



ORIGINAL VIDEO GAME  
**OPERATOR'S MANUAL**

■ **TERABURST** ■



© 1998 KONAMI ALL RIGHTS RESERVED.



- !**
- Failure to operate the machine correctly could result in malfunction or accidents, so please read this manual carefully before commencing operation. Be sure to operate the machine as described in this manual.
  - Keep this manual carefully so as to be ready for use when necessary.



# About this product

---

Thank you for purchasing this KONAMI product. This manual explains how to operate your game machine correctly and safely.



- **Failure to operate the machine correctly could result in malfunction or accidents, so please read this manual carefully before commencing operation. Be sure to operate the machine as described in this manual.**
- **Keep this manual carefully so as to be ready for use when necessary.**
- **If the machine still fails to display or to get started, immediately turn OFF the main power switch and contact your nearest dealer.**

• This manual covers the following models: \_\_\_\_\_

• **GN715-TB**

• **GN715-HD**

• **GN715-UC**

The specifications of GN715-TB may be somewhat different from GN715-HD and GN715-UC. In such a case, read the descriptions of the model which applies to the game machine you are operating.

---

- The specifications of this product are subject to change without notice for reasons such as improving the performance.
- The contents of this game, its main data and design are protected by copyright law and industrial property law.
- Unauthorized reproduction of this document or any of its contents is strictly forbidden.

© 1998 KONAMI ALL RIGHTS RESERVED.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

# Contents

---

■ Precautions for use .....	2
安全使用注意事項 .....	10
■ Locations of warning and other safety labels .....	7
警告標籤等的張貼位置 .....	15
1 Specifications .....	9
規格 .....	17
2 Names of parts and list of main parts .....	18
3 How to play .....	20
4 Opening and closing the doors	
4-1 Opening and closing the maintenance door .....	21
4-2 Opening and closing the coin door .....	22
5 PCB settings	
5-1 PCB start-up check (self test) .....	23
5-2 Adjusting the game environment (manual test) .....	24
5-3 Mode descriptions .....	25
6 Setting up the game machine	
6-1 Gun unit shooting range .....	32
6-2 Connecting the unit .....	33
6-3 Fastening the adjusters .....	36
6-4 Service panel .....	36
6-5 Power unit .....	37
6-6 Separating and moving the units .....	38
6-7 Moving the coin counter .....	39
7 Maintenance and annex	
7-1 Replacing the coin selector .....	40
7-2 Replacing the fluorescent light .....	41
7-3 Replacing the start button .....	42
7-4 Replacing the gun unit .....	43
7-5 Resetting the circuit protector .....	48
7-6 Adjusting the projector .....	49
7-7 Wiring diagram .....	53

## ■ Precautions for use

In this manual, the precautions to be followed without fail in order to prevent damage to persons to install, use or maintain "TERABURST™" or other persons or to properties are shown as follows.

### Be sure to read the following

•The following suggestions show the degree of danger and damage caused when the product is used improperly with the suggestions disregarded.



**WARNING**

Indicates a situation where disregarding the suggestions could result in death or serious injury.



**CAUTION**

Indicates a situation where disregarding the suggestions could result in injury or product damage.

•The following graphic suggestions describe the types of precautions to be followed.



Indicates a matter of which care should be taken.



Indicates a matter which is forbidden.




Indicates a matter which should be performed without fail.


## Setting Up





- **Be sure to consult your nearest dealer when setting up, moving or transporting this product.**


  - This product should not be set up, moved or transported by anyone other than industry specialists. Doing so could result in injury or product damage.
  - When installing the machine, make sure that all the 8 adjusters are tight on the floor and that the machine is placed stably and horizontally. Unstable set-up may get the machine shaky and result in personal injury or machine trouble.
  - When setting up this product, take care that no undue force is applied to the connecting sections of the game machine. Failure to do so could cause injury, accidents or product damage.
  
- **This product is an indoor game machine. Never set up the game machine outside.**


  - Setting up this product outside could result in accidents or equipment failure. 
  
- **Do not set up the game machine near emergency exits.**


  - Doing so could block exits in time of emergency and could result in death or serious injury. 
  
- **Do not set up the game machine.**


  - Otherwise an accident or malfunction may result. 
  - In a place exposed to rain or moisture.
  - In a place exposed to direct sunlight.
  - In a place exposed to direct heat from air-conditioning and heating equipment, etc..
  - Near hazardous flammable substance such as thinner and kerosene.
  - On an inclined or uneven floor.
  - Near fire extinguishing equipment.
  - In a place exposed to strong vibration.
  - In a place exposed to excessive dust.
  - Near equipment generating strong magnetism or electric waves.
  
- **Do not place containers holding chemicals or water on or near the game machine.**

  - Electrical shock or damage could be caused by water or foreign matter entering the inside of the machine. 
  
- **Do not place objects near the ventilating holes.**

  - Doing so could cause the internal temperature to rise excessively, resulting in fire or equipment failure. 
  
- **Do not bend the power cord by force or place heavy objects on it.**




  - Doing so could result in electric leakage or fire. 
  
- **Never plug or unplug the power cord with wet hands.**

  - Doing so could result in electrical shock. 
  
- **Never unplug by pulling the power cord.**

  - Doing so could damage the cord, resulting in electric leakage or fire. 



**Setting Up**





- **Be sure to use indoor wiring for within the specified voltage range. For extension cord, use indoor wiring of the specified rating or more.**  
· Failure to do so could result in fire or equipment failure.
- **Be sure to use the attached power cord.**  
· Otherwise a fire or machine trouble may result.
- **Never plug more than one cord at a time in the electrical receptacle.**  
· Doing so could result in fire or electrical shock. 
- **Do not lay the power cord where people walk through. You may tread on or stumble over them.**  
· You may stumble down and get injured, or damage the power cord or the cable. 
- **Be sure to ground this product.**  
· Otherwise an electric shock or machine trouble may be caused. 
- **Clearance of 100 mm (3.94in) or more should be created between the game machine and walls.**  
· Otherwise the machine (s) cannot be ventilated well, resulting in malfunction.
- **Once all the units have been coupled together, never roll the machine along over a rugged floor.**  
· Otherwise you could get injured or the machine damaged.

**Operation**



- **Hold the gun in the right position. Be careful not to wave or drop the machine gun.**  
· Otherwise it could result in injury or accident. 
- **If there is any abnormality such as smoke, bad smell or abnormal noise being emitted from the machine, immediately turn OFF the main power switch and unplug the power cord from the receptacle to stop operating it.**  
· Using the machine in abnormal conditions could result in fire or accidents.   

**In case of abnormality**

- 1 Turn OFF the main power switch.
  - 2 Unplug the power cord from the receptacle.
  - 3 Contact your nearest dealer.
- **Do not leave the power cord plugged improperly or covered with dust.**  
· Doing so could result in electrical shock or fire, so inspect the power cord periodically. 
- **Never disassemble, repair or modify any section other than those specified in this manual.**  
· Doing so could result in fire, malfunction or equipment failure.  
· Ask your nearest dealer to perform repairing, etc..  
· We do not assume any responsibility for any damages that would be caused by tampering with the machine. 

## Operation

 CAUTION

- **Do not use this product anywhere other than industrial areas.**
  - Using in a residential area or an area next to a residential area could affect signal reception of radios, television sets, telephones, etc..
- **The following users should not play the game.**
  - Doing so could cause accidents or illness.

·Those under the influence of alcohol.	·Those suffering from or being treated for arm or wrist ailments.
----------------------------------------	-------------------------------------------------------------------
- **Do not plug or unplug the power cord with wet hands.**
  - Doing so could result in electrical shock.
- **When handling the power cord, take care of the following:**
  - Otherwise an electric leak, fire or electric shock may result.

·Do not damage the power cord.	·Do not modify the power cord.
·Do not bend the power cord excessively.	·Do not twist the power cord.
·Do not heat the power cord.	·Do not pull the power cord.
·Do not bind the power cord.	·Do not tread on the power cord.
·Do not sandwich the power cord.	·Do not drive a nail into the power cord.
- **If the power cord or power plug becomes damaged, stop using the machine immediately and ask your nearest dealer to replace the parts.**
  - Using a damaged power cord or power plug could result in fire or electrical shock.
- **After the play is over, make sure the gun unit is back in the specified position.**
  - Otherwise the machine gun could come down and get you injured or get itself damaged.



## Inspection and cleaning

 WARNING

- **Be sure to turn OFF the main power switch and unplug the power cord from the receptacle before inspecting or cleaning the machine.**
  - Failure to do so could result in electrical shock.
- **When replacing parts, be sure to use parts of the correct specifications. Never use parts other than the specified ones.**
  - Using improper parts could result in fire or equipment failure.
- **The projector unit has some internal parts with high voltage. Only a qualified industry specialists is allowed to open the back door and maintenance door of the projector unit. With this maintenance door open, be very careful not to touch unnecessary parts.**
  - Otherwise an accident or electric shock may result.
- **Before pressing the reset switch in the PCB unit or replacing the CCD camera, take an anti-static measure using a wrist band or the like.**
  - Static electricity may damage the electronic parts in the PCB unit.
- **Never disassemble, repair or modify any section other than those specified in this manual.**
  - Doing so could result in fire, malfunction or equipment failure.
  - Ask your nearest dealer to perform repairing, etc..
  - We do not assume any responsibility for any damages that would be caused by tampering with the machine.
- **To clean the game machine, wipe it with a soft cloth dampened in a neutral detergent and wrung out.**
  - Using organic solvents such as thinner may decompose the material.
  - Electrical shock or equipment failure could be caused by water entering the inside of the machine.



## Moving and transportation



- The game machine contains parts such as the projector, electronic components and precision components which are sensitive to vibrations and impacts. Great care therefore should be taken when moving and transporting the game machine. Be sure not to let the machine tip over. 
- Before moving the machine, turn OFF the main power switch, unplug the power cord from the receptacle and remove the power cord from the machine. 
  - Stepping on the power cord or getting caught by it may cause an accident or damage.
- Before moving the machine, separate the unit front unit, projector unit or coupler and fully raise the 8 adjusters. Move the units on the casters.
  - Failure to do so could result in accidents, damage or equipment failure.
- When moving the units, be careful not to apply undue force.
  - The projector unit in particular is easy to turn over, which may cause an accident or damage.
- When moving the projector unit, be sure to press it along sideways (to the right or left). When moving it on a slope or getting it over a level difference, be sure to take the buddy system.
  - Otherwise the unit may turn over, resulting in an accident or damaged.

## Disposal



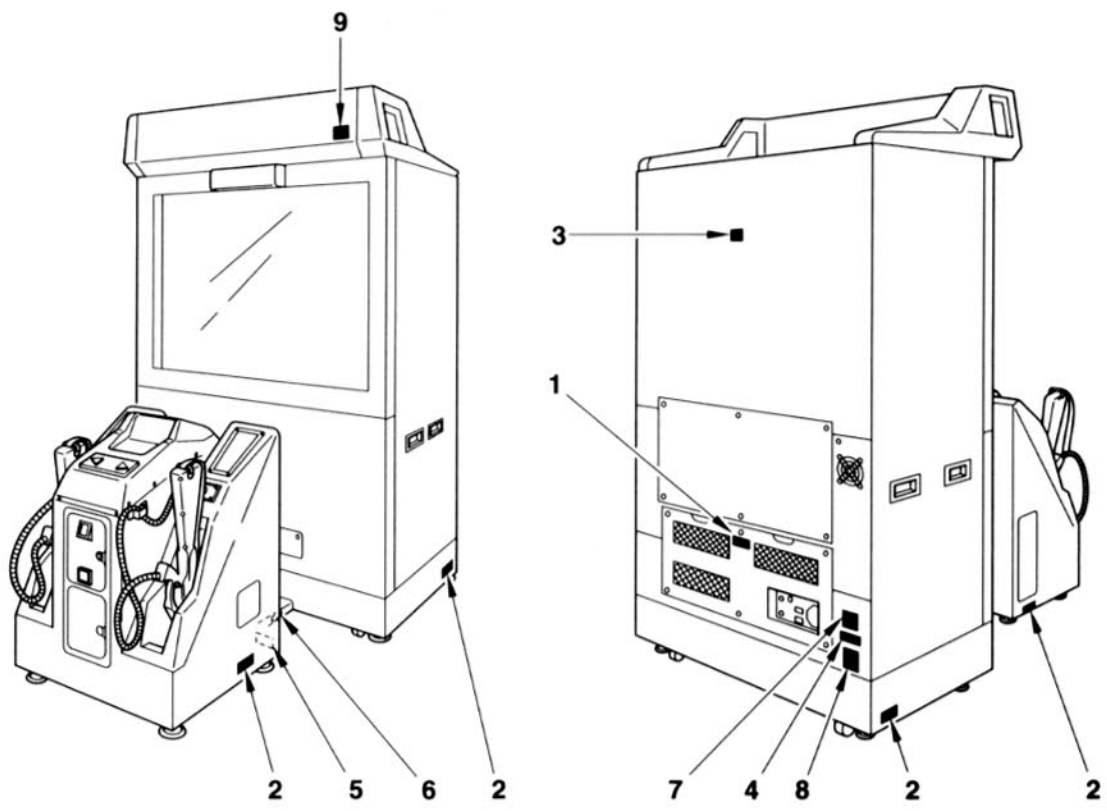
- When disposing of the projector of this product, do not leave it with the screen exposed. 
  - Doing so could result in fire due to direct sunlight, etc..
- When disposing of the projector with the screen section removed, do not hold the screen section to direct sunlight, etc.. 
  - Doing so could cause burns or fire.

## PRECAUTION IN HANDLING

- When setting up, inspecting, maintaining, moving or transporting this product, follow the procedures and instructions set forth in this manual and perform such work safely.
- Do not remove labels of "WARNING", "CAUTION", etc. attached to the product.
- Do not set up, handle, inspect, maintain, move or transport this product under conditions equivalent to the condition of "WARNING" or "CAUTION" specified in this manual.
- If a new owner is to have this product as a result of transfer, etc., be sure to give this manual to the new owner.



# Locations of warning and other safety labels



## Types of warning and other safety labels

1

**WARNING**

ELECTRICAL SHOCK HAZARD.  
DO NOT OPEN EXCEPT FOR SERVICE.

2

**WARNING**

Ensure all leg levellers are securely set and game cabinet is level.

3

**WARNING**

UNIT MAY FALL IF YOU PUSH OR TRUCK FROM THE WRONG SIDE. TO MOVE THE UNIT, PLEASE PUSH AS INDICATED IN THE PICTURE.

4

**Weight 205kg(452lb)**

PN.0000048483

8

THIS EQUIPMENT COMPLIES WITH THE REQUIREMENTS IN PART 15 OF FCC RULES FOR A CLASS A COMPUTING DEVICE. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA MAY CAUSE UNACCEPTABLE INTERFERENCE TO RADIO AND TV RECEPTION REQUIRING THE OPERATOR TO TAKE WHATEVER STEPS ARE NECESSARY TO CORRECT THE INTERFERENCE. THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.

**KONAMI.**

PN.0000011064

GN715-UC only

9

Parental Advisory Warning

This game is classified

**LIFE-LIKE VIOLENCE STRONG**

PN.0000048717

GN715-UC only

5

**Weight 70kg(155lb)**

PN.0000048482

6

**Weight 10kg(22lb)**

PN.0000048901

7

MODEL	GN715-HD TERABURST
POWER	220 v / 50 Hz
	380 W / 540 VA
MANUFACTURER	KONAMI CO., LTD.
DATE OF MANUFACTURE	MARCH 1988
WEIGHT	285 kg ( 629 lb )
SERIAL NUMBER	
<b>KONAMI.</b>	
<small>MADE IN JAPAN</small>	
<small>INDOOR USE</small>	

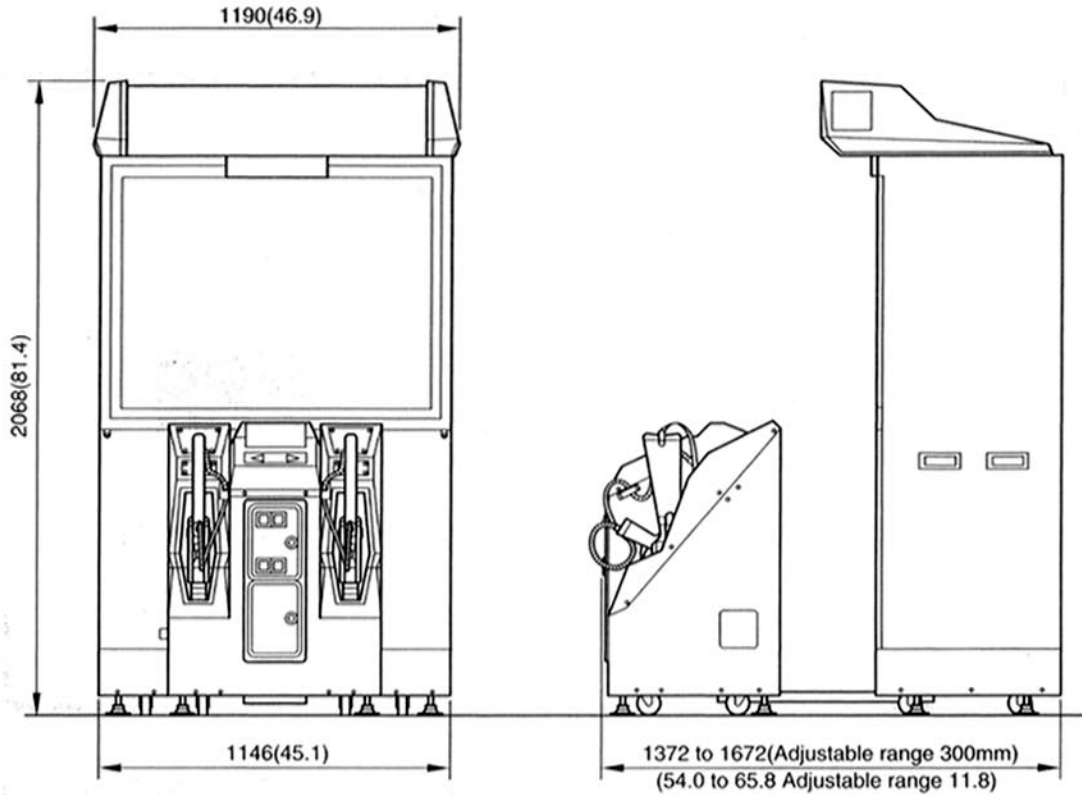
• The above is an example. The entries are different from destination to destination.

# MEMO

---

ENGLISH

# 1 Specifications



## Specifications

Dimensions	Refer to the figure above: mm(in)
Weight	Total weight : Approx. 285 kg (629 lb) Projector unit: Approx. 185 kg (408lb), Front unit: Approx. 70 kg (155lb) Billboard: Approx. 20 kg (44lb), Coupler: Approx. 10 kg (22lb)
Rated power consumption	380W / 540VA
Monitor	50 - inch color projector
Service condition	Temperature 0 to 30°C (32 to 86°F), Humidity 20 to 80%(No dewing is allowed.)
Attachments	<ul style="list-style-type: none"> <li>· Instruction manual ..... This manual</li> <li>· Keys for coin door ..... 2</li> <li>· Keys for maintenance ..... 2</li> <li>· AC power cord ..... 1</li> <li>· Coupler ..... 1</li> <li>· Coupler lock bolt (M8 X 55L) / (spring washer / flat washer) ... 2 each</li> <li>· Projector remote controller ..... 1</li> <li>· AA size batteries ..... 2</li> <li>· Hex wrench (Width across flats 6 mm) ..... 1</li> </ul>

•If any part is defective or not found, contact your nearest dealer.

•The specifications of this product are subject to change without notice for reasons such as improving the performance.

## 安全使用注意事項

本書說明為防止危害“TERABURST™”的設置、使用、維護等人員及他人和財產的安全注意事項，本書內容務請遵守。

### 務請閱讀

●本書使用如下標注，區分無視表示內容、錯誤使用時產生的危險和損害程度。



該項標注表示“有可能造成死亡或身負重傷”的內容。



該項標注表示“有可能造成傷害或物品損壞”的內容。

●本書使用如下圖標，說明務請遵守的內容種類。



本圖標表示“提請注意”的內容。



本圖標表示“禁止”的內容。



本圖標表示“強制實行”的內容。

## 設置時



- 設置、移動或搬運時，務必同當地的經銷店商洽。
  - ▶非專業人員執行設置、移動或搬運時，有可能受傷或損壞殼體。
  - ▶安裝本機時，務必使八個位置的可調支腳接觸地面，証實殼體呈水平狀態。無傾斜。固定不穩定時，可引起殼體晃動，及至受傷或造成事故。
  - ▶設置本機時，不得在殼體連接部位強加外力。否則，可致受傷或造成事故、損壞殼體。
  
- 本機為室內用遊戲機，千萬不要設置在室外。
  - ▶設置在室外，可造成事故或故障。
  
- 本機不得設置在建築物太平門附近。
  - ▶否則，發生災害時妨礙人們逃生，造成傷亡。
  
- 本機尚不得設置在以下場所。
  - ▶否則，可造成事故或故障。
    - 漏雨或潮濕結露的場所
    - 陽光直射的場所
    - 直接受到取暖裝置的熱氣吹拂的場所
    - 煤油、信那水等有引火性的危險物附近
    - 傾斜、不堅硬、不穩定的地面
    - 消防設備的附近
    - 晃動劇烈的場所
    - 多灰塵的場所
    - 產生強大磁場或電波的設備附近
  
- 本機上面或周圍不得放置盛水或藥劑的容器或物品。
  - ▶水份或異物進入內部，可致觸電或故障。
  
- 通風口附近不得放置物品。
  - ▶有妨通風，則內部溫度異常升高，造成火災或故障。
  
- 不得強行彎曲電源軟線，也不得在其上壓放重物。
  - ▶否則，可造成漏電事故或火災。
  
- 千萬不得用濕手拔下或插入電源插頭。
  - ▶否則，可致觸電。
  
- 不得牽拉電源軟線拔下電源插頭。
  - ▶否則，電源軟線損傷，造成漏電事故或火災。



禁止



禁止



禁止



禁止



禁止



禁止



禁止



禁止

設置時

**!** 注意

- 務必使用符合規格的電源。利用加長電線時，應使用符合規格的室內用線。  
▶否則，可造成火災或故障。
- 請務必使用附屬的電源軟線。  
▶否則，可造成火災或觸電。
- 千萬不得使用多分支插座。  
▶否則，可造成火災或觸電。
- 不得將電源軟線、伸出到被人踐踏或絆人通道上。  
▶否則，可致翻倒傷人，而且可損傷電源軟線。
- 本產品必須連接地線。  
▶否則，可造成觸電或故障。
- 設置本機時，請距牆壁10公分以上。  
▶否則本體不能正常散熱，造成故障。
- 接好各單元後，絕對不可穿越段差等處。  
▶否則，可致受傷和造成事故，損壞本機。



禁止



禁止



連接地線

使用時

**!** 警告

- 應以正確姿勢使用槍裝置。不得旋回轉動和摔落。  
▶不得旋回轉動和摔落。
- 萬一從本機中冒煙、發出氣味或異常聲響等，應立即關閉電源開關，并從插座上拔下電源插頭，停止使用。  
▶在異常狀態下使用，可造成火災或事故。



禁止



拔下電源插頭

判斷為異常時

- 1 斷開電源
- 2 從插座上拔下電源插頭
- 3 通知當地的經銷店

- 不得在電源插頭未正確插入插座中或積滿灰塵的狀態下放置不管。  
▶否則，可造成觸電或火災，應定期檢查。
- 千萬不得拆卸、修理或改造本書未指示的部位。  
▶否則，可造成火災、異常工作或故障。  
需要修理等時，請委託當地的經銷店。  
因改造本機而造成損害，本公司概不負責。



禁止



禁止拆卸

## 使用時

 注意

- 本機不得在工商業地區以外使用。
  - ▶在住宅區或其鄰接處使用，會妨礙電視機、收音機、電話機等接受信號。
- 應提請屬於下列情況之一的顧客，不要利用本機遊戲。
  - ▶否則，可致事故或引發疾病，加重症狀。
 

· 飲酒者，手臂、手腕有病，或正在接受治療。
- 千萬不得用濕手拔下或插入電源插頭。
  - ▶否則，可致觸電。
- 使用電源軟線時，請遵守以下事項。
  - ▶否則，可造成漏電事故或火災、觸電。
 

· 劃傷 · 加工 · 強行彎曲 · 扭轉 · 加熱  
 · 牽拉 · 打結 · 腳踏 · 擠壓或打釘
- 萬一電源軟線、電源插頭損傷時，應立即停止使用，委託當地的經銷店更換零件。
  - ▶在損傷狀態下使用，可造成火災或觸電。
- 遊戲後，應確認槍裝置是否已正確收存。
  - ▶否則，機關槍倒下可致受傷或損壞。



## 檢查和打掃

 警告

- 檢查或打掃本機時，務必斷開電源，從電源插座上拔下電源插頭。
  - ▶否則，可致觸電。
- 更換零件或易耗品時，務必使用本公司指定的產品。千萬不得使用或混用其他產品。
  - ▶否則，可造成火災或故障。
- 投影裝置內部有高壓流動，非常危險。除技術人員以外，不可打開投影裝置的背面門。
  - 另外，在投影裝置背面門打開時，不可隨意觸碰，請充分予以注意。
  - ▶否則可致事故或有觸電危險。
- 按下遊戲機板上的復位開關或交換CCD錄影機時，請用地線帶採取靜電防止措施。
  - ▶否則，發生靜電，會造成機板上電子零件的破損。
- 千萬不得拆卸、修理或改造本書未指示的部位。
  - ▶否則，可造成火災、異常工作或故障。
  - 需要修理等時，請委託當地的經銷店。
  - 因改造本機而造成損害，本公司概不負責。
- 打掃本機時，用軟布蘸取中性洗劑，擰乾後再擦拭。
  - ▶使用信那水等有機溶劑，可致本機變質。
  - ▶本機內部滲水，可造成觸電或故障。



拔下電源插頭



禁止



禁止



禁止拆卸

## 移動/搬運時

### 注意

- 本機內部裝有投影機、電子元件、精密器件等，不耐震動和沖撞的零件。移動和搬運時，應精心操作。  
▶ 千萬不要翻倒橫放。
- 移動本機前，請先切斷電源開關，從插座上拔下電源插頭，從機體上卸下全部電源軟線。  
▶ 否則，可造成事故和破損。
- 移動本機前，必須先分開前部裝置、投影裝置和連結板，將八個可調支腳調至最上面，用腳輪移動。  
▶ 否則，可造成事故、損傷或故障。
- 移動各裝置時，不可施加過份的力量。  
▶ 特別是投影裝置翻倒時造成事故和破損。
- 投影裝置根據推動方向會翻倒。移動時應面對屏幕向左右方向推動。在斜面或臺階處移動時必須由兩個人以上進行。  
▶ 否則翻倒時造成事故和破損。



禁止



拔下電源插頭

## 廢棄

### 警告

- 廢棄本產品的投影裝置時，不得將屏幕部分外露放置。  
▶ 否則，受直射陽光等的影響，將引起火災。
- 卸下投影機的屏幕部分將其廢棄時，避開直射陽光等。  
▶ 否則，有被燒傷危險或引起火災。



禁止



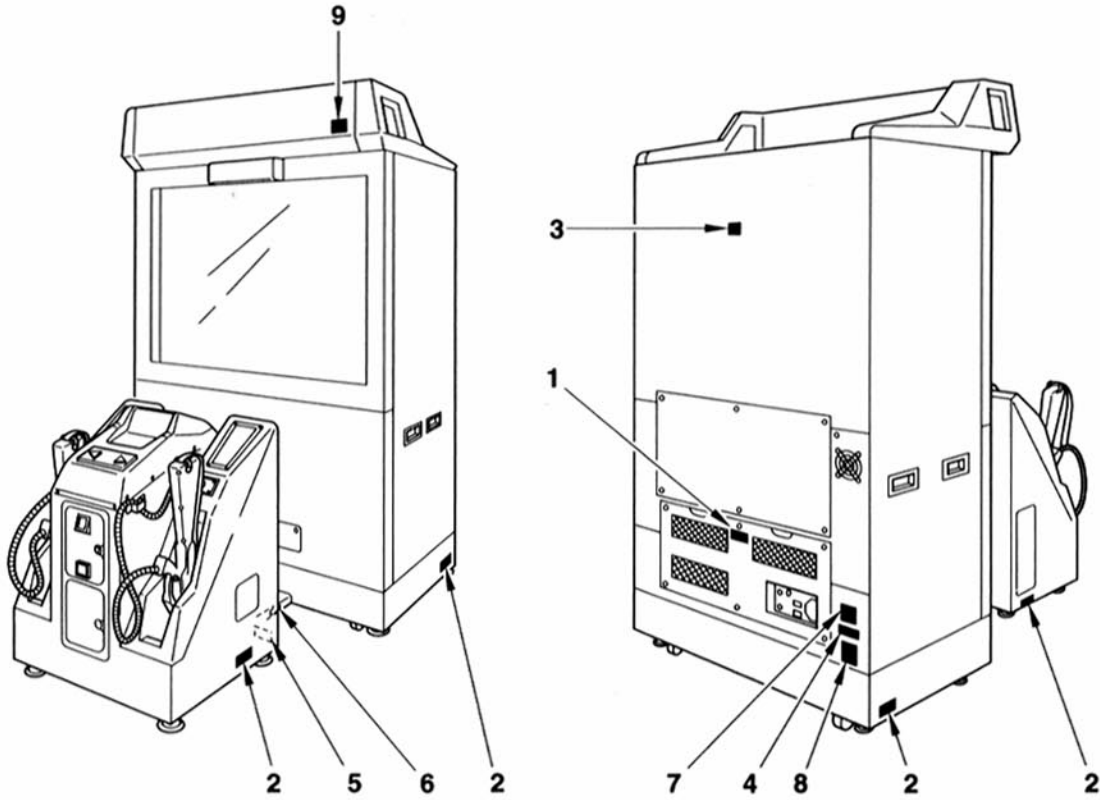
禁止

### 請留意

- 本機的設置、操作、檢查、打掃、移動及搬運，請遵照本書所載步驟及內容進行，確保安全。
- 不要揭下貼在本機上的“警告”“注意”等標籤。
- 不要在相當於間接性警告或注意的狀態下，設置、操作、檢查、打掃、移動及搬運等。
- 因轉讓等，本機的所有者發生變化時，務必將本書轉交給新的所有者。



# 警告標籤等的張貼位置

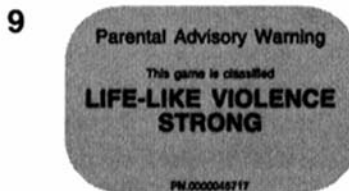


CHINESE

## 警告標籤等的種類



僅限 GN715-UC



僅限 GN715-UC



7

MODEL	GN715-HD TERABURST
POWER	220 v / 50 Hz 380 W / 540 VA
MANUFACTURER	KONAMI CO., LTD.
DATE OF MANUFACTURE	MARCH 1998
WEIGHT	285 kg ( 629 lb )
SERIAL NUMBER	
<b>KONAMI</b> MADE IN JAPAN	
INDOOR USE	

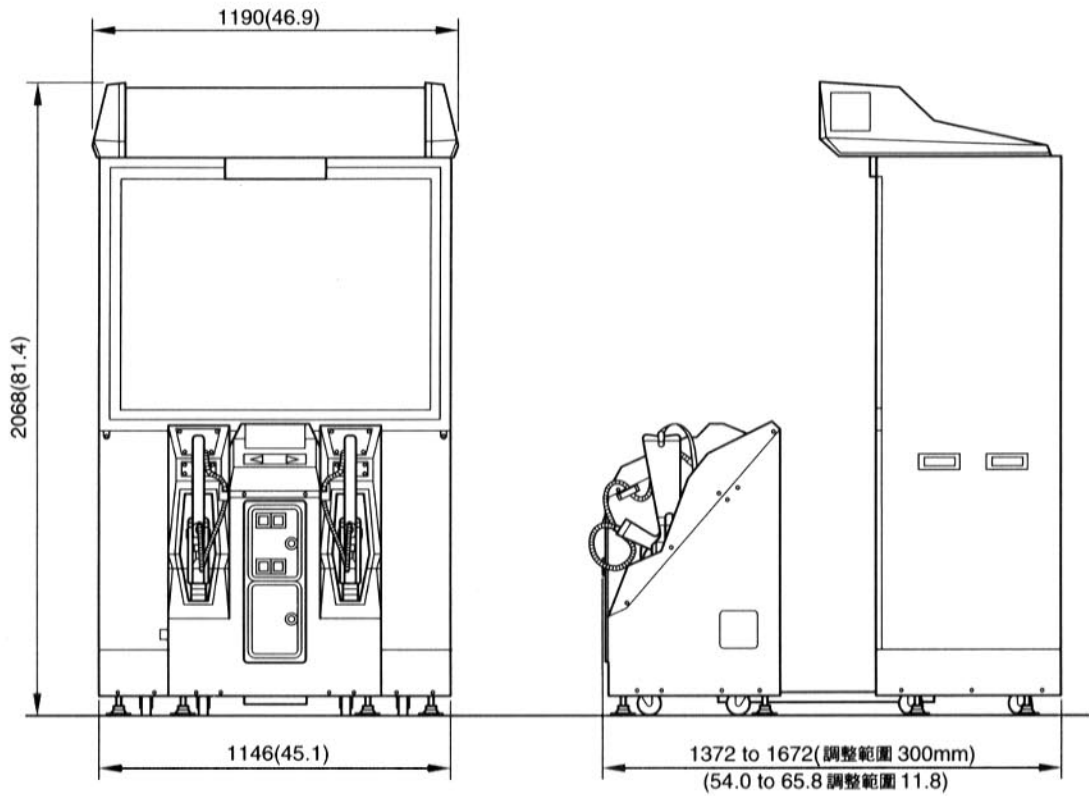
• 以上標注內容僅為示例。不同輸出地區，其標注內容有所不同。

# MEMO

---

CHINESE

# 1 規 格



CHINESE

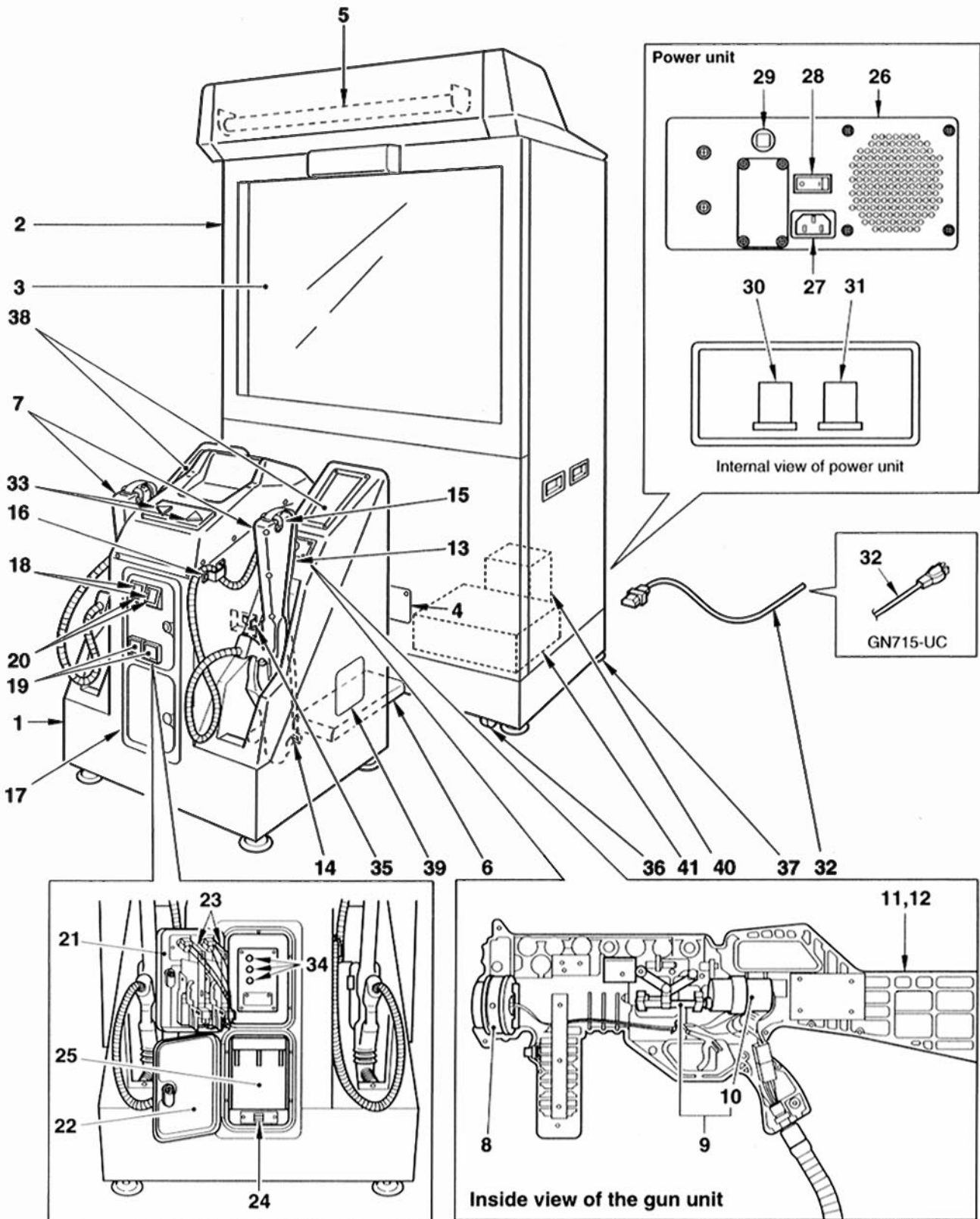
## 規 格

外形尺寸	參看上圖：mm(in)
重 量	總重量：約285kg(629lb) 投影裝置：約185kg(408lb)·前面單元：約70kg(155lb) 標題單元：約20kg(44lb)·連結板：約10kg(22lb)
額定耗電量	380W/540VA
顯示器	50英寸彩色投影機
使用條件	溫度0~30°C (32~86°F) 濕度20~80% (不得結露)
附 件	· 使用說明書..... 本書 · 存幣箱鑰匙..... 2 · 維修用鑰匙..... 2 · 電源軟線..... 1 · 連結板..... 1 · 連結板固定用螺栓 (M8×55L)、(平墊圈、彈簧墊圈)..... 各2 · 投影機調整遙控器..... 1 · 單3號乾電池..... 2 · 六角杆狀扳手(對邊6mm)..... 1

- 萬一有不足零件或不良零件，請惠詢當地的經銷店。
- 本機的規格因性能改良等理由而變更時，恕不預告。

# 2 Names of parts and list of main parts

## ■ Main machine



## 2 Names of parts and list of main parts

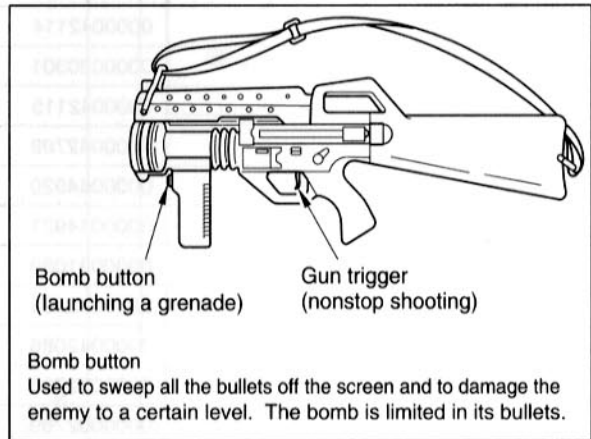
No.	Part name	Part #	Quantity	Remarks
1	Front unit	-	1	
2	Projector unit	-	1	
3	Projector	0000034962	1	
4	Front cover	-	1	
5	Fluorescent light unit	0000035008	1	
6	Coupler	0000009797	1	
7	Gun unit	0000042114	2	Include 8 to 15
8	CCD camera unit	0000030301	2	CCD camera : 0000003775
9	Gun kicking unit	0000042115	2	Include 10
10	Gun motor	0000042799	2	
11	Gun case	0000044920	2	Gun kicking unit-mounted side
12	Gun case	0000044921	2	
13	Gun strap	0000031089	2	
14	Strap hook A	0000042106	2	At muzzle
15	Strap hook B	0000042086	2	At gun stock
16	Gun cable clamp	0000003786	2	
17	Coin door unit	0000002769	1	Include 18 to 23 GN715-HD
		0000001415	1	Include 18 to 23 GN715-TB/UC
18	Coin input port	-	2	
19	Coin return port	-	2	
20	Coin return button	-	2	
21	Maintenance door	-	1	
22	Coin door	-	1	Excluding key
23	Coin selector	-	2	GN715-HD
		-	2	GN715-TB/UC
24	Coin counter	0000030431	1	
25	Coin box	0000006850	1	
26	Power unit	0000042194	1	
27	Power inlet	0000037224	1	
28	Main power switch	0000039100	1	Projector unit back (main power)
29	Circuit protector	0000036921	1	10A
30	Switching power A	0000003794	1	Main PCB (5V)
31	Switching power B	0000003795	1	Main PCB (12V)
32	AC power cord	0000036692	1	250V / 8A GN715-TB/HD
		0000036690	1	125V / 15A GN715-UC (3P)
33	Start button	0000003776	2	
34	Push-button switch	0000005098	3	
35	Sub-power switch	0000039100	1	Projector unit front
36	Caster	0000005357	8	
37	Adjuster	0000002405	8	
38	Speaker	0000002616	2	
39	Super woofer	0000003782	1	
40	Transformer unit	0000046286	1	
41	PCB unit	-	1	

# 3 How to play

The "TERABURST™" machine is designed to play gun shooting game alone or in a pair. The gun unit is equipped with a kicking mechanism to feel a kick of the gun.

## How to play

- Shoot the enemy space aliens and enemy weapons that appear one after the other on the screen to get as high as score possible.
- Use both the ordinary bullets and bombs to shoot the enemies efficiently.
- As many ordinary bullets as you like can be fired for nonstop shooting. There is no need to reload the gun.



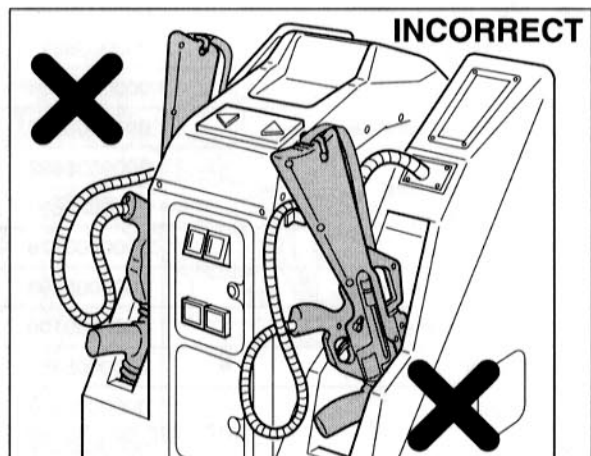
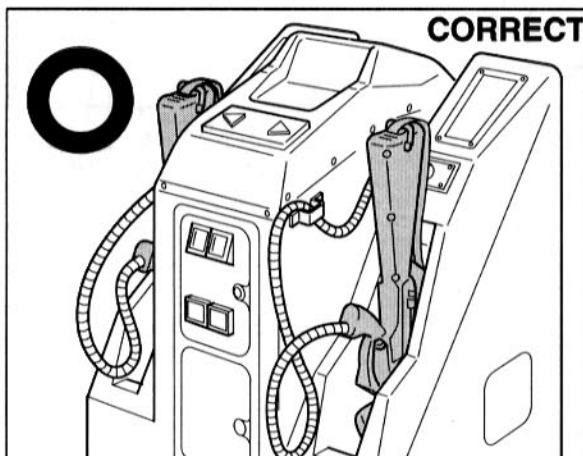
- 1 Put a coin (s) into the slot. Press the start button and the game starts itself.
- 2 The game proceeds in four stages. Each time one stage is cleared, your score at that stage is displayed.
- 3 When you get hit by the enemy, there will be fewer life points.
- 4 The game is over when you have lost all of your life points.

## Joining the game halfway

- You can join the game anytime during the play.

## Putting back the gun unit

- Put the gun unit back in its specified position.



## Continuing the game

- You can continue the game if you take the procedure within about 20 seconds before the game is over.

# 4 Opening and closing the doors

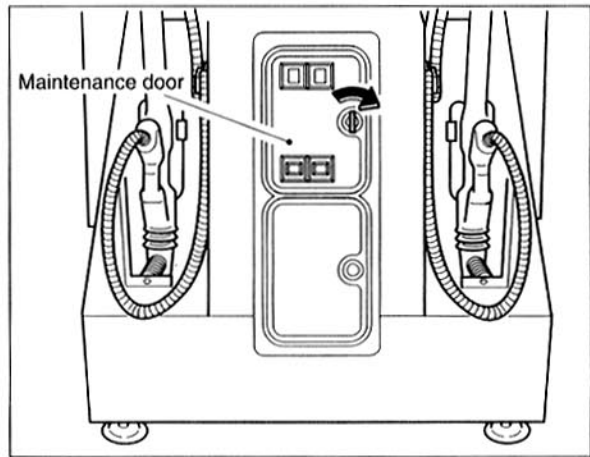
## 4-1 Opening and closing the maintenance door

### ■ How to open the maintenance door — — — — —

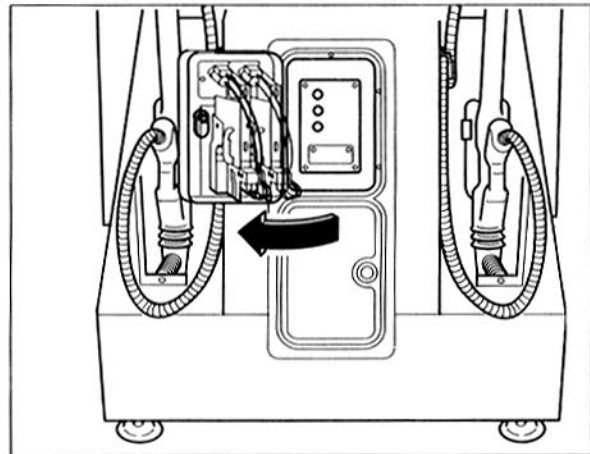


- Take care not to apply any load or impact to the maintenance door when it is open.
- After closing the maintenance door, be sure to check that the door is locked securely.

- 1 | Insert the attached maintenance key in the maintenance door and turn it clockwise.



- 2 | Open the maintenance door.



### ■ How to close the maintenance door — — — — —

- 1 | Close the maintenance door.
- 2 | Turn the maintenance key counterclockwise and draw it out.

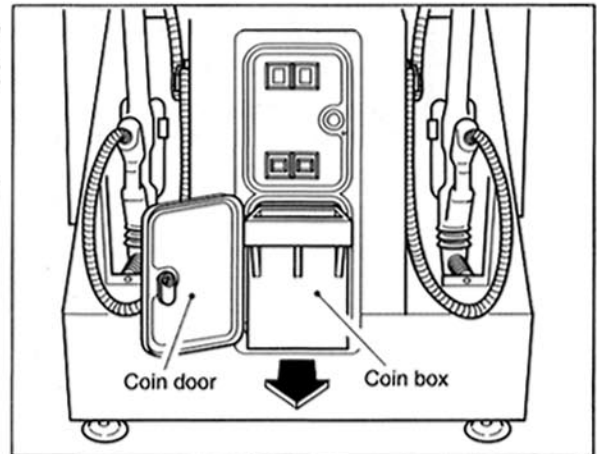
## 4-2 Opening and closing the coin door

### ■ Opening and closing the coin door and removing the coin box



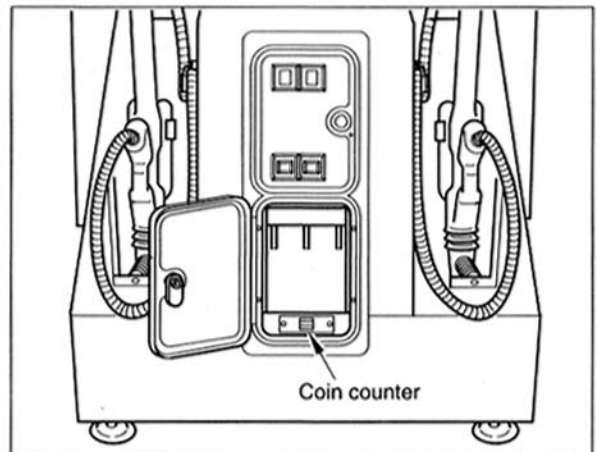
- Take care not to apply any load or impact to the coin door when it is open.
- Note that the coin box is considerably heavy to take out if it is full of coins.
- Securely lock the door for protection against burglaries.

- 1 Insert the attached coin door key in the coin door and turn it clockwise.
- 2 Open the coin door and take out the coin box.



### ■ Coin counter

- You will find the coin counter when the coin door is opened.  
The coin counter is located under the coin box.





# 5 PCB settings

---

## 5-1 PCB start-up check (self test)

When the main power switch is turned ON after installation of machine, the performance of game Printed Circuit Boards (PCB) is checked automatically and the result is displayed on the screen. If the power is not turned ON, make sure that the main power switch and the sub-power switch on the front of the projector unit are both at the ON position. (See page 37)



- **Be sure to check the PCB unit (self test) before using the machine.**
- **When the machine has been set up or when the PCB unit or the gun unit has been repaired or replaced, be sure to check the gun unit performance on the "GUN SETTINGS" on page 29.**
- **If an abnormality persists or the machine does not operate properly, immediately turn OFF the main power switch, unplug the power cord from the receptacle and contact your nearest dealer.**

### ■ Result of test —————

#### If test is OK

- All the devices of the PCB unit and the backup memory are checked, and the machine goes to the game mode and the demonstration game gets started.

#### If any abnormality is detected

- If the PCB unit is in trouble, "BAD" appears at the device position on the screen and the start-up test will be made again in about 5 seconds.
- If there is a problem with the protected data on the backup memory, the following message appears on the screen.  
"RTC SELF CHECK ERROR" In this case, the start-up test will be made again in about 5 seconds. If the same message shows up again, immediately turn OFF the main power switch, unplug the power cord and contact your nearest dealer.
- If there is a problem with the backup data, the following message appears on the screen.  
"RTC DATA ERROR PRESS TEST SWITCH TO INITIALIZE" In this case, press the test switch on the service panel to initialize the backup memory. (The settings made in the manual test will return to the factory settings.)

If an abnormal display continues or the machine does not operate normally, immediately turn OFF the main power switch, unplug the power cord and contact your nearest dealer.

## 5-2 Adjusting the game environment (manual test)

Manually check and change the settings for the screen displays and game contents and change them as required.

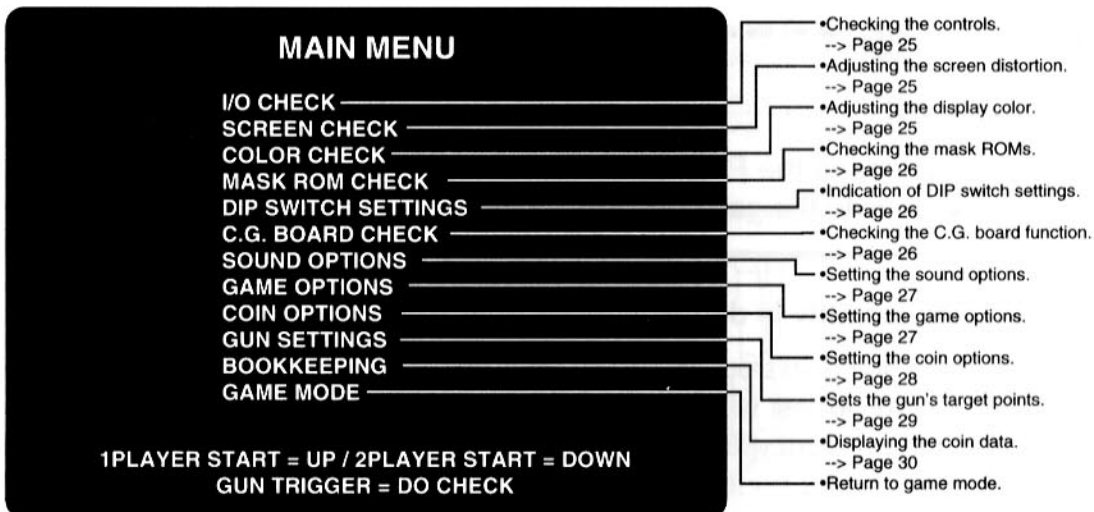
### ■ Starting the manual test mode

- 1 Turn ON the power switch.
- 2 Press the test switch on the service panel during the game mode demo (Do not turn ON the power switch with the test switch held down. The current settings will be erased and the machine will have the factory settings.)
  - The unit is set in the manual test mode and the main menu is displayed on the screen

### ■ Quit the manual test mode

- 1 Press the 1P or 2P start button to select "GAME MODE" on the main menu.
- 2 Pull the trigger of the 1P or 2P gun.
  - The screen goes back to the game mode.

### ■ Main menu screen (basic items)



### ■ Selecting each mode

How to select each mode from the main menu

- SELECT --> Press the 1P or 2P start button.
- SET --> Pull the trigger of the 1P or 2P gun.
  - The machine is now in the selected mode.

After selecting a mode, refer to the page on which that mode is described in details.

## 5-3 Mode descriptions

- The original factory settings are displayed in green; the changed settings are displayed in red.
  - To change the settings, press the 1P or 2P start button to select an item and pull the 1P or 2P gun trigger to modify its setting.
  - Then select "SAVE AND EXIT" and pull the 1P or 2P gun trigger again. With "NOW SAVING" displayed on the screen, all the settings are automatically saved. Then the main menu screen shows up again.
  - If "EXIT" is selected after the settings have been changed, the following message appears on the screen.

**YOU DID NOT SAVE. DO YOU WANT TO SAVE? YES/NO** Using the 1P or 2P start button, select "YES" or "NO" and pull the 1P or 2P gun trigger.

When "YES" is selected, the message "NOW SAVING" will appear, the modified settings will be saved, and the main menu screen will come on again.

When "NO" is selected, the message "NO MODIFICATION" will appear, the modified settings will not be saved, and the main menu screen will come on again.

- If "FACTORY SETTINGS" is selected and the 1P or 2P gun trigger is pulled, all the settings in the mode will be back to the factory ones.

**MEMO**

### I/O CHECK

**Checking the controls**

- Mode for checking the performance of each control.
  - To return to the main menu screen, press the 1P and 2P start buttons at once.
  - When testing the gun motor, be sure to hold the gun ready.
  - If not, this checking may fail. (See page 32)

### SCREEN CHECK

**Adjusting the screen distortion**

- Mode for checking the screen display.
  - While watching the crosshatch pattern on the screen, adjust the on-screen size, horizontal and vertical centering and other factors with the accompanying projector remote controller (see page 49).
  - To return to the main menu screen, pull the trigger of the 1P or 2P gun.

### COLOR CHECK

**Adjusting the display color**

- Mode for checking the display color.
  - Using the accompanying projector remote controller, adjust the display color so that the colors of the color bars should appear properly graduated and the background should become black sufficiently. (see page 49)
  - To return to the main menu screen, pull the trigger of the 1P or 2P gun.

## MASK ROM CHECK

### Checking the mask ROMs

- The mask ROMs are checked one by one.  
If the ROM is not in trouble, "OK" is displayed.  
If anything unusual is found, "BAD" appears. Once in this mode, this checking gets started automatically.  
To return to the main menu screen, pull the trigger of the 1P or 2P gun.
- If "BAD" appears, immediately turn OFF the main power switch, unplug the power cord from the receptacle and contact your nearest dealer.

## DIP SWITCH SETTINGS

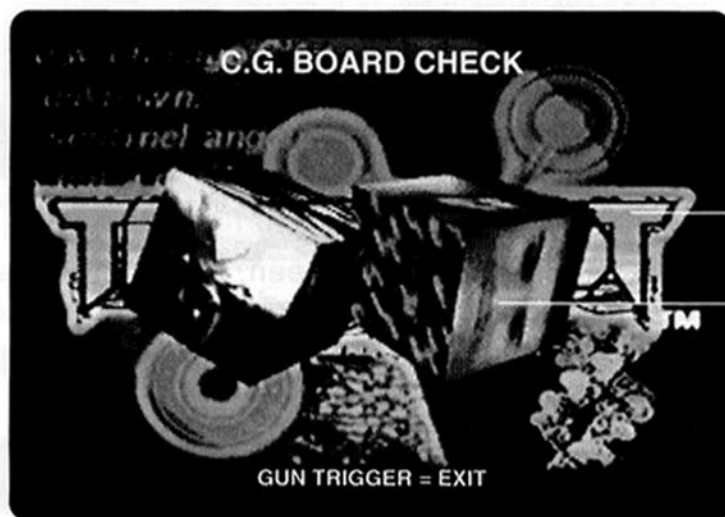
### Indication of DIP switch settings

- Mode for indication of DIP switch settings.  
Set all the DIP switches to the OFF position.  
To return to the main menu screen, pull the trigger of the 1P or 2P gun.

## C.G. BOARD CHECK

### Checking the C.G. board function

- Mode for checking the function of the C.G. board.  
Observe the screen in this mode to make sure that the C.G. board is functioning well.  
To return to the main menu screen, pull the trigger of the 1P or 2P gun.



•The "TERABURST" logo is shown back the cubes.

•Two cubes are rotating and entangled with each other.

## SOUND OPTIONS

### Setting the sound options

- This screen is used to make sound settings and to check them.  
Press the 1P or 2P start button to select an item, and pull the 1P or 2P gun trigger to enter a new setting.  
To return to the main menu screen, select "SAVE AND EXIT" or "EXIT" and pull the trigger of the 1P or 2P gun.

**SOUND OPTIONS**

SOUND IN ATTRACT MODE      ALL THE TIME

SOUND SCALE CHECK

SOUND VOLUME      20

FACTORY SETTINGS

SAVE AND EXIT

EXIT

1 PLAYER START = UP / 2 PLAYER START = DOWN  
GUN TRIGGER = MODIFY SETTING

- Turns on and off the demo play sound.  
-ALL THE TIME ..... Sound always on.  
-ONCE EVERY 4 CYCLES ..... Sound on every 4 cycles.  
-COMPLETELY OFF..... Sound always off.
- The "do re mi...do" musical scale is heard twice from both the speakers. (Sound effect is given to the second round.)
- Adjusts the sound volume from level 0 (mute) to 30 (Maximum).  
\* To raise the sound level, pull the trigger of the 1P gun.  
To lower the sound level, pull the trigger of the 2P gun.
- Pull the 1P or 2P gun trigger to returns all the settings to the factory settings.

•This screen is just an example.

## GAME OPTIONS

### Setting the game options

- This screen is used to make game settings and to check them.  
Press the 1P or 2P start button to select an item, and pull the 1P or 2P gun trigger to enter a new setting.  
To return to the main menu screen, select "SAVE AND EXIT" or "EXIT" and pull the trigger of the 1P or 2P gun.

**GAME OPTIONS**

DIFFICULTY LEVEL      4 / MEDIUM

BLOODY MODE      ON

RANKING DATA CLEAR

FACTORY SETTINGS

SAVE AND EXIT

EXIT

1 PLAYER START = UP / 2 PLAYER START = DOWN  
GUN TRIGGER = MODIFY SETTING

- Sets a difficulty level (from the 8 levels).  
1/EASIEST      Easier  
2/VERY EASY  
3/EASY  
4/MEDIUM ..... Standard  
5/MEDIUM HARD  
6/HARD  
7/VERY HARD  
8/HARDEST      Harder
- To raise the difficulty level, put the trigger of the 1P gun.  
To lower the difficulty level, pull the trigger of the 2P gun.
- Sets how opponent space aliens are gunned down.  
-ON.....Body blown off into pieces.  
-OFF.....Body falling down.
- Erases the score ranking data and returns the setting to the factory one.
- Pull the 1P or 2P gun trigger to returns all the settings to the factory settings.

•This screen is just an example.

# COIN OPTIONS

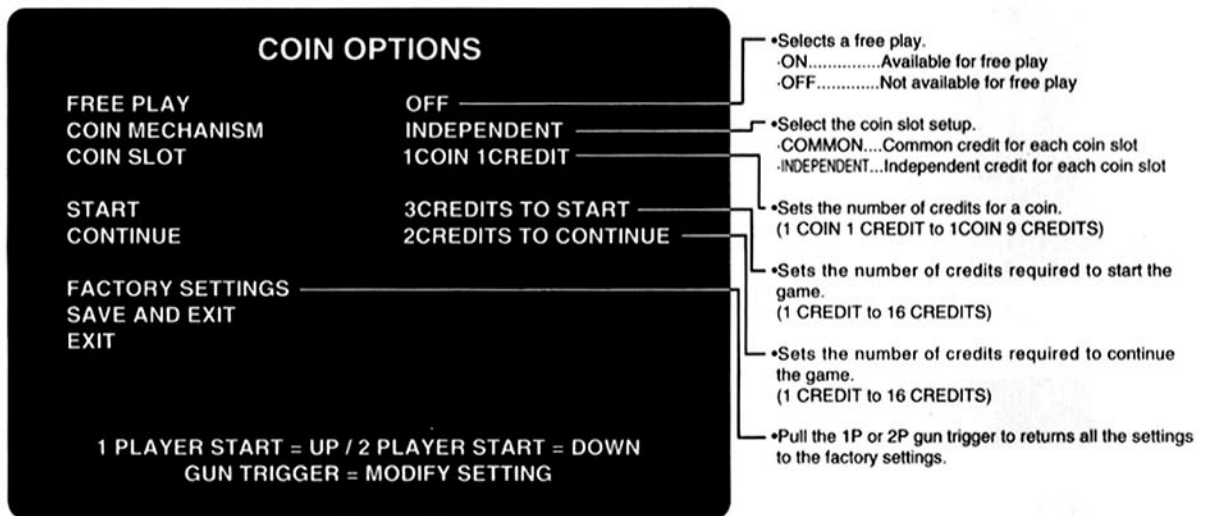
## Setting the coin options

■ This screen is used to make game play charge setting and to check them. Press the 1P or 2P start button to select an item, and pull the 1P or 2P gun trigger to enter a new setting.

To return to the main menu screen, select "SAVE AND EXIT" or "EXIT" and pull the trigger of the 1P or 2P gun.



•The coin setting options are not displayed when "FREE PLAY" is set to "ON". In such case, remember the games will be free.



•This screen is just an example.

## GUN SETTINGS

### Sets the gun's target points

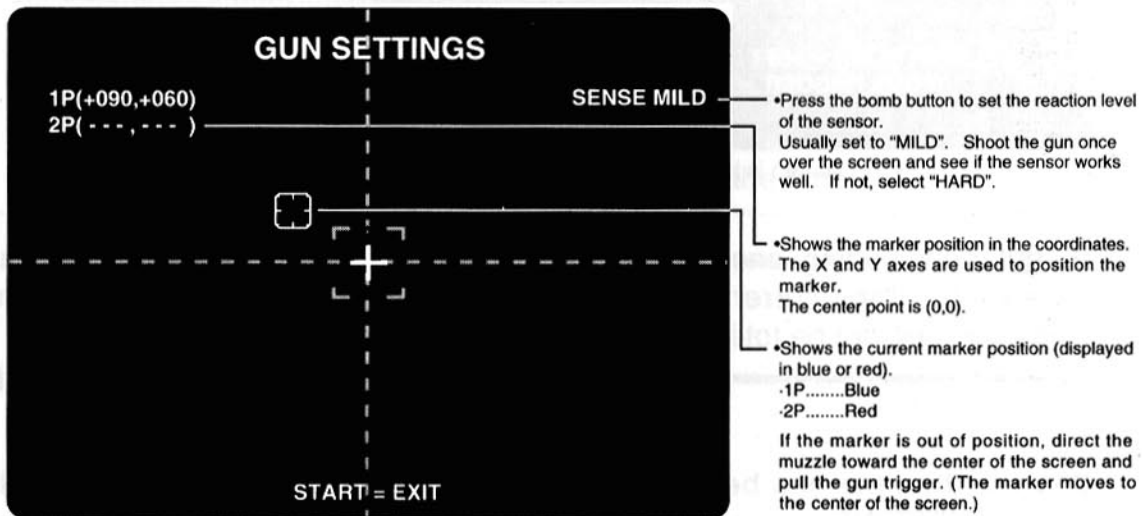
- In this mode, the marker position of the gun is checked.  
To return to the main menu screen, press the 1P or 2P start button.

#### •Positioning the target points

It is advisable to use this kit in the factory-set status.

If you want to reposition the target points of the gun, take the following steps on this screen.

- 1 Hold the gun unit and stand in front of the projector unit. Get the gun ready (see page 32). Pull the gun trigger, aiming at the center of the screen. (The target point, if out of position, will be automatically set to the center of the target on the screen.)
- 2 Make sure the marker has moved to the center of the screen.
- 3 Take the same steps for the other gun unit.



•This screen is just an example.

# BOOKKEEPING

## Displaying the coin data

- In this mode, the total data on the number of coins put into the machine is displayed. If the time is preset in this mode, the total data on the number of coins put into the machine can be viewed by coin slot. To return to the main menu screen, select "EXIT" pull the trigger of the 1P or 2P gun.

BOOKKEEPING

CLOCK SET UP

CURRENT 20:00:00  
SET TO 20:00:00 [SET] [EXIT]

1PLAYER START = LEFT / 2PLAYER START = RIGHT  
GUN TRIGGER = MODIFY SETTING

- Displays the current time in the 24-hour system. (20 hours, 00 minutes, 00 seconds)
- Sets the system clock to a desired time. Press the 1P or 2P start button to select an item and pull the gun trigger to change the setting.  
 SET.....Pull the gun trigger and the time is set. The "COIN DATA OF LAST 7 DAYS" screen shows up on the screen.  
 EXIT.....This mode is quitted without setting the time.

•This screen is just an example.

•The above setting, once made, is not displayed on the screen until the data is cleared. If the current time is not set, the coins that have been put in the machine will not be totaled nor displayed.

## MEMO

- When the time has been set on the "CLOCK SET UP" screen, the following BOOKKEEPING screens show up. Press the bomb button and the total coin data is cleared. To return to the main menu screen, pull the trigger of the 1P or 2P gun.

BOOKKEEPING

COIN DATA OF LAST 7DAYS

TODAY	XX		•Number of coins of today.
YESTERDAY	XX		•Number of coins of yesterday.
-2DAY	XX		•Number of coins of 2 days ago.
-3DAY	XX		•Number of coins of 3 days ago.
-4DAY	XX		•Number of coins of 4 days ago.
-5DAY	XX		•Number of coins of 5 days ago.
-6DAY	XX		•Number of coins of 6 days ago.
-7DAY	XX		•Number of coins of 7 days ago.
LAST 7DAYS AVERAGE	XX		•Average number of coins of last 7 days.
TOTAL COINS	XX		•Total number of coins after the time being set.

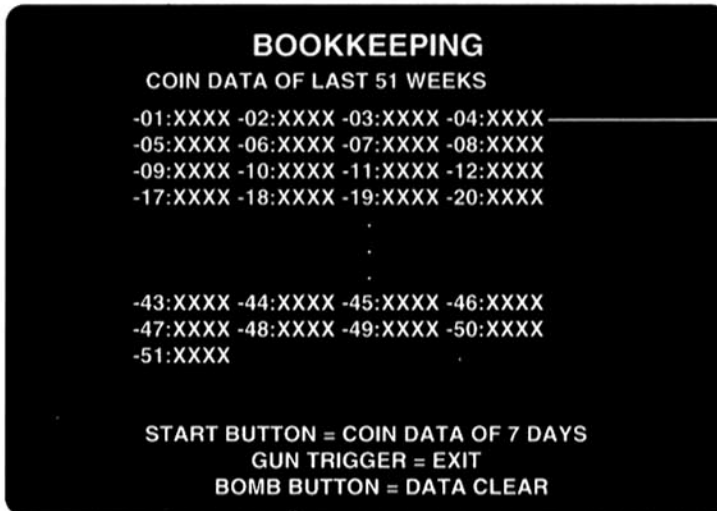
START BUTTON = COIN DATA OF 51WEEKS  
GUN TRIGGER = EXIT  
BOMB BUTTON = DATA CLEAR

•This screen is just an example.



- When the 1P or 2P start button is pressed on the “COIN DATA OF LAST 7 DAYS” screen, the past 51-week coin data is displayed in weekly totals. Press the bomb button and the total coin data is cleared.

To return to the main menu screen, pull the trigger of the 1P or 2P gun.



•Displays the total data for the period of 51 weeks ago up to one week ago.

•This screen is just an example.

- When the data is cleared on this screen and then “BOOKKEEPING” is selected, the “CLOCK SETUP” screen shows up. Make the time setting to get the coin totalization started.

**MEMO**

# 6 Setting up the game machine

## 6-1 Gun unit shooting range

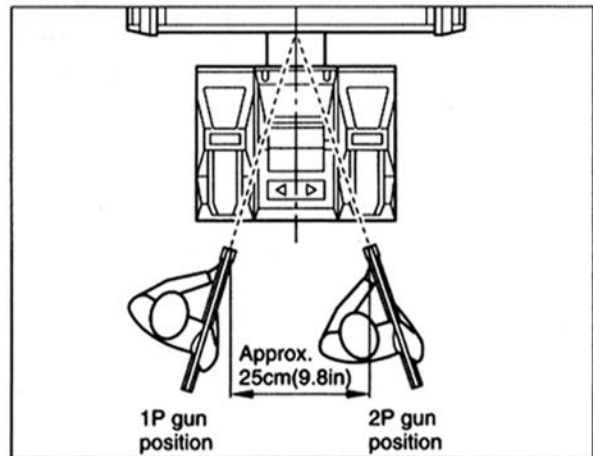
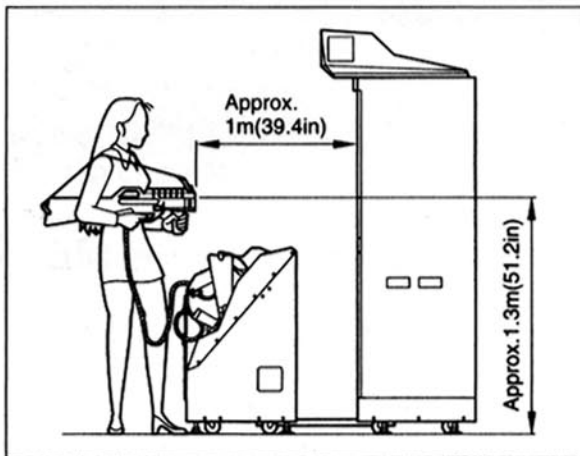
### ■ Setup environment for the machine

Be very careful not to set up the machine in any of the following ambient conditions. In such environment, the gun unit may fail to hit the targets or malfunction.

- The muzzle filter is exposed to direct sunlight.
- The muzzle filter receives the light reflected from a window or mirror.
- The muzzle filter is exposed directly to the light from a light source such as strong spotlight.

### ■ Gun unit shooting range

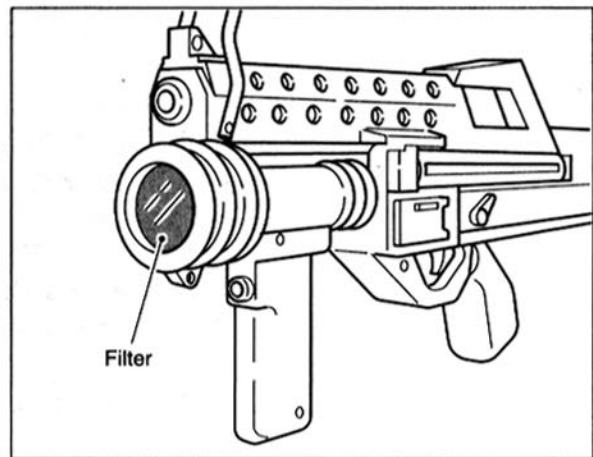
With the gun unit being carried under the arm, adjust the distance between the muzzle and the projector screen as shown below.



### ■ Stain on the muzzle

If the muzzle filter is scratched or stained, the gun unit may fail to shoot the targets or malfunction. Check and clean up the filter at regular intervals.

- Machine gun care**
- Gently wipe the gun clean with soft cloth (flannel) soaked in neutral detergent and squeezed well.
  - Do not use any thinner and other organic solvents. The gun unit surface may be deteriorated.
  - Allow no water to come into the gun. An electric shock or trouble may result.



## 6-2 Connecting the units

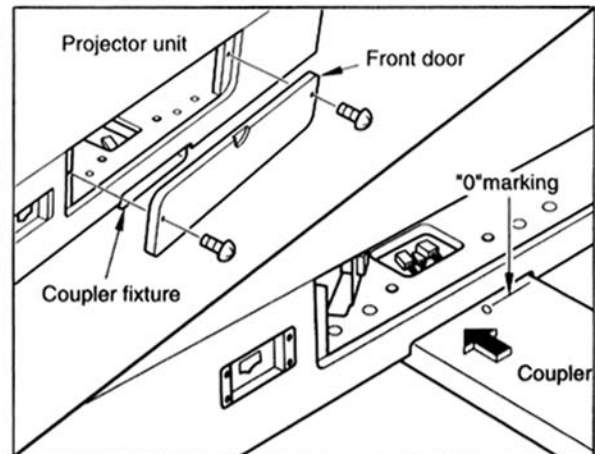
### How to connect the units



- If the machine with all the units coupled must be moved to another place, be careful to keep the machine's connections free from undue force.
- Once the units have been interconnected, never roll the machine along over a rugged floor.
- When connecting the units, be very careful not to get the wires caught between the units.

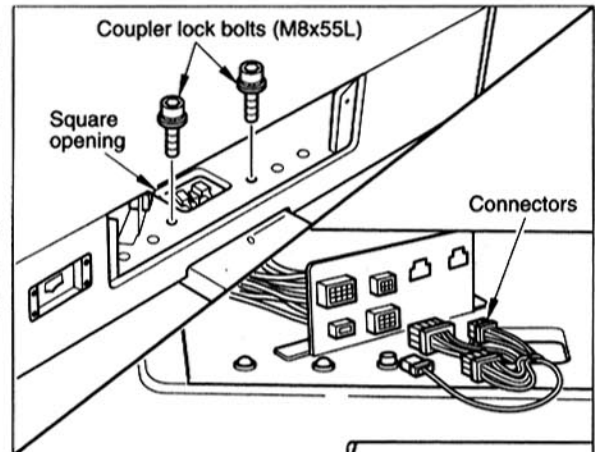
**1** Remove the front door of the projector unit.

**2** Insert the accompanying coupler into the coupler fixture at the bottom of the projector unit. Align the "0" marking on the coupler with the front of the projector.



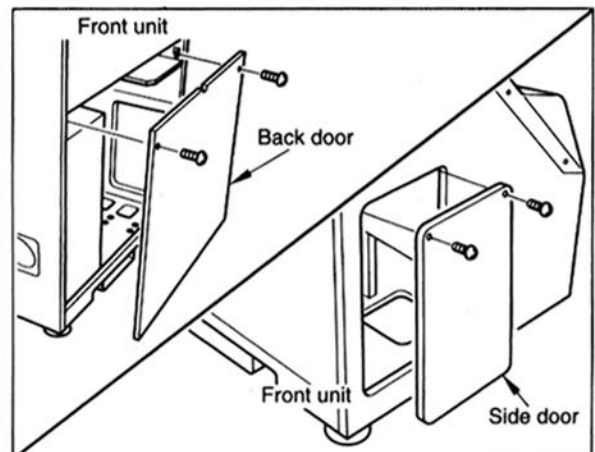
**3** Using the accompanying hex wrench, tighten up the accompanying 2 coupler lock bolts to fix the coupler.

**4** Draw the coupler's 4 connectors through the square opening at the bottom of the projector. Connect them tightly in position.



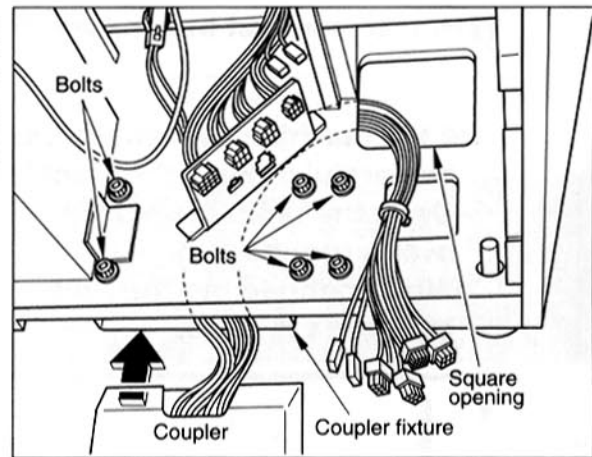
**5** Remove the back door or side door of the front unit in order to connect the coupler's connectors to the front unit.

- For connecting the connectors, detach either the back door or the side door of the front unit.
- In this explanation, the back door is removed.



**MEMO**

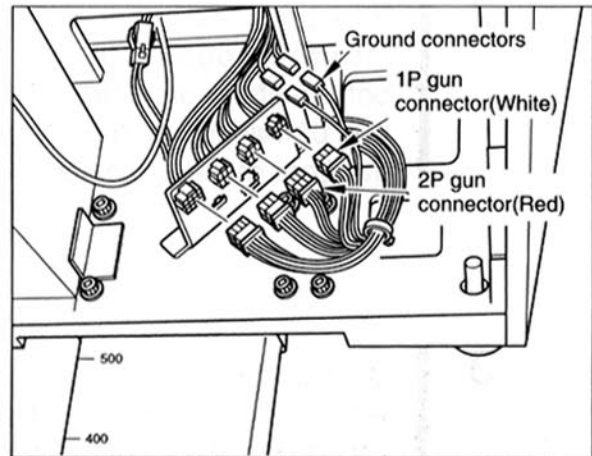
- 6** Loosen the 6 bolts of the front unit shown at right. Push the coupler into the front unit and take the wires out of the square opening of the front unit.



- 7** Connect the connectors. Do not confuse the signal lines.

- The 1P and 2P gun unit connectors are the same in shape.
- Make the following pairs referring to the connector colors.
  - 1P gun unit  
White connector / White connector
  - 2P gun unit  
Red connector / White connector

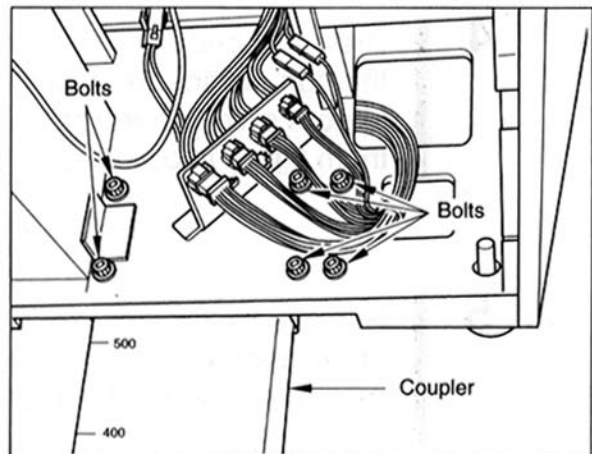
**MEMO**



- 8** Looking at the scale on the coupler, adjust the distance between the front unit and the projector unit. Tighten up the above 6 loose bolts to secure the coupler.

- This unit-to-unit distance cannot be shorter than 200 mm(7.9in).

**MEMO**



- 9** Place and fix the front door of the projector unit as well as the back (or side) door of the front unit.

- 10** Lock the adjusters, referring to "6-3 Fastening the adjusters" on page 36.

■ How to set up the billboard



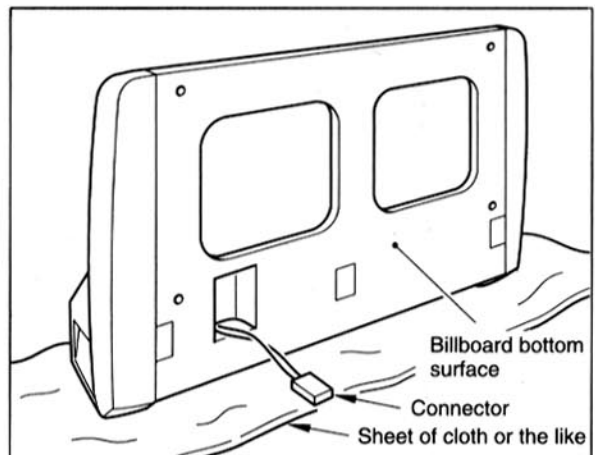
- Before setting up the billboard, be sure to lock the adjusters to fix the units. (Refer to “6-3 Fastening the adjusters” on page 36.)
- The billboard weighs about 20kg (44lb). Be sure to make a team of 2 or more people to install it safely. Use stools or the like.
- When setting up the billboard, be very careful not to get your hands pinched or the wires caught.

- 1** Referring to “6-3 Fastening the adjusters” on page 36, fasten the adjusters to fix the units.

• To protect the billboard unit, spread a sheet of cloth or the like under it.

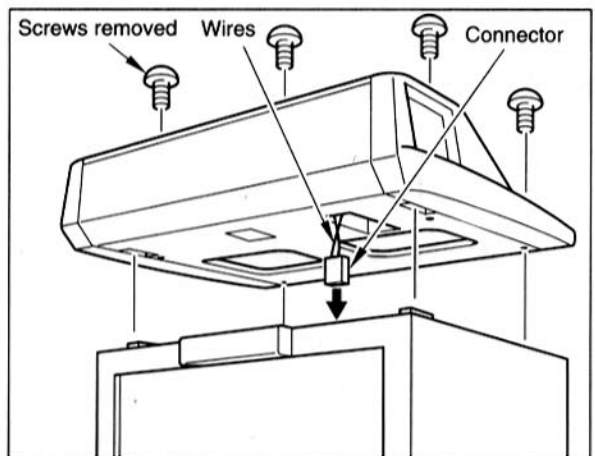
**MEMO**

- 2** Remove the connector from the billboard bottom surface.



- 3** Remove the title unit locking screws (4 pcs.) from the top surface of the projector unit.

- 4** Lift the billboard and connect the connector (drawn out in Step 2 above) to the projector unit. Place down and fix the billboard with the above screws.



• Be careful not to get the wires caught.

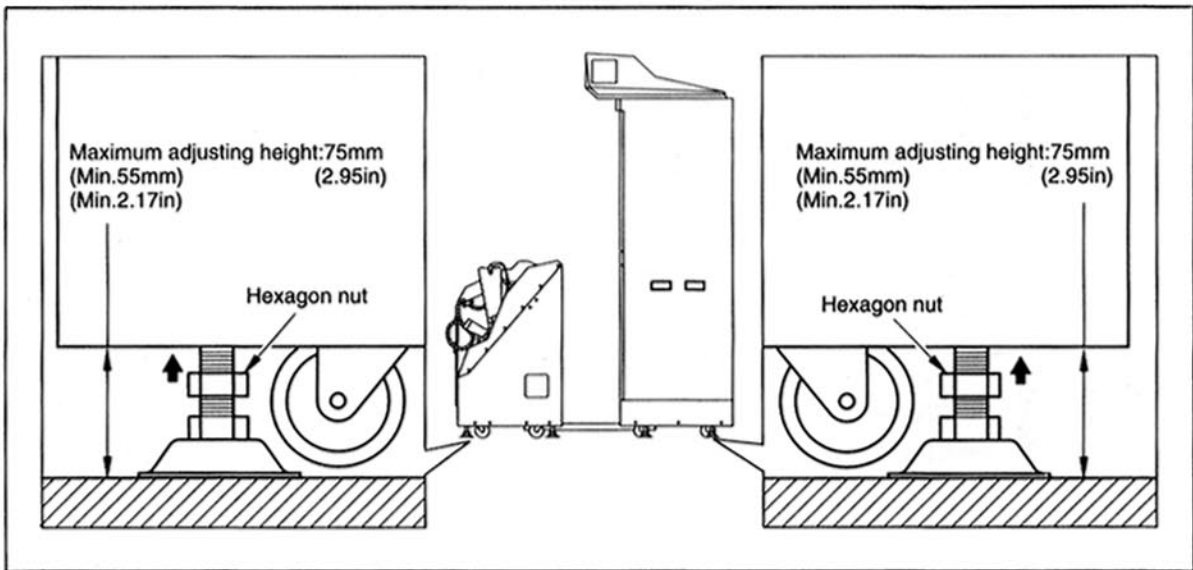
**MEMO**

## 6-3 Fastening the adjusters

### How to fasten the adjusters



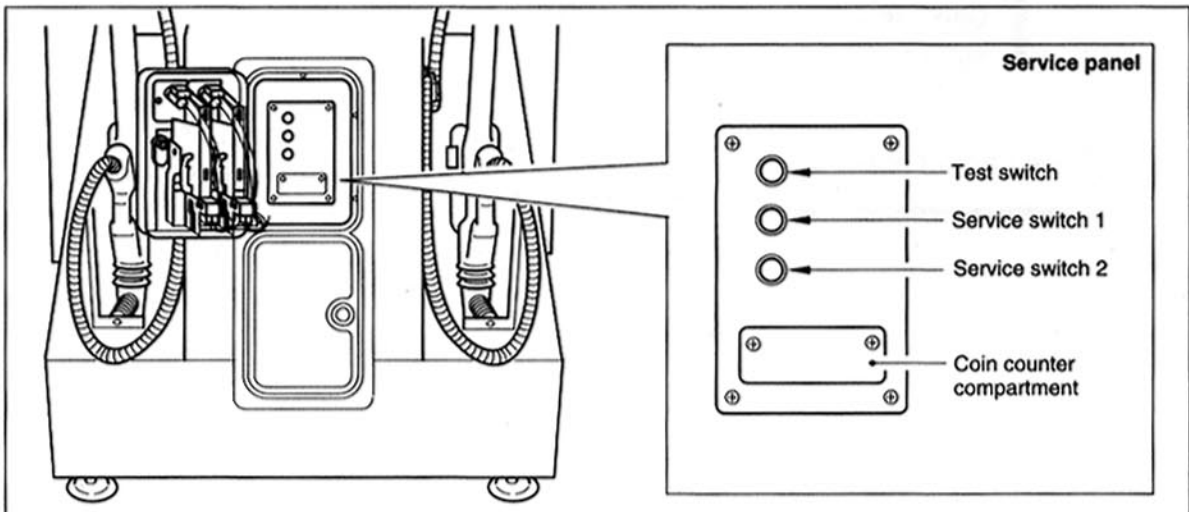
- Adjust the adjusters so that the casters do not touch the floor. Take care not to exceed the maximum adjusting height of the adjuster.
- Adjust the 8 adjusters so that they are flush with the floor and make sure that the machine is stable and placed in a horizontal position. Then tighten up the hexagon nuts upward.



## 6-4 Service panel

You will find the service panel when the maintenance door is opened with the attached maintenance key.

### Service panel



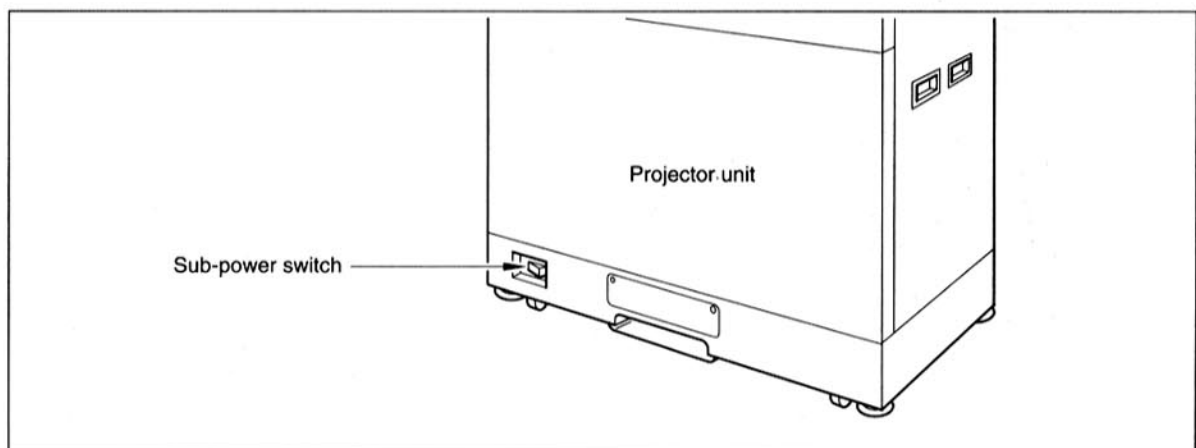
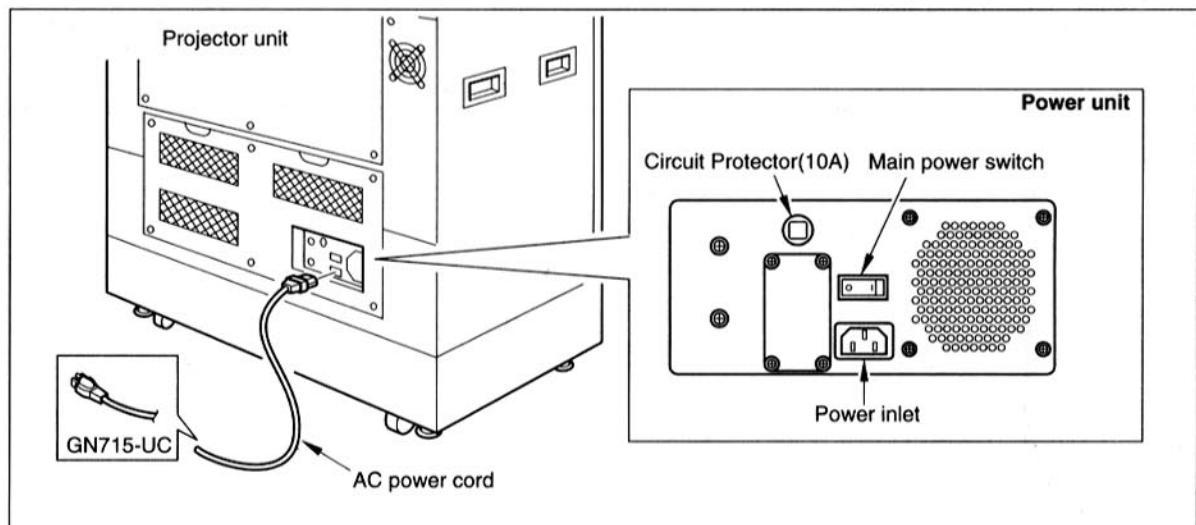
## 6-5 Power unit

The power unit (with the main power switch) is located on the back of the projector unit. The sub-power switch is situated on the front of the projector unit.

### ■ Power unit



- Be sure to use the attached AC power cord.
- Be sure to ground to the machine. Never connect the grounding wire to gas pipe, water pipe or telephone ground terminal.
- Before opening the back door or side door of the front unit, be sure to turn OFF the sub-power switch on the projector front first and then the main power switch on the power unit. If the sub-power switch is OFF but the main power switch is ON, some internal parts are still energized.



## 6-6 Separating and moving the units

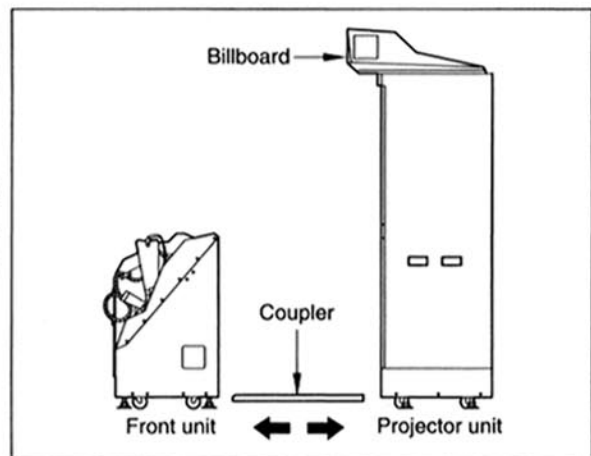
The machine can be divided into the units.

### ■ How to separate the units

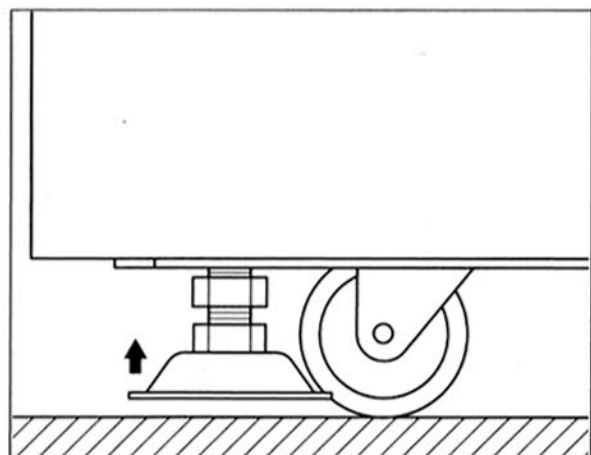


- Before separating the units from the machine, be sure to turn OFF the main power switch and remove the power cord plug from the receptacle.
- Before moving the machine, be sure to separate the front unit, the projector unit and the coupler and to disconnect all the connectors.
- Separate the billboard from the projector unit, when needed, before loosening the adjusters.
- Before moving the machine, fully raise the 8 adjusters and roll the machine on the casters.
- When connecting the separated units, take care not to catch the wiring and your hand between the units.
- Before rolling the machine along on a rugged floor, be sure to divide the machine into the units.

- 1 Turn OFF the main power switch and remove the power cord plug from the receptacle.
- 2 Take the reverse procedure to separate the front unit and the projector unit. (See page 33 to 35)



- 3 Loosen the 8 adjusters and move the units on the casters. If the billboard must be detached too, take it away before loosening the adjusters.





## 6-7 Moving the coin counter

The coin counter was installed in the coin box when the machine left the factory, but it can be moved onto the service panel.

### How to move the coin counter

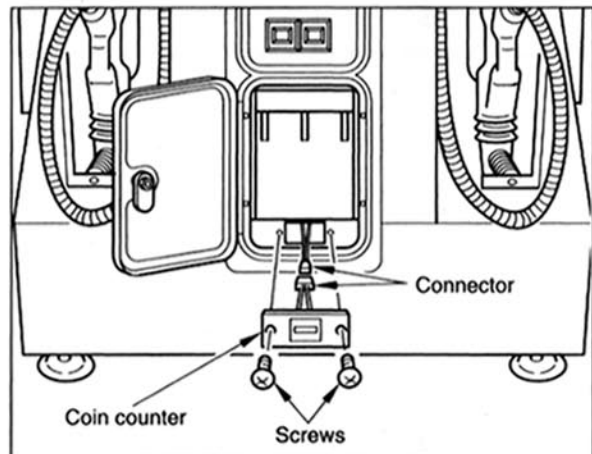


•Before moving the coin counter, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.

**1** Remove the back door or the side door of the front unit. (See page 33.)

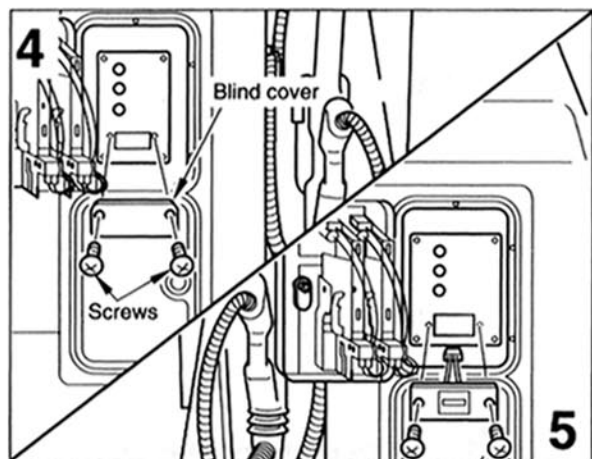
**2** Open the coin door, remove the coin counter lock screws, and take out the coin counter.

**3** Disconnect the coin counter connector.



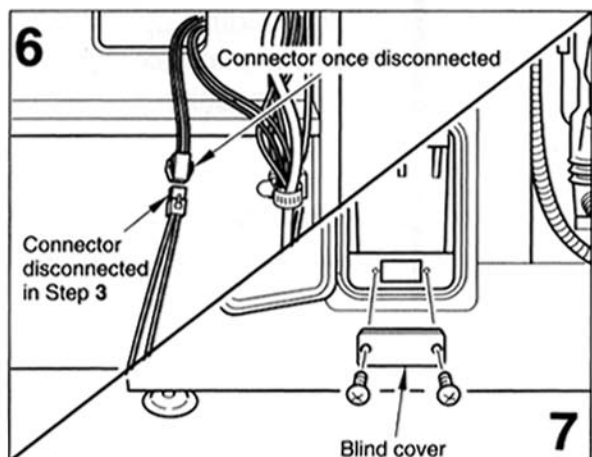
**4** Open the maintenance door and unscrew the blind cover to remove it from the service panel.

**5** Fit and fix the coin counter on the service panel with the screws.



**6** Reconnect the coin counter connector of the original connector (disconnected in Step 3 above).

**7** Install the blind cover in the coin counter hole inside the coin box.



# 7 Maintenance and annex

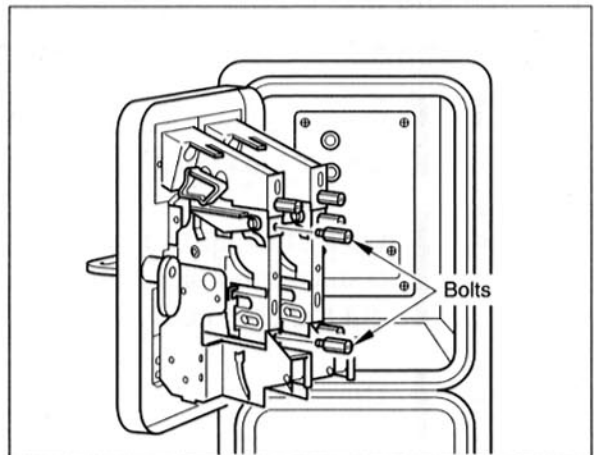
## 7-1 Replacing the coin selector

### ■ How to replace the coin selector

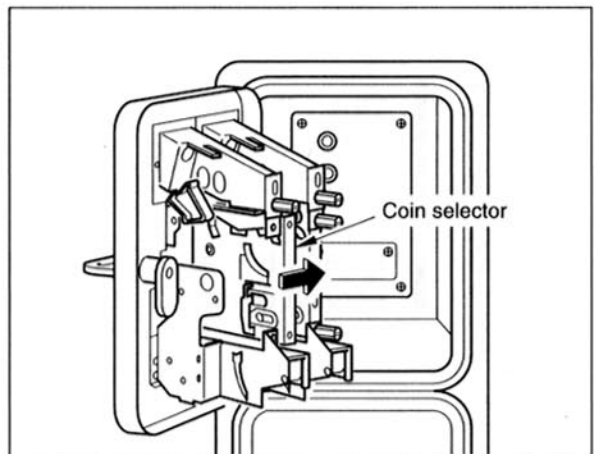


•Before replacing the coin selector, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.

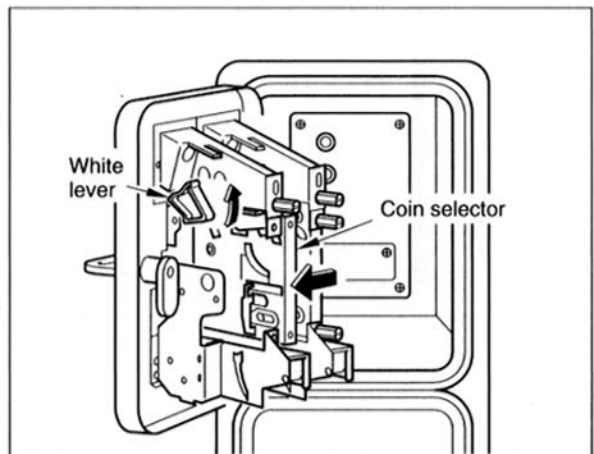
- 1 | Open the maintenance door. Remove the two bolts off the coin selector.



- 2 | Slide the coin selector to the right, and take it out.



- 3 | **To reattach the coin selector**  
While holding up the white lever, slide the coin selector to the left to fit it into position.



- 4 | Tighten up the bolts (removed in Step 1 above) and close the maintenance door.

## 7-2 Replacing the fluorescent light

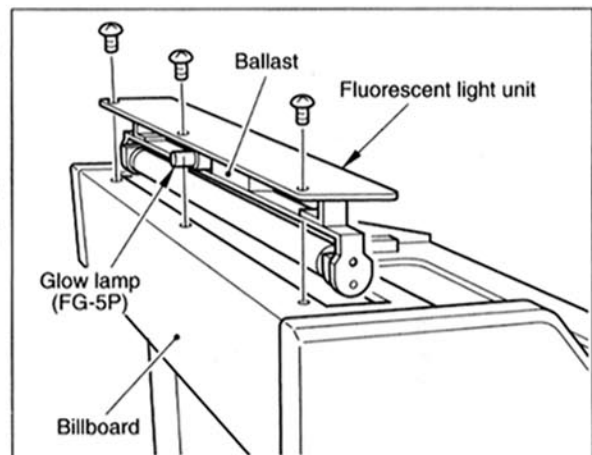
### ■ How to replace the fluorescent light



- Before replacing the fluorescent light, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.
- The fluorescent light is hot just after it is put off. Wait until it cools down and then replace it with a new one of the same type (straight tube 32W/100V).
- When installing and removing the fluorescent light unit, take care not to damage the wiring connecting the fluorescent light unit and the game machine.

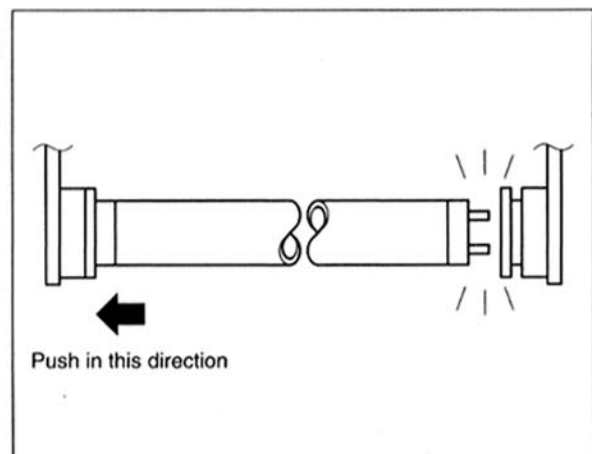
**1** Remove the fluorescent light unit lock screws off the top of the billboard.

**2** Lift the fluorescent light unit off position. Be careful not to hit against the ballast.



**3** Push one end of the fluorescent light in the direction of the socket. The other end of the fluorescent light will be detached from the opposite socket.

**4** Install a new fluorescent light in the reverse order.



- It is recommended that the glow lamp should be also replaced.

**MEMO**

## 7-3 Replacing the start button

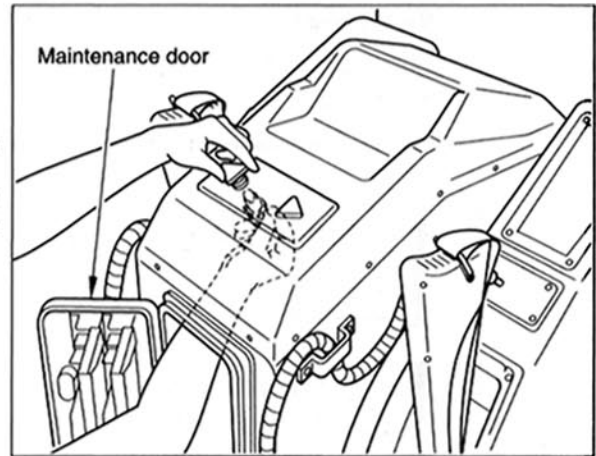
### ■ How to replace the start button



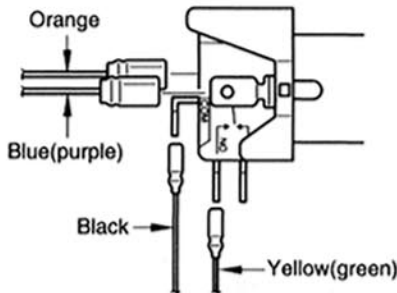
•Before replacing the start button, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.

1 | Open the maintenance door.

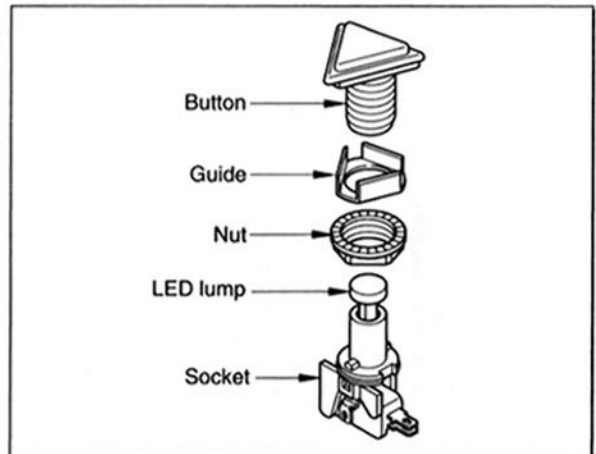
2 | Put your hand inside through the opening. Pull out the socket, loosen the nut and remove the button.



3 | To install the button, take the reverse procedure. When the socket has been replaced, reconnect the cables as shown below.



• The colors in parentheses are for the 2P side wiring.



•Pay attention to the direction of the sockets.  
•If the sockets have been replaced but the lamps fail to light up, check to see if the 1P and 2P sockets are in their respective positions.

**MEMO**

## 7-4 Replacing the gun unit

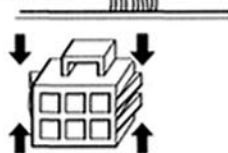
### How to replace the gun unit



- Before replacing the gun unit be sure to turn OFF the main power switch and unplug the power cord from the receptacle.
- If the gun does not feel kicking back after the gun unit has been replaced, press the reset switch of the gun circuit protector, referring to page 46.

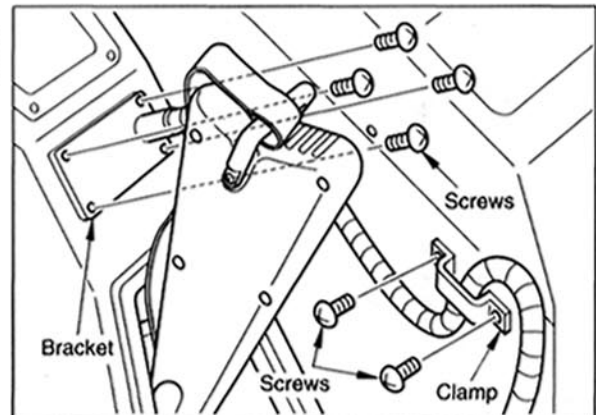
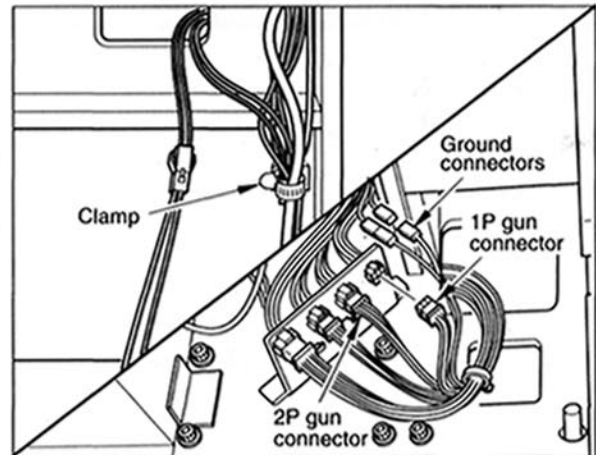
**1** Remove the back door or side door of the front unit. (see page 33)

**2** Undo the clamp that holds the leads coming from the gun unit. Disconnect the gun connectors and ground connectors shown at right. Unhook the connectors



Press the following the arrows

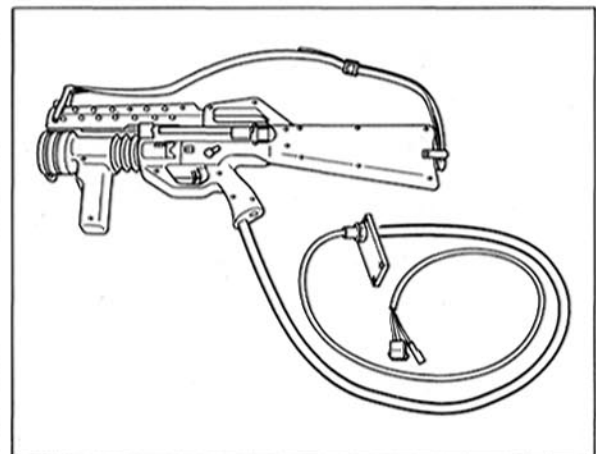
**3** Remove the clamp screws and the bracket screws. Now the gun unit cable is free of the clamp.



**4** Take out the gun unit together with the bracket.

**5** Take the reverse procedure to fit the gun unit back in position. Be careful not to confuse the 1P and 2P connectors. (See page 34)

**6** Referring to "5-1 PCB start-up check (self test)" on page 23, check the control performance on the "I/O CHECK" screen and the gun performance on the "GUN SETTINGS" screen.



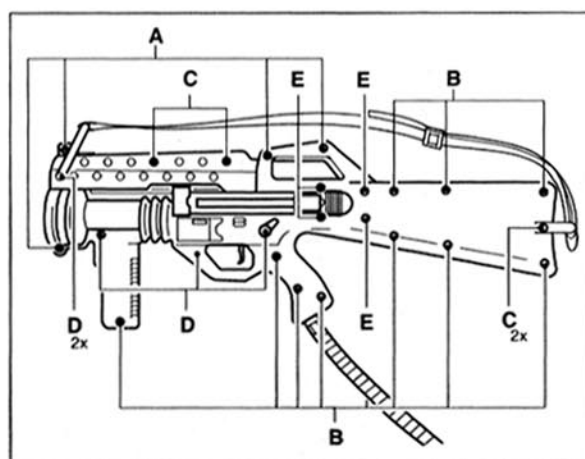
■ How to replace the gun kicking unit



- Before replacing the gun unit kicking mechanism, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.
- If the gun does not feel kicking back after the gun kicking unit has been replaced, press the reset switch of the gun circuit protector, referring to page 46.

- 1** Remove the 27 screws. Detach the strap hooks and the gun case.

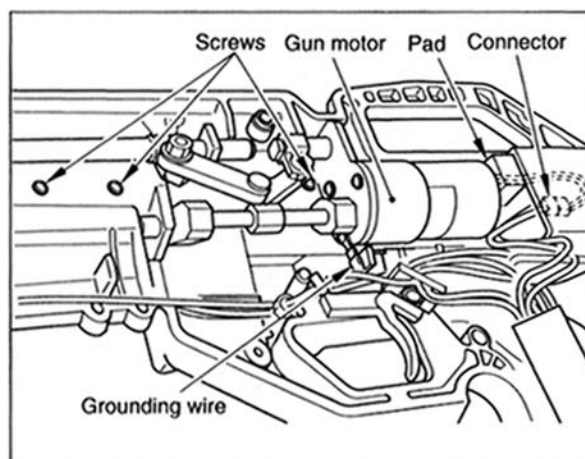
- A M3 x 8L
- B M3 x 20L
- C M3 x 25L
- D M3 x 30L
- E M4 x 15L



- 2** Remove the 3 screws off the gun kicking unit.

- 3** Disconnect the connector (shown at right) and the grounding wire.

- 4** Fit a new gun kicking unit in the reverse order. Be careful not to get the wires caught.



- When detaching the gun kicking unit, make sure the pad stays in position. In fitting this unit, double-check to see if the pad is in place.

**MEMO**

- 5** Referring to "5-1 PCB start-up check (self test)" on page 23, check the control performance on the "I/O CHECK" screen and the gun performance on the "GUN SETTINGS" screen.

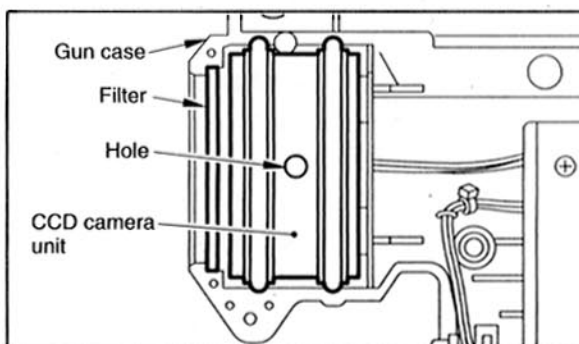
## How to replace the CCD camera unit



- Before replacing the CCD camera unit, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.
- Before replacing the CCD camera unit, take an anti-static measure using a wrist band or the like.
- Be sure to place the CCD camera unit with the camera facing upward. With the camera in any other position, the machine does not function as specified.

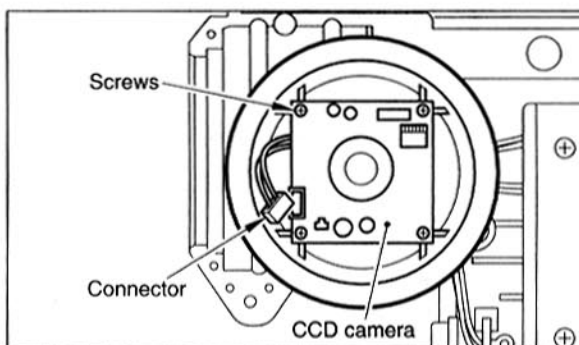
**1** Remove the 27 screws. Detach the strap hooks and the gun case. (See page 44)

**2** Take the CCD camera unit out of the gun case.



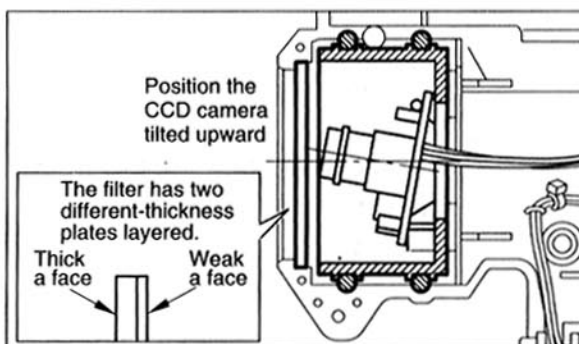
**3** Disconnect the connector from the CCD camera unit.

**4** Remove the 4 screws off the CCD camera. Detach the CCD camera.



**5** Place and fix a new CCD camera tilted upward as shown at right. (When viewed from the muzzle, the connector must be on the left. See the middle figure at right.)

**6** Referring to the position of the hole, fit the CCD camera unit in the reverse order. Be careful not to get the wires caught.



- Make sure the filter is placed back in the specified direction.

**MEMO**

**7** Go to the "GUN SETTING" screen on page 29 and make sure the target point is properly displayed.

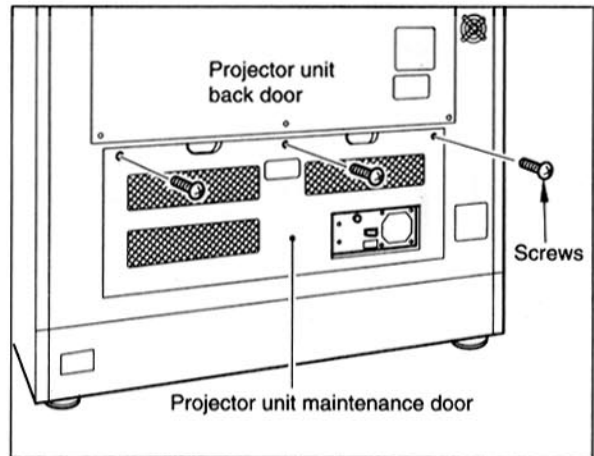
### ■ Resetting the gun circuit protector — — — — —

If an overcurrent or a short-circuit occurs in the gun kicking unit, the gun circuit protector is automatically activated to protect the circuitry of the machine. This gun circuit protector may have been activated when the gun unit, the gun kicking unit or the CCD camera unit has been replaced. If the gun fails to kick during the play, reset this protector in the procedure below.



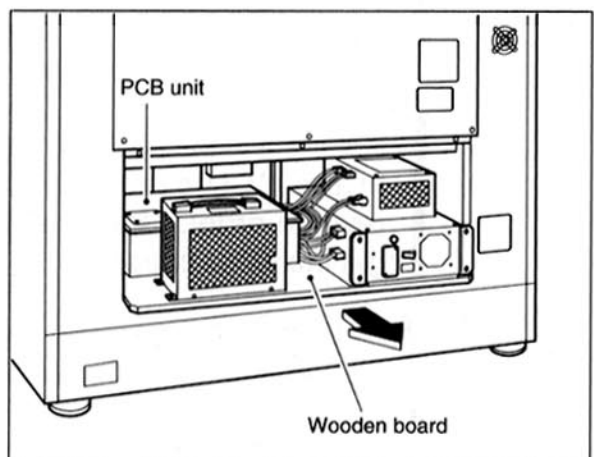
- Before resetting the circuit protector, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.
- If the circuit protector trips soon again, immediately turn OFF the main power switch, unplug the power cord, and contact your nearest dealer.
- The projector unit has some internal parts with high voltage. Only a qualified industry specialists is allowed to open the back door and maintenance door of the projector unit. With this maintenance door open, be very careful not to touch unnecessary parts.
- If the machine is in abnormal conditions and does not operate normally, immediately turn OFF the main power switch, unplug the power cord from the receptacle and contact your nearest dealer.
- Before pressing the reset switch in the PCB unit, take an anti-static measure using a wrist band or the like.

**1** | Open the maintenance door of the projector unit.



**2** | Slightly draw out the wooden board as shown at right.

• The wooden board can only be stretched out about 10 cm (3.9 inch).  
**MEMO**

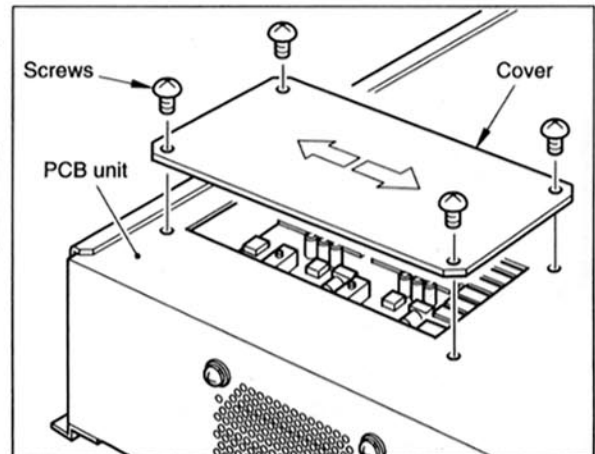




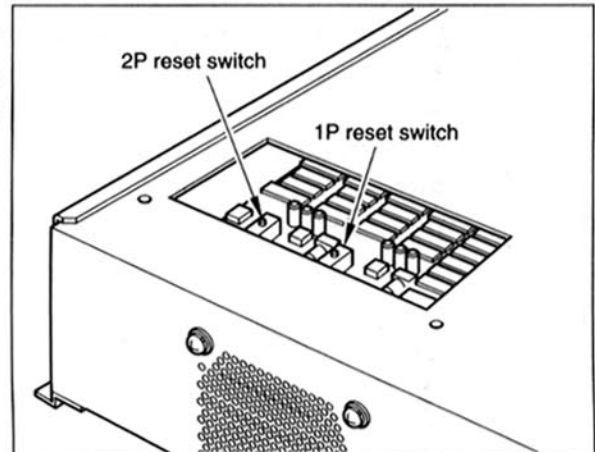
### 3 Remove the cover off the PCB unit.

- If the cover is difficult to detach, slide it right and left and pick it up.

**MEMO**



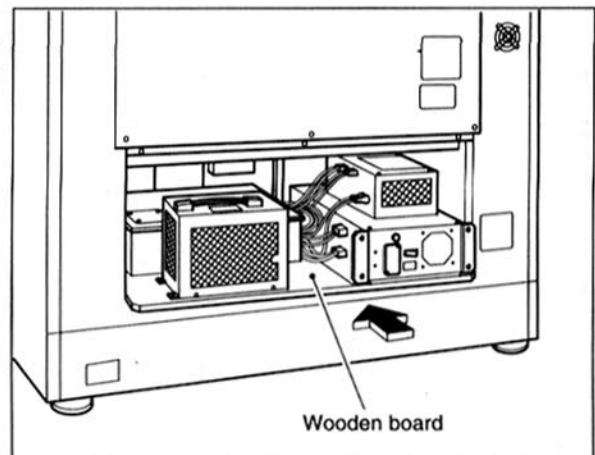
### 4 Wear a wrist band or the like for anti-static measure. Press the reset switch (white) as shown at right.



### 5 Place the PCB unit cover back into position. Gently push back the wooden board deep enough.

- Be careful not to get the wires caught by the wooden board.
- If the wires are caught by the wooden board, the maintenance door of the projector unit is not easy to close. Do not force the projector unit maintenance door closed. Look at the wires around.

**MEMO**



### 6 Attach the maintenance door of the projector unit in position.

### 7 Referring to "5-1 PCB start-up check (self test)" on page 23, gun's check the control performance.

## 7-5 Resetting the circuit protector

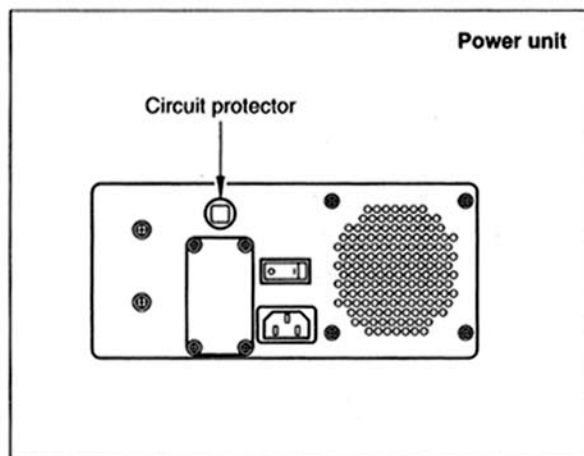
If an overcurrent or short-circuit occurs, the circuit protector will be automatically actuated to protect the electric circuits of the game machine. When resetting the circuit protector, turn OFF the main power switch, unplug the power cord from the receptacle, eliminate the cause, and then press the button of the circuit protector.

### ■ How to reset the circuit protector — — — — —



- Before resetting the circuit protector, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.
- If the circuit protector trips soon again, immediately turn OFF the main power switch, unplug the power cord, and contact your nearest dealer.
- The projector unit has some internal parts with high voltage. Only a qualified industry specialist is allowed to open the back door and maintenance door of the projector unit. With this maintenance door open, be very careful not to touch unnecessary parts.
- If the machine is in abnormal conditions and does not operate normally, immediately turn OFF the main power switch, unplug the power cord from the receptacle and contact your nearest dealer.

Press the circuit protector button at the power unit.



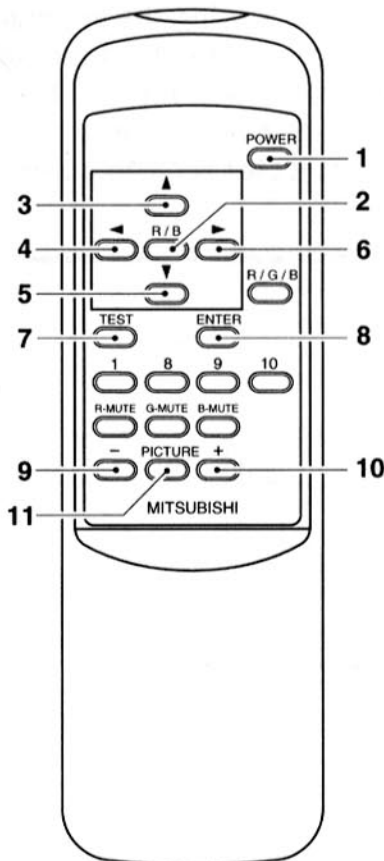
## 7-6 Adjusting the projector

The projector has already been adjusted at the time of shipment, but it may be readjusted with the attached remote controller as desired.



•The projector unit has some internal parts with high voltage. Only a qualified industry specialists is allowed to open the back door of the projector unit. With this back door open, be very careful not to touch unnecessary parts.

### ■ Appearance of the remote controller



Projector remote controller

1	<b>POWER key</b>	Used to turn ON/OFF the power. The POWER key is used only at the time of service maintenance. Do not use it in normal times.
2	<b>R/B key</b>	Used to select the red adjustment mode (R) or blue adjustment mode (B) in the static convergence adjustment mode.
3	<b>▲(UP) key</b>	Used to shift "Test Cross" up in the static convergence adjustment mode.
4	<b>◀(LEFT) key</b>	Used to shift "Test Cross" left in the static convergence adjustment mode.
5	<b>▼(DOWN) key</b>	Used to shift "Test Cross" down in the static convergence adjustment mode.
6	<b>▶(RIGHT) key</b>	Used to shift "Test Cross" right in the static convergence adjustment mode.
7	<b>TEST key</b>	It is a ON/OFF key for the static convergence adjustment mode. When it is turned ON, the "Test Cross" pattern appears in the center of the screen.
8	<b>ENTER key</b>	This key is used at the time of shipment. It does not function in normal times.
9	<b>- key</b>	Used to decrease the adjustment data value in the CONTRAST, BRIGHT, H-POS, V-POS, H-WIDTH and V-WIDTH adjustment modes.
10	<b>+ key</b>	Used to increase the adjustment data value in the CONTRAST, BRIGHT, H-POS, V-POS, H-WIDTH and V-WIDTH adjustment modes.
11	<b>PICTURE key</b>	Used to select the CONTRAST, BRIGHT, H-POS, V-POS, H-WIDTH and V-WIDTH adjustment modes. The adjustment modes are selected in the following order by pressing the key. <div style="text-align: center;"> <pre> graph LR     Normal[Normal operation] --&gt; Contrast[CONTRAST adjustment mode]     Contrast --&gt; Bright[BRIGHT adjustment mode]     Bright --&gt; H-POS[H-POS adjustment mode]     H-POS --&gt; H-WIDTH[H-WIDTH adjustment mode]     H-WIDTH --&gt; V-WIDTH[V-WIDTH adjustment mode]     V-WIDTH --&gt; V-POS[V-POS adjustment mode]     V-POS --&gt; H-POS           </pre> </div>

•Only the keys 1 to 11 shown above are allowed to be used. Never press the other keys.

**MEMO**

### •Adjustment mode

<b>CONTRAST adjustment mode</b>	Used to change the brightness the picture. Make adjustments with the "+" or "-" key.
<b>BRIGHT adjustment mode</b>	Used to change the black level of the picture. Make adjustments with the "+" or "-" key.
<b>H-POS adjustment mode</b>	Used to shift the position of the picture in the horizontal direction. Make adjustments with the "+" or "-" key.
<b>H-WIDTH adjustment mode</b>	Used to change the horizontal width of the picture. Make adjustments with the "+" or "-" key.
<b>V-POS adjustment mode</b>	Used to shift the position of the picture in the vertical direction. Make adjustments with the "+" or "-" key.
<b>V-WIDTH adjustment mode</b>	Used to change the vertical width of the picture. Make adjustments with the "+" or "-" key.

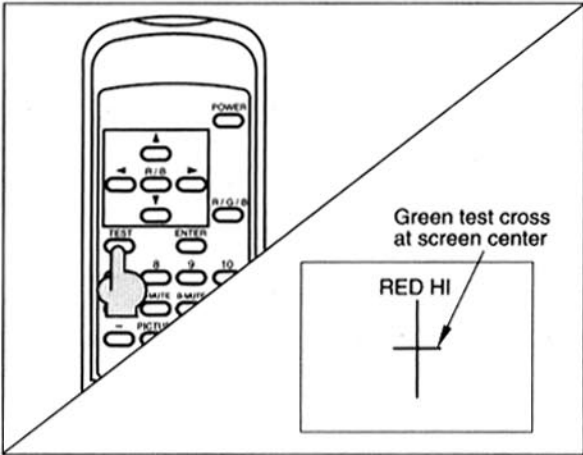
When the game machine is moved to another location or reoriented, screen color distortion can occur due to magnetism from objects near the game machine or from the earth's magnetic field. If screen color distortion occurs uniformly across the whole screen, adjust convergence in the following way.

■ **How to adjust the static convergence** — — — — —



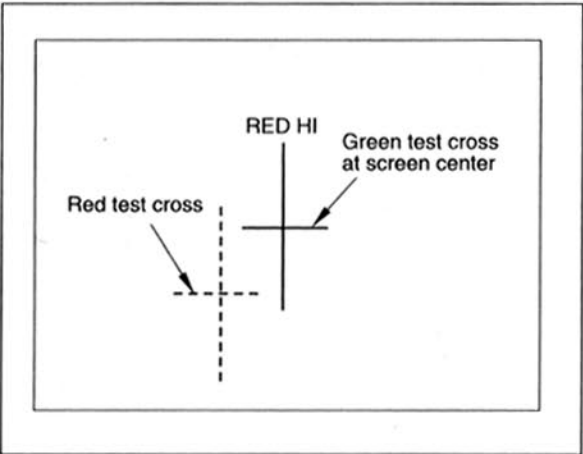
- **Direct the projector remotecontroller to the screen.**
- **When using the remote control, keep it within a 30° angle to the top, bottom, left and right of the center of the screen and stand no further than 3 meters(118inches) away from the screen.**
- **When the screen is disturbed by static electricity etc. during the adjustment of the unit, turn OFF the power switch and on again, and readjust the unit.**
- **If the projector remoto controller does not work properly, replace the batteries with new ones. If the projector remoto controller is not to be used for a long time, remove the batteries from the projector remoto controller. Failure to do so could cause liquid leakage.**

**1** Press the TEST key of the projector remoto controller. (The red color adjustment screen will appear.)

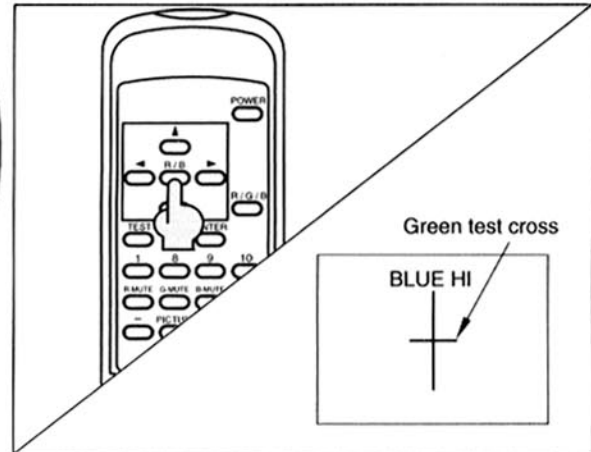


**2** Using the “◀”, “▶”, “▲” and “▼” keys, superimpose the red test cross on the green test cross at the screen center.

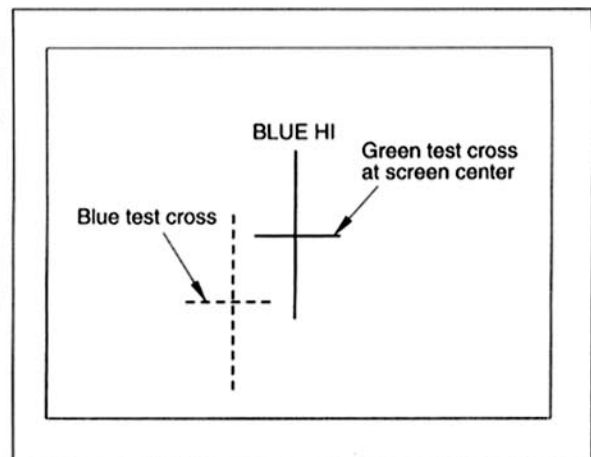
(When the red test cross is superimposed on the green test cross at the screen center, the green test cross turns yellow or white.)



- 3** Press the R / B key.  
 (The blue color adjustment screen will appear. Each time the key is pressed, switching between the red and blue is made.)



- 4** Using the “◀”, “▶”, “▲” and “▼” keys, superimpose the blue test cross on the green test cross at the screen center.  
 (When the blue test cross is superimposed on the green test cross at the screen center, the green test cross turns white.)



- 5** When the adjustment is completed, press the TEST key.

#### ■ Ending and automatic canceling of the adjustment mode ■ ■ ■ ■ ■ ■ ■ ■ ■ ■

If no valid key entry (changing the value or picture) is made in each adjustment mode within the time specified below, the mode is automatically canceled and ended and then the normal picture is displayed.

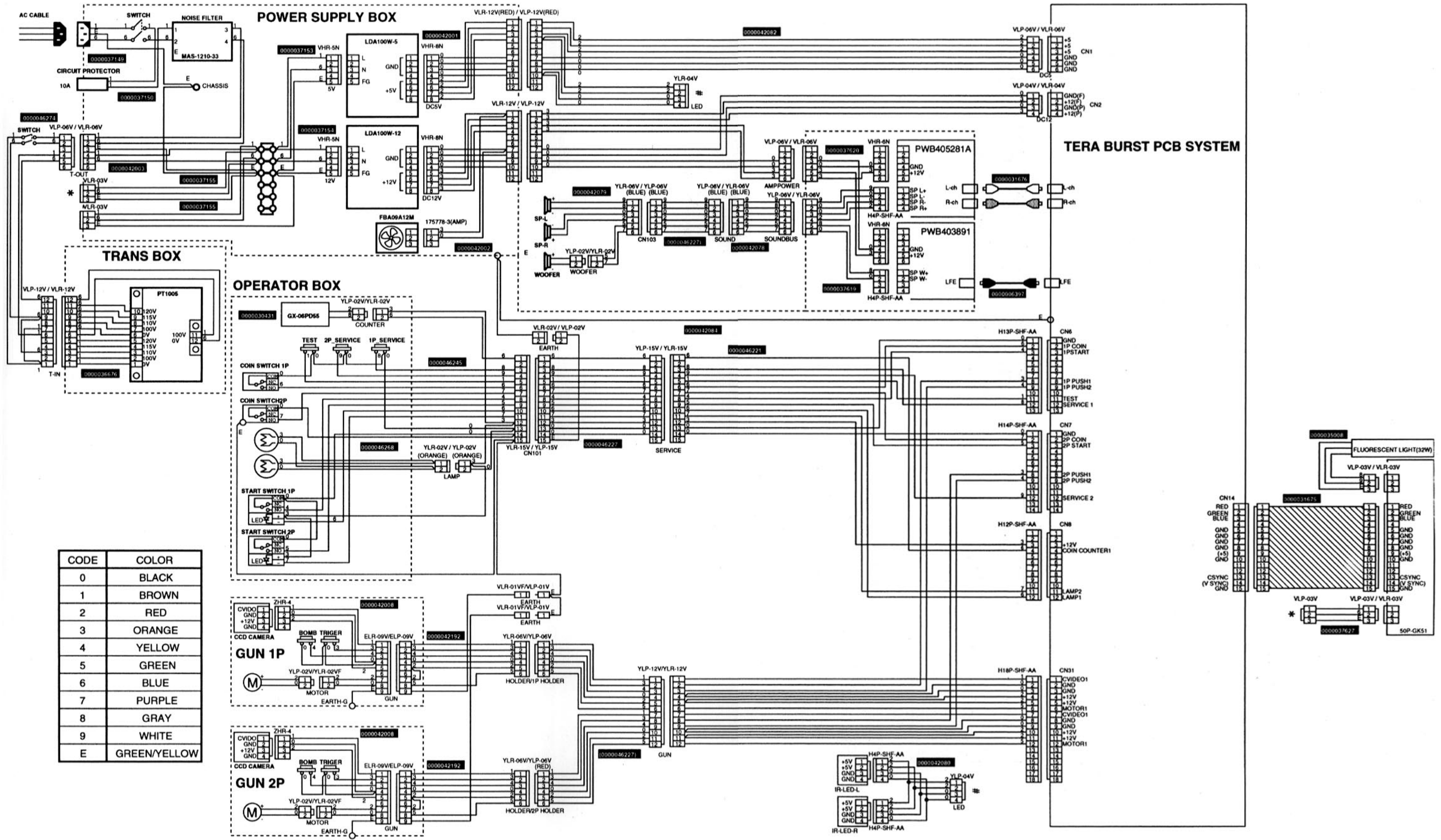
About 6 seconds	<ul style="list-style-type: none"> <li>·CONTRAST adjustment mode</li> <li>·BRIGHT adjustment mode</li> <li>·H-POS adjustment mode</li> <li>·H-WIDTH adjustment mode</li> <li>·V-POS adjustment mode</li> <li>·V-WIDTH adjustment mode</li> </ul>
About 5 minutes	<ul style="list-style-type: none"> <li>·Static convergence adjustment mode</li> </ul>

# MEMO

---

# 7-7 Wiring diagram

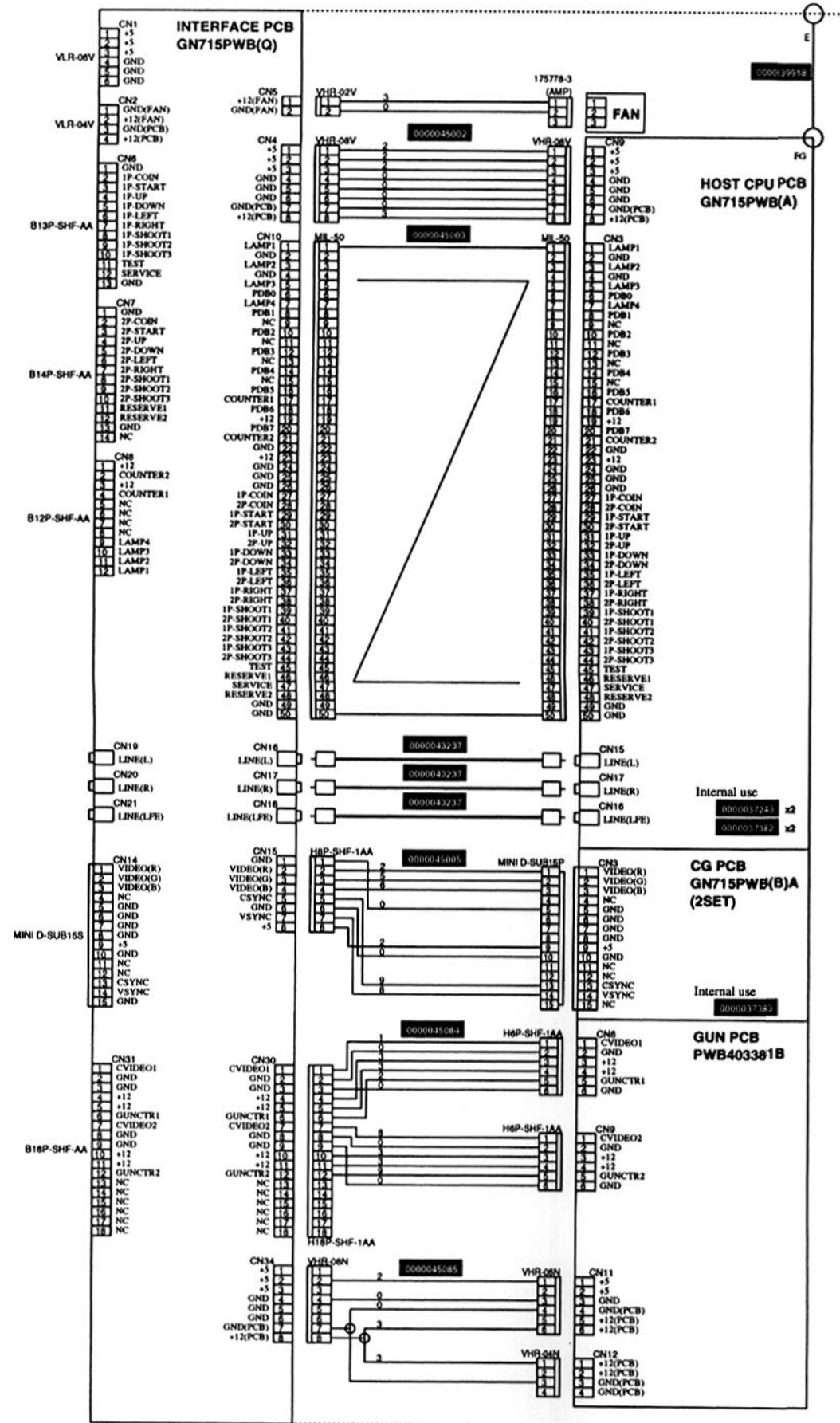
GN715-TB specifications for regions using 110 voltage area in Asia.



# Wiring diagram

GN715-TB specifications for regions using 110 voltage area in Asia.

2/2

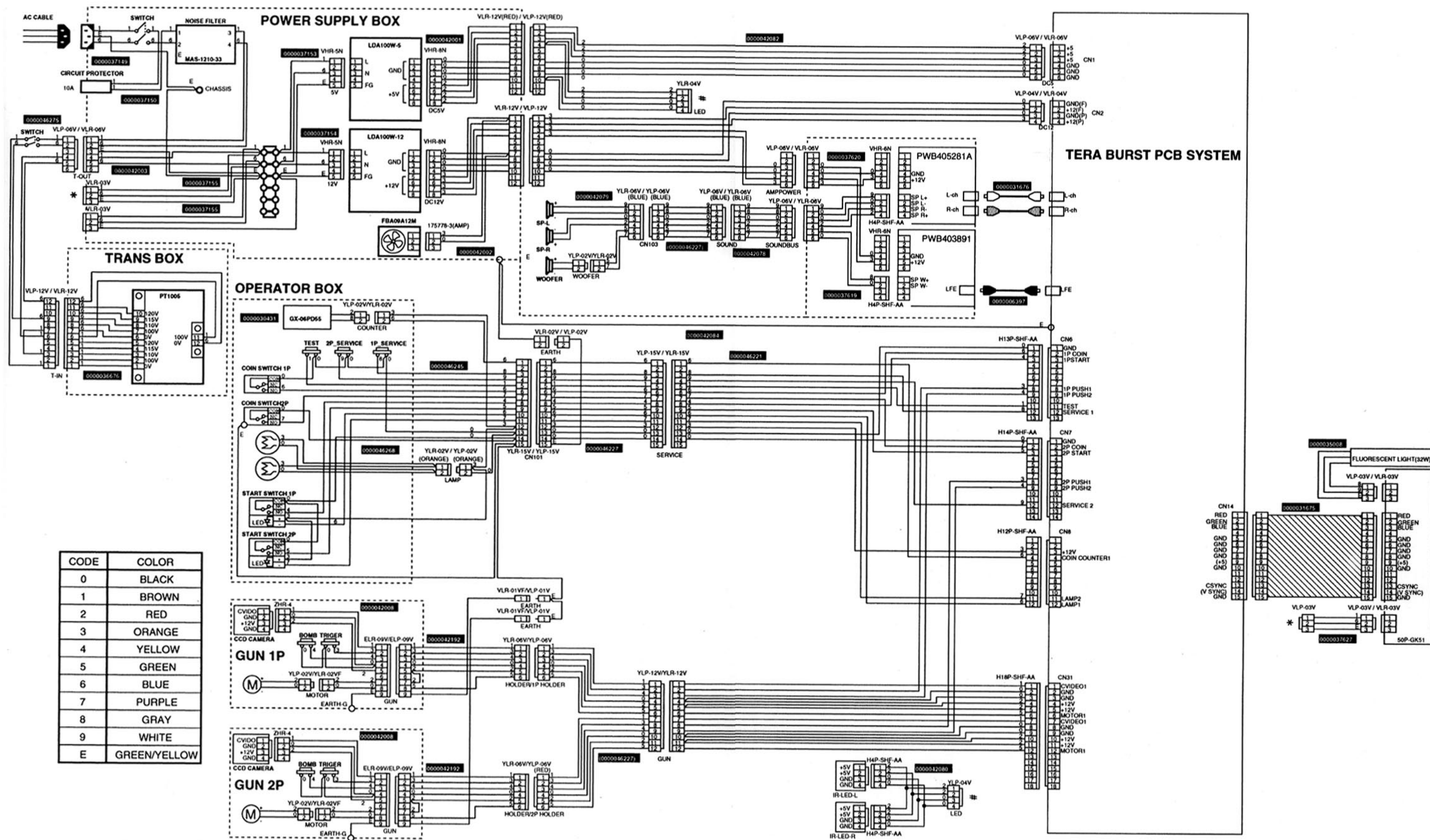


CODE	COLOR
0	BLACK
1	BROWN
2	RED
3	ORANGE
4	YELLOW
5	GREEN
6	BLUE
7	PURPLE
8	GRAY
9	WHITE
E	GREEN/YELLOW



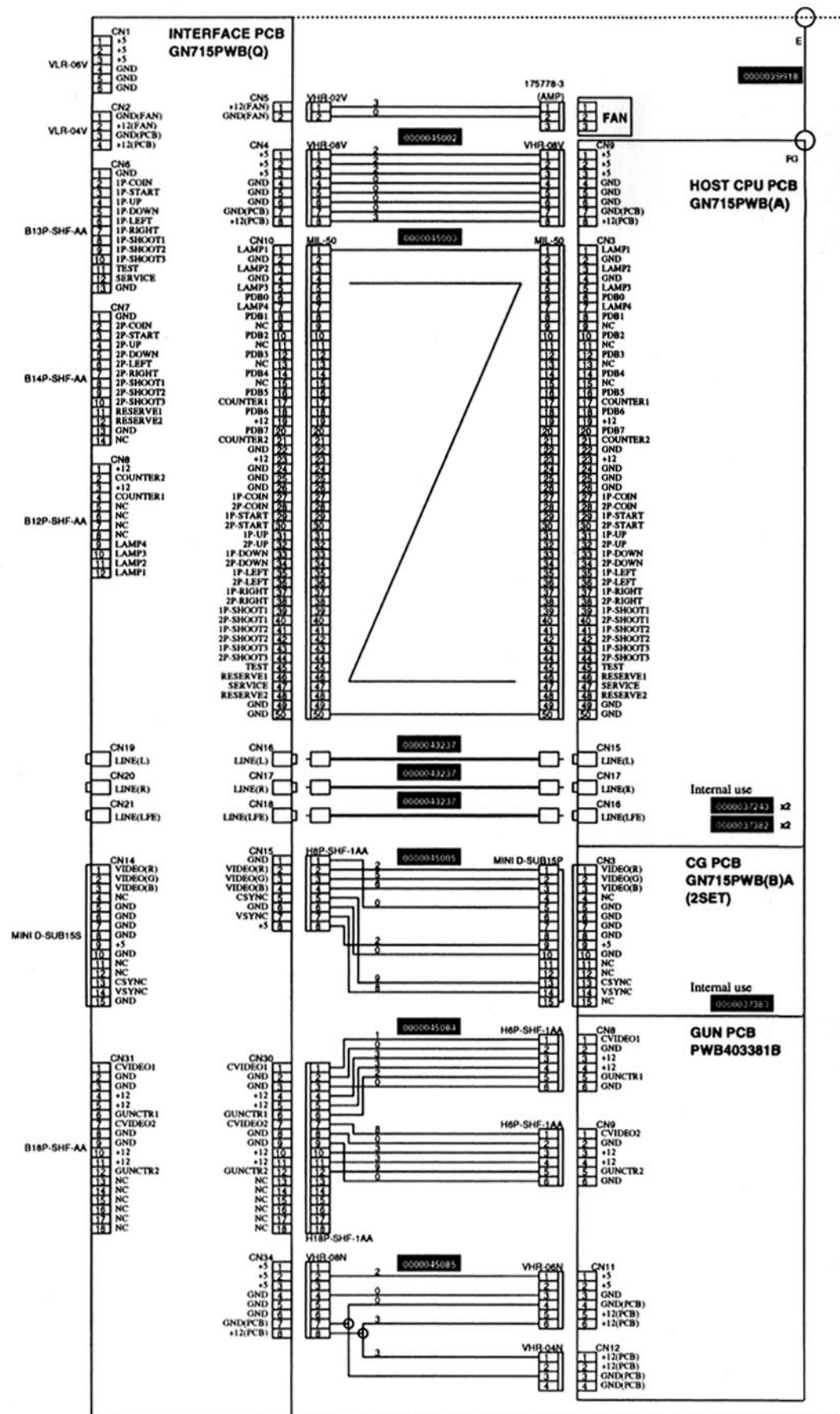
# Wiring diagram

GN715-HD specifications for regions using 220 voltage area in Asia.



# Wiring diagram

GN715-HD specifications for regions using 220 voltage area in Asia.

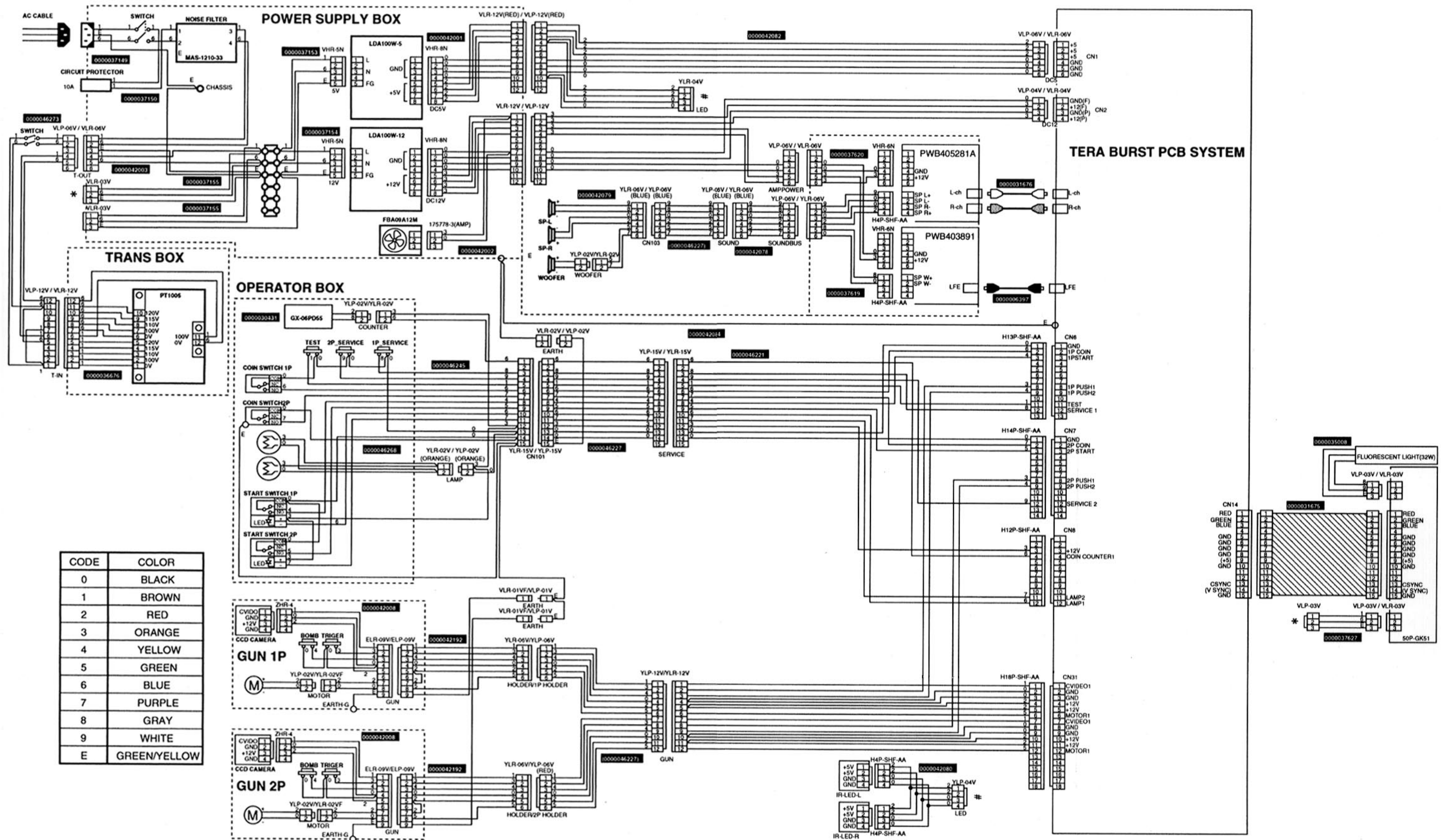


CODE	COLOR
0	BLACK
1	BROWN
2	RED
3	ORANGE
4	YELLOW
5	GREEN
6	BLUE
7	PURPLE
8	GRAY
9	WHITE
E	GREEN/YELLOW

# Wiring diagram

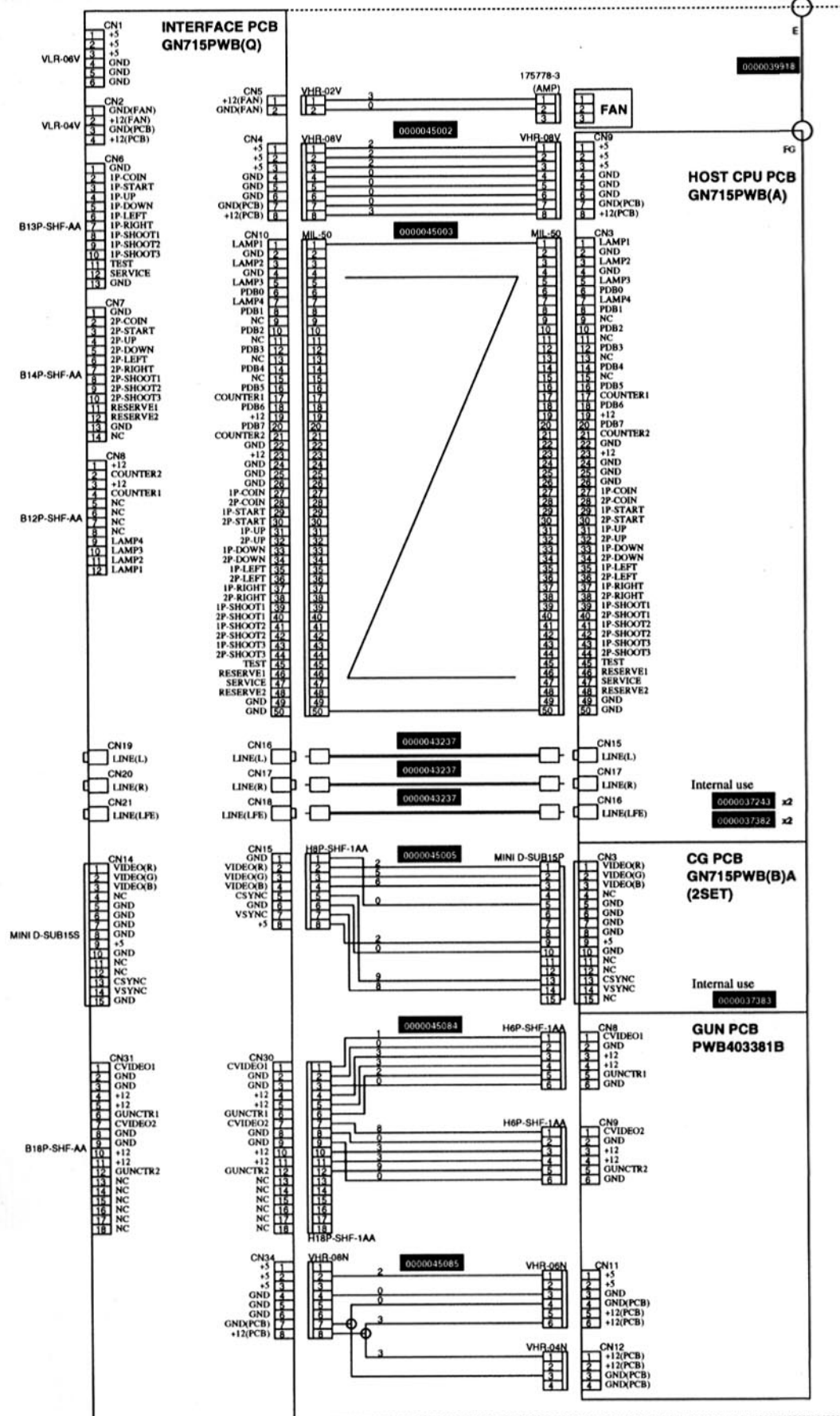
GN715-UC specifications for regions using 120 voltage area in U.S.A..

1/2



# Wiring diagram

GN715-UC specifications for regions using 120 voltage area in U.S.A..



CODE	COLOR
0	BLACK
1	BROWN
2	RED
3	ORANGE
4	YELLOW
5	GREEN
6	BLUE
7	PURPLE
8	GRAY
9	WHITE
E	GREEN/YELLOW

