

Star Wars: Battle Pod

STAR WARS © & ™ 2014 Lucasfilm Ltd. All rights reserved.

OPERATION MANUAL

The actual product may differ slightly from the illustrations in this manual.

Star Wars: Battle Pod

OPERATION MANUAL

Part No. 737-163
First Edition Published in December 2014

First Edition

BANDAI NAMCO Games Inc.

BANDAI NAMCO Games Inc.

2743001200

WARNING

- To ensure safe operation of the products, be sure to read this Operation Manual before use.
- Keep this operation manual, along with the projector operation manual in a safe place where it can be quickly accessed whenever needed.

The specifications of the machine and the contents of this operation manual are subject to change without prior notice due to product improvements.

Introduction

Thank you very much for purchasing the *Star Wars*: Battle Pod (referred to as "this machine" in this Operation Manual).

This Operation Manual describes:

- How to properly understand this machine.
- How to safely install, move, transport, operate, service and dispose of the machine.
- How to operate the machine properly and make full use of its functions.
- How to ensure the safety of players and bystanders.

The following manual is provided with this Operation Manual as a separate volume.

- Operation manual for the projector (NP-PE401H (V1))

Contact for Machine and Machine Repair Inquiries

- For inquiries regarding the machine or machine repairs, contact your distributor.

The copyrights, trademarks and other rights used by the machine are noted at the end of this Operation Manual.


1. Safety Precautions – Be sure to read to ensure safe operation –

Instructions to the Owner

If you delegate the work for installing, moving, transporting, operating, maintaining or disposing of this machine to other people, ensure that these people read the relevant sections of this operation manual carefully before starting work, and observe the corresponding precautions.

1-1 Levels of Risk

The safety and property damage precautions on the machine labels and in this Operation Manual are classified according to their risk level, as follows.

 **WARNING** : Failure to avoid these risks may result in serious injury or death

 **CAUTION** : Failure to avoid these risks may result in light injury or damage to other property

Notes about functionality that are not related to safety are indicated by the following symbol.



: Information about product functions or protection

1-2 Definition of "Technician"

This Operation Manual is designed for arcade personnel. However, the sections marked "Must be performed by a technician" in the Table of Contents are written for technicians. These must be performed by technicians only.

A technician is a person involved in the design, manufacture, inspection, maintenance or service at an amusement device manufacturer, or a person involved in routine maintenance or management (such as repair) of amusement devices who has specialized knowledge of electricity, electronics or mechanical engineering equivalent to or higher than a technical high school graduate.

1-3 Critical Safety Precautions

WARNING

- Should any abnormalities occur, turn off the power switch immediately to stop operations. Then, be sure to disconnect the power cord plug from the outlet. Operating the machine while the abnormality persists may result in fire or accident.
- Sections of the projector unit will remain hot and contain high voltage even after the power switch is turned off. In order to avoid electric shock or burns, be very careful not to accidentally touch these sections.
- Dust accumulating on the power cord plug may result in fire. Inspect the plug regularly and remove any dust.
- Fully insert the power cord plug into the outlet. Poor contact may generate heat and result in fire or burns.
- Damage to the power cord may result in fire, electric shock or electrical leakage. Be sure to observe the following.
 - Keep the power cord away from heaters.
 - Do not twist the power cord.
 - Do not forcibly bend the power cord.
 - Do not alter the power cord.
 - Do not bundle the power cord.
 - Do not pull the power cord. (Always unplug by holding the plug and not the power cord.)
 - Do not place objects on the power cord.
 - Do not allow the power cord to be caught between the machine and other devices or the wall.
 - Do not do anything else that might damage the power cord.
- Do not expose the power cord and power cord plug to water. Doing so may result in electric shock or electrical leakage.
- Do not touch the power cord plug with wet hands. Doing so may result in electric shock.
- The power capacity of the machine is as follows:
 - Models operating on 110 and 120 VAC: Maximum current consumption is 7.5 A
 - Models operating on 220 and 230 VAC: Maximum current consumption is 3.9 ATo prevent fire and electric shock, use indoor wiring that conforms to these power supply specifications.
- Use the machine with the power supply voltage in the following ranges:
 - Model operating on 110 VAC: 100 to 120 VAC
 - Model operating on 120 VAC: 110 to 130 VAC
 - Model operating on 220 VAC: 210 to 230 VAC
 - Model operating on 230 VAC: 220 to 240 VACUsing a voltage outside this range may result in fire or electric shock.
However, to optimize use of the machine, operate the machine with the following power supply voltages as much as possible:
 - Model operating on 110 VAC: 110 VAC
 - Model operating on 120 VAC: 120 VAC
 - Model operating on 220 VAC: 220 VAC
 - Model operating on 230 VAC: 230 VAC
- In order to ensure safe use of the machine, be sure to perform the pre-operation inspection (P-26 "7-3 Pre-operation Inspection" and P-90 "8B. Service") described in this Operation Manual. Omitting these inspections or service may result in an accident.

WARNING

- Use the consumables and service parts (including screws) that are specified by BANDAI NAMCO Games Inc. To request repairs or to order parts, contact your distributor.
- Do not modify the machine without permission. Do not perform any operations that are not described in this Operation Manual. Modifying the machine may create unforeseen hazards.
- If you decide to transfer ownership of this machine, be sure to provide this Operation Manual along with the operation manual for the projector with the machine.

CAUTION

- The projector of this machine uses a mercury lamp as a light source. The internal pressure of this lamp increases when lit. This lamp has the characteristics shown below. Be sure to fully understand these points, and handle the lamp with sufficient care.
 - Impact, degradation or other factors may cause the lamp to burst, emit loud noise, or reach the end of its life and no longer light up.
 - The time until the lamp bursts or reaches the end of its life differs according to the lamp.
 - Continued use past the replacement time increases the risk of the lamp bursting.
 - If the lamp bursts, glass shards may scatter inside the machine and exit the machine through the ventilation holes or other openings.
 - If the lamp bursts, the tiny amount of mercury gas sealed inside the lamp may be discharged together with glass particles from the ventilation holes of the projector unit or other openings.
 - Check the lamp operating time occasionally using Test mode, and prepare a new lamp when the replacement time approaches. (See P-42 "(d) PROJECTOR TEST".)
- If the lamp breaks...
 - Should the lamp, lens or other glass part break, handle any glass shards with care to avoid injury or damage, and contact your distributor.
 - Should the lamp burst, disconnect the power cord plug of the machine from the outlet, evacuate the room, and ventilate the room thoroughly. Then, clean the area around the machine thoroughly, and dispose of any foodstuffs that were located around the machine.
 - If you suspect that glass particles or mercury gas entered your eyes or that you may have breathed in these substances when the lamp burst, consult a doctor immediately.

1

2

3

4

5

6

7

8A

8B

9

10

11

Safety Precautions

Test Mode

Troubleshooting

1-4 Machine Warning Labels

WARNING

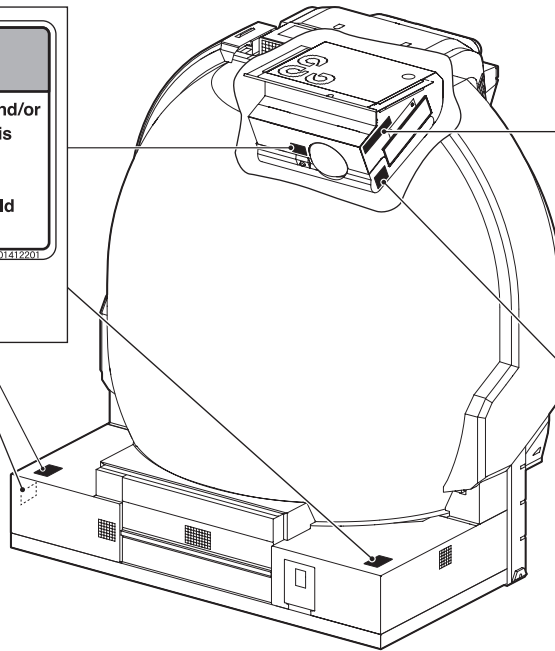
- The warning labels attached to the machine contain important information for ensuring safety. Be sure to observe the following.
 - In order to ensure that the warning labels attached to the machine are always clearly visible, install the machine in an appropriate, sufficiently lit location and keep the labels clean at all times. Also, make sure that the labels are not hidden by other machines or objects.
 - Do not remove or alter the warning labels.
 - If a warning label becomes excessively dirty or damaged, replace it with a new one. To order warning labels, contact your distributor.

WARNING
警告

To avoid an electrical shock and/or injury, be sure that the power is turned off before opening the service door.
Only qualified personnel should attempt to service the game.

8301412201

- Warning sticker Service B
Part No.: 461-534



CAUTION
注意

To avoid eye injury, do not directly look into the projector.

- Warning sticker
Projector
Part No.: 461-568

CAUTION
注意

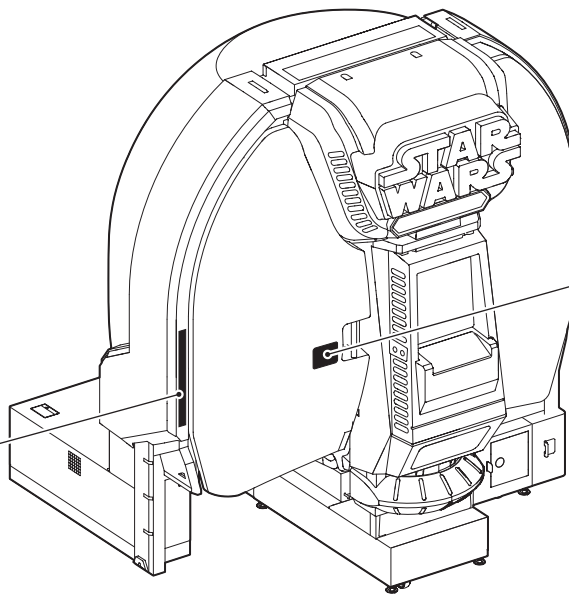
Watch overhead clearance.

- Caution sticker
Watch your head POD (S) EXP
Part No.: 461-821

CAUTION
注意

When entering and exiting, take extra care near the door hinges. To avoid pinching, do not place your fingers near the hinges.

- Caution sticker
Finger pinching POD
Part No.: 461-566



CAUTION
注意

- Please use caution if you have ever suffered any side effects when playing video games with flashing screens or are concerned that you might be in danger of doing so. Please take care when playing the game.
- If you feel unwell, please stop playing and take a rest.
- For safety, do not play under the following conditions:
 - If your feet do not reach the ground.
 - If you are intoxicated, are suffering from illness, are undergoing medical care, or are pregnant.
 - Heart issues or any other symptoms.
- This game is for single play only. Other personnel should not enter the game while playing.

8301412201

- Caution sticker
Capacity limit POD
Part No.: 461-567

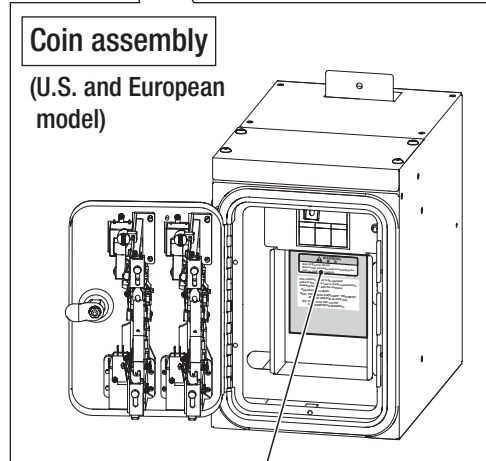
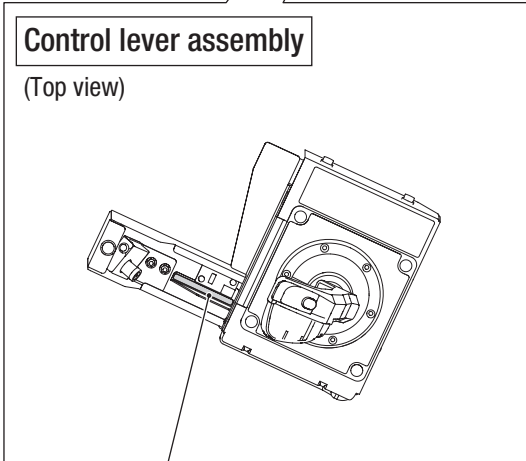
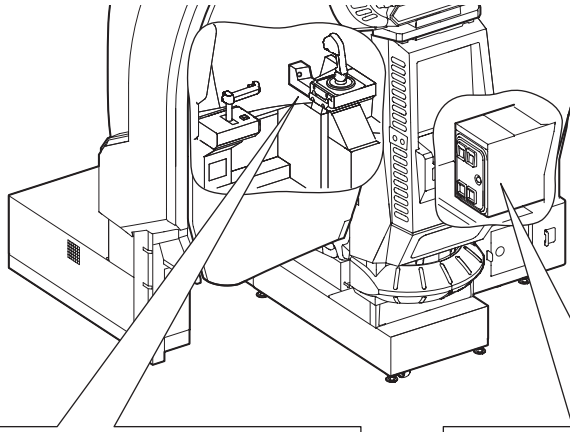
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8A
- 8B
- 9
- 10
- 11

Safety Precautions

Test Mode

Troubleshooting

1. Safety Precautions – Be sure to read to ensure safe operation –



⚠ 高温注意 ↑ HIGH TEMPERATURE

- Warning sticker
High temperature B
Part No.: 461-816

WARNING
警告

Risk of Electric Shock.
Disconnect all power before installing the
coin or credit mechanism.

8301421300

- Warning sticker
Coin mech
Part No.: 461-822

Projector unit

(NP-PE401H (V1))

NEC
MODEL No. NP-PE401H (V1)
100-240V ~ 50/60Hz 4.3-1.8A



Note for US Residents;
The lamp(s) in this product contains mercury.
Please dispose according to Local,
State or Federal Laws.

⚠️ 高圧注意/DANGER: High Voltage

- ・ サービスマン以外の方は分解しないで下さい。
- ・ 内部には高電圧部分が多くあり万一さわると危険です。
- ・ May only be disassembled by serviceman.
- ・ Interior contains many high-voltage parts which are dangerous if touched.

⚠️ 注意/CAUTION

- ・ 内部の温度が上昇しますので吸気口および排気口をふさがしないでください。
- ・ ランプ高圧中は排気口をのぞき込まないでください。
- ・ Do not block the air inlet and outlet grilles as this may cause overheating.
- ・ Do not look into the air outlet grilles while the projector is on.

⚠️ 高温注意/CAUTION: HOT

- ・ ランプ交換は、電源を切ったあと、60分待ってから行ってください。
- ・ Turn the power off and wait 60 minutes before changing the lamp.

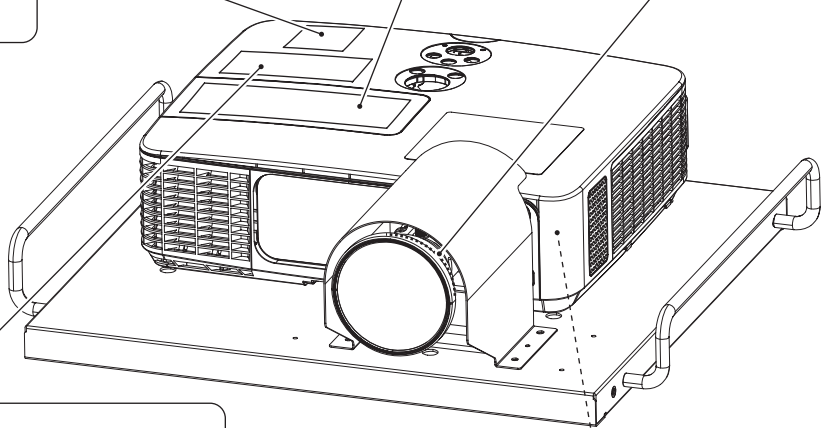
⚠️ 警告/WARNING

- ・ 点灯中はレンズをのぞかないで下さい。強い光が照射されているので目をいためる原因となります。
- ・ 動作中にレンズにレンズキャップをしないでください。レンズキャップが高温になり変形します。
- ・ 動作中にレンズの前に物を置いて光をさえぎらないでください。物が高温になり、破損や火災の原因となります。
- ・ Do not look into the lens while the projector is on. The strong light may cause damage to eyes.
- ・ Do not cover the lens with the lens cap while the projector is on, as the lens cap may deform due to heat.
- ・ Do not place any object in front of the projector lens while it is on. Doing so may result in damage to the object or cause fires.

⚠️ 注意/CAUTION

- ・ 間違った取り扱いをすると、高圧ランプが破綻する場合があります。
- ・ ランプの交換は取扱説明書の指示通り行ってください。
- ・ ランプのガラスを割らないよう取り扱いには注意してください。
- ・ もしランプが破綻してしまった場合には、ご自身で交換はせず、取扱説明書記載の連絡先にご連絡ください。
- ・ High-pressure lamp may explode if handled improperly.
- ・ Refer to the directions in the instruction manual when replacing the lamp.
- ・ During lamp replacement, be careful not to break the glass on the lamp.
- ・ If the lamp bulb should shatter, use the contact details outlined in the instruction manual and do not change the lamp yourself.

・ レンズを分解しないでください。分解すると元に戻せません。
・ 分解した場合、有償修理となり修理費用が発生する可能性があります。
Do not disassemble the projector lens. Once disassembled it can not be restored. If the lens is disassembled, you will be charged the full repair costs.



Bottom surface

ランプ交換には必ず弊社指定の交換ランプ
"NP24LP (V1)"
をご使用ください。(部品番号:307-923)
また修理依頼される場合は必ずプロジェクター
"NP-PE401H (V1)"
と指定してください。

Be sure to use the lamp dedicated
to this projector, NP24LP (V1) for
NP-PE401H (V1).
(Part No. 307-923)
Be sure to specify, this projector
"NP-PE401H (V1)" when the repair
is requested.

CAUTION : TO PREVENT ELECTRIC SHOCK, DO NOT OPEN TOP COVER. NO USER-SERVICEABLE PARTS INSIDE.

ATTENTION : AFIN DE PREVENIR UN CHOC ELECTRIQUE NE PAS ENLEVER LE COUVERCLE S'ADRESSER A UN REPARATEUR COMPETENT.

ВНИМАНИЕ : ВО ИЗБЕЖАНИЕ УДАРА ЭЛЕКТРИЧЕСКИМ ТОКОМ НЕ ОТКРЫВАЙТЕ ВЕРХНИЮ ПРИБЛИЖИ. ВНУТРИ НЕТ ДЕТАЛЕЙ ОБСЛУЖИВАЕМЫХ ПОЛЬЗОВАТЕЛЕМ.

주의 : 전기충격 방지를 위해 캐비닛을 열지 마십시오. 내부에는 사용자를 위한 서비스가능 부품이 들어있지 않습니다.

WARNING : TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

AVERTISSEMENT : POUR EVITER UN FEU OU UN RISQUE D' ELECTROCUTION NE PAS EXPOSER CET ENSEMBLE A LA PLUIE OU A L'HUMIDITE.

ПРЕДУПРЕЖДЕНИЕ : ДЛЯ СНИЖЕНИЯ РИСКА ВОЗГОРАНИЯ ИЛИ УДАРА ЭЛЕКТРИЧЕСКИМ ТОКОМ НЕ ПОДВЕРГАЙТЕ ДАННОЕ УСТРОЙСТВО ВОЗДЕЙСТВИЮ ДЖИВЯ ВЛАГИ.

경고 : 화재나 전기충격 위험을 줄이려면 비나 습기에 제품을 노출시키지 마십시오.

CAUTION : SEE INSTRUCTION MANUAL FOR LAMP REPLACEMENT.

HINWEIS : ZUM AUSWECHSELN DER LAMPE BEDIENUNGSANLEITUNG BEACHTEN. ZUR TRENNUNG VOM NETZ IST DER NETZSTECKER AUS DER STECKDOSE ZU ZIEHEN!

ВНИМАНИЕ : ПРИБ ЗАЩИТЕ РАБОТНИКОВ СТОПРИТЕ РАБОТУ ПРИСЛУШАЮЩИМ.

주의 : 램프 교환 시 안내책자를 살펴 보십시오.

イ、通風孔をふさがしないでください。 内部温度の上昇を招き故障の原因になります。 ロ、湿度の高い場所や湿気の多い場所での使用はさけてください。		
定格電圧 100V 定格入力電流 4.3A 定格周波数 50/60Hz	⚠️ 警告	高圧注意
		サービスマン以外の方はトップカバーをあけないでください。 内部には高電圧部分が多くあり、万一さわると危険です。

1
2
3
4
5
6
7
8A
8B
9
10
11 Safety Precautions

Test Mode
Troubleshooting

Table of Contents

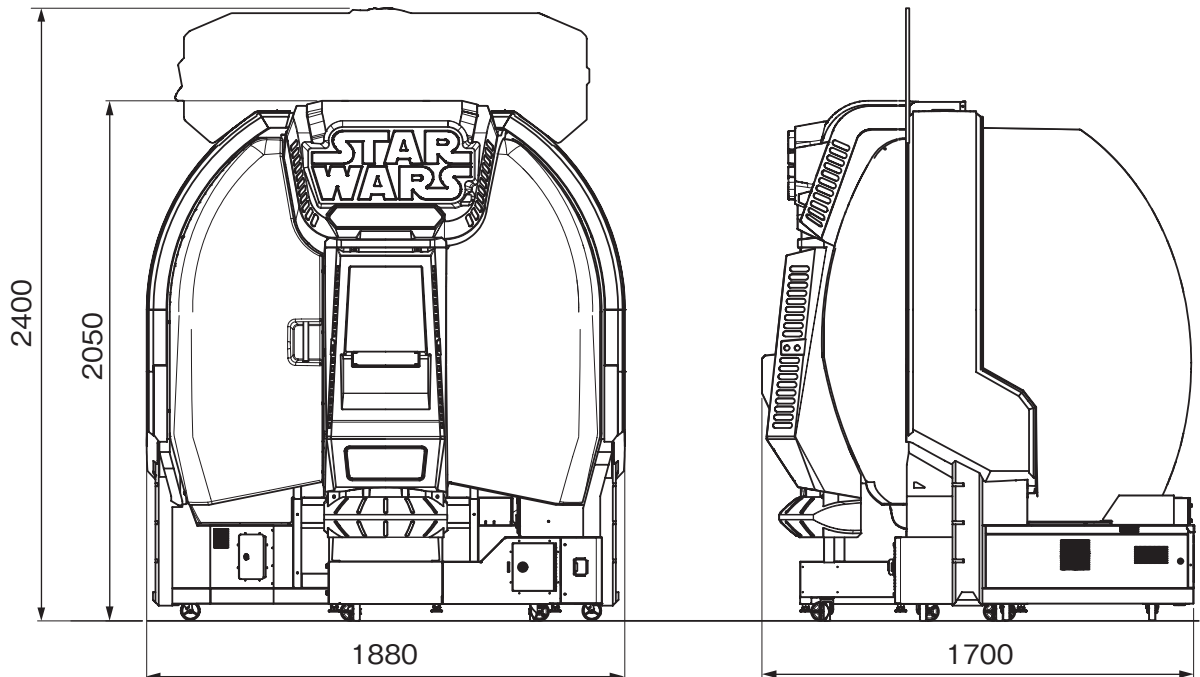
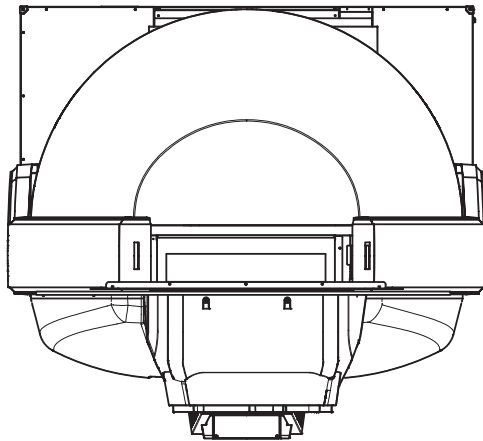
1. Safety Precautions – Be sure to read to ensure safe operation –	1
1-1 Levels of Risk	1
1-2 Definition of "Technician"	1
1-3 Critical Safety Precautions	2
1-4 Machine Warning Labels	4
2. Specifications	11
3. Package Contents	14
4. Overall Structure (Part Names)	18
5. Delivery and Installation Conditions	19
5-1 Installation Conditions	19
5-1-1 Locations Where the Machine Should Not be Installed	19
5-1-2 Play Zone to be Set Up during Installation	20
5-2 Required Dimensions for the Delivery Route (Such as Doors and Corridors)	20
6. Moving and Transportation	21
6-1 Moving (Within the Same Floor)	21
6-2 Transportation	22
6-2-1 Manual Transportation (Such as Carrying on Stairs)	22
6-2-2 Loading to and Unloading from a Vehicle	23
6-2-3 Transportation Using a Vehicle	24
7. Operation	25
7-1 People Who Should Not Play the Game	25
7-2 Consideration for Players	26
7-3 Pre-operation Inspection	26
7-3-1 Safety Inspection (Before Power On)	26
7-3-2 Safety Inspection (After Power On)	27
7-3-3 Function Inspection (After Power On)	27
7-4 Playing the Game	28
7-4-1 Outline of the Game	28
7-4-2 Operation Method	28
7-4-3 Game Flow	29
7-5 Power Switch and Adjustment Switch	30
7-5-1 Turning the Power Switch On	30
7-5-2 Adjustment Switches	32
7-6 Test Mode	33
7-6-1 Description of the Main Menu Screen (MENU)	33
7-6-2 Game Cost Settings (COIN OPTIONS)	34
7-6-3 Game Contents Settings (GAME OPTIONS)	35
7-6-4 Input/Output Test (I/O TEST)	36
7-6-5 Screen Adjustment (MONITOR TEST)	44
7-6-6 Sound Adjustment (SOUND TEST)	45
7-6-7 Displaying/Initializing Game Data (BOOKKEEPING)	46
7-6-8 Other Options (OTHERS)	47
7-6-9 Setting Network (NETWORK OPTIONS)	50
7-7 About the Network	56

7-8	About Maintenance Time	56
7-9	Cleaning	57
7-10	Projector Lamp (Lamp Unit) Life	60
8.	Technician's Manual – Must be performed by a technician –	61
8A.	Installation and Assembly	61
8A-1	Separation of Main Components (As Required by the Conditions during Delivery)	61
8A-1-1	Removing the Top Cover	61
8A-2	Assembly Preparation	62
8A-2-1	Number of Workers and Work Time	62
8A-2-2	Workflow	62
8A-2-3	Space Required during Installation	62
8A-2-4	Required Tools and Parts	62
8A-3	Assembly	63
8A-3-1	Removing the Service Door	63
8A-3-2	Connecting the Front Assembly and Rear Assembly	64
8A-3-3	Removing the Rear Joint Frame	67
8A-3-4	Installing the Lower Side Cover	68
8A-3-5	Installing the Side Cover	69
8A-3-6	Installing the Rear Cover	70
8A-3-7	Level Adjuster Adjustment	74
8A-3-8	Installing the Projector Unit	75
8A-3-9	Installing the POP	79
8A-4	Connecting the Power Cord and Ground Wire	82
8A-5	Connecting the LAN Cable (If Necessary)	84
8A-5-1	Connection Diagram of the LAN Cable	85
8A-5-2	Connecting the LAN Cable to the Machine	86
8A-6	Post-Installation Checks (Before Power On)	87
8A-7	Inserting the USB Dongle	87
8A-8	Turning the Power Switch On	88
8A-9	Post-Installation Checks (After Power On)	89
8B.	Service	90
8B-1	Inspection and Service	90
8B-1-1	Points for Inspection	90
8B-1-2	Points for Service	92
8B-2	Troubleshooting	93
8B-2-1	Overall	93
8B-2-2	Front Assembly	94
8B-2-3	Rear Assembly	94
8B-2-4	Control Lever/Throttle Lever/USB Camera	95
8B-2-5	Projector Assembly	96
8B-3	Error Messages	98
8B-4	Network Trouble	100
8B-5	Removing, Installing, and Replacing Each Part	101
8B-5-1	Front Assembly	101
8B-5-2	Control Lever Assembly	117
8B-5-3	Throttle Lever Assembly	138
8B-5-4	Coin Box Assembly	143
8B-5-5	Rear Assembly	150

8B-6	Replacing and Adjusting the Projector Unit	168
8B-6-1	Removing and Installing Each Part	168
8B-6-2	Adjusting the Projector Position	179
8B-6-3	Various Projector Settings	183
8B-6-4	On-screen Menu of the Projector	188
9.	Disposal	191
10.	Parts List	192
10-1	Overall	192
10-2	Front Assembly	193
10-3	Rear Assembly	196
10-4	Power Supply Assembly	200
10-5	Cord Box Assembly	201
10-6	Service Plate Assembly	202
10-7	Fan Assembly	203
10-8	Control Lever Assembly	204
10-9	Throttle Lever Assembly	206
10-10	Front Rack Assembly	207
10-11	Projector Assembly	208
10-12	Seat Assembly	209
10-13	Coin Assembly	210
10-13-1	Coin Assembly (U.S. model)	210
10-13-2	Coin Assembly (European model)	211
10-13-3	Coin Assembly (Asian model)	212
11.	Wiring Diagram	213
11-1	Overall Connection Diagram (U.S. model, 120 VAC)	213
11-2	Overall Connection Diagram (European model, 230 VAC)	216
11-3	Overall Connection Diagram (Asian model, 110 to 120 VAC, 220 to 240 VAC)	219

2. Specifications

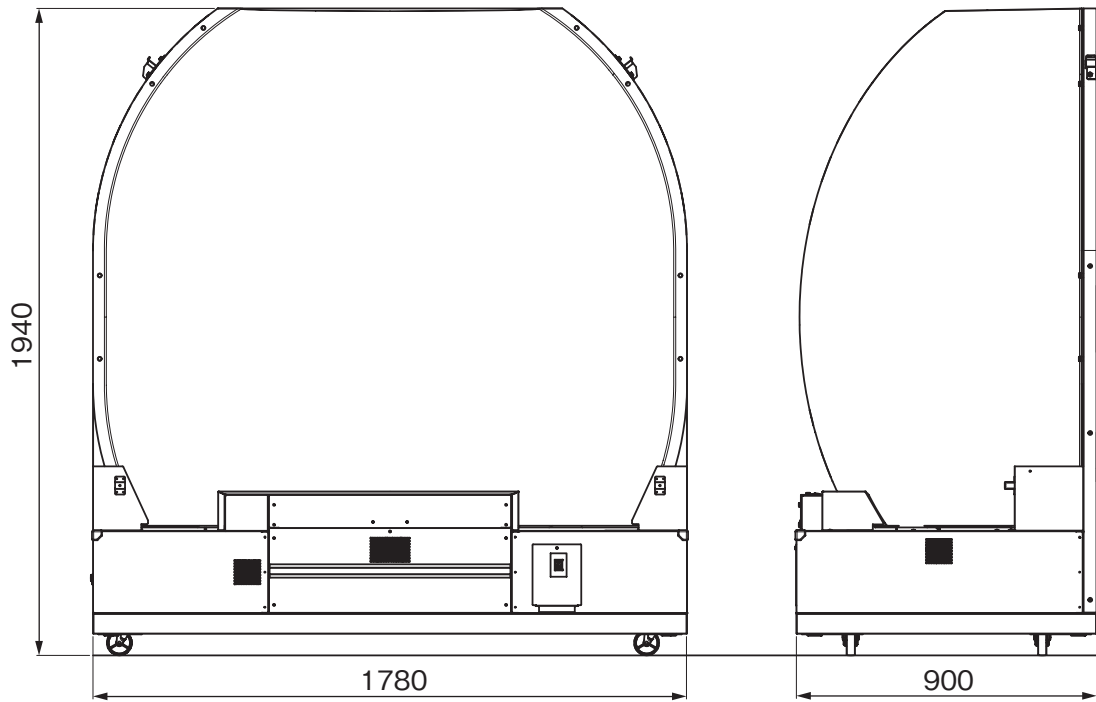
(1) Rated power supply	110 VAC 110 V ± 10 VAC 120 VAC 120 V ± 10 VAC 220 VAC 220 V ± 10 VAC 230 VAC 230 V ± 10 VAC
(2) Rated power consumption	880 W (110 VAC / 120 VAC) 880 W (220 VAC / 230 VAC)
(3) Maximum current consumption	7.5 A (110 VAC / 120 VAC) 3.9 A (220 VAC / 230 VAC)
(4) Display unit	180° dome screen + projector with special lens
(5) Dimensions	
[1] When installed	Main unit: Width (W) 1,880 x Depth (D) 1,700 x Height (H) 2,050 [mm] Installation size: Width (W) 1,880 x Depth (D) 1,700 x Height (H) 2,400 [mm]



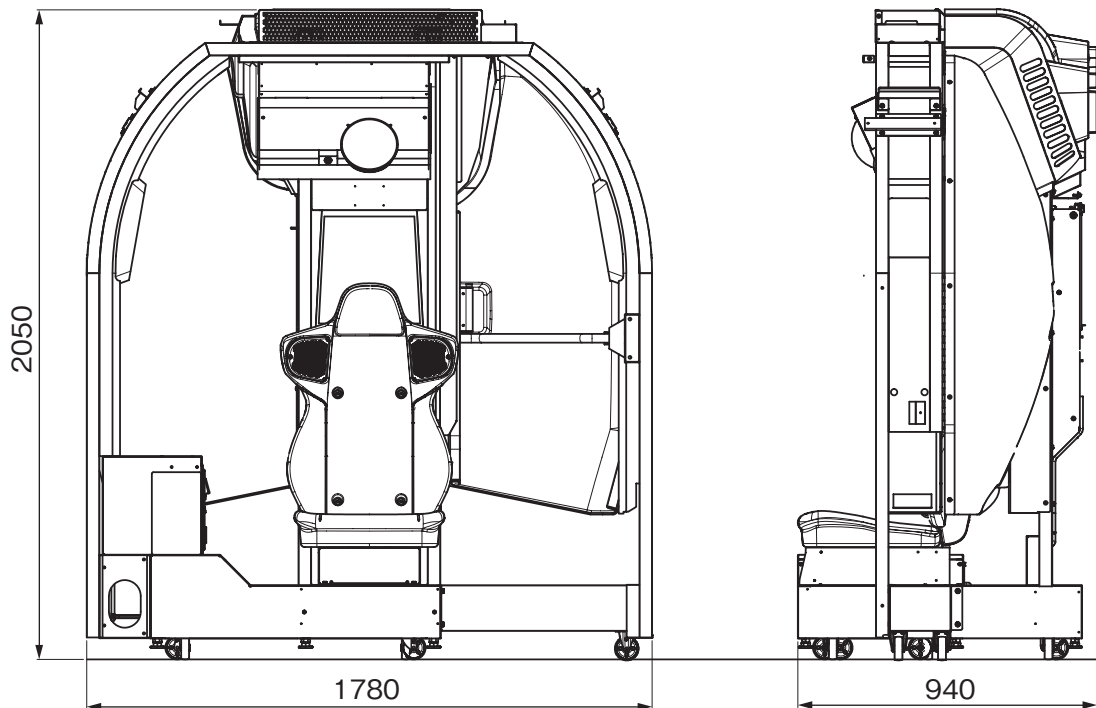
2. Specifications

[2] When disassembled

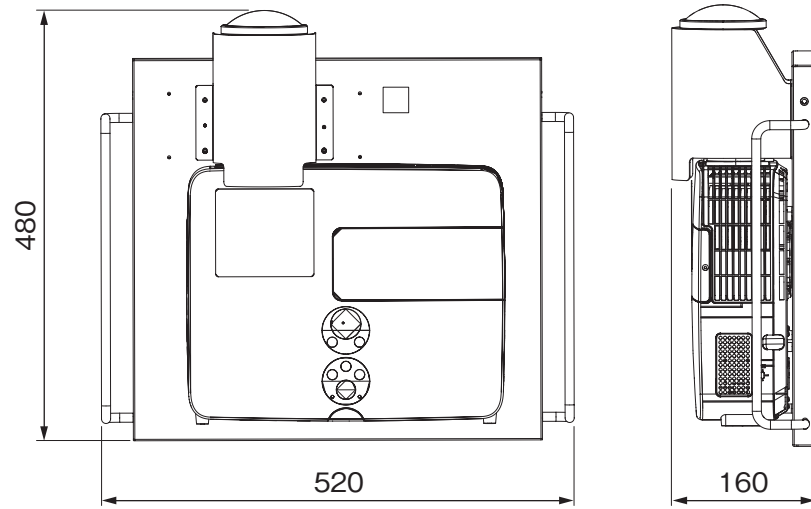
· Front assembly Width (W) 1,780 x Depth (D) 900 x Height (H) 1,940 [mm]



· Rear assembly Width (W) 1,780 x Depth (D) 940 x Height (H) 2,050 [mm]



· Projector unit Width (W) 520 x Depth (D) 480 x Height (H) 160 [mm]
 NP-PE401H (V1)



(6) Weight

- [1] When installed 375 kg
- [2] When disassembled
 - Front assembly 160 kg
 - Rear assembly 180 kg
 - Projector unit 10 kg

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8A
- 8B
- 9
- 10
- 11

Specifications

Test Mode

Troubleshooting

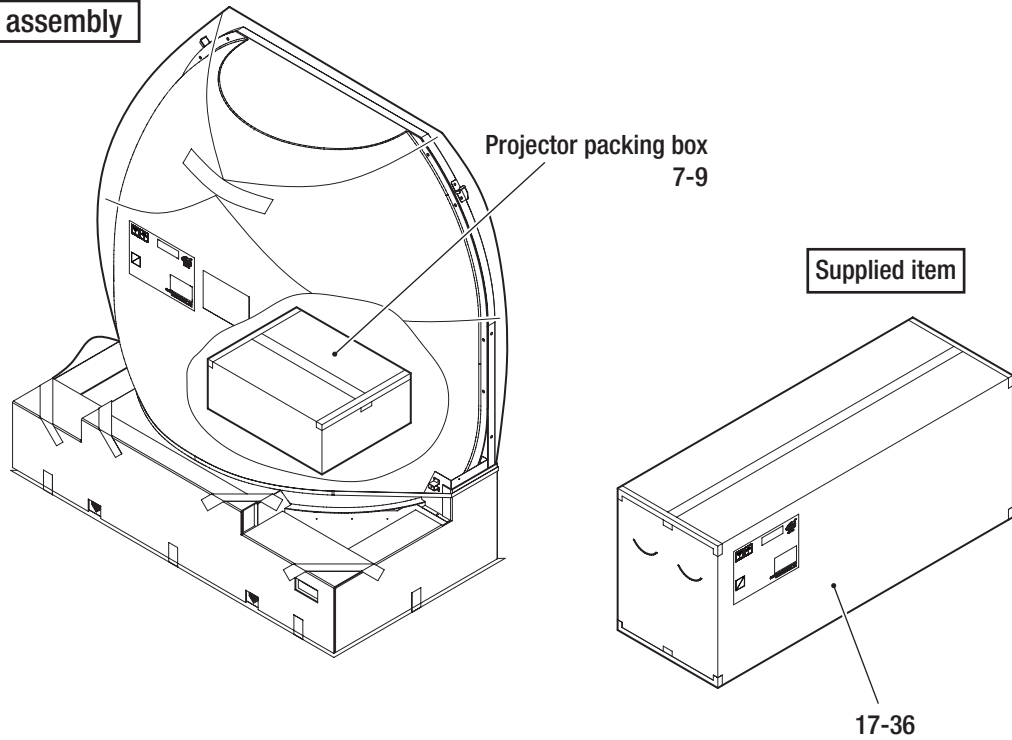
3. Package Contents

The following items (three packages) are included when this machine is shipped.

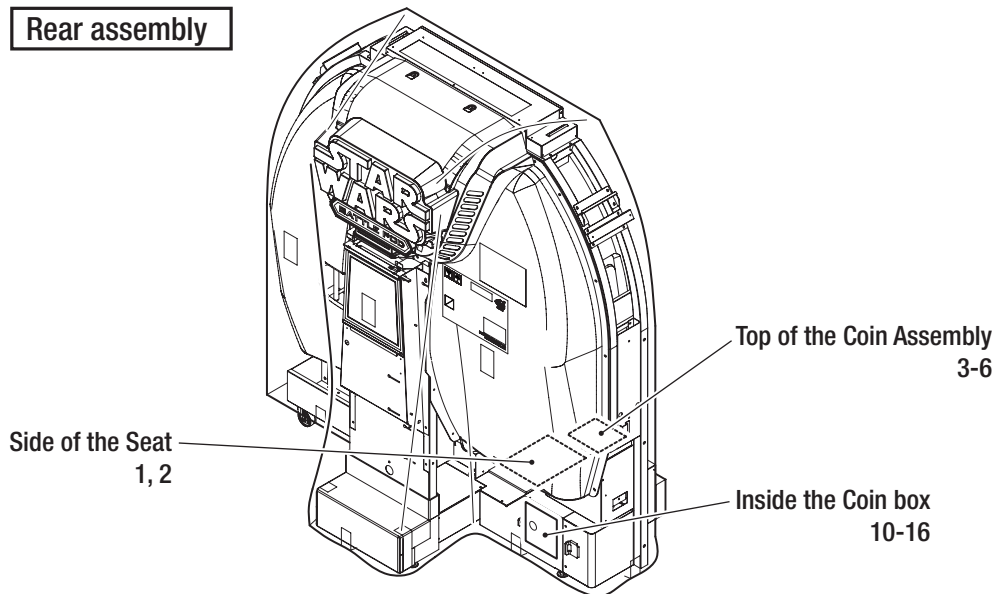
NOTICE

- Make sure that all the items below are contained in the product packages.
- If any items are missing, contact your distributor.
- The packing boxes are reused when transporting the machine, so store them in a safe place and do not dispose of them.
- Be sure to pack the projector unit in the dedicated packing box for transportation.

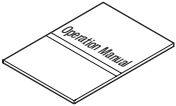
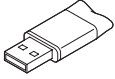




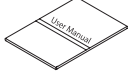








Front assembly



Rear assembly



● Supplied Item List

No.	Name	Specifications	Qty.
1	Operation Manual (this manual)		1
2	USB dongle	Note: This part may be delivered separately. 	1
3	Service key	For Asian models, this is the same as the Coindoor key. 	2
4	Coindoor key	U.S. and European model only 	2
5	Coinbox key		2
6	bill validator box key	U.S. model only 	2
7	Operation manual of the projector		1
8	Remote controller for projector		1
9	Batteries for remote controller	Size AAA 	2
10	Torx wrench	For M5, T25 	1
11	Torx bolt	M5 x 12 (Used in P. 68 to P. 78) 	40
12	Flat washer	Ø16 x Ø5.5 x t1.6 (Used in P. 69) 	4
13	Low head cap screw	M5 x 16 (Used in P. 73) 	4
14	Countersunk washer nut	M5 (Used in P. 71) 	6
15	Flange socket bolt	M8 x 16 (Used in P. 64) 	16

1

2

3

4

5

6

7

8A

8B

9

10

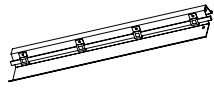
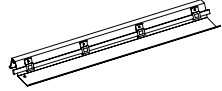
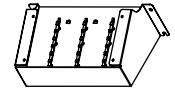
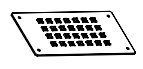
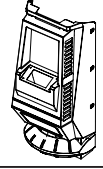
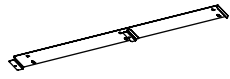
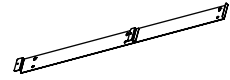
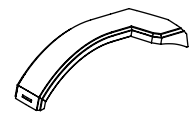
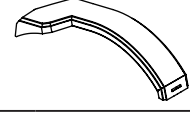
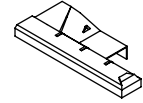
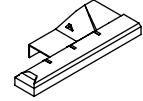
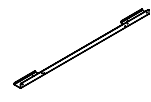


11

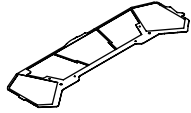

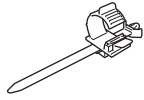
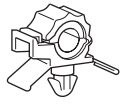


Package Contents

Test Mode

Troubleshooting

3. Package Contents

No.	Name	Specifications	Qty.
16	Flange socket bolt	M6 x 12 (Used in P. 78)	2
17	LED Unit (L)		1
18	LED Unit (R)		1
19	Console box		1
20	Console panel		1
21	Rear cover		1
22	Side joint (L)		1
23	Side joint (R)		1
24	Side cover (L) SW		1
25	Side cover (R) SW		1
26	Lower side cover (L) SW	With cover joint assembled 	1
27	Lower side cover (R) SW		1
28	POP bracket		1
29	POP bracket (L)		1
30	POP bracket (R)		1

No.	Name	Specifications	Qty.
31	POP board		1
32	Power cord	U.S. and European model only 	1
33	Clamp	For power cord 	1
34	Clamp	For LAN cable NBLINE model only 	1
35	Lock bar (B) B	U.S. model only 	1
36	Lock bar (C)	U.S. and European model only 	1

1

2

3

4

5

6

7

8A

8B

9

10

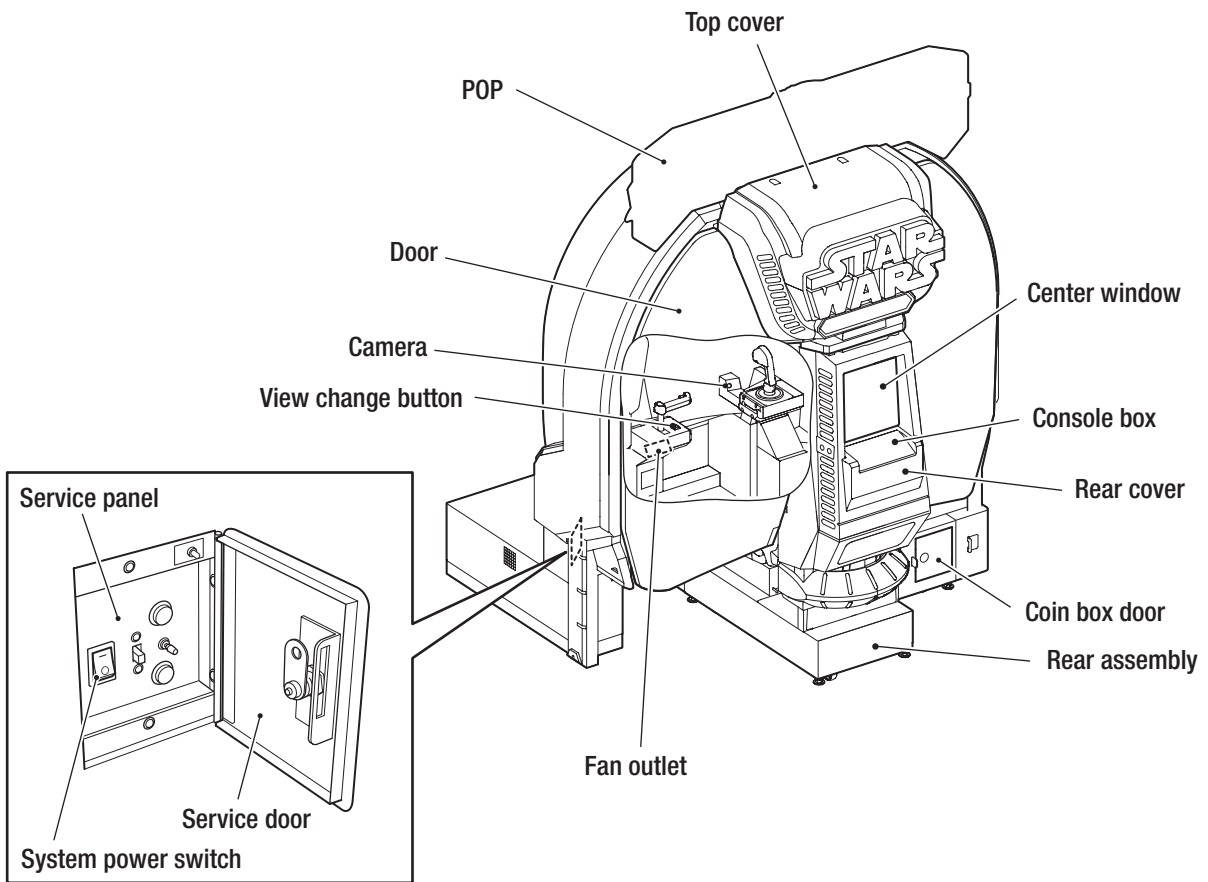
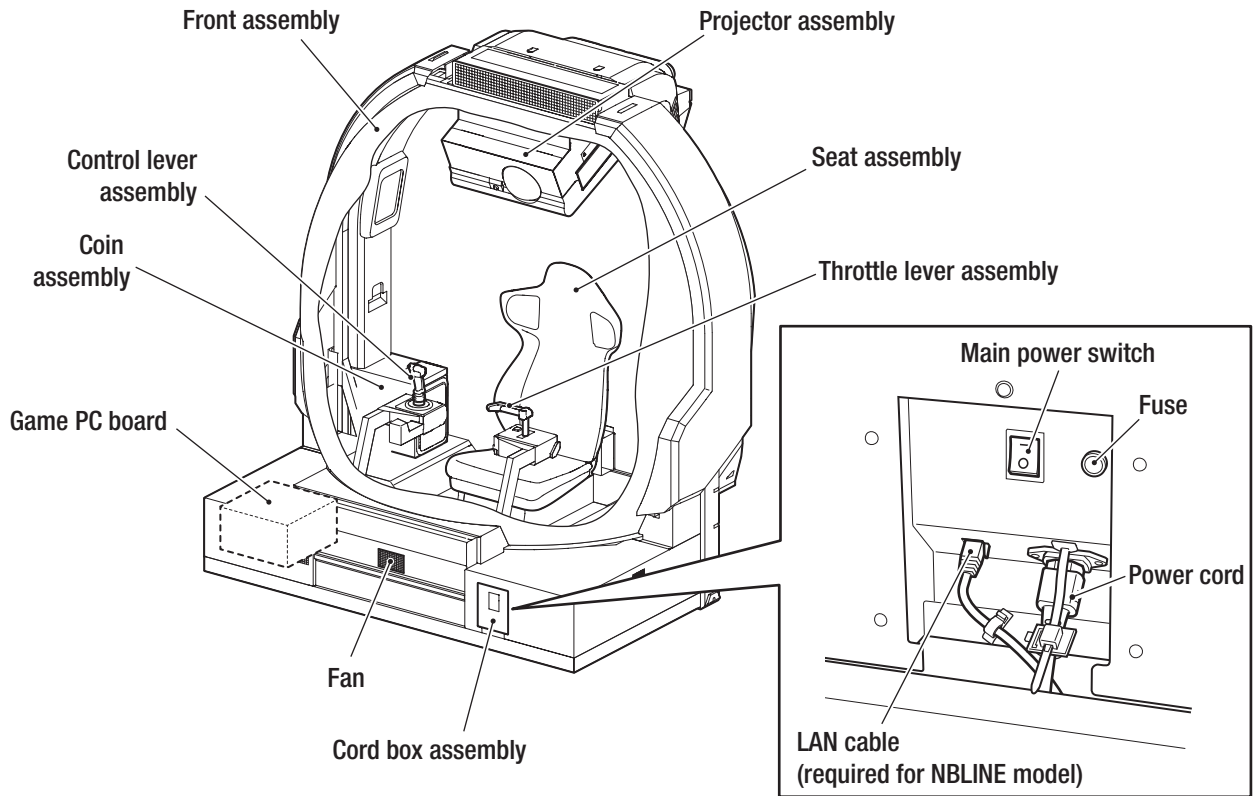
11

Package Contents

Test Mode

Troubleshooting

4. Overall Structure (Part Names)



5. Delivery and Installation Conditions

WARNING

- Install the machine according to the instructions in this Operation Manual. Failure to follow these instructions may result in fire, electric shock, injury or malfunction.
- Fully insert the power cord plug into the outlet. Poor contact may generate heat and result in fire or burns.
- Be sure to install the ground wire. Failure to install the ground wire may result in electric shock in the event of electrical leakage. (See P-82 "8A-4 Connecting the Power Cord and Ground Wire".)
- Install the machine securely by using the level adjusters. Unstable machine installation may result in accident or injury. (See P-74 "8A-3-7 Level Adjuster Adjustment".)

5-1 Installation Conditions

WARNING

- Make sure that the ventilation holes on the back, sides or top of the machine are not obstructed by any objects, walls, etc. If the ventilation holes are blocked, the inside of the machine may become hot, which may result in fire or malfunction.

5-1-1 Locations Where the Machine Should Not be Installed

WARNING

- This machine is designed for indoor use. Never install the machine outdoors or in the following locations.
 - A location exposed to direct sunlight
 - A location exposed to rain or water leaks
 - A damp location
 - A dusty location
 - A location close to heaters
 - A hot location
 - An extremely cold location
 - A location exposed to condensation caused by temperature differences
 - A location that obstructs an emergency exit or fire extinguishing equipment
 - An unstable location or a location exposed to vibration
- The appliance is not suitable for installation in an area where a water jet could be used.

Avoid use at altitudes of 1,500 m or more above sea level, as this may adversely affect product life.

1

2

3

4

5

6

7

8A

8B

9

10

11

Delivery and Installation Conditions

Test Mode

Troubleshooting

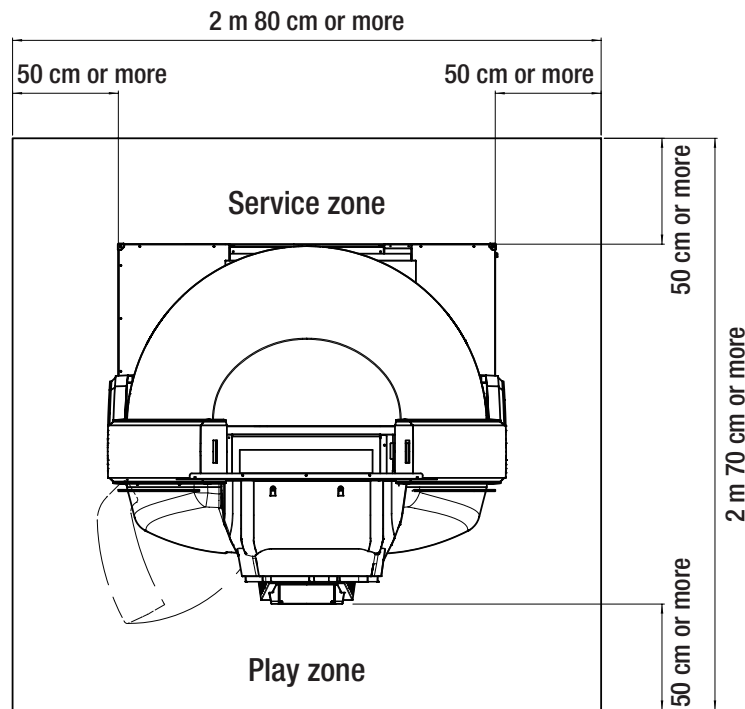
5-1-2 Play Zone to be Set Up during Installation

⚠ CAUTION

- Create a play zone around the machine so that players leaving the machine will not hit bystanders or passersby.

NOTICE

- When installing the machine, create a play zone as shown in the figure below. Be sure to secure this play zone, as it is also needed for service work.
- A floor-to-ceiling height of 2 m 60 cm or more is required.



5-2 Required Dimensions for the Delivery Route (Such as Doors and Corridors)

The dimensions of the machine when it is shipped are as follows. Entryways and corridors must be larger than the dimensions noted below.

- Front assembly Width (W) 1,780 x Depth (D) 900 x Height (H) 1,940 [mm]
- Rear assembly Width (W) 1,780 x Depth (D) 940 x Height (H) 2,050 [mm]

Removing the top cover will help to reduce the size in the depth direction. The depth of the rear assembly is 910 mm when the top cover is removed. (See P-61 "8A-1 Separation of Main Components (As Required by the Conditions during Delivery)".)

6. Moving and Transportation

! WARNING

- Do not leave the machine on a slope. It may fall over or cause an accident.

6-1 Moving (Within the Same Floor)



- Be sure to turn off the power switch before starting work.
- Move the machine carefully to avoid subjecting it to impact.
- The projector unit is a precision electronic component. Remove the projector unit and pack the projector unit in the dedicated packing box for transportation whenever possible.
- When disassembling the machine into the front and rear assemblies for moving, attach the rear joint frame to the rear assembly. (See P-67 "8A-3-3 Removing the Rear Joint Frame".)
- Even when moving the machine only a short distance, be sure to raise the level adjusters to their highest level. (See P-74 "8A-3-7 Level Adjuster Adjustment".)
- Handle the LAN cable and power cord with care to avoid damage to the parts. Be especially careful with the LAN cable connector when inserting or removing it. (See P-82 "8A-4 Connecting the Power Cord and Ground Wire" and P-84 "8A-5 Connecting the LAN Cable (If Necessary)".)
- Be careful not to apply force to the oval dome, rear window, door and other plastic parts when moving the machine.

1

2

3

4

5

6

7

8A

8B

9

10

11

Moving and Transportation

Test Mode

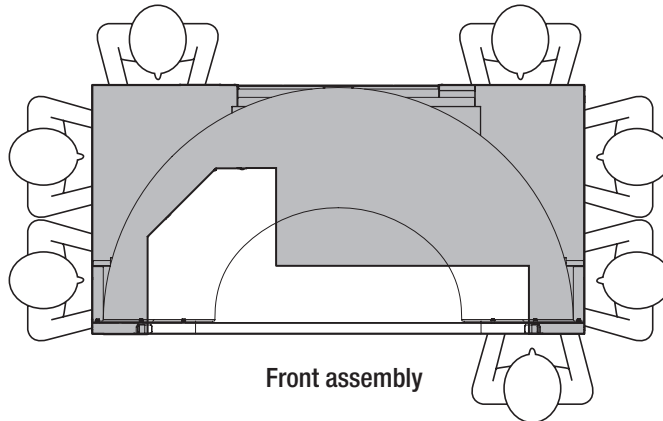
Troubleshooting

6-2 Transportation

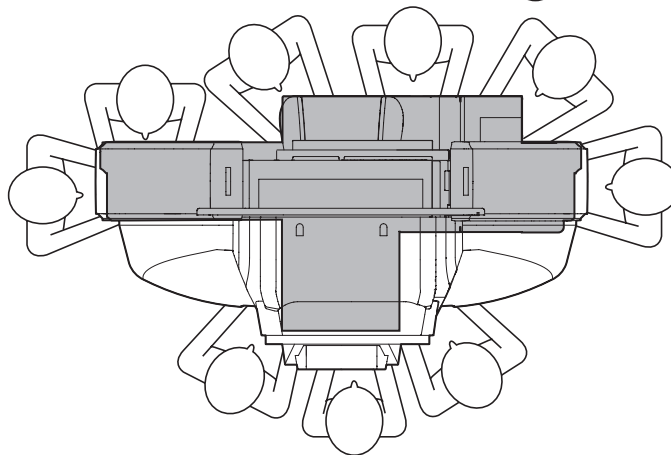
6-2-1 Manual Transportation (Such as Carrying on Stairs)

WARNING

- Before transporting the machine manually, be sure to first remove the projector unit, and disassemble the machine into the front and rear assemblies. (See P-75 "8A-3-8 Installing the Projector Unit" and P-63 "8A-3 Assembly".)
- Attempting to transport the fully assembled machine may result in an accident.
- When transporting the machine manually, be sure to use the following number of people. Overburdening yourself may result in accident or injury.
 - Front assembly (160 kg): 7 people or more
 - Rear assembly (180 kg): 8 people or more



Front assembly



Rear assembly

NOTICE

- Move the machine carefully to avoid subjecting it to impact.
- After disassembling the machine into the front and rear assemblies, attach the rear joint frame to the rear assembly. (See P-67 "8A-3-3 Removing the Rear Joint Frame".)
- Secure the door using cord or tape so that it does not open when transporting the rear assembly.
- Be sure to pack the projector unit in the dedicated packing box for transportation.
- Be careful not to apply force to the oval dome, rear window, door and other plastic parts when moving the machine.

6-2-2 Loading to and Unloading from a Vehicle

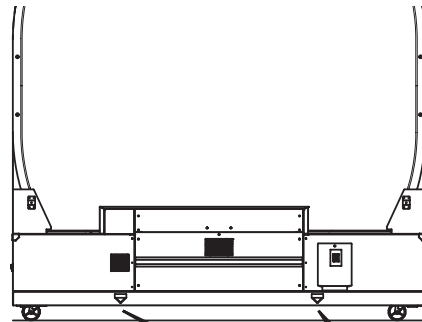

WARNING

- When using a forklift to transport the machine, observe the position of the fork sticker. If the fork is inserted in a location other than that indicated by the fork sticker, the machine may tip and fall over, or be subjected to another type of accident.

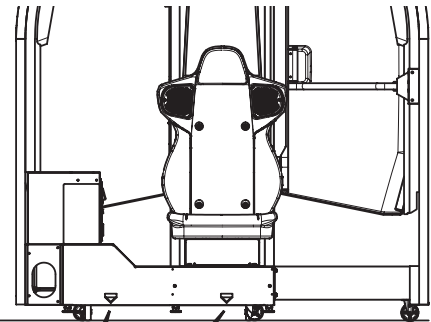

NOTICE

- Move the machine carefully to avoid subjecting it to impact.
- Be careful not to apply force to the oval dome, rear window, door and other plastic parts when moving the machine.

Front assembly



Rear assembly



Fork sticker

1

2

3

4

5

6

7

8A

8B

9

10

11

Moving and Transportation

Test Mode

Troubleshooting

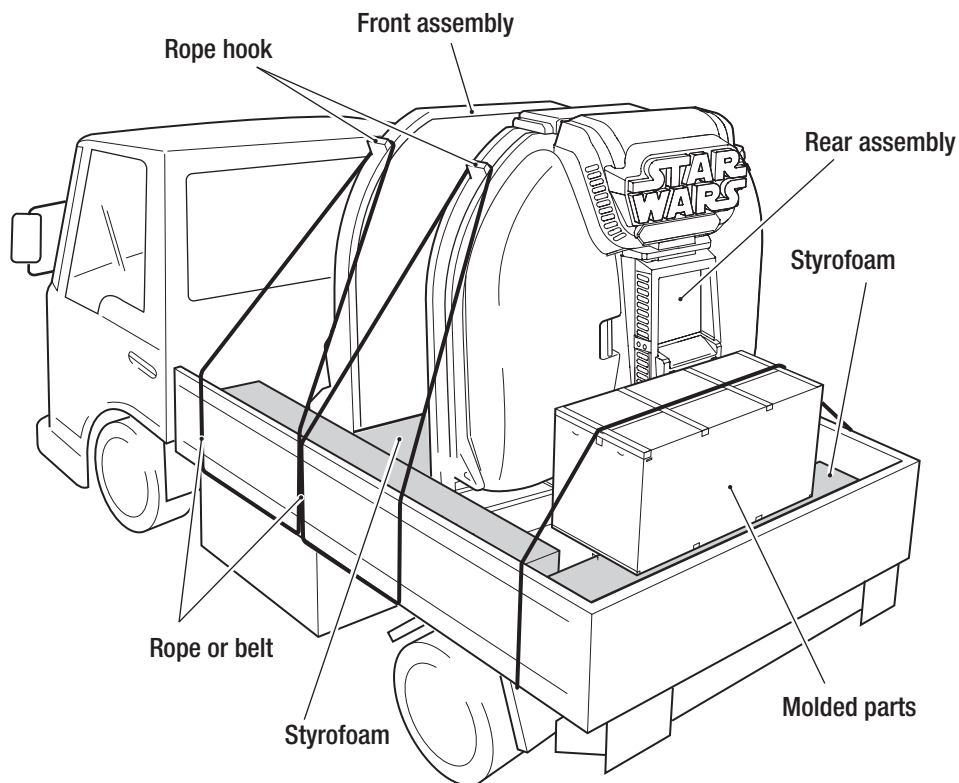
6-2-3 Transportation Using a Vehicle

WARNING

- When transporting the machine on a vehicle, secure the machine firmly so that it does not move while being transported. Failure to secure the machine may result in an accident.

NOTICE

- Move the machine carefully to avoid subjecting it to impact.
- When securing the machine with a rope, observe the following.
 - Be sure to secure the machine with ropes or belts in the positions shown in the figure below.
 - Place blankets or other shock absorbing material between the machine and the ropes or belts to protect the machine surfaces.
 - Be careful not to apply force to the oval dome, rear window, door and other plastic parts.
- When transporting the machine in rainy weather, use a vehicle with a cargo cover, a container truck, or similar vehicle to protect the machine from direct exposure to rain.



7. Operation

WARNING

- Should any abnormalities occur, turn off the power switch immediately to stop operations. Then, be sure to disconnect the power cord plug from the outlet. Operating the machine while the abnormality persists may result in fire or accident.
 - Dust accumulating on the power cord plug may result in fire. Inspect the plug regularly and remove any dust.
 - Fully insert the power cord plug into the outlet. Poor contact may generate heat and result in fire or burns.
 - Before operating the machine, be sure to check that installation has been performed according to the instructions and specified procedures in this Operation Manual (see P-19 "5. Delivery and Installation Conditions"). Failure to install the machine correctly may result in fire, electric shock, injury or malfunction.
 - The warning labels attached to the machine contain important information for ensuring safety. Be sure to observe the following. (For information about where to attach the warning labels, see P-4 "1-4 Machine Warning Labels".)
 - In order to ensure that the warning labels attached to the machine are always clearly visible, install the machine in an appropriate, sufficiently lit location and keep the labels clean at all times. Also, make sure that the labels are not hidden by other machines or objects.
 - Do not remove or alter the warning labels.
 - If a warning label becomes excessively dirty or damaged, replace it with a new one. To order warning labels, contact your distributor.
 - In order to ensure safe use of the machine, be sure to perform the pre-operation inspection (P-26 "7-3 Pre-operation Inspection"), service (P-90 "8B-1 Inspection and Service") described in this Operation Manual.
 - Set the cabinet volume within a range that allows the player to hear alarms and warning announcements within the operating facility.
- Omitting these inspections or service may result in an accident.

7-1 People Who Should Not Play the Game

CAUTION

- In order to ensure the safety of players, be careful not to let people play under the following conditions. It may result in an accident.
 - People who are sensitive to light such as strobe lights
 - People whose feet cannot reach the floor when sitting on the seat
 - People under the influence of alcohol
 - People who are injured or ill
 - People who are pregnant
 - People with heart conditions
 - People with other ailments
 - People whose behavior is against what is described on the warning labels on this machine.
- The machine is designed for one player. To prevent accidents, be careful not to let two or more people attempt to enter the machine at the same time.

1

2

3

4

5

6

7

8A

8B

9

10

11

Operation

Test Mode

Troubleshooting

7-2 Consideration for Players

CAUTION

- If players start feeling ill due to game images or light stimulation, they must stop playing and take a break immediately.
- In rare cases, stimulation by lights or video images may cause the player to have a seizure or lose consciousness. If this happens, make sure that the player gets immediate medical assistance. In particular, if the player is under 6 years old, be sure to advise the parents to keep an eye on their child.

7-3 Pre-operation Inspection

Check the points below before starting machine operations.

If there is an abnormality, resolve it by referring to P-93 "8B-2 Troubleshooting".

WARNING

- Before operating the machine, check the following locations. This is necessary to prevent accident or injury.
- Do not operate this machine when any part is damaged, broken, or deteriorated, or when this machine is not correctly installed. Doing so may cause injury to the players and the people around them. If you find any abnormalities, replace the affected parts immediately. To order a fuse, contact your distributor.

7-3-1 Safety Inspection (Before Power On)

- (1) Are the warning labels attached? (See P-4 "1-4 Machine Warning Labels".)
- (2) Are all warning labels legible? (See P-4 "1-4 Machine Warning Labels".)
- (3) Have all the level adjusters been adjusted? (See P-74 "8A-3-7 Level Adjuster Adjustment".)
- (4) Is the specified play zone provided? (See P-20 "5-1-2 Play Zone to be Set Up during Installation".)
- (5) Are the power cord and the LAN cable laid out safely so that they will not cause players or other customers to trip over them?
- (6) Is the rubber cover of the control lever torn or removed?
- (7) Is the finger guard of the throttle lever cracked or removed?
- (8) Are the parts that the player touches damaged, such as the seat and the control lever?

7-3-2 Safety Inspection (After Power On)

Inspect the following points after turning on the power switch. If you discover an abnormality, turn off the power switch immediately to stop operations.

Then, disconnect the power cord plug from the outlet and contact your distributor.

- (1) Is any part of the power cord or plug abnormally hot?
- (2) Does touching the machine give a tingling electric shock?
- (3) Is there a burning smell, abnormal noise or vibration?
- (4) Is there any other abnormality or malfunction?

7-3-3 Function Inspection (After Power On)

- (1) Check the images. (Are images projected from the projector?) (See P-44 "7-6-5 Screen Adjustment (MONITOR TEST)".)
- (2) Check the audio. (Is sound emitted from each speaker?) (See P-45 "7-6-6 Sound Adjustment (SOUND TEST)".)
- (3) Check the lamps. (Do the view change buttons light up?) (See P-40 "(c) OUTPUT TEST".)
- (4) Check each LED module (Does the LED module light up?) (See P-40 "(c) OUTPUT TEST".)

To inspect the following points, press the Service switch and actually play the game. (See P-32 "7-5-2 Adjustment Switches".)

- (1) Check the operation of the control lever. (Does the course of the vehicle change when you operate the control lever?)
- (2) Check the operation of the throttle lever. (Does the vehicle speed up or slow down when you move the throttle lever forward or backward?)
- (3) Check the operations of the main trigger and the special button. (Is a bullet fired when you press the button?)
- (4) Check the operation of the vibration motor. (Does the control lever vibrate when a bullet is fired?)
- (5) Check the operation of the fan.
- (6) Check the operations of the view change button. (Does the display change when you press the button?)

1

2

3

4

5

6

7

8A

8B

9

10

11

Operation

Test Mode

Troubleshooting

7-4 Playing the Game

7-4-1 Outline of the Game

This machine enables players to take part in sensory dogfight shooting games. Players ride well-known vehicles from the Star Wars movies such as X-wing Fighters and Speeder Bikes to shoot down enemy vehicles quickly in order to carry out their missions.

7-4-2 Operation Method

Operation Method When Selecting the Mission

(1) Control lever

- Tilt the lever forward, backward, right and left to select a mission.
- Press the main trigger or the special button to enter the mission.

Operation Method during the Mission

(1) Control lever

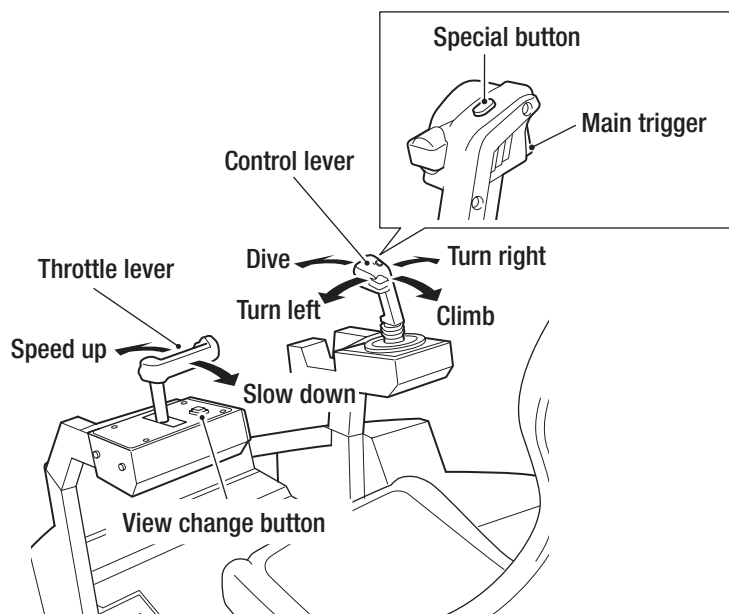
- Tilt the lever forward, backward, right and left to pilot your vehicle.
 - Tilt forward/backward: Dives/climbs
 - Tilt to the right/left: Turns to the right/left
- When you operate the main trigger or the special button, the corresponding weapons will be fired.

(2) Throttle lever

- Tilt the lever forward or backward to speed up or slow down the vehicle.
 - Tilt forward: The vehicle speeds up temporarily and closes the distance with the enemy vehicle.
 - Tilt backward: The vehicle slows down temporarily and the distance to the enemy vehicle widens.

(3) View change button

- Press the button to switch between showing/hiding the cockpit.



7-4-3 Game Flow

How to Start the Game

Insert a coin to start the game. The mission selection screen will be displayed.

Selecting the Mission

Select a mission from among five missions, each with a different level of difficulty.

Missions

(1) Basic Dogfight

Operate the control lever and throttle lever to align the lock-on circle onto enemy vehicles that appear before you, attack the enemy vehicle by pulling the main trigger, and attempt to deliver a damaging blow to shoot it down.

You can inflict great damage on the enemy vehicle if you align the center of the lock-on circle with the center of the enemy vehicle.

If you keep aligning the center of the lock-on circle with the enemy vehicle, it will be locked on.

Press the special button while locking on to carry out a crushing attack and quickly shoot down the enemy vehicle.

(2) Counterattack by Enemy Vehicles

If you fail to shoot down the enemy vehicle quickly, it will counterattack. If your vehicle is attacked by the enemy vehicle, the endurance of your vehicle will fall. If it reaches 0, the mission will end in failure.

(3) Final Dogfight

Toward the end of each mission, the final dogfight takes place. You must accomplish your goal within the time limit. If you fail to accomplish your goal, the mission will end in failure.

Results

Regardless of success or failure, when the mission finishes, you can display the result screen to check your score and rank.

When you successfully complete your mission for the first time, you can enter your name.

Continue

Display the continue selection screen after displaying the results. If you do not insert a coin and select continue at this time, the game will be over.

If you continue, you will be able to select from among five missions. You can select a mission that you have successfully completed.

Ranking

The ranking list is displayed when the game ends.

The most recent players compete in this ranking. Old data is automatically deleted in chronological order.

1

2

3

4

5

6

7

8A

8B

9

10

11

Operation

Test Mode

Troubleshooting

7-5 Power Switch and Adjustment Switch

7-5-1 Turning the Power Switch On

This machine has the following two types of power switches.

(a) Main power switch (on the cord box assembly)

This switch is used to turn ON/OFF the power switch of the machine.

(b) System power switch (inside the service door)

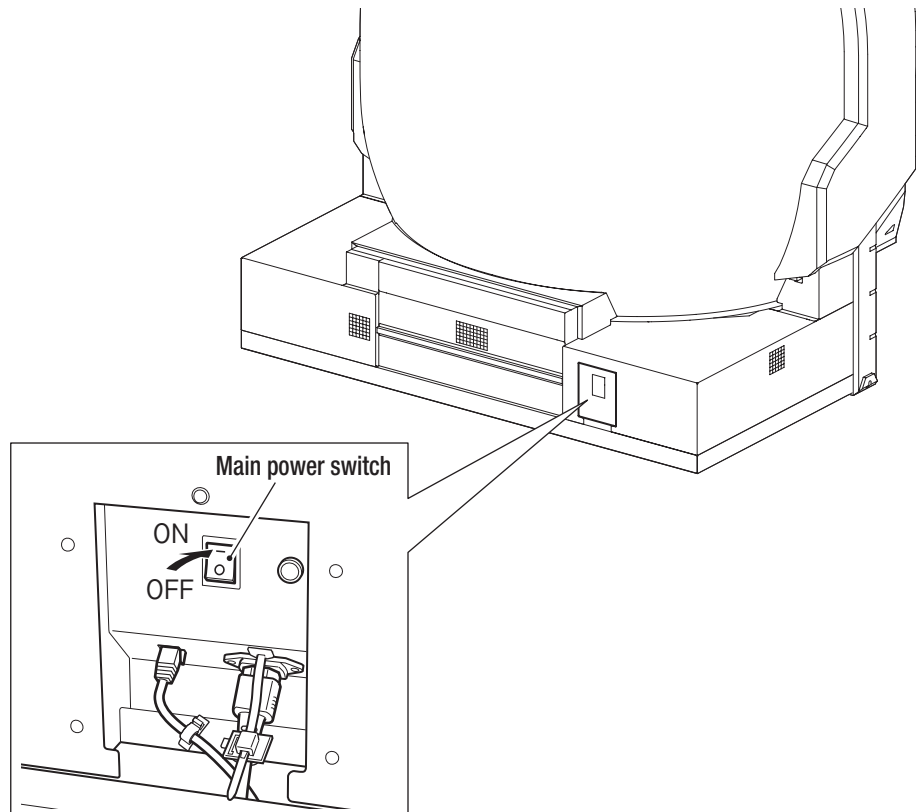
This switch is used to forcibly reboot the game PC board should any abnormalities occur in the system. To reboot the game PC board, set the system power switch to OFF, wait for 30 seconds or more, and then set the switch to ON again.

To start the machine, turn both the main power switch and the system power switch ON.

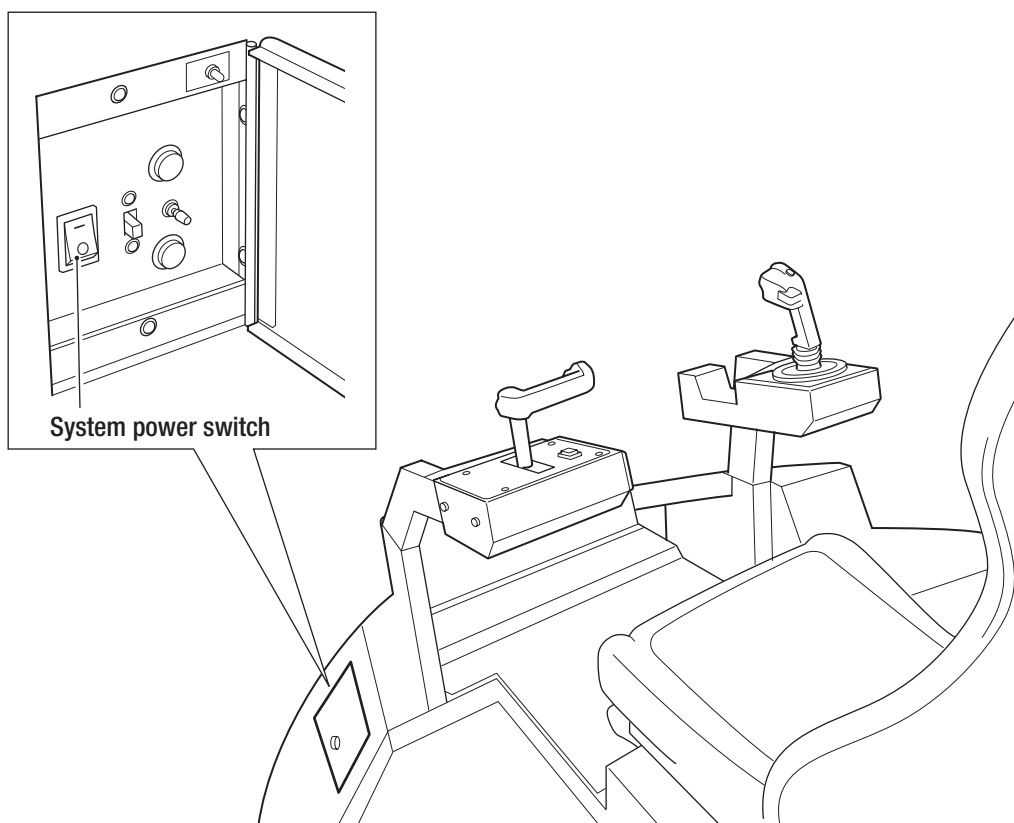


- To reboot the game PC board, use the system power switch. When the main power switch is used, it will take some time to restart the projector, and the display may remain blank for approximately 10 minutes.

- 1 Turn on the main power switch located on the front assembly.



- 2** Open the service door using the supplied service key.
- 3** Set the system power switch to ON.



1

2

3

4

5

6

7

8A

8B

9

10

11

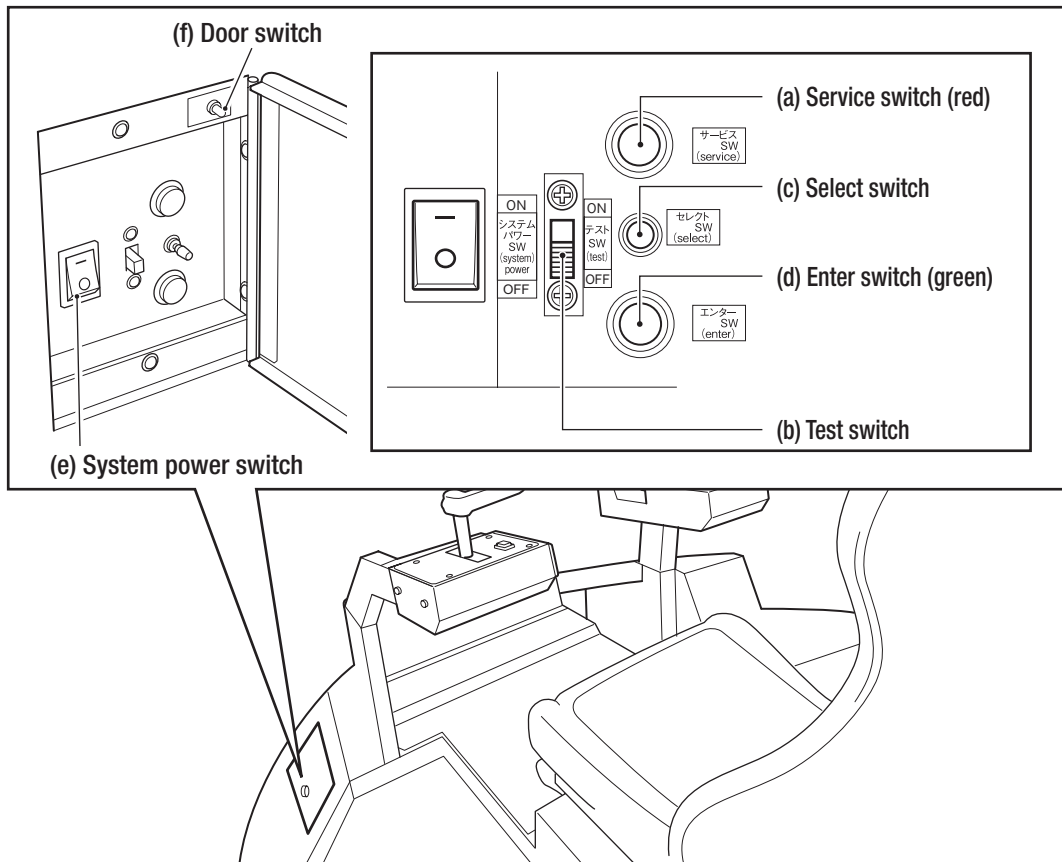
Operation

Test Mode

Troubleshooting

7-5-2 Adjustment Switches

The adjustment switches are located inside the service door.



(a) Service switch (red)

Press this button to increase the credit count without operating the coin counter. When credits are added using the Service switch, the side LED lamp on the rear cover lights up green.

(b) Test switch

Set this switch to ON to enter Test mode. Test mode is used to set the game cost and perform the I/O test.

(c) Select switch

Flip this switch up or down to select an item or setting to be confirmed or changed.

(d) Enter switch (green)

After selecting an item or setting with the Select switch, press this switch to enter or execute the selection.

(e) System power switch

Use this switch to reboot the game PC board when an abnormality occurs in the game screen. To reboot the game PC board, set the system power switch to OFF, wait for 30 seconds or more, and then set the system power switch to ON again.

(f) Door switch

To use the Service switch, open the service door and turn ON the door switch.



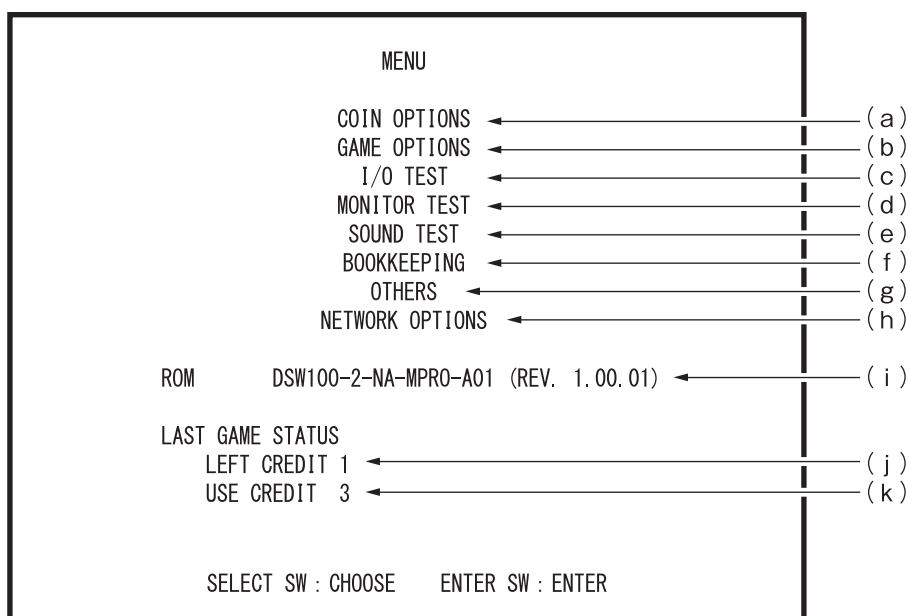
- To reboot the game PC board, use the system power switch.

When the main power switch is turning off, wait for 10 minutes or more before turning it on to protect the projector.

7-6 Test Mode

7-6-1 Description of the Main Menu Screen (MENU)

- 1** Use the service key to unlock and open the service door, and set the Test switch to ON. The MENU screen appears.
- 2** Flip the Select switch up or down to select the item.
The selected item blinks.
- 3** Press the Enter switch to enter the selected item.
When the selection is entered, the display changes to the selected test menu.
- 4** When all the adjustments are finished, set the Test switch to OFF.
The display returns to the game screen.



MENU screen

Item	Description	Reference section
(a) COIN OPTIONS	Sets the game cost.	P-34
(b) GAME OPTIONS	Sets the game contents.	P-35
(c) I/O TEST	Performs I/O test of switches and devices.	P-36
(d) MONITOR TEST	Adjusts the monitor.	P-44
(e) SOUND TEST	Adjusts the volume.	P-45
(f) BOOKKEEPING	Reviews the operating time and game data.	P-46
(g) OTHERS	Sets the time and the language.	P-47
(h) NETWORK OPTIONS	Displays information on the network. Available only on NBLINE-compatible machines.	P-50
(i) ROM	Displays software version or revision.	-
(j) LEFT CREDIT	Displays the number of credits remaining from the last time the game was played.	-
(k) USE CREDIT	Displays the number of credits used the last time the game was played.	-

1

2

3

4

5

6

7

8A

8B

9

10

11

Operation

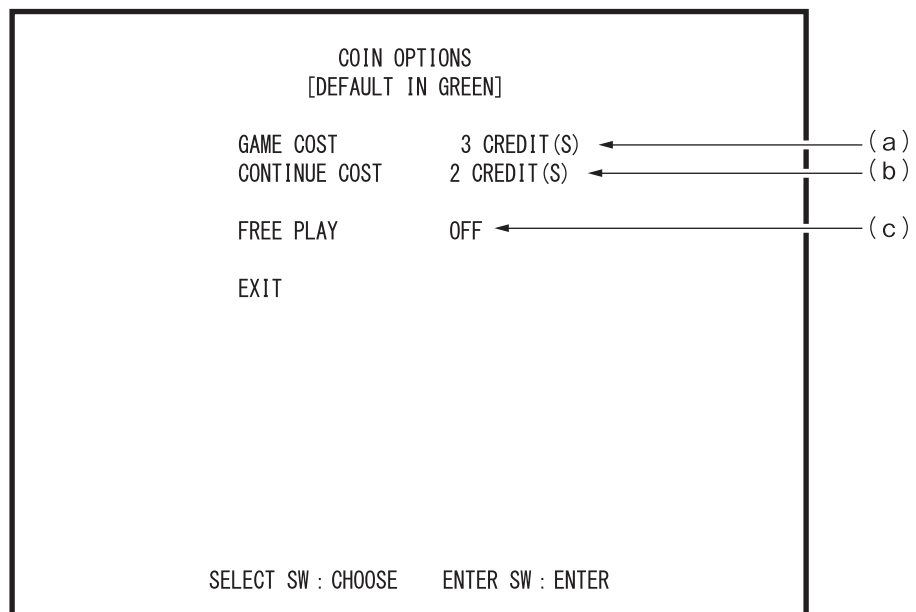
Test Mode

Troubleshooting

7-6-2 Game Cost Settings (COIN OPTIONS)

This screen is used to change the settings of the game cost and free play.

- 1** In the MENU screen, select COIN OPTIONS and press the Enter switch. The COIN OPTIONS screen appears.
- 2** Flip the Select switch up or down to select the item.
The selected item blinks.
- 3** Press the Enter switch to enter the selected item, and use the Select switch to change the setting. After changing the setting, press the Enter switch to return to the item selection.
- 4** Select EXIT and press the Enter switch to return to the MENU screen.



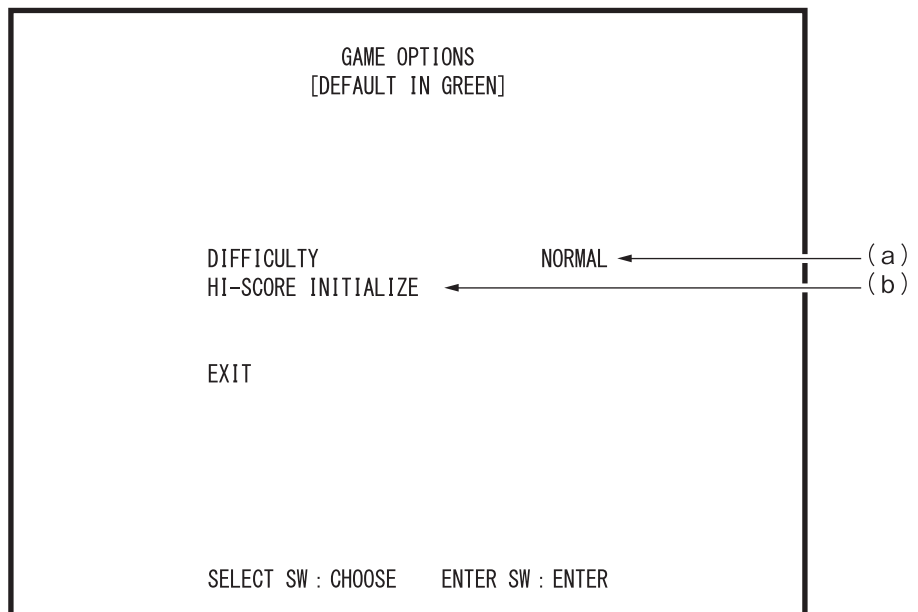
COIN OPTIONS screen

Item	Description	Default
(a) GAME COST	Sets the number of coins required for game play. The setting range is 1 to 19.	3
(b) CONTINUE COST	Sets the number of credits required to continue. The setting range is 1 to 19. Setting value cannot be larger than the GAME COST.	2
(c) FREE PLAY	Sets whether to allow free play. OFF: regular coin operation ON: free play · If FREE PLAY is turned ON, GAME COST and CONTINUE COST cannot be selected. · Depending on the specification, FREE PLAY cannot be turned ON.	OFF

7-6-3 Game Contents Settings (GAME OPTIONS)

This screen is used to set the game difficulty and initialize ranking.

- 1** In the MENU screen, select GAME OPTIONS and press the Enter switch. The GAME OPTIONS screen appears.
- 2** Flip the Select switch up or down to select the item.
The selected item blinks.
- 3** Press the Enter switch to enter the selected item, and use the Select switch to change the setting of the item. After changing the setting, press the Enter switch to return to the item selection.
- 4** Select EXIT and press the Enter switch to return to the MENU screen.



GAME OPTIONS screen

Item	Description	Default
(a) DIFFICULTY	Sets difficulty of the game. NO DEAD: a mode in which your vehicle will not be shot down even if it is attacked. EASY: a setting that makes it more difficult for your vehicle to be shot down when compared to the regular setting. NORMAL: regular setting HARD: a setting that makes it easier for your vehicle to be shot down when compared to the regular setting. VERY HARD: a setting that makes it extremely easy for your vehicle to be shot down when compared to the regular setting.	NORMAL
(b) HI-SCORE INITIALIZE	Initializes ranking. Select this item to display HI-SCORE INITIALIZE? with YES and NO displayed at right. Select NO to return to the state before making the above-mentioned selection. Select YES to reset and to display COMPLETE! after finishing initialization.	-

1

2

3

4

5

6

7

8A

8B

9

10

11

Operation

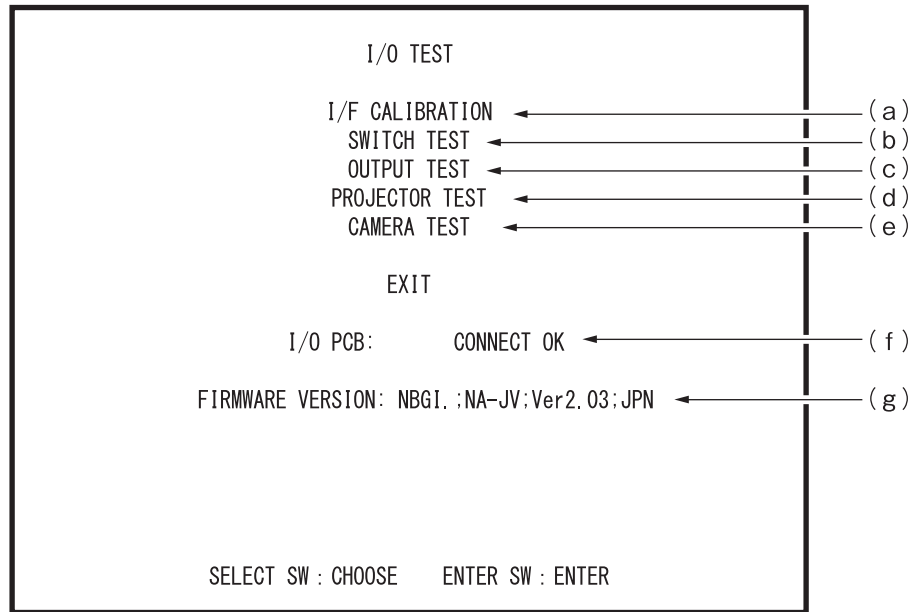
Test Mode

Troubleshooting

7-6-4 Input/Output Test (I/O TEST)

Initializes the controls (levers) and perform I/O test for each switch.

- 1** In the MENU screen, select I/O TEST and press the Enter switch.
The I/O TEST screen appears.
- 2** Flip the Select switch up or down to select the item to be displayed.
- 3** Press the Enter switch to enter the selected item. When the selection is entered, the display changes to the test screen of each item.
- 4** Select EXIT and press the Enter switch to return to the MENU screen.



I/O TEST screen

Item	Description	Reference section
(a) I/F CALIBRATION	Calibrate the control lever assembly and the throttle lever assembly.	P-37
(b) SWITCH TEST	Tests the operation of each switch.	P-38
(c) OUTPUT TEST	Checks the fan, control lever vibration, and the center window lamp operation.	P-40
(d) PROJECTOR TEST	Checks the usage condition of the projector.	P-42
(e) CAMERA TEST	Checks the operation of USB camera.	P-43
(f) I/O PCB	Displays the connection status of the NA-JV (S) PC board. CONNECT OK (green display): Communication is normal. CONNECT NG (red display): Communication is not normal. Check the connection of the NA-JV (S) PC board.	-
(g) FIRMWARE VERSION	Displays the version of the NA-JV (S) PC board.	-

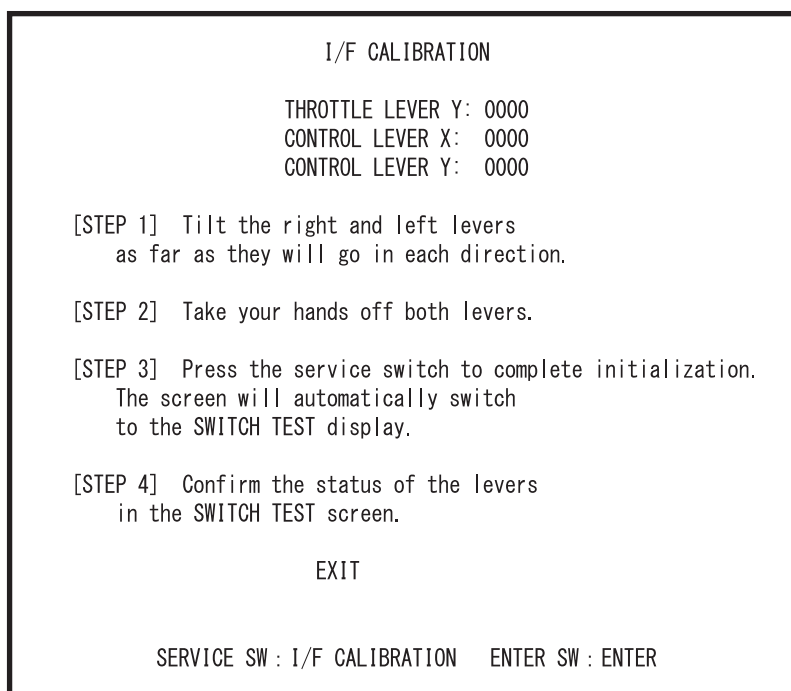
(a) I/F CALIBRATION

Calibrate the control lever assembly and the throttle lever assembly.



- When the control lever assembly, the throttle lever assembly, the game PC board, or the NA-JV (S) PC board is replaced, or the backup data is initialized, be sure to perform calibration. Otherwise, the game may not work correctly.

- 1** In the I/O TEST screen, select I/F CALIBRATION and press the Enter switch. The I/F CALIBRATION screen appears.
- 2** If you do not perform calibration, select EXIT and press the Enter switch to return to the I/O TEST screen.
- 3** Move the Control lever assembly from side to side, forward and backward, and move the throttle lever assembly forward and backward. When you strike the stopper, take your hands off the levers.
- 4** Press the Service switch to complete calibration of the levers. The display will automatically switch to the SWITCH TEST screen.
- 5** Confirm the status of the levers in the SWITCH TEST screen.



I/F CALIBRATION screen

1

2

3

4

5

6

7

8A

8B

9

10

11

Operation

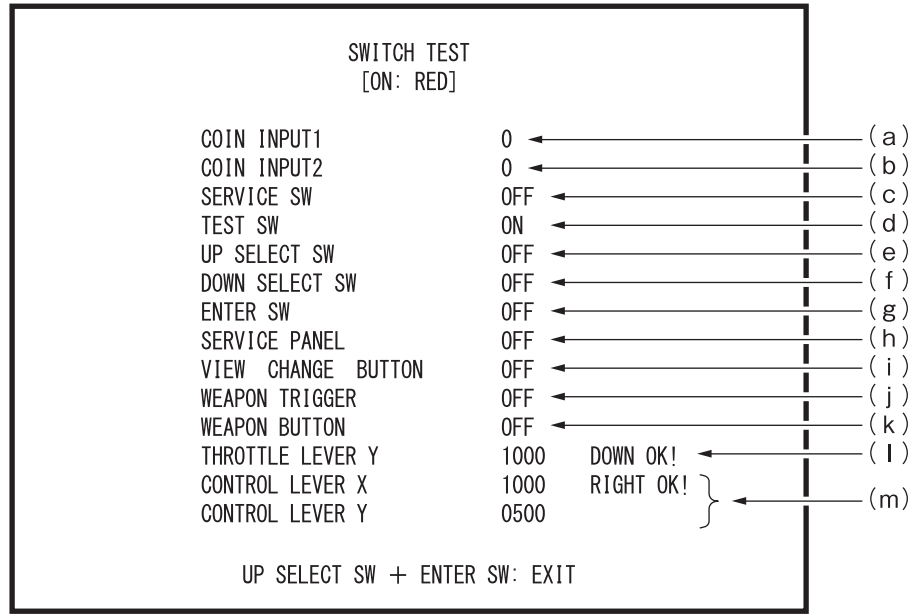
Test Mode

Troubleshooting

(b) SWITCH TEST

This screen is used to test each switch and control.

- 1** In the I/O TEST screen, select SWITCH TEST and press the Enter switch. The SWITCH TEST screen appears.
- 2** Entering each switch changes the display.
- 3** Hold the Select switch flipped up and press the Enter switch to return to the I/O TEST screen.



SWITCH TEST screen

Item	Description
(a) COIN INPUT1	Adds 1 to the count each time a coin is input for coin 1. When the count exceeds 999 it returns to 0.
(b) COIN INPUT2	Adds 1 to the count each time a coin is input for coin 2. When the count exceeds 999 it returns to 0. * COIN INPUT2 checks the operation of BILL VALIDATOR.
(c) SERVICE	Displays ON when you press the Service switch.
(d) TEST	Displays ON while the machine is in Test mode. Turn it off to return to the game screen.
(e) UP SELECT	Displays ON when you flip the Select switch up.
(f) DOWN SELECT	Displays ON when you flip the Select switch down.
(g) ENTER	Displays ON when you press the Enter switch.
(h) SERVICE PANEL	Displays ON when the service door is open.
(i) VIEW CHANGE BUTTON	Displays ON when you press the view change button.
(j) WEAPON TRIGGER	Displays ON when you press the main trigger of the control lever assembly.
(k) WEAPON BUTTON	Displays ON when you press the special button of the control lever assembly.
(l) THROTTLE LEVER	Increases or decreases the numerical value when you tilt the throttle lever forward or backward. If you move the lever all the way to the far side and UP OK! is displayed, and all the way to the near side and DOWN OK! is displayed, it is operating normally. If OK is not displayed even when you move the lever all the way, calibrate the lever. (See P-37 "(a) I/F CALIBRATION".)

Item	Description
(m) CONTROL LEVER	<p>Tilt the control lever from side to side to increase or decrease the numerical value on the X side, and forward or backward to increase or decrease the numerical value on the Y side.</p> <p>If you move the lever all the way to the left side and LEFT OK! is displayed, all the way to the right side and RIGHT OK! is displayed, all the way to the near side and UP OK! is displayed, and all the way to the far side and DOWN OK! is displayed, it is operating normally.</p> <p>If OK is not displayed even when you move the lever all the way, calibrate the lever. (See P-37 "(a) I/F CALIBRATION".)</p>

1

2

3

4

5

6

7

8A

8B

9

10

11

Operation

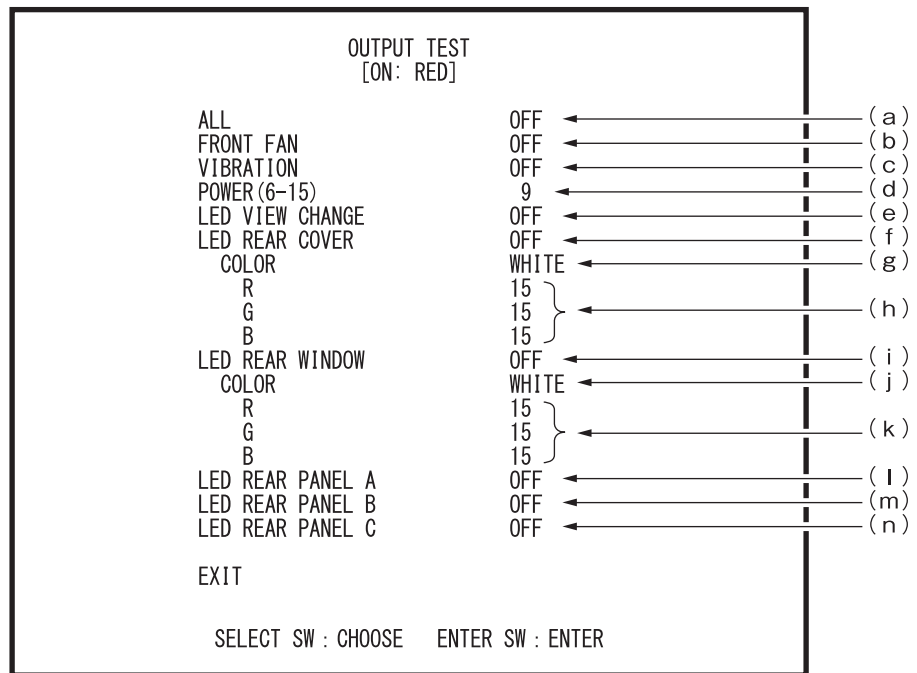
Test Mode

Troubleshooting

(c) OUTPUT TEST

This screen is used to check the fan, control lever vibration, and the LED module.
 This test is used to check operation. It has no effect on game play or Attract mode operation.

- 1** In the I/O TEST screen, select OUTPUT TEST and press the Enter switch. The OUTPUT TEST screen appears.
- 2** Flip the Select switch up or down to select the item to be checked.
- 3** Press the Enter switch to enter the selected item.
- 4** Select EXIT and press the Enter switch to return to the I/O TEST screen.



OUTPUT TEST screen

Item	Description	Default
(a) ALL	When you set this to ON, items (b), (c), (e), (f), (i), (l), (m), and (n) will be ON.	OFF
(b) FRONT FAN	Operates the fan when this is set to ON.	OFF
(c) VIBRATION	Vibrates the control lever with the intensity that has been set in "(d) POWER (6-15)" when this is set to ON.	OFF
(d) POWER(6-15)	Sets the vibration intensity of the control lever. The setting range is 6 to 15.	9
(e) LED VIEW CHANGE	Lights up the view change button lamp when this is set to ON.	OFF
(f) LED REAR COVER	Lights up the LED module on the rear cover side in the color that has been set in "(g) COLOR" when this is set to ON.	OFF
(g) COLOR	Sets the color of the LED module lamp on the rear cover side. WHITE: white lighting RED: red lighting BLUE: blue lighting GREEN: green lighting CUSTOM: lights up a color set in "(h) R, G, B"	WHITE
(h) R, G, B	Sets the color of the LED module lamp on the rear cover side with RGB values. The setting range is 1 to 15.	15

Item	Description	Default
(i) LED REAR WINDOW	Lights up the LED module in the center window with the color that has been set in "(j) COLOR" when this is set to ON.	OFF
(j) COLOR	Sets the color of the LED module lamp in the center window. WHITE: white lighting RED: red lighting BLUE: blue lighting GREEN: green lighting CUSTOM: lights up a color set in "(k) R, G, B"	WHITE
(k) R, G, B	Sets the color of the LED module lamp in the center window with RGB values. The setting range is 1 to 15.	15
(l) LED REAR PANEL A	Lights up the LED module on the left-hand side of the console panel when this is set to ON.	OFF
(m) LED REAR PANEL B	Lights up the LED module in the center of the console panel when this is set to ON.	OFF
(n) LED REAR PANEL C	Lights up the LED module on the right-hand side of the console panel when this is set to ON.	OFF

1

2

3

4

5

6

7

8A

8B

9

10

11

Operation

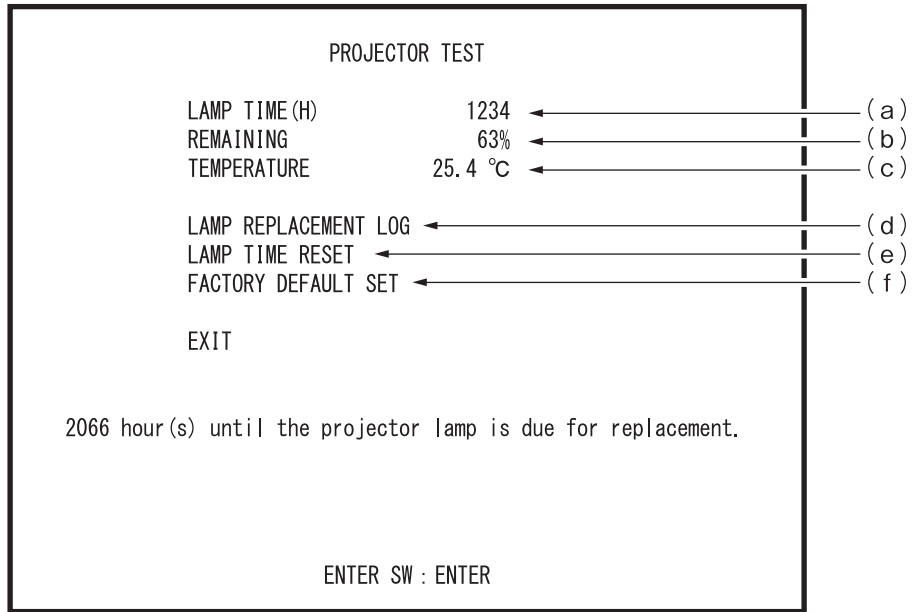
Test Mode

Troubleshooting

(d) PROJECTOR TEST

This screen is used to check the status of the projector and the operation time of the lamp, and to do a factory reset.

- 1** In the I/O TEST screen, select PROJECTOR TEST and press the Enter switch. The PROJECTOR TEST screen appears.
- 2** Flip the Select switch up or down to select the item to be checked. The selected item blinks.
- 3** Press the Enter switch to enter the selected item.
- 4** Select EXIT and press the Enter switch to return to the I/O TEST screen.



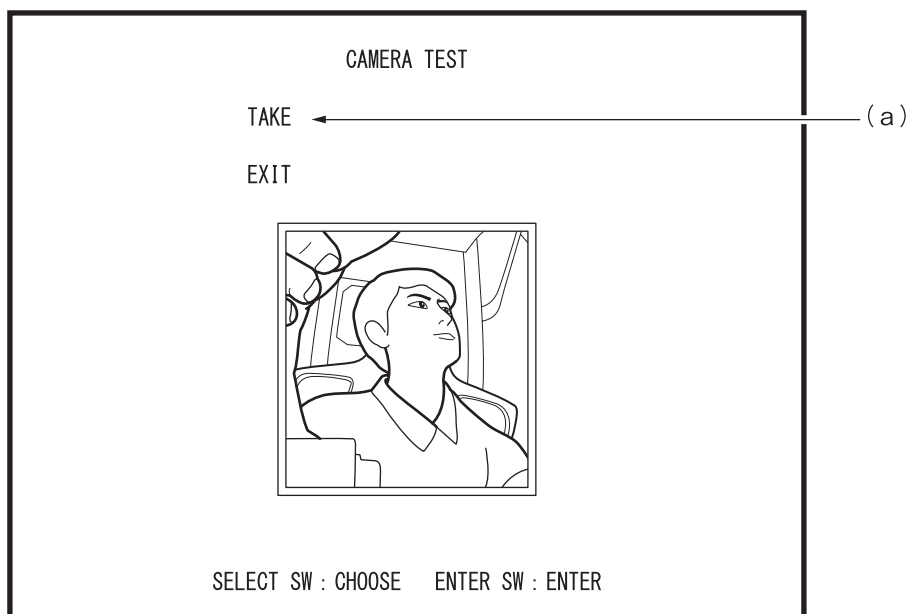
PROJECTOR TEST screen

Item	Description
(a) LAMP TIME(H)	Indicates the operation time of the projector lamp.
(b) REMAINING	Indicates the remaining operation time of the projector lamp.
(c) TEMPERATURE	Indicates the intake temperature of the projector. Clean the filter and review the installation environment so that the temperature is 35 degrees or below.
(d) LAMP REPLACEMENT LOG	Displays the replacement log of the projector lamp.
(e) LAMP TIME RESET	Resets the operation time of the projector lamp. Select this item to display LAMP TIME RESET? with YES and NO displayed on its right-hand side. Select NO to return to the state before making the above-mentioned selection. Select YES to reset and to display COMPLETE! after finishing initialization.
(f) FACTORY DEFAULT SET	Resets to the factory default. Select this item to display FACTORY DEFAULT SET? with YES and NO displayed on its right-hand side. Select NO to return to the state before making the above-mentioned selection. Select YES to reset and to display COMPLETE! after finishing initialization.

(e) CAMERA TEST

This screen is used to check the operation of the USB camera.

- 1** In the I/O TEST screen, select CAMERA TEST and press the Enter switch. The CAMERA TEST screen appears.
- 2** Flip the Select switch up or down to select the item. The selected item blinks.
- 3** Select TAKE and press the Enter switch to check the operation of the USB camera.
- 4** Select EXIT and press the Enter switch to return to the I/O TEST screen.



CAMERA TEST screen

Item	Description
(a) TAKE	Takes a still image with the camera. Press the Enter switch again to return to video display.

1

2

3

4

5

6

7

8A

8B

9

10

11

Operation

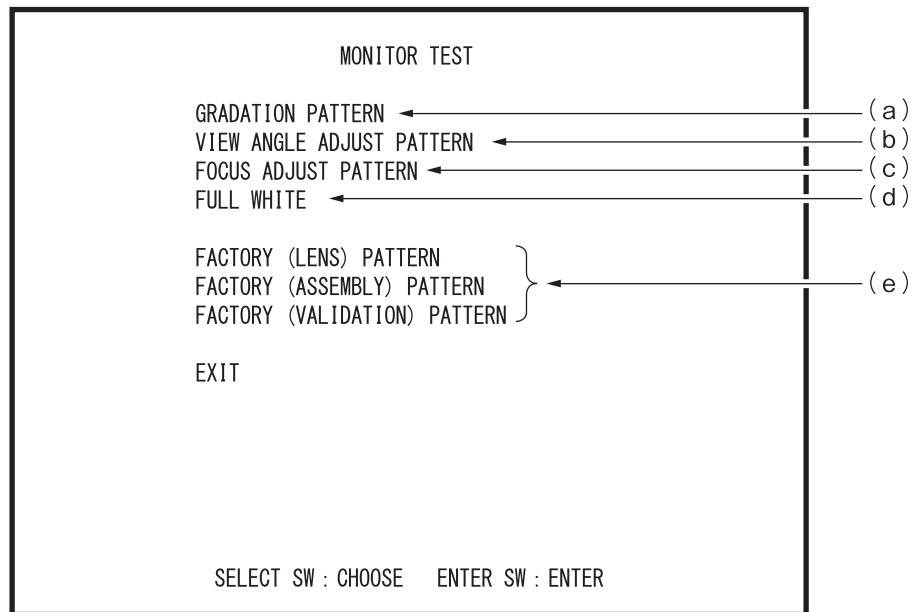
Test Mode

Troubleshooting

7-6-5 Screen Adjustment (MONITOR TEST)

Displays the screen for adjusting the projector.

- 1** In the MENU screen, select MONITOR TEST and press the Enter switch. The MONITOR TEST screen appears.
- 2** Flip the Select switch up or down to select the item. The selected item blinks.
- 3** Press the Enter switch to enter the test pattern to display. While the test pattern is displayed, press the Enter switch again to return to the MONITOR TEST screen.
- 4** Select EXIT and press the Enter switch to return to the MENU screen.



MONITOR TEST screen

Item	Description
(a) GRADATION PATTERN	Displays a gradation pattern.
(b) VIEW ANGLE ADJUST PATTERN	Displays a pattern for checking viewing angle.
(c) FOCUS ADJUST PATTERN	Displays a focus adjustment pattern.
(d) FULL WHITE	Turns the entire screen white.
(e) Factory adjustment pattern display	Displays a factory adjustment pattern.

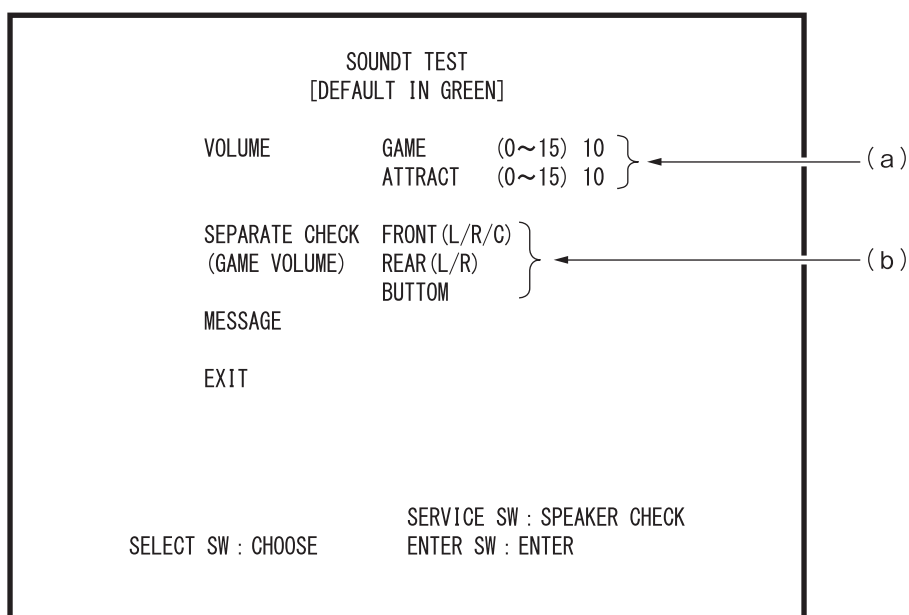
7-6-6 Sound Adjustment (SOUND TEST)


WARNING

- Set the cabinet volume within a range that allows the player to hear alarms and warning announcements within the operating facility.

Displays the screen for sound adjustment.

- 1** In the MENU screen, select SOUND TEST and press the Enter switch. The SOUND TEST screen appears.
- 2** Flip the Select switch up or down to select the item. The selected item blinks.
- 3** Press the Enter switch to enter the selected item.
- 4** After entering the selection, flip the Select switch up or down to change the item setting. After changing the setting, press the Enter switch to return to the item selection.
- 5** Press the Service switch to play the test sound from the speakers. The volume of the test sound is the setting value of the selected item.
- 6** Select EXIT and press the Enter switch to return to the MENU screen.



SOUND TEST screen

Item	Description	Default
(a) VOLUME	Sets the volume. The setting range is 0 to 15. Plays the test sound from all speakers, one at a time in sequence. GAME: volume setting during game play ATTRACT: volume setting while in Attract mode	10
(b) SEPARATE CHECK (GAMEVOLUME)	Test sound is played in the following groups in turns at the volume for the game set in "(a) VOLUME". FRONT (L/R/C): 3 speakers under the oval dome REAR (L/R/C): 2 speakers at the back of the seat BOTTOM: speaker below the seat surface	

1

2

3

4

5

6

7

8A

8B

9

10

11

Operation

Test Mode

Troubleshooting

7-6-7 Displaying/Initializing Game Data (BOOKKEEPING)

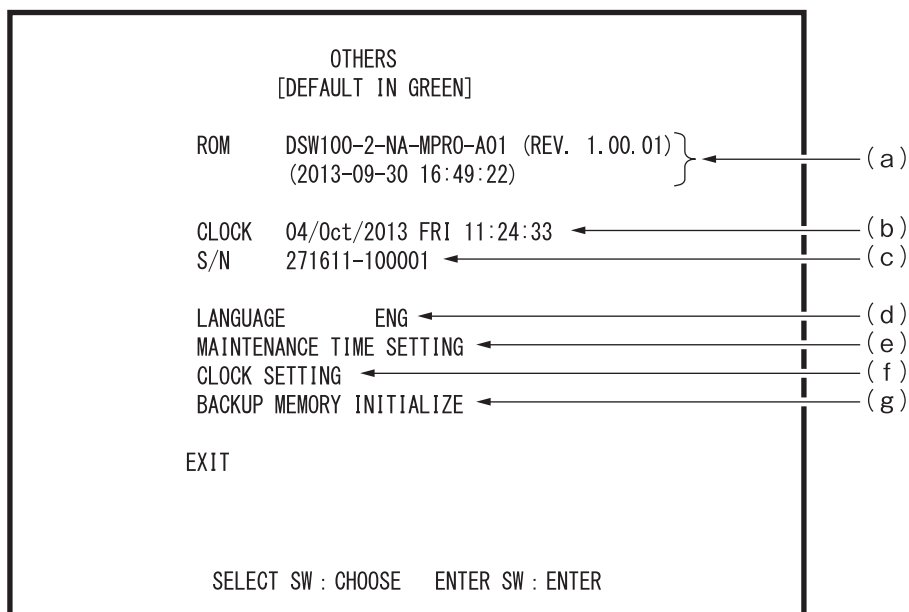
Displays or initializes various data related to the game.

- 1** In the MENU screen, select BOOKKEEPING and press the Enter switch. The BOOKKEEPING screen appears.
- 2** Flip the Select switch up or down to select the item. The selected item blinks.
- 3** Press the Enter switch to enter the selected item.
 - Every time you select NEXT and press the Enter switch, the display switches to the next page. Select NEXT in the last page to return to the first page.
 - Select ERROR LOG and press the Enter switch to change to the screen where you can check the error log.
 - Select BOOKKEEPING INITIALIZE and press the Enter switch to display BOOKKEEPING INITIALIZE? with NO and YES displayed on the right-hand side. Select NO to return to the state before making the above-mentioned selection. Select YES to display COMPLETE! after finishing initialization.
- 4** Select EXIT and press the Enter switch to return to the MENU screen.

7-6-8 Other Options (OTHERS)

Displays, sets or initializes the current time and the software version.

- 1** In the MENU screen, select OTHERS and press the Enter switch. The OTHERS screen appears.
- 2** Flip the Select switch up or down to select the item. The selected item blinks.
- 3** Press the Enter switch to enter the selected item.
- 4** Select EXIT and press the Enter switch to return to the MENU screen.



OTHERS screen

Item	Description
(a) ROM	Displays software version or revision, date and time of creation.
(b) CLOCK	Displays the current time of the built-in clock and the date.
(c) S/N	Displays the serial number of the USB dongle.
(d) LANGUAGE	Sets the language for the game. ENG: English (default) SPA: Spanish RUS: Russian IND: Indonesian THA: Thai
(e) MAINTENANCE TIME SETTING	Sets the maintenance time. (See P-56 "7-8 About Maintenance Time".)
(f) CLOCK SETTING	Sets the time of the built-in clock. CLOCK SETTING is not available in the NBLINE model.
(g) BACKUP MEMORY INITIALIZE	Resets each setting to the factory default. Select this item to display BACKUP MEMORY INITIALIZE? with YES and NO displayed on its right-hand side. Select NO to return to the state before items are selected. Select YES to display COMPLETE! after initialization is completed and to return to the screen before items are selected.

1

2

3

4

5

6

7

8A

8B

9

10

11

Operation

Test Mode

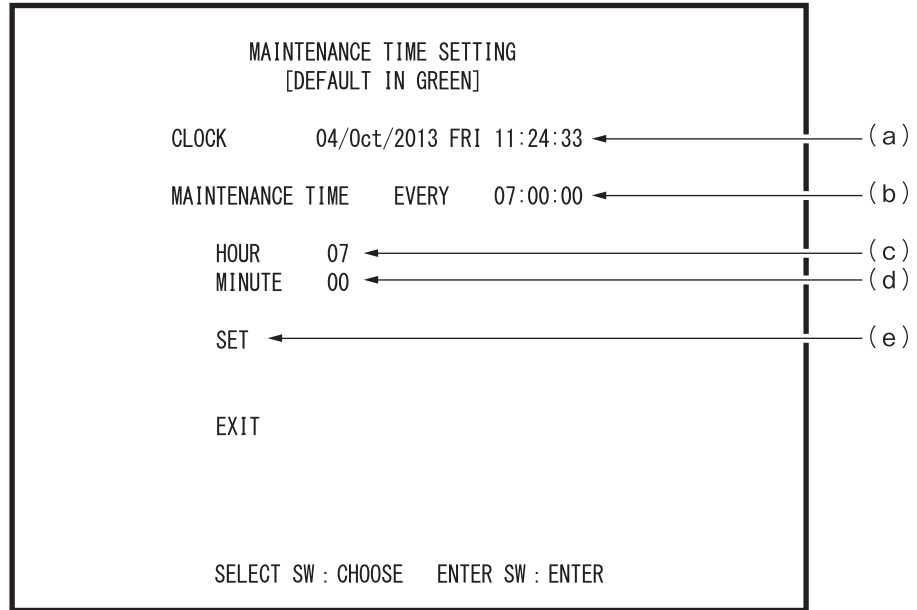
Troubleshooting

(a) Setting Maintenance Time (MAINTENANCE TIME SETTING)

Sets the maintenance time. (See P-56 "7-8 About Maintenance Time".)

If you change the setting, the machine will automatically restart after you set the Test switch to OFF.

- 1** In the OTHERS screen, select MAINTENANCE TIME SETTING and press the Enter switch. The MAINTENANCE TIME SETTING screen appears.
- 2** Flip the Select switch up or down to select the item. The selected item blinks.
- 3** Press the Enter switch to enter the selected item.
- 4** Select EXIT and press the Enter switch to return to the OTHERS screen.



MAINTENANCE TIME SETTING screen

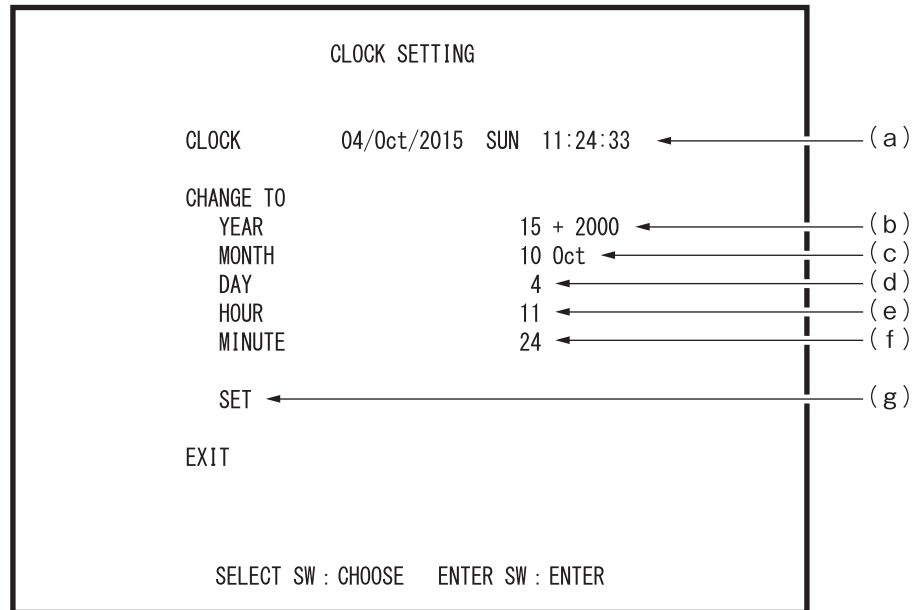
Item	Description	Default
(a) CLOCK	Displays the time of the built-in clock and date.	-
(b) MAINTENANCE TIME	Displays the maintenance time currently set.	07:00:00
(c) HOUR	Sets the hour of maintenance time.	07
(d) MINUTE	Sets the minute of maintenance time.	00
(e) SET	Enters the time that has been set.	-

(b) Setting the Clock (CLOCK SETTING)

Sets the time of the built-in clock.

* CLOCK SETTING is not available in the NBLINE model.

- 1** In the OTHERS screen, select CLOCK SETTING and press the Enter switch. The CLOCK SETTING screen appears.
- 2** Flip the Select switch up or down to select the item. The selected item blinks.
- 3** Press the Enter switch to enter the selected item.
- 4** Select EXIT and press the Enter switch to return to the OTHERS screen.



CLOCK SETTING screen

Item	Description
(a) CLOCK	Displays the current time of the built-in clock and the date.
(b) YEAR	Sets the year after the change.
(c) MONTH	Sets the month after the change.
(d) DAY	Sets the day after the change.
(e) HOUR	Sets the hour after the change.
(f) MINUTE	Sets the minute after the change.
(g) SET	Enters the time of the built-in clock and the date.

1

2

3

4

5

6

7

8A

8B

9

10

11

Operation

Test Mode

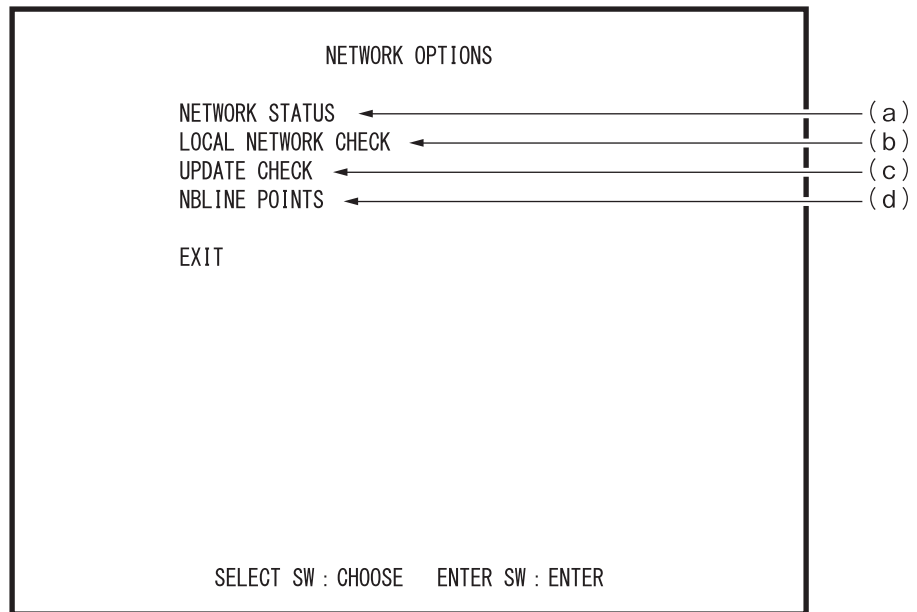
Troubleshooting

7-6-9 Setting Network (NETWORK OPTIONS)

This screen is used to check the network status and test the connection.

* NETWORK OPTIONS becomes available only in the NBLINE model.

- 1** In the MENU screen, select NETWORK OPTIONS and press the Enter switch. The NETWORK OPTIONS screen appears.
- 2** Flip the Select switch up or down to select the item. The selected item blinks.
- 3** Press the Enter switch to enter the selected item. When the selection is entered, the display changes to the test screen of each item.
- 4** Select EXIT and press the Enter switch to return to the MENU screen.



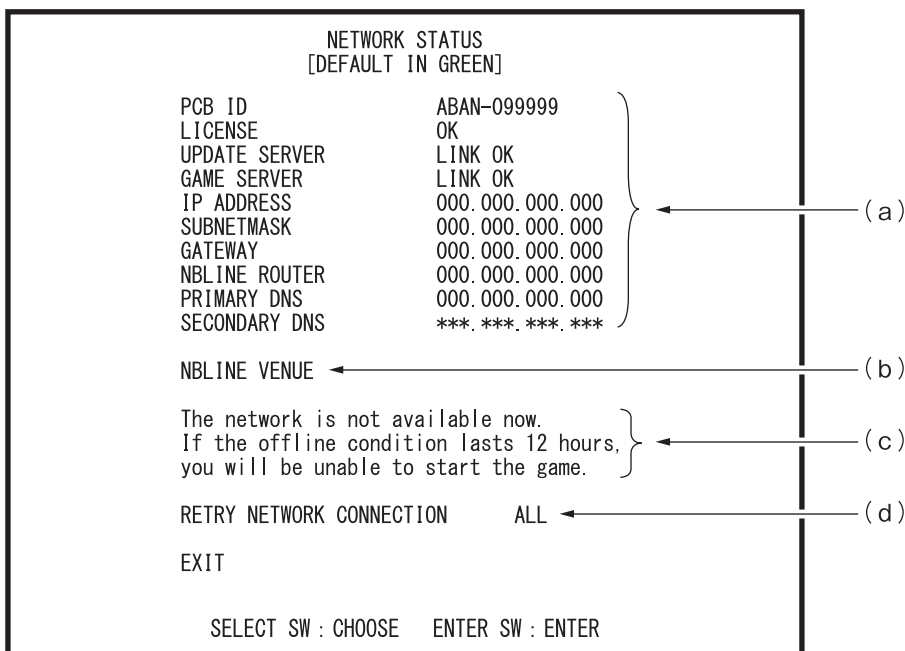
NETWORK OPTIONS screen

Item	Description	Reference section
(a) NETWORK STATUS	Used to check the network status and IP address, and to reacquire the network status.	P-51
(b) LOCAL NETWORK CHECK	Tests the local network connection.	P-53
(c) UPDATE CHECK	Checks the update status of the software.	P-54
(d) NBLINE POINTS	Checks the NBLINE points.	P-55

(a) NETWORK STATUS

Used to check the network status and IP address, and to reacquire the network status.

- 1** In the NETWORK OPTIONS screen, select NETWORK STATUS and press the Enter switch. The NETWORK STATUS screen appears.
- 2** Flip the Select switch up or down to select the item. The selected item blinks.
- 3** Press the Enter switch to enter the selected item.
- 4** Select EXIT and press the Enter switch to return to the NETWORK OPTIONS screen.



NETWORK STATUS screen

Item	Description
(a) NETWORK STATUS	Displays the following items. PCB ID: serial ID for validating NBLINE LICENSE: result of NBLINE validation UPDATE SERVER: connection status with the update server GAME SERVER: connection status with the game server IP ADDRESS: IP address of this cabinet SUBNETMASK: subnet mask setting value GATEWAY: IP address of gateway NBLINE ROUTER: IP address of NBLINE router PRIMARY DNS: IP address of primary DNS SECONDARY DNS: IP address of secondary DNS
(b) NBLINE VENUE	Displays the business name obtained during NBLINE validation.

- 1
- 2
- 3
- 4
- 5
- 6
- 7**
- 8A
- 8B
- 9
- 10
- 11

Operation

Test Mode

Troubleshooting

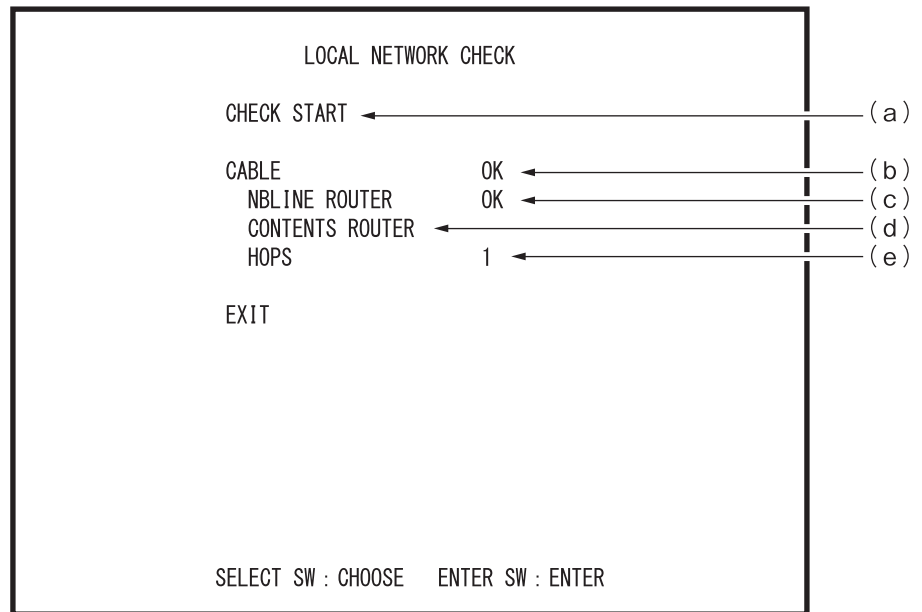
7. Operation

Item	Description
(c) Offline operation warning messages	The following messages are displayed during offline operation. <ul style="list-style-type: none">· During offline operation (example: remaining operation time is 12 hours): The network is not available now. If the offline condition lasts for 12 hours, you will be unable to start the game.· Offline operation is not possible (when the remaining offline operation time has reached zero): There is an error in the network so the game can't start. Please check the network according to the manual.
(d) RETRY NETWORK CONNECTION	Carries out the following processes. <ul style="list-style-type: none">· Reacquires DNS and DHCP addresses and the time· Validates the NBLINE again· Checks the game server.· Updates the display of network status according to the result of reacquisition

(b) LOCAL NETWORK CHECK

Tests the local network connection.

- 1** On the NETWORK OPTIONS screen, select LOCAL NETWORK CHECK and press the Enter switch. The LOCAL NETWORK CHECK screen appears.
- 2** Flip the Select switch up or down to select CHECK START and press the Enter switch. The local network is checked.
- 3** Select EXIT and press the Enter switch to return to the NETWORK OPTIONS screen.



LOCAL NETWORK CHECK screen

Item	Description
(a) CHECK START	Obtains information on the local network connection.
(b) CABLE	Displays the connection status between the game PC board and the LAN cable.
(c) NBLINE ROUTER	Displays the connection status between the game PC board and the NBLINE router.
(d) CONTENTS ROUTER	Not used on this machine.
(e) HOPS	Indicates the number of routers up to the NBLINE router.



- If the LAN cable is correctly connected, HOPS should be 1.
- If HOPS is 2 or higher, another router may be connected between the NBLINE router and this machine, which may cause a communication failure. Please check.

1

2

3

4

5

6

7

8A

8B

9

10

11

Operation

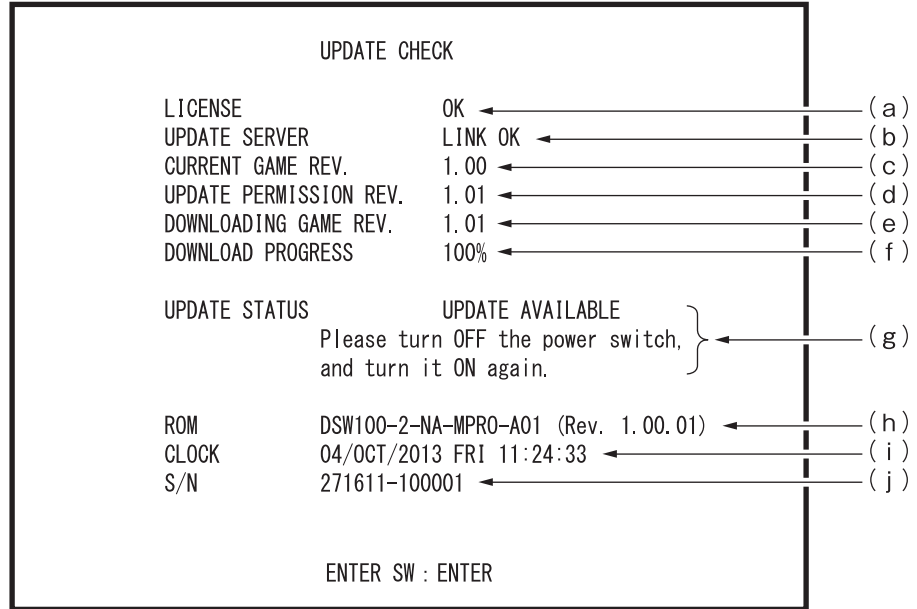
Test Mode

Troubleshooting

(c) UPDATE CHECK

Displays the update status of the game.

- 1** In the NETWORK OPTIONS screen, select UPDATE CHECK and press the Enter switch. The UPDATE CHECK screen appears.
- 2** Press the Enter switch to return to the NETWORK OPTIONS screen.



UPDATE CHECK screen

Item	Description
(a) LICENSE	Displays the validation status of the NBLINE.
(b) UPDATE SERVER	Displays the connection status with the update server.
(c) CURRENT GAME Rev.	Displays the revision of the current software.
(d) UPDATE PERMISSION Rev.	Displays the revision of the software that can be updated.
(e) DOWNLOADING GAME Rev.	Displays the revision of the software being downloaded.
(f) DOWNLOAD PROGRESS	Displays the progress of the download.
(g) UPDATE STATUS	Displays the update status of the software. UPDATE AVAILABLE: automatically updated the next time the power is turned on. UPDATE NOT AVAILABLE: software is being downloaded. It cannot be updated. UPDATE NOT REQUIRED: the latest version of software is installed. No software to update.
(h) ROM	Displays software version or revision.
(i) CLOCK	Displays the current time of the built-in clock and the date.
(j) S/N	Displays the serial number of the USB dongle.

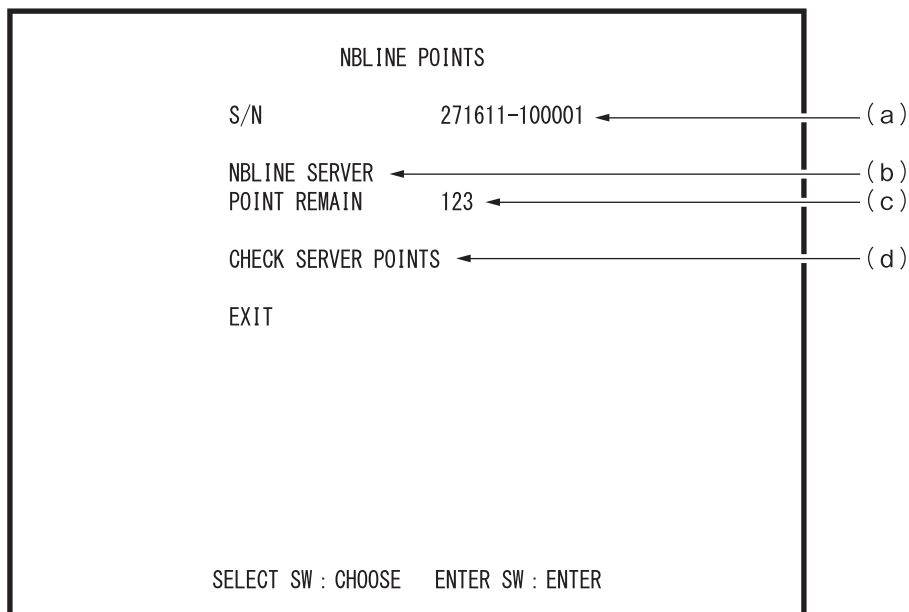


- It will take some time to update a game. In addition, after updating, some settings, including the difficulty level of the game, may return to factory defaults. Contact your distributor.
- Do not turn off the power while updating. Doing so may cause trouble to occur.

(d) NBLINE POINTS

This screen is used to check the NBLINE points.

- 1** In the NETWORK OPTIONS screen, select NBLINE POINTS and press the Enter switch. The NBLINE POINTS screen appears.
- 2** Use the Select switch to select CHECK SERVER POINT and press the Enter switch to update the point count with the NBLINE points charged.
- 3** Select EXIT and press the Enter switch to return to the NETWORK OPTIONS screen.



NBLINE POINTS screen

Item	Description
(a) S/N	Displays the serial number of the USB dongle.
(b) NBLINE SERVER	Displays the connection status of the NBLINE. LINK OK (in green): connection is normal. NG! (in red): connection failed.
(c) POINT REMAIN	Displays the remaining NBLINE points.
(d) CHECK SERVER POINTS	Execute CHECK SERVER POINTS to test the connection with the NBLINE server and reacquire the remaining NBLINE points.

1

2

3

4

5

6

7

8A

8B

9

10

11

Operation

Test Mode

Troubleshooting

7-7 About the Network

If the machine is NBLINE specified, it needs to be connected to the network (NBLINE). (*1)

When communication trouble or other trouble occurs in the network connection, the machine operates in offline mode. If the machine is operating in offline mode, the "offline icon" appears in the Attract screens. (*2)



If more than 240 hours has elapsed after the machine went into offline mode, new games cannot be started. (When 240 hours is reached while playing a game, the game can continue until it ends.) (*3)

To enable the game to be played again, resolve the network trouble and connect to NBLINE. (*4)

- *1 The network connection status can be checked in NETWORK STATUS in Test mode. (See P-51 "(a) NETWORK STATUS".)
- *2 For some network errors, error messages may not be displayed in the Game screen or the Attract screen. Check the error message displayed in the upper right of the Main menu screen (See P-33 "7-6-1 Description of the Main Menu Screen (MENU)" in Test mode.
- *3 The remaining operation time in offline mode can be checked in "Offline operation warning messages" in Test mode. (See P-51 "(a) NETWORK STATUS".)
- *4 Refer to P-99 "(3) Network Errors" for network troubleshooting.

7-8 About Maintenance Time

This machine is equipped with a function that clears the system by rebooting regularly ("Maintenance time") to reduce the load on the game PC board caused by prolonged continuous operation.

- * Before shipping, the maintenance time is set at 7:00 AM. However, this can be changed by following the description in P-48 "(a) Setting Maintenance Time (MAINTENANCE TIME SETTING)".
- * Even when the set time is reached, the machine will not reboot while a game is being played. It will reboot when the game is finished and the Attract screen reappears.

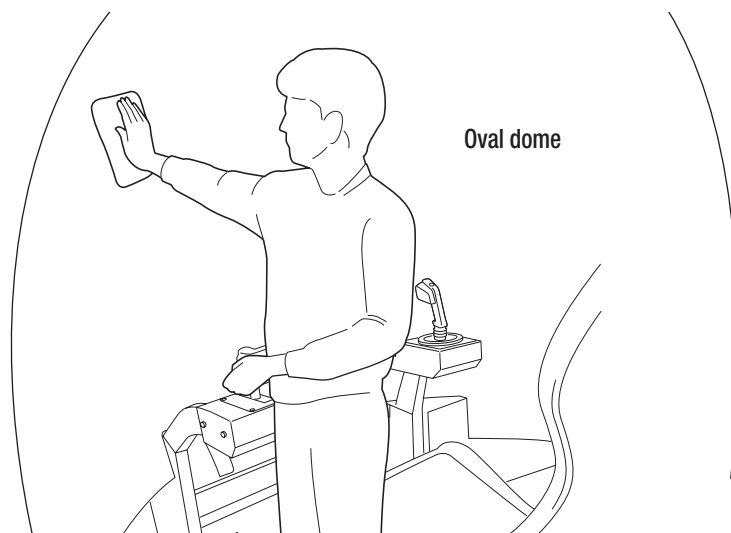
7-9 Cleaning



- Do not use thinner, benzene, gasoline or other organic solvents. Doing so may degrade the materials.

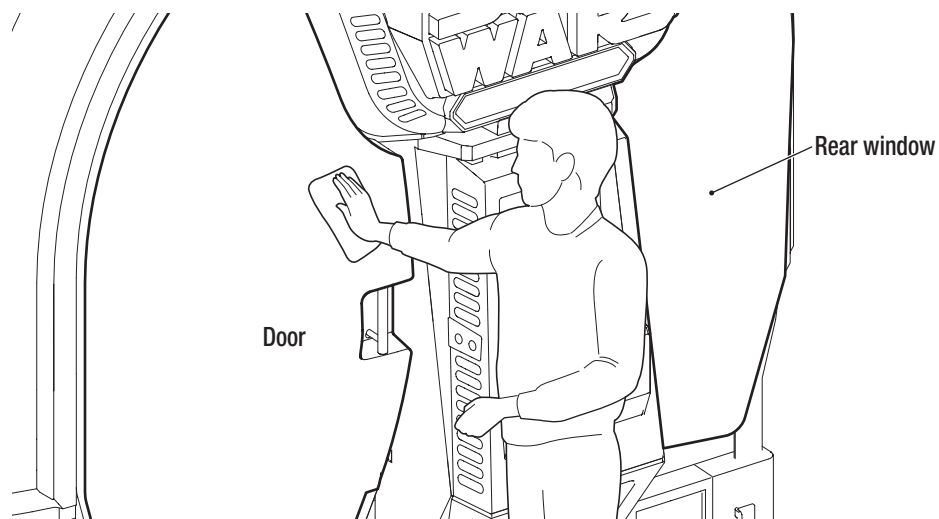
(1) Cleaning the Screen Surface

Wipe away any dirt or dust on the screen surface using a soft cloth moistened with a small amount of water, then wipe dry using a dry soft cloth.



(2) Cleaning the Door and Rear Window

Wipe away any dirt or dust using a dry soft cloth. If the door and rear window become extremely dirty, wipe off the dirt using a cloth moistened with a small amount of water, then wipe dry using a dry soft cloth.



1

2

3

4

5

6

7

8A

8B

9

10

11

Operation

Test Mode

Troubleshooting

(3) Cleaning the Projector Filters

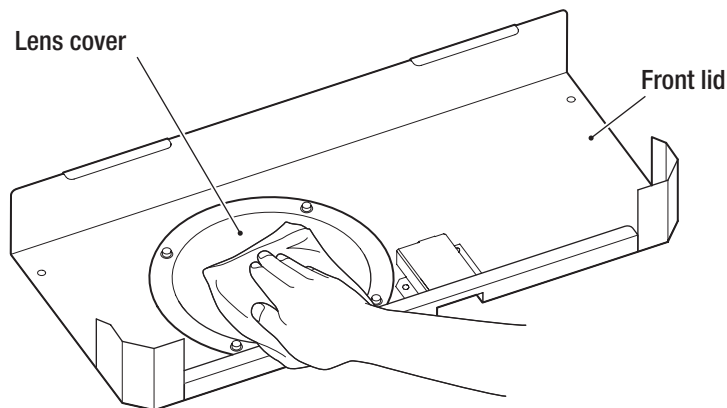


● Regularly clean the projector filters approximately once a week. Dust and dirt accumulating on the filters may prevent adequate ventilation and result in a projector error.

- 1** Remove the projector filters. (See P-175 "(4) Replacing the Filter of the Projector Cover".)
- 2** Clean dust and dirt from the filter surfaces.
Wash with water and allow to dry thoroughly, or use a vacuum cleaner, being careful not to suck the filter into the vacuum cleaner.
When a filter becomes torn or has large holes or other damage, replace it with a new one.
- 3** After cleaning, install the filters by reversing the procedure.

(4) Cleaning the Lens Cover

- 1** Open the projector cover of the projector assembly, and remove the front lid. (See P-75 "8A-3-8 Installing the Projector Unit".)
- 2** Wipe away any dirt or dust from the lens cover using the dry soft cloth.
When the lens cover becomes extremely dirty, wipe away the dirt using a cloth moistened with a small amount of water, then wipe dry using a dry soft cloth.



- 3** After cleaning, install the filters by reversing the procedure.

(5) Cleaning the Projector Lens

- 1** Open the projector cover of the projector assembly, and remove the front lid. (See P-75 "8A-3-8 Installing the Projector Unit".)
- 2** Remove any dirt or dust from the projector lens using a dedicated lens cleaning kit such as a commercially available eyeglass cleaning cloth or eyeglass cleaner.
- 3** After cleaning, install the filters by reversing the procedure.



- Do not use neutral detergent or other such cleaning fluids, but be sure to use a dedicated lens cleaner to clean the lens surface (commercially available eyeglass cleaning cloth, eyeglass cleaner, etc.)

1

2

3

4

5

6

7

8A

8B

9

10

11

Operation

Test Mode

Troubleshooting

7-10 Projector Lamp (Lamp Unit) Life

CAUTION

- Use a lamp unit specified by BANDAI NAMCO Games Inc. Use of a non-specified lamp unit may damage the projector unit.

NOTICE

- When the machine turns into the "Operation disabled" state shown in the table below, the projector is powered off even if a player is currently playing a game. When the "Replacement time" has come, replace the lamp unit promptly.
- The lamp unit is a consumable part and may not light up any longer, or the brightness may drop before the lamp reaches the end of its life depending on the usage conditions (environment of installed location, repeatedly turning on/off of the power). The lamp lifetime noted below is approximate, and is not a guaranteed value.
- To request repairs or to order parts, contact your distributor.
- The current operation time of the lamp unit can be checked in P-42 "(d) PROJECTOR TEST".

● Projector model number: NP-PE401H (V1)

Lamp life: 3,300 hours

The projector is powered off when the machine is used for another 100 hours after the lamp lifetime is reached. The projector cannot be powered on before the lamp unit is replaced. Replace the lamp unit by referring to P-169 "(2) Replacing the Projector Lamp (Lamp Unit)".

If the lamp lifetime has already been surpassed when the machine is started, the status is notified as follows.

Behavior when the power switch is turned on

Status	Lamp time	Behavior of the machine	Voice announcement
Replacement time	Approximately 3,300 to 3,400 hours	23-1 PROJECTOR LAMP WARNING is displayed in the screen.	WARNING voice, "It is time to replace the lamp soon", keeps sounding.
Operation disabled	Approximately 3,400 hours or more	The screen is blank and the LED modules of the top cover and the rear cover are blinking red and yellow.	WARNING voice "Please call the shop staff. Lamp usage time exceeded of the projector. Please replace the lamp, and reset the usage time" is played.

* Even in the status of "Replacement time", games can be played by entering Test mode and then exiting Test mode.

8. Technician's Manual – Must be performed by a technician –

8A. Installation and Assembly

8A-1 Separation of Main Components (As Required by the Conditions during Delivery)

8A-1-1 Removing the Top Cover

Removing the top cover will help to reduce the size in the depth direction.

With the top cover: Width (W) 1,780 x Depth (D) 940 x Height (H) 2,050 [mm]

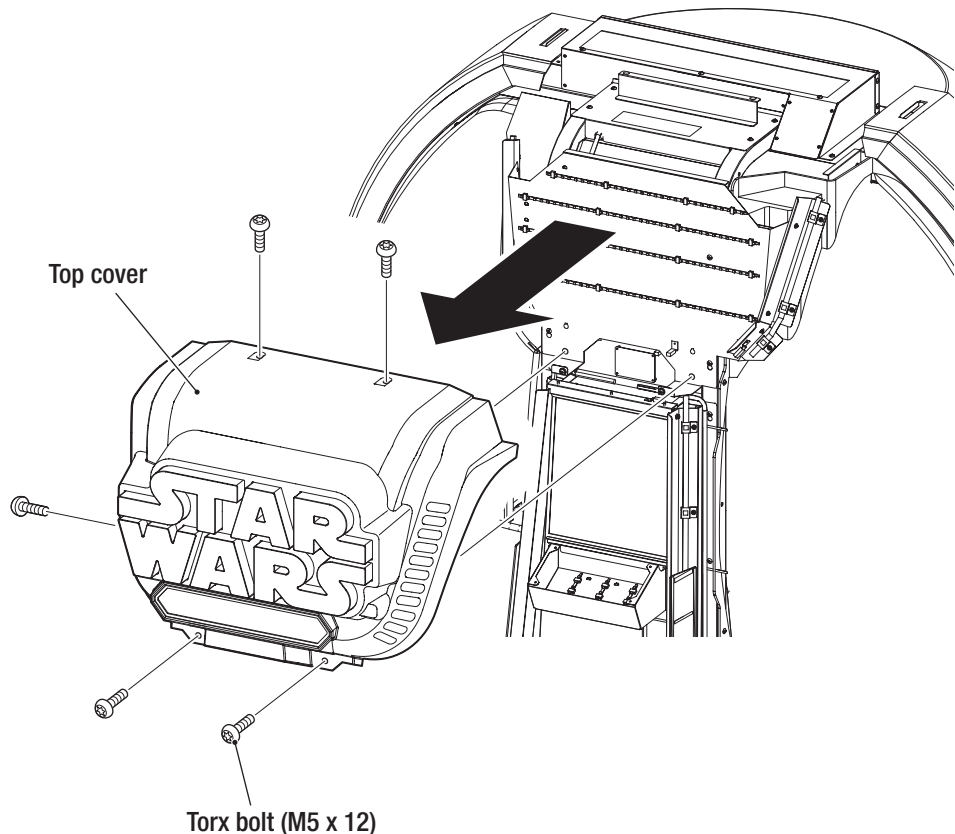
Without the top cover: Width (W) 1,780 x Depth (D) 910 x Height (H) 2,050 [mm]

If the delivery route is secured, you do not need to remove the top cover. Go to P-62 "8A-2 Assembly Preparation".

WARNING

- Removing the top cover involves standing at an elevated height. Prepare an appropriate stepladder or footstool and be careful when working. Working in an unnatural body posture may result in injury or machine damage.

- 1** Remove the five Torx bolts (M5 x 12) and remove the top cover.



- 2** To install, perform the procedure in reverse.

1

2

3

4

5

6

7

8A

8B

9

10

11

Installation and Assembly

Test Mode

Troubleshooting

8A-2 Assembly Preparation

8A-2-1 Number of Workers and Work Time

The following numbers of workers and work times are required for assembly work.

Number of workers

Delivery work: See P-22 "6-2 Transportation".)

Assembly work: Two or more technicians

Work time

Assembly work: Approximately one hour

8A-2-2 Workflow

Carry out the assembly work in the following order.

- [1] Attach the POP bracket to the rear assembly.
- [2] Connect the front and rear assemblies.
- [3] Install the projector unit.
- [4] Adjust the level adjuster.
- [5] Install the POP display.
- [6] Connect and adjust the power supply cable and other cables.

8A-2-3 Space Required during Installation

An open space of 3 m x 3 m or larger with a ceiling height of 2.5 m or higher is required for assembly and installation.

8A-2-4 Required Tools and Parts

The following tools are required for assembly and installation.

- Phillips-head screw driver (No. 2)
- Torx wrench (for M5, T25) * supplied
- Allen key (width across flats: 6 mm)
- Wrench (width across flats: 24 mm)
- A stepladder or a footstool
- Light (when needed)

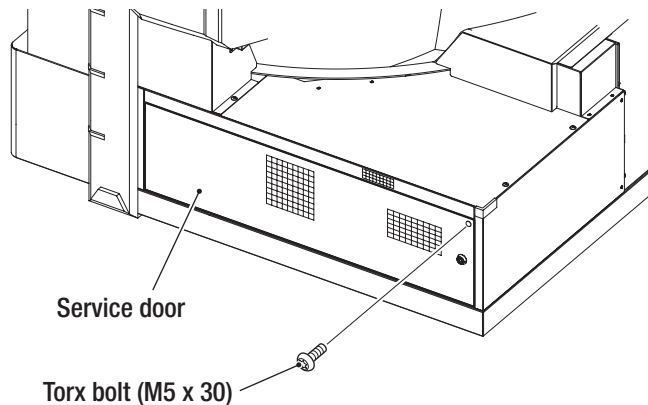
U.S. and European models are not equipped with coin selectors when they are shipped. See P-143 "(1) Replacing the Coin Selector (U.S. Model)" or P-146 "(4) Replacing the CASHFLOW (European Model)" to install a coin selector.

If connection to the NBLINE is necessary, refer to P-86 "8A-5-2 Connecting the LAN Cable to the Machine" and connect the LAN cable.

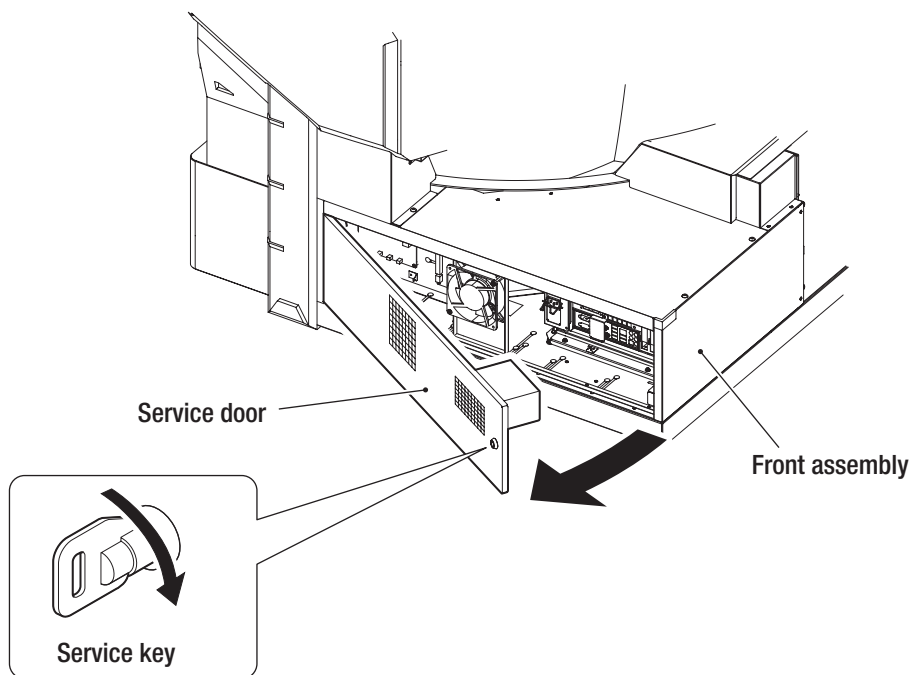
8A-3 Assembly

8A-3-1 Removing the Service Door

- 1 Remove the Torx bolt (M5 x 30) securing the service door.



- 2 Open the service door using the supplied service key, and remove it.



1

2

3

4

5

6

7

8A

8B

9

10

11

Installation and Assembly

Test Mode

Troubleshooting

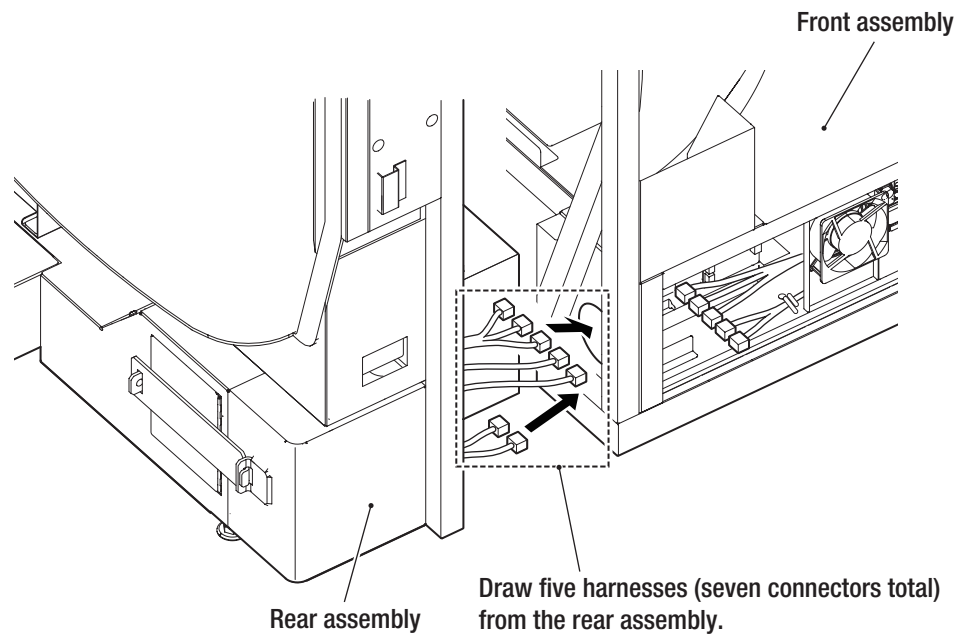
– Must be performed by a technician –

8A-3-2 Connecting the Front Assembly and Rear Assembly

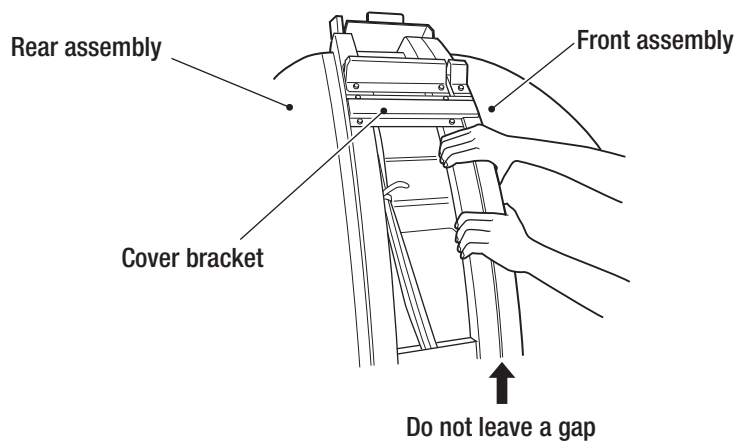
CAUTION

- When attaching the front and rear assemblies together, you may need to adjust the height of the rear assembly depending on the condition of the floor and other factors. Be careful not to let your hand get caught in a cover bracket or other objects.

- 1** Bring the front and rear assemblies closer and draw the five harnesses of the rear assembly into the front assembly.



- 2** Push the front and rear assemblies together, taking care not to allow the harnesses, that were drawn in **1**, to get caught.

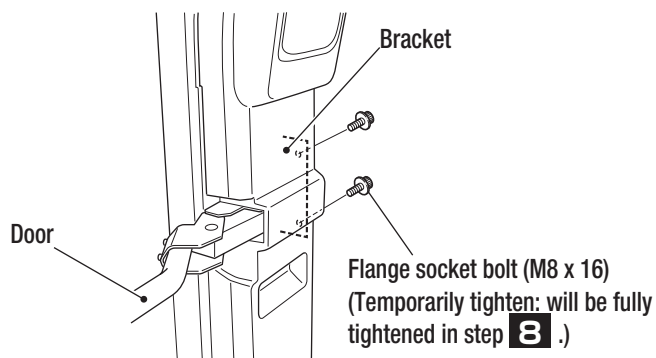


NOTICE

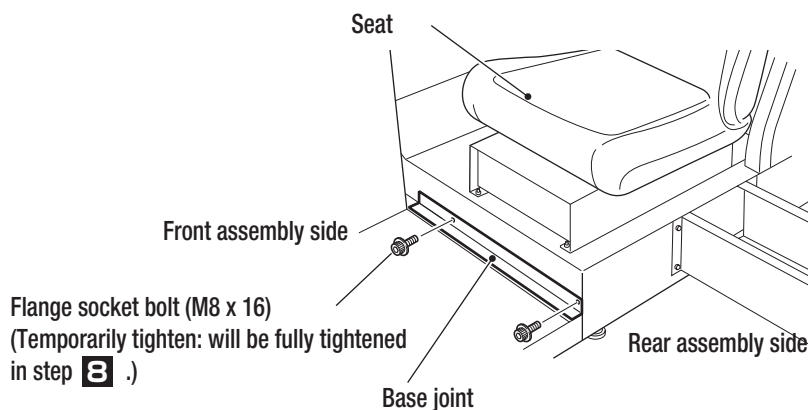
- When you push the assemblies together, the cover bracket protrusions of the rear assembly may come in contact with the front assembly depending on the condition of the floor and other factors. Push hard while taking care not to pinch your hands or other objects.

- Must be performed by a technician -

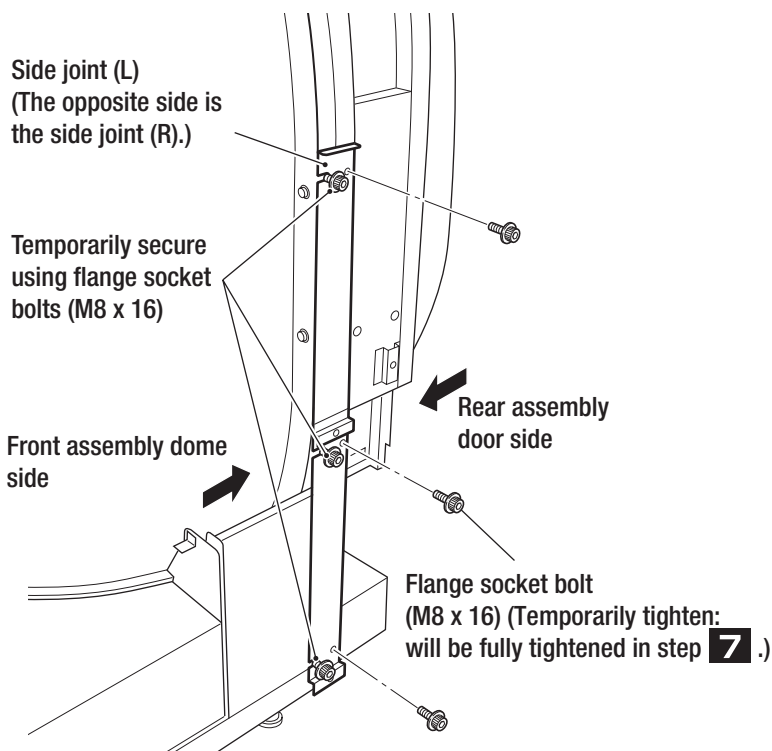
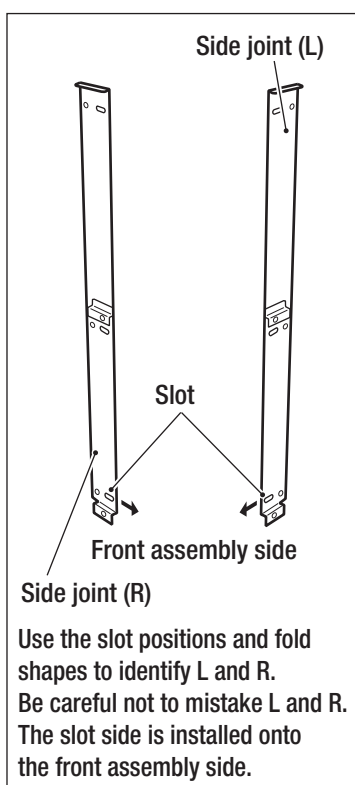
- 3 Open the door, and use the two supplied flange socket bolts (M8 x 16) to temporarily secure the bracket on the rear side.



- 4 Align the bolt holes of the base joint on the front assembly to the rear base on the rear assembly, and use the two supplied flange socket bolts (M8 x 16) to temporarily secure the assemblies.



- 5 Use the six supplied flange socket bolts (M8 x 16) to temporarily secure the supplied side joint (L).

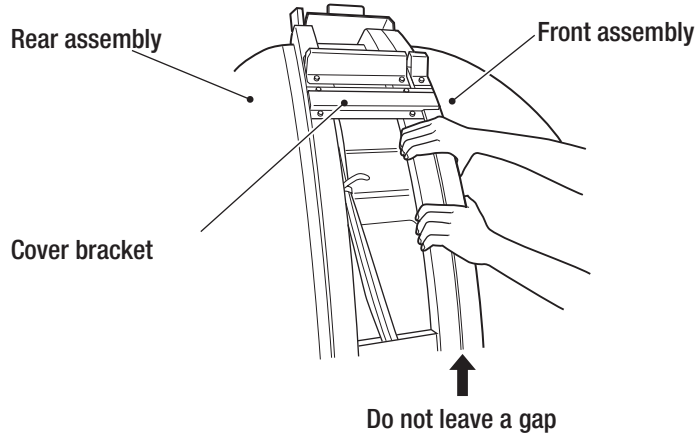


1
2
3
4
5
6
7
8A
8B
9
10
11
Installation and Assembly

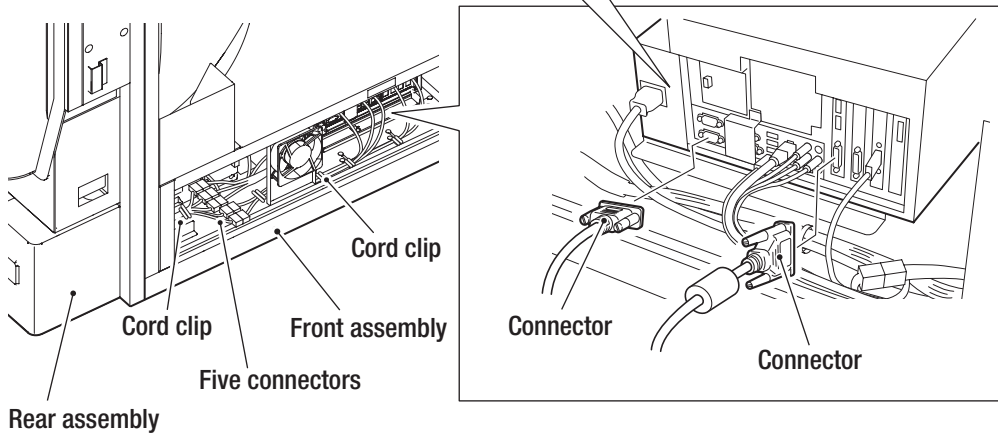
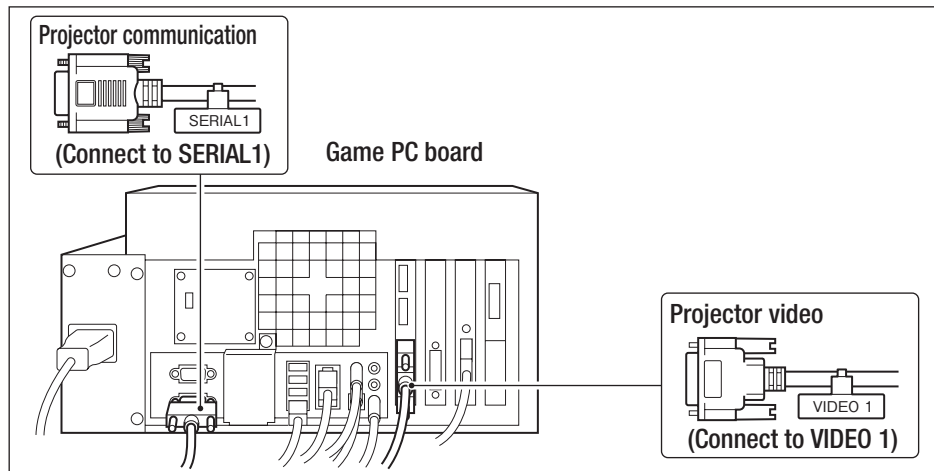
Test Mode
Troubleshooting

– Must be performed by a technician –

- 6** Similarly, use the six supplied flange socket bolts (M8 x 16) to temporarily secure the supplied side joint (R).
- 7** Hold the front and rear assemblies together so that there are no gaps between the joining surfaces, fully tighten the 12 flange socket bolts (M8 x 16) temporarily tightened in steps **5** and **6**.



- 8** Fully tighten the four flange socket bolts (M8 x 16) temporarily tightened in steps **3** and **4**.
- 9** Connect the seven connectors of the harness drawn into the front assembly from the rear assembly, then secure them with cord clips. The harnesses leading to the game PC board go through the inside (back side) of the sheet metal on which the fan is attached.

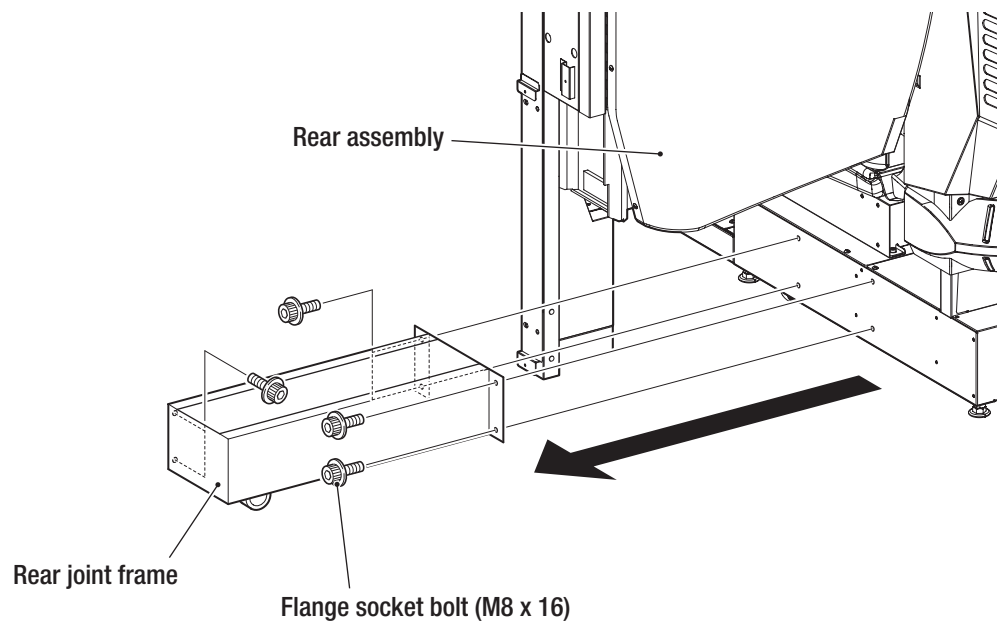


8A-3-3 Removing the Rear Joint Frame

Remove the six flange socket bolts (M8 x 16), and remove the rear joint frame.



- The rear joint frame is a required part during disassembly and transportation. Be sure to keep it together with the bolts in a safe place.



1

2

3

4

5

6

7

8A

8B

9

10

11

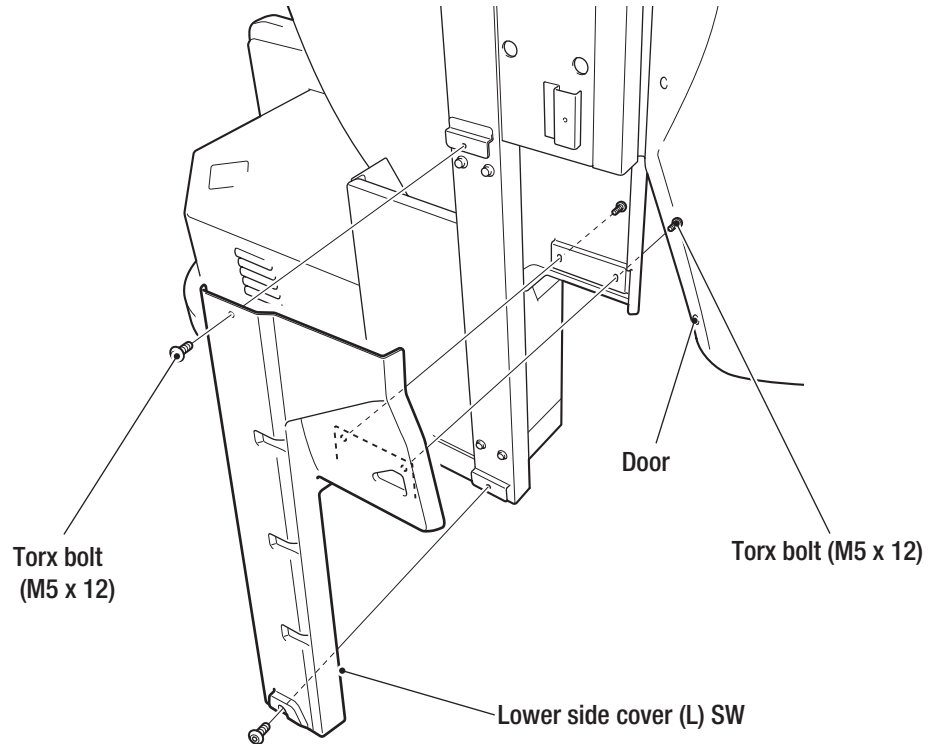
Installation and Assembly

Test Mode

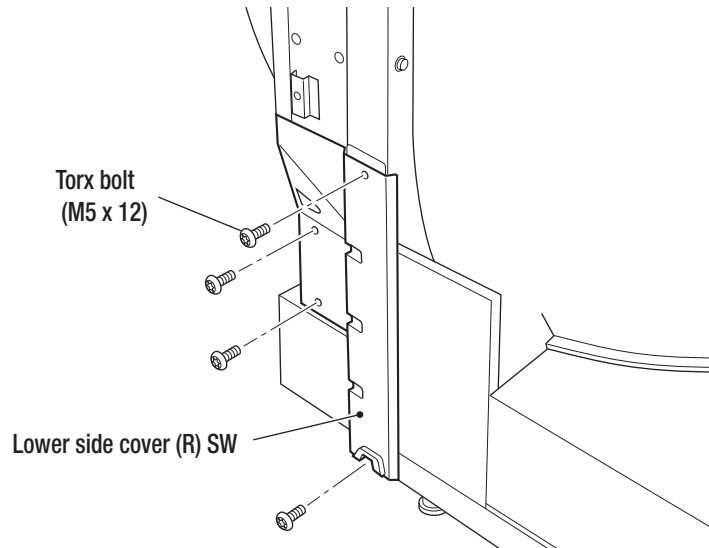
Troubleshooting

8A-3-4 Installing the Lower Side Cover

- 1 Use the four supplied Torx bolts (M5 x 12) to secure the lower side cover (L) SW.



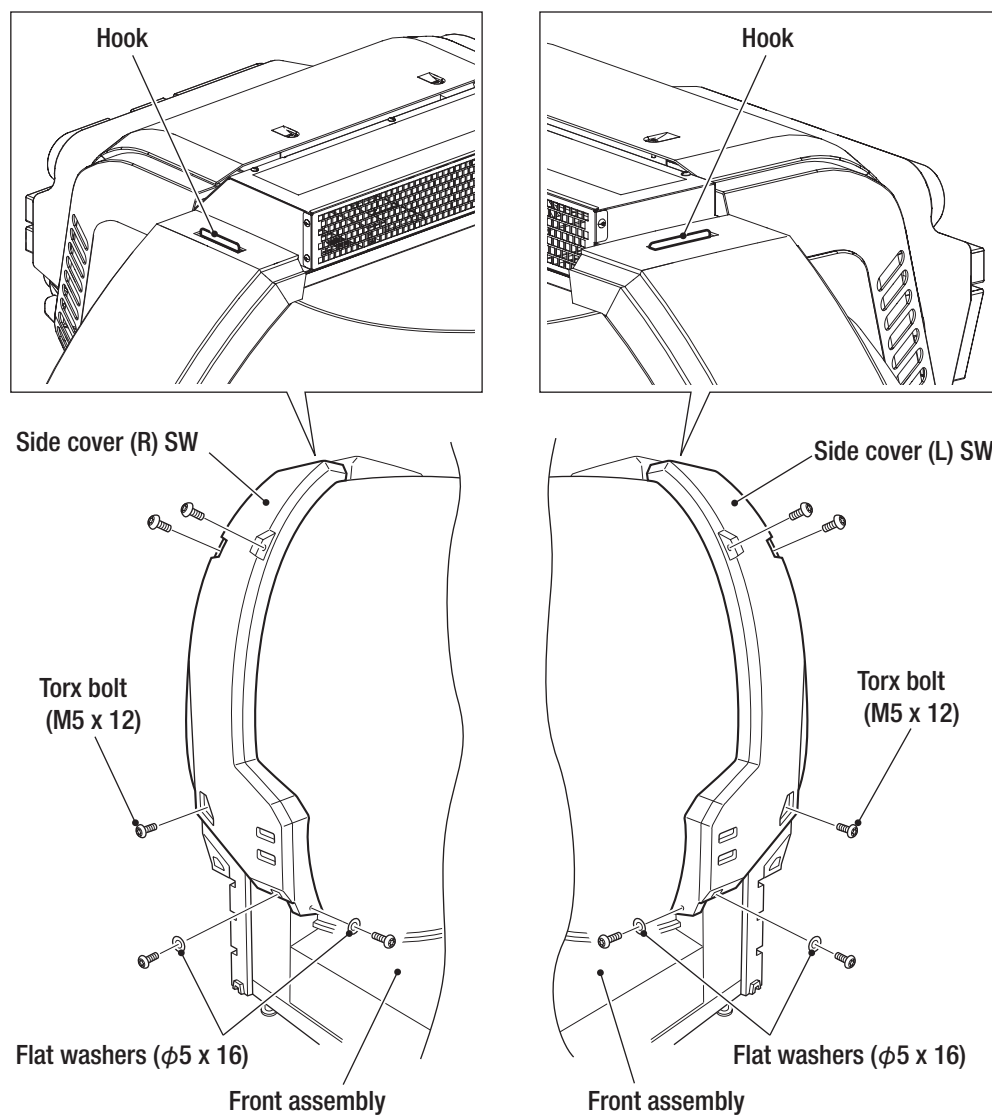
- 2 Use the four supplied Torx bolts (M5 x 12) to secure the lower side cover (R) SW.



- Must be performed by a technician -

8A-3-5 Installing the Side Cover

- 1** Hang the supplied side cover (L) SW on the hook above and use five supplied Torx bolts (M5 x 12) and two supplied flat washers ($\varnothing 5 \times 16$) to secure it.
- 2** Similarly, hang the supplied side cover (R) SW on the hook above and use five supplied Torx bolts (M5 x 12) and two supplied flat washers ($\varnothing 5 \times 16$) to secure it.



1

2

3

4

5

6

7

8A

8B

9

10

11

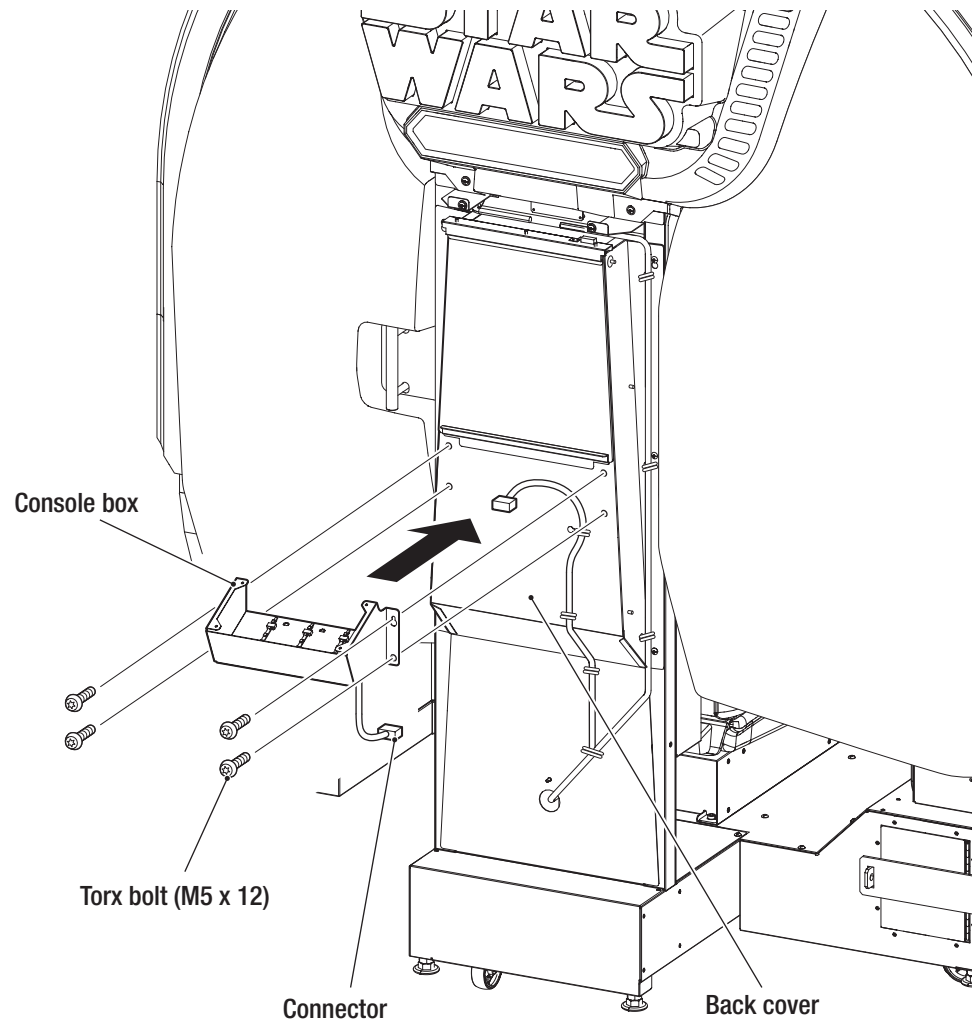
Installation and Assembly

Test Mode

Troubleshooting

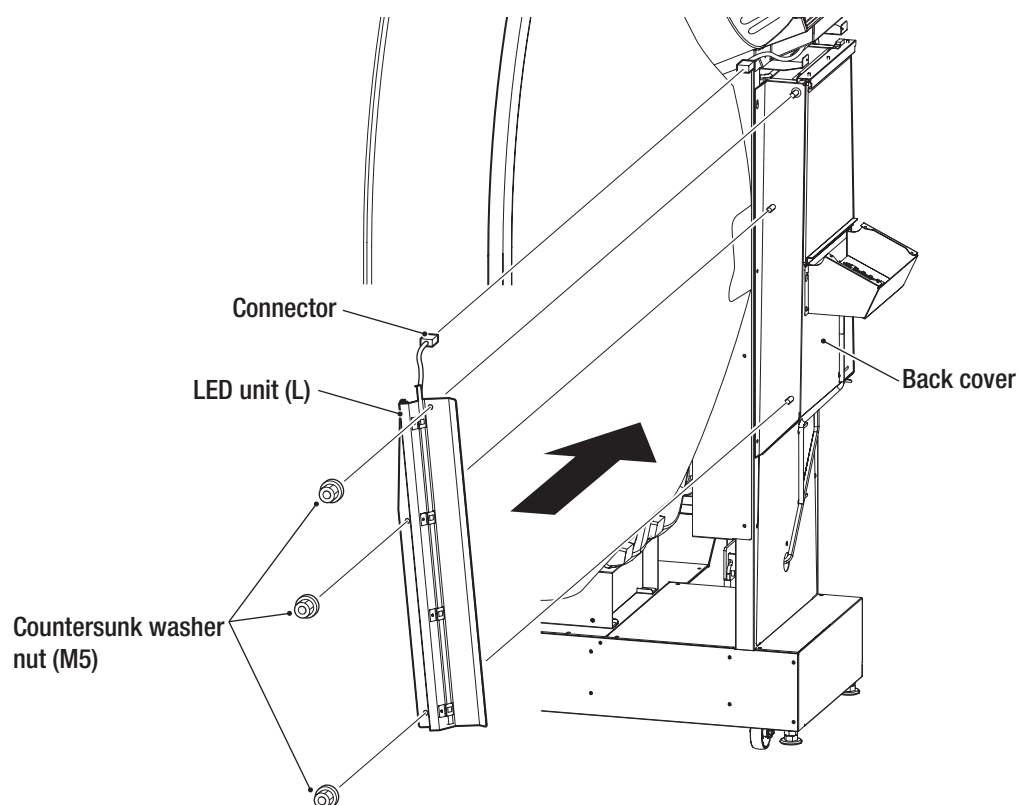
8A-3-6 Installing the Rear Cover

- 1 Secure the supplied console box to the back cover, using the four Torx bolts (M5 x 12), and connect the connector.



- Must be performed by a technician -

- 2** Secure the supplied LED unit (L) to the back cover, using the three supplied countersunk washer nuts (M5), and connect the connector.



- 3** Similar to step **2**, secure the supplied LED unit (R) to the back cover, using the three supplied countersunk washer nuts (M5), and connect the connector.

1

2

3

4

5

6

7

8A

8B

9

10

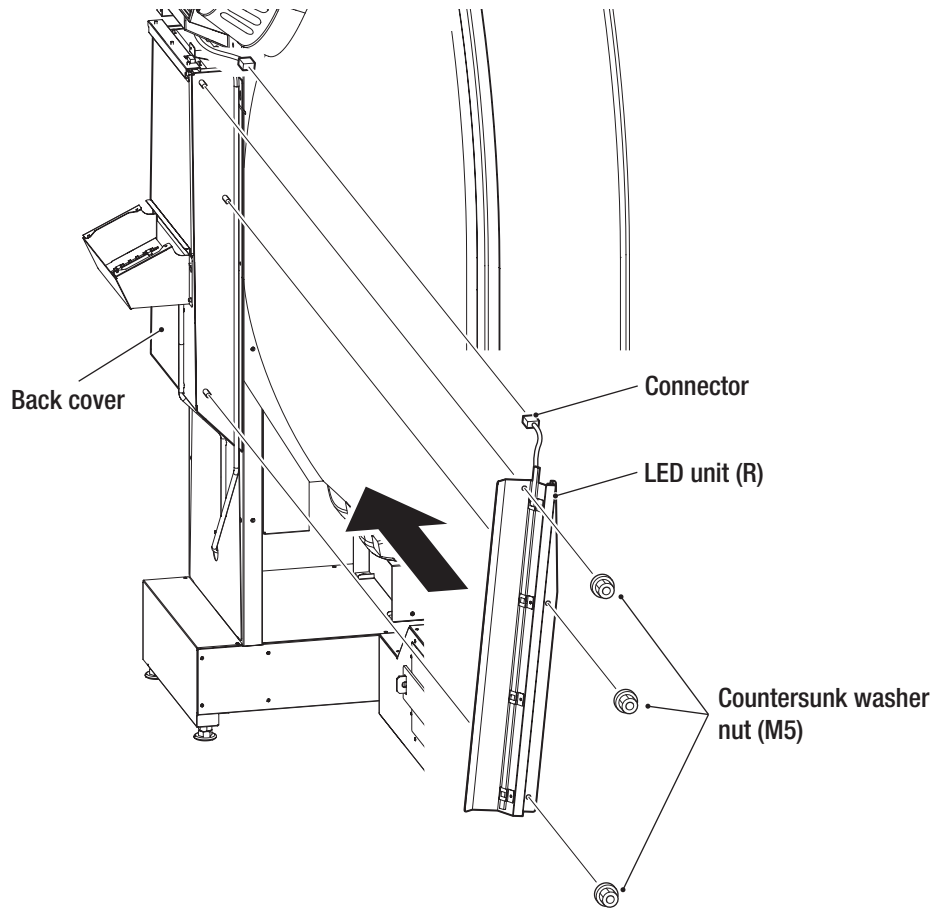
11

Installation and Assembly

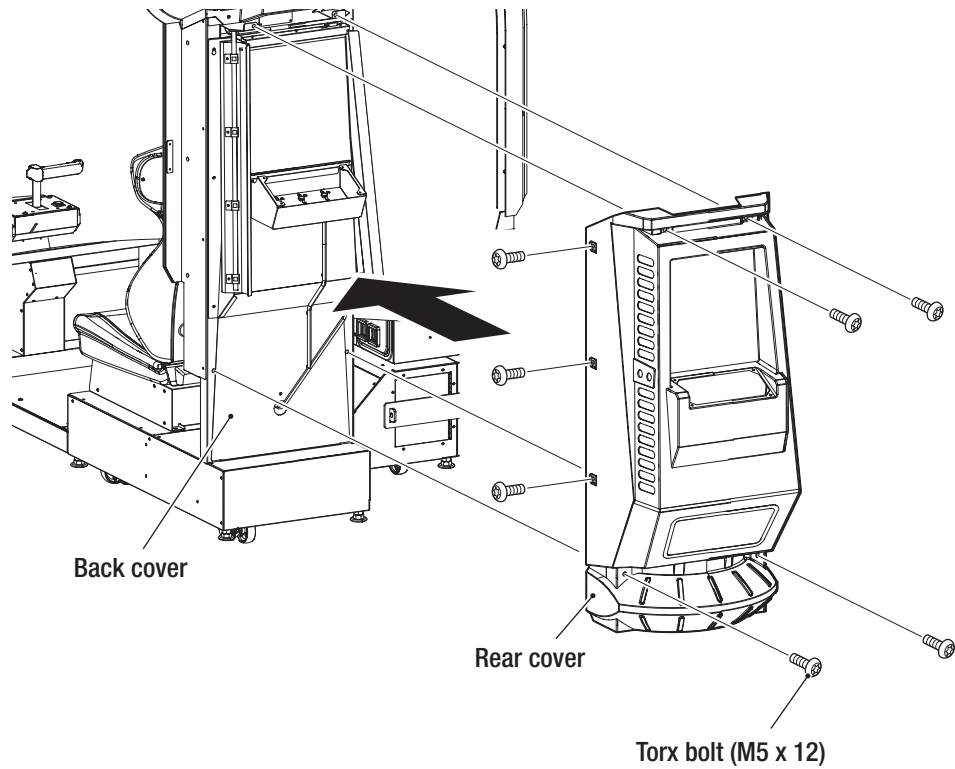
Test Mode

Troubleshooting

– Must be performed by a technician –

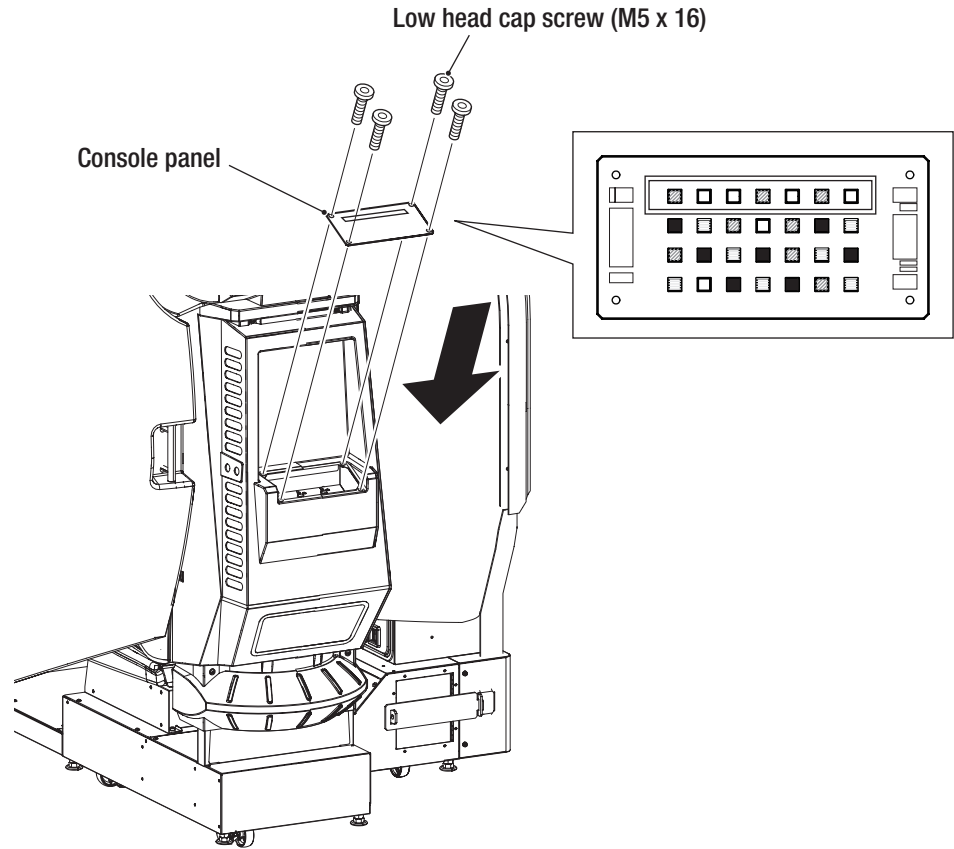


- 4** Place the supplied rear cover over the back cover and secure it using the seven supplied Torx bolts (M5 x 12).



- Must be performed by a technician -

- 5** Use the four supplied low head cap screws (M5 x 16) to secure the supplied console panel.



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8A**
- 8B
- 9
- 10
- 11

Installation and Assembly

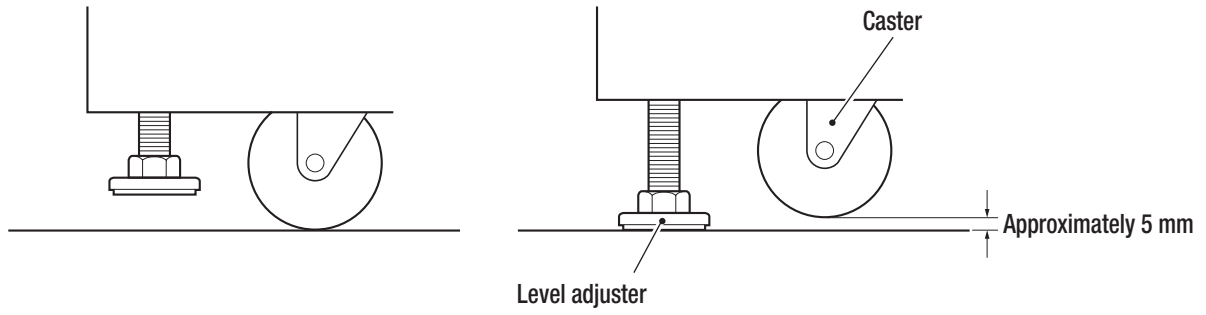
Test Mode

Troubleshooting

- Must be performed by a technician -

8A-3-7 Level Adjuster Adjustment

Lower the level adjuster until the casters are at a height of approximately 5 mm from the floor.



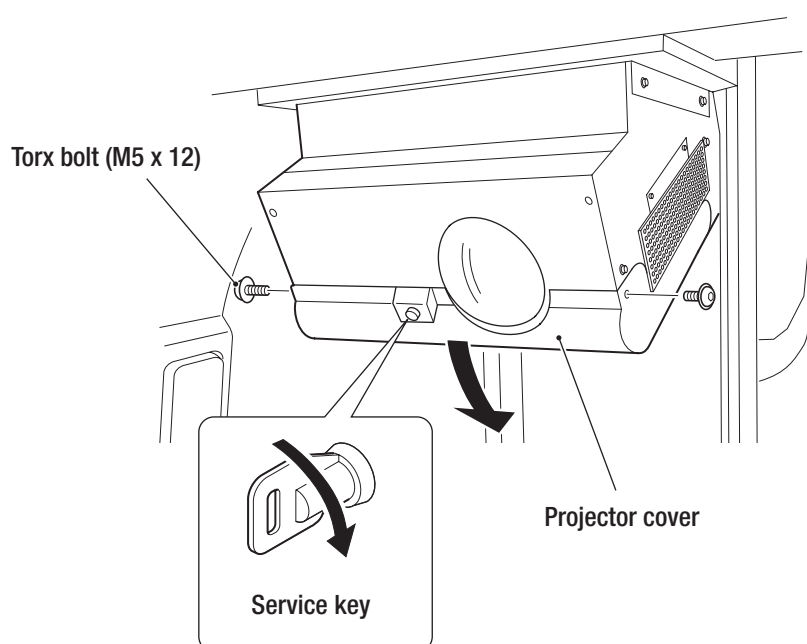
8A-3-8 Installing the Projector Unit

WARNING

- The projector unit weighs approximately 10 kg. Be very careful when performing installation.

NOTICE

- The projector unit packing box is used when moving, transporting and repairing the projector unit, so do not discard it.
 - Be careful not to touch the projector lens with your bare hands. Fingerprints or other dirt may prevent images from being projected properly.
 - Be careful not to damage the projector lens when carrying out the work.
- 1 Remove the two Torx bolts (M5 x 12) on both sides of the projector cover, and use the service key to unlock and open the projector cover.



1

2

3

4

5

6

7

8A

8B

9

10

11

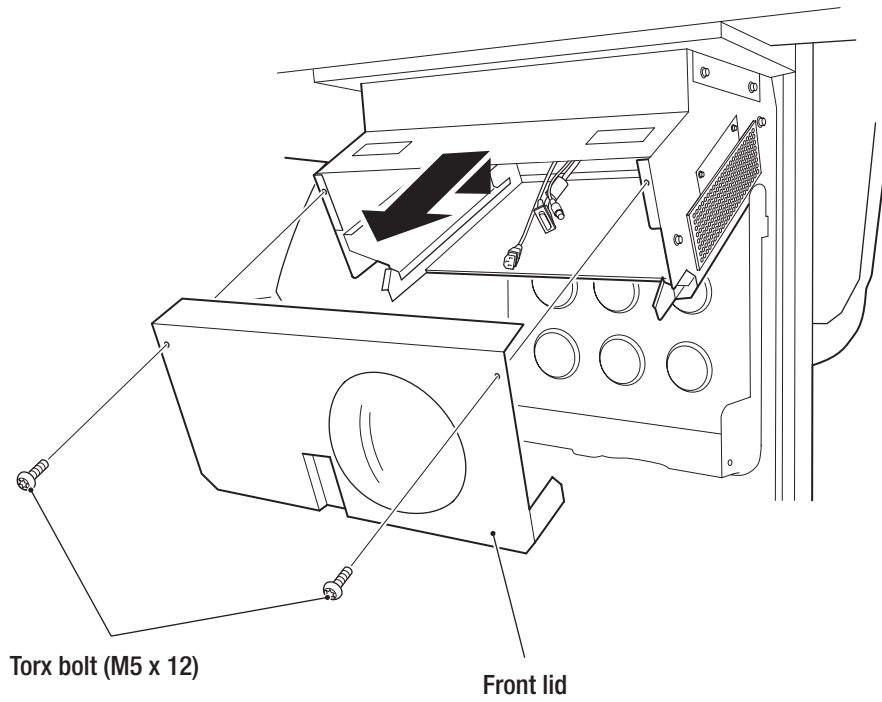
Installation and Assembly

Test Mode

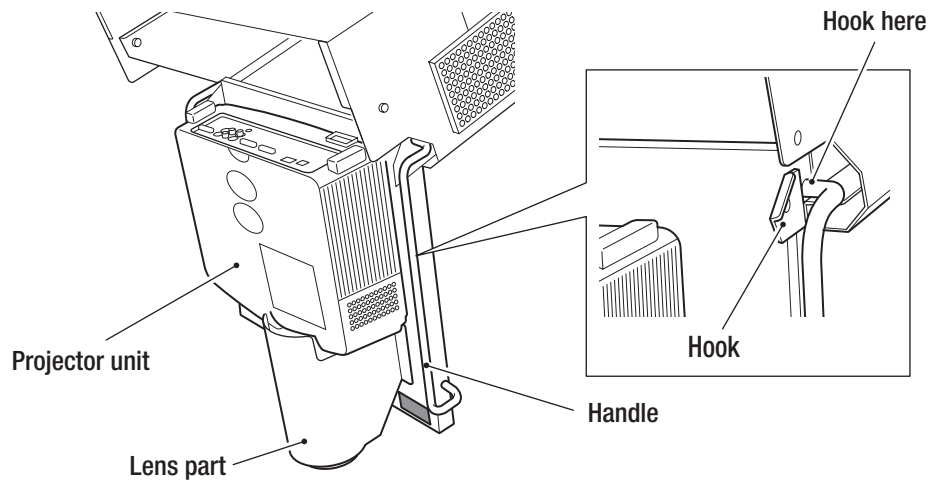
Troubleshooting

– Must be performed by a technician –

- 2 Remove the two Torx bolts (M5 x 12) securing the front lid, slide it toward you, and lift it up to remove it.

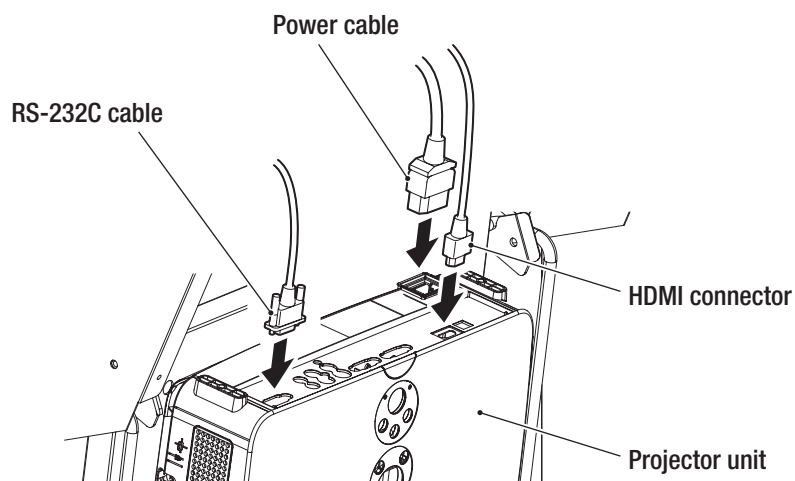


- 3 Remove the projector unit from the packing box, hold it by the handles with the lens facing downward, and hang the handles onto the hooks on both sides of the projector case.

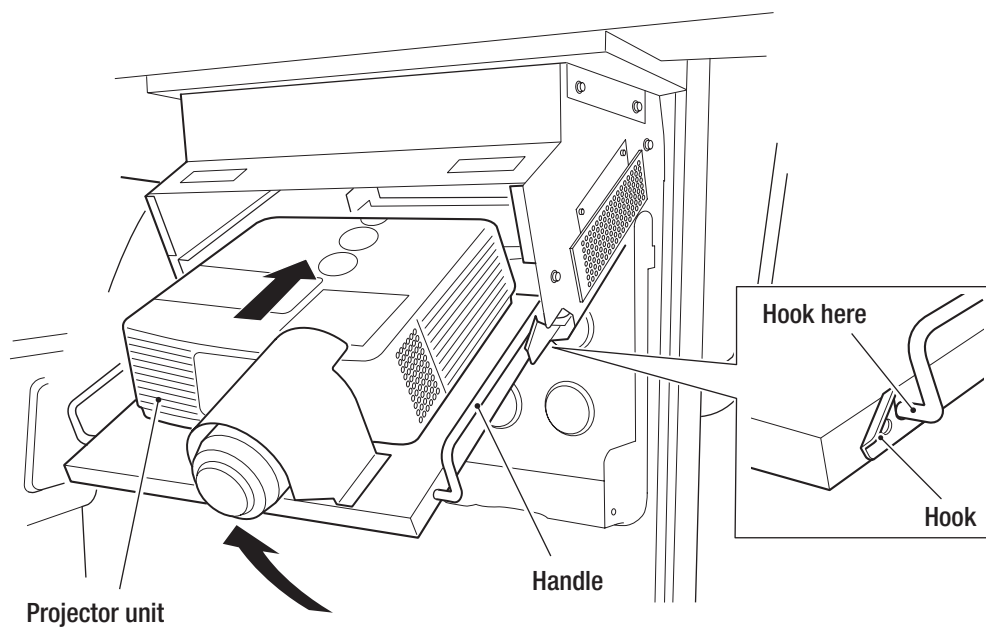


– Must be performed by a technician –

- 4** Connect three connectors (HDMI connector, RS-232C cable, power cable) to the projector.



- 5** Lift up the projector unit and push it back into the projector case, being careful not to pinch the cables. Then, hang the front side of the handles onto the hooks to secure the projector unit.



1

2

3

4

5

6

7

8A

8B

9

10

11

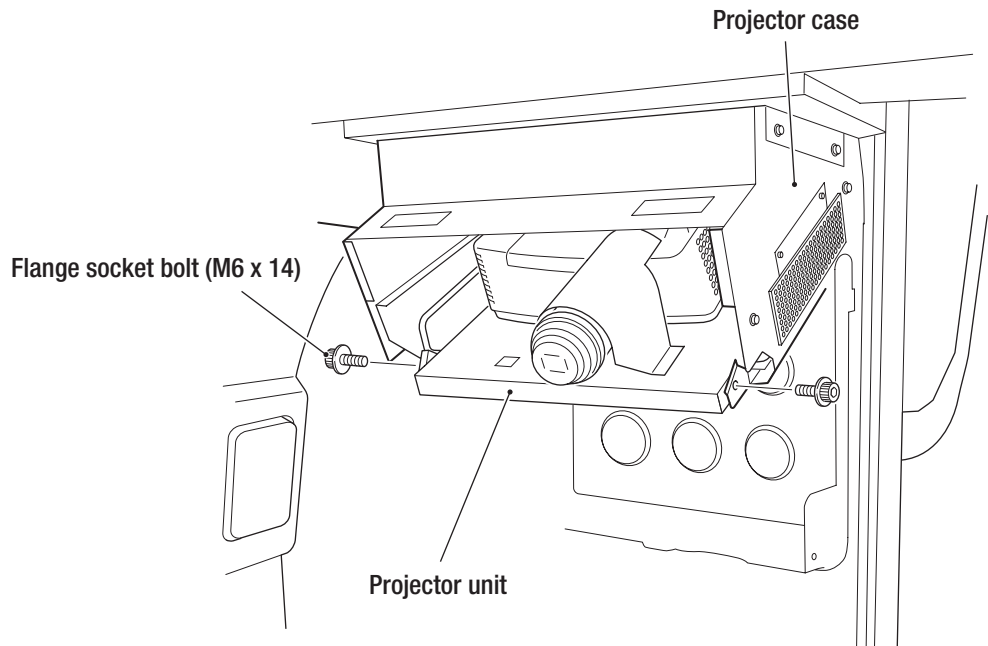
Installation and Assembly

Test Mode

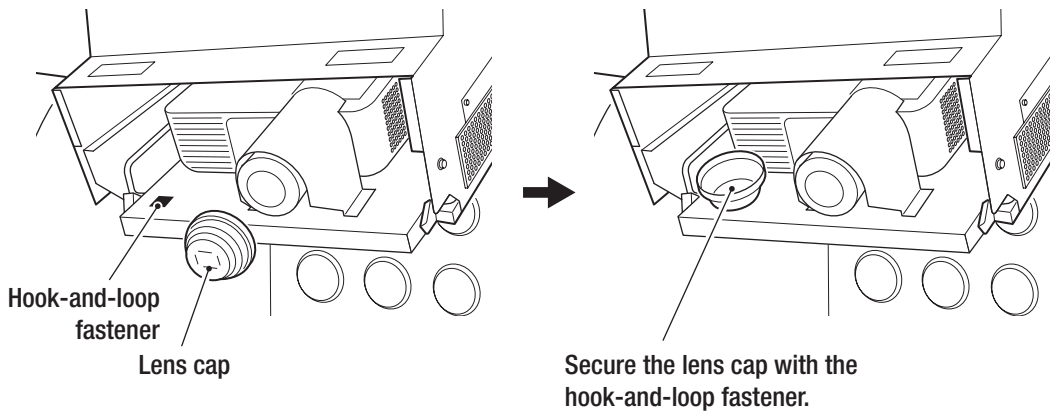
Troubleshooting

– Must be performed by a technician –

- 6 Use the two supplied flange socket bolts (M6 x 14) to secure the projector unit to the hooks on both sides of the projector case.



- 7 Remove the lens cap and secure it in the position shown in the figure to avoid misplacing it. (A hook-and-loop fastener is attached to the lens cap.)



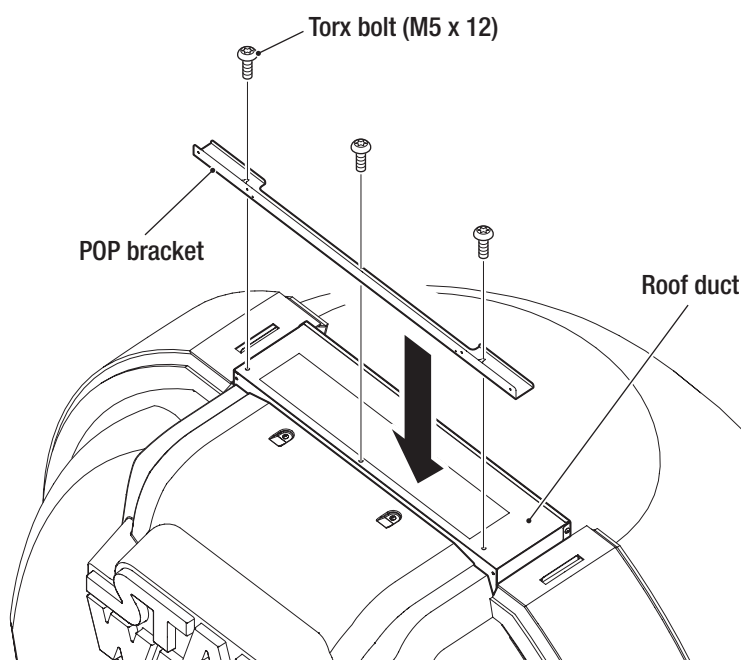
- 8 Install the front lid and the projector cover by following the procedures described in steps 1 and 2 in reverse.

8A-3-9 Installing the POP

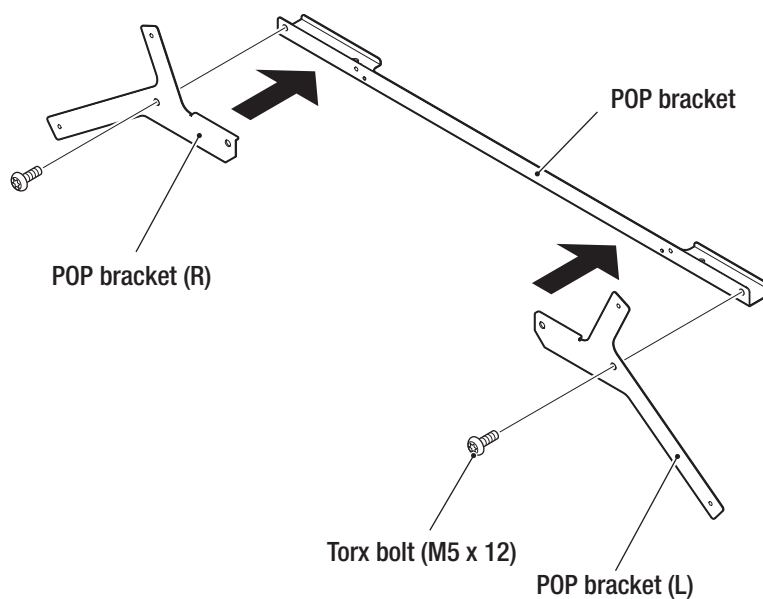
! WARNING

- Installing the POP display involves standing at an elevated height. Prepare an appropriate stepladder or footstool and be careful when working. Working in an unnatural body posture may result in injury or machine damage.

- 1 Place the supplied POP bracket on the roof duct and secure it using the three supplied Torx bolts (M5 x 12).



- 2 Install the POP bracket (L) and (R) to the POP bracket using the included Torx bolts (M5 x 12).



1

2

3

4

5

6

7

8A

8B

9

10

11

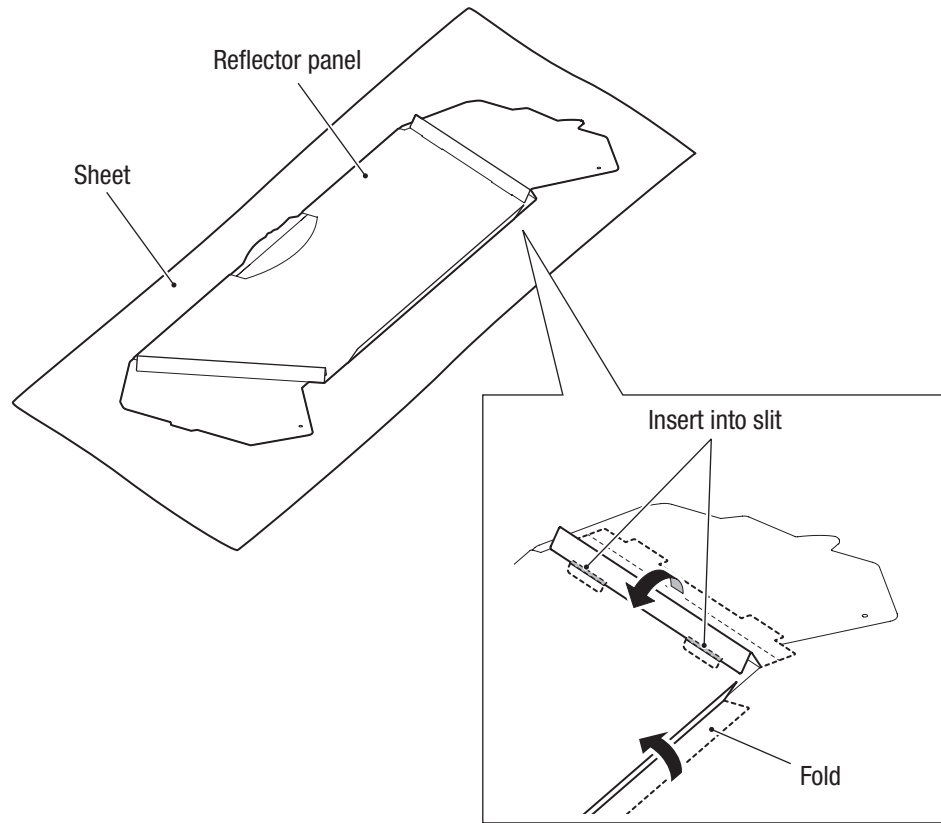
Installation and Assembly

Test Mode

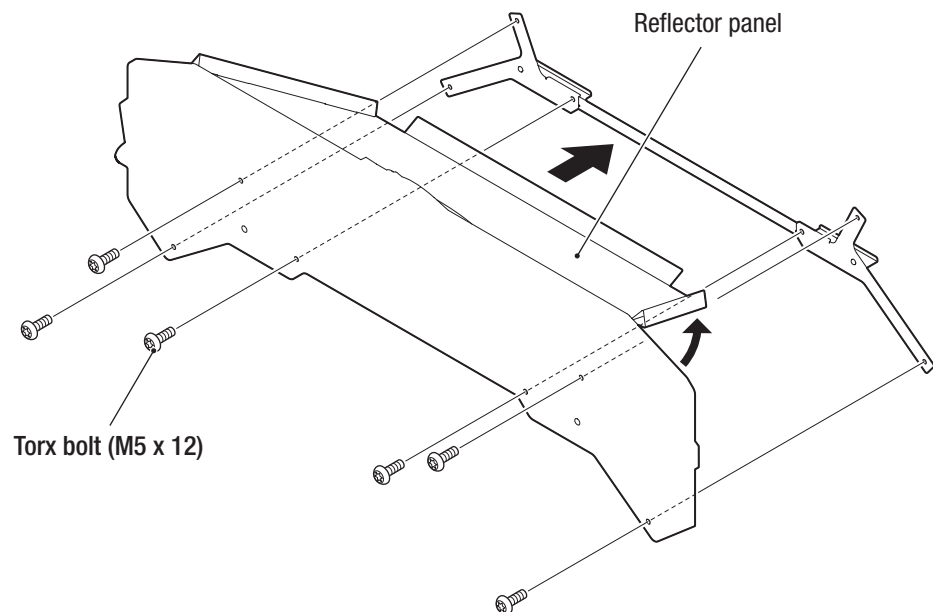
Troubleshooting

– Must be performed by a technician –

- 3 Fold both sides of the reflector behind the POP board to make a triangle shape, and then fold the bottom of the reflector forwards.

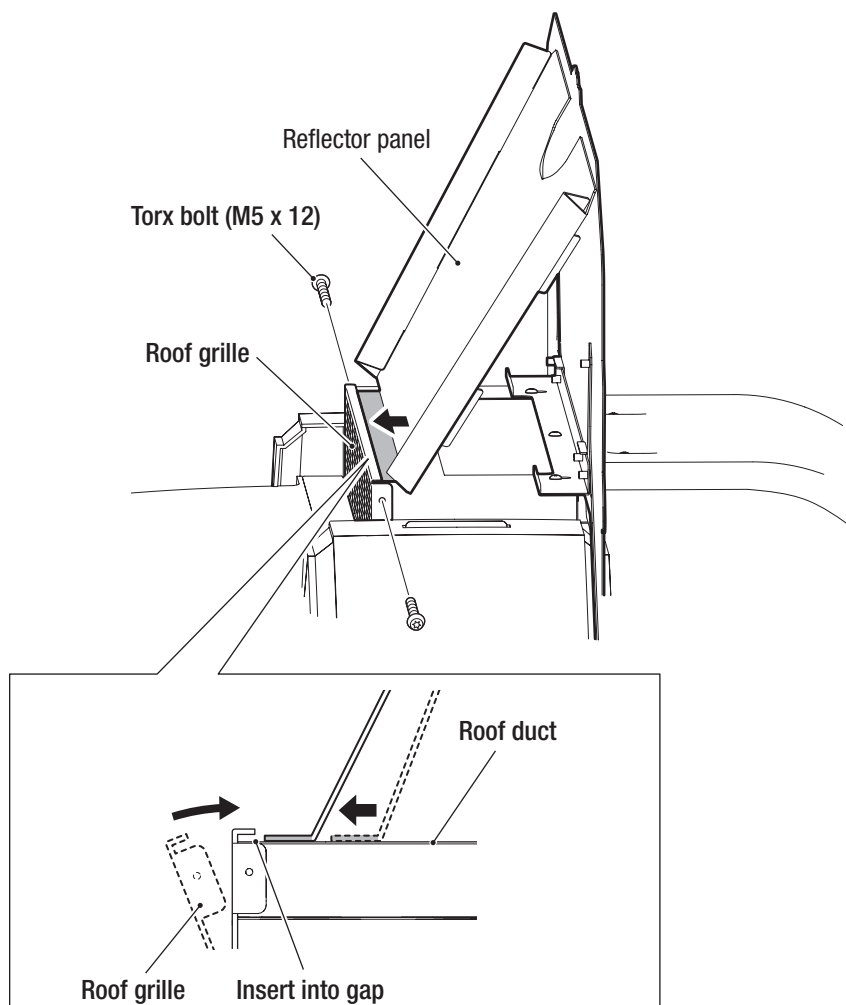


- 4 Lift up the reflector panel and install the POP board to the POP bracket with the six included Torx bolts (M5 X 12).

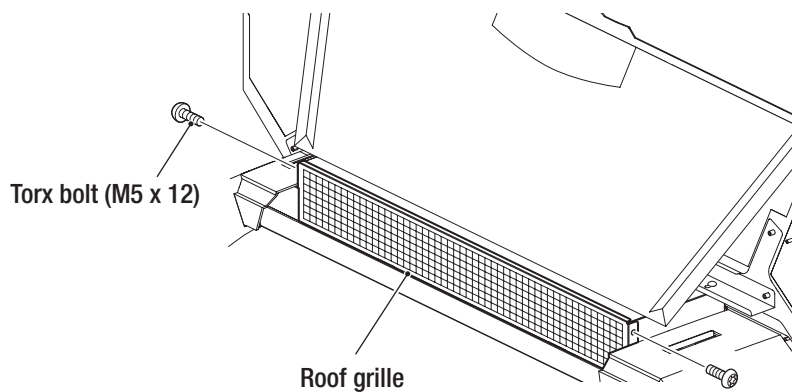


- Must be performed by a technician -

- 5 Remove the two Torx bolts (M5 x 12) holding the roof grille in place, and then insert the bottom of the reflector panel into the gap between the roof grille and roof duct.



- 6 Install the two Torx bolts (M5 X 12) to the roof grille.



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8A
- 8B
- 9
- 10
- 11

Installation and Assembly

Test Mode

Troubleshooting

– Must be performed by a technician –

8A-4 Connecting the Power Cord and Ground Wire

WARNING

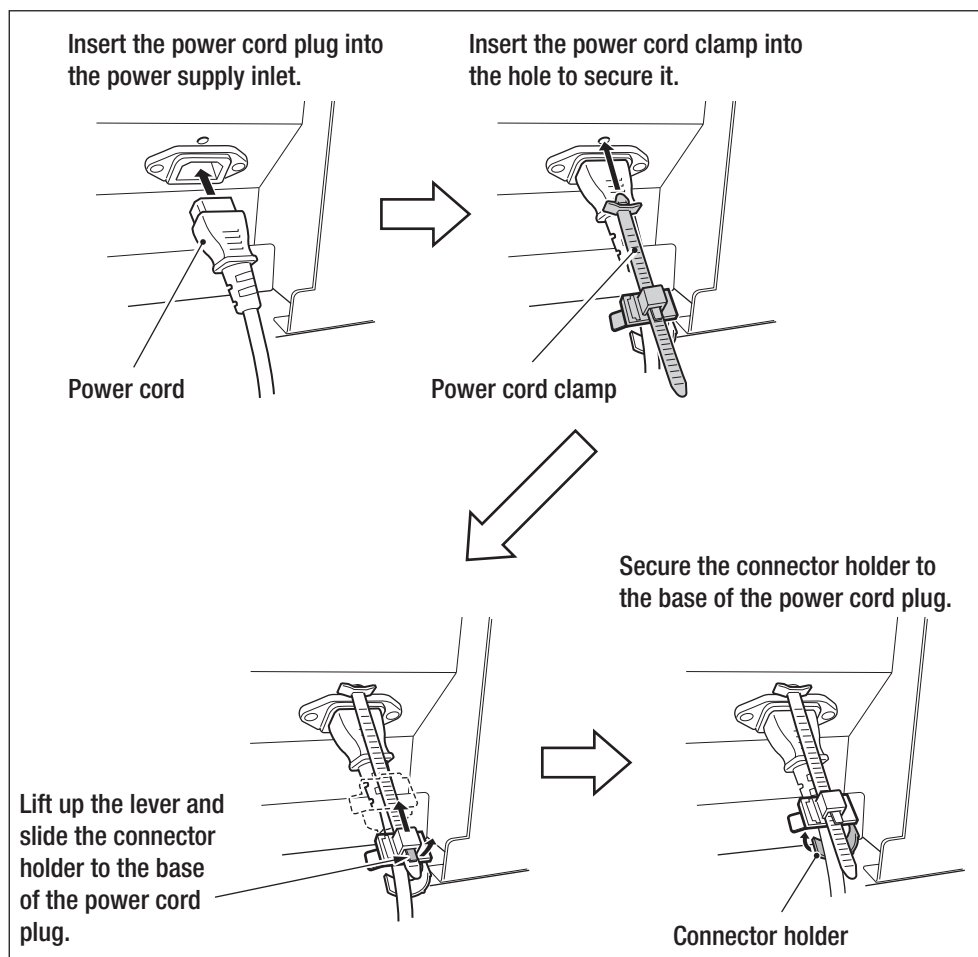
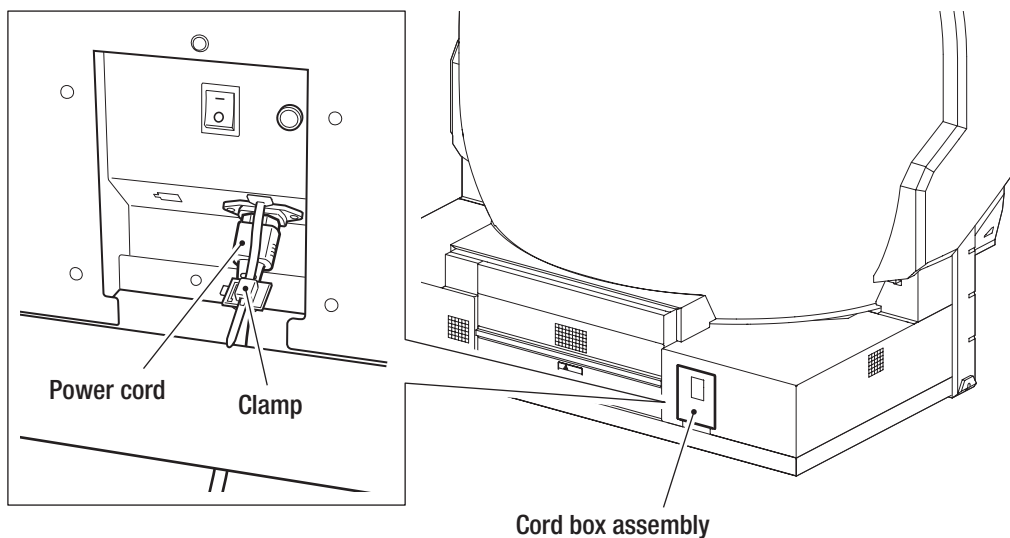
- Be sure to install the ground wire. Failure to connect the ground wire may result in electric shock in the event of a short-circuit.
- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.
- Be careful not to let the cabinet's sheet metal or other objects damage the cables that extend from the bottom of the cabinet. Doing so may result in fire or electric shock.

CAUTION

- Lay out the power cord and the LAN cable safely so that they will not cause players, bystanders or passersby to trip over them.

- Must be performed by a technician -

Connect the power cord plug to the power supply inlet of the machine, then secure it with the clamp as shown in the figure below to prevent accidental disconnection.



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8A**
- 8B
- 9
- 10
- 11

Installation and Assembly

Test Mode

Troubleshooting

8A-5 Connecting the LAN Cable (If Necessary)

Connect the LAN cable if connection to the NBLINE is necessary.

WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch of the game cabinet before starting this task.

CAUTION

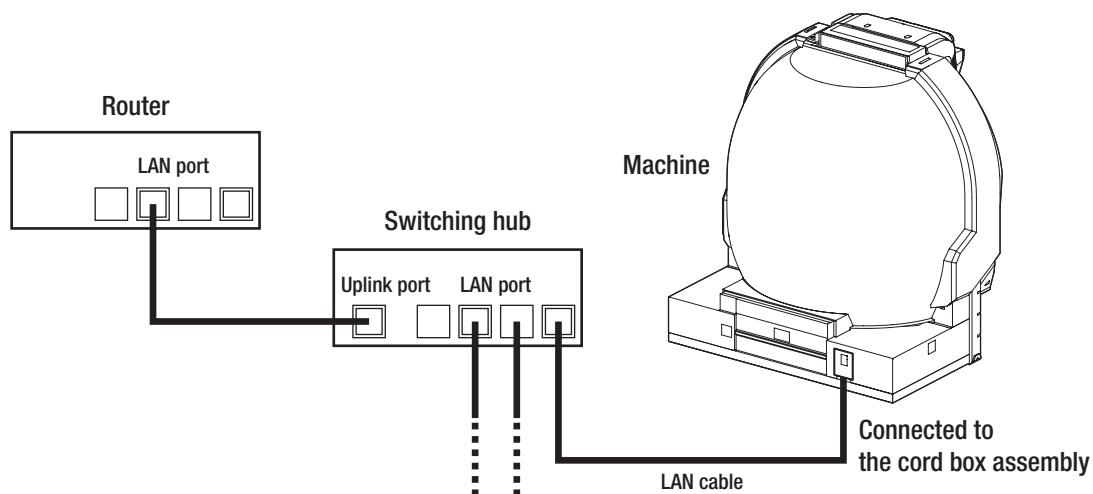
- Lay out the LAN cable so that it will not cause players, bystanders or passersby to trip over it.

NOTICE

- Careless network system installation or other work makes networks susceptible to hacking and can result in communication errors, lost data and other trouble. In case a recovery or countermeasures to prevent hacking are required, it is recommended that professionals be commissioned to carry out installation and other related work.
- When laying out the LAN cable on the floor, it is recommended that commercially available cable molding be used to protect the cable.
- Failure to observe the following instructions may result in communication trouble and prevent proper game play. Be sure to connect the LAN cable correctly according to the instructions.
 - A disconnected LAN cable may result in communication trouble. When laying out the LAN cable on the floor, be sure to arrange the cable so that passersby do not trip over it.
 - Do not bundle the LAN cable with power cords or pass it through the same cable molding as power cords.
 - When installing the machine, do not bend the LAN cable excessively or pull it too tight to avoid subjecting the cable to excessive load.

8A-5-1 Connection Diagram of the LAN Cable

- 1** Refer to the following figure for information on how to connect this machine to the router connected to the NBLINE or the switching hub, using a LAN cable.



* The connection work required for network communication differs according to the conditions that exist at the installation location. Therefore, this Operation Manual only describes an outline of the connections. For inquiries regarding individual support at each installation location, contact your distributor.

1

2

3

4

5

6

7

8A

8B

9

10

11

Installation and Assembly

Test Mode

Troubleshooting

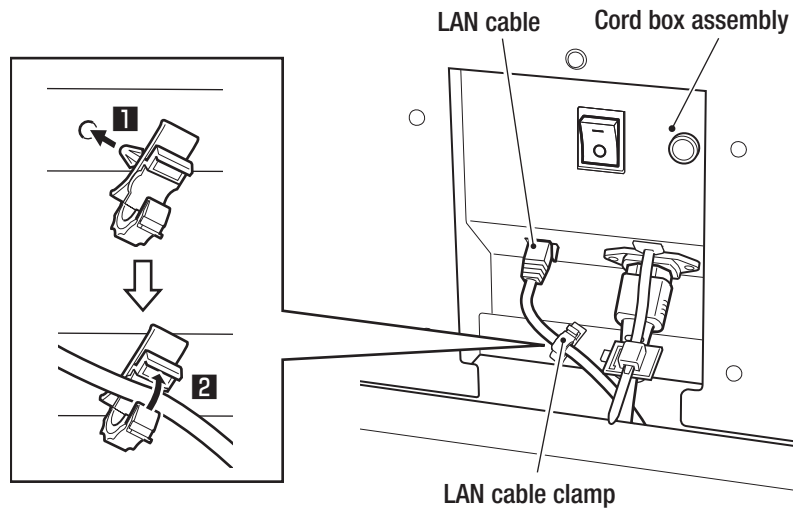
– Must be performed by a technician –

8A-5-2 Connecting the LAN Cable to the Machine

WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch of the game cabinet before starting this task.
- Be careful not to let the cabinet's sheet metal or other objects damage the cables that extend from the bottom of the cabinet. Doing so may result in fire or electric shock.

- 1** Insert the LAN cable clamp into the mounting hole of the cord box assembly.
- 2** Insert the LAN cable into the connector of the cord box assembly and pass it through the LAN cable clamp.



NOTICE

- Check the shape and orientation of the connector before inserting the LAN cable.
- Fully insert the LAN cable connector. A disconnected LAN cable will not work correctly.
- Recommended LAN Cable:
 - RJ45 CAT5e Ethernet Cable
 - Straight-Through
 - STP

8A-6 Post-Installation Checks (Before Power On)

When the installation operation is completed, check the following items before turning the main power switch on.

- Has the machine been installed in conformance with the installation conditions? (See P-19 "5-1 Installation Conditions".)
- Are the power capacity conditions met?
- Are the power cord and the LAN cable connector fully inserted?
- Has the ground wire been installed?
- Is the adjuster correctly adjusted?
- Are the front and rear assemblies firmly connected?
- Are the lower side cover, the side cover and the rear cover installed?
- Have the power cord and the LAN cable been installed using cable molding or other means so that players and other customers do not trip over them?

8A-7 Inserting the USB Dongle

WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch of the game cabinet before starting this task.
- The supplied USB dongle is intended only for use with this machine. Do not use it with other instruments. Do not insert any USB dongles that are not designed for use with this machine. Doing so may result in mechanical malfunction.

- 1** Insert the supplied USB dongle into the USB port No. 3 on the game PC board. (See P-101 "(1) Replacing the Game PC Board".)
- 2** Close the service door using the supplied service key, and secure it with a Torx bolt (M5 x 30). (See P-63 "8A-3-1 Removing the Service Door".)

1

2

3

4

5

6

7

8A

8B

9

10

11

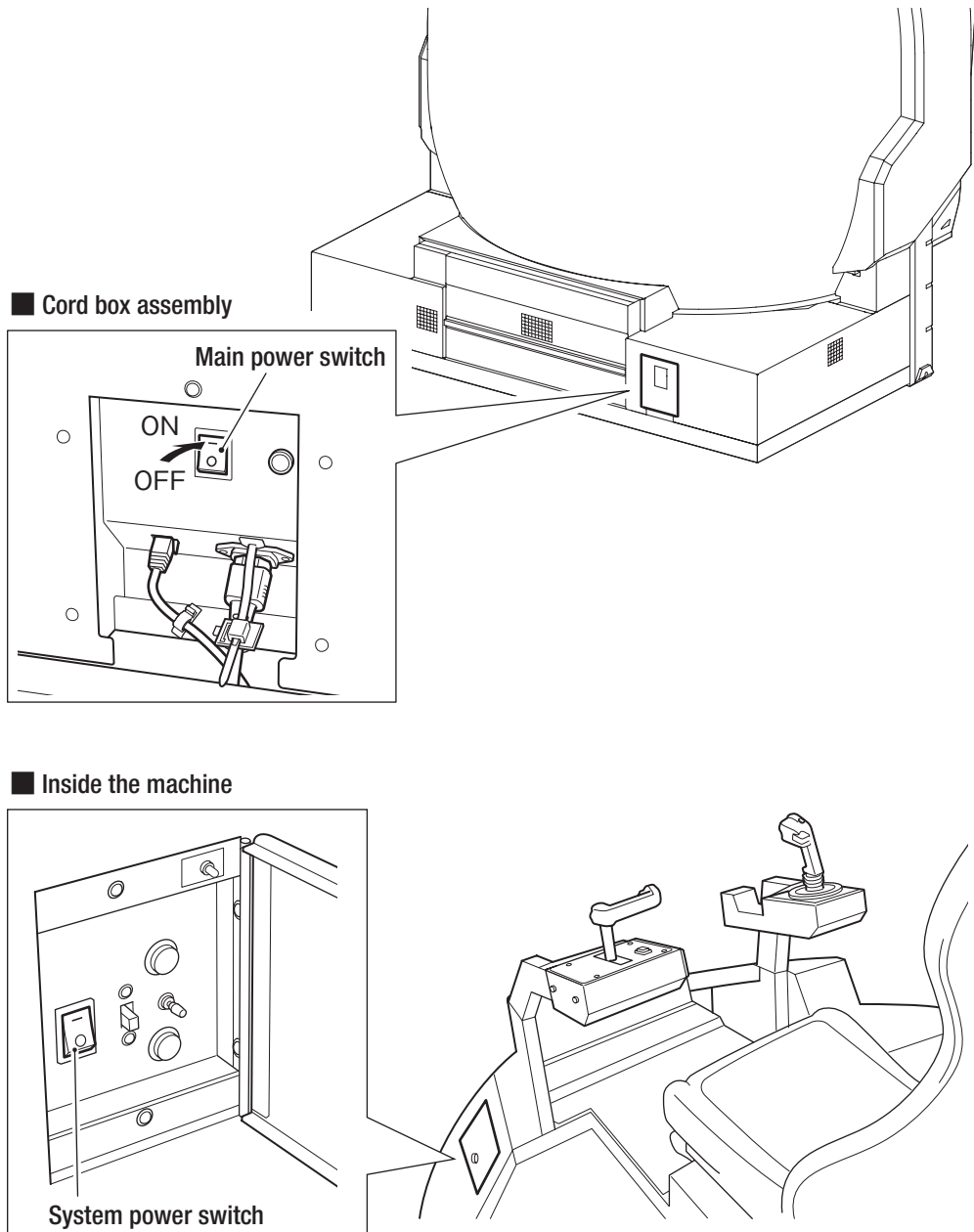
Installation and Assembly

Test Mode

Troubleshooting

8A-8 Turning the Power Switch On

- 1** Turn on the main power switch located on the front assembly.
- 2** Open the service door using the supplied service key.
- 3** Set the system power switch to ON.



8A-9 Post-Installation Checks (After Power On)

After turning the main power switch on, check the following items.

- Are images projected over the entire dome screen (all the way to the edges)? (See P-179 "8B-6-2 Adjusting the Projector Position".)
- Is the network communication status normal? (See P-56 "7-7 About the Network", if connection to the NBLINE is necessary.)
- Do the control lever, the throttle lever, and the view change button work correctly? (See P-38 "(b) SWITCH TEST".)

Set the game cost, the volume, and the maintenance time as required. (See P-33 "7-6 Test Mode".)

Now, installation and assembly are complete. (See P-25 "7. Operation".)

1

2

3

4

5

6

7

8A

8B

9

10

11

Installation and Assembly

Test Mode

Troubleshooting

– Must be performed by a technician –

8B. Service

WARNING

- In order to avoid electric shock, accident or injury to yourself or other people, be sure to turn off the main power switch before performing service work (such as repairs or correcting malfunctions).

8B-1 Inspection and Service

WARNING

- Perform periodic service. Failure to perform service may result in an accident.
- Perform the pre-operation inspection every day. This is required to prevent accidents. (See P-26 "7-3 Pre-operation Inspection".)

8B-1-1 Points for Inspection

Periodically check the following inspection points for any abnormalities.

(1) Level Adjuster Inspection

- Check that the level adjusters are fixed correctly. (See P-74 "8A-3-7 Level Adjuster Adjustment".)

(2) Power Cord Inspection

- Check that the power cord is firmly inserted into the cord box assembly of this machine and an outlet of the building. (See P-82 "8A-4 Connecting the Power Cord and Ground Wire".)
- Clean any dust or dirt from the connection parts.
- Check for cracks or dirt on the power cord covering. If there is any abnormality on the power cord, be sure to replace it.

(3) LAN Cable Inspection (If Connection to the NBLINE is Necessary)

- Check that the LAN cable connector is firmly inserted.
- Check for cracks or dirt on the LAN cable. If there is any abnormality on the LAN cable, be sure to replace it.

(4) Projector Inspection

- Check that images are projected properly from the projector.
- Check that the projection range of the projector matches the screen position. (See P-179 "8B-6-2 Adjusting the Projector Position".)
- Check the projector installation and adjustment screws for loose screws.
- Check that the filter of the projector unit or the projector box is not clogged with dust or other materials. If it is clogged, clean it or replace it. (See P-174 "(3) Cleaning the Filter of the Projector Unit" and P-175 "(4) Replacing the Filter of the Projector Cover".)

(5) Loose Screw Inspection

Check the following parts for loose screws. Fully retighten any loose screws.

- Fixing screws on the control lever assembly (See P-117 "(1) Replacing the Control Lever Assembly".)
- Fixing screws on lever grip A and lever grip B (See P-120 "(3) Replacing the Micro Switch".)
- Fixing screws on the throttle lever assembly (See P-138 "(1) Replacing the Throttle Lever Assembly".)
- Fixing screws on the seat assembly
- Others

(6) Game PC Board Inspection

- If dust accumulates around the air inlet of the game PC board, clean it.

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

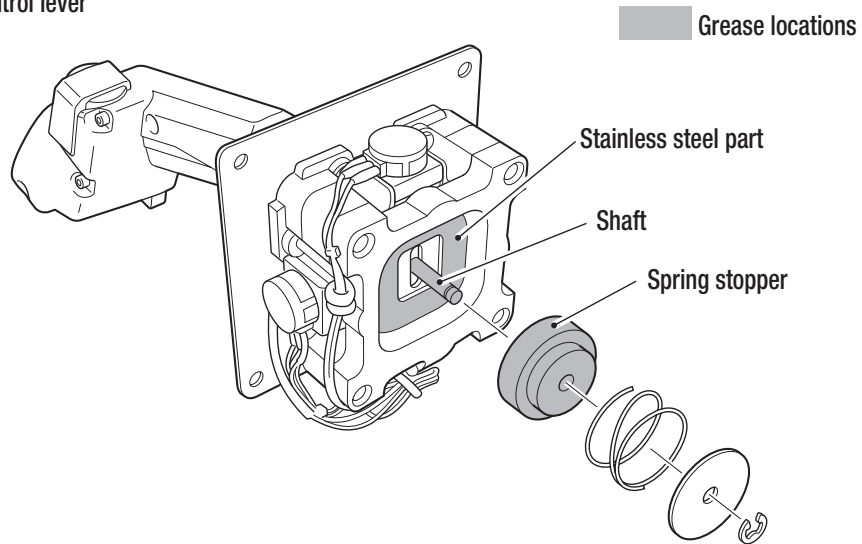
8B-1-2 Points for Service

Replenish the grease on the control lever and the throttle lever once every 6 months (approx.).

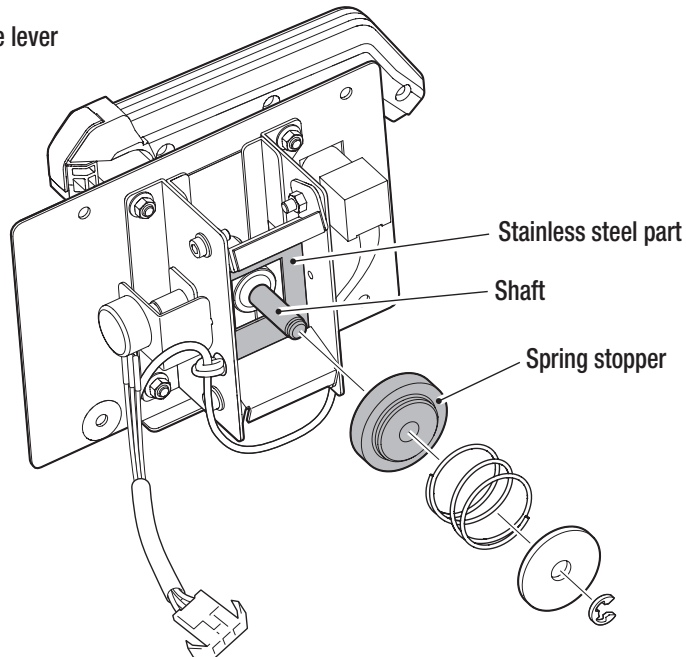
Clean off the old grease and apply fresh silicon grease (recommended product: G-40M , Shin-Etsu Chemical Co, Ltd.) to the stainless steel part, spring stopper and shaft.

Also reapply grease when the lever operation becomes stiff. (See P-127 "(7) Replacing the Spring or Spring Stopper".)

Control lever



Throttle lever



- Be sure to wipe off excess grease.
- Do not use anti-rust spray or lubricant spray, as these products will make the grease come off.

8B-2 Troubleshooting

WARNING

- In order to avoid electric shock, accident or injury to yourself or others, be sure to turn off the main power switch before starting this task.
- If the condition does not fall under the items from 8B-2-1 to 8B-2-5, or if the solution does not improve the condition, turn off the main power switch immediately, stop operations, and contact your distributor. Continuing to operate the machine may cause an accident.



NOTICE

- Before you conclude that the machine has malfunctioned, check that each connector is firmly connected.
- Never test the game PC board, the NA-JV (S) PC board, the LED filter PC board, or the amplifier PC board for continuity inspection by using a tester or other devices. BANDAI NAMCO Games Inc. will repair them. The internal voltage of the tester may damage the IC.
- To request repairs or to order parts, contact your distributor.

8B-2-1 Overall

Symptom	Main cause	Solution	Reference section
· The machine does not start.	· The USB dongle is not inserted.	· Insert the USB dongle.	P-101
	· The system power switch is set to OFF.	· Set the system power switch to ON.	P-32
	· A game PC board malfunction · A USB dongle malfunction.	· Contact your distributor.	-
· Operation is not stable or the machine operates incorrectly.	· The machine is not used with the power supply voltage in the following ranges: Model operating on 110 VAC: 100 to 120 VAC Model operating on 120 VAC: 110 to 130 VAC Model operating on 220 VAC: 210 to 230 VAC Model operating on 230 VAC: 220 to 240 VAC	· Disconnect any high-capacity devices (such as an air conditioner or large machine) from the same line to secure the specified power supply voltage.	-
· The power turns off during operation.	· The fuse has burned out.	· Replace with a new fuse of the specified capacity. If the fuse burns out frequently, there is a mechanical abnormality.	-
		· Contact your distributor.	-
· There is no sound coming from the speakers.	· The volume setting is low.	· Set the appropriate volume.	P-45
	· S5.1ch AMP PC board malfunction.	· Replace the S5.1ch AMP PC board.	P-106
· There is no sound coming from the main speaker or there is no sound coming from the correct speaker (side, seat, woofer).	· The sound connectors are not connected correctly.	· Refer to the Operation Manual and connect the connectors correctly.	P-101 P-106
· Service switch does not work.	· A connector is disconnected.	· Insert the connector securely.	P-101 P-104
	· NA-JV (S) PC board malfunction.	· Replace the NA-JV (S) PC board.	P-104
	· A door switch malfunction.	· Replace the door switch.	-

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

8B. Service

– Must be performed by a technician –

8B-2-2 Front Assembly

Symptom	Main cause	Solution	Reference section
· There is no wind coming from the fan.	· A connector is disconnected.	· Insert the connector securely.	P-104 P-111
	· A fan malfunction.	· Replace the fan.	P-111
	· NA-JV (S) PC board malfunction.	· Replace the NA-JV (S) PC board.	P-104

8B-2-3 Rear Assembly

Symptom	Main cause	Solution	Reference section
· There is no sound coming from the seat speakers or the bottom speakers.	· The volume setting is low.	· Set the appropriate volume.	P-45
	· A connector and a Faston terminal are disconnected.	· Insert the connector and the Faston terminal securely.	P-101 P-106
	· S5.1ch AMP PC board malfunction.	· Replace the S5.1ch AMP PC board.	P-106
· The LED module does not light up.	· A connector is disconnected.	· Insert the connector securely.	P-104 P-151-P-159 P-163
	· The LED regulator malfunction.	· Replace the LED regulator.	P-161
	· The LED filter PC board malfunction.	· Replace the LED filter PC board.	P-163

* For coin errors, see P-98 "(1) Hardware Errors". For projector errors, see P-99 "(2) Projector Errors".

8B-2-4 Control Lever/Throttle Lever/USB Camera

Symptom	Main cause	Solution	Reference section
· Cannot shoot.	· A connector is disconnected.	· Insert the connector securely.	P-101 P-113
	· A USB camera malfunction.	· Replace the USB camera.	P-113
· The lever does not function.	· The analog interface has not been calibrated.	· Calibrate the analog interface.	P-37
	· A connector is disconnected.	· Insert the connector securely.	P-104 P-117 P-138
	· An analog interface malfunction.	· Replace the analog interface.	P-118 P-139
	· NA-JV (S) PC board malfunction.	· Replace the NA-JV (S) PC board.	P-104
· A button switch does not function.	· A connector is disconnected.	· Insert the connector securely.	P-104 P-117
	· A micro switch malfunction.	· Replace the micro switch.	P-120
	· NA-JV (S) PC board malfunction.	· Replace the NA-JV (S) PC board.	P-104
· The throttle or control lever movement is stiff.	· The silicon grease has become worn (dry).	· Apply new silicon grease.	P-92
· An abnormality in the throttle or control lever neutral range.	· The throttle/control lever (analog interface) has not been calibrated..	· Calibrate the throttle/control lever.	P-37
	· The spring stopper has become worn.	· Replace the spring stopper.	P-127

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

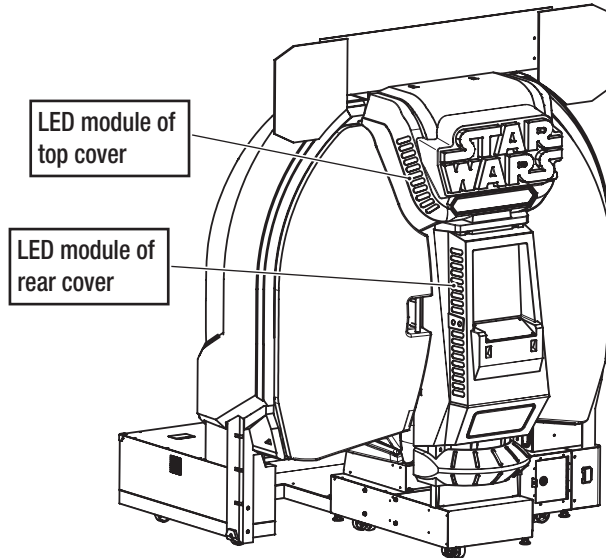
Troubleshooting

– Must be performed by a technician –

8B-2-5 Projector Assembly

When the lamp unit life of the projector expires, the LED module shown in the diagram below will blink red and yellow.

When the screen is blank and the LED modules of the top cover and the rear cover are not blinking, there may be a problem with the projector. Request a technician to solve the problem.



Symptom	Main cause	Solution	Reference section
<ul style="list-style-type: none"> ·The screen is blank and the LED modules of the top cover and the rear cover are blinking red and yellow. ·WARNING voice "Please call the shop staff. Lamp usage time exceeded of the projector. Please replace the lamp, and reset the usage time" is played. 	<ul style="list-style-type: none"> ·As the lamp operation time exceeded 3,400 hours, it stopped operating. ·Lamp unit life. 	<ul style="list-style-type: none"> ·Prepare a replacement lamp unit and replace it with the old one. ·After replacing the lamp unit, reset the lamp operation time in Test mode on the machine. 	P-169
<ul style="list-style-type: none"> ·23-1 PROJECTOR LAMP WARNING is displayed in the screen. ·WARNING voice "It is time to replace the lamp soon" is played. 	<ul style="list-style-type: none"> · The lamp operation time has exceeded 3,300 hours. · Lamp unit life is nearing the end. 		
<ul style="list-style-type: none"> ·The screen is blank and the LED modules of the top cover and the rear cover are blinking red and yellow. · WARNING voice "Please call the shop staff. Non-lighting lamp error of the projector. Turn off the power, please reboot at later" is played. 	<ul style="list-style-type: none"> · The lamp unit has become hot making it difficult to light. · Lamp unit malfunction. · Projector malfunction. 	<ul style="list-style-type: none"> · Turn off the main power switch, wait for a moment, and turn on the power again. · If the same thing happens after the lamp unit has cooled down, replace the lamp unit. · If the same thing happens after replacing the lamp unit, contact your distributor. 	P-88 P-168 P-169
<ul style="list-style-type: none"> · The screen is blank and the LED modules of the top cover and the rear cover are not blinking red and yellow. · WARNING voice "Please call the shop staff. Temperature sensor error of the projector. Please clean the filter" is played. 	<ul style="list-style-type: none"> · The inside of the projector has become hot. 	<ul style="list-style-type: none"> · Turn off the main power switch and clean the projector filters, then turn on the power again. 	P-42 P-88 P-174 P-175

– Must be performed by a technician –

Symptom	Main cause	Solution	Reference section
<ul style="list-style-type: none"> The screen is blank and the LED modules of the top cover and the rear cover are not blinking red and yellow. WARNING voice "Please call the shop staff. Fan error of the projector. Please call for repair" is played. 	<ul style="list-style-type: none"> A malfunction of the cooling fan inside of the projector. 	<ul style="list-style-type: none"> Contact your distributor. 	-
<ul style="list-style-type: none"> The screen is blank and the LED modules of the top cover and the rear cover are not blinking red and yellow. WARNING voice "Please call the shop staff. Power failure error of the projector. Please call for repair" is played. 	<ul style="list-style-type: none"> A power malfunction inside the projector. 	<ul style="list-style-type: none"> Contact your distributor. 	-
<ul style="list-style-type: none"> The screen is blank and the LED modules of the top cover and the rear cover are not blinking red and yellow. 	<ul style="list-style-type: none"> The projector power is off. 	<ul style="list-style-type: none"> Turn on the projector power. 	P-185
	<ul style="list-style-type: none"> The connectors of the cables connecting the projector and the game PC board are disconnected. 	<ul style="list-style-type: none"> Check the connection of each connector of the projector and the game PC board. 	P-75 P-101
	<ul style="list-style-type: none"> The projector does not work because the lamp cover has come off. 	<ul style="list-style-type: none"> Correctly install the lamp cover. 	P-169
	<ul style="list-style-type: none"> Projector malfunction. 	<ul style="list-style-type: none"> Contact your distributor. 	-
<ul style="list-style-type: none"> The screen operates but does not display any image. The entire screen is blue. 	<ul style="list-style-type: none"> The connectors of the video cables connecting the projector and the game PC board are disconnected. 	<ul style="list-style-type: none"> Securely insert the connectors of the video cables connecting the projector and the game PC board. 	P-75 P-101
<ul style="list-style-type: none"> Images are not displayed correctly. 	<ul style="list-style-type: none"> An abnormality in some of the projector settings. 	<ul style="list-style-type: none"> Reset the projector to the factory default in Test mode. 	P-42
	<ul style="list-style-type: none"> A connector is disconnected. 	<ul style="list-style-type: none"> Insert the connector securely. 	P-66 P-77
<ul style="list-style-type: none"> The image is out of focus. 	<ul style="list-style-type: none"> The projector unit lens or lens cover is dirty. 	<ul style="list-style-type: none"> Clean the projector unit lens and lens cover. 	P-58 P-59
<ul style="list-style-type: none"> The image is dark. 	<ul style="list-style-type: none"> The brightness and contrast are not adjusted correctly. 	<ul style="list-style-type: none"> Adjust the brightness and contrast. 	P-188
	<ul style="list-style-type: none"> Lamp unit life of the projector unit is nearing the end. 	<ul style="list-style-type: none"> Replace the lamp unit of the projector unit. 	P-169
<ul style="list-style-type: none"> The color appears faded. The hue is poor. 	<ul style="list-style-type: none"> The red, green and blue levels are not adjusted correctly. 	<ul style="list-style-type: none"> Adjust the red, green and blue levels. 	P-188
	<ul style="list-style-type: none"> The screen is dirty. 	<ul style="list-style-type: none"> Clean the screen. 	P-57
	<ul style="list-style-type: none"> Lamp unit of the projector unit is nearing the end of its operation time. 	<ul style="list-style-type: none"> Replace the lamp unit of the projector unit. 	P-42 P-169
<ul style="list-style-type: none"> Cannot operate the projector unit with a remote controller. 	<ul style="list-style-type: none"> The remote controller batteries have run down. 	<ul style="list-style-type: none"> Replace the remote controller batteries. 	P-183
	<ul style="list-style-type: none"> The remote controller batteries are not installed correctly. 	<ul style="list-style-type: none"> Install the remote controller batteries correctly. 	P-183
	<ul style="list-style-type: none"> The remote controller is not pointed at the photosensor of the projector unit. 	<ul style="list-style-type: none"> Point the remote controller at the photosensor of the projector unit when operating it. 	P-184

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

8B-3 Error Messages

When this machine detects an error on start-up or during game play, it displays an error screen and stops operation.

Refer to the error code table below to identify the cause of the error and resolve it.

If the error display remains on the screen after performing the appropriate solution, set the Test switch to ON and then OFF again to cancel the error display.

If a screen not shown in the error code table is displayed, or the error message is displayed again after performing the appropriate solution, there may be some other cause. Contact your distributor.

(1) Hardware Errors

When this machine detects an error on start-up or during game play, it displays an error screen and stops operation.

Error code	Error message	Main cause	Solution	Reference section
1-11	COIN ERROR1 (COIN UNIT1)	· The coin selector is jammed.	· Check the coin selector and resolve the trouble.	P-143 P-148
		· A coin selector or micro switch malfunction.	· Replace the coin selector or the micro switch.	P-143 P-144 P-148 P-149
		· The harness to the coin selector or the micro switch is not connected correctly.	· Check the connection of the connector.	P-144 P-149
		· NA-JV (S) PC board malfunction.	· Replace the NA-JV (S) PC board.	P-104
1-12	COIN ERROR 2 (COIN UNIT1)	· A Service switch malfunction.	· Contact your distributor.	-
		· NA-JV (S) PC board malfunction.	· Replace the NA-JV (S) PC board.	P-104
1-21	COIN ERROR 1 (COIN UNIT2)	· A bill validator malfunction.	· Replace the bill validator.	P-145
		· NA-JV (S) PC board malfunction.	· Replace the NA-JV (S) PC board.	P-104
1-22	COIN ERROR 2 (COIN UNIT2)	· A Service switch malfunction.	· Contact your distributor.	-
		· NA-JV (S) PC board malfunction.	· Replace the NA-JV (S) PC board.	P-104
2-6	CLOCK ERROR 1	· The time of the cabinet is incorrectly set.	· Contact your distributor.	-
2-7	CLOCK ERROR 2	· A game PC board malfunction.	· Contact your distributor.	-
3-1	I/O ERROR 1	· The harness of the NA-JV (S) PC board is not connected correctly.	· Check the connection of the connector.	P-101 P-104
		· NA-JV (S) PC board malfunction.	· Replace the NA-JV (S) PC board.	P-104
3-2	I/O ERROR 2	· The harness of the NA-JV (S) PC board is not connected correctly.	· Check the connection of the connector.	P-101 P-104
		· NA-JV (S) PC board malfunction.	· Replace the NA-JV (S) PC board.	P-104
8-1	CAMERA ERROR	· The harness of the USB camera is not connected correctly.	· Check the connection of the connector.	P-101 P-113
		· A USB camera malfunction.	· Replace the USB camera.	P-113
19-21	USB DONGLE ERROR (INVALID DONGLE)	· A USB dongle for another model is inserted.	· Turn off the main power switch, and then insert the USB dongle for this machine. If the same error is displayed when you turn on the main power switch, contact your distributor.	P-30 P-101

– Must be performed by a technician –

Error code	Error message	Main cause	Solution	Reference section
19-22	USB DONGLE ERROR (NO DONGLE)	· A USB dongle is not inserted.	· Check that the USB dongle is correctly inserted. If the USB dongle is correctly inserted, contact your distributor.	P-101
19-23	USB DONGLE ERROR (UNKNOWN)	· Two or more USB dongles are inserted.		

(2) Projector Errors

Error code	Error message	Main cause	Solution	Reference section
23-1	PROJECTOR LAMP WARNING	· Lamp unit life is nearing the end.	· Prepare a new lamp unit and replace the lamp unit promptly.	P-42 P-169
23-8	PROJECTOR OTHER ERROR	· The game PC board and the projector cannot communicate.	· Check the connection of the connector.	P-75 P-101
		· Projector malfunction.	· Contact your distributor.	-

(3) Network Errors

If the connection to the NBLINE is required to operate this machine, a network error will be displayed. However, error messages with * will not be displayed on the game screen or the Attract screen. They will be displayed in the upper right of the main menu (P-33 "7-6-1 Description of the Main Menu Screen (MENU)") in Test mode.

Error code	Error message	Main cause	Solution	Reference section
5-5	NETWORK DISCONNECTION ERROR*	· The LAN cable is not connected correctly.	· Check the connection of the connector.	P-86 P-101
5-6	ERROR DEVICE*	· A game PC board malfunction.	· Contact your distributor.	-
5-10	ERROR LIBRARY NOINT*			
5-20	ERROR GS AUTH NG			
5-21	ERROR GS TIMEOUT*	· An abnormality in the connection or authentication of the game server.	· Contact your distributor.	-
5-22	ERROR GS HOST NOTFOUND*			
5-23	ERROR GS NG*			
5-40	ERROR NBIP TIMEOUT*			
5-41	ERROR NBIP HOST NOTFOUND*			
5-42	ERROR DNS TIMEOUT*			
5-43	ERROR DNS HOST NOTFOUND			
5-44	ERROR AUTH NG*			
5-45	ERROR AUTH TIMEOUT*	· The revision of the game server and that of the software are different.	· Check that the software update is available, then restart the machine using the system power switch, and update the software.	P-32 P-54
5-50	REVISION ERROR			

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

8B. Service

– Must be performed by a technician –

Error code	Error message	Main cause	Solution	Reference section
5-51	INTERNAL SERVER ERROR*	· The game server is down due to service or other reasons.	· Wait for a while and then check the communication. · Contact your distributor.	-
5-52	SERVICE UNAVAILABLE*			
5-53	INCONSISTENT SERVER ERROR*	· An abnormality in the connection with the game server.	· Check the network connection.	P-51 P-53
5-54	FIRST CERTIFICATE ERROR	· An abnormality in the communication with the authentication server.	· Check the network connection.	P-51 P-53
20-1	VERSION UP ERROR	· Failed to update the software.	· Use the system power switch to restart the machine and attempt to update the software again.	P-32
22-1	CERTIFICATE ERROR	· Continuous offline operating time has exceeded 240 hours.	· Check the network connection. If there are no problems, use the system power switch to restart the machine and communicate with the authentication server.	P-32 P-51 P-53
		· Game cost information that has not been sent to the game server has exceeded the prescribed number.	· Check the network connection. If there are no problems, use the system power switch to restart the machine and communicate with the game server.	P-32 P-51 P-53
22-2	CHARGING DATA ERROR	· An abnormality in the billing data.	· Check the network connection.	P-32 P-51 P-53
		· An abnormality in the connection with the game server.		
22-3	NBLINE POINT BALANCE ERROR	· The remaining NBLINE points total is below the value required for one play.	· Charge the NBLINE points.	-

8B-4 Network Trouble

If the machine offers NBLINE model, see P-56 "7-7 About the Network".

If the problem persists, contact your distributor.

– Must be performed by a technician –

8B-5 Removing, Installing, and Replacing Each Part

8B-5-1 Front Assembly

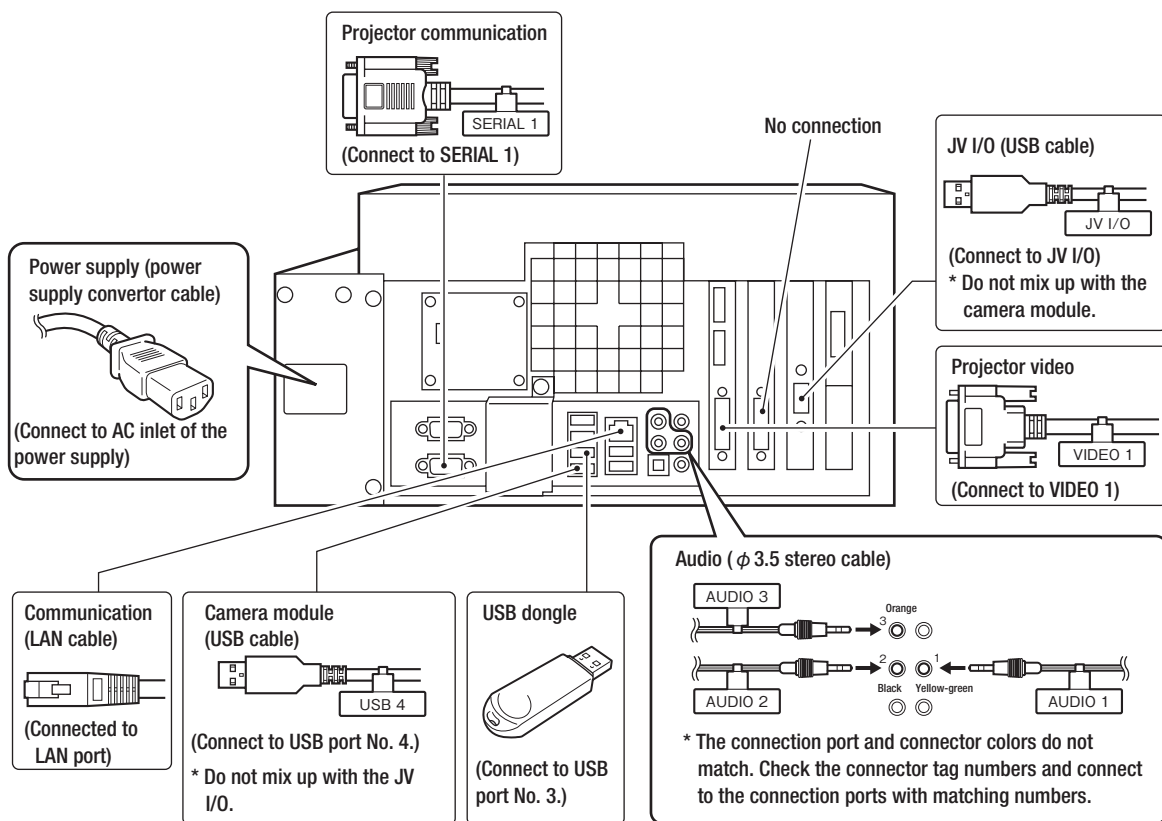
(1) Replacing the Game PC Board

! WARNING

● In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

NOTICE

- PC boards are vulnerable to static electricity. If a person handles a PC board while charged with static electricity, the parts on the PC board may be damaged. Before handling a PC board, discharge the static electricity from your body. (Example: touching the surface of grounded metal.)
- When installing a game PC board on the front assembly, take care not to allow connectors and harnesses to get caught.
- Connect the connectors correctly according to the indications on the game PC board.



- Check the connector orientations, connect the connectors firmly to each other, and lock them securely.
- After replacing a game PC board, be sure to adjust the control lever assembly and throttle lever assembly, and check the volume and other settings. (See P-33 "7-6 Test Mode".)

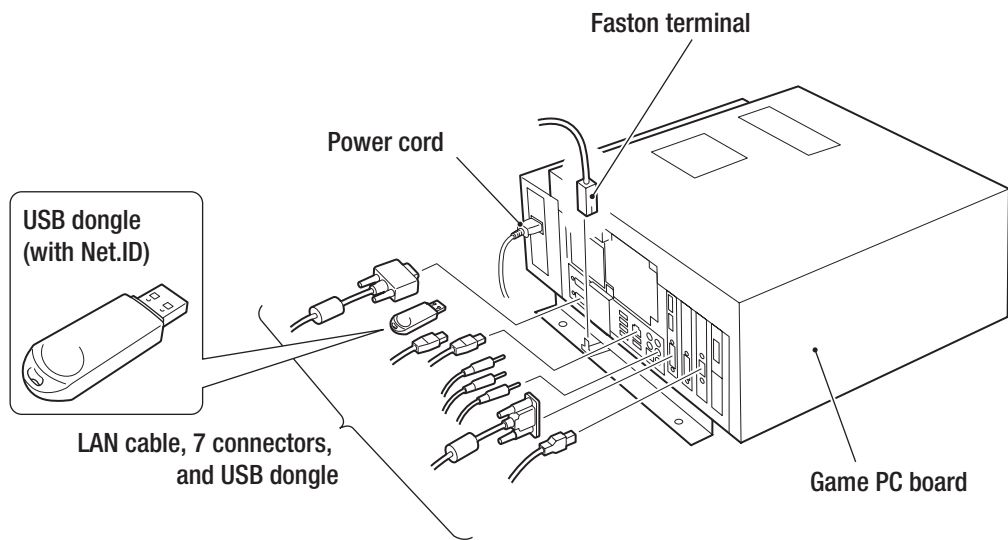
- 1 Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2 Remove the service door. (See P-63 "8A-3-1 Removing the Service Door".)

1
2
3
4
5
6
7
8A
8B
9
10
11
Service

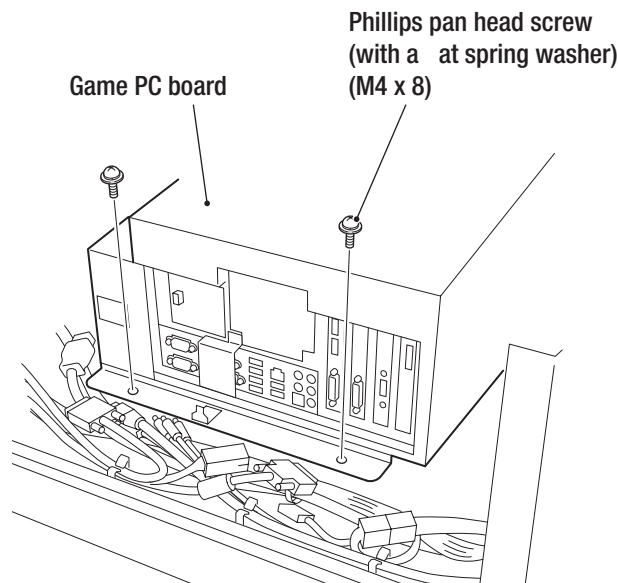
Test Mode
Troubleshooting

– Must be performed by a technician –

- 3 Remove the USB dongle. (See P-87 "8A-7 Inserting the USB Dongle".)
- 4 Remove the LAN cable, power cord, and Faston terminal.
- 5 Disconnect the seven connectors.

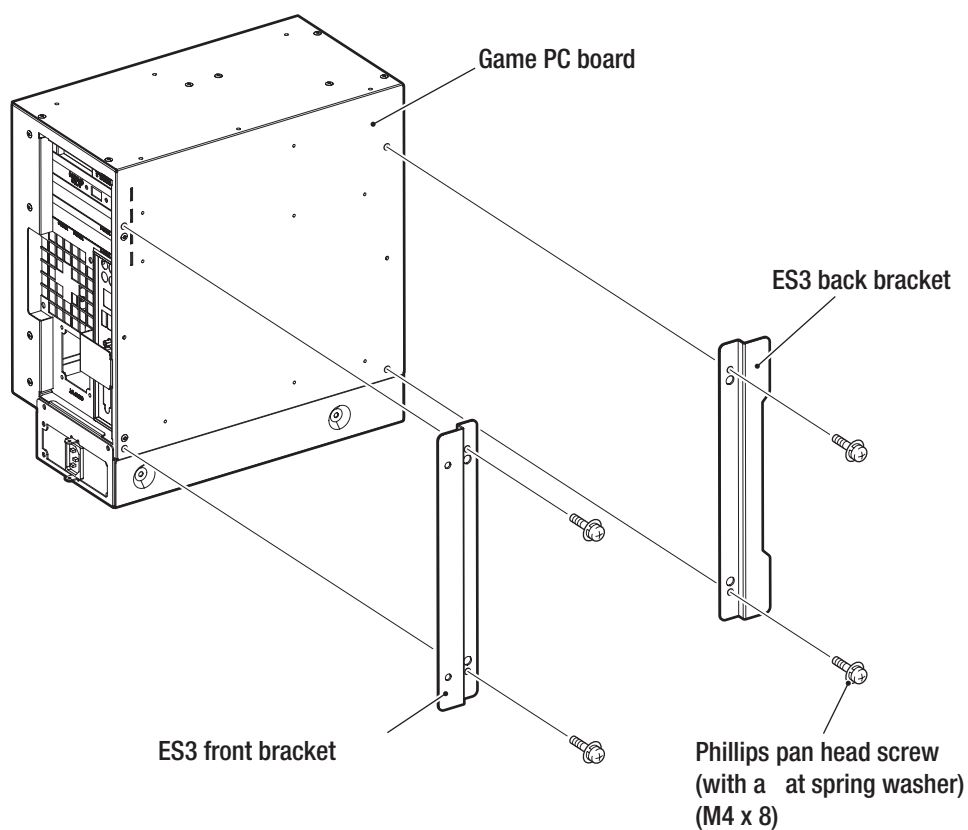


- 6 Remove the two Phillips pan head screws (with flat and spring washers) (M4 x 8), and pull the game PC board forward to remove it, after removing the hooks on the inside.



- Must be performed by a technician -

- 7** Remove respective two Phillips pan head screws (with flat and spring washers) (M4 x 8), and remove the ES3 front bracket and ES3 back bracket from the game PC board.



- 8** Replace the game PC board with a new one, and install the new one by following the removal procedure in reverse.

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

– Must be performed by a technician –

(2) Replacing the NA-JV (S) PC Board

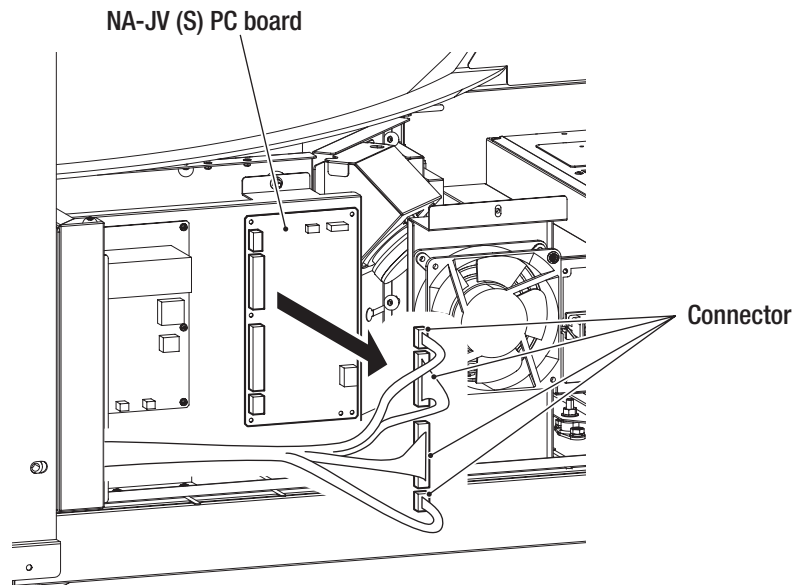
! WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

NOTICE

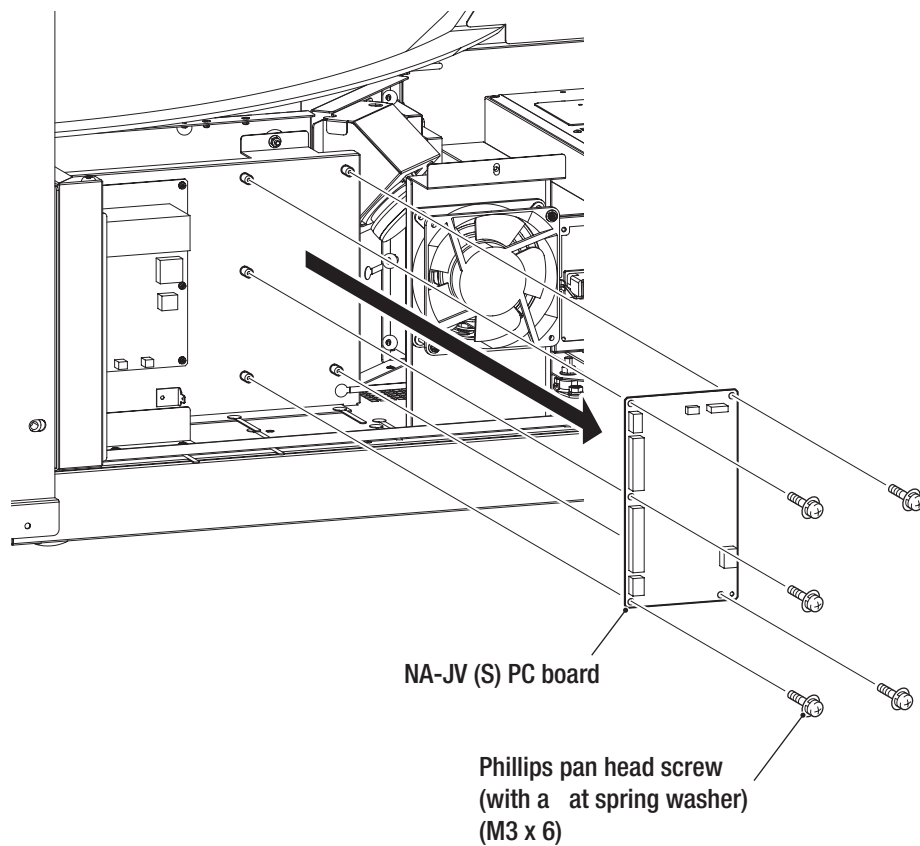
- PC boards are vulnerable to static electricity. If a person handles a PC board while charged with static electricity, the parts on the PC board may be damaged.
Before handling a PC board, discharge the static electricity from your body. (Example: touching the surface of grounded metal.)
- Check the connector orientations, connect the connectors firmly to each other, and lock them securely.
- Conduct input/output tests in Test mode. (See P-36 "7-6-4 Input/Output Test (I/O TEST)".)

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the service door. (See P-63 "8A-3-1 Removing the Service Door".)
- 3** Disconnect the four connectors.



- Must be performed by a technician -

- 4** Remove the five Phillips pan head screws (with flat and spring washers) (M3 x 6), replace the NA-JV (S) PC board with a new one, and install the new one by following the removal procedure in reverse.



1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

– Must be performed by a technician –

(3) Replacing the S5.1ch AMP PC Board

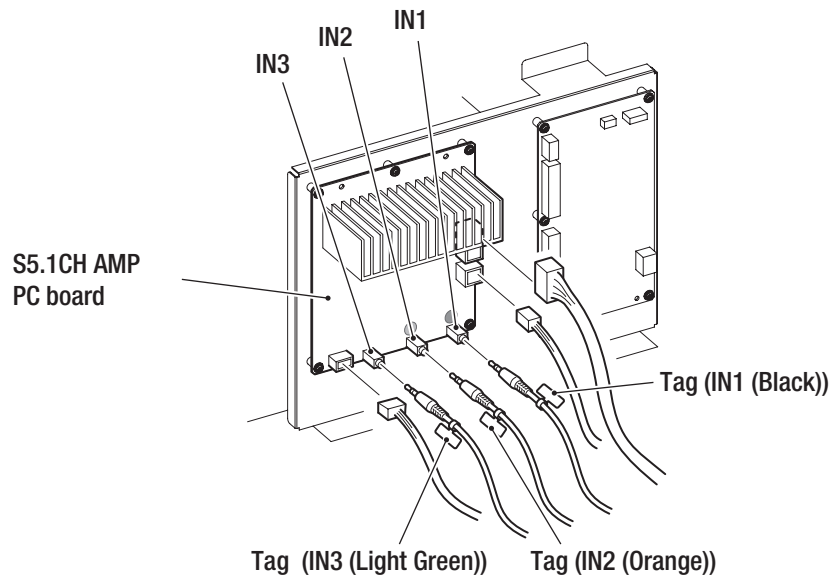
! WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

NOTICE

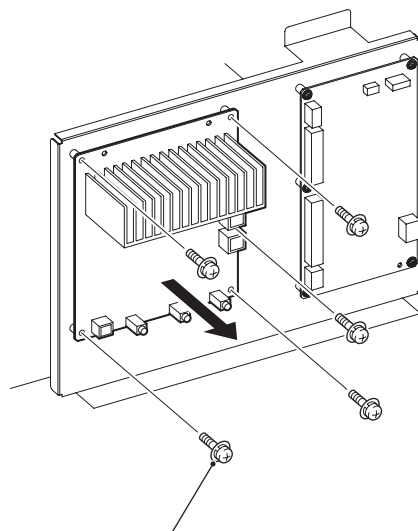
- PC boards are vulnerable to static electricity. If a person handles a PC board while charged with static electricity, the parts on the PC board may be damaged.
Before handling a PC board, discharge the static electricity from your body. (Example: touching the surface of grounded metal.)
- Check the connector orientations, connect the connectors firmly to each other, and lock them securely.
- Conduct input/output tests in Test mode. (See P-36 "7-6-4 Input/Output Test (I/O TEST)".)

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the service door. (See P-63 "8A-3-1 Removing the Service Door".)
- 3** Disconnect the six connectors.



– Must be performed by a technician –

- 4** Remove the five Phillips pan head screws (with flat and spring washers) (M3 x 6), replace the S5.1ch AMP PC board with a new one, and install the new one by following the removal procedure in reverse.



Phillips pan head screw (with a flat spring washer)
(M3 x 6)

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

– Must be performed by a technician –

(4) Replacing the Switching Regulator

The machine uses a 5V switching regulator, a 12V switching regulator, and a 24V switching regulator.

! WARNING

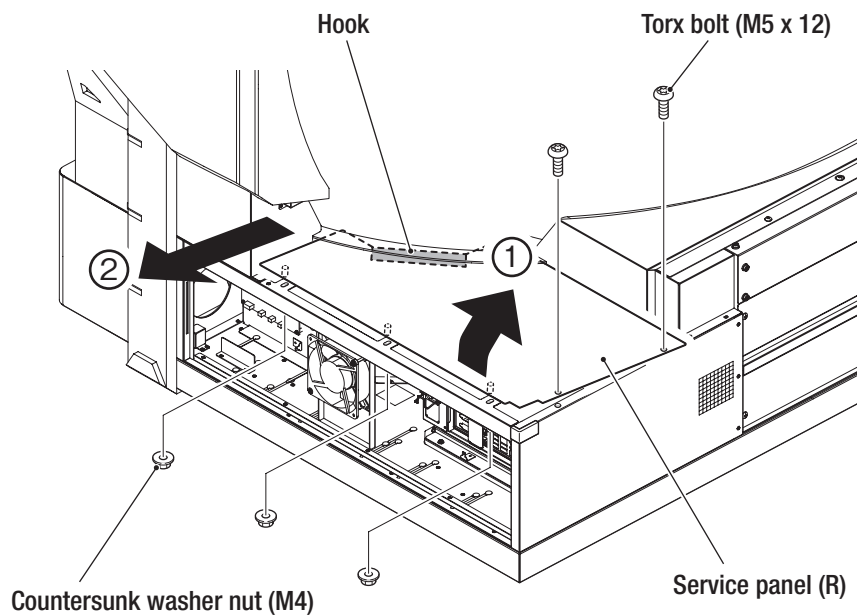
- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

NOTICE

- PC boards are vulnerable to static electricity. If a person handles a PC board while charged with static electricity, the parts on the PC board may be damaged.
Before handling a PC board, discharge the static electricity from your body. (Example: touching the surface of grounded metal.)
- Check the connector orientations, connect the connectors firmly to each other, and lock them securely.

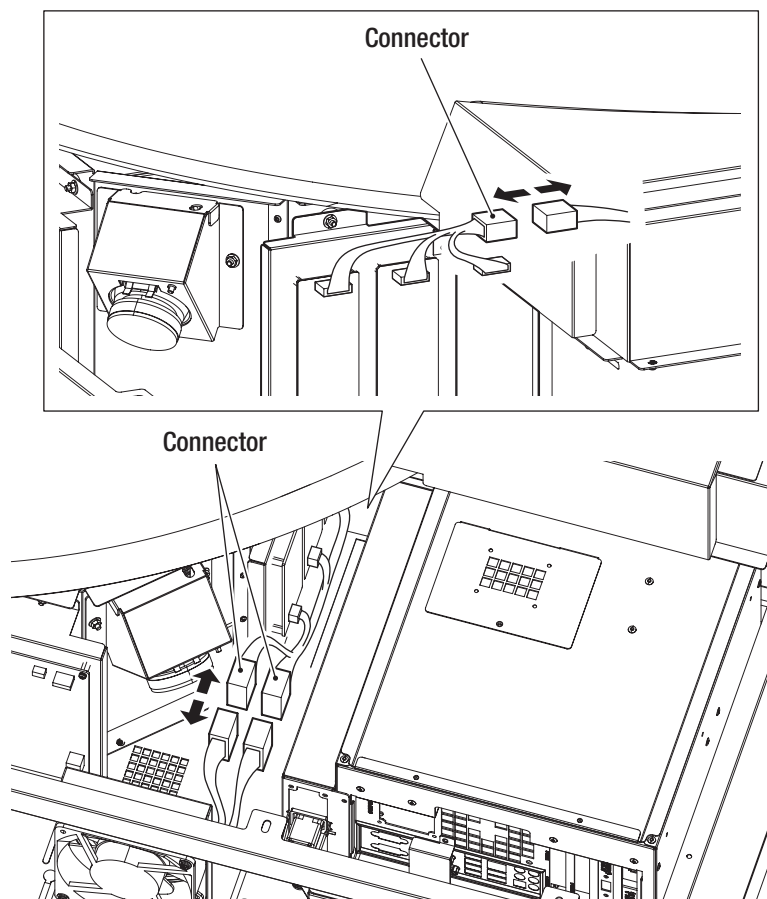
- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the service door. (See P-63 "8A-3-1 Removing the Service Door".)
- 3** Remove the two Torx bolts (M5 x 12) and the three countersunk washer nuts (M4), and remove the service panel R.

*When removing the service panel R, [1] lift up its service door side approximately 15 mm, [2] pull out the panel in the direction of the arrow to release it from the hook at the end.

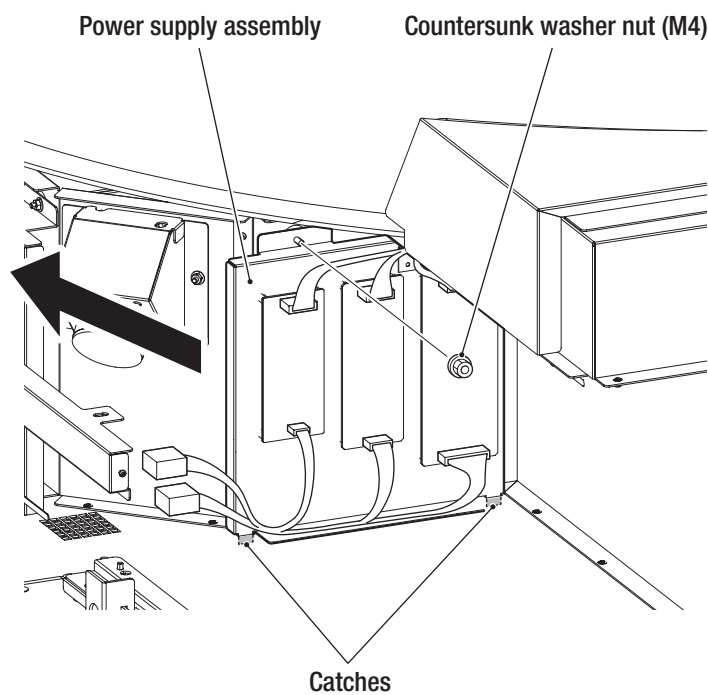


- Must be performed by a technician -

- 4** Disconnect the three connectors.



- 5** Remove the countersunk washer nut (M4), release the two lower catches from the holes, and then pull out the power supply assembly.



1

2

3

4

5

6

7

8A

8B

9

10

11

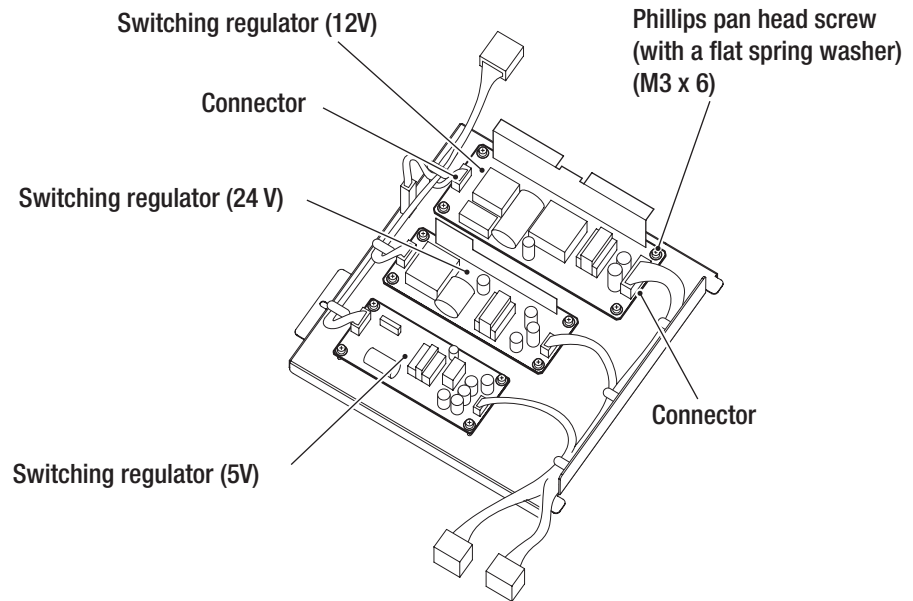
Service

Test Mode

Troubleshooting

– Must be performed by a technician –

- 6 Remove the two connectors and the four Phillips pan head screws (with flat and spring washers) (M3 x 6) of the failed switching regulator, replace the switching regulator with a new one, and install the new one by following the removal procedure in reverse.

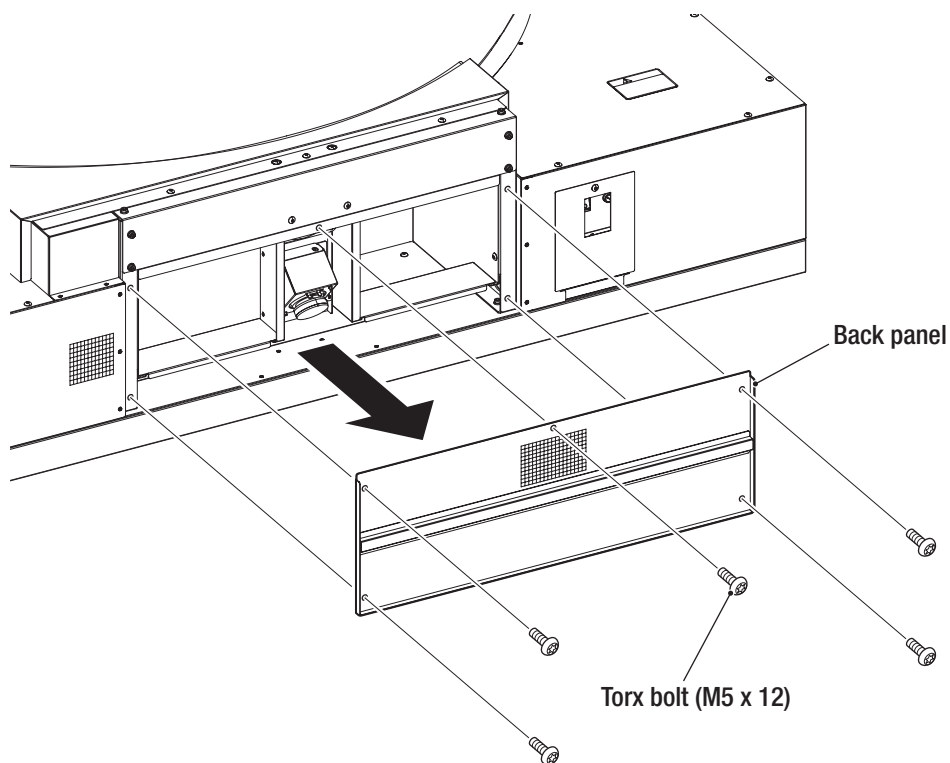


(5) Replacing the Fan

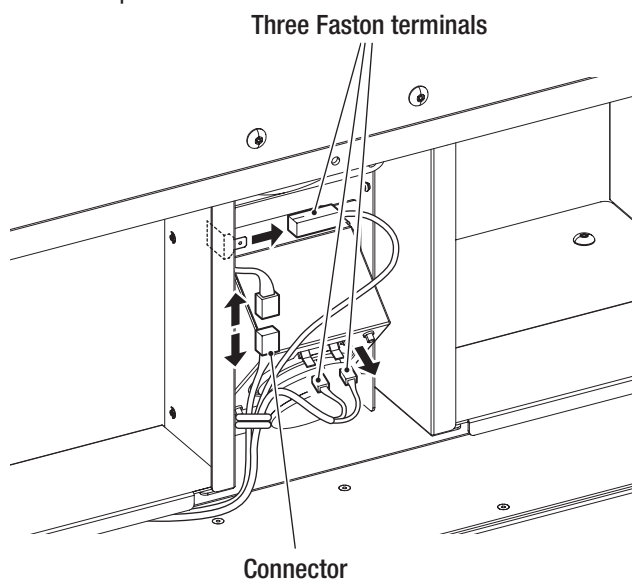
! WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the five Torx bolts (M5 x 12), and remove the back panel.



- 3** Disconnect the connector and the three Faston terminals, then release the harnesses from the cord clip.



1

2

3

4

5

6

7

8A

8B

9

10

11

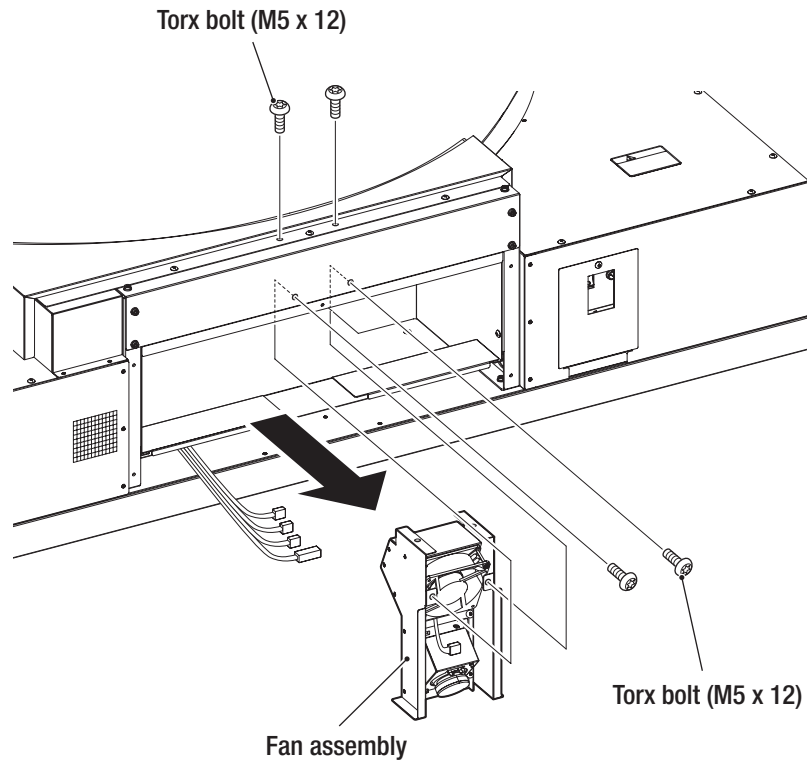
Service

Test Mode

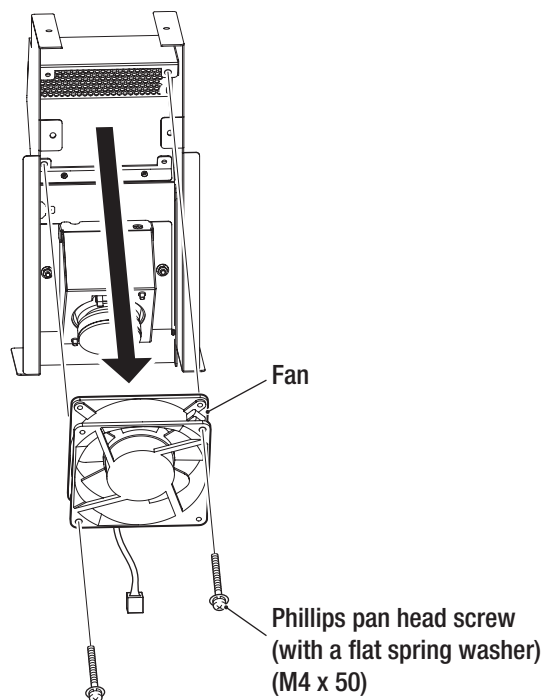
Troubleshooting

– Must be performed by a technician –

- 4** Remove the four Torx bolts (M5 x 12), and pull out the fan assembly.



- 5** Remove the two Phillips pan head screws (with flat and spring washers) (M4 x 50) and the two countersunk washer nuts (M4), and replace the fan with a new one by installing the new one so that the air blows out towards the player side, following the removal procedure in reverse.



- When installing, secure the harnesses with the cord clip so that the harness does not touch the fan motor.

(6) Replacing the USB Camera

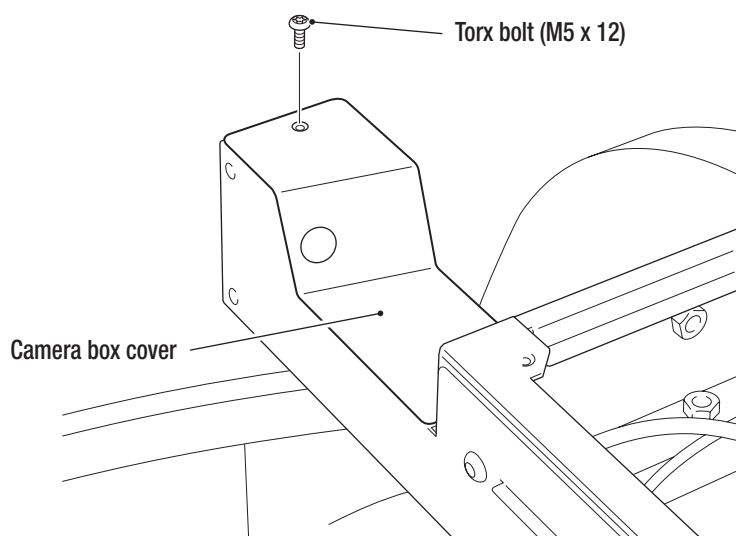
WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

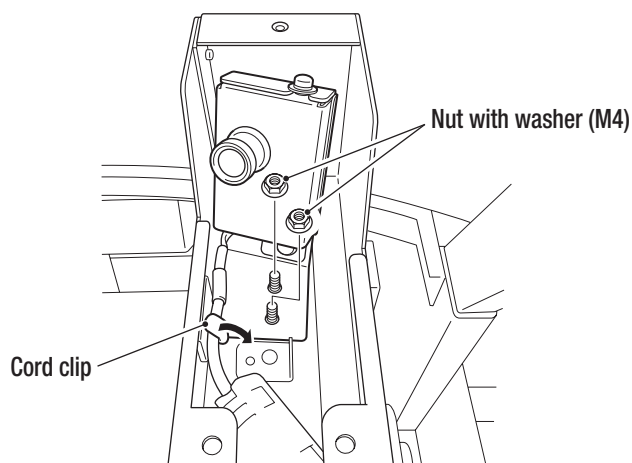
NOTICE

- PC boards are vulnerable to static electricity. If a person handles a PC board while charged with static electricity, the parts on the PC board may be damaged. Before handling a PC board, discharge the static electricity from your body. (Example: touching the surface of grounded metal.)

- 1 Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2 Remove the Torx bolt (M5 x 12) and remove the camera box cover.



- 3 Remove the two countersunk washer nuts (M4), and free the harness from the cord clip.



1

2

3

4

5

6

7

8A

8B

9

10

11

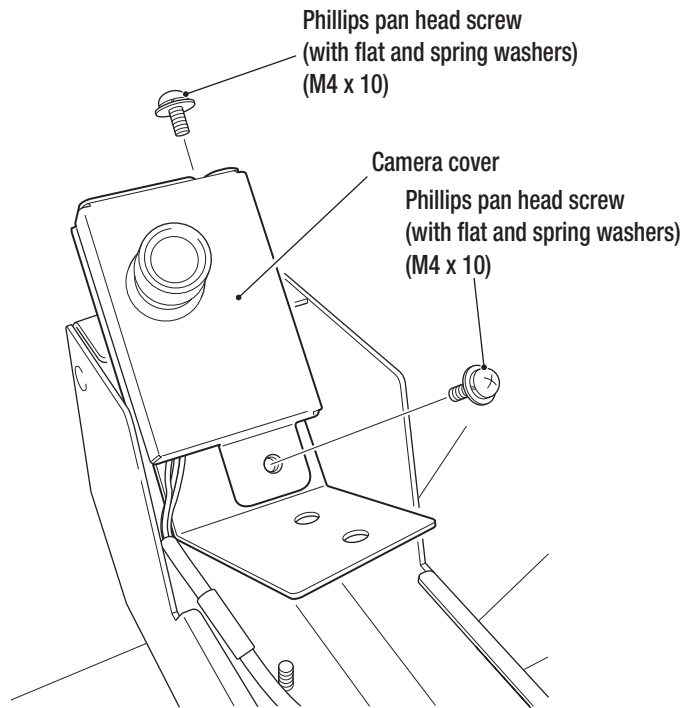
Service

Test Mode

Troubleshooting

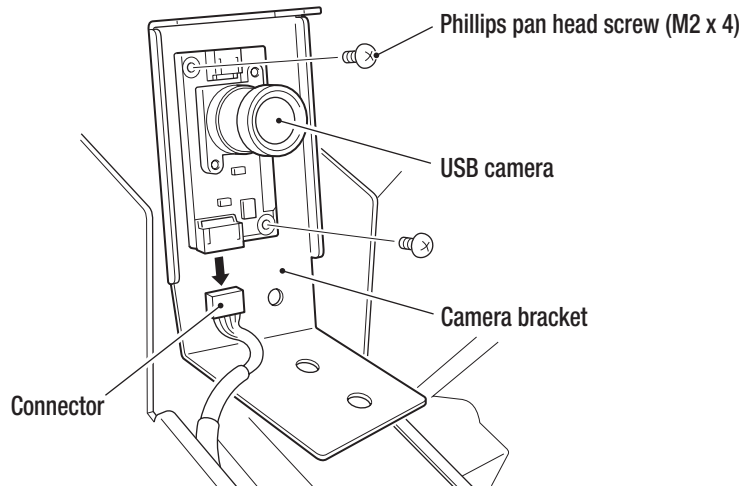
– Must be performed by a technician –

- 4 Remove the two Phillips pan head screws (with flat and spring washers) (M4 x 10), and remove the camera cover.



- 5 Disconnect the connector.

- 6 Remove the two Phillips pan head screws (M2 x 4), replace the USB camera with a new one, and install the new one by following the removal procedure in reverse.



– Must be performed by a technician –

(7) Replacing the Fuse of the Cord Box Assembly

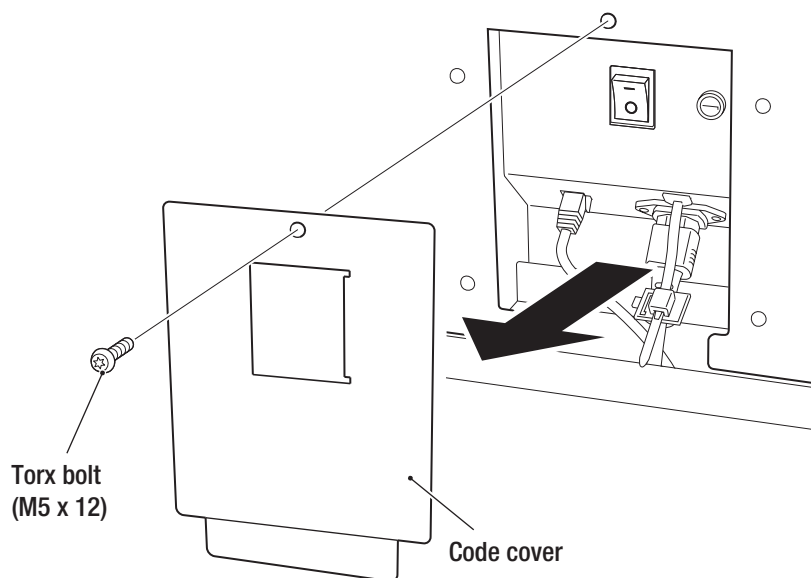
WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.
- Never use a fuse other than the specified type. The fuse must be installed to prevent fire or accident.
- If the fuse blows out immediately after it is newly installed, other causes may be suspected. Immediately turn off the main power switch, pull out the power cord plug from the outlet, and contact your distributor.

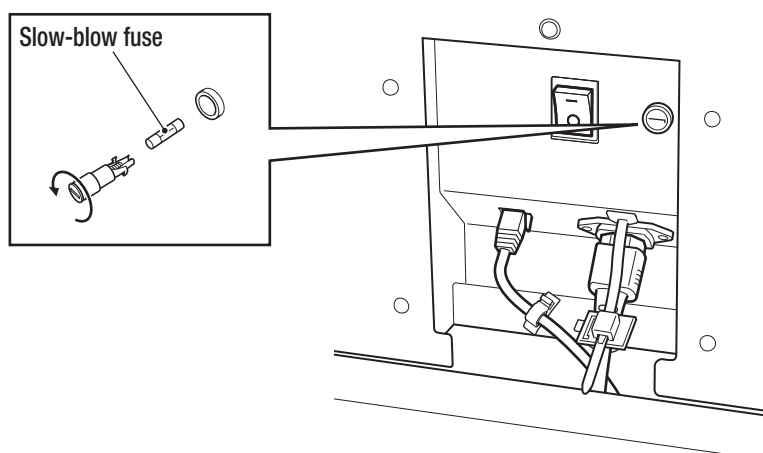


- To order a fuse, contact your distributor.

- 1 Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2 Remove the Torx bolt (M5 x 12), and remove the cord cover.



- 3 Use a standard screwdriver to rotate the fuse holder cap counter-clockwise and remove the fuse.



1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

– Must be performed by a technician –

- 4** Replace the fuse with either of the following fuses according to the machine specifications, and install the new one by following the removal procedure in reverse.

Specifications:

110 VAC / 120 VAC

220 VAC / 230 VAC

Fuse rating:

Slow-blow fuse T10A 250 V

Slow-blow fuse T5A 250 V

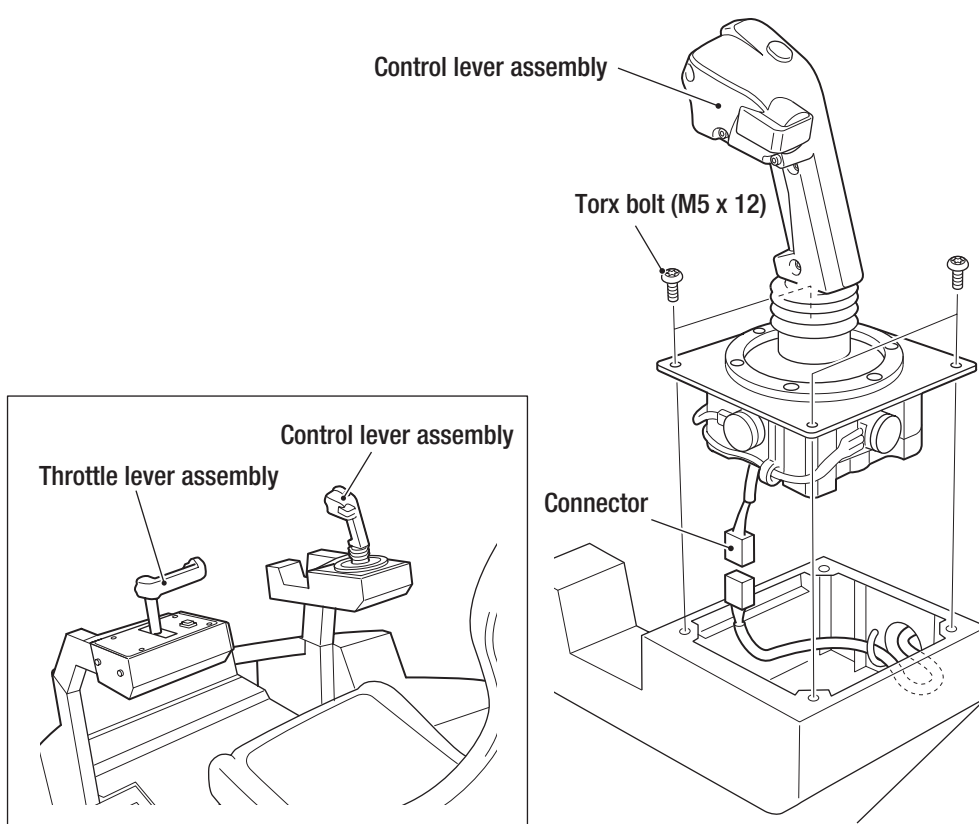
8B-5-2 Control Lever Assembly

(1) Replacing the Control Lever Assembly

! WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the four Torx bolts (black) (M5 x 12) and lift up the control lever assembly.
- 3** Disconnect the connector and replace the control lever assembly.



- 4** To install, perform the procedure in reverse.

NOTICE

When installing, check the connector orientations, connect the connectors firmly to each other, and lock them securely.

- When installing, take care not to allow the connectors and harnesses to get caught.
- After replacement, be sure to perform calibration. (See P-37 "(a) I/F CALIBRATION".)

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

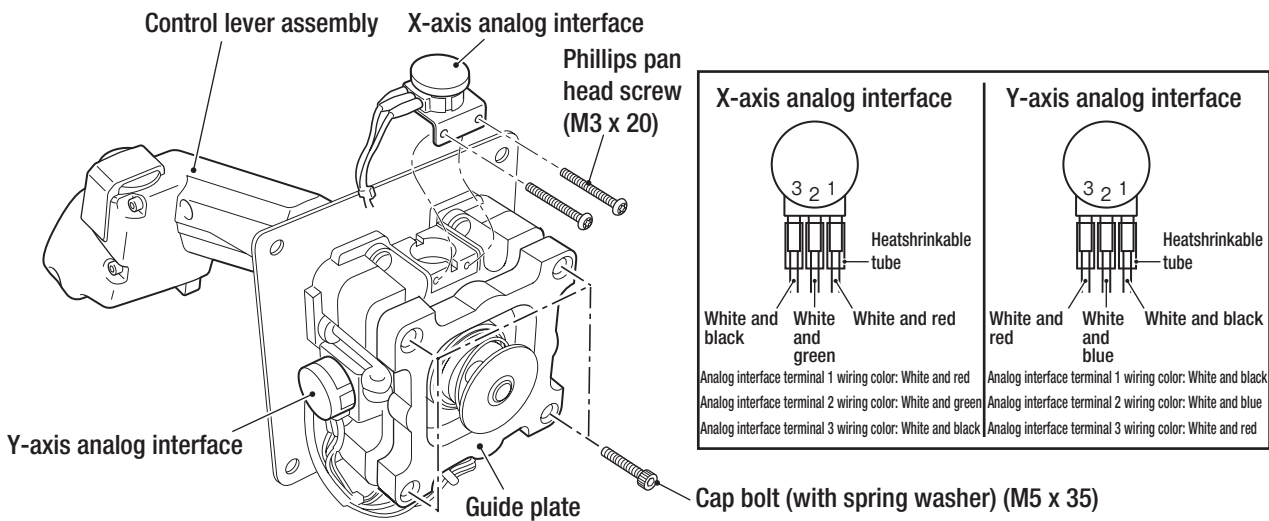
– Must be performed by a technician –

(2) Replacing the Analog Interface

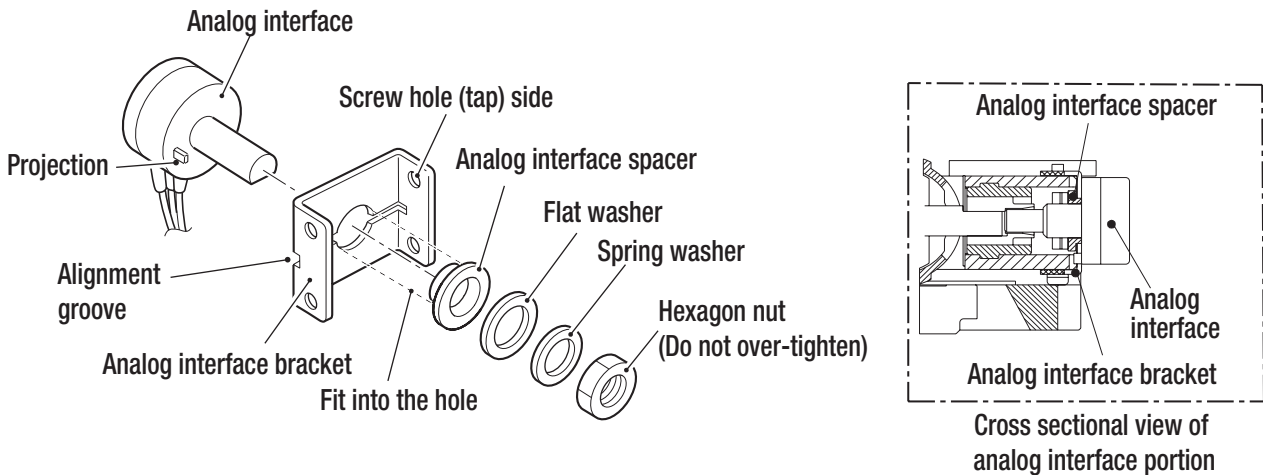
! WARNING

● In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the control lever assembly. (See P-117 "(1) Replacing the Control Lever Assembly".)
- 3** Remove the four cap bolts (M5 x 35) (with spring washer) and remove the guide plate.
- 4** Remove the two Phillips pan head screws (M3 x 20) and remove the analog interface.



- 5** Remove the analog interface from the analog interface bracket.



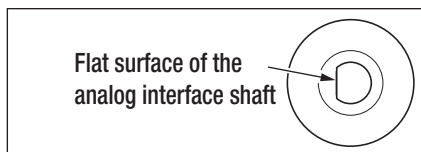
- 6** Replace the analog interface.
Install the new analog interface onto the analog interface bracket while fitting its projection into the position alignment groove in the bracket.

– Must be performed by a technician –

- 7** To install, perform the procedure in reverse.



- When installing the analog interface, align the flat surface of the analog interface shaft with the position of the D-shaped hole.



- After replacement, be sure to perform calibration. (See P-37 "(a) I/F CALIBRATION".)
- When installing, be careful not to pinch the harness in the lever's moving parts.

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

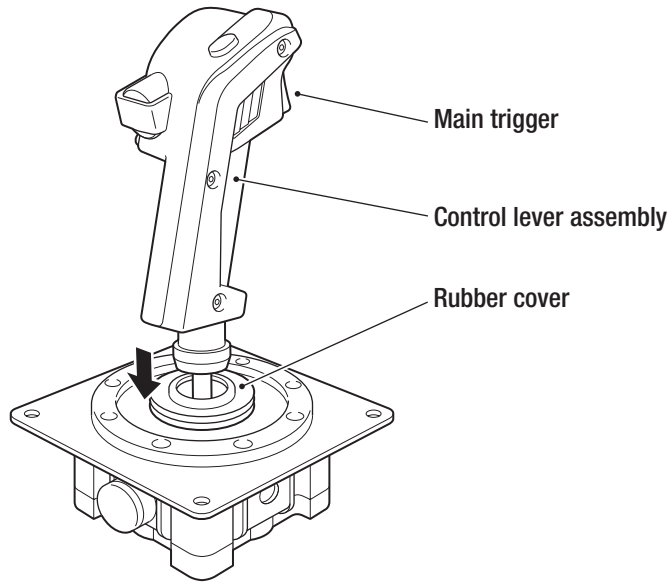
– Must be performed by a technician –

(3) Replacing the Micro Switch

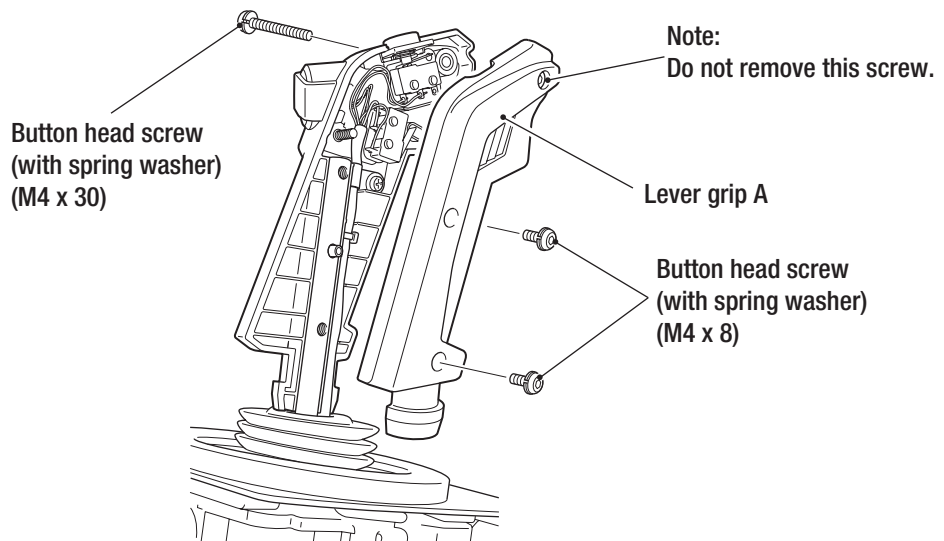
! WARNING

● In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the control lever assembly. (See P-117 "(1) Replacing the Control Lever Assembly".)
- 3** Lower the rubber cover until the grip harness is visible.



- 4** Remove the two button head screws with spring washer (M4 x 8) and the button head screw with spring washer (M4 x 30), and remove lever grip A.



NOTICE

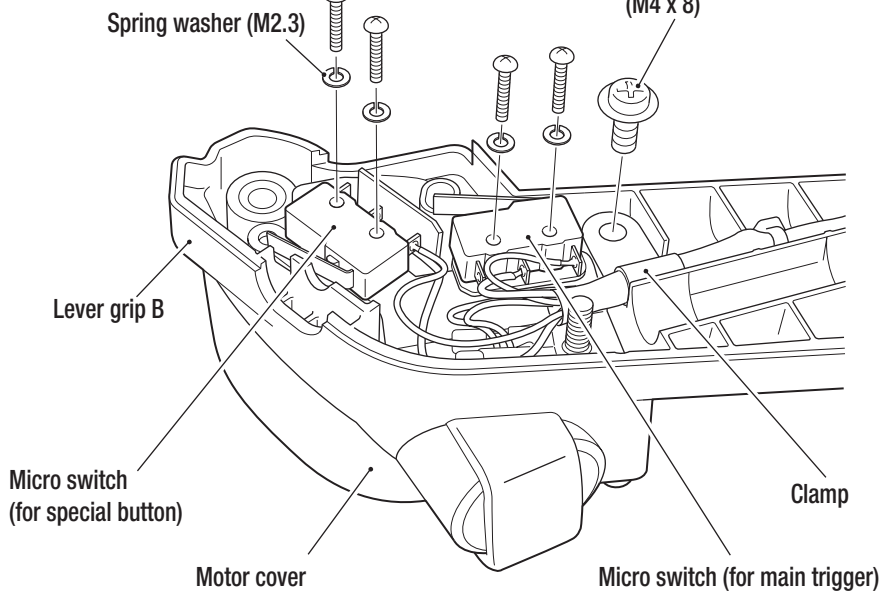
● Be sure not to remove the button head screw with spring washer (M4 x 8) on the top of lever grip A to keep the main trigger installed.

– Must be performed by a technician –

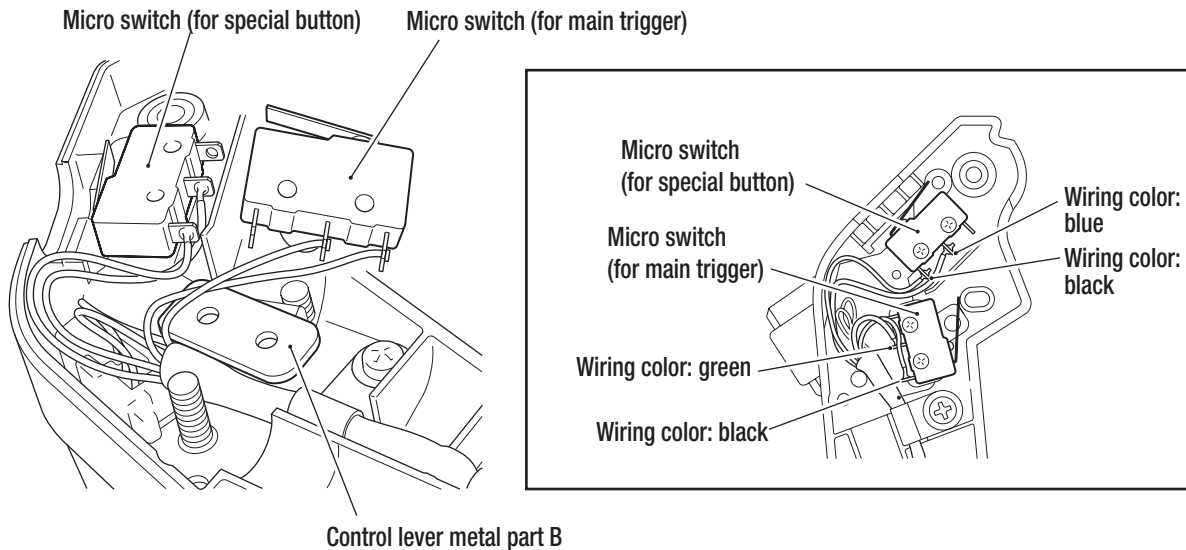
- 5** Remove the four special Phillips pan head screws (M2.3 x 12), four spring washers and the Phillips pan head screw with a flat spring washer (M4 x 8), and remove the micro switches and clamps.

Special Phillips pan head screw (M2.3 x 12)

Phillips pan head screw (with flat and spring washers) (M4 x 8)



- 6** Melt the solder of the micro switch terminals and replace the micro switch.
 * Be sure not to remove the contact (metal part) crimped at the end of the wire.



NOTICE

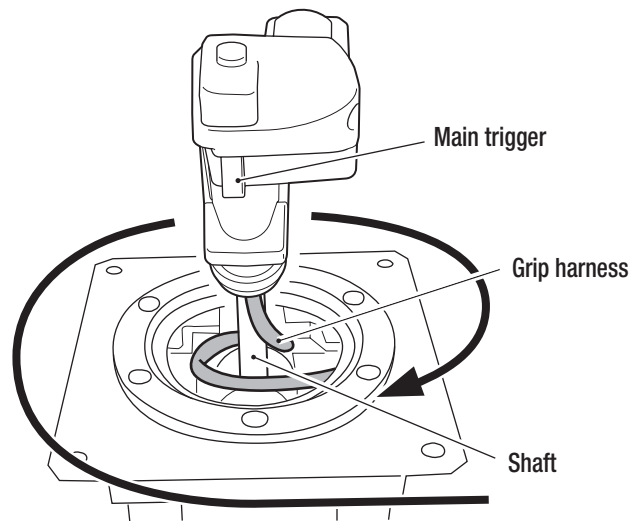
- When installing, take care not to allow the harness to get caught.
- Be very careful when handling the soldering iron.
- When soldering the wiring to the micro switch, ensure that the combinations of wiring colors and terminals are correct.
- Be sure to place lever metal part B below the micro switch (for the main trigger).

1
2
3
4
5
6
7
8A
8B
9
10
11
Service

Test Mode
Troubleshooting

– Must be performed by a technician –

- 7 Check that the grip harness makes a full right hand turn around the shaft as shown in the following figure.



- 8 To install, perform the procedure in reverse.
Install the harness along the shaft so that there are no gaps between them.



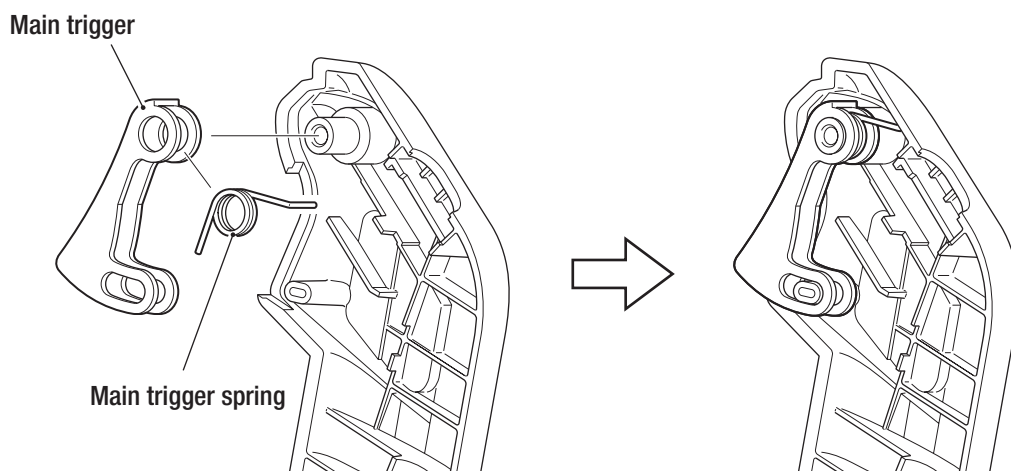
- After replacement, be sure to perform calibration. (See P-37 "(a) I/F CALIBRATION".)

– Must be performed by a technician –

(4) Replacing the Main Trigger Spring**! WARNING**

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the control lever assembly. (See P-117 "(1) Replacing the Control Lever Assembly".)
- 3** Disassemble the lever grip. (See P-120 "(3) Replacing the Micro Switch" steps **3** to **4**.)
- 4** Remove the main trigger, then remove the main trigger spring and replace it with a new one.



- 5** To install, perform the procedure in reverse. (See P-120 "(3) Replacing the Micro Switch" steps **3** to **4**.)



- After replacement, be sure to perform the I/O test for each switch. (See P-38 "(b) SWITCH TEST".)

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

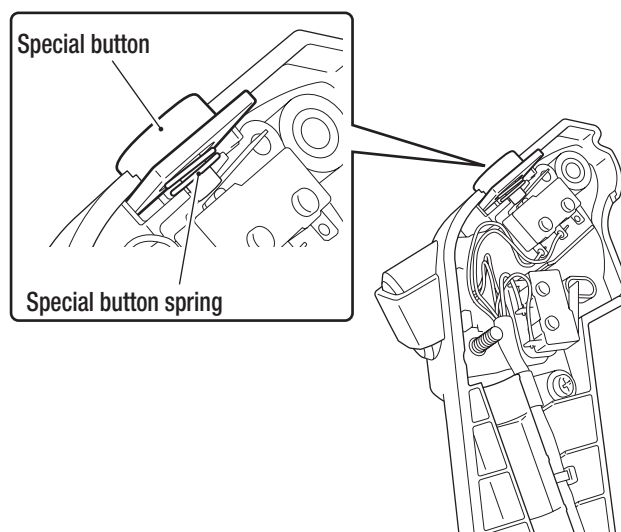
– Must be performed by a technician –

(5) Replacing the Special Button Spring

! WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1 Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2 Remove the control lever assembly. (See P-117 "(1) Replacing the Control Lever Assembly".)
- 3 Disassemble the lever grip. (See P-120 "(3) Replacing the Micro Switch" steps **3** to **4**.)
- 4 Remove the special button, then remove the special button spring and replace it with a new one



- 5 To install, perform the procedure in reverse. (See P-120 "(3) Replacing the Micro Switch" steps **3** to **4**.)



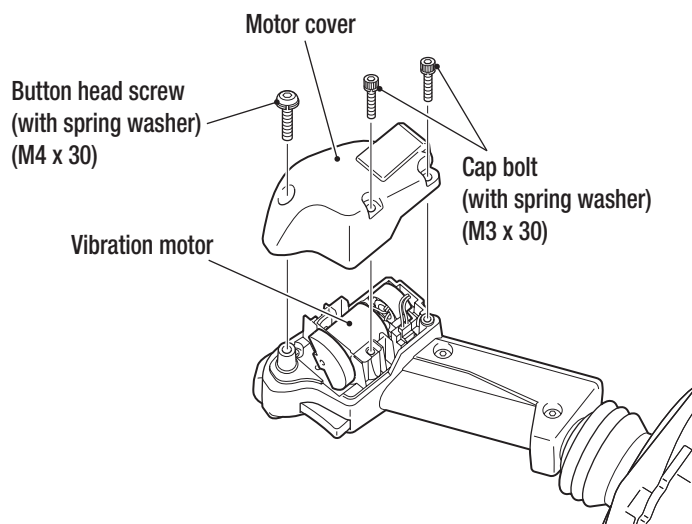
- After replacement, be sure to perform the I/O test for each switch. (See P-38 "(b) SWITCH TEST".)

(6) Replacing the Vibration Motor

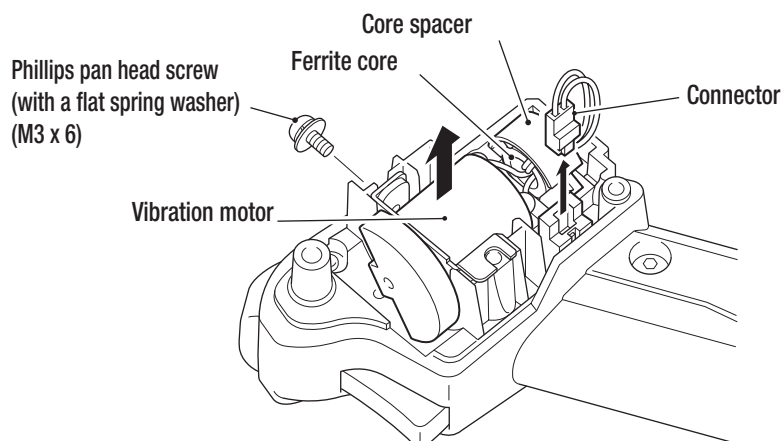
! WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the control lever assembly. (See P-117 "(1) Replacing the Control Lever Assembly".)
- 3** Remove the button head screw (with spring washer) (M4 x 30) and the two cap bolts (with spring washers) (M3 x 30), and remove the motor cover.



- 4** Disconnect the connector, remove the Phillips pan head screw (with flat and spring washers) (M3 x 6), and remove the vibration motor, ferrite core and core spacer.



1

2

3

4

5

6

7

8A

8B

9

10

11

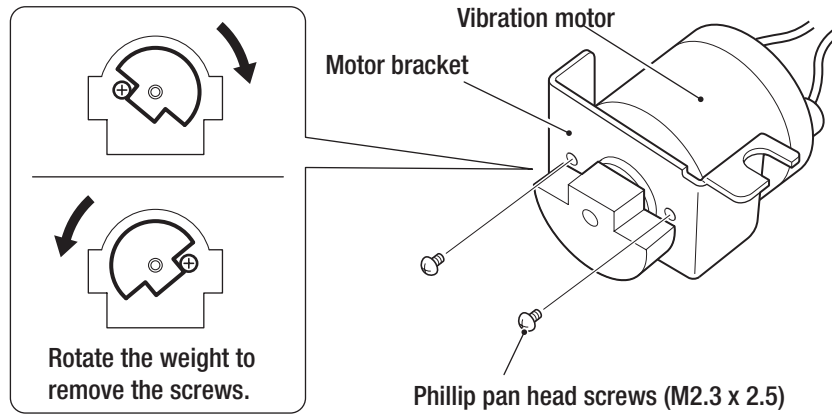
Service

Test Mode

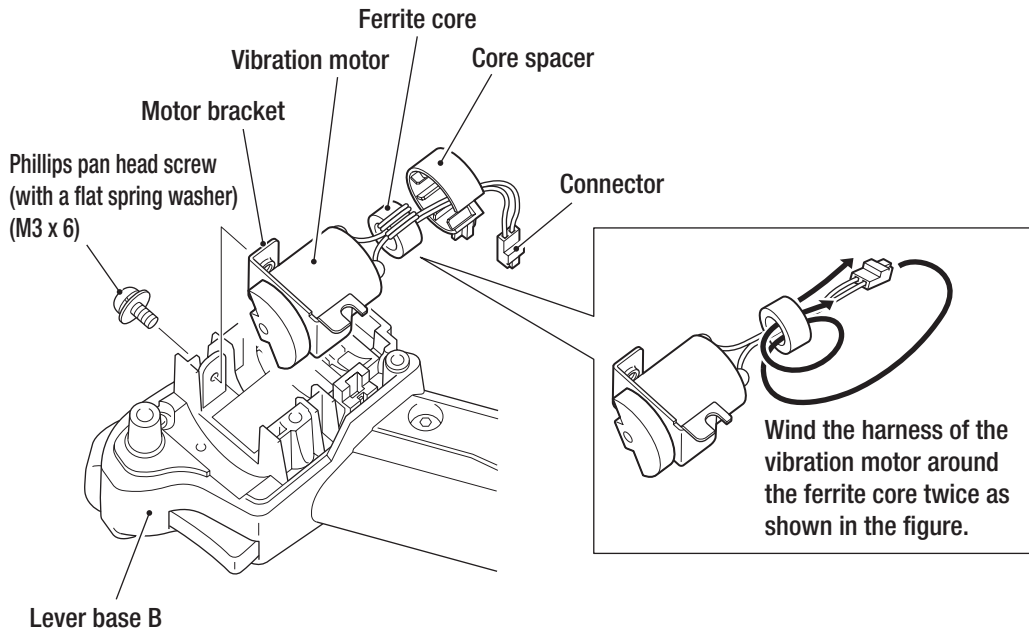
Troubleshooting

– Must be performed by a technician –

- 5** Rotate the weight, remove the two Phillips pan head screws (M2.3 x 2.5) and remove the vibration motor. Replace it with a new vibration motor by following the removal procedure in reverse.



- 6** Wind the harness of the new vibration motor around the ferrite core two times, attach the core spacer to the ferrite core, and install the vibration motor with the ferrite core and core spacer to lever base B.



- 7** To install, perform the procedure in reverse.

– Must be performed by a technician –

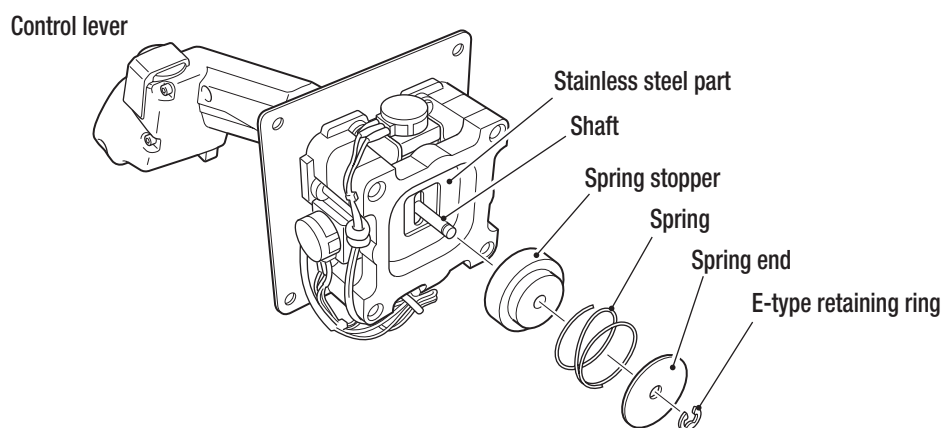
(7) Replacing the Spring or Spring Stopper**! WARNING**

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the control lever assembly or the throttle lever assembly. (See P-117 "(1) Replacing the Control Lever Assembly" or P-138 "(1) Replacing the Throttle Lever Assembly".)
- 3** Use pliers or the like to remove the E-type retaining ring, and remove the spring end, spring, and spring stopper.

NOTICE

- The throttle lever also has the same spring part structure.



- 4** Wipe off the old grease on the sliding areas of the spring and spring stopper, and apply fresh silicon grease (recommended product: G-40M , Shin-Etsu Chemical Co, Ltd.) to the same area. (See P-92 "8B-1-2 Points for Service".)
- 5** Replace the spring or spring stopper.
- 6** To install, perform the procedure in reverse.

NOTICE

- When installing it, take care not to allow the harness to get caught in the lever's moving parts.
- After replacement, be sure to perform calibration. (See P-37 "(a) I/F CALIBRATION".)

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

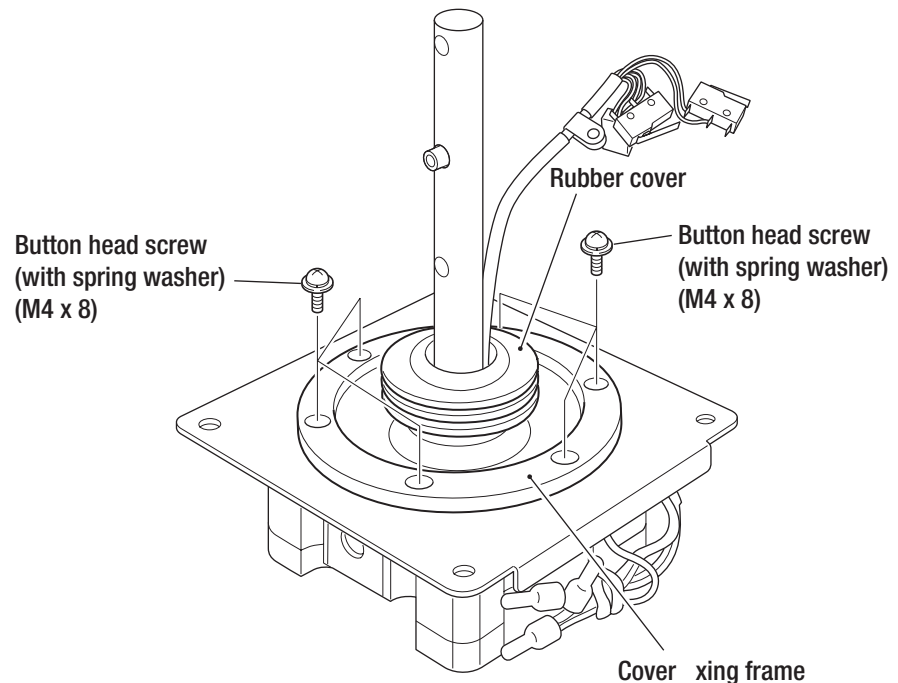
– Must be performed by a technician –

(8) Replacing the Rubber Cover

! WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the control lever assembly. (See P-117 "(1) Replacing the Control Lever Assembly".)
- 3** Remove grips A and B of the control lever assembly. (See P-120 "(3) Replacing the Micro Switch" steps **3** to **5**.)
- 4** Remove the six button head screws with spring washers (M4 x 8) and remove the cover fixing frame and rubber cover. Take care not to break the wiring.



- 5** Replace the rubber cover.
- 6** To install, perform the procedure in reverse. (See P-120 "(3) Replacing the Micro Switch" steps **3** to **5**, **7**, and **8**.)



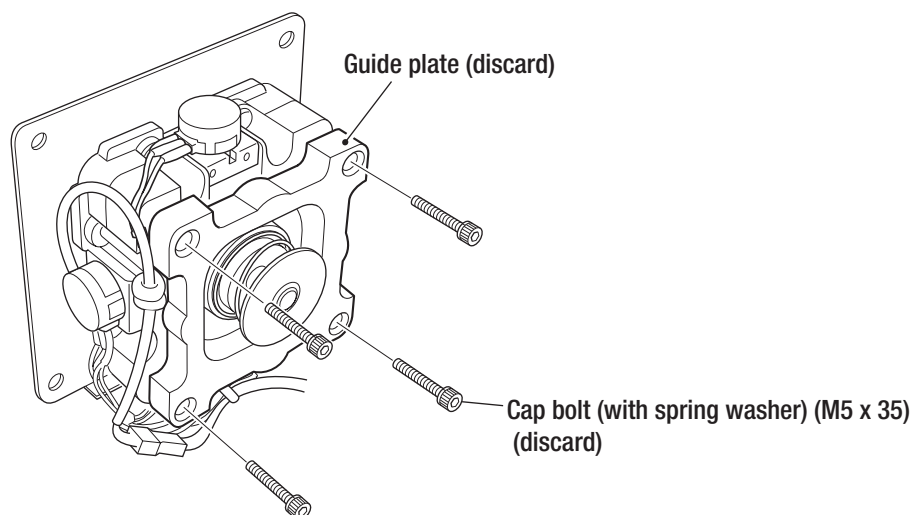
- After replacement, be sure to perform calibration. (See P-37 "(a) I/F CALIBRATION".)

– Must be performed by a technician –

(9) Replacing the Lever Sub-assembly**! WARNING**

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the control lever assembly. (See P-117 "(1) Replacing the Control Lever Assembly".)
- 3** Remove grips A and B of the control lever assembly. (See P-120 "(3) Replacing the Micro Switch" steps **3** to **5**.)
- 4** Remove the rubber cover. (See P-128 "(8) Replacing the Rubber Cover" steps **4** to **5**.)
- 5** Remove the four cap bolts (with spring washers) (M5 x 35) and remove the guide plate. Discard the removed cap bolts and guide plate.



1

2

3

4

5

6

7

8A

8B

9

10

11

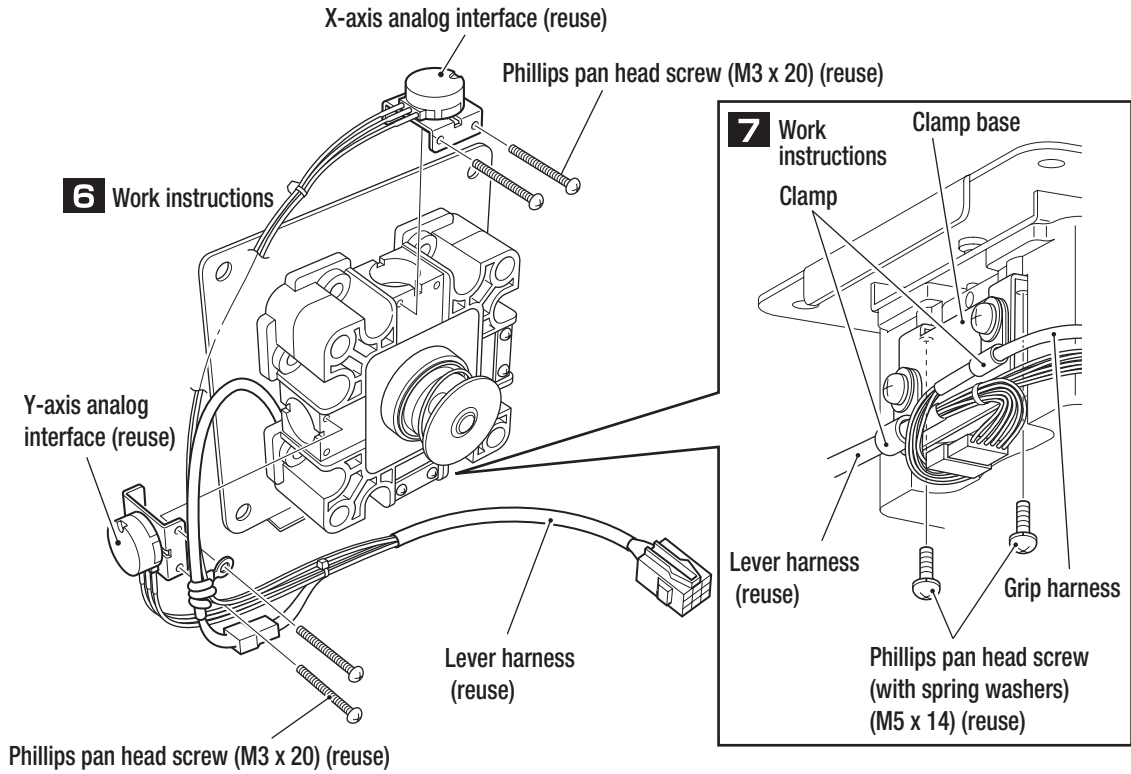
Service

Test Mode

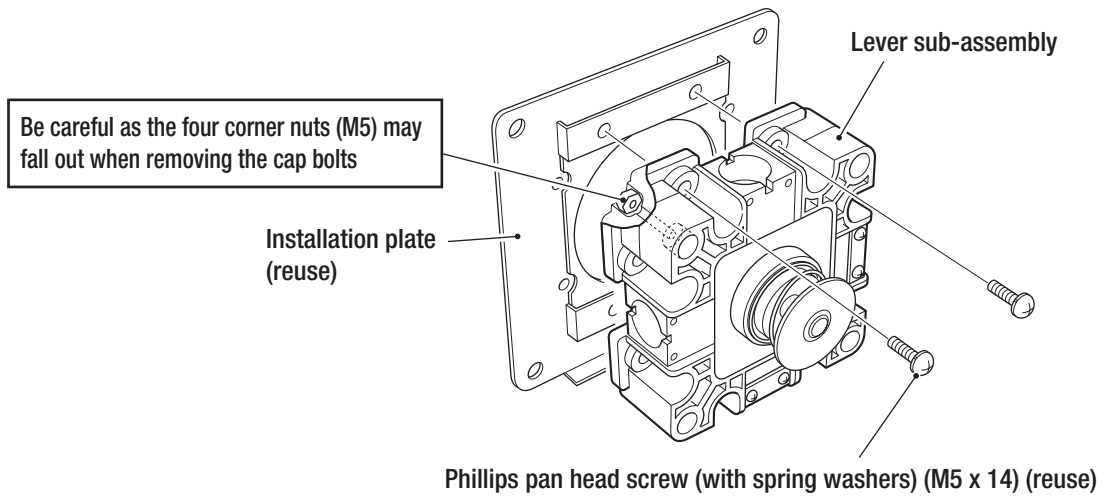
Troubleshooting

– Must be performed by a technician –

- 6** Remove the two Phillips pan head screws (M3 x 20) and remove the X-axis and Y-axis analog interfaces.
- 7** Remove the two Phillips pan head screws (with spring washers) (M5 x 14) and remove the clamp base along with the lever harness and grip harness.



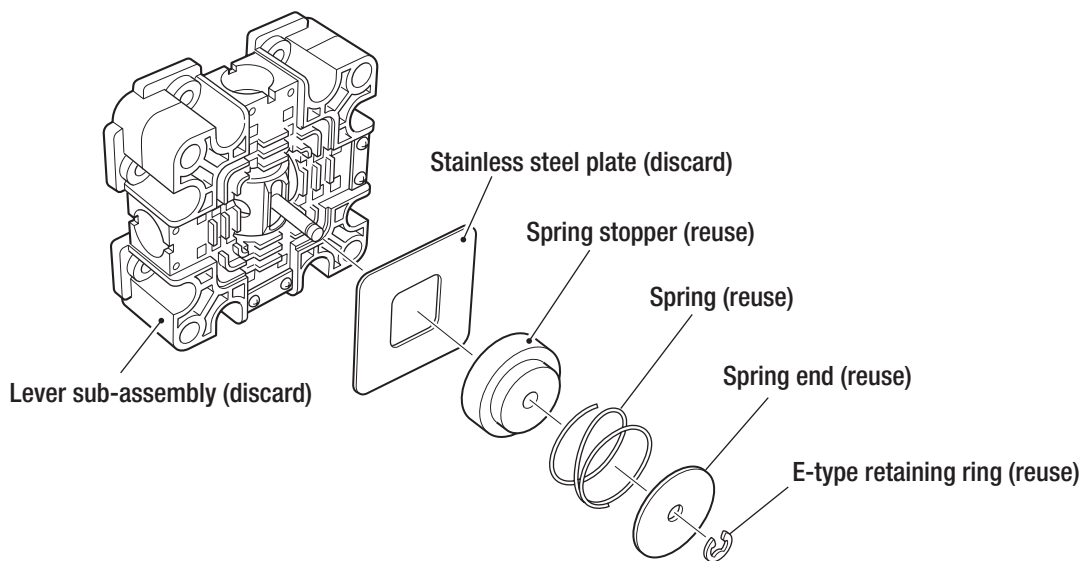
- 8** Remove the two Phillips pan head screws (with spring washers) (M5 x 14) and remove the lever sub-assembly from the installation plate.



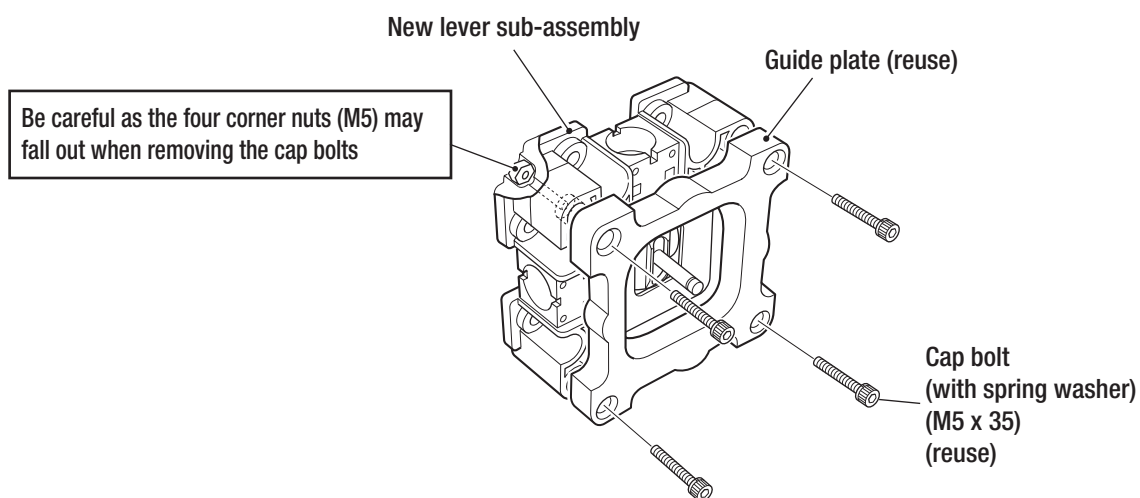
- Must be performed by a technician -

- 9** Use pliers or the like to remove the E-type retaining ring, and remove the spring stopper, spring, spring end and stainless steel plate.

*The spring stopper, spring, spring end and E-type retaining ring are to be reused. Discard the removed lever sub-assembly and stainless steel plate.



- 10** Remove the four cap bolts (with spring washers) (M5 x 35) of the new lever sub-assembly, and remove the guide plate.



1

2

3

4

5

6

7

8A

8B

9

10

11

Service

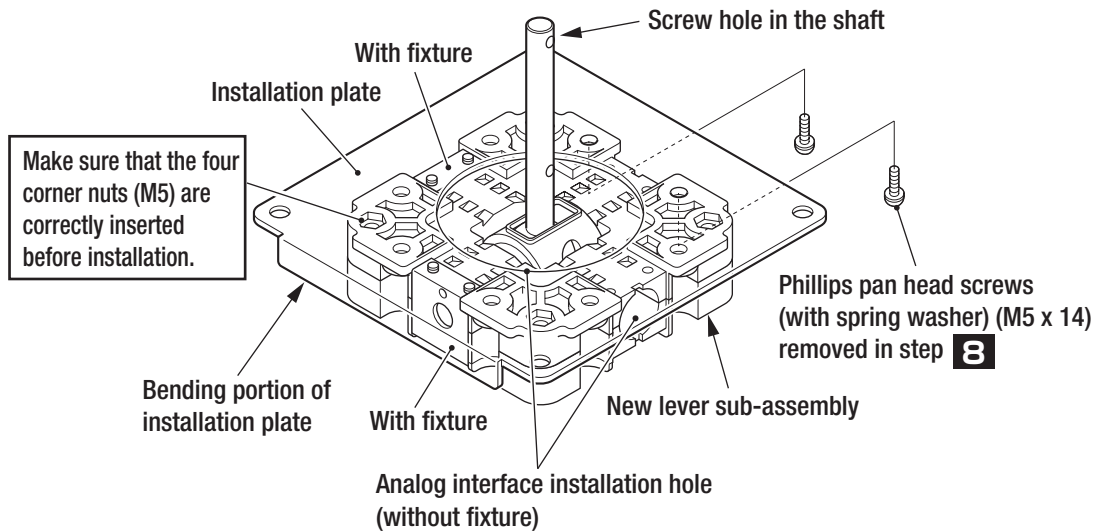
Test Mode

Troubleshooting

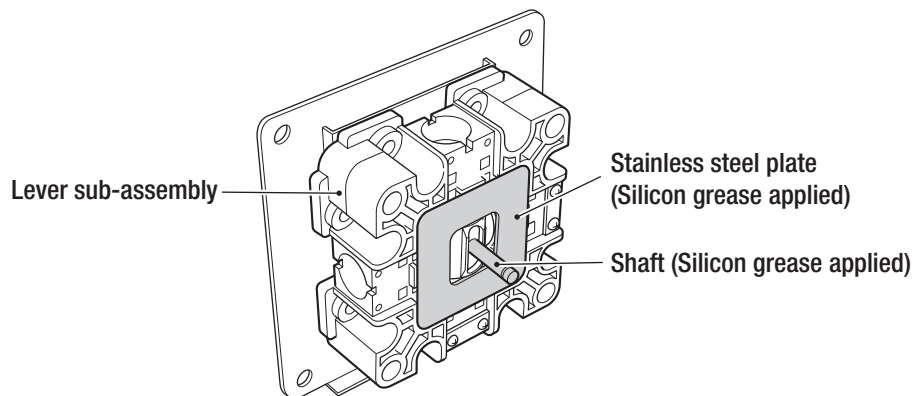
– Must be performed by a technician –

- 11** Install the new lever sub-assembly onto the installation plate by following the procedures described in step **8** in reverse.

Refer to the following figure to install it facing the correct direction.

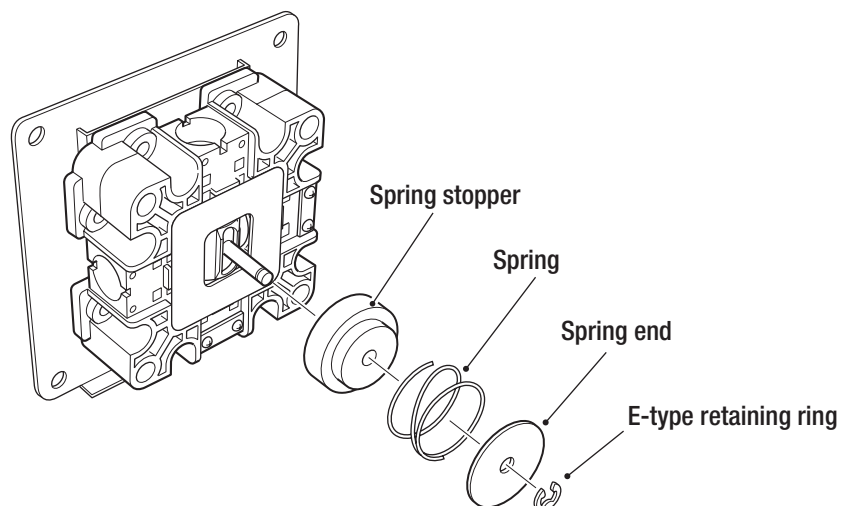


- 12** Apply silicon grease (recommended product: G-40M , Shin-Etsu Chemical Co, Ltd.) to the stainless steel plate and shaft portion of the new lever sub-assembly.



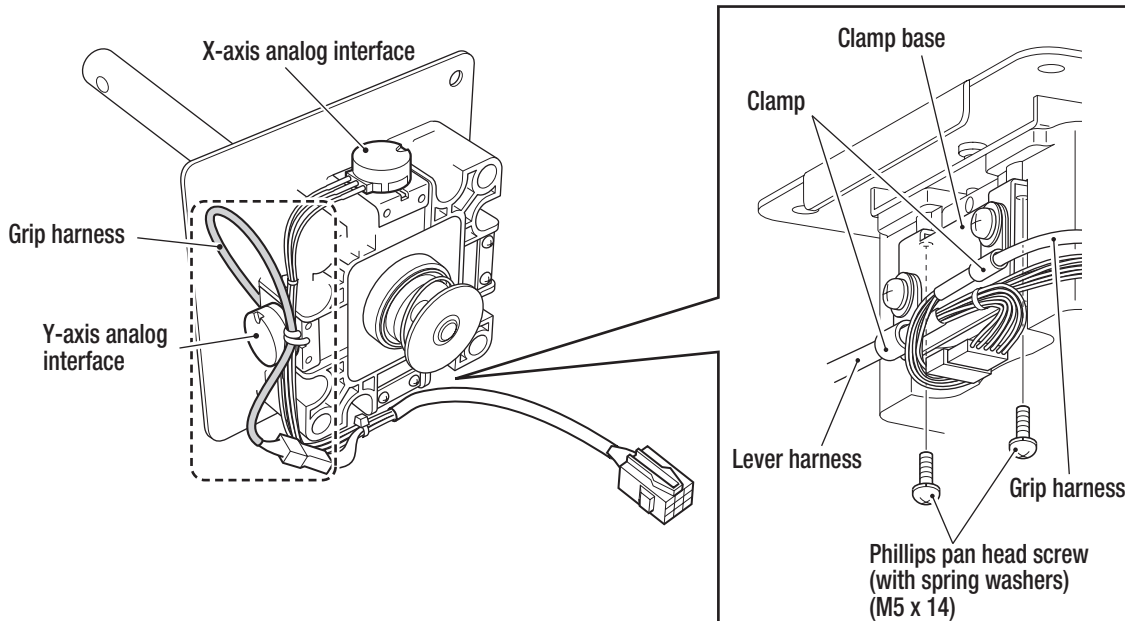
- 13** Wipe off the old grease on the sliding areas of the spring and spring stopper, and apply fresh silicon grease (recommended product: G-40M , Shin-Etsu Chemical Co, Ltd.) to the same area. (See P-92 "8B-1-2 Points for Service".)

- 14** Install the spring stopper, spring and spring end in the reverse order to procedures described in step **10**, and secure them with the E-type retaining ring.



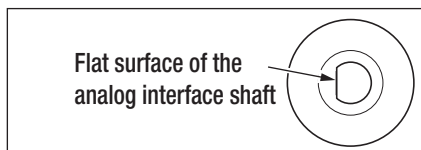
– Must be performed by a technician –

- 15** Install the analog interfaces and harness by following the procedures described in steps **6** to **7** in reverse.

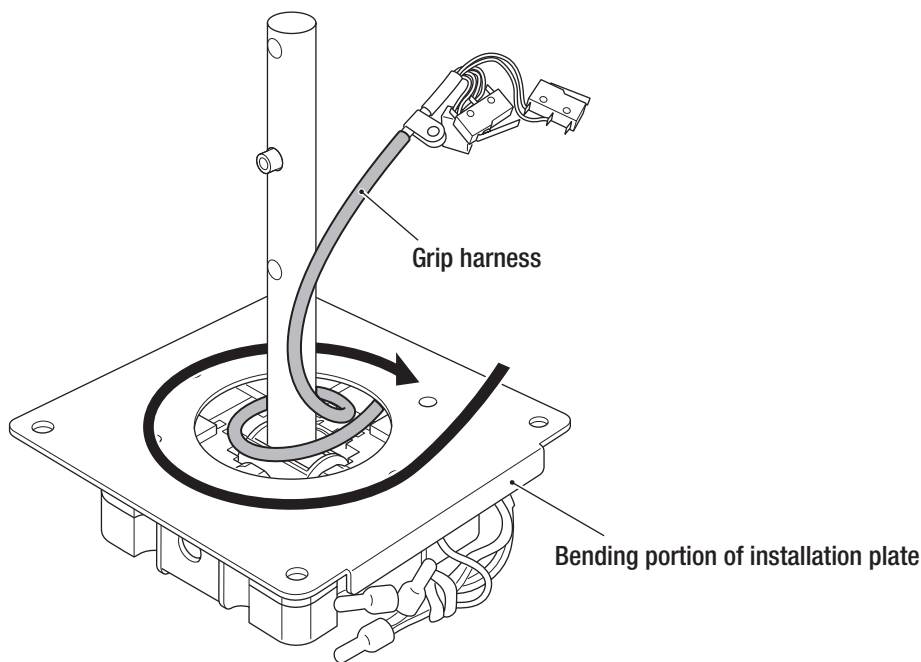


NOTICE

- When installing, take care not to allow the harness to get caught in the moving parts.
- When installing the analog interface, align the flat surface of the analog interface shaft with the position of the D-shaped hole.



- 16** Arrange the grip harness as shown in the figure below by turning it once around the shaft in a clockwise direction.



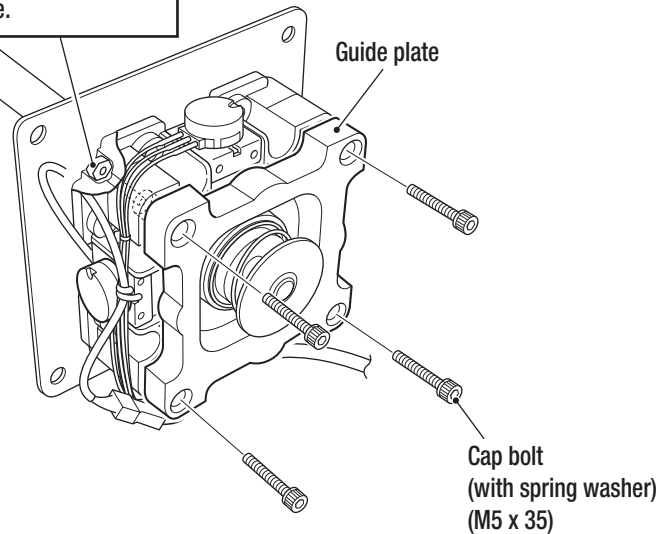
1
2
3
4
5
6
7
8A
8B
9
10
11
Service

Test Mode
Troubleshooting

– Must be performed by a technician –

- 17** Use the cap bolts (with spring washers) (M5 x 35) to install the guide plate that was removed in step **11**.

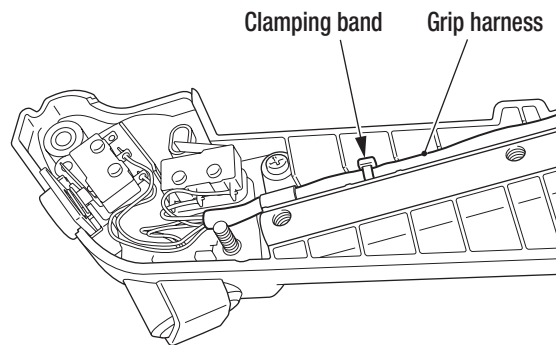
During installation, the four corner nuts (M5) may rotate loosely so that the bolts do not tighten. In this case, use a thin rod or other tool to push the nuts (M5) toward the bolt side.



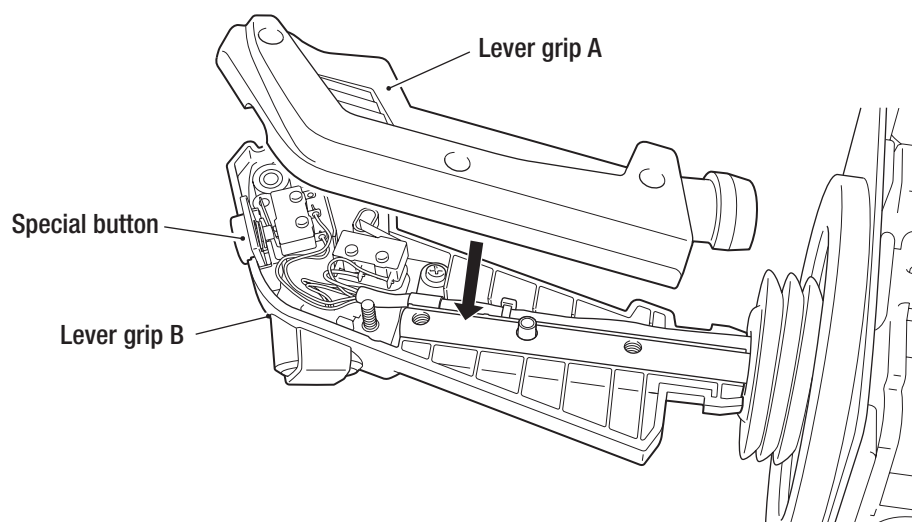
NOTICE

- When installing the guide plate, take care not to allow the stainless steel plate to get caught.

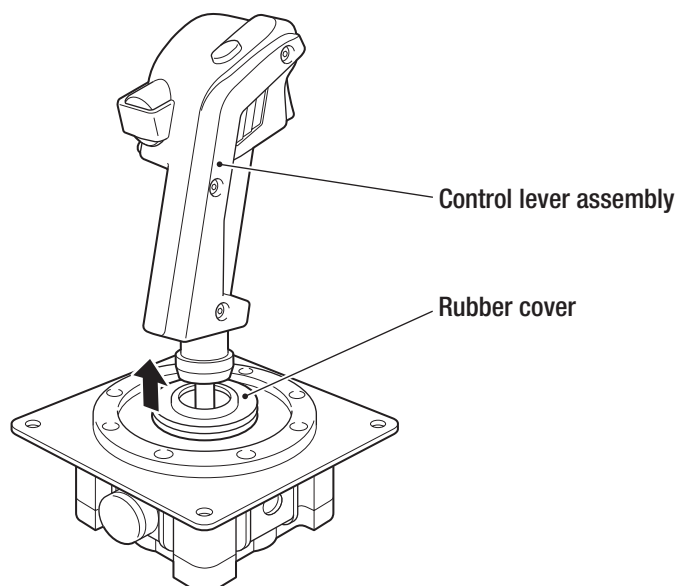
- 18** Install the rubber cover. (See P-128 "(8) Replacing the Rubber Cover" steps **4** to **5**.)
- 19** Install the grip. (See P-120 "(3) Replacing the Micro Switch" steps **3** to **5**, and **7**.) Make sure that the grip harness is arranged correctly before installing the grip.



- Must be performed by a technician -



- 20** Pull the rubber cover up to the base of the lever arm.



- 21** Connect the connector and use the four Torx bolts (M5 x 12) to install the control lever. (See P-117 "(1) Replacing the Control Lever Assembly".)



- When installing, take care not to allow the harness to get caught.
- After installation, be sure to perform calibration. (See P-37 "(a) I/F CALIBRATION".)

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

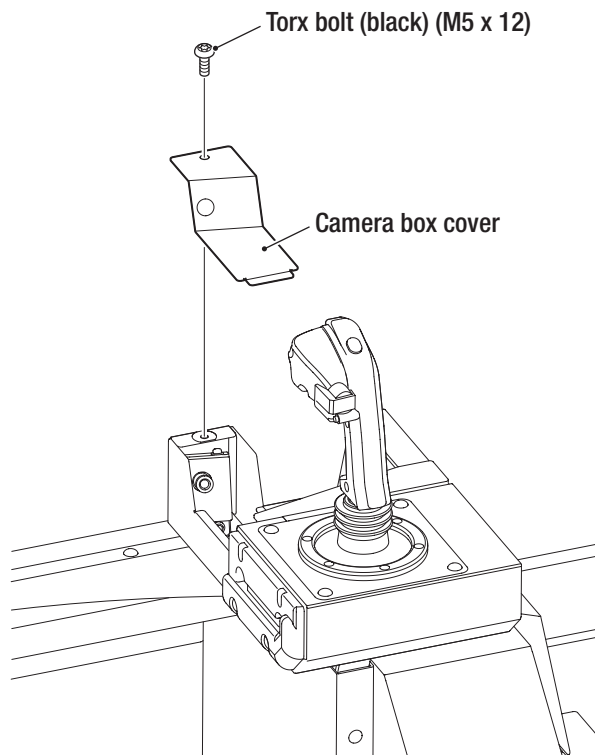
– Must be performed by a technician –

(10) Replacing the OC PROTECTOR PC Board

! WARNING

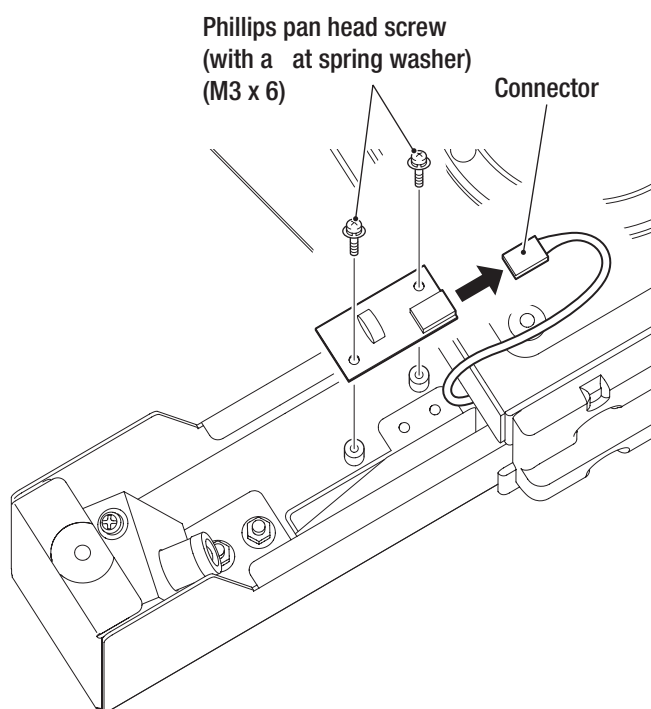
- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.
- In some cases, the OC PROTECTOR PC board may become hot. In order to avoid accident or injury to yourself or others, be sure to turn off the main power switch and wait 3 minutes or more before starting this task.

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the Torx bolt (black) (M5 x 12) and remove the camera box cover.



- Must be performed by a technician -

- 3** Disconnect the connector, remove the two Phillips pan head screws (with flat and spring washers) (M3 x 8), and remove the OC PROTECTOR PC board.



- 4** To install, perform the procedure in reverse.

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

– Must be performed by a technician –

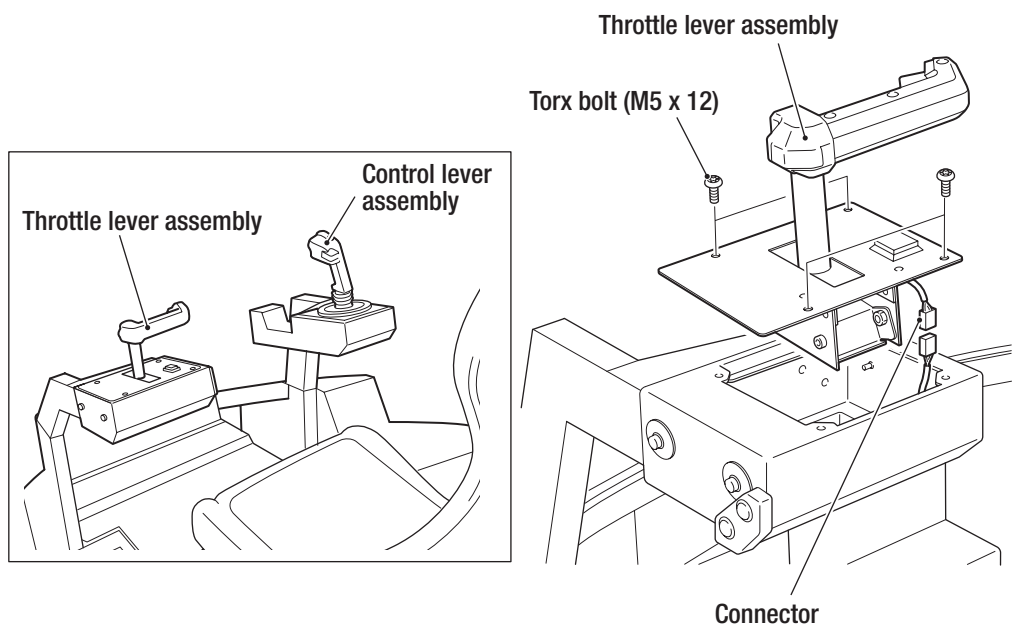
8B-5-3 Throttle Lever Assembly

(1) Replacing the Throttle Lever Assembly

! WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the four Torx bolts (black) (M5 x 12) and lift up the throttle lever assembly.
- 3** Disconnect the connector and replace the throttle lever assembly.



- 4** To install, perform the procedure in reverse.

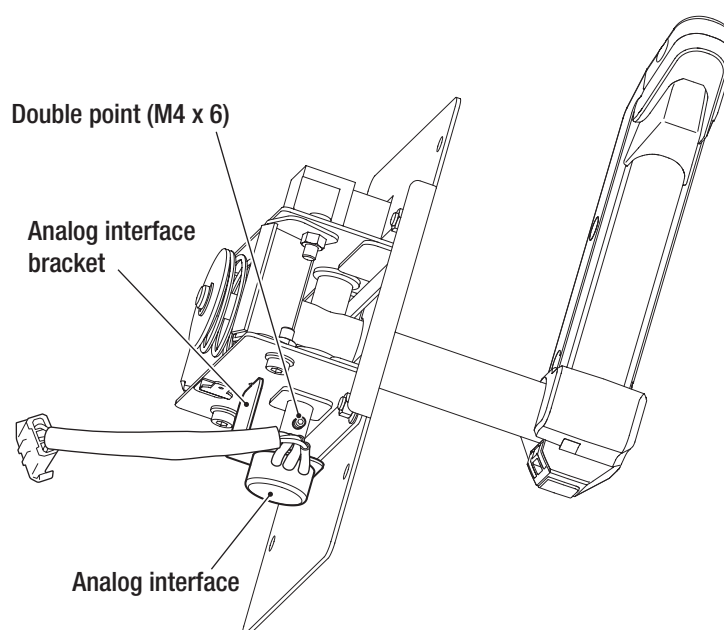
NOTICE

- When installing it, check the connector orientations, connect the connectors firmly to each other, and lock them securely.
- When installing it, take care not to allow the connectors and harnesses to get caught.
- After replacement, be sure to perform calibration. (See P-37 "(a) I/F CALIBRATION".)

– Must be performed by a technician –**(2) Replacing the Analog Interface****! WARNING**

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the throttle lever assembly. (See P-138 "(1) Replacing the Throttle Lever Assembly".)
- 3** Loosen the double point (M4 x 6) and remove the analog interface together with the analog interface bracket.



1

2

3

4

5

6

7

8A

8B

9

10

11

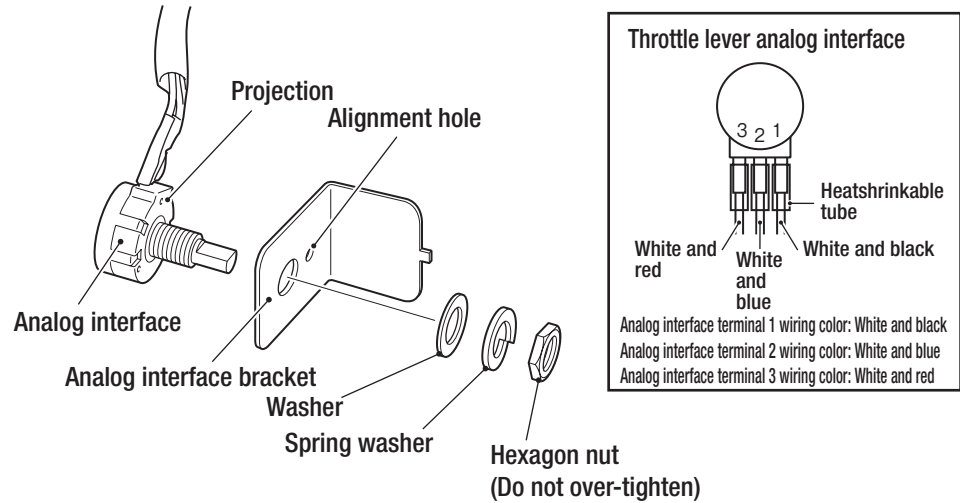
Service

Test Mode

Troubleshooting

– Must be performed by a technician –

- 4** Remove the analog interface from the analog interface bracket.

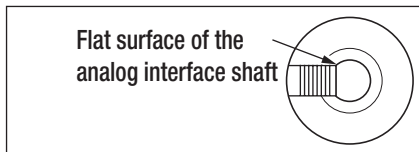


- 5** Install the new analog interface onto the analog interface bracket while fitting its projection into the position alignment groove in the bracket.

- 6** To install, perform the procedure in reverse.



- Tighten the double point (M4 x 6) to the level surface of the analog interface shaft.

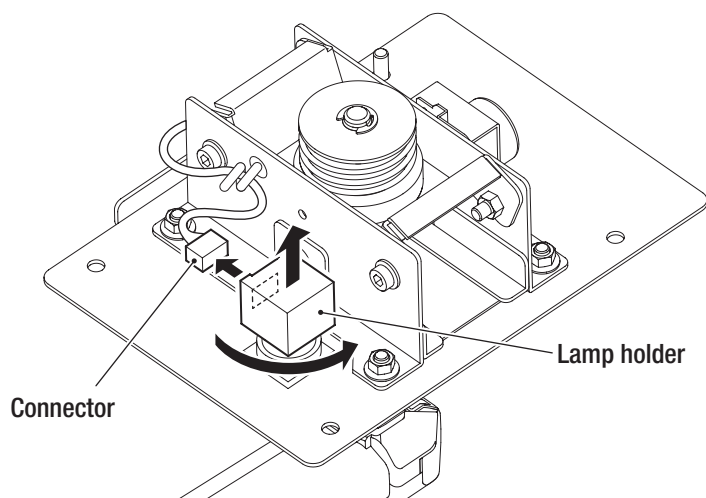


- After replacement, be sure to perform calibration. (See P-37 "(a) I/F CALIBRATION".)
- When installing, be careful not to pinch the harness in the lever's moving parts.

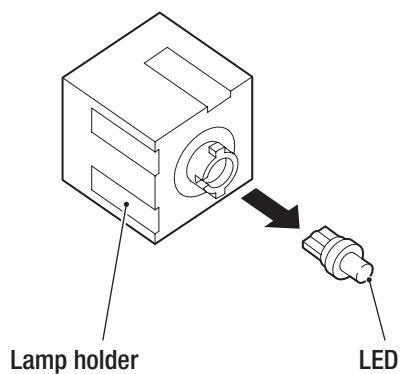
(3) Replacing the View Change Button**! WARNING**

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the throttle lever assembly. (See P-138 "(1) Replacing the Throttle Lever Assembly".)
- 3** Disconnect the connector, turn the lamp holder of the view change button approximately 45 degrees counterclockwise, and pull out the holder.



- 4** When replacing the LED, insert a new LED by aligning its tab with the groove in the lamp holder.



1

2

3

4

5

6

7

8A

8B

9

10

11

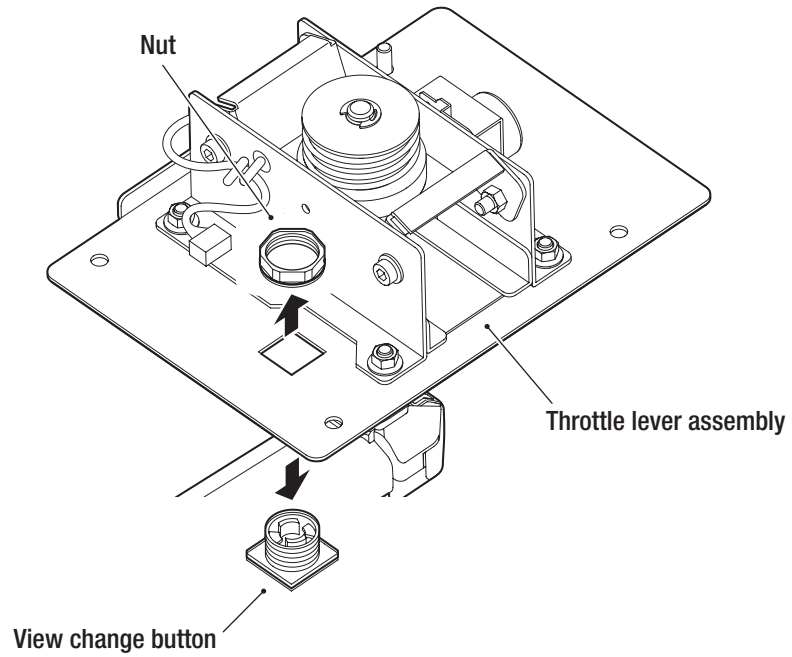
Service

Test Mode

Troubleshooting

– Must be performed by a technician –

- 5** Remove the nut and remove the view change button from the throttle lever assembly.



- 6** To install, perform the procedure in reverse.

8B-5-4 Coin Box Assembly

(1) Replacing the Coin Selector (U.S. Model)

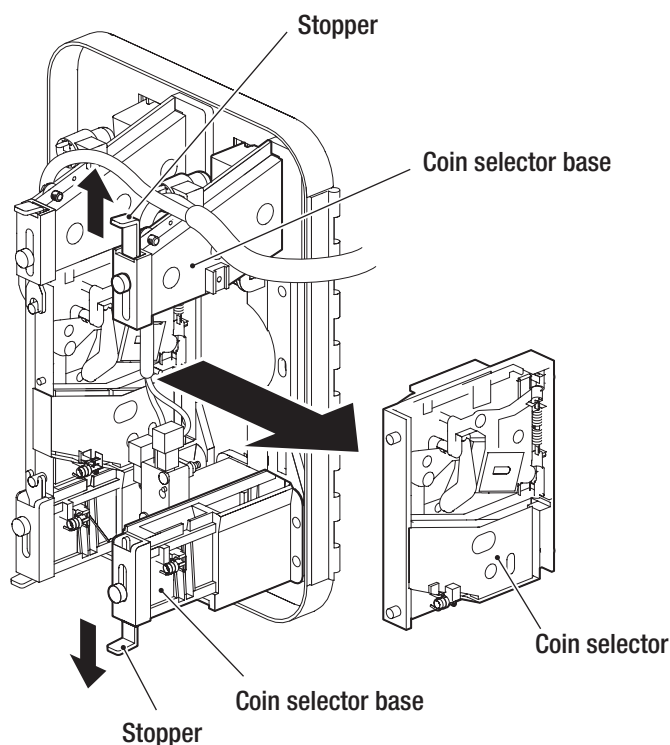
! WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

NOTICE

- When installing the coin selector, take care not to allow the connectors and harnesses to get caught.
- After replacement, be sure to check the operation of the coin switch by dropping a coin into the slot. (See P-38 "(b) SWITCH TEST".)

- 1 Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2 Open the coin door using the supplied service key. (See P-146 "(4) Replacing the CASHFLOW (European Model)".)
- 3 Loosen the screws of the coin selector base, slide the two stoppers to unlock them, and replace the coin selector.



- 4 Lock the stopper by following the unlocking procedure in reverse, and close the coin door.
- 5 Specified coin selector
Suzo-Happ \$.25 USA Coin Mech (P/N 42-3079-100)

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

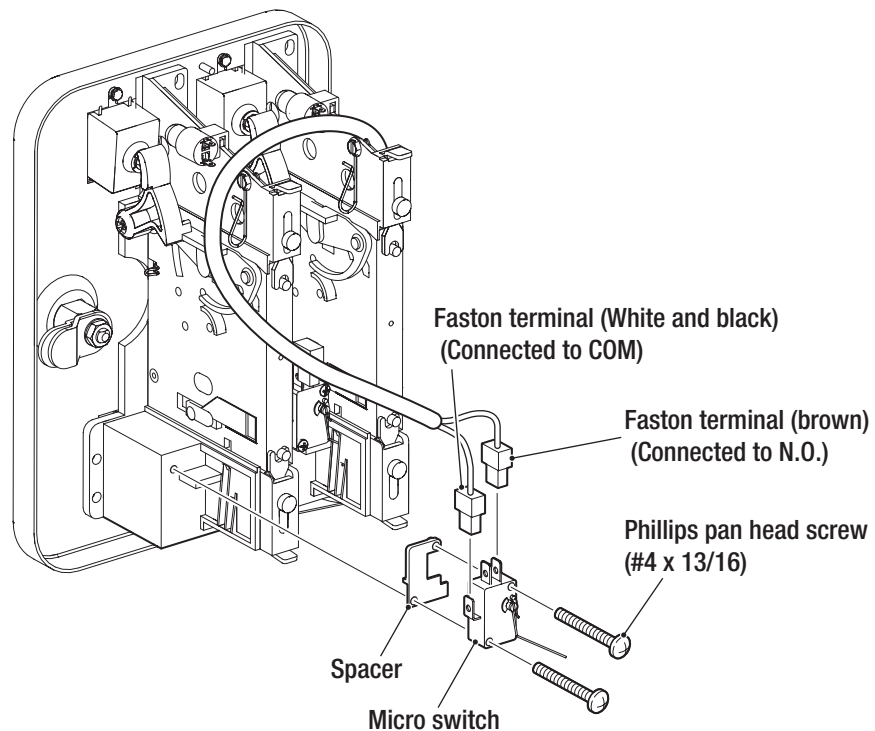
– Must be performed by a technician –

(2) Replacing the Coin Micro Switch (U.S. Model)

! WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1 Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2 Open the coin door using the supplied service key. (See P-146 "(4) Replacing the CASHFLOW (European Model)".)
- 3 Disconnect the two Faston terminals from the micro switch.
- 4 Remove the two Phillips pan head screws (#4 x 13/16) and replace the micro switch.



- 5 To install, perform the procedure in reverse.

NOTICE

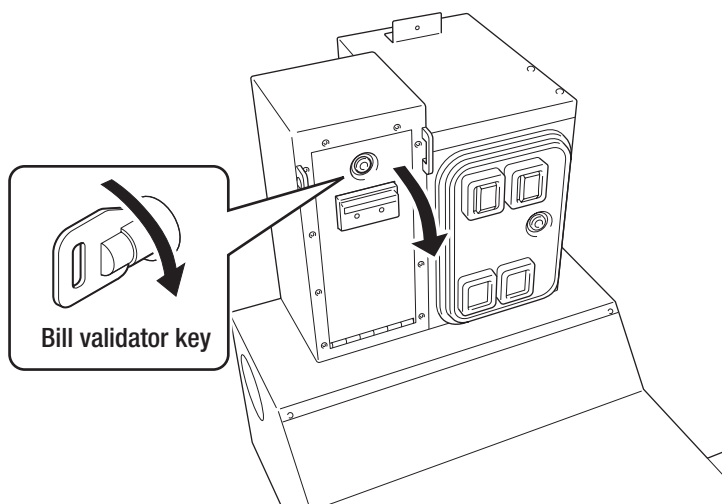
- When installing, insert the Faston terminals all the way in position.
- When installing, take care not to allow the connectors and harnesses to get caught.
- Two Faston terminals are provided. When installing them, refer to the above figure for information on how to connect the Faston terminals correctly.

(3) Replacing the Bill Validator (U.S. Model)

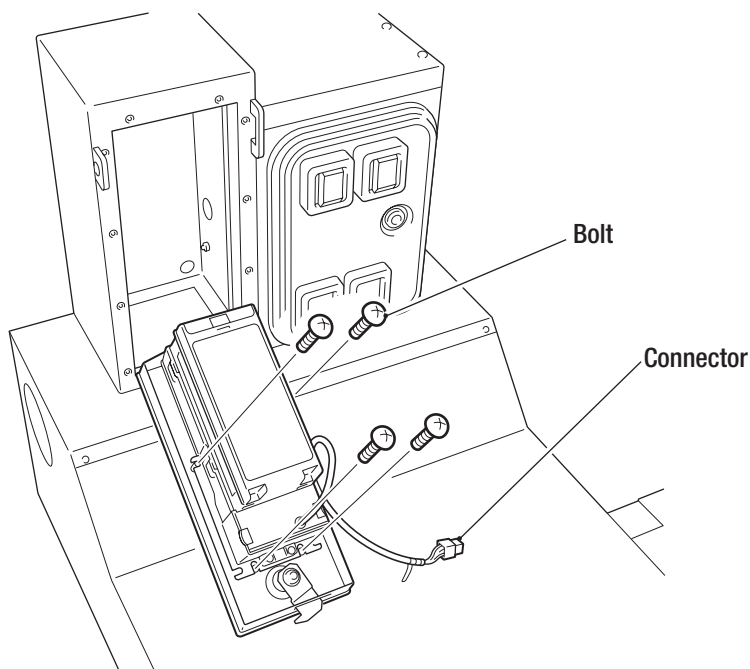
! WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1 Turn off the main power switch. (See P-88 "8A-8 Turning the Power Switch On".)
- 2 Use the bill validator key to open the door.



- 3 Disconnect the connector, remove the four bolts, and replace the bill validator.



- 4 To install, perform the procedure in reverse.

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

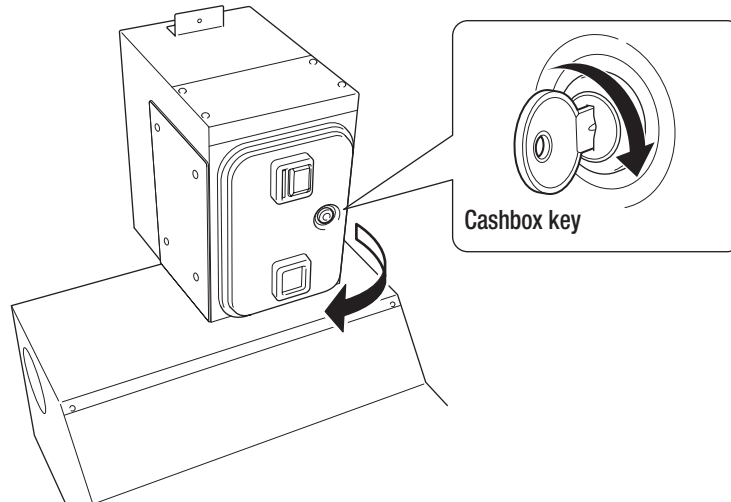
– Must be performed by a technician –

(4) Replacing the CASHFLOW (European Model)

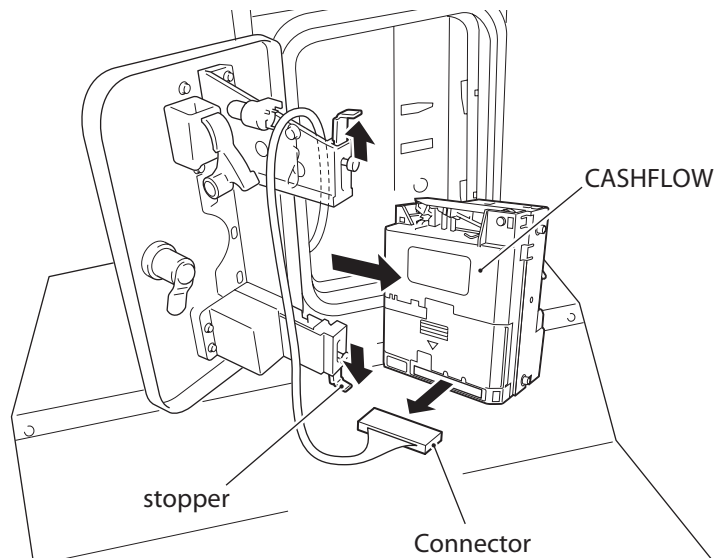
! WARNING

● In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1** Turn off the main power switch. (See P-88 "8A-8 Turning the Power Switch On".)
- 2** Use the cashbox key to open the door.



- 3** Disconnect the connector, slide the stoppers in two places to unlock them, and then remove the CASHFLOW to replace it.



- 4** To install, perform the procedure in reverse.

Specified coin selector
MEI CASHFLOW340 (P/N 65500327)

(5) Replacing the Fuse of Coin Assembly (U.S. and European Models)

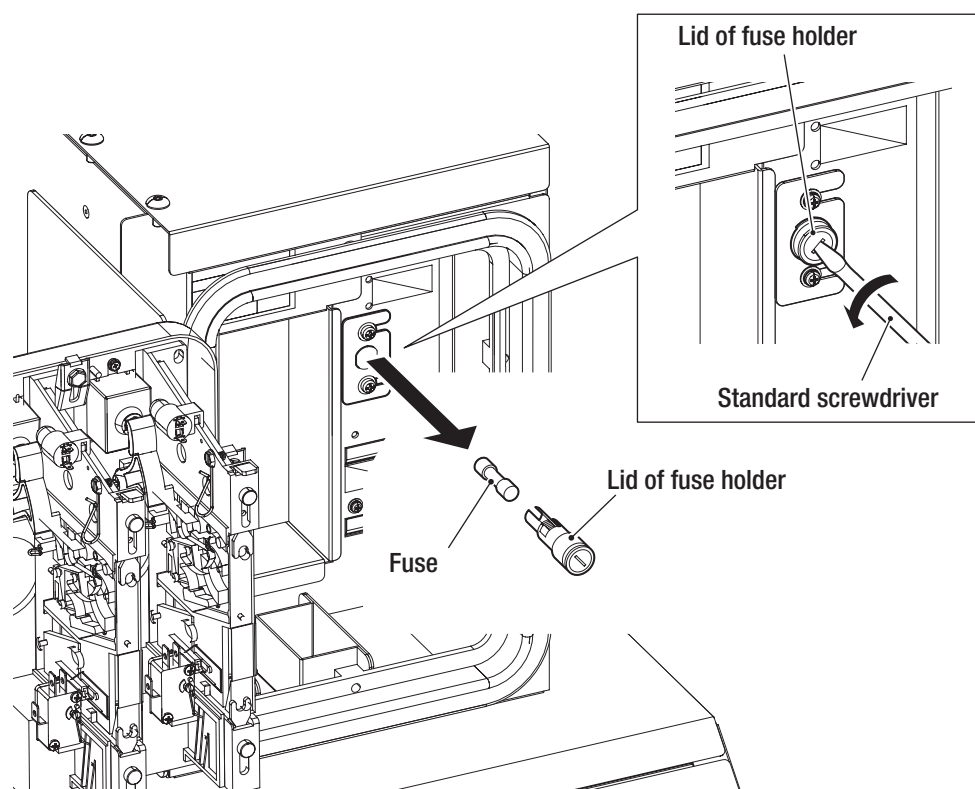
WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.
- Never use a fuse other than the specified type. The fuse must be installed to prevent fire or accident.
- If the fuse blows out immediately after it is newly installed, other causes may be suspected. Immediately turn off the main power switch, pull out the power cord plug from the outlet, and contact your distributor.

NOTICE

- To order a fuse, contact your distributor.

- 1 Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2 Open the coin door using the supplied service key. (See P-146 "(4) Replacing the CASHFLOW (European Model)".)
- 3 Use a standard screwdriver to rotate the fuse holder cap counter-clockwise and remove the fuse.



- 4 Replace the fuse with either of the following fuses according to the machine specifications, and install the new one by following the removal procedure in reverse.

Specifications:	Fuse rating:
U.S.	Slow-blow fuse T6. 3 A 250 V
European	Fast Acting fuse 2A 250V

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

– Must be performed by a technician –

(6) Replacing the Coin Selector (Asian Model)

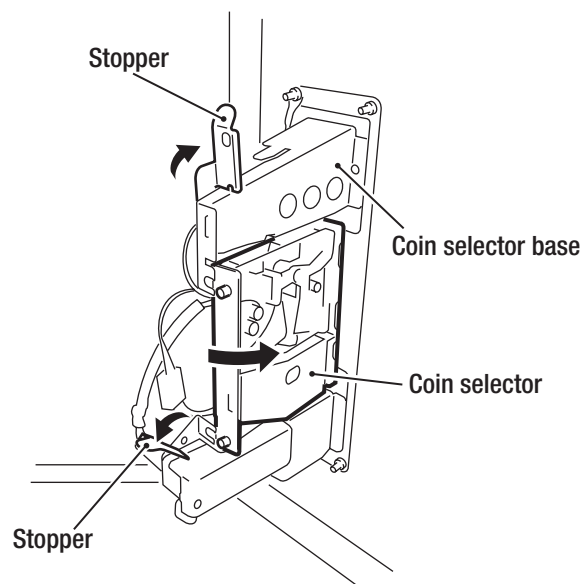
! WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

NOTICE

- When installing the coin selector, take care not to allow the connectors and harnesses to get caught.
- After replacement, be sure to check the operation of the coin switch by dropping a coin into the slot. (See P-38 "(b) SWITCH TEST".)

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Open the coin door using the supplied service key. (See P-146 "(4) Replacing the CASHFLOW (European Model)".)
- 3** Pull the two stoppers of the coin selector base toward you to release the lock, and replace the coin selector.



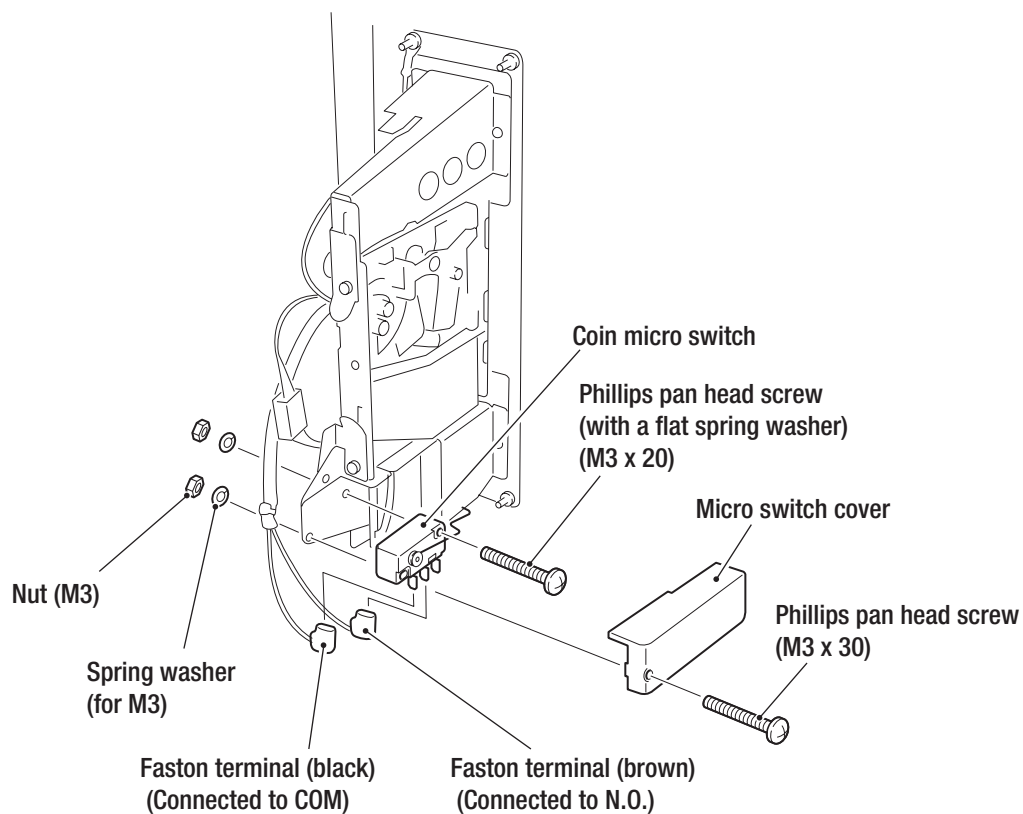
- 4** Close the coin door.

– Must be performed by a technician –

(7) Replacing the Coin Micro Switch (Asian Model)**! WARNING**

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Open the coin door using the supplied service key. (See P-146 "(4) Replacing the CASHFLOW (European Model)".)
- 3** Disconnect the two Faston terminals from the micro switch.
- 4** Remove the Phillips pan head screw (M3 x 30), M3 spring washer, and M3 nut, and then remove the resin protection cover.
- 5** Remove the Phillips pan head screw (M3 x 20), M3 spring washer, and M3 nut, and then replace the micro switch.



- 6** To install, perform the procedure in reverse.

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

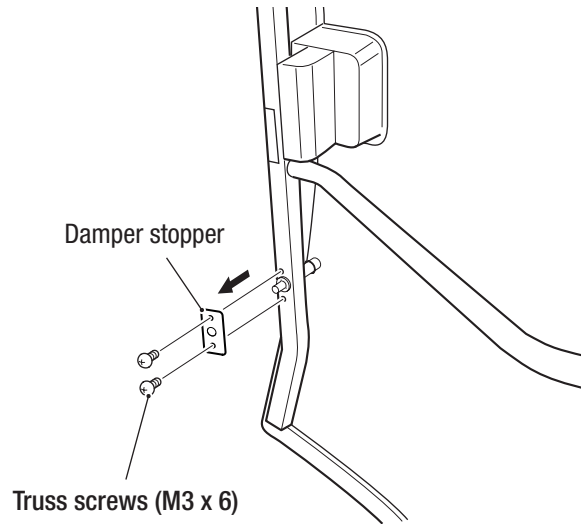
Troubleshooting

8B-5-5 Rear Assembly

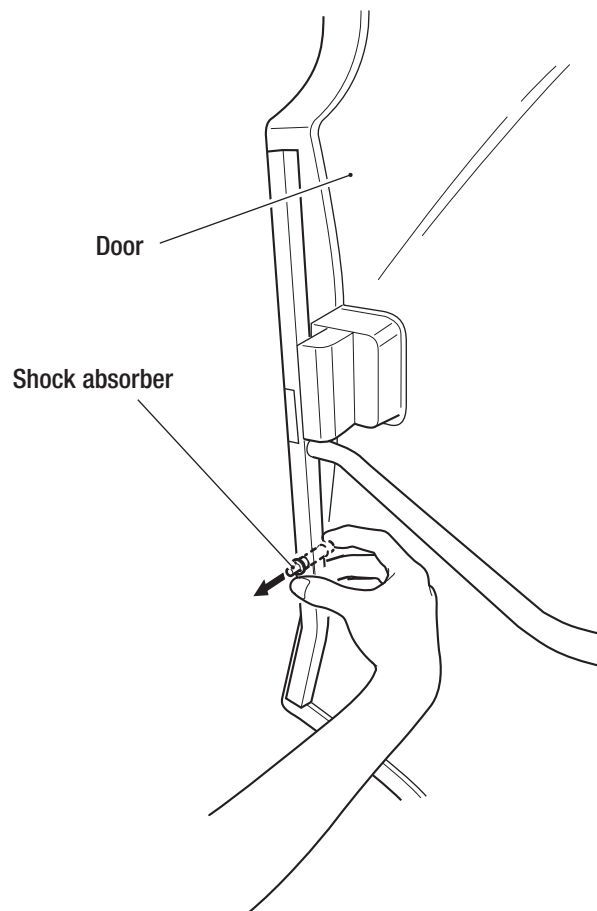
(1) Replacing the Shock Absorber

One shock absorber is provided to prevent the door from slamming.

- 1 Remove the two Phillips truss screws (M3 x 6), and remove the damper stopper.



- 2 Push the shock absorber from the back side to remove and replace it.



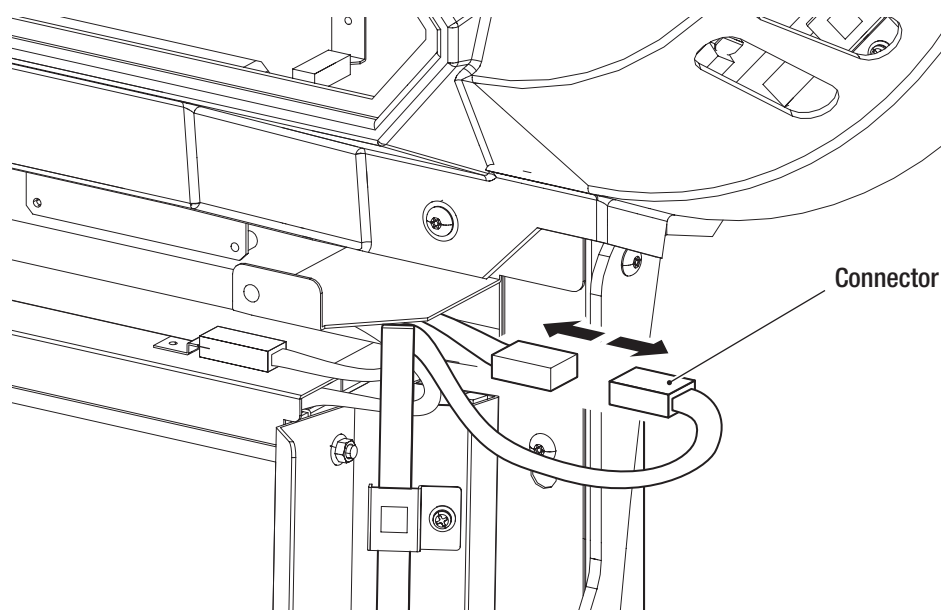
– Must be performed by a technician –**(2) Replacing the Side LED Module of the Rear Cover**

This section describes procedures for replacing each side LED module located on both sides of the rear cover.

! WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the console panel and rear cover. (See P-70 "8A-3-6 Installing the Rear Cover".)
- 3** Disconnect the connector of the LED module.



1

2

3

4

5

6

7

8A

8B

9

10

11

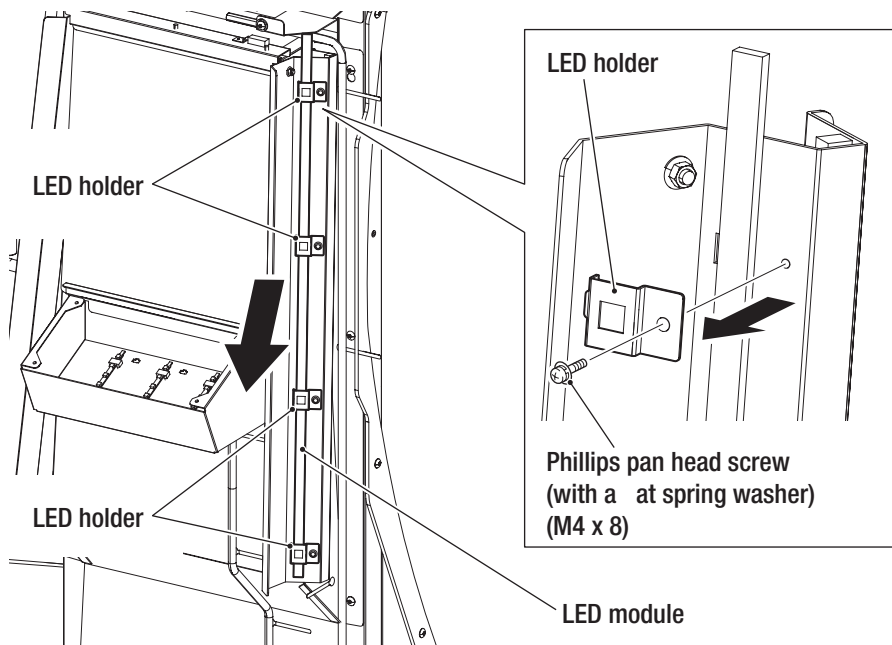
Service

Test Mode

Troubleshooting

– Must be performed by a technician –

- 4** Removal of one Phillips pan head screw (with flat and spring washer) (M4 x 8) will enable the LED holder to be removed. Remove all four LED holders and the LED module in the same way.



- 5** Similarly, replace the LED module on the opposite side.

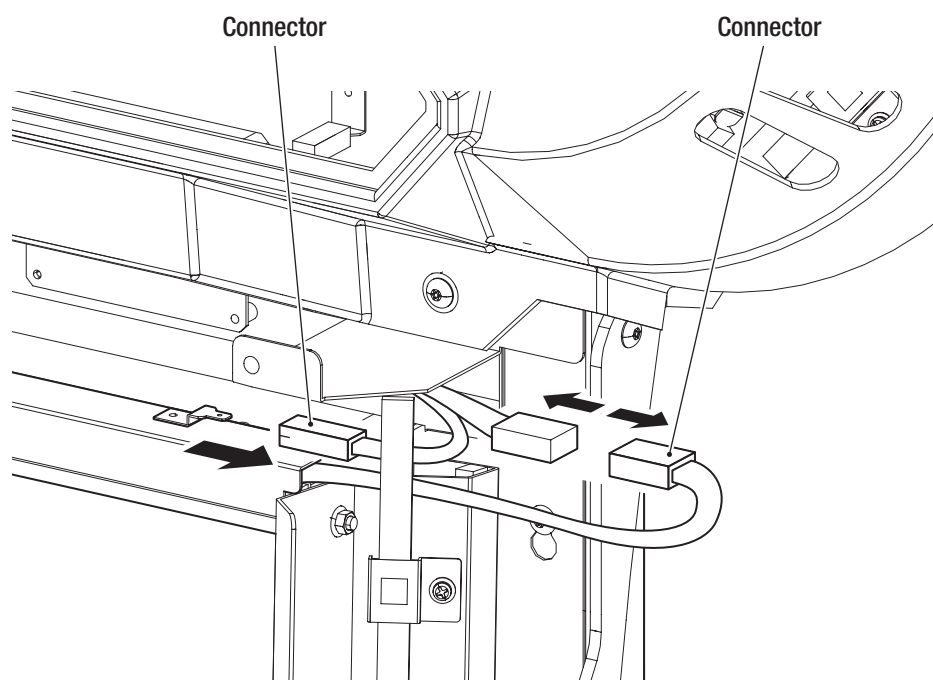
(3) Replacing the LED Module for the Center Window

This section describes procedures for replacing the LED module at the center window of the rear cover.

! WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the console panel and rear cover. (See P-70 "8A-3-6 Installing the Rear Cover".)
- 3** Disconnect the two connectors of the LED module.



1

2

3

4

5

6

7

8A

8B

9

10

11

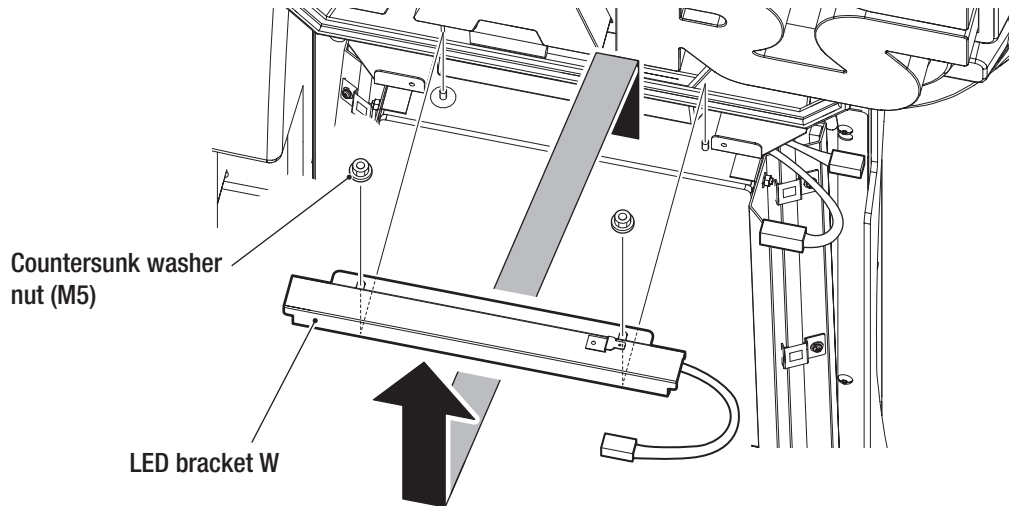
Service

Test Mode

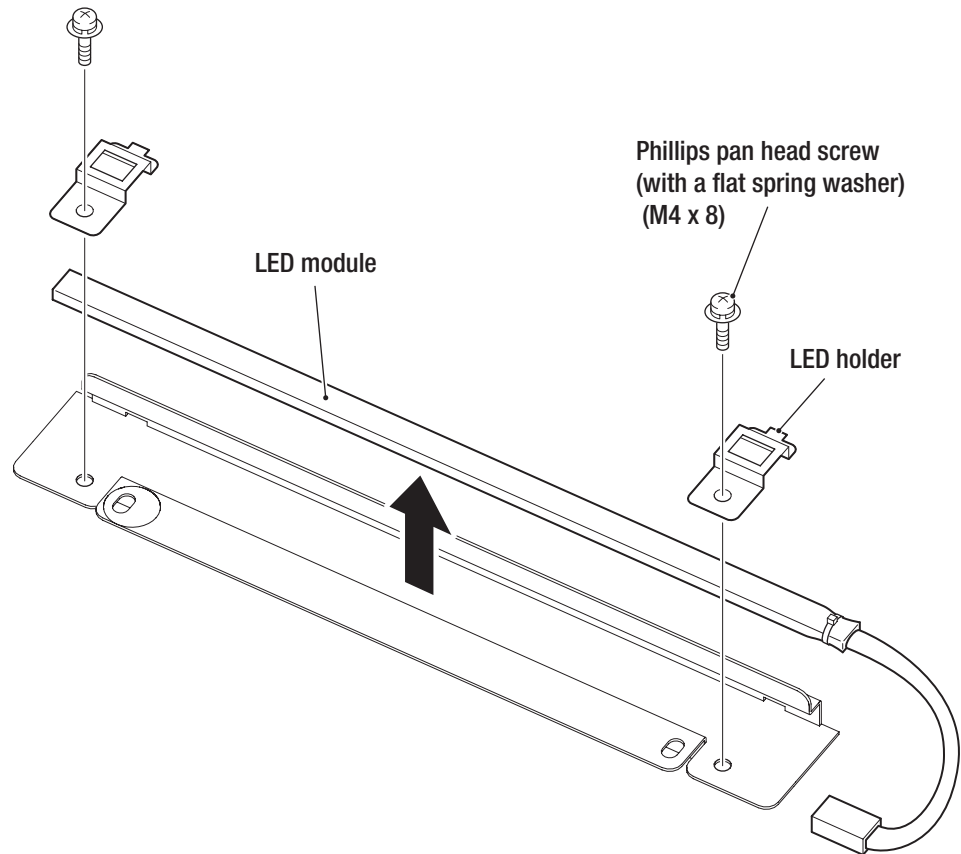
Troubleshooting

– Must be performed by a technician –

- 4** Remove the two countersunk washer nuts (M5), and the LED bracket W.



- 5** Removal of one Phillips pan head screw (with flat and spring washer) (M4 x 8) will enable the LED holder to be removed. Remove two LED holders and replace the LED module.



(4) Replacing the LED Module for the Console Box

This section describes procedures for replacing the LED module inside the console panel at the center of the rear cover.

! WARNING

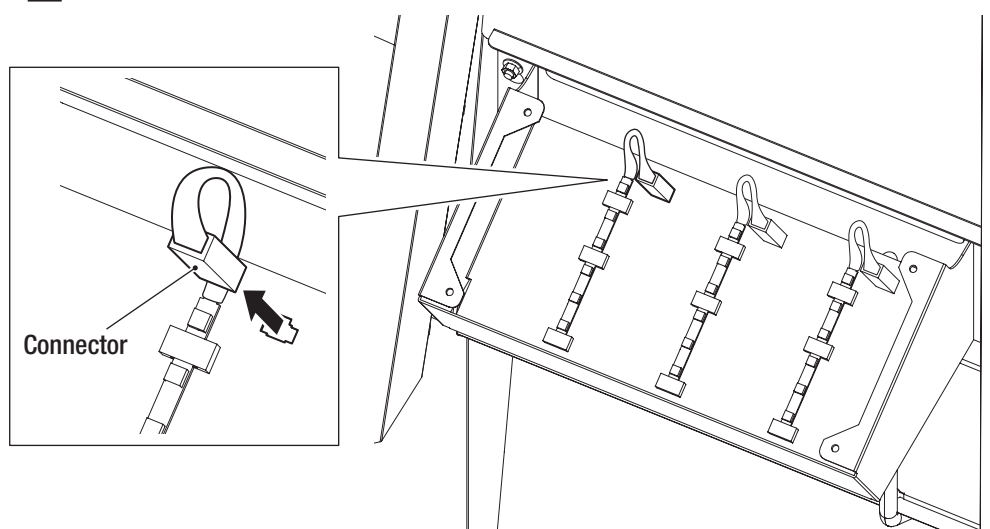
- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

NOTICE

- PC boards are vulnerable to static electricity. If a person handles a PC board while charged with static electricity, the parts on the PC board may be damaged.

Before handling a PC board, discharge the static electricity from your body. (Example: touching the surface of grounded metal.)

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the console panel and rear cover. (See P-70 "8A-3-6 Installing the Rear Cover".)
- 3** Disconnect the connector of the LED module.



1

2

3

4

5

6

7

8A

8B

9

10

11

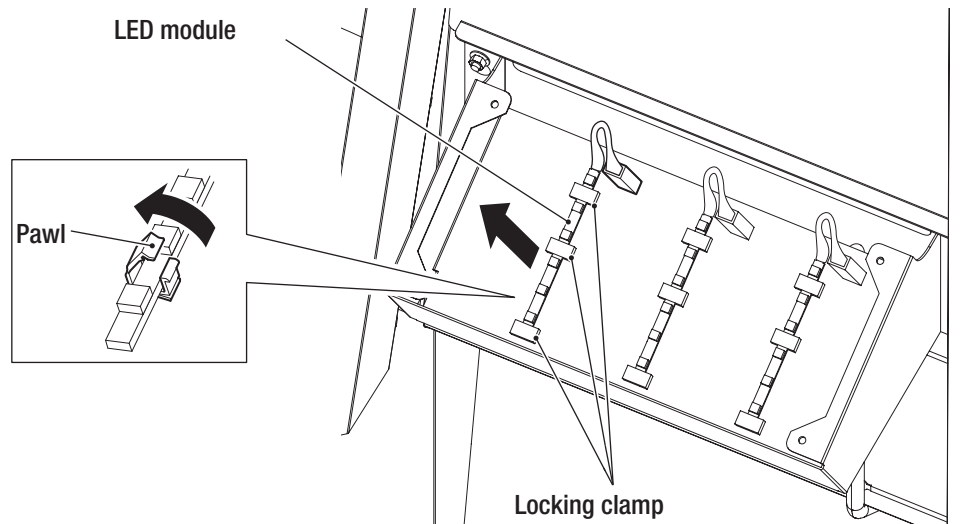
Service

Test Mode

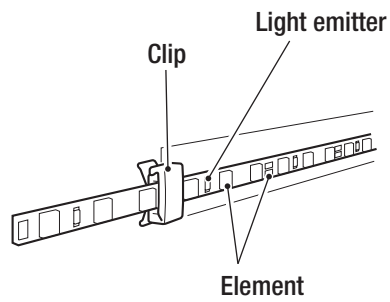
Troubleshooting

– Must be performed by a technician –

- 4 Release the three locking clamps and replace the LED module.



- When securing the LED module with the locking clamps, be sure not to allow the light emitters or elements to get caught.



(5) Replacing the LED Modules for the Title Logo Display

This section describes procedures for replacing the LED modules for the title logo display on the top cover. The machine uses one 500-mm LED module and three 600-mm LED modules.

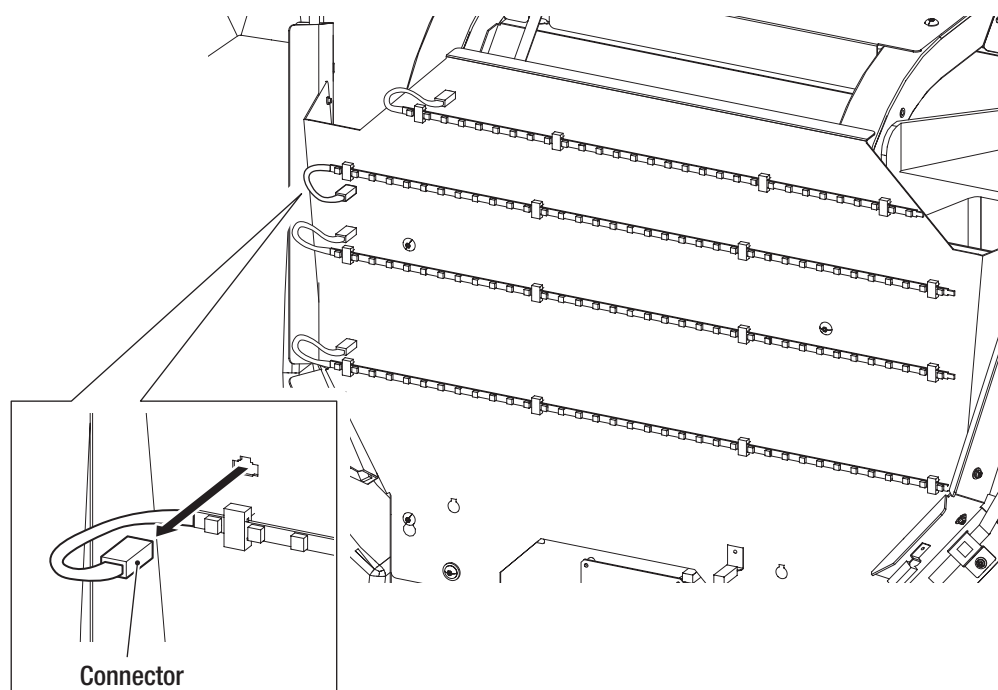
! CAUTION

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.
- Replacement of the LED module for the title logo display involves standing at an elevated height. Prepare an appropriate stepladder or footstool and have two or more people perform the work. Working in an unnatural body posture may result in injury or machine damage.

NOTICE

- PC boards are vulnerable to static electricity. If a person handles a PC board while charged with static electricity, the parts on the PC board may be damaged.
Before handling a PC board, discharge the static electricity from your body. (Example: touching the surface of grounded metal.)

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the console panel and rear cover. (See P-70 "8A-3-6 Installing the Rear Cover".)
- 3** Remove the top cover. (See P-61 "8A-1-1 Removing the Top Cover".)
- 4** Disconnect the connector of the LED module.



1

2

3

4

5

6

7

8A

8B

9

10

11

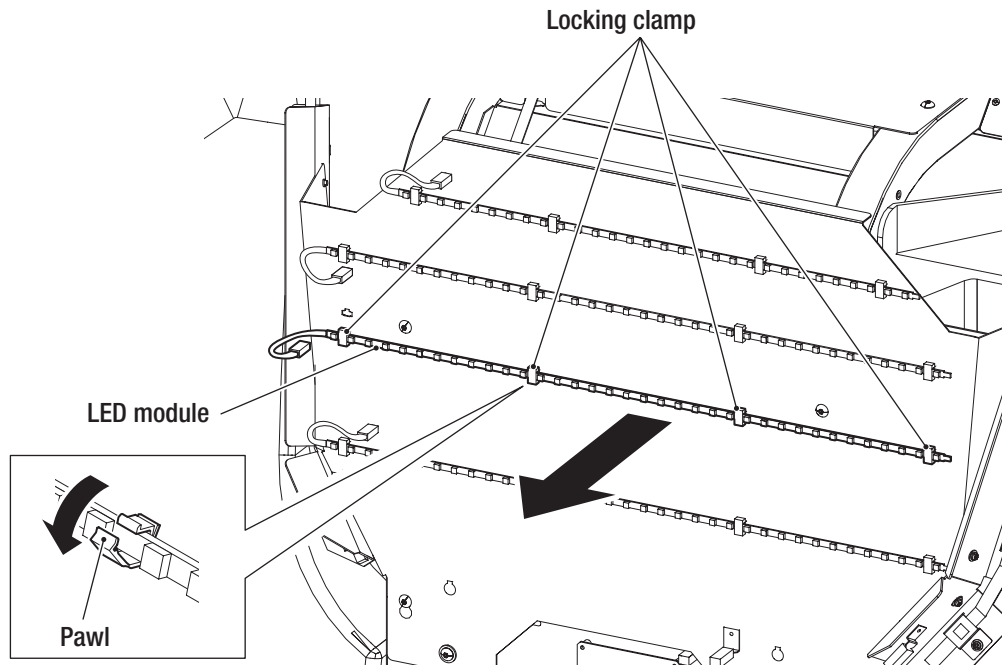
Service

Test Mode

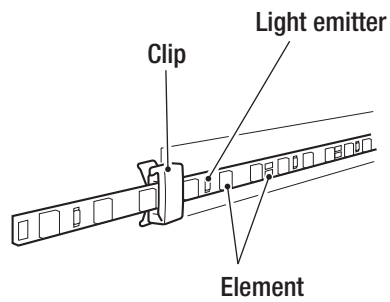
Troubleshooting

– Must be performed by a technician –

- 5 Release the four locking clamps and replace the LED module.



- When securing the LED module with the clips, be sure not to allow the light emitters or elements to get caught.



(6) Replacing the Side LED Module of the Top Cover

This section describes procedures for replacing each side LED module located on both sides of the top cover.

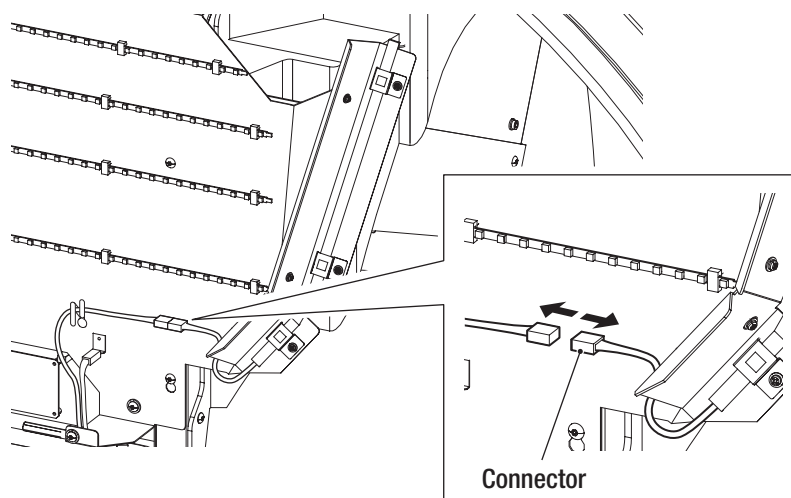
! WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.
- Replacement of the side LED module of the top cover involves standing at an elevated height. Prepare an appropriate stepladder or footstool and have two or more people perform the work. Working in an unnatural body posture may result in injury or machine damage.

**NOTICE**

- PC boards are vulnerable to static electricity. If a person handles a PC board while charged with static electricity, the parts on the PC board may be damaged.
Before handling a PC board, discharge the static electricity from your body. (Example: touching the surface of grounded metal.)

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the console panel and rear cover. (See P-70 "8A-3-6 Installing the Rear Cover".)
- 3** Remove the top cover. (See P-61 "8A-1-1 Removing the Top Cover".)
- 4** Disconnect the connector of the LED module.



1

2

3

4

5

6

7

8A

8B

9

10

11

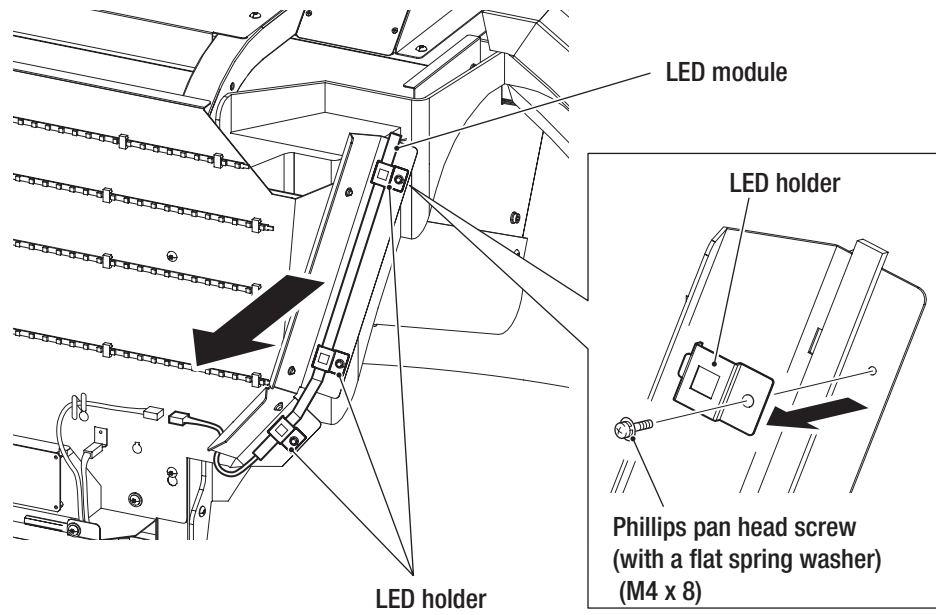
Service

Test Mode

Troubleshooting

– Must be performed by a technician –

- 5 Removal of one Phillips pan head screw (with flat and spring washer) (M4 x 8) will enable the LED holder to be removed. Remove all three LED holders and the LED module in the same way.



(7) Replacing the Regulator for the LED

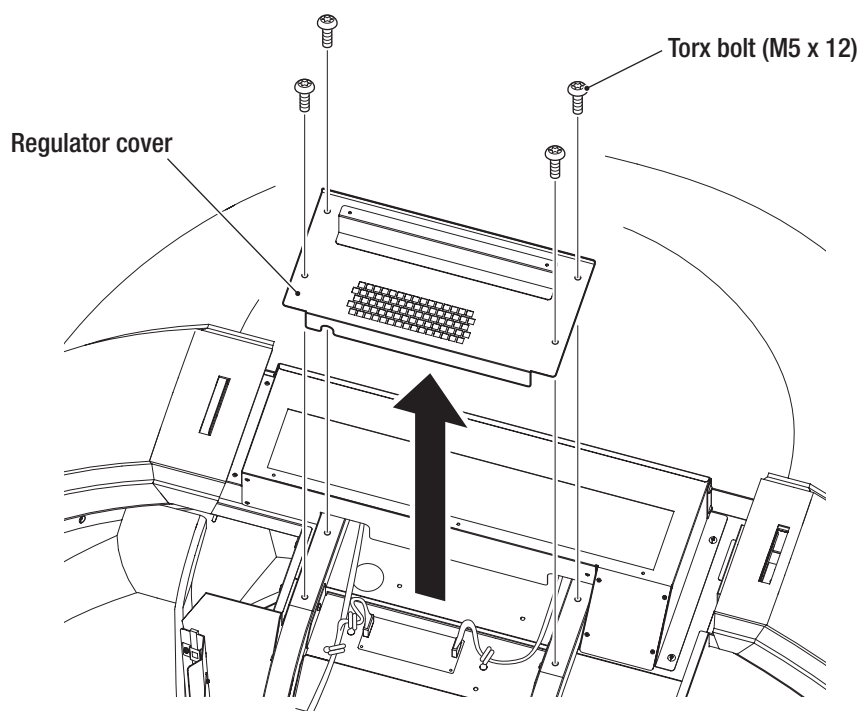
WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.
- Replacement of the side LED regulator involves standing at an elevated height. Prepare an appropriate stepladder or footstool and have two or more people perform the work. Working in an unnatural body posture may result in injury or machine damage.

NOTICE

- PC boards are vulnerable to static electricity. If a person handles a PC board while charged with static electricity, the parts on the PC board may be damaged. Before handling a PC board, discharge the static electricity from your body. (Example: touching the surface of grounded metal.)

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the console panel and rear cover. (See P-70 "8A-3-6 Installing the Rear Cover".)
- 3** Remove the top cover. (See P-61 "8A-1-1 Removing the Top Cover".)
- 4** Remove the four Torx bolts (M5 x 12) and remove the regulator cover.



1

2

3

4

5

6

7

8A

8B

9

10

11

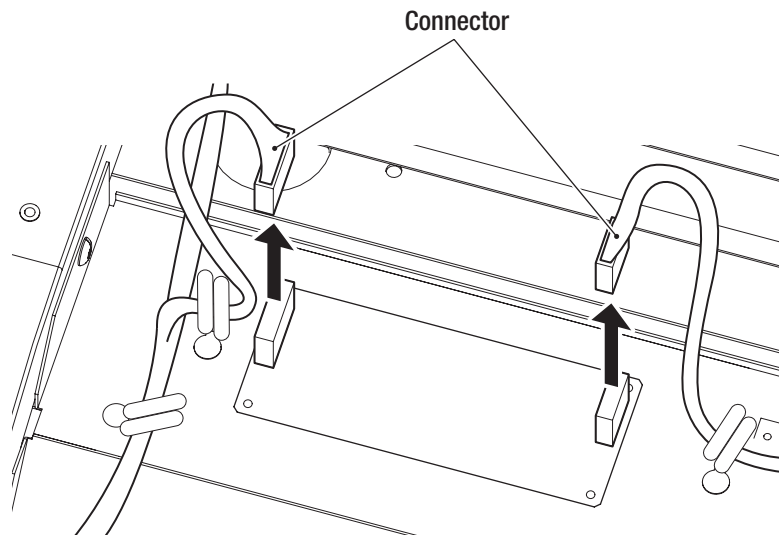
Service

Test Mode

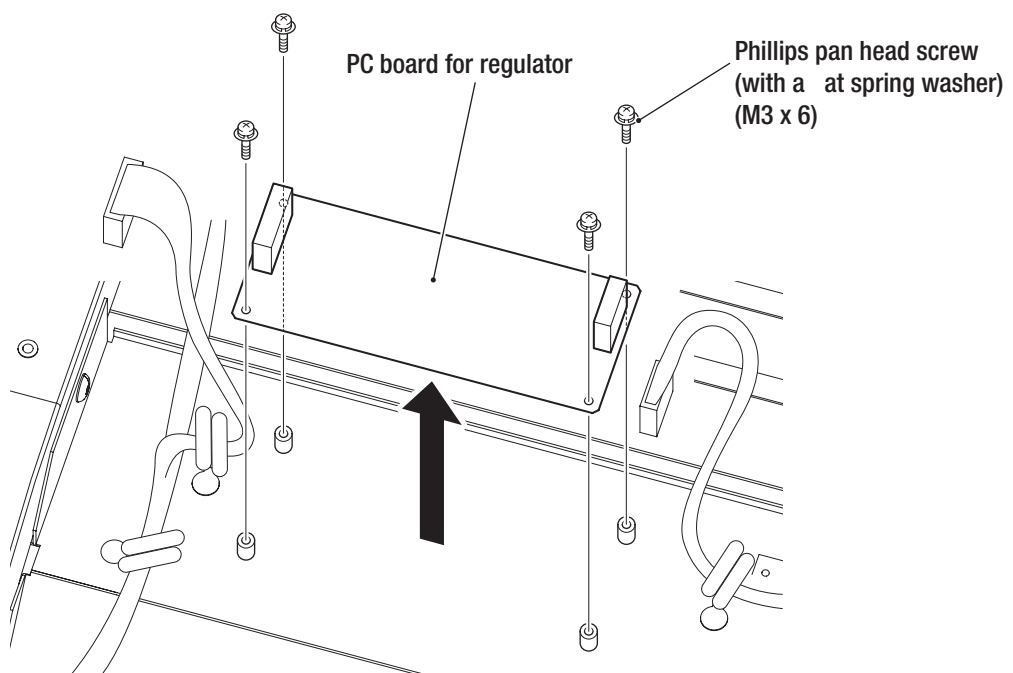
Troubleshooting

– Must be performed by a technician –

- 5** Disconnect the two connectors.



- 6** Remove the four Phillips pan head screws (with flat and spring washers) (M3 x 6), replace the regulator with a new one, and install the new one by following the removal procedure in reverse.



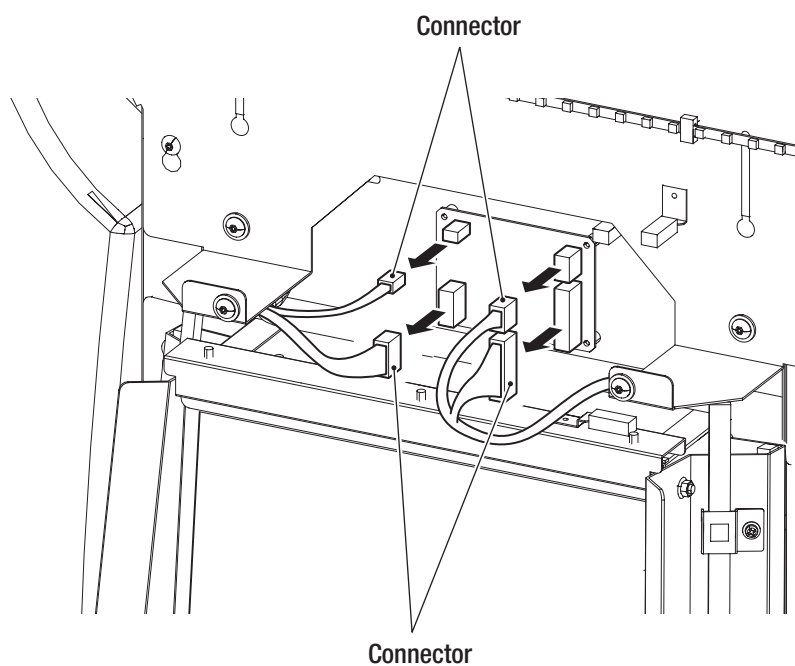
(8) Replacing the LED Filter PC Board**! WARNING**

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.
- Replacement of the LED filter PC board involves standing at an elevated height. Prepare an appropriate stepladder or footstool and have two or more people perform the work. Working in an unnatural body posture may result in injury or machine damage.

NOTICE

- PC boards are vulnerable to static electricity. If a person handles a PC board while charged with static electricity, the parts on the PC board may be damaged.
Before handling a PC board, discharge the static electricity from your body. (Example: touching the surface of grounded metal.)

- 1** Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2** Remove the console panel and rear cover. (See P-70 "8A-3-6 Installing the Rear Cover".)
- 3** Remove the top cover. (See P-61 "8A-1-1 Removing the Top Cover".)
- 4** Disconnect the four connectors.



1

2

3

4

5

6

7

8A

8B

9

10

11

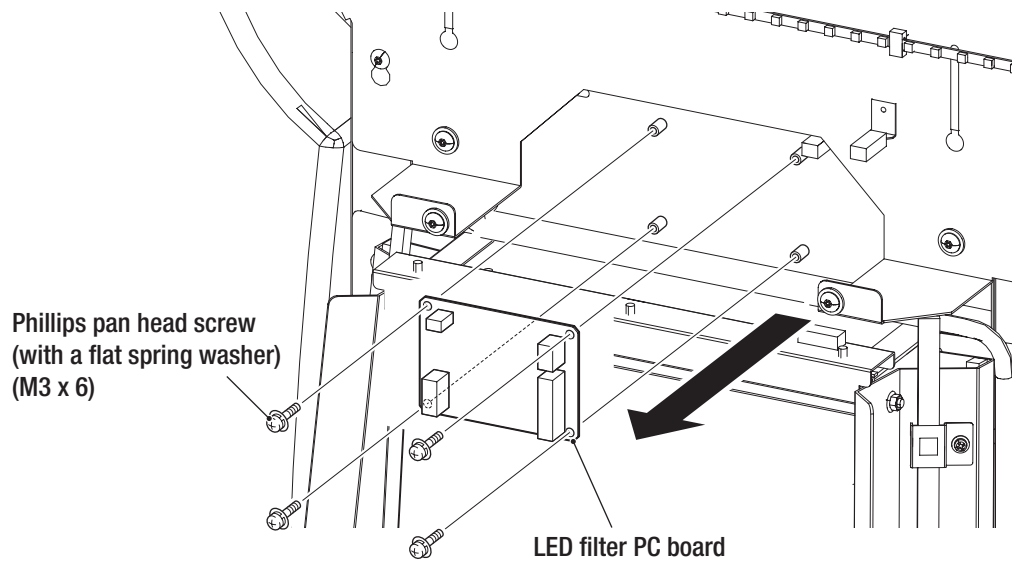
Service

Test Mode

Troubleshooting

– Must be performed by a technician –

- 5 Remove the four Phillips pan head screws (with flat and spring washers) (M3 x 6), and replace the LED filter PC board with a new one.



- 6 To install, perform the procedure in reverse.



- When installing, check the connector orientations, connect the connectors firmly to each other, and lock them securely.
- When installing, take care not to allow the connectors and harnesses to get caught.

(9) Replacing the LED Module for the POP Display

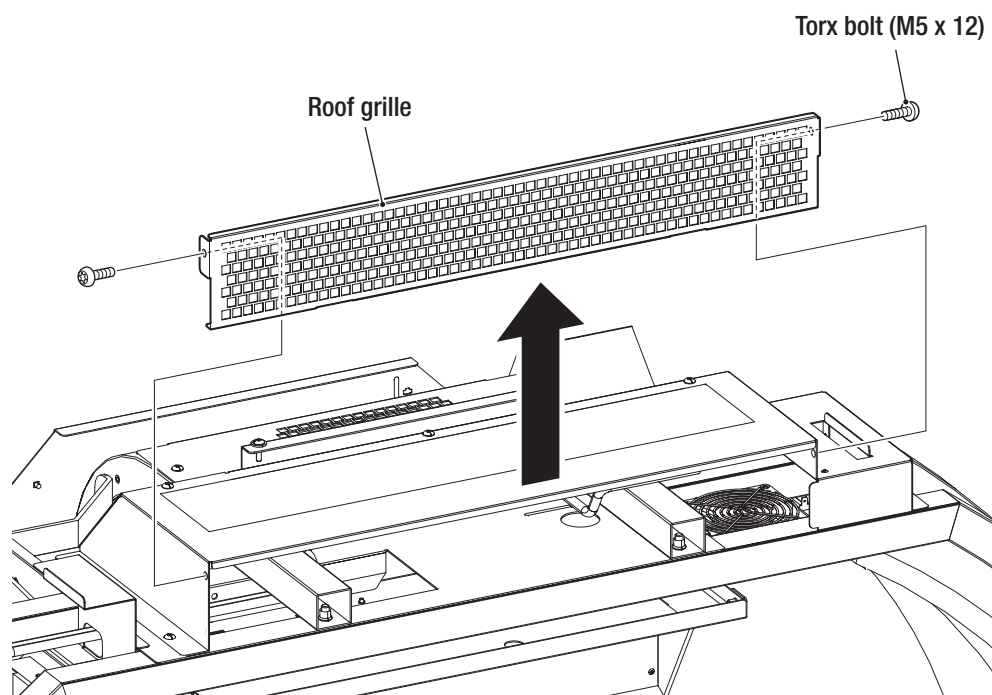
WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.
- Replacement of the LED module for the POP display involves standing at an elevated height. Prepare an appropriate stepladder or footstool and have two or more people perform the work. Working in an unnatural body posture may result in injury or machine damage.

NOTICE

- PC boards are vulnerable to static electricity. If a person handles a PC board while charged with static electricity, the parts on the PC board may be damaged. Before handling a PC board, discharge the static electricity from your body. (Example: touching the surface of grounded metal.)

- 1 Turn off the main power switch. (See P-30 "7-5-1 Turning the Power Switch On".)
- 2 Remove the POP display. (See P-79 "8A-3-9 Installing the POP".)
- 3 Separate the front assembly from the rear assembly, and then remove the POP bracket. (See P-64 "8A-3-2 Connecting the Front Assembly and Rear Assembly".)
- 4 Remove the two Torx bolts (M5 x 12) and remove the roof grille.



1

2

3

4

5

6

7

8A

8B

9

10

11

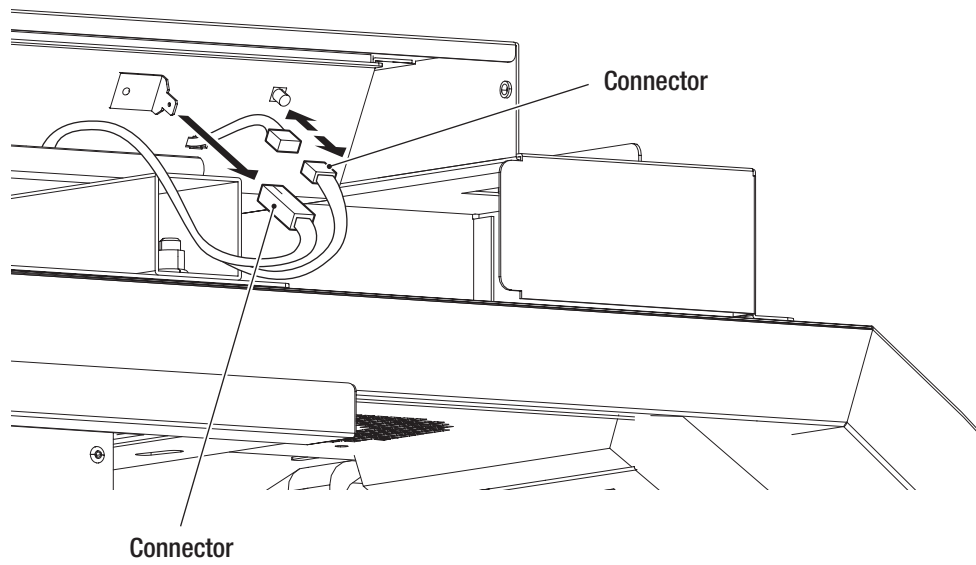
Service

Test Mode

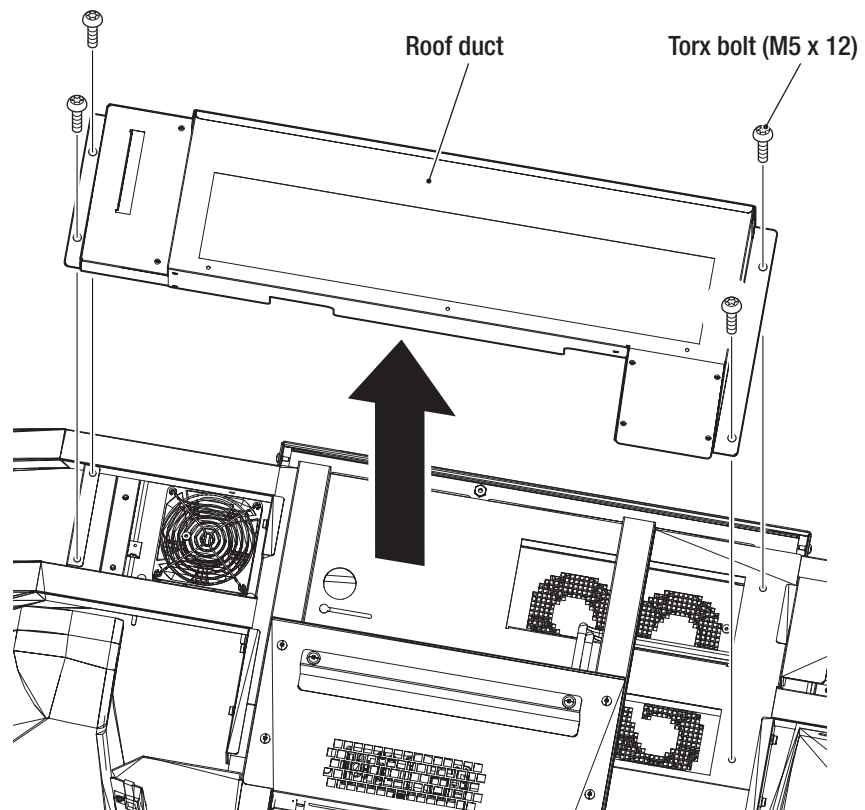
Troubleshooting

– Must be performed by a technician –

- 5** Disconnect the two connectors.

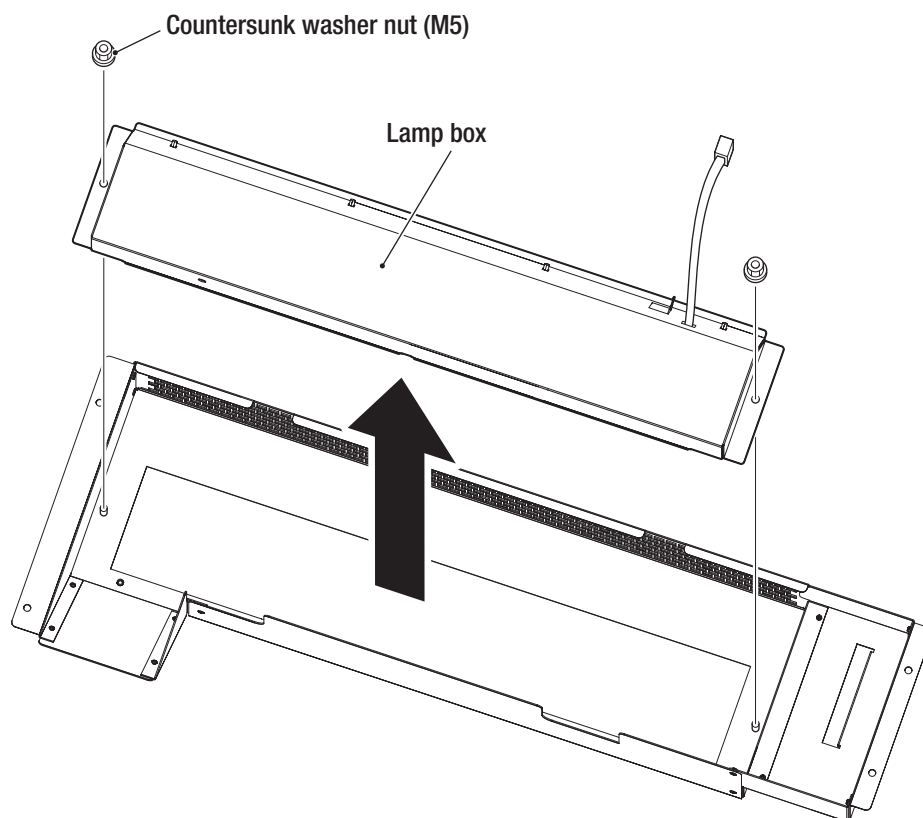


- 6** Remove the four Torx bolts (M5 x 12) and remove the roof duct.

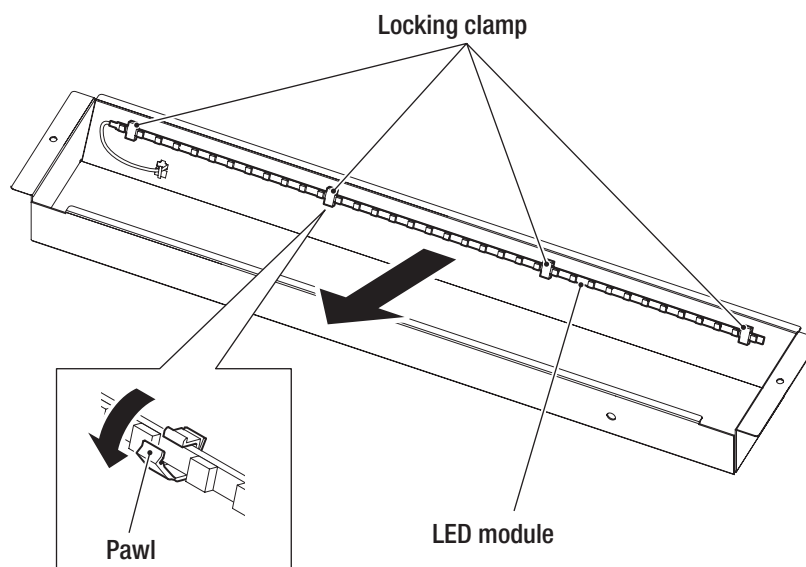


- Must be performed by a technician -

- 7** Remove the two countersunk washer nuts (M5), then remove the lamp box.



- 8** Release the four locking clamps and replace the LED module.



- 9** To assemble, perform the procedure in reverse.

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

– Must be performed by a technician –

8B-6 Replacing and Adjusting the Projector Unit

WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.
- Do not look into the lens while the projector unit is lit. The strong light emitted through the lens may cause vision impairment or other problems.
- Be sure to use the dedicated lamp unit for this machine when replacing the lamp unit. Using a lamp other than a dedicated lamp may result in malfunction, damage or injury. Also, do not reuse an old lamp unit because it may break.
- If operation is continued while accumulated dust remains inside the projector, a fire or malfunction may result. Be sure to clean the inside of the projector roughly once a year.
The best time to clean is before highly humid weather sets in. For information about internal cleaning and related costs, contact your distributor.

NOTICE

- To order a dedicated lamp, contact your distributor.
- Use a dedicated projector packing box when shipping the projector unit.

8B-6-1 Removing and Installing Each Part

(1) Replacing the Projector Unit

WARNING

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1** Turn off the main power switch. (See P-88 "8A-8 Turning the Power Switch On".)
- 2** Referring to P-75 "8A-3-8 Installing the Projector Unit", remove the projector unit by following the installation procedure in reverse.
- 3** To install, perform the procedure in reverse.
- 4** After installation, adjust the projector position. (See P-179 "8B-6-2 Adjusting the Projector Position".)

(2) Replacing the Projector Lamp (Lamp Unit) **WARNING**

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.
- Be sure to turn off the main power switch and wait one or more hours to allow the lamp unit to cool down sufficiently before replacing the lamp unit. The lamp unit will be very hot immediately after the main power switch is turned off, and may cause burns if touched.
- Never insert metal objects, flammable foreign objects, hands or other objects into the lamp unit enclosure after removing the lamp unit. Doing so may result in fire or electric shock.
- Be careful not to drop the lamp unit fixing screws inside the machine. Also, do not allow pieces of metal or flammable matter to enter the inside of the machine. Operating while foreign matter is inside the machine may result in electric shock or fire.
- Install the replacement lamp unit securely. Improper installation may result in dim images or fire.
- **Never use anything other than a new dedicated lamp unit for this machine.** Also, do not reuse an old lamp unit. Doing so may result in malfunction, damage or injury. To order a lamp unit, contact your distributor.
- Do not place the removed lamp unit on or near flammable matter. Doing so may result in fire.
- Do not leave the removed lamp unit where other people may touch it. Otherwise, they may be burned or injured by glass shards if the lamp unit is dropped or damaged.
- The lamp unit of this machine uses a tiny amount of mercury, which is an environmentally hazardous substance. Handle the used lamp unit carefully to avoid damaging it, and dispose of it properly as hazardous waste such as fluorescent lights. In addition, follow any applicable local municipal regulations or other ordinances when disposing of the lamp unit.
- If the lamp unit is damaged, a tiny amount of white gas (mercury) may be discharged. If you breathe this gas in or if it gets into your eyes or mouth, consult a doctor immediately.

 **CAUTION**

- If the lamp bursts, be sure to contact your distributor regarding cleaning the interior of the projector, replacing the lamp unit, or other repairs.
- Depending on the lamp unit damage status, glass shards may have scattered inside the projector unit. Glass shards may drop off the projector unit, especially when it is removed from the machine. Therefore, take extra care when handling the projector unit. Should any glass shards fall onto the floor or seat, carefully and completely remove the glass shards using a vacuum cleaner or similar device.
- Do not remove any screws besides those that are necessary when replacing the lamp unit. Doing so may result in machine damage or malfunction.

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

– Must be performed by a technician –

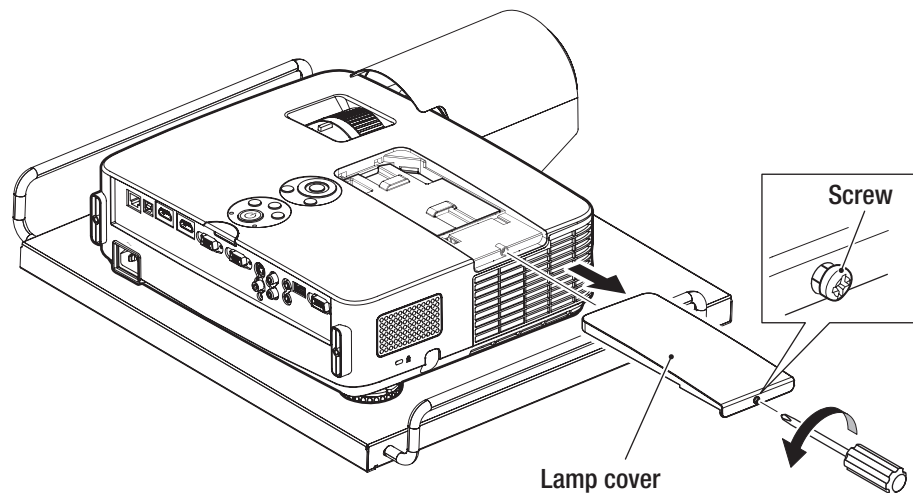


- Confirm the projector unit model and be sure to use a compatible lamp unit that is specified by BANDAI NAMCO Games Inc. Using other than the specified lamp unit may result in a projector malfunction. In addition, when requesting repair, be sure to indicate the projector unit model.

Projector unit	Lamp unit
NP-PE401H (V1)	Part number; 307-923

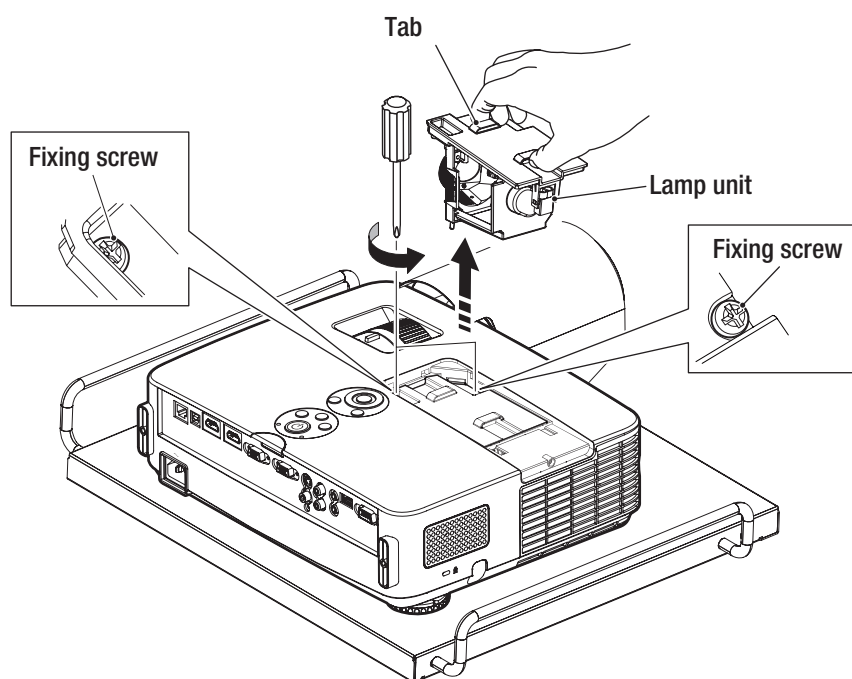
- Install the lamp cover correctly so that there are no gaps. Failure to install the cover correctly may result in malfunction such as the power not turning on or the lamp unit not lighting up.
- Be sure to use a new lamp unit when replacing the lamp unit.
- To request repairs or to order parts, contact your distributor.
- The lamp is made of glass, so be careful not to touch it with bare hands, subject it to strong impact, or scratch it. (Dirt, impact or scratches may cause the glass to break.)
- When replacing the lamp unit, be sure to remove the projector unit from the machine and place the unit on a flat work surface.

- 1** Turn off the main power switch. (See P-88 "8A-8 Turning the Power Switch On".)
- 2** Secure an area next to the machine cabinet on which to place the removed projector unit. Spread out a vinyl sheet or otherwise prepare a flat and sufficiently wide space (approx. 1 m square).
- 3** Remove the projector unit and place it in the area prepared in step 2. (See P-75 "8A-3-8 Installing the Projector Unit".)
- 4** Loosen the screw and slide the lamp cover to remove it.



– Must be performed by a technician –

- 5** Loosen the two lamp unit fixing screws sufficiently, pinch the tabs of the lamp unit with your fingers, and slowly pull up the lamp unit vertically to remove it.



- Do not loosen any screws other than the lamp unit fixing screws.

WARNING

- Gently remove the lamp unit from the projector unit.
- Do not expose the removed lamp unit to water or other substances, or place it near flammable objects or where other people may touch it. Doing so may result in burns or injury.

1

2

3

4

5

6

7

8A

8B

9

10

11

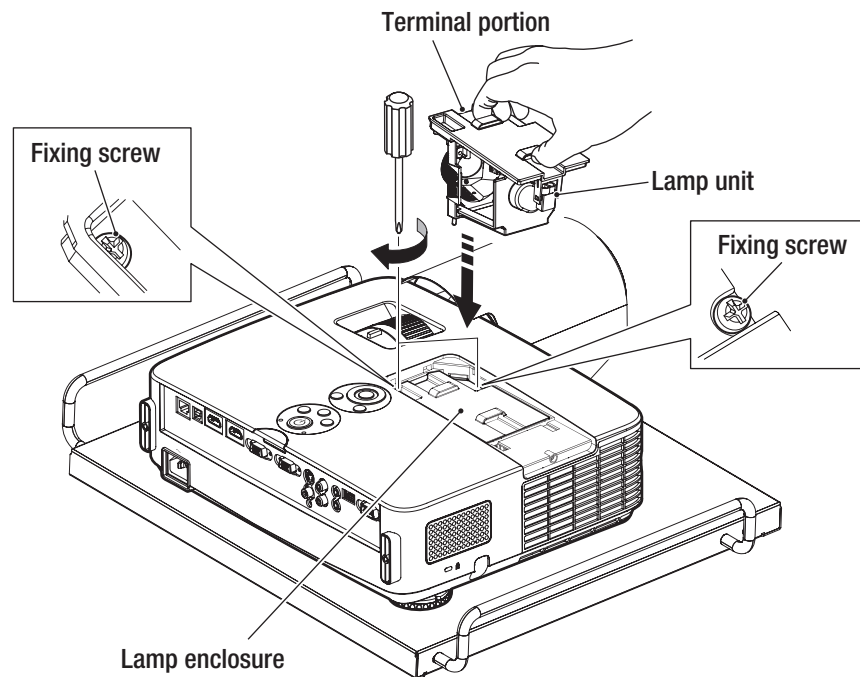
Service

Test Mode

Troubleshooting

– Must be performed by a technician –

- 6** Hold a new lamp unit facing the direction as shown in the figure, fit the unit into the lamp enclosure while pressing it in the direction of the arrow, insert the terminals firmly, and secure it using the two fixing screws.



- 7** Install the lamp cover as before using the screws by following the procedures described in steps **3** and **4** in reverse.



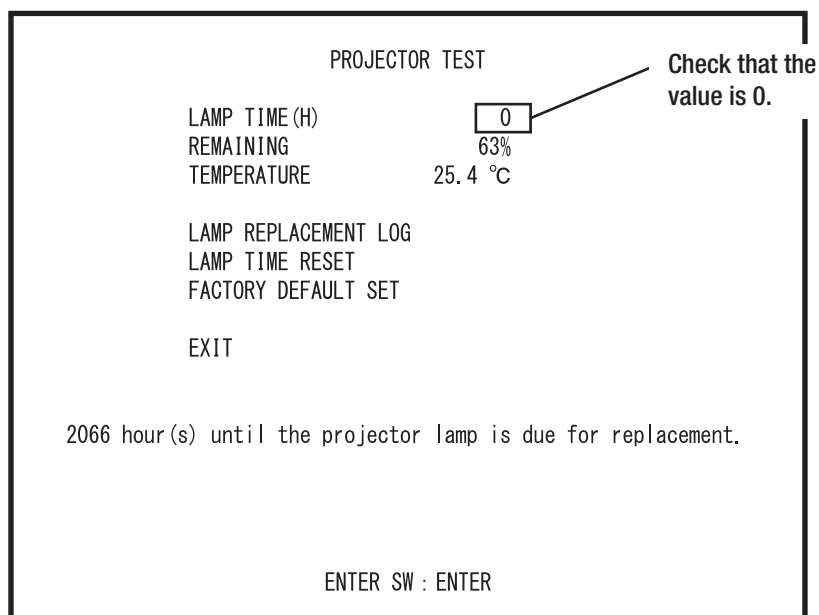
- If the lamp cover is not installed correctly, the power will not turn on. Be sure to install the lamp cover securely.

- 8** Install the projector unit by following the removal procedure in reverse. (See P-75 "8A-3-8 Installing the Projector Unit".)

- 9** Turn on the main power switch and enter Test mode.
If the projector is not powered on and remains in a standby state, point the remote controller at the projector and keep pressing the HELP button for 10 seconds or more. The power will turn on temporarily. After ensuring that the projector unit lamp (which was lighting up red) has gone out, press the power button on the control panel of the projector unit or the power (ON) button on the remote controller to turn the projector on.

- Must be performed by a technician -

- 10** Select PROJECTOR TEST on the I/O TEST screen, and execute LAMP TIME RESET.
Check that the value for **LAMP TIME(H)** is 0.



PROJECTOR TEST screen

- 11** Set the Test switch to OFF to exit Test mode.

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

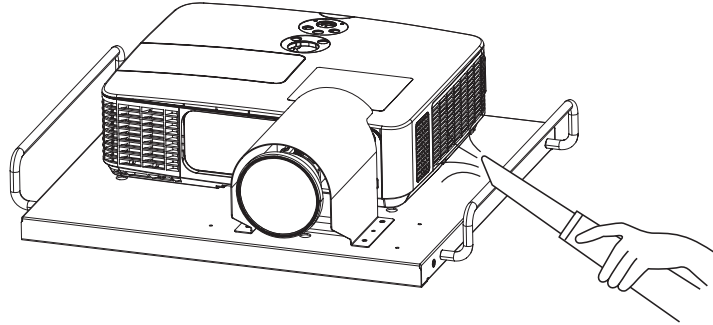
Test Mode

Troubleshooting

(3) Cleaning the Filter of the Projector Unit

If the filter becomes dusty, the air flow rate will be reduced and the internal temperature will rise. This leads to malfunctions. For this reason, be sure to clean the filter frequently.

- 1** Turn off the main power switch. (See P-88 "8A-8 Turning the Power Switch On".)
- 2** Referring to P-75 "8A-3-8 Installing the Projector Unit", remove the projector unit by following the installation procedure in reverse.
- 3** Use a vacuum cleaner to clean the filter from outside the air inlet. (The filter does not need to be removed.)

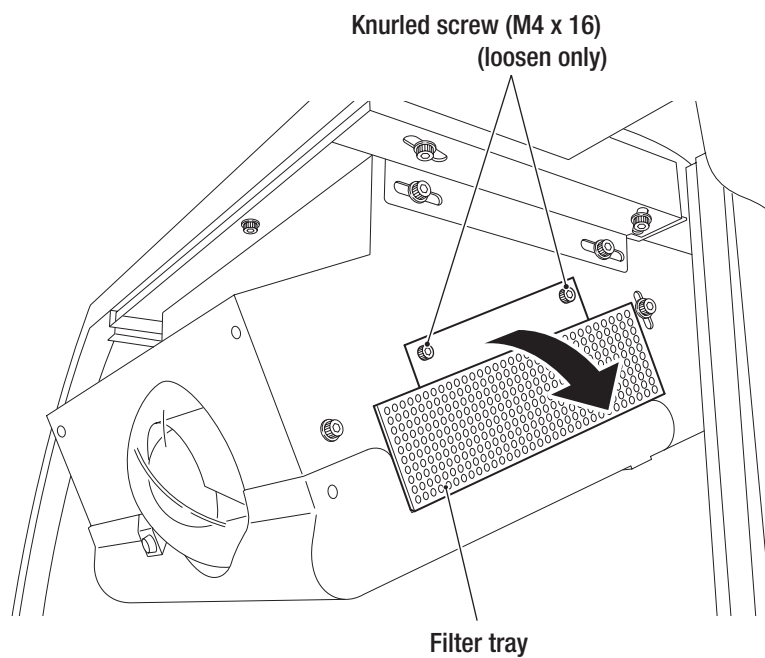


- 4** After cleaning the filter, install the projector unit by following the removal procedure in reverse. (See P-75 "8A-3-8 Installing the Projector Unit".)

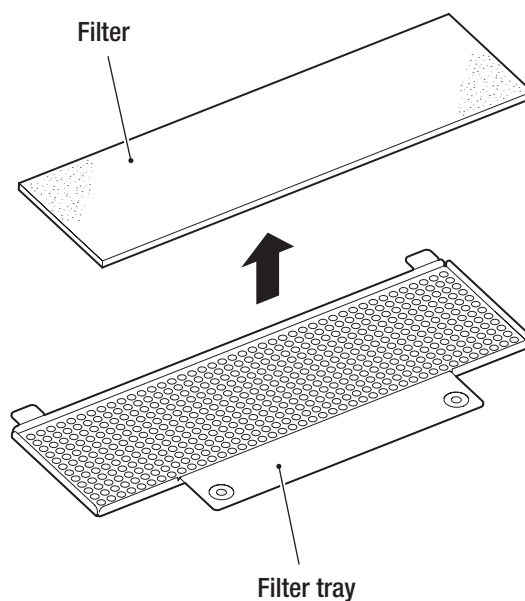
(4) Replacing the Filter of the Projector Cover**! WARNING**

- In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1** Turn off the main power switch. (See P-88 "8A-8 Turning the Power Switch On".)
- 2** Loosen the two knurled screws (M4 x 16) and remove the filter tray from the projector unit.



- 3** Remove the filter from the filter tray and replace it.



- 4** To install, perform the procedure in reverse.

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

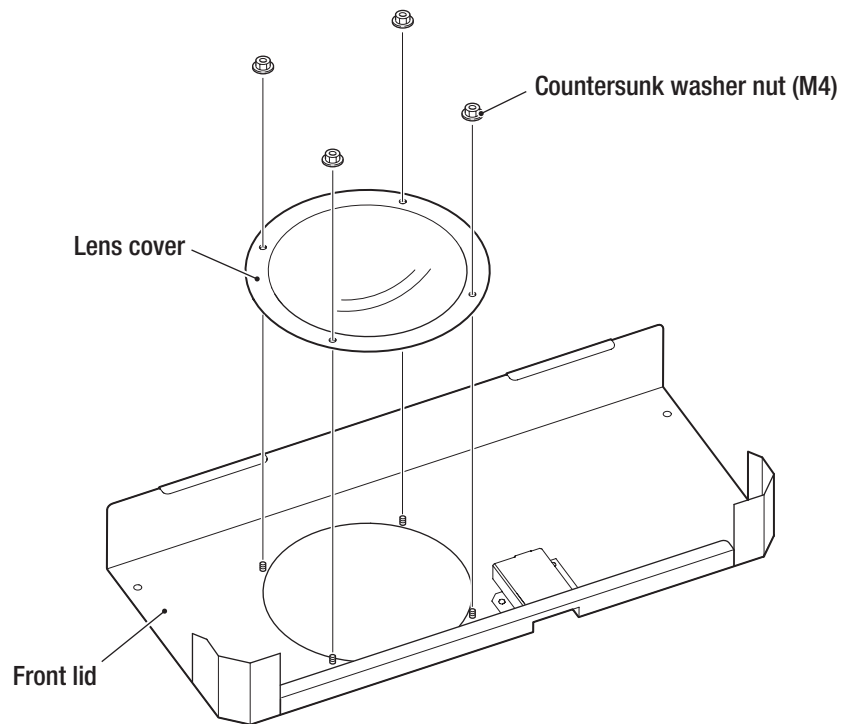
– Must be performed by a technician –

(5) Replacing the Lens Cover

WARNING

● In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1** Turn off the main power switch. (See P-88 "8A-8 Turning the Power Switch On".)
- 2** Open the projector cover and remove the front lid. (See P-75 "8A-3-8 Installing the Projector Unit".)
- 3** Remove the four countersunk washer nuts (M4), then remove and replace the lens cover.



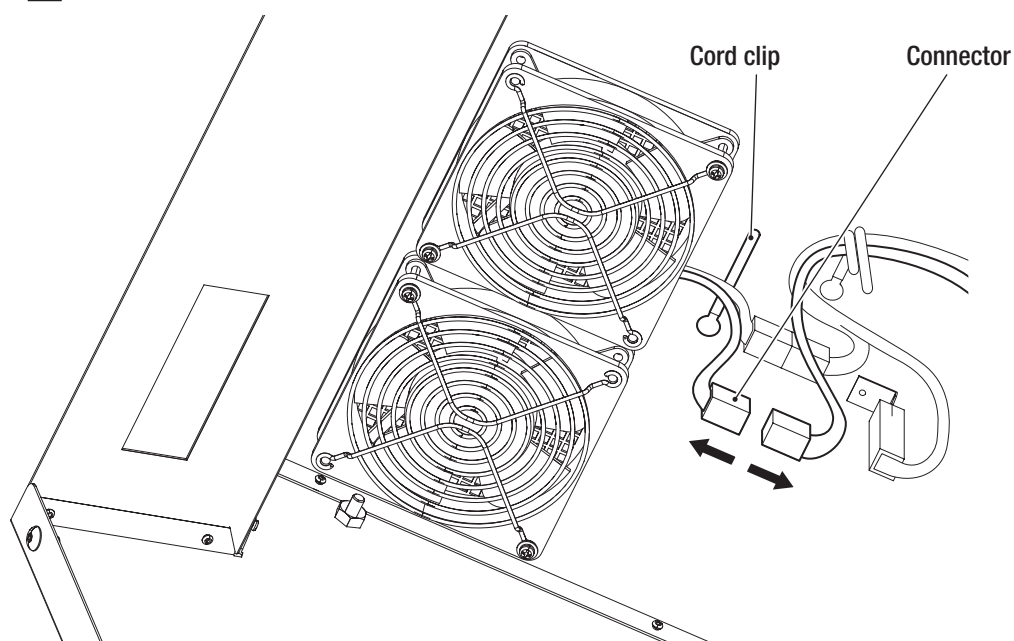
- 4** To install, perform the procedure in reverse.

(6) Replacing the Fan

! WARNING

● In order to avoid electric shock, accident or injury to yourself or others as well as damage to the electronic circuits, be sure to turn off the main power switch before starting this task.

- 1** Turn off the main power switch. (See P-88 "8A-8 Turning the Power Switch On".)
- 2** Remove the projector unit. (See P-75 "8A-3-8 Installing the Projector Unit".)
- 3** Release the cord clip and disconnect the connector for the fan that is to be replaced.



1

2

3

4

5

6

7

8A

8B

9

10

11

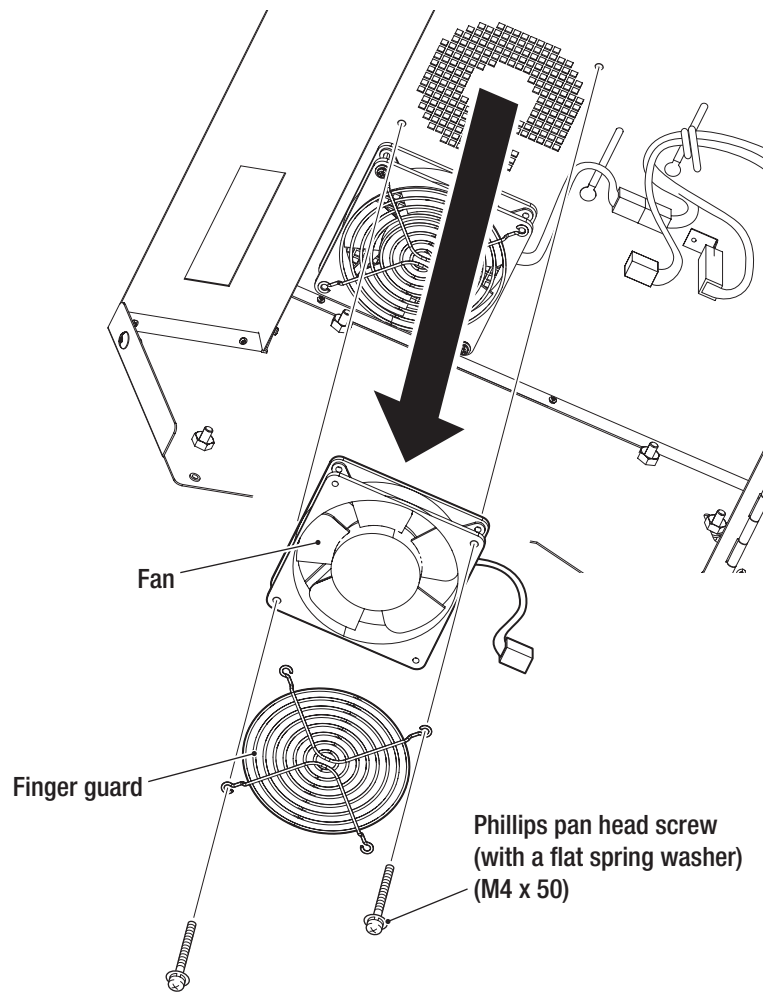
Service

Test Mode

Troubleshooting

– Must be performed by a technician –

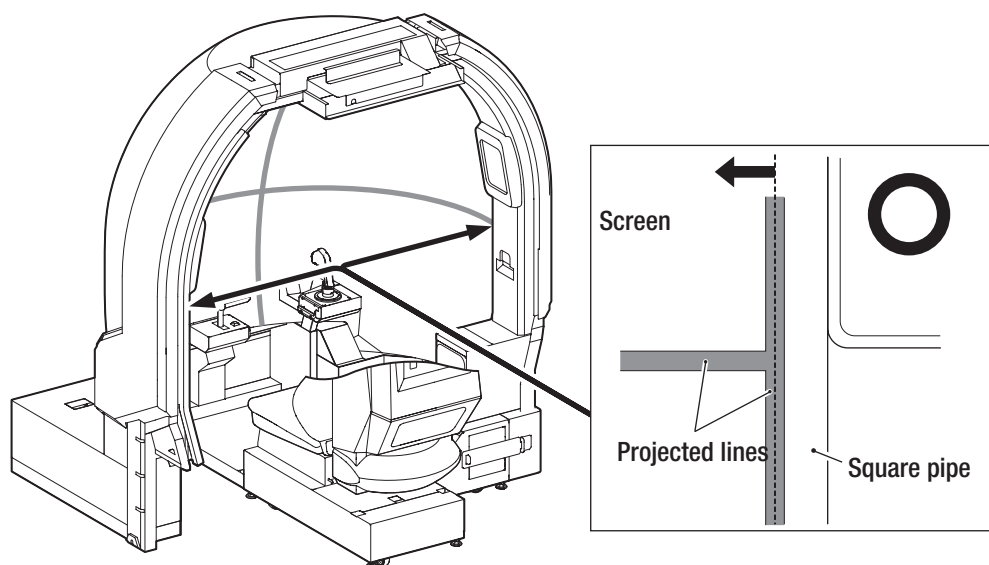
- 4 Remove the two Phillips pan head screws (with flat and spring washers) (M4 x 50), and remove the fan and finger guard.



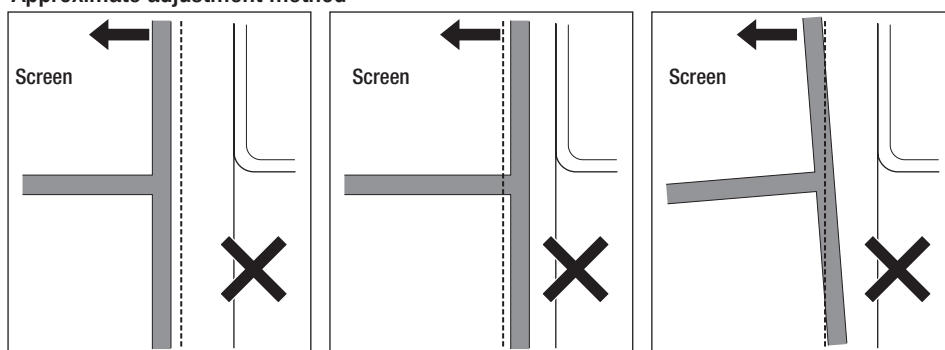
- 5 Install the fan unit so that air can flow upwards.
- 6 To install, perform the procedure in reverse.

8B-6-2 Adjusting the Projector Position

- 1** Turn on the main power switch. (See P-88 "8A-8 Turning the Power Switch On".)
- 2** After the title screen appears, enter Test mode, select MONITOR TEST, and then select VIEW ANGLE AND FOCUS ADJUST PATTERN. (See P-44 "7-6-5 Screen Adjustment (MONITOR TEST)".)
- 3** Adjust the vertical and lateral positions and viewing angle of the projector as described on the following pages so that the white lines on the right and left edges of the VIEW ANGLE ADJUST PATTERN display screen are located at the edges of the dome screen as shown in the figure below.



Approximate adjustment method



1

2

3

4

5

6

7

8A

8B

9

10

11

Service

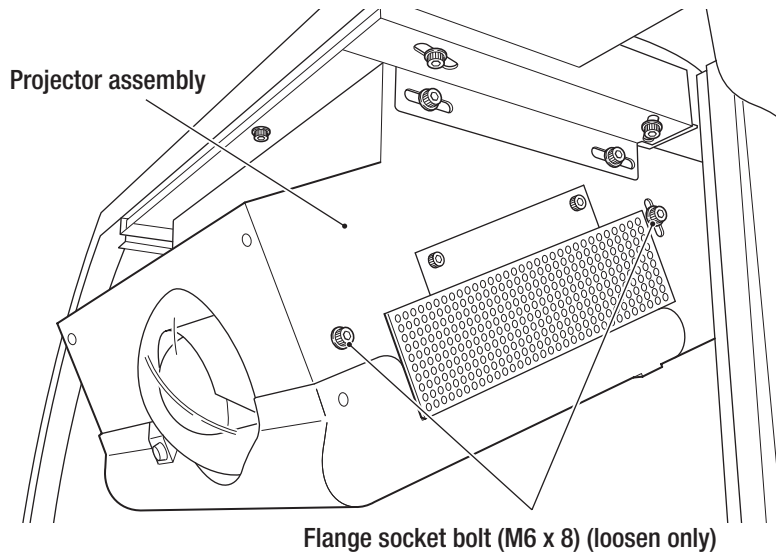
Test Mode

Troubleshooting

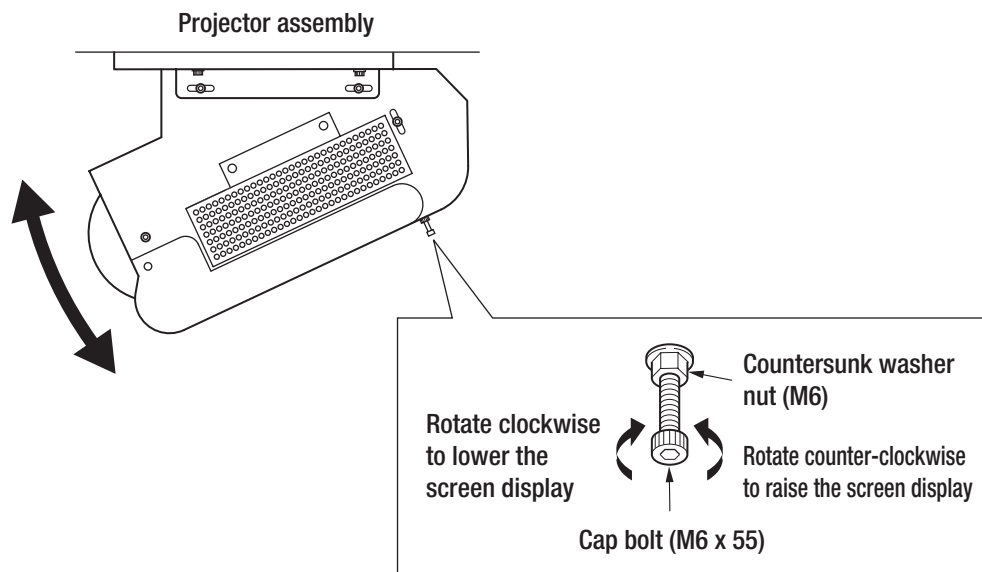
– Must be performed by a technician –

(1) Vertical Adjustment

- 1 Loosen the four flange socket bolts (M6 x 8) on the right and left sides of the projector assembly.



- 2 Loosen the countersunk washer nut (M6) and rotate the cap bolt (M6 x 55) to move the screen display up and down. Rotate clockwise to lower and counter-clockwise to raise the screen display.

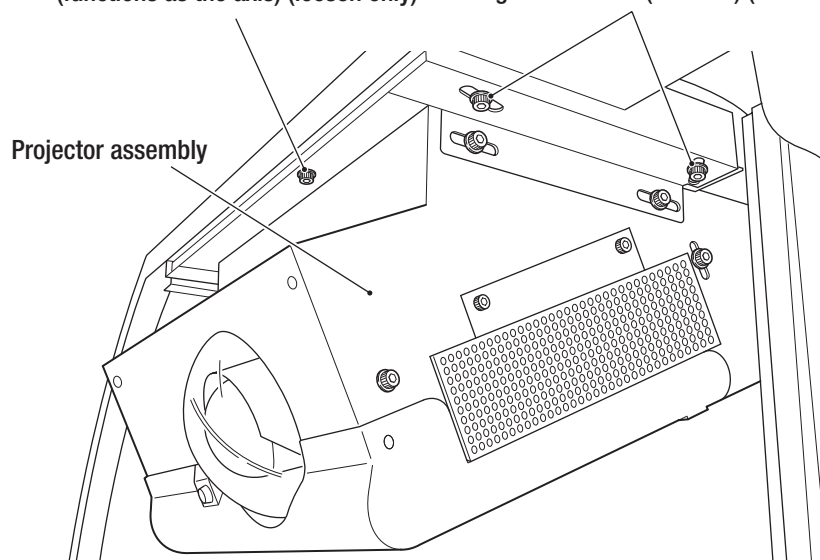


- 3 Adjust the vertical position so that the white lines on the right and left edges of the VIEW ANGLE ADJUST PATTERN display screen are approximately parallel with the edges of the dome screen.
- 4 After finishing the adjustment, tighten the loosened screws by following the screw loosening order in reverse.

(2) Lateral Adjustment

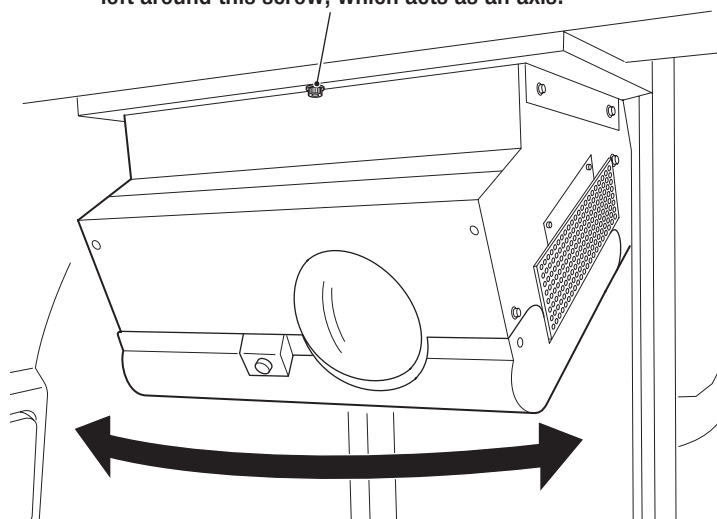
- 1** Loosen the four flange socket bolts (M6 x 12) on the right and left sides of the projector assembly and the flange socket bolt (M6 x 12) above the lens. Loosen each screw just enough so that the projector assembly can be moved.

Flange socket bolt (M6 x 12)
(functions as the axis) (loosen only) Flange socket bolt (M6 x 12) (loosen only)



- 2** Move the rear of the projector assembly to the right and left around the axis of the loosened flange socket bolt (M6 x 12) above the lens. The screen display moves to the right and left accordingly.

Flange socket bolt (M6 x 12)
* The projector assembly moves right and left around this screw, which acts as an axis.



- 3** Adjust the lateral position so that the white lines on the right and left edges of the VIEW ANGLE ADJUST PATTERN display screen are approximately the same distance from the edges of the dome screen.
- 4** After finishing the adjustment, tighten the loosened screws by following the screw loosening order in reverse.

1

2

3

4

5

6

7

8A

8B

9

10

11

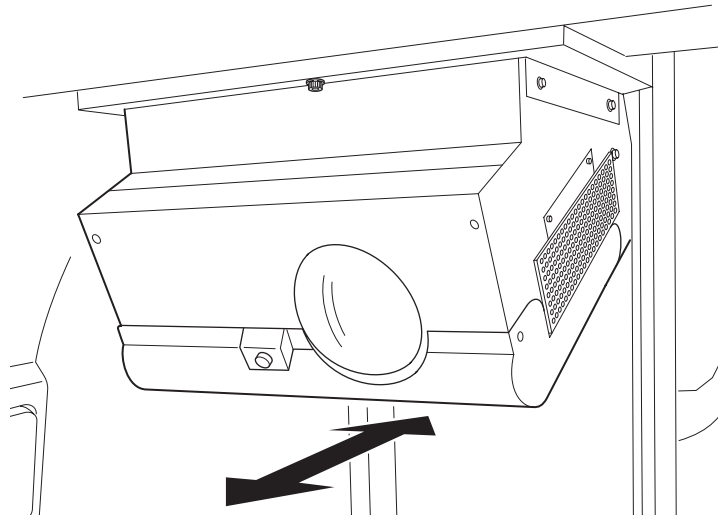
Service

Test Mode

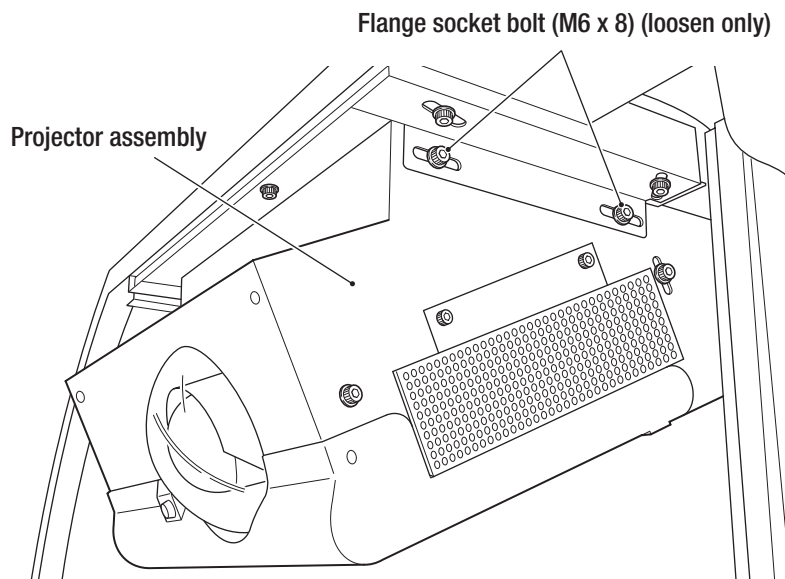
Troubleshooting

(3) Viewing Angle Adjustment

- 1** Loosen the four flange socket bolts (M6 x 8) on the right and left sides of the projector assembly.
Loosen each screw just enough so that the projector assembly can be moved.



- 2** Move the projector assembly forward and backward to move the edges of the screen display in and out.



- 3** Adjust so that the white lines on the right and left edges of the VIEW ANGLE ADJUST PATTERN display screen are within the edges of the dome screen.
- 4** After finishing the adjustment, tighten the loosened screws by following the screw loosening order in reverse.

8B-6-3 Various Projector Settings

(1) Preparing the Remote Controller

! WARNING

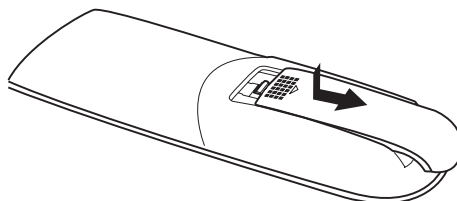
Be sure to observe the following regarding the dry cell batteries of the remote controller. Failure to do so may cause the batteries to leak fluid or burst, possibly resulting in burns or injury.

- Do not use other than the specified batteries.
- Do not mix up the polarity indications (+ and -).
- Do not charge, heat, disassemble, short circuit or place the batteries in a fire.
- Do not leave dry cell batteries that are exhausted or past the recommended use date indicated on the batteries in the remote controller.
- Do not mix different types of dry cell batteries or use new and old batteries together.
- Should battery fluid adhere to equipment, do not touch the battery fluid directly. If you happen to touch the battery fluid, rinse thoroughly with water and consult a doctor.

■ Insert the dry cell batteries into the remote controller.

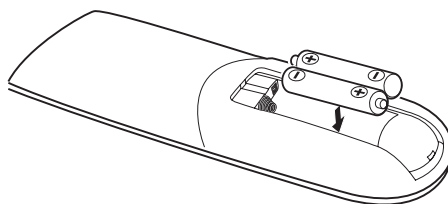
- 1** Remove the battery cover.

While pressing the battery cover, pull it toward you, and then lift up the cover to remove it.



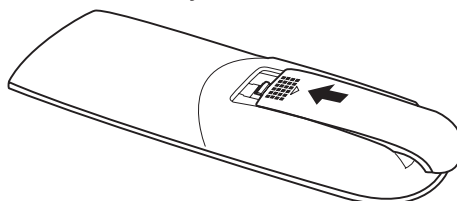
- 2** Insert the dry cell batteries.

Confirm the polarities of the dry cell batteries and insert them according to the polarity indications on the inside of the case.



- 3** Close the battery cover.

To close the battery cover, slide the tab at the rear of the cover.



1

2

3

4

5

6

7

8A

8B

9

10

11

Service

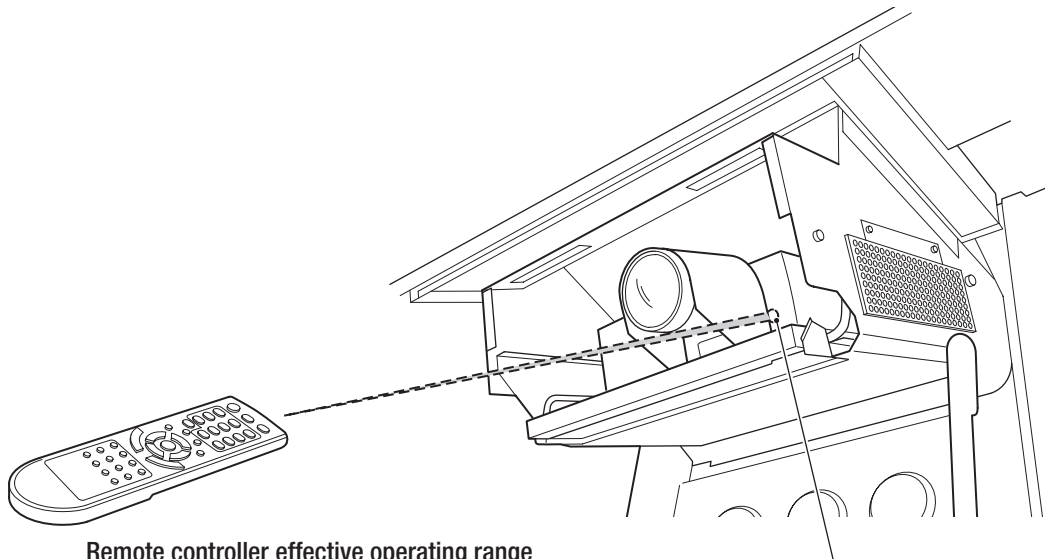
Test Mode

Troubleshooting

(2) How to Operate the Remote Controller

- The remote controller may not operate when the remote control photosensor is directly exposed to bright light such as sunlight or fluorescent light.
- Do not drop or subject the remote controller to impact.
- Do not leave the remote controller in hot or humid locations.
- Do not expose the remote controller to water and do not place it on wet objects.
- Do not disassemble the remote controller.
- In rare cases, remote controller operations may not be accepted easily depending on the location of use or surrounding conditions. In such cases, point the remote controller directly at the projector unit and perform the operation again.

Remove the projector cover and front lid of the projector assembly (see P-75 "8A-3-8 Installing the Projector Unit"), and operate the remote controller while pointing it at the remote controller photosensor of the projector unit.



Remote controller effective operating range
Angle: within approximately 30° in the vertical and horizontal directions
Distance: within approximately 6 m

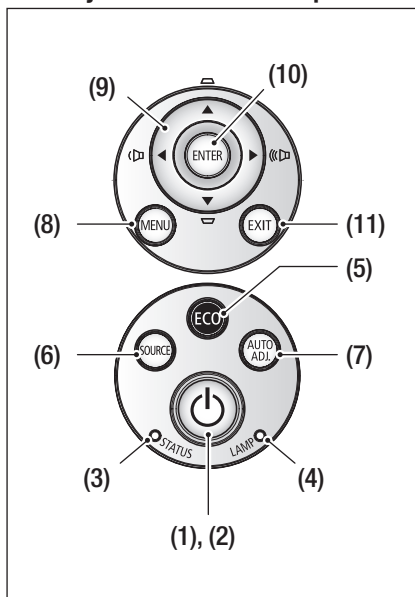
Remote control photosensor

- Must be performed by a technician -

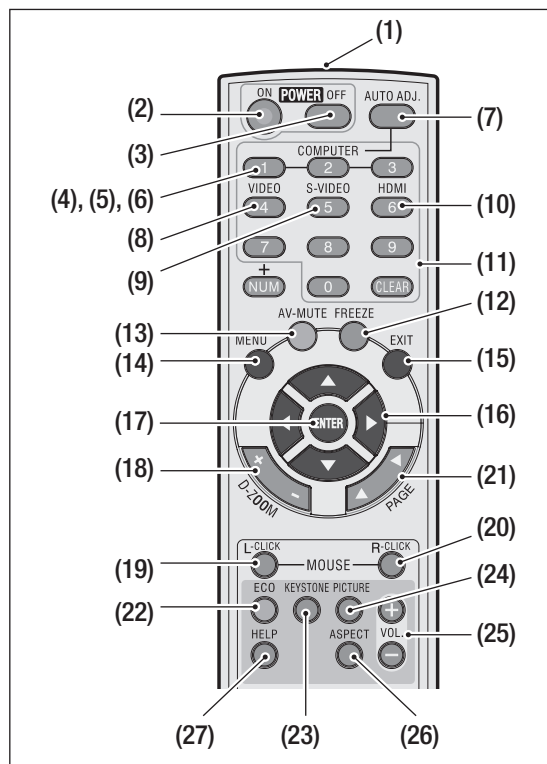
(3) Projector Unit Control Panel and Remote Controller Part Names

For details, see the accompanying operation manual of the projector.

Projector unit control panel



Remote controller



Projector unit control panel

(1) Power button

Turns the power of the machine on/off (standby state).

When turning off the power (entering the standby state), pressing the button once displays the confirmation message on the screen. Press the button again.

(2) Power indicator

This indicator indicates the state of the projector power.

- Goes out: Main power is off.
- Blinking blue (at short intervals): In preparation for power on
- Blinking blue (at long intervals): Off-timer (effective state)
- Lights up blue: Power on state
- Lights up orange: Standby state (standby mode is "Standard")
- Lights up red: Standby state (standby mode is "Power-saving")

(3) Status indicator

This indicator indicates the internal status of the projector.

- Goes out: No abnormality or standby state (standby mode is "Power-saving")
- Blinking red: Indicates an abnormality, corresponding to the blinking interval.
- Blinking green: In preparation for lighting the lamp again after failure to light.
- Lights up green: Standby state (standby mode is "Standard")
- Lights up orange: Control panel lock "ON" state

(4) Lamp indicator

This indicator indicates the status of the projector lamp.

- Goes out: No abnormality
- Blinking red: Warning to replace the lamp
- Lights up red: Lamp usage period has been exceeded
- Lights up green: In Eco mode

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

- (5) (ECO) button
This button is used to display the Eco mode selection screen.
- (6) (SOURCE) button
Each time this (SOURCE) button is pressed, the projector searches input signals of those in the following order: Computer → HDMI1 → HDMI2 → Video → S-Video → and so on. If the projector detects any input signals, it projects that signal.
- (7) (AUTO ADJ.) button
This button is used to automatically adjust the projector to the optimum conditions when it projects the PC screen.
- (8) (MENU) button
This button is used to display various on-screen setting and adjustment menus.
- (9) ▲, ▼, ◀, and ▶ buttons
These buttons are used to select items from the menu or to adjust values. (See P-188 "8B-6-4 On-screen Menu of the Projector".)
When no menu screen is displayed, you can use the ◀ or ▶ button to adjust the volume and the ▲ or ▼ button to correct the vertical keystone distortion.
- (10) (ENTER) button
While any menu is being displayed, if this button is pressed, the screen proceeds to the menu in the next layer. (See P-188 "8B-6-4 On-screen Menu of the Projector".) Pressing this button while any confirmation message is being displayed accepts the item.
- (11) (EXIT) button
While any menu is being displayed, if this button is pressed, the screen returns to the menu in the previous layer. When this button is pressed with the cursor placed on the main menu tab, the menu is closed.
When this button is pressed while any confirmation message is being displayed, the operation is canceled.

Remote Controller

- (1) Remote control transmitter
Transmits remote controller signals by using infrared rays.
Operate the remote controller by pointing its transmitter at the remote controller photosensor of the projector unit.
- (2) Power (ON) button
Use this button to turn on the power of the machine when it is in a standby state (with the power indicator lighting up red*). (* When the standby mode is set to "Power-saving")
- (3) Power (OFF) button
Pressing this button once displays the power-off confirmation message. Pressing this button once more turns off the power of the machine. (The machine enters the standby state.)
- (4) (COMPUTER 1) button
Use this button to select the computer input (or component).
- (5) (COMPUTER 2/3) button
(Not used on this machine.)
- (6) (COMPUTER 2/3) button
(Not used on this machine.)
- (7) (AUTO ADJ.) button
This button is used to automatically adjust the projector to the optimum conditions when it projects the computer screen.
- (8) (VIDEO) button
Use this button to select the video input.
- (9) (S-VIDEO) button
Use this button to select the S-video input.

- (10) (HDMI) button
Use this button to select HDMI1 or HDMI2 input. Each time this button is pressed, the selection switches between HDMI1 input and HDMI2 input.
- (11) (NUM) button, number (0 - 9) input buttons, and (CLEAR) button
Use these buttons to set the security keyword for the projector.
- (12) (FREEZE) button
Use this button to show the image being displayed in the form of a still image on the screen. Pressing the button again returns the still image display to the original display.
- (13) (AV-MUTE) button
Use this button to temporarily kill the image and sound. Pressing the button again returns the still image display to the original display.
- (14) (MENU) button
This button is used to display various on-screen setting and adjustment menus. (See P-188 "8B-6-4 On-screen Menu of the Projector".)
- (15) (EXIT) button
While any on-screen menu is being displayed, if this button is pressed, the screen returns to the menu in the previous layer. When this button is pressed with the cursor placed on the main menu tab, the menu is closed.
When this button is pressed while any confirmation message is being displayed, the operation is canceled.
- (16) ▲, ▼, ◀, and ▶ buttons
Use these buttons for on-screen menu operation and for the display position adjustment of the screen enlarged by using the (D-ZOOM +/-) button.
When the mouse receiver (sold separately) is connected to the computer, these buttons act as a computer mouse.
- (17) (ENTER) button
While any on-screen menu is being displayed, if this button is pressed, the screen proceeds to the menu in the next layer.
When this button is pressed while any confirmation message is being displayed, the item is accepted.
- (18) (D-ZOOM +/-) button
This button is used to zoom the screen image in or out.
- (19) (MOUSE L-CLICK) button
Use this button when the mouse receiver (sold separately) is connected to the computer. This button will function as the left-hand button of a mouse.
- (20) (MOUSE R-CLICK) button
Use this button when the mouse receiver (sold separately) is connected to the computer. This button will function as the right-hand button of a mouse.
- (21) (PAGE) button
Use this button when the mouse receiver (sold separately) is connected to the computer. This button serves to scroll the screen or to switch between slides on a PowerPoint presentation.
- (22) (ECO) button
This button is used to display the Eco mode selection screen.
- (23) (KEystone) button
Use this button to display the keystone distortion correction screen.
- (24) (PICTURE) button
Use this button to display the picture mode select screen provided in the IMAGE of the on-screen menu.
- (25) (VOL. +/-) button
(Not used on this machine.)
- (26) (ASPECT) button
Use this button to display the aspect adjustment items.
- (27) (HELP) button
Use this button to display the information screen.

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

– Must be performed by a technician –

8B-6-4 On-screen Menu of the Projector



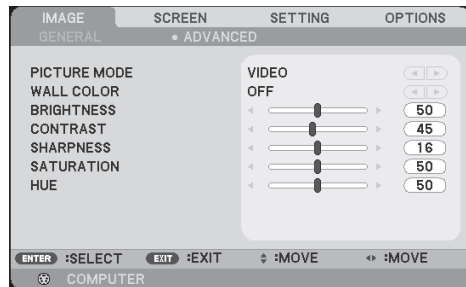
- Please note that in rare cases, the brightness may fluctuate due to the lamp characteristics.
- The lamp is a consumable part. When the lamp is used for a long time, the image may become dark or the lamp may burn out and no longer light up. This is due to the lamp characteristics, and is not a malfunction.
- The pixel engine used in the machine is manufactured using high-precision technology, but there may be pixels that do not light (dark pixels) or are constantly lit (bright pixels). This is not a malfunction.
- To reset to the factory default, execute PROJECTOR TEST (see P-42 "(d) PROJECTOR TEST" in Test mode.

The control buttons on the projector unit control panel and remote controller (see P-185 "(3) Projector Unit Control Panel and Remote Controller Part Names") allow you to display various menus on the screen and perform respective adjustments and settings.

*Changing the values of some items in the setting menus provided with the machine is restricted.

■ Setting method using the on-screen menus

- 1 Press the menu button.
The on-screen menu is displayed.



- 2 Press ▲ or ▼ button to select a sub-menu. To accept the selected menu, press the (ENTER) button.
- 3 When any rectangular adjustment bar such as "Volume" (sound level) is displayed, press the ◀ or ▶ button to adjust that item.

■ To cancel the on-screen menu

- 1 With the cursor located in the main menu tab, press the (EXIT) button.
 - Menu screen operations may not be possible even when the button is pressed. In this case a malfunction may have occurred. Disconnect the power cord plug from the outlet, wait 10 minutes or more and then connect the power cord plug to the outlet again.
 - Adjustments can be made using the on-screen menu when there is an external input signal.

■ Configuration of on-screen menu

For detailed setting values and other information, see the accompanying operation manual of the projector.

Main menu	Sub-menu	Configurable item
IMAGE (image adjustment)	GENERAL (general)	PICTURE MODE (picture mode) WALL COLOR (wall color correction) BRIGHTNESS (brightness) CONTRAST (contrast) SHARPNESS (sharpness) SATURATION (saturation) HUE (hue)
	ADVANCED (advanced)	GAMMA (gamma correction) BrilliantColor™ COLOR TEMP. (color temperature) DYNAMIC CONTRAST (dynamic contrast) COLOR (color) COLOR SPACE (color space)
SCREEN (screen adjustment)	GENERAL (general)	ASPECT RATIO (aspect) OVERSCAN (overscan) V KEYSTONE (vertical keystone correction)
	3D SETTING (3D setting)	3D 3D INVERT (3D inversion) 3D STRUCTURE (3D format)
SETTING (installation)	GENERAL (general)	LANGUAGE (language) ORIENTATION (projection method) REMOTE SENSOR (setting of the remote control photosensor) HDMI SETTINGS (HDMI settings) MUTE (mute) VOLUME (volume)
	SIGNAL (signal)	PHASE (phase) CLOCK (clock frequency) H. POSITION (horizontal position) V. POSITION (vertical position)
	ADVANCED (advanced)	LOGO (logo) PC CONTROL MODE (PC control mode) NETWORK (network) CLOSED CAPTION (closed caption) SECURITY (security)

1

2

3

4

5

6

7

8A

8B

9

10

11

Service

Test Mode

Troubleshooting

– Must be performed by a technician –

Main menu	Sub-menu	Configurable item
OPTIONS (options)	GENERAL (general)	INPUT SEARCH (automatic input switching) INPUT (terminal) FAN MODE (fan mode) INFORMATION HIDE (On-screen display is off) BACKGROUND COLOR (background color) RESET (reset)
	LAMP/FILTER SETTINGS (lamp/filter settings)	LAMP LIFE REMAINING (remaining lamp life)* LAMP HOURS USED (used hours of the lamp)* FILTER HOURS USED (used hours of the filter)* ECO MODE (Eco mode) FILTER LIFE REMINDER (lamp message) FILTER USAGE HOURS (filter cleaning hours) CLEAR LAMP HOURS (Clears the lamp usage time) CLEAR FILTER HOURS (Clears the filter usage time)
	INFORMATION (information)	MODEL NO.* SERIAL NUMBER* SOURCE (input terminal)* RESOLUTION (resolution)* SOFTWARE VERSION (software version)*
	ADVANCED (advanced)	STANDBY MODE (standby mode) DIRECT POWER ON (direct power on) AUTO POWER OFF (MIN.) (auto power off (minute)) OFF TIMER (MIN.) (off-timer (minute)) CONTROL PANEL LOCK (key lock of the main unit)

*: Only for display (Not allowed to change)

9. Disposal

WARNING

- When disposing of the machine, follow the applicable regulations for collection, transportation and disposal.
- When entrusting the collection, transportation and disposal of the machine to someone else, be sure to entrust the work to specialists in each field.
- The projector lamp used in this machine contains inorganic mercury, which is hazardous to the human body and the environment. When disposing of used lamps, follow the applicable regulations for collection, transportation and disposal.

* The software used in this machine is protected by copyright laws. It is prohibited to copy, adapt, distribute publicly, or use the software for purposes other than the operation of this machine. Infringement of copyright laws may be subject to criminal penalties.

Do not use the recording media containing the software in a machine other than the specified game machine. Doing so may result in mechanical malfunction.

1

2

3

4

5

6

7

8A

8B

9

10

11

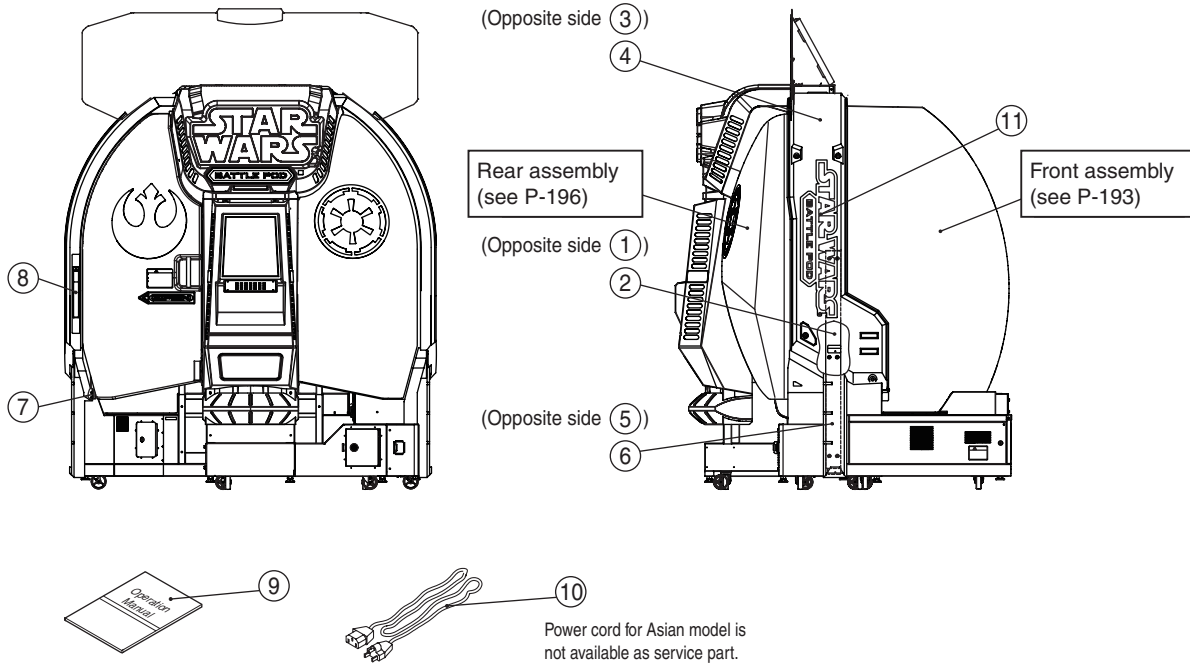
Disposal

Test Mode

Troubleshooting

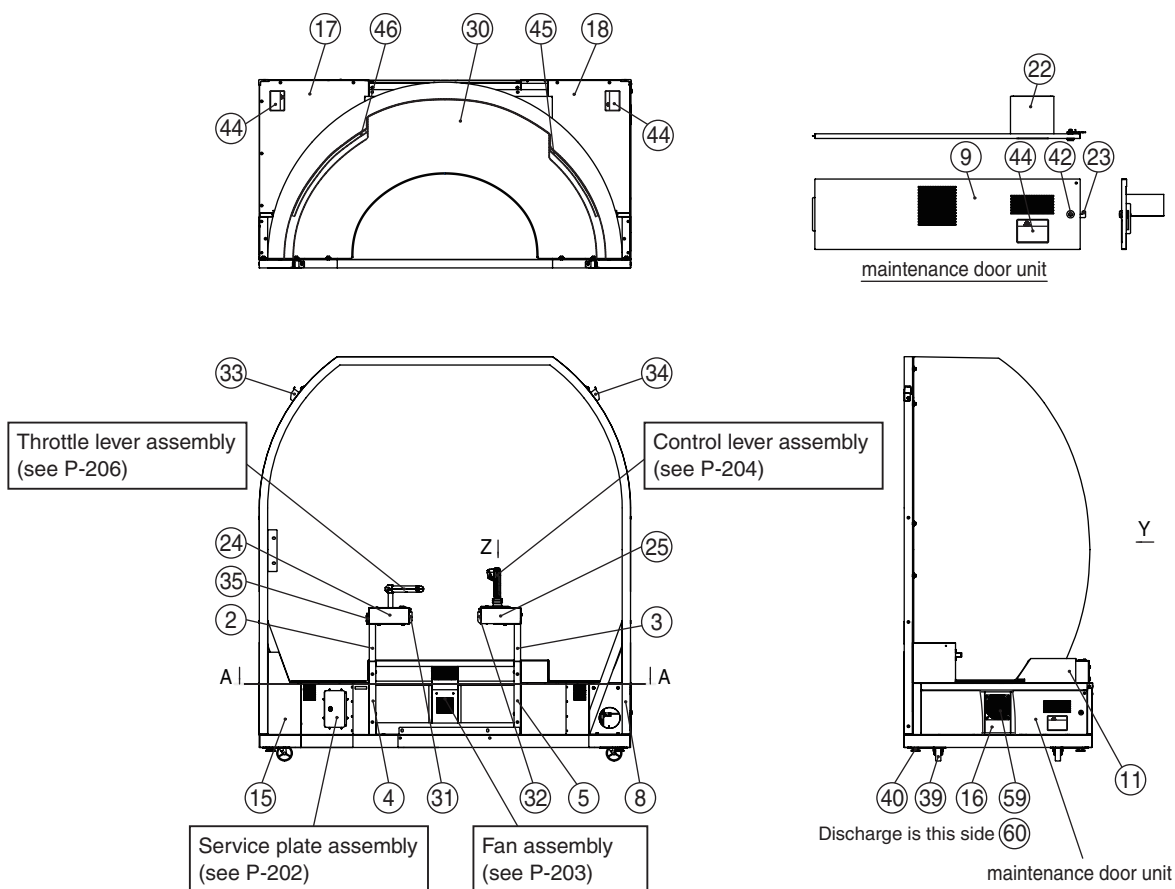
10. Parts List

10-1 Overall



No.	Name	Quantity	Type and rating	Part No.
1	Side joint (L)	1		717-910
2	Side joint (R)	1		717-911
3	Side cover (L) SW	1		737-170
4	Side cover (R) SW	1		737-171
5	Lower side cover (L) SW	1		737-172
6	Lower side cover (R) SW	1		737-173
7	Cover joint	1		717-916
8	Caution sticker Finger pinching POD (EXP)	1		461-627
9	Operation Manual	1	This manual	737-163
10a	Power cord UL	1	3m U.S. model BIZ-UL-AC15A125V-3000	011-164
10b	Power cord BSI		3m European model BIZ-BSI-AC10A250V-3000	011-165
11	Side logo decal	2		737-174

10-2 Front Assembly

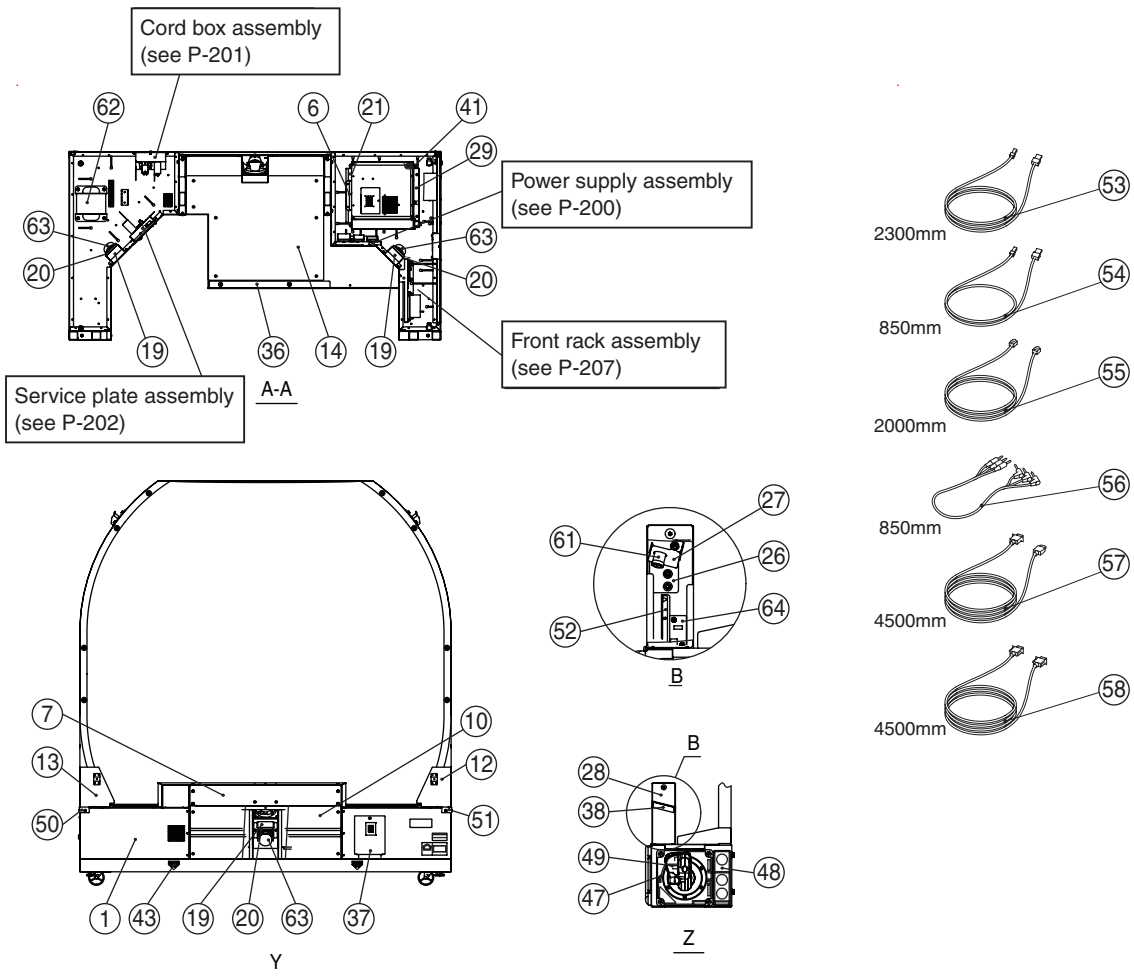


No.	Name	Quantity	Type and rating	Part No.
1	Front base	1		737-180
2	Lever stay base L	1		737-181
3	Lever stay base R	1		737-182
4	Lever stay cover L	1		737-183
5	Lever stay cover R	1		737-184
6	ES3 base	1		737-185
7	Across beam	1		737-186
8	Dome frame	1		737-187
9	Maintenance door	1		737-188
10	Back panel	1		737-189
11	Flange cover C	1		737-190
12	Flange cover L	1		737-191
13	Flange cover R	1		737-192
14	Floor plate	1		737-193
15	Frame cover	1		737-194
16	Fan bracket	1		737-195
17	Maintenance panel L	1		737-196
18	Maintenance panel R	1		737-197
19	Speaker bracket	3		737-198

- 1
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7
 - 8A
 - 8B
 - 9
 - 10
 - 11
- Parts List

- Test Mode
- Troubleshooting

10. Parts List



No.	Name	Quantity	Type and rating	Part No.
20	Baffle board	3		737-199
21	ES3 back bracket	1		737-200
22	ES3 duct	1		737-201
23	Key plate	1		737-202
24	Lever base L	1		737-203
25	Lever base R	1		737-204
26	Camera bracket	1		737-205
27	Camera cover	1		737-206
28	Camera box cover	1		737-207
29	ES3 front bracket	1		737-208
30	Oval dome	1		717-930
31	Lever side CV (L) SW	1		737-209
32	Lever side CV (R) SW	1		737-210
33	Front rope hook L	1		717-977
34	Front rope hook R	1		717-982
35	Coner guard	1		717-986
36	Base joint SW	1		737-211
37	Cord cover	1		737-212
38	Camera lens cover	1		737-297
39	Caster (swivel type)	4		102-199
40	Adjustment bolt	4		102-045
41	Anti-vibration rubber	4		106-181
42	Coin lock	1	F750-DS8 random number	101-175

No.	Name	Quantity	Type and rating	Part No.
43	Fork sticker	2		461-678
44	Warning sticker Service (B) (EXP)	3		461-677
45	Gap rubber S	1	420mm	106-184
46	Gap rubber L	1	580mm	106-185
47	Control base decal A	1		737-214
48	Control base decal B	1		737-215
49	Control lever decal	1		737-216
50	Point cover L	1		729-161
51	Point cover R	1		729-162
52	Warning sticker high temperature B	1		461-816
53	USB cable (between game PC board and USB camera)	1	2300mm	011-098
54	USB cable (between game PC board and NA-JV(S) PC board)	1	850mm	011-183
55	LAN cable (between game PC board and Strait PC board)	1	2000mm	011-099
56	Audio cable (between game PC board and 5.1CH AMP PC board)	1	850mm	011-182
57	HDMI-DVI cable (between game PC board and projector)	1	4500mm	011-184
58	RS232C cable	1	4500mm	011-185
59	DC axial-flow fan motor	1		005-493
60	Fan guard	1		005-413
61	USB camera	1		307-830
62	Transformer	1		004-770
63	Speaker	3		006-181
64	OC-protector PC board	1		307-999

1

2

3

4

5

6

7

8A

8B

9

10

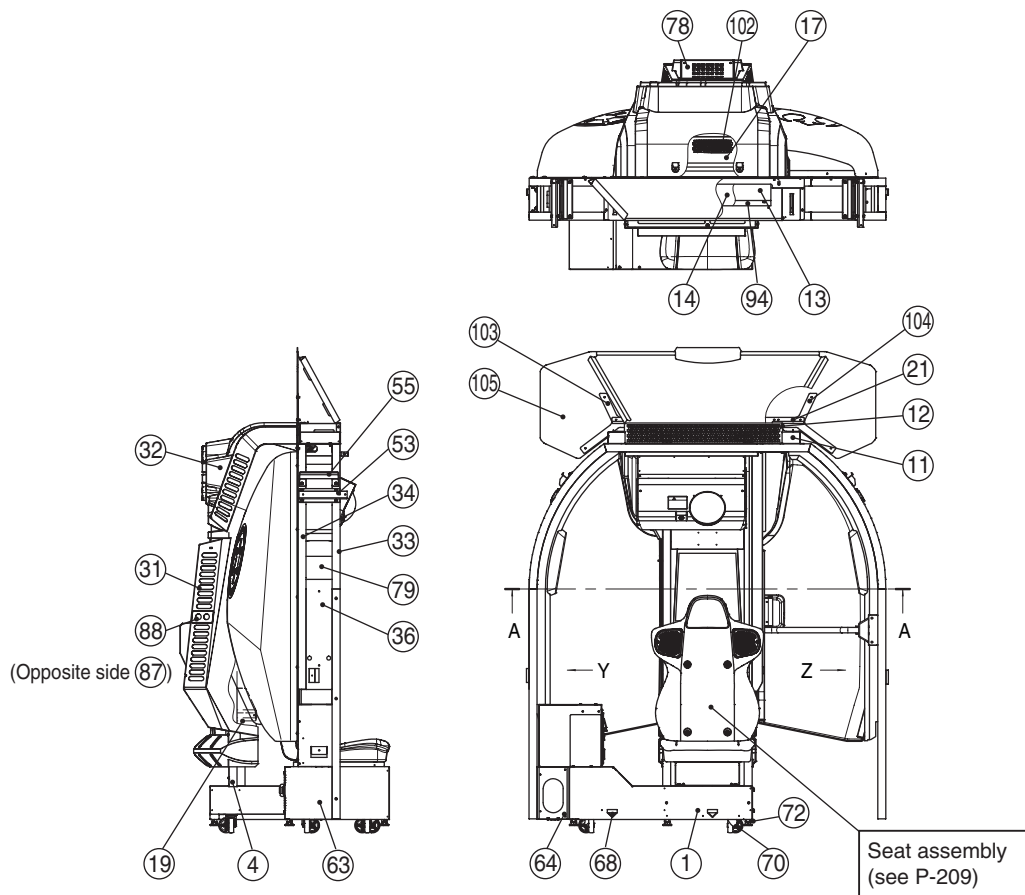
11

Parts List

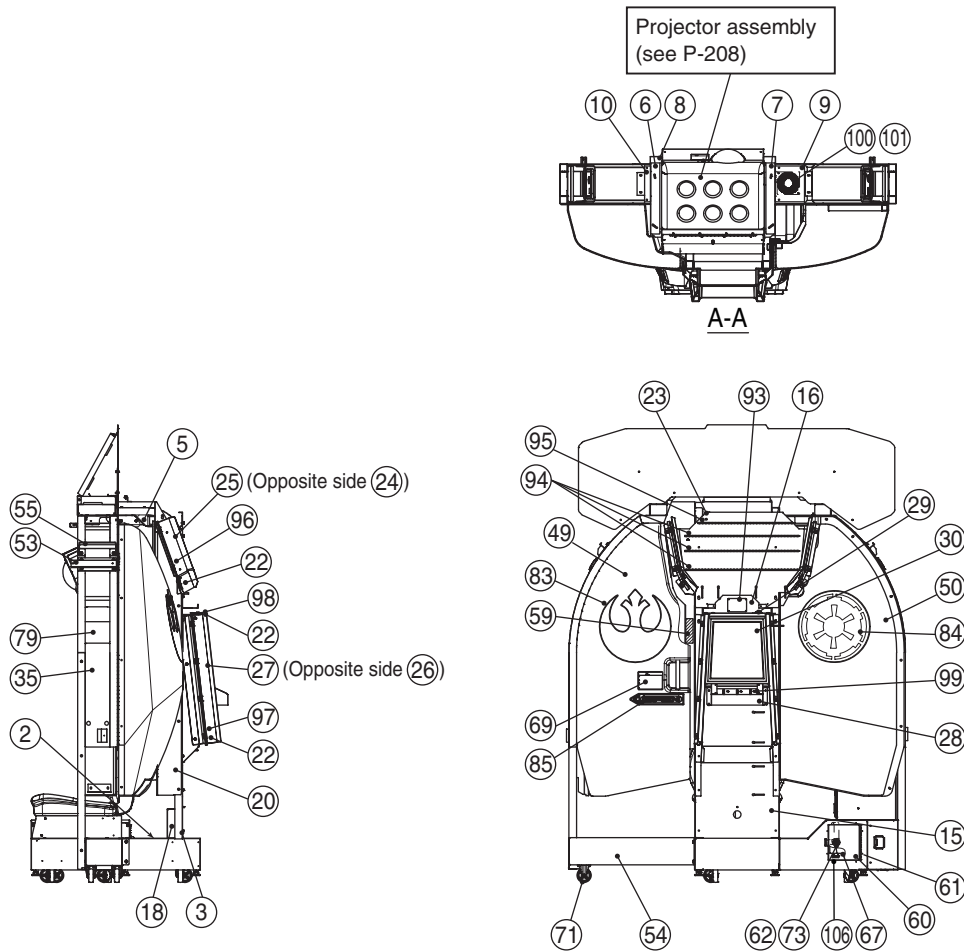
Test Mode

Troubleshooting

10-3 Rear Assembly



No.	Name	Quantity	Type and rating	Part No.
1	Rear base	1		737-241
2	Seat base hatch	1		737-242
3	Back frame L	1		737-243
4	Back frame R	1		737-244
5	Top frame	1		737-245
6	Side hook L	1		737-246
7	Side hook R	1		737-247
8	Top frame cover	1		737-248
9	Inner bracket L	1		737-249
10	Inner bracket R	1		737-250
11	Roof duct	1		737-251
12	Roof grill	1		737-252
13	Lamp box	1		737-253
14	Lamp cover	1		737-254
15	Back cover	1		737-255
16	Back cover U	1		737-256
17	Regulator cover	1		737-257
18	Harness cover	1		737-258
19	Window bracket	1		737-259
20	Catch base	1		737-260
21	POP bracket	1		737-261
22	LED holder	16		737-262
23	Top cover base	1		737-263
24	LED bracket TR	1		737-264

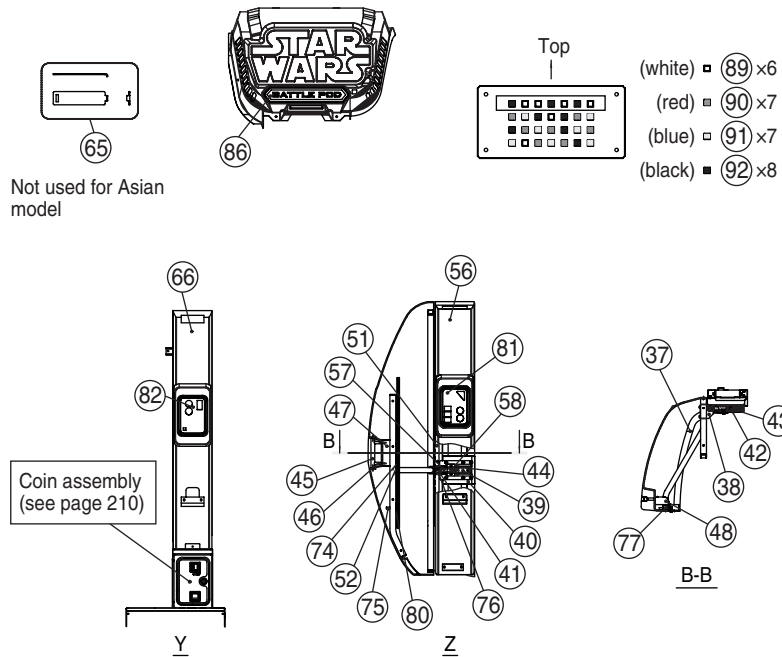


No.	Name	Quantity	Type and rating	Part No.
25	LED bracket TL	1		737-265
26	LED bracket RR	1		737-266
27	LED bracket RL	1		737-267
28	Console box	1		737-268
29	LED bracket W	1		737-269
30	Centor window	1		737-270
31	Rear cover	1		737-271
32	Top cover	1		737-272
33	Side frame	1		718-033
34	Rear frame	1		718-034
35	Side joint L	1		718-037
36	Side joint R	1		718-038
37	Door frame	1		718-039
38	Door stay bracket	1		718-045
39	Door stay	1		718-046
40	Door stoppar base	1		718-047
41	Stay shaft	1		718-048
42	Stay pin	1		718-049
43	Door spring	1		718-050
44	Door stoppar rubber	1		718-051
45	Door Knob	1		718-052
46	Knob spacer	2		718-053
47	Knob bracket KT	1		718-054
48	Knob bracket KT cover	1		718-055

- 1
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7
 - 8A
 - 8B
 - 9
 - 10
 - 11
- Parts List

- Test Mode
- Troubleshooting

10. Parts List



No.	Name	Quantity	Type and rating	Part No.
49	Door (SW)	1		737-273
50	Rear window (SW)	1		737-274
51	Door hinge	1		718-060
52	Door receiver	1		718-062
53	Cover bracket KT	2		718-069
54	Raer joint flame	1		718-070
55	Rear rope hook	2		718-078
56	Interior cover (L)	1		737-275
57	Stay cover	1		718-091
58	Stay cover W	1		718-092
59	Door cushion	1		722-392
60	Coin door	1		729-117
61	Coin door hinge	1		729-123
62	Stopper plate C	1		729-125
63	Cable case	1		737-276
64	Rear joint	1		737-277
65	Lock bar (C)	1		737-333
66	Interior cover (R)	1		737-278
67	Cash box (K)	1		461-040
68	Fork sticker	2		461-678
69	Caution sticker Capacity limit POD (EXP)	1		461-620
70	Caster (swivel type)	4		102-199
71	Caster (fixed)	2		102-201
72	Adjustment bolt	4		102-045
73	Cam lock	1		101-142
74	Magnet catch	1		101-209
75	Damper	1		106-251
76	Flange bush	2		104-025
77	Square pipe pulg	4		102-203
78	Console panel	1		737-279
79	Cover support	2		737-280

No.	Name	Quantity	Type and rating	Part No.
80	Damper stopper	1		737-281
81	Interior cover decal L	1		737-282
82	Interior cover decal R	1		737-283
83	Symbol mark decal L	1		737-284
84	Symbol mark decal R	1		737-285
85	Open decal	1		737-286
86	Sub title panel	1		737-288
87	Side panel (L)	1		737-289
88	Side panel (R)	1		737-328
89	Button (white)	6		737-329
90	Button (red)	7		737-330
91	Button (blue)	7		737-331
92	Button (black)	8		737-332
93	LED filter PC board	1		307-996
94	LED bar module	4	white, 600mm	002-731
95	LED bar module	1	white, 500mm	002-730
96	LED tape module	2	full color, 400mm	002-726
97	LED tape module	2	full color, 650mm	002-727
98	LED tape module	1	full color, 300mm	002-728
99	LED bar module	3	white, 100mm	002-729
100	Fan	1		005-558
101	Fan guard	1		005-413
102	Regulator	1		009-270
103	POP bracket (L)	1		737-334
104	POP bracket (R)	1		737-335
105	POP board (EXP)	1		737-169
106	Coin counter	1	Asian model	003-055

1

2

3

4

5

6

7

8A

8B

9

10

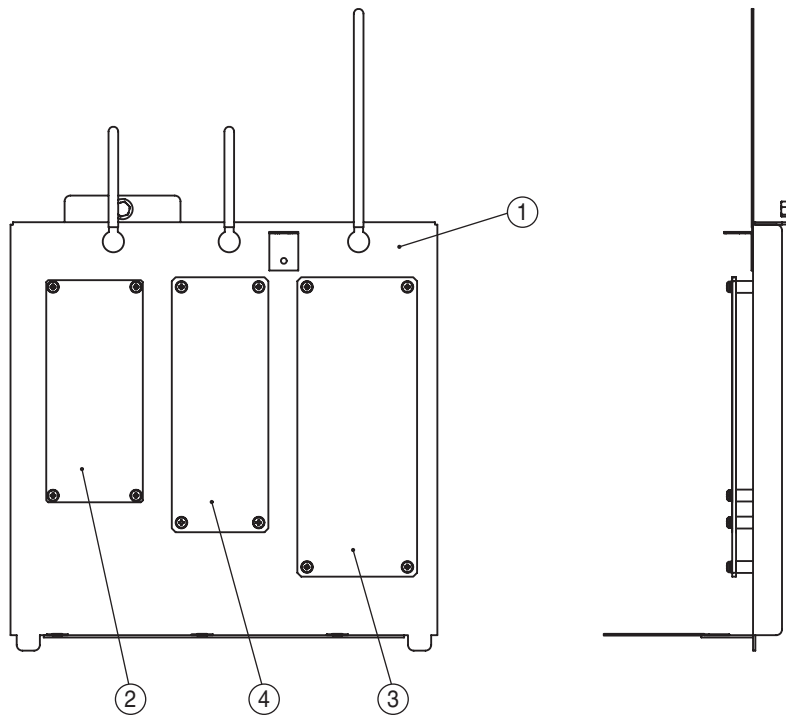
11

Parts List

Test Mode

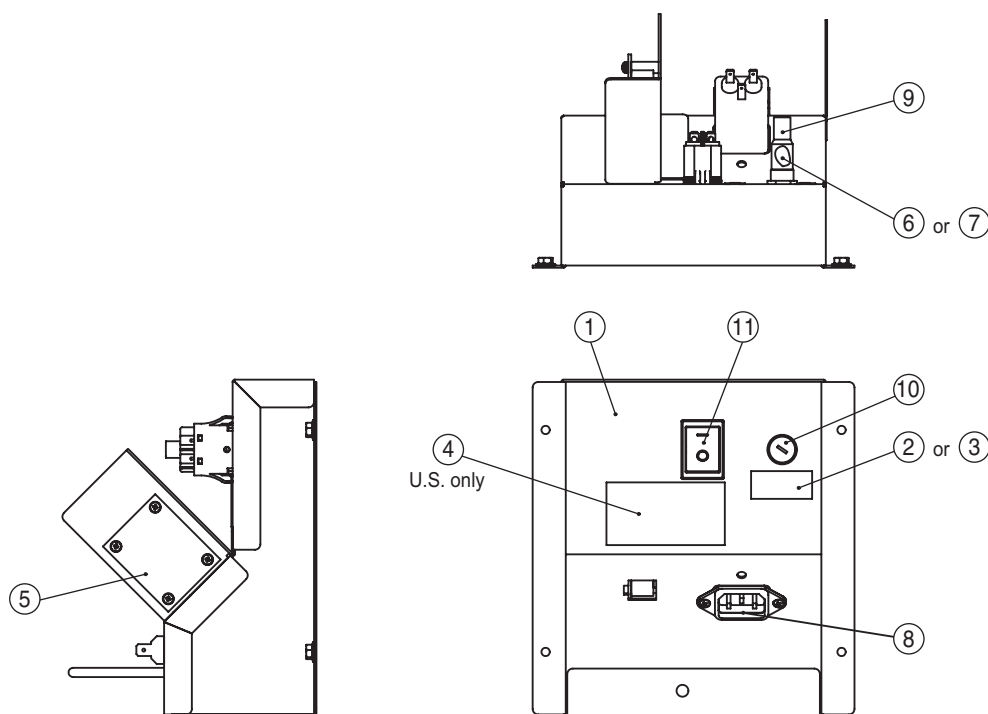
Troubleshooting

10-4 Power Supply Assembly



No.	Name	Quantity	Type and rating	Part No.
1	Power supply base	1		737-220
2	Switching regulator (5V)	1	VS15C-5	009-112
3	Switching regulator (12V)	1	VS100E-12	009-270
4	Switching regulator (24V)	1	VS50E-24	009-265

10-5 Cord Box Assembly



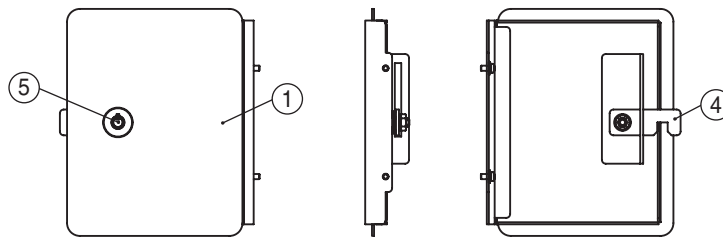
No.	Name	Quantity	Type and rating	Part No.
1	Cord box	1		737-221
2	Fuse sticker	1	110 V / 120 V	734-323
3	Fuse sticker (C)	1	220 V / 230 V	735-126
4	Fuse caution label	1		736-980
5	Straight PC board	1		307-308
6	Slow-blow fuse (T10A 250V)	1		001-108
7	Slow-blow fuse (T5A 250V)	1		001-111
8	Noise filter	1	RPE-2010R	011-103
9	Fuse holder	1		001-112
10	Fuse holder cap	1		001-113
11	Power switch	1	A8A-207-1D	000-906

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8A
- 8B
- 9
- 10
- 11

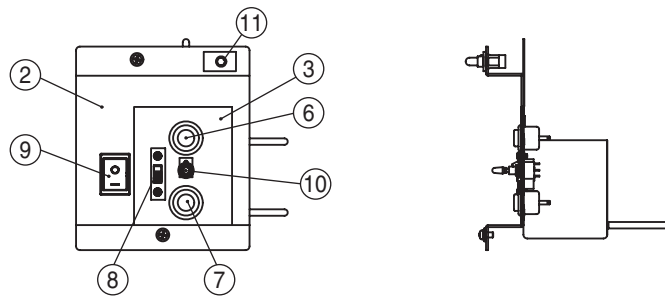
Parts List

- Test Mode
- Troubleshooting

10-6 Service Plate Assembly



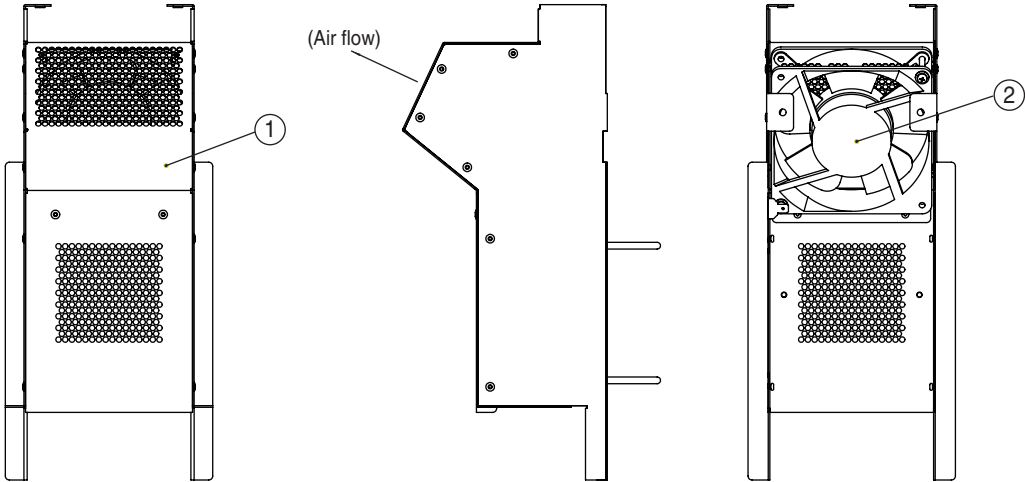
(DOOR)



(PANEL)

No.	Name	Quantity	Type and rating	Part No.
1	Service door	1		737-225
2	Service panel	1		737-226
3	Service sticker	1		734-228
4	Key plate	1		737-202
5	Coin lock	1	F750-DS8 random number	101-175
6	Push button (red) <Service>	1	SDP-103C-22RB	000-336
7	Push button (green) <Enter>	1	SDP-103C-22GB	000-619
8	Slide switch <Test>	1	SDS-103A-03#13BJ	000-681
9	Rocker switch <Reset switch>	1	A8A-207-1D	307-308
10	Toggle switch <Select>	1	SDSA-331G-CR	000-337
11	Door switch	1	D3D-111	000-615

10-7 Fan Assembly

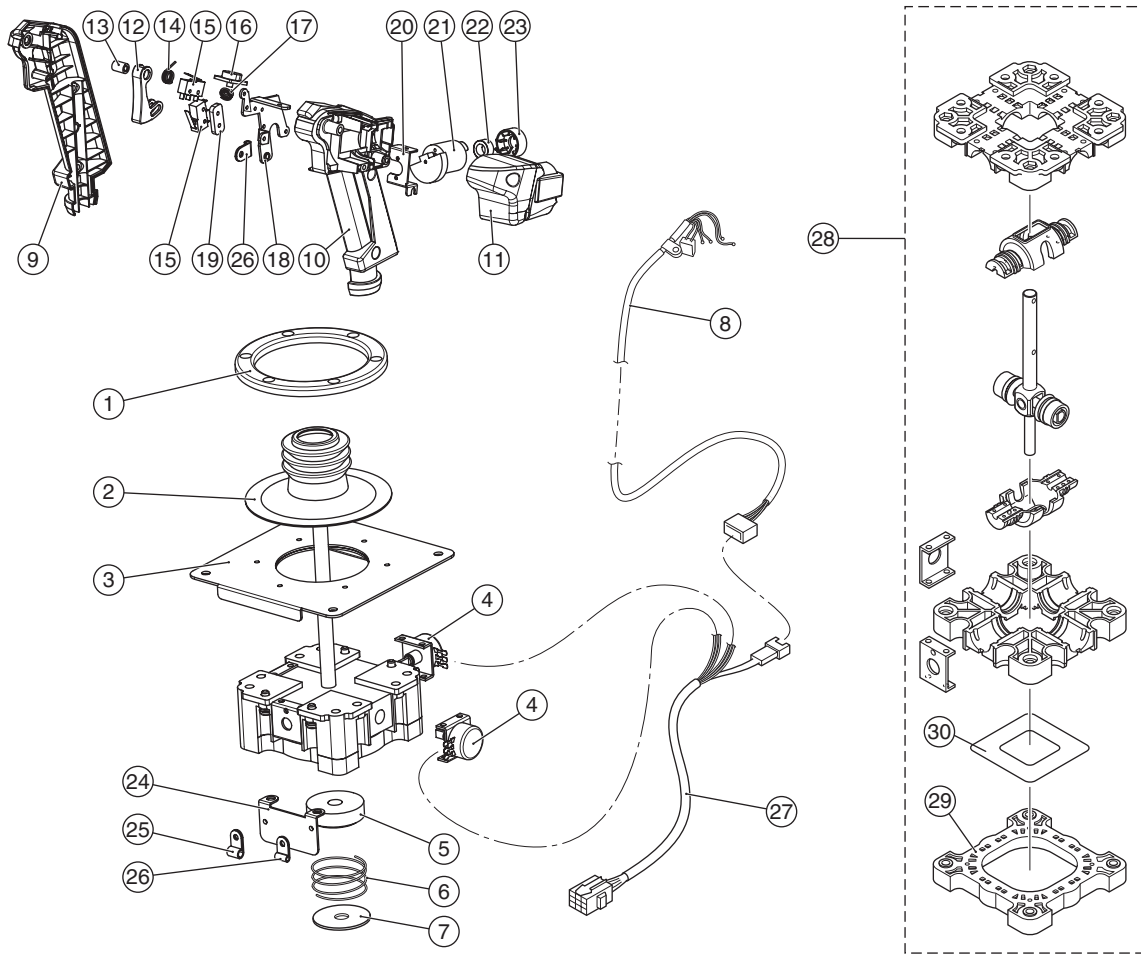


No.	Name	Quantity	Type and rating	Part No.
1	Duct box	1		737-227
2	Fan	1	9G1224G101	005-557

- 1
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7
 - 8A
 - 8B
 - 9
 - 10
 - 11
- Parts List

- Test Mode
- Troubleshooting

10-8 Control Lever Assembly



No.	Name	Quantity	Type and rating	Part No.
1	Cover fixing frame	1		306-829
2	Rubber cover	1		737-319
3	Installation plate	1		306-824
4	Analog interface (with analog interface bracket)	2		008-079
5	Spring stopper	1		737-316
6	Spring	1		307-849
7	Spring end	1		737-317
8	Grip harness	1		307-850
9	Control lever grip A (SW)	1	L and R make a set	737-320
10	Control lever grip B (SW)	1		
11	Motor cover (SW)	1		737-324
12	Machine gun button	1		306-780
13	Machine gun button spacer	1		737-321
14	Machine gun button spring	1		306-781
15	Switch (For Machine gun button and Missile button)	1		307-853
16	Missile button	1		306-779
17	Missile button spring	1		306-782
18	Lever metal part A	1		307-856
19	Lever metal part B	1		307-857
20	Motor bracket	1		737-323
21	Vibration motor	1		737-322
22	Ferrite core	1		307-860

No.	Name	Quantity	Type and rating	Part No.
23	Core spacer M (SW)	1		737-325
24	Clamp bracket	1		307-862
25	Clamp (large)	1		307-863
26	Clamp (small)	2		307-864
27	Lever harness	1		307-865
28	Lever sub-assembly	1		737-326
29	Guide plate	1		306-812
30	Metal plate	1		306-823

1

2

3

4

5

6

7

8A

8B

9

10

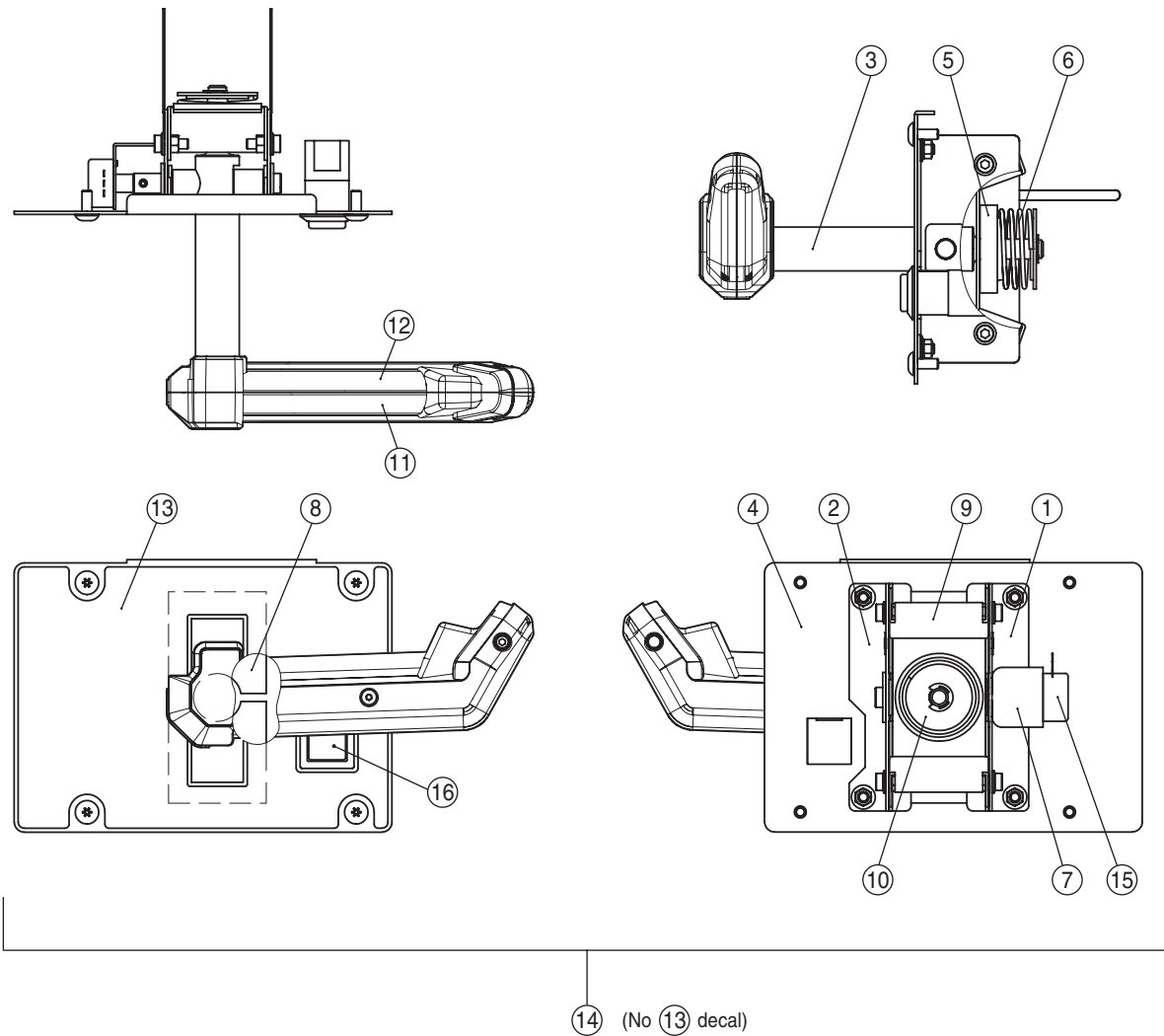
11

Parts List

Test Mode

Troubleshooting

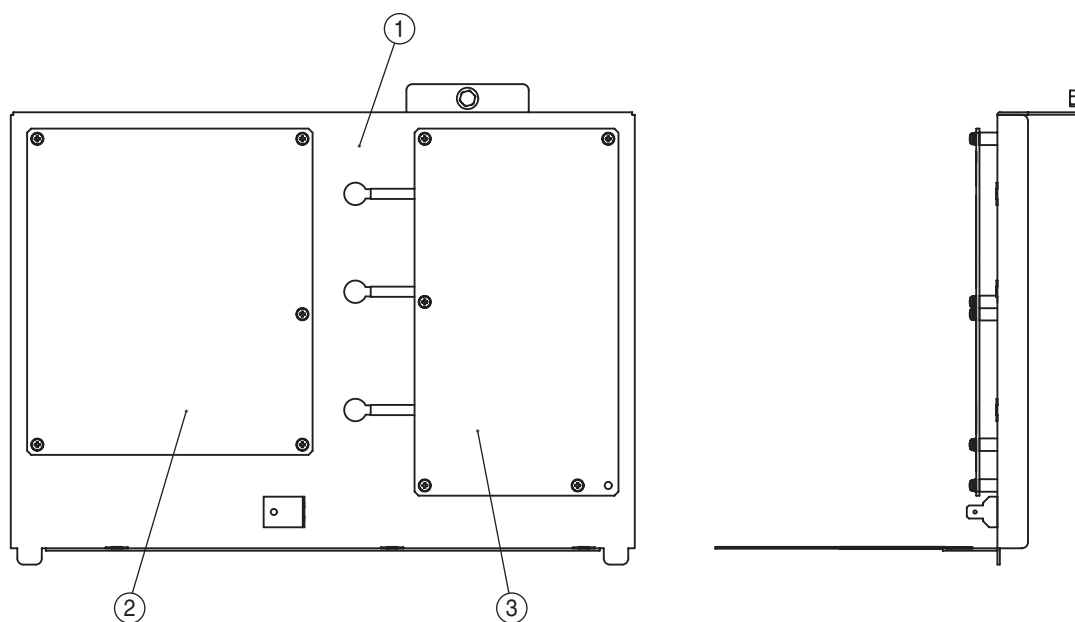
10-9 Throttle Lever Assembly



14 (No 13 decal)

No.	Name	Quantity	Type and rating	Part No.
1	Side base L	1		737-230
2	Side base R	1		737-231
3	Lever shaft	1		737-232
4	Base plate	1		737-233
5	Spring stopper	1		734-250
6	Spring	1		734-251
7	Vol bracket	1		734-252
8	Finger guard	1		734-253
9	Stopper	1		734-254
10	Spring washer	1		734-255
11	Throttle lever grip A	1	L and R make a set	737-236
12	Throttle lever grip B	1		
13	Throttle base decal (EXP)	1		737-237
14	Throttle lever assembly <no decal>	1		737-235
15	Analog interface	1	RVQ24YN04-06 20F B102	008-079
16	Illuminated push button switch	1		000-913

10-10 Front Rack Assembly



No.	Name	Quantity	Type and rating	Part No.
1	Front rack base	1		737-240
2	S5.1CH AMP PC board	1		307-997
3	NA-JV(S) PC board	1		307-423

1

2

3

4

5

6

7

8A

8B

9

10

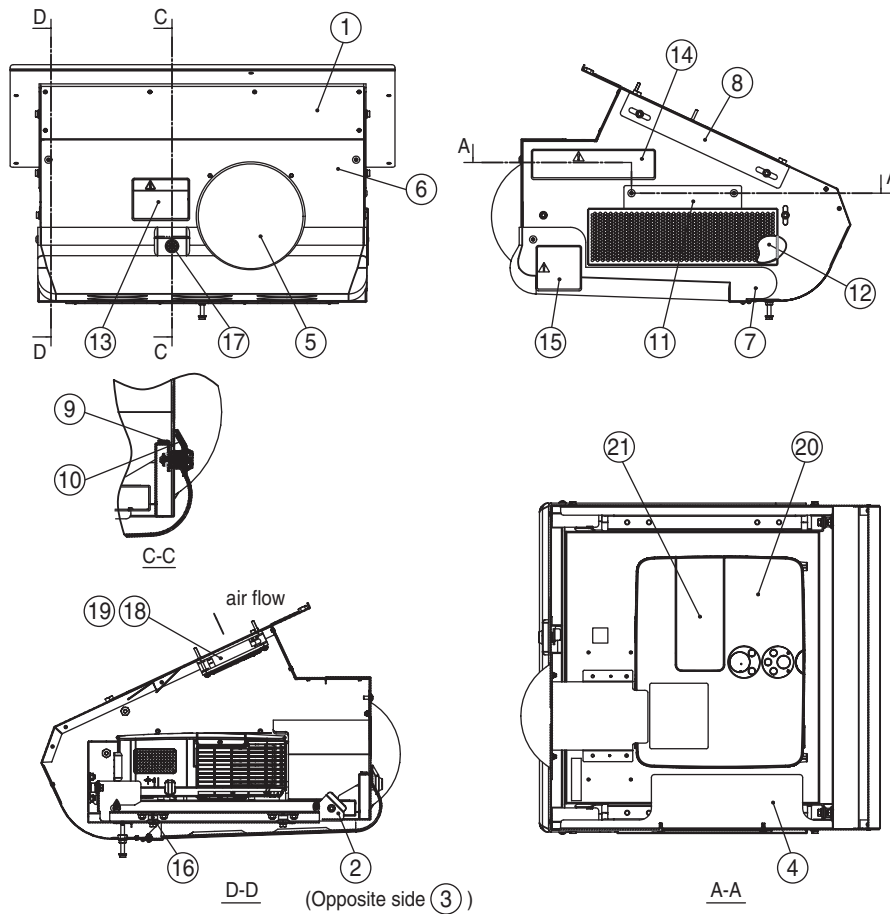
11

Parts List

Test Mode

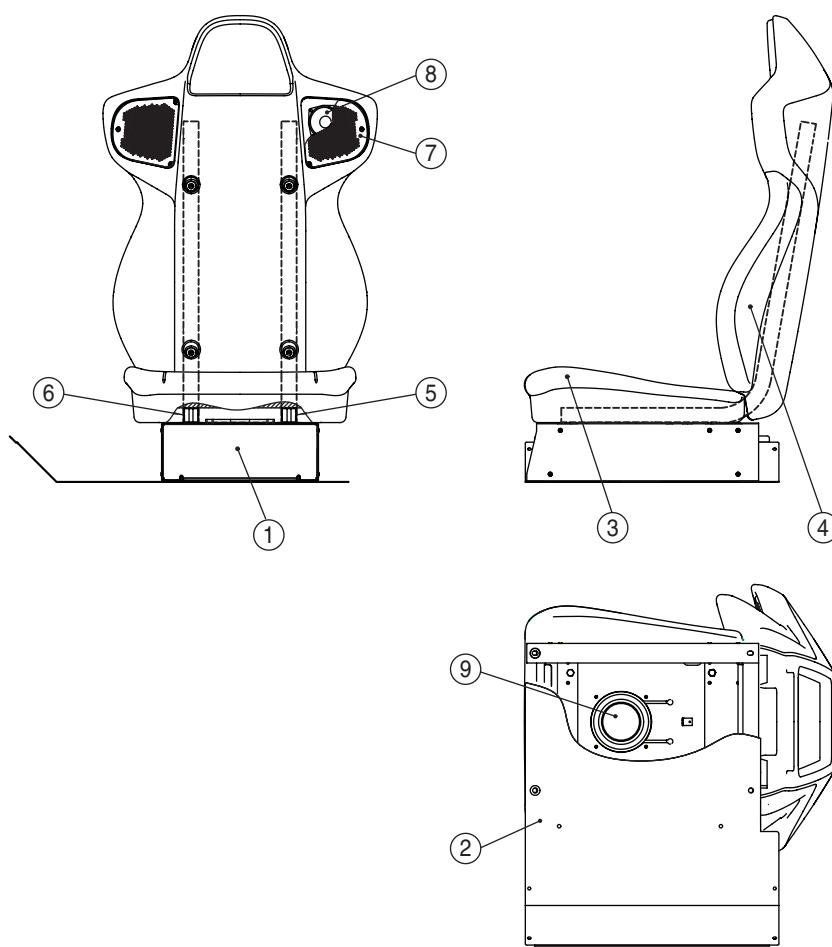
Troubleshooting

10-11 Projector Assembly



No.	Name	Quantity	Type and rating	Part No.
1	Projector case 2	1		737-290
2	Projector hook (L)	1		734-298
3	Projector hook (R)	1		734-299
4	Adjustment tray 2	1		737-291
5	Lens cover	1		718-102
6	Front lid 2	1		737-292
7	Projector cover SW	1		737-293
8	Projector hanger 2	1		737-294
9	Key hook	1		718-111
10	Lock washer	1		718-112
11	Filter tray S	1		737-295
12	Filter S	1		737-296
13	Warning sticker Service B (EXP)	1		461-539
14	Caution sticker Projector (EXP)	1		461-621
15	Caution sticker Watch your head POD (S) EXP	1		461-821
16	Anti-vibration rubber	6		106-166
17	Coin lock	1	F750-DS8 random number	101-175
18	Fan	1		005-558
19	Fan guard	1		005-413
20	Projector assembly (With a fish-eye lens)	1		307-922
21	Replacement lamp for the projector	1		307-923

10-12 Seat Assembly



No.	Name	Quantity	Type and rating	Part No.
1	Seat adaptor	1		737-300
2	Seat floor	1		737-301
3	Seat cushion SW	1		737-302
4	Seat back	1		737-303
5	Seat pipe (L)	1		734-303
6	Seat pipe (R)	1		734-304
7	Seat speaker cover	2		710-962
8	Speaker	2		006-181
9	Woofer	1		006-184

1

2

3

4

5

6

7

8A

8B

9

10

11

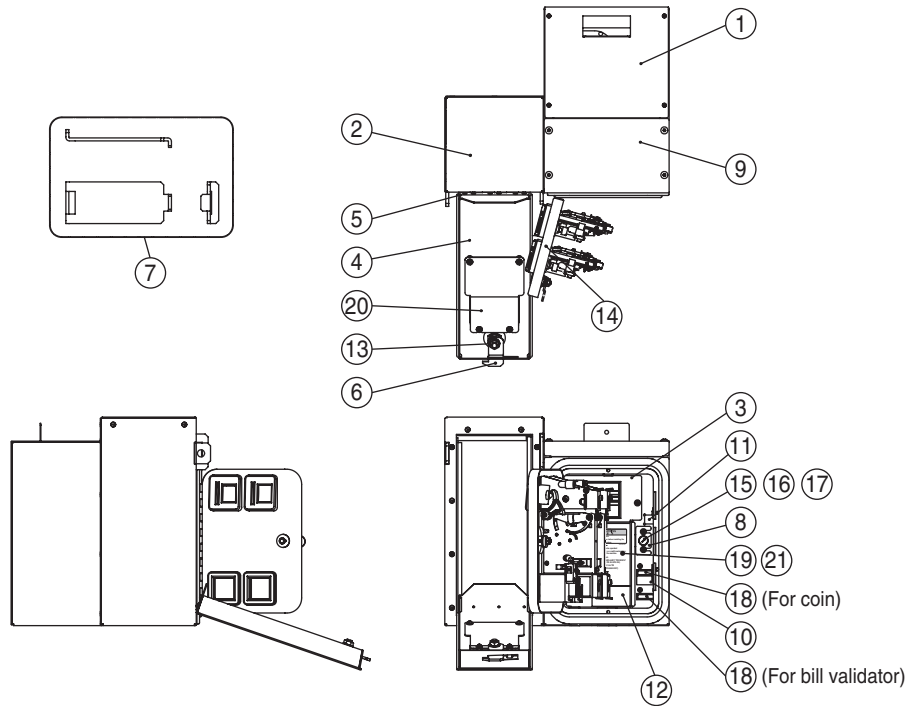
Parts List

Test Mode

Troubleshooting

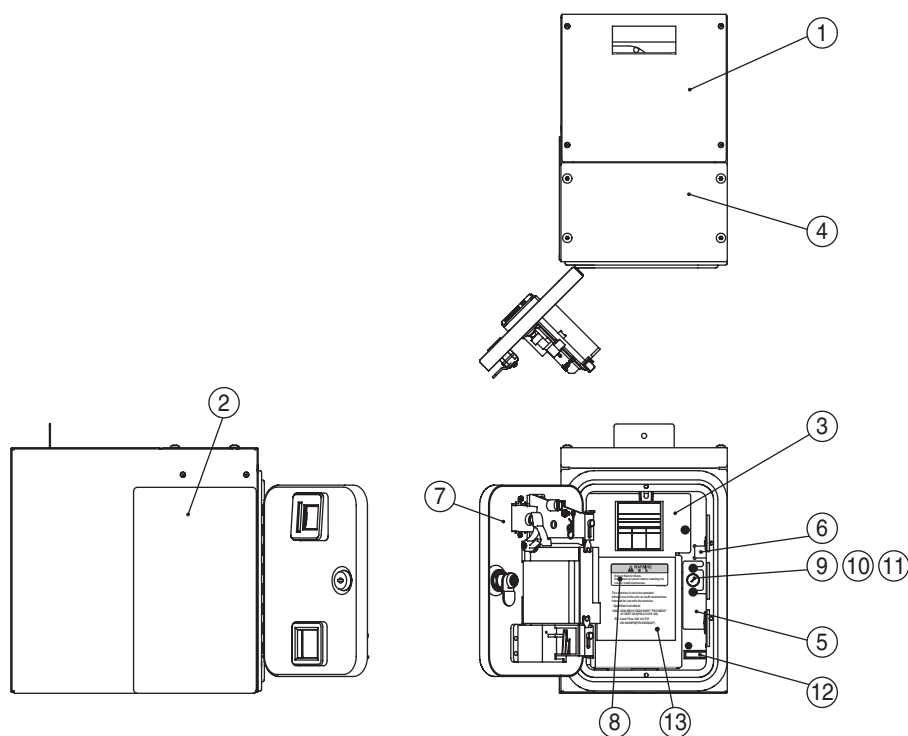
10-13 Coin Assembly

10-13-1 Coin Assembly (U.S. model)



No.	Name	Quantity	Type and rating	Part No.
1	Coin box	1		737-305
2	Bill validator box	1		737-327
3	Guard panel	1		737-307
4	Bill validator door B	1		737-312
5	Bill validator hinge B	1		737-313
6	Stopper plate (B)	1		735-114
7	Lock bar (B) B	1		737-314
8	Fuse holder bracket (NAI)	1		735-116
9	Cover panel (N) B	1		737-311
10	Coin counter label	1		735-118
11	Fuse sticker (B)	1		735-120
12	Fuse caution label	1		736-980
13	Cam lock	1		101-142
14	Small door assembly	1	40-0055-12W (2slot , no mech)	100-482
15	Slow-blow fuse (T6.3A 250V)	1		001-114
16	Fuse holder	1		001-112
17	Fuse holder cap	1		001-113
18	Coin counter	2		003-055
19	Warning sticker coin mech	1		461-822
20	Bill validator door cover	1		737-315
21	Coin mech label	1		737-336

10-13-2 Coin Assembly (European model)

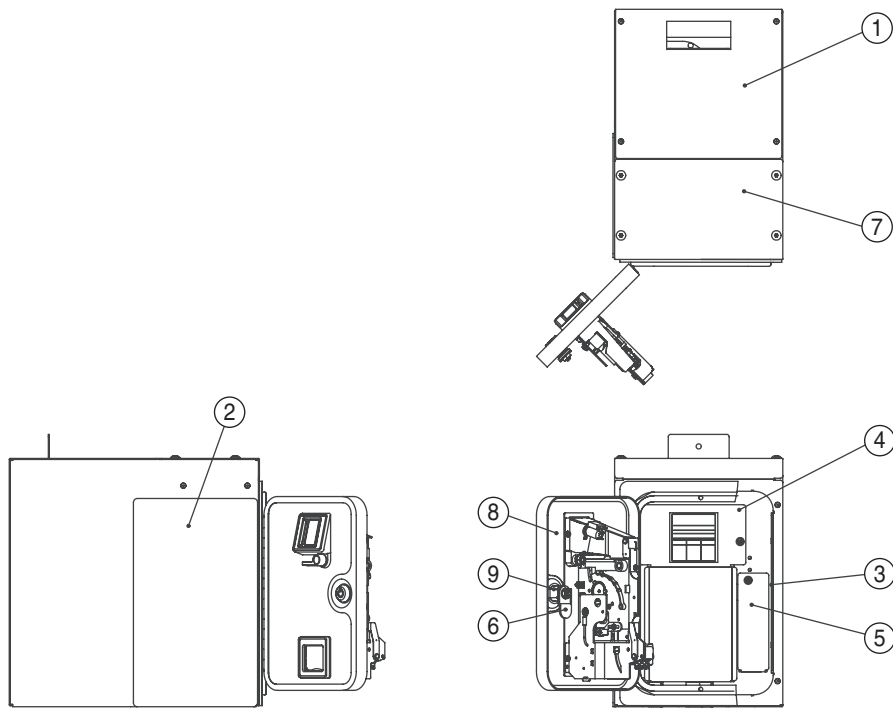


No.	Name	Quantity	Type and rating	Part No.
1	Coin box	1		737-305
2	Hole cover	1		737-306
3	Guard panel	1		737-308
4	Cover panel (N) B	1		737-311
5	Fuse holder bracket (NEL)	1		735-127
6	Fuse sticker (D)	1		735-128
7	Small door & Frame assembly	1	40-0731-12W (no mech)	100-483
8	Warning sticker coin mech	1		461-822
9	Fast Acting fuse (2A 250V)	1		001-115
10	Fuse holder	1		001-112
11	Fuse holder cap	1		001-113
12	Coin counter	1		003-055
13	Coin mech label	1		737-336

- 1
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7
 - 8A
 - 8B
 - 9
 - 10
 - 11
- Parts List

- Test Mode
- Troubleshooting

10-13-3 Coin Assembly (Asian model)

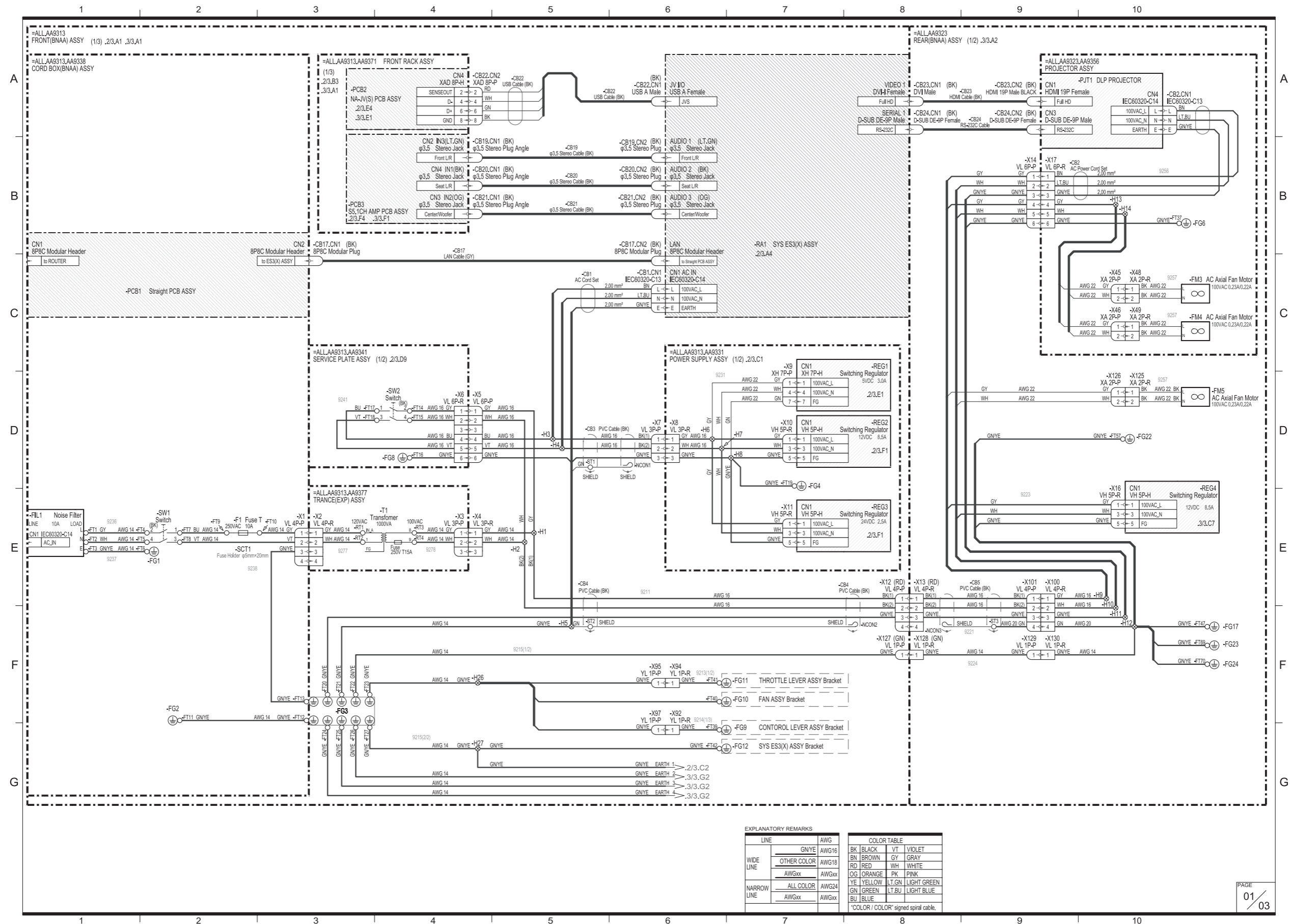


No.	Name	Quantity	Type and rating	Part No.
1	Coin box	1		737-305
2	Hole cover	1		737-306
3	JP coin sim	2		737-307
4	Guard panel	1		737-308
5	Fuse holder bracket (JPN)	1		737-309
6	Stopper plate	1		737-310
7	Cover panel (N) B	1		737-311
8	Coin door assembly	1	NAD-S1	100-481
9	Coin lock	1	F750-DS8 random number	101-175

11. Wiring Diagram

11-1 Overall Connection Diagram (U.S. model, 120 VAC)

(1/3)



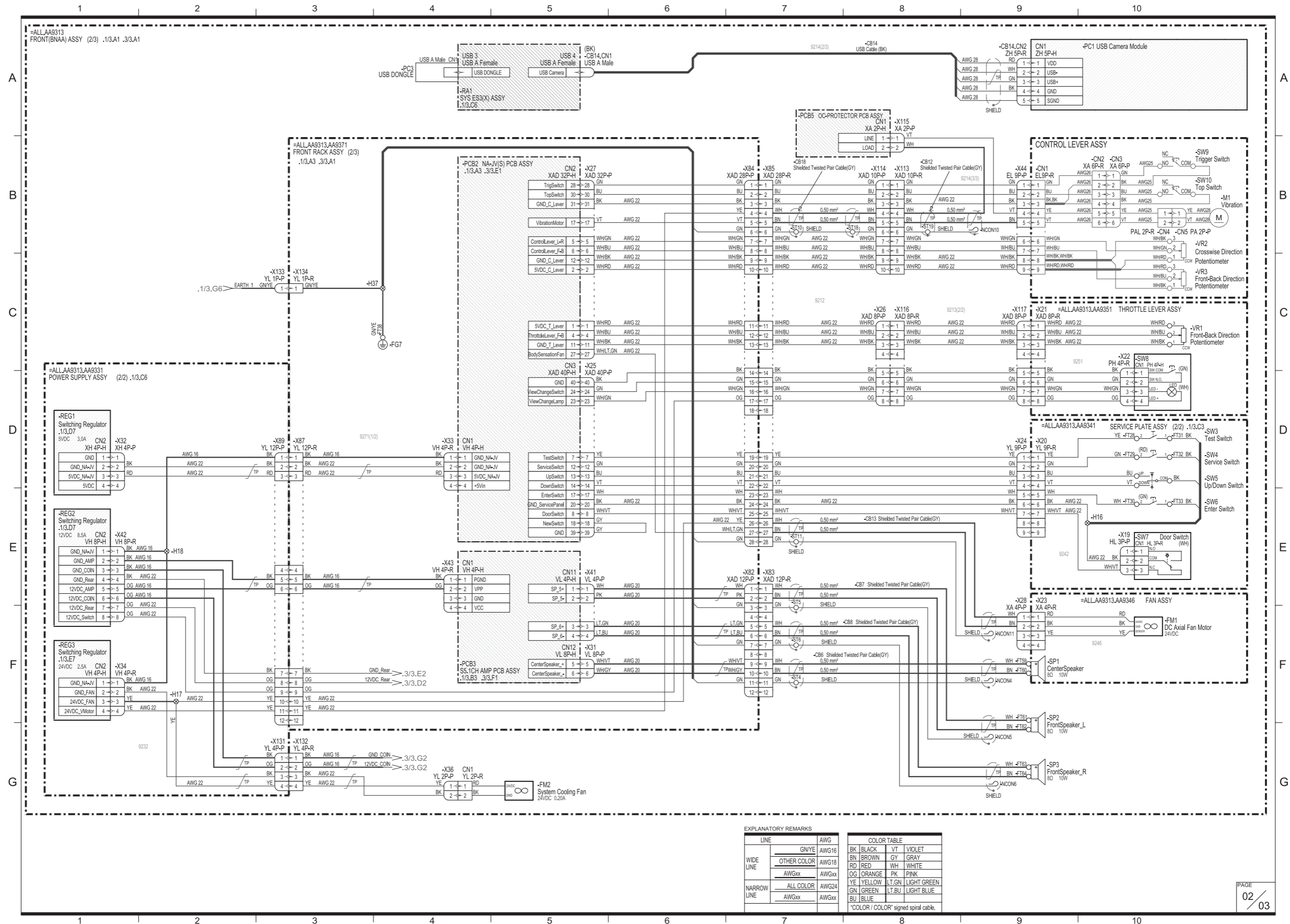
EXPLANATORY REMARKS

LINE	AWG	COLOR TABLE
WIDE LINE	GNYE AWG16	BK BLACK VT VIOLET
	OTHER COLOR AWG18	BN BROWN GY GRAY
	AWGxx AWGxx	RD RED WH WHITE
NARROW LINE	ALL COLOR AWG24	OG ORANGE PK PINK
	AWGxx AWGxx	YE YELLOW LT.GN LIGHT GREEN
		GN GREEN LT.BU LIGHT BLUE
		BU BLUE

COLOR / COLOR signed spiral cable.

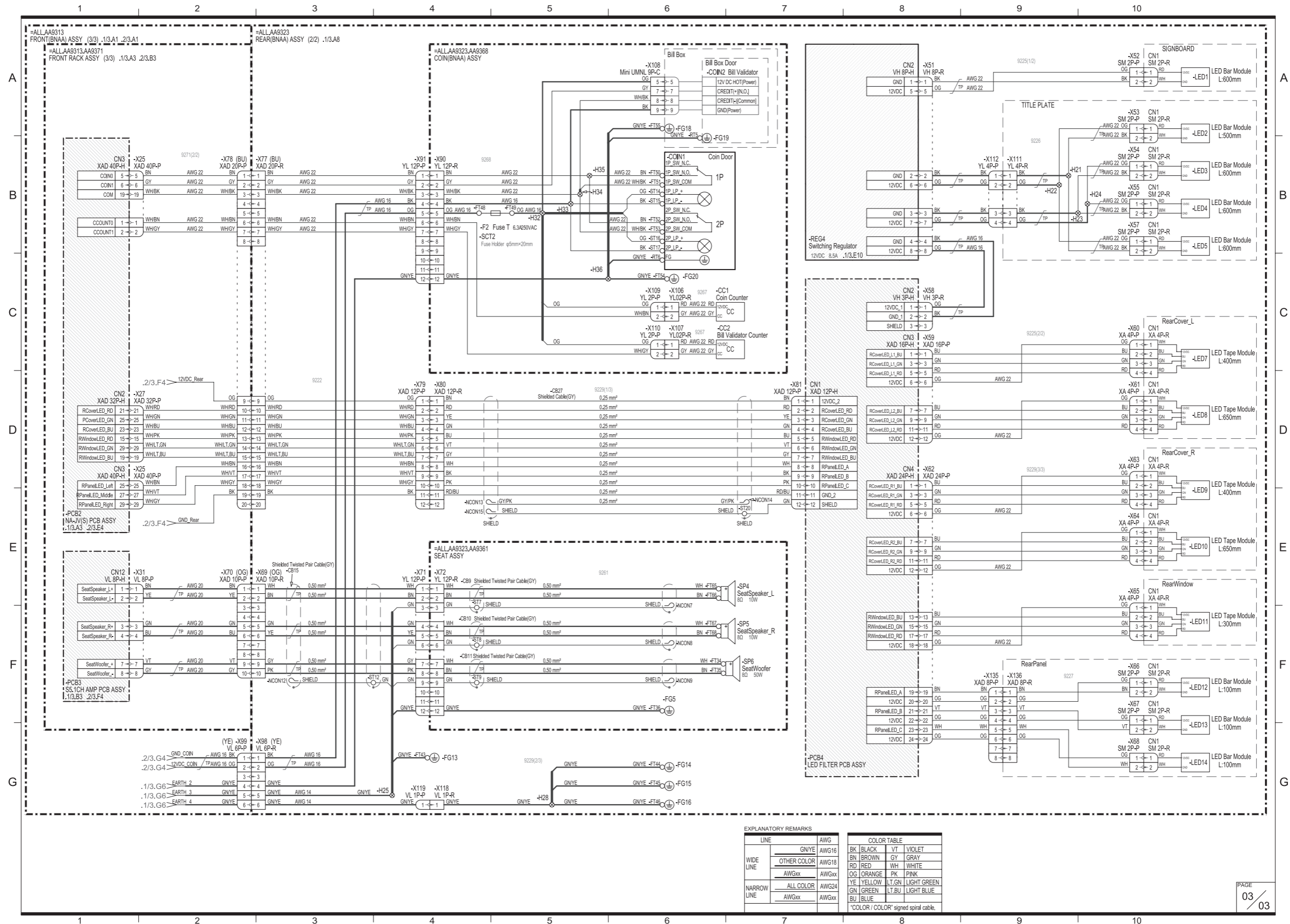
11. Wiring Diagram

(2/3)



11. Wiring Diagram

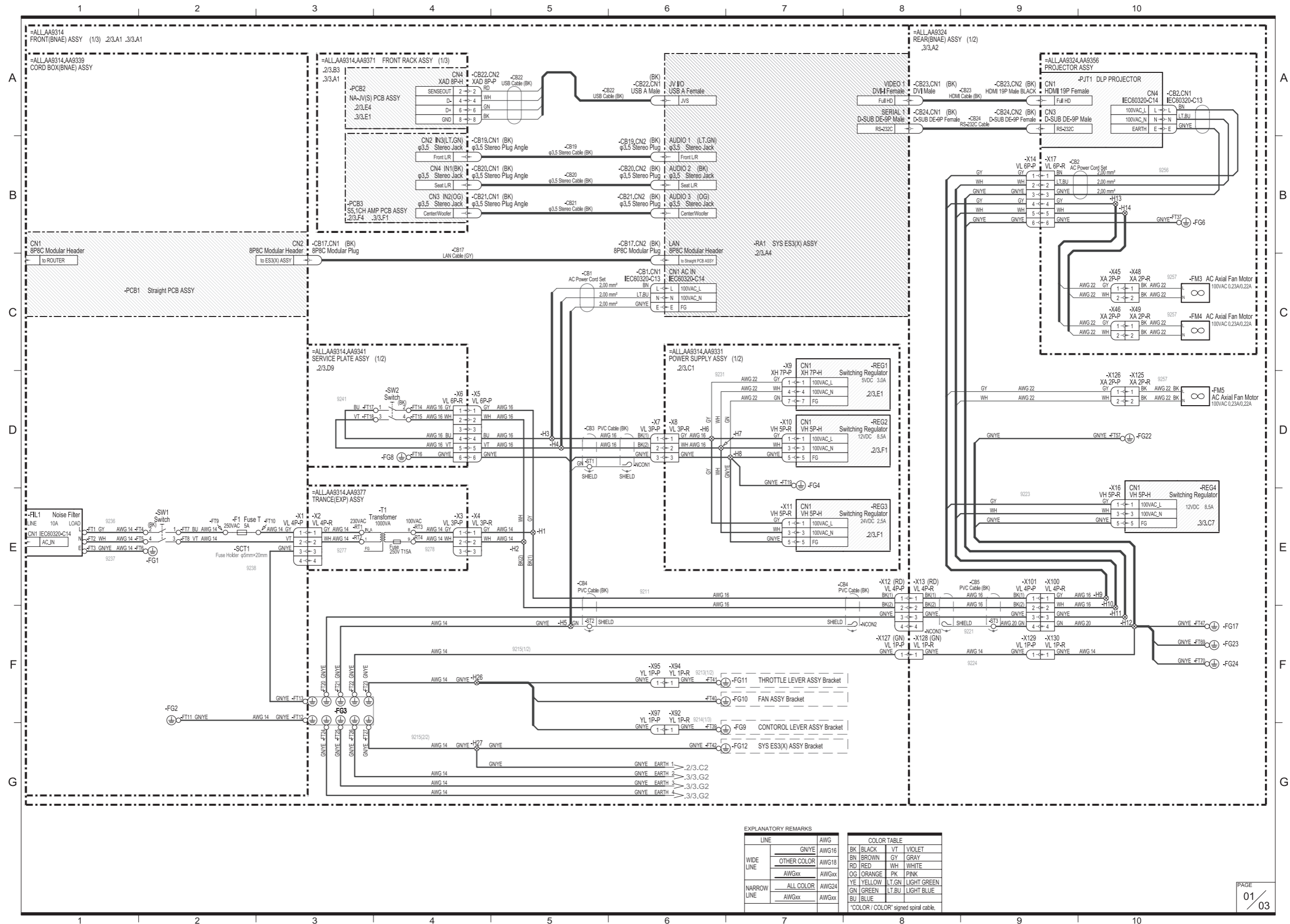
(3/3)



11. Wiring Diagram

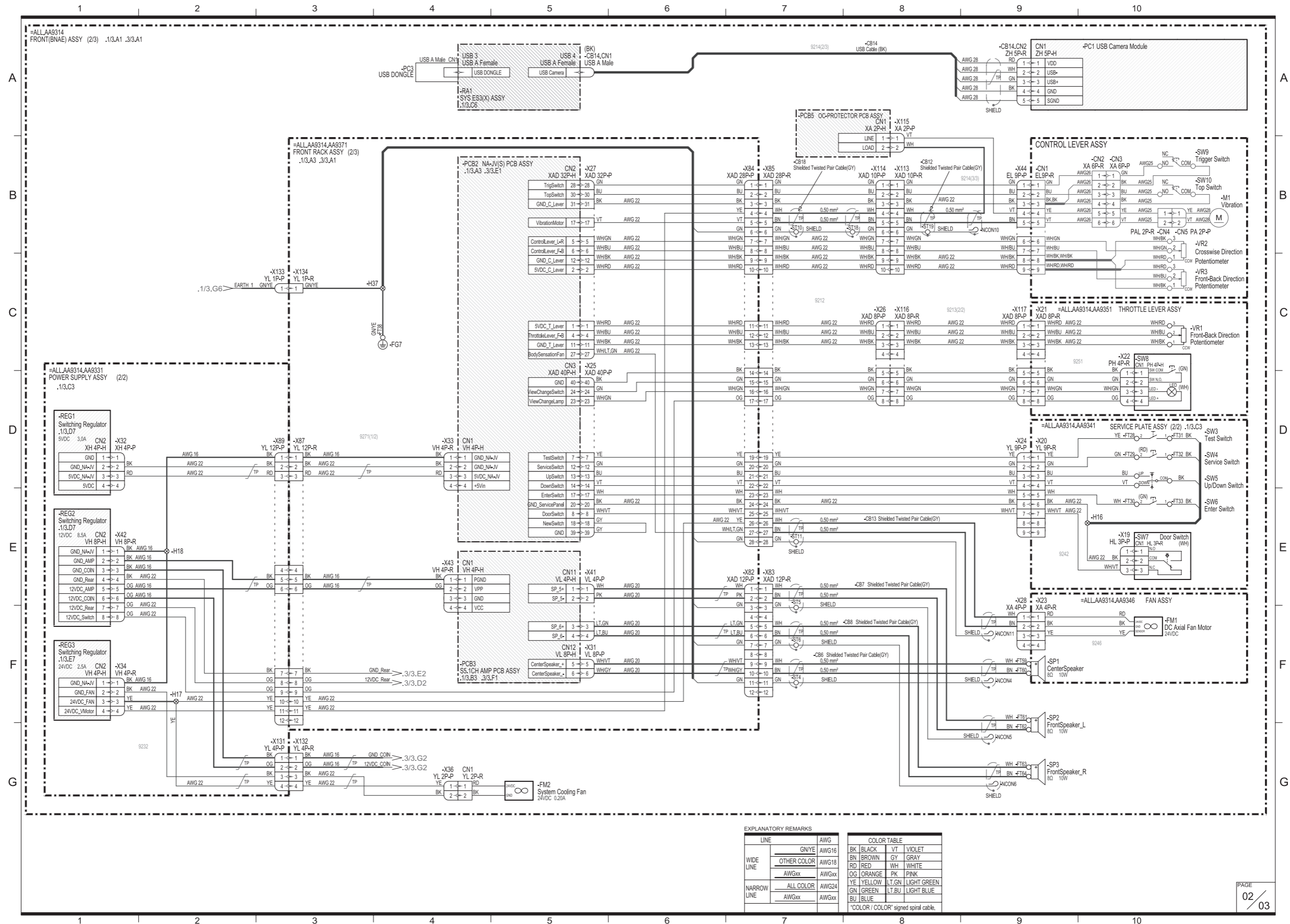
11-2 Overall Connection Diagram (European model, 230 VAC)

(1/3)



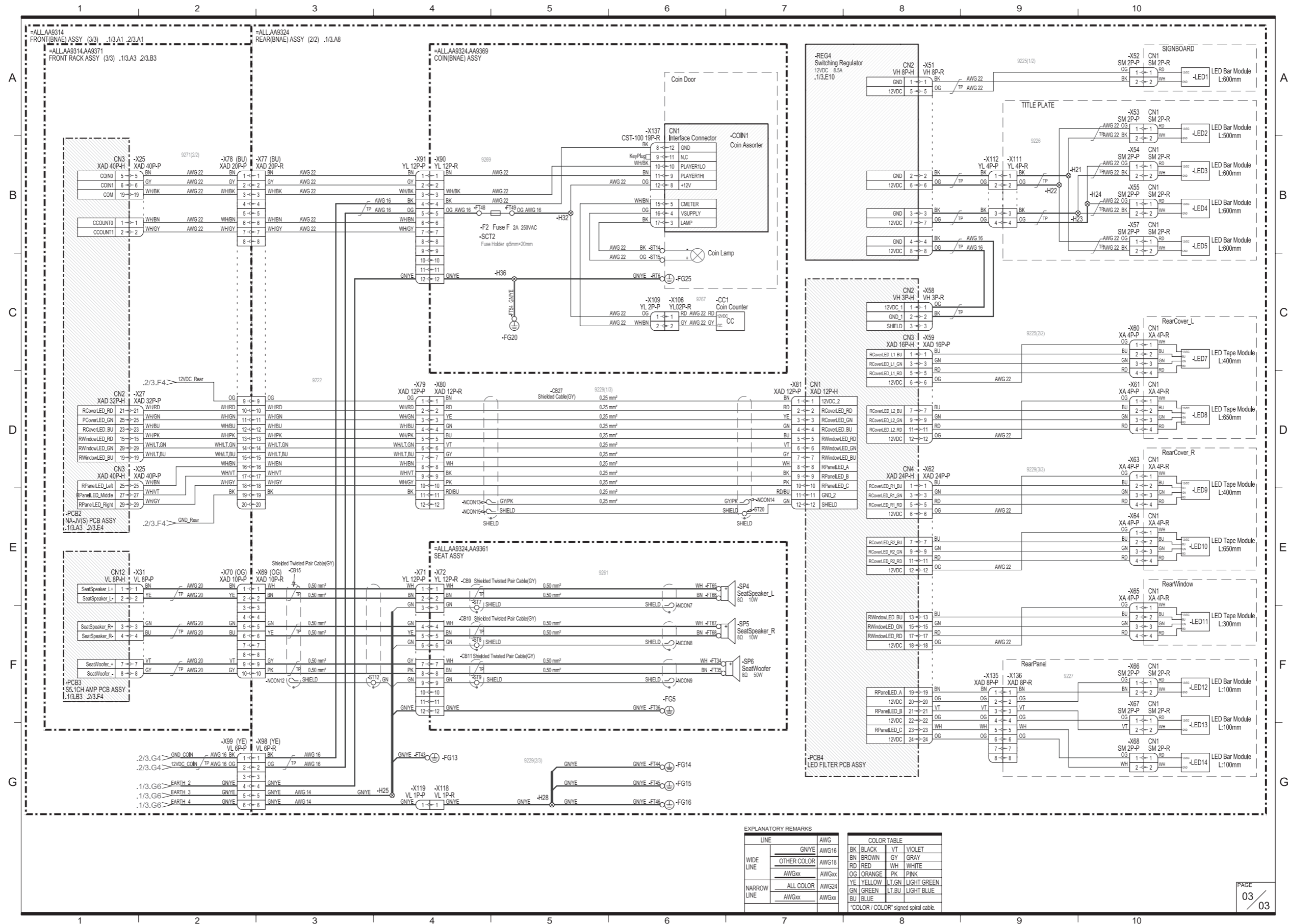
11. Wiring Diagram

(2/3)



11. Wiring Diagram

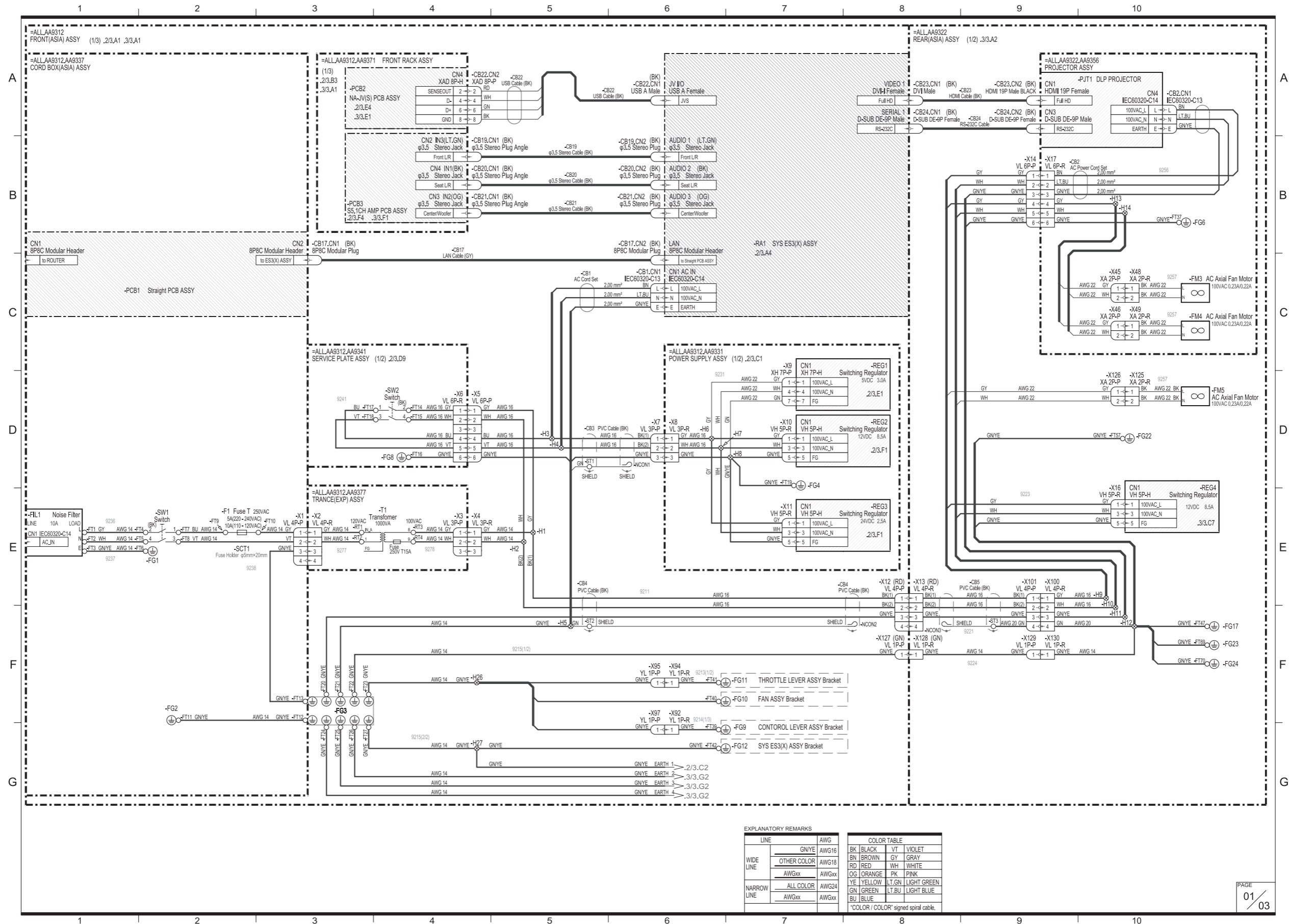
(3/3)



11. Wiring Diagram

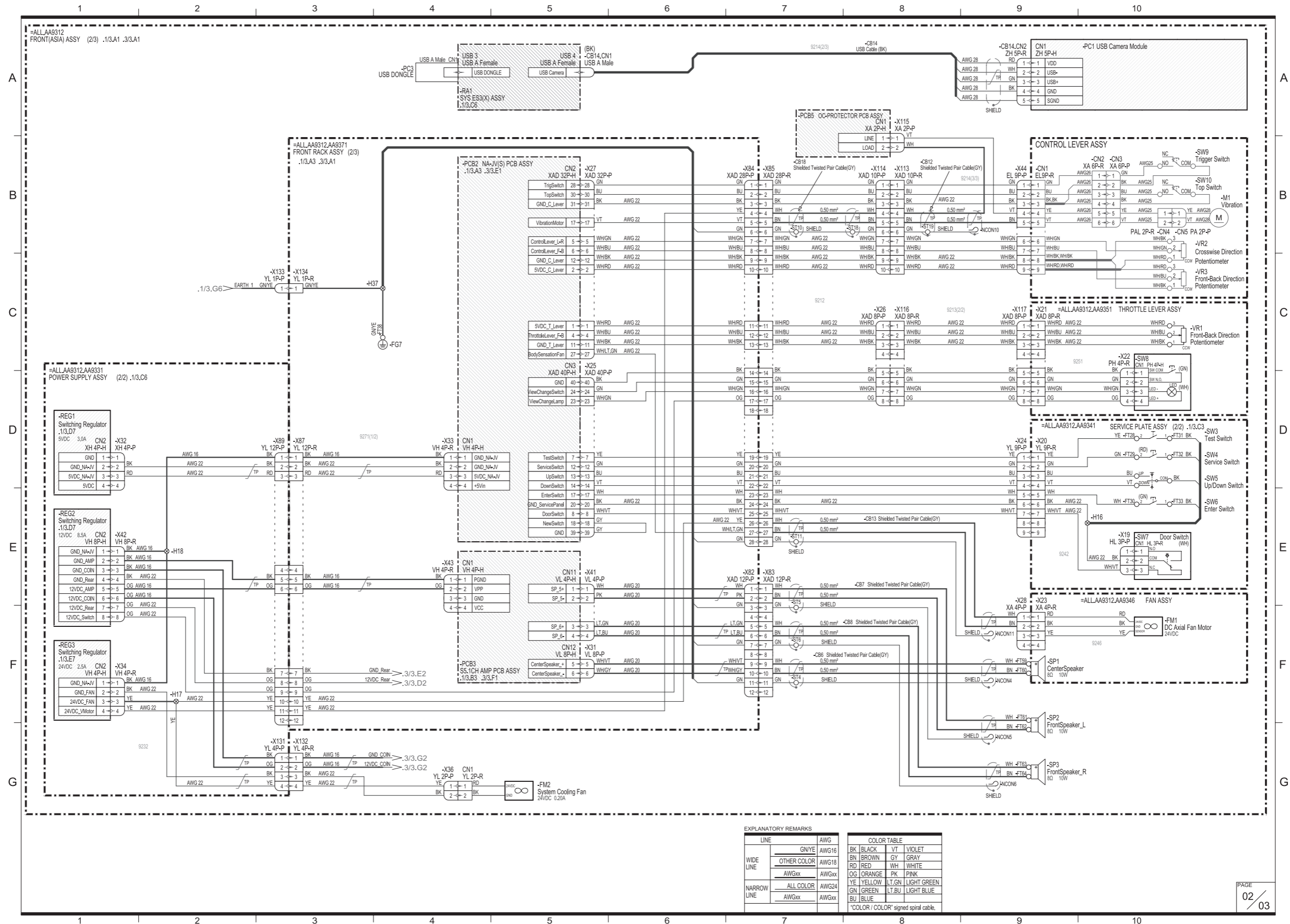
11-3 Overall Connection Diagram (Asian model, 110 to 120 VAC, 220 to 240 VAC)

(1/3)



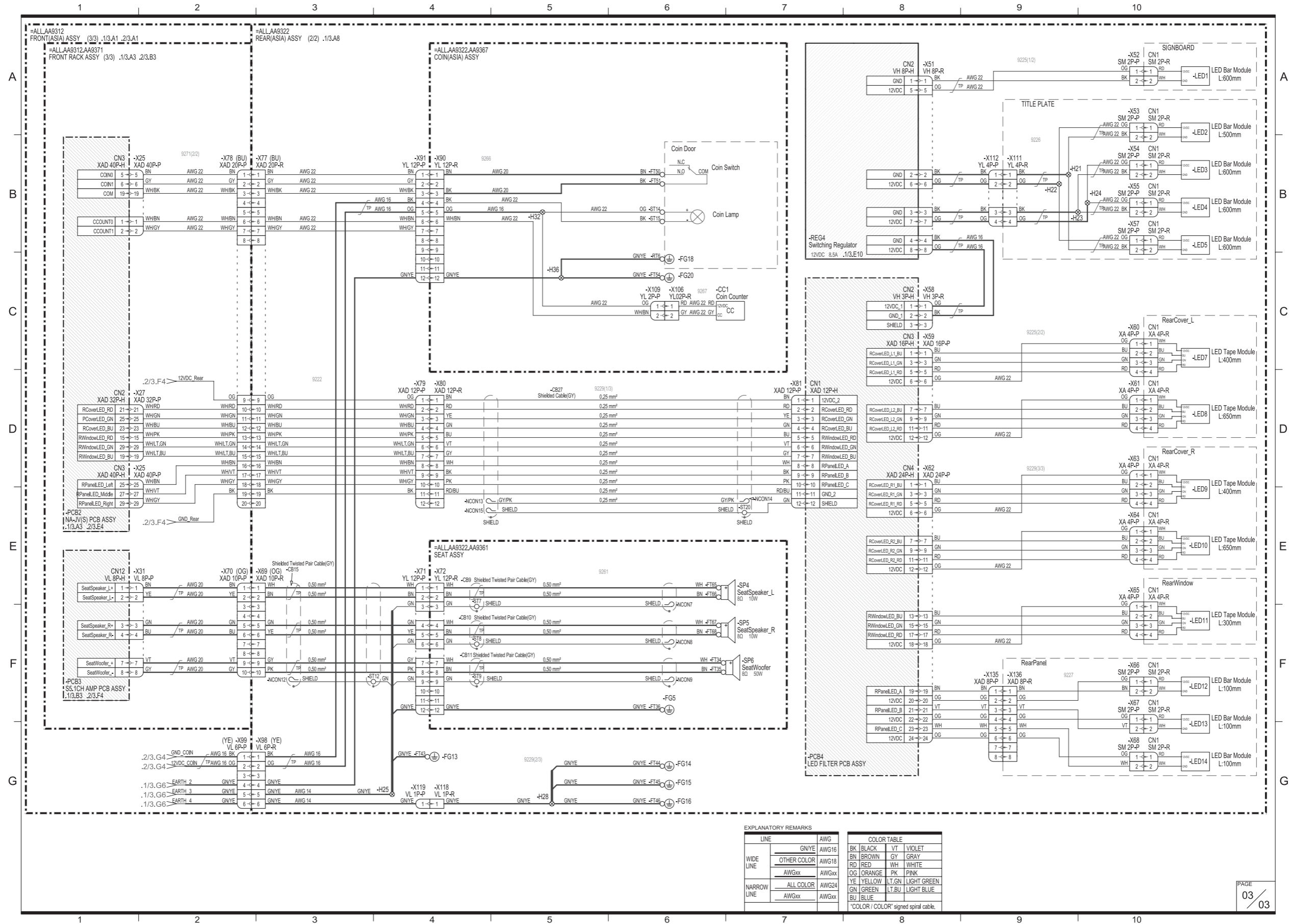
11. Wiring Diagram

(2/3)



11. Wiring Diagram

(3/3)



Copyrights and Trademarks

The software used in this machine is protected by copyright laws.

It is prohibited to copy, adapt, distribute publicly, or use the software for purposes other than the operation of this machine.

Infringement of the copyright laws may be subject to criminal penalties.

In addition, do not use the recording media containing the software in a machine other than the specified machine.

Doing so may result in equipment malfunction.

Unreal, the circle-U logo and the Powered by Unreal Technology logo are trademarks or registered trademarks of Epic Games, Inc. in the United States and elsewhere.

Powered by Wwise © 2006 – 2014 Audiokinetic Inc. All rights reserved.

All other trademarks are the property of their respective owners.

This product includes the following software used under third party license. See below for the license conditions and other information.

libogg

Copyright (c) 2002, Xiph.org Foundation

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of the Xiph.org Foundation nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE FOUNDATION OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

libvorbis

Copyright (c) 2002-2008 Xiph.org Foundation

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of the Xiph.org Foundation nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE FOUNDATION OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

cryptodev

Copyright (c) 2002 Bob Beck <beck@openbsd.org>

Copyright (c) 2002 Theo de Raadt

Copyright (c) 2002 Markus Friedl

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES

(INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

pcrc

WCELIBCEX - Windows CE C Library Extensions

The source code of the WCELIBCEX library is licensed under MIT License:

<http://opensource.org/licenses/mit-license.php>

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Protocol Buffers

Protocol Buffers - Google's data interchange format

Copyright 2008, Google Inc.

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

- * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

- * Neither the name of Google Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Code generated by the Protocol Buffer compiler is owned by the owner of the input file used when generating it. This code is not standalone and requires a support library to be linked with it. This support library is itself covered by the above license.

nvTexture(MIT)

NVIDIA Texture Tools 2.0 is licensed under the MIT license.

Copyright (c) 2007 NVIDIA Corporation

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

OpenSSL

LICENSE ISSUES

=====

The OpenSSL toolkit stays under a dual license, i.e. both the conditions of the OpenSSL License and the original SSLeay license apply to the toolkit. See below for the actual license texts. Actually both licenses are BSD-style Open Source licenses. In case of any license issues related to OpenSSL please contact openssl-core@openssl.org.

OpenSSL License

```
/* =====
* Copyright (c) 1998-2011 The OpenSSL Project. All rights reserved.
*
* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:
*
* 1. Redistributions of source code must retain the above copyright
* notice, this list of conditions and the following disclaimer.
*
* 2. Redistributions in binary form must reproduce the above copyright
* notice, this list of conditions and the following disclaimer in
* the documentation and/or other materials provided with the
* distribution.
*
* 3. All advertising materials mentioning features or use of this
* software must display the following acknowledgment:
* "This product includes software developed by the OpenSSL Project
* for use in the OpenSSL Toolkit. (http://www.openssl.org/)"
*
* 4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to
* endorse or promote products derived from this software without
* prior written permission. For written permission, please contact
* openssl-core@openssl.org.
*
* 5. Products derived from this software may not be called "OpenSSL"
* nor may "OpenSSL" appear in their names without prior written
* permission of the OpenSSL Project.
*
* 6. Redistributions of any form whatsoever must retain the following
* acknowledgment:
* "This product includes software developed by the OpenSSL Project
* for use in the OpenSSL Toolkit (http://www.openssl.org/)"
*
* THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT "AS IS" AND ANY
* EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
* PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR
* ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
* SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT
* NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
* LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
* STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
* ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
* OF THE POSSIBILITY OF SUCH DAMAGE.
* =====
*
* This product includes cryptographic software written by Eric Young
* (eay@cryptsoft.com). This product includes software written by Tim
* Hudson (tjh@cryptsoft.com).
*
```

*/

Original SSLeay License

/* Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)

* All rights reserved.

*

* This package is an SSL implementation written

* by Eric Young (eay@cryptsoft.com).

* The implementation was written so as to conform with Netscapes SSL.

*

* This library is free for commercial and non-commercial use as long as

* the following conditions are aheared to. The following conditions

* apply to all code found in this distribution, be it the RC4, RSA,

* lhash, DES, etc., code; not just the SSL code. The SSL documentation

* included with this distribution is covered by the same copyright terms

* except that the holder is Tim Hudson (tjh@cryptsoft.com).

*

* Copyright remains Eric Young's, and as such any Copyright notices in

* the code are not to be removed.

* If this package is used in a product, Eric Young should be given attribution

* as the author of the parts of the library used.

* This can be in the form of a textual message at program startup or

* in documentation (online or textual) provided with the package.

*

* Redistribution and use in source and binary forms, with or without

* modification, are permitted provided that the following conditions

* are met:

* 1. Redistributions of source code must retain the copyright

* notice, this list of conditions and the following disclaimer.

* 2. Redistributions in binary form must reproduce the above copyright

* notice, this list of conditions and the following disclaimer in the

* documentation and/or other materials provided with the distribution.

* 3. All advertising materials mentioning features or use of this software

* must display the following acknowledgement:

* "This product includes cryptographic software written by

* Eric Young (eay@cryptsoft.com)"

* The word 'cryptographic' can be left out if the rouines from the library

* being used are not cryptographic related :-).

* 4. If you include any Windows specific code (or a derivative thereof) from

* the apps directory (application code) you must include an acknowledgement:

* "This product includes software written by Tim Hudson (tjh@cryptsoft.com)"

*

* THIS SOFTWARE IS PROVIDED BY ERIC YOUNG "AS IS" AND

* ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE

* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE

* ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE

* FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL

* DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS

* OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)

* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT

* LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY

* OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF

* SUCH DAMAGE.

*

* The licence and distribution terms for any publically available version or
* derivative of this code cannot be changed. i.e. this code cannot simply be
* copied and put under another distribution licence
* [including the GNU Public Licence.]

*/

MICROSOFT SOFTWARE LICENSE TERMS

WINDOWS EMBEDDED STANDARD 7

These license terms are an agreement between you and BANDAI NAMCO Games Inc. ("BNGI"). Please read them. They apply to the software included on this device. The software also includes any separate media on which you received the software.

The software on this device includes software licensed from Microsoft Corporation or its affiliate.

The terms also apply to any Microsoft

- updates,
- supplements,
- Internet-based services, and
- support services

for this software, unless other terms accompany those items. If so, those terms apply.

If you obtain updates or supplements directly from Microsoft, then Microsoft, and not BNGI, licenses those to you.

As described below, using the software also operates as your consent to the transmission of certain computer information for Internet-based services.

By using the software, you accept these terms. If you do not accept them, do not use the software. Instead, contact BNGI to determine its return policy for a refund or credit.

If you comply with these license terms, you have the rights below.

1. USE RIGHTS

Use. The software license is permanently assigned to the device with which you acquired the software. You may use the software on the device.

2. ADDITIONAL LICENSING REQUIREMENTS AND/OR USE RIGHTS

a. Specific Use. BNGI designed the device for a specific use. You may only use the software for that use.

b. Other Software. You may use other programs with the software as long as the other programs

- directly supports the manufacturer's specific use for the device, or
- provide system utilities, resource management, or anti-virus or similar protection.
- Software that provides consumer or business tasks or processes may not be run on the device. This includes email, word processing, spreadsheet, database, scheduling and personal finance software. The device may use terminal services protocols to access such software running on a server.

c. Device Connections. You may not use the software as server software. In other words, more than one device may not access, display, run, share or use the software at the same time.

You may use terminal services protocols to connect the device to a server running business task or processes software such as email, word processing, scheduling or spreadsheets.

You may allow up to ten other devices to access the software to use

- File Services,
- Print Services,
- Internet Information Services, and
- Internet Connection Sharing and Telephony Services.

The ten connection limit applies to devices that access the software indirectly through "multiplexing" or other software or hardware that pools connections. You may use unlimited inbound connections at any time via TCP/IP.

d. Remote Access Technologies. You may access and use the software remotely from another device using remote access technologies as follows.

Remote Desktop. The single primary user of the device may access a session from any other device using Remote Desktop or similar technologies. A "session" means the experience of interacting with the software, directly or indirectly, through any combination of input, output and display peripherals. Other users may access a session from

any device using these technologies, if the remote device is separately licensed to run the software.

Other Access Technologies. You may use Remote Assistance or similar technologies to share an active session.

Other Remote Uses. You may allow any number of devices to access the software for purposes other than those described in the Device Connections and Remote Access Technologies sections above, such as to synchronize data between devices.

e. Font Components. While the software is running, you may use its fonts to display and print content. You may only

- embed fonts in content as permitted by the embedding restrictions in the fonts; and
- temporarily download them to a printer or other output device to print content.

f. Icons, images and sounds. While the software is running, you may use but not share its icons, images, sounds, and media.

3. VHD BOOT. Additional copies of the software created using the software's Virtual Hard Disk functionality ("VHD Image") may be pre-installed on the physical hard disk of the device. These VHD Images may only be used for maintaining or updating the software installed on the physical hard disk or drive. If the VHD Image is the only software on your device, it may be used as the primary operating system but all other copies of the VHD Image may only be used for maintenance and updating.

4. POTENTIALLY UNWANTED SOFTWARE. The software may include Windows Defender. If Windows Defender is turned on, it will search this device for "spyware," "adware" and other potentially unwanted software. If it finds potentially unwanted software, the software will ask you if you want to ignore, disable (quarantine) or remove it. Any potentially unwanted software rated "high" or "severe," will be automatically removed after scanning unless you change the default setting. Removing or disabling potentially unwanted software may result in

- Other software on your device ceasing to work, or
- Your breaching a license to use other software on this device

By using this software, it is possible that you will also remove or disable software that is not potentially unwanted software.

5. SCOPE OF LICENSE. The software is licensed, not sold. This agreement only gives you some rights to use the software. BNGI and Microsoft reserve all other rights. Unless applicable law gives you more rights despite this limitation, you may use the software only as expressly permitted in this agreement. In doing so, you must comply with any technical limitations in the software that allow you to use it only in certain ways. For more information, see the software documentation or contact BNGI. You may not:

- work around any technical limitations in the software;
- reverse engineer, decompile or disassemble the software;
- make more copies of the software than specified in this agreement;
- publish the software for others to copy;
- rent, lease or lend the software; or
- use the software for commercial software hosting services.

Except as expressly provided in this agreement, rights to access the software on this device do not give you any right to implement Microsoft patents or other Microsoft intellectual property in software or devices that access this device.

6. INTERNET-BASED SERVICES. Microsoft provides Internet-based services with the software. Microsoft may change or cancel them at any time.

a. Consent for Internet-Based Services. The device may contain one or more of the software features described below. These features connect to Microsoft or service provider computer systems over the Internet. In some cases, you will not receive a separate notice when they connect. For more information about these features, visit go.microsoft.com/fwlink/?linkid=104604.

By using these features, you consent to the transmission of this information. Microsoft does not use the information to identify or contact you.

Computer Information. The following features use Internet protocols, which send to the appropriate systems

computer information, such as your Internet protocol address, the type of operating system and browser, the name and version of the software you are using, and the language code of the device where you installed the software. Microsoft uses this information to make the Internet-based services available to you. BNGI has elected to turn on the following features on the device.

- Plug and Play and Plug and Play Extensions. You may connect new hardware to your device. Your device may not have the drivers needed to communicate with that hardware. If so, the update feature of the software can obtain the correct driver from Microsoft and install it on your device.
- Web Content Features. Features in the software can retrieve related content from Microsoft and provide it to you. Examples of these features are clip art, templates, online training, online assistance and Appshelp. You may choose to switch them off or not use them.
- Digital Certificates. The software uses x.509 version 3 digital certificates. These digital certificates confirm the identity of user sending information to each other and allow you to encrypt the information. The software retrieves certificates and updates certificate revocation lists over the Internet.
- Auto Root Update. The Auto Root Update feature updates the list of trusted certificate authorities. You can switch off this feature.
- Windows Media Digital Rights Management. Content owners use Windows Media digital rights management technology (WMDRM) to protect their intellectual property, including copyrights. This software and third party software use WMDRM to play and copy WMDRM-protected content. If the software fails to protect the content, content owners may ask Microsoft to revoke the software's ability to use WMDRM to play or copy protected content. Revocation does not affect other content. When you download licenses for protected content, you agree that Microsoft may include a revocation list with the licenses. Content owners may require you to upgrade WMDRM to access their content. Microsoft software that includes WMDRM will ask for your consent prior to the upgrade. If you decline an upgrade, you will not be able to access content that requires the upgrade. You may switch off WMDRM features that access the Internet. When these features are off, you can still play content for which you have a valid license.
- Windows Media Player. When you use Windows Media Player, it checks with Microsoft for
 - compatible online music services in your region;
 - new versions of the player; and
 - codecs if your device does not have the correct ones for playing content.

You can switch off this feature. For more information, go to: go.microsoft.com/fwlink/?LinkId=51331.

- Malicious Software Removal/Clean On Upgrade. Before installation of the software, the software will check and remove certain malicious software listed at www.support.microsoft.com/?kbid=890830 ("Malware") from your device. When the software checks your device for Malware, a report will be sent to Microsoft about any Malware detected or errors that occurred while the software was checking for Malware. No information that can be used to identify you is included in the report. You may disable the software's Malware reporting functionality by following the instructions found at www.support.microsoft.com/?kbid=890830.
- Network Awareness. This feature determines whether a system is connected to a network by either passive monitoring of network traffic or active DNS or HTTP queries. The query only transfers standard TCP/IP or DNS information for routing purposes. You can switch off the active query feature through a registry setting.
- Windows Time Service. This service synchronizes with www.time.windows.com once a week to provide your device with the correct time. The connection uses standard NTP protocol.
- Search Suggestions Service. In Internet Explorer, when you type a search query in the Instant Search box or type a question mark (?) before your search term in the Address bar, you will see search suggestions as you type (if supported by your search provider). Everything you type in the Instant Search box or in the Address bar when preceded by a question mark (?) is sent to your search provider as you type. Also, when you press Enter or click the Search button, the text in the Instant Search box or Address bar is sent to the search provider. If you use a Microsoft search provider, use of the information sent is subject to the Microsoft Online Privacy Statement. This statement is available at go.microsoft.com/fwlink/?linkid=31493. If you use a third-party search provider, use of the information sent will be subject to the third party's privacy practices. You can turn search suggestions off at any time. To do so, use Manage Add-ons under the Tools button in Internet Explorer. For more information about the search suggestions service, see go.microsoft.com/fwlink/?linkid=128106.

- Consent to Update Infrared Emitter/Receiver. The software may contain technology to ensure the proper functioning of the infrared emitter/receiver device shipped with certain Media Center-based products. You agree that the software may update the firmware of this device.
- Media Center Online Promotions. If you use Media Center features of the software to access Internet-based content or other Internet-based services, such services may obtain the following information from the software to enable you to receive, accept and use certain promotional offers:
 - certain device information, such as your Internet protocol address, the type of operating system and browser you are using, and the name and version of the software you are using,
 - the requested content, and
 - the language code of the device where you installed the software.

Your use of the Media Center features to connect to those services serves as your consent to the collection and use of such information.

- Media Playback Updates. The software on the device may include media playback features which receives updates directly from the MSCORP Media Playback Update servers. If activated by your manufacturer, these updates will be downloaded and installed without further notice to you. The manufacturer is responsible for ensuring these updates work on your device.
 - Windows Update Agent. The software on the device includes Windows Update Agent (“WUA”). This feature enables your device to access Windows Updates either directly from MSCORP Windows Update server or from a server installed with the required server component and from the Microsoft Windows Update server. To enable the proper functioning of the Windows Update service in the software (if you use it) updates or downloads to the Windows Update service will be required from time to time and downloaded and installed without further notice to you. Without limiting any other disclaimer in these license terms or any license terms accompanying a Windows Update, you acknowledge and agree that no warranty is provided by Microsoft Corporation or their affiliates with respect to any Windows Update that you install or attempt to install on your device.
- b. Use of Information.** Microsoft may use the device information, error reports, and Malware reports to improve our software and services. We may also share it with others, such as hardware and software vendors. They may use the information to improve how their products run with Microsoft software.
- c. Misuse of Internet-based Services.** You may not use these services in any way that could harm them or impair anyone else’s use of them. You may not use the services to try to gain unauthorized access to any service, data, account or network by any means.

7. PRODUCT SUPPORT. Contact BNGI for support options. Refer to the support number provided with the device.

8. MICROSOFT .NET BENCHMARK TESTING. The software includes one or more components of the .NET Framework (“ .NET Components”). You may conduct internal benchmark testing of those components. You may disclose the results of any benchmark test of those components, provided that you comply with the conditions set forth at go.microsoft.com/fwlink/?LinkID=66406.

Notwithstanding any other agreement you may have with Microsoft, if you disclose such benchmark test results, Microsoft shall have the right to disclose the results of benchmark tests it conducts of your products that compete with the applicable .NET Component, provided it complies with the same conditions set forth at go.microsoft.com/fwlink/?LinkID=66406.

9. BACKUP COPY. You may make one backup copy of the software. You may use it only to reinstall the software on the device.

10. DOCUMENTATION. Any person that has valid access to your device or internal network may copy and use the documentation for your internal, reference purposes.

11. PROOF OF LICENSE. If you acquired the software on the device, or on a disc or other media, a genuine Certificate of Authenticity label with a genuine copy of the software identifies licensed software. To be valid, this label must be affixed to the device, or included on or in BNGI’s software packaging. If you receive the label separately, it is not valid. You should keep the label on the device or packaging to prove that you are licensed to use the software. To identify genuine Microsoft software, see <http://www.howtotell.com>.

12. TRANSFER TO A THIRD PARTY. You may transfer the software only with the device, the Certificate of Authenticity label, and these license terms directly to a third party. Before the transfer, that party must agree that these license terms apply to the transfer and use of the software. You may not retain any copies of the software including the backup copy.

- 13. NOTICE ABOUT THE H.264/AVC VISUAL STANDARD, THE VC-1 VIDEO STANDARD, THE MPEG-4 VISUAL STANDARD AND THE MPEG-2 VIDEO STANDARD.** This software may include H.264/AVC, VC-1, MPEG-4 Part 2, and MPEG-2 visual compression technology. If the software includes those visual compression technologies MPEG LA, L.L.C. requires this notice:

THIS PRODUCT IS LICENSED UNDER ONE OR MORE VIDEO PATENT PORTFOLIO LICENSES SUCH AS, AND WITHOUT LIMITATION, THE AVC, THE VC-1, THE MPEG-4 PART 2 VISUAL, AND THE MPEG 2 VIDEO PATENT PORTFOLIO LICENSES FOR THE PERSONAL AND NON-COMMERCIAL USE OF A CONSUMER TO (i) ENCODE VIDEO IN COMPLIANCE WITH THE ABOVE STANDARDS (“VIDEO STANDARDS”) AND/OR (ii) DECODE VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL AND NON-COMMERCIAL ACTIVITY OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED TO PROVIDE VIDEO UNDER SUCH PATENT PORTFOLIO LICENSES. NONE OF THE LICENSES EXTEND TO ANY OTHER PRODUCT REGARDLESS OF WHETHER SUCH PRODUCT IS INCLUDED WITH THIS PRODUCT IN A SINGLE ARTICLE. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION MAY BE OBTAINED FROM MPEG LA, L.L.C. SEE WWW.MPEGLA.COM.

- 14. NOTICE ABOUT THE MP3 AUDIO STANDARD.** This software includes MP3 audio encoding and decoding technology as defined by ISO/IEC 11172-3 and ISO/IEC 13818-3. It is not licensed for any implementation or distribution in any commercial product or service.
- 15. NOT FAULT TOLERANT. The software is not fault tolerant. BNGI installed the software on the device and is responsible for how it operates on the device.**
- 16. RESTRICTED USE.** The Microsoft software was designed for systems that do not require fail-safe performance. You may not use the Microsoft software in any device or system in which a malfunction of the software would result in foreseeable risk of injury or death to any person. This includes operation of nuclear facilities, aircraft navigation or communication systems and air traffic control.
- 17. NO WARRANTIES FOR THE SOFTWARE. The software is provided “as is”. You bear all risks of using it. Microsoft gives no express warranties, guarantees or conditions. Any warranties you receive regarding the device or the software do not originate from, and are not binding on, Microsoft or its affiliates. When allowed by your local laws, BNGI and Microsoft exclude implied warranties of merchantability, fitness for a particular purpose and non-infringement.**
- 18. LIABILITY LIMITATIONS. You can recover from Microsoft and its affiliates only direct damages up to two hundred fifty U.S. Dollars (U.S. \$250.00). You cannot recover any other damages, including consequential, lost profits, special, indirect or incidental damages.**

This limitation applies to:

- anything related to the software, services, content (including code) on third party internet sites, or third party programs, and
- claims for breach of contract, breach of warranty, guarantee or condition, strict liability, negligence, or other tort to the extent permitted by applicable law.

It also applies even if Microsoft should have been aware of the possibility of the damages. The above limitation may not apply to you because your country may not allow the exclusion or limitation of incidental, consequential or other damages.

- 19. EXPORT RESTRICTIONS.** The software is subject to United States export laws and regulations. You must comply with all domestic and international export laws and regulations that apply to the software. These laws include restrictions on destinations, end users and end use. For additional information, see www.microsoft.com/exporting.
- 20. ENTIRE AGREEMENT.** This agreement, additional terms (including any printed-paper license terms that accompany the software and may modify or replace some or all of these terms), and the terms for supplements, updates, Internet-based services and support services that you use, are the entire agreement for the software and support services.
- 21. APPLICABLE LAW**
- a. United States.** If you acquired the software in the United States, Washington state law governs the interpretation of this agreement and applies to claims for breach of it, regardless of conflict of laws principles. The laws of the state where you live govern all other claims, including claims under state consumer protection laws, unfair competition laws, and in tort.

b. Outside the United States. If you acquired the software in any other country, the laws of that country apply.

22. Third Party Programs. Microsoft provides the following copyright notices for third party software included in the software. These notices are required by the respective copyright holders and do not change your license to use this software.

Portions of this software are based in part on the work of Spider Systems © Limited. Because Microsoft has included the Spider Systems Limited software in this product, Microsoft is required to include the following text that accompanied such software:

Copyright 1987 Spider Systems Limited
Copyright 1988 Spider Systems Limited
Copyright 1990 Spider Systems Limited

Portions of this software are based in part on the work of Seagate Software.

Portions of this software are based in part on the work of ACE*COMM Corp. Because Microsoft has included the ACE*COMM Corp. software in this product, Microsoft is required to include the following text that accompanied such software:

Copyright 1995-1997 ACE*COMM Corp

Portions of this software are based in part on the work of Sam Leffler and Silicon Graphics, Inc. Because Microsoft has included the Sam Leffler and Silicon Graphics software in this product, Microsoft is required to include the following text that accompanied such software:

Copyright © 1988-1997 Sam Leffler
Copyright © 1991-1997 Silicon Graphics, Inc.

Permission to use, copy, modify, distribute, and sell this software and its documentation for any purpose is hereby granted without fee, provided that (i) the above copyright notices and this permission notice appear in all copies of the software and related documentation, and (ii) the names of Sam Leffler and Silicon Graphics may not be used in any advertising or publicity relating to the software without the specific, prior written permission of Sam Leffler and Silicon Graphics.

THE SOFTWARE IS PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND, EXPRESS, IMPLIED OR OTHERWISE, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT SHALL SAM LEFFLER OR SILICON GRAPHICS BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES OF ANY KIND, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER OR NOT ADVISED OF THE POSSIBILITY OF DAMAGE, AND ON ANY THEORY OF LIABILITY, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Portions Copyright © 1998 PictureTel Corporation

Portions of this software are based in part on the work of Highground Systems. Because Microsoft has included the Highground Systems software in this product, Microsoft is required to include the following text that accompanied such software:

Copyright © 1996-1999 Highground Systems

Windows 7 incorporates compression code from the Info-ZIP group. There are no extra charges or costs due to the use of this code, and the original compression sources are freely available from <http://www.info-zip.org/> or <ftp://ftp.info-zip.org/pub/>

infozip/src/ on the Internet.

Portions Copyright © 2000 SRS Labs, Inc

This product includes software from the 'zlib' general purpose compression library.

Portions of this software are based in part on the work of ScanSoft, Inc. Because Microsoft has included the ScanSoft, Inc. software in this product, Microsoft is required to include the following text that accompanied such software:

TextBridge® OCR © by ScanSoft, Inc.

Portions of this software are based in part on the work of University of Southern California. Because Microsoft has included the University of Southern California software in this product, Microsoft is required to include the following text that accompanied such software:

Copyright © 1996 by the University of Southern California

All rights reserved.

Permission to use, copy, modify, and distribute this software and its documentation in source and binary forms for any purpose and without fee is hereby granted, provided that both the above copyright notice and this permission notice appear in all copies, and that any documentation, advertising materials, and other materials related to such distribution and use acknowledge that the software was developed in part by the University of Southern California, Information Sciences Institute. The name of the University may not be used to endorse or promote products derived from this software without specific prior written permission.

THE UNIVERSITY OF SOUTHERN CALIFORNIA makes no representations about the suitability of this software for any purpose. THIS SOFTWARE IS PROVIDED "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Other copyrights might apply to parts of this software and are so noted when applicable.

Portions of this software are based in part on the work of James Kanze. Because Microsoft has included the James Kanze software in this product, Microsoft is required to include the following text that accompanied such software:

COPYRIGHT AND PERMISSION NOTICE

All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, publish, distribute, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, provided that the above copyright notice(s) and this permission notice appear in all copies of the Software and that both the above copyright notice(s) and this permission notice appear in supporting documentation. Permission is also given to modify the software to any extent, under the condition that, in the modified software, the prefix "GB_" is changed to something else, and the name directories for includes files ("gb" in this distribution) is also changed.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization of the copyright holder.

This product contains software from Cisco ISAKMP Services.

Portions of this software are based in part on the work of RSA Data Security, Inc. Because Microsoft has included the RSA Data Security, Inc. software in this product, Microsoft is required to include the following text that accompanied such software:

Copyright © 1990, RSA Data Security, Inc. All rights reserved.

License to copy and use this software is granted provided that it is identified as the "RSA Data Security, Inc. MD5 Message-Digest Algorithm" in all material mentioning or referencing this software or this function. License is also granted to make and use derivative works provided that such works are identified as "derived from the RSA Data Security, Inc. MD5 Message-Digest Algorithm" in all material mentioning or referencing the derived work.

RSA Data Security, Inc. makes no representations concerning either the merchantability of this software or the suitability of this software for any particular purpose. It is provided "as is" without express or implied warranty of any kind.

These notices must be retained in any copies of any part of this documentation and/or software.

Portions of this software are based in part on the work of OpenVision Technologies, Inc. Because Microsoft has included the OpenVision Technologies, Inc. software in this product, Microsoft is required to include the following text that accompanied such software:

Copyright 1993 by OpenVision Technologies, Inc.

Permission to use, copy, modify, distribute, and sell this software and its documentation for any purpose is hereby granted without fee, provided that the above copyright notice appears in all copies and that both that copyright notice and this permission notice appear in supporting documentation, and that the name of OpenVision not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission. OpenVision makes no representations about the suitability of this software for any purpose. It is provided "as is" without express or implied warranty.

OPENVISION DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS, IN NO EVENT SHALL OPENVISION BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Portions of this software are based in part on the work of Regents of The University of Michigan. Because Microsoft has included the Regents of The University of Michigan software in this product, Microsoft is required to include the following text that accompanied such software:

Copyright © 1995, 1996 Regents of The University of Michigan.
All Rights Reserved.

Permission to use, copy, modify, and distribute this software and its documentation for any purpose and without fee is hereby granted, provided that the above copyright notice appears in all copies and that both that copyright notice and this permission notice appear in supporting documentation, and that the name of The University of Michigan not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission. This software is supplied as is without expressed or implied warranties of any kind.

Copyright © 1993, 1994 Regents of the University of Michigan.
All rights reserved.

Redistribution and use in source and binary forms are permitted provided that this notice is preserved and that due credit is given to the University of Michigan at Ann Arbor. The name of the University may not be used to endorse or promote products derived from this software without specific prior written permission. This software is provided "as is" without express or implied warranty.

Portions of this software are based in part on the work of Massachusetts Institute of Technology. Because Microsoft has included the Massachusetts Institute of Technology software in this product, Microsoft is required to include the following text

that accompanied such software:

Copyright 1989, 1990 by the Massachusetts Institute of Technology. All Rights Reserved.

Export of this software from the United States of America may require a specific license from the United States Government. It is the responsibility of any person or organization contemplating export to obtain such a license before exporting.

WITHIN THAT CONSTRAINT, permission to use, copy, modify, and distribute this software and its documentation for any purpose and without fee is hereby granted, provided that the above copyright notice appear in all copies and that both that copyright notice and this permission notice appear in supporting documentation, and that the name of M.I.T. not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission. M.I.T. makes no representations about the suitability of this software for any purpose. It is provided "as is" without express or implied warranty.

Under U.S. law, this software may not be exported outside the US without license from the U.S. Commerce department.

Copyright 1994 by the Massachusetts Institute of Technology. All Rights Reserved.

Export of this software from the United States of America may require a specific license from the United States Government. It is the responsibility of any person or organization contemplating export to obtain such a license before exporting.

WITHIN THAT CONSTRAINT, permission to use, copy, modify, and distribute this software and its documentation for any purpose and without fee is hereby granted, provided that the above copyright notice appear in all copies and that both that copyright notice and this permission notice appear in supporting documentation, and that the name of M.I.T. not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission. M.I.T. makes no representations about the suitability of this software for any purpose. It is provided "as is" without express or implied warranty.

This product includes software developed by the University of California, Berkeley and its contributors.

Portions of this software are based in part on the work of the "Entrust" security technology licensed from Northern Telecom.

Portions of this software are based in part on the work of Hewlett-Packard Company. Because Microsoft has included the Hewlett-Packard Company software in this product, Microsoft is required to include the following text that accompanied such software:

Copyright © 1994 Hewlett-Packard Company

Permission to use, copy, modify, distribute and sell this software and its documentation for any purpose is hereby granted without fee, provided that the above copyright notice appear in all copies and that both that copyright notice and this permission notice appear in supporting documentation. Hewlett-Packard Company and Microsoft Corporation make no representations about the suitability of this software for any purpose. It is provided "as is" without express or implied warranty.

This product includes software from the 'libpng' PNG reference library.

Portions of this software are based in part on the work of Autodesk, Inc. Because Microsoft has included the Autodesk, Inc. software in this product, Microsoft is required to include the following text that accompanied such software:

© Copyright 1995 by Autodesk, Inc.

This product contains graphics filter software; this software is based in part on the work of the Independent JPEG Group.

This product includes "True Verb" technology from KS Waves Ltd.

Portions of this software are based in part on the work of SGS-Thomson Microelectronics, Inc. Because Microsoft has included the SGS-Thomson Microelectronics, Inc. software in this product, Microsoft is required to include the following text that accompanied such software:

Portions of this software are based in part on the work of Unicode, Inc. Because Microsoft has included the Unicode, Inc. software in this product, Microsoft is required to include the following text that accompanied such software:

COPYRIGHT AND PERMISSION NOTICE

Copyright © 1991-2005 Unicode, Inc. All rights reserved. Distributed under the Terms of Use in <http://www.unicode.org/copyright.html>.

Permission is hereby granted, free of charge, to any person obtaining a copy of the Unicode data files and any associated documentation (the "Data Files") or Unicode software and any associated documentation (the "Software") to deal in the Data Files or Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Data Files or Software, and to permit persons to whom the Data Files or Software are furnished to do so, provided that (a) the above copyright notice(s) and this permission notice appear with all copies of the Data Files or Software, (b) both the above copyright notice(s) and this permission notice appear in associated documentation, and © there is clear notice in each modified Data File or in the Software as well as in the documentation associated with the Data File(s) or Software that the data or software has been modified.

THE DATA FILES AND SOFTWARE ARE PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE DATA FILES OR SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in these Data Files or Software without prior written authorization of the copyright holder.

The Combined PostScript Driver was the result of a cooperative development process by Adobe Systems Incorporated and Microsoft Corporation.

Portions of this software are based in part on the work of Media Cybernetics. Because Microsoft has included the Media Cybernetics software in this product, Microsoft is required to include the following text that accompanied such software:

HALO Image File Format Library © 1991-1992 Media Cybernetics, Inc.

Portions of this software are based in part on the work of Luigi Rizzo. Because Microsoft has included the Luigi Rizzo software in this product, Microsoft is required to include the following text that accompanied such software:

© 1997-98 Luigi Rizzo (luigi@iet.unipi.it)

Portions derived from code by Phil Karn (karn@ka9q.ampr.org), Robert Morelos-Zaragoza (robert@spectra.eng.hawaii.edu) and Hari Thirumoorthy (harit@spectra.eng.hawaii.edu), Aug 1995

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHORS BE LIABLE FOR ANY DIRECT,

INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Portions of this software are based in part on the work of W3C. Because Microsoft has included the W3C software in this product, Microsoft is required to include the following text that accompanied such software:

W3C © SOFTWARE NOTICE AND LICENSE

<http://www.w3.org/Consortium/Legal/2002/copyright-software-20021231>

This work (and included software, documentation such as READMEs, or other related items) is being provided by the copyright holders under the following license. By obtaining, using and/or copying this work, you (the licensee) agree that you have read, understood, and will comply with the following terms and conditions.

Permission to copy, modify, and distribute this software and its documentation, with or without modification, for any purpose and without fee or royalty is hereby granted, provided that you include the following on ALL copies of the software and documentation or portions thereof, including modifications:

1. The full text of this NOTICE in a location viewable to users of the redistributed or derivative work.
2. Any pre-existing intellectual property disclaimers, notices, or terms and conditions. If none exist, the W3C Software Short Notice should be included (hypertext is preferred, text is permitted) within the body of any redistributed or derivative code.
3. Notice of any changes or modifications to the files, including the date changes were made. (We recommend you provide URLs to the location from which the code is derived.)

THIS SOFTWARE AND DOCUMENTATION IS PROVIDED "AS IS," AND COPYRIGHT HOLDERS MAKE NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR THAT THE USE OF THE SOFTWARE OR DOCUMENTATION WILL NOT INFRINGE ANY THIRD PARTY PATENTS, COPYRIGHTS, TRADEMARKS OR OTHER RIGHTS.

COPYRIGHT HOLDERS WILL NOT BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF ANY USE OF THE SOFTWARE OR DOCUMENTATION.

The name and trademarks of copyright holders may NOT be used in advertising or publicity pertaining to the software without specific, written prior permission. Title to copyright in this software and any associated documentation will at all times remain with copyright holders.

Portions of this software are based in part on the work of Sun Microsystems, Inc. Because Microsoft has included the Sun Microsystems, Inc. software in this product, Microsoft is required to include the following text that accompanied such software:

Sun RPC is a product of Sun Microsystems, Inc. and is provided for unrestricted use provided that this legend is included on all tape media and as a part of the software program in whole or part. Users may copy or modify Sun RPC without charge, but are not authorized to license or distribute it to anyone else except as part of a product or program developed by the user.

SUN RPC IS PROVIDED AS IS WITH NO WARRANTIES OF ANY KIND INCLUDING THE WARRANTIES OF DESIGN, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, USAGE OR TRADE PRACTICE.

Sun RPC is provided with no support and without any obligation on the part of Sun Microsystems, Inc. to assist in its use, correction, modification or enhancement.

SUN MICROSYSTEMS, INC. SHALL HAVE NO LIABILITY WITH RESPECT TO THE INFRINGEMENT OF COPYRIGHTS, TRADE SECRETS OR ANY PATENTS BY SUN RPC OR ANY PART THEREOF.

In no event will Sun Microsystems, Inc. be liable for any lost revenue or profits or other special, indirect and consequential damages, even if Sun has been advised of the possibility of such damages.

Sun Microsystems, Inc.
2550 Garcia Avenue
Mountain View, California 94043

Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories. Confidential unpublished works. Copyright 1992-1997 Dolby Laboratories. All rights reserved.

Portions of this software are based in part on the work of Andrei Alexandrescu. Because Microsoft has included the Andrei Alexandrescu software in this product, Microsoft is required to include the following text that accompanied such software:

The Loki Library
Copyright © 2001 by Andrei Alexandrescu
This code accompanies the book:
Alexandrescu, Andrei. "Modern C++ Design: Generic Programming and Design Patterns Applied." Copyright © 2001. Addison-Wesley.
Permission to use, copy, modify, distribute and sell this software for any purpose is hereby granted without fee, provided that the above copyright notice appear in all copies and that both that copyright notice and this permission notice appear in supporting documentation.
The author or Addison-Wesley Longman make no representations about the suitability of this software for any purpose. It is provided "as is" without express or implied warranty.

Portions Copyright © 1995 by Jeffrey Richter

Portions of this software are based in part on the work of the Distributed Management Task Force, Inc. (DMTF). Because Microsoft has included software based on DMTF specifications in this product, Microsoft is required to include the following text:

Copyright © 2007 Distributed Management Task Force, Inc. (DMTF). All rights reserved.

Portions of this work are derived from "The Draft Standard C++ Library" Copyright © 1995 by P.J. Plauger published by Prentice-Hall and are used with permission.

Portions of this software are based in part on the work of Hewlett-Packard Company. Because Microsoft has included the Hewlett-Packard Company software in this product, Microsoft is required to include the following text that accompanied such software:

Copyright © 2002, 2003 Hewlett-Packard Company.

About Notice:

This software is based on software available from <http://mpvtools.sourceforge.net>.

This software processes a format called MPV. MPV is an open specification for managing collections and multimedia playlists of photo, video, and music content and associated metadata and is available at no cost from the Optical Storage Technology Association. More information about the MPV specification can be found at <http://www.osta.org/mpv>.

Permission Notice:

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice, this permission notice, and the above About Notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM,

DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization of the copyright holder.

All other trademarks are property of their respective owners.