

SEGA™

NEW ASTRO CITY

SERVICEMAN MANUAL



IMPORTANT!

- Before using this product, read this **SERVICEMAN MANUAL** carefully to understand the contents herein stated.
- After reading this manual, be sure to keep it available nearby the product or elsewhere convenient for referring to it anytime when necessary.

SEGA ENTERPRISES, LTD.

MANUAL NO. 420 - 6294 - 01

retouché et
mis en forme
par VYBYVY



pour HFSPLAY.fr



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BEFORE USING THE PRODUCT, BE SURE TO READ THE FOLLOWING:

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SPECIFICATIONS

Installation space :	750 mm (W) × 905 mm (D)
Height :	1,445 mm
Total Weight :	93 kg
Power :	142W (AC 230V 50 Hz)

INTRODUCTION OF THE SERVICEMAN MANUAL

SEGA ENTERPRISES, LTD., supported by its high electronic technology of LSIs, microprocessors, etc. and a wealth of experience, has for more than 30 years been supplying various innovative and popular game machines to the world market. This Serviceman Manual is intended to provide detailed descriptions together with all the necessary information covering the general operation of electronic assemblies, electromechanicals, servicing control, spare parts, etc. as regards NEW ASTRO CITY, a new SEGA product.

This manual is intended for technical personnel who have knowledge of electricity and technical expertise especially in ICs, CRTs, microprocessors, etc.

For the prevention of accidents, work stated herein should under no circumstances be performed by anyone other than the technical personnel. Should any malfunctioning occur, turn the power off and contact where the product was purchased from or the following offices. Should this Serviceman Manual be lost, it can be purchased by placing an order with the following or where the product was purchased from.

SEGA AMUSEMENTS EUROPE LIMITED/AMUSEMENT MACHINE SALES DIVISION
Unit 2 Industrial Estate, Leigh Close, New Malden, Surrey KT3 3NL, England

Phone : (081) 336-2256

Fax : (081) 336-1715

SEGA SOUTHERN EUROPE LIAISON OFFICE

Calle Vallellano, 19-23, 1 A, 37008-Salamanca, Spain

Phone : (923) 265893

Fax : (923) 265913

1. HANDLING PRECAUTIONS

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

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



- Before performing the work, be sure to turn power off. Performing the work without turning power off can cause an electric shock or short circuit.
- To avoid electric shock or short circuit, do not insert or pull out the plug quickly.
- To avoid electric shock, do not unplug with a wet hand.
- Do not expose Power Cords and Earth Wires on the surface, (floor, passage, etc.). If exposed, the Power Cords and Earth Wires are susceptible to damage. Damaged cords and wires can cause electric shock or short circuit.
- To avoid causing a fire or electric shock, do not put things on or damage Power Cords.
- When or after installing the product, do not unnecessarily pull the power cord. If damaged, the power cord can cause a fire or electric shock.
- In case the power cord is damaged, ask for replacement through where the product was purchased from or the office herein stated. Using the cord as is damaged can cause fire, electric shock or leakage.
- Be sure to perform grounding appropriately. Inappropriate grounding can cause an electric shock.
- Be sure to use fuses meeting specified rating. Using fuses exceeding the specified rating can cause a fire or electric shock.
- Completely make connector connections for IC BD and others. Insufficient insertion can cause an electric shock.
- To avoid causing a fire or electric shock, do not make Specification changes by removing, converting and making additions unless otherwise designated by SEGA.
- Be sure to perform periodic maintenance inspections herein stated.



- Also, for the IC board circuit inspections, only the logic tester is allowed. The use of a multiple-purpose tester is not permitted, so be careful in this regard.
- When cleaning the CRT surfaces, use a soft, dry cloth. Do not apply chemicals such as thinner, benzine, etc.
- When you touch the monitor (CRT) at the time the power is turned on or off, you might slightly feel electricity. This, however, is caused by static electricity and would not adversely affect the human body.



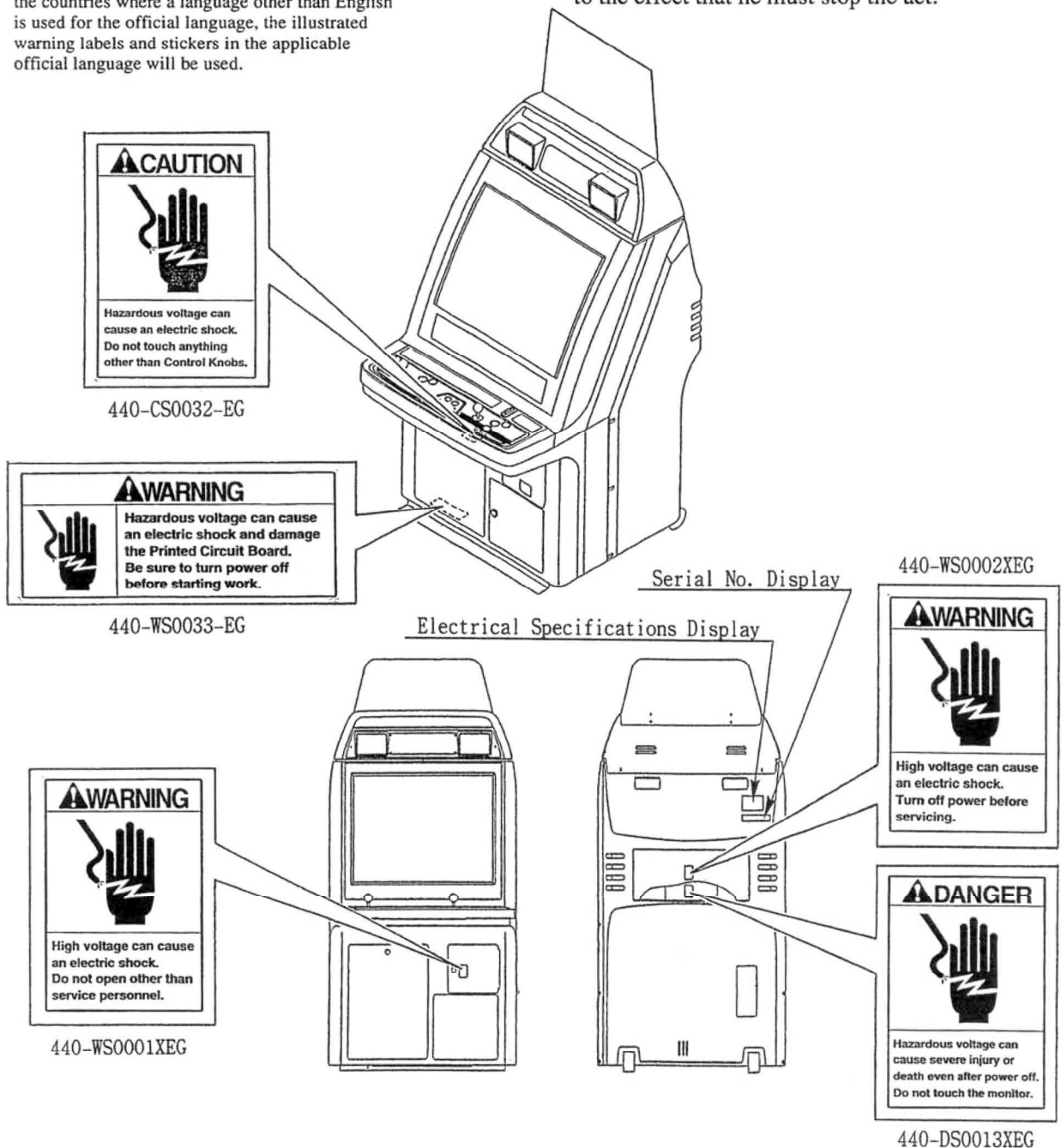
CONCERNING THE STICKER DISPLAY

SEGA product has Stickers describing the product manufacture No. (Serial No.) and Electrical Specifications. Also it has a Sticker describing where to contact for repair and for purchasing parts. When inquiring about or asking for repair, mention the Serial No. and Name of Machine indicated on the Sticker. The Serial No. indicates the product register. Identical machines could have different parts depending on the date of production. Also, improvements and modifications might have been made after the publication of this Manual. In order to meet the above situations, mention the Serial No. when contacting the applicable places.

The illustrations indicate Product Liability related warning labels and stickers to be used in the countries where English is the official language. In the countries where a language other than English is used for the official language, the illustrated warning labels and stickers in the applicable official language will be used.

CONCERNING WARNING DISPLAYS

SEGA product has warning displays on Stickers, Labels and or printed instructions adhered / attached to or incorporated in the places where a potentially hazardous situation can arise. The warning displays are intended for accident prevention for the customers and for avoiding hazardous situation relating to maintenance and servicing work. There are some portions in the Cabinet, which are subject to high tension voltage, etc. where accidents can be caused only by touching. When performing the servicing work, be very careful of the warning displays. Especially, any complex repair and replacement work not mentioned herein, should be performed by those technical personnel who have knowledge of electricity and technical expertise. For the prevention of accidents, caution any customer whose act runs counter to the warnings, as to the effect that he must stop the act.



2. PRECAUTIONS CONCERNING INSTALLATION LOCATION



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

- Places subject to rain or water leakage, or places subject to high humidity in the proximity of an indoor swimming pool and or shower, etc.
- Places subject to direct sunlight, or places subject to high temperatures in the proximity of heating units, etc.
- Places filled with inflammable gas or vicinity of highly inflammable/volatile chemicals or hazardous matter.
- Dusty places.
- Sloped surfaces
- Places subject to any type of violent impact.
- Vicinity of anti-disaster facilities such as fire exits and fire extinguishers.
- The operating (ambient) temperature range is from 5°C to 40°C. Only in the case a projector is employed, the temperature range is from 5°C to 30°C.

LIMITATIONS OF USAGE REQUIREMENTS



- Be sure to check the Electrical Specifications. Ensure that this product is compatible with the location's power supply, voltage and frequency requirements. A plate describing Electrical Specifications is attached to the product. Non-compliance with the Electric Specifications can cause a fire and electric shock.
- This product requires the Breaker and Earth Mechanisms as part of the location facilities. Using them in a manner not independent can cause a fire and electric shock.
- Ensure that the indoor wiring for the power supply is rated at 7A or higher (AC 230V). Non-compliance with the Electrical Specifications can cause a fire and electric shock.
- Be sure to independently use the power supply equipped with the Earth Leakage Breaker. Using a power supply without the Earth Leakage Breaker can cause an outbreak of fire when earth leakage occurs.
- Putting many loads on one electrical outlet can cause generation of heat and a fire resulting from overload.
- When using an extension cord, ensure that the cord is rated at 7A or higher (AC 230V area). Using a cord rated lower than the specified rating can cause a fire and electric shock.



- Note that for transporting the machine into the location's building, the minimum necessary dimensions of the opening (of doors, etc.) are 0.85m (W) and 1.55m (H).
- For the operation of this machine, secure a minimum area of 2.2m (W) × 2.3m (D). For ventilation, provide an approximately 20cm. space between the rear part of the cabinet and the wall.

3. NAME OF PARTS

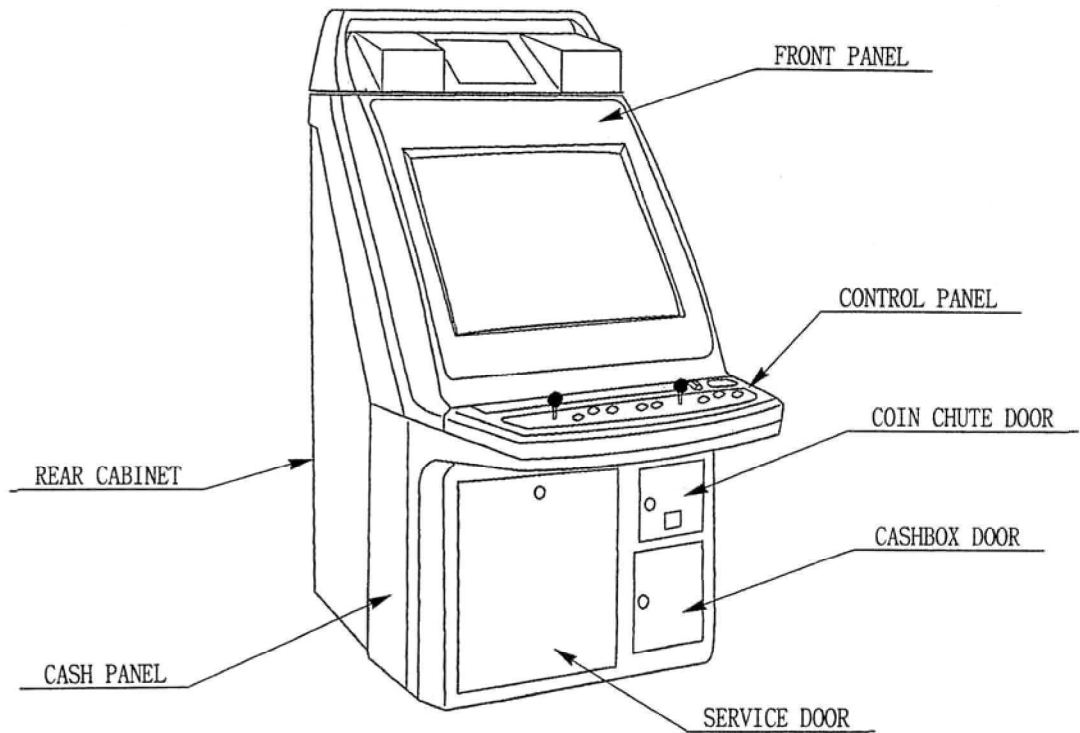


FIG. 3 a

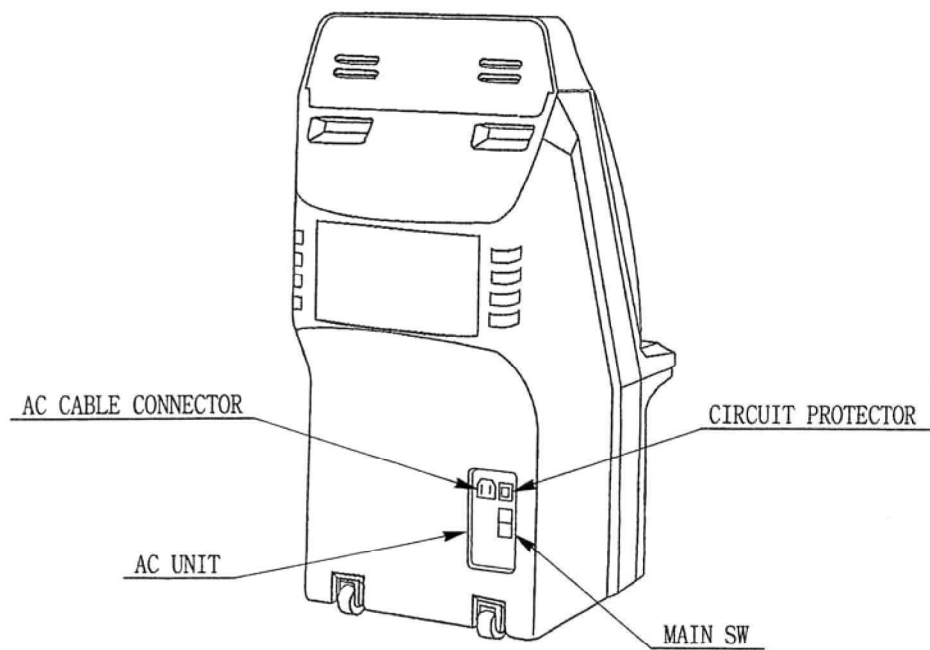


FIG. 3 b

4. ACCESSORIES

When transporting the machine, make sure that the following parts are supplied.

PART No.	Qty	DESCRIPTION	REMARKS
253-5185	4	CAP SW 30	
420-6294	1	OWNERS MANUAL NAS CE	
420-6294-01	1	SERVICEMAN MANUAL NAS CE	
540-0006-01	1	WRENCH FOR TAMP PRF SCR DUAL TYPE M4	Tool
220-5381	2	MASTER KEY	For opening/closing the doors
	2	KEY	For the CASHBOX D00R
600-6618	1	AC CABLE CONNECT TYPE FOR EXP	Refer to Section 5.

TOOL

(TAMPERPROOF WRENCH)
M4 540-0006-01

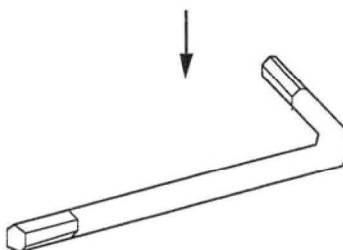


FIG. 4 TAMPERPROOF WRENCH

5. INSTALLATION

INSTALLING THE INSTRUCTION PANEL

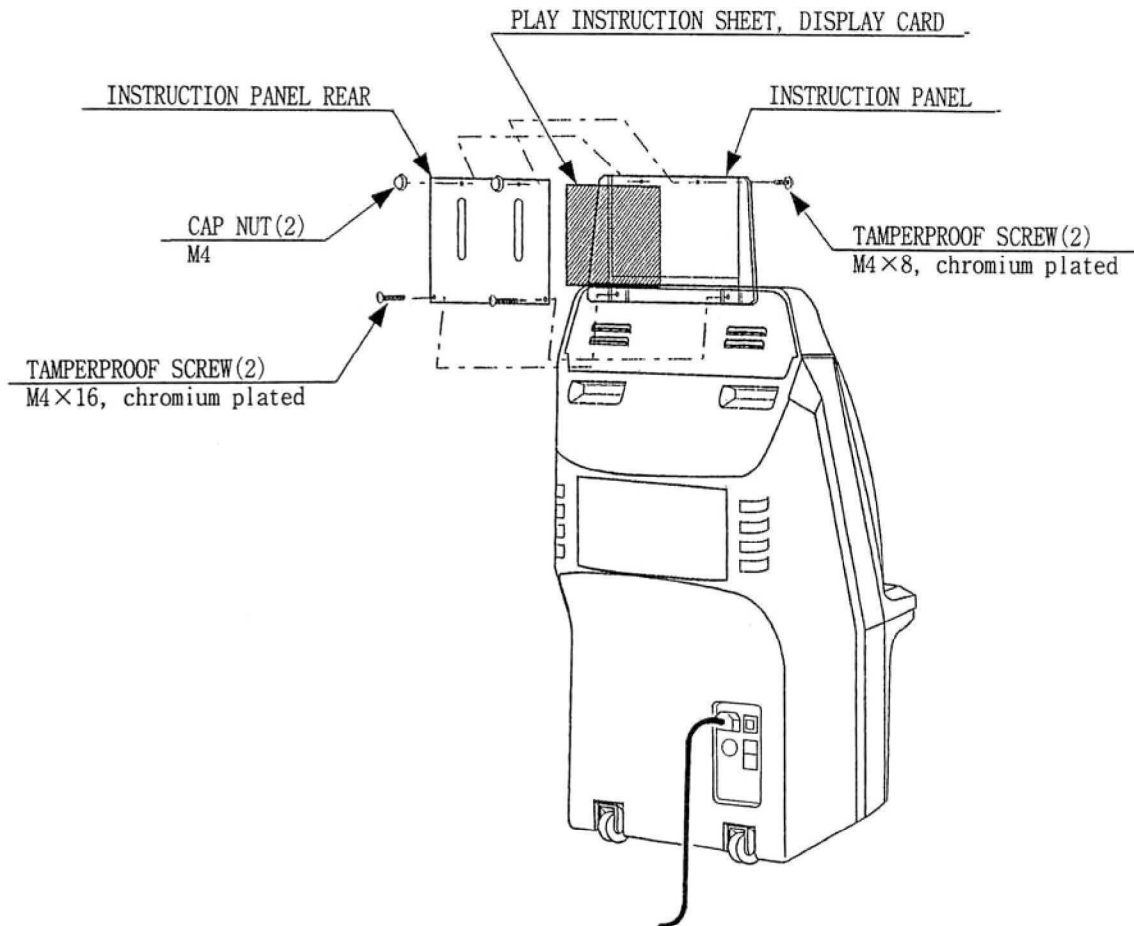
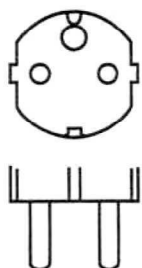


FIG. 5 a

POWER SUPPLY CONNECTION

At the time of shipment, the AC cable with the plug shown below is supplied as an accessory.



Socket Outlet side



AC Cable Connector side



- Be sure to independently use the power supply socket outlet equipped with an Earth Leakage Breaker. Using a power supply without an Earth Leakage Breaker can cause a fire when the leakage occurs.
- Provide the plug socket equipped with an "accurately grounded earth terminal" so as to ensure appropriate grounding when inserting the plug into the plug socket. An Earth Wire is incorporated in the power cord of this product. Inappropriate grounding can cause the customers to be subject to electric shock or unstable movements of the product.
- Do not expose power cords on the passages, etc. Exposed power cords are susceptible to damage and can cause electric shock or short circuit.
- The supplied power cord (AC cable), an accessory of this product is a bipolar earth type for CEE Specifications. If it is not compatible with the socket outlet to be used, prepare the AC cable (10A - 250V) with an appropriate plug which is compatible with the socket outlet used.

- ① The AC unit is mounted on the rear of the Cabinet. The AC Unit incorporates the Main Power SW and power cord.
- ② Ensure that the Main Power SW is OFF.
- ③ Securely insert the AC cable (power cord) to the AC Cable Connector and Socket Outlet.

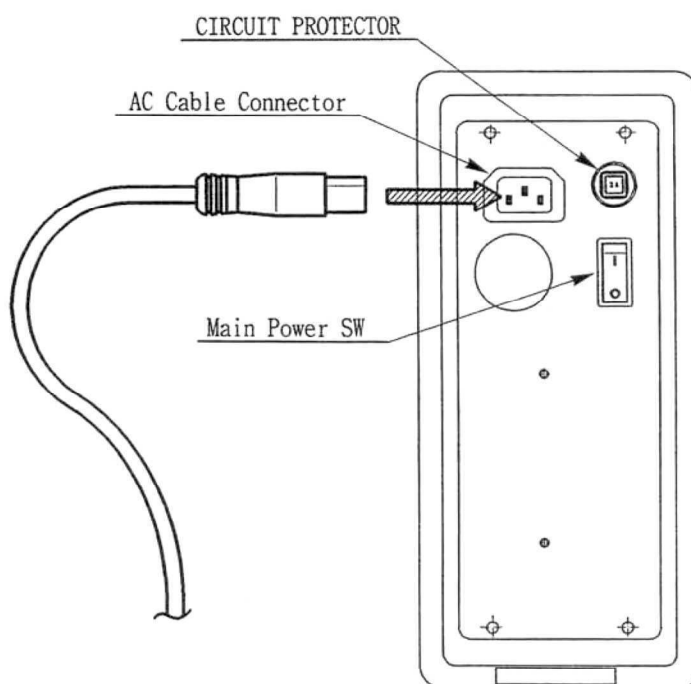


FIG. 5 b AC Unit

- ④ Firmly insert the Power Plug into the Socket Outlet.
- ⑤ Perform wiring for the Power Cord. Install Wire Covering to protect the Power Cord.
- ⑥ Turn the Main Power SW ON to turn power ON.

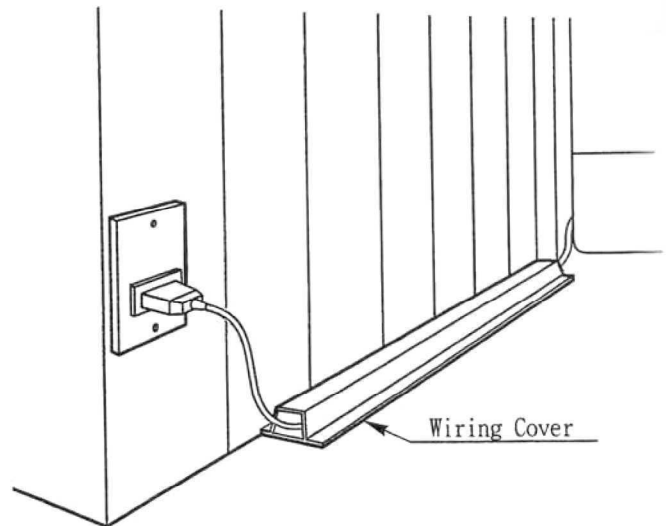


FIG. 5 c Wiring for Power Cord

TRANSPORTING THE MACHINE



When moving the machine, be sure to pull the power supply plug out. Moving the machine with the power plug inserted as is can damage the power cord, causing a fire or electric shock. When moving the machine, be sure not to damage the power cord by treading on it.



When transporting the machine, be sure to hold the catch portion on the rear of the cabinet with the casters making contact with the surface as shown below. Inclining the machine by holding portions other than the catch or moving the cabinet with adjusters as is in contact with the surface can damage the cabinet, parts, and or the floor surfaces.

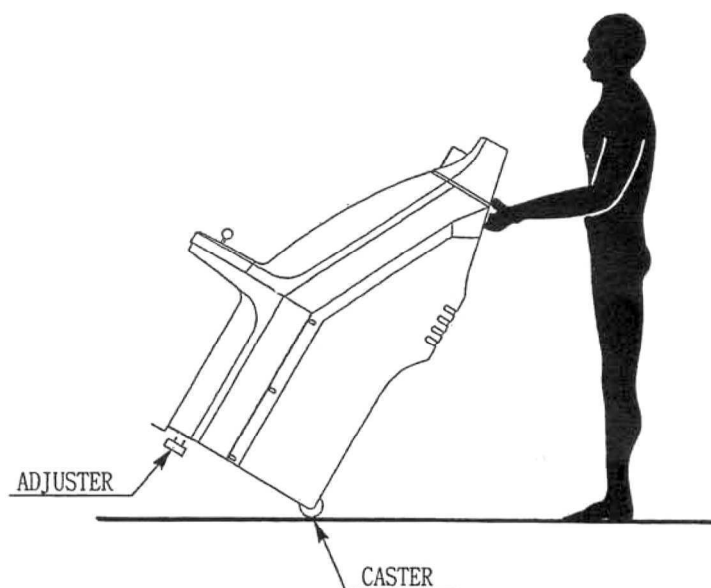


FIG. 5 d

6. COIN METER & POWER SUPPLY UNIT

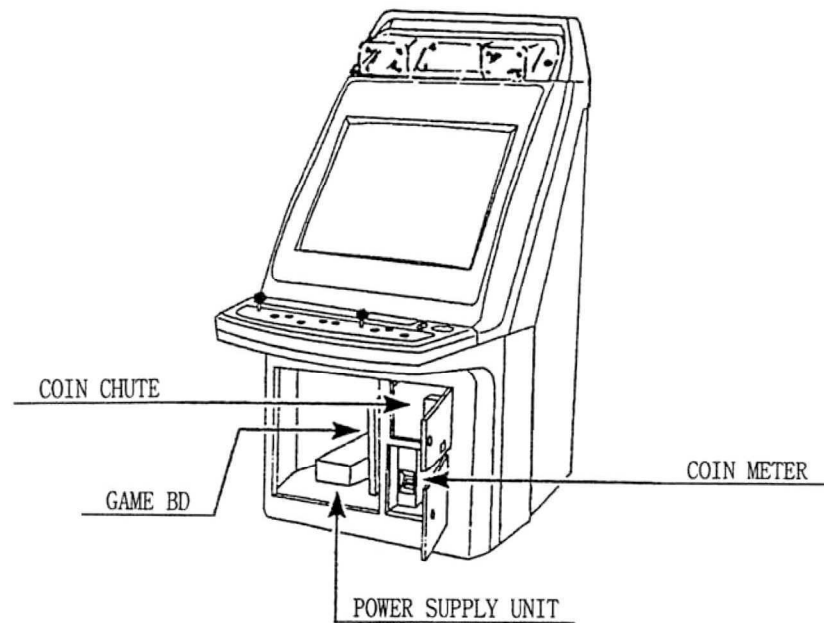


FIG. 6 a

COIN METER

The COIN METER is located beside the CASHBOX and counts the number of coins inserted.

POWER SUPPLY UNIT



The capacity of the Power Supply Unit used for NEW ASTRO CITY is +5V 7A, +12V 1.5A (PEAK 2A), and - 5V 0.1A. Using any Board which requires power in excess of the above-mentioned capacity is not allowed. Using the Board exceeding the capacity can damage the power supply.

400-5198-CE-01Z

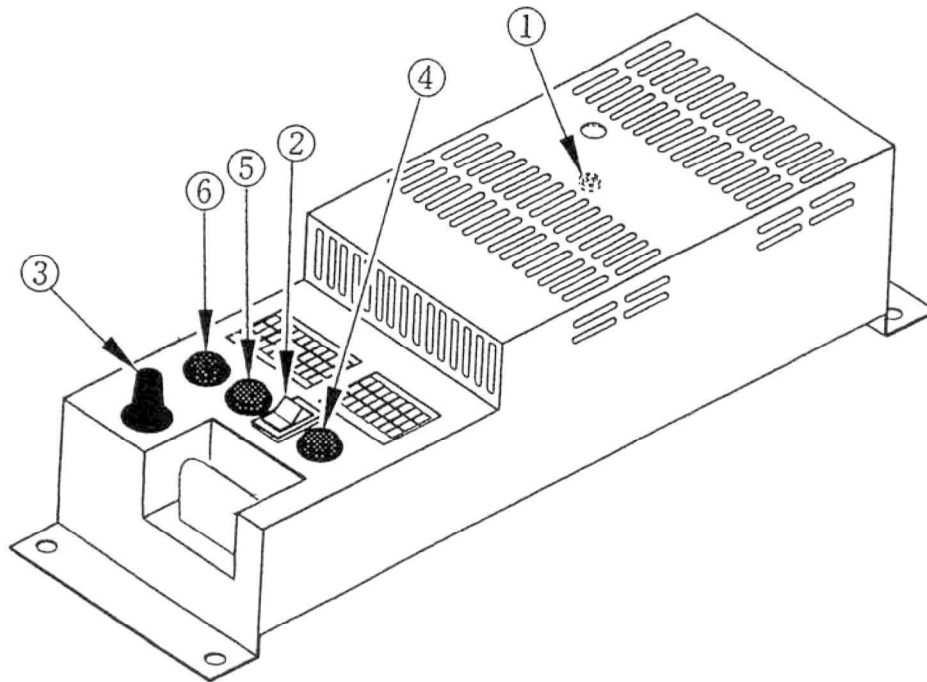


FIG. 6 b POWER SUPPLY UNIT (400-5198-CE-01Z)



① V.ADJ. has been adjusted at the time of shipment from the factory. Use the settings as is set at the time of shipment. Changing the settings without a good reason can cause damage to the IC Board and malfunctioning.

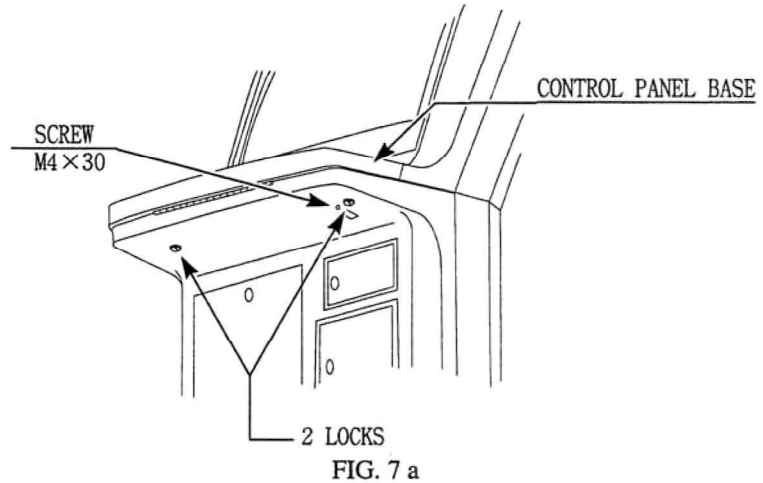
- ① V. ADJ. : DC Power Supply voltage (+5V) adjustment volume (V. R.)
- ② POWER SW : This is a SUB POWER SUPPLY SW. The AC Unit on the rear part of the cabinet has the Main Power Supply SW (normally set to ON).
- ③ SOUND VOL. : Adjust the Speaker Volume. Considering the environment where the machine is located, make adjustment of the sound volume to an appropriate level.
- ④ DEMAG. SW : Removes on-screen color deviation.
- ⑤ TEST SW : Allows for entering the Test Mode of Game BD.
- ⑥ SERVICE SW : SERVICE CREDIT SW.
(Used without registering on the Coin Meter.)

7. CONTROL PANEL

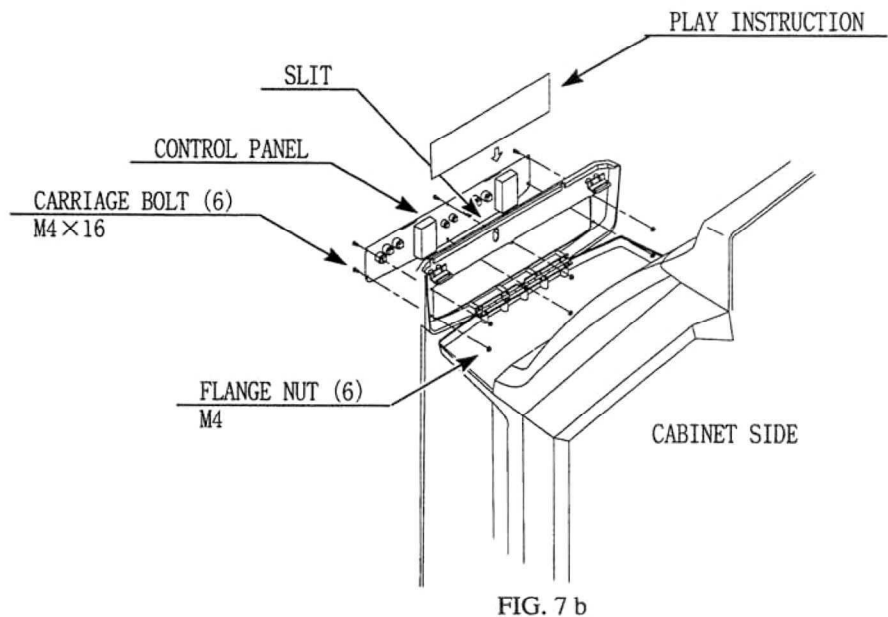


Before starting work, be sure to turn power off. Working without turning power off can cause electric shock or short circuit.

The control panel base can be opened by opening the two locks on the backside of the control panel. The lock on the right is screwed in before shipment. To open the lock, loosen the screw.



When replacing the Control Panel, open the Control Panel Base, disconnect all of the Connectors, remove the M4×8 screw which secures the Earth Wire attached to the Connector Panel, and remove 6 each of Flange Nuts & 6 Carriage Bolts which secure the Control Panel.



8. REPLACING THE PLAY INSTRUCTION



Before starting work, be sure to turn power off. Working without turning power off can cause electric shock or short circuit.

Open the Control Panel Base and pull out the PLAY INSTRUCTION via the inside slit to replace it. (Refer to 7. CONTROL PANEL)

9. COIN SELECTOR

HANDLING THE COIN JAM

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

COIN INSERTION TEST

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

- ☐ Does the Coin Meter count satisfactorily?
- ☐ Does the coin drop into the Cashbox correctly?
- ☐ Is the coin rejected when inserted while keeping the Reject Button pressed down?

10. CAUTIONS AND WARNINGS CONCERNING THE SAFETY FOR HANDLING THE MONITORS

Before handling the monitors, be sure to read the following explanations and comply with the caution/warning instructions given below. Note that the caution/warning symbol marks and letters are used in the instructions.



Indicates that handling the monitors erroneously by disregarding this warning may cause a potentially hazardous situation, which could result in death or serious injury.



Indicates that handling the monitors by disregarding this caution may cause a potentially hazardous situation, which could result in personal injury and or material damage.



Indicates that access to a specific part of the equipment is forbidden.



Indicates the instruction to disconnect a power connector or to unplug.

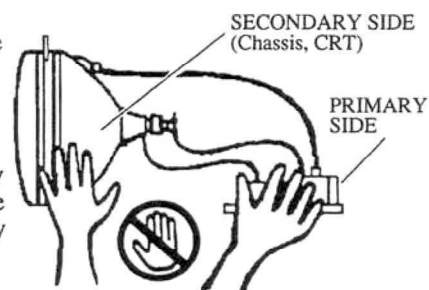


- When performing such work as installing and removing the monitor, inserting and disconnecting the external connectors to and from monitor interior and the monitor, be sure to disconnect the power connector (plug) before starting the work. Proceeding the work without following this instruction can cause electric shock or malfunctioning.
- Using the monitor by converting it without obtaining a prior permission is not allowed. SEGA shall not be liable for any malfunctioning and accident caused by said conversion.



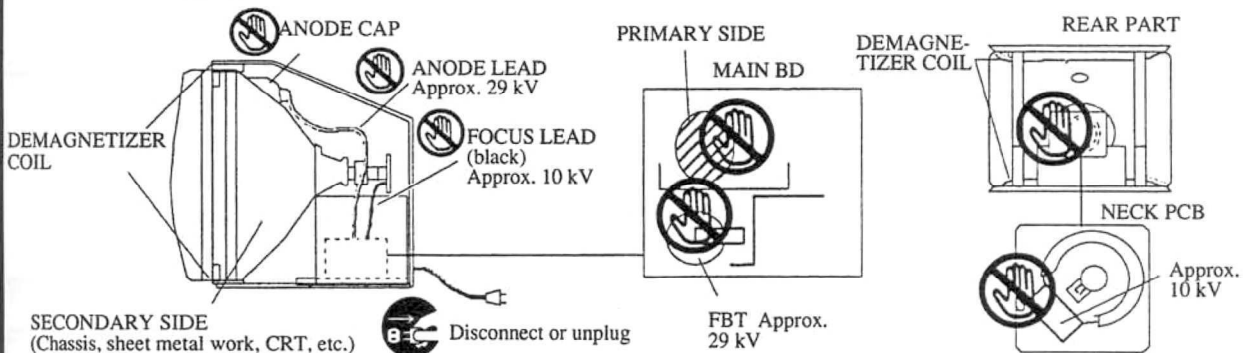
● Primary side and Secondary side

The monitor's circuit which is divided into the Primary side and Secondary side, is electrically isolated. Do not touch the primary side, or do not touch both the primary side and the secondary side simultaneously. Failing to observe the instruction can cause electric shock and this is very dangerous. When making monitor adjustments, use a non-conductive driver and make adjustment without touching any part other than the Adjustment V. R. and knob. Also, be sure not to cause a short-circuit to the Primary side and Secondary side. If short-circuited, it can cause electric shock or malfunctioning, which is very dangerous.



● High-tension Voltage

Some of the parts inside monitor are subject to high-tension voltage in excess of 20,000 volts and very dangerous. Therefore, do not touch the monitor interior. Should soldering & paper wastes, etc. be mixed in the monitor interior, turn the power off so as not to cause malfunctioning or fire hazard.



● Connecting the CRT and PCB

For combining the CRT and PCB, use the specified part No. to maintain the status of adjustments made at the factory. The anode of the CRT itself will be accumulatively charged as time elapses, generating high-tension voltage which is very dangerous. The monitor should be used with the Chassis, CRT and PCB assembled. When repair, etc. is required at the time of malfunctioning, be sure to send it in an "as is assembled" condition. If these are disassembled, what's charged to said high tension voltage can be discharged, causing a very hazardous situation. Therefore, under no circumstances should it be disassembled.



● Static Electricity

Touching the CRT surface sometimes causes you to slightly feel electricity. This is because the CRT surfaces are subject to static and will not adversely affect the human body.

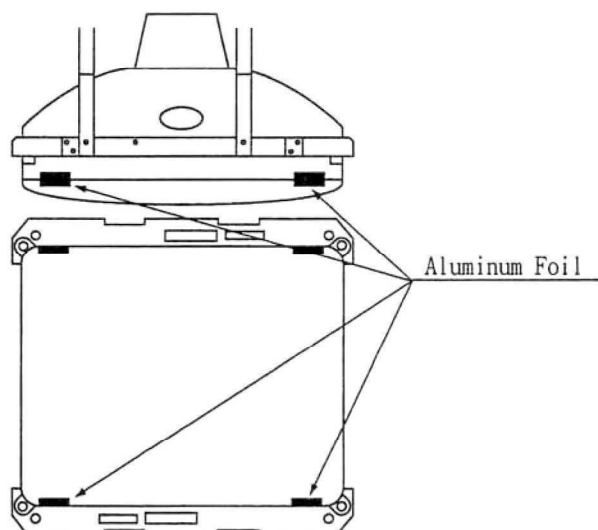
● Installation and removal

Ensure that the Magnetizer Coil, FBT (Fly-Back Transformer), Anode Lead and Focus Lead are not positioned close to the sheet metal work's sharp edges, etc. and avoid damaging the insulated portions so as not to cause electric shock and malfunctioning. (For the name of parts, refer to the above Figures).



For the purpose of static prevention, special coating is applied to the CRT face of this product. To protect the coating, pay attention to the following points. Damaging the coating film can cause electric shock to the customers. For the caution to be heeded when cleaning, refer to the Section of Periodic Inspection Table.

- Do not apply or rub with a hard item (a rod with pointed edge, pen, etc.) to or on the CRT surfaces.
- Avoid applying stickers, seals, etc. on the CRT face.
- Do not remove aluminum foils from the CRT corners. Removing the aluminum foils can cause static prevention effects to be lowered.



11. MONITOR'S VERTICAL/HORIZONTAL TRANSPOSITION



When performing such work as monitor installation/removal, or inserting/disconnecting the external Connector connected to the monitor and its interior, first be sure to disconnect the power connector (plug). Working with the power plug as is connected can cause electric shock or malfunctioning.



- The MONITOR has high-tension parts. Before starting the work, be sure to turn the power off first.
- After the vertical/horizontal transposition of the MONITOR, monitor adjustments may be required. (Refer to MONITOR ADJUSTMENT.)

- ① Open the Control Panel and disconnect 4P Connector (for Speakers) from the Connector Panel and remove the M4×12 screw which secures the Earth Wire attached to the Connector Panel.
- ② Take off 3 screws A (M5×16) and 2 screws B (M4×12) to remove the Front Panel. Take off eight screws C (M4×10) which secure the Monitor Mask, turn the Monitor Mask a 90 degrees and install the Monitor Mask to the Front Panel.

- ③ Take off Nuts and Spacers which secure the Monitor at the 4 corners. Open the Service Door, disconnect the 15P Connector which is connected to the Monitor, raise the Monitor and turn it a 90 degrees in direction A (to turn it from the horizontal position to vertical position) and in the opposite direction (to turn it from the vertical position to horizontal position).
- ④ Insert the 15P connector into the Monitor and secure the Monitor with Nuts and Spacers. Also, install the Front Panel to the Cabinet, connect the 4P Connector to the Panel, and secure the Earth Wire with the M4×12 screw.

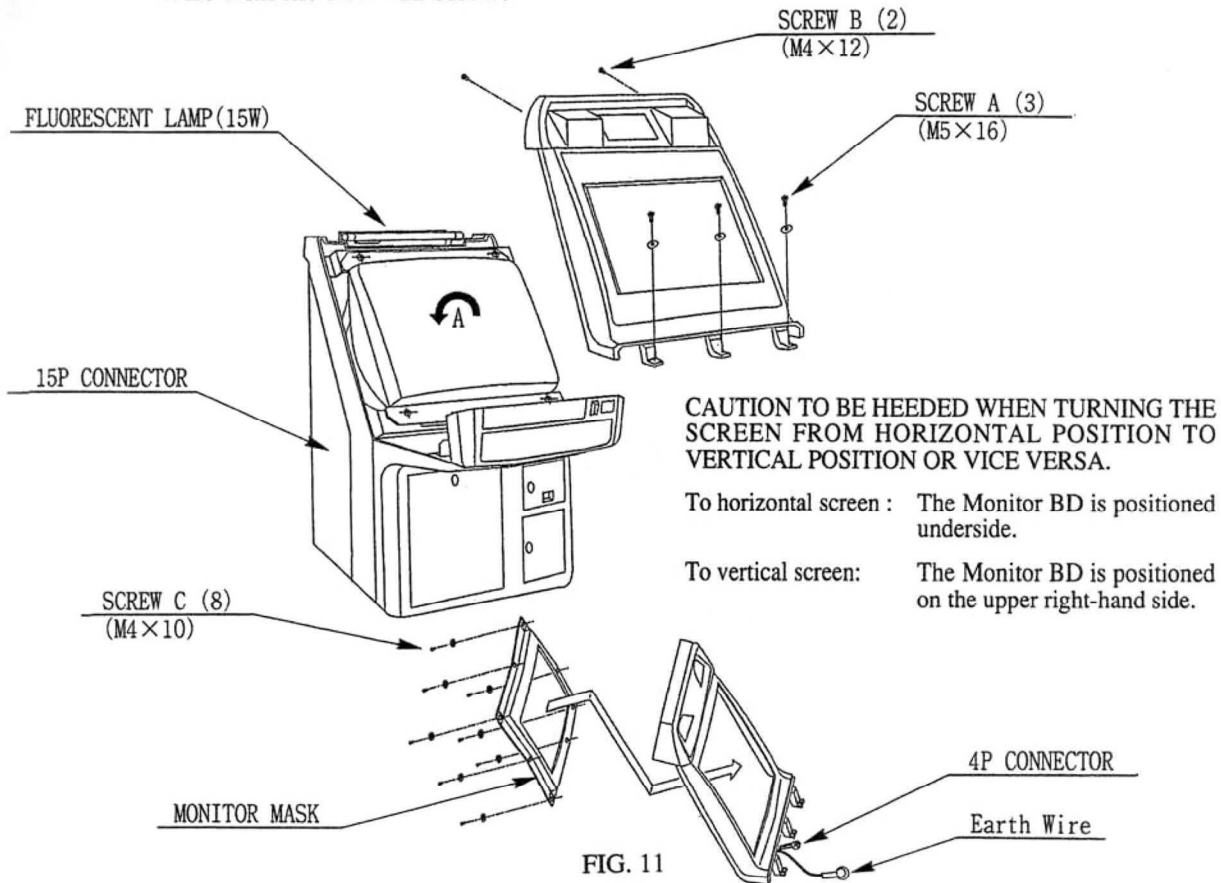


FIG. 11

12. MONITOR ADJUSTMENTS



- Be sure to turn power off before working except for screen adjustments. Working without turning power off can cause electric shock or short circuit.
- Be sure to use the resinous adjustment rod when making adjustments. Working with bare hands and using a conductive type of tool can cause electric shock.

The 29 inch monitor employed for NEW ASTRO CITY can convert to and from the medium resolution mode (24K mode) of a 24.83 kHz horizontal frequency for SYSTEM 24 and the low resolution mode (15K mode) of a 15.7 kHz horizontal frequency for the ordinary GAME BD. The modes can be alternated by changing the Monitor Main BD Connector insertion.

The 29 inch Monitor has 2 different makes, i. e., Nanao and Sanwa. Each has different mode change and adjustment methods. Therefore, when changing the modes and making adjustments, check the maker by following the parts numbers (via adjustment V.R. name display at the front of the Monitor). Be sure to follow the specific maker's adjustment method.

1) NANA0 monitor: 200-5242-15-04 (15K mode)
200-5242-24-04 (24K mode)

NAME OF FRONT V.R.

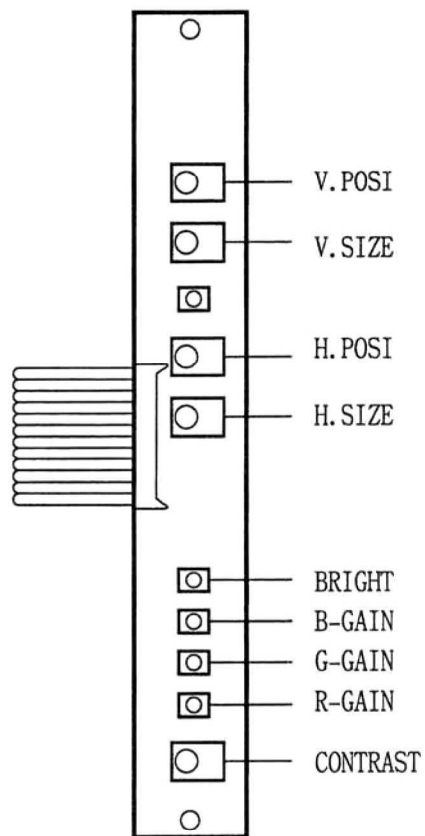


FIG. 12 a

- 1) NANA monitor (1)
 200-5242-15-04 (15K mode)
 200-5242-24-04 (24K mode)



CAUTION to be heeded when adjusting the MONITOR V.R.!!

When replacing the GAME BD, the above-mentioned monitor frequency change and ④ CONTRAST adjustment may be required depending on the game contents. In this case, touching the variable resistors other than the one needed, without good reason, may cause trouble, so pay careful attention in this regard.

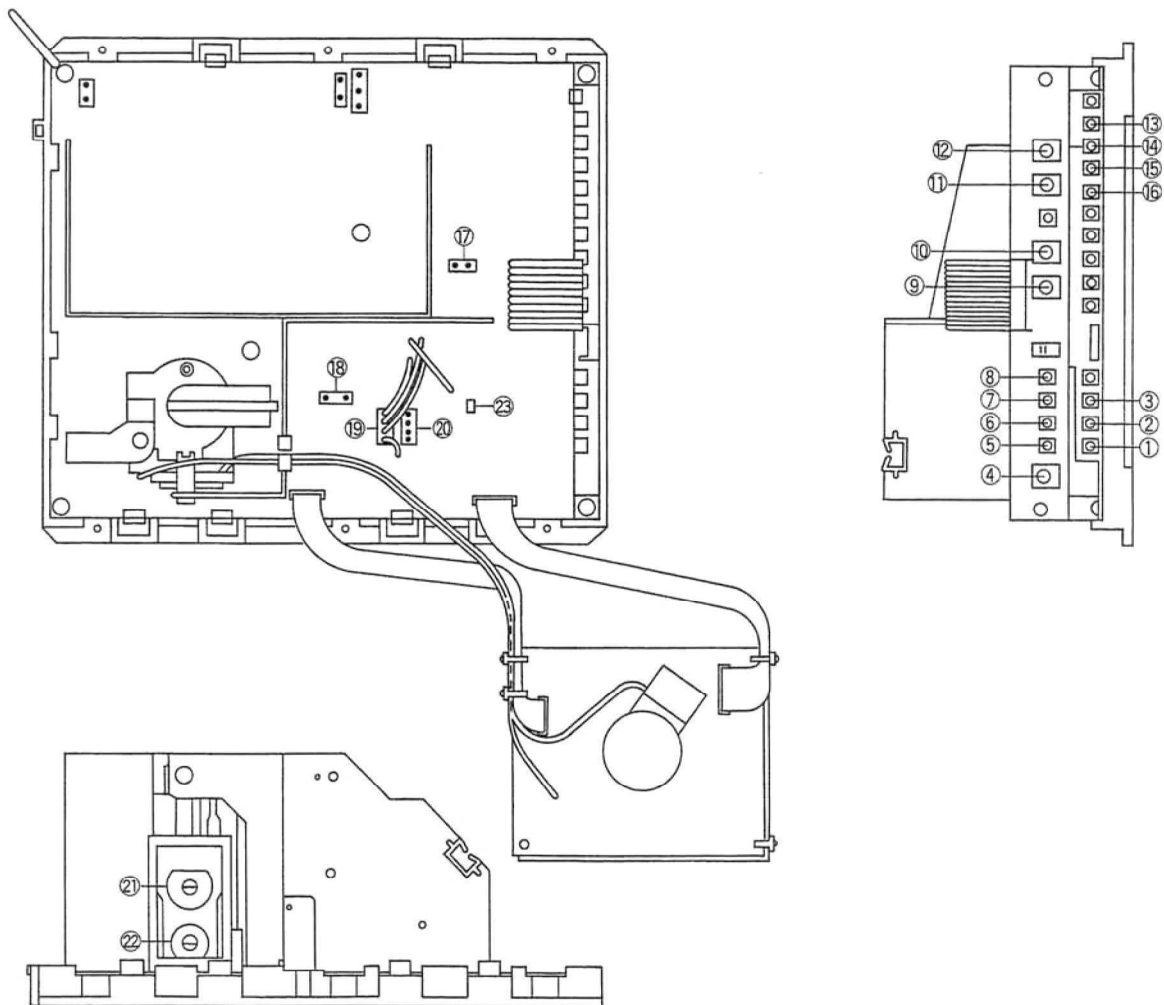


FIG. 12 b

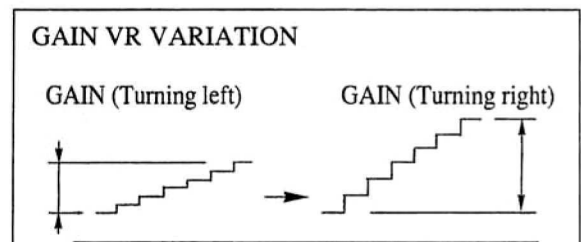
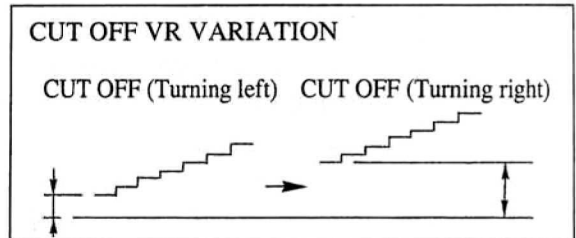
METHOD OF CHANGING THE MONITOR'S FREQUENCY

- (1) Insert the horizontal frequency change connector (①⑨ for 15K & ②⑩ for 24K) into the corresponding horizontal frequency position.
- (2) In the on-screen game mode, make adjustments of ③⑨ Horizontal size and ④⑪ Vertical size.
- (3) In the Horizontal size, if adjustment can not be sufficiently made, insert the ⑤⑫ Horizontal size tap into the applicable different position and then redo the Horizontal size adjustment.

- 1) NANA monitor (2)
 200-5242-15-04 (15K mode)
 200-5242-24-04 (24K mode)

ADJUSTMENT FUNCTIONS

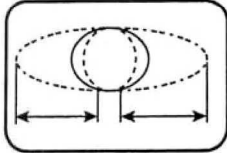
- ① R CUT OFF (VR201)
Turning this to the right will result in the red color becoming deeper.
- ② G CUT OFF (VR202)
Turning this to the right will result in the green color becoming deeper.
- ③ B CUT OFF (VR203)
Turning this to the right will result in the blue color becoming deeper.
- ④ CONTRAST (VR283)
Adjusts image contrast.
- ⑤ R-GAIN (VR280)
Turning this to the right will result in the red color becoming deeper.
- ⑥ G-GAIN (VR281)
Turning this to the right will result in the green color becoming deeper.
- ⑦ B-GAIN (VR282)
Turning this to the right will result in the blue color becoming deeper.



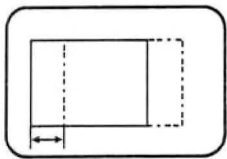
- 1) NANA monitor (3)
200-5242-15-04 (15K mode)
200-5242-24-04 (24K mode)

- ⑧ BRIGHT (VR284)
This adjusts the on-screen image brightness.

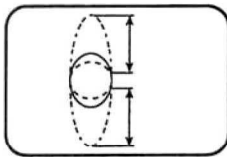
- ⑨ H. SIZE (VR285)
The horizontal image dimension is adjustable.



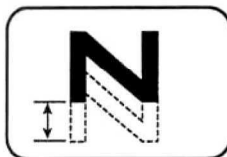
- ⑩ H. POSITION (VR286)
The horizontal image's position is adjustable.



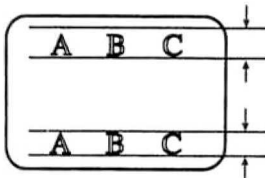
- ⑪ V. SIZE (VR287)
The vertical image dimension is adjustable.



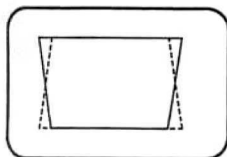
- ⑫ V. POSITION (VR288)
The image's vertical position is adjustable.



- ⑬ V. LIN (VR401)
Controls vertical linearity.



- ⑭ TRAP (VR453)
Controls trapezoidal distortions.



- ⑮ S.P.C (VR450)
Controls pincushion distortion.

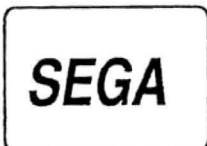

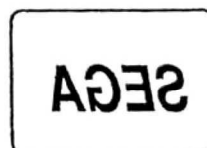
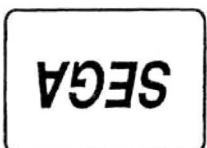
- 1) NANA O monitor (4)
 200-5242-15-04 (15K mode)
 200-5242-24-04. (24K mode)

⑩ H. SUB. SIZE (VR452)

Adjusts H. SIZE. (in the front).

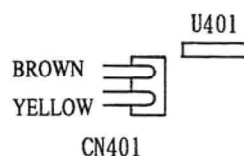
Normally, adjustments are previously made and fixed with silicone rubber.

⑪⑫ DEFLECTING YOKE POLARITY CHANGE CONNECTOR

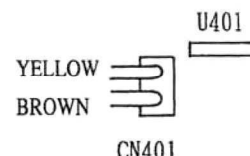
⑪ CN401			
	NORMAL	REVERSE	
⑫ NORMAL CN501	 <p>The image displayed is normal.</p>	 <p>A vertically inverted image is displayed by reflex on a mirror.</p>	
⑫ INVERSION CN501	 <p>An image reflected on a mirror appears.</p>	 <p>An image which is turned a 180 degrees is displayed.</p>	

⑪ CN401

NORMAL CONNECTION

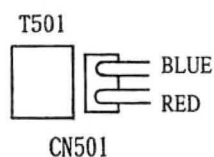


INVERTED CONNECTION

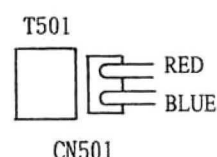


⑫ CN501

NORMAL CONNECTION



INVERTED CONNECTION



⑬ HORIZONTAL FREQUENCY CHANGE CONNECTOR(CN503)

After changing, the horizontal frequency will be 15. 75KHz.

⑭ HORIZONTAL FREQUENCY CHANGE CONNECTOR(CN504)

After changing, the horizontal frequency will be 24. 39KHz.

⑮ FOCUS

To be adjusted to the best status.

⑯ SCREEN

Adjusts to the CUTOFF point.

⑰ H-SIZE CHANGE TAP (WIDE : CN506/NARROW : CN507)

After ⑨H. SIZE adjustments are made, if the size is still narrow, change it to W side. However, this is effective only in the case where the horizontal frequency change connector is CN 503. (15.75 KHz)

13. REPLACEMENT OF FLUORESCENT LAMP



- When performing the work, be sure to turn power off. Working with power on can cause an electric shock or short circuit accident.
- Hot fluorescent lamp can cause burns. Be very careful when replacing them.

- ① Open the Control Panel and disconnect 4P Connector (for Speakers) from the Connector Panel and remove the M4×12 screw which secures the Earth Wire attached to the Connector Panel.
- ② Take off 3 screws A (M5×16) and 2 screws B (M4×12) which secure the Front Panel and remove the Front Panel. The Fluorescent Lamp (15W) above the Monitor appears. Refer to 11. MONITOR TRANSPOSITION.

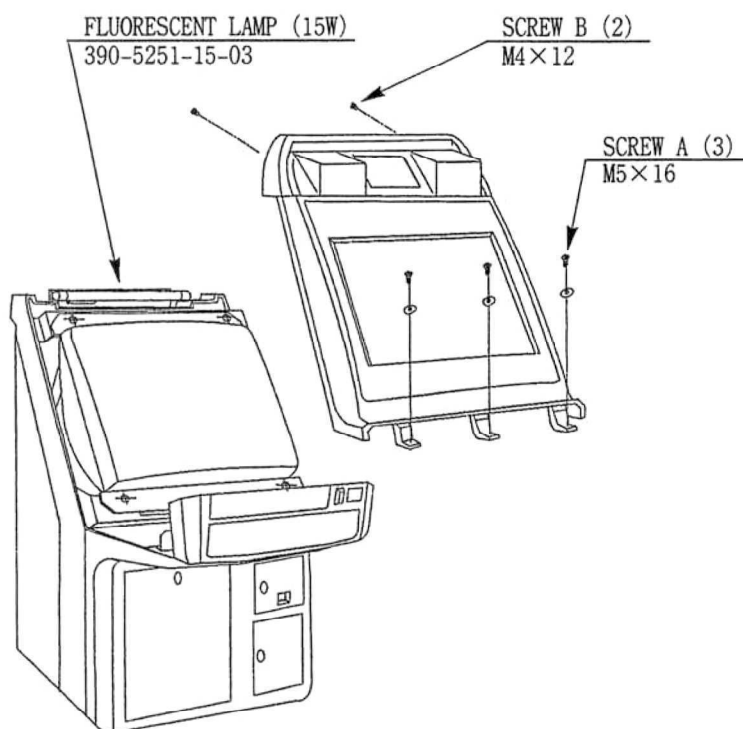


FIG. 13 a

Remove the FL Lid from the rear part of the cabinet to replace the Fluorescent Lamp.

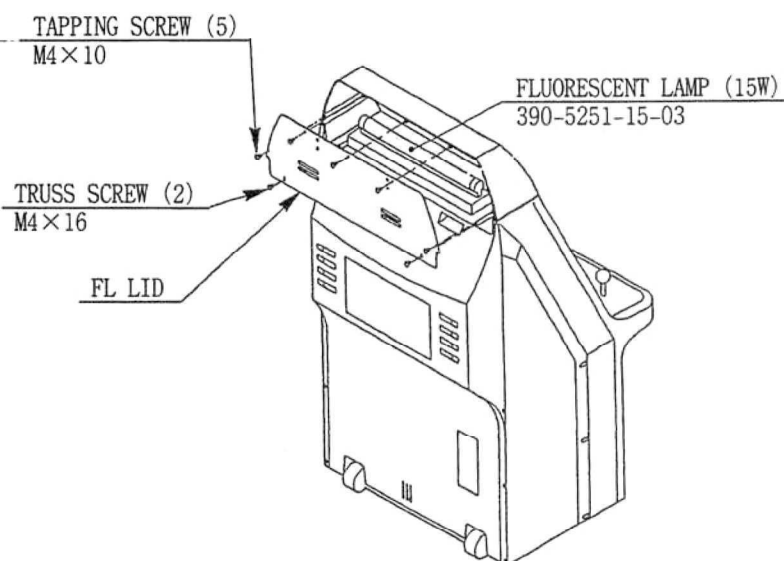


FIG. 13 b

14. REPLACEMENT OF GAME BD



- The power capacity for the product's Game BD is + 5V 7A , + 12V 1.5A and - 5V 0.1A. Do not use Game Boards that require a power capacity exceeding these. Should such a board be used, the Power Supply Unit's parts can cause generation of heat resulting in a fire.
- Be sure to use the wiring of specified rating for the conversion Harness used for replacement with a Game BD other than JAMMA Standard. Using the wiring of a rating lower than the specified one can cause generation of heat resulting in a fire.



This cabinet incorporates JAMMA harness. When replacing the game BD (to SYSTEM24, etc.) with one to which JAMMA Standard does not apply, be sure to replace the harness at the same time. The replacement harness depends on the game BD (contents). Also, when replacing the game BD, be sure to read 12. MONITOR ADJUSTMENTS.

- (1) Open the service door and disconnect all wire harnesses attached to the game BD.
- (2) Take off the WING BOLT and pull out the BD BASE.

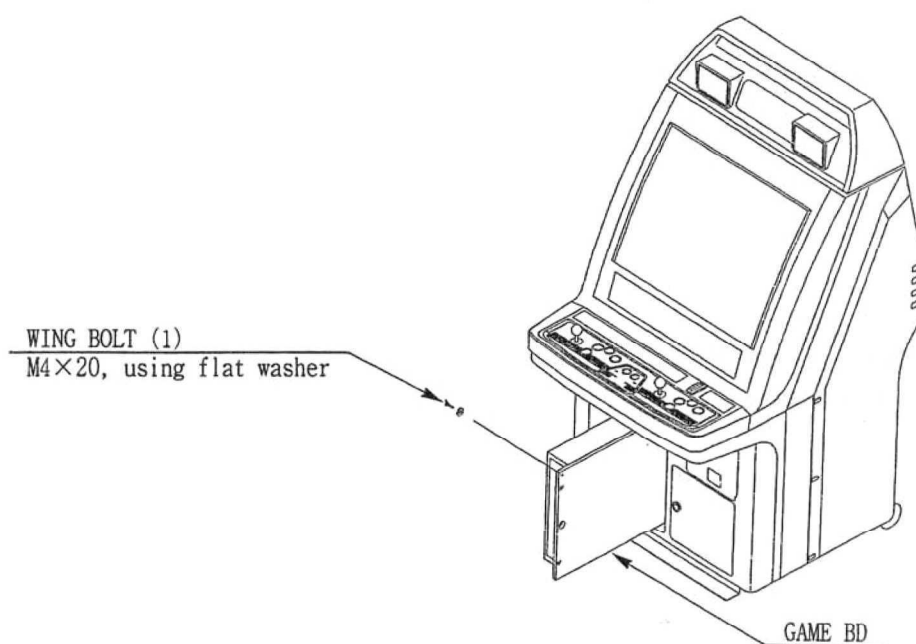


FIG. 14

15. CIRCUIT PROTECTOR



After removing the cause of the functioning of the Circuit Protector, reinstate the Circuit Protector. Depending on the cause of the functioning, using the Circuit Protector as is without removing the cause could result in generation of heat and a fire.

The AC unit on the backside of the cabinet has Circuit Protector. Even after removing the cause due to which the Circuit Protector functioned, if no improvement is noticed, please contact the Distributor, etc. where the product was purchased from, or the office(s) herein listed.

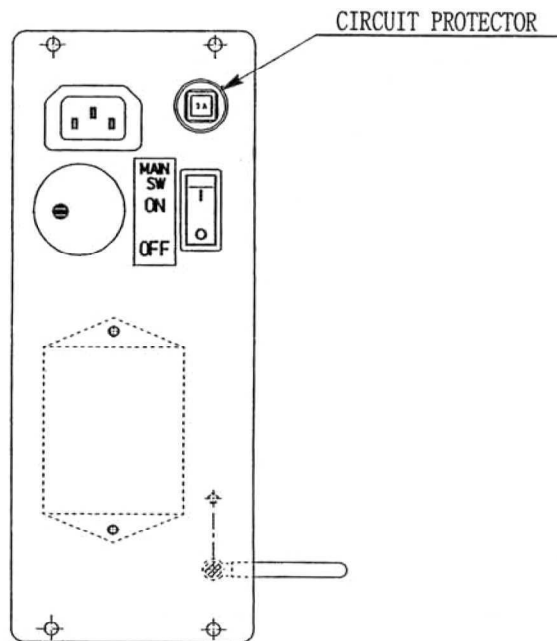
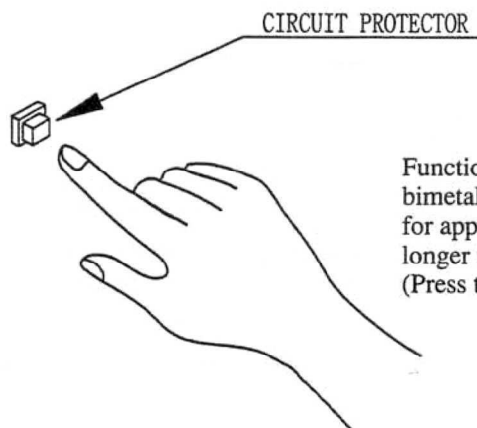


FIG. 15 a



Functions due to the activation of bimetal. To restore the function, wait for approximately one minute or longer until the bimetal cools off. (Press the Button.)

FIG. 15b

16. PERIODIC INSPECTION TABLE

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



- Be sure to check once a year to see if Power Cords are damaged, the plug is securely inserted, dust is accumulated between the Socket Outlet and the Power Plug, etc. Using the product with dust as is accumulated can cause a fire or electric shock.
- Periodically once a year, request the place of contact herein stated or the Distributor, etc. where the product was purchased from, as regards the interior cleaning. Using the product with dust as is accumulated in the interior without cleaning can cause a fire or accident. Note that cleaning the interior parts can be performed on a pay-basis.

TABLE 16

ITEMS	DESCRIPTION	PERIOD	REFERENCE
MONITOR	Cleaning CRT face.	Weekly	See below.
	Check adjustments.	Monthly	Refer to the Game Board's Service Manual.
GAME BD	DIP SW Setting check	Monthly	
CONTROL PANEL	Switch test	Monthly	
Speaker, sound	Sound test, check volume adjustment	Monthly	
COIN SELECTOR	Coin insertion test.	Monthly	9
POWER PLUG	Inspection and cleaning	Annually	See above.
INTERIOR	Cleaning		
Cabinet surfaces	Cleaning	As occasion arises.	See below.

CAUTIONS TO BE HEEDED WHEN CLEANING THE CRT SURFACES



Static preventive coating is applied to the CRT surfaces. When cleaning, pay attention to the following points. Peeling off of static preventive coat can cause electric shock.

- Remove smears by using a dry, soft cloth (flannels, etc.). Do not use a coarse gauze, etc.
- For smear removing solvent, alcohol (ethanol) is recommended. When using chemical detergent, be sure to follow instructions below:
 - Dilute chemical detergent with water and dip a soft cloth in and then thoroughly wring it to wipe smears off.
 - Do not use a chemical detergent containing an abradant, powder or bleaching agent.
 - Do not use alkaline chemical detergents such as "glass cleaner," or solvents such as thinner, etc.
- Do not rub or scratch the CRT face with hard items such as brushes, scrub brush, etc.

CLEANING THE CABINET SURFACES

If the Cabinet is badly stained, use a cloth which is dipped in the chemical detergent liquid diluted with water and then squeezed dry. Do not use thinner, benzine, alcohol or chemical dustcloth as they can damage the Cabinet surfaces.

17. DESIGN RELATED PARTS

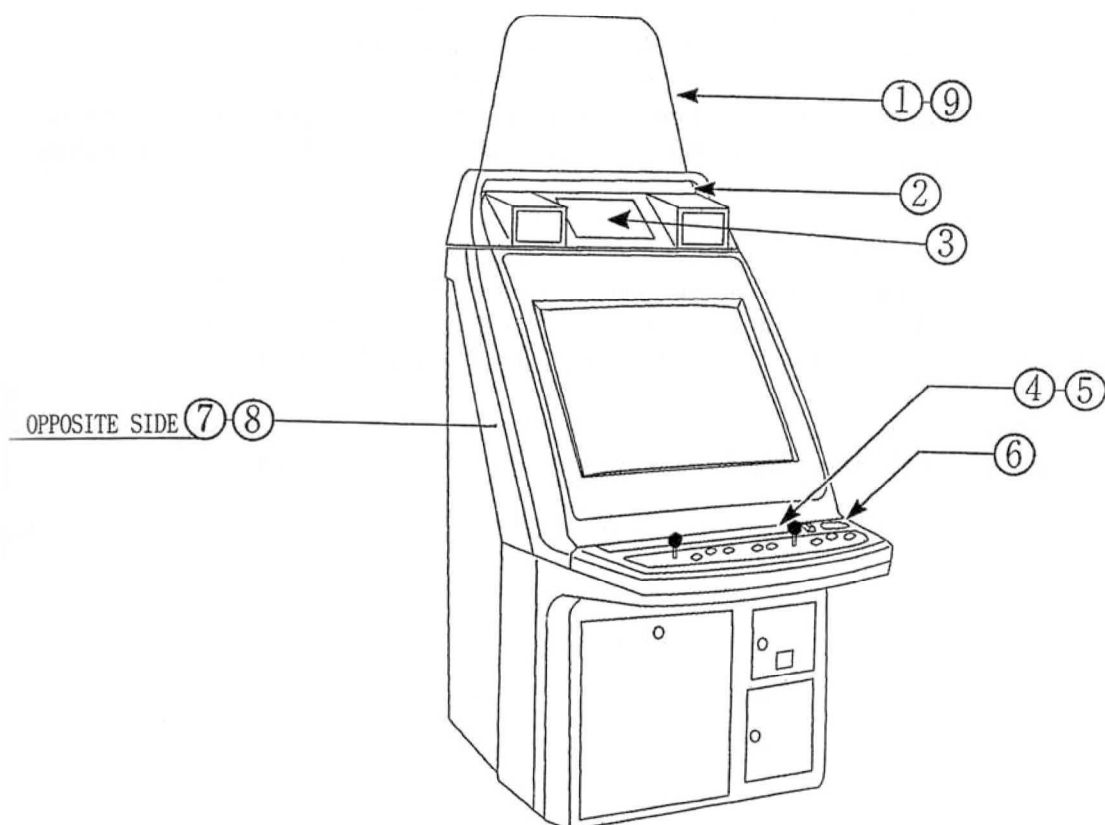


FIG. 17

No.	PART NO.	DESCRIPTION
1	CQN-0001	INSTRUCTION PANEL
2	CQN-1104	BILLBOARD UPPER
3	NAS-1105	BILLBOARD LOWER
4	CQN-0003	SHEET
5	CQN-1052	INSTRUCTION COVER
6	421-8260	DENOMINATION STICKER 100YEN
7	CQN-1201X-B	SIDE STICKER RIGHT
8	CQN-1201X-C	SIDE STICKER LEFT
9	CQN-0002	INSTRUCTION PANEL REAR

18. PARTS LIST

From among the parts used for the product, regarding the Stickers & Sheets such as warning & cautionary displays intended for players, and those describing the name of hazard prevention equipment such as the Emergency Stop Button, etc., the official language applicable to the installation location is employed. These Stickers and Sheets are important parts from the point of view of safety and should be replaced immediately if soiled or peeled off. The PARTS LIST herein contains only the PART Nos. of Stickers and Sheets described in English (with suffixed E or EG).

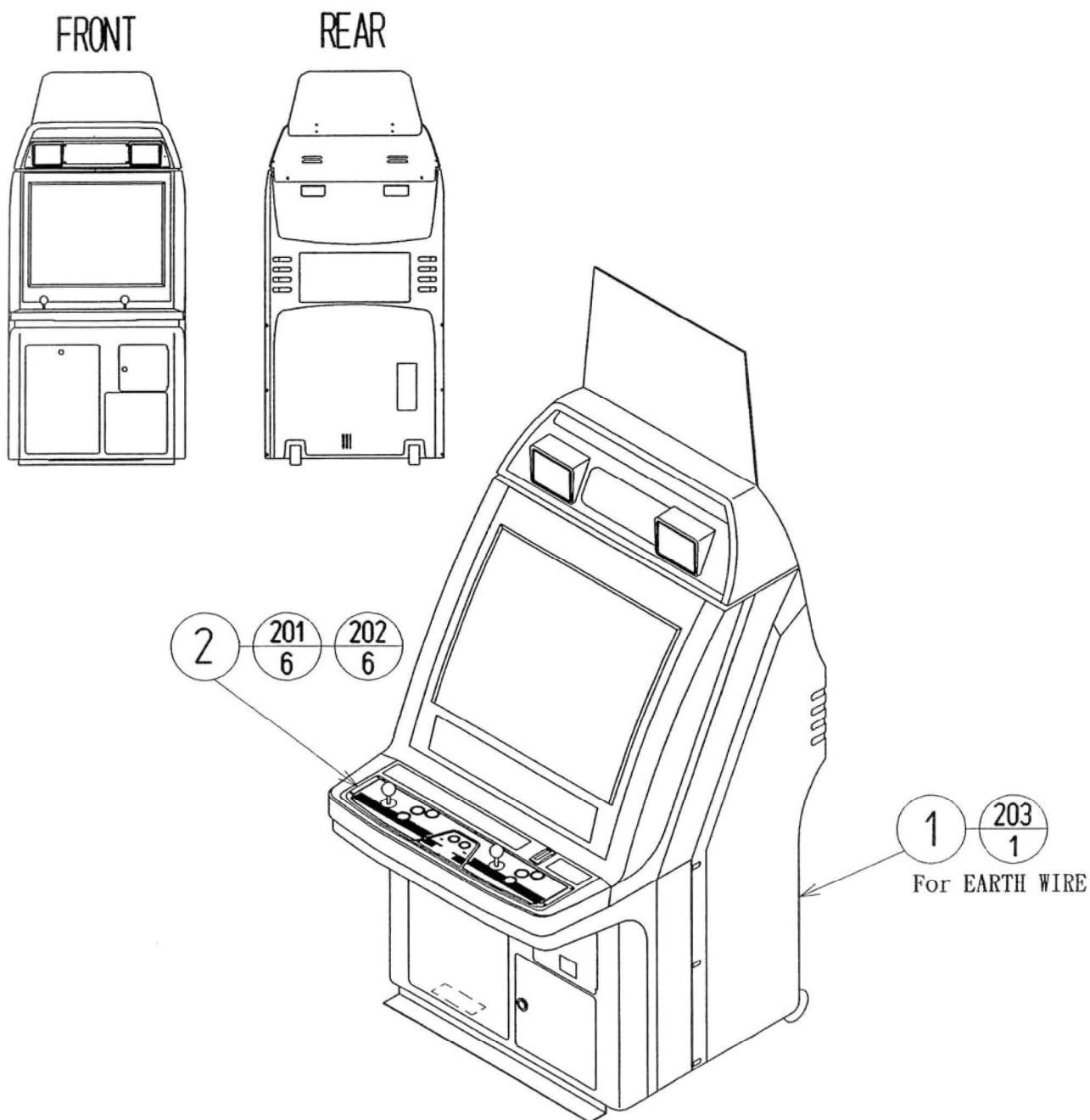
In the case where the star mark * is indicated in the Note Column of the PARTS LIST, that particular part has the applicable official language available. As such, when placing order, ensure that the corresponding official language is available for that particular part. For Example, if you desire Stickers and Sheets described in French, suffix FR in lieu of E or EG.

However, note that if a common expression can be used, only one expression is registered for plural official languages and in this case, only one language is available.

The following are the suffix character(s) of the Part No. for the corresponding official language:

E or EG:	English	FR:	French	GM:	German	SP:	Spanish
PT:	Portuguese	IT:	Italian	DU:	Dutch	GR:	Greek
DA:	Danish	SW:	Swedish	NW:	Norwegian	IC:	Icelandic

① TOP ASSY NEW ASTRO CITY CE (NAS-0000CE)

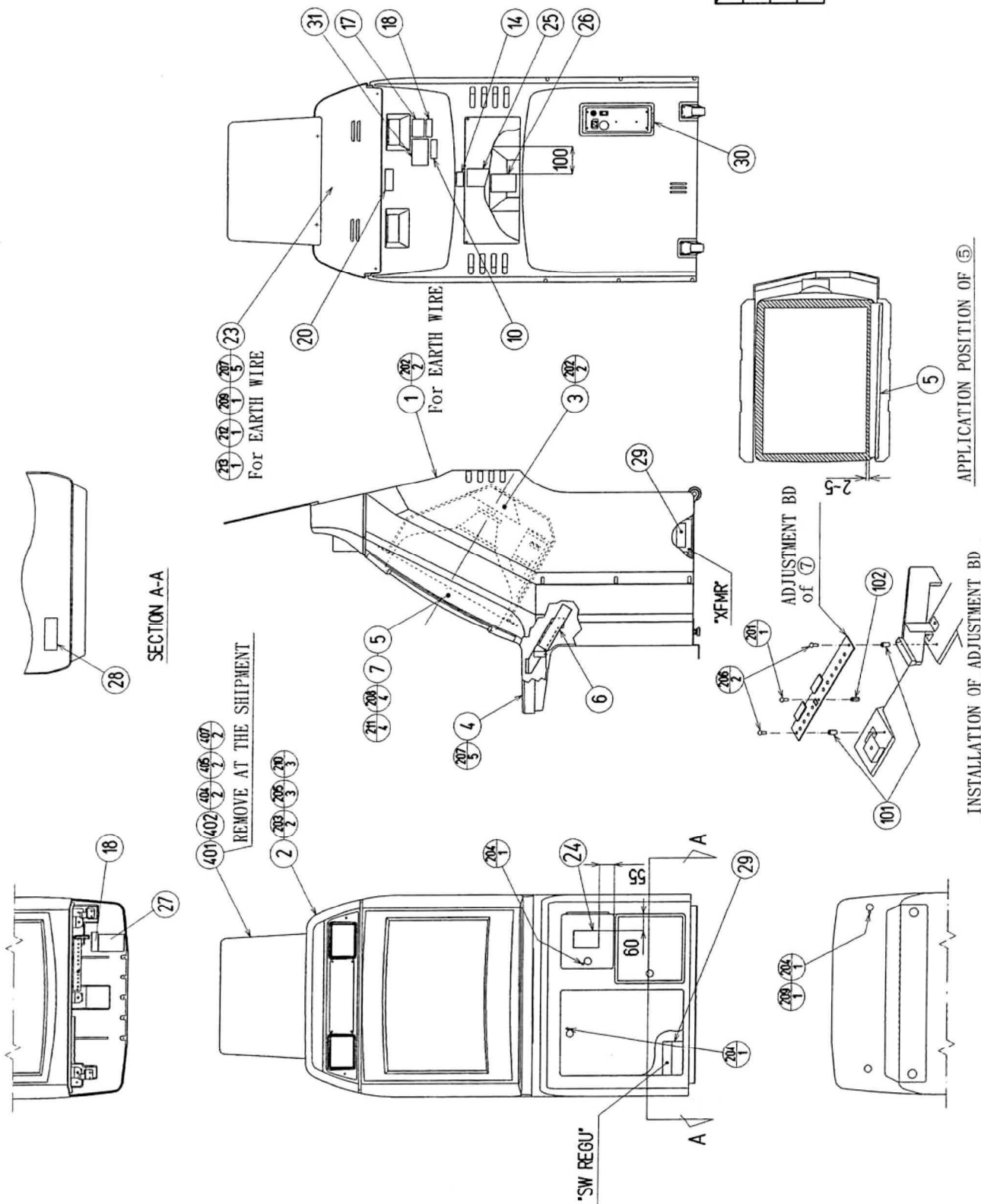


ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	NAS-1000CE	ASSY CABINET COM 15K CE	
2	CQN-2000CE	ASSY CONTROL PANEL 2L6B CE	
201	031-0S0416	CRG BLT STN M4×16	
202	050-F00400	FLG NUT M4	
203	000-P00408-W	M SCR PH W/FS M4×8	

② ASSY CABINET COM 15K CE (NAS-1000CE)

(D-1/3)

	TORQUE
206	20 kgf · cm
207	30 kgf · cm
208	200 kgf · cm



② ASSY CABINET COM 15K CE (NAS-1000CE)

(D-2/3)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	NAS-1001CE	ASSY SUB-CABINET CE	
2	NAS-1100CE	ASSY FRONT PANEL CE	
3	CQN-0004	ASSY SHIELD COVER	
4	CQN-1050CE	ASSY CONTROL PANEL BASE CE	
5	CQN-1003	GUTTER	
6	CQN-1004	CHUTE COVER	
7	200-5242-15CE04	ASSY CLR DSPL 29 15K 100V CE	
8	220-5381	KEY MASTER FOR 220-5380	
10	421-6594-91	STICKER CERTIFICATE	
14	421-7349	STICKER DANGER INFORMATION	
17	421-7987-01	STICKER ELEC SPEC FOR CE(EXP)	
18	421-7988-91	STICKER SERIAL NUMBER	
20	421-8368	STICKER ANTISTATIC	
21	SGM-4111	KEY BAG	
22	SGM-4232-91	AIR CAP COVER 750×950×1400	
23	CQN-1105XCE	FL LID CE	
24	440-WS0001XEG	STICKER W NOT OPEN DOOR ENG	
25	440-WS0002XEG	STICKER W POWER OFF ENG	
26	440-DS0013XEG	STICKER D MONITOR ENG	
27	440-CS0032-EG	STICKER C NOT TOUCH W/O KNOB	
28	440-WS0033XEG	STICKER W BD POWER OFF ENG	
29	421-6671	STICKER DANGER HIGH VOLTAGE	
30	421-6690-04	STICKER 230V(230V AREA)	
31	421-9471	STICKER INDOOR USE ONLY	
101	280-5167-12.5	SPACER ER-12.5	
102	280-5170-18	SPACER MP-18	
201	000-P00312	M SCR PH M3×12	
202	000-P00412-W	M SCR PH W/FS M4×12	
203	000-T00416-0C	M SCR TH CRM M4×16	
204	008-T00410-0C	TMP PRF SCR TH CRM M4×10	
205	000-P00516-S	M SCR PH W/S M5×16	
206	012-P00320	TAP SCR #2 PH 3×20	
207	012-T00410-0C	TAP SCR TH CRM 4×10	
208	050-F00800	FLG NUT M8 S=12	
209	060-F00400	FLT WSHR M4	
210	068-552016	FLT WSHR 5.5-20×1.6	
211	068-852216	FLT WSHR 8.5-22×1.6	
212	050-H00400	HEX NUT M4	
213	060-S00400	SPR WSHR M4	
401	CQN-0001	INSTRUCTION PANEL	
402	CQN-0002	INSTRUCTION PANEL REAR	
403	SGM-2675	POLYETHYLENE BAG 240×370	
404	008-T00408-0C	TMP PRF SCR TH CRM M4×8	
405	008-T00416-0C	TMP PRF SCR TH CRM M4×16	
406	011-F00312	TAP SCR #1 FH 3×12	
407	050-C00400-3C	CAP NUT TYPE3 CRM M4	
408	253-5442	ANTI BACTERIAL CAP SW	
409	420-6294	OWNERS MANUAL NAS CE	
413	540-0006-01	WRENCH M4 TMP SCR	

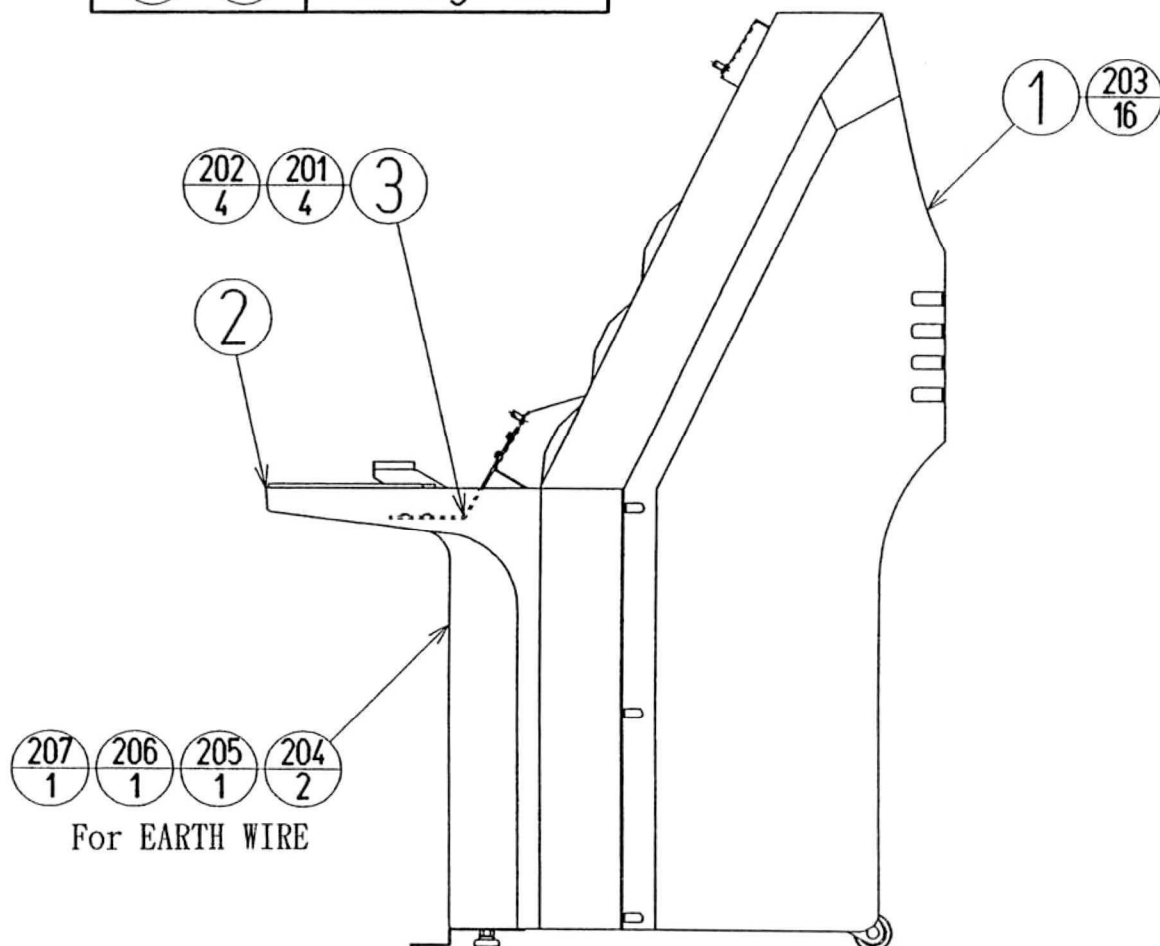
② ASSY CABINET COM 15K CE (NAS-1000CE)

(D-3/3)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
414	601-6605-03	CARTON BOX 345×470×40	
416	600-6618	AC CABLE CONNECT TYPE FOR EXP	
417	420-6294-01	SERVICEMAN MANUAL NAS CE	
418	600-6502-16	WIRE HARN ELECOIN DC12V	
419	600-6502-17	WIRE HARN ELECOIN SIGNAL	
420	600-6502-37	WIRE HARN ELECOIN CNTR	

③ ASSY SUB-CABINET CE (NAS-1001CE)

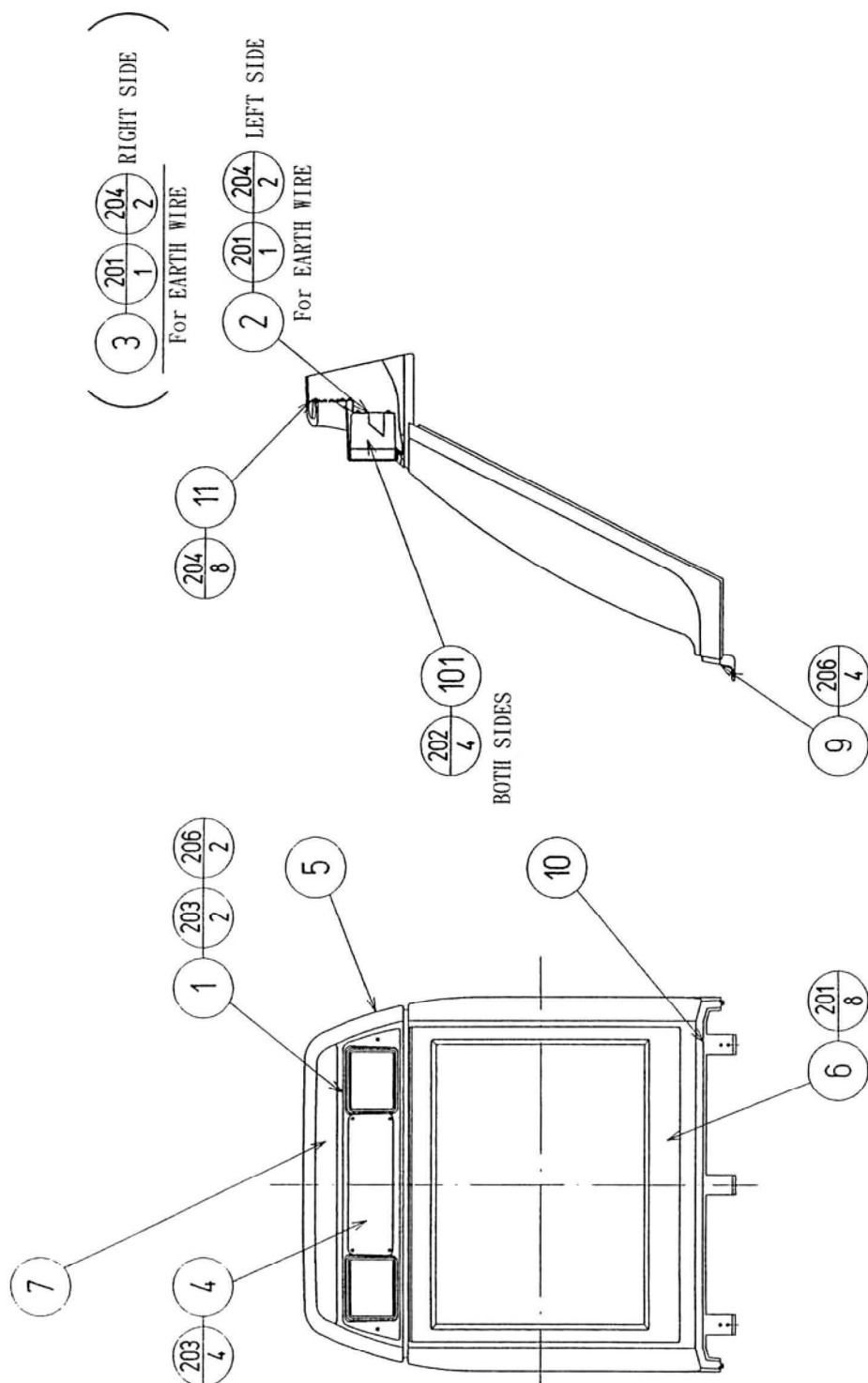
		TORQUE
②②	②③	55 kgf·cm



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	NAS-1200CE	ASSY REAR CABINET CE	
2	NAS-1300CE	ASSY CASH PANEL CE	
3	CQN-1002	RETAINER	
201	000-P00516-W	M SCR PH W/FS M5×16	
202	012-P00512	TAP SCR PH 5×12	
203	012-P00520-OC	TAP SCR PH CRM 5×20	
204	000-P00412-W	M SCR PH W/FS M4×12	
205	050-H00400	HEX NUT M4	
206	060-F00400	FLT WSHR M4	
207	060-S00400	SPR WSHR M4	

④ ASSY FRONT PANEL CE (NAS-1100CE)

(D-1/2)



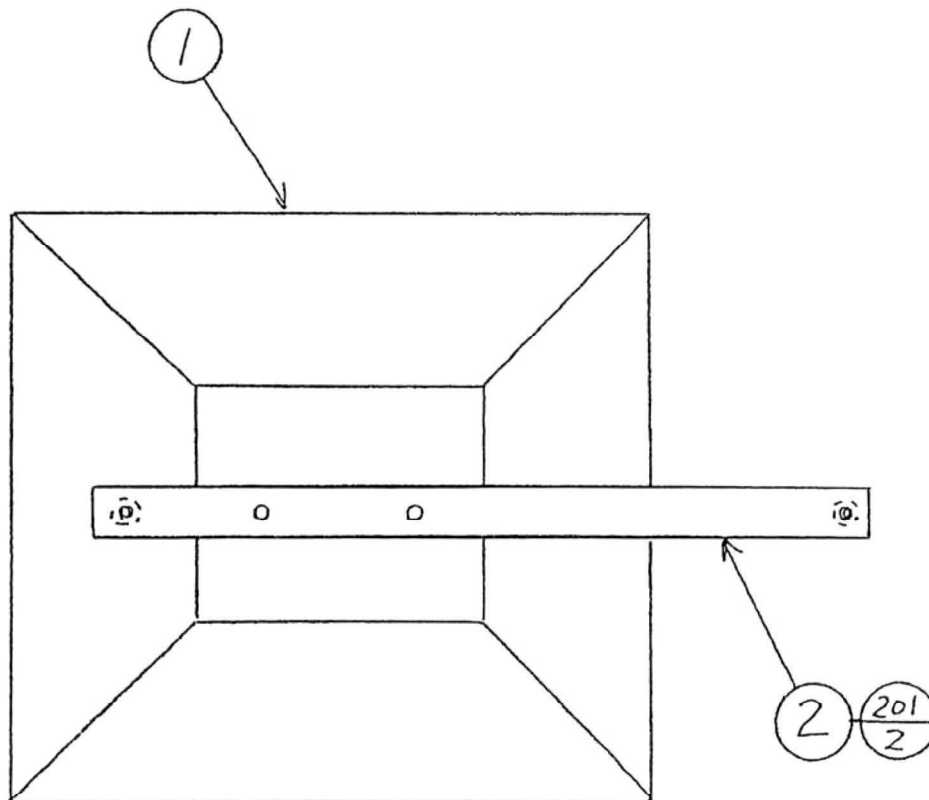
TORQUE	
204	30Kgf·cm

④ ASSY FRONT PANEL CE (NAS-1100CE)

(D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	NAS-1102	SPEAKER COVER V	
2	NAS-1103CE	SPEAKER BRKT L CE	
3	NAS-1104CE	SPEAKER BRKT R CE	
4	NAS-1105	BILLBOARD LOWER	
5	NAS-1106	FRONT PANEL	
6	CQN-1111	ASSY MASK	
7	CQN-1104	BILLBOARD UPPER	
9	CQN-1106	LOCK BRACKET	
10	CQN-1109	SPONGE	
11	CQN-1110	HOLDER	
12	NAS-1107	SPACER	
101	130-5124	SPEAKER MINI BOX 4OHM 10W	
102	280-5275-SR10	CORD CLAMP SR10	
201	000-P00410-W	M SCR PH W/FS M4×10	
202	000-P00512-W	M SCR PH W/FS M5×12	
203	008-T00416-0C	TMP PRF SCR TH CRM M4×16	
204	012-T00410-0C	TAP SCR TH CRM 4×10	
206	050-F00400	FLG NUT M4	
301	600-6502-07	WIRE HARN EXT SPEAKER A	
302	600-6502-29	WIRE HARN EARTH SP	
303	600-6502-30	WIRE HARN EXT EARTH SP	
304	600-6502-31	WIRE HARN EARTH FL LID	

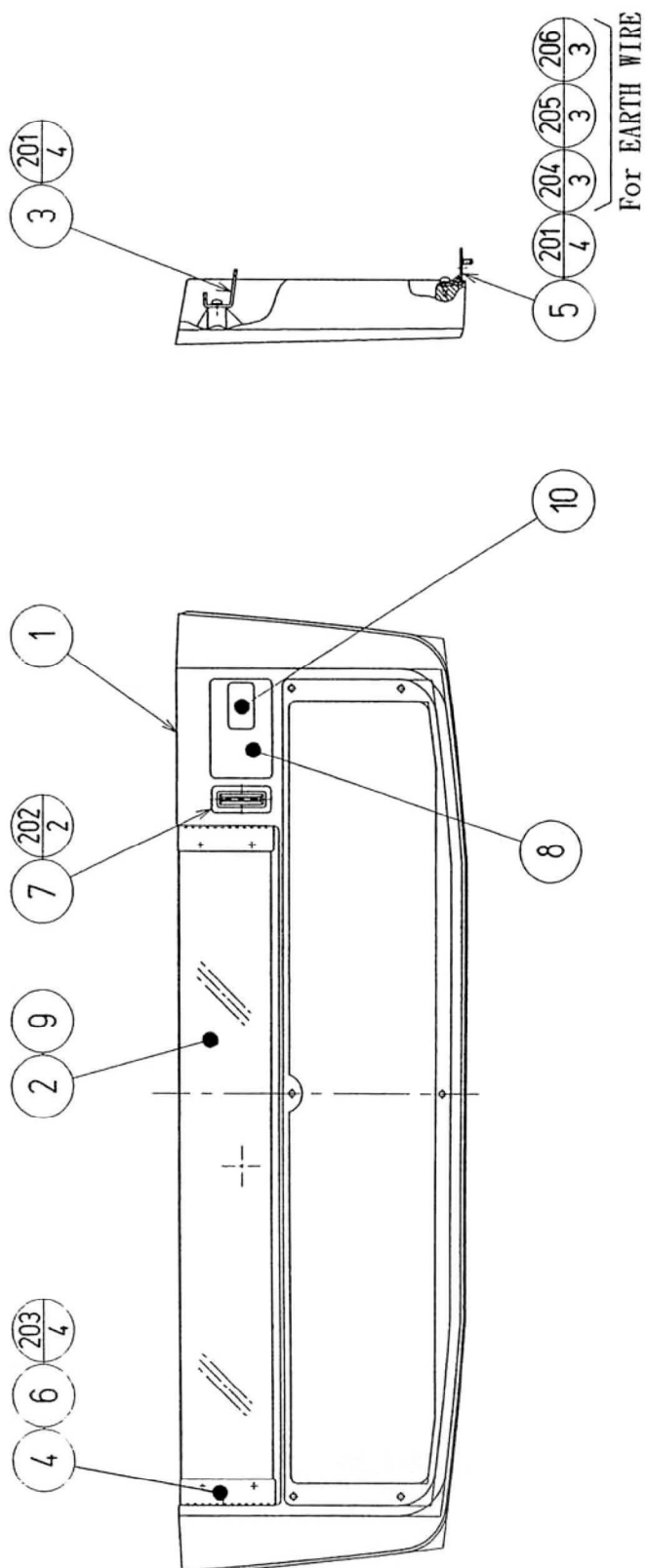
⑤ ASSY SHIELD COVER (CQN-0004)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	200-5258	MONITOR SHIELD	
2	200-5259	SHIELD STAY	
201	000-P00406-W	M SCR PH W/FS M4×6	

⑥ ASSY CONTROL PANEL BASE CE (CQN-1050CE)

(D-1/2)

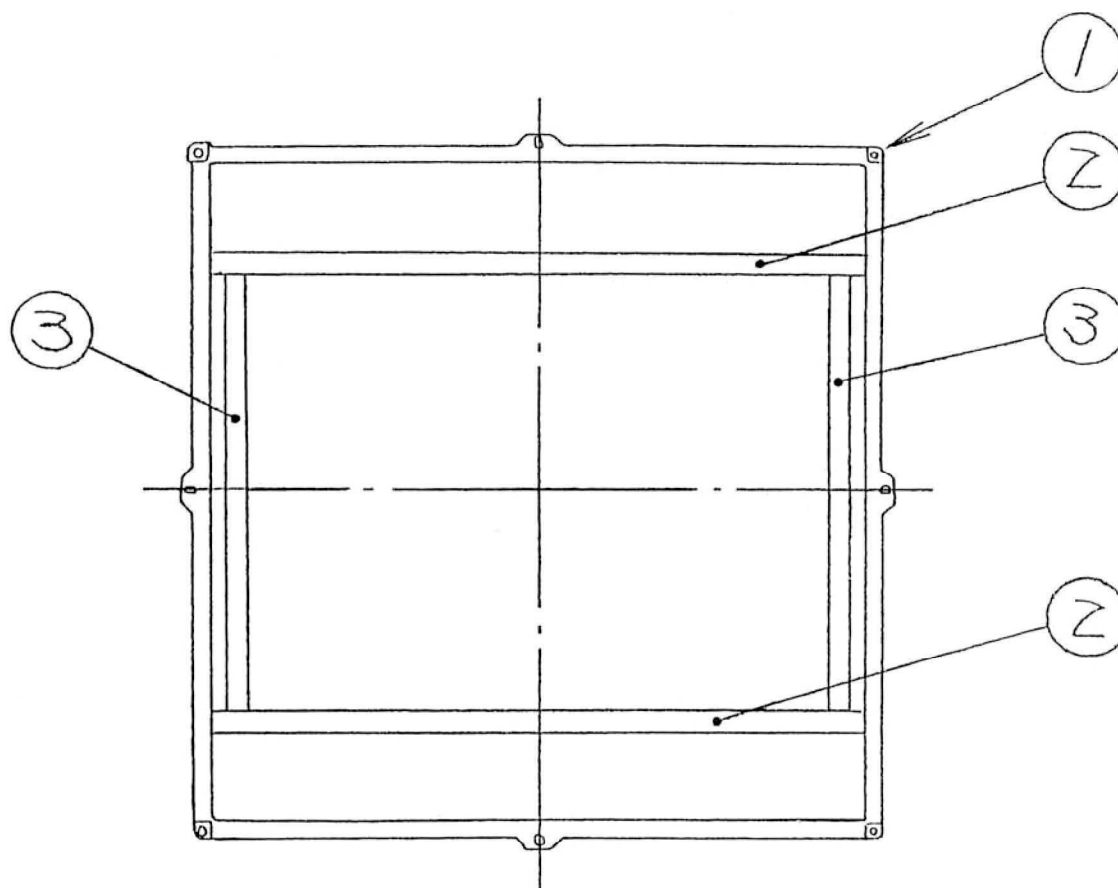


⑥ ASSY CONTROL PANEL BASE CE (CQN-1050CE)

(D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CQN-1051	CONTROL PANEL BASE	
2	CQN-1052	INSTRUCTION COVER	
3	CQN-1053	LOCK BRACKET	
4	CQN-1057	STUD PLATE	
5	CQN-1055XCE	HINGE CE	
6	CQN-1056	PROTECT SHEET	
7	220-5428-09	COIN ENTRY COMMON	
8	421-8260	DENOMINATION STICKER ¥100	
9	CQN-0003	SHEET	
10	421-8340-12	DENOMINATION STICKER BLANK	
101	280-5275-SR10	CORD CLAMP SR10	
201	000-P00408-W	M SCR PH W/FS M4×8	
202	000-P00308-W	M SCR PH W/FS M3×8	
203	050-F00400	FLG NUT M4	
204	050-H00400	HEX NUT M4	
205	060-F00400	FLT WSHR M4	
206	060-S00400	SPR WSHR M4	
301	600-6502-25	WIRE HARN PNL BASE A	
302	600-6502-26	WIRE HARN PNL BASE B	
303	600-6502-27	WIRE HARN EARTH HINGE A	
304	600-6502-28	WIRE HARN EARTH HINGE B	

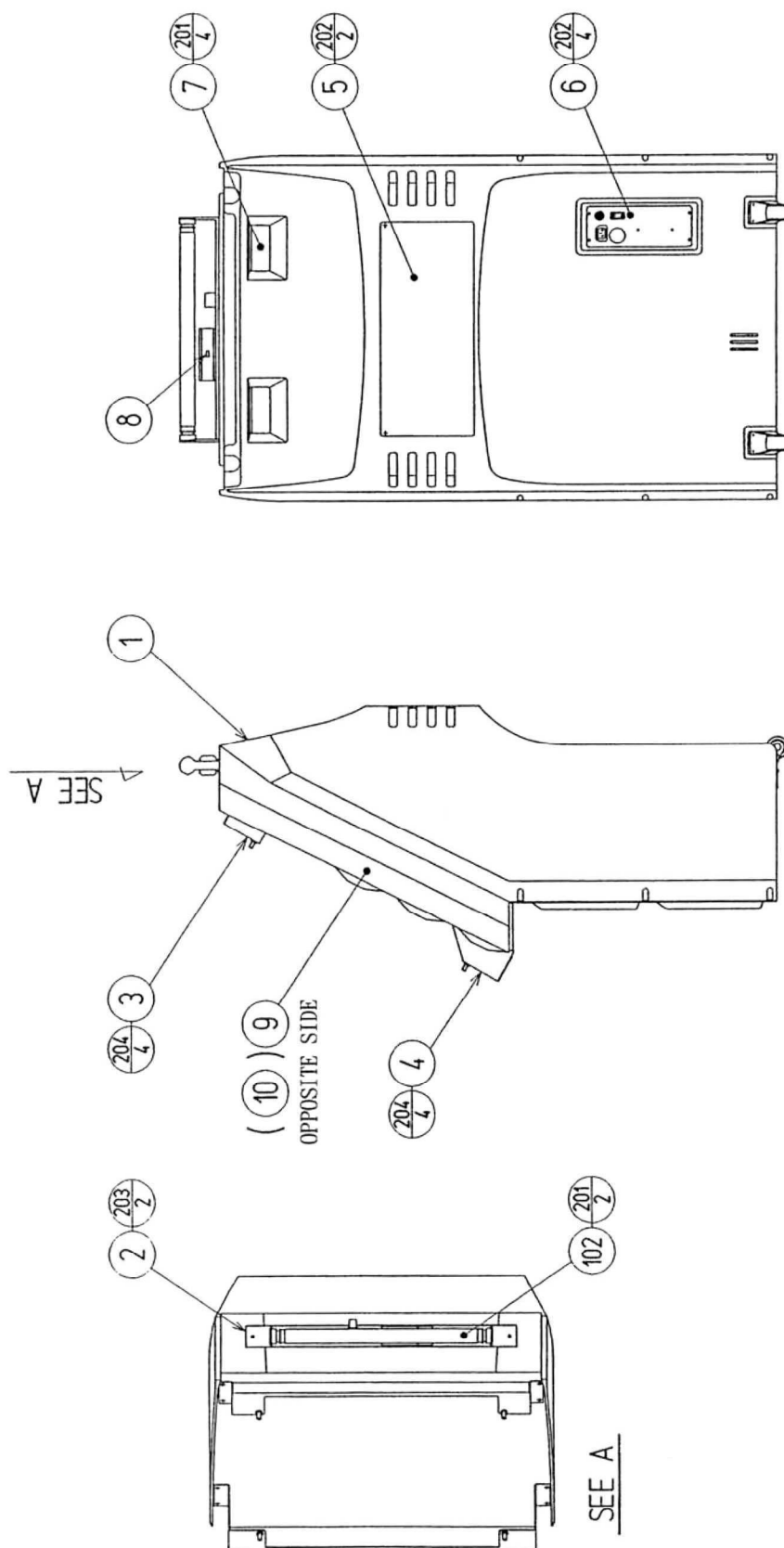
⑦ ASSY MASK (CQN-1111)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CQN-1102	MASK	
2	CQN-1112	PACKING L	
3	CQN-1113	PACKING S	
201	090-0002	GLUE, CEMEDINE No.3000RS	

⑧ ASSY REAR CABINET CE (NAS-1200CE)

(D-1/2)



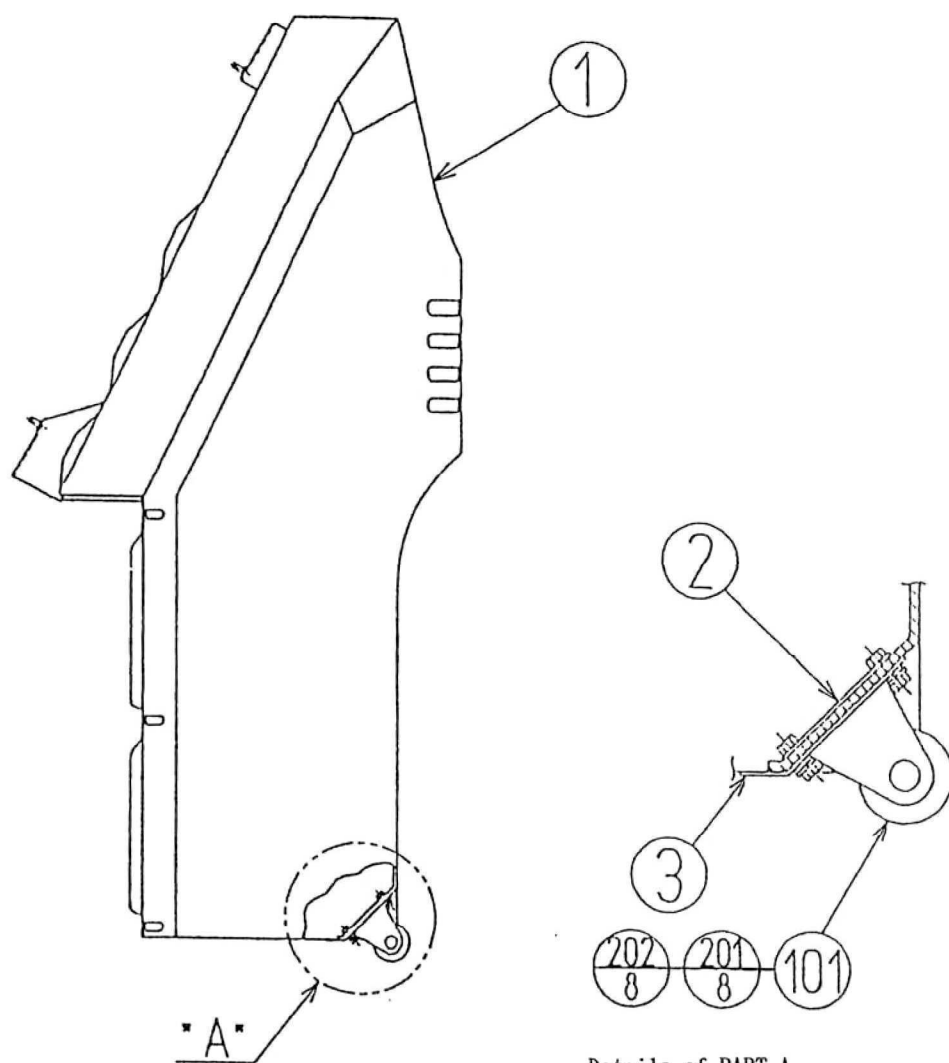
TORQUE	
②③	30 kgf·cm
②④	80 kgf·cm

⑧ ASSY REAR CABINET CE (NAS-1200CE)

(D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	NAS-1201	ASSY REAR CABI W/CASTER	
2	NAS-1202	FL BRKT	
3	CQN-1202X	MONITOR BRKT UPPER	
4	CQN-1203Y	MONITOR BRKT LOWER	
5	CQN-1205	BACK LID	
6	NAS-1210	ASSY AC UNIT CE	
7	CQN-1212	COVER	
8	421-7501-12	STICKER FL 15W	
9	CQN-1201X-B	SIDE STICKER RIGHT	
10	CQN-1201X-C	SIDE STICKER LEFT	
101	280-5009-01	CORD CLAMP 21	
102	390-5446CE	ASSY FL 15W W/CONN CE	
103	280-5275-SR10	CORD CLAMP SR10	
201	000-P00416-W	M SCR PH W/FS M4×16	
202	008-T00412-0B	TMP PRF SCR TH BLK M4×12	
203	012-T00410-0C	TAP SCR TH CRM 4×10	
204	012-P00616	TAP SCR PH 6×16	

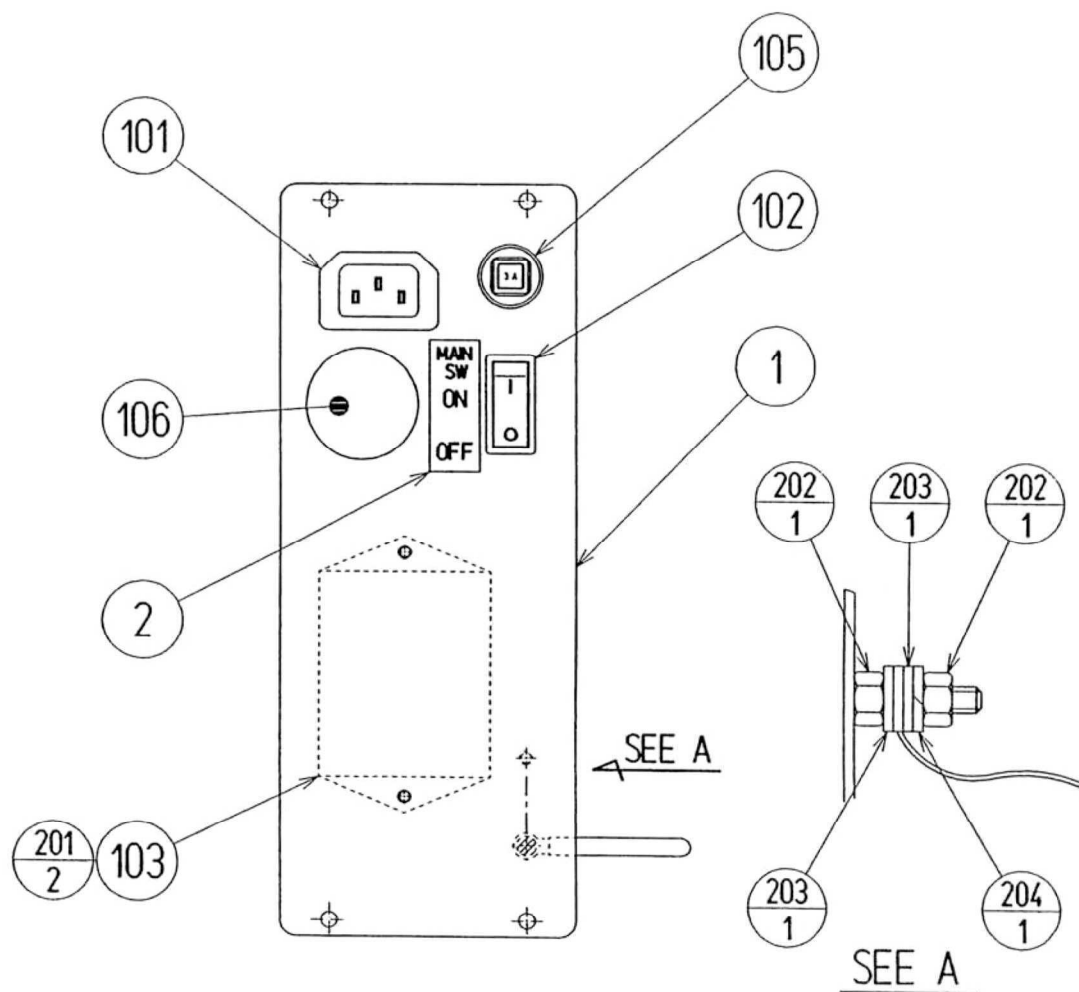
⑨ ASSY REAR CABI W/CASTER (NAS-1201)



Details of PART A

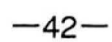
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CQN-1201-A	CABINET BLANK	
2	CQN-1208	BOLT PLATE	
3	CQN-1209	CASTER BRACKET	
101	601-6151-01	CASTER	
201	050-H00600	HEX NUT M6	
202	060-S00600	SPR WSHR M6	

⑩ ASSY AC UNIT CE (NAS-1210)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	NAS-1211	AC PANEL EXP CE	
2	421-8324	STICKER MAIN SW ON OFF	
3	NAS-1360	ASSY EARTH WIRE CE	
101	214-0202	AC INLET PANEL TYPE	
102	509-5453-V-B	SW ROCKER J8 V-B	
103	270-5115	NOISE FILTER 15A GT-215J	
104	601-0460	PLASTIC TIE BELT 100MM	
105	512-5046-3000	C. P 3000MA CE UL	
106	253-5442	ANTI BACTERIAL CAP SW	
107	310-5029-H20	SUMITUBE F H 20MM	
201	000-P00406-W	M SCR PH W/FS M4×6	
202	050-H00400	HEX NUT M4	
203	060-F00400	FLT WSHR M4	
204	060-S00400	SPR WSHR M4	
301	600-6502-32	WIRE HARN AC UNIT EXP CE	

(D-1/2)

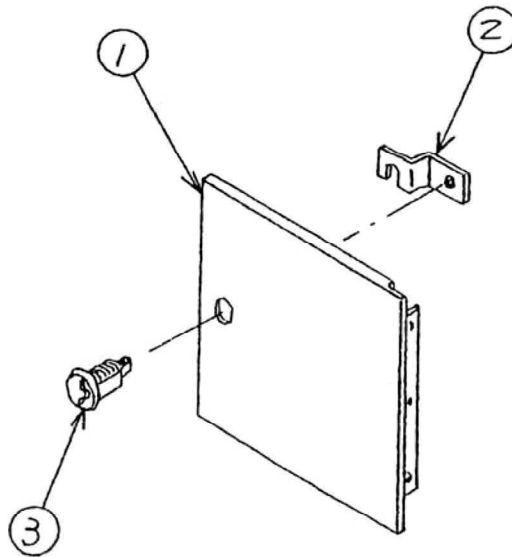


⑪ ASSY CASH PANEL CE (NAS-1300CE)

(D-2/2)

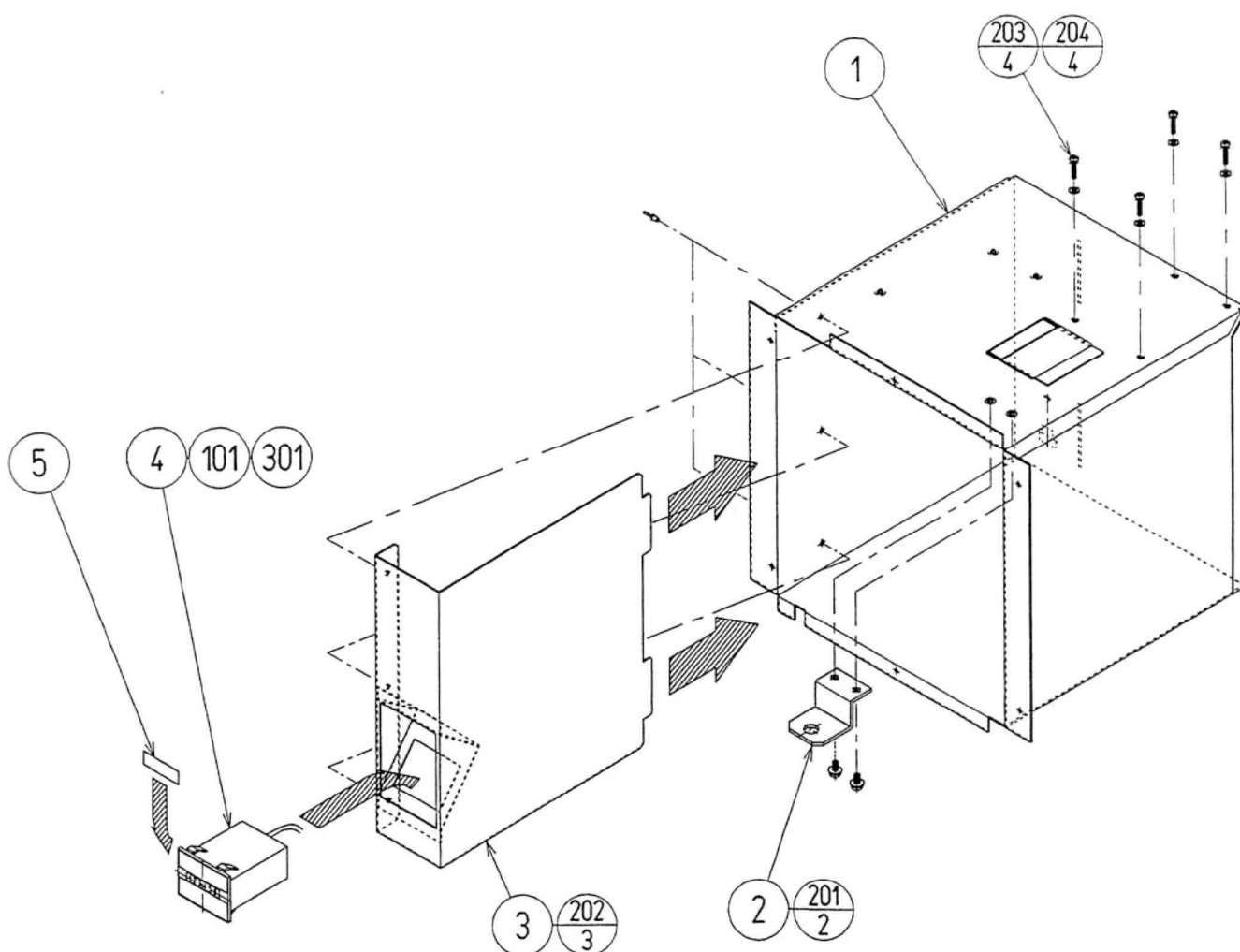
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	NAS-1350CE	ASSY WIRE CE	
2	CQN-0103	WOODEN BASE	
3	CQN-1301X	CASH PANEL	
4	CQN-1302	FRAME CASH BOX	
5	CQN-1303	ASSY CASH BOX DOOR	
6	CQN-1305CE	ASSY CASH BOX COVER CE	
7	CQN-1309	FRONT PANEL HOLDER	
8	CQN-1310	CHUTE	
9	CQN-1311	LKG TNG	
10	CQN-1312	SPACER	
11	CQN-1313	LOCK BRACKET	
12	CQN-1315	STOPPER	
13	CQN-1316CE	CONNECTOR BRACKET CE	
14	CQN-1317CE	ASSY SERVICE DOOR CE	
15	CQN-1319CE	ASSY COIN CHUTE DOOR CE	
16	CQN-1328	BD HOLDER	
17	CQN-1329CE	PLATE CE	
18	CQN-1330	ASSY LEG ADJUSTER	
19	253-5366	CASH BOX	
20	220-5380	MAG LOCK MASTER W/O KEY	
21	400-5198CE-01Z	PWR SPLY UNIT CE	
22	117-5285	NUT PLATE XFMR 560-5360	
101	280-5009-01	CORD CLAMP 21	
102	280-0419	HARNESS LUG	
103	560-5360	PWR XFMR 300VA CE	
201	000-P00414-W	M SCR PH W/FS M4×14	
202	000-F00410	M SCR FH M4×10	
203	010-F00312	S-TITE SCR FH M3×12	
204	012-T00410-0C	TAP SCR TH CRM 4×10	
205	032-000420	WING BLT M4×20	
206	050-F00600	FLG NUT M6	
207	068-441616	FLT WSHR 4.4-16×1.6	
209	000-P00520-W	M SCR PH W/FS M5×20	
301	600-6502-33	WIRE HARN COIN CHUTE	
305	600-6502-34	WIRE HARN EXT XFMR CE	

⑫ ASSY CASH BOX DOOR (CQN-1303)



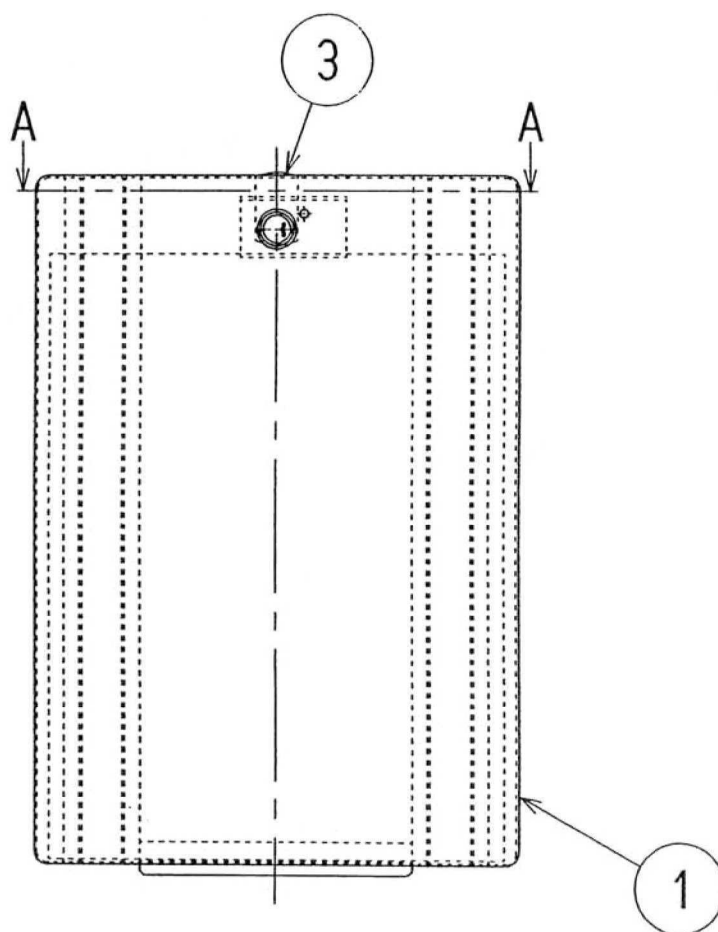
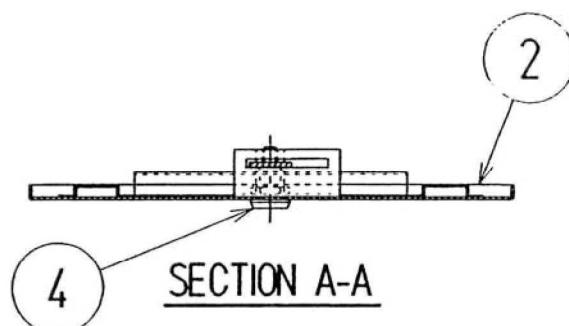
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CQN-1304	CASH BOX DOOR	
2	NCA-1017	LOCKING TONGUE	
3	220-5046-91	MAGNETIC LOCK W/KEYS	

⑬ ASSY CASH BOX COVER CE (CQN-1305CE)



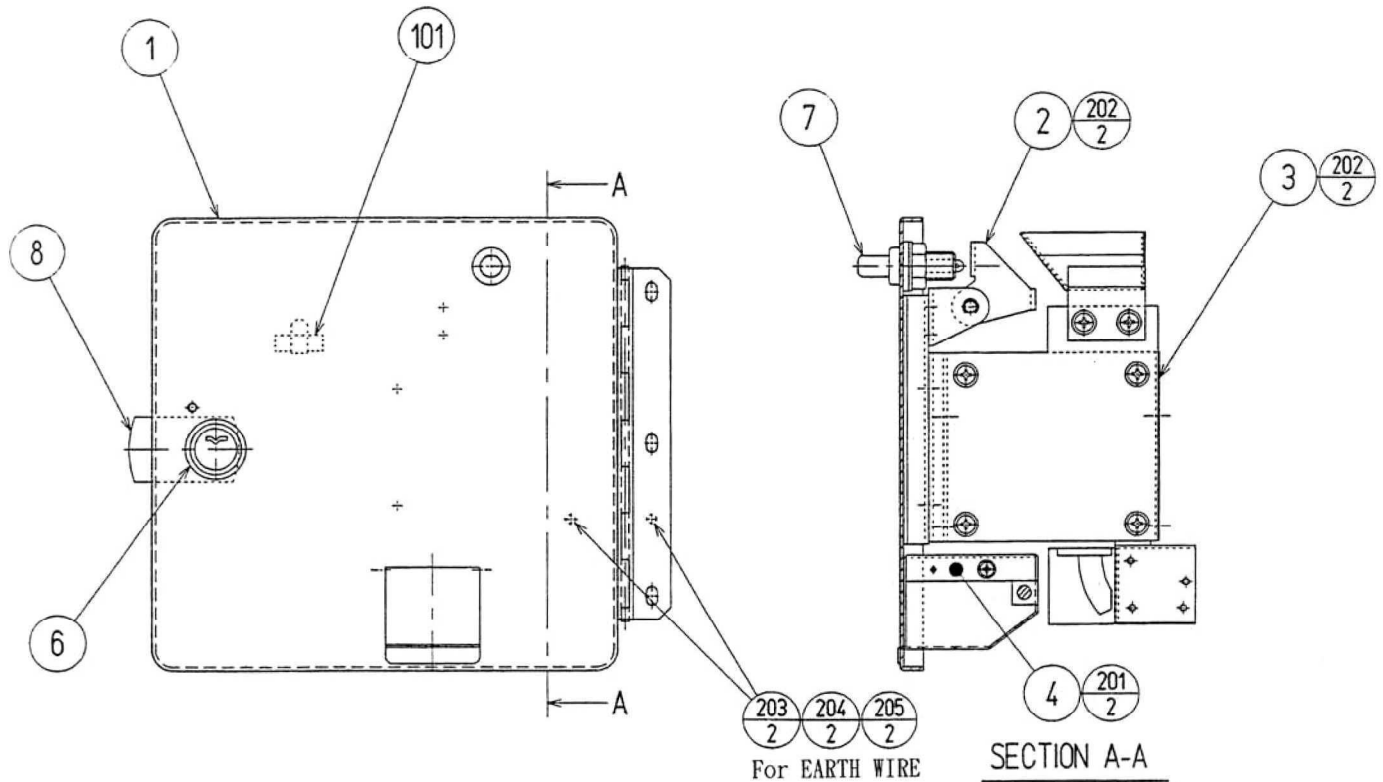
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CQN-1306XCE	CASH BOX COVER CE	
2	CQN-1307	LOCK BRACKET	
3	CQN-1308	COIN METER BRACKET	
4	220-5217-01	MAG CNTR 6DIG DC12	
5	421-6591-01	STICKER COIN METER	
101	209-0023	CONN CLOSED END	
201	000-P00408-W	M SCR PH W/FS M4×8	
202	047-PA3206-3	RVT OPEN TYPE AL 3.2×6.3	
203	000-P00330-W	M SCR PH W/FS M3×30	
204	069-000007-PN	FLT WSHR PLASTIC 3.3-8×0.8	
301	600-6502-35	WIRE HARN COIN METER 12V	

⑭ ASSY SERVICE DOOR CE (CQN-1317CE)



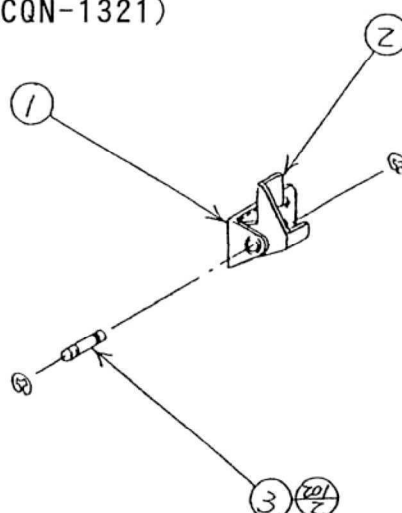
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CQN-1318	SERVICE DOOR	
2	CQN-1325CE	PAPER INSULATOR CE	
3	DP-1167	TNG LKG	
4	220-5380	MAG LOCK MASTER W/O KEY	

15 ASSY COIN CHUTE DOOR CE (CQN-1319CE)



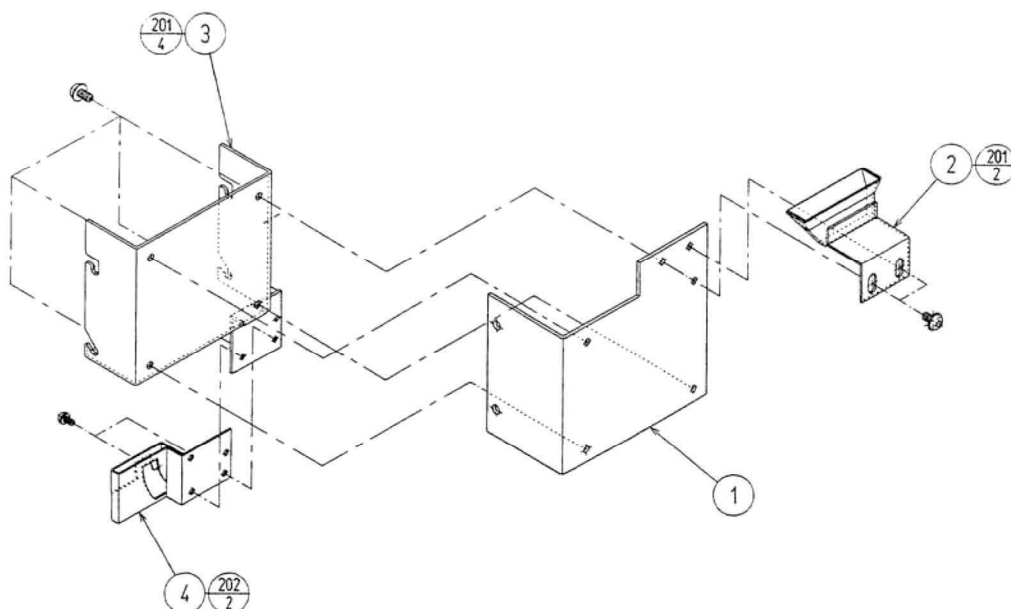
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CQN-1320XCE	COIN CHUTE DOOR CE	
2	CQN-1321	ASSY REJECT LEVER	
3	CQN-1324CE	ASSY COIN CHUTE BRKT CE	
4	CQN-1326Y	REJECT COVER	
6	220-5380	MAG LOCK MASTER W/O KEY	
7	250-5043	REJECT BUTTON ASSEMBLY	
8	DP-1167	TNG LKG	
101	280-0425	CORD CLAMP ϕ 10	
201	010-P00306-F	S-TITE SCR PH W/F M3 \times 6	
202	010-P00408-F	S-TITE SCR PH W/F M4 \times 8	
203	050-H00400	HEX NUT M4	
204	060-F00400	FLT WSHR M4	
205	060-S00400	SPR WSHR M4	
301	600-6227-15	WIRE HARN COIN CHUTE EARTH	
302	600-6502-36	WIRE HARN EXT C. DOOR EARTH	

①⑥ ASSY REJECT LEVER (CQN-1321)



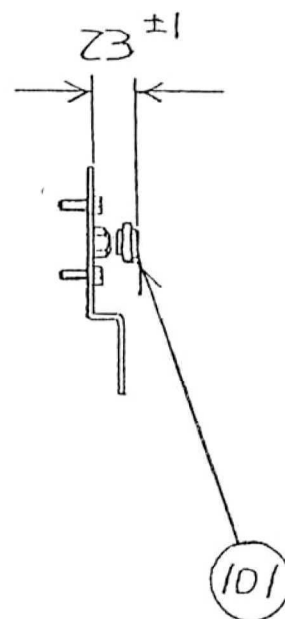
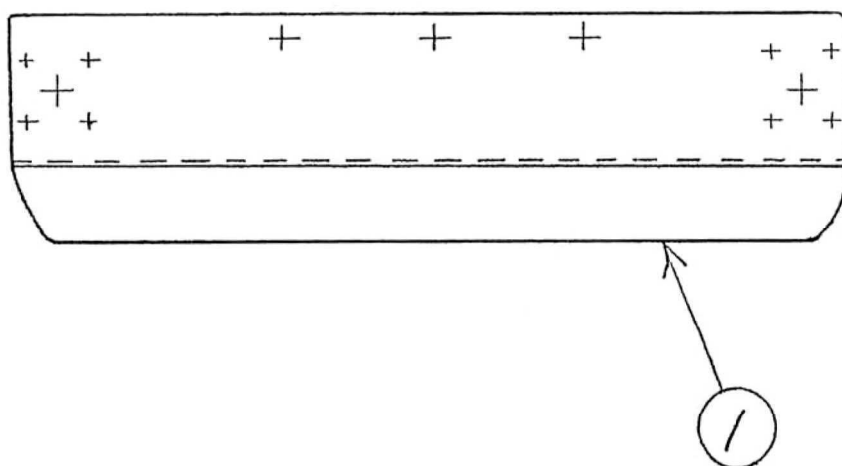
ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CQN-1322	REJECT LEVER BRACKET	
2	CY-1032	REJECT LEVER	
3	123-0035	SHAFT	
201	069-0039	E RING 3.2	

①⑦ ASSY COIN CHUTE BRKT CE (CQN-1324CE)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CY-1009	COIN CHUTE BRACKET	
2	105-5041	UPPER COIN CHUTE	
3	220-5272	CHANNEL BRKT W/O SW CHUTE	
4	220-5269	COIN SW CHUTE $\phi 30.8$ TYPE	
201	010-P00408-F	S-TITE SCR PH W/F M4 \times 8	
202	000-P00306-S	M SCR PH W/S M3 \times 6	

⑱ ASSY LEG ADJUSTER (CQN-1330)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CQN-1331	LEG ADJ BRKT	
101	601-6076	LEG ADJUSTER $\phi 32$	

①⑨ ASSY WIRE CE (NAS-1350CE)

ASSY WIRE (NAS-1350CE) is comprised of the following wire harnesses.
An ASSY DRG. is unavailable.

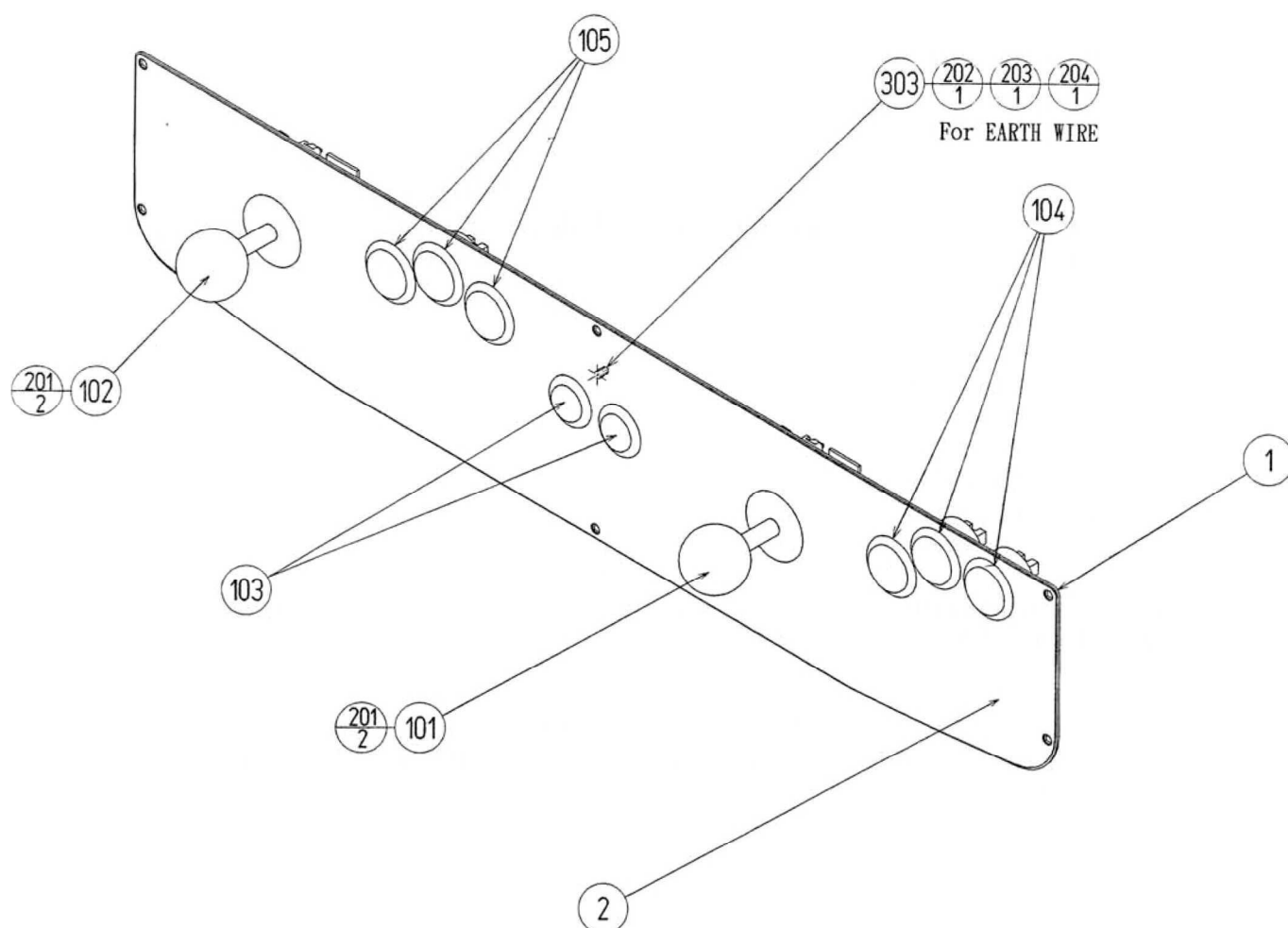
ITEM NO.	PART NO.	DESCRIPTION	NOTE
101	601-0460	PLASTIC TIE BELT 100MM	
302	600-6227-06	WIRE HARN RESERVE INPUT	
303	600-6502-38	WIRE HARN EDGE CONN CE	
304	600-6502-12	WIRE HARN EXT SPEAKER B	

②⑩ ASSY EARTH WIRE CE (NAS-1360)

ASSY WIRE (NAS-1360) is comprised of the following wire harnesses.
An ASSY DRG. is unavailable.

ITEM NO.	PART NO.	DESCRIPTION	NOTE
101	601-0460	PLASTIC TIE BELT 100MM	
301	600-6502-39	WIRE HARN EARTH XFMR	
302	600-6502-40	WIRE HARN EARTH PNL BRKT	
303	600-6502-41	WIRE HARN EARTH LEG ADJ	
304	600-6502-42	WIRE HARN EARTH CASH BOX	

②① ASSY CONTROL PANEL 2L6B CE (CQN-2000CE)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CQN-2001	PANEL BASE 2L6B	
2	CQN-2002	CONT PANEL PLATE 2L6B	
101	610-0094-04	ASSY 8WAY JOYSTICK PINK (LS-25)	
102	610-0094-05	ASSY 8WAY JOYSTICK GREEN (LS-25)	
103	509-5156	SW PB 1M YELLOW OBSN-24Y	
104	509-5135-08	SW PUSH BUTTON 1M SPL PINK	
105	509-5135-09	SW PUSH BUTTON 1M GREEN	
106	280-5009	CORD CLAMP 21	
201	000-P00406-S	M SCR PH W/S M4×6	
202	050-H00400	HEX NUT M4	
203	060-F00400	FLT WSHR M4	
204	060-S00400	SPR WSHR M4	
301	600-6227-07	WIRE HARN CONT PNL 1P (2L6B)	
302	600-6227-08	WIRE HARN CONT PNL 2P (2L6B)	
303	600-6502-24	WIRE HARN CONT PNL EARTH CE	

19. WIRE COLOR CODE TABLE

THE WIRE COLOR CODE is as follow:

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

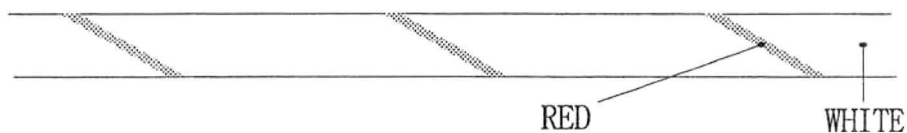
Wires other than those of any of the above 5 single colors will be displayed by 2 alphanumeric characters.

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

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

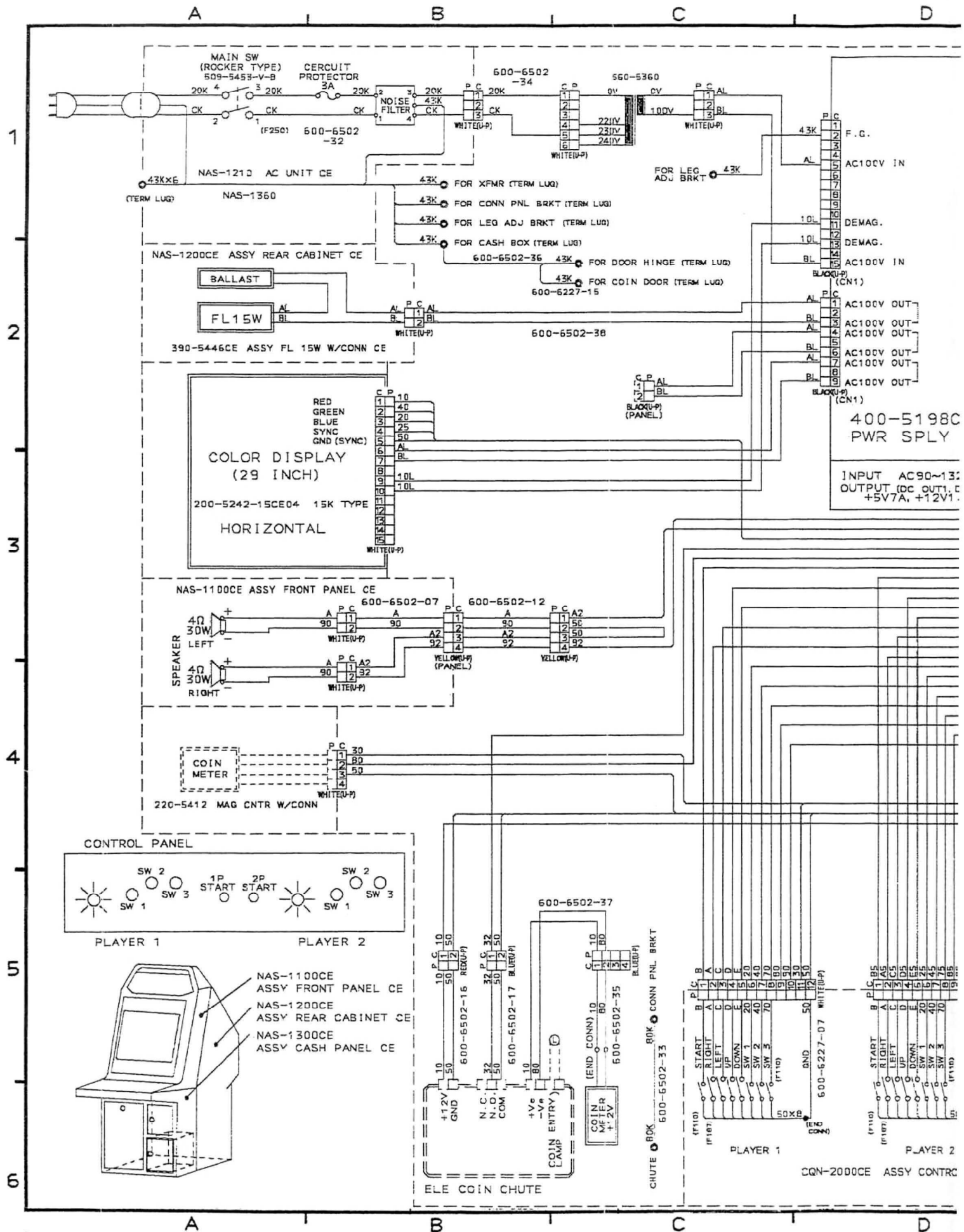
Note 1: If the right-hand side alphanumeric is not 0, that particular wire has a spiral color code. The left-hand side character shows the base color and the right-hand side one, the spiral color.

<Example> 51 WHITE / RED



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

K:	AWG18, UL1015
L:	AWG20, UL1007
None:	AWG22, UL1007



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