

SERVICE MANUAL



ISSUE DATE: Feb. 27, 2013



- ▶ Please read the manual carefully and keep it in mind before using this machine.
- ▶ Put this manual within touch of your reference in anytime.

PRECAUTIONS FOR USE

The following safety precautions are given throughout this manual. They must be strictly followed to protect those who install, use or maintain this product as well as to protect players, visitors and property.

For safety reasons.

- The following suggestions should be adhered to:



WARNING

Disregarding could result in serious injury.



CAUTION

Disregarding could result in injury or product damage.

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



Indicates a care should be taken.



Forbidden.



Indicates a matter which must be performed.

- **Precautions to be followed:**

Certain procedures require a qualified in-shop maintenance person or industry specialist. For such instructions, a qualified person must take care of the jobs.

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

Qualified in-shop maintenance person


- A service staff shall have experience in operations of game machines. The staff shall be responsible for assembly, installation, inspection and maintenance of the machine.

Industry specialist

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

PRECAUTIONS FOR USE


WARNING

If there is any abnormality such as smoke, bad smell or abnormal noise being emitted from the machine, immediately turn OFF the main power switch and unplug the power cord from the receptacle to stop operating it. 

- Using the machine in abnormal conditions could result in fire or accidents.


In case of abnormality

1. Turn OFF the main power switch.
2. Unplug the power cord from the receptacle.
3. Contact your nearest dealer.

Do not leave the power cord plugged in improperly or covered with dust. 

- Doing so could result in the power cord being damaged periodically.


CAUTION

Do not use this product anywhere other than industrial areas. 

- Using in a residential area or an area next to a residential area could affect signal reception of radios, television sets, telephones, etc..
- Do not give shock the surface of glass products.

- Please do not play this game if
 - When you do drinking;
 - When your physical condition is not normal;
 - When you are in pregnancy;
 - When you have on a pulse controller;
 - When you have recently experienced a cramp or fainting away while watching TV.
- Avoid excessive force/shock while playing/moving the game.
- While do games, pay attention to surrounding.

Do not plug or unplug the power cord with wet hands. 

In handling the power cord, follow the instructions below. 

- | | |
|---|--|
| • Do not damage the power cord. | • Do not modify the power cord. |
| • Do not bend the power cord excessively. | • Do not twist the power cord. |
| • Do not heat the power cord. | • Do not pull the power cord. |
| • Do not bind the power cord. | • Do not stand on the power cord. |
| • Do not sandwich the power cord. | • Do not drive a nail into the power cord. |

If the power cord or power plug becomes damaged, stop using the machine immediately and ask your nearest dealer to replace the parts.

PRECAUTIONS FOR USE

WARNING

Be sure to consult an industry specialist when setting up, moving or transporting this product.

- This product should not be set up, moved or transported by any one other than an industry specialist.
- When installing this product, set the 4 leg levelers evenly on the floor and make sure that the product is installed stably in a horizontal position. Unstable installation may result in injury or accident.
- When installing this product, do not apply undue force on movable parts. Otherwise, injury and accident may result, or the product may be damaged.

The machine for indoor usage only does not install outside.



Do not set the game machine up near emergency exits.



Protect the game machine from:



- Rain or moisture.
- Direct sunlight.
- Direct heat from air-conditioning and heating equipment, etc..
- Hazardous flammable substances.
- Otherwise an accident or malfunction may result.

Do not place containers holding chemicals or water on or near the game machine.



Do not place objects near the ventilating holes.



Do not bend the power cord by force or place heavy objects on it.



Never plug or unplug the power cord with wet hands.



Never unplug the game machine by pulling the power cord.



CAUTION

Be sure to use indoor wiring within the specified voltage requirements. For extension cord, use the specified rating or more.

Be sure to use the attached power cord.

Never plug more than one cord at a time into the electrical receptacle.



Do not lay the power cord where people walk through.



Be sure to ground this product.



Do not exert excessive force when moving the machine.



For proper ventilation, keep the game machine 100mm(4") away from the walls.

Do not alter the system related dipswitch settings.

PRECAUTIONS FOR USE

WARNING

Be sure to turn OFF the main power switch and unplug the power cord from the receptacle before inspecting or cleaning the machine.



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



Opening inside the machine shall be done by machine specialist only as high electric current is being sent inside. For game machine with monitor, a care should be taken while opening its back door. If not, a damage to the inside parts or the monitor may occur.



If the sub power switch of the service panel is turned OFF without turning OFF the main power switch of the power supply unit, some parts in the units remain live. When opening the back door, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.



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



To clean the game machine, wipe it with a soft cloth dampened in a neutral detergent.

- Using thinner or other organic solvent or alcohol may decompose the material.
- Electrical shock or equipment failure could be caused by water entering the inside of the machine.

CAUTION

Components in the game are sensitive to vibrations and impact. Care should be used when moving and transporting the game machine.



Be sure not to let the machine tip over.

Before moving the machine, be sure to turn OFF the main power switch, unplug the power cord from the receptacle and remove the power cord from the machine.



Before moving take the machine, off the levelers and move it on the casters.

Avoid excessive force while moving the machine.

PRECAUTIONS IN HANDLING

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

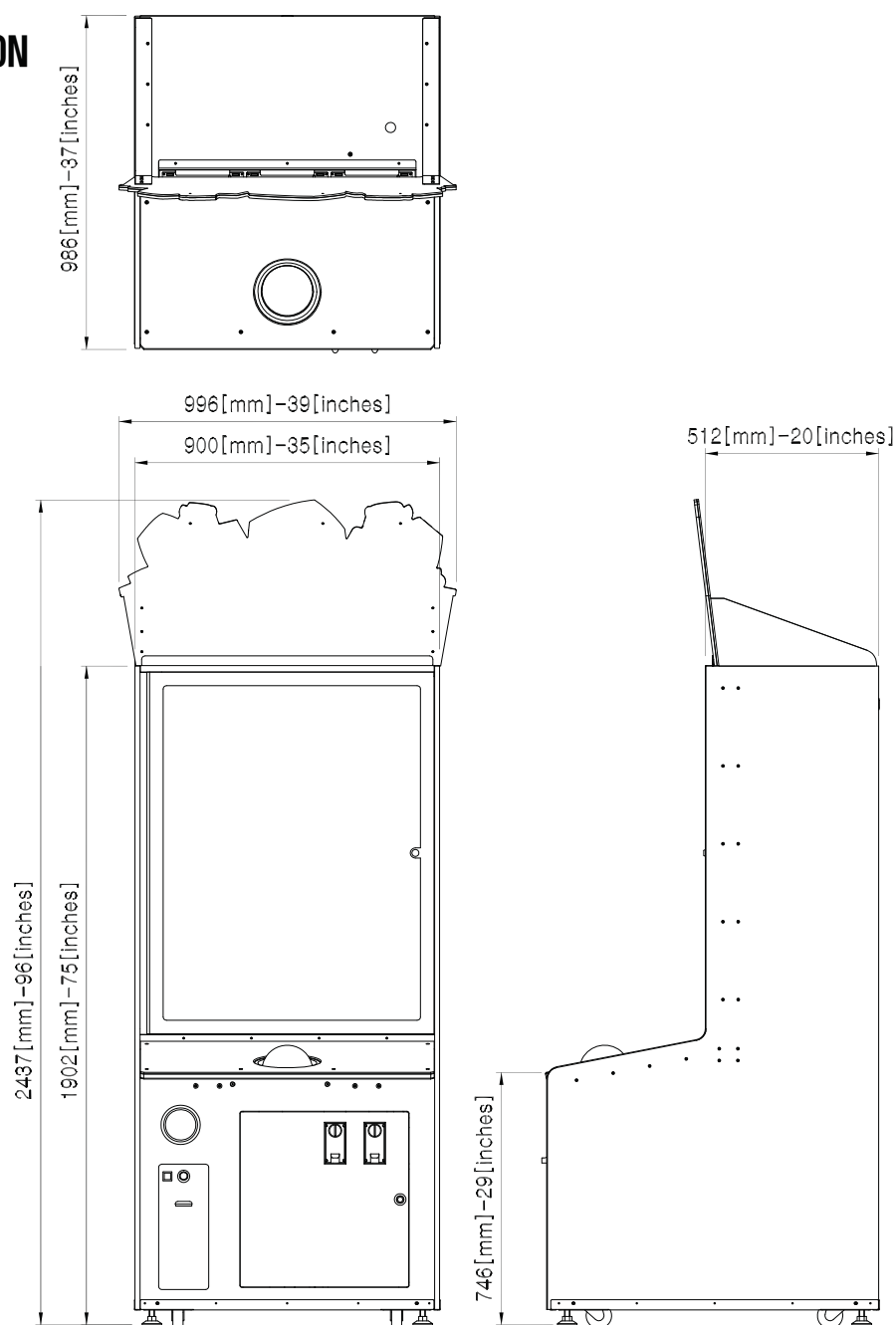
CONTENTS

1. SPECIFICATION AND DIMENSION	P02	7. TROUBLESHOOTING	P23
1-1. DIMENSION	P02	7-1. IN CASE OF POWER FAILURE	P23
1-2. SPECIFICATION	P02	7-2. MOTOR ERROR	P23
1-3. NAME OF PARTS	P03	7-3. MICRO SWITCH ERROR	P24
1-4. STICKER LOCATION	P04	7-4. COIN SELECTOR ERROR	P25
[COMPONENTS]	P04	7-5. SOUND ERROR	P26
2. INSTALLATION	P05	7-6. BUTTON & COUNTER ERROR	P27
2-1. INSTALLATION	P05	7-7. SETUP LCD PCB ERROR	P28
2-2. HOW TO INSTALL	P05	7-8. DOOR LED PCB, BILLBOARD LED PCB, COLOR BLOCK PCB & JACKPOT FND, CREDIT FND ERROR	P29
3. HOW TO PLAY	P06	7-9. SOLENOID ERROR	P30
4. DIP SETTING	P07	8. PART LIST	P31
5. SETUP SETTINGS	P08	8-1. EXPLODED VIEW	P28
5-1. MACHINE SETUP	P08	8-2. LIST	P33
5-2. SETUP MENU	P09	8-3. PICTURE	P35
5-3. TEST MODE	P12	9. WIRING DIAGRAM	P36
5-4. ERROR	P13		
5-5. PAYOUT TABLE	P14		
No #1 (USA, INT)			
- PAYOUT TABLE	P17		
No #2 (EU)			
6. HOW TO REPLACE MAJOR COMPONENTS	P20		
6-1. REPLACING MAIN PCB	P20		
6-2. REPLACING COIN SELECTOR	P20		
6-3. REPLACING HOLE CHECK R,T, LED-X2 PCB & MOTOR	P21		
6-4. REPLACING SOLENOID	P21		
6-5. REPLACING PCB	P22		

1. SPECIFICATION AND DIMENSION



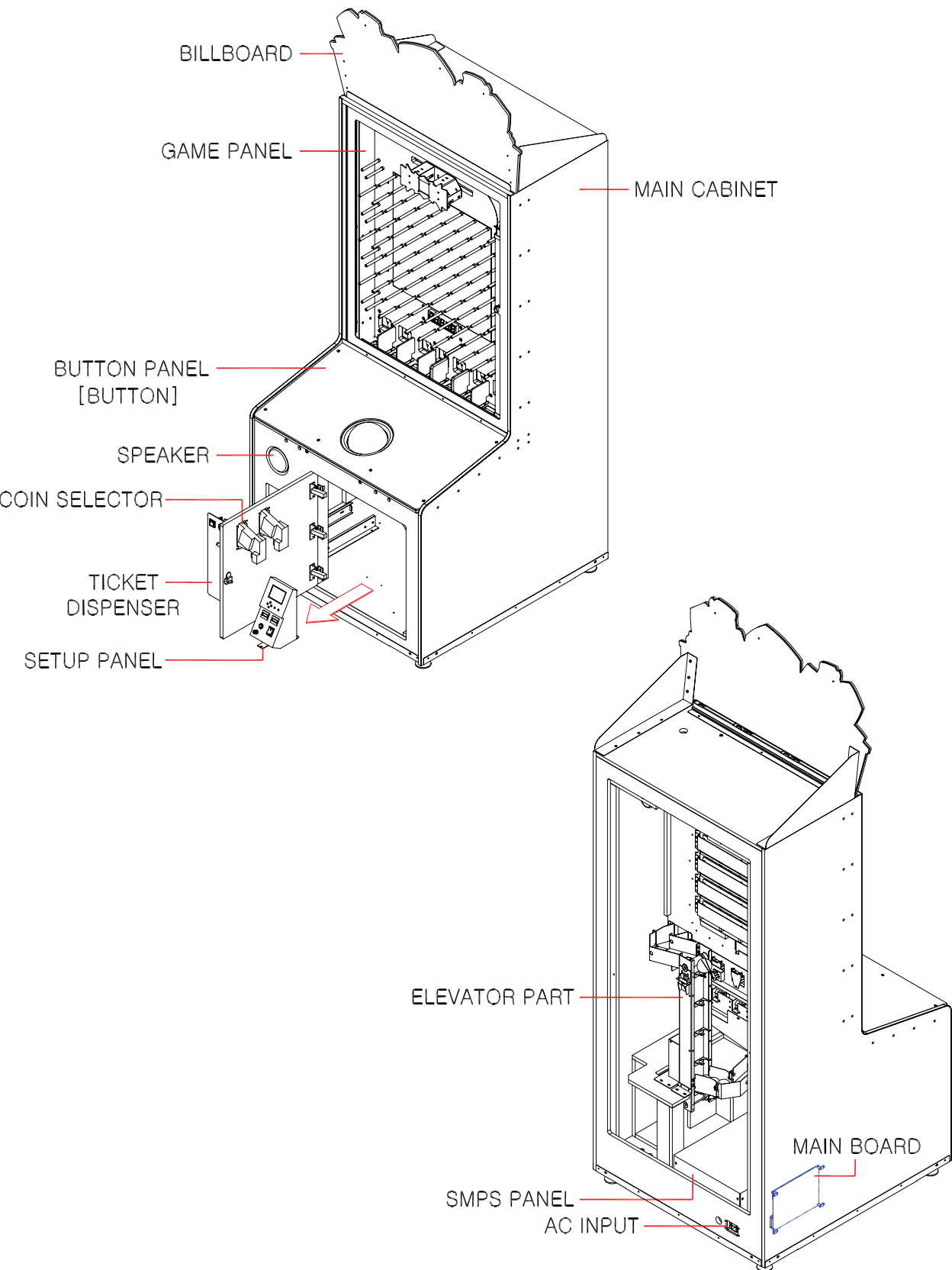
1-1. DIMENSION



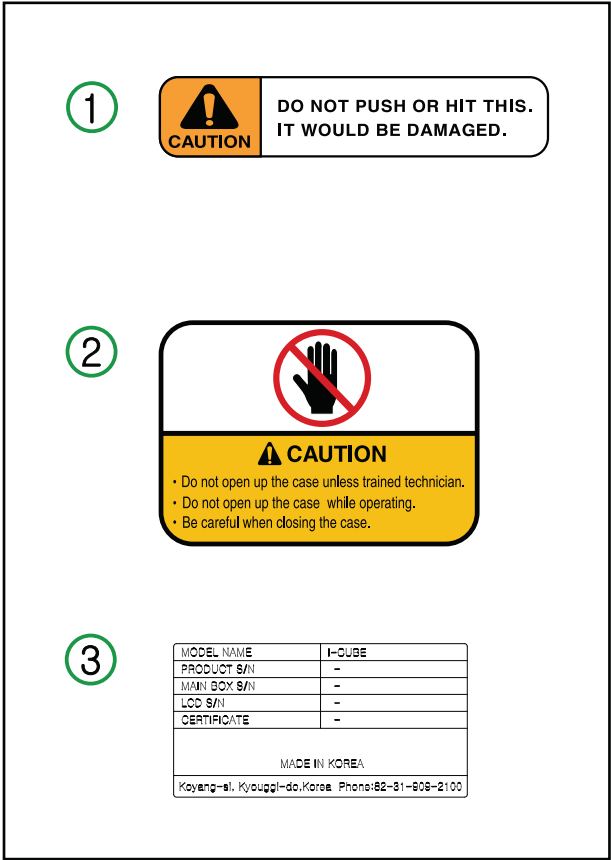
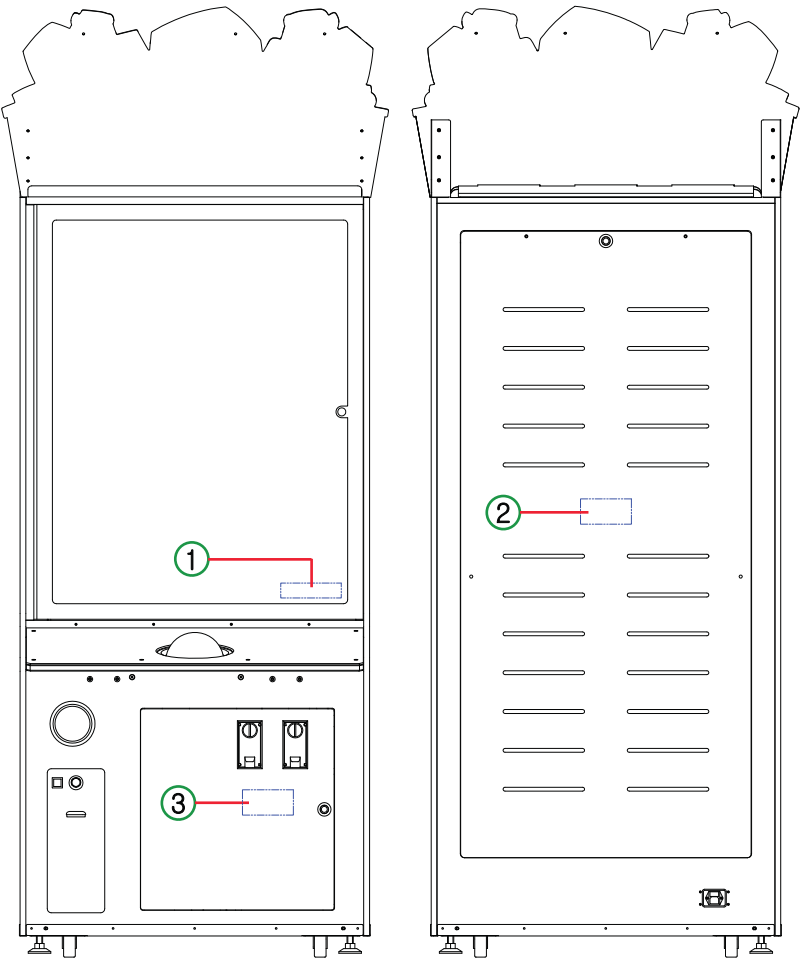
1-2. SPECIFICATION

DIMENSION (W x D x H)	996 x 986 x 2437 (mm)	
PACKING DIMENSION (W x D x H)	1150 x 1000 x 2190 (mm)	
WEIGHT (kg)	180kg [WEIGHT INCLUDING PACKAGING : 205kg]	
VOLTAGE	AC 110V	AC 220V
FREQUENCY RANGE	60Hz	60Hz
CONSUMPTION	155W	
CERTIFICATION	-	

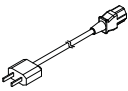




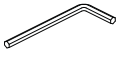

1-3. NAME OF PARTS



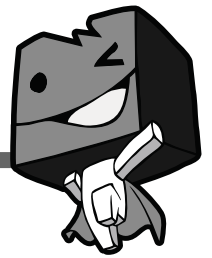
1-4. STICKER LOCATION



COMPONENTS

NO.	PART NAME	SPEC.	QTY
1	AC POWER CORD	110V or 220V 	1
2	BALL	- 	10EA
3	KEY	6001 	2
4	KEY	7001 	2
5	BOLT	M4x20L, M6x20L 	Each 8EA
6	WRENCH	3mm, 4mm 	1
7	MANUAL	- 	1

2. INSTALLATION

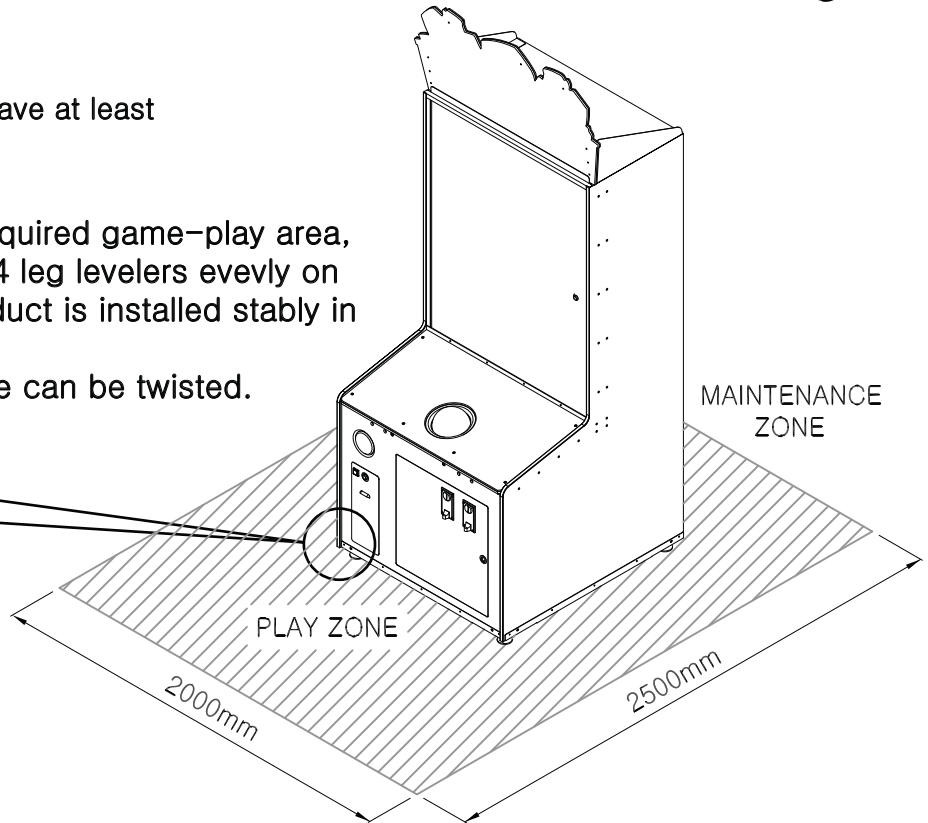
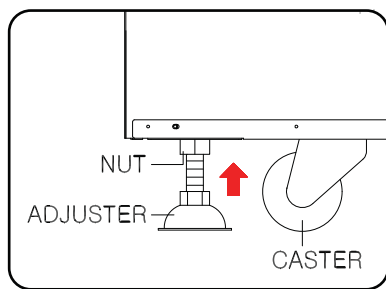


2-1. INSTALLATION

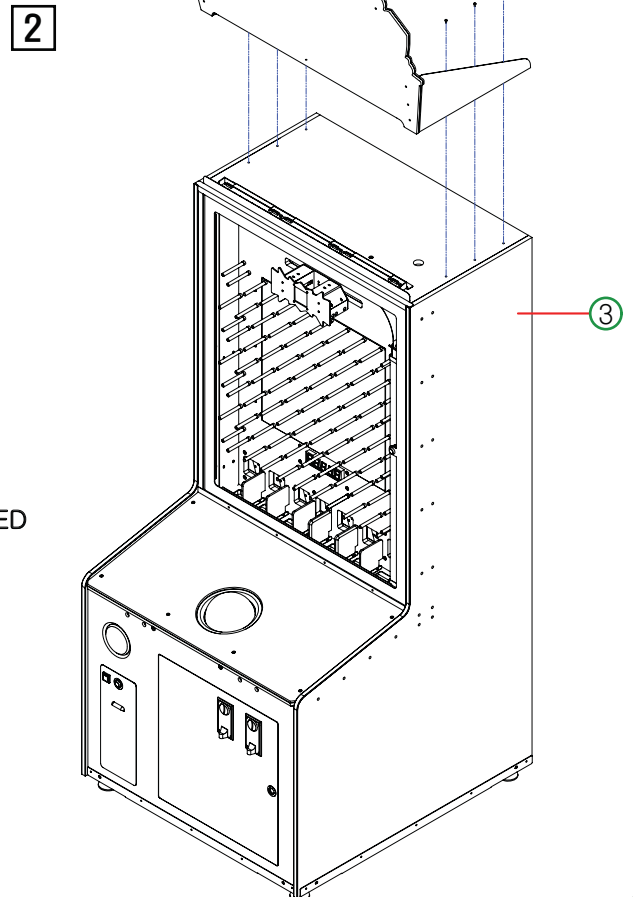
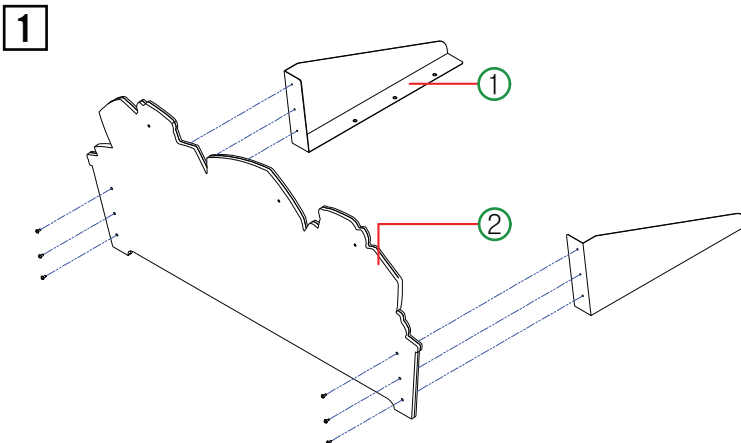
- Need to have installation place.
Maintenance Zone & Play zone should have at least 2000mm x 2500mm each.

IMPORTANT

- Once you set up the machine with required game-play area, when installing this product, set the 4 leg levelers evenly on the floor and make sure that the product is installed stably in a horizontal position. Otherwise the set winning percentage can be twisted.

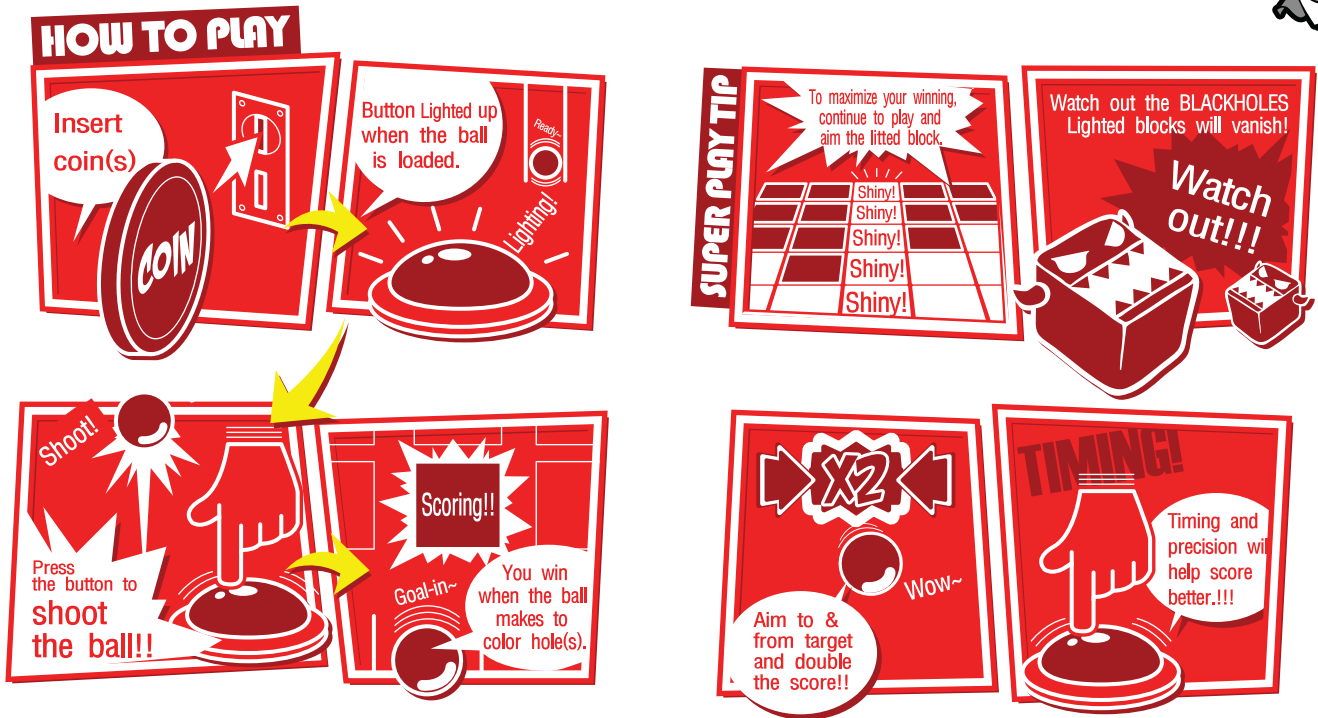
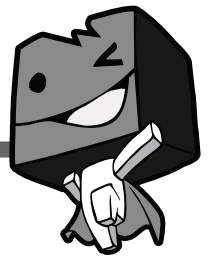


2-2. HOW TO INSTALL [BILLBAOED]



- 1) Assemble ② POP FORMAX+ACRYL ASSEMBLE on the ① POP FIXED BKT. [M4 bolt, 6ea]
- 2) FIX POP ASS'Y on the ③ Main cabinet. [M6 bolt, 6ea]

3. HOW TO PLAY

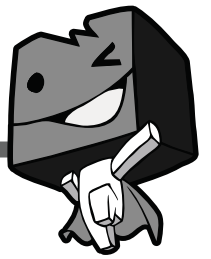


- 3-1.** Insert coin(s) and press the button to launch ball.
- 3-2.** Ball drops through pin matrix to a color hole, lighting up the lamp with a number.
Win tickets stated on the lamp.
- 3-3.** Win DOUBLE when ball passes through “X2” Hole.
- 3-4.** No tickets paid when ball drops to a monster hole, and turn off the lamps randomly.
- 3-5.** You may get bingo bonus when color lamps reach to the top.
(Win JACKPOT when red lamps reach the top.)

* NOTE [Retry]

- In case ball turn back to the original position, please press button to shoot the ball again.


4. DIP SETTING



DIP SETTING

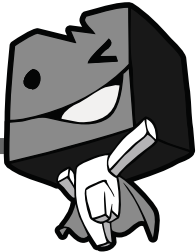
!WARNING -

It will change payout table and factory setting according to the DIP S/W on main board.

Status for DIP 1	Status for DIP 2	Picture for Dip S/W	Dip S/W setup type	Ref. Payout table
OFF	OFF		USA	Payout table No#1
ON	OFF		INT	Payout table No#1
OFF	ON		EU	Payout table No#2

(Payout table (DIP8 : Fixed))

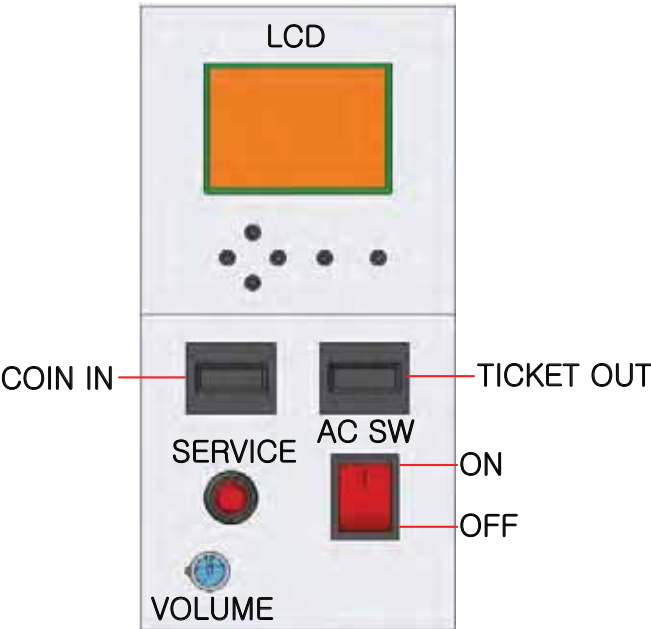
5. SETUP SETTINGS



5-1. MACHINE SETUP

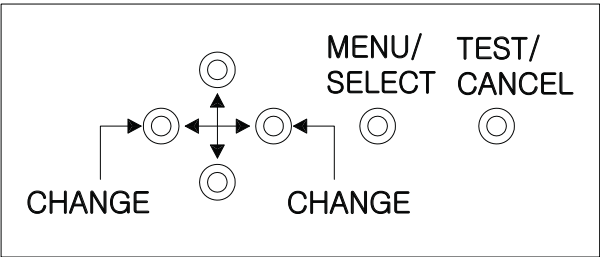
1. HOW TO ENTER SETUP MENU

- 1 There is “Control panel” inside cabinet. User may set any setting using following.



[CONTROL PANEL]

2. SETUP BUTTON LAYOUT



- 1) [↑ ↓] UP/DOWN : Move up, down
- 2) [← →] LEFT/RIGHT : Change setting
- 3) MENU/SELECT : Setup menu mode / Select mode
- 4) TEST/CANCEL : Exit / Cancel

[OPERATION MENU]

Press MENU Button. [SELECT button: Enter]	
## OPERATION MENU ##	
SETUP MODE	Setup mode
CLEAR MODE	Clear mode
VIEW INT-DATA	Check internal data
FACTORY-SETTING	Back to factory setting
GAME MODE	Return to game mode
TEST MODE	Test mode

5-2. SETUP MODE

SETUP MODE					
LCD Display	Description	Range	Default		
			USA	INT	EU
Credit/Coin	Credit per coin	Free, 1/1, 1/2, 1/3, 1/4, 1/5	1/2	1/1	1/1
Ball Count	The number of ball per game	1, 2, 3, 4, 5	1	1	1
Score Type	Score type (Credit - the number of BALL) Ratio table of credit per ball [Refer to Payout table No#1] Note: IF you change this value, the number of ticket on playing field need to be changed	User, 1-1, 1-2, 1-3, 1-4, 1-5, 2-1, 2-2, 2-3, 2-4, 2-5, 3-1, 3-2, 3-3, 3-4, 3-5, 4-1, 4-2, 4-3, 4-4, 4-5 5-1, 5-2, 5-3, 5-4, 5-5	2-1	1-1	1-1
ScoreDetail	Set the number of ticket for each section by operator	Enter sub-menu			
MercyTicket	The number of mercy ticket	0 ~ 10	0	0	0
HalfPayout	Dispense 1ticket/2points	OFF, ON	OFF	OFF	OFF
No-Ticket	No ticket payout	OFF, ON	OFF	OFF	OFF
Difficulty	Difficulty Levels	1-EZ, 2-NM, 3-HA	2-NM	2-NM	2-NM
DemoVolume	Control demo sound volume	OFF, 10 ~ 100	100	100	100
SOL-Power	Adjust solenoid power Refer to [Warning - 1]	100 ~ 600	200		
SAVE AND EXIT	Save and Exit	SELECT button to enter			
CANCEL AND EXIT	Cancel and Exit				

[Warning-1]

- SOL-power setting is not changed even Factory set is performed.
- This setting is saved only you exit with "SAVE AND EXIT" from Setup mode.
- Note: Score type will be changed to [User]

* Once “Score detail” in setup mode is selected, the below items will be shown.

SETUP MODE -> SCORE DETAIL

[Warning-2] Payout will be changed if Score detail is used.

– Score type will be changed to [User]

LCD display	Description	Range	Default	
			USA & INT	EU
Green Lv1	Score : Green 1 stage	1 ~ 200	6	2
Green Lv2	Score : Green 2 stage	1 ~ 400	8	3
Green Lv3	Score : Green 3 stage	1 ~ 600	12	4
Green Lv4	Score : Green 4 stage	1 ~ 800	25	6
Green Lv5	Score : Green 5 stage	1 ~ 1000	100	30
Yellow Lv1	Score : Yellow 1 stage	1 ~ 200	4	1
Yellow Lv2	Score : Yellow 2 stage	1 ~ 400	6	2
Yellow Lv3	Score : Yellow 3 stage	1 ~ 600	8	3
Yellow Lv4	Score : Yellow 4 stage	1 ~ 800	20	5
Yellow Lv5	Score : Yellow 5 stage	1 ~ 1000	50	20
Red Lv1	Score : Red 1 stage	1 ~ 200	20	5
Red Lv2	Score : Red 2 stage	1 ~ 400	40	10
Red Lv3	Score : Red 3 stage	1 ~ 600	60	20
Red Lv4	Score : Red 4 stage	1 ~ 800	150	40
Red Lv5	Score : Red 5 stage	1 ~ 2000	1000	250
Blue Lv1	Score : Blue 1 stage	1 ~ 200	4	1
Blue Lv2	Score : Blue 2 stage	1 ~ 400	6	2
Blue Lv3	Score : Blue 3 stage	1 ~ 600	8	3
Blue Lv4	Score : Blue 4 stage	1 ~ 800	15	4
Blue Lv5	Score : Blue 5 stage	1 ~ 1000	40	15
Pink Lv1	Score : Pink 1 stage	1 ~ 200	6	2
Pink Lv2	Score : Pink 2 stage	1 ~ 400	8	3
Pink Lv3	Score : Pink 3 stage	1 ~ 600	15	4
Pink Lv4	Score : Pink 4 stage	1 ~ 800	30	8
Pink Lv5	Score : Pink 5 stage	1 ~ 1000	150	40
SAVE AND EXIT	Save & Exit	SELECT button to enter		
CANCEL AND EXIT	Cancel & Exit			

CLEAR MODE

LCD Display	Description	
CLEAR TICKETS	Clear ticket	SELECT button to enter
CLEAR CREDITS	Clear credit & remained ball	
CLEAR GAME-DATA	Clear game data	
EXIT	Exit	

VIEW INT-DATA	
LCD Display	Description
GAMES	The number of total play
PAYOUT	The number of total payout ticket
AVG TOTAL	The number of average payout ticket per game
CREDIT	Total number of credit
SERVICE	The total number of credits using service button.
X2	The number of ball pass through "X2" gate
X2SCR	The number of ticket payout in case of passing "X2" gate
GOALIN PERCENT	The number of ball entered per each color
*** GOALIN SCORE ***	The number of ticket payout per each color
***** VER INFO *****	Version information and time information for play
CANCEL Button : Exit	

FACTORY-SETTING
Back to factory setting (It will clear whole data and game setup will be back to default)
Note : It does not change setting of "SOL-Power"
SELECT Button : Factory setting after re-confirmation

GAME MODE
Back to game mode (Exit menu) SELECT Button to Enter











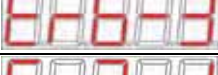










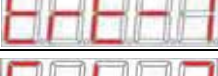


5-3. TEST MODE

TEST MODE		
LCD Display	value	Description
INPUT TEST	[->]	Check input status and enter into check mode
LAMP	Off, On	Lamp Off, On (Ticket lamp)
FND & LED	0 ~ 4	Performance test for FND & LED
X2 BLOCK	Off, On	Check "X2 Block"
ELEVATOR	Off, On	Check ball elevator
SOLENOID	Off, On	Solenoid (shooting device) check (Automatically On, Off)
COIN	Off, On	Check coin-mech
TICKET	Off, On	Check ticket dispenser (5ticket per testing)
SOUND TEST	[->]	Enter Sound test
GAME MODE	Back to game mode	

TEST MODE -> INPUT TEST	
LCD Display	Description
0:0000,1:0000,7:0000 shb, sts, elt, elb, mbs X2-, co-,tkb, tks, svb n g y r b p n	Display input signal Shooting button, Ball mounting sensor,, Elevator upper S/W, Elevator lower S/W,, " X2 Block sensor. X2 Sensor, Coin-mech, Ticket button, Ticket sensor, Service button. hole : Status of Blackhole(L), Green, Yellow, Red, Blue, Pink, Blackhole(R)

TEST MODE -> SOUND TEST		
LCD Display	Value	Description
SOUND Stop/Play	0 ~ 15	Test playing sound (On, Off)
-EXIT-	Exit test mode	

5-4. ERROR CODE

Error Code	Fnd Display	Error type	Content	Check point
Er0-1		SETUP LCD	NO response from SET UP LCD	Check LCD (No problem with playing game)
Er0-2		System	Failure of setup memory reading & writing	Replace main board if it has still problem after turn off and on machine.
Er0-3			Failure of setup save data	Check setup setting and save in setup mode (If the problem still happen, we recommend to change "Main board")
Er0-5			Failure of game data memory reading & writing	Replace main board if it has still problem after turn off and on machine.
Er1-1		Coin-mech	Coin mech #1 Error	Check coin-mech #1 (Check NC, NO S/W in coin-mech)
Er1-2			Coin mech #2 Error	Check coin-mech #2 (Check NC, NO S/W in coin-mech)
Er5-1		X2 block	X2 block sensor Error	Check motor sensor and signal
Er5-2			X2 Sensor signal error	Check X2 sensor
Er6-1		Elevator	Elevator error. (Lower movement check S/W)	Check for any ball an Elevator or Lower movement check S/W
Er6-2			Elevator upper sensor error	Check if ball is empty or upper sensor
Er6-3			Elevator upper S/W error	Elevator upper S/W check
Er7-1		Shooting device	Ball mount sensor error	Check jammed ball or ball mount sensor
Er7-2			Solenoid problem	Check solenoid
Er7-3			Failure of shooting ball	Check condition of shooting device (shooting power)
Er8-1		Color hole sensor	Black hole (left) sensor error	Check black hole(left) sensor
Er8-2			Green hole sensor error	Check Green hole sensor
Er8-3			Yellow hole sensor error	Check Yellow hole sensor
Er8-4			Red hole sensor error	Check Red hole sensor
Er8-5			Blue hole sensor error	Check Blue hole sensor
Er8-6			Pink hole sensor error	Check Pink hole sensor
Er8-7			Black hole(right) sensor error	Check black hole(right) sensor error
Er8-8			Hole sensor signal error	Check jammed ball or hole sensor
Ert-1		Ticket error	Ticket empty	Check ticket or function
Ert-2			Jammed ticket	Check jammed ticket and NC, NO S/W in ticket dispenser

5-5. PAYOUT TABLE No #1 (USA, INT)

1 COIN PAYOUT TABLE											
Score Type 1-1, (1Coin - 1Ball)						Score Type 1-2, (1Coin - 2Ball)					
	Green	Yellow	Red	Blue	Pink		Green	Yellow	Red	Blue	Pink
5	50	30	500	20	70	5	25	15	250	10	35
4	12	10	70	7	15	4	6	5	35	3	7
3	6	5	30	4	7	3	3	2	15	2	4
2	4	3	20	3	4	2	2	1	10	1	3
1	3	2	10	2	3	1	2	1	5	1	2

Score Type 1-3, (1Coin - 3Ball)					
	Green	Yellow	Red	Blue	Pink
5	15	10	150	7	20
4	4	3	20	3	5
3	3	2	10	1	3
2	2	1	6	1	2
1	1	1	3	1	1

Score Type 1-4, (1Coin - 4Ball)					
	Green	Yellow	Red	Blue	Pink
5	12	7	125	5	15
4	3	2	15	2	3
3	2	1	7	1	2
2	1	1	5	1	1
1	1	1	2	1	1

Score Type 1-5, (1Coin - 5Ball)					
	Green	Yellow	Red	Blue	Pink
5	10	6	100	4	15
4	2	1	14	1	3
3	1	1	6	1	1
2	1	1	4	1	1
1	1	1	2	1	1

2 COIN PAYOUT TABLE											
Score Type 2-1, (2Coin - 1Ball)						Score Type 2-2, (2Coin - 2Ball)					
	Green	Yellow	Red	Blue	Pink		Green	Yellow	Red	Blue	Pink
5	100	50	1000	40	150	5	50	30	500	20	70
4	25	20	150	15	30	4	12	10	70	7	15
3	12	8	60	8	15	3	6	5	30	4	7
2	8	6	40	6	8	2	4	3	20	3	4
1	6	4	20	4	6	1	3	2	10	2	3

Score Type 2-3, (2Coin - 3Ball)					
	Green	Yellow	Red	Blue	Pink
5	30	20	300	15	50
4	8	6	50	5	10
3	4	3	20	3	5
2	3	2	15	2	3
1	2	1	10	1	2

Score Type 2-4, (2Coin - 4Ball)					
	Green	Yellow	Red	Blue	Pink
5	25	15	250	10	35
4	6	5	35	3	7
3	3	2	15	2	4
2	2	1	10	1	3
1	2	1	5	1	2

Score Type 2-5, (2Coin - 5Ball)					
	Green	Yellow	Red	Blue	Pink
5	20	10	200	8	30
4	5	4	25	3	6
3	3	2	10	2	3
2	2	1	8	1	2
1	1	1	4	1	1

3 COIN PAYOUT TABLE

Score Type 3-1, (3Coin - 1Ball)						Score Type 3-2, (3Coin - 2Ball)					
	Green	Yellow	Red	Blue	Pink		Green	Yellow	Red	Blue	Pink
5	150	100	1000	70	200	5	70	50	500	30	150
4	35	30	250	20	45	4	20	15	100	10	30
3	20	15	100	15	20	3	10	7	50	6	10
2	15	10	50	10	12	2	6	4	30	4	5
1	10	6	30	6	10	1	4	3	15	3	4

Score Type 3-3, (3Coin - 3Ball)						Score Type 3-4, (3Coin - 4Ball)					
	Green	Yellow	Red	Blue	Pink		Green	Yellow	Red	Blue	Pink
5	50	30	500	20	70	5	35	25	250	15	50
4	12	10	70	7	15	4	10	7	70	5	10
3	6	5	30	4	7	3	5	3	30	3	7
2	4	3	20	3	4	2	4	2	15	2	3
1	3	2	10	2	3	1	2	1	10	1	2

Score Type 3-5, (3Coin - 5Ball)					
	Green	Yellow	Red	Blue	Pink
5	30	20	200	15	40
4	7	6	50	4	8
3	4	3	20	3	4
2	3	2	10	2	3
1	2	1	7	1	2

4 COIN PAYOUT TABLE

Score Type 4-1, (4Coin - 1Ball)						Score Type 4-2, (4Coin - 2Ball)					
	Green	Yellow	Red	Blue	Pink		Green	Yellow	Red	Blue	Pink
5	200	150	1000	100	300	5	100	50	1000	40	150
4	50	40	250	30	70	4	25	20	150	15	30
3	30	20	100	25	30	3	12	8	60	8	15
2	20	15	80	15	20	2	8	6	40	6	8
1	15	10	50	10	15	1	6	4	20	4	6

Score Type 4-3, (4Coin - 3Ball)						Score Type 4-4, (4Coin - 4Ball)					
	Green	Yellow	Red	Blue	Pink		Green	Yellow	Red	Blue	Pink
5	70	50	300	30	100	5	50	30	500	20	70
4	15	12	70	10	20	4	12	10	70	7	15
3	10	7	50	8	10	3	6	5	30	4	7
2	7	5	25	4	7	2	4	3	20	3	4
1	5	3	15	2	5	1	3	2	10	2	3

Score Type 4-5, (4Coin - 5Ball)					
	Green	Yellow	Red	Blue	Pink
5	30	20	500	15	50
4	10	7	50	5	12
3	5	4	20	4	7
2	4	3	15	3	4
1	3	2	10	2	3

5 COIN PAYOUT TABLE											
Score Type 5-1, (5Coin - 1Ball)						Score Type 5-2, (5Coin - 2Ball)					
	Green	Yellow	Red	Blue	Pink		Green	Yellow	Red	Blue	Pink
5	300	150	1000	100	400	5	150	75	750	50	200
4	60	50	500	35	75	4	35	30	200	25	40
3	30	25	200	20	35	3	15	10	70	10	15
2	20	15	100	15	20	2	10	7	50	7	10
1	15	10	50	10	15	1	7	5	25	5	7

Score Type 5-3, (5Coin - 3Ball)					
	Green	Yellow	Red	Blue	Pink
5	100	50	500	30	150
4	25	20	100	15	30
3	10	8	50	6	10
2	6	5	30	5	6
1	5	3	20	3	5

Score Type 5-4, (5Coin - 4Ball)					
	Green	Yellow	Red	Blue	Pink
5	75	35	500	25	100
4	15	10	100	8	20
3	7	6	50	5	8
2	5	3	25	3	5
1	3	2	10	2	3

Score Type 5-5, (5Coin - 5Ball)					
	Green	Yellow	Red	Blue	Pink
5	50	30	500	20	70
4	12	10	70	7	15
3	6	5	30	4	7
2	4	3	20	3	4
1	3	2	10	2	3

PAYOUT TABLE No #2 (EU)

1 COIN PAYOUT TABLE

Score Type 1-1, (1Coin - 1Ball)						Score Type 1-2, (1Coin - 2Ball)					
	Green	Yellow	Red	Blue	Pink		Green	Yellow	Red	Blue	Pink
5	50	20	250	15	40	5	15	10	150	7	20
4	6	5	40	4	8	4	3	2	20	2	4
3	4	3	20	3	4	3	2	1	10	1	2
2	3	2	10	2	3	2	1	1	6	1	1
1	2	1	5	1	2	1	1	1	3	1	1

Score Type 1-3, (1Coin - 3Ball)						Score Type 1-4, (1Coin - 4Ball)					
	Green	Yellow	Red	Blue	Pink		Green	Yellow	Red	Blue	Pink
5	10	7	80	5	15	5	7	5	50	3	10
4	2	1	15	1	2	4	1	1	10	1	1
3	1	1	6	1	1	3	1	1	5	1	1
2	1	1	4	1	1	2	1	1	2	1	1
1	1	1	2	1	1	1	1	1	1	1	1

Score Type 1-5, (1Coin - 5Ball)					
	Green	Yellow	Red	Blue	Pink
5	5	3	30	2	7
4	1	1	5	1	1
3	1	1	3	1	1
2	1	1	2	1	1
1	1	1	1	1	1

2 COIN PAYOUT TABLE

Score Type 2-1, (2Coin - 1Ball)						Score Type 2-2, (2Coin - 2Ball)					
	Green	Yellow	Red	Blue	Pink		Green	Yellow	Red	Blue	Pink
5	60	40	500	30	80	5	30	20	250	15	40
4	12	20	80	8	16	4	6	5	40	4	8
3	8	6	40	6	8	3	4	3	20	3	4
2	6	4	20	4	6	2	3	2	10	2	3
1	4	2	10	2	4	1	2	1	5	1	2

Score Type 2-3, (2Coin - 3Ball)						Score Type 2-4, (2Coin - 4Ball)					
	Green	Yellow	Red	Blue	Pink		Green	Yellow	Red	Blue	Pink
5	20	15	200	10	30	5	15	10	150	7	20
4	4	2	30	2	5	4	3	2	20	2	4
3	3	2	10	2	3	3	2	1	10	1	2
2	2	1	5	1	2	2	1	1	6	1	1
1	1	1	3	1	1	1	1	1	3	1	1

Score Type 2-5, (2Coin - 5Ball)					
	Green	Yellow	Red	Blue	Pink
5	10	7	100	5	15
4	3	2	15	2	3
3	2	1	8	1	2
2	1	1	5	1	1
1	1	1	2	1	1

3 COIN PAYOUT TABLE											
Score Type 3-1, (3Coin - 1Ball)						Score Type 3-2, (3Coin - 2Ball)					
	Green	Yellow	Red	Blue	Pink		Green	Yellow	Red	Blue	Pink
5	80	70	750	60	100	5	40	35	350	30	50
4	20	15	100	10	25	4	10	7	50	5	12
3	15	8	50	8	10	3	7	4	30	4	7
2	10	6	30	6	10	2	5	3	15	3	5
1	6	6	20	4	6	1	3	2	10	2	3

Score Type 3-3, (3Coin - 3Ball)						Score Type 3-4, (3Coin - 4Ball)					
	Green	Yellow	Red	Blue	Pink		Green	Yellow	Red	Blue	Pink
5	30	20	250	15	40	5	20	15	200	10	30
4	6	5	40	4	8	4	5	3	30	3	6
3	4	3	20	3	4	3	3	2	15	2	3
2	3	2	10	2	3	2	2	2	10	2	2
1	2	1	5	1	2	1	1	1	5	1	1

Score Type 3-5, (3Coin - 5Ball)					
	Green	Yellow	Red	Blue	Pink
5	17	15	150	10	20
4	4	3	20	2	5
3	3	2	10	1	3
2	2	1	6	1	2
1	1	1	4	1	1

4 COIN PAYOUT TABLE											
Score Type 4-1, (4Coin - 1Ball)						Score Type 4-2, (4Coin - 2Ball)					
	Green	Yellow	Red	Blue	Pink		Green	Yellow	Red	Blue	Pink
5	150	70	1000	50	200	5	60	40	500	30	80
4	20	15	200	15	30	4	12	8	80	8	16
3	15	10	80	10	15	3	8	6	40	6	8
2	10	8	40	8	10	2	6	4	20	4	6
1	8	4	20	4	8	1	4	2	10	2	4

Score Type 4-3, (4Coin - 3Ball)						Score Type 4-4, (4Coin - 4Ball)					
	Green	Yellow	Red	Blue	Pink		Green	Yellow	Red	Blue	Pink
5	50	30	350	20	70	5	30	20	250	15	40
4	6	5	70	5	10	4	6	5	40	4	8
3	5	3	25	3	5	3	4	3	20	3	4
2	3	2	10	2	3	2	3	2	10	2	3
1	2	1	5	1	2	1	2	1	5	1	2

Score Type 4-5, (4Coin - 5Ball)					
	Green	Yellow	Red	Blue	Pink
5	30	20	200	10	40
4	4	3	40	3	6
3	3	2	15	2	3
2	2	1	8	1	2
1	1	1	4	1	1

5 COIN PAYOUT TABLE											
Score Type 5-1, (5Coin - 1Ball)						Score Type 5-2, (5Coin - 2Ball)					
	Green	Yellow	Red	Blue	Pink		Green	Yellow	Red	Blue	Pink
5	150	100	1000	70	250	5	80	60	500	40	100
4	30	25	250	20	40	4	15	12	100	10	20
3	20	15	100	15	20	3	10	7	50	7	10
2	15	10	50	10	15	2	7	5	30	5	7
1	10	5	30	5	10	1	5	2	15	2	5

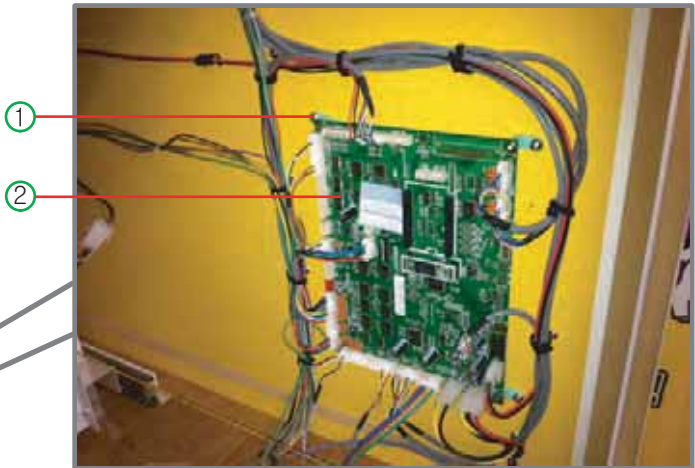
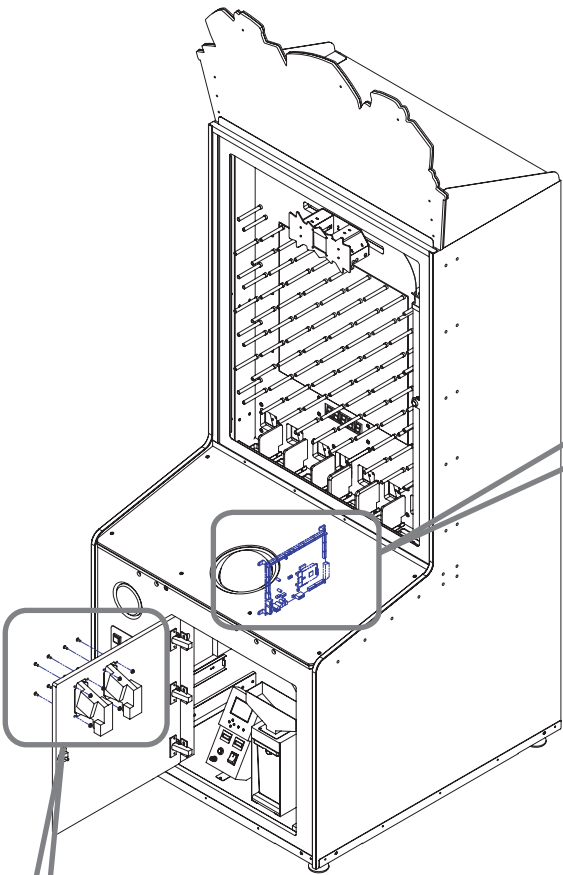
Score Type 5-3, (5Coin - 3Ball)					
	Green	Yellow	Red	Blue	Pink
5	50	30	500	20	70
4	10	6	70	6	15
3	8	5	30	5	7
2	4	3	15	3	5
1	3	2	10	2	3

Score Type 5-4, (5Coin - 4Ball)					
	Green	Yellow	Red	Blue	Pink
5	40	30	250	20	50
4	7	6	50	5	10
3	5	3	30	3	5
2	3	2	20	2	3
1	2	1	10	1	2

Score Type 5-5, (5Coin - 5Ball)					
	Green	Yellow	Red	Blue	Pink
5	30	20	250	15	40
4	6	5	40	4	8
3	4	3	20	3	4
2	3	2	10	2	3
1	2	1	5	1	2

6. HOW TO REPLACE MAJOR COMPONENTS

6-1) Replacing MAIN PCB



- (1) Open the REAR DOOR.
- (2) ① Unscrew two hand bolts (size M4).
- (3) Disconnect all cables and remove four hand bolts (size M3) to replace ② Main PCB.
- (4) Reassemble them in reverse order.

NO.	PART NAME	SPEC.	CODE NO.
②	MAIN PCB ASS'Y	-	-

6-2) Replacing COIN SELECTOR

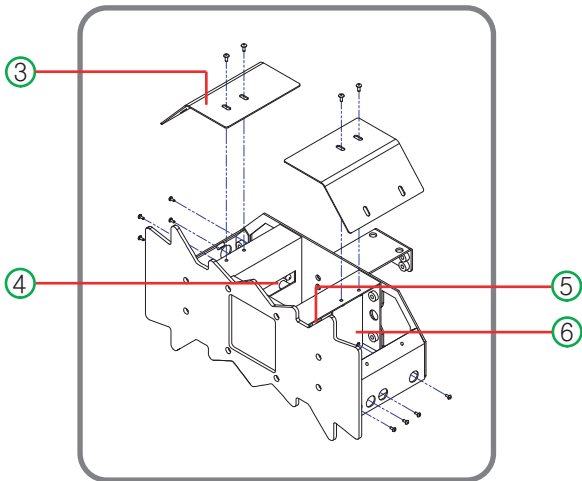


- (1) Open the FRONT DOOR.
- (2) Disconnect all ② connectors from coin selector.
- (3) Unscrew eight bolts [size M4] & nuts to replace the Coin Selector.
- (4) Reassemble them in reverse order after replacement.

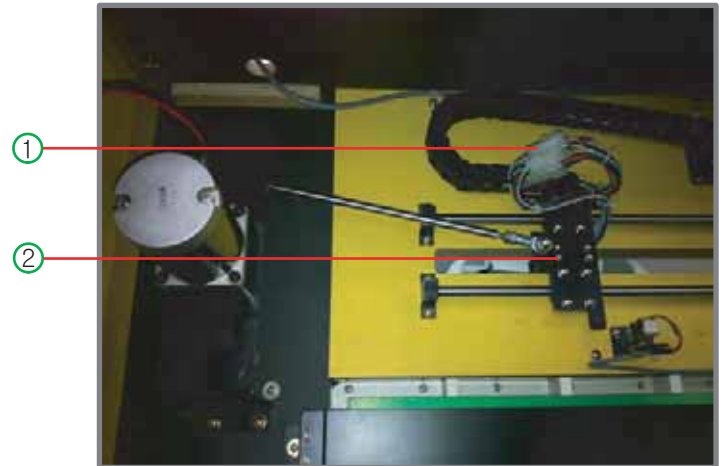
NO.	PART NAME	SPEC.	CODE NO.
②	COIN SELECTOR	TW-130B	MZZZ0SPE021

* Reassemble them in reverse order and check performance of the game.

6-3) Replacing HOLE CHECK R,T, LED-X2 PCB & MOTOR

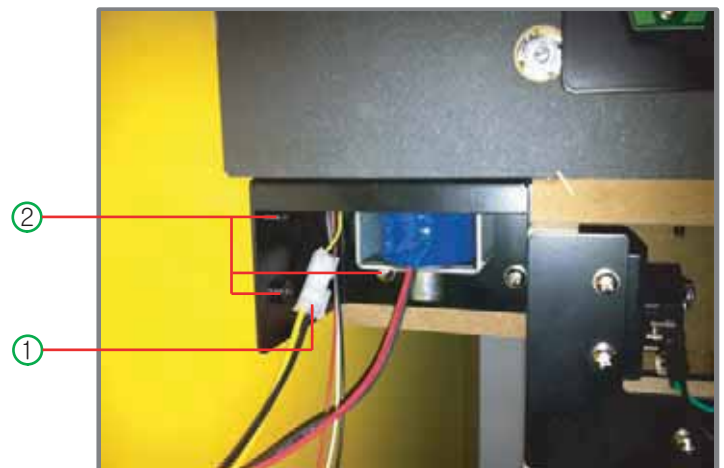
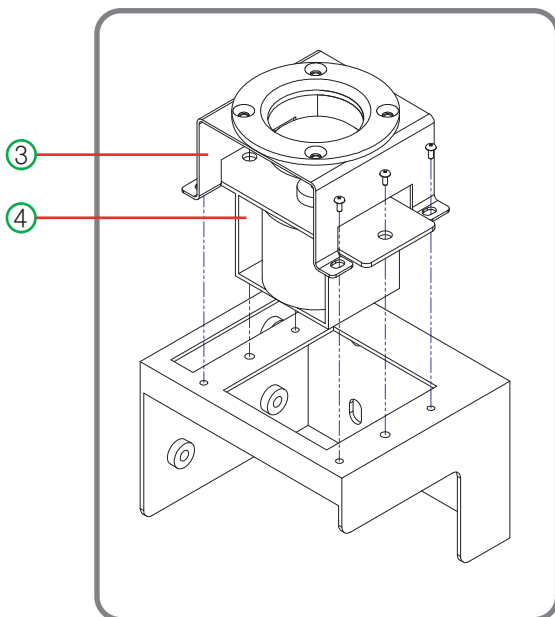


- (1) Open the REAR DOOR. .
- (2) Unscrew four bolts (size M4) from RODB LMBKT.
- (3) Unscrew eight bolts (size M4) to remove MOVING BLOCK COVER.
- (4) Disconnect all cables from Sensor PCB to replace
 ④HOLE CHECK-R, ⑤HOLECHECK-L, or ⑥LAMP LED.



NO.	PART NAME	SPEC.	CODE NO.
④	HOLECHECKR SENSOR	—	MCLB0ACR005
⑤	HOLECHECKT SENSOR	—	MCLB0PCB006
⑥	LAMP LED X2	—	MCLB0PCB007

6-4) Replacing SOLENOID



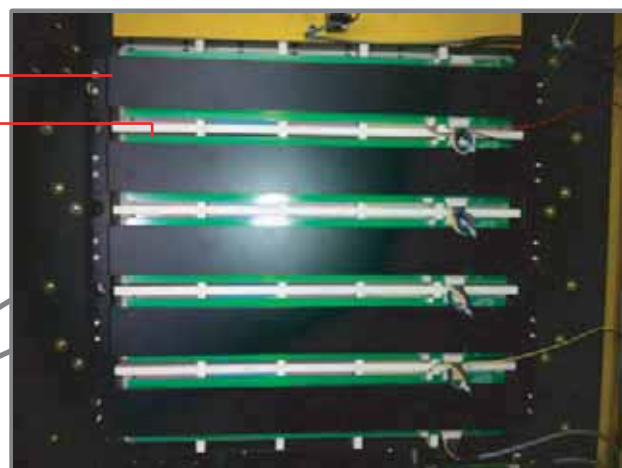
- (1) Disconnect all cables from SOLENOID Ass'y.
- (2) Unscrew six bolts (size M6) to remove
 ②Ball Shooting Ass'y.
- (3) Remove ③BALL SUPPORT BKT to replace ④SOLENOID.
- (4) Reassemble them in reverse order after replacement.

* Reassemble them in reverse order and check performance of the game.

NO.	PART NAME	SPEC.	CODE NO.
④	BALL SHOOTING SOL	MP-1640	MCLB0SOL001

6-5) Replacing PCB

(1) Replacing COLOR BLOCK PCB



- (1) Open the REAR DOOR.
- (2) Unscrew four bolts and disconnect all cables to remove ①LIGHT BLOCK BKT.
- (3) Unscrew six bolts (size M3) to disassemble ②COLOR BLOCK, and replace PCB.

NO.	PART NAME	SPEC.	CODE NO.
②	COLOR BLOCK	8X5	MCLB0PCB004

(2) Replacing JACKPOT FND, SHOW TIME LED PCB, MICRO SWITCH



JACKPOT FND

- (1) Disconnect all cables and unscrew four bolts (size M4) to remove ①JACKPOT FND BKT.
- (2) Replace JACKPOT FND PCB.

SHOW TIME LED PCB

- (1) Disconnect all connectors.
- (2) Unscrew three bolts (size M3) to replace ③SHOW TIME LED PCB.

MICRO SWITCH

- (1) Disconnect all connectors and unscrew two bolts to remove ④MICRO SWITCH.
- (2) Replace MICRO SWITCH from ⑤MICRO SWITCH ASS'Y.

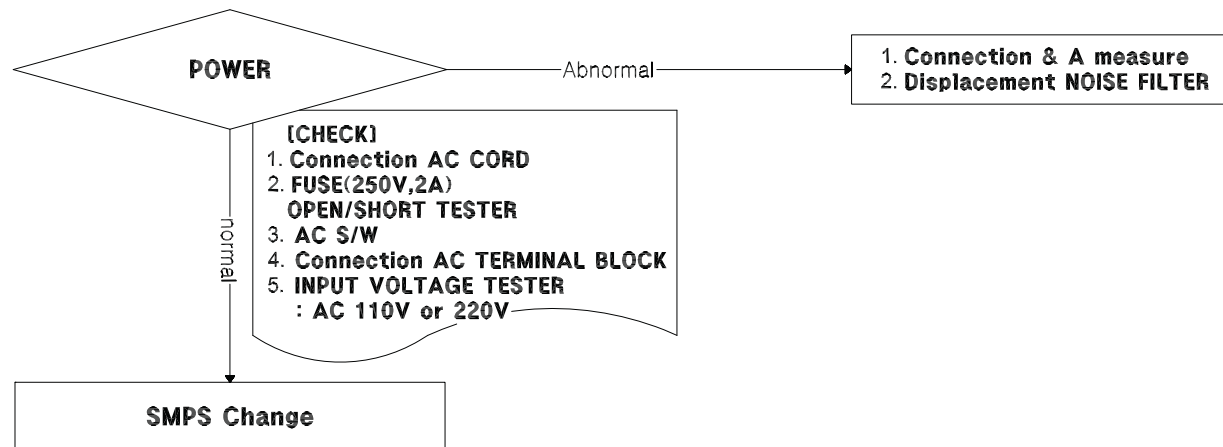
NO.	PART NAME	SPEC.	CODE NO.
②	JACKPOT FND PCB ASS'Y	-	ADOS0PCB005
③	JACKPOT FND PCB ASS'Y	-	ADOS0PCB008
⑤	MICRO SWITCH	CNP-05H-03	MELE0MIC002

* Reassemble them in reverse order and check performance of the game.

7. TROUBLESHOOTING

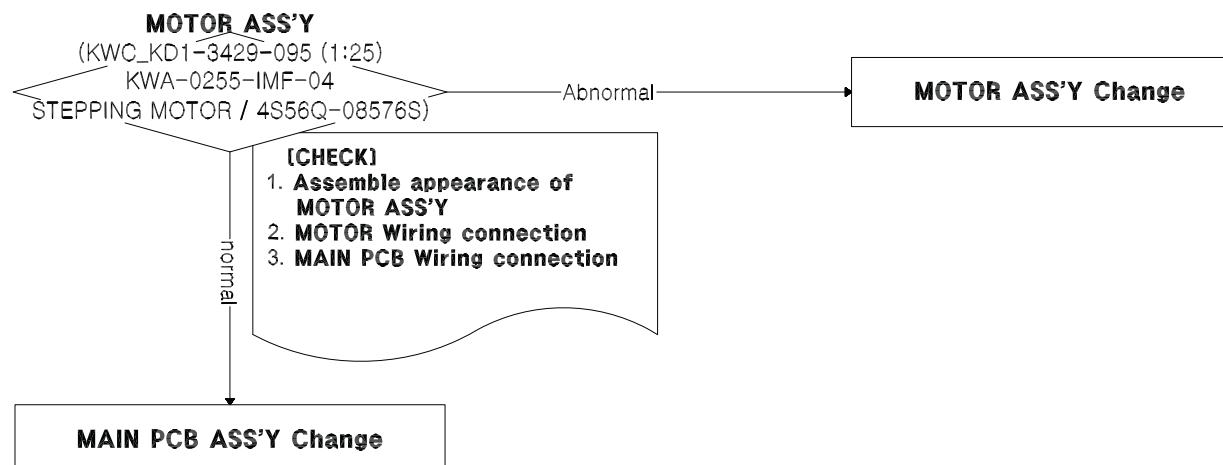
7-1. IN CASE OF POWER FAILURE

*Common: Check the input voltage, check wiring



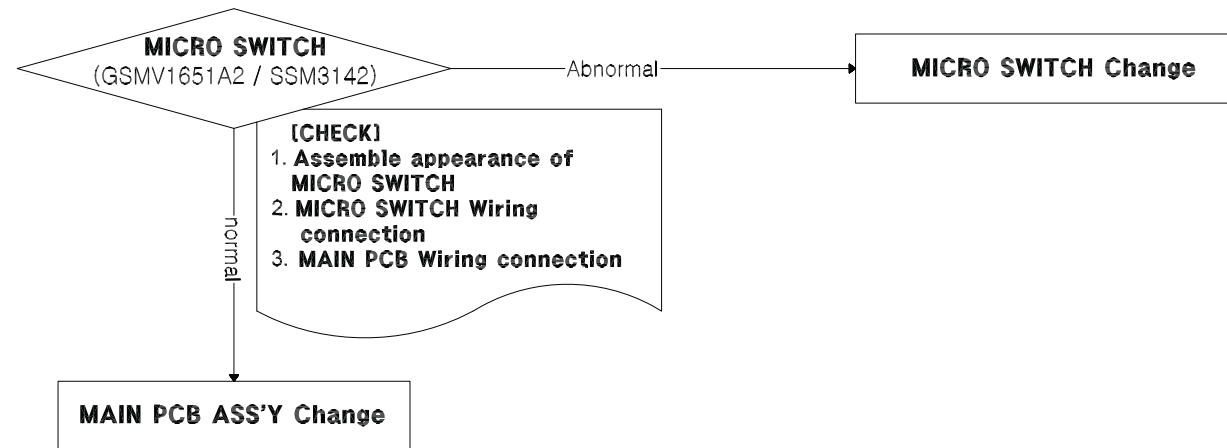
7-2. MOTOR ERROR

*Common: Check the input voltage, check wiring



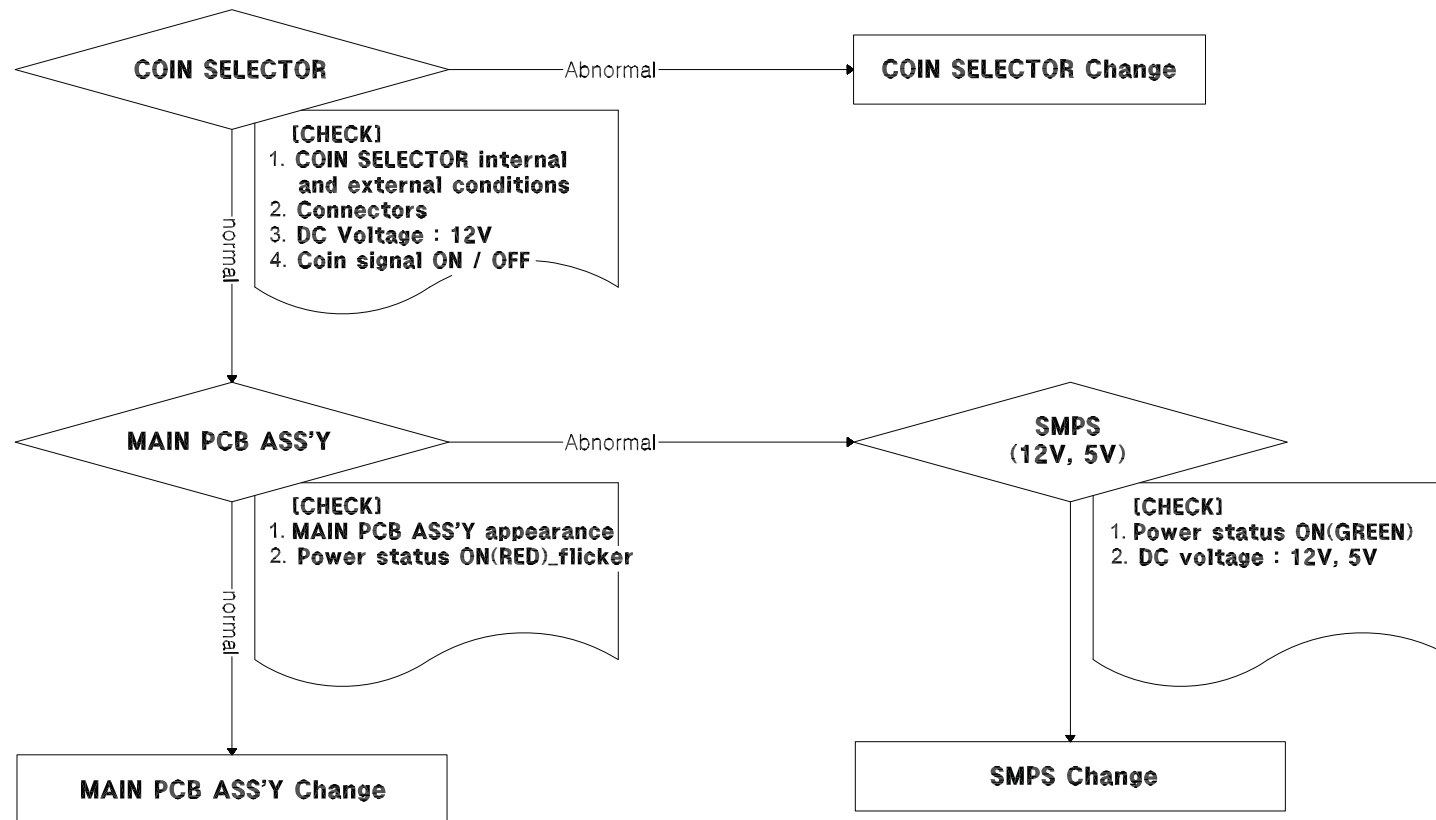
7-3. MICRO SWITCH ERROR

*Common: Check the input voltage, check wiring



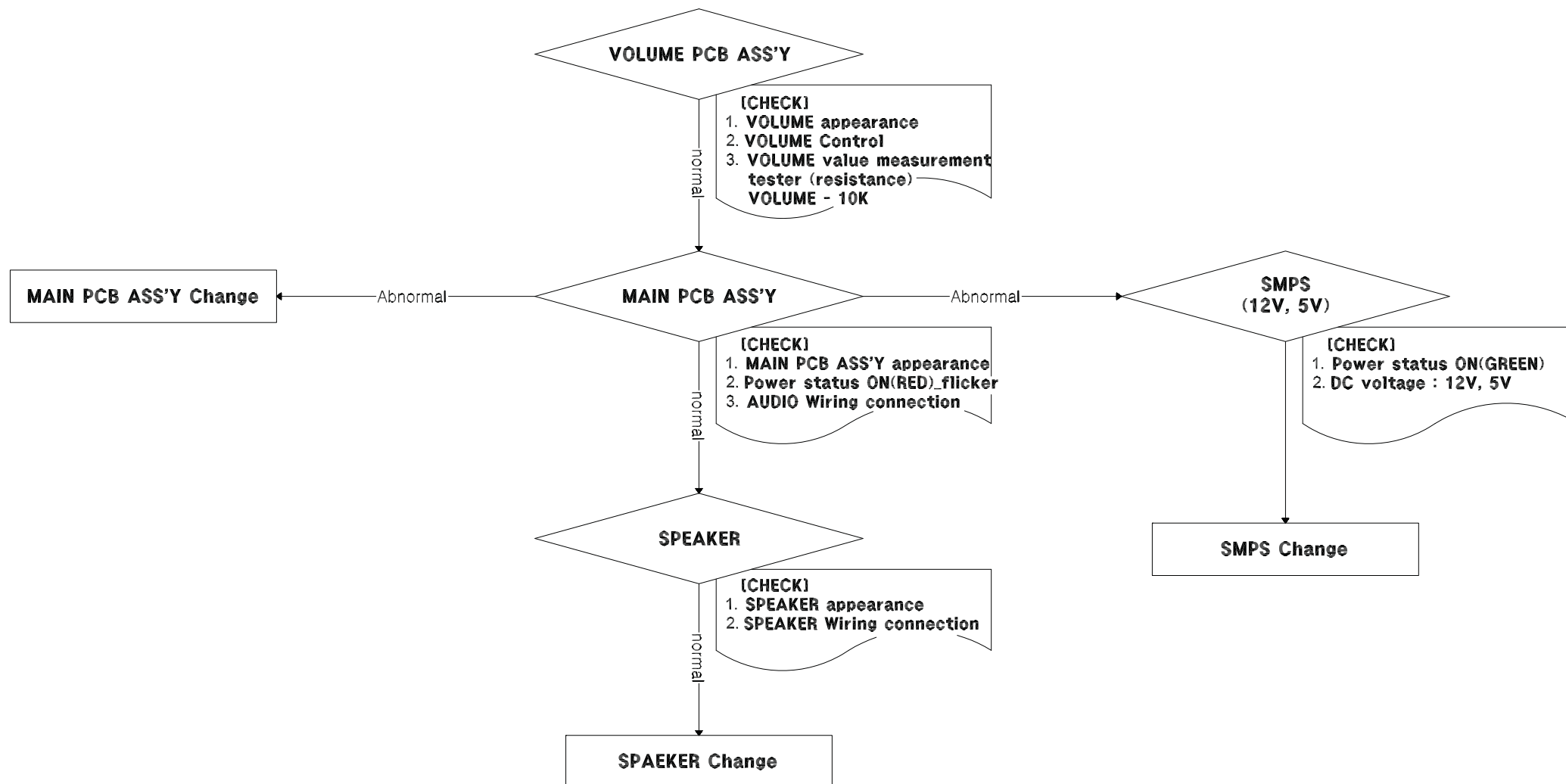
7-4. COIN SELECTOR ERROR

*Common: Check the input voltage, check wiring



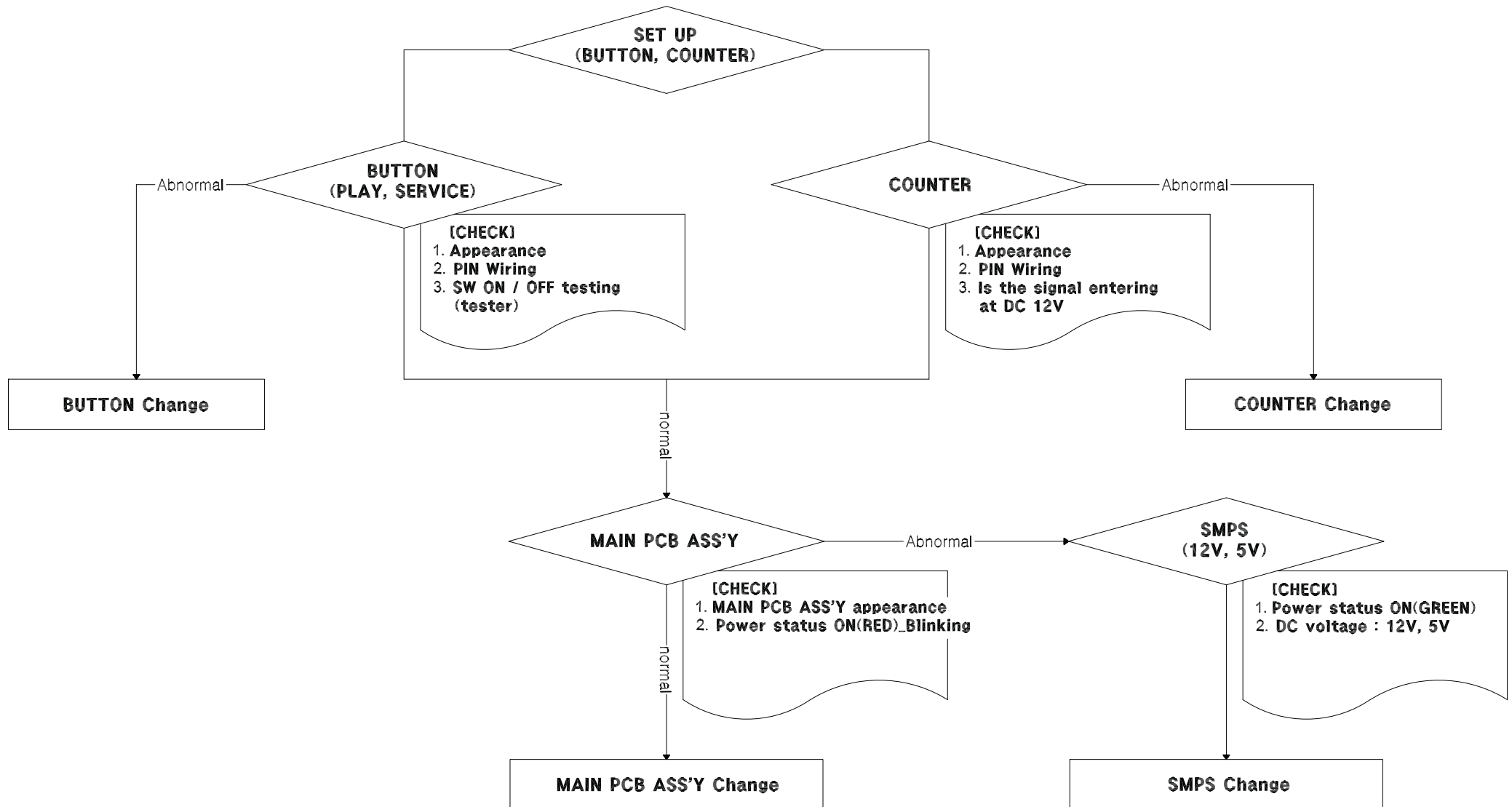
7-5. SOUND ERROR

*Common: Check the input voltage, check wiring



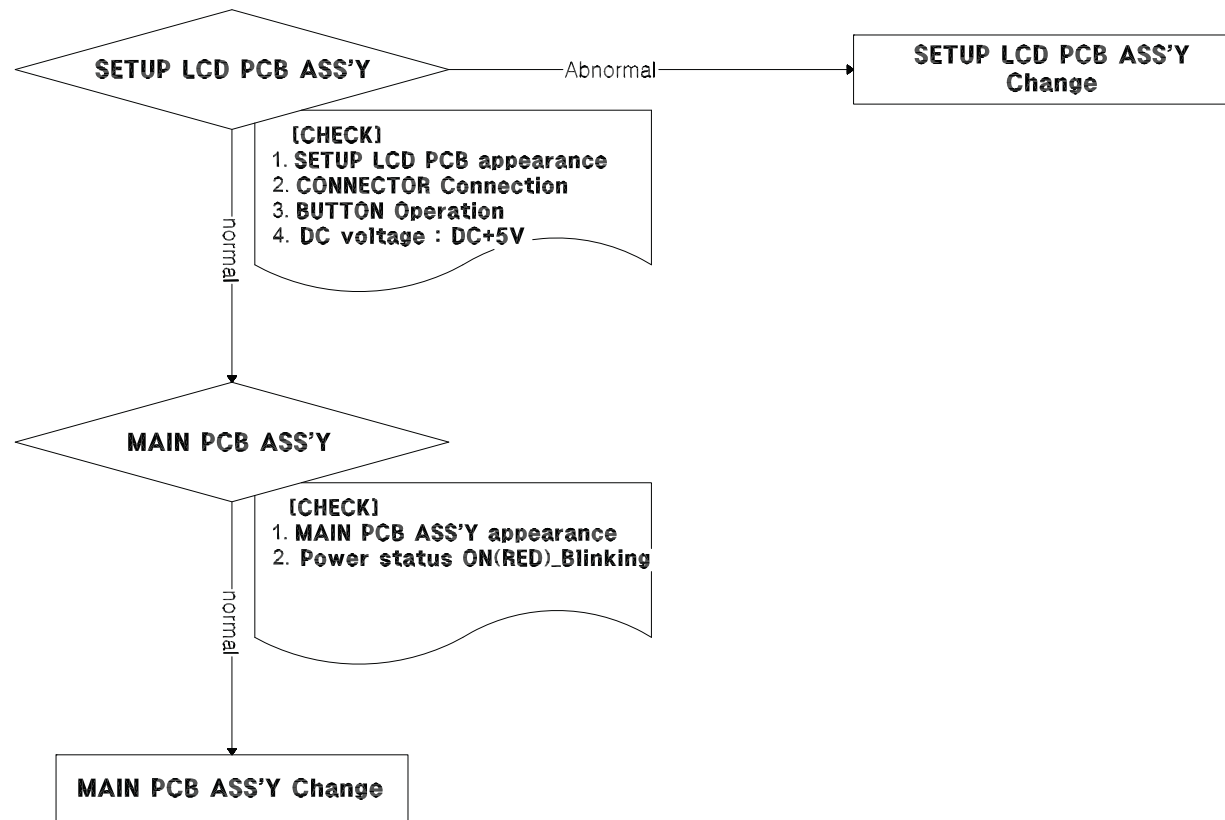
7-6. BUTTON & COUNTER ERROR

*Common: Check the input voltage, check wiring



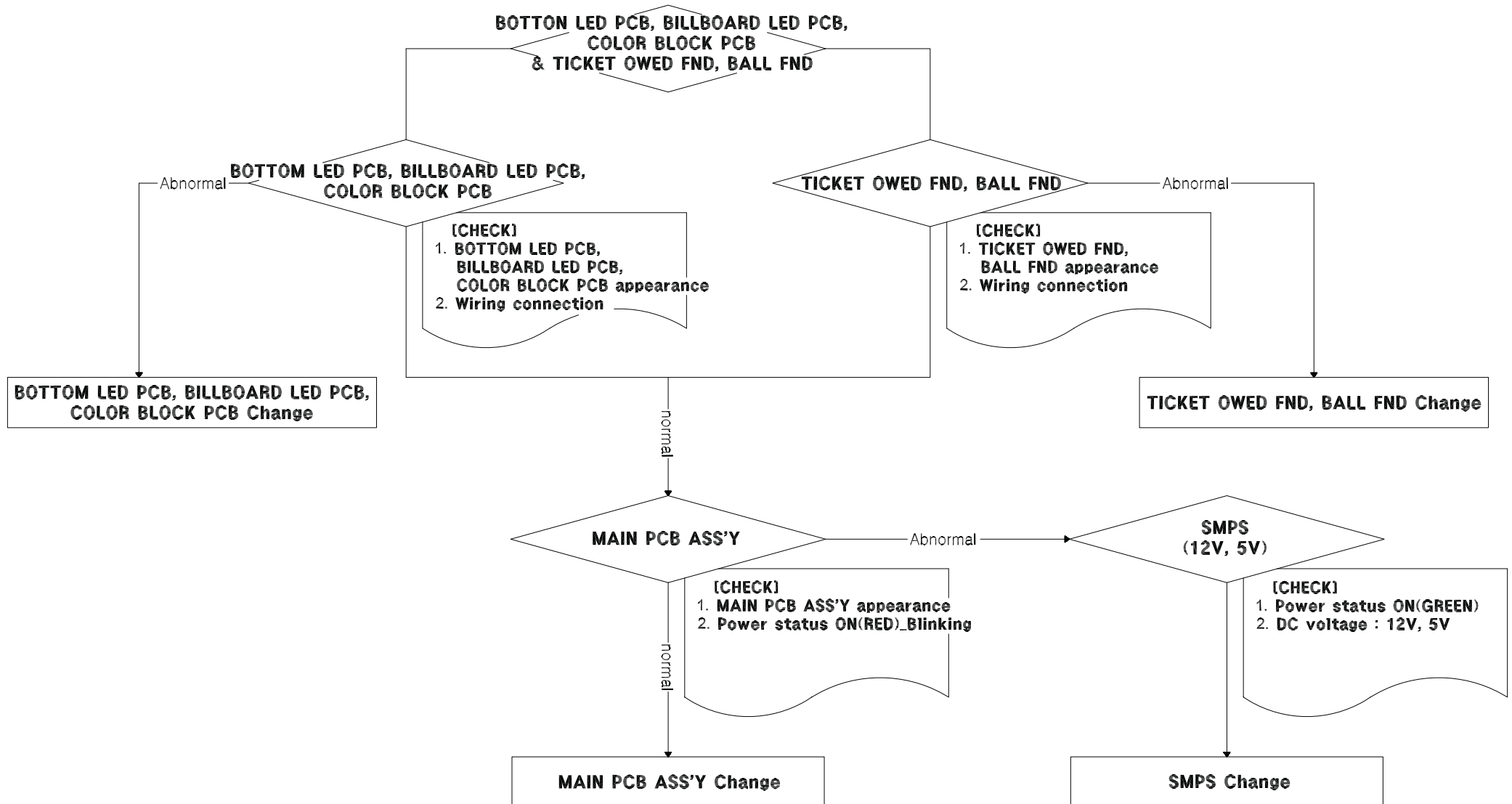
7-7. SETUP LCD PCB ERROR

*Common: Check the input voltage, check wiring



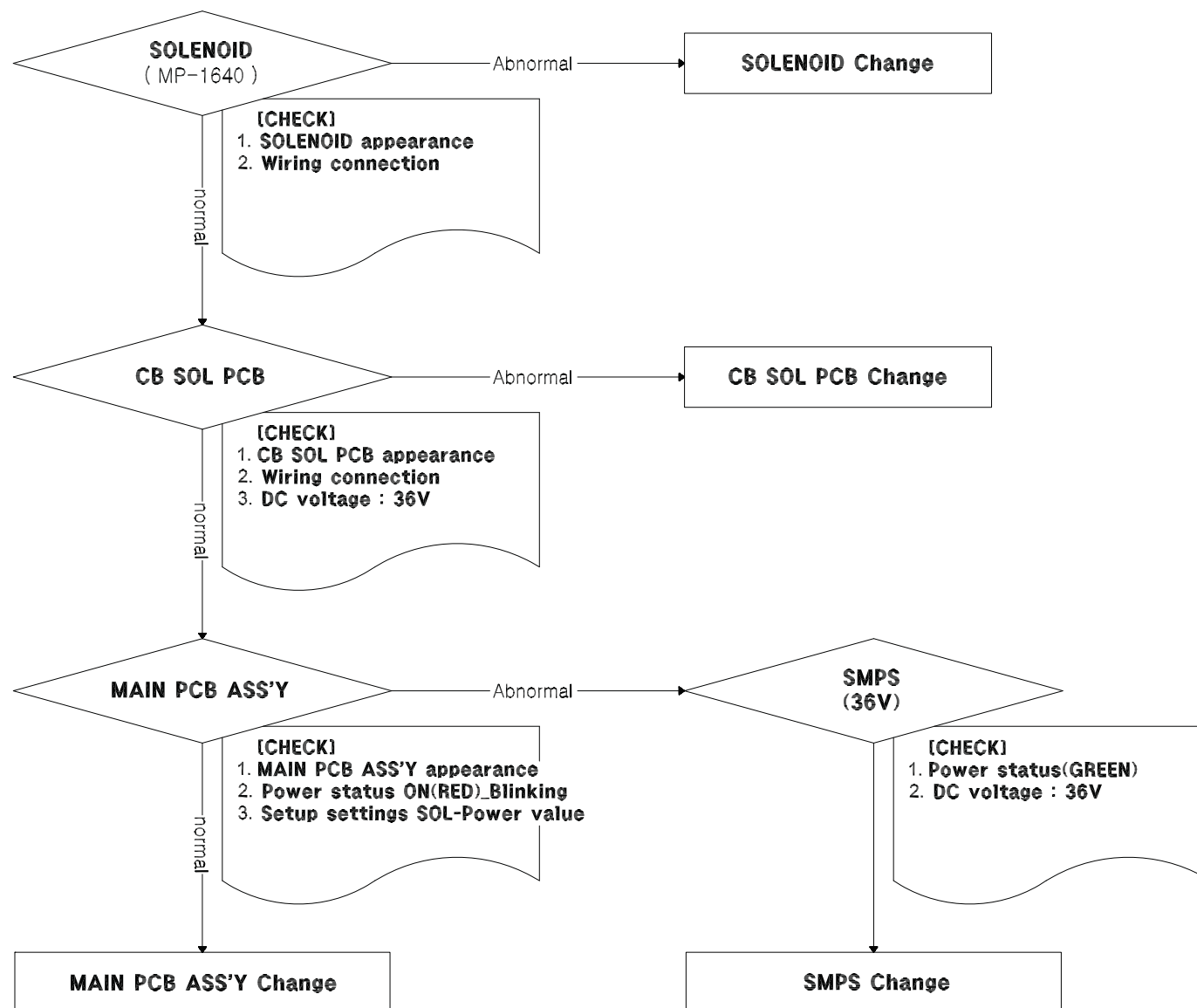
7-8. BOTTON LED PCB, BILLBOARD LED PCB, COLOR BLOCK PCB & TICKET OWED FND, BALL FND ERROR

*Common: Check the input voltage, check wiring



7-9. SOLENOID ERROR

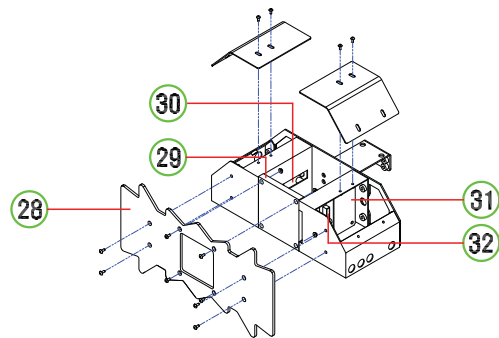
*Common: Check the input voltage, check wiring



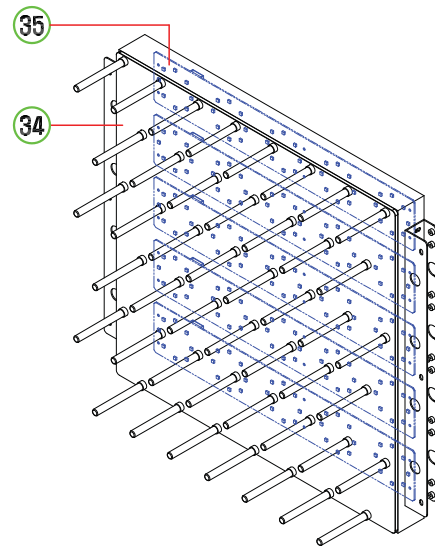
8. PARTS LIST

8-1. EXPLODED VIEW

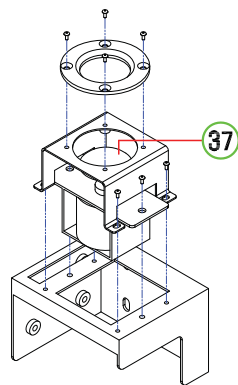
27 MOVING BLOCK FRONT COVER PART



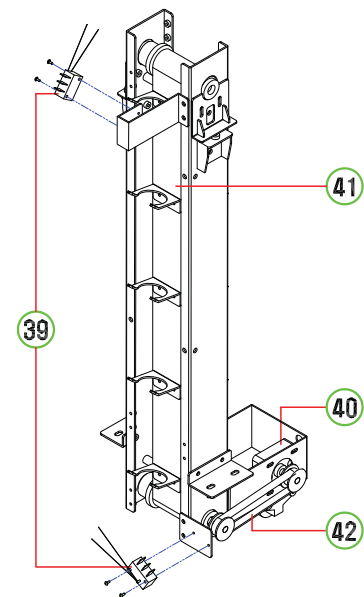
33 LIGHT BLOCK PART



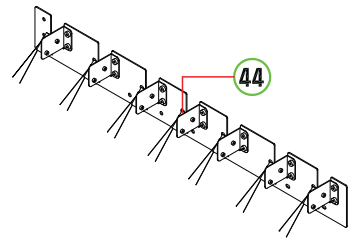
36 BALL SHOOTING PART



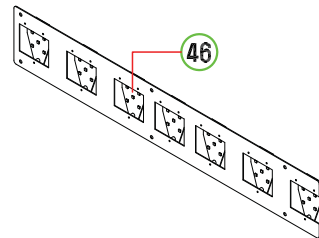
38 ELEVATOR PART



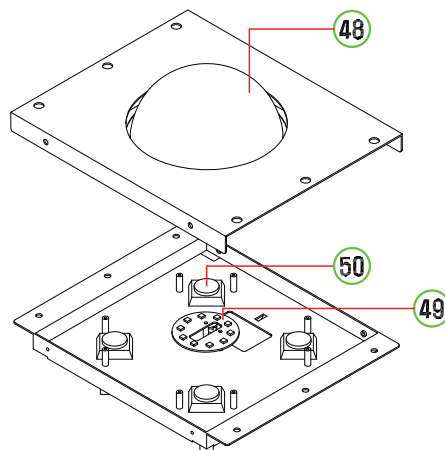
43 MICRO SWITCH PART



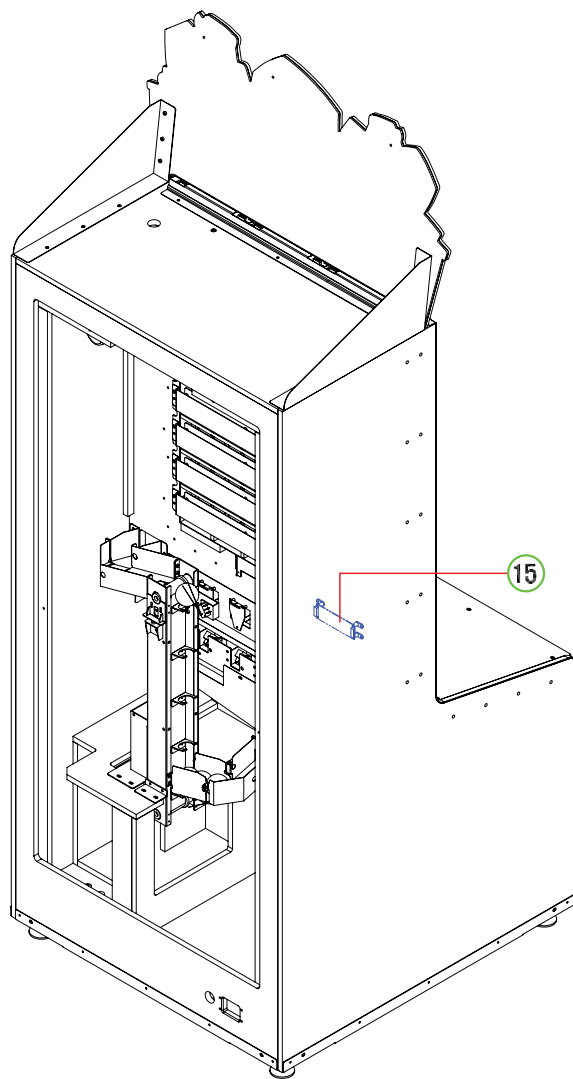
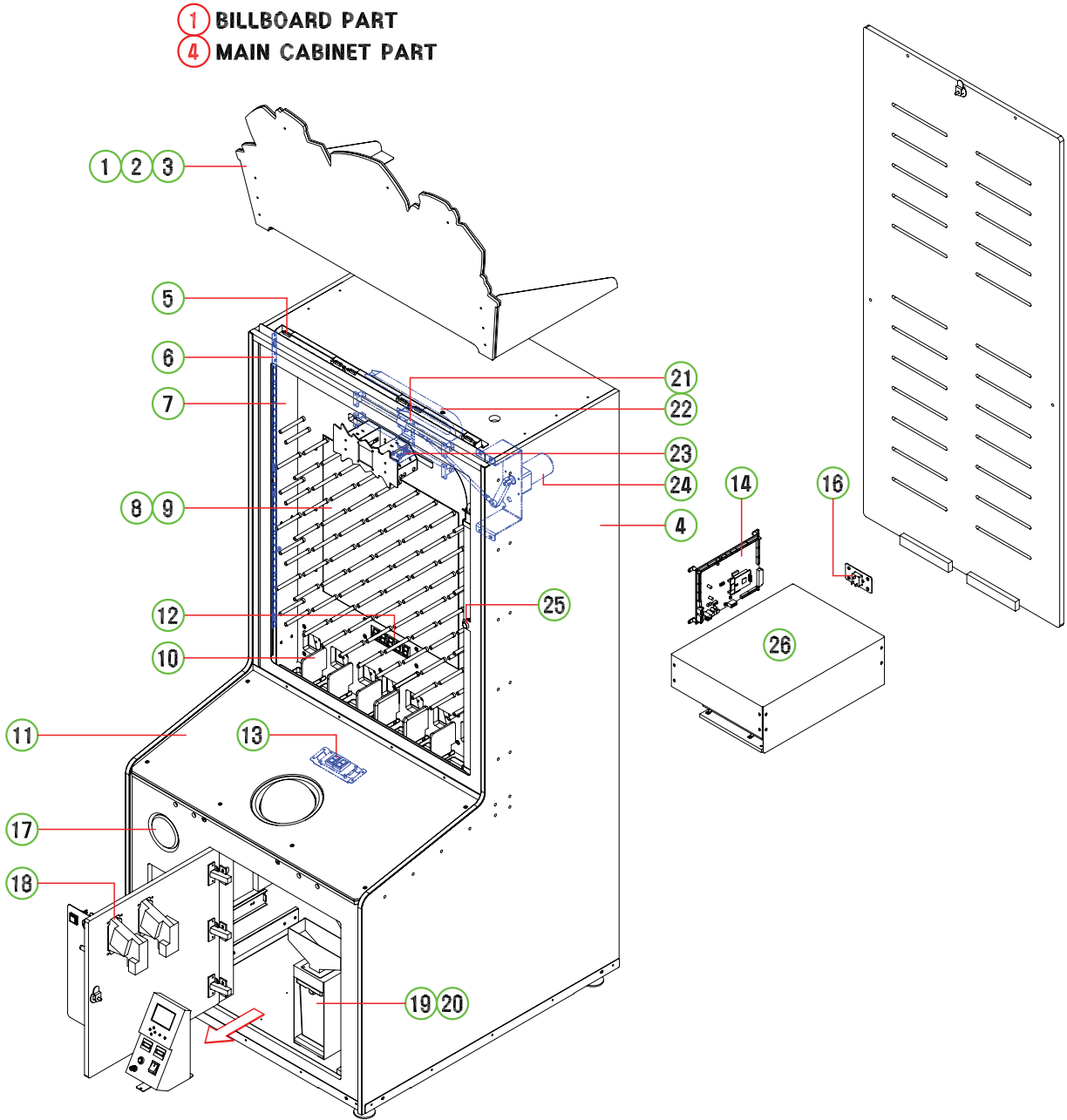
45 SHOW TIME LED PCB PART



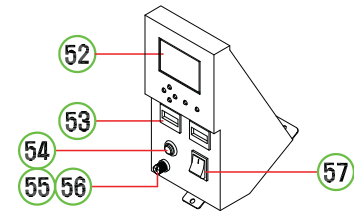
47 BUTTON DIRECTION PART



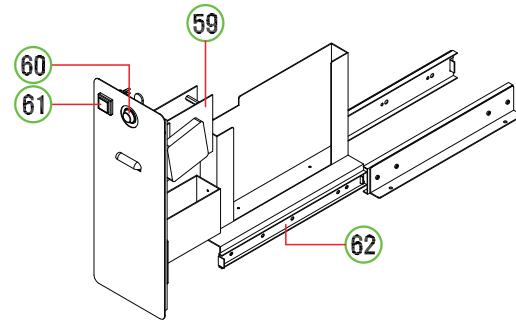
1 BILLBOARD PART
4 MAIN CABINET PART



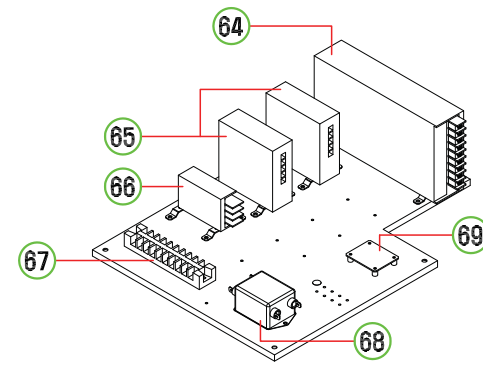
51 SETUP LCD PART



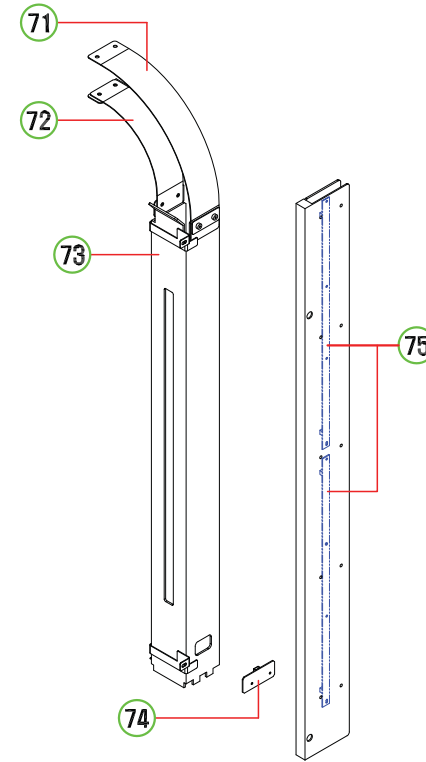
58 TICKET DISPENSER PART



63 POWER SUPPLY PART



70 BALL GUIDE RAIL PART



8-2. LIST

NO.	PIC	LEVEL		PART NAME	SPEC.	QTY	CODE NO.
①		1		BILLBOARD PART			
②			2	BILLBOARD ACRYL SW CLB	ACRYL_8.0t	1	MCLB0ACR009
③			2	BILLBOARD FORMAX	COLOR BOYZ	1	ACLB0ACR007
④		1		MAIN CABINET PART			
⑤			2	DOOR LED PCB-R PCB ASS'Y	WINNERS' CUBE CLASSIC	3	AWCM0PCB001
⑥			2	BILLBOARD LED PCB ASS'Y	WHITE TYPE	2	ASUP0PCB001
⑦			2	GLASS FRONT DOOR CLB	5.0T 1012X784mm	1	MCLB0GLA001
⑧	○		2	LIGHT BLOCK ACRYL	COLOR BOYZ	1	ACLB0ACR005
⑨	○		2	SCORE PANEL ACRYL	EN-MAXIMUM 500 POINT	1	ACLB0ACR001
			2	SCORE PANEL ACRYL	EUROPE-MAXIMUM 250 POINT	1	ACLB0ACR002
			2	SCORE PANEL ACRYL	CEC-MAXIMUM 100 POINT	1	ACLB0ACR003
			2	SCORE PANEL ACRYL	USA-MAXIMUM 1000 POINT	1	ACLB0ACR008
⑩	○		2	BALL BLOCK GUARD A CLB	ACRYL_10.0t	6	MCLB0ACR007
⑪			2	CASE FRONT UPPER ACRYL	COLOR BOYZ	1	ACLB0ACR004
⑫			2	JACKPOT FND PCB ASS'Y	-	1	ADOS0PCB005
⑬			2	CREDIT FND PCB ASS'Y	-	1	ADOS0PCB006
⑭			2	COLORBOYZ MAIN BOARD ASS'Y	COLOR BOYZ	1	MCLB0PCB002
			2	CPU PCB ASS'Y	COLOR BOYZ	1	MCLB0PCB009
			2	SOUND ROM PCB ASS'Y	COLOR BOYZ	1	MCLB0PCB010
⑮			2	SHOW TIME LED CONTROL PCB ASS'Y	-	1	ADOS0PCB008
⑯	○		2	AC INPUT	DAC-13H	1	MELE0SWI015
			2	FUSE	0218010.MXP 250V,10A,4PA	2	MELE0FUS018
⑰	○		2	SPEAKER	MID4.5"+TW1/2" 8Ω	1	MZZZ0SPE021
⑱	○		2	COIN SELECTOR	TW-130B	2	MZZZ0SPE021
⑲	○		2	COIN BOX SMALL	200*198*107 BLACK	1	MDRE0PLA007
⑳			2	KEY ASS'Y 6001	WITHOUT KEY 6001	1	MZZZ0KEY075
			2	KEY	6001 KEY 2EA	1	MZZZ0KEY014
㉑			2	LM CASE_W40H26L35 10	SC 10 UU	2	MZZZ0LMC001
㉒	○		2	CABLE CHAIN	KJP018-1B-23LINK	1	MZZZ0CBC003
㉓	○		2	PHOTO INT-1 PCB ASS'Y	CIRCLE RAMA	1	ACIR0PCB011
㉔	○		2	DC MOTOR	K6DG15N1-K6G100B	1	MZZZ0MOT069
㉕			2	KEY ASS'Y 7001	WITHOUT KEY 7001	1	MZZZ0KEY076
			2	KEY 7001	7001 KEY 2EA	2	MZZZ0KEY035
㉖			2	COVER POWER SUPPLY CLB	PET-1.0t	1	MCLB0PET003
㉗		1		MOVING BLOCK FRONT COVER PART			
㉘			2	ACRYL MOVING BLOCK 2X CLB	ACRYL_3.0t	1	MCLB0ACR001
㉙			2	ACRYL DIRECTION 2X CLB	ACRYL_8.0t	1	MCLB0ACR002
㉚			2	HOLECHECK R SENSOR PCB ASS'Y	COLOR BOYZ	1	MCLB0PCB005

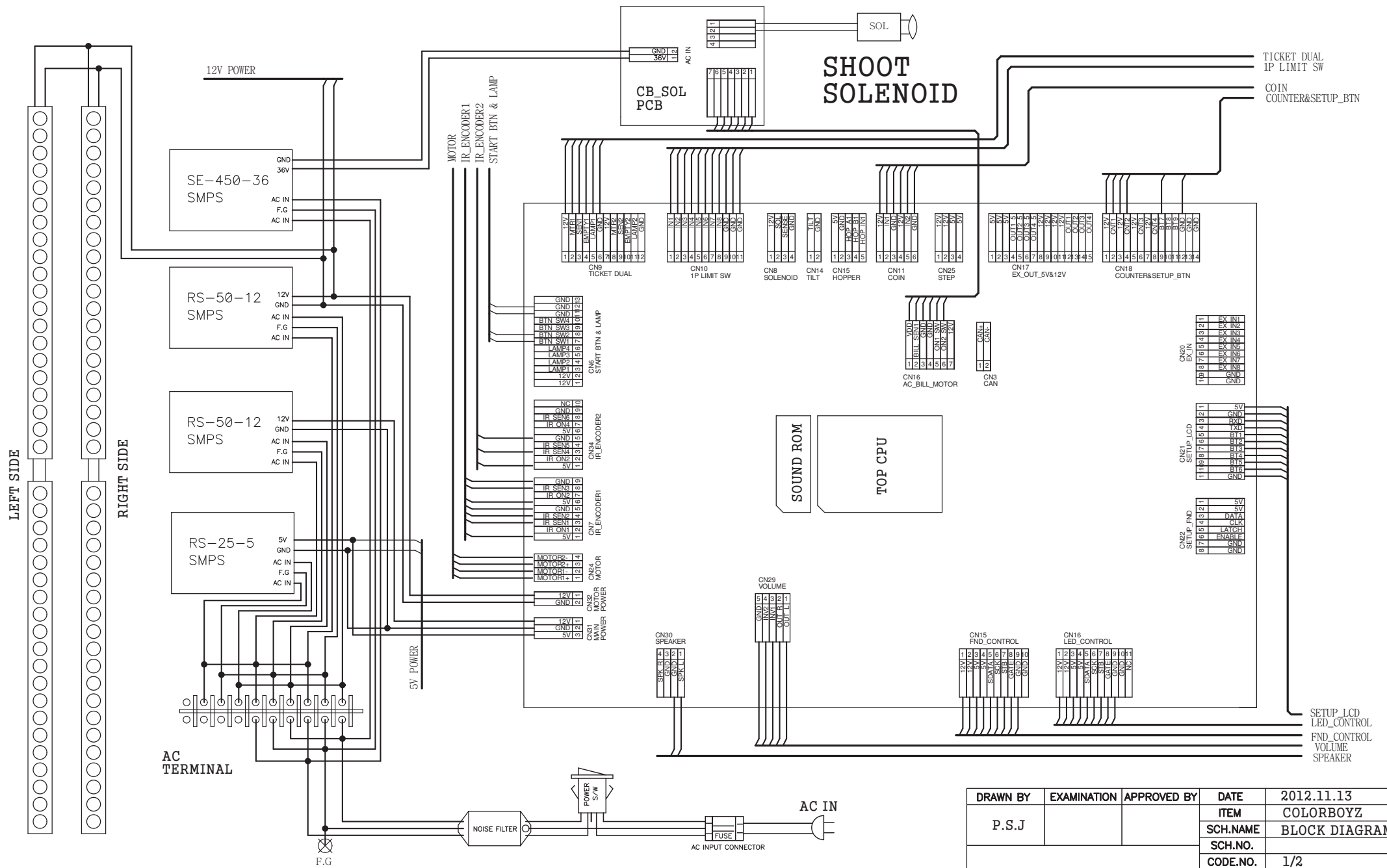
NO.	PIC	LEVEL		PART NAME	SPEC.	QTY	CODE NO.
③①			2	HOLECHECK T SENSOR PCB ASS'Y	COLOR BOYZ	1	MCLB0PCB006
③②			2	LAMP LED X2 PCB ASS'Y	COLOR BOYZ	1	MCLB0PCB007
③③		1		LIGHT BLOCK PART			
③④			2	LIGHT BLOCK ACRYL	COLOR BOYZ	1	MCLB0ACR003
③⑤			2	COLOR BLOCK 8X5 PCB ASS'Y	COLOR BOYZ	5	MCLB0PCB004
			2	ASS'Y PIN PC CLB	ø9.8, L90,5, M4?.7	81	MCLB0PLA001
③⑥		1		BALL SHOOTING PART			
③⑦			2	BALL SHOOTING SOL CLB	MP-1640	1	MCLB0SOL001
			2	BALL CLB	ø5, JOOLA	1	MCLB0BAL001
③⑧		1		ELEVATOR PART			
③⑨			2	MICRO SWITCH	CNR-05H-03	2	MELE0MIC002
④①	○		2	MOTOR	KGB-162-3429C	1	MZZZ0MOT060
④②	○		2	BELT	1.4T 50W 620L(ø30)	1	MCLB0BEL001
④③	○		2	TIMMING BELT	120XL-9.5T	1	MZZZ0BEL011
④④		1		MICRO SWITCH PART			
④⑤			2	MICRO SWITCH	CNR-05H-03	7	MELE0MIC002
④⑥		1		SHOW TIME LED PCB PART			
④⑦			2	SHOW TIME LED PCB ASS'Y	-	7	ADOS0PCB007
④⑧		1		BUTTON DIRECTION PART			
④⑨			2	DOME ACRYL	ø150-5T	1	MZZZ0PLA034
⑤①			2	COIN ENTRY PCB ASS'Y	COLOR BOYZ	1	MCLB0PCB003
⑤②	○		2	BUTTON SWITCH	AM1PB-30HS-W12 NO LAMP 300G	4	MZZZ0BUT089
⑤③		1		SETUP LCD PART			
⑤④			2	SETUP LCD PCB ASS'Y	UNISYTECH	1	AZZZ0PCB113
⑤⑤	○		2	COUNTER	AMMC-712(OA127CL)	2	MZZZ0COU002
⑤⑥	○		2	PUSH BUTTON SWITCH	DS-412R	1	MELE0PUS006
⑤⑦	○		2	VOLUME KNOB	-	1	MELE0VOL007
⑤⑧	○		2	VR PCB ASS'Y	1 VOLUME	1	AHM20PCB016
⑤⑨	○		2	ROCKER SWITCH	T-125 4P	1	MELE0SWI004
⑥①		1		TICKET DISPENSER PART			
⑥②	○		2	TICKET DISPENSER	TL-002H	1	MZZZ0TID007
⑥③			2	KEY ASS'Y	WITHOUT KEY 7001	1	MZZZ0KEY076
⑥④			2	BUTTON SWITCH	-	1	MMUM0BUT002
⑥⑤	○		2	GUIDE RAIL	300mm	2	MMUN0000004
⑥⑥		1		POWER SUPPLY PART			
⑥⑦	○		2	POWER SMPS	MEANWELL SE-450-36 36V 12.5A	1	MELE0SMP059
⑥⑧	○		2	POWER SMPS	MEANWELL RS50-12V	2	MELE0SMP055
⑥⑨	○		2	POWER SMPS	MEANWELL RS25-5V	1	MELE0SMP056

NO.	PIC	LEVEL		PART NAME	SPEC.	QTY	CODE NO.
67			2	TERMINAL BLOCK	250V 10P	1	MELE0TEB003
68	○		2	NOISE FILTER	ES1-F10	1	MELE0NOI006
69			2	CB SOL PCB	—	1	MCLB0PCB001
70		1		BALL GUIDE RAIL PART			
71			2	BALL GUIDE RAIL EXT CLB	PET-1.2t	1	MCLB0PET001
72			2	BALL GUIDE RAIL INT CLB	PET-1.2t	1	MCLB0PET002
73	○		2	ACRYL DOOR HINGE SUPPORT LEFT CLB	3.0T, MILK COLOR	1	MCLB0ACR005
74			2	BALL SENSOR PCB ASS'Y	COLOR BOYZ	1	MCLB0PCB008
75	○		2	BILLBOARD LED PCB ASS'Y	WHITE TYPE	2	ASUP0PCB001

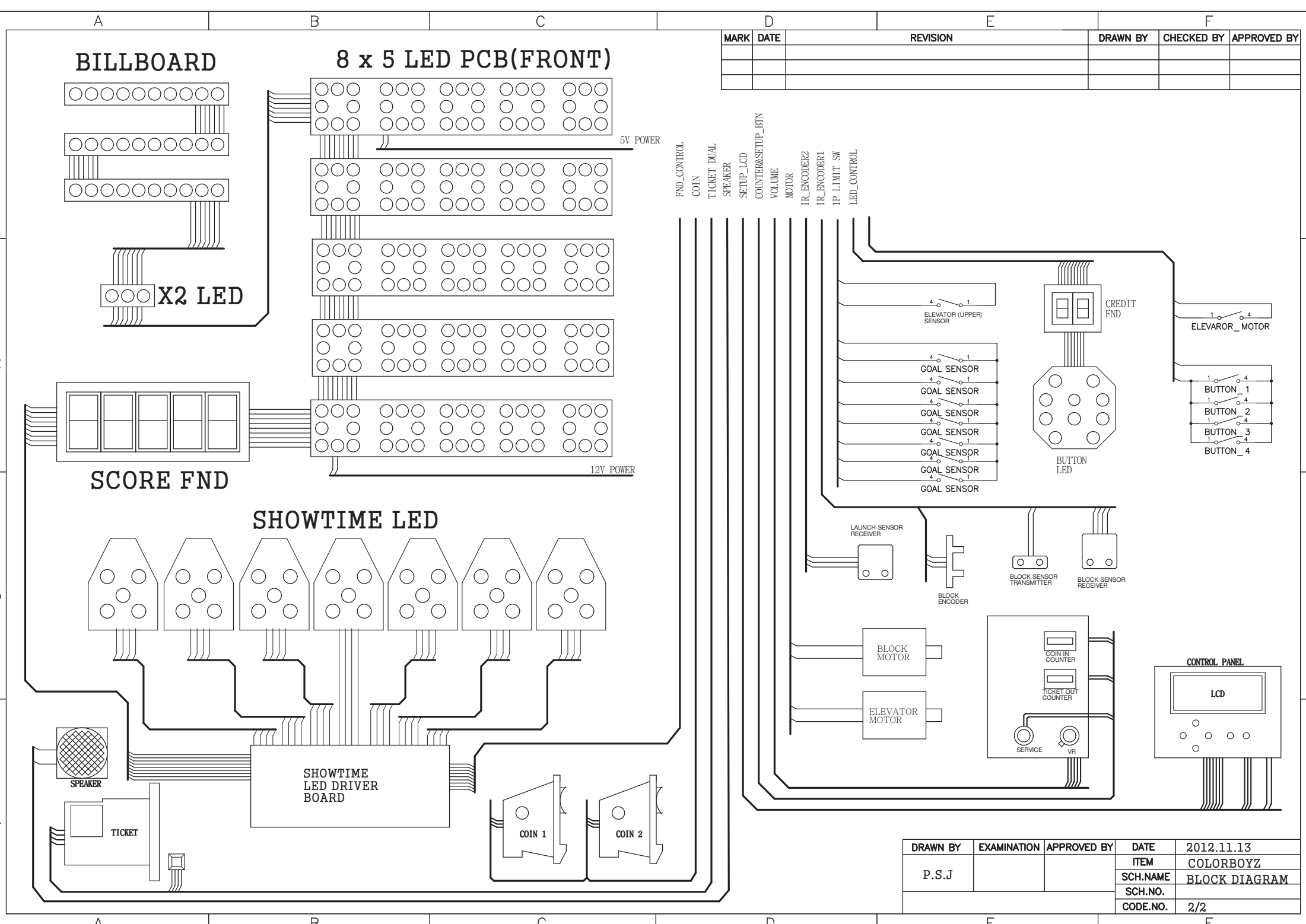
8-3. PICTURE

8	9	10	16	17	18
					
21	22	23	39	40	41
					
42	50	53	54	55	56
					
57	59	62	64	65	66
					
68	73	75			
					

MARK	DATE	REVISION	DRAWN BY	CHECKED BY	APPROVED BY



DRAWN BY	EXAMINATION	APPROVED BY	DATE	2012.11.13
P.S.J			ITEM	COLORBOYZ
			SCH.NAME	BLOCK DIAGRAM
			SCH.NO.	
			CODE.NO.	1/2



MARK	DATE	REVISION	DRAWN BY	CHECKED BY	APPROVED BY

DRAWN BY	EXAMINATION	APPROVED BY	DATE	2012.11.13
P.S.J			ITEM	COLORBOYZ
			SCH.NAME	BLOCK DIAGRAM
			SCH.NO.	
			CODE.NO.	2/2



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