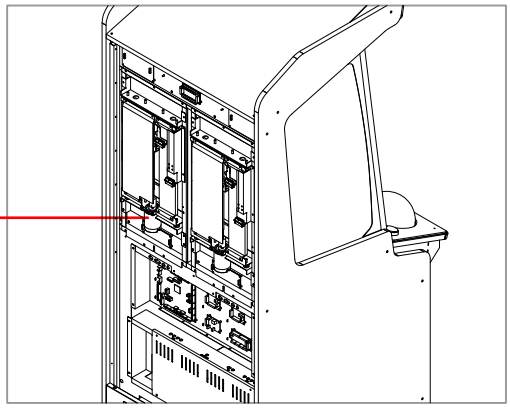
4. TROUBLESHOOTING

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

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

- IN CASE THE MOTOR OR THE PCB RELATED MOTOR PROBLEM



[Related videos]

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

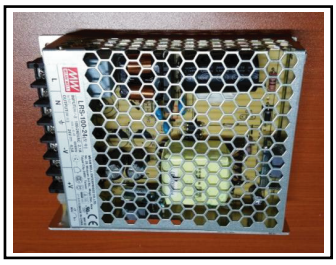
YES →
[HOW TO CHECK]
1. CHECK CONNECTION OF CONNECTOR
2. CHECK IF BOLT AND MOTOR ARE IN POSITION
3. CHECK BALL SCREW CONDITION

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

- **CODE NO.**
  [MELE0SMP080]



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

REPLACE DC MOTOR

NO

REPLACE DC MOTOR DRIVER PCB

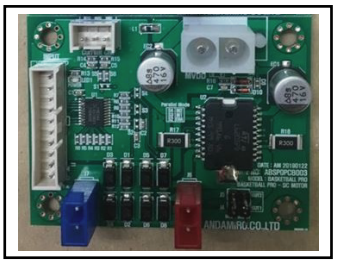
NO

REPLACE MAIN PCB

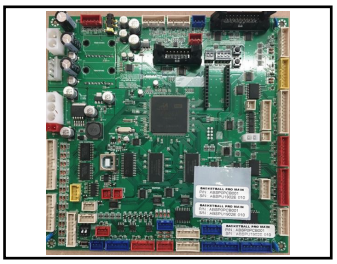
DONE

- CODE NO.
[MZZZ0MOT143]

- CODE NO.
[ABSP0PCB003]



- CODE NO.
[ABSP0PCB001]

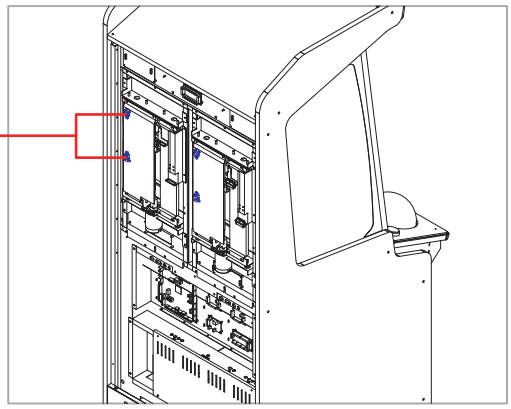


[Related videos]

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

4-2. LIMIT SWITCH ERROR [Er4-3~8]

- IN CASE BACKBOARD MOTOR LIMIT SWITCH IS PROBLEM



LIMIT SWITCH ERROR [Er4-3~8]

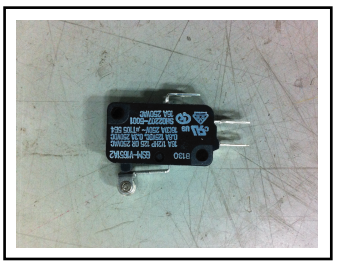
TEST SWITCH
- YES → DONE
- NO →
[HOW TO TEST]
1. TEST MODE > BACKBOARD-MOT
2. 1P MOTOR UP / DOWN MOVE
   - USE SETUP LCD UP / LEFT BUTTON
3. 2P MOTOR UP / DOWN MOVE
   - USE SETUP LCD RIGHT / DOWN BUTTON
4. CHECK IF THERE IS '-' MARK AT FIRST DIGIT OF SCORE FND WHEN MOTOR MOVES UP / DOWN IN MAXIMUM

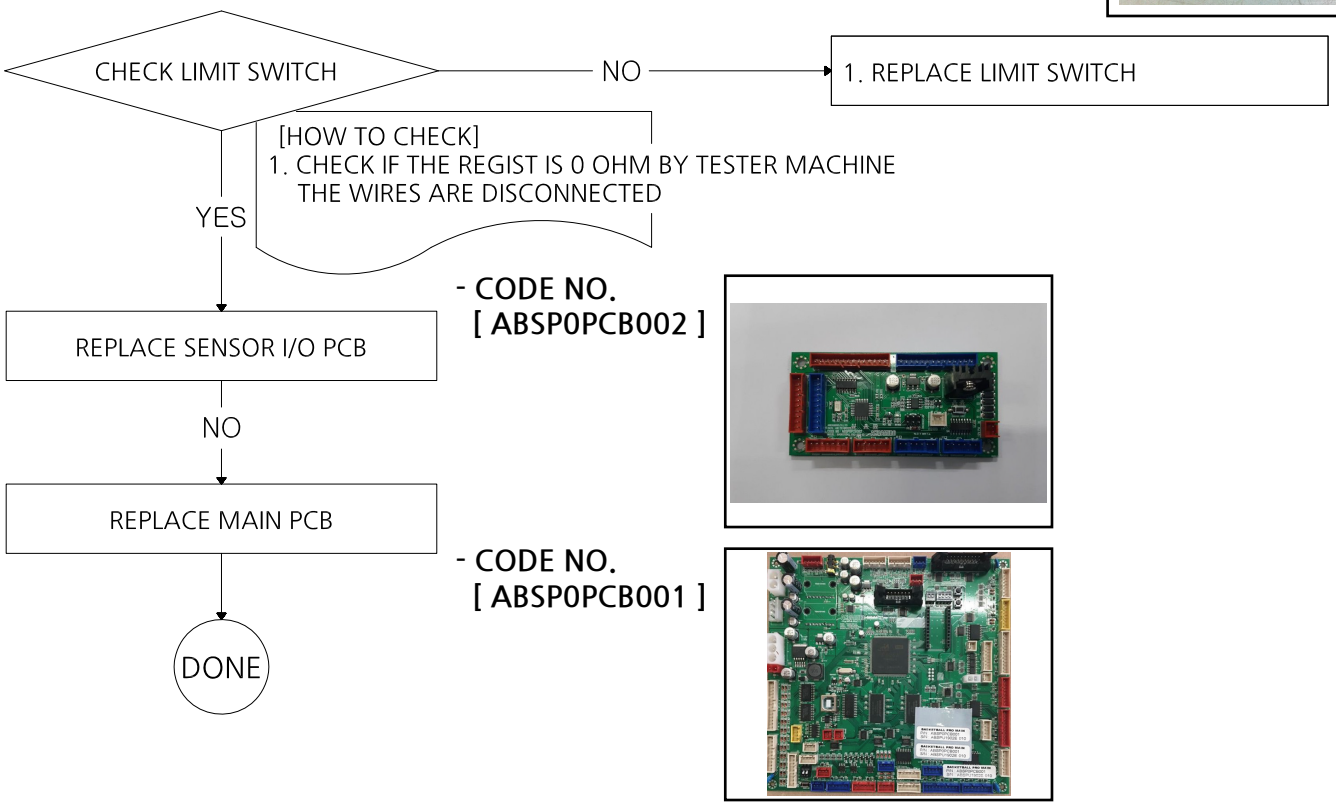
CHECK SWITCH
- NO → 1. RECONNECT CONNECTOR 2. REASSEMBLE OR REPLACE
- YES →
[HOW TO CHECK]
1. CHECK CONNECTION OF CONNECTOR (N.O & COM)
2. CHECK IF BOLT AND PART ARE IN POSITION
3. CHECK SWITCH CONDITION
4. CHECK SENSING ANGLE OF SWITCH PIN

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]

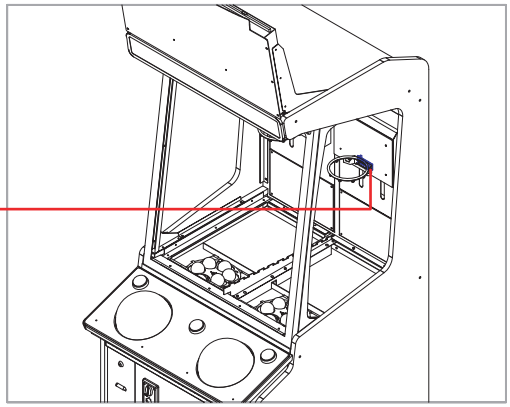
- CODE NO.
[ABSP0PCB001]

[Related videos]

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

4-3. GOAL SENSOR ERROR [Er5-1~3]

- IN CASE GOAL SENSOR IS PROBLEM



GOAL SENSOR ERROR [Er5-1~3]

TEST GOAL SENSOR
YES → DONE

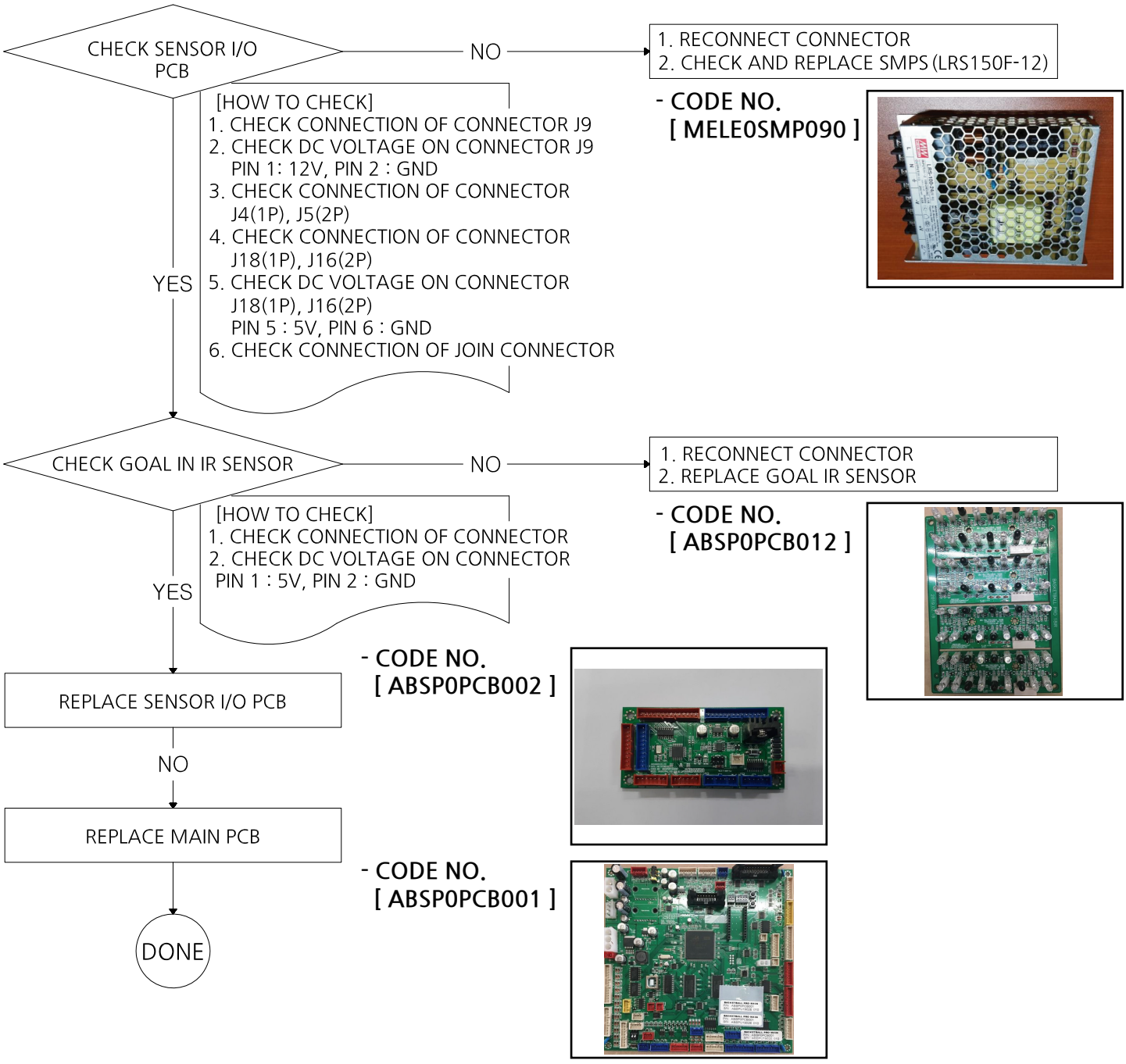
NO
[HOW TO TEST]
1. TEST MODE > GOAL -SENSOR
2. SENSOR ON / OFF BY SELECT BUTTON
3. CHECK IF THERE IS '-' MARK ON TIME FND WHEN GOAL SENSOR WORKS

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

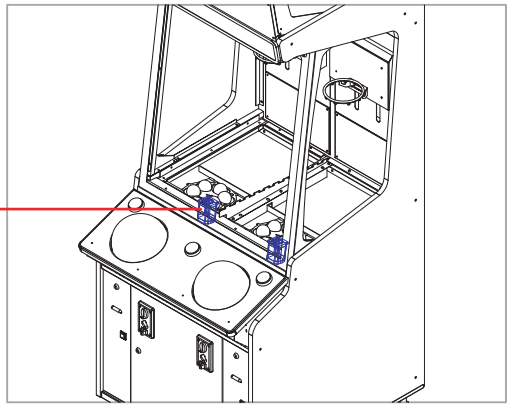

CHECK SENSOR I/O PCB
NO
1. RECONNECT CONNECTOR
2. CHECK AND REPLACE SMPS (LRS150F-12)
- CODE NO.
[MELE0SMP090]
[HOW TO CHECK]
1. CHECK CONNECTION OF CONNECTOR J9
2. CHECK DC VOLTAGE ON CONNECTOR J9
PIN 1: 12V, PIN 2 : GND
3. CHECK CONNECTION OF CONNECTOR
J4(1P), J5(2P)
4. CHECK CONNECTION OF CONNECTOR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

[Related videos]

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

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

- IN CASE STEP MOTOR IS PROBLEM

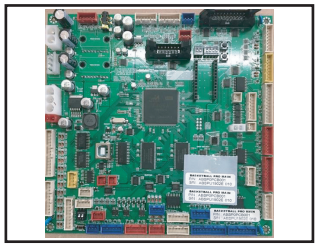


STEPPING MOTOR ERROR [Er6-1~2]

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

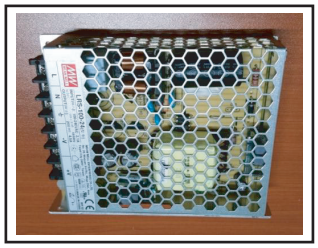
CHECK MAIN PCB
- NO → 1. RECONNECT CONNECTOR
  2. REPLACE MAIN PCB
  - CODE NO. [ABSP0PCB001]



- 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

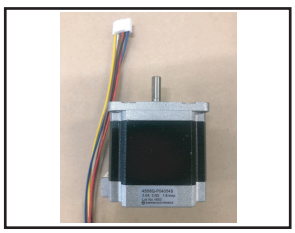
CHECK STEPPING MOTOR DRIVER PCB
- NO → 1. RECONNECT CONNECTOR
  2. CHECK AND REPLACE SMPS (LRS150F-12)
  - CODE NO. [MELE0SMP090]



- 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

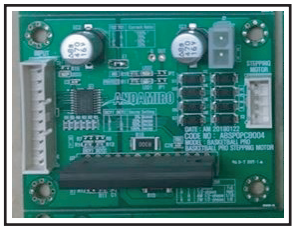
- CODE NO. [MZZZ0MOT144]



REPLACE STEPPING MOTOR

- NO →

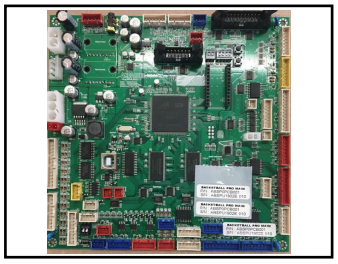
REPLACE STEPPING MOTOR DRIVER PCB
- CODE NO. [ABSP0PCB004]



- NO →

REPLACE MAIN PCB

- CODE NO.
[ABSP0PCB001]

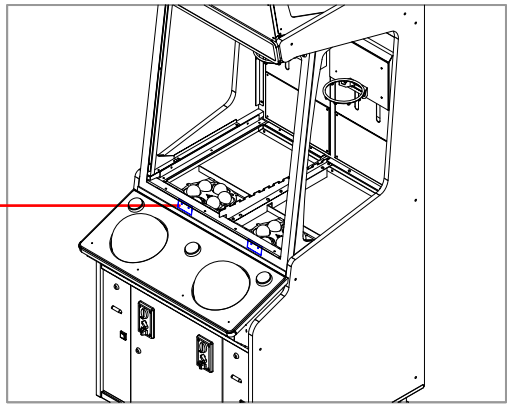


DONE

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

- IN CASE BALL SENSING IR SENSOR IS PROBLEM

BALL SENSING IR SENSOR



[Related videos]

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

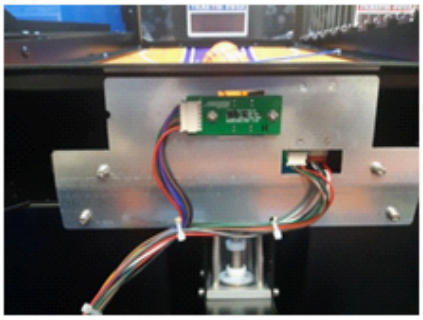
1. MAKE BALL SENSING IR SENSOR UP SIDE DOWN AS SHOWN IN THE PHOTO

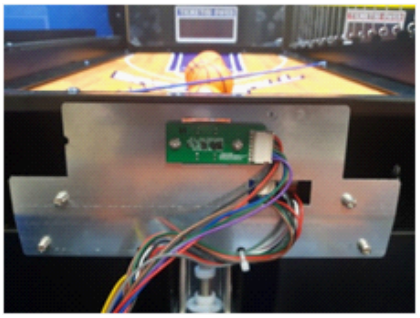
2. CHANGE THE VALUE OF BALL-SEN FROM DN TO UP FOR THE PLAYER WITH ERROR

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.**



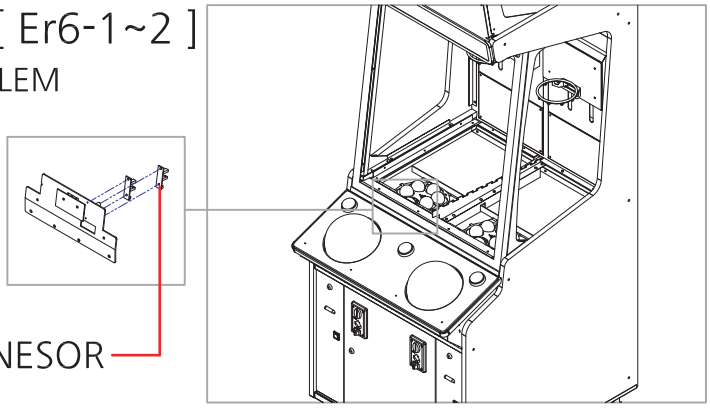


[Related videos]

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

4-6. 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)

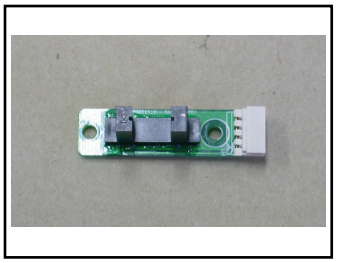
CHECK SENSOR I/O PCB

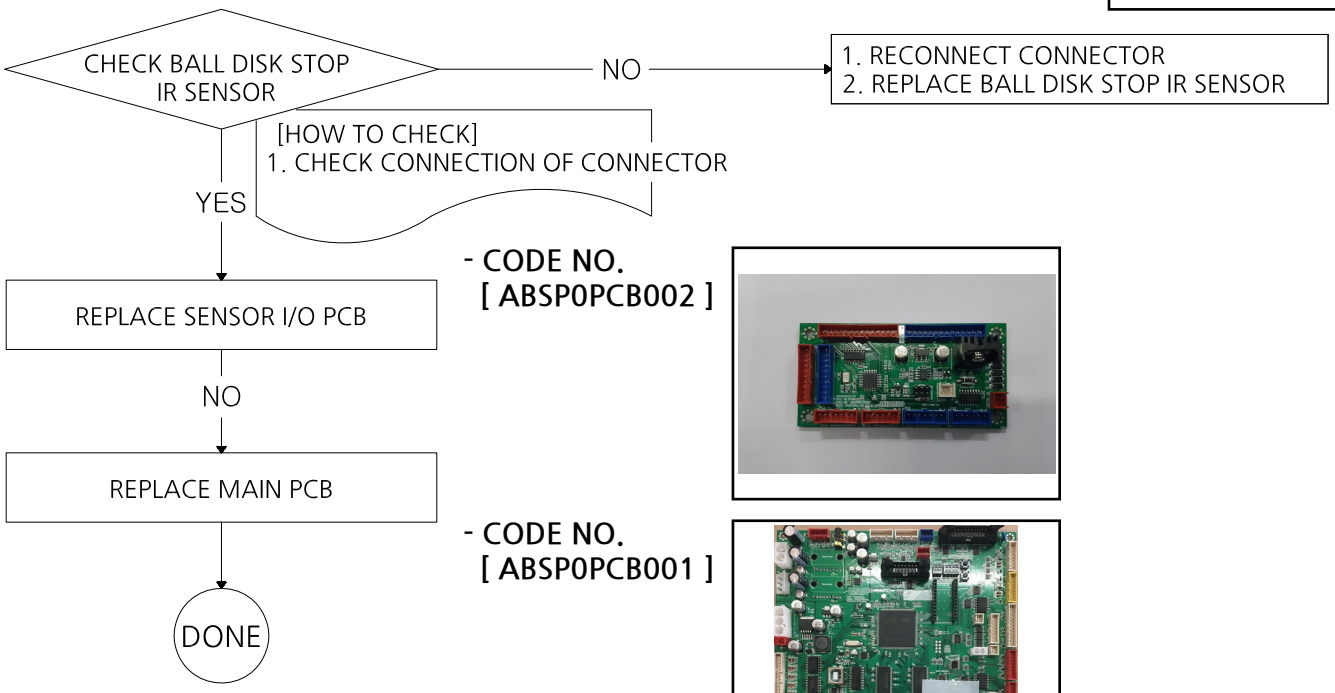
NO →
1. RECONNECT CONNECTOR
2. CHECK AND REPLACE SMPS (LRS150F-12)
3. REPLACE SENSOR I/O PCB

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]

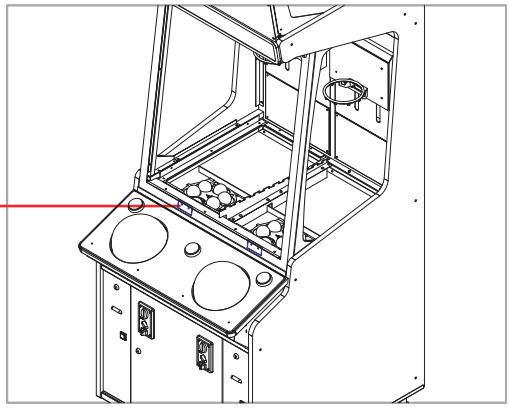
[Related videos]

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

4-7. 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

YES

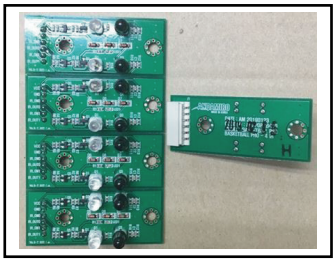
[HOW TO CHECK]
1. CHECK CONNECTION OF CONNECTOR J9
2. CHECK DC VOLTAGE ON CONNECTOR J9
   PIN 1: 12V, PIN 2 : GND
3. CHECK CONNECTION OF CONNECTOR
   J1(1P), J2(2P)
4. CHECK CONNECTION OF CONNECTOR
   J12(1P), J13(2P)
5. CHECK DC VOLTAGE ON CONNECTOR
   J12(1P), J13(2P)
   PIN 1 : 5V, PIN 2 : GND
6.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

CHECK BALL SENSING IR SENSOR

NO

1. RECONNECT CONNECTOR
2. REPLACE BALL SENSING IR SENSOR

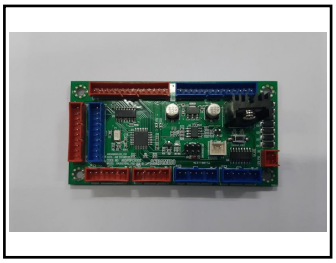
- CODE NO.
  [ABSP0PCB010]



[HOW TO CHECK]
1. CHECK CONNECTION OF CONNECTOR

YES

- CODE NO.
  [ABSP0PCB002]

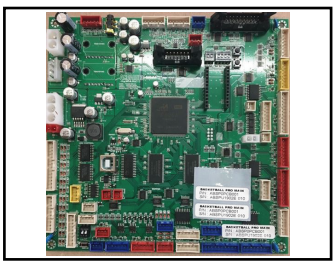


REPLACE SENSOR I/O PCB

NO

REPLACE MAIN PCB

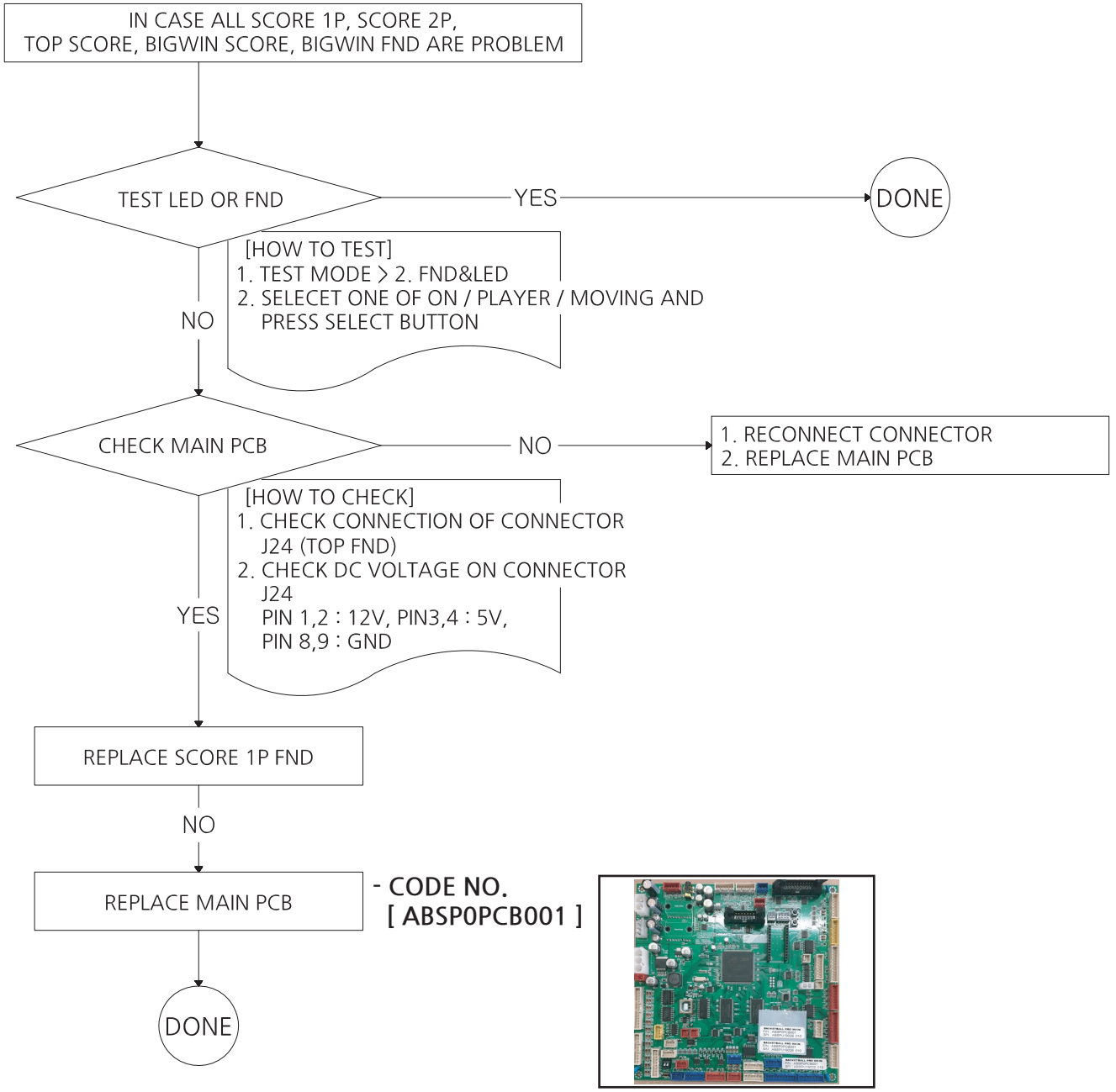
- CODE NO.
  [ABSP0PCB001]



DONE

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

4-8. 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.

4-9. IN CASE ALL 1P TICKET FND, TIME FND, 2X LED, BACKBOARD LED ARE PROBLEM