*** ANDAMIRO WARRANTS the parts from date of shipment as follows.**

- One Year Limited Warranty : Electronic Boards
- 6 Month Limited Warranty : Moving Parts

CONTENTS

[1. ERROR CODE]

ERROR TYPE	ERROR CODE	DESCRIPTION	CHECK POINTS
CHARGE-IN Er2	Er2-1	ABNORMAL CONDITION OF COIN SIGNAL FOR TWO SECONDS	1. CHECK COIN SELECTOR AND WIRING CONNECTION 2. CHECK MAIN BOARD
ADC Er3	Er3-1	NO ACK. SIGNAL OR ABNORMAL FUNCTION	1. CHECK ADC CHIP 2. CHECK MAIN BOARD
	Er3-2	NO CHANGE AT ANALOGUE VALUE	
	Er3-3	ABNORMAL VALUE WHILE DC MOTOR STOPS	
	Er3-4	ABNORMAL VALUE (LIMIT SWITCH CHANGED) WHILE DC MOTOR WORKS	1. CHECK CONNECTION BETWEEN MOTOR AND ADC 2. CHECK MAIN BOARD
BACKBOARD Er4	Er4-1	WHILE MOTOR WORKS, CURRENT VALUE LOWER THAN REFERENCE VALUE (NO CHANGE AT LIMIT SWITCH, MOTOR NOT WORKING)	1. CHECK CONNECTION STATUS OF MOTOR 2. CHECK MAIN BOARD
	Er4-2	WHEN MOTOR WORKS, LOAD HIGHER THAN REFERENCE VALUE (JAM)	1. CHECK MOTRO JAM 2. CHECK MAIN BOARD
	Er4-3	LIMIT UP NOT SENSED	1. CHECK LIM IT UP/DN SWITCH 2. CHECK LIM IT UP/DN WIRING 3. CHECK MAIN BOARD
	Er4-4	LIMIT DN NOT SENSED	
	Er4-5	LIMIT UP SENSED CONTINUOUSLY	
	Er4-6	LIMIT DN SENSED CONTINUOUSLY	
	Er4-7	LIMIT UP/DN S/W SENSED AT THE SAME TIME	
	Er4-8	LIMIT UP/DN WORKS ABNORMALLY, DIFFERENT FROM THEIR FUNCTIONS	
GOAL-SENSOR Er5	Er5-1	GOAL UP SENSOR SENSED CONTINUOUSLY	1. CHECK GOAL SENSOR PCB AND WIRING CONNECTION 2. CHECK MAIN BOARD
	Er5-2	GOAL DN SENSOR SENSED CONTINUOUSLY	
	Er5-3	WHEN BOOTING, ABNORMAL SIGNAL OF GOAL UP/DN SENSOR	

BALL-DISC **Er6**	Er6-1	DISK STARTING POINT SENSOR NOT SENSED	1. CHECK DISK ENCODER AND WIRING 2. CHECK STEPING MOTOR OPERATION 3. CHECK MAIN BOARD
	Er6-2	DISK STARTING POINT SENSOR SENSED CONTINUOUSLY	
	Er6-5	BALL RECOGNITION SENSORS NOT SENSED (NO BALL)	1. CHECK BALL INPUT 2. CHECK BALL SENSOR PCB AND WIRING CONNECTION 3. CHECK MAIN BOARD

In case E2~E6 error occurs, the error code is displayed at SCORE/TIME FND of the player and all functions stop. When pressing SERVICE/RESET Button after troubleshooting, the error is cleared and functions are restored through testing process. However, there may be some delay when the other player is playing the game at restore time.

※ If an error occurs to one player at VS Mode, the game switches to single mode automatically

※ The game shall be continued at following cases even when error occurs and error shall be displayed when game stops.

- In case of CHARGE-IN Er2,when games are in process or there are remaining credits
- When game ends and in a state of results
- When score is higher than BIG-WIN Challenging Score
- When main game ends at VS Mode

TICKET **Et**	Et-E	TICKET SIGNAL NOT SENSED (NO TICKET)	1. CHECK TICKET EMPTY/JAM 2. CHECK TICKET DISPENSER AND WIRING CONNECTION 3. CHECK MAIN BOARD
	Et-J	TICKET SIGNAL SENSED CONTINUOUSLY (JAM)	

Ticket-related errors are displayed at Ticket FND but games shall be continued.
When pressing Ticket Button after trouble shooting, remaining tickets shall be dispensed.

[2. TEST MODE]

TEST MODE		
TEST ITEMS	**SET UP ITEMS**	**DESCRIPTION AND DISPLAY**
TEST INPUT	INPUT DEVICE TEST	
	EXIT	EXIT
	TOP FND	[TEST] [tst] [Inp] Display of flickering
	SCORE FND	1st Digit:[¯/_]Display of Ball Mounting Upper/Lower Sensor 2nd Digit:[P] Display of Disk Deceleration Sensor 3rd Digit:[O] Display of Disk Starting Point Sensor
	TIME FND	1st Digit:[¯/_] Display of Backboard Upper/Lower Limit Switch 2nd Digit:[¯/_]Display of Goal Recognition Upper/Lower Sensor
	CREDIT FN	2nd Digit:[c] Display of Coin Input Signal
	START BUTTON TICKET BUTTON	While pressing the button, each related button lamp turns on
	SETUP LCD	2nd Line: sVStuTUcC.... [S] 1P Start Button [V] VS Mode Start Button, [S] 2P Start Button [t] 1P Ticket Button [u] 1P Ticket Sensor [T] 2P Ticket Button [U] 2P Ticket Sensor [c] 1P Coin Signal Input [C] 2P Coin Signal Input 3rd Line: L12345678--R12345678 (L = 1P, R = 2P) [1/2] Backboard Upper/Lower Limit Switch [3/4] Goal Recognition Upper/Lower Sensor [5/6] Ball Mounting Upper/Lower Sensor [7/8] Disk Deceleration/Starting Sensor 4th Line: udlrsc12E mnpq1234xy [u/d/l/r/s/c] SETUP UP/DOWN/LEFT/RIGHT/SELECT/CANCEL BUTTON [1/2] 1P/2P SERVICE BUTTON, [E] ERROR CLEAR BUTTON [m/n] BOOT MODE DIP S/W (BOARD BOTTOM LEFT) [p/q] USER DIP SW6, [1/2/3/4] USER DIP SW7, [x/y] USER SW
TEST FND & LED	FND & LED TEST	
	Type	OFF = TOTAL OFF ON = TOTAL ON PLAYER = Each player flickering MOVING = Moving by each device unit
	EXIT	EXIT
TEST COIN	COIN SELECTER TEST	
	Coin1 EN	OFF/ON = Coin Selector 1 EN OFF/ON
	Coin2 EN	OFF/ON = Coin Selector 2 EN OFF/ON
	EXIT	EXIT
	UPPER FND	[TEST] [tst] [con] Display of flickering
	SCORE FND	[xxx] Display of Coin Input count
	TIME FND	1st Digit : [E] Display of error 2nd Digit:[c] Display of Coin Signal Input

TEST TICKET	TICKET DISPENSER TEST	
	DISPENSE 1P 3	1P Ticket dispenser releases 3 tickets
	DISPENSE 2P 3	2P Ticket dispenser releases 3 tickets
	EXIT	EXIT
	TOP FND	[TEST] [tst] [tic] Display of flickering
	SCORE FND	[xxx] Display of remaining tickets [Erx] Error code when error occurs
	TIME FND	1ST Digit [t] Display of Ticket Button 2ND Digit [u] Display of Ticket Sensor
	TICKET BUTTON	When pressing the button, lamp turns on. Try again when error occurs
TEST COUNTER	COUNTER TEST	
	PULSE 1P COIN IN	1P COIN IN Counter increase
	PULSE 1P TICKET OUT	1P TICKET OUT Counter Increase
	PULSE 2P COIN IN	2P COIN IN Counter increase
	PULSE 2P TICKET OUT	2P TICKET OUT Counter increase
	EXIT	EXIT
	TOP FND	[TEST] [tst] [cnt] Display of flickering
TEST GOAL-SENSOR	GOAL RECOGNITION SENSOR TEST	
	Enable	OFF/ON = OFF/ON for sensor control board Enable
	EXIT	EXIT
	TOP FND	[TEST] [tst] [Gol] Display of flickering
	SCORE FND	[xxx] Display of count for goal recognition
	TICKET FND	[xxx] Display of count for erroneous recognition
	TIME FND	[‾‾/__] Display of goal recognition Top/Bottom Sensor
TEST BACKBOARD-MOT	BACKBOARD MOTOR TEST	
	TEST MANUAL	MANUAL TEST (working only during the time pressing the button) ↑/← BUTTON: 1P MOTOR UP/DOWN MOVE →/↓ BUTTON: 2P MOTOR UP/DOWN MOVE
	TOP FND	[TEST] [tst] [bb1] Display of flickering
	SCORE FND	1ST Digit:[‾/_] Display of backboard Up/Down Limit Switch 2~3 Digit:[x.x] Display of motor required current [Ex] Display of error code when error occurs (E3-x: ADC Error)
	TIME FND	[--/uP/dn] Display of motor movement [Ex] Display of error code when error occurs (E4-x: Backboard Error)
	TICKET FND	[xxxx] DC Motor required current ADC Value (16 hexadecimal)
	TEST AUTO	AUTOMATIC TEST ←/→ BUTTON: 1P/2P AUTOMATIC PROCESS ON/OFF
	TOP FND	[TEST] [tst] [bb2] Display of flickering
	SCORE FND	1ST Digit:[‾/_] Display of backboard Up/Down Limit Switch 2~3 Digit:[x.x] Display of motor required current [E x] Display of error code when error occurs (E3-x: ADC Error)
	TIME FND	[x.x] Display of movement time [Ex] Display of error code when error occurs (E4-x: Backboard Error)
	TICKET FND	[xxxx] Display of number of Up/Down Repetition
	EXIT	EXIT

TEST BALLDISC-MOT	BALL DISK MOTOR TEST	
	TEST MANUAL	MANUAL TEST (working only during the time pressing the button) ↑/← BUTTON: 1P STEP MOTOR FORWARD/REVERSE ROTATION →/↓ BUTTON: 1P STEP MOTOR FORWARD/REVERSE ROTATION
	TOP FND	[TEST] [tst] [st1] Display of flickering
	SCORE FND	1ST Digit:[¯/_] Display of ball mounting Up/Down Sensor 2ND Digit:[P] Display of Disk Deceleration Sensor 3RD Digit:[O] Display of Disk Starting Point Sensor
	TIME FND	[--/Fo/bA] DISPLAY OF STEP MOTOR FORWARD/REVERSE ROTATION [Ex] Display of error code when error occurs (E5-x: Ball Disk Error)
	TEST SECTOR	SECTOR TEST (When ball is not mounted, one sector at a time repeats automatically) ←/→ BUTTON: 1P/2P SECTOR TEST ON/OFF
	TOP FND	[TEST] [tst] [st2] Display of flickering
	SCORE FND	1ST Digit:[¯/_] Display of ball mounting Up/Down Sensor 2ND Digit:[P] Display of Disk Deceleration Sensor 3RD Digit:[O] Display of Disk Starting Point Sensor
	TIME FND	[xx] Display of Sector Step Number [Ex] Display of error code when error occurs (E5-x: Ball Disk Error)
	TICKET FND	[xxxx] Display of number of repetitions
	TEST LOGIC	LOGIC TEST (TEST in the same way game logic) ←/→ BUTTON: 1P/2P LOGIC TEST ON/OFF
	TOP FND	[TEST] [tst] [st3] Display of flickering
	SCORE FND	1st Digit: [¯/_] Display of Ball Mounting Up/Down Sensor 2nd Digit: [P] Display of Disk Sensor Deceleration Sensor 3rd Digit: [O] Display of Disk Starting Point Senor
	TIME FND	[--/Pr] DISPLAY OF OPERATION STATUS [Ex] Display of error code when error occurs (E5-x: Ball Disk Error)
	TICKET FND	[xxxx] Display of Ball Hit Count
	EXIT	EXIT

TEST SOUND	SOUND TEST ←/→ BUTTON: SELECT ITEMS SELECT BUTTONS: ITEM PLAY/STOP CANCEL BUTTON: EXIT	
	1. CH	Voice Output One, Two, ~ Eight according to each channel speaker Left Speaker : 1, 3, 5, 7 Right Speaker : 2, 4, 6, 8
	2. BGM	Background Sound Output Test
	3. SFX	Sound Effect Output Test
	4. VOC	Voice Output Test
	TOP FND	[TEST] [tst] [snd] Display of flickering
	SCORE FND	[xxx] Display of Select Times
	TIME FND	1P [--/PL] Display of Play or Non-Play 2P [xxx] Display of Play Times

* BOOT SELF - TEST / ERROR RESET

All items are tested during booting test but limited times with error are tested during resetting error. Detailed steps are displayed at Time FND and completion of each step is shown as [oc] and error is shown as [Er].

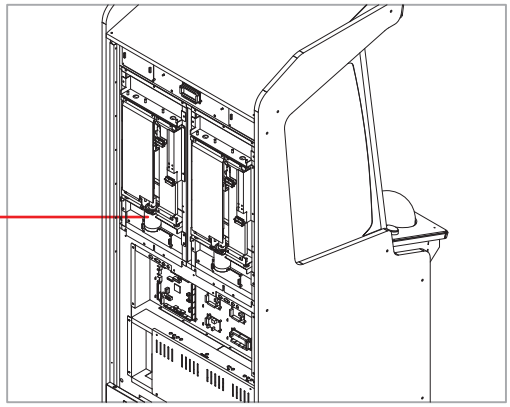
TEST ITEMS	DETAILED STEPS	DESCRIPTION AND DISPLAY
CHARGE-IN	[co]	COIN SELECTOR INPUT TEST
		SCORE FND 1ST Digit:[c] DISPLAY OF COIN SIGNAL INPUT
ADC	[A1]	ADC CONVERSION TEST
		SCORE FND 1st Digit:[¯/_] Display of backboard Up/Down Limit Switch SCORE FND 2nd~ 3rd Digit:[x.x] Display of backboard motor required current
BACKBOARD	[b1]	TEST FOR OPERATION OF BACKBOARD MOTOR AND LIMIT SWITCH
	[b2]	TEST FOR OPERATION OF BACKBOARD MOTOR AND SHUTTLE TIME
	[b3]	OPERATION OF BACKBOARD MOTOR AND LOCATION TO CENTER
		SCORE FND 1ST Digit:[¯/_] Display of backboard Up/Down Limit Switch SCORE FND 2ND~3RD Digit:[x.x] Display of backboard motor required current
GOAL-SENSOR	[c1]	GOAL SENSOR INPUT TEST
		SCORE FND [GS¯/_] Display of goal recognition Up/Down Sensor
BALL-DISC	[d1]	OPERATION TEST FOR BALL DISK SENSOR AND STEPING MOTOR
		SCORE FND 1st Digit: [¯/_]Display of ball mounting Up/Down Sensor SCORE FND 2nd Digit:[P] Display of Disk Deceleration Sensor SCORE FND 3nd Digit:[O] Display of Disk Starting Point

[3. TROUBLESHOOTING]

* General check up : Check the supply voltage and wiring connection properly
* "NO" : Means faulty of the check up result.

1. DC MOTOR ERROR [Er3-1~4, Er4-1,2]

- IN CASE THE MOTOR OR THE PCB RELATED MOTOR PROBLEM



DC MOTOR ERROR [Er3-1~4, Er4-1,2]

MOTOR TEST
- YES → DONE
- NO →
  [HOW TO TEST]
  1. TEST MODE > BACKBOARD-MOT
  2. 1P MOTOR UP / DOWN MOVE
     - USE SETUP LCD UP / LEFT BUTTON
  3. 2P MOTOR UP / DOWN MOVE
     - USE SETUP LCD RIGHT / DOWN BUTTON

CHECK DC MOTOR
- NO → 1. RECONNECT CONNECTOR
  2. REASSEMBLE OR REPLACE
- YES →
  [HOW TO CHECK]
  1. CHECK CONNECTION OF CONNECTOR
  2. CHECK IF BOLT AND MOTOR ARE IN POSITION
  3. CHECK BALL SCREW CONDITION

CHECK MAIN PCB
- NO → 1. RECONNECT CONNECTOR
  2. REPLACE MAIN PCB
- YES →
  [HOW TO CHECK]
  1. CHECK CONNECTION OF CONNECTOR J10
  2. CHECK DC VOLTAGE ON CONNECTOR J10
     PIN 1 : 5V, PIN 2 : GND
  3. CHECK CONNECTION OF JOIN CONNECTOR

CHECK DC MOTOR DRIVER PCB
- NO → 1. RECONNECT CONNECTOR
  2. CHECK AND REPLACE SMPS (LRS100-24)
  3. REPLACE DC MOTOR DRIVER PCB
- YES →
  [HOW TO CHECK]
  1. CHECK CONNECTION OF CONNECTOR J3
     PIN 1 : 12V, PIN 2 : GND
  2. CHECK CONNECTION OF CONNECTOR J1
  3. CHECK DC VOLTAGE ON CONNECTOR J1
     PIN 1 : 5V, PIN 2 : GND
  4. CHECK DC VOLTAGE ON CONNECTOR
     J6(1P), J7(2P)
     PIN 1 : 12V, PIN 2 : GND
  5. CHECK CONNECTION OF JOIN CONNECTOR

- CODE NO.
[MELE0SMP080]

REPLACE DC MOTOR

NO

REPLACE DC MOTOR DRIVER PCB

NO

REPLACE MAIN PCB

DONE

- CODE NO.
[MZZZ0MOT143]

- CODE NO.
[ABSP0PCB003]

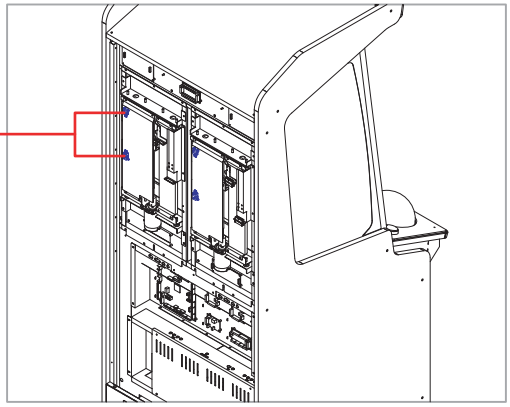
- CODE NO.
[ABSP0PCB001]

* General check up : Check the supply voltage and wiring connection properly
* "NO" : Means faulty of the check up result.

2. LIMIT SWITCH ERROR [Er4-3~8]

- IN CASE BACKBOARD MOTOR LIMIT SWITCH IS PROBLEM

LIMIT SWITCH



LIMIT SWITCH ERROR [Er4-3~8]

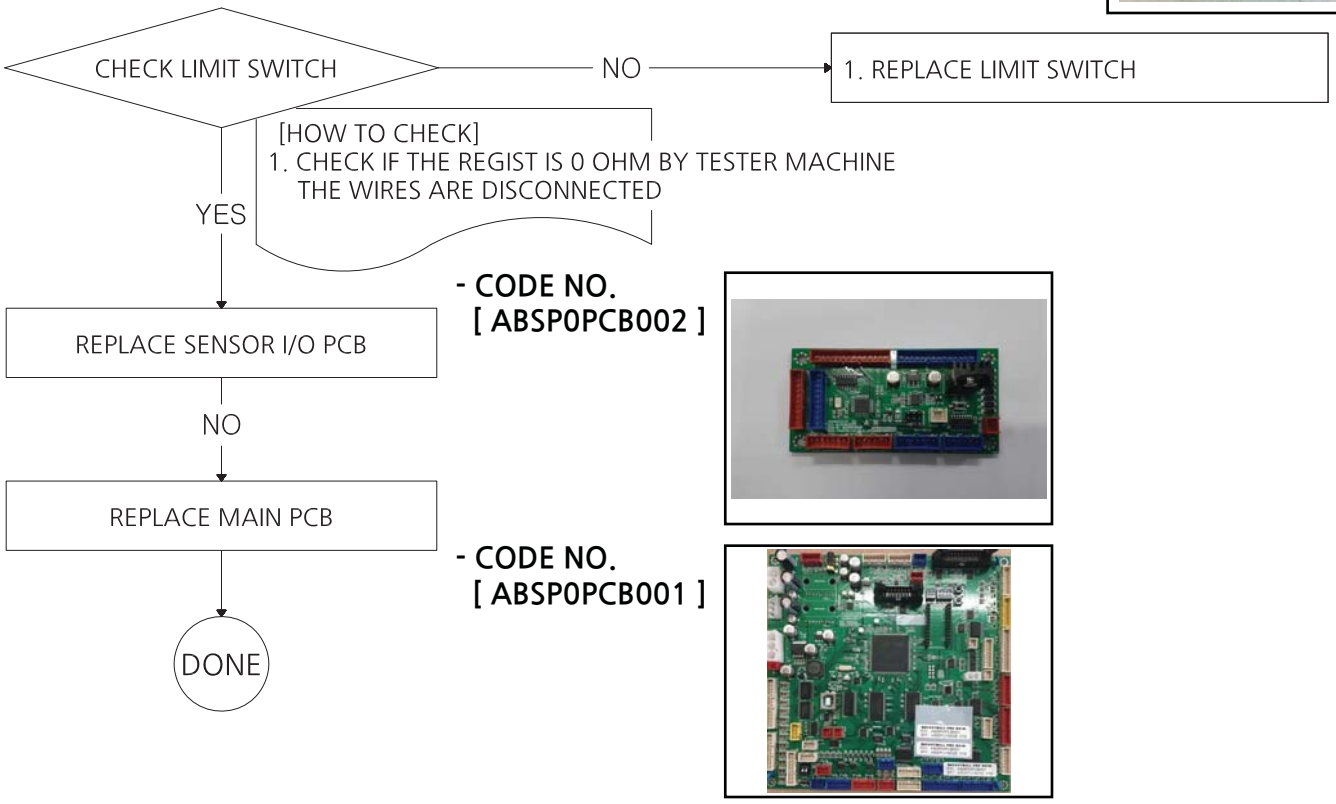
TEST SWITCH
- YES → DONE
- NO →
  [HOW TO TEST]
  1. TEST MODE > BACKBOARD-MOT
  2. 1P MOTOR UP / DOWN MOVE
     - USE SETUP LCD UP / LEFT BUTTON
  3. 2P MOTOR UP / DOWN MOVE
     - USE SETUP LCD RIGHT / DOWN BUTTON
  4. CHECK IF THERE IS '-' MARK AT FIRST DIGIT OF SCORE FND WHEN MOTOR MOVES UP / DOWN IN MAXIMUM

CHECK SWITCH
- NO → 1. RECONNECT CONNECTOR 2. REASSEMBLE OR REPLACE
- YES →
  [HOW TO CHECK]
  1. CHECK CONNECTION OF CONNECTOR (N.O & COM)
  2. CHECK IF BOLT AND PART ARE IN POSITION
  3. CHECK SWITCH CONDITION
  4. CHECK SENSING ANGLE OF SWITCH PIN

CHECK MAIN PCB
- NO → 1. RECONNECT CONNECTOR
- YES →
  [HOW TO CHECK]
  1. CHECK CONNECTION OF CONNECTOR J13(1P), J14(2P)

CHECK SENSOR I/O PCB
- NO → 1. RECONNECT CONNECTOR 2. CHECK AND REPLACE SMPS (LRS150F-12)
- YES →
  [HOW TO CHECK]
  1. CHECK CONNECTION OF CONNECTOR J9
  2. CHECK DC VOLTAGE ON CONNECTOR J9 PIN 1: 12V, PIN 2 : GND
  3. CHECK CONNECTION OF CONNECTOR J4(1P), J5(2P)
  4. CHECK CONNECTION OF CONNECTOR J18(1P), J16(2P)
  5. CHECK CONNECTION OF JOIN CONNECTOR

- CODE NO.
[MELE0MIC021]



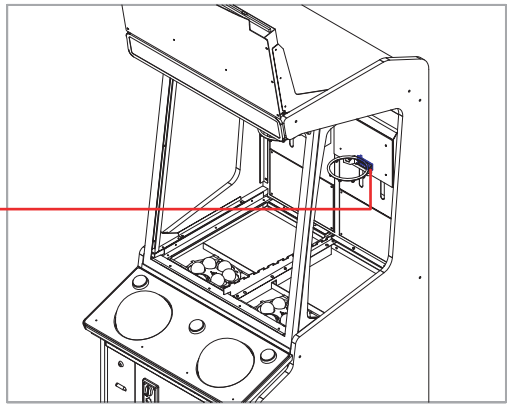
- CODE NO.
[ABSP0PCB002]

- CODE NO.
[ABSP0PCB001]

* General check up : Check the supply voltage and wiring connection properly
* "NO" : Means faulty of the check up result.

3. GOAL SENSOR ERROR [Er5-1~3]

- IN CASE GOAL SENSOR IS PROBLEM



GOAL SENSOR ERROR [Er5-1~3]

TEST GOAL SENSOR

YES → DONE

NO

[HOW TO TEST]
1. TEST MODE > GOAL -SENSOR
2. SENSOR ON / OFF BY SELECT BUTTON
3. CHECK IF THERE IS '-' MARK ON TIME FND WHEN GOAL SENSOR WORKS

CHECK GOAL SENSOR

NO → 1. RECONNECT CONNECTOR
2. REASSEMBLE OR REPLACE

YES

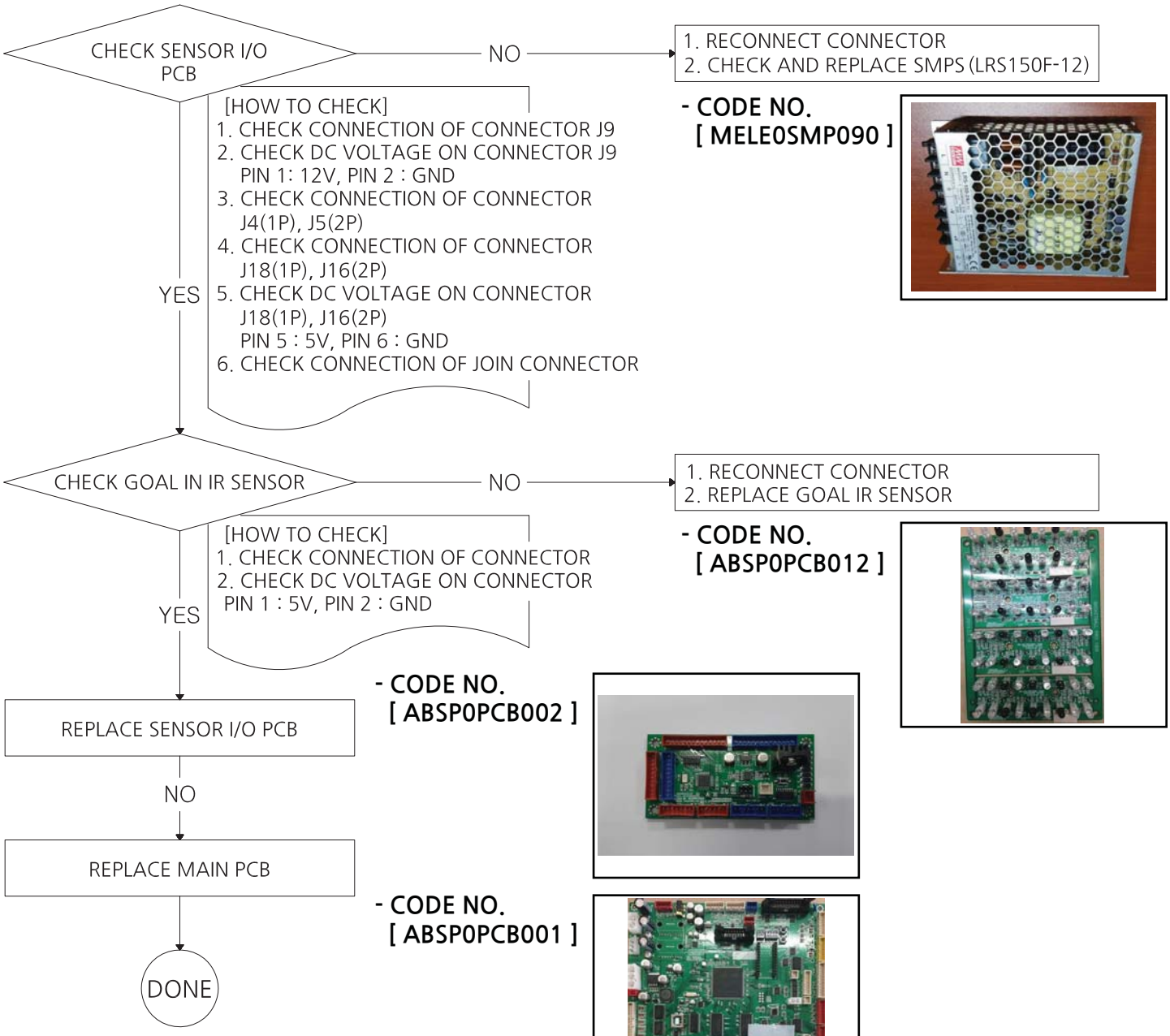
[HOW TO CHECK]
1. CHECK CONNECTION OF CONNECTOR
2. CHECK IF RIM IS TOO CLOSE TO SENSOR OR TOO FAR
3. CHECK IF THERE IS NO DEBRIS ON SENSOR

CHECK MAIN PCB

NO → 1. RECONNECT CONNECTOR

YES

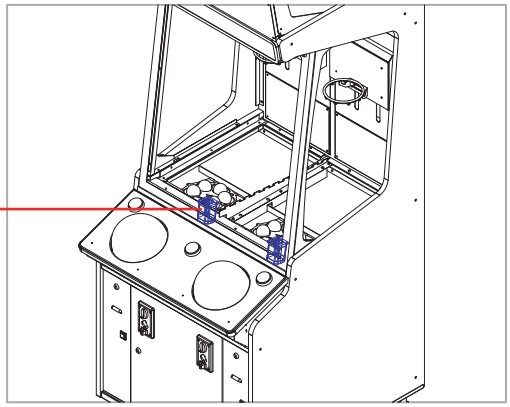
[HOW TO CHECK]
1. CHECK CONNECTION OF CONNECTOR J13(1P), J14(2P)
2. CHECK DC VOLTAGE ON CONNECTOR J13(1P), J14(2P) PIN 4 : 0V, PIN 8 : GND


CHECK SENSOR I/O PCB
NO
1. RECONNECT CONNECTOR
2. CHECK AND REPLACE SMPS (LRS150F-12)
- CODE NO.
[MELE0SMP090]
[HOW TO CHECK]
1. CHECK CONNECTION OF CONNECTOR J9
2. CHECK DC VOLTAGE ON CONNECTOR J9
PIN 1: 12V, PIN 2 : GND
3. CHECK CONNECTION OF CONNECTOR
J4(1P), J5(2P)
4. CHECK CONNECTION OF CONNECTOR
J18(1P), J16(2P)
YES
5. CHECK DC VOLTAGE ON CONNECTOR
J18(1P), J16(2P)
PIN 5 : 5V, PIN 6 : GND
6. CHECK CONNECTION OF JOIN CONNECTOR
CHECK GOAL IN IR SENSOR
NO
1. RECONNECT CONNECTOR
2. REPLACE GOAL IR SENSOR
- CODE NO.
[ABSP0PCB012]
[HOW TO CHECK]
1. CHECK CONNECTION OF CONNECTOR
2. CHECK DC VOLTAGE ON CONNECTOR
PIN 1 : 5V, PIN 2 : GND
YES
- CODE NO.
[ABSP0PCB002]
REPLACE SENSOR I/O PCB
NO
REPLACE MAIN PCB
- CODE NO.
[ABSP0PCB001]
DONE

* General check up : Check the supply voltage and wiring connection properly
* "NO" : Means faulty of the check up result.

4. STEPPING MOTOR ERROR [Er6-1~2]

- IN CASE STEP MOTOR IS PROBLEM



STEPPING MOTOR ERROR [Er6-1~2]

TEST MOTOR — YES → DONE

NO

[HOW TO TEST]
1. TEST MODE > BALLDISC-MOT
2. 1P STEPPING MOTOR NORMAL/REVERSE ROTATION
   - USE SETUP LCD UP / LEFT BUTTON
3. 2P STEPPING MOTOR NORMAL/REVERSE ROTATION
   - USE SETUP LCD RIGHT / DOWN BUTTON
4. CHECK IF Fo(NORNAL ROTATION) OR bA(REVERSE ROTATION) MARKS ON TIME FND WHEN THE MOTOR ROTATES
5. CHECK IF THERE IS NO MARK AT THIRD DIGIT OF SCORE FND WHEN THERE IS NO BALL

CHECK MAIN PCB — NO → 1. RECONNECT CONNECTOR
2. REPLACE MAIN PCB

- CODE NO.
[ABSP0PCB001]

YES

[HOW TO CHECK]
1. CHECK CONNECTION OF CONNECTOR J36
2. CHECK DC VOLTAGE ON CONNECTOR J36
   1P - PIN 1 : 5V, PIN 2 : GND
   2P - PIN 3 : 5V, PIN 4 : GND

CHECK STEPPING MOTOR DRIVER PCB — NO → 1. RECONNECT CONNECTOR
2. CHECK AND REPLACE SMPS (LRS150F-12)

- CODE NO.
[MELE0SMP090]

YES

[HOW TO CHECK]
1. CHECK CONNECTION OF CONNECTOR J2
   PIN 1 : 12V, PIN 2 : GND
2. CHECK CONNECTION OF CONNECTOR J1
3. CHECK CONNECTION OF CONNECTOR J3
3. CHECK CONNECTION OF JOIN CONNECTOR

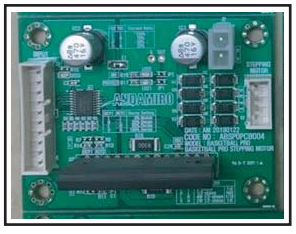
- CODE NO.
[MZZZ0MOT144]

REPLACE STEPPING MOTOR

NO

REPLACE STEPPING MOTOR DRIVER PCB

- CODE NO.
[ABSP0PCB004]



NO

REPLACE MAIN PCB

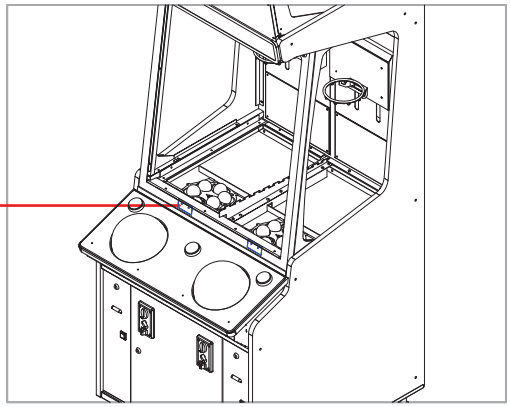
DONE

- CODE NO.
[ABSP0PCB001]

4-5. BALL SENSING IR SENSOR ERROR
[Er6-5]

- IN CASE BALL SENSING IR SENSOR IS PROBLEM

BALL SENSING IR SENSOR



BALL SENSING IR SENSOR ERROR
[Er6-5]

TEST BALL SENSING IR SENSOR — YES → DONE

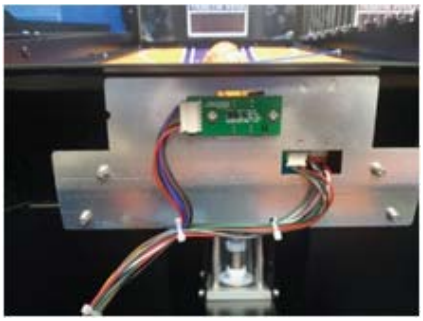
NO →

[HOW TO TEST]
1. TEST MODE > TEST INPUT
2. CHECK IF THERE IS '-' MARK AT FIRST DIGIT OF SCORE FND WHEN THERE IS BALL IN POSITION
3. CHECK IF '_' MARK IS SHOWN AT UPPER SIDE ONLY

1. MAKE BALL SENSING IR SENSOR UP SIDE DOWN AS SHOWN IN THE PHOTO
2. CHANGE THE VALUE OF BALL-SEN FROM DN TO UP FOR THE PLAYER WITH ERROR
3. SAVE AND EXIT

DONE

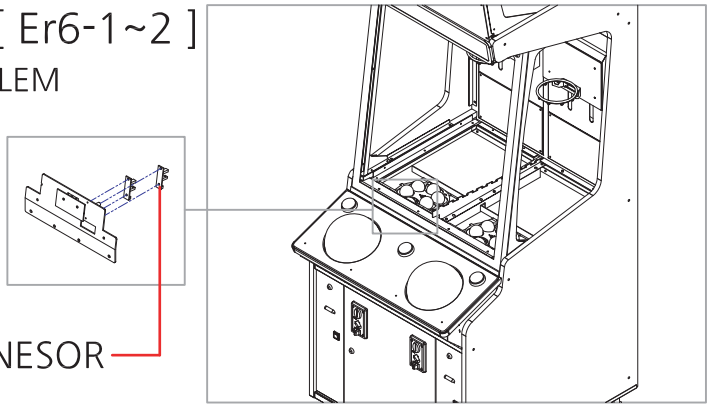
*** When ER 6-5 occurs, in case upper sensor of Ball Sensing IR Sensor is normal and lower sensor is defective, troubleshooting is as follows. If both upper and lower sensors are defective, please replace the whole Ball Sensing IR Sensor. After replacing it, please perform program setting and put Ball Sensing IR Sensor in original position.**



* General check up : Check the supply voltage and wiring connection properly
* "NO" : Means faulty of the check up result.

6. DISK STOP IR SENSOR ERROR [Er6-1~2]

- IN CASE DISK TOP IR SENSOR IS PROBLEM



DISK STOP IR SENSOR ERROR [Er6-1~2]

TEST BALL DISK

YES → DONE

NO

[HOW TO TEST]
1. TEST MODE > BALLDISK-MOT
2. 1P STEPPING MOTOR NORMAL / REVERSE ROTATION
   - USE SETUP LCD UP / LEFT BUTTON
3. 2P STEPPING MOTOR NORMAL / REVERSE ROTATION
   - USE SETUP LCD RIGHT / DOWN BUTTON
4. CHECK IF THERE IS '0' MARK AT THIRD DIGIT OF SCORE FND WHEN THERE IS BALL IN POSITION

CHECK BALL DISK STOP IR SENSOR

NO →
1. RECONNECT CONNECTOR
2. REASSEMBLE OR REPLACE

YES

[HOW TO CHECK]
1. CHECK CONNECTION OF CONNECTOR
2. CHECK IF BALL DISK BRACKET IS TOO CLOSE TO SENSOR OR BROKEN
3. CHECK IF THERE IS NO DEBRIS ON SENSOR

CHECK MAIN PCB

NO →
1. RECONNECT CONNECTOR

YES

[HOW TO CHECK]
1. CHECK CONNECTION OF CONNECTOR J17(1P), J30(2P)

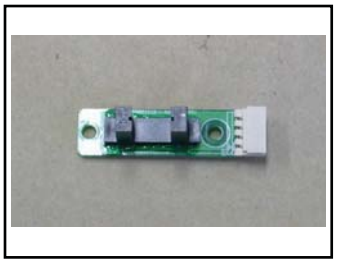
CHECK SENSOR I/O PCB

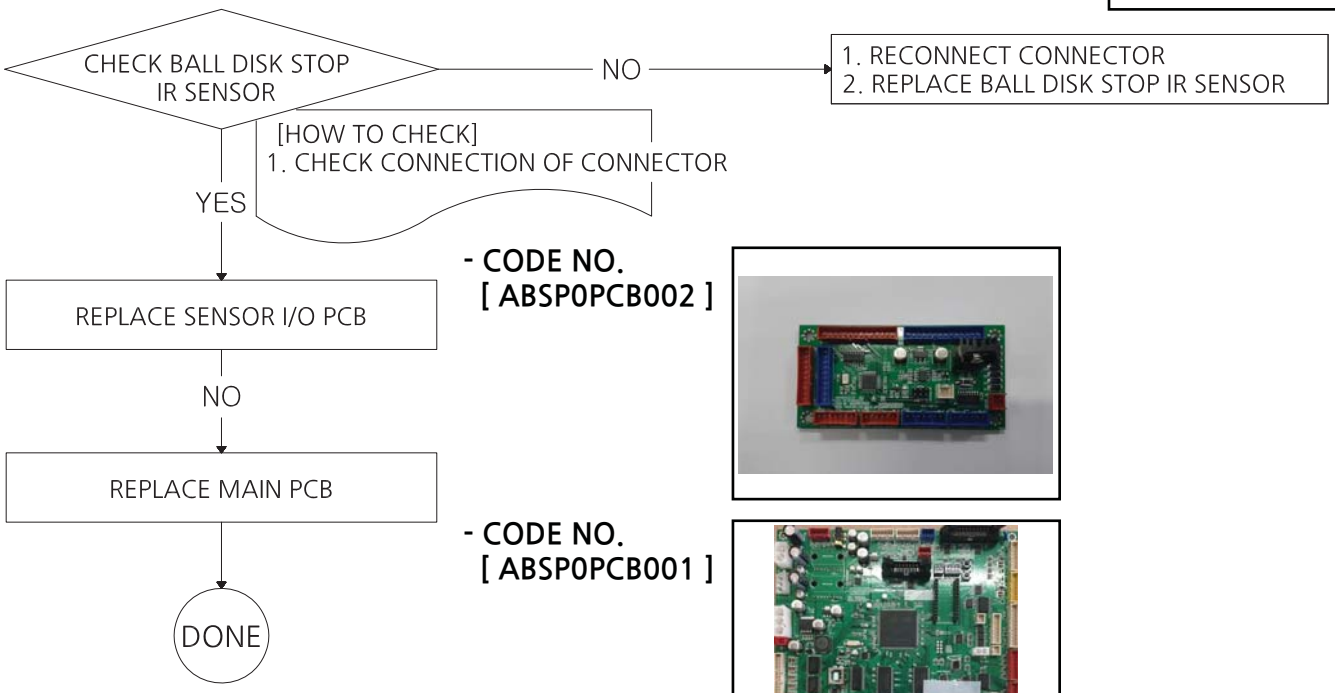
NO →
1. RECONNECT CONNECTOR
2. CHECK AND REPLACE SMPS (LRS150F-12)
3. REPLACE SENSOR I/O PCB

YES

[HOW TO CHECK]
1. CHECK CONNECTION OF CONNECTOR J9
2. CHECK DC VOLTAGE ON CONNECTOR J9
   PIN 1: 12V, PIN 2 : GND
3. CHECK CONNECTION OF CONNECTOR J1(1P), J2(2P)
4. CHECK CONNECTION OF CONNECTOR J12(1P), J13(2P)
5. CHECK DC VOLTAGE ON CONNECTOR J12(1P), J13(2P)
   PIN 1 : 5V, PIN 2 : 0V, PIN 4 : GND
6. CHECK CONNECTION OF JOIN CONNECTOR

- CODE NO.
[AZZZ0PCB103]





- CODE NO.
[ABSP0PCB002]

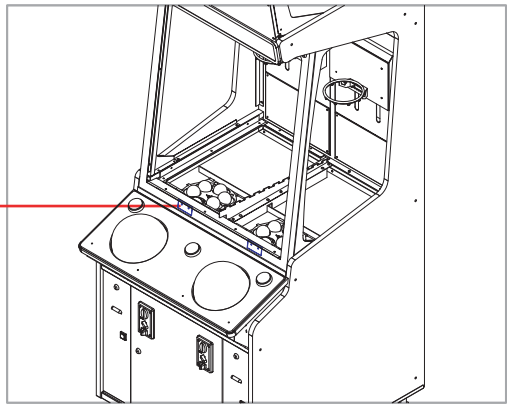
- CODE NO.
[ABSP0PCB001]

* General check up : Check the supply voltage and wiring connection properly
* "NO" : Means faulty of the check up result.

7. BALL SENSING IR SENSOR ERROR [Er6-5]

- IN CASE BALL SENSING IR SENSOR IS PROBLEM

BALL SENSING IR SENSOR



BALL SENSING IR SENSOR ERROR
[Er6-5]

TEST BALL DISC
YES → DONE
NO →
[HOW TO TEST]
1. TEST MODE > BALL DISC-MOT
2. 1P STEPPING MOTOR NORMAL / REVERSE ROTATION
   - USE SETUP LCD UP / LEFT BUTTON
3. 2P STEPPING MOTOR NORMAL / REVERSE ROTATION
   - USE SETUP LCD RIGHT / DOWN BUTTON
4. CHECK IF THERE IS '-' MARK AT FIRST DIGIT OF SCORE FND WHEN THERE IS BALL IN POSITION

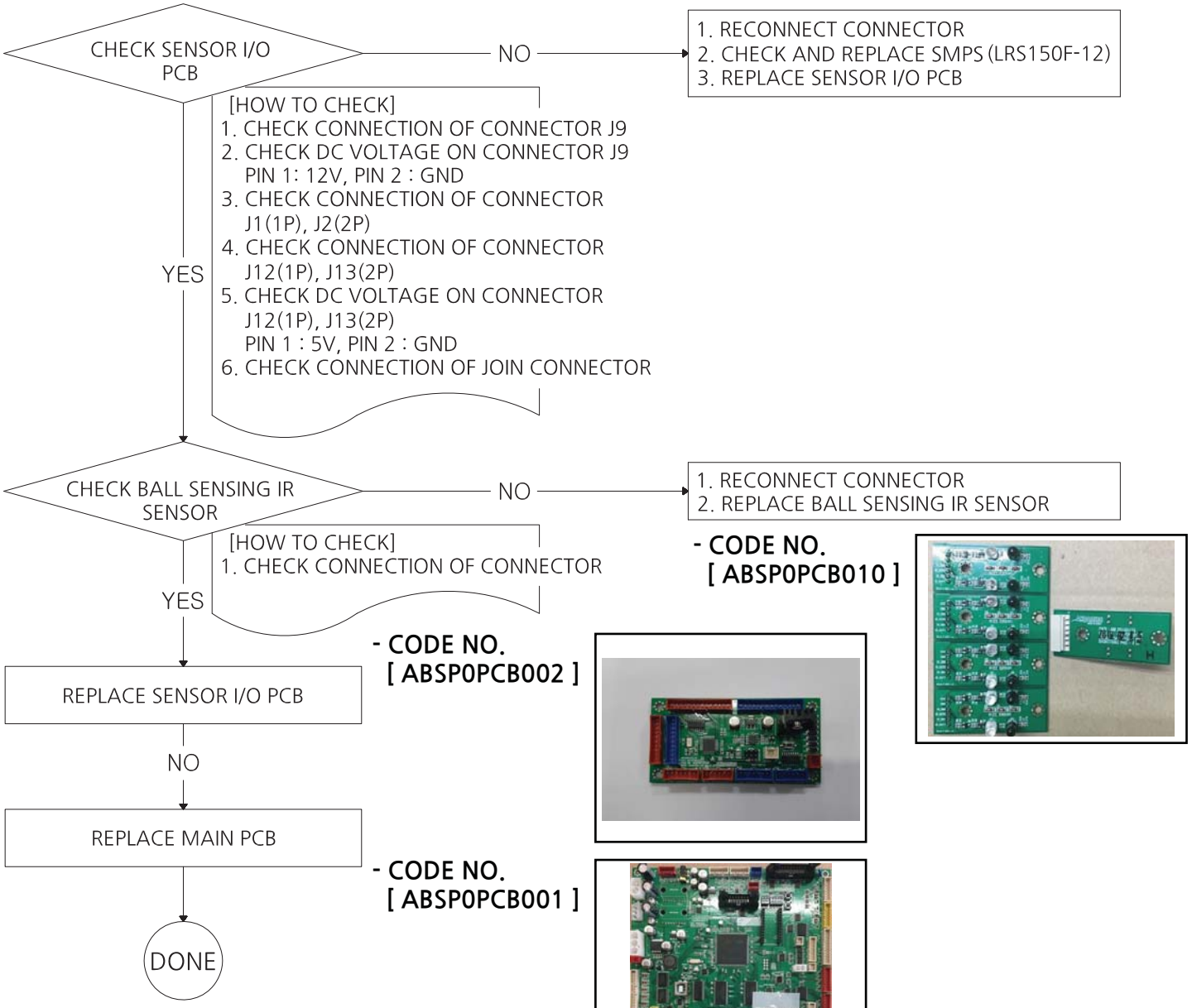
CHECK BALL SENSING IR SENSOR
NO →
1. SUPPLY MORE BALLS OR REPLACE BALLS
2. RECONNECT CONNECTOR
3. REASSEMBLE OR REPLACE
4. CLEAN SENSOR

YES →
[HOW TO CHECK]
1. CHECK IF THERE IS BALL
2. CHECK CONNECTION OF CONNECTOR
3. CHECK IF BALL DISK BRACKET IS TOO CLOSE TO SENSOR OR BROKEN
4. CHECK IF THERE IS NO DEBRIS ON SENSOR

CHECK MAIN PCB
NO →
1. RECONNECT CONNECTOR

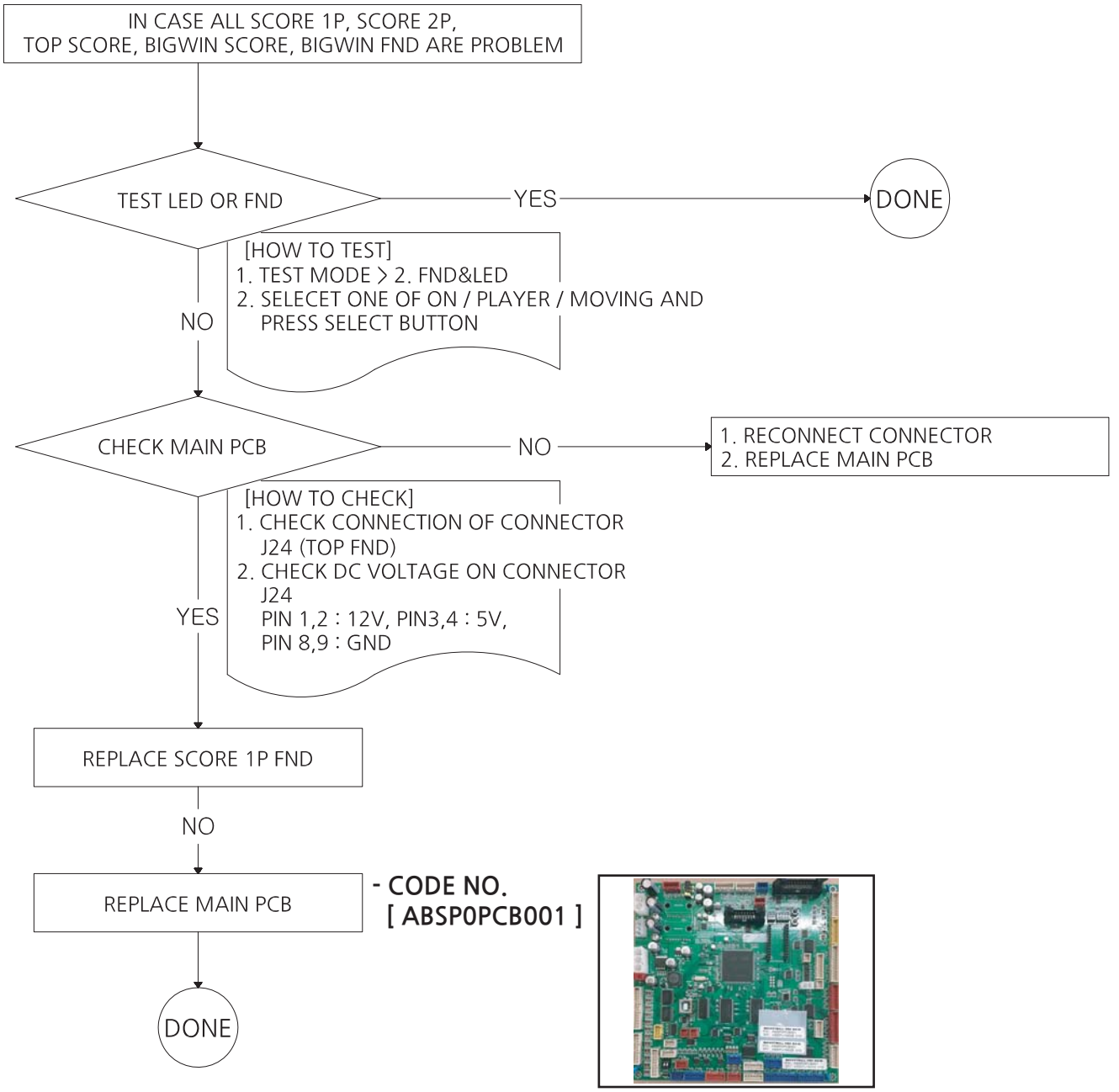
YES →
[HOW TO CHECK]
1. CHECK CONNECTION OF CONNECTOR J17(1P), J30(2P)

YES →


CHECK SENSOR I/O PCB
NO
1. RECONNECT CONNECTOR
2. CHECK AND REPLACE SMPS (LRS150F-12)
3. REPLACE SENSOR I/O PCB
[HOW TO CHECK]
1. CHECK CONNECTION OF CONNECTOR J9
2. CHECK DC VOLTAGE ON CONNECTOR J9
PIN 1: 12V, PIN 2 : GND
3. CHECK CONNECTION OF CONNECTOR
J1(1P), J2(2P)
4. CHECK CONNECTION OF CONNECTOR
J12(1P), J13(2P)
5. CHECK DC VOLTAGE ON CONNECTOR
J12(1P), J13(2P)
PIN 1 : 5V, PIN 2 : GND
6. CHECK CONNECTION OF JOIN CONNECTOR
YES
CHECK BALL SENSING IR SENSOR
NO
1. RECONNECT CONNECTOR
2. REPLACE BALL SENSING IR SENSOR
- CODE NO.
[ABSP0PCB010]
[HOW TO CHECK]
1. CHECK CONNECTION OF CONNECTOR
YES
- CODE NO.
[ABSP0PCB002]
REPLACE SENSOR I/O PCB
NO
REPLACE MAIN PCB
- CODE NO.
[ABSP0PCB001]
DONE

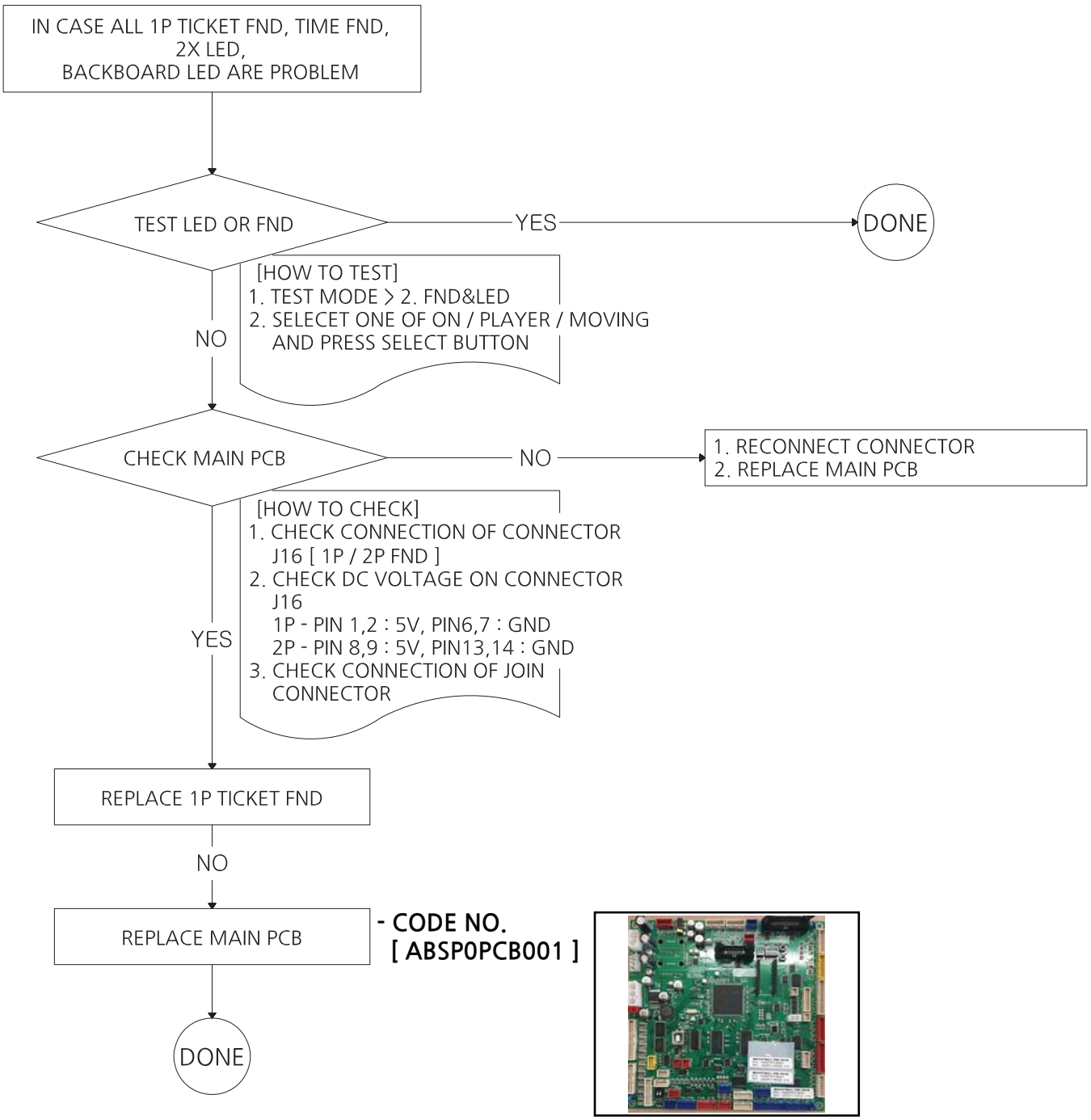
* General check up : Check the supply voltage and wiring connection properly
* "NO" : Means faulty of the check up result.

8. IN CASE ALL SCORE 1P, SCORE 2P, TOP SCORE, BIGWIN SCORE, BIGWIN FND ARE PROBLEM



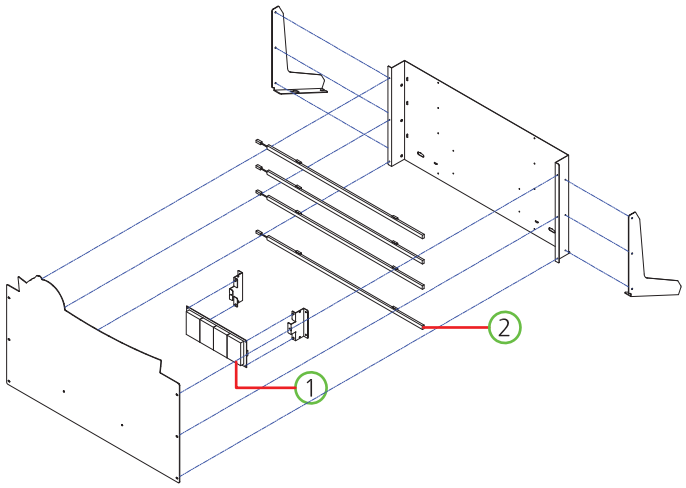
* General check up : Check the supply voltage and wiring connection properly
* "NO" : Means faulty of the check up result.

9. IN CASE ALL 1P TICKET FND, TIME FND, 2X LED, BACKBOARD LED ARE PROBLEM

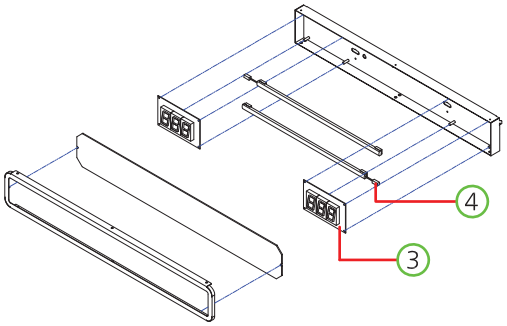


[4. PART LIST]

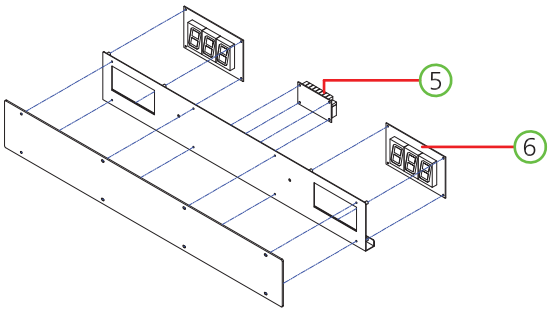
- BILLBOARD PART



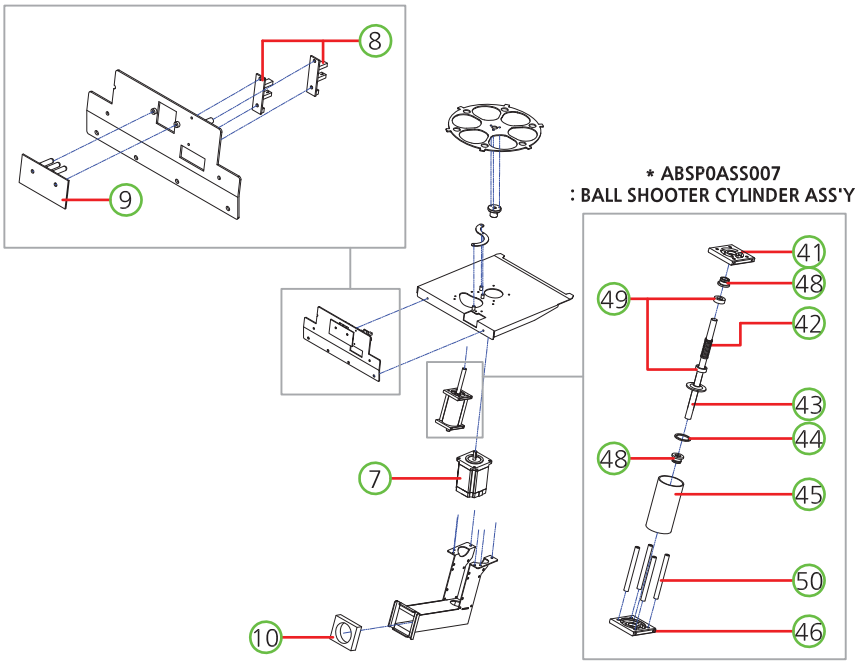
- HIGH SCORE FRAME PART



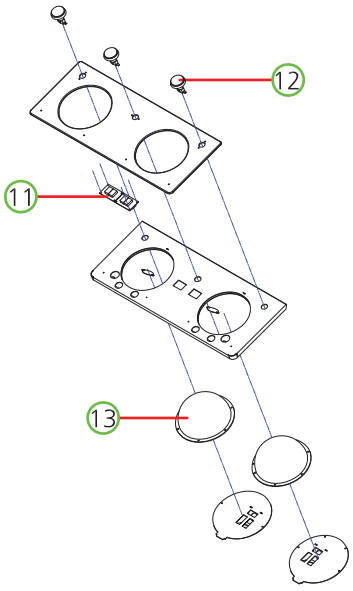
- SCORE FND BKT PART



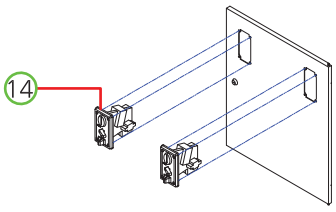
- BALL ROTATE PART



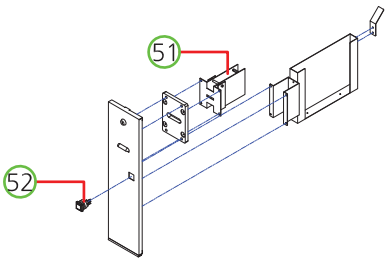
- PUSH TABLE COVER PART



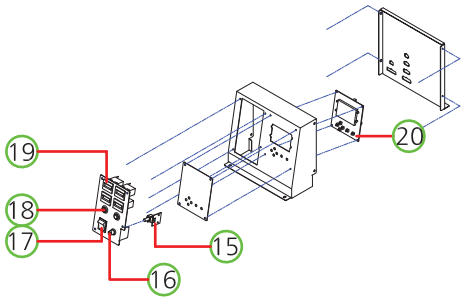
- FRONT DOOR PART



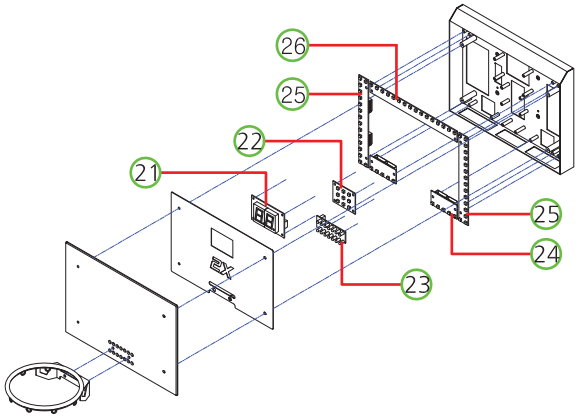
- TICKET DISPENSER PART



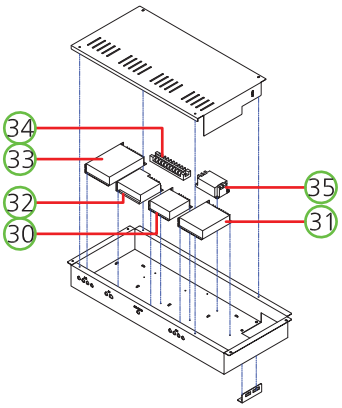
- SETUP PANEL PART



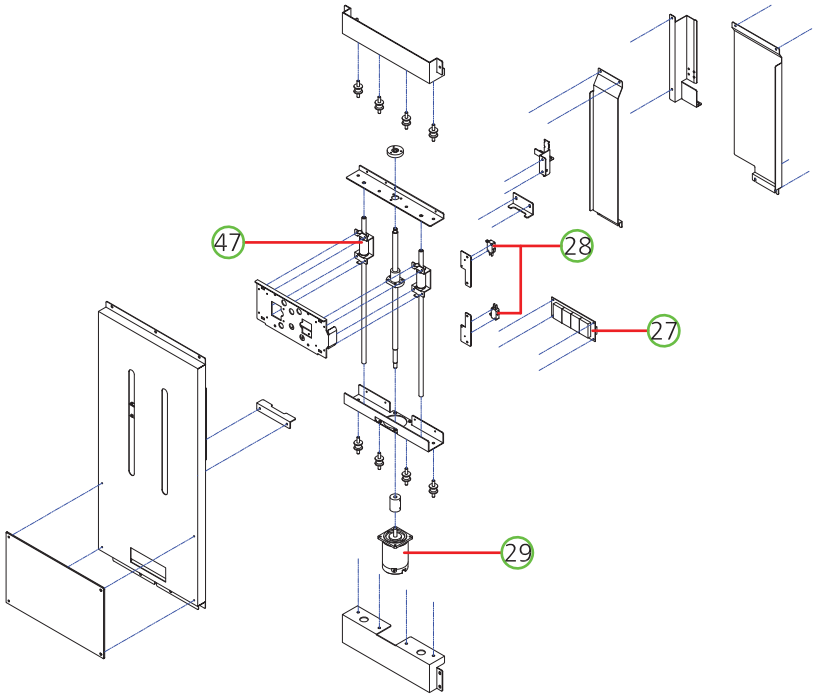
- GOAL POST PART



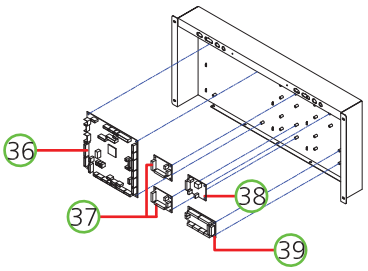
- POWER BOX PART



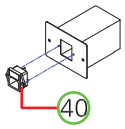
- BASKET MOVING PART



- MAIN IO PART



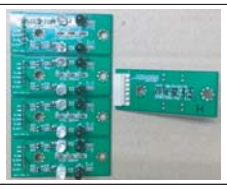
- AC INPUT PART



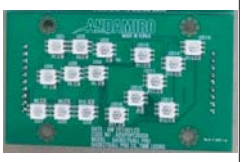
NO.	PIC	PART NAME	SPEC.	QTY	CODE NO.	WARRANTY	
						6 Month	One Year
1	O	FND PCB ASS'Y	6390-4 (STRAIGHT)	1	AFND0PCB011		O
2	O	LED BAR 12V PCB ASS'Y	710mm	4	AZZZ0PCB165	N / A	N / A
3	O	BONUS FND PCB ASS'Y	SND1817	2	ASBP0PCB003		O
4	O	LED BAR 12V ASS'Y	460mm	2	AZZZ0PCB124	N / A	N / A
5	O	FND EXT IO PCB ASS'Y	-	1	ABSP0PCB005		O
6	O	BONUS FND PCB ASS'Y	SND1817	2	ASBP0PCB003		O
7	O	STEPPING MOTOR	4S56Q-04054S	1	MZZZ0MOT144	O	
8	O	PHOTO INT-1 PCB ASS'Y	ANGLE TYPE	2	AZZZ0PCB103		O
9	O	BASKETBALL PRO 4 IR-PCB ASS'Y	-	1	ABSP0PCB010		O
10	O	BALL SHOOTER SPONGE	-	1	MBSP0SPO001	N / A	N / A
11	O	FND PCB ASS'Y	2029-2	2	AFND0PCB001		O
12	O	BUTTON SWITCH	AMIPB-60HR-W12D	3	MZZZ0BUT054	N / A	N / A
13	O	BASKET BALL PUSH RUBBER	-	2	MBSP0RUB001	N / A	N / A
14	O	COIN SELECTOR	TW-389	2	MZZZ0COS052	N / A	N / A
15	O	VOLUME PCB ASS'Y	1 VOLUME	1	AHM20PCB016		O
16	O	VOLUME KNOB	-	1	MELE0VOL007	N / A	N / A
17	O	ROCKER SWITCH	R595KDF	1	MELE0SWI021	N / A	N / A
18	O	PUSH BUTTON SWITCH	DS-412R ROSH	2	MELE0PUS006	N / A	N / A
19	O	COUNTER	OA127CL	4	MZZZ0COU002	N / A	N / A
20	O	SETUP LCD PCB ASS'Y	-	1	AZZZ0PCB113		O
21	O	FND PCB ASS'Y	2941-2 (ANGLE)	1	AFND0PCB015		O
22	O	2X TIME LED60 PCB ASS'Y	80 x 48 RED 16EA	1	ABSP0PCB009		O
23	O	14 IR-PCB ASS'Y	70 x 35 SI5312/ST5811 14R	1	ABSP0PCB012		O
24	O	BACKBOARD LED70 PCB ASS'Y	70 x 33 RGB 5EA	2	ABSP0PCB008		O
25	O	BACKBOARD LED205 PCB ASS'Y	205 x 25 RGB 16EA	2	ABSP0PCB007		O
26	O	BACKBOARD LED235 PCB ASS'Y	235 x 25 RGB 16EA	1	ABSP0PCB006		O
27	O	FND PCB ASS'Y	2941-4 (STRAIGHT)	1	AFND0PCB004		O
28	O	MICRO SWITCH	GSMV1651A2	2	MELE0MIC021	N / A	N / A
29	O	MOTOR	K6DS30N2-SA_60 DC24V 30W_2000RPM_2.5	1	MZZZ0MOT143	O	
30	O	POWER SMPS	LRS 100-24	1	MELE0SMP080		O
31	O	POWER SMPS	LRS 50_12	1	MELE0SMP082		O
32	O	POWER SMPS	LRS 75_5	1	MELE0SMP094		O
33	O	POWER SMPS	LRS 150F_12	1	MELE0SMP090		O
34	O	TERMINAL BLOCK	250V 10P UL_CE	1	MELE0TEB003	N / A	N / A
35	O	NOISE FILTER	RNS-2010	1	MELE0NOI009	N / A	N / A
36	O	MAIN PCB ASS'Y	-	1	ABSP0PCB001		O
37	O	STEPPING MOTOR PCB ASS'Y	65 x 50 TB6560AHQ - 1CH	2	ABSP0PCB004		O
38	O	DC MOTOR PCB ASS'Y	65 x 50 L6205 - 2CH	1	ABSP0PCB003		O
39	O	SEN IO PCB ASS'Y	55 x 100 ATMEGA8A - IR	1	ABSP0PCB002		O
40	O	AC INPUT	DAC-13H	1	MELE0SWI015	N / A	N / A
41	O	BALL SHOOTER PIPE FIX BKT	Al6061	1	MBSP0PRO013	N / A	N / A

NO.	PIC	PART NAME	SPEC.	QTY	CODE NO.	WARRANTY	
						6 Month	One Year
42	O	CYLINDER SPRING	-	1	MBSP0SPR001	N / A	N / A
43	O	BALL TARGET SHAFT	Al6061	1	MBSP0PRO005	N / A	N / A
44	O	O RING	G8 (⌀8 / 3T)	1	MZZZ0ORI009	N / A	N / A
45	O	AIR CYLINDER PIPE	PC PIPE (⌀35 1.5T)	1	MBSP0PRO001	N / A	N / A
46	O	BALL SHOOTER PIPE FIX LOWER BKT	Al6061	1	MBSP0PRO004	N / A	N / A
47	O	LM BEARING BUSH	LM12LUU	2	MZZZ0BEA127	N / A	N / A
48		BALL SHOOTER BUSH	BRASS	2	MBSP0PRO010	N / A	N / A
49		CYLINDER SPRING COVER ACETAL	ACETAL	2	MBSP0PRO014	N / A	N / A
50		CYLINDER SPACER	STS304	4	MBSP0PRO011	N / A	N / A
51	O	TICKET DISPENSER	CLE CL-002Q_270	1	MZZZ0TID010	N / A	N / A
52	O	BUTTON SWITCH	TICKET AM1PB-26SH R12D	1	MMUM0BUT002	N / A	N / A

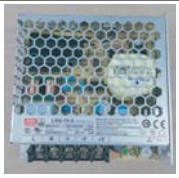
1	2	3	4	5	6
					
AFND0PCB011	AZZZ0PCB165	ASBP0PCB003	AZZZ0PCB124	ABSP0PCB005	ASBP0PCB003

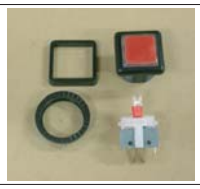
7	8	9	10	11	12
					
MZZZ0MOT144	AZZZ0PCB103	ABSP0PCB010	MBSP0SPO001	AFND0PCB001	MZZZ0BUT054

13	14	15	16	17	18
					
MBSP0RUB001	MZZZ0COS052	AHM20PCB016	MELE0VOL007	MELE0SWI021	MELE0PUS006

19	20	21	22	23	24
					
MZZZ0COU002	AZZZ0PCB113	AFND0PCB015	ABSP0PCB009	ABSP0PCB012	ABSP0PCB008

25	26	27	28	29	30
					
ABSP0PCB007	ABSP0PCB006	AFND0PCB004	MELE0MIC021	MZZZ0MOT143	MELE0SMP080

31	32	33	34	35	36
					
MELE0SMP082	MELE0SMP094	MELE0SMP090	MELE0TEB003	MELE0NOI009	ABSP0PCB001

37	38	39	40	41	42
					
ABSP0PCB004	ABSP0PCB003	ABSP0PCB002	MELE0SWI015	MBSP0PRO013	MBSP0SPR001
43	44	45	46	47	51
					
MBSP0PRO005	MZZZ0ORI008	MBSP0PRO001	MBSP0PRO004	MZZZ0BEA127	MZZZ0TID010
52					
					
MMUM0BUT002					