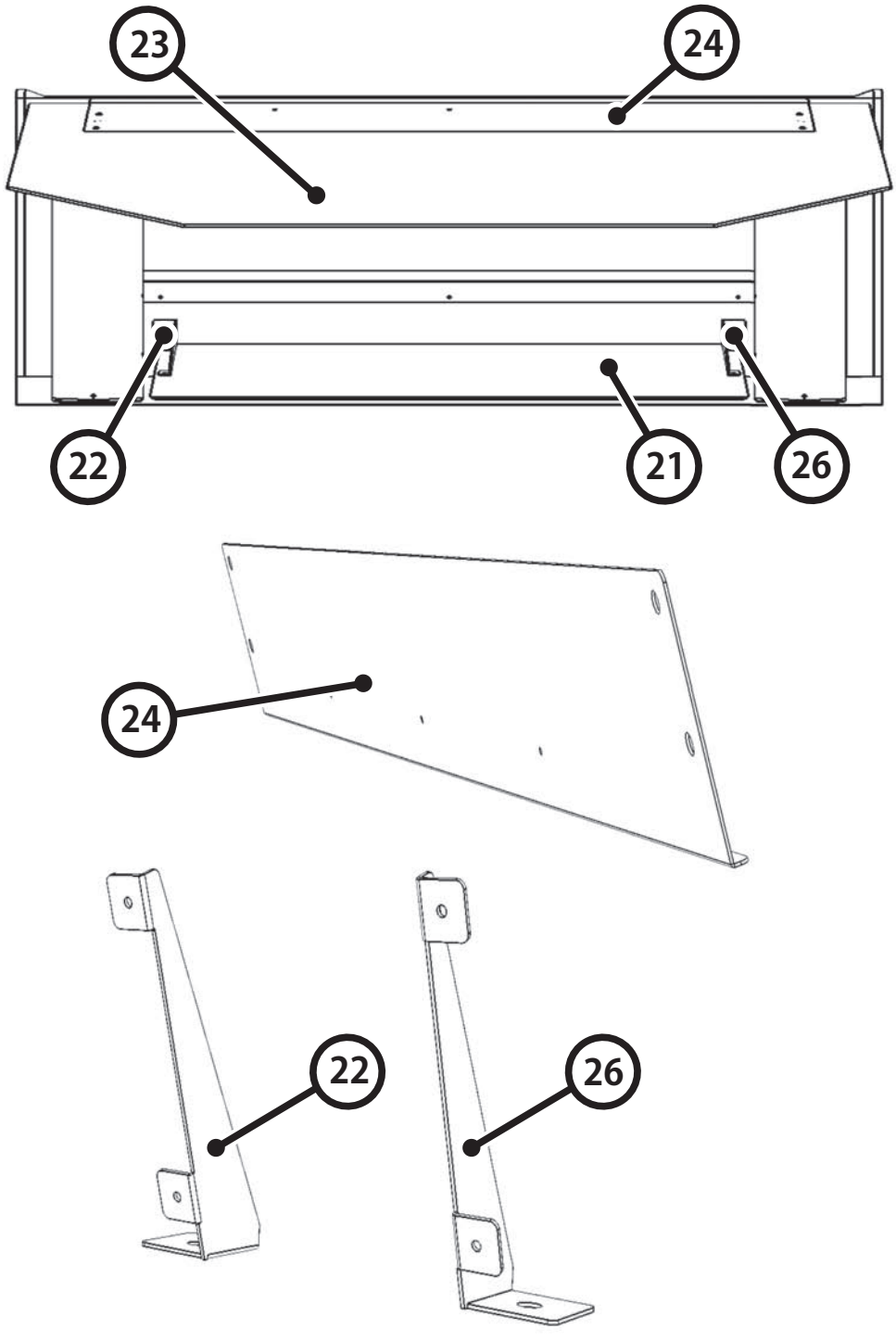
No.	Component Part	Description	Quantity	
1	PK0455	BOX RMB INST KIT	1	*
2	420-7148-01UK	OWNERS MANUAL RMB DX	1	*
3	RMB-1001UK	STICKER INSTRUCTION MULTI RMB	1	*
4	509-5080	SW MICRO TYPE (SS-5GL2)	2	*
5	420-7032-01UK	LINDBERGH RED MANUAL	1	*
6	OS1019	SELF SEAL BAG 9X12.3/4	2	*
7	610-0727-5003	DVD SOFT KIT RMB	1	*
10	LM1227	UK MAINS LEAD 10A WITH PLUG	1	*
11	LM1246	EUROLEAD 10A EUROPEAN SOCKET	1	*
12	SAECE-XXX	DECLARATION OF CONFORMITY XXX	1	*
21	RMB-0556UK	BILLBOARD FRONT PLATE	1	
22	RMB-0557UK	BILLBOARD STAY LH	1	
23	RMB-0558UK	BILLBOARD POP	1	
24	RMB-0559UK	POP BRKT POP HOLDER	1	
25	CTF-1002UK	WASHER CTF	4	*
26	RMB-0567UK	BILLBOARD STAY RH	1	
27	CTF-0562UK	POP HOLDER	1	*
201	FAS-290034	HEX SKT LH CAP SCR STN M5X10	2	*
202	030-000820-SB	M8X20 BLT W/S BLK	6	*
203	068-852216-0B	M8 WSHR 22OD FLT BLK	6	*
204	000-T00416-0B	M4X16 MSCR TH BLK	3	*

* NOT SHOWN

3 STICKER INSTRUCTION MULTI RMB KIT

1 STICKER INSTRUCTION MULTI RMB ENG
2 STICKER INSTRUCTION MULTI RMB FRE
3 STICKER INSTRUCTION MULTI RMB GER
4 STICKER INSTRUCTION MULTI RMB ITA
5 STICKER INSTRUCTION MULTI RMB SPA
6 STICKER INSTRUCTION MULTI RMB RUS

A B
1 401 ASSY - INST DX (RMB-INST DX)



NOTES

20 WIRE COLOR CODE TABLE

⚠ WARNING

The DC power wire color for this product is different from previous SEGA titles. Working from the previous wire colors will create a high risk of fire.

The color codes for the wires used in the diagrams in the following chapter are as follows.

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

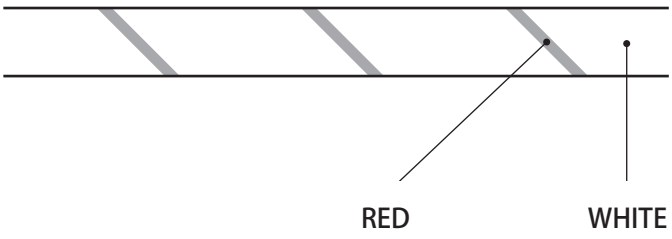
Wires other than those of any of the above 5 single colors will be displayed by 2 alphanumeric characters.

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

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

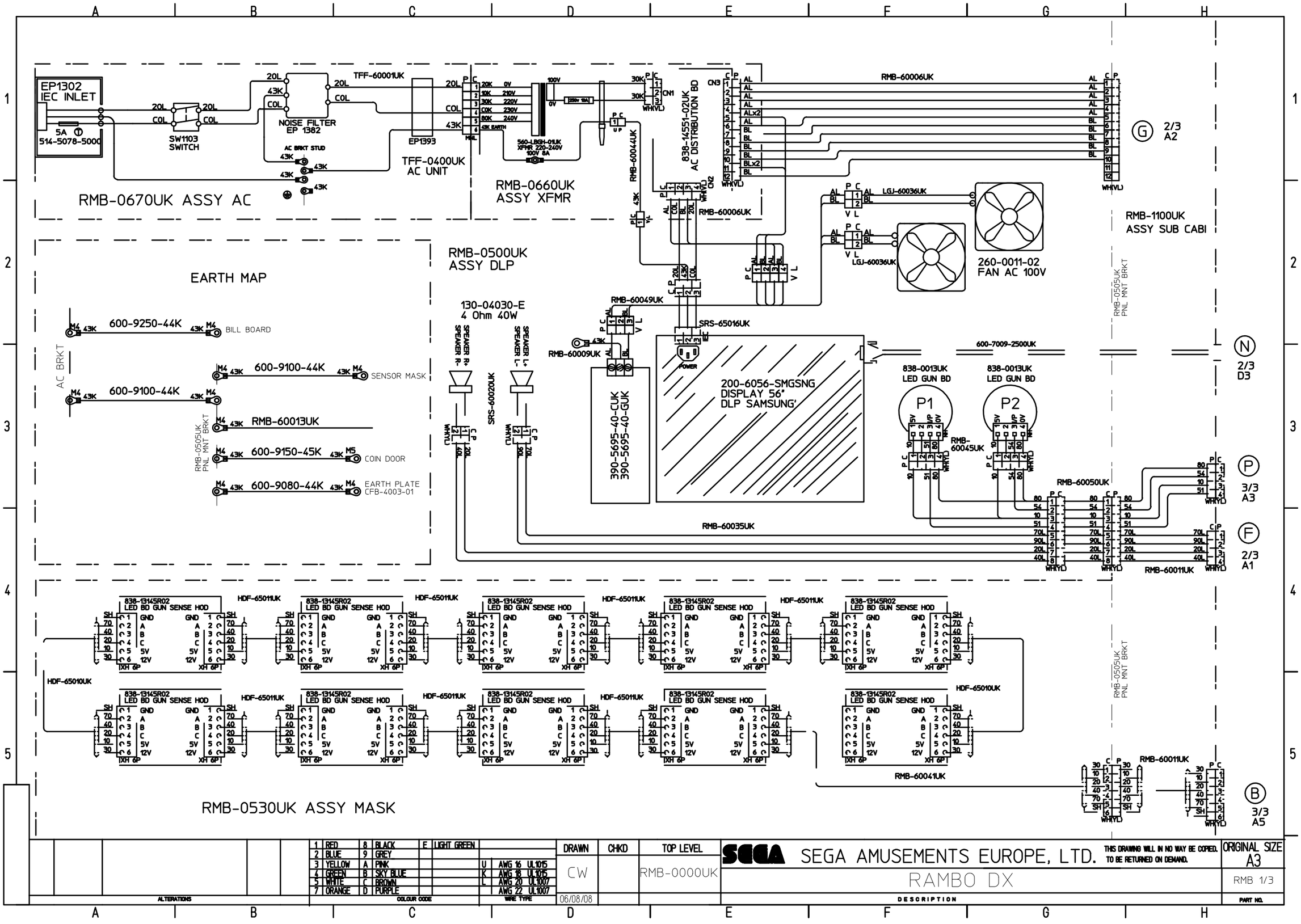
Note 1: If the right-hand side numeral is not 0, that particular wire has a spiral color code. The left-hand side character shows the base color and the right-hand side one, the spiral color.

<Example> 51·····WHITE/RED



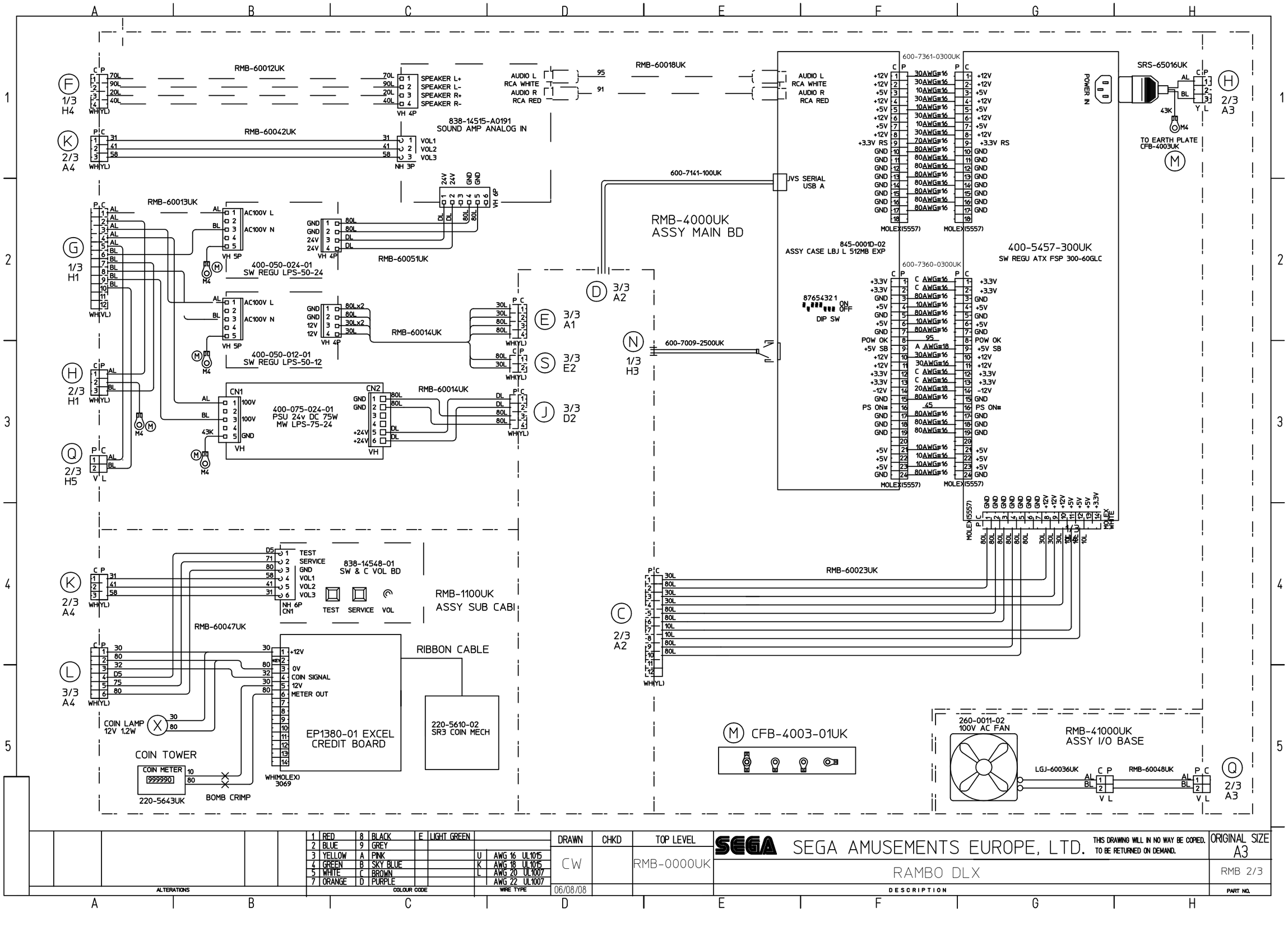
Note 2: The character following the wire color code indicates the size of the wire.

U :	AWG16
K :	AWG18
L :	AWG20
None :	AWG22


EP1302
IEC INLET
5A
514-5078-5000
SW1103
SWITCH
NOISE FILTER
EP 1382
AC BRKT STUD
TFF-60001UK
EP1393
TFF-0400UK
AC UNIT
RMB-0670UK ASSY AC
560-LBGH-01UK
XFMR 220-240V
100V 8A
RMB-0660UK
ASSY XFMR
RMB-60044UK
838-14551-02UK
AC DISTRIBUTION BD
RMB-60006UK
LGJ-60036UK
260-0011-02
FAN AC 100V
RMB-1100UK
ASSY SUB CABI
RMB-0505UK
PNL MNT BRKT
EARTH MAP
AC BRKT
600-9250-44K
BILL BOARD
600-9100-44K
SENSOR MASK
600-9100-44K
RMB-60013UK
600-9150-45K
COIN DOOR
600-9080-44K
EARTH PLATE
CFB-4003-01
RMB-0505UK
PNL MNT BRKT
RMB-0500UK
ASSY DLP
130-04030-E
4 Ohm 40W
SPEAKER R+
SPEAKER L+
SRS-60020UK
RMB-60049UK
SRS-65016UK
RMB-60009UK
390-5695-40-CUK
390-5695-40-GUK
200-6056-SMGSNG
DISPLAY 56"
DLP SAMSUNG'
POWER
600-7009-2500UK
838-0013UK
LED GUN BD
P1
P2
RMB-60045UK
RMB-60050UK
RMB-60035UK
RMB-60011UK
G 2/3 A2
N 2/3 D3
P 3/3 A3
F 2/3 A1
B 3/3 A5
838-13145R02
LED BD GUN SENSE HOD
HDF-65011UK
HDF-65010UK
RMB-60041UK
RMB-0530UK ASSY MASK

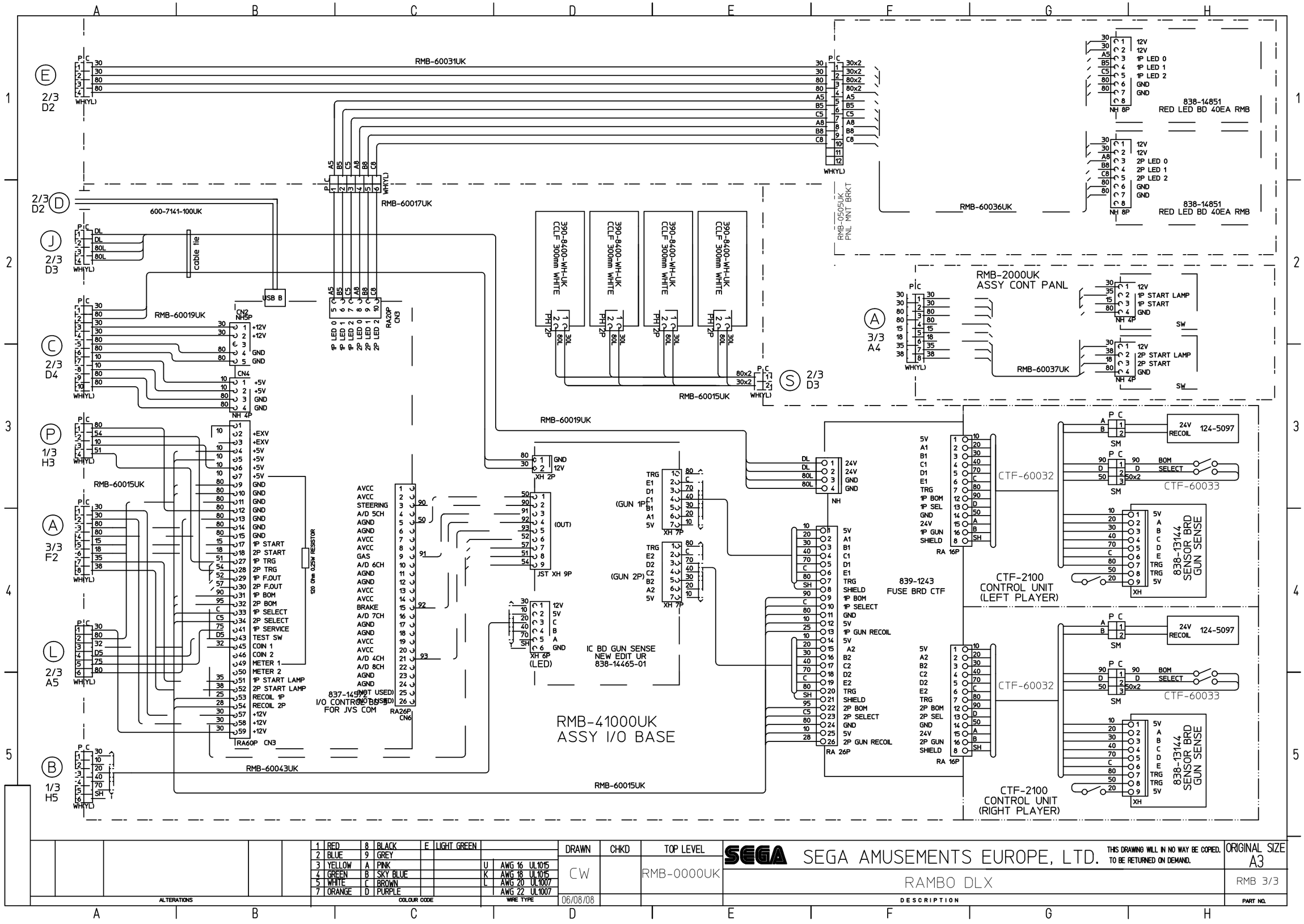
| | | |

(D-2/3)


RMB-60012UK
RMB-60018UK
838-14515-A0191
SOUND AMP ANALOG IN
RMB-60042UK
RMB-60013UK
RMB-60051UK
400-050-024-01
SW REGU LPS-50-24
400-050-012-01
SW REGU LPS-50-12
RMB-60014UK
400-075-024-01
PSU 24V DC 75W
MW LPS-75-24
600-7141-100UK
RMB-4000UK
ASSY MAIN BD
600-7009-2500UK
600-7361-0300UK
600-7360-0300UK
845-0001D-02
ASSY CASE LBJ L 512MB EXP
400-5457-300UK
SW REGU ATX FSP 300-60GLC
SRS-65016UK
TO EARTH PLATE
CFB-4003UK
838-14548-01
SW & C VOL BD
RMB-1100UK
ASSY SUB CABI
RMB-60047UK
RMB-60023UK
EP1380-01 EXCEL
CREDIT BOARD
RIBBON CABLE
220-5610-02
SR3 COIN MECH
COIN LAMP
12V 1.2W
COIN TOWER
220-5643UK
BOMB CRIMP
CFB-4003-01UK
260-0011-02
100V AC FAN
RMB-41000UK
ASSY I/O BASE
LGJ-60036UK
RMB-60048UK

| | | |

(D-3/3)



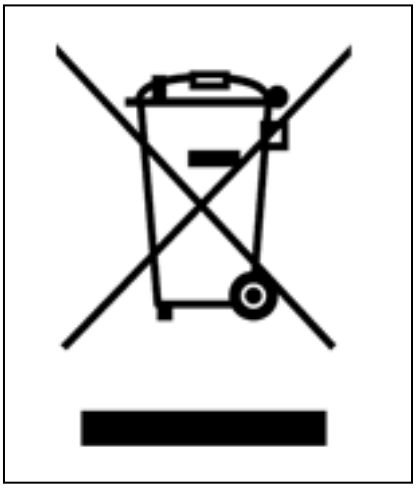
1	RED	8	BLACK	E	LIGHT GREEN			DRAWN	CHKD	TOP LEVEL	SEGA	SEGA AMUSEMENTS EUROPE, LTD.	THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.	ORIGINAL SIZE
2	BLUE	9	GREY					CW		RMB-0000UK				A3
3	YELLOW	A	PINK			U	AWG 16 UL1015					RAMBO DLX		RMB 3/3
4	GREEN	B	SKY BLUE			K	AWG 18 UL1015							
5	WHITE	C	BROWN			L	AWG 20 UL1007							
7	ORANGE	D	PURPLE			I	AWG 22 UL1007	06/08/08						
ALTERATIONS				COLOUR CODE		WIRE TYPE					DESCRIPTION			PART NO.

SEGA AMUSEMENT EUROPE LTD

WEEE Statement.

The WEEE (Waste of Electrical and Electronic Equipment) directive places an obligation on all EU based manufacturers and importers of Electrical and Electronic Equipment to take back products at the end of their useful life. Sega Amusements Europe Ltd accepts its responsibility to finance the cost of treatment and recovery of redundant WEEE in accordance with the specified WEEE recycling requirements.

The symbol shown below will be on all products manufactured from 13th August 2005 which indicates this product must not be disposed of with other normal waste. Instead, it is the user's responsibility to dispose of their waste equipment by arranging to return it to a designated collection point for the recycling of waste electrical and electronic equipment, or by returning it to SEGA Amusements Europe Ltd for reprocessing.



For more information about where you can send your waste equipment for recycling contact your local authority office or SEGA Amusements Europe UK sales office.