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SERVICE MANUAL

CIRCUS BALL DROP™ Ver 2.0

ISSUEDATE:June. 23, 2015

STOP

IMPORTANT

- 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 safty 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 resu t the power cord 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 bend the power cord excessively.
- Do not heat the power cord.
- Do not bind the power cord.
- Do not sandwich the power cord.
- Do not modify the power cord.
- Do not twist the power cord.
- Do not pull the power cord.
- Do not stand on 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 of 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 form 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.

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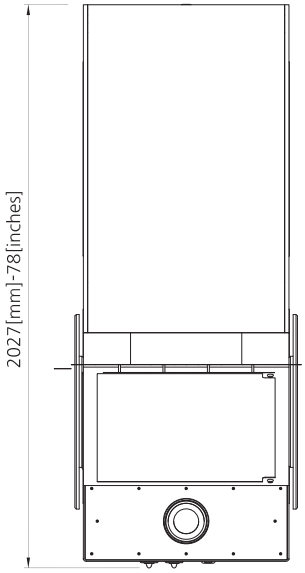
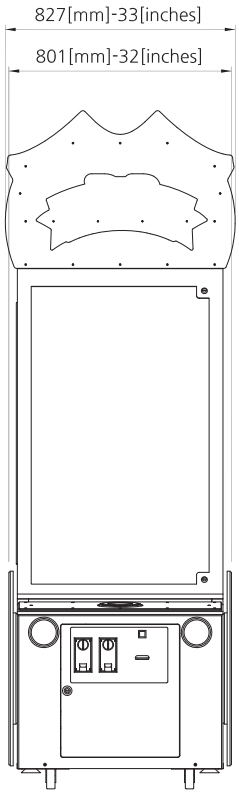
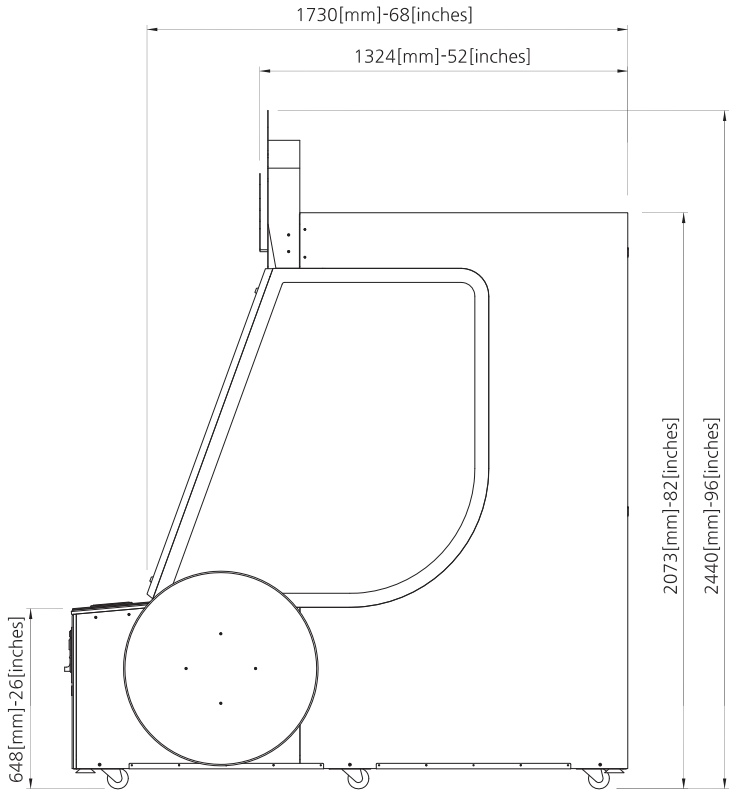
1. SPECIFICATION AND DIMENSION

1-1. DIMENSION



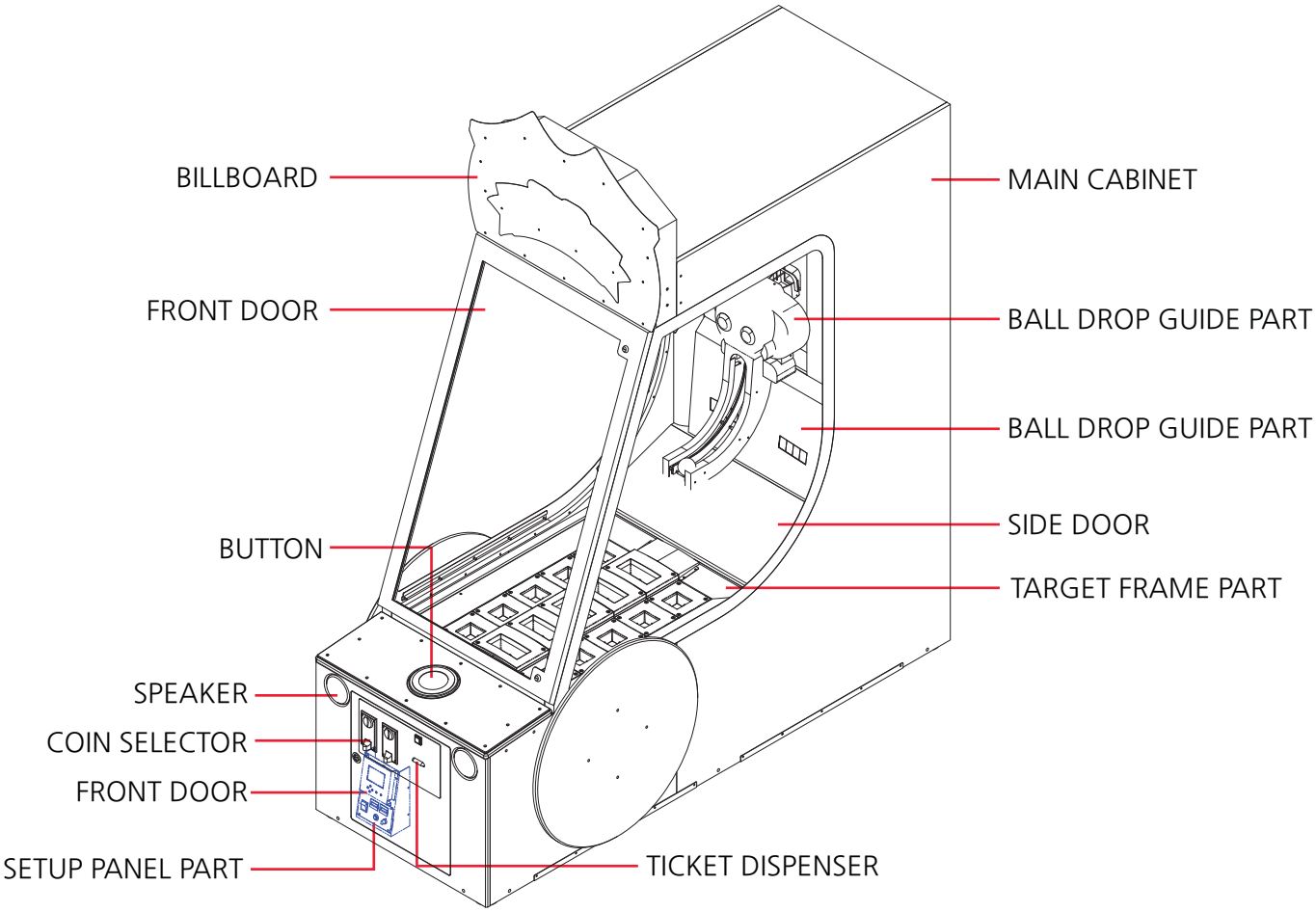


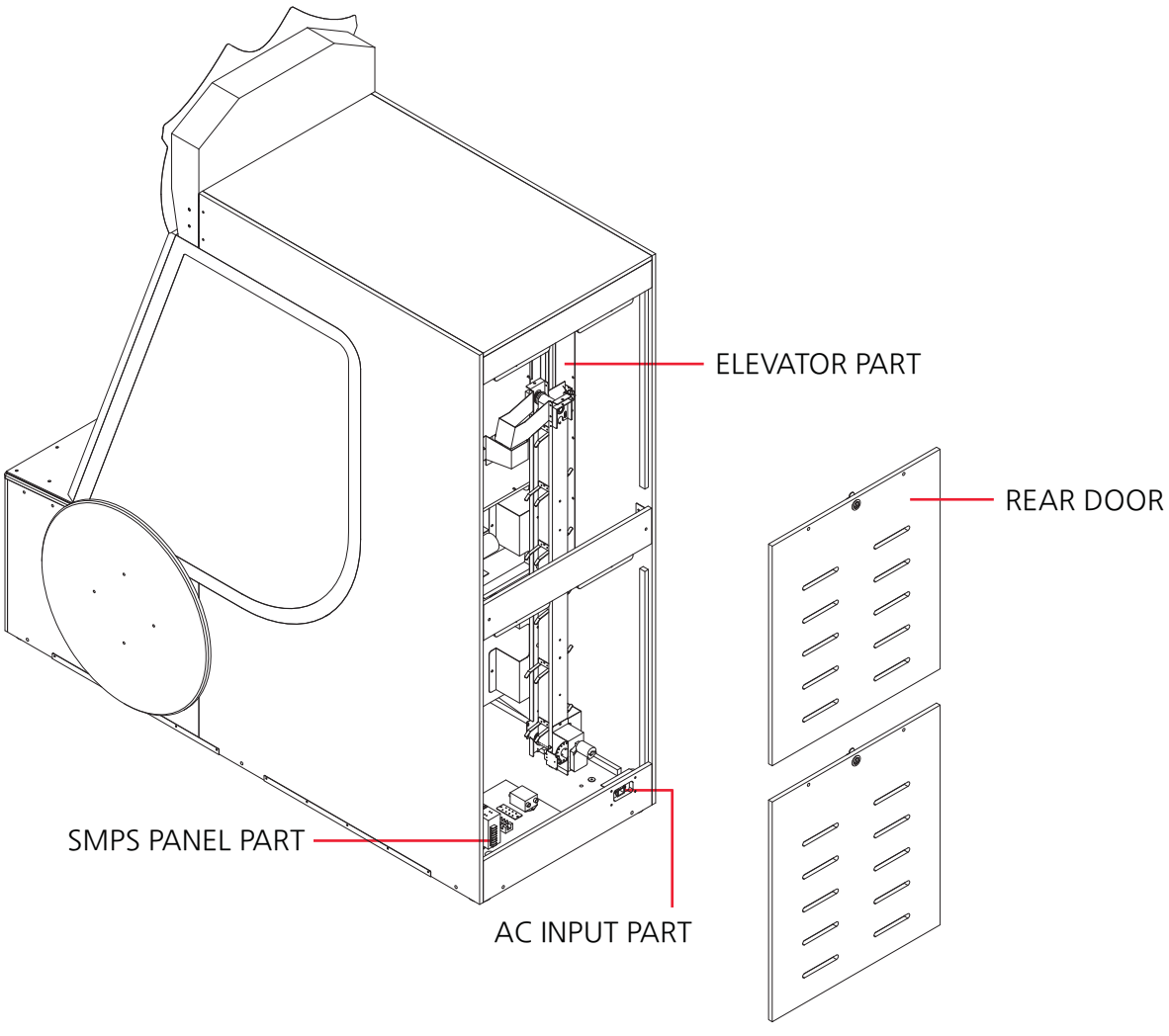


1-2. SPECIFICATION

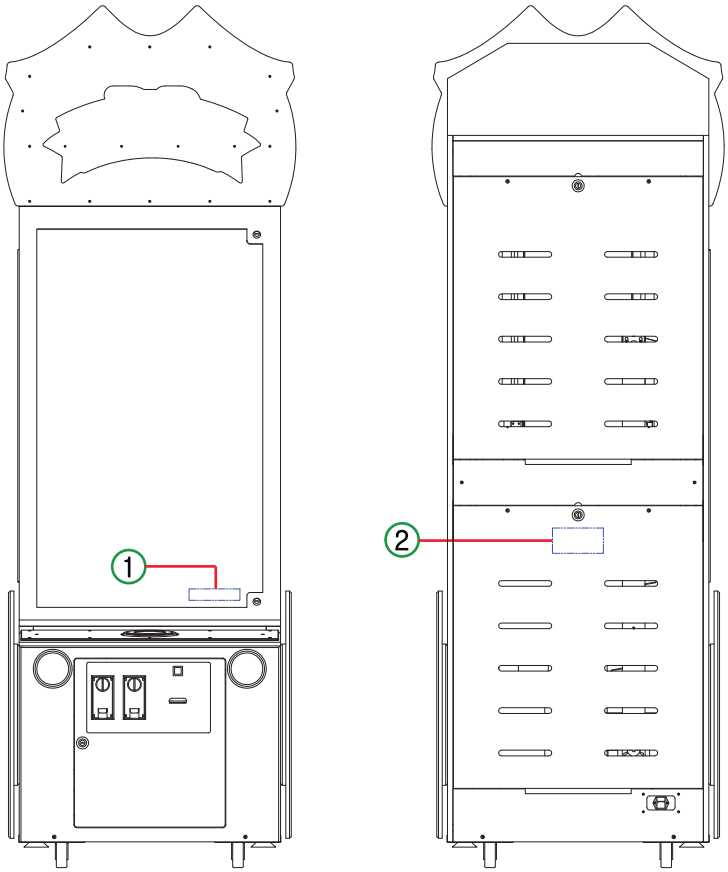
DIMENSION (W x D x H)	948 x 2027 x 2410 (mm)
PACKING DIMENSION (W x D x H)	850 x 2150 x 2260 (mm)
WEIGHT (kg)	282kg [WEIGHT INCLUDING : 326 kg] PACKAGING]
VOLTAGE	AC 110V / 220V
FREQUENCY RANGE	50/60Hz
CONSUMPTION	230 W
CERTIFICATION	-

1-3. NAME OF PARTS





1-4. STICKER LOCATION



1-5. COMPONENTS

NO.	PART NAME	SPEC.	QTY
1	AC POWER CORD	-	1
2	BALL	-	10
3	KEY	6001, 7001	2
4	BOLT	M6 x 20L	5
5	WRENCH	2.5mm, 4mm	2
6	MANUAL	-	1

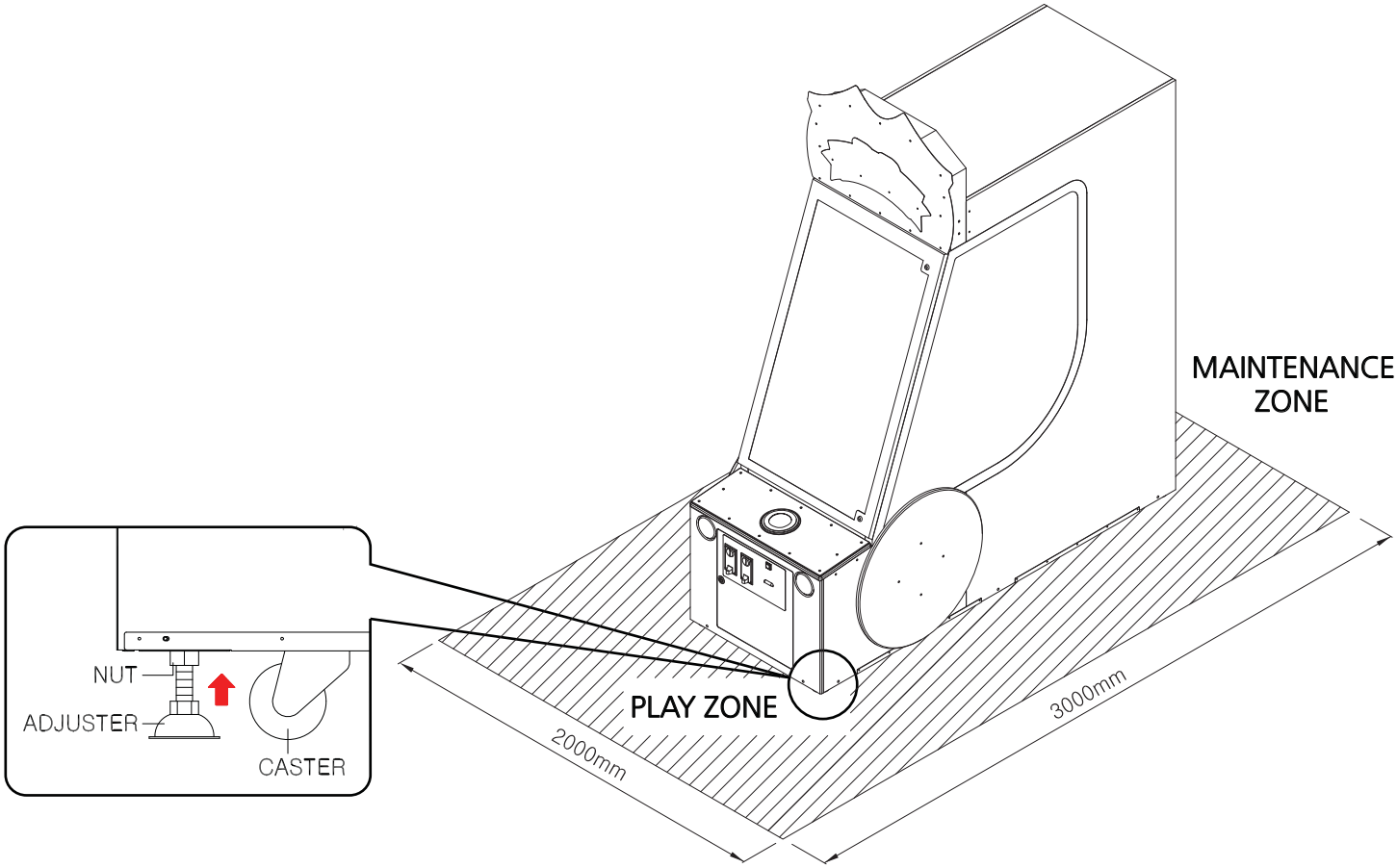
2. INSTALLATION

2-1. INSTALLATION SPACE

- Need to have installation place.
  Maintenance Zone & Play zone should have at least
  2000mm x 3000mm each.

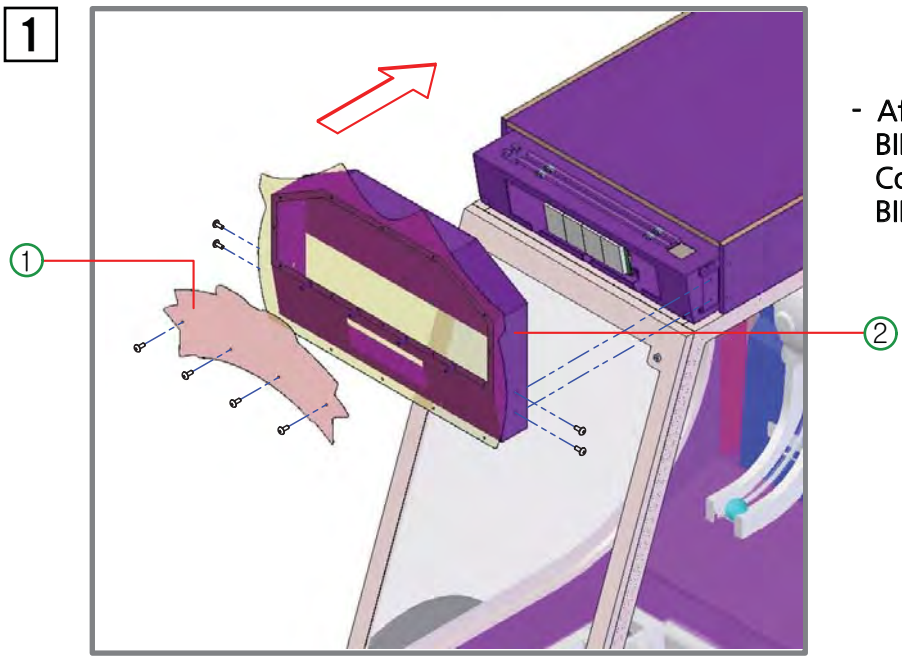
IMPORTANT

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



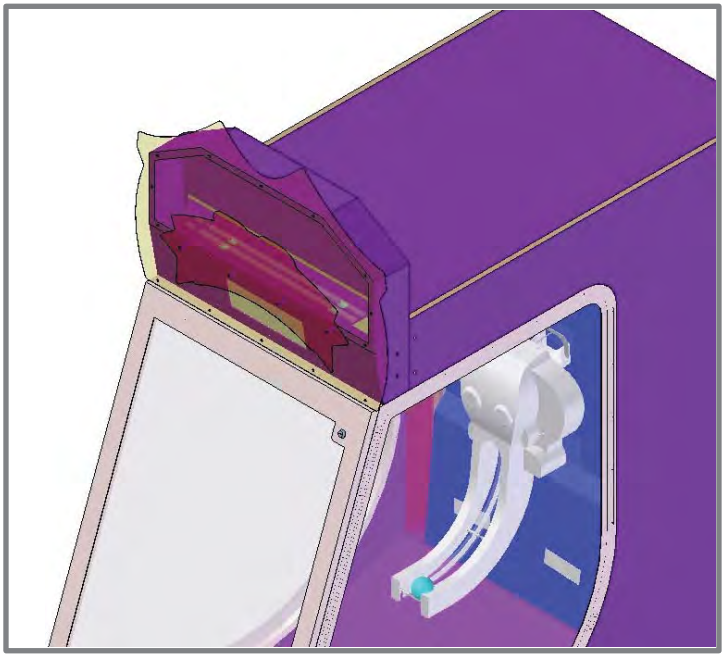
2-2. HOW TO INSTALL

1



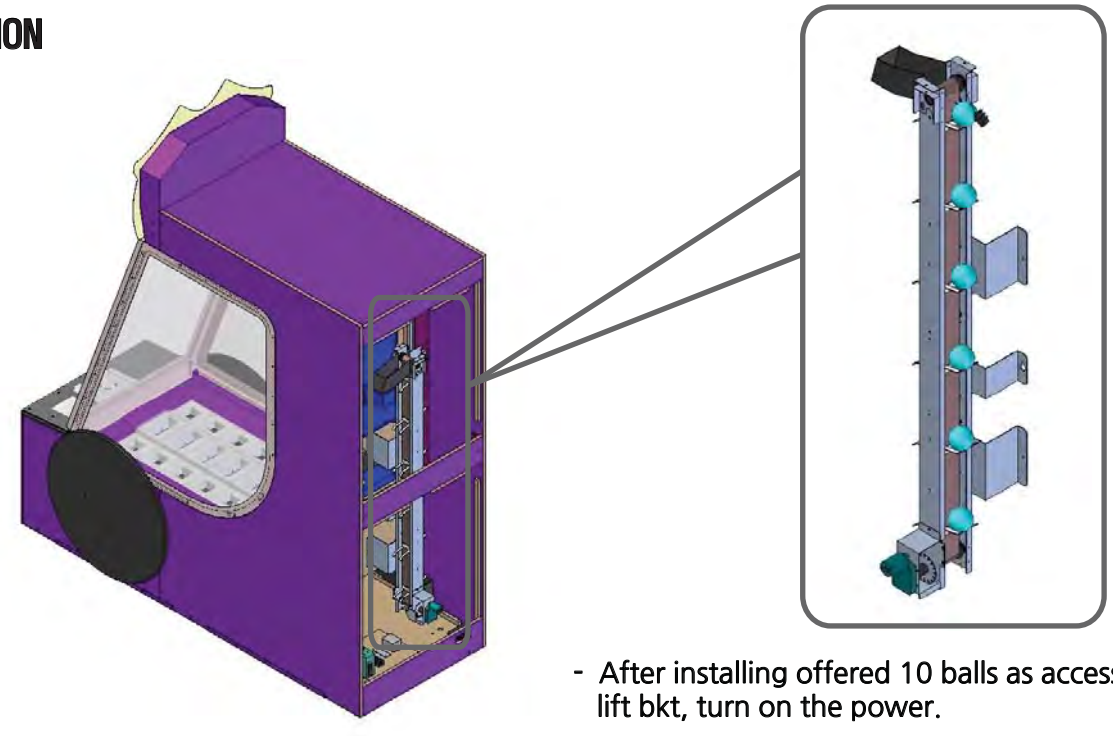
- After assembling ①BILLBOARD ACRYL WITH BILLBOARD FRAME, [M4bolts, 4 places] Combine ②BILLBOARD FRAME ASS'Y With ③ BILLBOARD INNER FRAME. [M6bolts, 4 places]

2



- You complete it like picture.

*** CAUTION**



- After installing offered 10 balls as accessories in elevator lift bkt, turn on the power.

3. GAME CHARACTERISTICS

3-1. One Button action, simple to play!

3-2. Multiple bonus features and shinning LED light effects!

3-3. Gorgeous circus themed cabinet and realistic jungle sounds add to the players' excitement!

4. HOW TO PLAY

4-1. After coin inserting, elephant head moves up and down.

4-2. At this time, push the ball drop button, elephant head stop and release ball from elephant nose.

4-3. Of 15hole, distributed ticket in the successive hole is dispensed.

4-4. Of 15hole, super bonus hole dispense displayed ticket in the billboard fnd, bonus ball is eventhall.

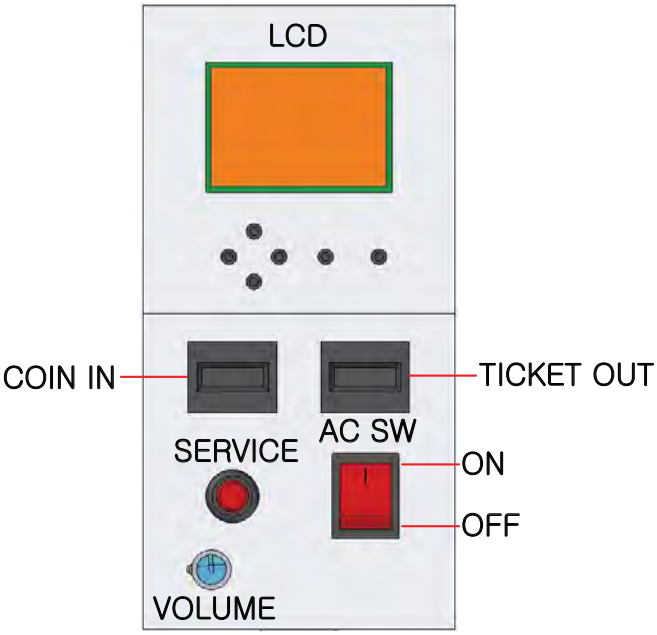
* 3 ball is released from elephant nose automatically in the event game.
  Automatically released 3balls dispense distributed ticket in the succesive all hole.

5. SETUP SETTINGS

5-1. MACHINE SETUP

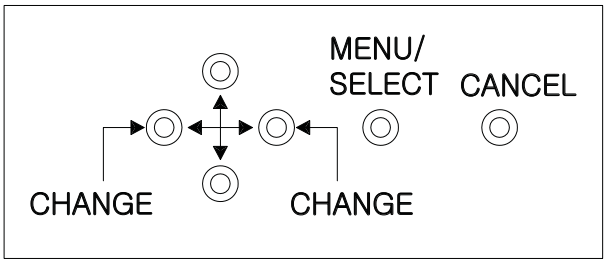
1. HOW TO ENTER SETUP MENU

[1] There is "Control panel" inside cabinet. User may set any setting using following.



[CONTROL PANEL]

2. SETUP BUTTON LAYOUT



1) [↑↓] Up/Down Key : Menu Up/Down move
2) [←→] Left/Right Key : Set value Left/Right change
3) MENU/SELECT key : Set up Menu mode, Select perform
4) CANCEL key : Exit

[OPERATION MENU]

PUSH MENU BUTTON . [SELECT BUTTON: ACCESS]	
#OPERATING OPTIONS#	
PROGRAM SETTINGS	SETUP MODE
CLEAR MODE	CLEAR MODE
BOOKKEEPING DATA	BOOKKEEPING
FACTORY SETTING	INITIALIZING FACTORY SETTING
TEST MODE	TEST MODE
EXIT	EXIT TO GAME

5-2. SETUP MODE

PROGRAM SETTINGS		
LCD DISPLAY	**DESCRIPTION**	**RANGE**
★ **CREDIT/COIN 1/1**	COIN PER CREDIT.	FREE, 1/1, 1/2, 1/3, 1/4, 1/5 1/6, 1/7, 1/8, 1/9, 1/10, 2/1, 3/1, 4/1, 5/1
★ **GAME TIME 30**	GAME PLAY TIME	5 ~ 100 (SECOND)
★ **BONUS BALLS 3**	BALL NUMBERS TO DISPENSE FOR BONUS BALLS (IF YOU SET IN "OFF", DON'T USE BONUS BALL EVENT)	"OFF", 1 ~ 10
★ **SCORE TYPE 9**	SETTING OF GOALIN HOLE SCORE DISPENSATION KIND **TYPE: 1 ~ 14 SET UP** **[SEPARATION #2] SCORE TYPE SETTING REFERENCE.**	1 ~ 14 : REFER TO SEPARATE SETTING SCORE TABLE
★ **SCORE DETAIL =>**	DETAIL SETTING OF GOALIN HOLE SOCRE. **[SEPARATION #1] SCORE DETAIL SETUP REFERANCE.**	SET EACH GOALIN HOLE SEPARATELY IF VALUE IS CHANGED IN HERE, 'USER' WORD IS DISPLAYED IN FRONT OF SCORE TYPE SETTING VALUE
★ **S-BONUS VALUE 500**	Super Bonus INITIAL STARTING	CHANGEABLE FROM 50 TO S-BONUS LIMIT VALUE (10 unit increasing)
S-BONUS LIMIT 3000	Super Bonus MAXIMUM VALUE	CHANGEABLE FROM S-BONUS VALUE TO 9999 VALUE (10 unit increasing)
★ **S-B INCREMENT 1**	INCREASING VALUE PER SUPER BONUS 1 GAME.	0 ~ 50 (1 unit increasing)
DIFFICULTY NORMAL	SETTING OF GAME LEVEL. (TICKET CHANGING ABOUT +-1~2 TICKET IN AVERAGE TICKET ISSUE DIPENSATION)	EASY – EASY PROGRESS (+1~2) NORMAL – NORMAL PROGRESS(0) HARD – HARD PROGRESS (-1~2)
MERCY TICKET 0	MERCY TICKET DISPENSE NUMBERS (NON-WINNING SCORE, DISPENSATION TICKET)	0 ~ 10 (1 unit increasing)
TICKET/SCORE 1/1	SETTING OF TICKET NUMBER PER SCORE NONE: DON'T USE TICKET	NONE, 1/1, 1/2,

ATTRACT VOLUME 50	DEMO SOUND VOLUME	OFF , 10 ~ 100 (10 unit increasing)
ATTRACT ACTION 15	SETTING OF DEMO GAME PROGRESS(ELEPHANT MOVEMENT)	OFF , 5, 10, 15, 20, 30, 40, 50, 60 (PER MINUTE)
ELEPHANTSPEED NORM	SETTING OF ELEPHANT MOVEMENT.	SLOW, NORM(NORMAL), FAST
SAVE AND EXIT	SAVE AND EXIT	PUSH SELECT BUTTON, PRACTICE AFTER MOVEMENT [YES] or [NO] CURSOR
CANCEL AND EXIT	CANCEL AND EXIT	
WARING ★ if you change the value of setting marked by ★, All of the internal BOOKKEEPING DATA will be deleted.		

* SELECT “Score Detail” of SET UP MODE AND TO BELOWED SET UP BY SELECT BUTTON.

#1 (SETUP MODE) SCORE DETAIL SET UP

SELECTED GOAL IN HOLE NUMBER DISPLAYS ON TIME FND SCREEN (H-01 ~ H-15)

SET UP SCORE DISPLAYS ON TICKET FND

THE LED COLOR OF GOAL IN HOLE IS WHITE

GOALIN HOLE 01 IS STARTED FROM LEFT SIDE OF START BUTTON (Front Door).

[WARING-1] BASIC GAME AVERAGE POINTS AND TICKET DISPENSE NUMBERS MAY VARY IF YOU CHANGE THE SET UP AS BELOW.

LCD DISPLAY	DESCRIPTION	RANGE	DEFAULT
Hole – 01	GOAL-IN HOLE 01 SCORE SET UP	0 ~ 500	10
Hole – 02 SUPER BONUS	**VALUE CHANGE FROM S-BONUS VALUE OF PROGRAM SETTINGS ARTICLE**		
Hole – 03	GOAL-IN HOLE 03 SCORE SET UP	0 ~ 500	10
Hole – 04	GOAL-IN HOLE 04 SCORE SET UP	0 ~ 500	20
Hole – 05 BONUS BALL	BONUS BALL HOLE SCORE IS WON RANDOMLY AND EVENT PROGRESS (BETWEN 1 ~ 300 SCORE)		
Hole – 06	GOAL-IN HOLE 06 SCORE SET UP	0 ~ 500	20
Hole – 07	GOAL-IN HOLE 07 SCORE SET UP	0 ~ 500	30
Hole – 08	GOAL-IN HOLE 08 SCORE SET UP	0 ~ 2000	200
Hole – 09	GOAL-IN HOLE 09 SCORE SET UP	0 ~ 500	30
Hole – 10	GOAL-IN HOLE 10 SCORE SET UP	0 ~ 500	20
Hole – 11	GOAL-IN HOLE 11 SCORE SET UP	0 ~ 2000	100
Hole – 12	GOAL-IN HOLE 12 SCORE SET UP	0 ~ 500	20
Hole – 13	GOAL-IN HOLE 13 SCORE SET UP	0 ~ 500	10
Hole – 14	GOAL-IN HOLE 14 SCORE SET UP	0 ~ 2000	50
Hole – 15	GOAL-IN HOLE 15 SCORE SET UP	0 ~ 500	10
BONUSBALL HOLE	SETTING OF BONUS BALL EVENT	“None” : DO NOT USE SELECT AMONG THE 05, 08, 11, 14 HOLE NUMBER	05 (HOLE)
SAVE AND EXIT	SAVE AND EXIT **(IF YOU SAVE PROGRAM SETTING, YOU CAN SAVE VALUE TOGETHER)**	PUSH SELECT BUTTON, PRACTICE AFTER MOVEMENT [YES] or [NO] CURSOR	
CANCEL AND EXIT	CANCEL AND EXIT		

CLEAR MODE

- IF YOU DELETE GAME DATA, YOU CAN SAVE GAME SETTING VALUE.

LCD DISPLAY	DESCRIPTION	RANGE
CLEAR TICKETS	CLEAR TICKETS	PUSH SELECT BUTTON, PRACTICE AFTER MOVEMENT [YES] or [NO] CURSOR
CLEAR CREDITS	CLEAR CREDITS AND BALLS	
CLEAR DATA	CLEAR GAME-DATA (GAME SETTING VALUE IS SAVED)	
EXIT	EXIT	

BOOKKEEPING DATA

LCD DISPLAY	DESCRIPTION
== BOOKKEEPING == GAMES TICKETS AVERAGE	GAME INFO DISPLAY . GAMES : TOTAL GAME PLAYED NUMBERS . TICKETS : TOTAL DISPENSED TICKETS NUMBERS . AVERAGE : AVERAGE DISPENSED TICKET NUMBER PER GAME
== TOTAL CREDITS == COINS SERVICE CREDITS	TOTAL CREDIT PLAY INFO DISPLAY . TOAL INSERTED COINS DISPLAY . TOTAL SERVICE BUTTON TIMES DISPLAY . TOTAL CREDIT DISPLAY
== MULTI BONUS == EVENT SCORE	MULTI BONUS PLAY INFO DISPLAY . MULTI BONUS TIMES DISPLAY . TOTAL ACQUIRED SCORES ON MULTIBONUS DISPLAY
== SUPER BONUS == SUCCESS SCORE DIRECT	SUPER BONUS PLAY INFO DISPLAY . SUPER BONUS CHALLEGED TIMES DISPLAY . SUPER BONUS SUCCEED TIMES DISPLAY . NUMBER OF DIRECT GOALIN BALL IN THE SUPER BONUS GOALIN HOLE (AFTER SHOOTING VALL, GOALIN IN THE 1 SECOND)
** VER INFO INT-N ** V 1.02, Jan 22 2015 RUNTIME h:mm:ss PLAYTIME h:mm:ss	VERSION & GAME OPERATING HOUR INFORMATION DISPLAY . VERSION INFO TOTAL EQUIPMENT POWER ON STATUS TIME DISPLAY(hour:min:sec) . TOTAL GAME PLAY TIME DISPLAY (hour:min:sec)
CANCEL BUTTON : EXIT	

FACTORY-SETTINGS INITIALIZING TO FACTORY SETTING VALUE (ALL DATA CLEAR AND SET UP TO THE BASIC DATA VALUE ON GAME SET-UP)

LCD DISPLAY (PRACTICE)		LCD DISPLAY (PRACTICE)
FACTORY-SETTING ARE YOU SURE? [YES] or [NO] MOVE CURSOR AND PRACTICE	RECONFIRM	**FACTORY-SETTING** [YES] or [NO] MOVE CURSOR AND PRACTICE

5-3. TEST MODE

TEST MODE			
LCD DISPLAY	**SET VALUE**	**DESCRIPTION**	
INPUT TEST	[=>]	ACCESS TO INPUT TEST MODE	
FND & LAMP	LAMP, FND, LED MOVING TEST		
	"OFF"	LAMP OFF	
	"ON"	LAMP ON (THIS VALUE IS SAVED ON THE OTHER TEST MODE FOR YOUR REFERENCE.)	
	"STEP"	LAMP	ENTIRE ON, OFF BLINKING -> THE UP ON-> THE RIGHT ON -> THE LEFT ON-> TICKET 1 LAMP ON SEQUENCE REPETITION
		FND	ENTIRE ON, OFF BLINKING -> NUMBER COUNT 1111 ~ 9999 -> S-BONUE FND: 1111 / TICKETS FND : 2222 / TIME FND : 3333 / CREDIT FND : 44 SIGN SEQUENCE REPETITION
		LED	ENTIRE ON, OFF BLINKING -> RED -> GREEN -> BLUE -> WHITE LIGHTING SEQUENCE REPETITION
	"ON/OFF"	ENTIRE ON, OFF REPETITION	
ELEPHANT (BALL DROP EQUIPMENT)	MOVEMENT TEST OF ELEPHANT SHOOTING BALL EQUIPMENT (IF YOU PUSH SELECT BUTTON WITHOUT SETTING ARTICLE CHANGE ON THE MOVE, IT IS STOP.)		
	"STOP"	STOP	
	"MOVE"	UP/DOWN REPETITION MOVE	
	"UP"	MOVE TO UP-SIDE	
	"DONW"	MOVE TO DOWN-SIDE	
	TIME FND SIGN : [0000] SHOW OPERATING HOUR UP TO Up, Down Limit S/W TICKET FND SIGN: [0000] BALL SENSOR IN ORDER FROM LEFT, UP S/W, DOWN S/W, DISPLAY ENCODER SENSOR STATUS AS 0.1		
SOLENOID	TEST FOR SOLENOID MOVEMENT STATUS		
	"OFF"	SOLENOID BASIC STATUS	
	"ON"	SOLENOID PULLED SATUS	
	"WAIT"	STANDING BY STATUS UNTIL NEXT ON IS POSSIBLE	
	TIME FND DISPLAY : AFTER SOLENOID OPERATING, WAITING HOUR COUNT TO NEXT OPERATING TICKETS FND DISPLAY : SOLENOID OPERATING STATUS DISPLAY		
ELEVATOR	TEST FOR BALL ELEVATOR MOVENT		
	"OFF"	BALL ELEVATOR STOP OR HOLD STATUS	
	"ON"	BALL ELEVATOR MOVE **CAUTION! THERE IS A PLOBLEM ABOUT BALL JAMMED, IF OVER 2 BALL ARE CAME, IT OPERATE SOLENOID AUTOMATICALLY AND DISPENSE BALL.** **PLEASE MOVE ELEPHANT TO UP-SIDE IN ORDER TO CONTINUATIVE TEST.**	

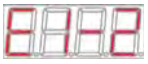
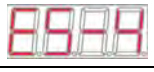
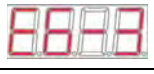
	TIME FND DISPLAY: [E0S0] ENCODER SENSOR FORM LEFT, UP-SIDE BALLS/W STATUS DISPLAY TICKET FND DISPLAY: BALL ELEVATOR OPERATING STATUS DISPLAY S-BONUS FND DISPLAY: UP-SIDE BALL S/W CHECKING HOUR INTERVAL DISPLAY	
GOALIN IO	GOAL IN IO BOARD & GOAL IN LED HOLE TEST	
	"RESET"	GOALIN IO BOARD BOOT AGAIN. AFTER BLINKING LED WHITE IT CHANGES TO Red, Green, Blue, Yellow, Cyan, Magenta, Black MODE.
	"SENSOR"	SENSOR TEST IT BLINK TO 1PEACE EACH AS LED Green COLOR IF IT RECOGNIZES SENSOR, IT REMAINS TO LED Red AND IF IT SEPARATE, IT DISPLAY LED ANMATION.
	TIME FND DISPLAY : [u1.00] GOALIN IO BOARD FIRMWARE VIRSION DISPLAY TICKETS FND DISPLAY: [0000] HEXADECIMAL OF GOIN HOLE SENSOR STATUS DISPLAY S-BONUS FND DISPLAY: [n100] GOALIN IO BOARD AND COMMUNICATION STATUS RATE DISPLAY	
COIN	"OFF", "ON"	COIN MACHINE MOVEMENT (MOVEMENT STATUS AND INSERTED COUNT DISPLAY ON TIME, FICKET FND)
	TIME FND DISPLAY : COIN MACHINE 1 NUMBER, SENSOR STATUS CHECK COIN COUNT DISPLAY FROM LEFT TICKETS FND DISPLAY: COIN MACHINE 2 NUMBER, SENSOR STATUS CHECK COIN COUNT DISPLAY FROM LEFT. S-BONUS FND DISPLAY: OPERATING STATUS DISPLAY	
TICKET	"OFF", "ON"	TEST FOR TICKET MOVEMNT (BASIC 3 TICKETS)
	TIME FND DISPLAY: [b0s0] Empty BUTTON STATUS FROM LEFT, TICKET DISPENSATION SENSOR STATUS DISPLAY TICKETS FND DISPLAY: DISPENSED TICKET COUNT 3, 2, 1 DISPLAY S-BONUS FND DISPLAY: TICKET TEST OPERATING STATUS DISPLAY	
SOUND TEST	[=>]	ACCESS TO SOUND TEST MODE
EXIT	EXT TO SETUP MODE	

TEST MODE -> INPUT TEST		
YOU CAN EXIT FROM Input Test IF YOU PUSH SELECT OR CANCEL BUTTON FOR MORE THAN 1 SECOND		
LCD DISPLAY	**STATUS**	**DESCRIPTION**
GAME BUTTON	Off, On	GAME BUTTON SATUS
TICKET SENSOR	Off, On	TICKET DISPENSE SENSOR STATUS
TICKET BUTTON	Off, On	TICKET DISPENSE BUTTON STATUS
COIN 1 SENSOR	Off, On	COIN 1 SENSOR STATUS
COIN 2 SENSOR	Off, On	COIN 2 SENSOR STATUS
SETUP UP	Off, On	SETUP UP BUTTON STATUS
SETUP DOWN	Off, On	SETUP DOWN BUTTON STATUS
SETUP LEFT	Off, On	SETUP LEFT BUTTON STATUS
SETUP RIGHT	Off, On	SETUP RIGHT BUTTON STATUS
SETUP SELECT	Off, On	SETUP SELECT BUTTON STATUS
SETUP CANCEL	Off, On	SETUP CANCLE BUTTON STATUS
SERVICE BUTTON	Off, On	SETUP BUTTON STATUS
0 : 0000000000000000	INNER SWITCH, SENSOR STATUS 0, 1 VALUE CONFIM	
1 : 0000000000000000	0 – NO INPUT	
7 : 0000000000000000	1 – INPUT EXIST	

TEST MODE -> SOUND TEST		
LCD DISPLAY	**SET VALUE**	**DESCRIPTION**
TEST	“Channel”	THE VOICE OF One, Two, ~ Eight GENERATES CHANNEL BY CHANNEL
	“BGM”	BGM GENERATING TEST
	“FX”	SOUND EFFECT GENERATING TEST
	“VOC”	VOICE GENERATIING TEST
-EXIT-	EXIT TO PREVIOUS MENU	

EXIT	
EXIT TO PREVIOUS MENU (SETUP MODE) (EXIT MENU)	SELECT BUTTON : PERFORM

5-4. ERROR CODE

Error Code	TIME Fnd Display	ErrorS	DESCRIPTION	REMEDY
E0-1		SETUP LCD	NO SET UP LCD RESPONSE	SET UP LCD CHECK (GAME PLAYS ON NORMAL STATUS)
E0-2		SYSTEM	FAILURE OF READING & WRITING SAVED SET UP DATA MEMORY	IF THE ERROR CONTINUES AFTER POWER On, Off AGAIN, REPLACE THE MAIN BOARD)
E0-3			SAVED SET UP DATA PROBLEM	ACCESS TO SET UP MODE AND CHECK AND CONFIRM THE SET UP AND THEN SAVE (IF THE ERRR CONTINUES, REPLACE THE MAIN BOARD)
E0-4			FAILURE OF READING & WRITING SAVED GAME DATA MEMORY	IF THE ERROR CONTINUES AFTER POWER On, Off AGAIN, REPLACE THE TOP CPU BOARD)
E1-1		COIN MACHINE	COIN 1 SENSOR SIGNAL EXIST	CHECK THE COIN MACHINE 1 (COIN SWITCH STATUS CHECK)
E1-2			COIN 2 SENSOR SIGNAL EXIST	CHECK THE COIN MACHINE 2 (COIN SWITCH STATUS CHECK)
E2-1		GOALIN IO BOARD	NO COMMUNICATION	1. IO BOARD STATUS INSPECTION. (LED BLINKS) 2. INSPECT WIRES
E2-2			NO GOALIN SENSOR INPUT SIGNAL (NO CONSECUTIVE GOALIN 3 TIMES SIGNAL IN A GAME)	1. BALL JAMMED INSPECTION 2. GOALIN SENSOR STATUS INSPECTION.
E2-3			GOALIN SENSOR SIGNAL COME CONTINUOUSLY	1. HARNESS INSPECTION.. 2. GOALIN IO PCB SENSOR INSPECTION.
E4-1		BALL INSTALL SENSOR (SOLENOID)	AFTER DISPENSING ELEVATOR BALL, NO BALL INSTALLATION SENSOR SIGNAL	1. BALL INSTALLATION SENSOR INSPECTION 2. BALL DISPENSATION INSPECTION.
E4-2			AFTER SHOOTING BALL, BALL INSTALLATION SIGNAL EXIST CONTINUOUSLY..	1. BALL INSTALLATION SENSOR INSPECTION 2. SOLENOID OPERATING INSPECTION
E5-1		BALL DROP MOVING DEVICE	NO MOTOR OPERATING OR NO ENCODER SENSOR SIGANL HAVE A PROBLEM ABOUT UP/DOWN SWITCH	1. MOTOR OPERATING INSPECTION. 2. MOTOR ENCODER INSPECTION. 3. UP/DOWN SWITCH INSPECTION.
E5-2			HAVE A PROBLEM ABOUT UP/DOWN SWITCH	1. MOTOR OPERATING INSPECTION. 2. UP RESTRICTION SWITCH INSPECTION.
E5-3			HAVE A PROBLEM ABOUT DOWN RESTRICTION SWITCH	1. MOTOR OPERATING INSPECTION. 2. DOWN RESTRICTION SWITCH INSPECTION.
E5-4			UP/DOWM RESTRICTION SWITCH SIGNAL EXIST AT THE SAME TIME	UP/DOWN RESTRICTION SWITCH INSPECTION.
E6-1		ELEVATOR	NO CHANGE ENCODER SIGNAL	1. CHECK THE MOTOR OPERATING 2. CHECK THE ENCODER SENSOR STATUS
E6-2			NO SIGNAL OF UP-SIDE BALL SWITCH	1. CHECK THE BALL EXISTENCE 2. CHECK THE UP SWITCH STATUS
E6-3			UP-SIDE BALL SWITCH SIGNAL EXIST CONTINUOUSLY	1. CHECK THE UP-SIDE BALL SWITCH 2. BELT TENSION CHECK(BELT ROTATION)
Et-1		TICKET ERROR	NO TICKET	CHECK TICKETS OR MOVENET
Et-2			TICKET OBSTRUCTED	CHECK TICKET OBSTRUCTED OR DEEP SWITCH STATUS

5-5. PAYOUT TABLE

[[SEPERATION #2] SCORE TYPE TABLE

STANDARD DISPENSATION TABLE OF AVERAGE TICKET ISSUE QUANTITY PER 1 GAME.
BONUS BALLS HOLE IS WON SCORE RANDOMLY AND BONUS BALLS EVENT PROGRESS
(BONUS BALLS EVENT – AUTOMATICALLY SETTING BALL DISPENSE AND WIN GOALIN HOLE SCORE)

SCORE TYPE 1		
AVERAGE TICKET		8 Ticket
1	10	1
2	20	2
4	50	4
2	Bonus Balls	2
1	**100**	1
FRONT BUTTON		

SCORE TYPE 2		
AVERAGE TICKET		12 Ticket
2	20	2
4	40	6
10	80	10
6	Bonus Balls	4
2	**100**	2
FRONT BUTTON		

SCORE TYPE 3		
AVERAGE TICKET		16 Ticket
2	30	4
6	50	6
10	100	10
6	Bonus Balls	6
4	**200**	2
FRONT BUTTON		

SCORE TYPE 4		
AVERAGE TICKET		20 Ticket
4	50	4
6	70	8
10	100	10
8	Bonus Balls	6
4	**300**	4
FRONT BUTTON		

SCORE TYPE 5		
AVERAGE TICKET		24 Ticket
6	50	6
10	70	10
20	100	20
10	Bonus Balls	10
6	**300**	6
FRONT BUTTON		

SCORE TYPE 6		
AVERAGE TICKET		28 Ticket
4	50	4
10	70	10
20	100	20
10	Bonus Balls	10
4	**500**	4
FRONT BUTTON		

SCORE TYPE 7		
AVERAGE TICKET		32Ticket
6	50	6
10	70	10
30	150	30
10	Bonus Balls	10
6	**500**	6
FRONT BUTTON		

SCORE TYPE 8		
AVERAGE TICKET		36Ticket
8	70	8
10	100	20
30	150	30
20	Bonus Balls	10
8	**500**	8
FRONT BUTTON		

SCORE TYPE 9 (DEFAULT)		
AVERAGE TICKET		40Ticket
10	50	10
20	100	20
30	200	30
20	Bonus Balls	20
10	**500**	10
FRONT BUTTON		

SCORE TYPE 10		
AVERAGE TICKET		44Ticket
10	70	10
20	100	20
50	200	50
20	Bonus Balls	20
10	**500**	10
FRONT BUTTON		

SCORE TYPE 11		
AVERAGE TICKET		48Ticket
10	100	10
20	200	20
40	300	40
20	Bonus Balls	20
10	**500**	10
FRONT BUTTON		

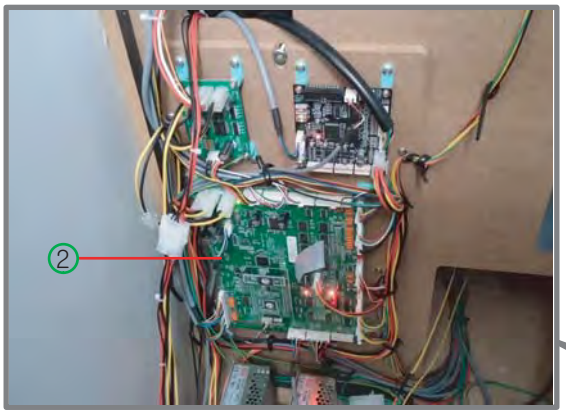
SCORE TYPE 12		
AVERAGE TICKET		52Ticket
10	100	10
20	200	30
50	300	50
30	Bonus Balls	20
10	**500**	10
FRONT BUTTON		

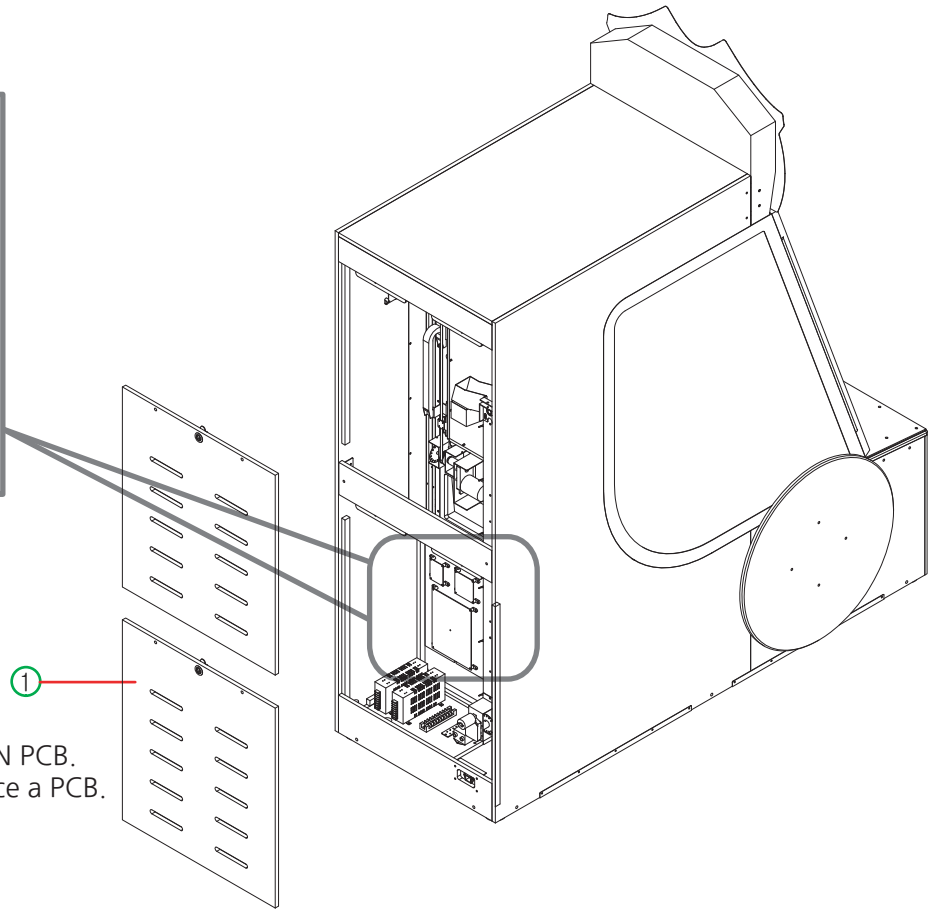
SCORE TYPE 13		
AVERAGE TICKET		56Ticket
10	100	10
30	200	30
60	300	60
30	Bonus Balls	30
10	**500**	10
FRONT BUTTON		

SCORE TYPE 14		
AVERAGE TICKET		60Ticket
10	100	10
20	200	20
30	300	30
20	Bonus Balls	20
10	**1000**	10
FRONT BUTTON		

6. HOW TO REPLACE MAJOR COMPONENTS

6-1) Replacing MAIN PCB

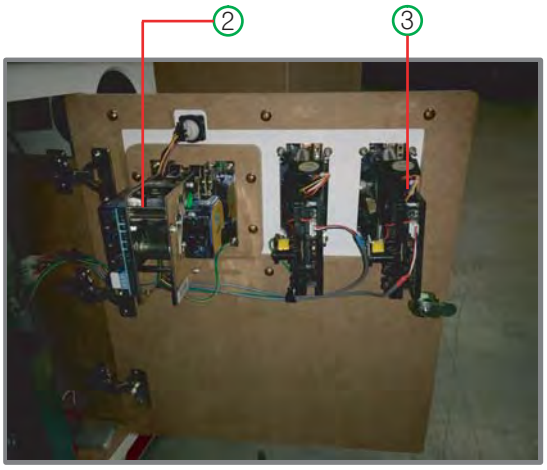




(1) Open the ①FRONT DOOR, There is a ②MAIN PCB.
After separate a connected connector, replace a PCB.
(2) Reassemble them in reverse order.

NO.	PART NAME	SPEC.	CODE NO.
②	MAIN PCB ASS'Y	-	AICU0PCB001

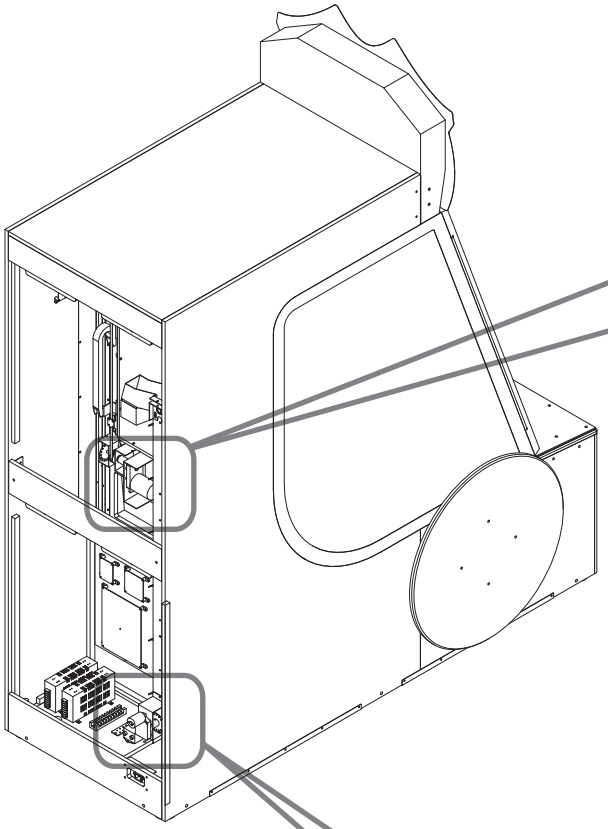
6-2) Replacing COIN SELECTOR & TICKET DISPENSER



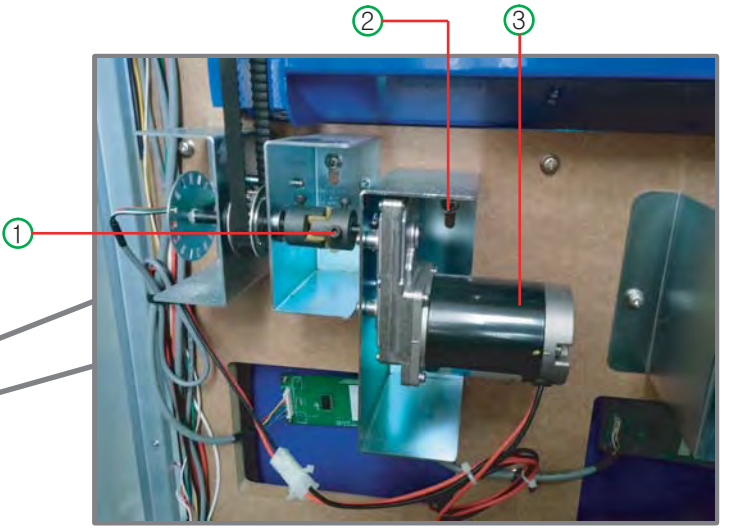
(1) Open the ①FRONT DOOR.
(2) Separate a connected connector.
(3) Seperate the bolt or bolt&nut. [M4bolts, 4places]
(4) Reassemble them in reverse order after replacement.

NO.	PART NAME	SPEC.	CODE NO.
②	COIN SELECTOR	TW-333	MZZZ0COS045
③	TICKET DISPENSER	TL-002H	MZZZ0TID007

6-3) Replacing MOTOR



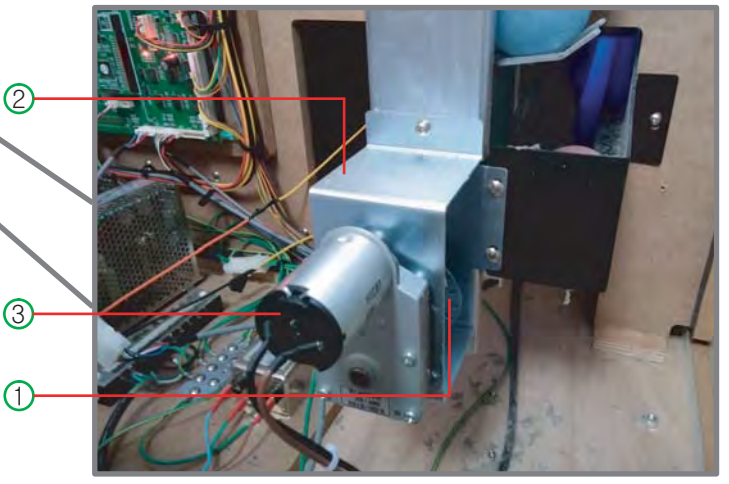
(1) Replacing Y MOTOR



(1) Open the rear door using the key.
(2) Separate the conected connector with motor.
(3) ① Separate the coupling using the wrench and,
(4) ② Separate the Y MOTOR part ass'y [M6bolts, 2places]
(5) ③ Separate the connected connector with MOTOR ass'y, after replacing, assembles in reverse order.[M4bolts, 4places]

NO.	PART NAME	SPEC.	CODE NO.
③	MOTOR	KGY-060-K6DG15N1	MZZZ0MOT083

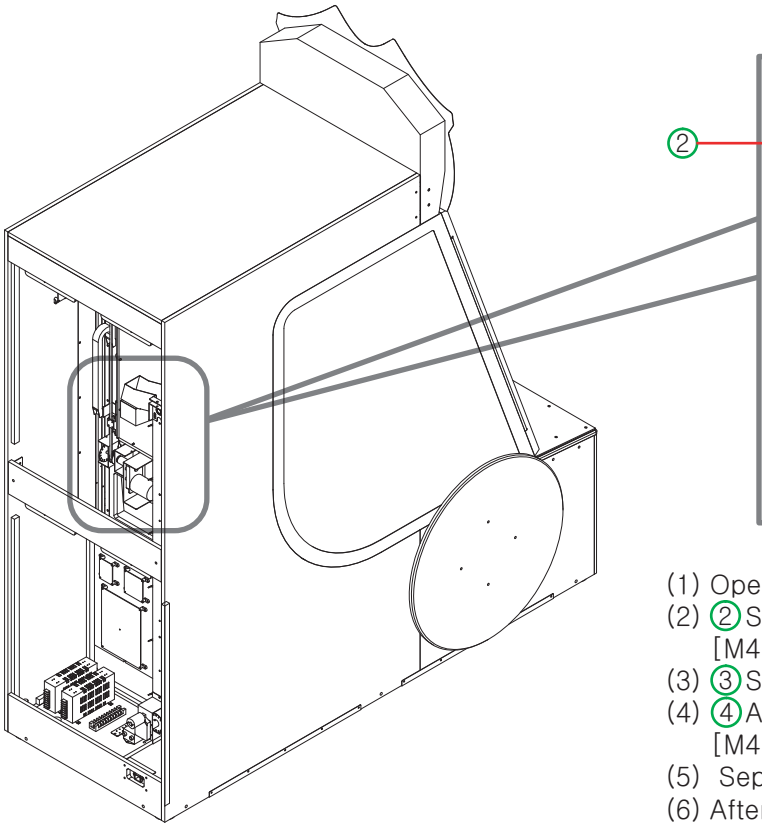
(2) Replacing ELEVATOR MOTOR

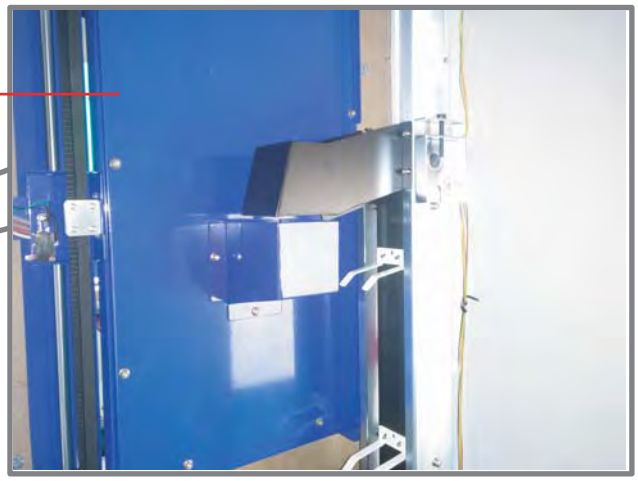


(1) Separate the connected connector with MOTOR,
(2) ① Separate the coupling using the wrench and
(3) ② Separate the ELEVATOR MOTOR BKT. [M4bolts, 2places]
(4) ③ After MOTOR replacing, assemble in reverse order. [M4bolts, 4places]

NO.	PART NAME	SPEC.	CODE NO.
③	MOTOR	KGE-3448-050-12V	MZZZ0MOT084

6-4) Replacing SOLENOID





(1) Open the rear ① DOOR using the key.
(2) ② Separate the Y MOVING BASE COVER BKT.
[M4bolts, 8places]
(3) ③ Separate the connected connector with SOLENOID.
(4) ④ After separating captive bolt SOLENOID BASE BKT.
[M4bolts, 4places]
(5) Separate the SOLENOID [M4bolts, 4places]
(6) After replacing, assemble in reverse order.

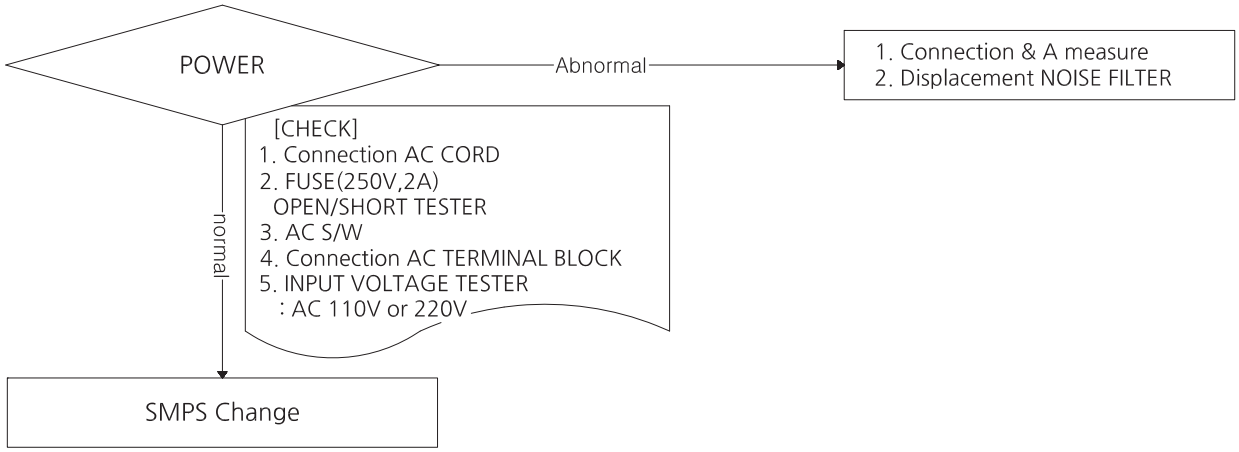
NO.	PART NAME	SPEC.	CODE NO.
③	TUBULAR SOLENOID	M 32022L	AREE0ASS001

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

7. TROUBLESHOOTING

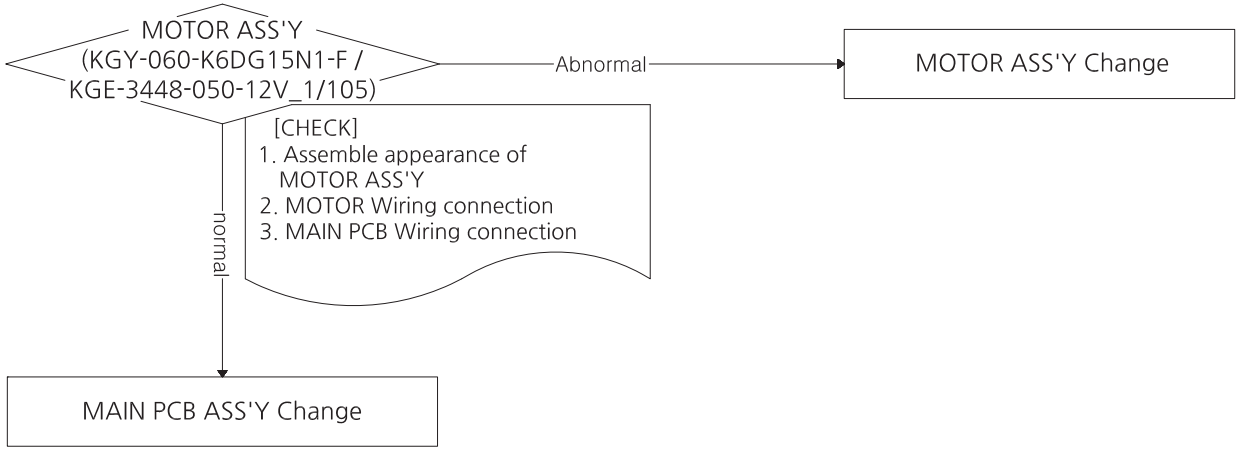
7-1. IN CASE OF POWER FAILURE

*Common: Check the input voltage, check wiring



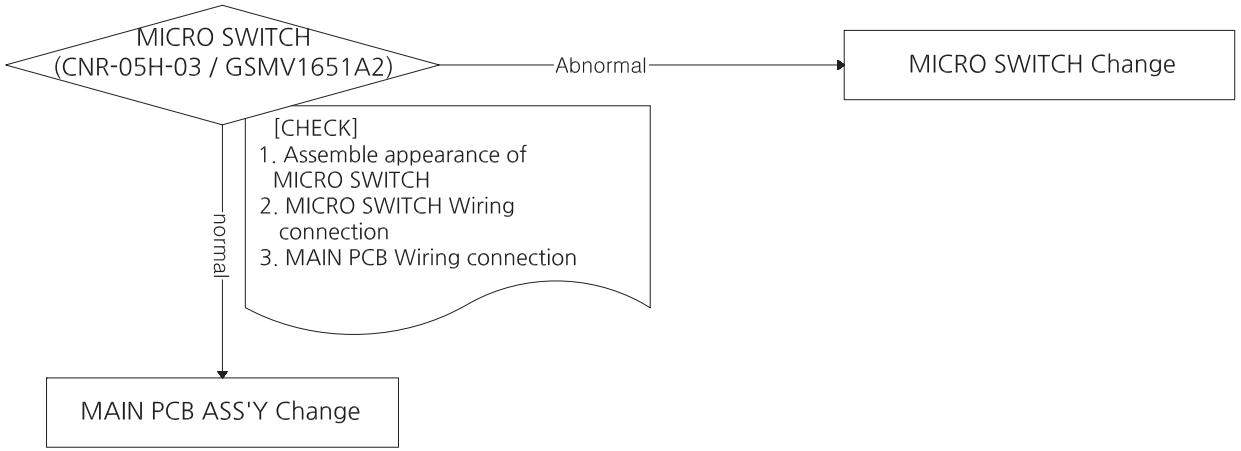
7-2. MOTOR ERROR

*Common: Check the input voltage, check wiring



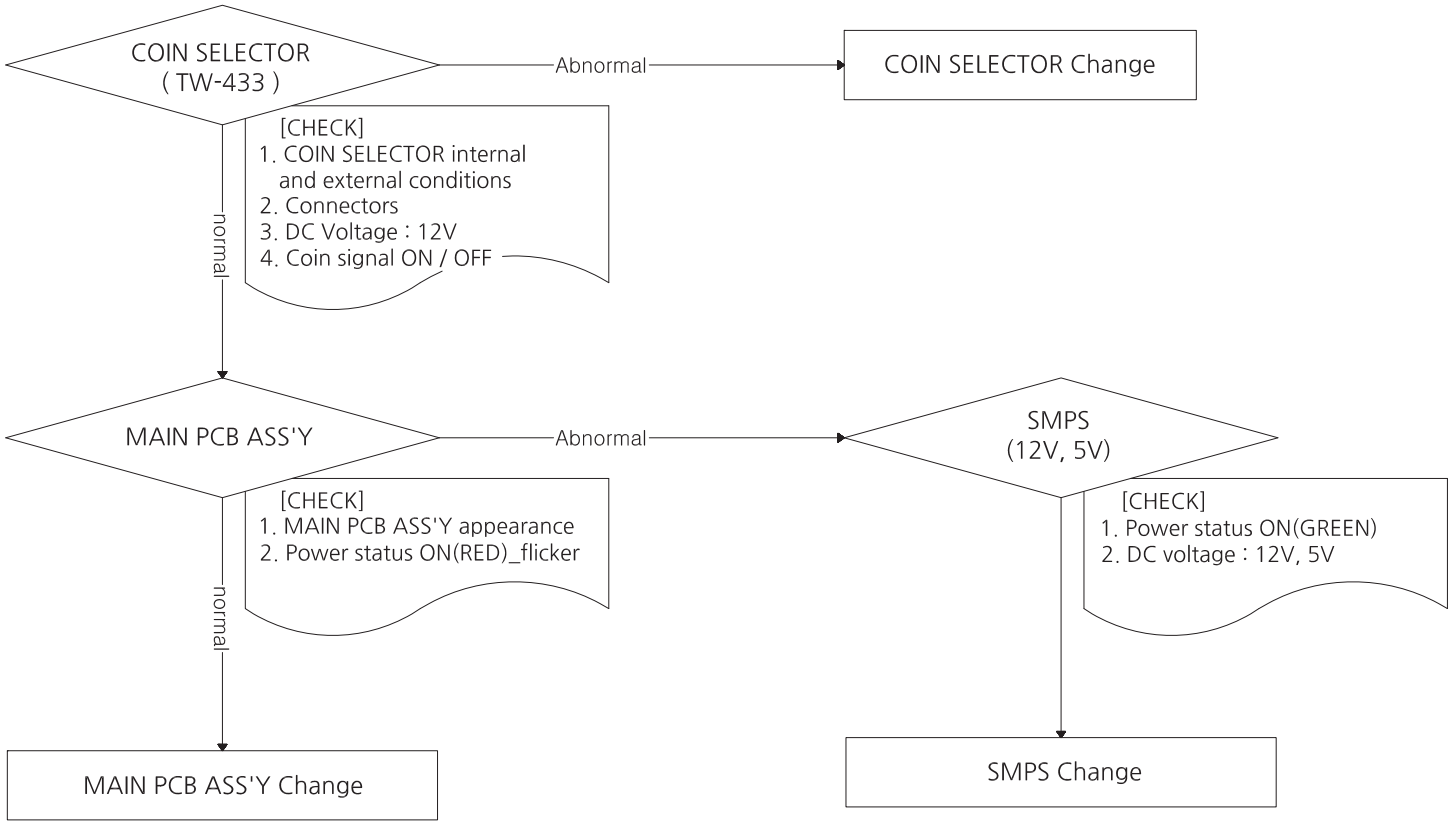
7-3. MICRO SWITCH ERROR

*Common: Check the input voltage, check wiring



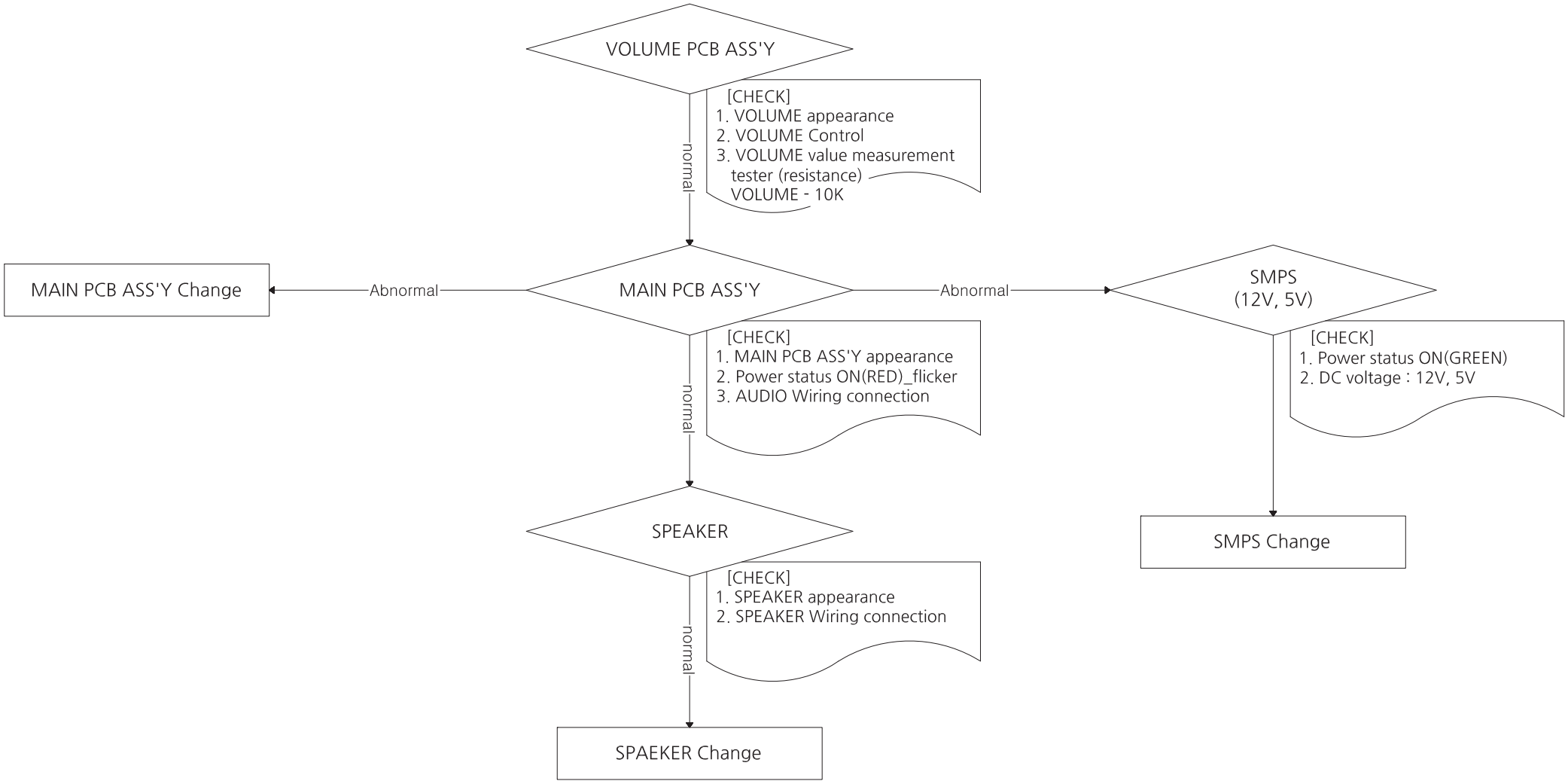
7-4. COIN SELECTOR ERROR

*Common: Check the input voltage, check wiring



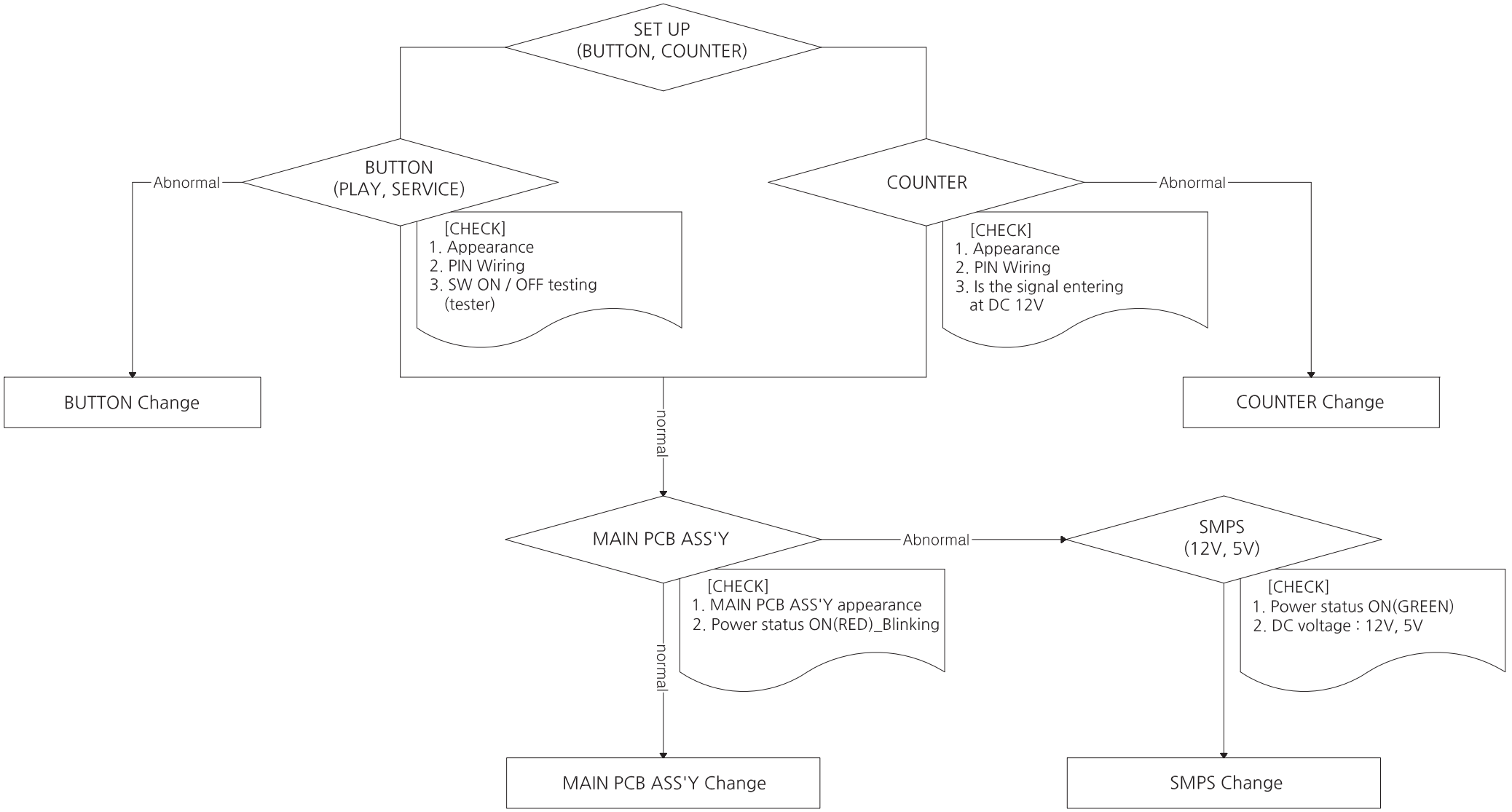
7-5. SOUND ERROR

*Common: Check the input voltage, check wiring



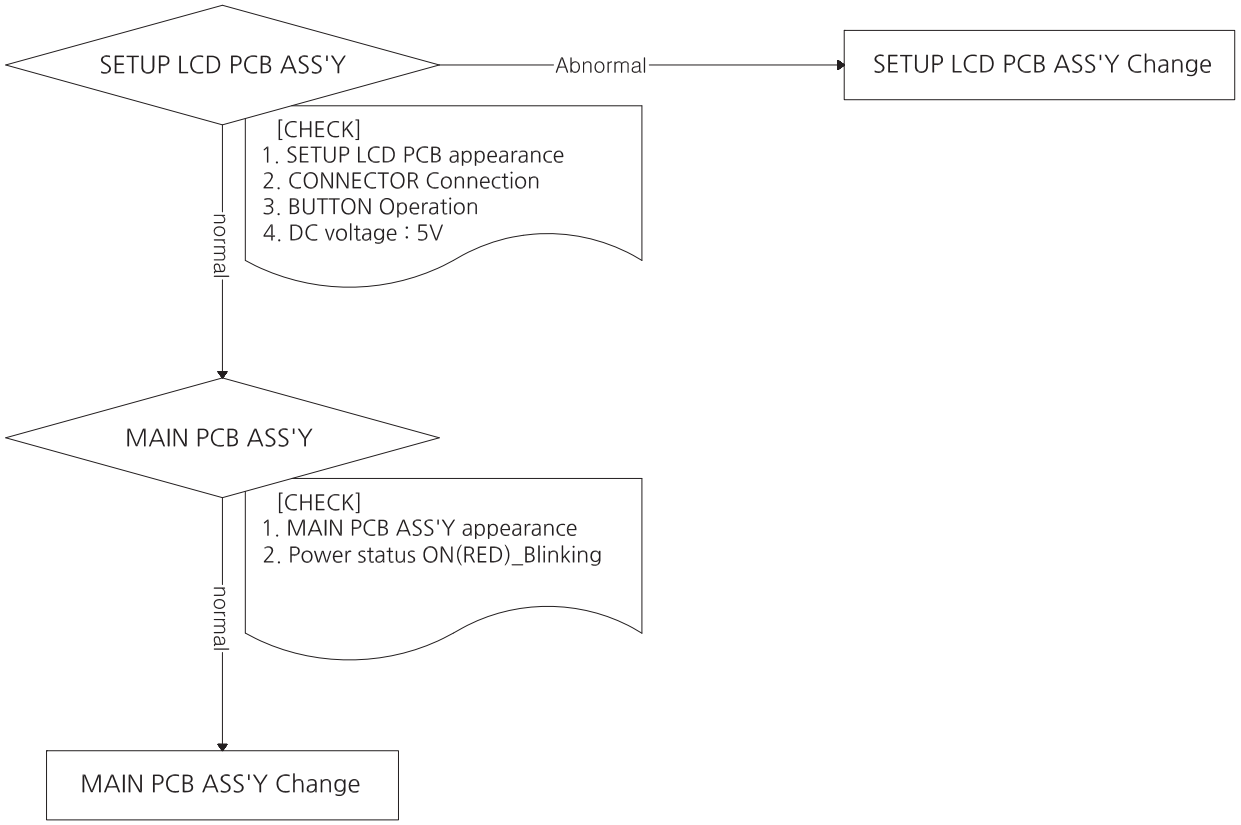
7-6. BUTTON & COUNTER ERROR

*Common: Check the input voltage, check wiring



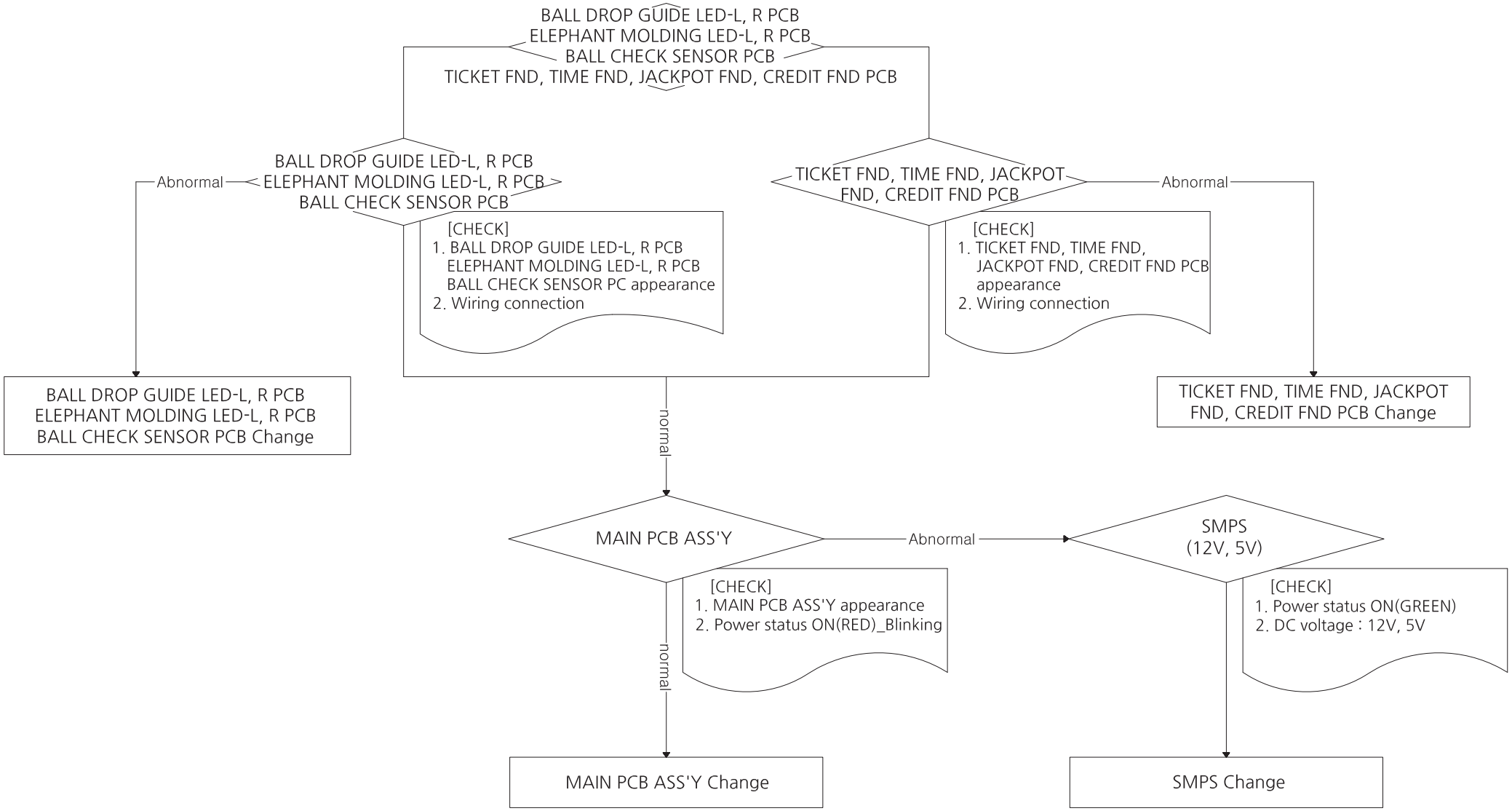
7-7. SETUP LCD PCB ERROR

*Common: Check the input voltage, check wiring



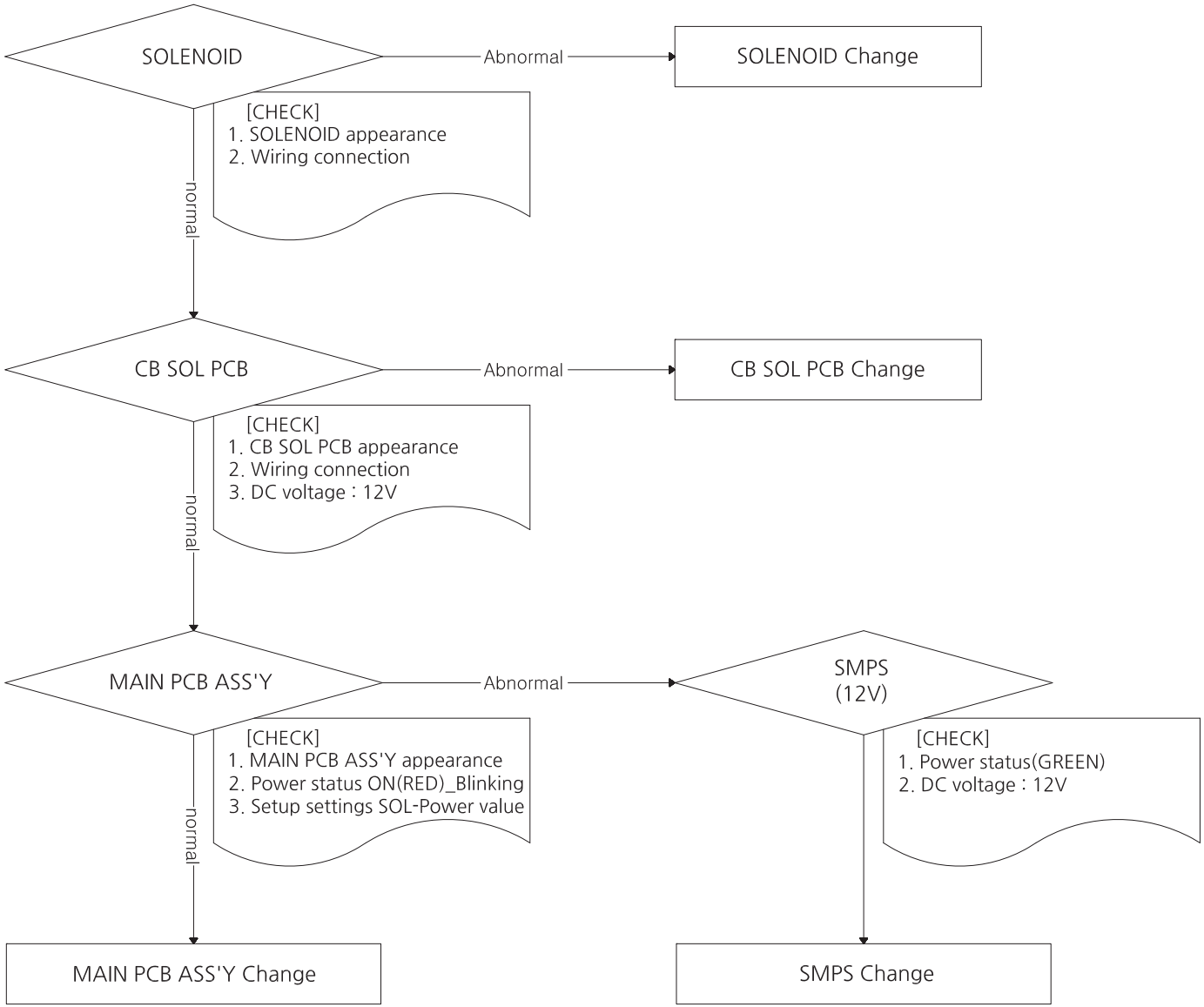
7-8. BALL DROP GUIDE LED-L, R PCB / ELEPHANT MOLDING LED-L, R PCB / BALL CHECK SENSOR PCB / TICKET FND, TIME FND, JACKPOT FND, CREDIT FND PCB ERROR

*Common: Check the input voltage, check wiring



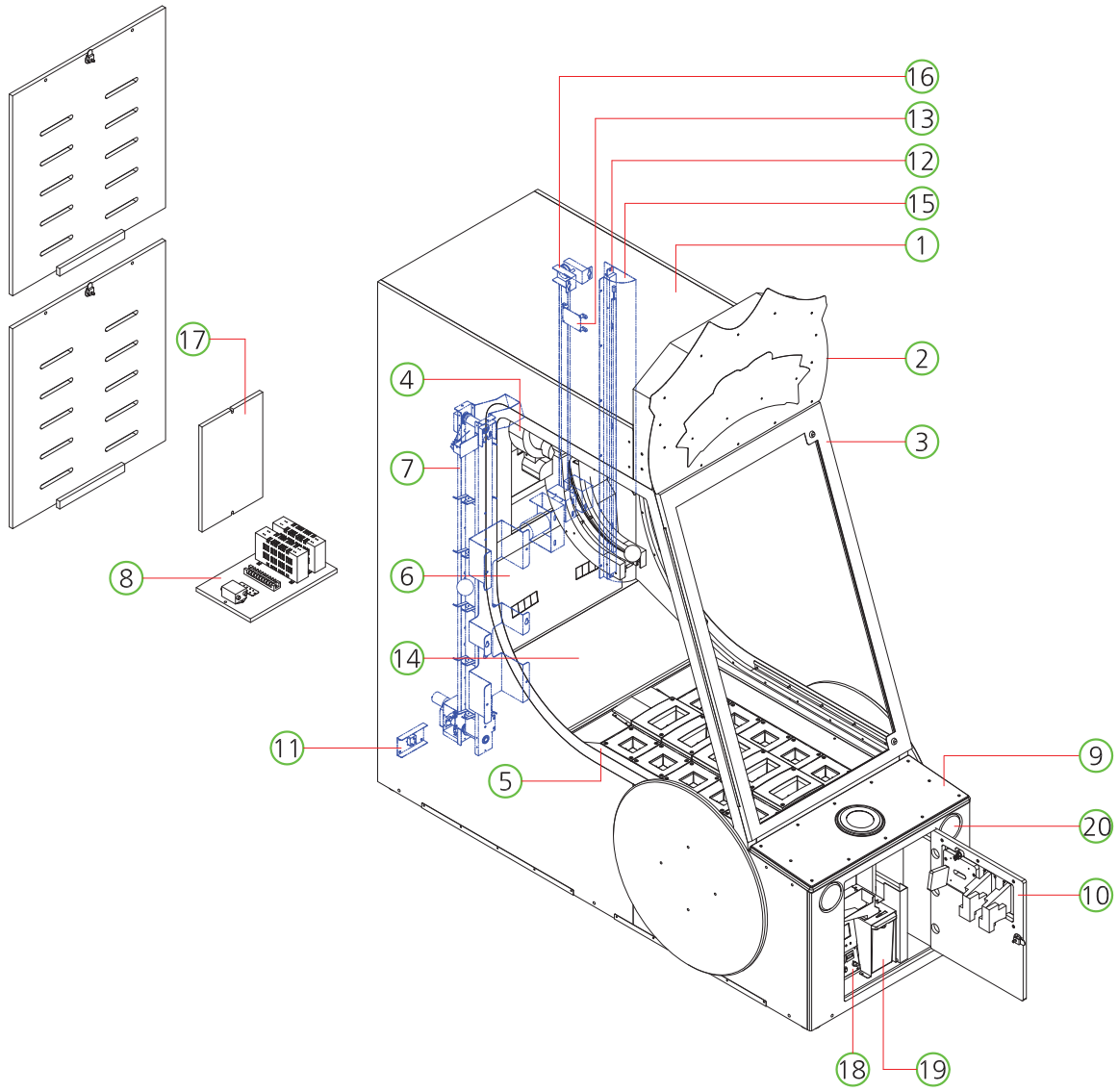
7-9. SOLENOID ERROR

*Common: Check the input voltage, check wiring



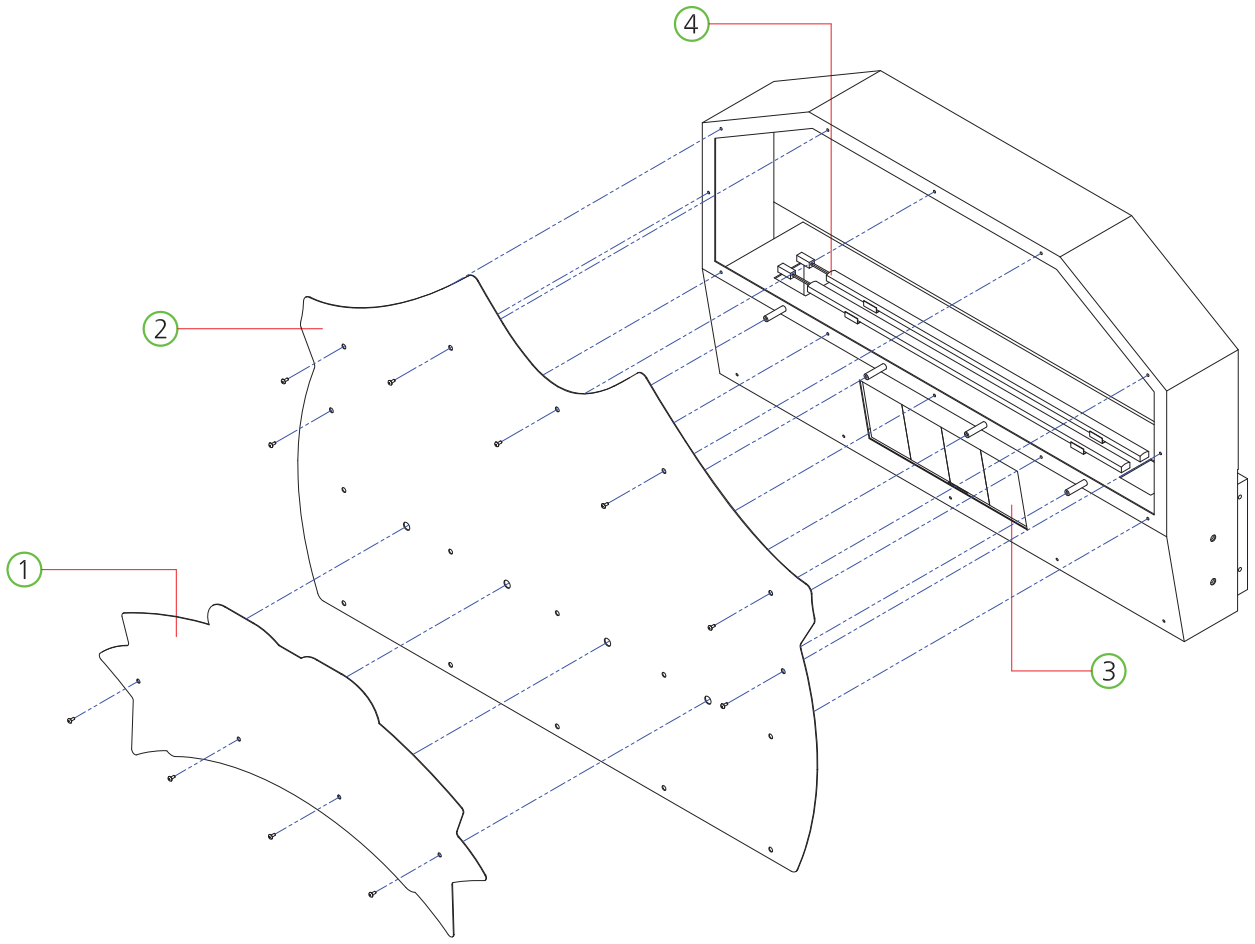
8. EXPLODED VIEW

8-1. MAIN CABINET



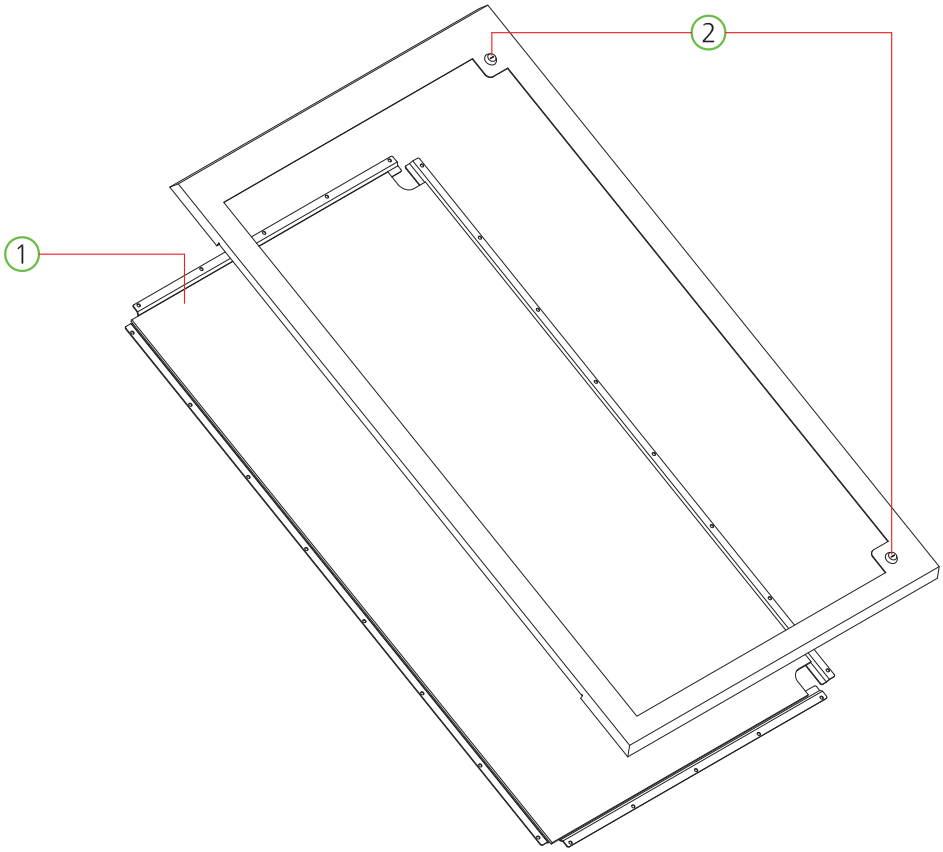
NO.	PART NAME	SPEC.	QUANTITY	CODE NO.
1	MAIN CABINET PART	-	1	-
2	BILLBOARD PART	-	1	-
3	FRONT WINDOW DOOR PART	-	1	-
4	BALL DROP GUIDE PART	-	1	-
5	TARGET FRAME PART	-	1	-
6	TICKET FND BKT PART	-	1	-
7	ELEVATOR PART	-	1	-
8	SMPS PANEL PART	-	1	-
9	BUTTON PANEL PART	-	1	-
10	FRONT DOOR PART	-	1	-
11	AC INPUT PART	-	1	-
12	INNER CONER LED LAMP PART	-	2	-
13	DISPLAY COPY PCB ASS'Y	-	1	AGST0PCB008
14	SIDE WINDOW	GLASS-5.0t	1	MREE0GLA001
15	INNER CONER COVER ACRYL	PET-1.0t	2	MREE0ACR007
16	Y MOTOR PART	-	1	-
17	MAIN BOARD PCB PART	-	1	-
18	SETUP PANEL PART	-	1	-
19	COIN BOX	SMALL	1	MDRE0PLA007
20	SPEAKER	-	2	-

8-2. BILLBOARD PART



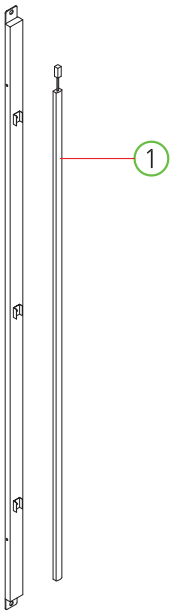
NO.	PART NAME	SPEC.	QUANTITY	CODE NO.
1	BILLBOARD ACRYL	ACRYL-1.0t	1	MREE0ACR005
2	BILLBOARD FND ACRYL	ACRYL-1.0t	1	MREE0ACR006
3	FND PCB ASS'Y	ACRYL-1.0t	1	AFND0PCB011
4	LED STICK BAR	CW500	2	MELE0LED002

8-3. FRONT WONDOW DOOR PART



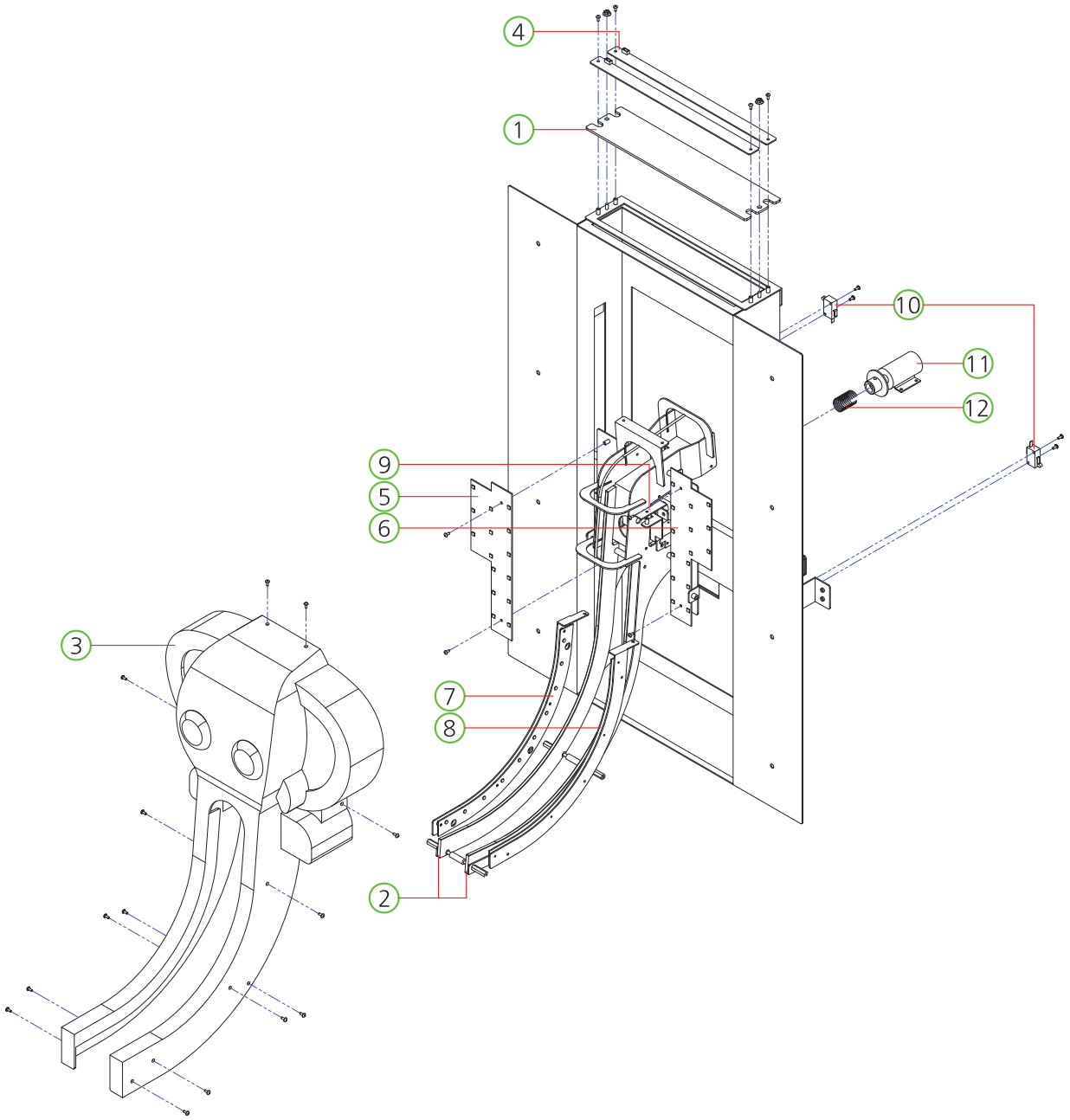
NO.	PART NAME	SPEC.	QUANTITY	CODE NO.
1	FRONT WINDOW	GLASS-5.0t	1	MREE0GLA001
2	KEY ASS'Y	7001	2	MZZZ0KEY076

8-4. INNER CONER LED LAMP PART



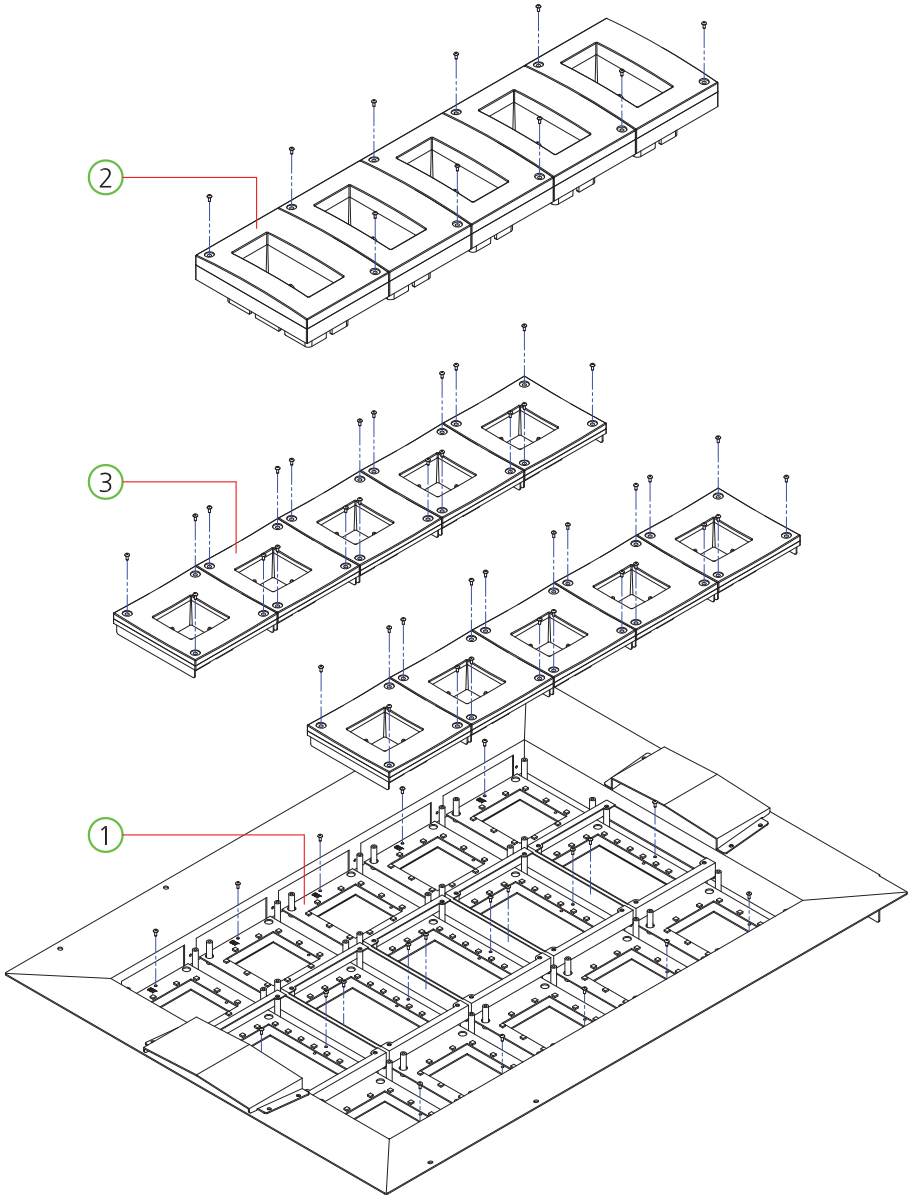
NO.	PART NAME	SPEC.	QUANTITY	CODE NO.
1	LED STICK BAR	CW960	1	MELE0LED002

8-5. BALL DROP GUIDE PART



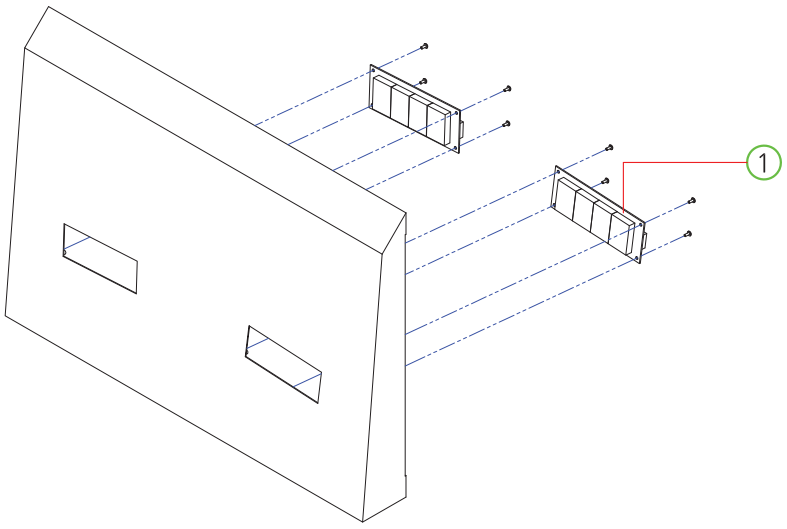
NO.	PART NAME	SPEC.	QUANTITY	CODE NO.
1	Y MOVING TOP LED COVER ACRYL	ACRYL-3.0t	1	MREE0ACR002
2	BALL DROP GUIDE RAIL ACRYL	ACRYL-5.0t	1	MREE0ACR001
3	ELEPHANT MOLDING	-	1	MREE0MOL001
4	MIDDLE DOOR LED PCB ASS'Y	-	2	AM190PCB003
5	ELEPHANT MOLDING LED PCB-L ASS'Y	-	1	AREE0PCB006
6	ELEPHANT MOLDING LED PCB-R ASS'Y	-	1	AREE0PCB007
7	BALL DROP GUIDE LED PCB ASS'Y-L	-	1	AREE0PCB004
8	BALL DROP GUIDE LED PCB ASS'Y-R	-	1	AREE0PCB005
9	BALL CHECK SENSOR PCB ASS'Y	-	1	AREE0PCB003
10	MICRO SWITCH	GSMV1651A2	2	MELE0MIC021
11	TUBULAR SOLENOID	M 32022L	1	AREE0ASS001
12	SOLENOID RETURN SPRING	-	1	MREE0SPR002

8-6. TARGET FRMAE PART



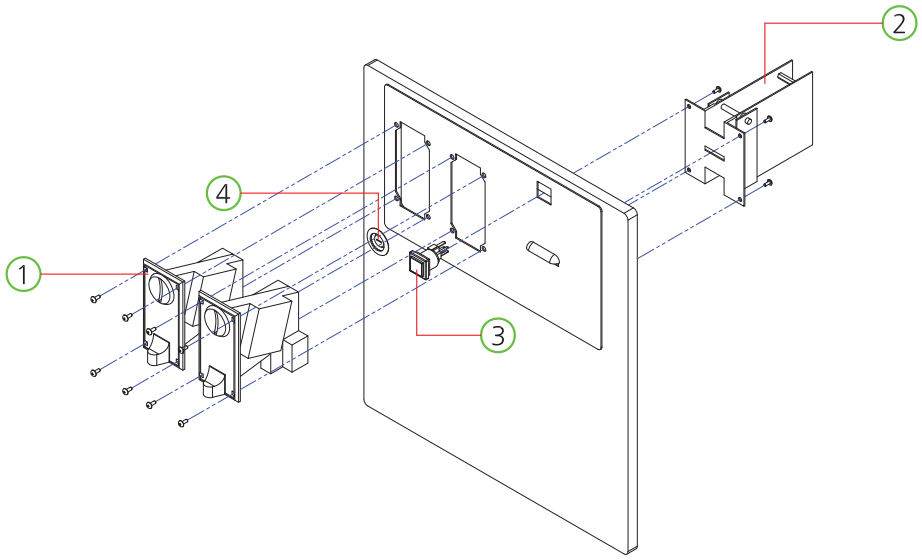
NO.	PART NAME	SPEC.	QUANTITY	CODE NO.
1	TARGET SENSOR PCB ASS'Y	-	5	AREE0PCB009
2	TARGET ACRYL-A BASE	-	5	MREE0PLA001
3	TARGET ACRYL-A	-	5	MREE0PLA002
4	TARGET ACRYL-B BASE	-	10	MREE0PLA003
5	TARGET ACRYL-B	-	10	MREE0PLA004

8-7. TICKET FND BKT PART



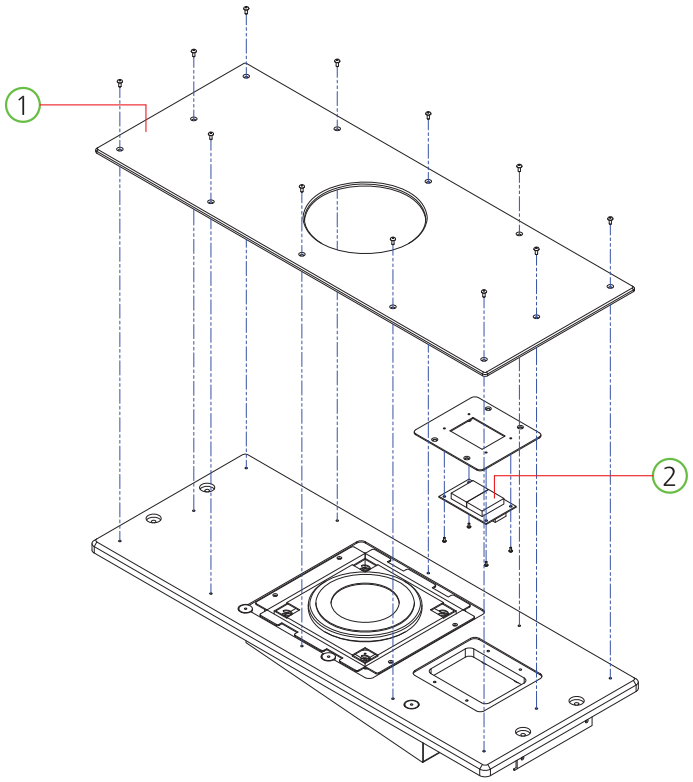
NO.	PART NAME	SPEC.	QUANTITY	CODE NO.
1	FND PCB ASS'Y	-	2	AFND0PCB004

8-8. FRONT DOOR PART

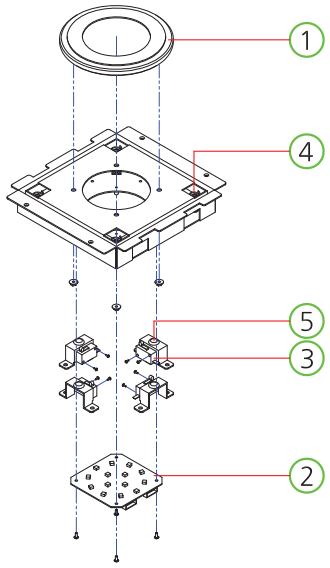


NO.	PART NAME	SPEC.	QUANTITY	CODE NO.
1	COIN SELECTOR	TW-333	2	MZZZ0COS045
2	TICKET DISPENSER	TL-002H	1	MZZZ0TID007
3	BUTTON SWITCH	AMIPB-26SH R12D	1	MMUM0BUT002
4	KEY ASS'Y	7001	1	MZZZ0KEY076

8-9. BUTTON PANEL PART

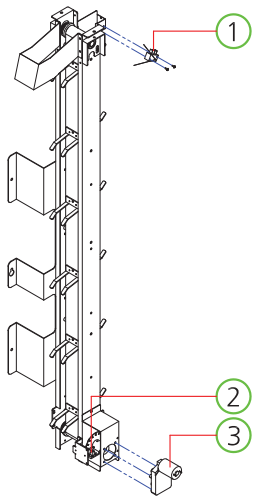


NO.	PART NAME	SPEC.	QUANTITY	CODE NO.
1	BUTTON PANEL ACRYL	ACRYL-5.0t	1	MREE0ACR004
2	FND PCB ASS'Y	-	1	AFND0PCB003



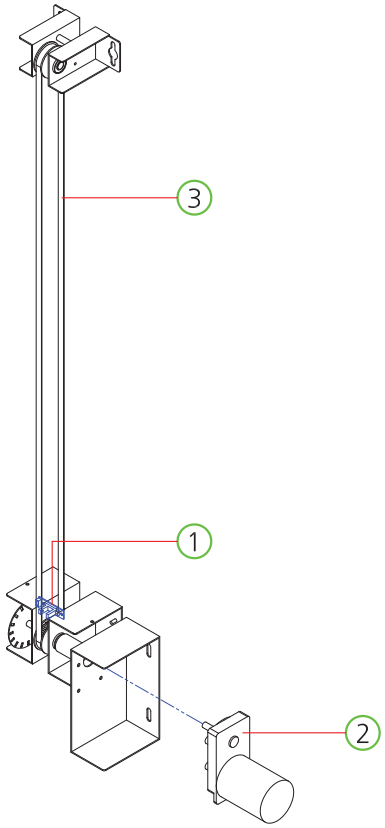
NO.	PART NAME	SPEC.	QUANTITY	CODE NO.
1	DROP BUTTON ACRYL	-	1	MREE0ACR003
2	TOP CASE LED PCB ASS'Y	-	1	APCX0PCB009
3	MICRO SWITCH	GSMV1651A2	1	MELE0MIC021
4	DROP BUTTON RETURN SPRING	-	4	MREE0SPR001
5	PLUG CUSHION RUBBER	KD-96R-9, 6mm	4	MCIR0RUB001

8-10. ELEVATOR PART



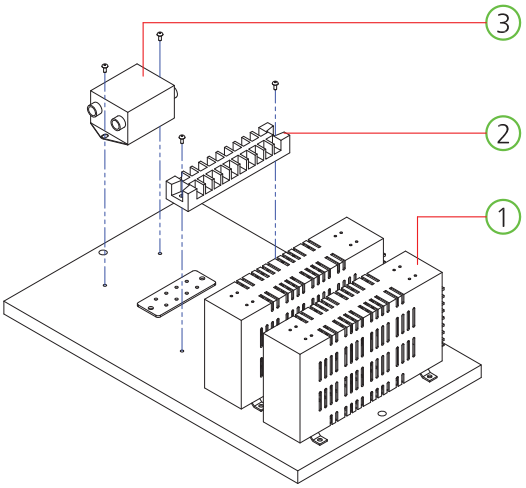
NO.	PART NAME	SPEC.	QUANTITY	CODE NO.
1	MICRO SWITCH	CNR-05H-03	1	MELE0MIC002
2	PHOTO INT-1 PCB ASS'Y	-	1	ACIR0PCB011
3	MOTOR	KGE-3448-050-12V_1/105	1	MZZZ0MOT084

8-11. Y MOTOR PART



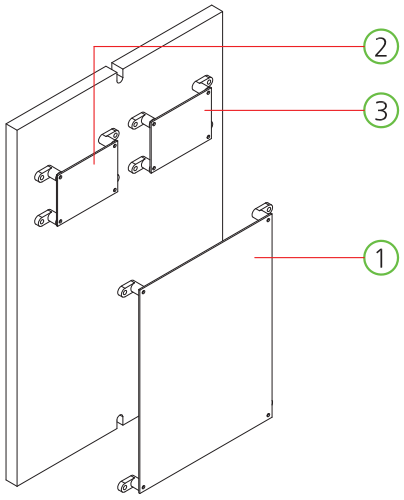
NO.	PART NAME	SPEC.	QUANTITY	CODE NO.
1	PHOTO INT-1 PCB ASS'Y	-	1	ACIR0PCB011
2	DC MOTOR	KGY-060-K6DG15N1	1	MZZZ0MOT083
3	TIMMING BELT	754XL-037	1	MZZZ0BEL022

8-12. SMPS PANEL PART



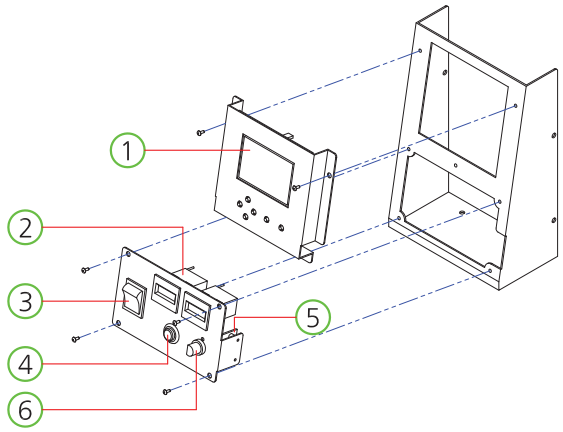
NO.	PART NAME	SPEC.	QUANTITY	CODE NO.
1	POWER SMPS	D120A	2	MELE0SMP045
2	TERMINAL BLOCK	250V 10P	1	MELE0TEB003
3	NOISE FILTER	ES1-F10	1	MELE0NOI006

8-13. MAIN BOARD PCB PART



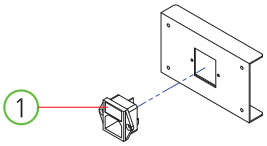
NO.	PART NAME	SPEC.	QUANTITY	CODE NO.
1	MAIN PCB ASS'Y	-	1	AICU0PCB001
	SOUND ROM PCB ASS'Y	-	1	AICU0PCB004
	CPU B PCB ASS'Y	-	1	ALOB0PCB009
2	EXT MOTOR ASS'Y	-	1	ASLG0PCB008
3	TARGET I/O PCB ASS'Y	-	1	AREE0PCB008

8-14. SETUP PANEL PART



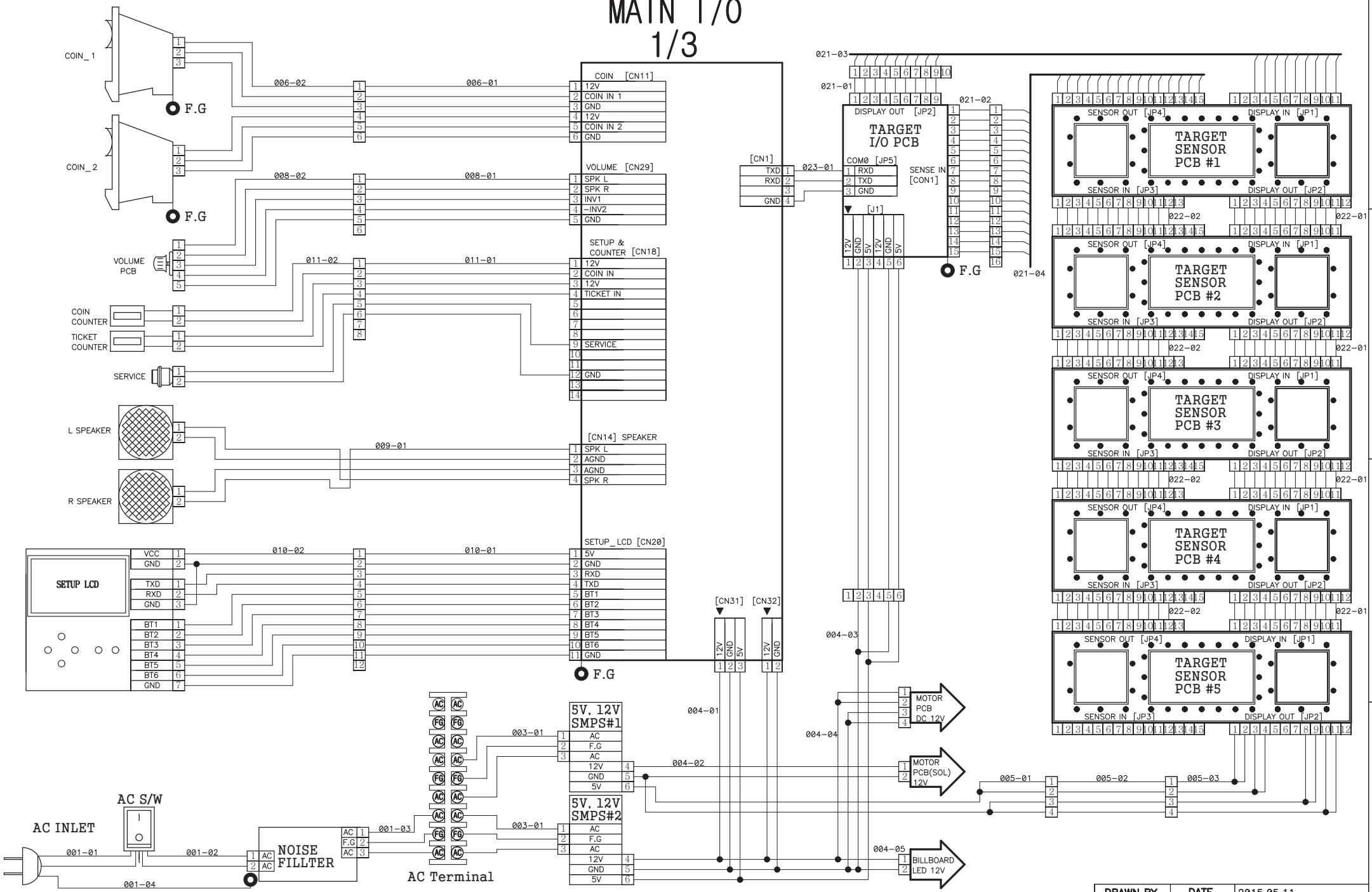
NO.	PART NAME	SPEC.	QUANTITY	CODE NO.
1	SETUP LCD PCB ASS'Y	-	1	AZZZ0PCB113
2	COUNTER	AMMC-712	2	MZZZ0COS045
3	ROCKER SWITCH	T-125 4P	1	MELE0SWI004
4	PUSH BUTTON SWITCH	DS412R	1	MELE0PUS006
5	VOLUME PCB ASS'Y	-	1	AHM20PCB016
6	VOLUME KNOB	-	1	MELE0VOL007

8-15. AC INPUT PART



NO.	PART NAME	SPEC.	QUANTITY	CODE NO.
1	AC INPUT	DAC-13H	1	MELE0SWI015
	FUSE	10A	1	MELE0FUS018

MAIN I/O
1/3



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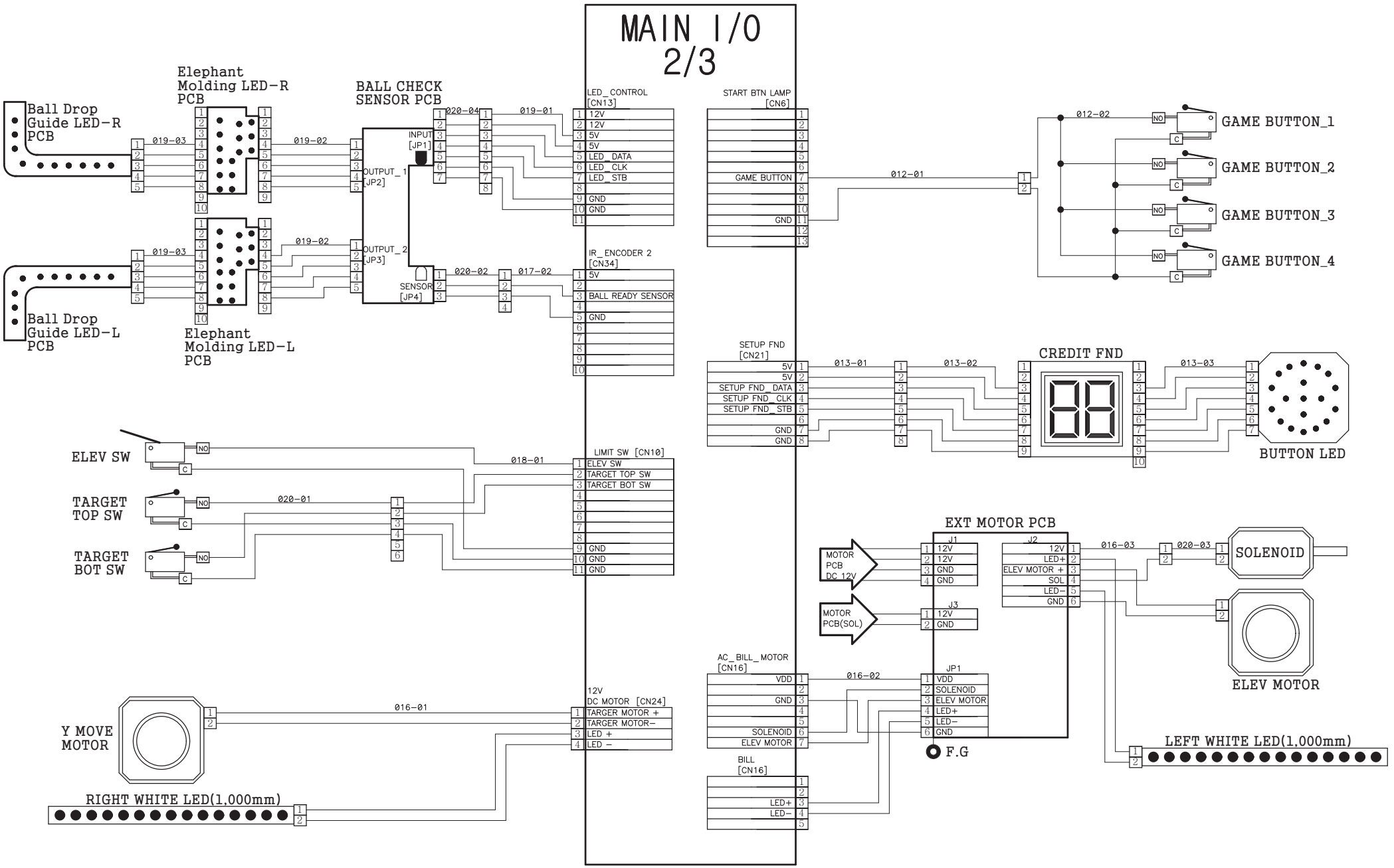
MAIN I/O 2/3



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	ITEM	RED ELEPHANT
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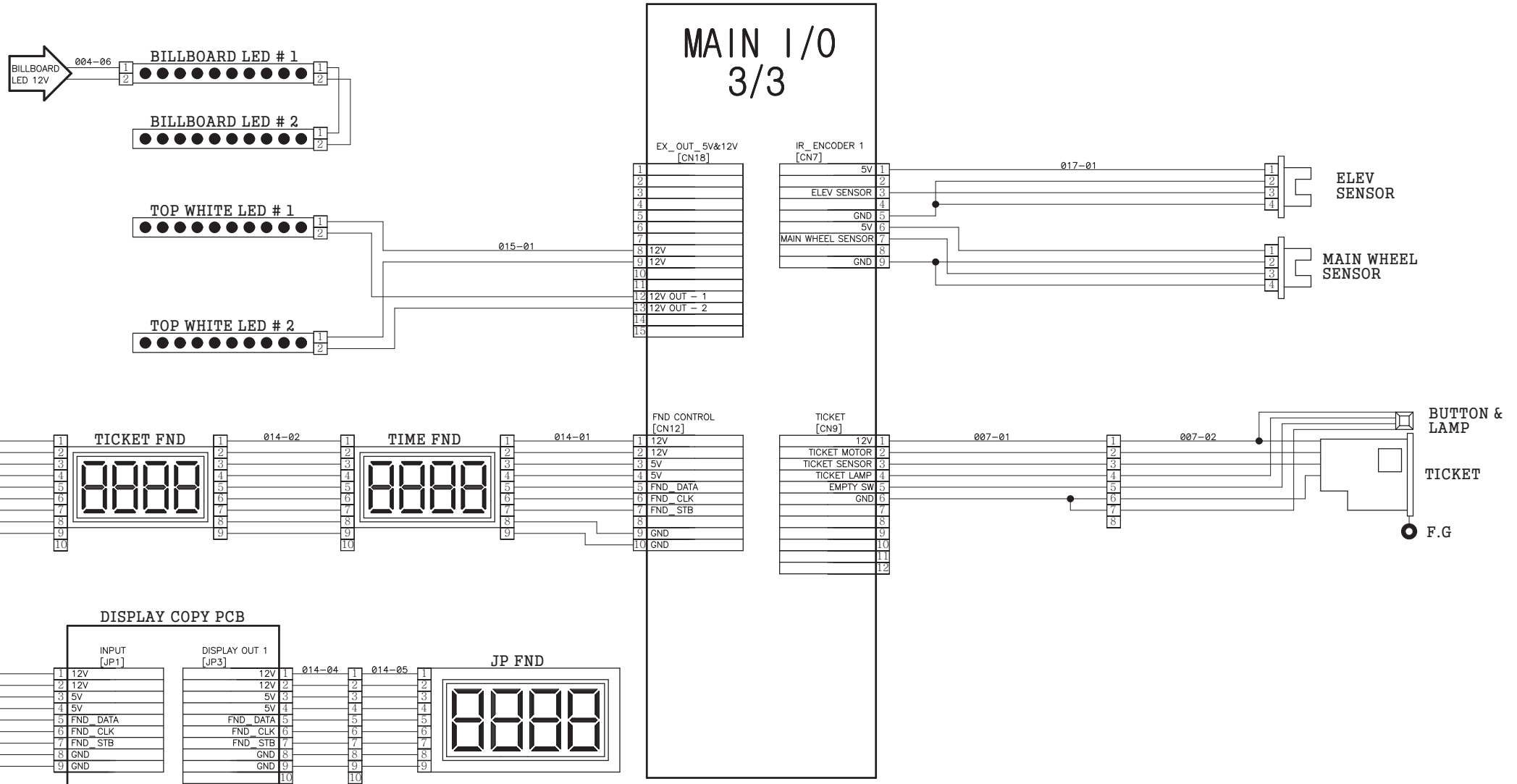

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