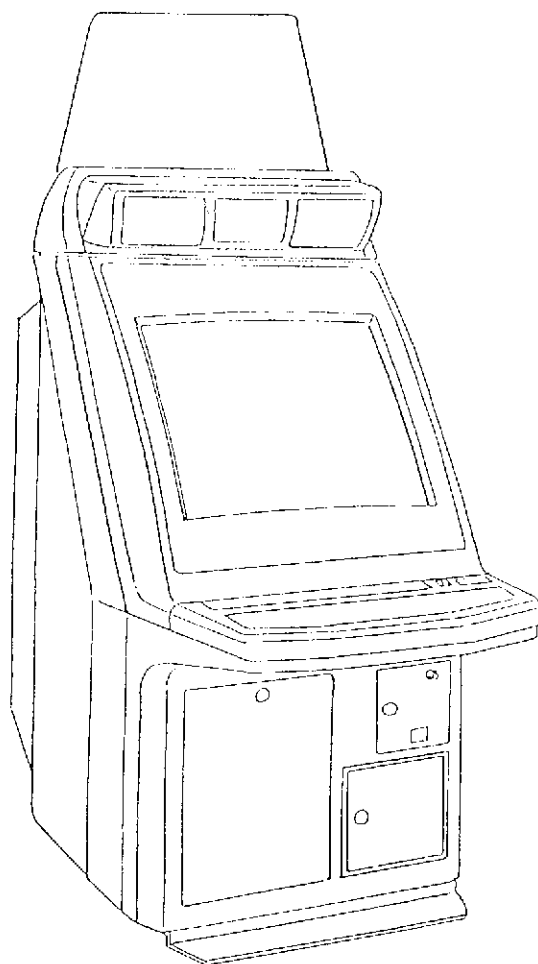


SEGA

ASTRO CITY 2

OWNER'S MANUAL



SEGA ENTERPRISES, LTD.

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SPECIFICATIONS

Installation space : 750 (W) × 1,005 mm (D) (29.5 in. × 39.6 in.)

Height : 1,445 mm (56.9 in.)

Weight : Approx. 125 kg. (276 lds.)

Power, maximum current : 202W 2.7A (AC 110V 50 Hz AREA)

200W 2.65A (AC 110V 60 Hz AREA)

201W 2.5A (AC 120V 60 Hz AREA)

205W 1.3A (AC 220V 50 Hz AREA)

205W 1.3A (AC 220V 60 Hz AREA)

206W 1.1A (AC 240V 50 Hz AREA)

203W 1.2A (AC 240V 60 Hz AREA)

For TAIWAN

Power, current : 203W 2.8A (MAX.)

160W 2.1A (MIN.)

C. R. T. : 29 INCH COLOR MONITOR

NOTE: Descriptions in this manual are subject to change without prior notice.

INTRODUCTION OF THE OWNER'S 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 Owner's 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 ASTRO CITY 2, a new SEGA product.

This manual is intended for those who have knowledge of electricity and technical expertise especially in ICs, CRTs, microprocessors, etc. Carefully read this manual to acquire sufficient knowledge before working on the machine. Should there be a malfunction, non-technical personnel should under no circumstances touch the interior system. Should such a case arise, contact our Main Office or the closest branch office listed as follows:

SEGA ENTERPRISES, INC. (U.S.A.)/CUSTOMER SERVICE
45133 Industrial Drive, Fremont, California 94538, U.S.A.
Phone : (415) 802-3100
Fax : (415) 802-1754

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 Vallengano, 19-23, 1° A, 37008-Salamanca, Spain
Phone : (923) 265893
Fax : (923) 265913

1. HANDLING PRECAUTIONS

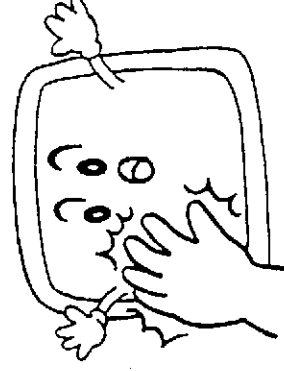
When installing or inspecting the machine, be very careful of the following points and pay attention to ensure that the player can enjoy the game safely.

- Be sure to turn the power off before working on the machine.
- To insert or pull out the plug quickly is dangerous.
- It is necessary to make sure that the power cord or the grounding wire is not exposed on the road, etc. in a manner so as to be dangerous. Make sure that grounding connections are made safely at the position where so specified.
- Do not use any fuse that does not meet specified rating.
- Make complete connections for the IC board and other connectors. Insufficient insertion is very dangerous.
- The operating (ambient) temperature range is from 5°C to 40°C.

Also, for the IC board circuit inspections, only the logic tester is allowed. The use of a tester is not permitted, so be careful in this regard.

After confirming that there are no irregularities, turn the power ON.

REGARDING STATIC ELECTRICITY:



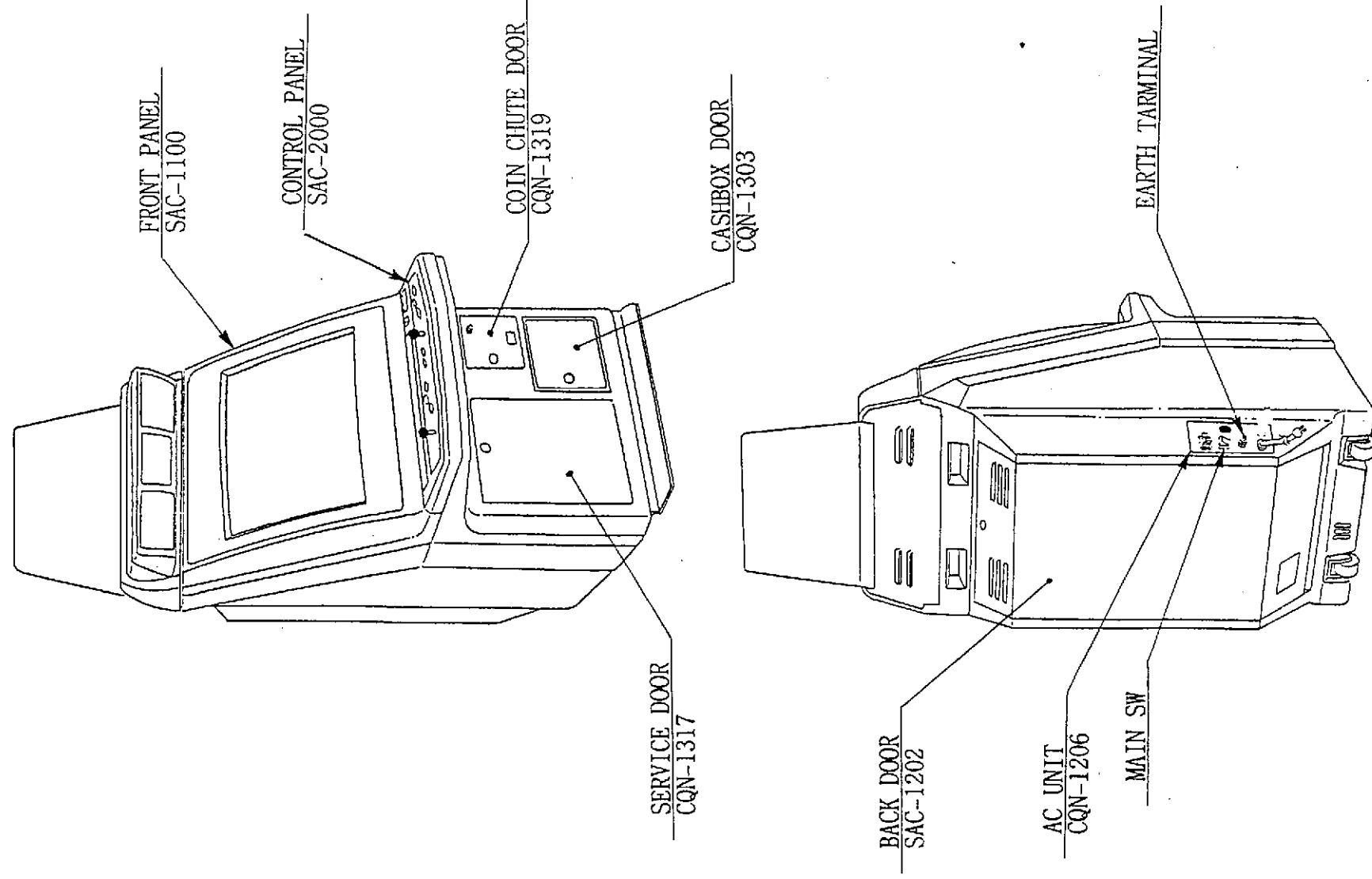
When you touch the monitor (CRT) at the time the power is turned on or off, you might slightly feel electricity. This, however, is caused by static electricity and would not inflict bodily injury on persons.

2. PRECAUTIONS CONCERNING INSTALLATION LOCATION

The ASTRO CITY 2 is an indoor game machine. Absolutely do not install it outside. Even indoors, avoid installing in places mentioned below so as to ensure proper usage:

- Places subject to rain or water leakage, or condensation due to humidity.
- In the proximity of an indoor swimming pool and/or shower.
- Places subject to direct sunlight.
- Places subject to heat sources from heating units, etc., or hot air.
- Vicinity of highly inflammable/volatile chemicals or hazardous matter.
- Sloped surfaces.
- Vicinity of anti-disaster facilities such as fire exits and fire extinguishers.
- Places subject to any type of violent impact.
- Dusty places.

3. NAME OF PARTS



4. ACCESSORIES

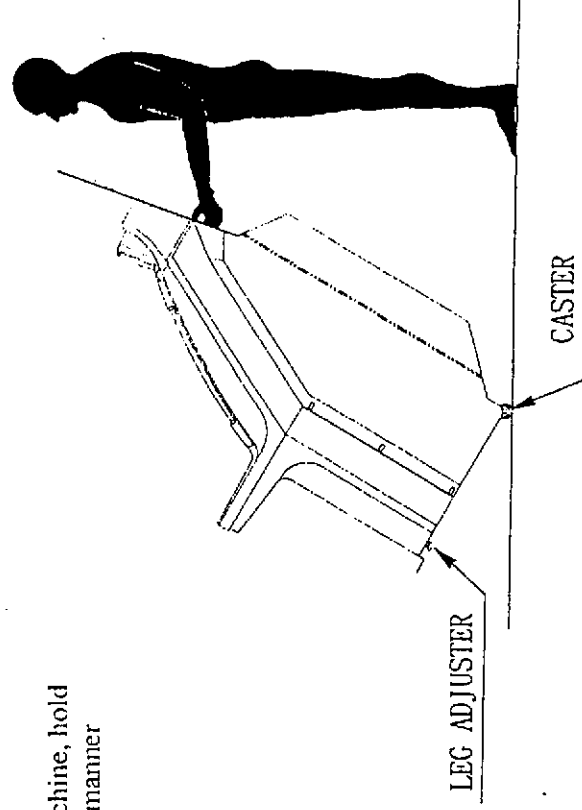
PART No.	Qty	DESCRIPTION	REMARKS
253-5185	4	CAP SW 30	
420-6115-01	1	OWNERS MANUAL ASTRO CITY 2 ENG	ASTRO CITY 2 OWNER'S MANUAL, ENG.
514-5037-3000	1	FUSE 6.4 ϕ $\times$ 30 3000mA 250V	For spare AC 200~240V AREA
514-5036-8000	1	FUSE 6.4 ϕ $\times$ 30 8000mA 125V	For spare AC 100~120V AREA
540-0006-01	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 DOOR
420-6114-01	1	SERVICE MANUAL VIRTUA FIGHTERS ENG	VIRTUA FIGHTERS SERVICE MANUAL, ENG.
011-F00312	4	TAP SCR FH 3 $\times$ 12	Used other than for CG BD.

OPTIONAL PARTS

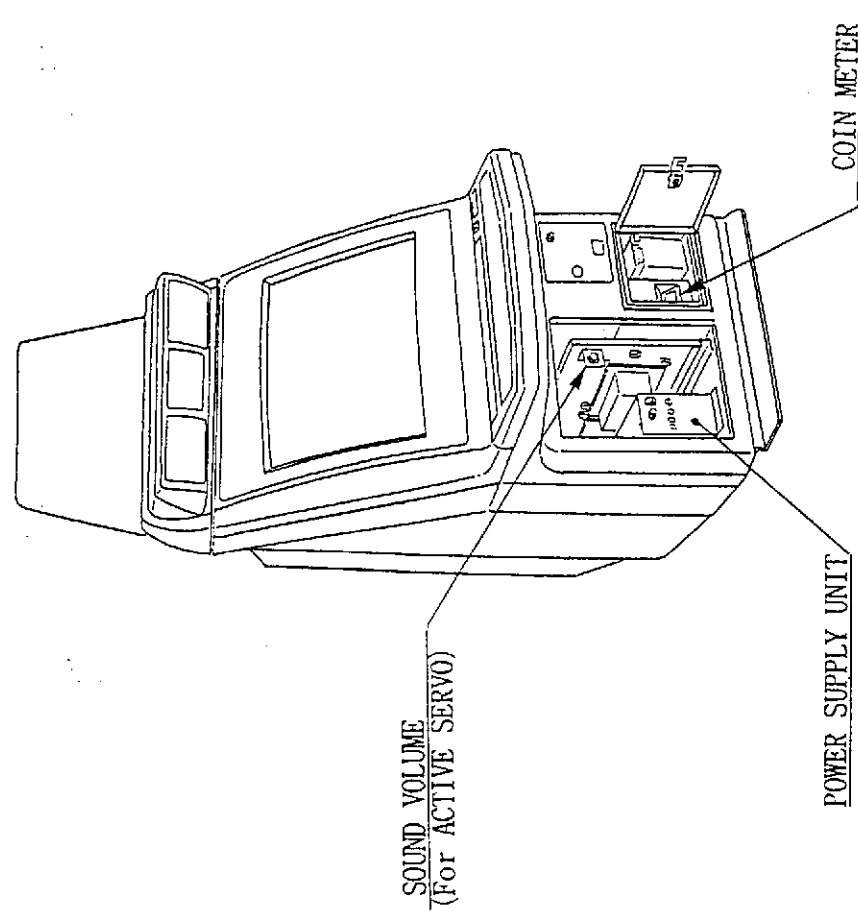
PART No.	DESCRIPTION	REMARKS
CQN-2000	ASSY CONT PANEL 2L6B	2 levers & 6 buttons
CQN-20001 600-6227-10	ASSY CONT PANEL 2L10B WIRE HARN CONT PNL 6B	2 levers & 10 buttons WIRE HARN for Buttons 4, 5 & 6
CQN-20002 600-6227-11	ASSY CONT PANEL MAJAN WIRE HARN EXT MAJAN	Mah-jongg JAMMA $\rightarrow$ Mah-jongg conversion HARN
CQN-20003 600-6227-11	ASSY CONT PANEL HANAFUDA WIRE HARN EXT MAJAN	HANAFUDA (Japanese playing cards) JAMMA $\rightarrow$ HANAFUDA conversion HARN
CQN-20004 600-6227-10	ASSY CONT PANEL 2L12B WIRE HARN CONT PNL 6B	2 levers & 12 buttons WIRE HARN for Buttons 4, 5 & 6
CQN-20005	ASSY CONT PANEL 8B	8 buttons
CQN-20006 600-6227-33	ASSY CONT PANEL 2BALL 2B WIRE HARN EXT CONT BALL SYS32	2 CONTROL BALLS & 2 buttons Intermediate HARN for control balls
600-6227-28	WIRE HARN EXT SY 16, 24	JAMMA $\rightarrow$ SYSTEM 16 & 24 conversion HARN

5. TRANSPORTING THE MACHINE

When transporting the machine, hold the catch and move it in a manner shown at the right.



6. COIN METER & POWER SUPPLY UNIT



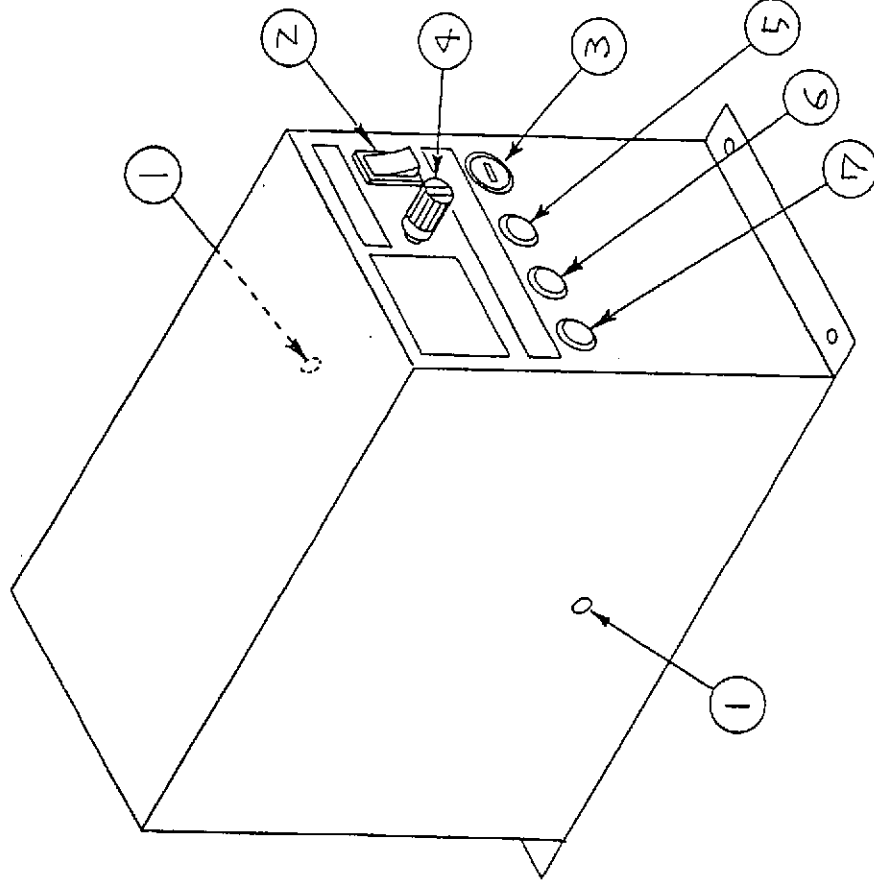
CAUTION!!

If the COIN METER and the game board are electrically disconnected, game play is not possible.

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

POWER SUPPLY UNIT

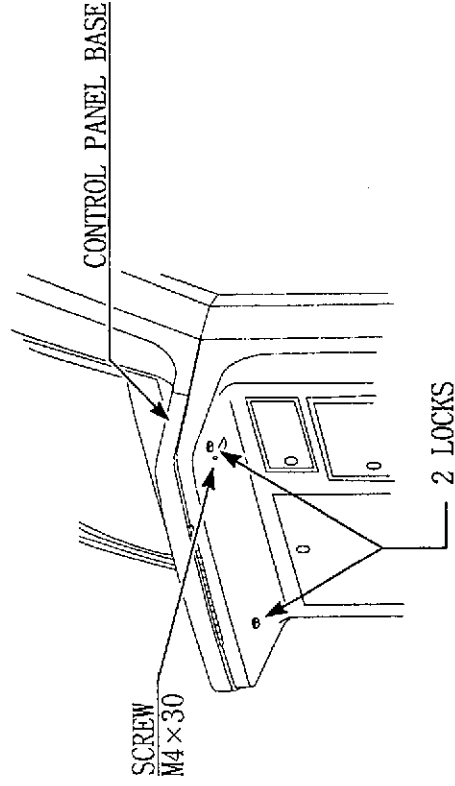
The POWER SUPPLY UNIT is located inside the SERVICE DOOR.



- ① V. ADJ. : This is an adjustment volume control for DC power supply. It is set to a predetermined value at the time of shipment. Changing the setting without good reason is very dangerous.
- ② POWER SW. : This is a SUB POWER SW. The AC UNIT on the backside of the cabinet has the MAIN POWER SW (normally, this should be kept in the ON position).
- ③ FUSE : Use the one meeting the rated requirements such as AC voltage, amperage, etc.
- ④ SOUND VOL. : Does not function in the case where a CG BD is employed.
- ⑤ DEMAG. SW. : Eliminates color unevenness from the screen.
- ⑥ TEST SW. : This is used when entering the test mode.
For the application of TEST MODE, refer to the SERVICE MANUAL.
- ⑦ SERVICE SW. : Gives credits without registering on the coin meter.

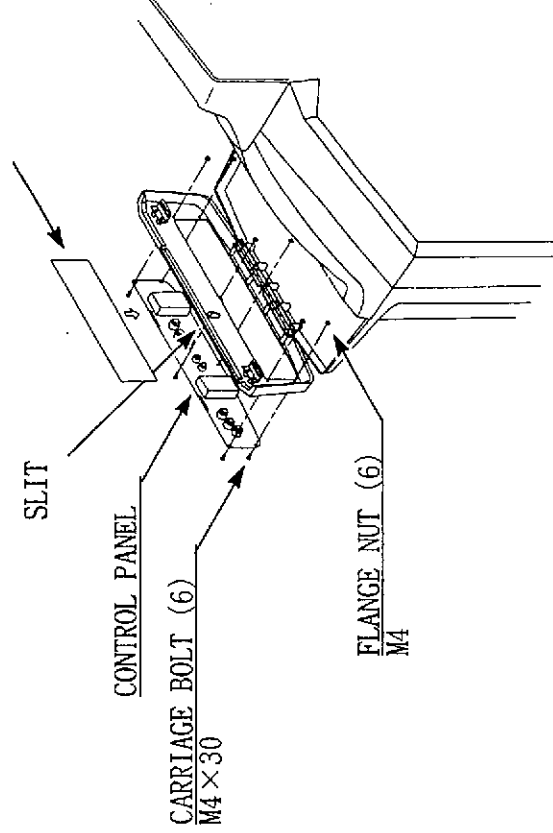
7. CONTROL PANEL

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.



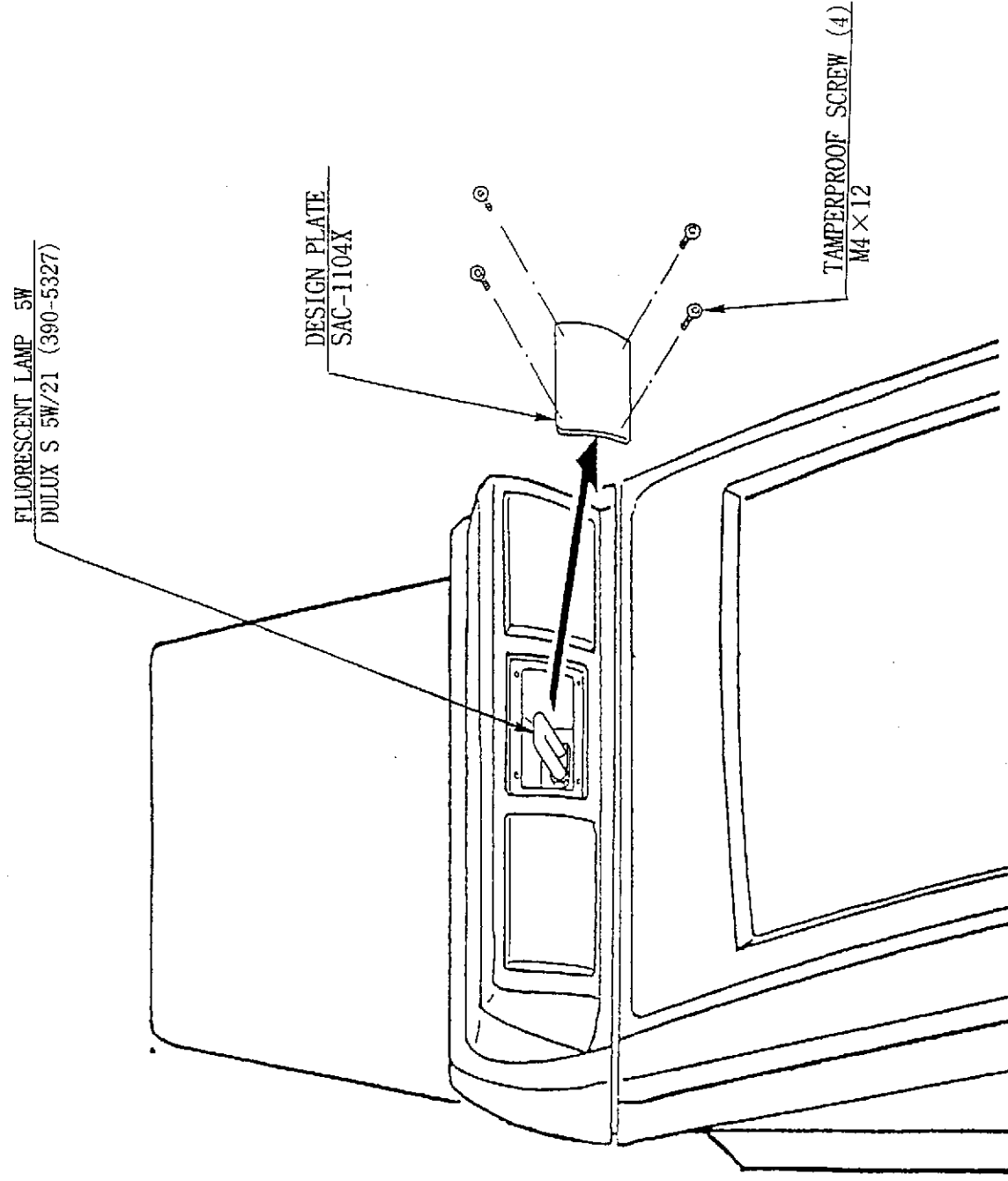
When replacing the CONTROL PANEL, open the CONTROL PANEL BASE, disconnect all of the connectors and remove the 6 M4 FLANGE NUTs & 6 CARRIAGE BOLTs per CONTROL PANEL.

PLAY INSTRUCTION



8. REPLACING THE FLUORESCENT LAMP

In a manner as shown below, remove the parts and replace the Fluorescent lamp.



9. COIN SELECTOR

HANDLING THE COIN JAM

Even when the REJECT button is pressed, if the coin is not rejected, 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.

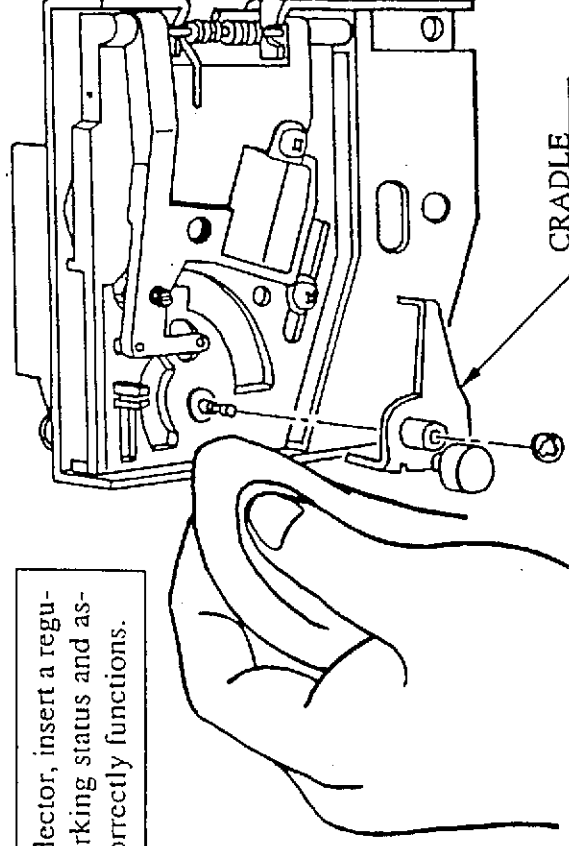
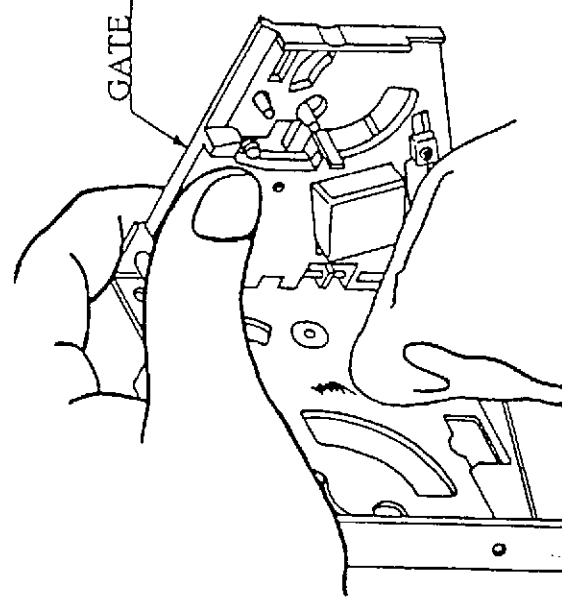
CLEANING THE COIN SELECTOR

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

- ① Turn the power for the machine OFF.
Open the coin chute door.
- ② Open the gate and dust off by using a soft brush (made of wool, etc.).
- ③ Remove stain by wiping with a soft cloth which contains water or chemical detergent.
- ④ Remove the CRADLE.
When removing the retaining ring (E ring), be very careful so as not to bend the shaft.
- ⑤ Remove stain from the shaft and pillow portions by wiping off with a soft cloth, etc.
- ⑥ After wiping off as per 5 above, further apply a dry cloth, etc. to cause the coin selector to dry completely.

Absolutely do not apply machine oil, etc. to the coin selector.

After cleaning the coin selector, insert a regular coin in the normal working status and ascertain that the selector correctly functions.



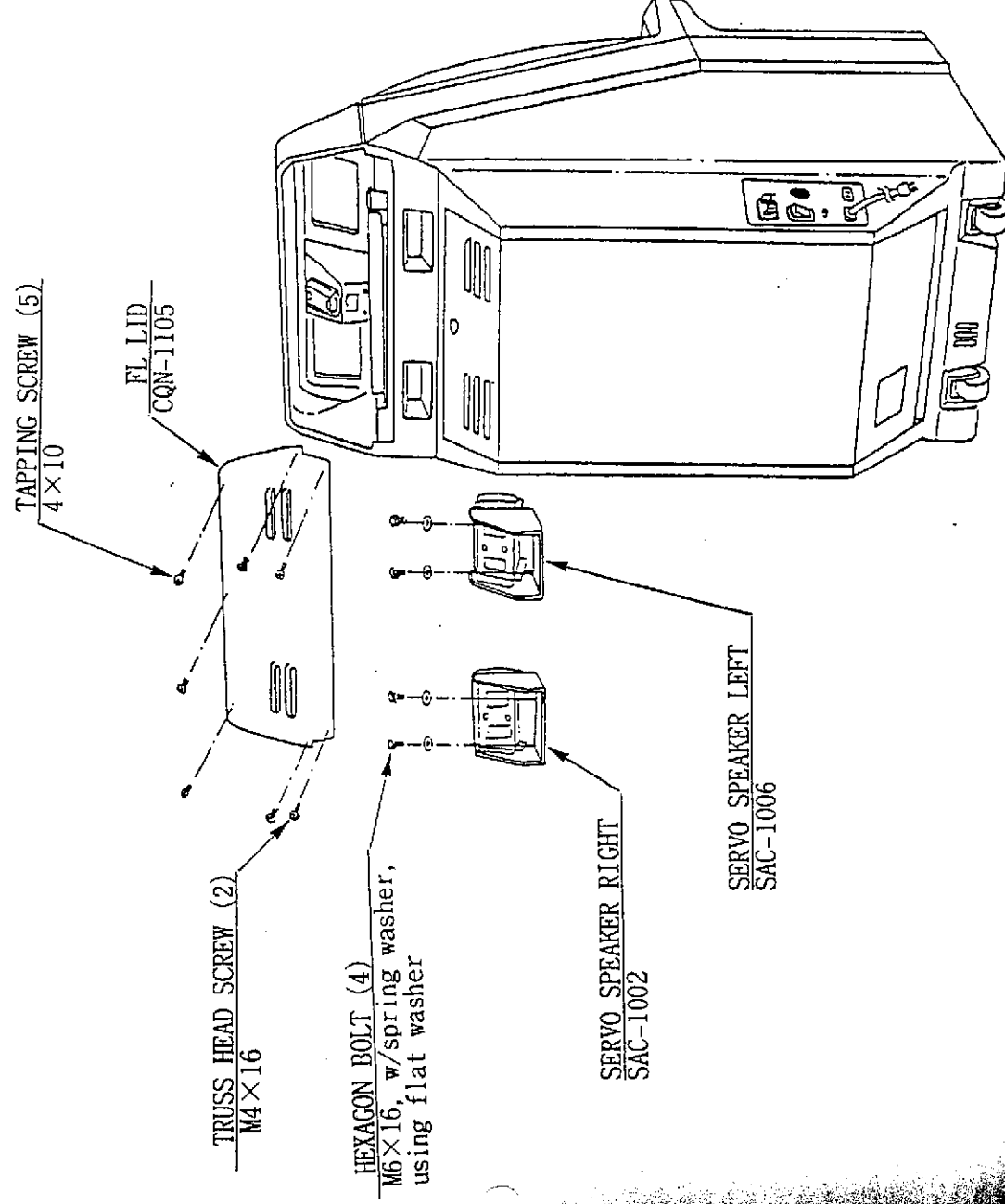
10. MONITOR

10-1 MONITOR'S VERTICAL/HORIZONTAL TRANSPOSITION

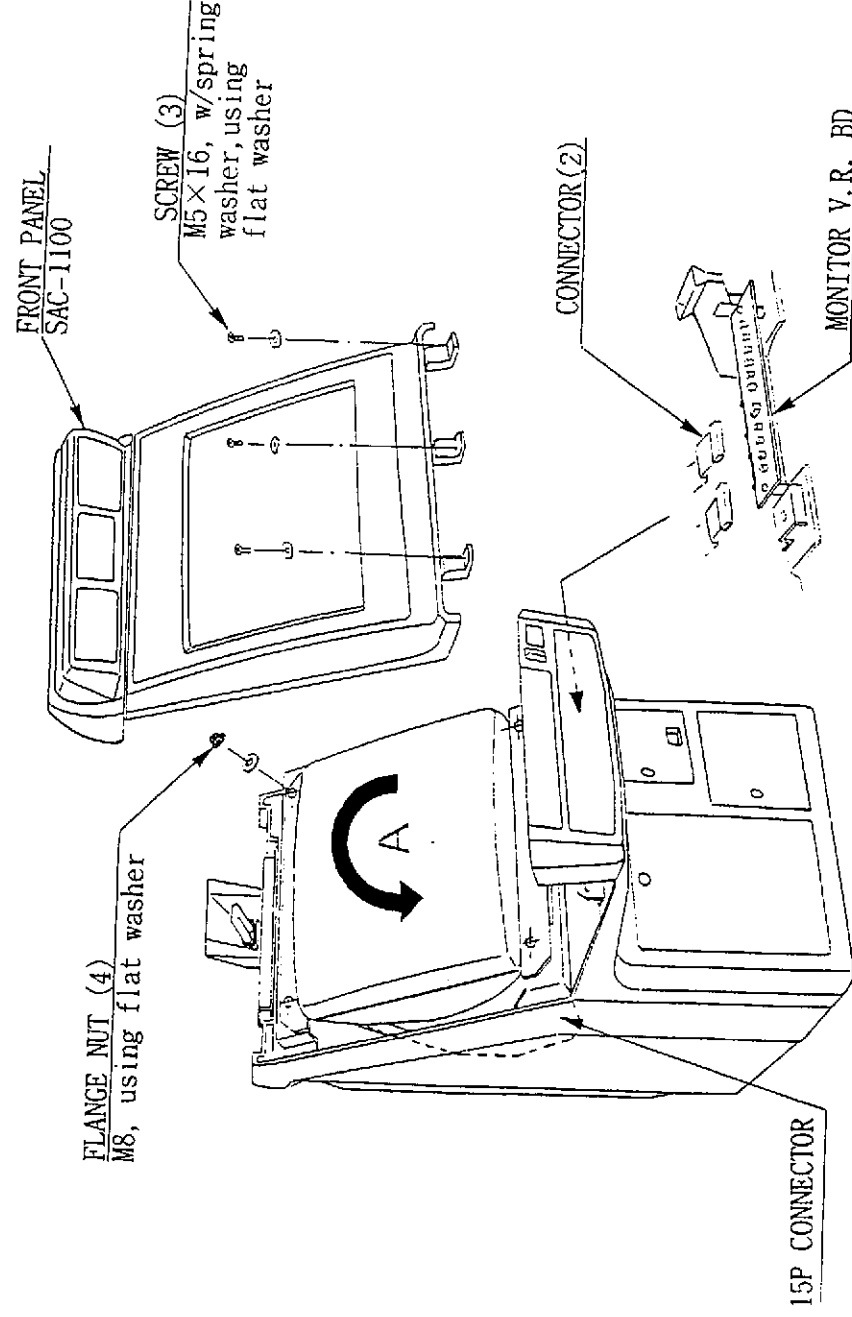
WARNING!!

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.

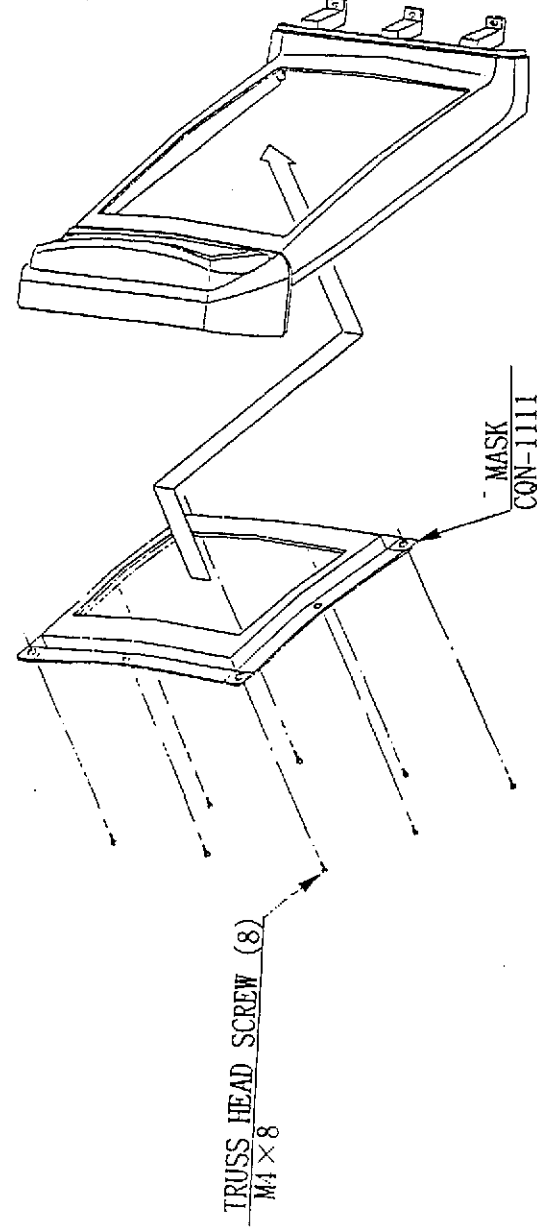
- ① Remove the FL LID, SERVO SPEAKER RIGHT and SERVO SPEAKER LEFT.



- ② Remove the **FRONT PANEL** and disconnect the **15P CONNECTOR** on one side of the monitor and the **MONITOR V.R. BOARD CONNECTOR**.



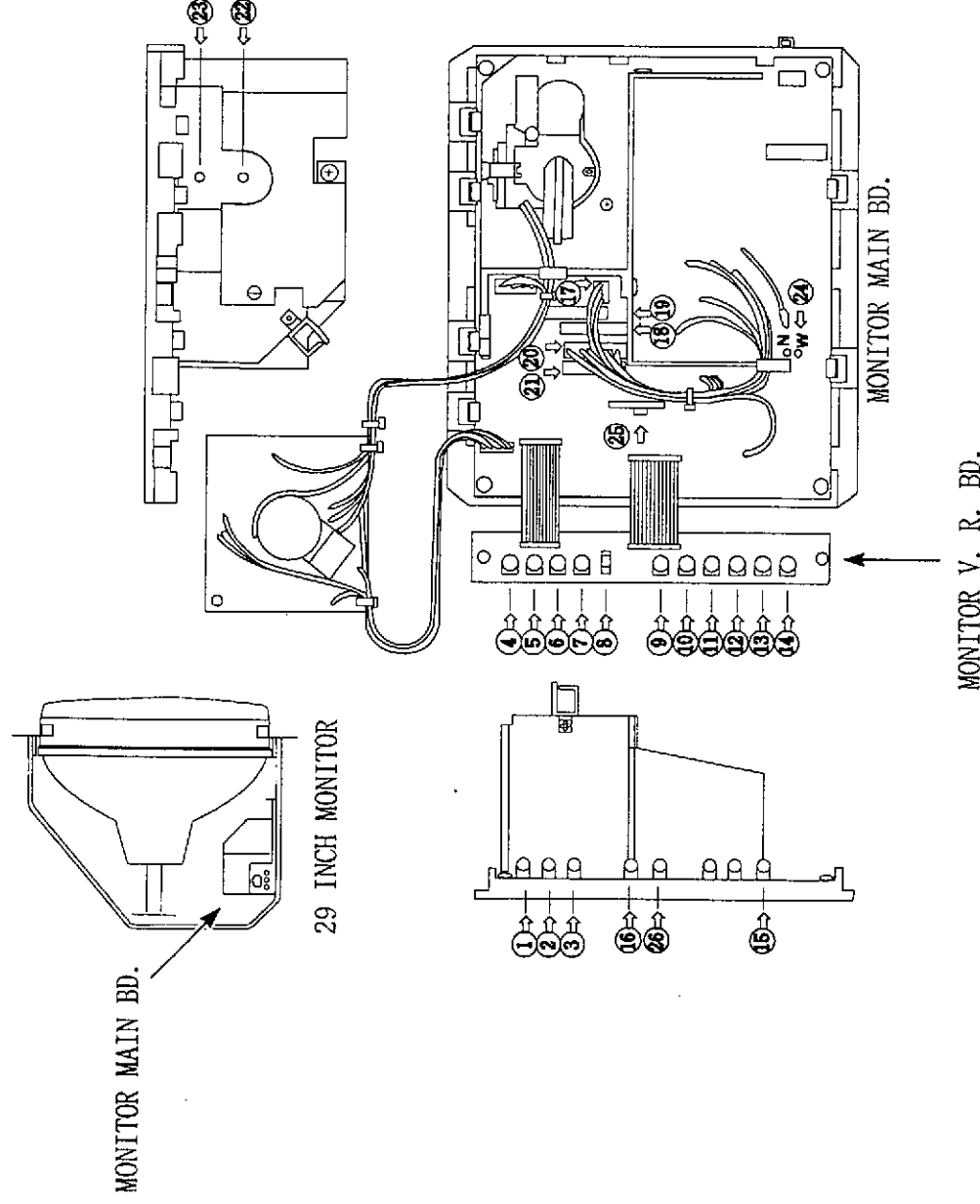
- ③ Take off the **FLANGE NUTS** and turn the **MONITOR** a 90 degrees in **Direction A** (from the horizontal direction to vertical direction). For the transposition from vertical to horizontal direction, turn the monitor in the direction opposite the above A.
- ④ The transposition of the mask should also be carried out in a manner so as to correspond with the monitor transposition.



CAUTION!!

- 11

NANA0 monitor (1)



METHOD OF CHANGING THE MONITOR'S FREQUENCY

- (1) Insert the horizontal frequency change connector (20 of 15K & 21 of 24K) into the corresponding horizontal frequency position.
- (2) In the on-screen game mode, make adjustments of 9 Horizontal size and 12 Vertical size.
- (3) In the Horizontal size, if adjustment can not be sufficiently made, insert the 24 Horizontal size tap into the applicable different position and then redo the Horizontal size adjustment.

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

When replacing the GAME BD, the above-mentioned monitor frequency change and 7 brightness 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.

NANA0 monitor (2) ADJUSTMENT FUNCTIONS

① R-BIAS (VR102)

Turning this to the right will result in the red color becoming darker.

② G-BIAS (VR112)

Turning this to the right will result in the green color becoming darker.

③ B-BIAS (VR122)

Turning this to the right will result in the blue color becoming darker.

④ R-GAIN (VR101)

Turning this to the right will result in the red color becoming darker.

⑤ G-GAIN (VR111)

Turning this to the right will result in the green color becoming darker.

⑥ B-GAIN (VR121)

Turning this to the right will result in the blue color becoming darker.

⑦ BRIGHT (VR570)

This adjusts the on-screen image brightness.

⑧ S.S.S.W (SW502)

Controls the visual quality.

A: Ordinary
B: Super-sharpness

⑨ H. SIZE (VR533)

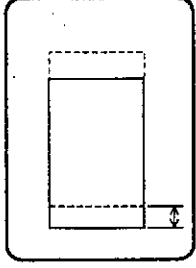
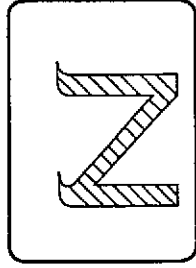
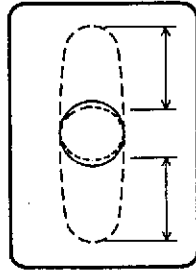
The horizontal image dimensions are adjustable.

⑩ H. HOLD (VR531)

This adjusts the horizontal distortions.

⑪ H. POSITION (VR532)

The horizontal image's position is adjustable.



⑫ V. SIZE (VR433)

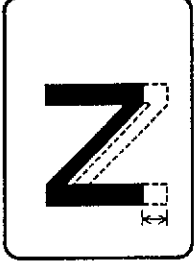
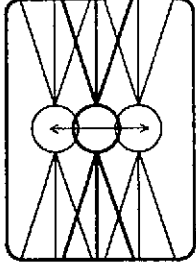
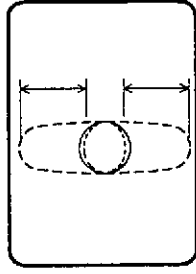
The vertical image dimensions are adjustable.

⑬ V. HOLD (VR431)

The on-screen image's vertical distortion is adjustable.

⑭ V. POSITION (VR435)

The image's vertical position is adjustable.

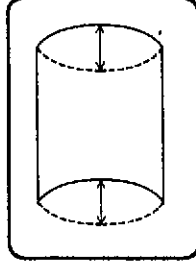
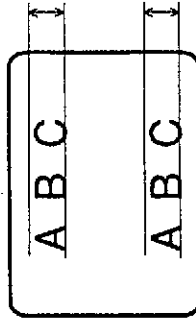


⑮ V. LIN (VR432)

Controls vertical linearity.

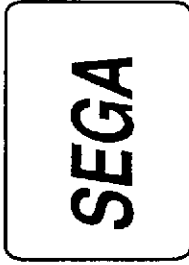
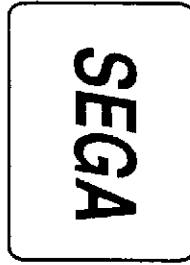
⑯ S.P.C (VR451)

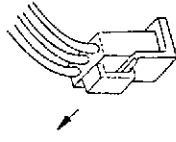
Controls pincushion distortion.



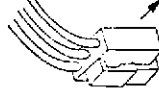
NANA0 monitor (3)

①⑦①⑧①⑨ DEFLECTING YOKE POLARITY CHANGE CONNECTOR

	NORMAL	REFLEX
①⑧ NORMAL CN531	 The image displayed is normal.	 A vertically inverted image is displayed by reflex on a mirror.
①⑨ INVERSION CN530	 An image which is turned a 180 degrees is displayed.	 An image reflected on a mirror appears.



①⑦ NORMAL



①⑦ REFLEX

②⑦ HORIZONTAL FREQUENCY
CHANGE CONNECTOR(CN540)
After changing, the horizontal
frequency will be 15. 75KHz.

②① HORIZONTAL FREQUENCY
CHANGE CONNECTOR(CN541)
After changing, the horizontal
frequency will be 24. 83KHz.

②② FOCUS
To be adjusted to
the best status.

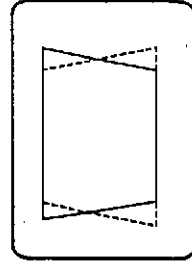
②③ SCREEN
Adjusts to the
CUTOFF point.

②④ H-SIZE CHANGE TAP.

After H. SIZE adjustments are made, if the
size is still narrow, change it to W side. How-
ever, this is effective only in the case where
the horizontal frequency change connector is
CN 540. (15.75 KHz)

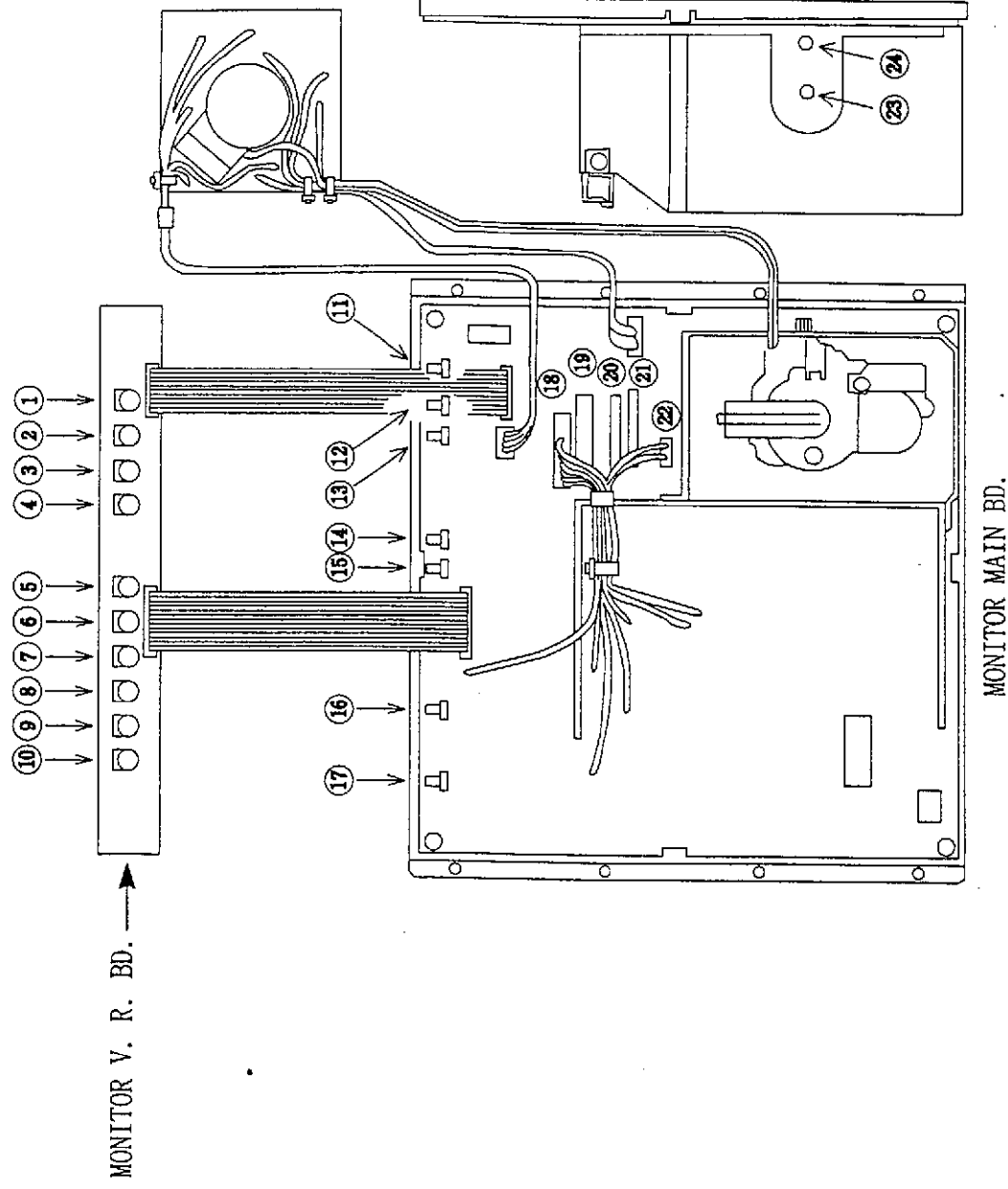
②⑤ TRAPEZOID Adjustment
Controls trapezoidal distortions.

②⑥ H. SUB SIZE (R469)



This is adjusted if the size still can not fully be
adjusted with H. SIZE (H.S). Normally, adjust-
ments have previously been made. This control is
fixed with silicone rubber.

SANWA monitor (1)



METHOD OF CHANGING THE MONITOR FREQUENCY

- (1) Insert the horizontal frequency change connector into the applicable corresponding position.
- (2) In the on-screen GAME BD mode, make adjustments of ⑤ HORIZONTAL SIZE and ⑧ VERTICAL SIZE.

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

When replacing the GAME BD, the above-mentioned monitor frequency change and ④ brightness 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.

SANWA monitor (2)

ADJUSTMENT FUNCTIONS

- | | | |
|---|---|---|
| <p>① R. GAIN (VR151)
Turning this to the right will result in the red color becoming darker.</p> | <p>② G. GAIN (VR152)
Turning this to the right will result in the green color becoming darker.</p> | <p>③ B. GAIN (VR153)
Turning this to the right will result in the blue color becoming darker.</p> |
| <p>④ BRIGHT (VR481)
This adjusts the on-screen image brightness.</p> | | |
| <p>⑤ H. SIZE (VR455)
The horizontal image dimensions are adjustable.</p> | <p>⑥ H. HOLD (VR342)
This adjusts the horizontal distortions.</p> | <p>⑦ H. POSI (VR451)
The horizontal image's position is adjustable.</p> |
| | | |
| <p>⑧ V. SIZE (VR353)
The vertical image dimensions are adjustable.</p> | <p>⑨ V. HOLD (VR341)
The on-screen image's vertical distortion is adjustable.</p> | <p>⑩ V. POSI (VR351)
The image's vertical position is adjustable.</p> |
| | | |
| <p>⑪ R. BLK (VR201)
Turning this to the right will result in the red color becoming darker.</p> | <p>⑫ G. BLK (VR202)
Turning this to the right will result in the green color becoming darker.</p> | <p>⑬ B. BLK (VR203)
Turning this to the right will result in the blue color becoming darker.</p> |
| <p>⑭ PCC PHASE (VR453)
Horizontal deflection phase adjustment</p> | <p>⑮ PCC AMP (VR454)
Horizontal deflection adjustment</p> | <p>⑯ H SUB HOLD (VR343)
Horizontal synchronous adjustment in 15K mode</p> |
| <p>⑰ V. LIN (VR354)
Vertical linearity adjustment
Adjusts the elongation and contraction on the upper part of the screen.</p> | | |
| <p>⑱ HORIZONTAL FREQUENCY CHANGE CONNECTOR (CN405)
After changing, the horizontal frequency will be 24.83KHz.</p> | <p>⑲ HORIZONTAL FREQUENCY CHANGE CONNECTOR (CN404)
After changing, the horizontal frequency will be 15.75KHz.</p> | |

SANWA monitor (3)

(20)(21)(22) DEFLECTING YOKE POLARITY CHANGE CONNECTOR

(22)

	NORMAL	REFLEX
(20) NORMAL CN402	 The image displayed is normal.	 A vertically inverted image is displayed by reflex on a mirror.
(21) INVERSION CN401	 An image which is turned a 180 degrees is displayed.	 An image reflected on a mirror appears.

(23) FOCUS

To be adjusted to the best status.

(24)

SCREEN

Adjusts to the CUTOFF point.

10-3 CLEANING OF THE CRT

To prevent static electricity, coating treatment is applied to the monitor's CRT of the ASTRO CITY 2. Utilize a soft, dry cloth to clean the CRT. Do not apply chemicals such as thinner, benzine, etc.

11. REPLACEMENT OF GAME BD

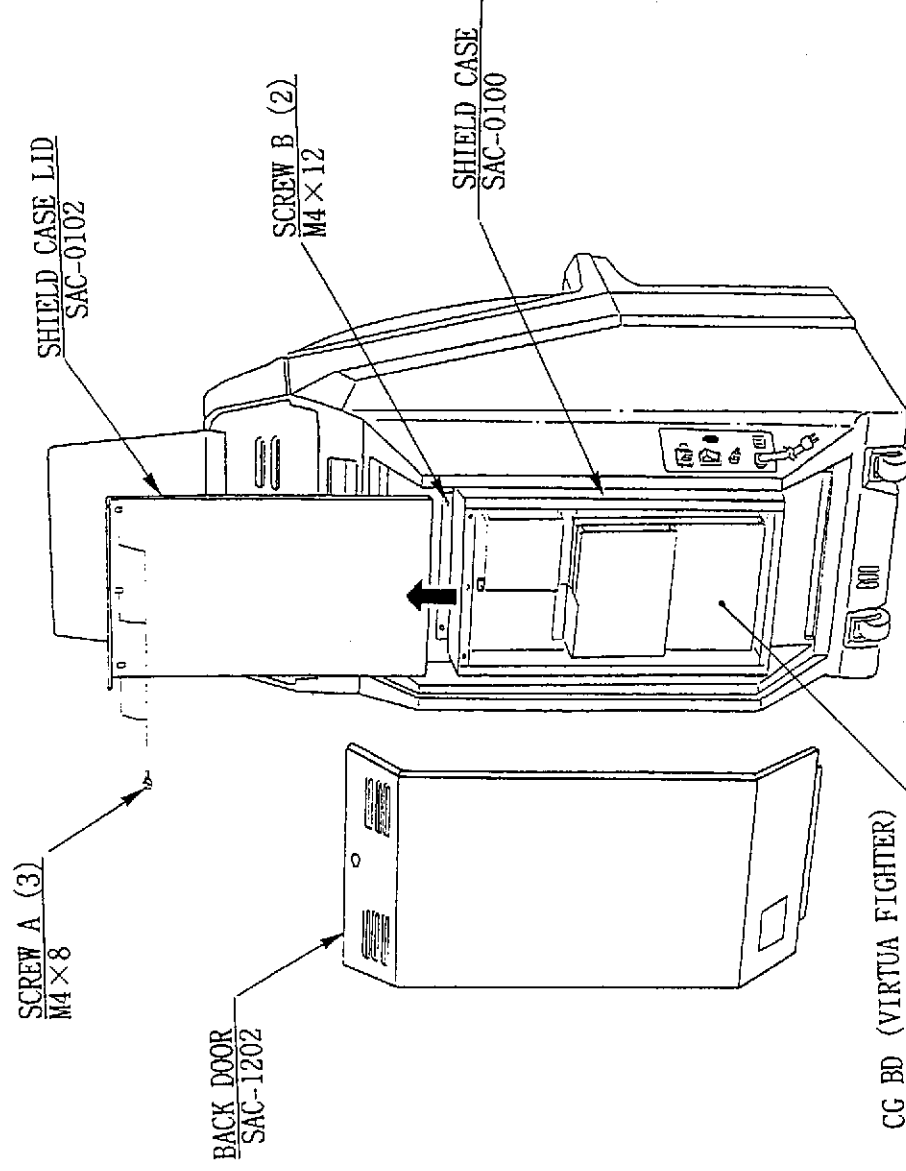
CAUTION!!

- Before inserting or pulling out the connectors, always make sure that the power is turned off.
- This cabinet incorporates JAMMA harness. When replacing the game BD (SYSTEM 24, etc.) with one to which JAMMA Standard does not apply, be sure to replace the harness at the same time.
- When replacing the game BD, be sure to read "10-2 MONITOR ADJUSTMENT."

IN THE CASE OF CG BD:

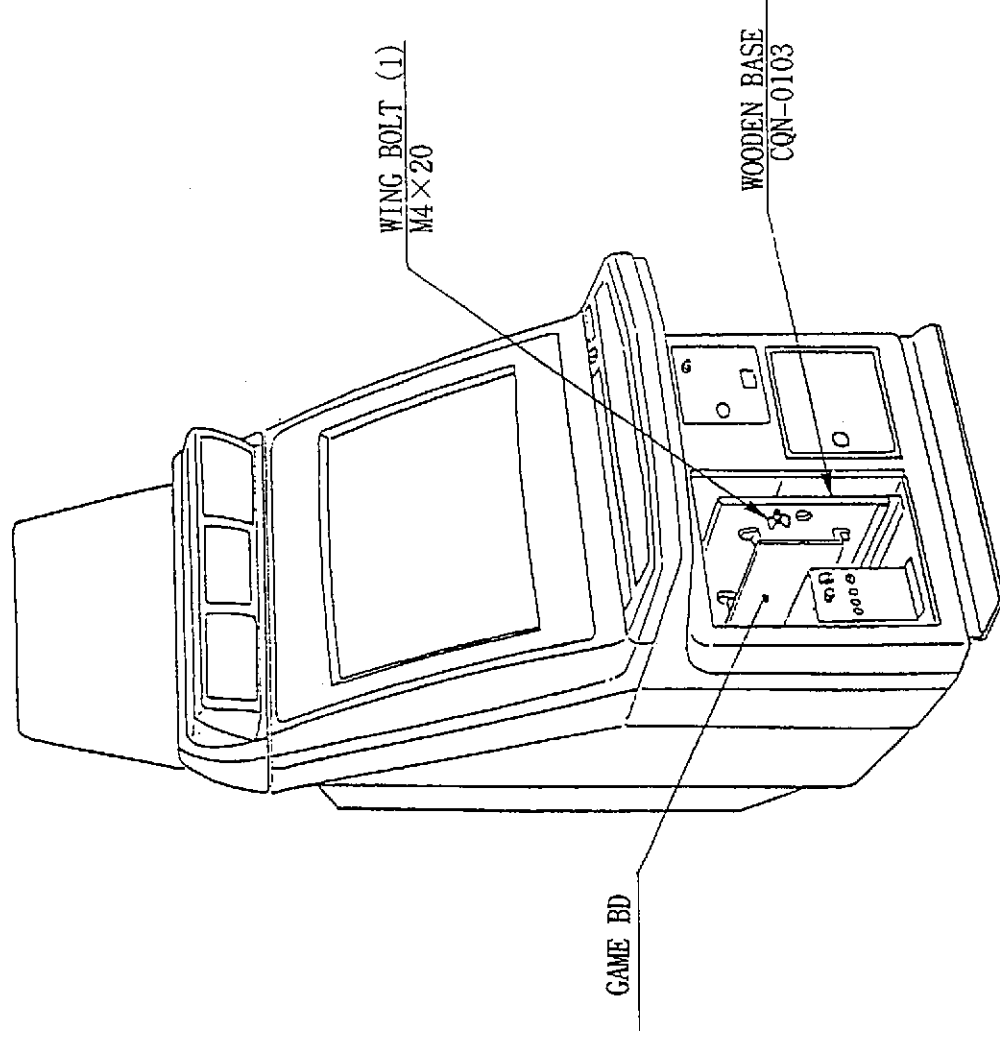
Open the back door, take off the 3 SCREWS A and remove SHIELD CASE LID. The game BD is secured with 6 S-TITE SCREWS.

When removing the game BD together with the shield case, disconnect all the connectors and take off the 2 SCREWS B.



IN THE CASE OF GAME BD (SYSTEM 32, etc.) OTHER THAN THE ABOVE:

Open the service door and disconnect all wire harnesses attached to the game BD.
Take off the WING BOLT and pull out the WOODEN BASE.



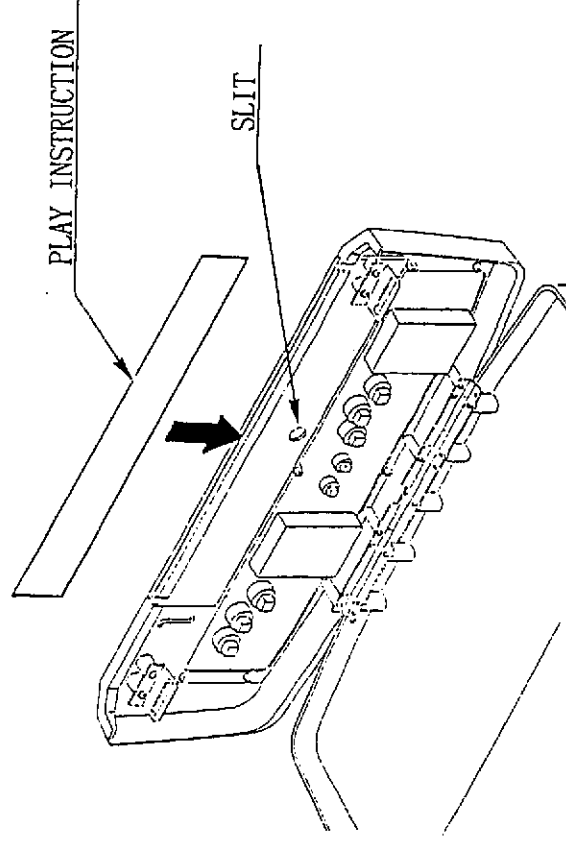
When replacing the game BD from CG BD to another type, install that type of game BD after removing the sound BD and AMP BD, etc. on the WOODEN BASE.

Appropriately store the sound BD, etc. which were removed.

REPLACING THE PLAY INSTRUCTION

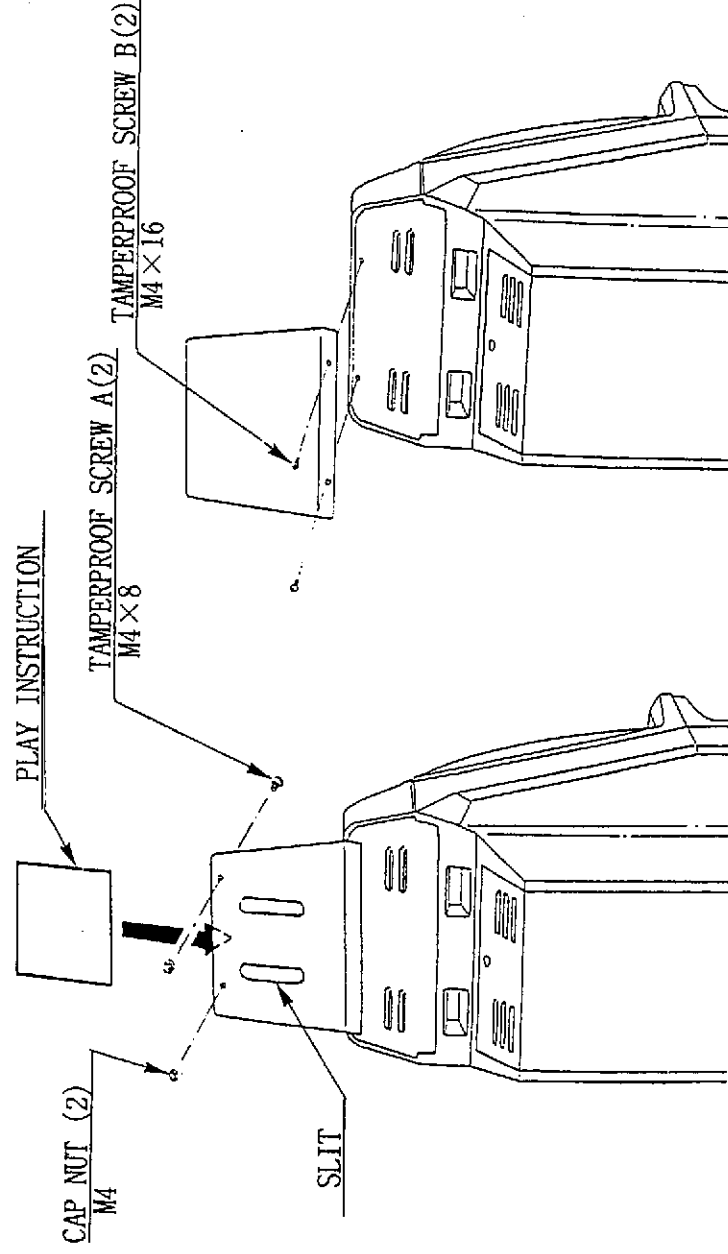
○Control Panel portion:

Open the Control Panel Base and pull out the **PLAY INSTRUCTION** via the inside slit to replace it.

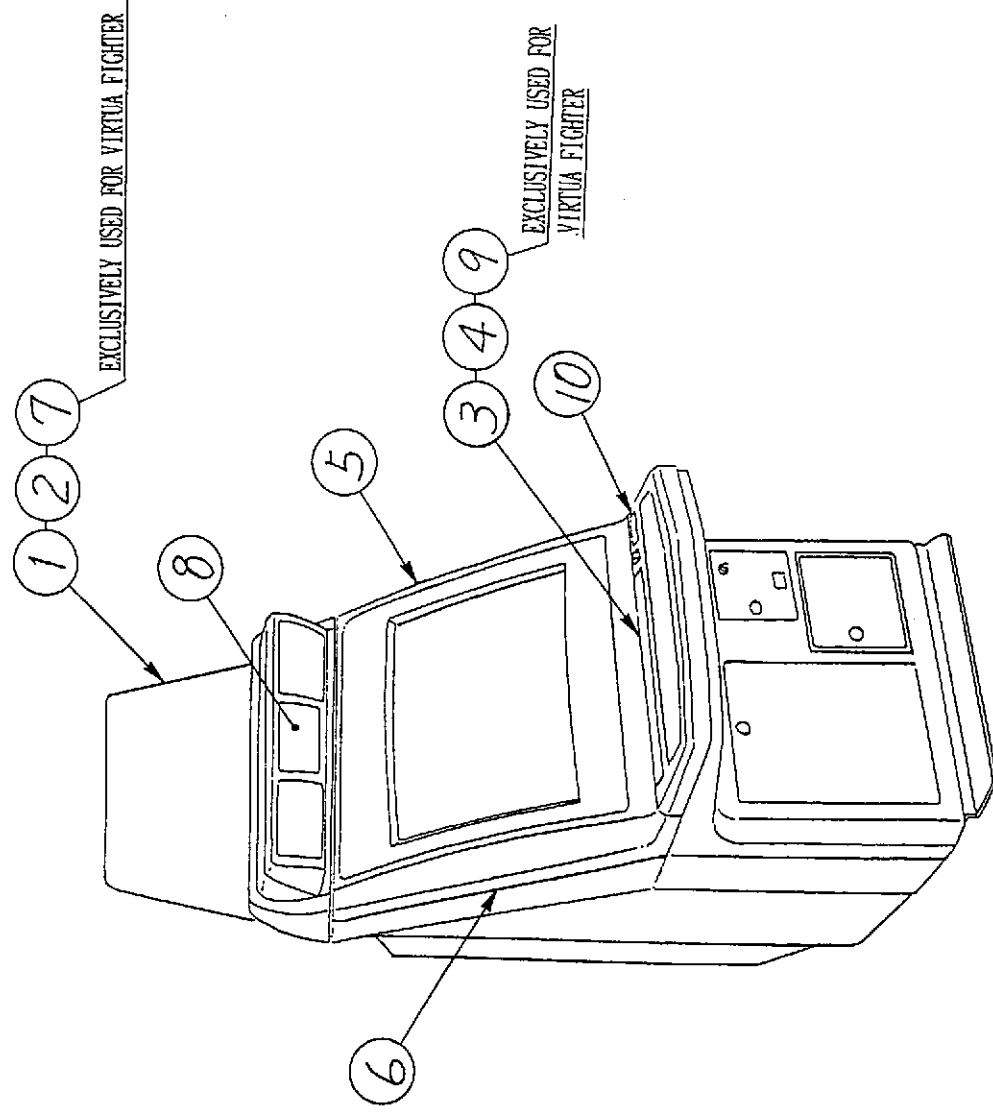


○Front Panel portion:

Take off the 2 **TAMPERPROOF SCREWS A** and the 2 **CAP NUTS**, then pull out the **PLAY INSTRUCTION** via the backside slit to replace it.
 The whole item can be removed by taking off the 2 **TAMPERPROOF SCREWS B**.



12. DESIGN RELATED PARTS

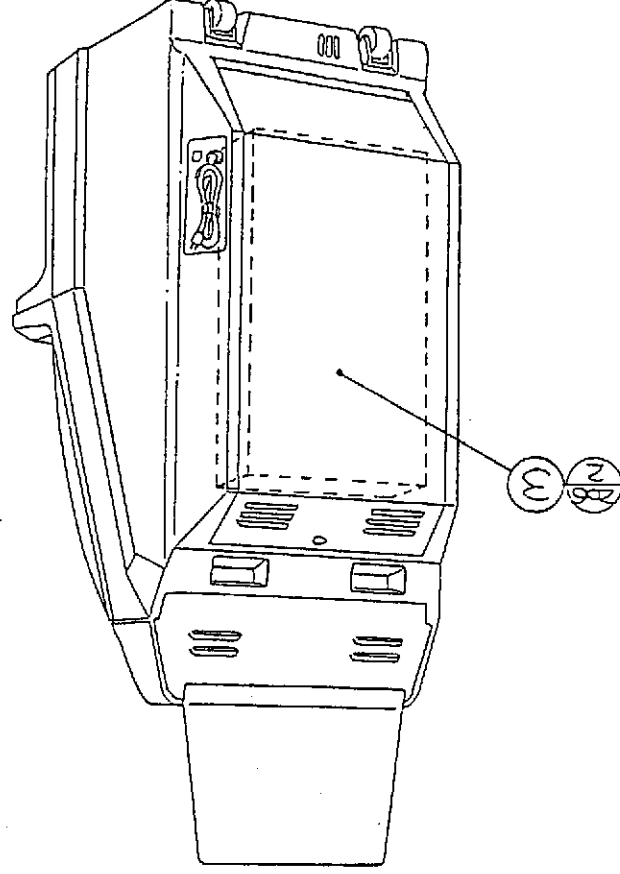
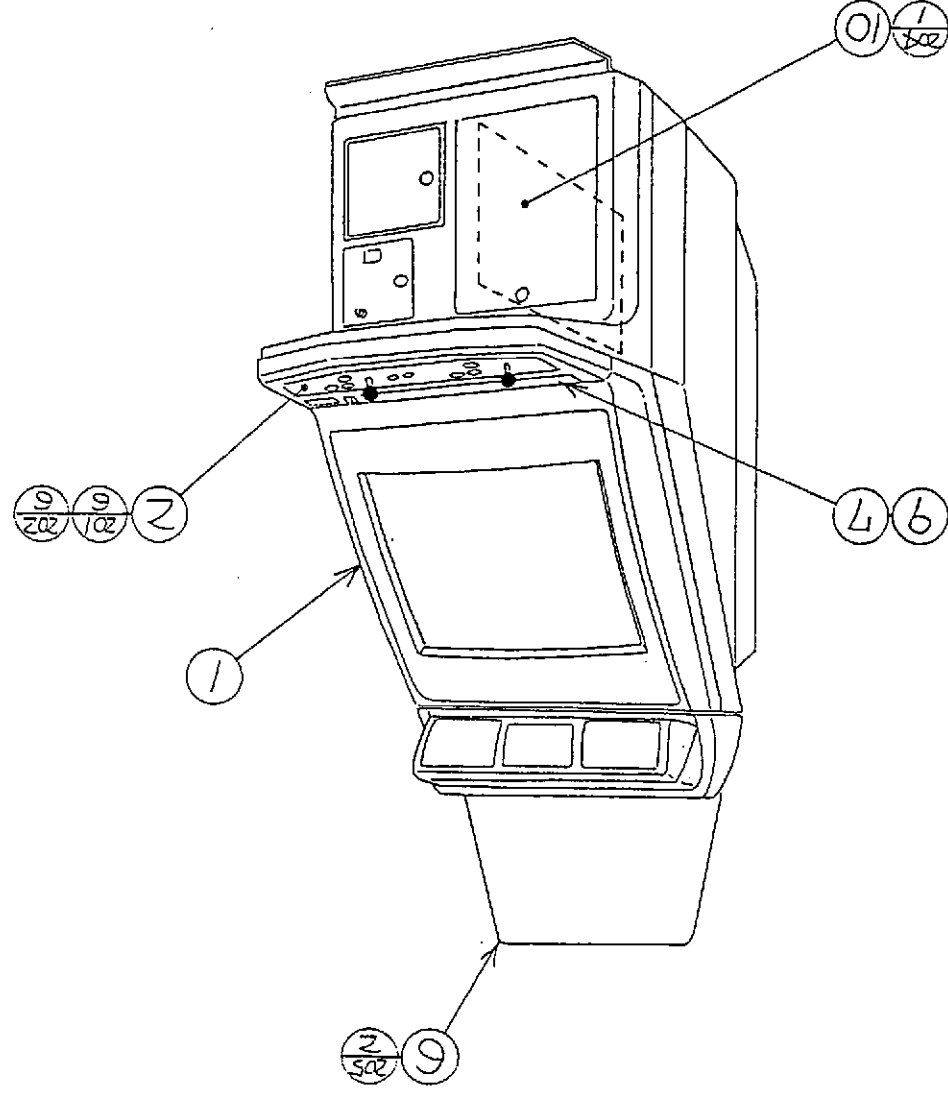


No.	PART NO.	DESCRIPTION
1	CON-0001	INSTRUCTION PANEL
2	CON-0002	INSTRUCTION PANEL REAR
3	CON-0003	SHEET
4	CON-1052	INSTRUCTION COVER
5	CON-1201X-B	SIDE STICKER RIGHT
6	CON-1201X-C	SIDE STICKER LEFT
7	SAC-0001	BILLBOARD PNL VIRTUA FIGHTERS
8	SAC-1104X	DESIGN PLATE
9	422-0461-03	HOW TO PLAY VIRTUA FIGHTERS ENG
10	421-8340~	DENOMINATION STICKER ~

13. PARTS LIST

① ASSY VIRTUA FIGHTERS (2L6B)

(D-1/2)

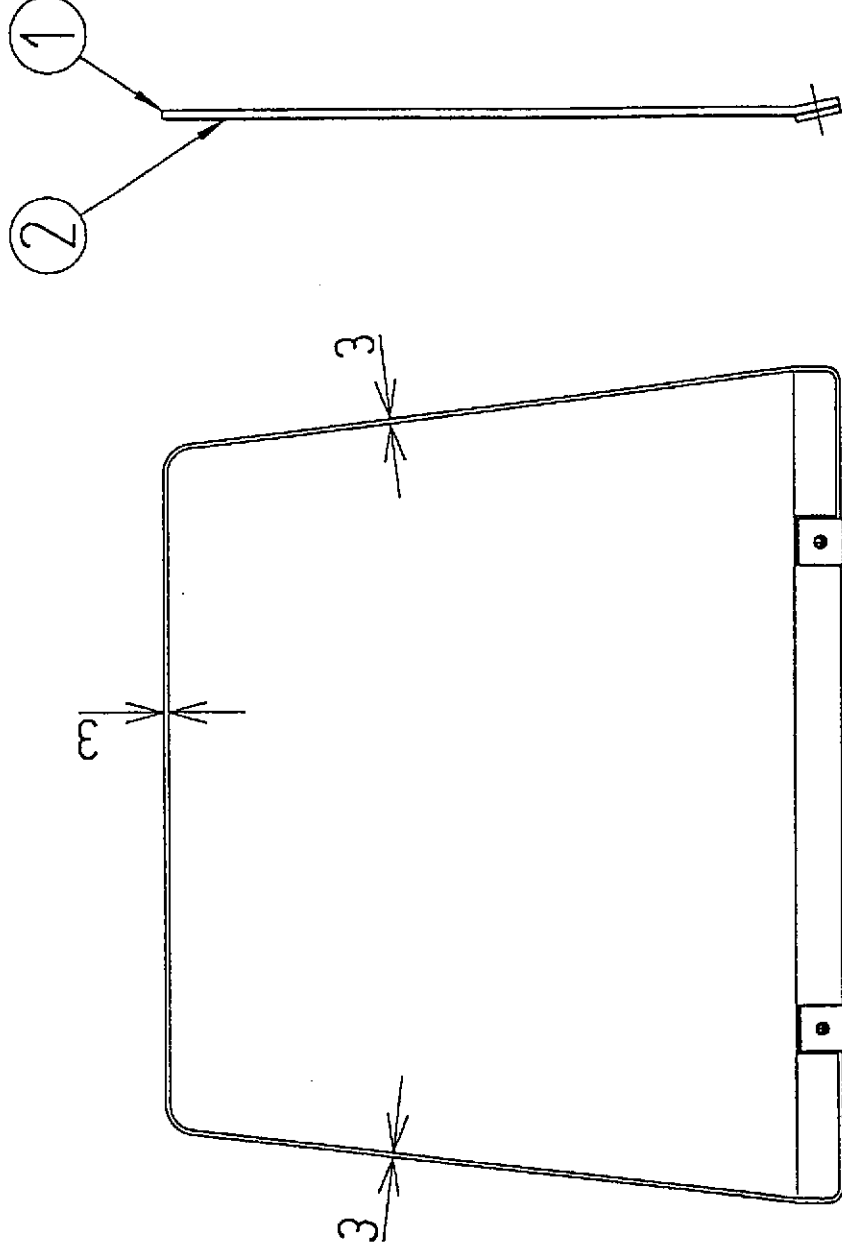


① ASSY VIRTUA FIGHTERS (2L6B)

(D-2/2)

ITEM NO.	PART NO.	DESCRIPTION
1	SAC-1000	ASSY CABINET COM
2	SAC-2000	ASSY CONTROL PANEL 2L6B
3	SAC-0100	ASSY SHIELD CASE & GAME BD
6	SAC-0001	BILLBOARD PNL VIRTUA FIGHTERS
7	421-5800-218	ORIGINAL SEAL VIRTUA FIGHTERS
9	422-0461-03	HOW TO PLAY SH VIRTUA FIGHTERS ENG
10	SAC-0200	ASSY AUDIO BD
201	031-0S0416	CRG BLT STN M4×16
202	050-F00400	FLG NUT M4
204	032-000420	WING BLT M4×20
205	008-T00416-0C	TMP PRF SCR TH CRM M4×16
206	000-P00412-W	M SCR PH W/FS M4×12
401	420-6114-01	SERVICE MNL VIRTUA FIGHTER ENG

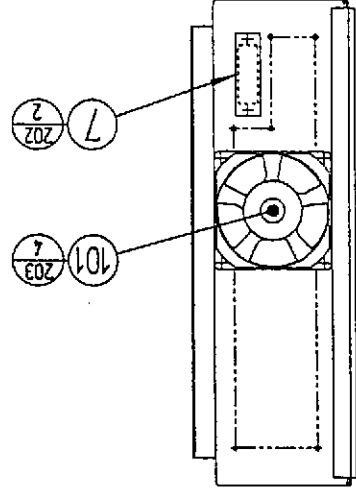
② BILLBOARD PNL VIRTUA FIGHTERS (SAC-0001)



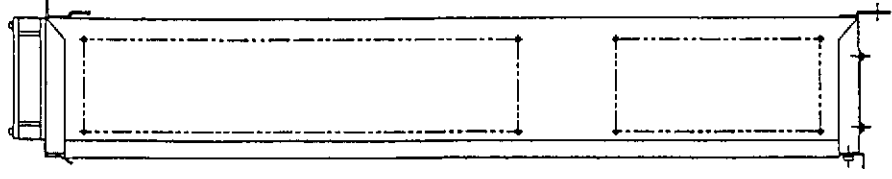
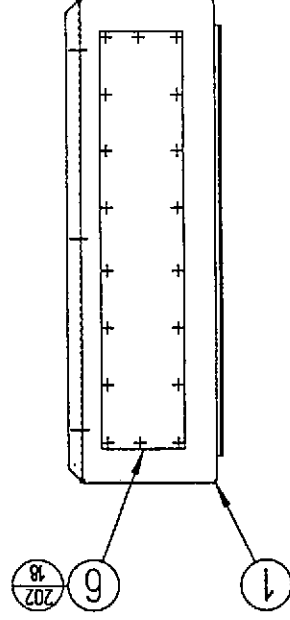
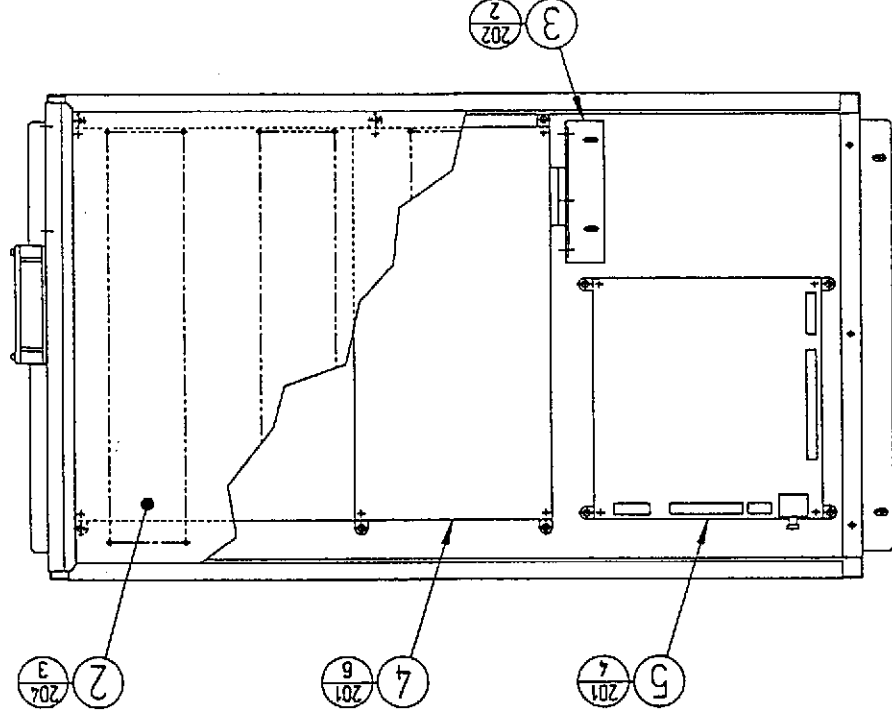
ITEM NO.	PART NO.	DESCRIPTION
1	SAC-0001-A	BILLBOARD PANEL BLANK
2	SAC-0001-B	BILLBOARD SH VIRTUA FIGHTERS

③ ASSY SHIELD CASE & GAME BD (SAC-0100)

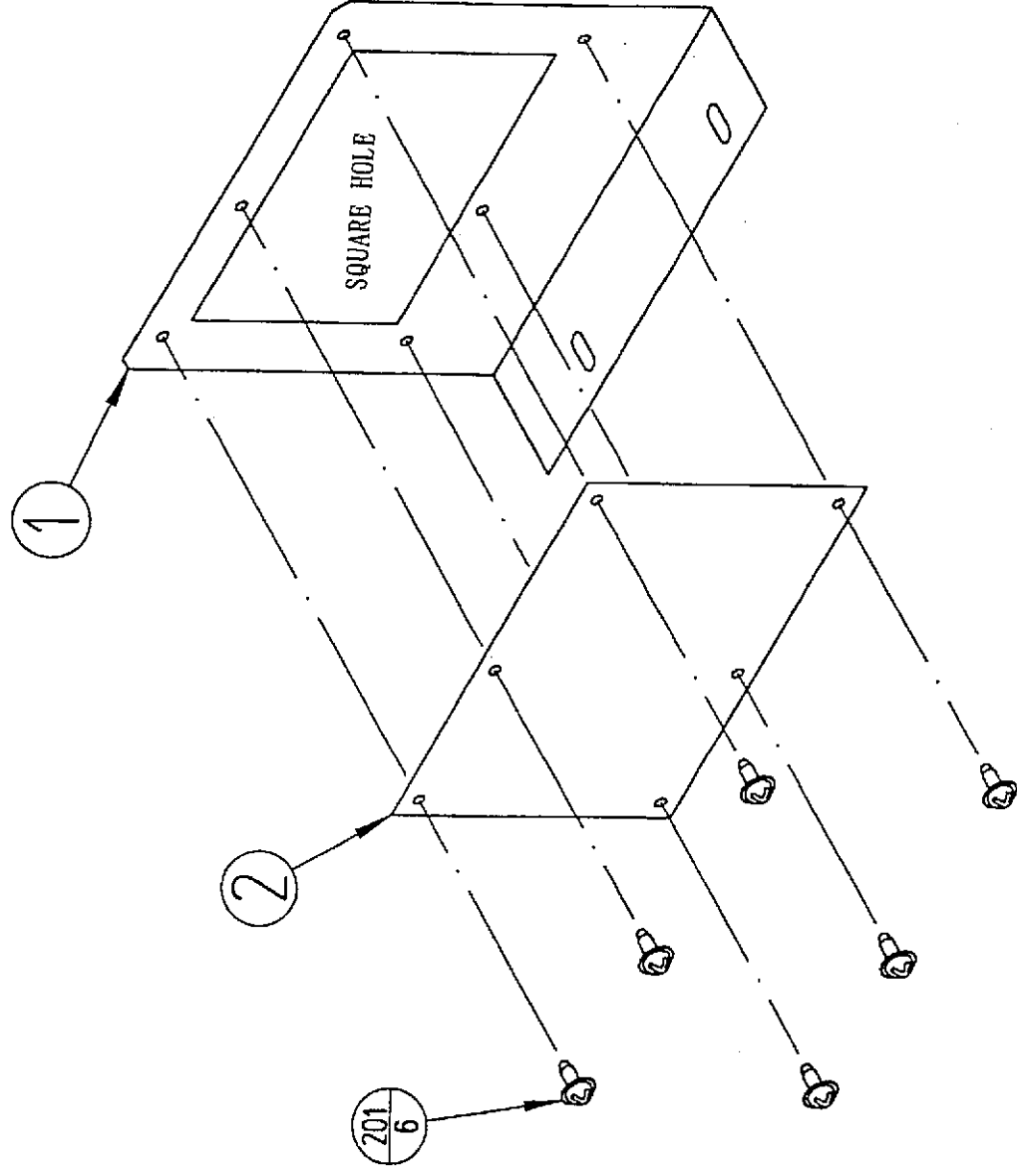
(D-1/2)



BLOWING DIRECTION OF FAN

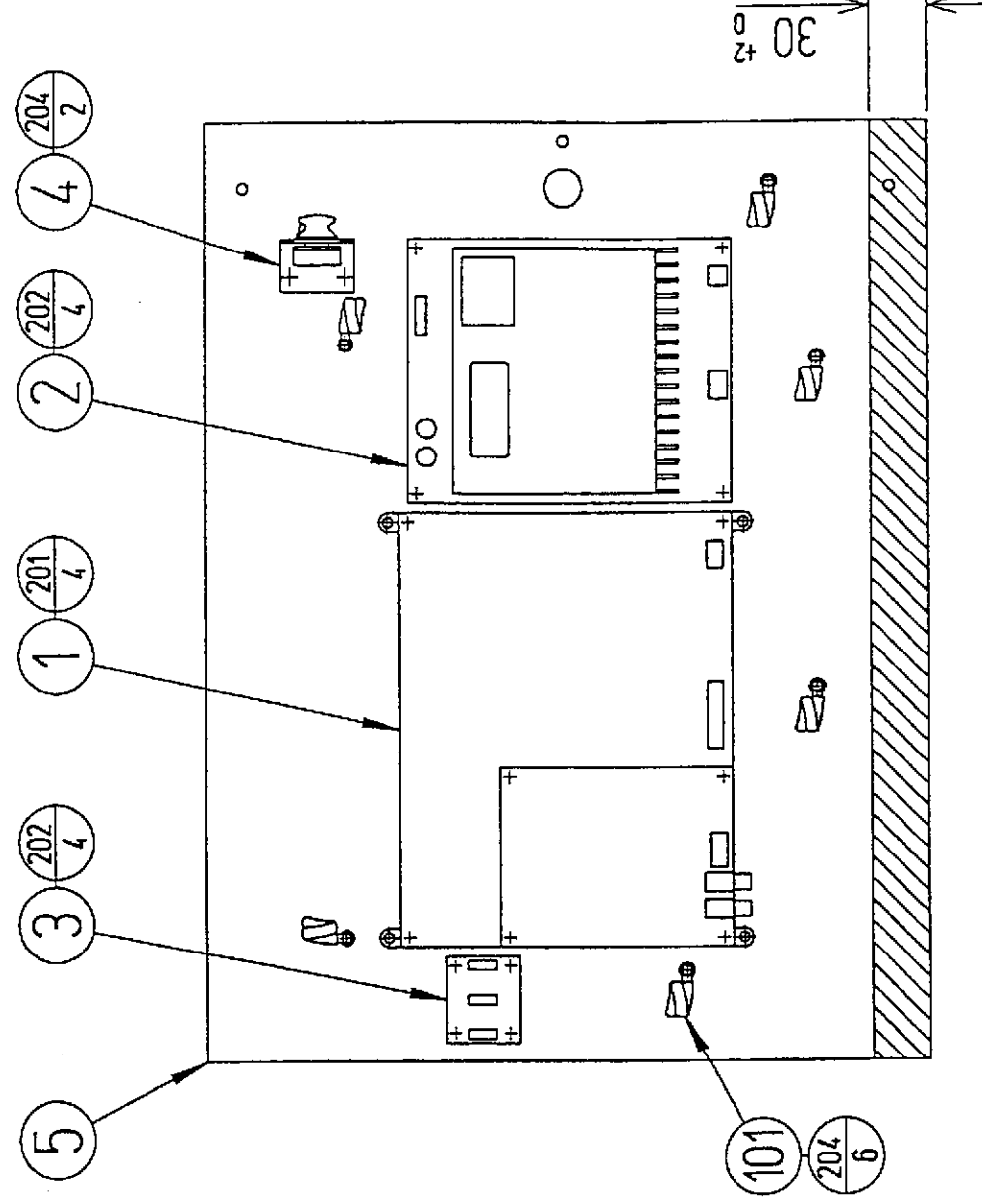


④ ASSY CONN BD (SAC-0103)



ITEM NO.	PART NO.	DESCRIPTION
1	SAC-0104	CONN BD BRACKET
2	839-0630	CONN BD V.F.
201	010-P00308	S-TITE SCR PH M3×8

⑤ ASSY AUDIO BD (SAC-0200)



ITEM NO.	PART NO.	DESCRIPTION
1	837-10020	SOUND BD VIRTUA FIGHTERS
2	838-10018	AMP BD SERVO
2	838-8689	AMP BD YST W/LOUDNESS
3	839-0542	AUDIO MIX BD
4	SAC-0201	ASSY VOLUME
5	CQN-0103	WOODEN BASE
101	280-0419	HARNES LUG
201	011-F00312	TAP SCR FH 3×12
202	011-P02620	TAP SCR PH 2.6×20
204	011-T00312	TAP SCR TH 3×12
301	600-6317-02	WIRE HARN AUDIO MIX
302	600-6317-03	WIRE HARN AUDIO RL
303	600-6317-05	WIRE HARN SPEAKER EXT
304	600-6317-08	WIRE HARN SOUND BD PWR
305	600-6317-09	WIRE HARN PWR AMP AC

⑦ ASSY CABINET COM (SAC-1000)

(D-2/3)

ITEM NO.	PART NO.	DESCRIPTION	OTHERS
1	SAC-1001	ASSY SUB-CABINET	
2	CQN-1050	ASSY CONTROL PANEL BASE	
3	SAC-1100	ASSY FRONT PANEL	
4	SAC-1002	ASSY SERVO SPEAKER RIGHT	
5	SAC-1004	ASSY FL 5W	
6	CQN-0003	SHEET	
7	CQN-0004	ASSY SHIELD COVER	
8	CQN-1003	GUTTER	
9	CQN-1004	CHUTE COVER	
10	CQN-1105	FL LID	
11	200-5242-24-02	ASSY CLR DSPL 29 TYPE 24K 100V	
11	200-5243-24	ASSY CLR DSPL 29 TYPE 24K 100V	
13	421-6594	STICKER SERIAL NO.INFO	
14	421-6709	STICKER SERVICE INSTR ENG	
18	421-7349	STICKER DANGER INFORMATION	
20	421-7987	STICKER ELEC SPEC	
20	421-8408	STICKER ELEC SPEC FOR TAIWAN	OTHERS
21	421-7988-91	STICKER SERIAL NUMBER	TAIWAN
23	SGM-4111	KEY BAG	
24	220-5381	KEY MASTER FOR 220-5380	
25	SGM-4261	AIR CAP COVER 750×1050×1400	
26	421-8368	STICKER ANTISTATIC	
27	SAC-1006	ASSY SERVO SPEAKER LEFT	
101	280-5167-12.5	SPACER ER-12.5	
102	280-5170-18	SPACER MP-18	
201	012-T00410-0C	TAP SCR TH CRM 4×10	
202	000-P00516-S	M SCR PH W/S M5×16	
203	068-552016	FLT WSHR 5.5-20×1.6	
204	050-F00800	FLG NUT M8 S=12	
205	000-T00430-0C	M SCR TH CRM M4×30	
206	000-T00416-0C	M SCR TH CRM M4×16	
207	068-852216	FLT WSHR 8.5-22×1.6	
209	000-P00412-W	M SCR PH W/FS M4×12	
210	012-P00320	TAP SCR PH 3×20	
211	000-P00312	M SCR PH M3×12	
212	030-000616-S	HEX BLT W/S M6×16	
213	068-652016	FLT WSHR 6.5-20×1.6	
401	601-6605-03	CARTON BOX 345×470×40	
402	420-6115-01	OWNERS MANUAL SUPER ASTRO ENG	
403	SGM-2675	POLYETHYLENE BAG 240×370	
404	540-0006-01	WRENCH FOR TAMP PRF SCR DUAL TYPE M4	
405	514-5036-8000	FUSE 6.4φ×30 8000mA 125V	

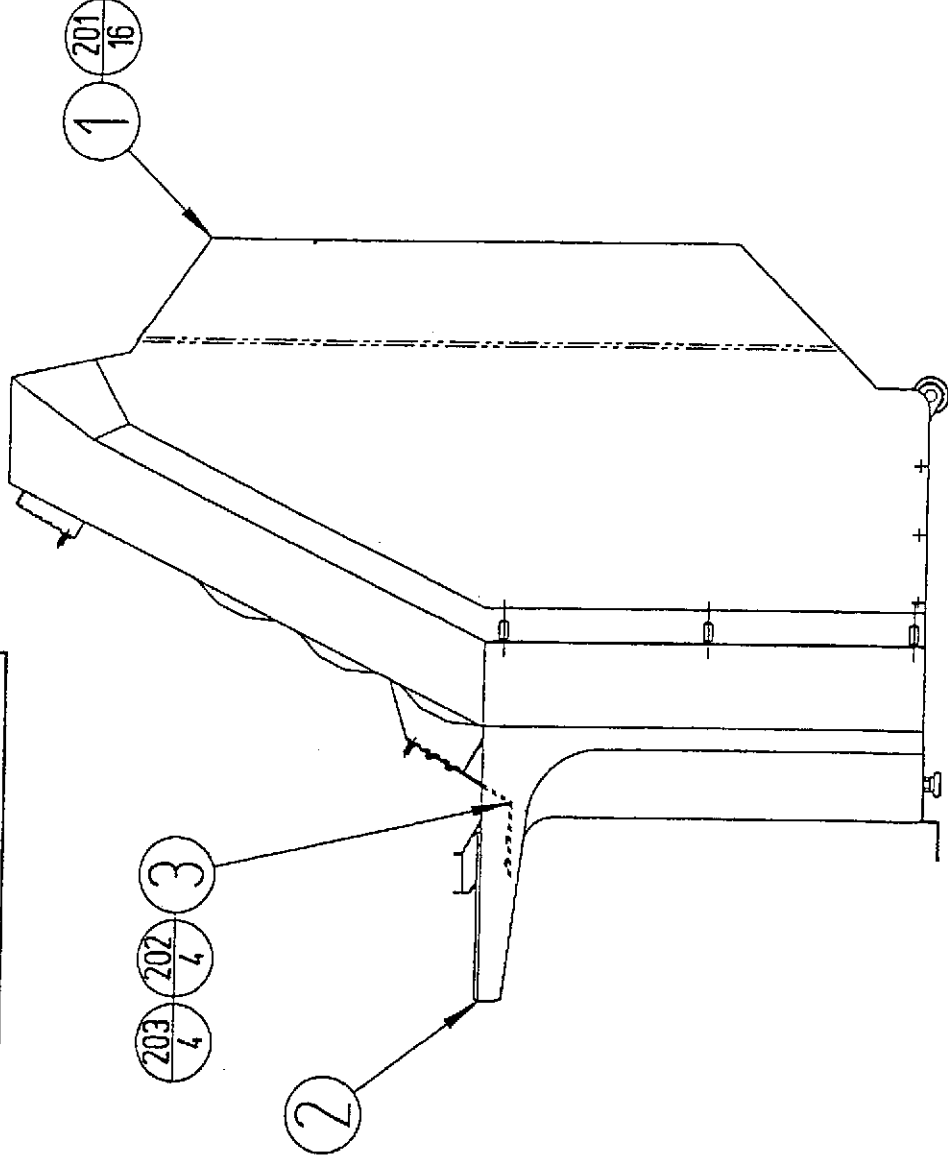
⑦ ASSY CABINET COM (SAC-1000)

(D-3/3)

ITEM NO.	PART NO.	DESCRIPTION
407	008-T00408-0C	TMP PRF SCR TH CRM M4×8
408	008-T00416-0C	TMP PRF SCR TH CRM M4×16
409	050-C00400-3C	CAP NUT TYPE3 CRM M4
410	CQN-0001	INSTRUCTION PANEL
411	CQN-0002	INSTRUCTION PANEL REAR
412	253-5185	CAP SW 30
413	011-F00312	TAP SCR FH 3×12
/	421-6671	STICKER DANGER HIGH VOLTAGE
/	560-5179	AUTO XFMR 110V-120V 600VA AC110~120V AREA
/	560-5198	AUTO XFMR 220V-240V 300VA AC220~240V AREA
/	012-P00412	TAP SCR PH 4×12
/	420-6690-03	STICKER 220V AC220V AREA
/	420-6690-05	STICKER 240V AC240V AREA
/	420-6690-06	STICKER 110V AC110V AREA

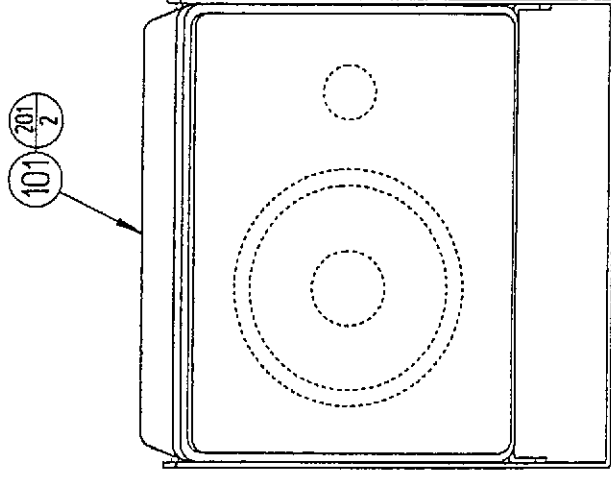
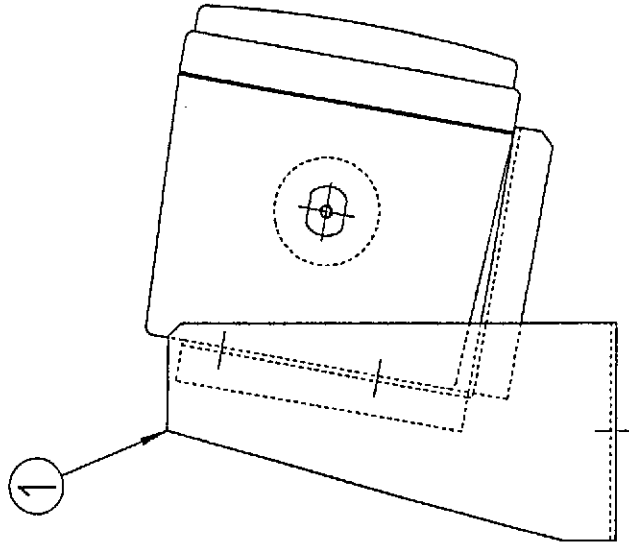
⑧ ASSY SUB-CABINET (SAC-1001)

	TORQUE	
(201) (203)	55 kgf・cm	



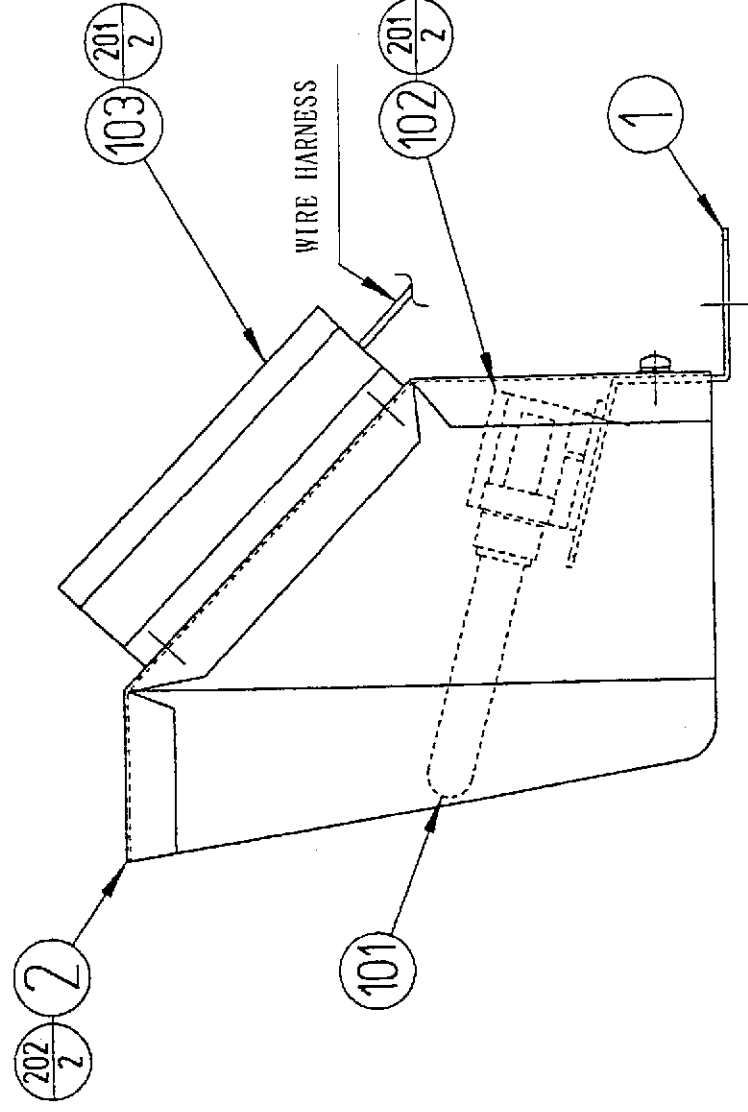
ITEM NO.	PART NO.	DESCRIPTION
1	SAC-1200	ASSY REAR CABINET
2	SAC-1300	ASSY CASH PANEL
3	CQN-1002	RETAINER
201	012-P00520-0C	TAP SCR PH CRM 5×20
202	012-P00512	TAP SCR PH 5×12
203	000-P00516-W	M SCR PH W/FS M5×16

⑨ ASSY SERVO SPEAKER RIGHT (SAC-1002)



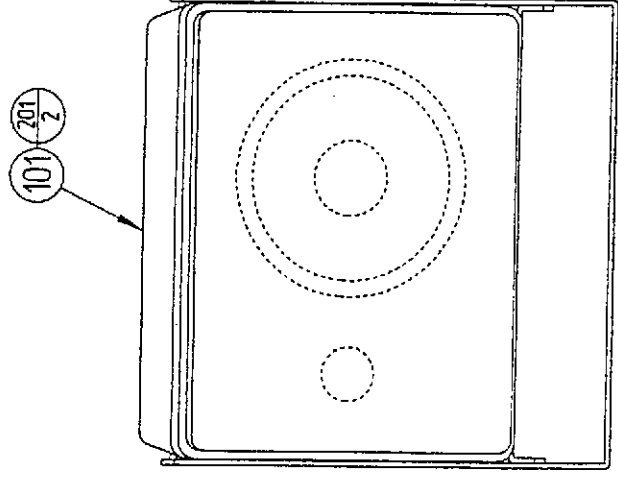
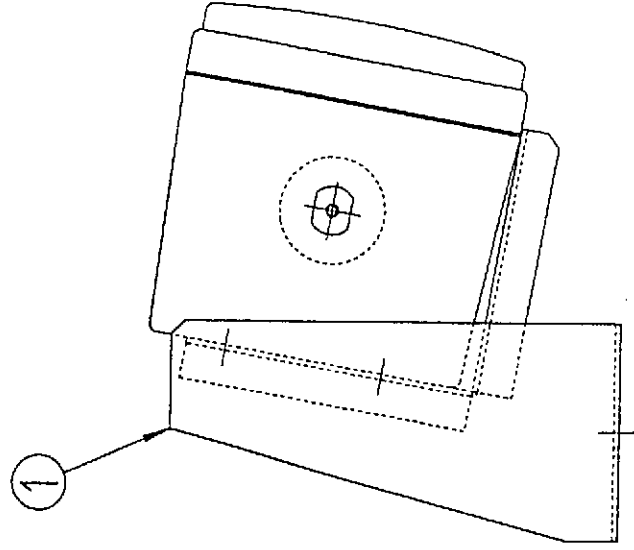
ITEM NO.	PART NO.	DESCRIPTION
1	SAC-1003X	SPEAKER BRACKET
101	130-5078	ASSY SPEAKER BOX YST
101	130-5096	ASSY SERVO SPEAKER BOX
201	000-P00512-W	M SCR PH W/FS M5×12

⑩ ASSY FL 5W (SAC-1004)



ITEM NO.	PART NO.	DESCRIPTION
1	SAC-1005	FL BRACKET
2	SAC-1007	FL COVER
101	390-5327	FL 5W (DULUX-S 5W/21)
102	214-0125	SOCKET FOR DULX
103	182-5044	COIL BALLAST FOR DULUX 5W
104	209-0023	CONN CLOSED END
105	601-0460	PLASTIC TIE BELT 100MM
201	000-P00306-W	M SCR PH W/FS M3×6
202	000-P00408-W	M SCR PH W/FS M4×8
301	600-6317-01	WIRE HARN FL 5W

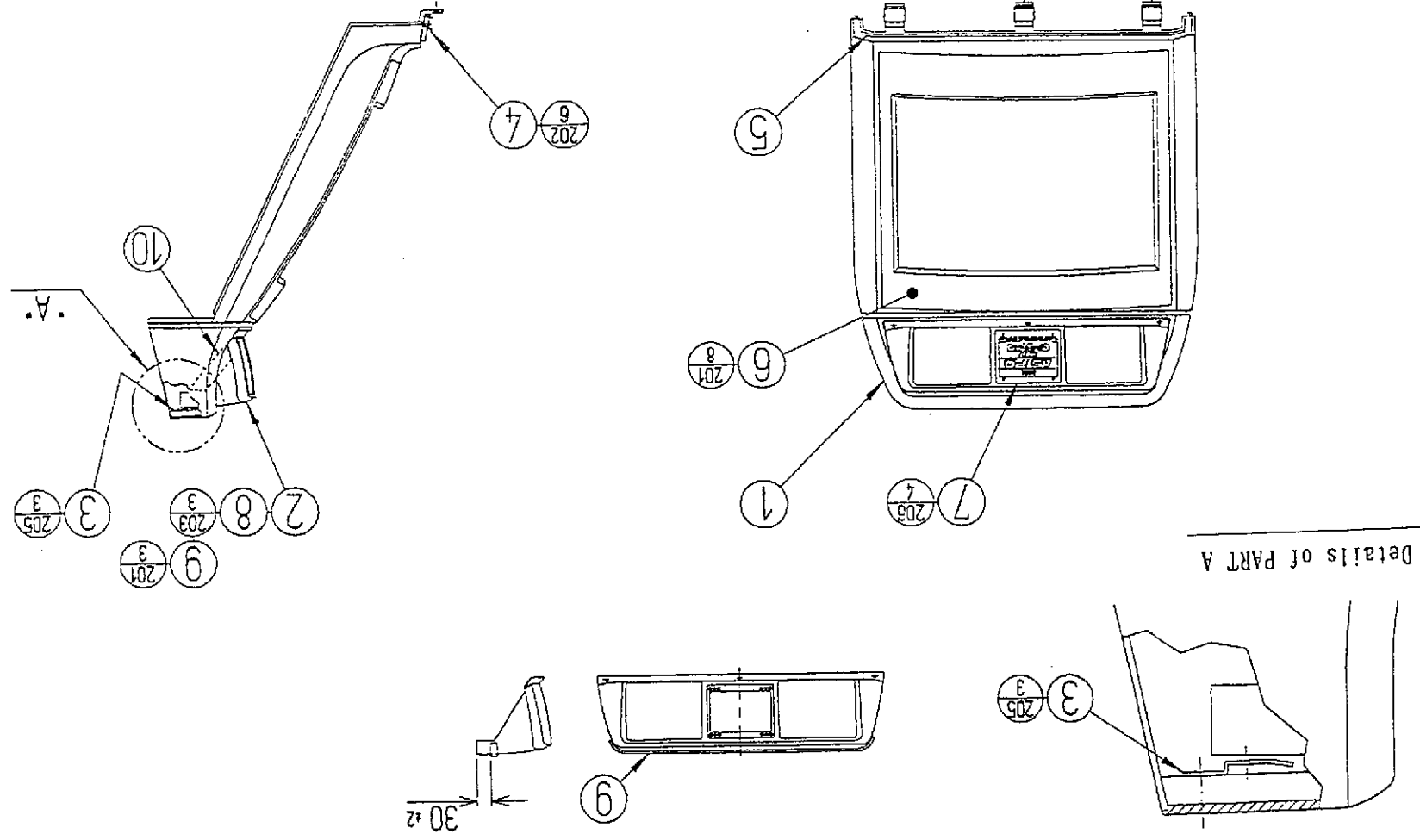
⑪ ASSY SERVO SPEAKER LEFT (SAC-1006)



ITEM NO.	PART NO.	DESCRIPTION
1	SAC-1003X	SPEAKER BRACKET
101	130-5078	ASSY SPEAKER BOX YST
101	130-5096	ASSY SERVO SPEAKER BOX
201	000-P00512-W	M SCR PH W/FS M5×12

⑫ ASSY FRONT PANEL (SAC-1100)

(D-1/2)



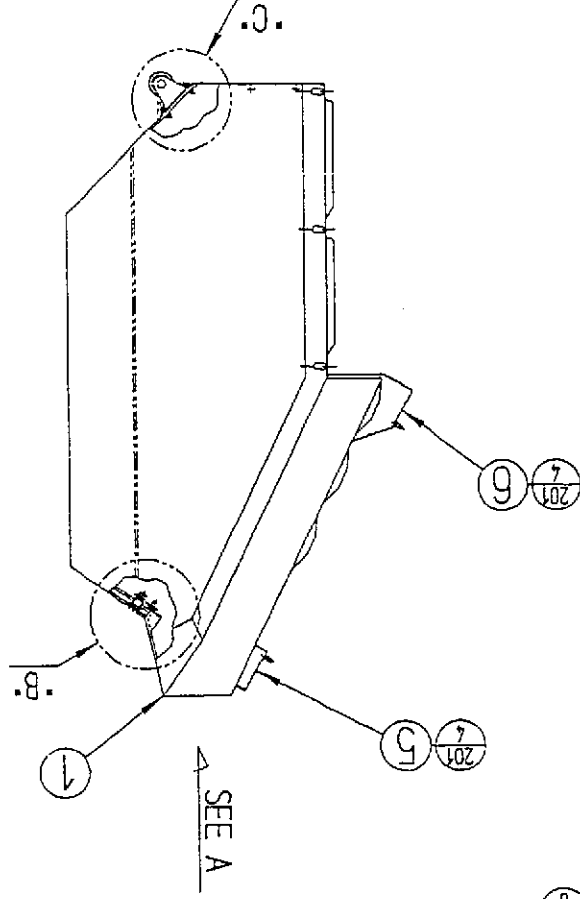
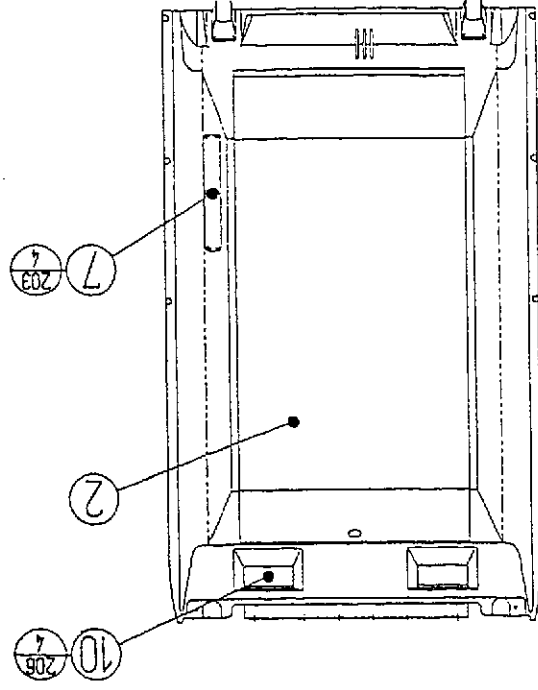
⑫ ASSY FRONT PANEL (SAC-1100)

(D-2/2)

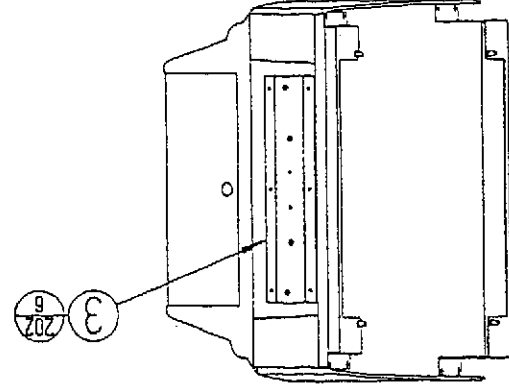
ITEM NO.	PART NO.	DESCRIPTION
1	SAC-1101	FRONT PANEL
2	SAC-1102	SPEAKER COVER
3	SAC-1103	BRACKET
4	CQN-1106	LOCK BRACKET
5	CQN-1109	SPONGE
6	CQN-1111	ASSY MASK
7	SAC-1104X	DESIGN PLATE
8	SAC-1105	NUT BRACKET M4
9	SAC-1106	CUSHION
10	SAC-1107	BLIND SHEET
201	000-T00408-0B	M SCR TH BLK M4×8
202	050-F00400	FLG NUT M4
203	008-T00412-0C	TMP PRF SCR TH CRM M4×12
205	000-T00425-0C	M SCR TH CRM M4×25
206	008-T00412-0B	TMP PRF SCR TH BLK M4×12

⑬ ASSY REAR CABINET (SAC-1200)

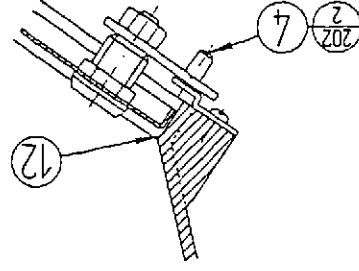
(D-1/2)



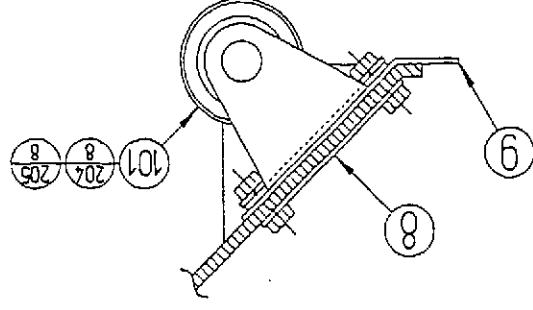
TORQUE	201	202
	80 kgf・cm	30 kgf・cm



SEE A



Details of PART B



Details of PART C

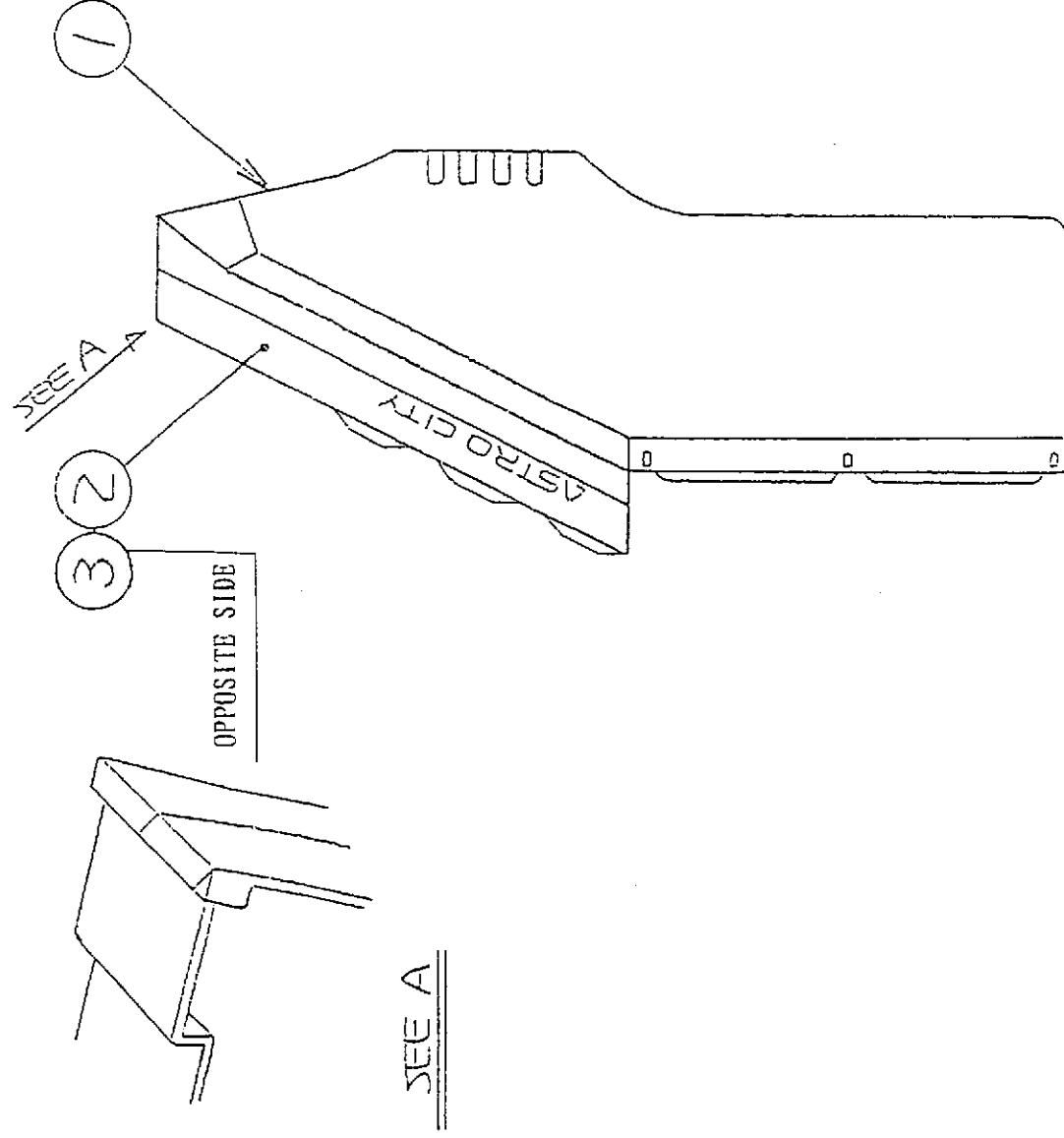
⑬ ASSY REAR CABINET (SAC-1200)

(D-2/2)

ITEM NO.	PART NO.	DESCRIPTION
1	SAC-1201	CABINET
2	SAC-1202	ASSY BACK DOOR
3	SAC-1204	SPEAKER BASE
4	SAC-1205	LOCK BRACKET
5	CQN-1202X	MONITOR BRACKET UPPER
6	CQN-1203Y	MONITOR BRACKET LOWER
7	CQN-1206-01	AC UNIT TAIWAN
7	CQN-1206-02	AC UNIT EXPORT
8	CQN-1208	BOLT PLATE
9	CQN-1209	CASTER BRACKET
10	CQN-1212	COVER
11	SAC-1301	ASSY WIRE
12	SAC-1207	CUSHION
101	601-6151-01	CASTER
102	280-5225	CORD CLAMP 21
201	012-P00616	TAP SCR PH 6×16
202	012-P00410	TAP SCR PH 4×10
203	008-T00412-0B	TMP PRF SCR TH BLK M4×12
204	050-H00600	HEX NUT M6
205	060-S00600	SPR WSHR M6
206	000-P00416-W	M SCR PH W/PS M4×16

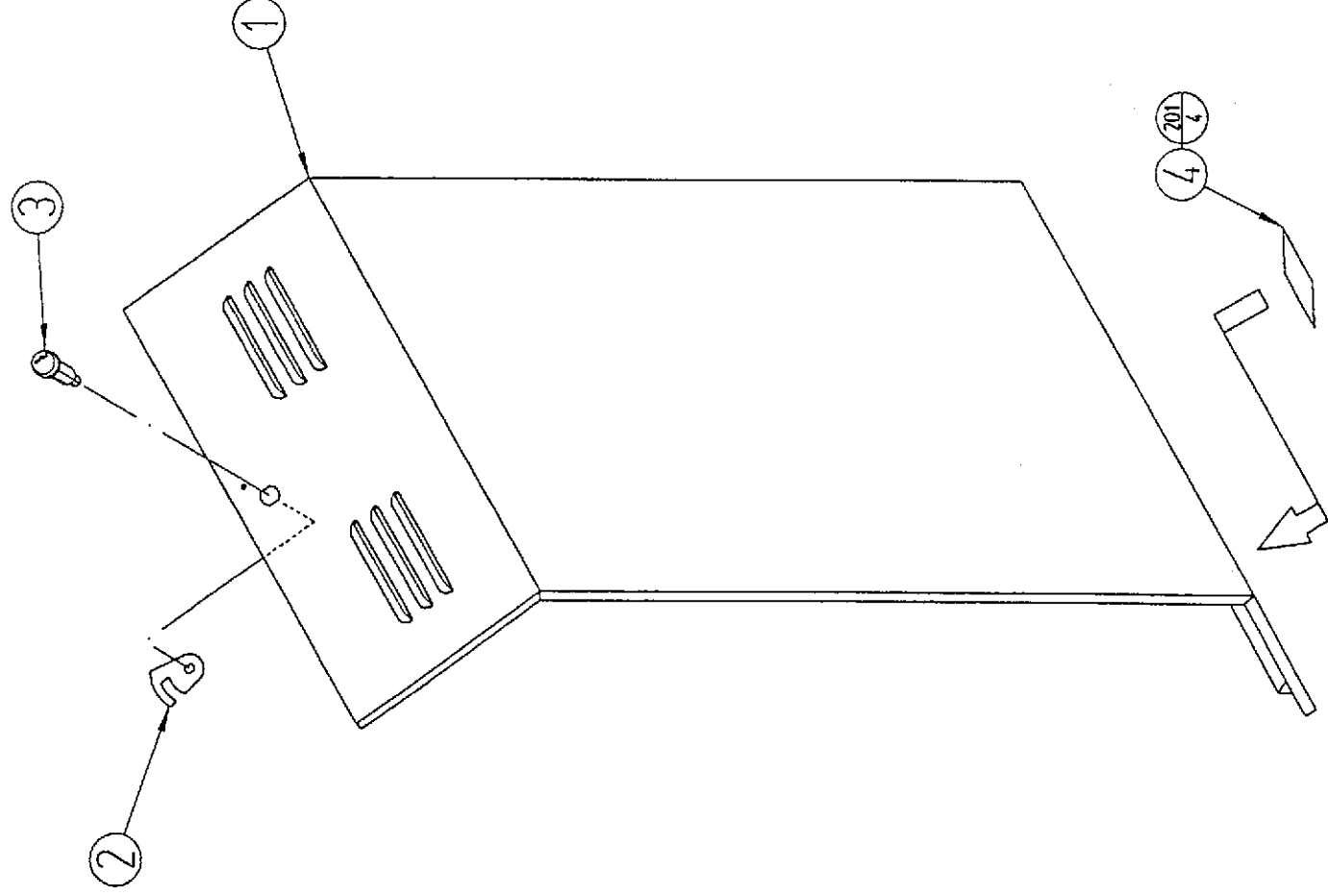
TAIWAN
OTHERS

⑭ CABINET (SAC-1201)



ITEM NO.	PART NO.	DESCRIPTION
1	SAC-1201-A	CABINET BLANK
2	CQN-1201X-B	SIDE STICKER RIGHT
3	CQN-1201X-C	SIDE STICKER LEFT

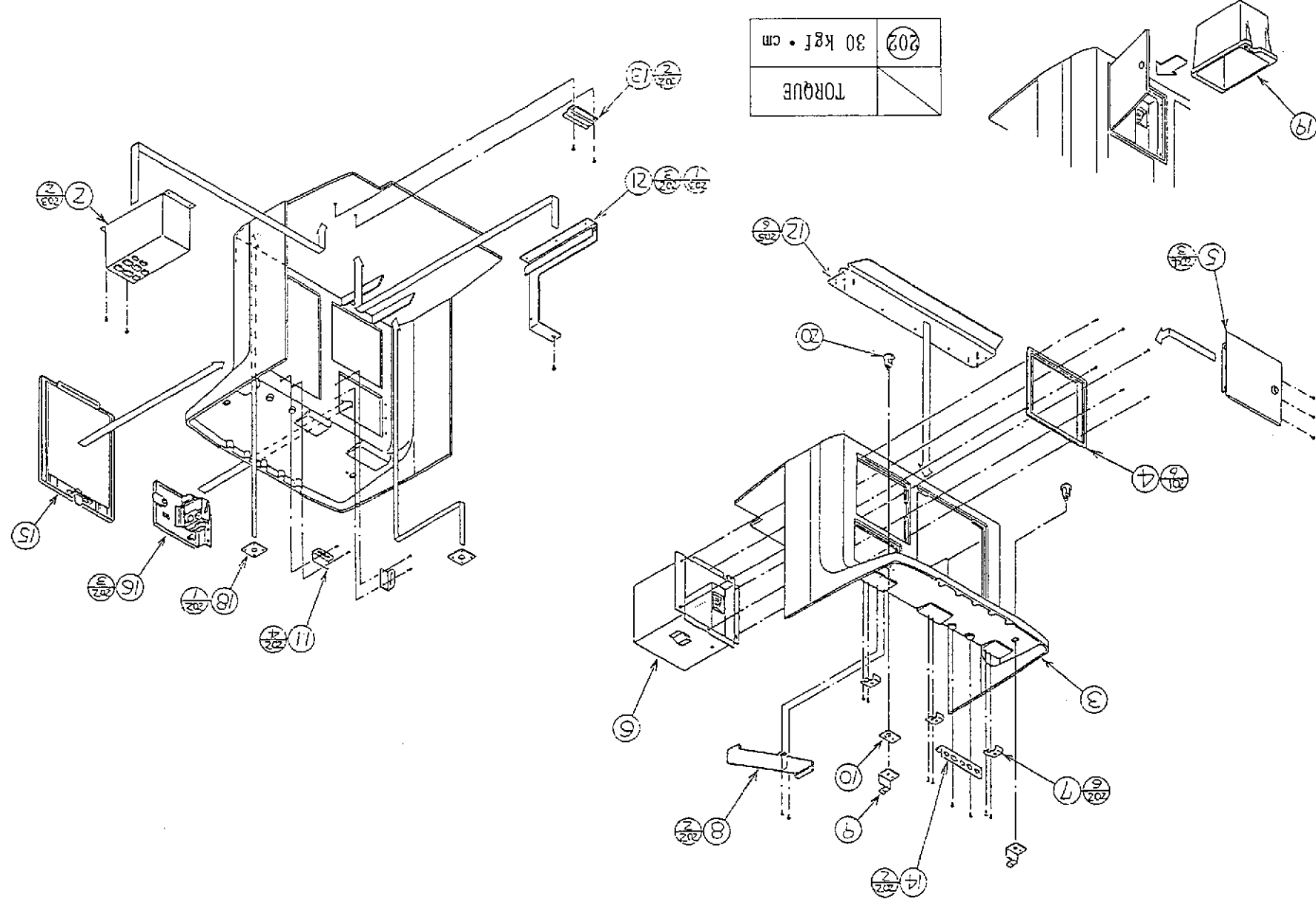
⑮ ASSY BACK DOOR (SAC-1202)



ITEM NO.	PART NO.	DESCRIPTION
1	SAC-1203	BACK DOOR
2	TH-1015	LOCKING TONGUE
3	220-5380	MAG LOCK MASTER W/O KEY
4	SAC-1206	LID
201	008-T00408-0C	TMP PRF SCR TH CRM M4×8

①⑥ ASSY CASH PANEL (SAC-1300)

(D-1/2)



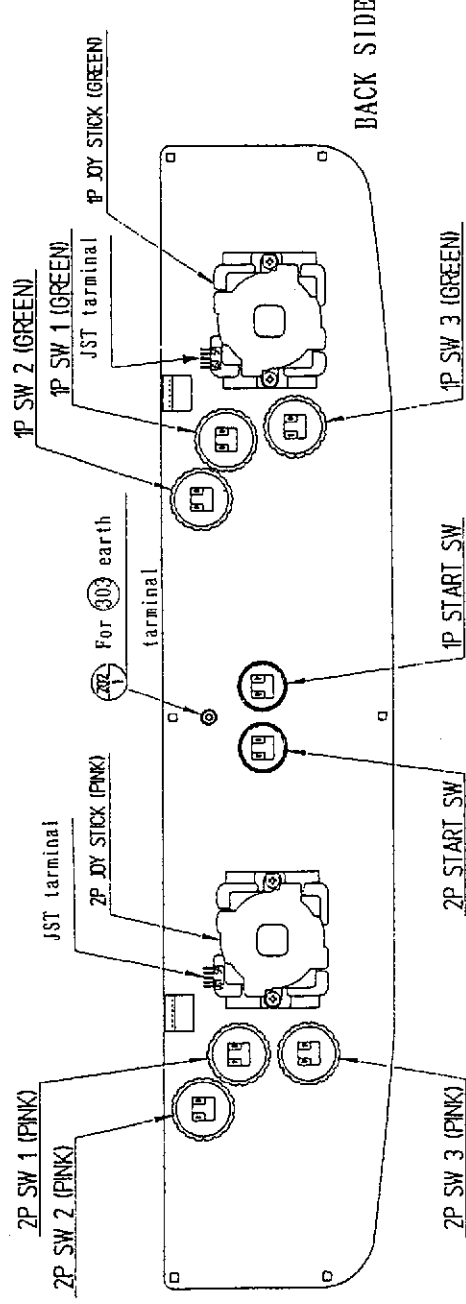
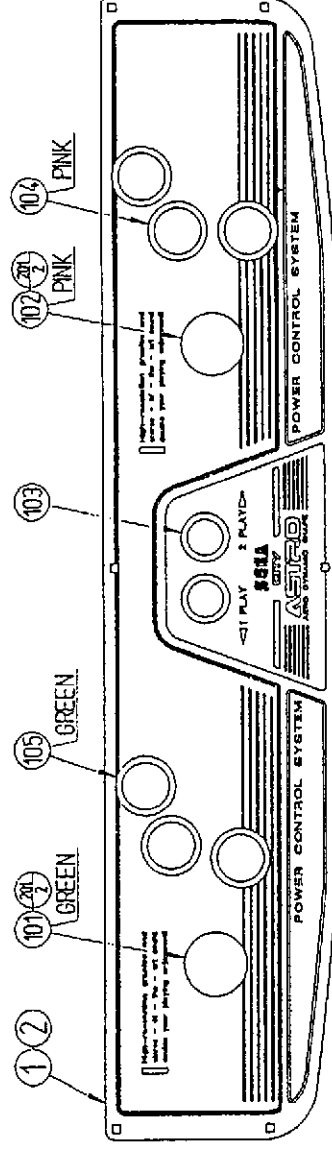
⑩ ASSY CASH PANEL (SAC-1300)

(D-2/2)

ITEM NO.	PART NO.	DESCRIPTION
2	400-5220	PWR SPLY UNIT
3	CQN-1301X	CASH PANEL
4	CQN-1302	FRAME CASH BOX
5	CQN-1303	ASSY CASH BOX DOOR
6	CQN-1305	ASSY CASH BOX COVER
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-1330	ASSY LEG ADJUSTER
13	CQN-1315	STOPPER
14	CQN-1316	CONNECTOR BRACKET
15	CQN-1317	ASSY SERVICE DOOR
16	CQN-1319	ASSY COIN CHUTE DOOR
17	CQN-1323	ASSY WIRE
18	CQN-1329	PLATE
19	253-5366	CASH BOX
20	220-5380	MAG LOCK MASTER W/O KEY
21	CQN-1328	BD HOLDER
101	280-5225	CORD CL.MAP 21
102	280-0419	HARNESS LUG
201	010-F00316	S-TITE SCR FH M3×16
202	012-P00410	TAP SCR PH 4×10
203	000-P00414-W	M SCR PH W/FS M4×14
204	000-F00410	M SCR FH M4×10
205	050-F00600	FLG NUT M6
301	600-6227-24	WIRE HARN CONT PNL EARTH LEFT
302	600-6227-25	WIRE HARN CONT PNL EARTH RIGHT
303	600-6227-26	WIRE HARN COIN CHUTE EARTH
304	600-6227-27	WIRE HARN COIN LEG BRACKET EARTH

⑪ ASSY CONTROL PANEL 2L6B (SAC-2000)

(D-1/2)

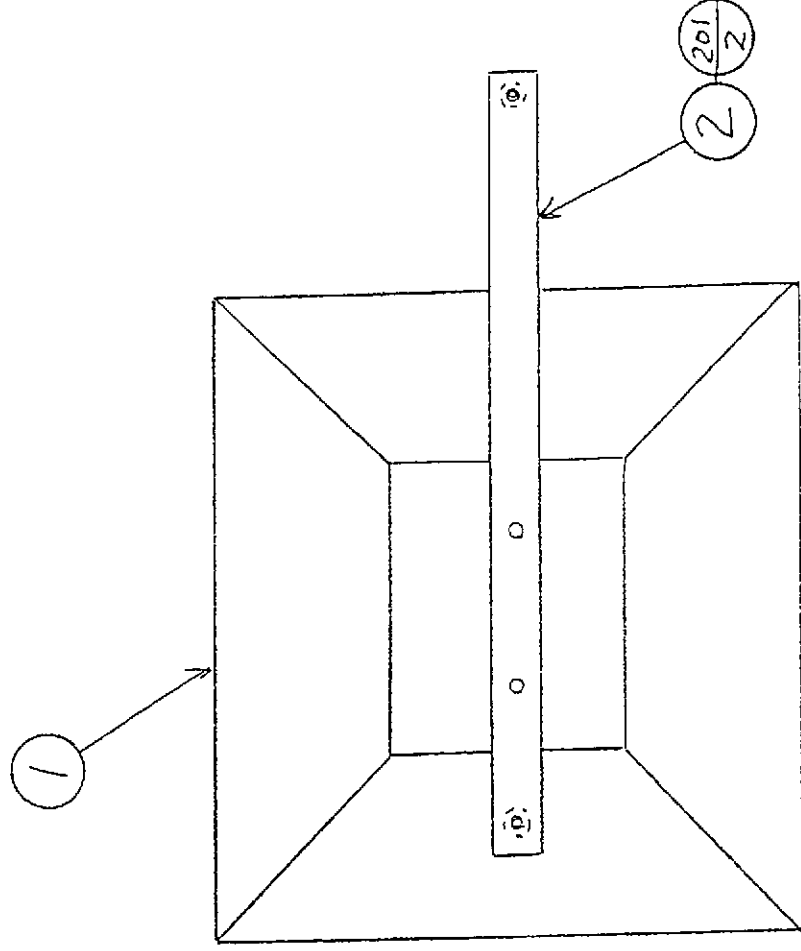


⑪ ASSY CONTROL PANEL 2L6B (SAC-2000)

(D-2/2)

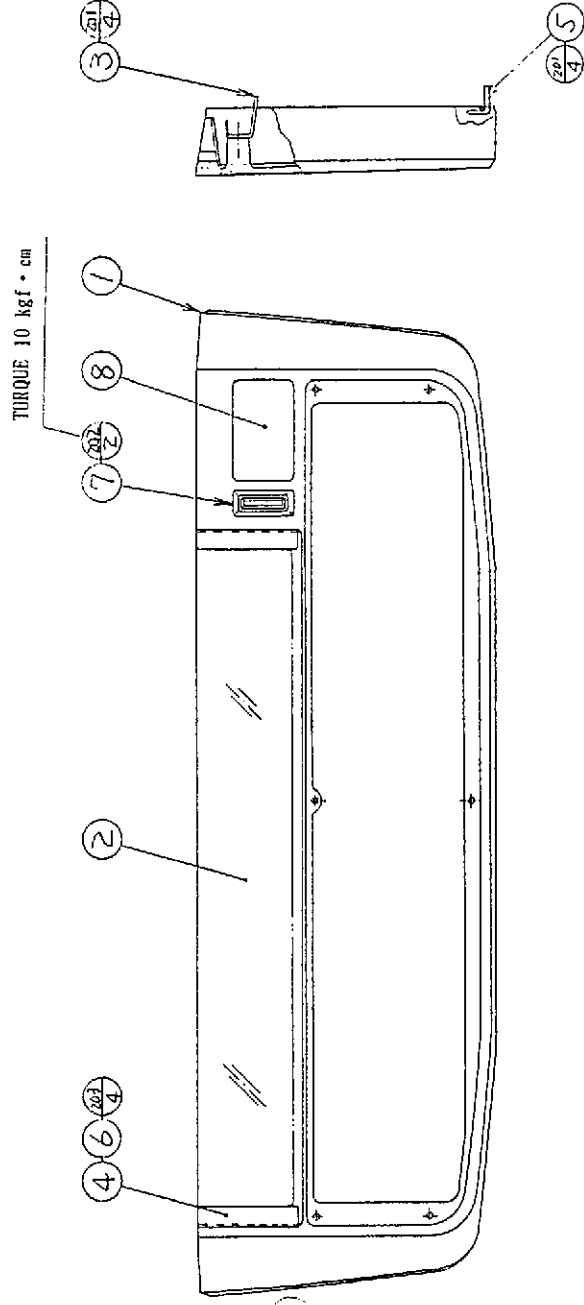
ITEM NO.	PART NO.	DESCRIPTION
1	SAC-2001	PANEL BASE 2L6B
2	SAC-2002	CONT PANEL PLATE 2L6B
101	610-0322-01	ASSY 8WAY JOYSTICK GREEN (JST TYPE)
102	610-0322-02	ASSY 8WAY JOYSTICK PINK (JST TYPE)
103	509-5156	SW PUSH BUTTON IM YELLOW
104	509-5135-08	SW PUSH BUTTON IM SPL PINK
105	509-5135-09	SW PUSH BUTTON IM GREEN
106	280-5225	CORD CLMAP 21
201	000-P00412-S	M SCR PH W/S M4×12
202	050-F00400	FLG NUT M4
301	600-6317-17	WIRE HARN CONT PNL 1P
302	600-6317-18	WIRE HARN CONT PNL 2P
303	600-6227-09	WIRE HARN CONT PNL EARTH

⑱ ASSY SHIELD COVER (CON-0004)



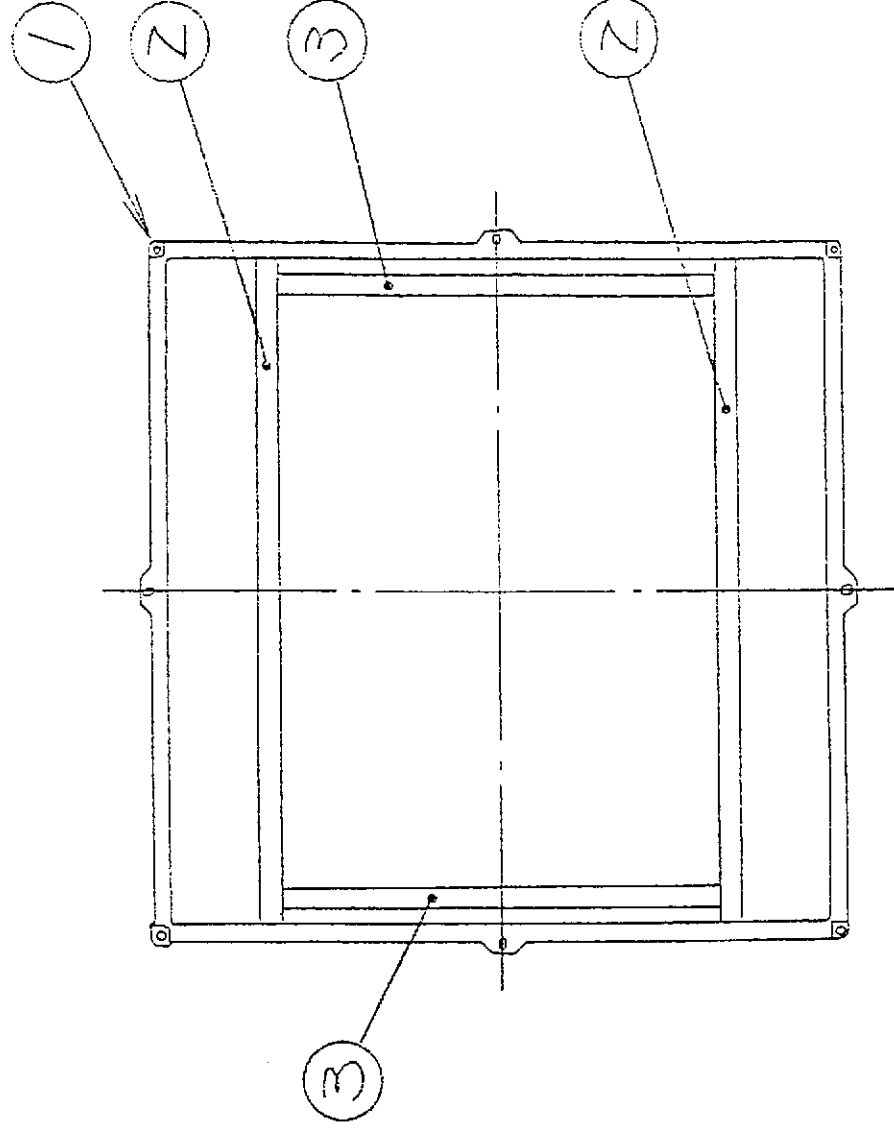
ITEM NO.	PART NO.	DESCRIPTION
1	200-5258	MONITOR SHIELD
2	200-5259	SHIELD STAY
201	000-P00406-W	M SCR PH W/FS M4×6

⑰ ASSY CONTROL PANEL BASE (CQN-1050)



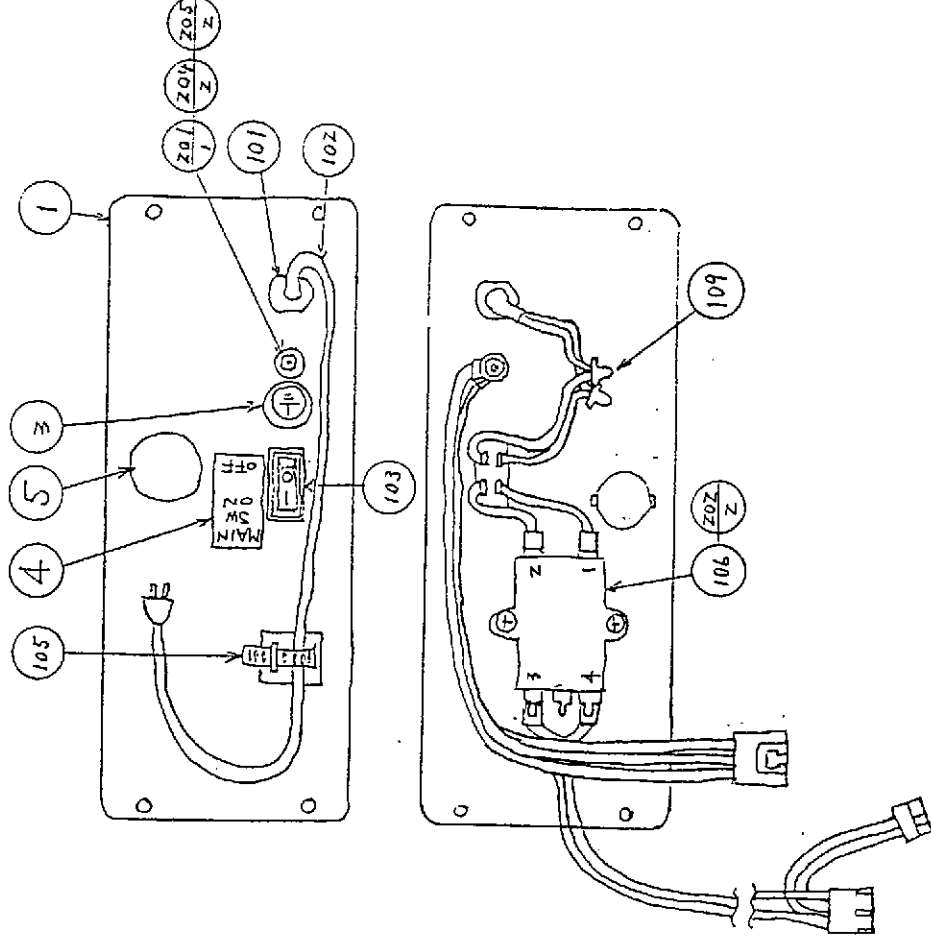
ITEM NO.	PART NO.	DESCRIPTION
1	CQN-1051	CONTROL PANEL BASE
2	CQN-1052	INSTRUCTION COVER
3	CQN-1053	LOCK BRACKET
4	CQN-1057	STUD PLATE
5	CQN-1055X	HINGE
6	CQN-1056	PROTECT SHEET
7	220-5167~	COIN ENTRY
8	421-8340	DENOMINATION STICKER ~
201	000-0408-FS	M SCR PH W/FS M4×8
202	000-0308-FS	M SCR PH W/FS M3×8
203	051-0004	FLG NUT M4

②⑩ ASSY MASK (CON-1111)



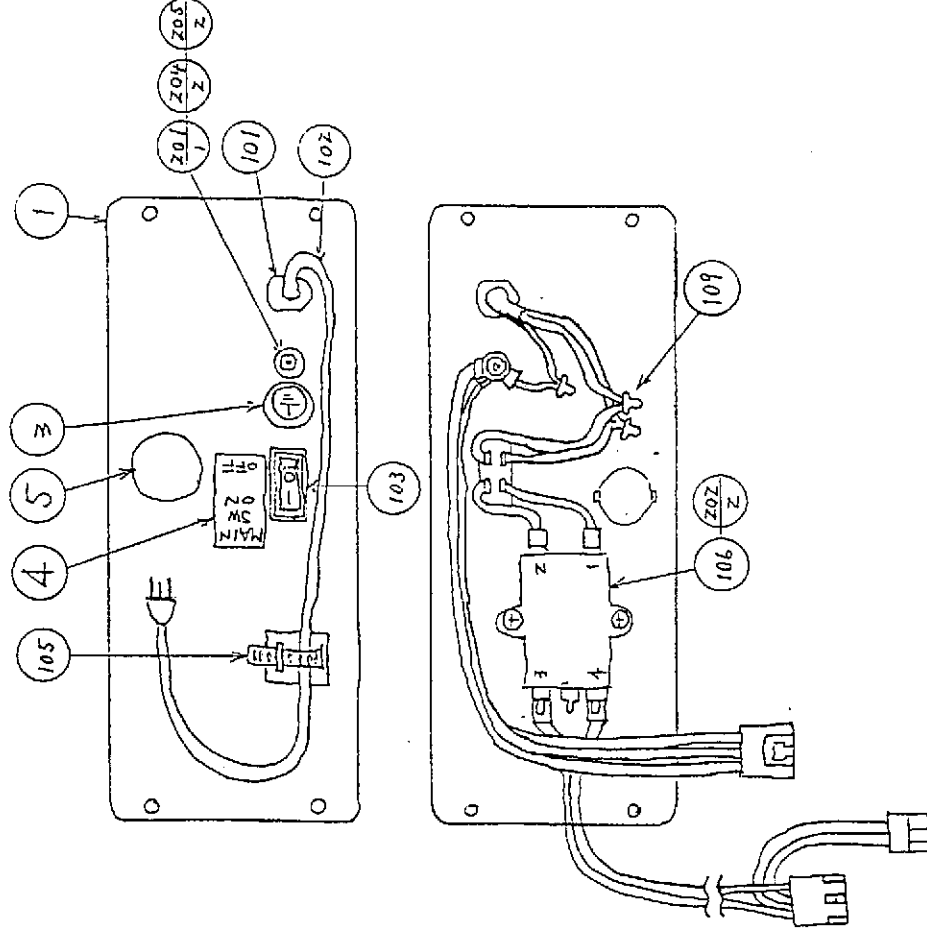
ITEM NO.	PART NO.	DESCRIPTION
1	CQN-1102	MASK
2	CQN-1112	PACKING L
3	CQN-1113	PACKING S

② AC UNIT TAIWAN (CQN-1206-01)



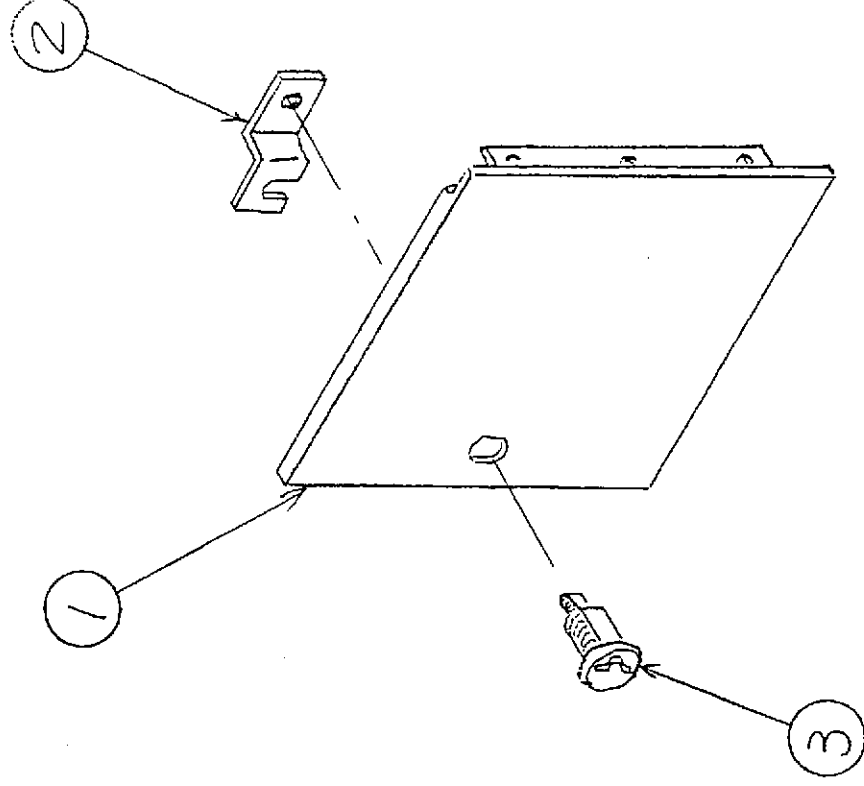
ITEM NO.	PART NO.	DESCRIPTION
1	CQN-1207-01	AC PANEL EXPORT
3	421-8202	STICKER EARTH MARK
4	421-8324	STICKER MAIN SW ON OFF
5	253-5185	CAP SW 30
101	280-5134-6N34	BUSHING STRAIN RELIEF 6N34
102	600-6037	CA & PLUG ASSY 15A (W/LUG)
103	509-5453-V-B	SW ROCKER J8 V-B
105	280-5122	CORD CLAMP (TAKEUT1 UL-18S)
106	270-5020	NOISE FILTER AC250V 6A
108	601-0460	PLASTIC TIE BELT 100mm
109	209-0023	CONN CLOSED END
201	000-0414-BR	M SCR PH BRS M4×14
202	000-0306-F	M SCR PH W/F M3×6
204	050-0004-BR	HEX NUT BRS M4
205	069-0003	FLT WSHR BRS 4-12×1
301	600-6227-23	WIRE HARN AC UNIT EXPORT

②② AC UNIT EXPORT (CQN-1206-02)



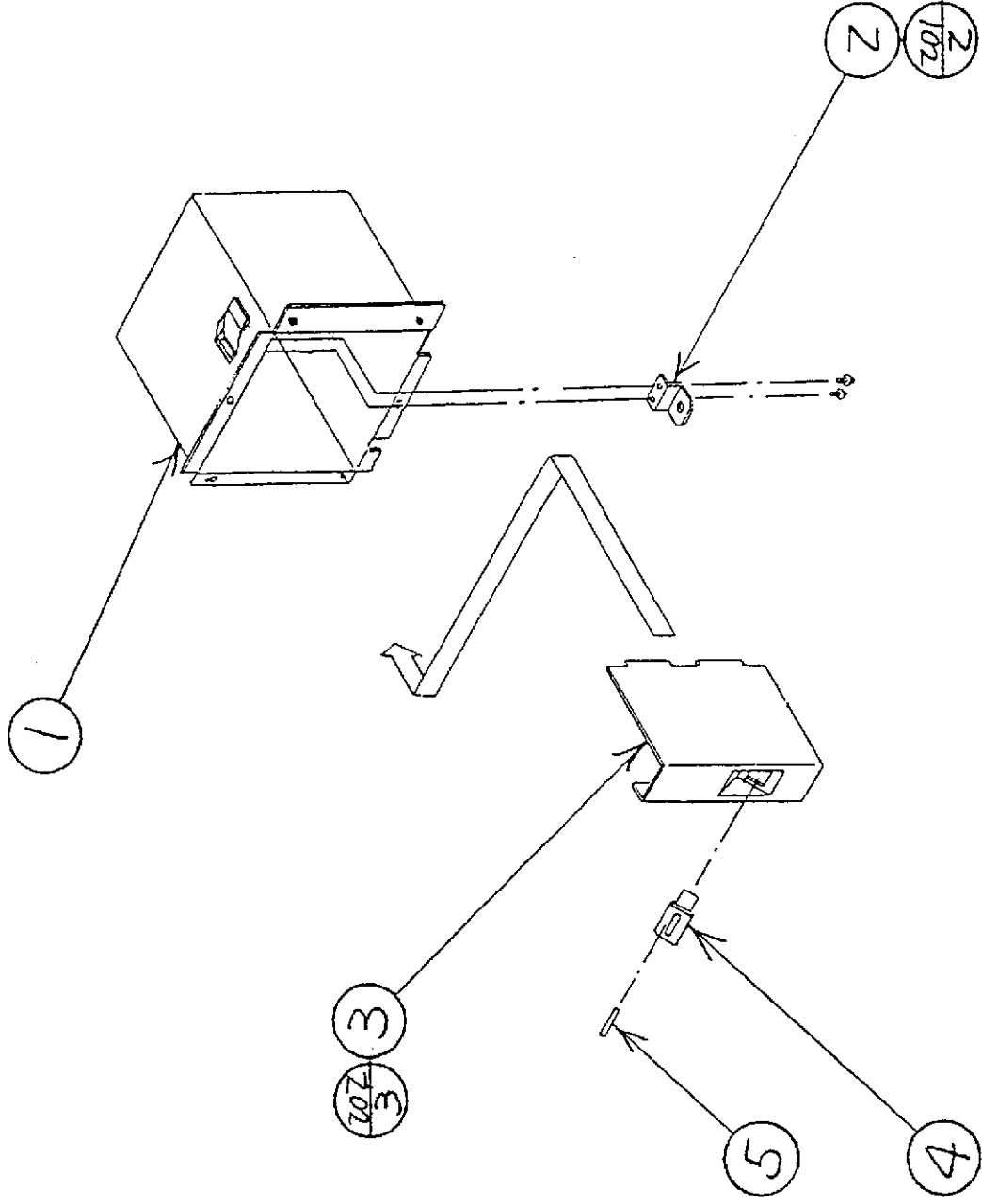
ITEM NO.	PART NO.	DESCRIPTION
1	CQN-1207-01	AC PANEL EXPORT
3	421-8202	STICKER EARTH MARK
4	421-8324	STICKER MAIN SW ON OFF
5	253-5185	CAP SW 30
101	280-5134-6N34	BUSHING STRAIN RELIEF 6N34
102	600-5007	CA & PLUG ASSY W/EARTH
103	509-5453-V-B	SW ROCKER J8 V-B
105	280-5122	CORD CLAMP (TAKEUT1 UL-18S)
106	270-5020	NOISE FILTER AC250V 6A
108	601-0460	PLASTIC TIE BELT 100mm
109	209-0023	CONN CLOSED END
201	000-0414-BR	M SCR PH BRS M4×14
202	000-0306-F	M SCR PH W/F M3×6
204	050-0004-BR	HEX NUT BRS M4
205	069-0003	FLT WSHR BRS 4-12×1
301	600-6227-23	WIRE HARN AC UNIT EXPORT

②③ ASSY CASH BOX DOOR (CQN-1303)



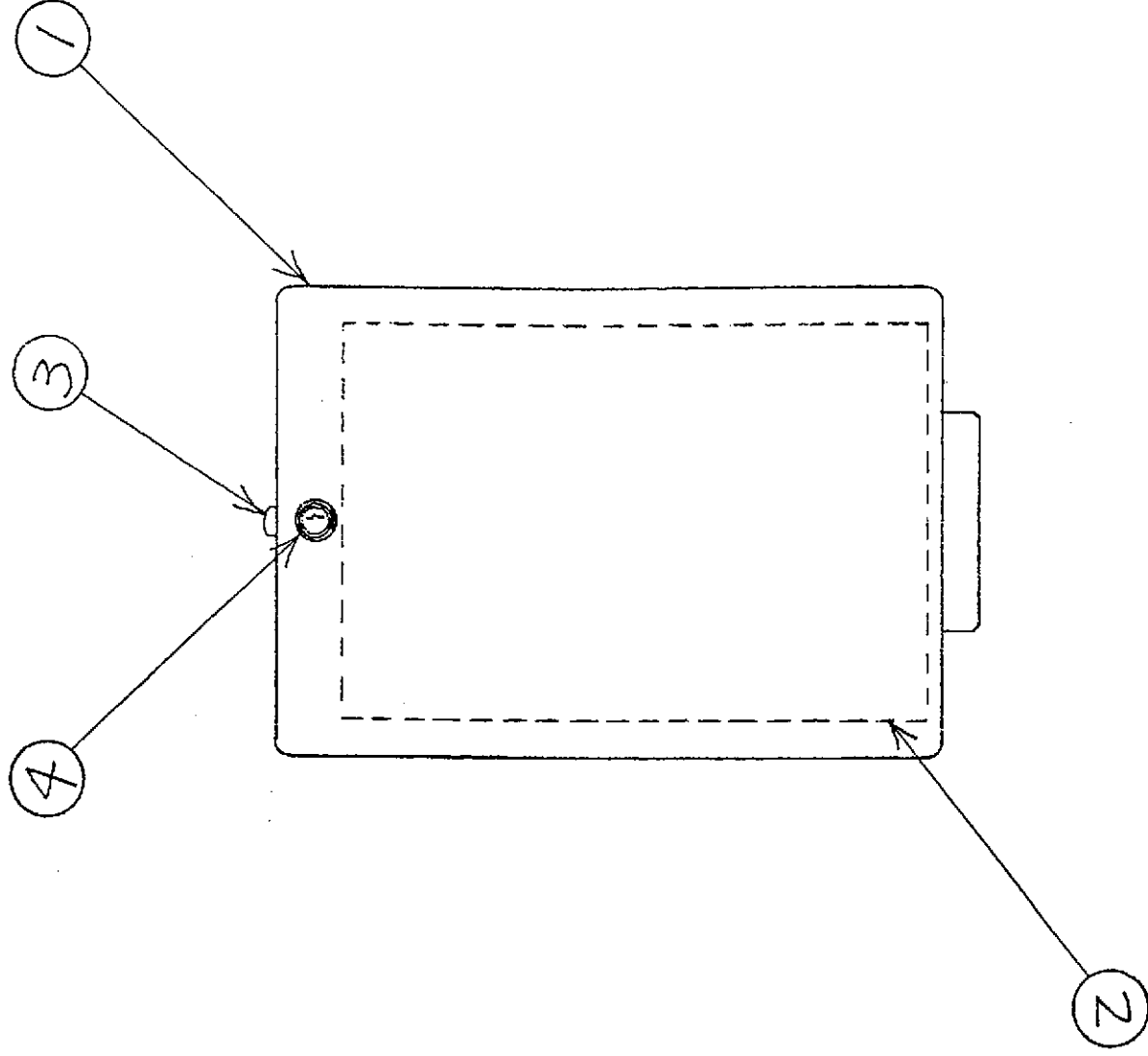
ITEM NO.	PART NO.	DESCRIPTION
1	CQN-1304	CASH BOX DOOR
2	NCA-1017	LOCKING TONGUE
3	220-5046-91	MAGNETIC LOCK W/KEYS

②④ ASSY CASH BOX COVER (CQN-1305)



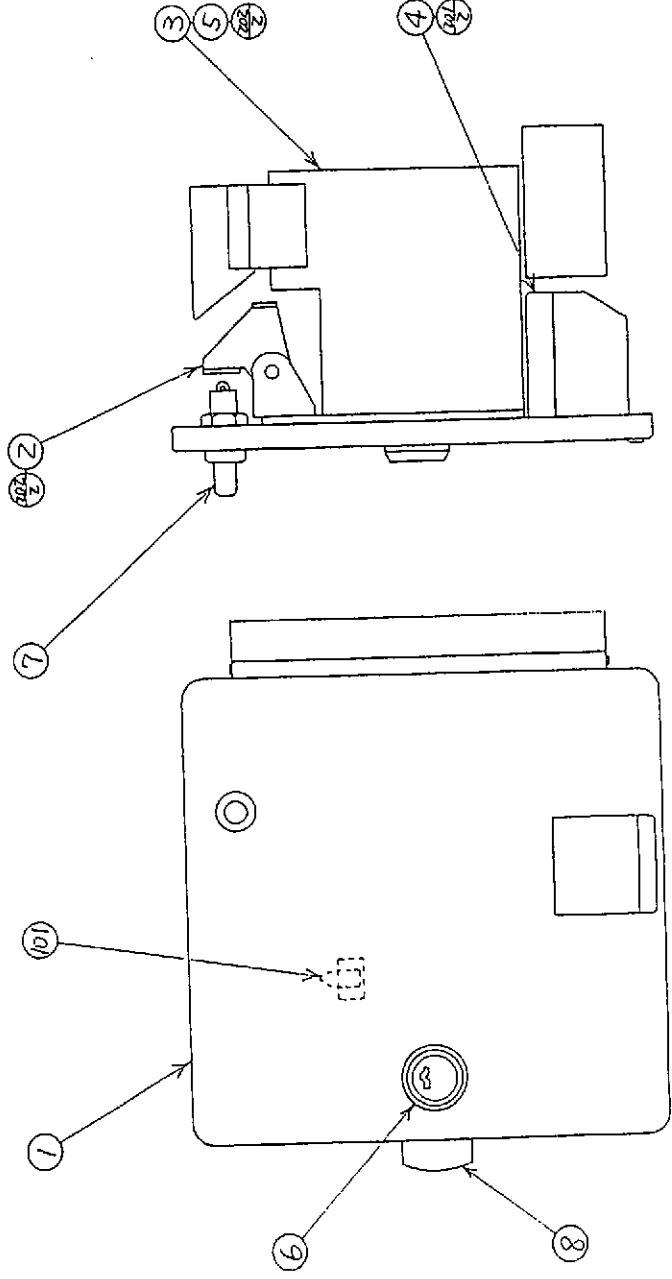
ITEM NO.	PART NO.	DESCRIPTION
1	CQN-1306X	CASH BOX COVER
2	CQN-1307	LOCK BRACKET
3	CQN-1308	COIN METER BRACKET
4	220-5412	MAG CNTR W/CONN
5	421-6591-01	STICKER COIN METER
201	000-0408-FS	M SCR PH W/FS M4×8
202	047-0002	RVT OPEN TYPE 3.2×6.3

②⑤ ASSY SERVICE DOOR (CQN-1317)



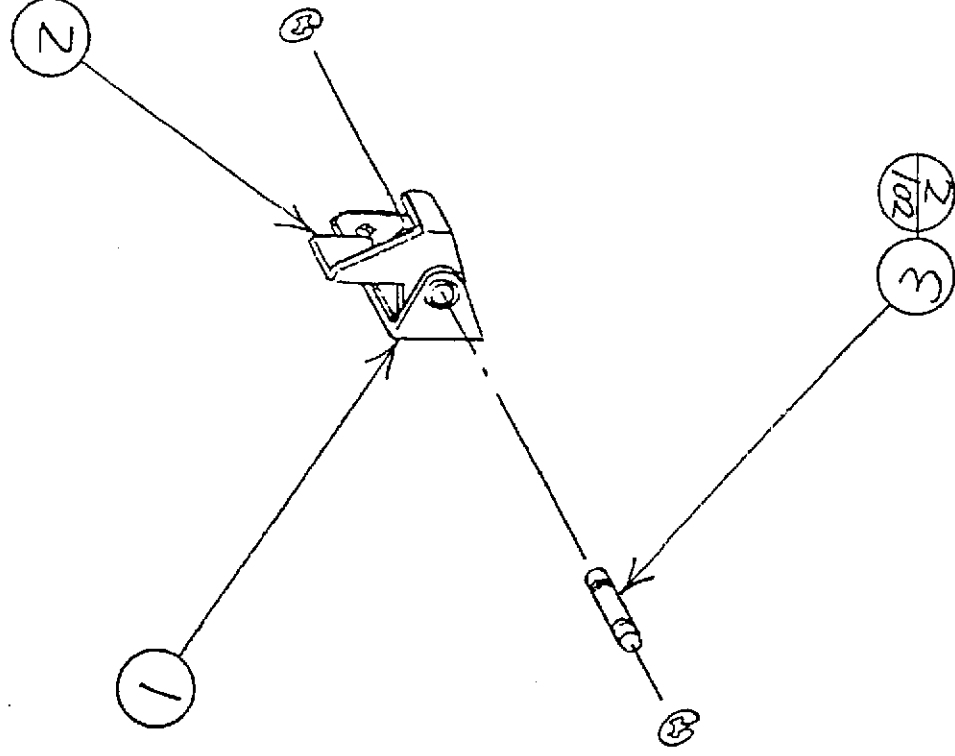
ITEM NO.	PART NO.	DESCRIPTION
1	CQN-1318	SERVICE DOOR
2	CQN-1325	PAPER INSULATOR
3	DP-1167	TNG LKG
4	220-5380	MAG LOCK MASTER W/O KEY

26 ASSY COIN CHUTE DOOR (CQN-1319)



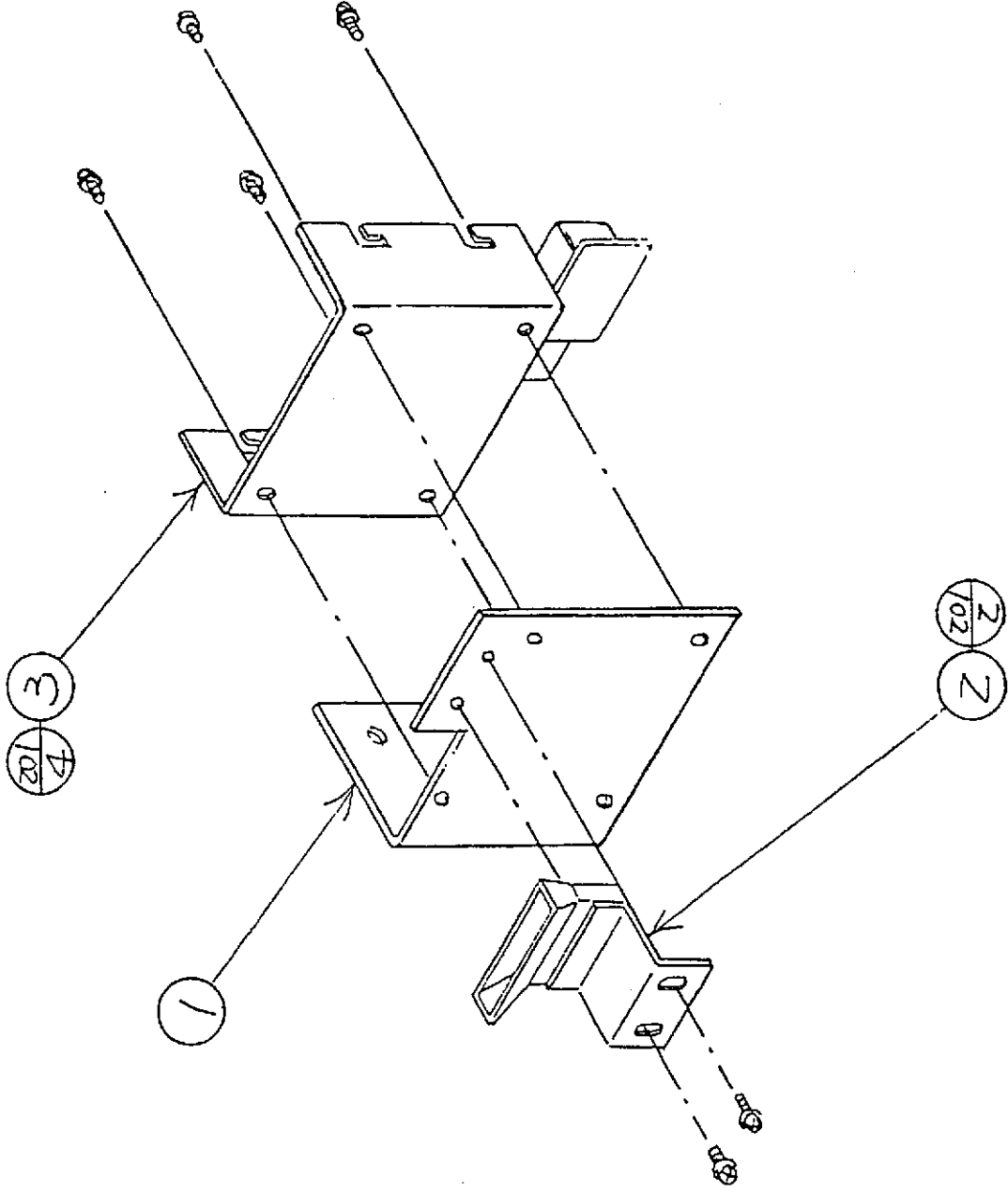
ITEM NO.	PART NO.	DESCRIPTION
1	CQN-1320	COIN CHUTE DOOR
2	CQN-1321	ASSY REJECT LEVER
3	CQN-1324	ASSY COIN CHUTE BRKT
4	CQN-1326	REJECT COVER
5	220-5208~	COIN CHUTE REJR ~
6	220-5380	MAG LOCK MASTER W/O KEY
7	250-5043	REJECT BUTTON ASSEMBLY
8	DP-1167	TNG LKG
101	280-0425	CORD CLAMP $\phi 10$
201	010-0306-F	S-TITE SCR PH W/F M3×6
202	010-0408-F	S-TITE SCR PH W/F M4×8
301	600-6227-15	WIRE HARN COIN CHUTE EARTH

② ASSY REJECT LEVER (CQN-1321)



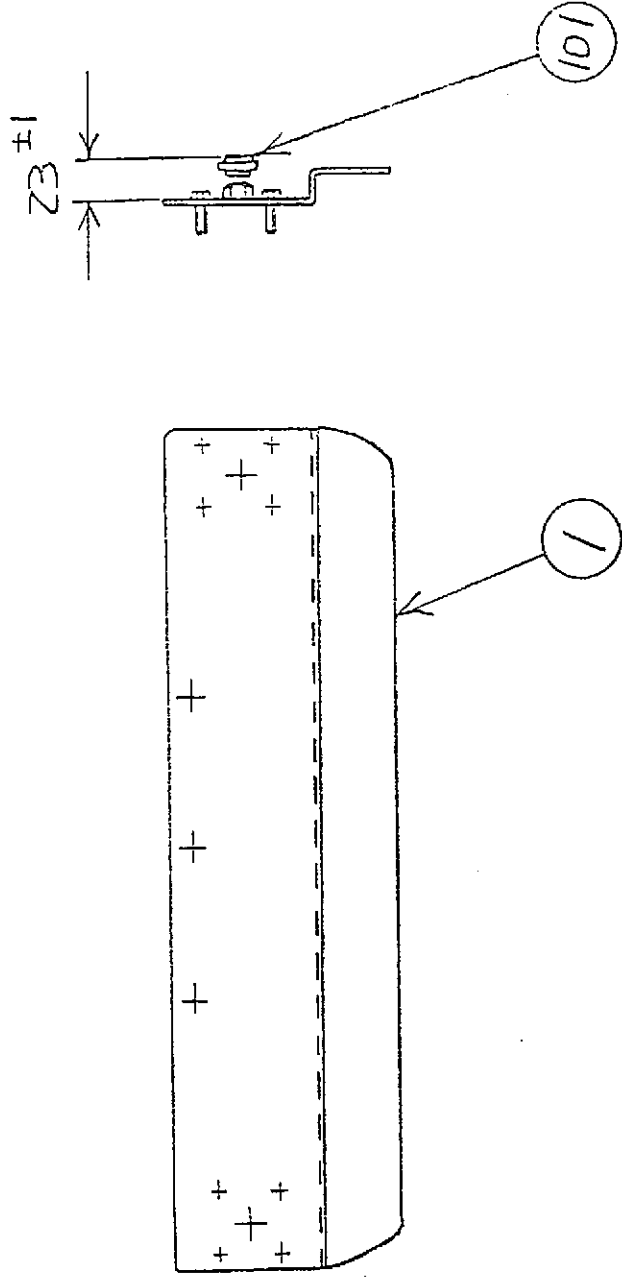
ITEM NO.	PART NO.	DESCRIPTION
1	CQN-1322	REJECT LEVER BRACKET
2	CY-1032	REJECT LEVER
3	123-0035	SHAFT
201	069-0039	E RING 3.2

②⑧ ASSY COIN CHUTE BRKT (CQN-1324)



ITEM NO.	PART NO.	DESCRIPTION	
1	CY-1009	COIN CHUTE BRACKET	
2	105-5041	UPPER COIN CHUTE	
3	220-5370	COIN CHUTE BRACKET ASSY ¥500	} OTHERS
	220-5370-01	COIN CHUTE BRACKET ¥500	
3	220-5272	CHANNEL BRKT W/O SW CHUTE	} SHINGAPOLE
	220-5269	COIN XFMR 220-240V 300VA	
201	010-0408-F	S-TITE SCR PH W/F M4×8	

②⑨ ASSY LEG ADJUSTER (CQN-1330)



ITEM NO.	PART NO.	DESCRIPTION
1	CQN-1331	LEG ADJ BRKT
101	601-6076	LEG ADJUSTER ϕ 32

14. WIRE COLOR CODE TABLE

THE WIRE COLOR CODE is as follows :

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

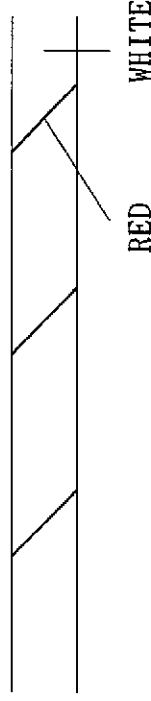
Wires other than those of any of the above 5 single colors will be displayed by 2 alphanumeric characters.

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

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

Note 1 : If the right-hand side 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

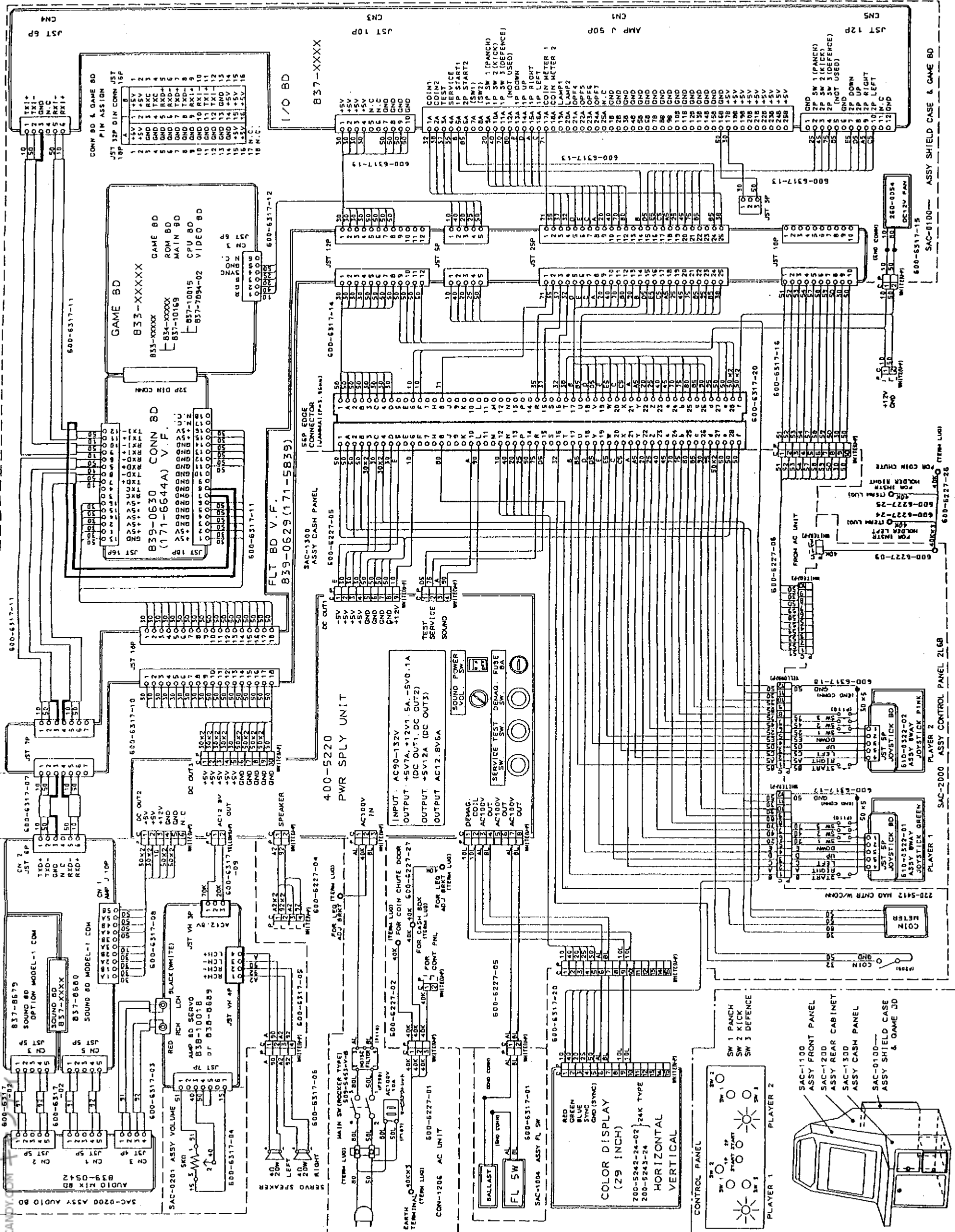


Note 1 : The character following the wire color code indicates the size of the wire.

K : A W G 18, U L 1015

L : A W G 20, U L 1007

None: A W G 22, U L 1007



15. WIRING DIAGRAM