

ORIGINAL VIDEO GAME OPERATOR'S MANUAL

■ THRILL DRIVE 2 ■





- - 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.



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



•This manual covers the following models: -

•GMA41-TB

•GMA41-HD

The specifications of GMA41-TB may be somewhat different from GMA41-HD.

In such a case, read the descriptions of the model which applies to the game machine you are operating.

•Be sure to read the following.

Set the memory card before use.

It is impossible to use this machine even when you turn ON the main power switch in the factory settings state.

Set the attached memory card to the PCB unit before use.

When starting the machine, read "6-3 Setting the memory card" in page 41 of this manual and follow the procedure.

- •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 devices and design are protected under each law concerning patent, copyright and other intellectual properties.
- •Unauthorized reproduction of this document or any of its contents is strictly forbidden.

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The following safety precautions are given throughout this manual. They must be strictly followed to protect those who install, use or maintain this product as well as to prevent other people's injuries and property damages.

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.



•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.

•Definitions of gualified in-shop maintenance persons and industry specialist who handle this product.

 In this instruction manual, some procedures require a qualified in-shop maintenance person or industry specialist. For such instructions, a qualified person must take care of the jobs. Otherwise an electric shock, machine trouble, or a serious accident may result.

Replacing the machine parts, inspecting and maintaining the machines, and troubleshooting must be assigned only to a qualified in-shop maintenance person or industry specialist. This booklet gives instructions that hazardous jobs in particular must be handled by an industry specialist. Qualified in-shop maintenance persons and industry specialist are defined as follows.

Qualified in-shop maintenance persons

A qualified in-shop maintenance person must have experiences in maintaining amusement machines, money changers and the like. Under the supervision of an amusement machines shop owner or manager, he or she routinely assembles, installs, inspects and maintains the amusement machines, or replaces their component units and consumable parts, in the amusement machines workshop and/or shop.

Jobs handled by qualified in-shop maintenance persons

• Assembling, installing, inspecting and maintaining amusement machines and money changers, and replacing their component units and consumable parts.

Industry specialist

An industry specialist must be engaged in designing, manufacturing, inspecting and servicing amusement machines. Or he or she must have an education in electrical, electronic and mechanical engineering, and routinely maintain and repair amusement machines.

Jobs handled by industry specialist

Assembling and installing amusement machines and money changers, and repairing and adjusting their electrical, electronic and mechanical component parts.

Precautions for use

Setting Up





ENGL



•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 monthly or more frequently.



Precautions for use

•The game machine contains parts such as the monitor, 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.	\bigcirc
•Before moving the machine, be sure to turn OFF the main power switch, unplug the power cord, from the receptacle and remove the power cord and networking cable from the machine. •Stepping on or tripping over the power cord or the networking cable may result in an accident or damage the machine.	8
•Before moving the machine, be sure to separate the main unit and seat unit and fully raise the 12 adjusters so that the machine can be moved on the casters. •Otherwise accidents, machine damage or trouble may result.	
•When moving the units, be careful not to apply undue force. •Which may cause an accident or damage the machine.	
•When moving the main unit, be sure to push 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 damage.	
•When moving the unit, take care that no undue force is applied to the opening / closing sections or moving sections of the machine. •Otherwise injury, accidents or machine damage may result.	

PRECAUTION

•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		4	5		
	securely set and game cabinet is level.		6	A HAZAR	DOUS VOLTAGE PN.0000032445
2	A WARNING ELECTRICAL SHOCK HAZARD.		7	Weight 275	kg(606.41b)
	DO NOT OPEN EXCEPT FOR SERVICE.	A CAUTION Please do not play this game if - you have been dirking.	8	Weight PN.00000081269	0kg(88.21b)
		you are lifed are sick or have been recently sick you think you might be pregnant. You are susceptible to muscle spasms or loss of consciousness due to sound, light or moving pictures.	9	MODEL	GMA41-TB THRILL DRIVE2
		Your exercise is medically regulated.		POWER	<u>110 v / 60 н</u> z 500W(MAX)
_			_	MANUFACTURER	KONAMI CORPORATION
3	▲注意(ちゅう)	N) / CAUTION		DATE OF MANUFACTURE	March,2001
	(1) がいまたいがい (1000) 技術者以外は絶対に分解しないでください。けがや故障の原因になります。	This product should be disassembled by qualified industry specialists only. Failure to obey this warning could result in product damage, accident and injury.		WEIGHT	355kg (782.8lb)
	かがい まま たち いたき でんかんきがたい あう かん ひんち かんしょうだい かず本機から電源供給コネクターを抜いてください。	Turn the power OFF and disconnect the power supply from the PCB before removing	ig	SERIAL NUMBER	
	故障や電電の原因になります。 使用産液は本機が熱くなっていることがあります。 取り扱いには注意してください。	the PCB cage. Failure to do so could result in machine failure and electrical shoc Pay careful attention when openning the PCB cage soon after play, because the contents will be hot.	<u>*.</u>	ко	NAMI
	○ ケースのごや近くには、氷や業品の入った倉器や物を置かないでください。 <u>■</u> 水労や実物が内部に入ると、感覚や故障の原因になります。	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.	_	M. PN.0000097047	ADE IN JAPAN
		Do not touch this with wet hands. Doing so could cause injury and electrical sho	ck.		ia an avampla
	部品の交換は、認す当社指定のものを使用してください。 それ以外ものを使用したり運用することは絶対にしないでください。 火災や実常作動、故障の原因になります。	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,malfunction or equipment failure MADE IN JAP		The entries destination	are different from to destination.

1 Specifications



Specifications

Dimensions	Refer to the figure above: mm(in)		
Weight	Total weight : Approx. 355 kg (782.8lb) Main unit : Approx. 275 kg (606.4lb) Seat unit : Approx. 40 kg (88.2lb) (one unit)		
Rated power consumption	•GMA41-TB : 500W (MAX) •GMA41-HD : 395W (610VA)		
Monitor	29 - inch CRT		
Service condition	Temperature 10 to 35°C (50 to 95°F), Humidity 20 to 80%(No dewing is allowed.)		
Attachments	Iemperature 10 to 35 C (50 to 95 F), Humidity 20 to 80%(No dewing is allowed.) Instruction manual This manual Memory card 2 Keys for coin door 2 Keys for maintenance 2 Joint fitting A 2 Joint fitting B 2 Joint fitting parts (Screw M8X35L, flat washer, spring washer) 16 AC power cord 1 Networking cable 1		

•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.



Provide a space of the following dimensions for installation of the product.



Follow the procedure below when heaving up the main unit.



本書説明爲防止危害本產品的設置、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。

●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。



●本書使用如下圖標,説明務請遵守的內容種類。



●經營本產品的店內維修人員和技術人員的定義

●本書中記載的説明中,凡指示為由"店內維修人員"或"技術人員"進行的操作,必須由具有專門知識 和技術的人員進行。

- ·否則,將造成觸電或故障等重大事故。
- ·交換本產品零件、維修檢查、以及處置發生的異常情況時必須由"店內維修人員"或"技術人員"進行。 本書中,特別是有關危險的操作規定由"技術人員"進行。有關"店內維修人員"和"技術人員"定 義如下:

什麼是店內維修人員?

·擁有娛樂機器、換錢機的維修經驗,在娛樂機器(本產品)的所有者和運營者的管理下,對娛樂設施或 店內的機器進行日常的安裝、設置、檢查維修,交換裝置和消耗零部件等對機器整體進行維修管理的人員。

店內維修人員的工作內容

·安裝、設置、檢查維修娛樂機器和換錢機,交換裝置和消耗零部件。

什麼是技術人員?

· 關機器設計、製造、檢查和維修工作的人員,以及具有,擁有電子、機械工學等專門技術知識,日常對 娛樂機器進行維修管理和修理的人員。

技術人員的工作內容

·安裝、設置娛樂機器和換錢機,對電子部件和結構部件進行修理和調整。

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。 ·設置本產品時,必須將十二個調節腳的底面平穩地放在地面,使其成為水平狀態, 不可晃動。否則,不穩定的放置將會導致受傷或發生事故。 · 在設置本產品時,請不要對開關部位和可動部位癸分施加力量,否則將會導致受傷或發 牛事故, 並導致產品損壞。 ●本機為室內用游戲機,千萬不要設置在室外。 ·設置在室外,可造成事故或故障。 ●本機不得設置在建筑物太平門附近。 ·否則,發生災害時妨礙人們逃生,造成傷亡。 禁止 ●本機尙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,則內部溫度異常昇高,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 ●在插入記憶卡之情況下打開背面門時,必須關閉主電源開關,并從電源插座上拔出 電源插頭。 ·否則將會導致觸電或發生故障。 拔下電源插頭

設置時



 ●請務必使用符合規格的電源。利用加長電線時,應單獨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和通信用纜線。 ·否則,可造成火災或故障。 	
●千萬不得使用多分支插座。 ·否則,可造成火災或觸電。	$\bigotimes_{i \in \mathcal{I}}$
●通信連接用的插銷不可與「THRILL DRIVE 2」以外的游戲機、音像機器或通信機器 連接。在不進行通信連接時,不要將通信連接用的插銷與任何東西連接。 ·否則,不能正常進行游戲,引起故障。	
●不得將電源軟線、通信用纜線、等伸出到被人踐踏和絆人通道上。 ·否則,可致翻倒傷人,而且可損傷軟線。	\bigotimes
 ●不可將通信用纜線強行扭曲或壓放重物。 ·否則,不能正常進行游戲。 	
●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,並且,將本機並列設置時,機體之間應相隔10 公分以上。 ·否則本體不能正常散熱,造成故障。	上コヌメビル水

使用時





12

●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。應至少每月一次以上進行檢查。



禁止

CHINESE





●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。	拔下電源插頭
●本產品內部電壓高壓部位危險,除技術人員外,不可打開背面門。如打開背面門時請注意不可隨意觸摸顯示屏周圍。 ·否則將會導致發生事故或觸電。	
●不關閉電源裝置的主電源開關,只關閉服務盤上的電源時,本體內仍然通電。打開背面門時,必須關閉主電源開關,將電源插頭從插座上拔下。 ·否則將會導致發生事故或觸電。	禁止
●請不要對本説明書中未指定的部位進行分解、修理、各種設定或者改造。 ·否則將會導致火災、動作失誤或故障等。需要修理等時,請委託當地的經銷店。 因對未指定的部位進行分解、修理、各種設定或者改造而導致的損害,本公司概不負責。 	拔下電源插頭 (1) 禁止分解
●清掃本產品時,請使用浸有中性洗滌劑的軟布擰乾後進行擦拭。 ·如果使用稀釋劑等有機溶劑或酒精擦拭時,會引起本體的變質。 ·如果本體內部浸水,將會導致觸電或發生故障。 	

移動、搬運時



●本機內部裝有顯示器、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,從機體上卸下電源軟線 和通信用纜線。 不可踩蹋或牽拉電源軟線和通信用纜線,否則,可造成事故和破損。 拔下電源插頭 ●移動本機前,務必將座席裝置和本體裝置分離后,將十二支可調支腳調至最上面, 用腳輪移動。 · 否則會造成破損或故障。 ●移動各裝置時,不可施加過份的力量。 ·否則翻倒時造成事故和破損。 ●顯示器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。 ●移動本產時,不可強行向機體開關部位和可動部位施加過份的力量。

•否則,可致受傷或事故,破壞機器本體。



●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"等標簽。

●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。



■警告標簽等的種類





規

格

外形尺寸	參閱上圖 mm(in)
重量	 總重量 :約 355kg (782.8lb) 本體裝置 :約 275kg (606.4lb) 座席裝置 :約 40kg (88.2lb)(一個)
額定消耗電力	¥GMA41-TB:500W (MAX) ¥GMA41-HD:395W (610VA)
顯示屏	29英吋顯示屏
使用條件	溫度10~35℃(50~95ßF) 濕度20~80 <i>%</i> (不可結霜)
附屬物品	• 使用説明書 本書 記憶卡 2 錢箱鑰匙 2 · 錢箱鑰匙 2 · 維修用鑰匙 2 · 連接件A 2 · 連接件B 2 · 連接件用固定件(螺栓M8×35L/平墊圈/彈簧墊圈) 16 · 電源軟線 1 · 通信用纜線 1 · 編號標簽 1

●萬一附屬品不全或發現其他次品時,請惠詢當地的經銷店。
 ●因提高產品性能等理由,本產品的規格不經預告可能有所變更。



設置本產品時,請確保以下空間。



抬起本體裝置時,務請按照以下指示進行。



2 Names of parts



3 How to play

"THRILL DRIVE 2" is the second version of a unique driving game with the concept "Crisis and panic management when driving". You can maneuver your car, jumping, tilting sideway, rushing up and down a cliff and doing many other terrific and comical car actions out of the real world. Try to reach the goal within the time limit. In a networked play, up to 4 players can drive in competition.

How to play ___

1 Put a coin(s) in the slot. The "SELECT CAR" screen appears.

2 Choose a player car on the "SELECT CAR" screen.

Use the steering wheel to choose a car and step on the accelerator pedal or press the start button to decide it.

If the shift lever is set to neutral, the AT (automatic transmission) mode is selected. If the lever is set to up side or down side, the MT (manual transmission) mode is selected.

AT Gearshift is not needed during the game play.

•MT Gearshift is needed during the game play.

When the player car is decided, the "SELECT COURSE" screen appears.

3 The following courses can be selected on the "SELECT COURSE" screen.

·JAPAN ·EUROPE ·U.S.A.

When other players join the game, the course is decided by majority. In case of a tie, priority will be given to "JAPAN", "U.S.A." and "EUROPE" in this order.

- **4** When the above selection is made, what has been chosen will appear on the screen and the game will start.
- **5** If a player reaches the finish line within the time limit or the time is up, the game is over. When the game is over, the race results are displayed and the player's driving technique is judged by analysis graph or scores.

Joining the game halfway - - - - -

Nobody can join the game halfway.

Once the game is over, the player can not continue the game.

KONAMI website ranking event ----

By setting "INTERNET RANKING" on the "GAME OPTIONS" screen to "YES", the player can join the ranking event in KONAMI website.

Ranking-in the procedure —

- **1** A password is displayed when the player reaches the goal in the one-player mode and the game is over.
- **2** Note down the password and access the KONAMI homepage at the following website.

http://www.konami.co.jp/am/AM_English

 3 Enter the specified items and get them registered for ranking in.
 The above KONAMI website can be accessed from the player's computer or other terminal, not on the game machine. The player is expected to pay the access cost.

The schedules and durations of ranking events will be separately introduced. (Keep in mind that those events will not be held for some reasons.)

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

Close the maintenance door.

1

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. •Securely lock the door for protection against burglaries.

•Note that the coin box is considerably heavy to take out if it is full of coins.

- 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 -

1

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

•To move the coin counter onto the service panel, see page 44.

- MEMO



5 Networking and Game settings

5-1 How to networking the machine

- Using two sets of this product, up to four network-compatible machines can be interconnected for networked play. To enable the networked play, connect the accompanying networking cable to the network pin jacks of the cabinet.
 - •When using the game machine independently, do not connect anything to the pin jack for network connection.
 - For networking, leave open the not-to-be-used network pin jacks.
 - •The network connection pin jack is dedicated to the "THRILL DRIVE 2" machine. Never use it for any other game machines and audio-visual equipment. Be sure to employ it to interconnect the same "THRILL DRIVE 2" machines.
 - •Be sure to use the accompanying networking cable or the substitute cable described on page 60.
 - •When the machines are networked, be sure to make the "NETWORK ID" settings in the "NETWORK OPTIONS" screen on page 32. Then make sure the networking is complete.



Networking cable

Networking example -



5-2 Checking the game performance

When the power switch is turned ON, the self-diagnostic test will get started. The test results will be displayed on the screen. If the machine fails to switch on, check the main power switch and the sub power switch to see if they are both on.

(See page 42) Keep in mind that the power does not turn on if the back door is not tightly closed.



- •Do not change the DIP switch setting of the machine to other than factory setting.
- •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 self test

If test is OK-

• The steering wheel and other components are automatically repositioned. The machine then goes to the game mode and the demonstration game gets started.

If any abnormality is detected -

• "BAD" or "HARDWARE ERROR (***)" appears on the screen, and the checking is repeated.

"SYSTEM WORK BACKUP DATA ERROR" appear, press the test button on the service panel. (The device settings will be back to the factory settings.)

If "OPTION SETTINGS BACKUP DATA ERROR." and "PRESS TEST SWITCH TO INITIALIZE." appear, press the test button on the service panel. (The settings will be back to the factory settings.)

If "RECORD BACKUP DATA ERROR." and "PRESS TEST SWITCH TO INITIALIZE." appear, press the test button on the service panel. (The course record will be back to the factory setting.)

If "BOOKKEEPING BACKUP DATA ERROR." and "PRESS TEST SWITCH TO INITIALIZE." appear, press the test button on the service panel. (The bookkeeping data will be back to the factory setting.)

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

5-3 Repositioning the steering wheel and others

After the self-test, the positions of the steering wheel, accelerator pedal and brake pedal are corrected automatically. Then "DO NOT TOUCH THE CONTROL DEVICES WHEN THE MACHINE IS BEING INITIALIZED." appears on the screen. With the message onscreen, never touch the steering wheel, accelerator pedal and brake pedal. At this time, the steering wheel turns itself several times clockwise and counterclockwise.
•When the position check is over, the operation mode returns automatically to the game mode.
If any abnormality is detected The result of check is displayed as follows on the screen. •Steering wheel abnormal The message "DEVICE ERROR (STEERING WHEEL)" appears on the screen. What to do
•Accelerator abnormal The message "DEVICE ERROR (ACCELERATOR)" appears on the screen. What to do The accelerator control exceeds the correctable range. Make the adjustment by referring to "7-4 Replacing and adjusting the potentiometer" in pages 51 and 52.
•Brake abnormal
The message "DEVICE ERROR (BRAKE)" appears on the screen. What to do The brake control exceeds the correctable range. Make the adjustment by referring to "7-4 Replacing and adjusting the potentiometer" in pages 51 and 52.

If any of the above signs is displayed, press the test switch on the service panel to go to the test mode. (The "MAIN MENU" screen shows up.) Then choose "I/O CHECK" to check the device which shows the error. If the "DEVICE ERROR (****)" is still displayed after the adjustment, the device itself may be in trouble. Immediately turn OFF the main power switch, unplug the power cord and contact your nearest dealer. If the "GAME MODE" is selected on the "MAIN MENU" screen with some troubles of any devices, the game may not be played normally.

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.

If the timer is not set yet in the "BOOKKEEPING", the following message appears on the screen.

"PLEASE SET THE TIME FOR THE BOOKKEEPING"

Press the test button, and the "MAIN MENU" screen shows up instead in the test mode. Select the "BOOKKEEPING" screen and set the time. Without this setting, the above message appears each time the machine gets started.

5-4 Setting and adjustment of game mode

Manually make, check and change the settings for the screen displays and game contents.

Starting the test mode

- 1 Turn ON the power switch.
- 2 Press the test button on the service panel during the game mode demo (during the game mode demo of all the game machines in the case of networking). (Hold down the test button and turn ON the power switch. The current settings are cleared and the factory settings are restored.)

•The main menu appears on the screen.

Quit the test mode

- 1 Choose the "GAME MODE" from the main menu by the shift lever.
- 2 Press the start button.
 - •Then, the screen returns to game mode.

MAIN MENU	
I/O CHECK SCREEN CHECK COLOR CHECK DISK MEDIA CHECK DISK MEDIA CHECK C.G. CHECK SOUND OPTIONS GAME OPTIONS COIN OPTIONS NETWORK OPTIONS CALIBRATION BOOKKEEPING ALL FACTORY SETTINGS GAME MODE	¥Checking the controls> Page 27¥Adjusting the screen distortion> Page 28¥Adjusting the display color> Page 28¥Checking the disk media> Page 28¥Checking the C.G. performance> Page 29¥Setting various sound options> Page 29¥Setting various game options> Page 30¥Setting various network options> Page 32¥Setting various network options> Page 32¥Setting various network options> Page 32¥Setting various network options> Page 32¥Chalibrating the steering wheel, etc> Page 36¥Returning all the settings to the factory ones> Page 38¥Returning the game mode> Page 38
GEAR SHIFT UP/DOWN = SELECT OPTION PRESS START BUTTON = DO CHECK	

•If the time is not set yet, "> <" starts flashing around "BOOKKEEPING" to prompt you to set the system clock.

- MEMO

How to select each mode from the main menu

•SELECT --> Move the shift lever up side or down side.

-SET --> Press the start button.

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

5-5 Mode descriptions

The original factory settings are displayed in green; the changed settings are displayed in red.

To change the settings, move the shift lever up side or down side to select an item, and press the start button to enter it.

•After the setting change, select "SAVE AND EXIT" and press the start button. The settings are saved automatically and the screen returns to the main menu.

If "EXIT" is selected after the modification of the settings, the following message will appear:

NEED TO PRESS START SWITCH YOU DID NOT SAVE. DO YOU WANT TO SAVE? [YES / NO]

Select "YES" or "NO" by shift lever up side or down side and set it by pressing the start button.

If "YES" is selected, the new settings will be saved with "NOW SAVING" displayed and the screen will return to the main menu.

If "NO" is selected, the new settings will not be saved with "NO MODIFICATION" displayed.

 If "FACTORY SETTINGS" is selected and the start button is pressed, all the settings of the mode will be back to the factory ones.

I/O CHECK

Mode for checking the performance each control.

To return to the main menu screen, hold press the start button and move up side the shift lever.

VO CHECK	Shows the voltage of the game PCB unit.
VOLTAGE:5.000v	•ONThe switch is on. •OFFThe switch is off. •FRRORThe switch is defective
GEAR SHIFT LEVER # COIN MECH SWITCH2 OFF UP START BUTTON OFF TEST BUTTON OFF SERVICE BUTTON OFF	The marker position changes to show the input value. ADC: Value before correction from the A/D converter
STEERING WHEEL LEFT CENTER RIGHT +00000 [0000] I+ I+ I+ ADC:00000 [0000] I+ I+ I+ HOLD START BUTTON + GEAR SHIFT DOWN = ACTIVE STEERING TEST – HOLD GEAR SHIFT UP + PRESS START BUTTON = EXIT	Shows the value for the steering wheel in decimal (hexadecimal) notation. The steering wheel is set properly when it is fully turned clockwise and the red "I" mark comes to the "RIGHT" position as well as when it is fully turned counterclockwise and the mark comes to the "LEFT" position. Shows the value for the accelerator pedal in decimal (hexadecimal) notation. The accelerator pedal is set properly when it is released and the "I" mark moves to "MIN" as well as when it is fully pressed and the mark moves to "MAX".
•This screen is just an example.	Shows the value for the brake pedal in decimal (hexadecimal) notation. The brake pedal is set properly when it is released and the "I" mark moves to "MIN" as well as when it is fully pressed and the mark moves to "MAX".
•If the steering wheel or the accelerator pedal is not correctly adjusted, make an adjustment by referring to "7-4 Replacing and adjusting the potentiometer" on page 48 to 52.	Check the steering wheel reaction device by putting down side the shift lever while pressing the start button. The steering wheel turns automatically clockwise and counterclockwise by turns during checking. Then, make sure that the "I" mark moves accordingly to the right and left on the meter which shows the value for the steering wheel. Do not touch the steering wheel while this checking is conducted.

Checking the controls

SCREEN CHECK

■ Mode for checking the screen display.

Adjusting the screen distortion

Adjust the focus, distortion and size of the image on the screen while watching the crosshatch pattern. Use the monitor adjustment PCB to make adjustments. To return to the main menu screen, press the start button. (See page 57)

COLOR CHECK

Mode for checking the display color.

Make the adjustment using the monitor adjustment PCB so that the colors of the color bars should appear properly graded and the background should become black sufficientry. Use the monitor adjustment PCB to make adjustment. (See page 57) To return to the main menu screen, press the start button.

DISK MEDIA CHECK

Checking the disk media

Adjusting the display color

Mode for checking the disk media In this mode, the disk media check sums are checked one after the other. "OK" appears on the screen when not in trouble: "BAD" if in trouble. When the machine is put into this mode, tilt down the shift lever to start checking automatically.

Press the start button to interrupt checking or return to the main menu screen.

DISK MEDIA CHECK	
DISK MEDIA CHECK	
100	——— Counts down from "100". Checking is complete when at "0".
PRESS START BUTTON = EXIT	

When the disk media have been completely checked, "OK" appears. **DISK MEDIA CHECK OK** If anything wrong is in the check results, "BAD" appears. **DISK MEDIA CHECK BAD**

• If "BAD" appears, immediately turn OFF the main power switch, unplug the AC power cord from the receptacle and contact your nearest dealer.

C.G. CHECK

Checking the C.G. performance

■ Mode for checking the function of the C.G..

Watch the screen in this mode to make sure the images appear correctly. To return to the main menu screen, press the start button.



SOUND OPTIONS

Setting various sound options

■Mode for setting and checking the sound options.

Move the shift lever up side or down side to select an item, and press the start button to enter it.

To return to the main menu screen, select "SAVE AND EXIT" or "EXIT" and press the start button.

SOUND OPTIONS SOUND IN ATTRACT MODE ALL THE TIME B.G.M. IN GAME MODE ON SOUND SCALE CHECK 20 B.G.M. VOLUME 20 SOUND EFFECTS VOLUME 20 SCREAM IN ATTRACT MODE ON POLICE CAR SIREN ON FACTORY SETTINGS SAVE AND EXIT EXIT GEAR SHIFT UP/DOWN = SELECT OPTION PRESS START BUTTON = MODIFY SETTING	 Turns on and off the demo play sound. ALL THE TIME
•This screen is just an example.	 Adjusts the sound volume level from 0 (mute) to 30 (maximum). •To raise the sound level, hold press the start button and move up side the shift lever. •To lower the sound level, hold press the start button and move down side the shift lever. •Sets whether shouting is on or off during the attract mode. •OFF



COIN OPTIONS

Setting various coin options

Mode for setting and checking the coin options.

Move the shift lever up side or down side to select an item, and press the start button to enter it.

To return to the main menu screen, select "SAVE AND EXIT" or "EXIT" and press the start button.



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

COIN OPTIONS		Γ	Selects a free play. YESAvailable for free play. NONot available for free play.
FREE PLAY COIN MECHANISM COIN SLOT 1 COIN SLOT 2 START	NO		 Sets the credits of coin slots common or independent when two or more coin slots are available. COMMONWhen two or more coin slots are available, their credit is common. INDEPENDENTThe credit of each coin slot is independent
FACTORY SETTINGS — SAVE AND EXIT EXIT			Sets the number of credits for a coin. (16 COINS 1 CREDIT to 1 COIN 1 CREDIT.)
GEAR SHIFT UP/DOW PRESS START BUTTO	IN = SELECT OPTION IN = MODIFY SETTING		Sets the number of credits required to start the game. (1 CREDIT to 16 CREDITS.)
•This screen is j	ust an example.		• Press the start button to clear all the settings in this mode back to the factory settings.

NETWORK OPTIONS

Setting various network options

This mode is used to set the network ID and to check the networking condition of each networked machine.

When the machines have been networked, be sure to check the networking condition on this screen.

Move the shift lever up side or down side to select an item, and press the start button to enter it.

To return to the main menu screen, select "SAVE AND EXIT" or "EXIT" and press the start button.



•If the machine still shows the same trouble or any troubles that are not discussed in this manual, immediately turn OFF the main power switch, unplug the power cord and contact your nearest dealer.

NETWORK OPTIONS	
NETWORK ID 1	Shows network ID. Enters different numbers (machine numbers) to the monitors of the machines that will be networked.
SAVE AND EXIT EXIT	Sets the waiting time for networking. Choose from 8, 12, 16, 20, 24, 28 and 32 seconds.
FREOR DOWN STATUS	Press the start button to clear all the settings in this
ID No.1 0 0 I	mode back to the factory settings.
ID No.3 0 0 DNC ID No.4 0 0 DNC	The current network conditions appear. The "I" mark is moving from left to right when the
GEAR SHIFT UP/DOWN = SELECT OPTION PRESS START BUTTON = MODIFY SETTING	"DNC" (Did Not Connect) appears if the machine is
•This screen is just an example.	not networked.

- Check items (Watch the screen for longer than 1 minute and make sure the following 3 conditions are met.) — ·Check that the "I" mark in the STATUS column is moving from the left to the right at a fixed speed.

•Check that the value in the ERROR column is below "10" after one minute. •Check that the value in the DOWN column does not change from "0". Screen display when game machines are networked = = = = =

•Two machines are networked. (2-P PLAY)

Screen for player 1		Screen for player 2
NETWOR	K OPTIONS	NETWORK OPTIONS
NETWORK ID GAME JOINING PE	RIOD 12	NETWORK ID 2 GAME JOINING PERIOD 12
FACTORY SETTING SAVE AND EXIT EXIT	GS	FACTORY SETTINGS SAVE AND EXIT EXIT
THIS BOARD-ID IS	1	THIS BOARD-ID IS 2
ERRO	OR DOWN STATUS	ERROR DOWN STATUS
ID No.1 () ID No.2 () ID No.3 ()	0 0 I 0 0 I 0 0 DNC	ID No.1 0 0 I ID No.2 0 0 I ID No.3 0 0 DNC
PRESS START BUTTO	ON = MODIFY SETTING	GEAR SHIFT UP/DOWN = SELECT OPTION PRESS START BUTTON = MODIFY SETTING

•Four machines are networked. (4-P PLAY)

Screen for player 1

NETWORK OPTIONS							
NETWORK I GAME JOIN	D ING PERI	OD	1	1 2			
FACTORY S SAVE AND E EXIT	ETTINGS EXIT						
THIS BOARI	D-ID IS 1						
	ERROR	DOW	N STAT	US			
ID No.1	0	0					
ID No.2	0	0					
ID No.3	0	0					
ID No.4	0	0					
GEAR SHIFT U PRESS START	JP/DOWN BUTTON	= SE = MC	LECT O	PTION TTING			

Screen for player 2

NET	NORK	OPT	IONS	
NETWORK I	D			2
GAME JOINI	NG PERI	OD		12
FACTORY S SAVE AND E EXIT	ettings Exit	;		
THIS BOARI	D-ID IS 2			
	ERROR	DOW	N STA	TUS
ID No.1	0	0		
ID No.2	0	0		
ID No.3	0	0		
ID No.4	0	0		
GEAR SHIFT U	IP/DOWN	= SE	LECT O	

Screen for player 3

NET	NETWORK OPTIONS						
NETWORK I	NETWORK ID 3						
GAME JOIN	ING PERI	IOD	12				
FACTORY S SAVE AND E EXIT	FACTORY SETTINGS SAVE AND EXIT EXIT						
THIS BOARI	D-ID IS 3						
	ERROR	DOW	N STATUS	;			
ID No.1	0	0					
ID No.2	0	0					
ID No.3	0	0					
ID No.4	0	0					
GEAR SHIFT U	GEAR SHIFT UP/DOWN = SELECT OPTION						
PRESS START	BUTTON	= MC	DDIFY SETT	ING			

Screen for player 4

NETW	NETWORK OPTIONS							
NETWORK ID				4				
GAME JOININ	G PERIO	OD		12				
FACTORY SET	TINGS							
SAVE AND EX	IT							
EAII								
THIS BOARD-I	D IS 4							
E	RROR	DOW	N STA	TUS				
ID No.1	0	0						
ID No.2	0	0						
ID No.3	0	0						
ID No.4	0	0						
GEAR SHIFT UP	DOWN	= SE	LECT O	PTION				
PRESS START B	UTTON	= MC	DIFY S	ETTING				

•This screen is just an example.

CALIBRATION

Calibrating the steering wheel, etc.

Mode for calibrating the steering wheel, accelerator pedal and brake pedal. When "DEVICE ERROR (****)" appears in the self-test during system start-up, make

the calibrations in this mode.

Move the shift lever up side or down side to select an item, and press the start button to enter it.

To return to the main menu screen, select "EXIT" and press the start button.



[•]This screen is just an example.

•For the details of calibration of each device, see next page.

- •When the calibration is performed and "ERROR" appears, follow the "7-4 Replacing and adjusting the potentiometer" on page 48 to 52.
- •Press and hold the test button and turn ON the power switch, the current correction value is also cleared.

MEMO -
•To calibrate the steering wheel

Adjust the potentiometer so that the input value is not off-scale on the "I/O CHECK" screen when fully steering to the right and left. The input value, ranging from 0 to 65535, becomes 0 or 65535 when off-scale.

Choose "STEERING WHEEL" and press the start button so that the screen shown below appears.

Follow the instructions on the screen to make the steering wheel calibration.

At first, the following message appears. Set the steering wheel to center (straight run) and press the start button.

POSITION THE STEERING WHEEL IN THE CENTRE. PRESS START BUTTON = CONTINUE

Then, the following message appears. Turn the steering wheel fully counterclockwise and press the start button.

TURN THE STEERING TO LEFT FULLY	
PRESS START BUTTON = CONTINUE	

Next, the following message appears. Turn the steering wheel fully clockwise and press the start button.

TURN THE STEERING TO RIGHT FULLY	
PRESS START BUTTON = CONTINUE	
When the following message appears, release yo	ur hands from the steering wheel.
DO NOT TOUCH THE STEERING WHEEL UNTIL THE MACHINE IS BEING INITIALIZED.	
45	The time to finish calibration is displayed here.
When the calibration is finished correctly, "OK" ap	pears.
STEERING WHEEL : OK	
In the event of a calibration error, "ERROR" appears.	f "ERROR" is still displayed, contact your nearest dealer.

•To calibrate the accelerator pedal and brake pedal

For the accelerator pedal and brake pedal, adjust the potentiometer so that the input value is not off-scale on the "I/O CHECK" screen when stepping all the way on the pedal or releasing it.

The input value, ranging from 0 to 65535, becomes 0 or 65535 when it comes to the limit.

Choose "ACCELERATOR" or "BRAKE" and press the start button. The messages shown below appear. Follow the instructions on the screen to make the calibration. (The figures below are for "ACCELERATOR" selected.)

At first, the following message appears. Never touch the accelerator pedal.

DO NOT TOUCH THE ACCELERATOR

Then, the following message appears. Step fully on the accelerator pedal and press the start button.

STEP ON THE ACCELERATOR FULLY PRESS START BUTTON = CONTINUE

Next, the following message appears. Release your foot from the accelerator pedal.

RELEASE THE ACCELERATOR.

When the calibration is finished correctly, "OK" appears.

ACCELERATOR : OK

In the event of a calibration error, "ERROR" appears. If "ERROR" is still displayed, contact your nearest dealer.

ACCELERATOR : ERROR

BOOKKEEPING

Displaying the bookkeeping information of coins

MEMO

Mode for displaying the total data on the number of coins put in the machine. If the time is preset on the "CLOCK SETUP" screen, the total data on the number of coins put into the machine can be checked.

To return to the main menu screen, select "SAVE AND EXIT" or "EXIT" and press the start button.



Just when the machine has been set up or initialized, set the time in this screen.
When the time setting has been modified, the bookkeeping information is automatically cleared. With the current time not set, the total of received coins and other bookkeeping data are not displayed. (The data once erased can not be resumed.)

When the time has been preset on the "CLOCK SETUP" screen, as shown on the preceding page, the following each "BOOKKEEPING" is displayed on the screen. Each time the shift lever up and down, the screen changes as follows. To return to the main menu screen, press the start button on each screen.



With the current time already set, the current time and the total coin data can be cleared by moving up the shift lever and pressing the start button on each screen. In such case, "DO YOU WANT TO CLEAR ALL BOOKKEEPING DATA? YES/NO" appears. Moving the shift lever up or down, select "YES or "NO" and press the start button.

If "YES" is selected, the question for re-confirmation appears on the screen.

If "YES" is selected again, all the bookkeeping data are deleted and "CLEAR COMPLETED" appears on the screen, the data is saved as was set at the time of shipment and the main menu appears again automatically.

If "NO" is selected, "NO MODIFICATION" is indicated and the main menu appears again without deletion of the data.

BOOKKEEPING		-
TODAY	100	Number of coinc of today
LAST 7DAYS AVERAGE TOTAL COINS	130	Average number of coins of last 7 days. Total number of coins after the time being set.
YESTERDAY	120	Number of coins of yesterday.
-2DAY -3DAY	130 ———— 140 ————	——— Number of coins of 2 days ago. ——— Number of coins of 3 days ago.
-4DAY	110	Number of coins of 4 days ago.
-5DAY -6DAY	0	Number of coins of 5 days ago.
GEAR SHIFT UP/DOWN = PREVIOUS/NEX	T DATA SUMMARY	"0" appears for the day whose data is not totalized.
HOLD GEAR SHIFT UP + PRESS START BU PRESS START BUTTON =	TTON = DATA CLEAR EXIT	•This screen at left is just an example.
Screen of the total numb	er of coins fo	or past 52 weeks
BOOKKEEPING		
COIN DATA OF LAST 52 W	EEKS	
-01: 910 -02: 0 -03: 0	-04: 0	
		Number of coins of 1 week before.
	:	Number of coins of 2 weeks before.
		Number of coins of 3 weeks before.
		:
: : :		:
-49:0 -50:0 -51:00	-52: 0	: "0" appears for the week whose data is not totalized.
HOLD GEAR SHIFT UP + PRESS START BU	TTON = DATA CLEAR	
PRESS START BUTTON =	EXIT	 This screen at left is just an example.
Screen of the total numb	er of coins fo	or each day of the week
BOOKKEEPING		
COIN DATA OF EACH DAY		
TOTAL COINS	910	——— Total number of coins after the time being set.
SUN	120	——— Number of coins for Sunday.
MON	130	Number of coins for Monday.
WED	140	Number of coins for Tuesday. Number of coins for Wednesday.
THU	100	——— Number of coins for Thursday.
FRI	210	——— Number of coins for Friday.
SAT	0	Number of coins for Saturday.
GEAR SHIFT UP/DOWN = PREVIOUS/NEX	T DATA SUMMARY	"0" appears for a day of the week whose data is not
HOLD GEAR SHIFT UP + PRESS START BU PRESS START BUTTON =	TION = DATA CLEAR	totalized.
		• This screen at left is just an example.
Screen of indication of pl	ay condition	S
BOOKKEEPING		
PLAY DATA SUMMARY	(
TOTAL PLAY TIME	10H 2M 0S	Total play time since the setting of time.
AVERAGE PLAY TIME	3M 0S	Average play time.
	5M 0S	Longešt plaý time.
SHORTEST PLAY TIME	2111-05	- Shortesi piay tille.
COIN SLOT 1 COUNT COIN SLOT 2 COUNT	5	Total count for coin slot 1. Total count for coin slot 2.
TOTAL PLAY COUNT	5	Total number of coins since the setting of time.
SOLO PLAY COUNT		
	5	— I otal number of coins for solo play.
GEAR SHIFT UP/DOWN = PREVIOUS/NEX HOLD GEAR SHIFT UP + PRESS START BU	5 T DATA SUMMARY TTON = DATA CLEAR	Total number of coins for solo play.

Screen of the total number of coins for last 7 days

37

per of coins per	nour.
G	
HOUR	
16:00 10 17:00 15 18:00 15 19:00 20 20:00 30 21:00 25 22:00 30 23:00 10	 Total number of coins per hour. "0" appears for the hour whose data is not totalized.
EXT DATA SUMMARY BUTTON = DATA CLEAR = EXIT	•This screen at left is just an example.
	G HOUR 16:00 10 17:00 15 18:00 15 19:00 20 20:00 30 21:00 25 22:00 30 23:00 10 EXT DATA SUMMARY BUTTON = DATA CLEAR = EXIT

ALL FACTORY SETTINGS

Returning all the settings to factory ones

■ Mode of returning all the settings of each mode to their factory settings.

Move the shift lever up or down to select "YES" or "NO". Press the start button to enter the decision.

When "YES" is selected, you are requested to confirm it. When "YES" is selected again, all the settings of each mode will be returned to their factory settings with "NOW SAVING" appearing on the screen. The main menu screen will then show up itself.

If "NO" is selected, "NO MODIFICATION" is indicated and the main menu appears again without saving the data of changed settings.



•This screen is just an example.

Mode for returning to the factory settings -

·SOUND OPTIONS ·GAME OPTIONS ·COIN OPTIONS ·NETWORK OPTIONS ·CALIBRATION **·BOOKKEEPING**

6 Installation and assembling

6-1 Mounting the seat unit

How to mount the seat unit

•When moving the units, use care not to apply undue force to opening and closing parts as well as moving parts.

•When installing the main unit and seat unit take care not to catch the your hand.

Fix the attached joint fittings A and joint fittings B temporarily to the seat unit.



2 Fit the main unit and the seat units and temporarily fix the joint of the main unit.



MEMO

•After finishing the "6-2 Fastening the adjusters" on page 40, tighten the joint securely.

•The connectors existing between the main unit and the seat unit will not be used here. Push them into the main unit.

6-2 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.

•Make all the unit 12 adjusters come in contact with the floor, tighten them with hexagon nuts after making sure that all the units are placed stably in a horizontal position.



6-3 Setting the memory card



Fix the back door tightly with the three screws. (Loose screws may activate the door switch, which keeps off the power.)

6-4 Power unit

Power unit

The power unit is located on the back of main 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.
- •There is high voltage inside the machine. Only the qualified industry specialist is allowed to open the back door. With the back door open, be very careful not to touch the monitor and its nearby parts.
- •If the sub power switch of the service panel is turned OFF without turning OFF the main power switch of the power unit, some parts in the units remain live. When opening the back door, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.



6-5 Service panel

Service panel — — —

Using the accompaying maintenance key, open and detach the maintenance door to access the service panel inside.



6-6 Splitting into and moving of units

The machine can be divided into 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 turn OFF the main power switch,
- unplug the power cord, from the receptacle and remove the power cord and networking cable from the machine.
- •Before moving the machine, fully screw up all adjusters. Move the machine on the casters.
- •When moving the units, use care not to apply undue force to opening and closing parts as well as moving parts.
- •When connecting the separated units, take care not to catch the your hand between the units.

Separating the cockpit unit and the screen unit

- Be sure to turn OFF the main power switch and unplug the AC power cord from the receptacle.
- **2** Disconnect the main unit side of the joint fitting A and joint fitting B.



3 Raise all the adjusters and move the units on the casters.



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.



44

7 Maintenance

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.

•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.
When replacing parts, be sure to use parts of the correct specifications. Never use parts other than the specified ones.

•Strictly refrain from disassembly and repair of parts which are not indicated in this manual, as well as settings and remodelling.

- **1** Be sure to turn OFF the main power switch and unplug the AC power cord from the receptacle.
- **2** Open the maintenance door.
- **3** Release the levers that fix the coin selector. See at right.
- 4 Slide the coin selector to the right, and take it out.





- 5 To fit a new coin selector
 Fit the 2 projections of the coin selector to their mating notches.
 6 Lock the levers (in Step 3 above)
 - Lock the levers (in Step **3** above) again, 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 the power switch is turned off. Wait until it cools down and then replace it with a new one of the same type (straight tube 32W/100V white).
- •When detaching and reattaching the fluorescent light unit, be careful not to damage the wires between this unit and the main unit.
- •When replacing the fluorescent light, use a stepladder for safety sake.
- •When replacing parts, be sure to use parts of the correct specifications. Never use parts other than the specified ones.
- •Strictly refrain from disassembly and repair of parts which are not indicated in this manual, as well as settings and remodelling.
- **1** Be sure to turn OFF the main power switch and unplug the AC power cord from the receptacle.
- 2 Remove the fluorescent light unit lock screws off the top of the billboard.
- **3** Lift the fluorescent light unit off position. Be careful not to hit against the ballast.



- 4 Push one end of the fluorescent light in the direction of the socket. The other end of the fluorescent light will be datached from the opposite socket.
- 5 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



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

•When replacing parts, be sure to use parts of the correct specifications. Never use parts other than the specified ones.

•Strictly refrain from disassembly and repair of parts which are not indicated in this manual, as well as settings and remodelling.

- Be sure to turn OFF the main power switch and unplug the AC power cord from the receptacle.
- 2 Remove the screws and detach the button bracket.



- **3** Remove the screw and detach the band from the button socket.
- 4 Draw the socket out of the button.



5 Take the reverse steps to install the button into position. If the socket has been replaced, reconnect the cables as shown below.







5 Remove the screws off the control panel.



Pull out the control panel towards you.

6

Take due xare not to drop the control panel. And take care that the control panel does not damage the monitor adjustment PCB.



7 Loosen the two fixing screws, remove the screws off the potentiometer breket, and remove the whole bracket.

•If the lock screws are inaccessible, turn the steering wheel to make them accessible and easy to loosen.

MEMO ·



8 Remove the hexagon nut and separate the potentiometer.

•When replacing the potentiometer with new one, be sure to first make the adjustment on the next page. MEMO



How to adjust the steering wheel unit potentiometer - -

- 1 Fit the potentiometer projection to the smallest hole of the potentiometer bracket. Tighten up the hexagon nut.
- 2 Connect the wiring poperly.



- **3** Grasp the potentiometer tip with your fingers and adjust it as shown in the figure.
- 4 Turn the steering wheel to the original position, install the potentiometer bracket as it was and tighten the bracket with the two fixing screws securely.



Adjust so that (-) mark on the potentiometer knob is aligned with the center terminal.

MEMO

•Even when the potentiometer bracket screw and the lock screws are tight enough, the potentiometer bracket is same what loose. Keep in mind that the bracket is not tightly locked.

- **5** Assemble the steering wheel unit to the main unit in the reverse order.
- 6 Attach the back door in position, and turn the maintenance key counterclockwise.
- 7 Fix the back door tightly with the screws. (Loose screws may activate the door switch, whitch keeps of the power.)
- 8 Plug the power cord in the receptacle and turn ON the main power switch. Carry out "5-2 Checking the game performance" on page 24.
- **9** Call up the "I/O CHECK" screen, show on page 27. Move the steering wheel and make sure the "I" make comes to the LEFT and RIGHT positions.





1 Without touching the pedal, adjust the potentiometer with a flatblade screwdriver.

 [Adjusting method]
 Potentiometer for accelerator
 Fully turn the potentiometer counterclockwise and then turn it back by about 10°.

• Potentiometer for brake Fully turn the potentiometer clockwise and the turn it back by about 10°.



- 2 Tighten up the gears' lock screws. Be careful not to confuse the wiring.
- **3** Attach the back door in position, and turn the maintenance key counterclockwise.
- 4 Fix the back door thitly with the screws. (Loose screws may activate the door switch, whitch keep of the power.)



- 5 Plug the power cord in the receptacle and turn ON the main power switch. Carry out "5-2 Checking the game performance" on page 24.
- 6 Call up the "I/O CHECK" screen, show on page 27. Step on the acceleration pedal and brake pedal and make sure the "I" make comes to the MIN and MAX positions.

7-5 Replacing the shift unit microswitch



Place the shift unit in the specified position. See the figure at right.
 "DOWN" to face the monitor
 "UP" to face the player



7-6 Inspecting and replacing the motor brushes

At the motor of the steering wheel unit are fitted two motor brushes. The motor brushes are worn every time when the machine is operated. It is therefore recommended to do periodical checking about every 2000 hours.

How to inspect and replace the motor brushes — — — — — — — — — — — —



•Strictly refrain from disassembly and repair of parts which are not indicated in this manual, as well as settings and remodelling.

- Be sure to turn OFF the main power switch and unplug the AC power cord from the receptacle.
- 2 Referring to page 48, separate the control panel from the main unit.
- **3** Disconnect the wiring from the motor.



4 Using a Flatblade screwdriver, remove the screw caps and take out the motor brushes.

•Check to see if the motor brush has worn out up to the marked line. If so, replace the motor brush with new one.



5 Install the motor brushes back into position. Attach the control panel in place.



7-7 Replacing the timing belt and adjusting its tension



7-8 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.
- •There is high voltage inside the machine. Only the qualified industry specialist is allowed to open the back door. With the back door open, be very careful not to touch the monitor and its nearby parts.
- •If the sub power switch of the service panel is turned OFF without turning OFF the main power switch of the power unit, some parts in the units remain live. When opening the back door, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.

•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.

- **1** Be sure to turn OFF the main power switch and unplug the AC power cord from the receptacle.
- 2 Remove the cause of the trouble. Press the button on the circuit protector of the power unit.



7-9 Adjusting the monitor

The monitor has already been adjusted at the time of shipment, but it may be readjusted as desired.

When adjusting the monitor, refer to "SCREEN CHECK" and "COLOR CHECK" on page 28.

•There is high voltage inside the machine. Only the qualified industry specialist is allowed to open the back door. With the back door open, be very careful not to touch the monitor and its nearby parts.

Monitor adjustment PCB --

The monitor adjustment PCB is located inside the game machine. When adjusting the monitor, pull the control panel. (See page 48 and 49)



1	CONTRAST	Contrast adjustment Used to changes the contrast.
2	R.GAIN	Red input gain adjustment Changes red brightness. Turning it clockwise will make the red deeper.
3	G.GAIN	Green input gain adjustment Changes green brightness. Turning it clockwise will make the green deeper.
4	B.GAIN	Blue input gain adjustment Changes blue brightness. Turning it clockwise will make the blue deeper.
5	BRIGHT	Brightness adjustment Changes brightness. Turning it clockwise will make the image brighter.
6	H.SIZE	Horizontal screen size adjustment Changes the width of the screen.
7	H.POSI	Horizontal image position adjustment Changes the image position in the horizontal direction.
8	V.SIZE	Vertical screen size adjustment Changes the height of the screen.
9	V.POSI	Vertical image position adjustment Changes the image position in the vertical direction.

7-10 Troubleshooting

If the power switch is turned ON but the machine fails to start properly, take the following measures. If the machine still malfunctions or any other problem than described below occurs, immediately turn OFF the main power switch, unplug the power cord from the receptacle and contact your nearest dealer.

Trouble	Possible causes and check points	Measures
No image on screen, title unit fluorescent light failure to light up.	•No power turned ON. (Main power switch, Sub-power switch.)	•Turn ON the power switch. Check also the shop's circuit breaker. (See page 42.)
	 Power cord disconnected from the machine or wall outlet. 	•Reconnect the power cord tightly. (See page 42.)
	•Back door open or loosely closed.	•Screw down the back door tightly. (The door switch has been activated to cut off the power.) (See page 42.)
	•Circuit protector activated.	•Take measures, referring back to page 56.
No image on screen : title unit fluorescent light on.	•Memory card not inserted.	•Check the memory card for wrong position. (See page 41.)
	PCB unit defective.Monitor defective.	•Immediately turn OFF the main power switch, unplug the power cord from the receptacle and contact your nearest dealer.
Title unit fluorescent lamp failure to light up.	•Fluorescent lamp or glow lamp broken.	•Replace the fluorescent lamp or glow lamp with new one of the same type. (See page 46.)
Screen too dark or too bright.	•Monitor maladjusted.	•Readjust the brightness on the monitor adjustment PCB. (See page 57.)
Start button malfunctioning.	•Switch wires disconnected from start button.	•Reconnect the switch wires to the socket. (See page 47.)
	•Start button defective.	•Replace the start button with new one. (See page 47.)

Trouble	Possible causes and check points	Measures
Start button functioning, but failure to light up.	•Lamp wires disconnected from start button socket, or reversely connected.	•Reconnect the switch wires to the socket. (See page 47.)
	•Start button lamp (LED) defective.	•Check the performance on the "I/O CHECK" screens. Replace the start button as required. (See page 27 and 47.)
Coin selector malfunctioning.	•Coin selector defective.	•Check the performance on the "I/O CHECK" screen. If malfunctioning, replace the coin selector or microswitch with new one. (See page 27 and 45.)
No sound or too loud (or too soft) sound.	•Sound level maladjusted.	•Make proper setting on the "SOUND OPTIONS" screen. (See page 29.)
Pedal unit malfunctioning.	•Wires disconnected from potentiometer.	•Reconnect the wires to the potentiometer. (See page 48.)
	•Potentiometer maladjusted.	•Check the performance on the "I/O CHECK" screen and readjust the potentiometer. (See page 27 and 48.)
	•Potentiometer defective.	•Check the performance on the "I/O CHECK" screens. Replace the potentiometer as required. (See page 27 and 48.)
"BAD" displayed on the "DISK MEDIA CHECK" screen in test mode.	•Memory card defective.	•Immediately turn OFF the main power switch, unplug the power cord from the receptacle and contact your nearest dealer.
"HARDWARE ERROR (***)" displayed on screen: game failure to start.	•Something wrong with the hardware.	•Write down the error code displayed. Immediately turn OFF the main power switch, unplug the power cord from the receptacle and contact your nearest dealer.

7 Maintenance

Trouble	Possible causes and check points	Measures
"OK" appears at the initial device check, but this check is repeated without going to the game mode.	•Some connectors disconnected or wires broken.	•Turn OFF the main power switch, unplug the power cord from the receptacle and check all the connectors for poor contact. If all the connectors are tightly connected but the same trouble occurs, contact your nearest dealer.
"NETWORK ERROR" displayed: failure to play networked.	•"NETWORK ID" wrongly set.	•Make correct network ID on the "NETWORK OPTIONS" screen in the test mode. (See page 32.)
	•Networking cable defective.	•Reconnect the networking cable between the machines (see page 23) or replace the networking cable.
	•One of the networking cable has been disconnected from during play.	 1.Turn OFF the main power switch. 2.Connect the networking cable properly. 3.Turn ON the main power switch again.
	•One of the networking cable has been internally broken or broken.	•Replace the networking cable with new one.
		•You can also use commercially-sold video cable (75Ω3C-FV) having a lengh of 2m (78.74 in) or less.
"DNC" and "I" marks appearing alternately at STATUS on "NETWORK OPTIONS" screen, or "ERROR" happening more often.	•Supply voltage drop or unstable.	•Connect the networked machine's power plug to the same wall outlet.

8 Annex

8-1 Label locations and exploded view



No.	CODE No.	NAME	QTY	NOTE
1	0000096944	LABEL, PLAYING A/HD	2	
2	0000096945	LABEL, PLAYING B/HD	1	
3	0000096518	LABEL, SIDE L	1	
4	0000096521	LABEL, SIDE R	1	
5	0000096530	LABEL, KONAMI L	1	
6	0000096531	LABEL, KONAMI R	1	
7	0000096532	LABEL, SEAT A	2	
8	0000096536	LABEL, SEAT B/L	2	
9	0000096537	LABEL, SEAT B/R	2	
10	0000096538	LABEL, SEAT C	2	
11	0000096522	LABEL, COMPANE A	2	
12	0000096523	LABEL, COMPANE B	2	
13	0000096528	LABEL, COMPANE C	2	
14	0000096529	LABEL, COMPANE D	2	
15	0000081263	LABEL, METER	2	
16	0000037716	LABEL, ENTRY	1	
17	0000037424	LABEL, SEAT	2	
18	0000096546	LABEL, ZEICHEN	1	Player's No. (1P to 4P)

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NOTE																														
QTΥ	1	2	2	~	-	-	-	~		9		-		~		4	4		~	-			-				ļ		-	
- MATERIAL/SPEC.	SECC T1.6				SPCC T1.2	SPCC T1.2	W00D T15	SPCC T3.2	SPCC T1.2	PUNCH D3 PITCH4	SECC T1.6	W00D T15	SECC T2.3	LANC CONNECTOR	SPCC T1.6	C-275-A-3	K-420G-75-N	ZWS150PF-5/J	ZWS100PF-12/J	FBA09A12M	AJ8201BK	M1816	NRF110-10A	MAS-1210-33	AV1225	KSP-1	NS-801-1 W/0	NO. 1	ML-6750F-187ABC-6P	500VA
NAME	BKT,FAN	UNIT, PCB BOX	UNIT, PCB(K)	UNIT, CF-CARD	BRACKET, REGULATOR	BRACKET, REGULATOR	CABINET	BKT., CASTER(D)	BRACKET, POVER	BRACKET, AIR	BKT., SWITCH	COVER, CABINET	BKT., SWITCH	ASS'Y, PCB	BASE, TRANSFORMER	ADJUSTER	CASTER	REG., SWITCHING	REG., SWITCHING	MOTOR, FAN	SWITCH, ROCKER	INLET, AC	PROTECTOR, CIRCULT	FILTER, NOISE	SWITCH, DOOR	WASHER, LOCK	LOCK	PLATE, LOCK	BLOCK, TERMINAL	TRANSFORMER
CODE NO.	0000013534	0000096448	0000056403	0000096446	0000037024	0000043023	0000045963	0000008802	0000041183	0000009465	0000012230	0000013264	0000012231	0000037320	0000043613	0000002405	0000002051	000003799	0000030688	0000003209	0000039100	0000031056	0000036921	0000003180	0000004953	0000005684	0000002771	0000004531	0000036925	0000077822
NO.	1	2	3	4	£	9	7	8	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
					I		-					I	I													I				
NOTE		SW, PW		SW, PW	SW, PW				SW, PW				SW																	
QTY	4	24	N	80	~	46	26	20	20	~	3	4	4																	
MATERIAL/SPEC.	M6×25	M6x20	M4	M3×10	M4×30	d4x10	d3.1x13	BSB-308-6	M3×6	d3x8	M6×30	M4×30	M6x20																	

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SCREW, CROSS TRUSS SCREW, CROSS PAN SEMS

111

113

SCREU, CROSS PAN SEMS SCREU, CROSS TAPPING PAN

SCREW, CROSS TRUSS

SCREW, CROSS TAPPING TRUSS SCREW, WOOD CROSS ROUND

106 107 108 109 110

SPACER

SCREW, CROSS PAN SEMS SCREW, CROSS PAN SEMS

SCREW, CROSS TRUSS SCREW, CROSS PAN SEMS

NAME

CODE NO.

NO. 101 NUT, FLANGE

102 103 104 105

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NOTE																																
QTΥ	-	1	2	ŀ	-							~		4		-		-	1		1	-	4	1	1	4	4		2	2		
MATERIAL/SPEC.	SPCC 13.2	SUS 304 T1	SUS 304 T1	PMMA/PVC T5	PVC	PVC	PVC	SUS 304 T1	SUS 304 T1	PMMA T5	SPCC T1.2	SPCC 12.3	SPCC T1.6	W00D T9			SPCC 13.2	SPCC T1.2	SPCC T1.2	SPCC T1.6	SPCC T1.6	V00D T15	SECC T2.3	SPCC T1.6	SPCC T1.2	SECC 12.3	SPCC T1.2	ABS	SPCC T2.3	2V.R. (AC/BR)		
NAME	BKT, CASTER(A)	COVER, CENTER	COVER, SIDE	ESCUSSION(A)	SHEET, FLOOR(L)	SHEET, FLOOR(R)	SHEET, FLOOR(B)	COVER, EDGE (A)	COVER, EDGE (B)	PANEL, TITLE	COVER, TOP	COVER, FOOT	HOLDER, TITLE(A)	PLATE, SPEAKER HOLD	UNIT, CONTROL (R)	UNIT, CONTROL (L)	BKT., SUPPORT	PLATE, COUNTER	PLATE, COVER	BRACKET, COUNTER	BKT, COIN SELECTOR	BOARD, SELECTOR	BRACKET, MONITOR	BKT, LAMP	BKT., SERVICE	FRAME, MONITOR	FIXTURE, CONNECT	BOX, COIN	FIXTURE, SUPPORT	GAME PEDAL		
CODE NO.	0000008799	0000008803	0000008804	0000007625	0000012581	0000012582	0000011689	00000080808	0000008000	0000096843	000000800	0000013530	0000087161	0000013558	0000096613	0000096605	0000008000	0000012186	0000012255	0000041198	0000007411	0000008402	0000081190	0000008807	0000013531	0000008805	0000013559	0000006850	0000013536	0000002247		
NO.	-	2	3	4	5	9	7	8	6	10	Ξ	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
NOTE													SV, PV					SW, PW			SW, PW										WA(SW)	
QTΥ	4	4	-	2	-	-		~	-	و	~	27	24	14	22	16	20	2	2	12	12	9	14	2	4	8	20	12	2	4	8	~
MATERIAL/SPEC.	EWS-U0AS25E53	PD10391A	AJ8201BK	GX-06PD55	NAD-W2-KBTA	NS-801-1 W/2	NS-812 W/2	NO. 2	S-32W875MM	DS-412-2P	K29CC55	M6x25	M6×20	M6x25	M6	M4x25	M4	M3×10	M3	d4×10	M4×15	d4×10	#18×16	M6x25	d3.1×13	d3.1×13	db	M6×30	d8	M4×30	M6x25	db
NAME	POTENT I OMETER	SPEAKER	SWITCH, ROCKER	COUNTER	DOOR, COIN	LOCK	LOCK	PLATE, LOCK	LAMP, F. WITH HOLDER	SWITCH, PUSH	MON I TOR	SCREW, CROSS TRUSS	SCREU, CROSS PAN SEMS	BOLT, CAP SQUARE NECK	NUT, FLANGE	BOLT, CAP SQUARE NECK	NUT, FLANGE	SCREV, CROSS PAN SEMS	NUT, FLANGE	SCREW, CROSS TAPPING TRUSS	SCREV, CROSS PAN SEMS	SCREV, CROSS TAPPING TRUSS	NAIL	SCREW, CROSS TRUSS	SCREV, VOOD CROSS ROUND	SCREV, VOOD CROSS FLAT	WASHER, PLAIN	BOLT, BUTTON HEAD	WASHER, PLAIN	SCREW, CROSS TRUSS	BOLT, HEX SOCKET CAP	WASHER, PLAIN
CODE NO.	0000001723	0000002322	0000039100	0000030431	0000086349	0000001676	0000005537	0000004799	0000002522	0000005098	0000081148																					
	31	32	33	34	35	36	37	38	39	40	41	101	102	103	104	105	106	107	08	60	10	=	12	13	14	115	116	117	118	119	120	121

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NOTE QTΥ \sim 2 4 ---4 4 4 \sim \sim 15 2V.R. (AC/BR) SUS 304 T1 MATERIAL/SPEC. SUS 304 T1 SUS 304 T1 SUS 304 T1 SPCC T1.6 SPCC T1.6 SPCC 13.2 SPCC 12.3 SPCC T1.6 SPCC T3.2 T1.2 SPCC T1.2 SPCC T1.6 SPCC T1.2 SPCC T1.2 SPCC 12.3 SPCC T1.2 W00D T15 SECC T2.3 SECC T2.3 PMMA T5 19 PMMA/PVC PVC ABS PVC PVC MOOD SPCC PLATE, SPEAKER HOLD UNIT, CONTROL (L) BRACKET, COUNTER BKT, COIN SELECTOR BRACKET, MONI TOR UNIT, CONTROL (R) BOARD, SELECTOR FIXTURE, SUPPORT HOLDER, TITLE(A) FIXTURE, CONNECT PLATE, COUNTER FRAME, MONITOR SHEET, FLOOR(L) SHEET, FLOOR(R) SHEET, FLOOR(B) BKT., SERVICE BKT, CASTER(A) COVER, CENTER ESCUSSION(A) COVER, EDGE (A) COVER, EDGE (B) PANEL, TITLE BKT., SUPPORT PLATE, COVER COVER, SIDE GAME PEDAL COVER, FOOT COVER, TOP BOX, COIN BKT, LAMP NAME 0000007625 0000012582 0000011689 0000008809 0000096843 0000008806 0000096613 0000096605 0000012186 0000012255 0000041198 0000007411 0000008402 0000081190 0000006850 0000013536 0000002247 0000008799 0000008803 0000008804 0000008808 0000013530 0000087161 0000013558 0000008800 0000008805 0000013559 0000012581 0000008807 0000013531 CODE NO. 15 2 21 13 16 18 16 20 21 22 23 25 27 28 29 30 4 = 14 17 24 26 \sim m ഹ و 8 σ ġ. (MS) MM SW.PW SW, PW SV. PV NOTE QTΥ 24 14 22 16 20 12 12 14 20 2 4 \sim \sim ڡ \sim 27 \sim \sim ڡ \sim 4 8 \sim ω \sim EWS-U0AS25E53 NS-801-1 W/2 MATERIAL/SPEC. NAD-W2-KBHA NS-812 W/2 S-32W875MM DS-412-2P GX-06PD55 PD10391A AJ8201BK d3.1x13 d3.1x13 K29CC55 #18×16 M6x25 M3×10 M4×15 d4×10 M6x25 M6×20 M6x25 M4x25 d4×10 M6×30 M4×30 M6x25 NO. 2 М6 Μ4 MЗ gр ąв 89 SCREW, CROSS PAN SEMS SCREV, CROSS TAPPING TRUSS ICREV, CROSS TAPPING TRUSS SCREW, WOOD CROSS ROUND BOLT, BUTTON HEAD SCREW, CROSS PAN SEMS LAMP, F. WITH HOLDER SCREW, CROSS TRUSS SCREV, CROSS PAN SEMS BOLT, CAP SOUARE NECK BOLT, CAP SQUARE NECK SCREW, CROSS TRUSS SCREV, VOOD CROSS FLAT SCREW, CROSS TRUSS BOLT, HEX SOCKET CAP POTENT I OMETER WASHER, PLAIN SWITCH, ROCKER WASHER, PLAIN WASHER, PLAIN SWITCH, PUSH NUT, FLANGE NUT, FLANGE PLATE, LOCK NUT, FLANGE DOOR, COIN COUNTER MON I TOR SPEAKER NAME LOCK LOCK NAIL 0000001676 0000002522 0000005098 0000081148 0000039100 0000005537 0000004799 0000086347 0000001723 0000002322 0000030431 ŝ CODE 102 103 104 105 106 108 109 110 112 113 114 115 116 117 118 119 107 Ξ 33 39 40 101 120 31 32 34 35 36 37 38 41 121 ю.

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FIG.4 ASS'Y, REACTION SV. PV SV, PV NOTE ٥T٧ 8 ŝ \sim ŝ 4 4 4 \sim 4 4 \sim V 2 SPCC T2.3 SS400 P4055M0250A GEELM-G-47-2 EVS-U0AS25E53 P24S5M0250A MATERIAL/SPEC. 8RL-D6S363 SPCC 13.2 SPCC 13.2 SPCC 13.2 SPCC T3.2 B250S5M350 ASPFL204 UR HS90 M4×10 M6×15 M6×14 M4×12 6×6×28 4×4×13 d3.2×18 S45C M6×30 M5×30 6×6×14 M8×15 4×4×32 M4×10 M4×6 M6×8 d12 d20 8 9 9W SCREV, CROSS PAN SEMS SUPPORT, PLATE(A) BOLT, CAP SQUARE NECK SCREW, CROSS PAN SEMS SCREW, HEX SOCKET SET SCREW, CROSS FLAT SCREV, HEX SOCKET SET SCREW, HEX SOCKET SET BRACKET, MOTOR BRACKET, P. METER POTENT I OMETER SCREW, CROSS PAN ING, RETAINING C SHAF STOPPER, SHAFT KEY, PARALLEL VASHER, PLAIN KEY, PARALLEL KEY, PARALLEL BASE, MOTOR BELT, TIMING KEY, PARALLEL BKT, UNIT(B) NUT, FLANGE PIN, SPLIT MOTOR, DC NUT, FLANGE PULLEY PULLEY GEARHEAD BOLT, HEX NUT, HEX STOPPER BEARING SHAFT SHOLDICK NAME 0000001723 0000041389 0000041191 0000009162 0000041194 0000012741 0000041239 0000036919 0000009164 0000041192 0000041196 0000044705 0000041240 0000036918 0000001721 CODE NO. 2 = 2 13 14 101 102 103 103 104 105 106 106 109 110 111 112 113 114 115 116 117 118 119 120 9 N \sim m 4 ഹ و ~ æ თ Ň 115) 4 6 15 13 101 102 ×2 ×4 ×4 (108) ົດ ଏ 103) 7 X (10) X Z ŝ Z 112 (116) (112) (113) 120 (110) ×2 (105 (106) x2 x2 Ľ. (T $\mathbb{O}^{\mathbb{O}}$ 100 ์ต 6 0 001 114 8 (111) 117 --Ø (118) (10)(10) Å (4) (107) Ø (11 È, 10 Ξ

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FIG.5 UNIT, CABINET SEAT

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FIG.6 UNIT, ATTACHMENT 110x180 T0.04 1 230x350 T0.05 2 260x300 T0.05 1 NP BLACK 16 VA(SV. PV) 2 NOTE QTΥ \sim ~ \sim NS-812-W/2 NS-801-W/2 MATERIAL/SPEC. M8×35 0000012575 PLATE.CONNECT(A) 0000012576 PLATE.CONNECT(B) 0000096546 LABEL.ZEICHEN BOLT, BUTTON HEAD UNIT, CF-CARD BOOK, MANUAL/HD KEY,LOCK KEY,LOCK CABLE, AC CABLE, RF NAME BAG BAG CODE NO. 0000097046 0000005537 0000001676 00000036692 0000036692 0000006059 0000004319 0000004630 0000096446 9 – 9 0 13 12 13 ~ č 5 4 9 ~ 8 $\tilde{0}$, d ൭ഁ൭ഁ €I; õ Ð a 12 ×, \odot 6 x2 ம • 🖅 [∐] 0

MEMO





Wiring diagram (1P)









Wiring diagram (1P)





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