

Operator Manual

BLACK HOLE



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FOR SAFETY

■ Setting up

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 anyone 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; do 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.

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

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 across a walkway.

Be sure to ground this product.

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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 dip switch settings.

■ Operation

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

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

Do not connect the power cord improperly or permit dust or dirt to come in contact with the connection.

- Doing so could affect the power periodically

Do not use this product anywhere other than commercial 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 plug or unplug the power cord with wet hands.

If the power cord or power plug becomes damaged, stop use immediately until the damaged is repaired.

■ Inspection and cleaning

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.

All maintenance should be performed by a qualified specialist only, as high voltage is present in some areas.

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 may remain live. When opening the back door, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.

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To clean the game machine, wipe with a soft cloth dampened with a neutral non-abrasive detergent.

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

■ Moving and transportation

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

Be sure not to let the machine tip over.

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

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

Avoid excessive force while moving the machine.

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FOR SAFETY

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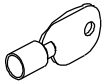
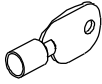
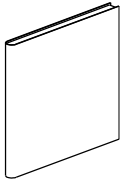
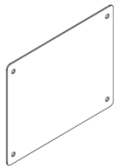
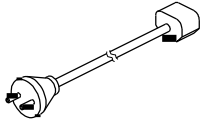
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COMPONENTS

No.	Figure	Part Name	QTY
1		6001 KEY (COIN BOX)	2 EA
2		7001 KEY	2 EA
3		MANUAL	1 EA
4		HEX WRENCH METRIC (2.5mm) / (4mm)	2 EA
5		COIN DOOR COVER	1 EA
6		AC CORD	1 EA

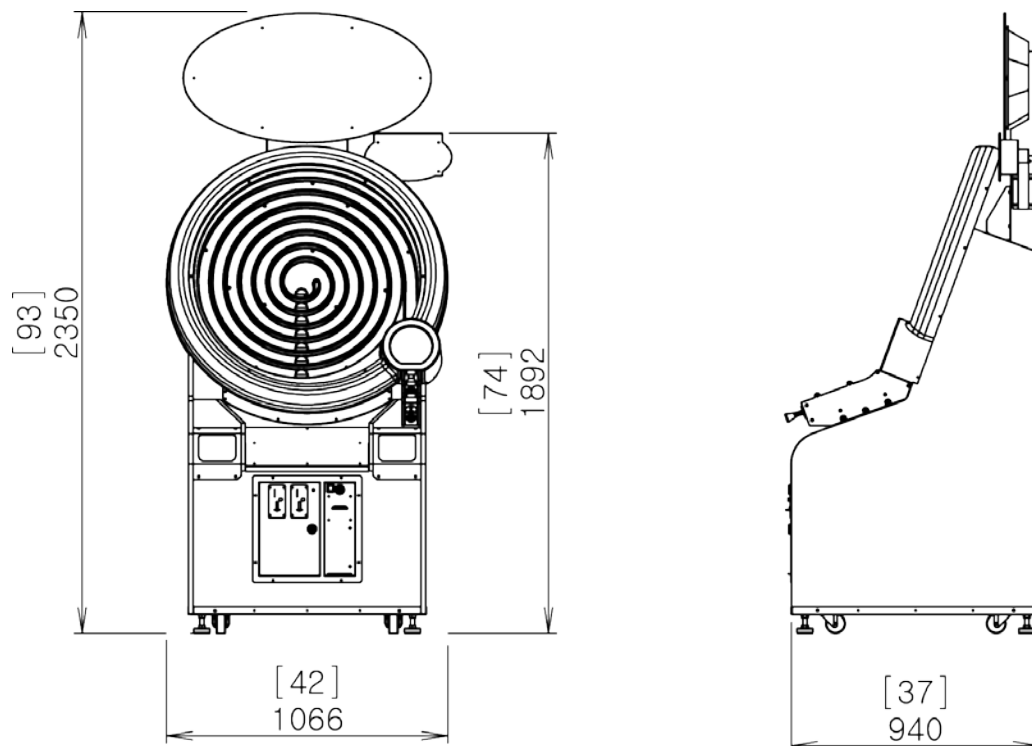
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1. ABOUT GAME

1-1. GAME DESCRIPTION

Black hole is a true skill based ticket redemption game. The player pulls the plunger and shoots the ball to win the jackpot.

1-2. DIMENSIONS

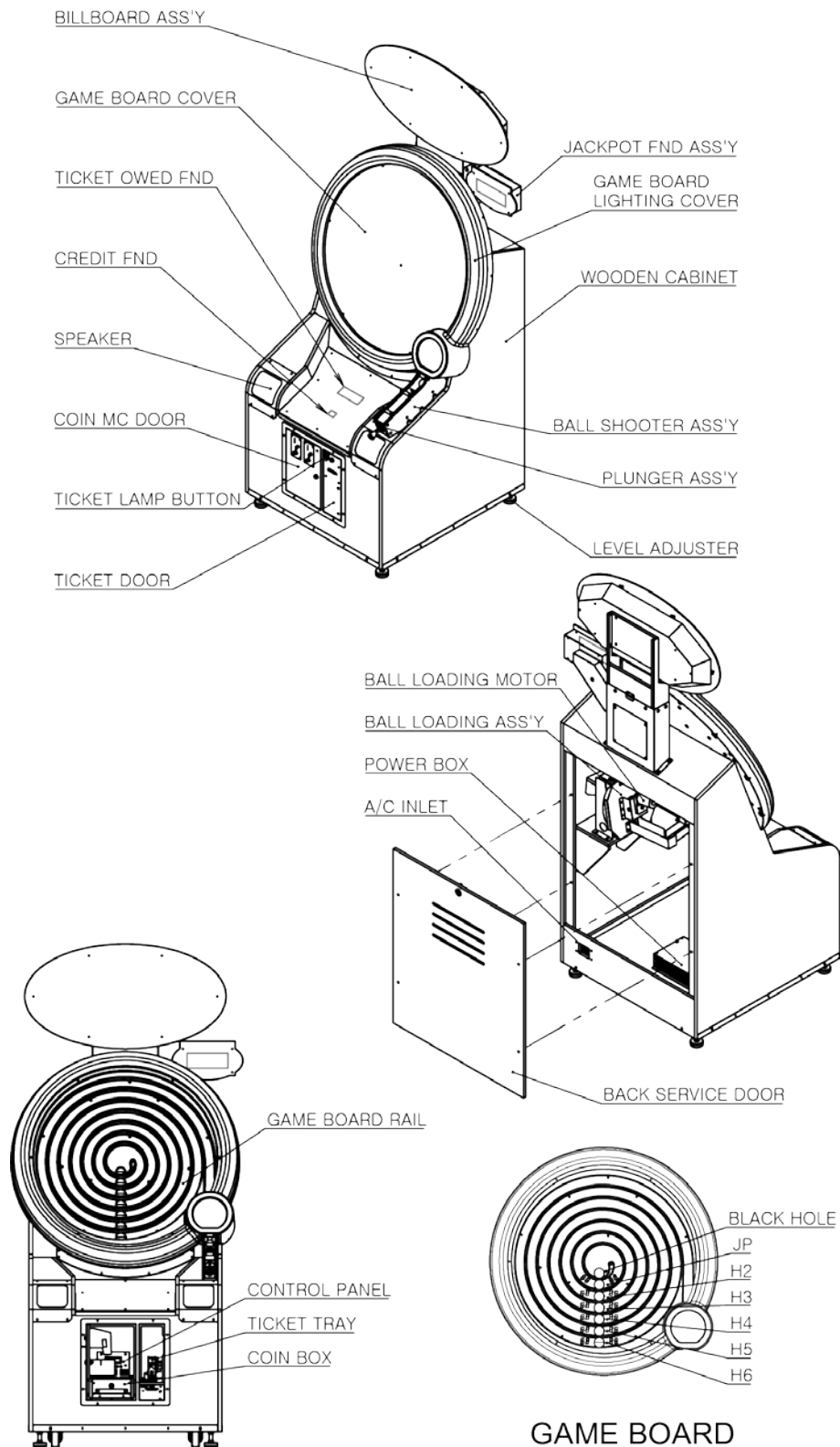


1-3. SPECIFICATION

DIMENSIONS (See above figure)	W1066 x D940 x H2346 (mm) W42 x D37 x H93 (inch)
WEIGHT	210Kg (463lbs)
POWER	110V (50/60Hz), 190W

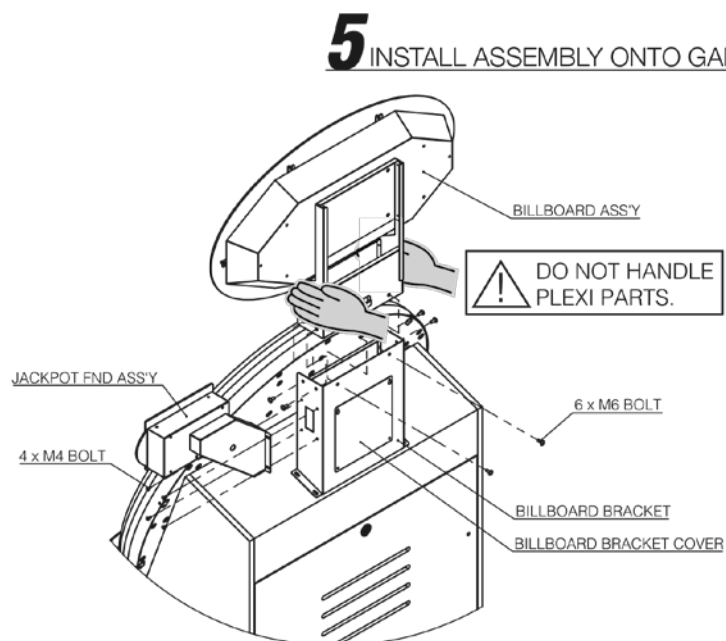
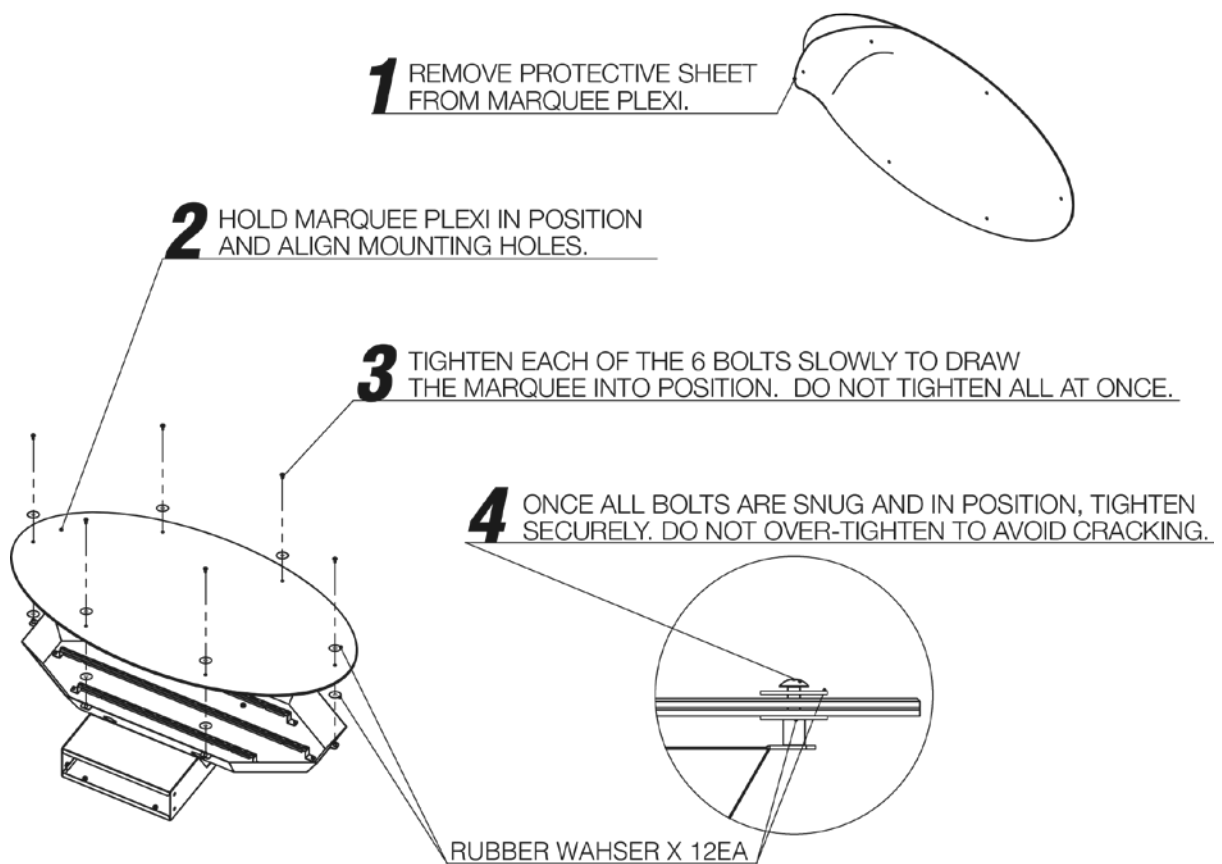
2. NAME OF PARTS

2-1. NAME OF PARTS



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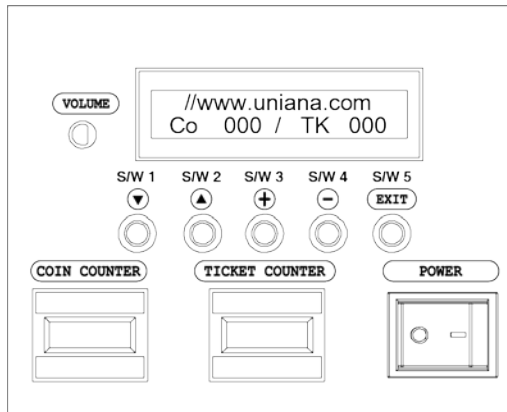
2-2. BILLBOARD TITLE ASSEMBLY



3. GAME SETUP & TEST MODE

3-1. CONTROL PANEL

■ CONTROL PANEL SWITCH



VOLUME : SOUND VOLUME
S/W 1 : GET INTO SETUP MODE
 SELECT SETUP MODE (NEXT)
S/W 2 : SELECT SETUP MODE (PREVIOUS)
S/W 3 : INCREASE SETUP VALUE
S/W 4 : DECREASE SETUP VALUE
S/W 5 : EXIT SETUP MODE

- BOOK KEEPING (MAIN)

CO : COIN COUNT
 TK : TICKET COUNT

• SERVICE COIN MODE

1. Push and hold S/W5.
2. Push S/W3 for service coin. (This coin is not counted on coin counter & bookkeeping)

• CLEAR BOOKEEPING

1. Push and hold S/W5
2. Turn off the machine.
3. Turn on power switch while push and hold S/W5.

• FACTORY RESET

1. Turn off the machine.
2. Turn on power switch while push and hold S/W3 & S/W4.
3. Hold S/W3 & S/W4 until machine turns on. (It takes about 6~10 seconds)

3-2. SETUP MODE

The first step of setup mode

- Push S/W 1 (▼) button to get into setup mode.
- Push S/W 1 (▼) button to move setup mode list to next.
- Push S/W 2 (▲) button to move setup mode list to previous.
- To change the value of selected mode, follow next step.
 1. Push S/W 3 (+) or S/W 4 (-) button to increase or decrease value.
 2. Push S/W 1 (▼) or S/W 2 (▲) button to enter other setup mode list.
- Push S/W 5 (EXIT) button to exit setup mode.
- After changing setup, turn off and turn on the machine.

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1. NOT USED	- NOT USED
2. CREDIT_MODE 1_COIN_1_PLAY	- CREDIT MODE (1 COIN 1 PLAY ~ 10 COINS 1 PLAY & 1 COIN 1~10 PLAYS)
3. Bookkeeping_	Push S/W3 & S/W4 for list BK 0 SC 0 (BLACK HOLE COUNT / SCORE AMOUNT) JP 0 SC 0 (JACKPOT COUNT / SCORE AMOUNT) H2 0 SC 0 (HOLE2 COUNT / SCORE AMOUNT) H3 0 SC 0 (HOLE3 COUNT / SCORE AMOUNT) H4 0 SC 0 (HOLE4 COUNT / SCORE AMOUNT) H5 0 SC 0 (HOLE5 COUNT / SCORE AMOUNT) H6 0 SC 0 (HOLE6 COUNT / SCORE AMOUNT)
4. Ticket Feature 1/1 Ticket	- TICKET DISPENSING MODE (1/2~1/1) * When 1/2 TICKET is selected, emits 1 TICKET that counts 2 tickets
5. JackPot_LIMIT_ VALUE= 500	- JACKPOT MAXIMUM VALUE (1-9900) (* MAX ≥ JP_SC_SCORE) * Set maximum accumulated JACKPOT value
6. JP_ADDITION_ VALUE= 1	- JACKPOT ADDITIONAL VALUE (0-10) * Set desired accumulated JACKPOT value per play
7. DEMO_PLAY_Eve 0030	- PLAY DEMO PER SELECTED SECONDS (20~240) * Set to turn off demo play, or activate to play on selected time
8. DEMO_SOUND_ VALUE= 0003	- PLAY DEMO SOUND PER SELECTED MINUTES (1~30) * Set to turn off demo sound, or select time for Spacecraft sound in between normal demo sound (demo sound is 1 minute long)
9. B_K_Hole_Score_ VALUE= 0002	- BLACK HOLE SCORE VALUE (1-99)
10. JP_SC_Setup_1 VALUE= 0250	- JACKPOT HOLE SCORE VALUE (1-9900) (* MAX ≤ JackPot_LIMIT_VALUE)
11. Score_Setup_2 VALUE= 0002	- HOLE SCORE '2' VALUE (1-99) * 2nd hole from top value is fixed
12. Score_Setup_3 VALUE= 0004	- HOLE SCORE '3' VALUE (1-99)
13. Score_Setup_4 VALUE= 0006	- HOLE SCORE '4' VALUE (1-99)
14. Score_Setup_5 VALUE= 0008	- HOLE SCORE '5' VALUE (1-99)

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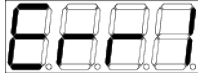
15. Score_Setup_6 VALUE= 0002	- HOLE SCORE '6' VALUE (1-99) * Bottom hole value is fixed
16. LED_TEST_MODE 00000	- Push S/W3 & S/W4 to test led lighting colors. (1~7) * Test by switching the LED colors
17. THE_END	- END OF LIST

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4. ERROR & TROUBLE SHOOTING

■ ERROR CODES

[TICKET OWED FND]



- BALL LOADING ERROR



- TICKET ERROR

4-1. TROUBLE SHOOTING: ERROR

■ ERROR - 01

First step of trouble shooting Err1:

- Motor does not work, follow next step.

1. Check connectors & harness.
2. Check for any loose bolts on motor assembly and rotary wheel.
3. Check ball stuck.
4. Replace motor.
5. Replace main board.

- Motor work properly. Follow next step.

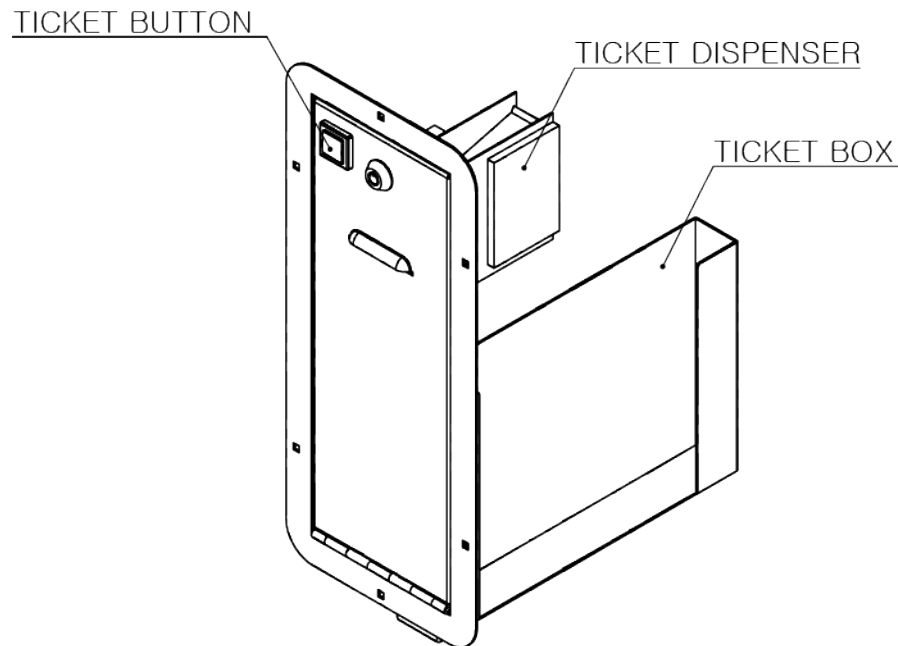
1. Check micro switch on ball loading assembly.
2. Replace micro switch.
3. Replace main board.

4-2. TROUBLE SHOOTING: TICKET ERROR

■ TICKER ERROR – HELP

First step of trouble shooting ticket error:

- If ticket box is empty, load new tickets to ticket dispenser and push ticket button.
- If ticket button does not work, test ticket dispenser & ticket lamp



- If ticket dispenser does not work.

1. Check connectors & harness.
2. Replace ticket dispenser.
3. Replace main board.

- When ticket dispenser work properly.

1. Check connectors & harness.
2. Check ticket button test.
3. Replace ticket button.
4. Replace main board

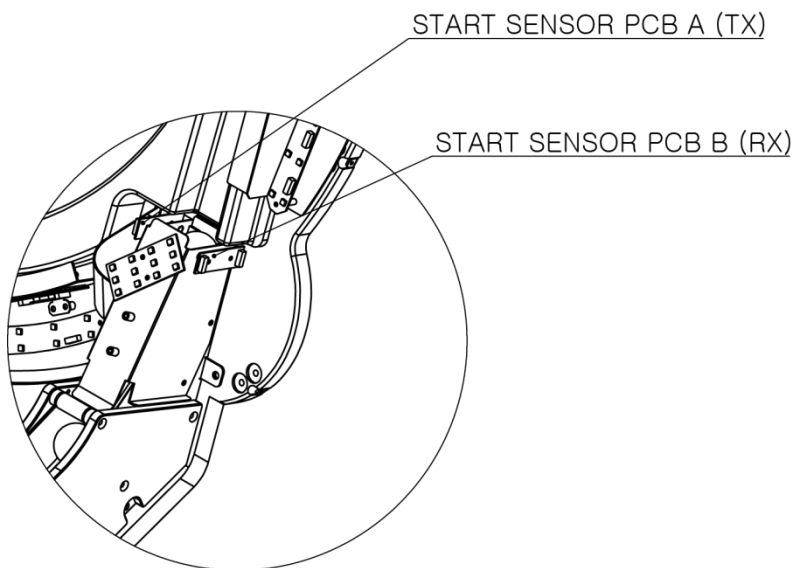
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4-3. TROUBLESHOOTING: SENSOR ERROR

■ GAME START OR SCORE CHECK ERROR

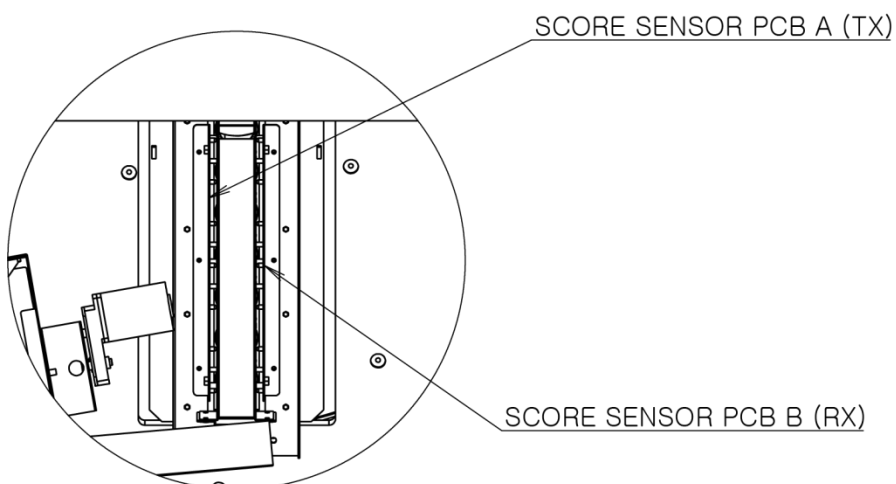
- Start sound or lighting animation does not work, follow next step.

1. Check connectors & harness.
2. Replace start sensor PCB.
3. Replace main board.



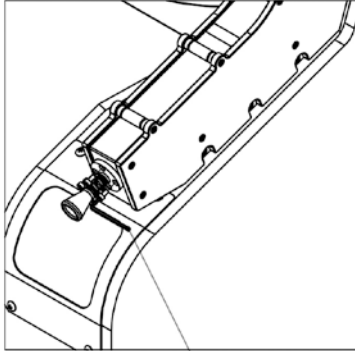
- Machine does not check score while game playing, follow next step.

1. Check connectors & harness.
2. Replace score sensor PCB.
3. Replace main board.



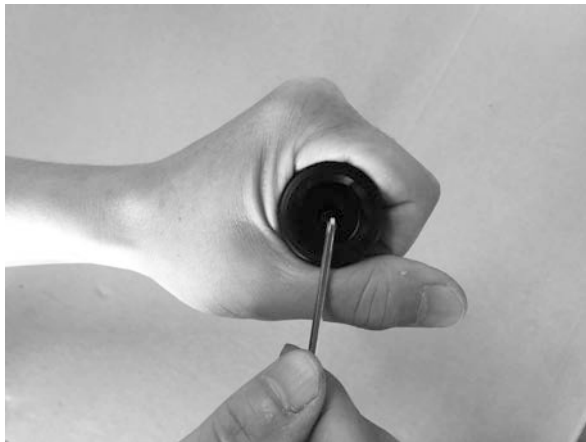
4-4. SPRING REPLACEMENT INSTRUCTION

1. Unscrew the 4 bolts with 4mm wrench enclosed and separate the plunger Assy'.

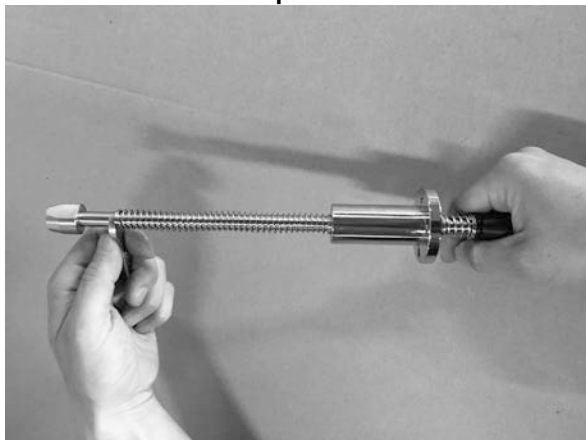


4mm HEX WRENCH

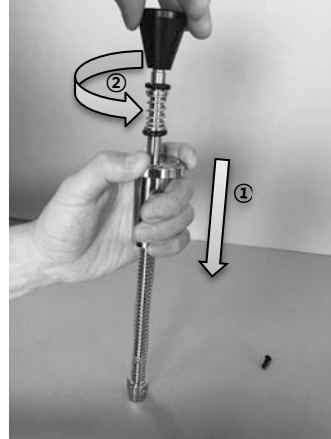
2. Unscrew bolt on the knob with 2.5mm wrench enclosed.



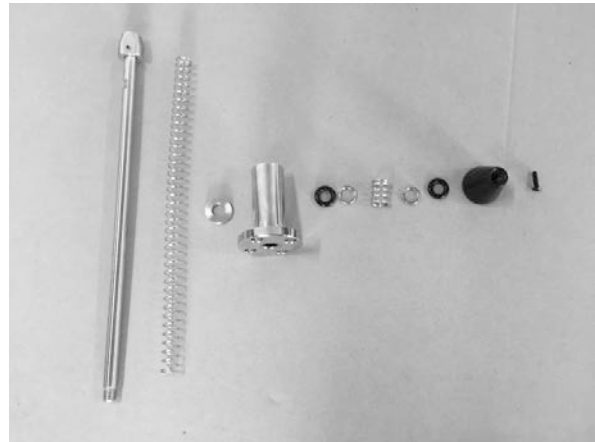
3. Grip the shaft with Spanner (size 8) and turn the knob anticlockwise with force given. If the knob starts to turn with less force, move to the next step.



4. Caution! The spring may pop up to you. Must direct the head to ground and release the knob with pressing housing area.



5. Disassemble the shaft and replace the spring.



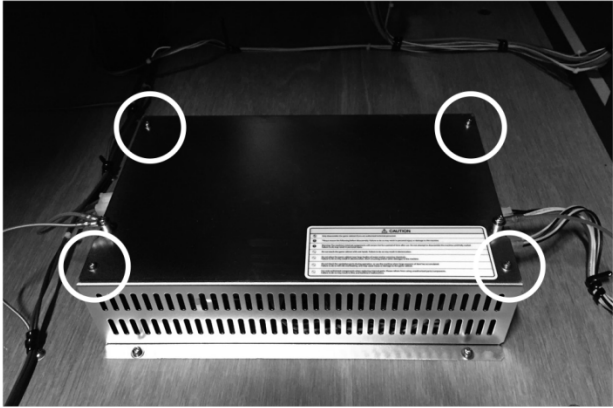
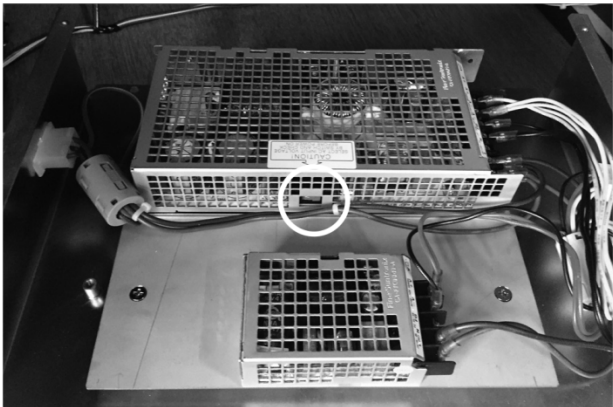
6. Reassemble the shaft with reverse order.



7. Put back the plunger Assy' to the shooter box.box.

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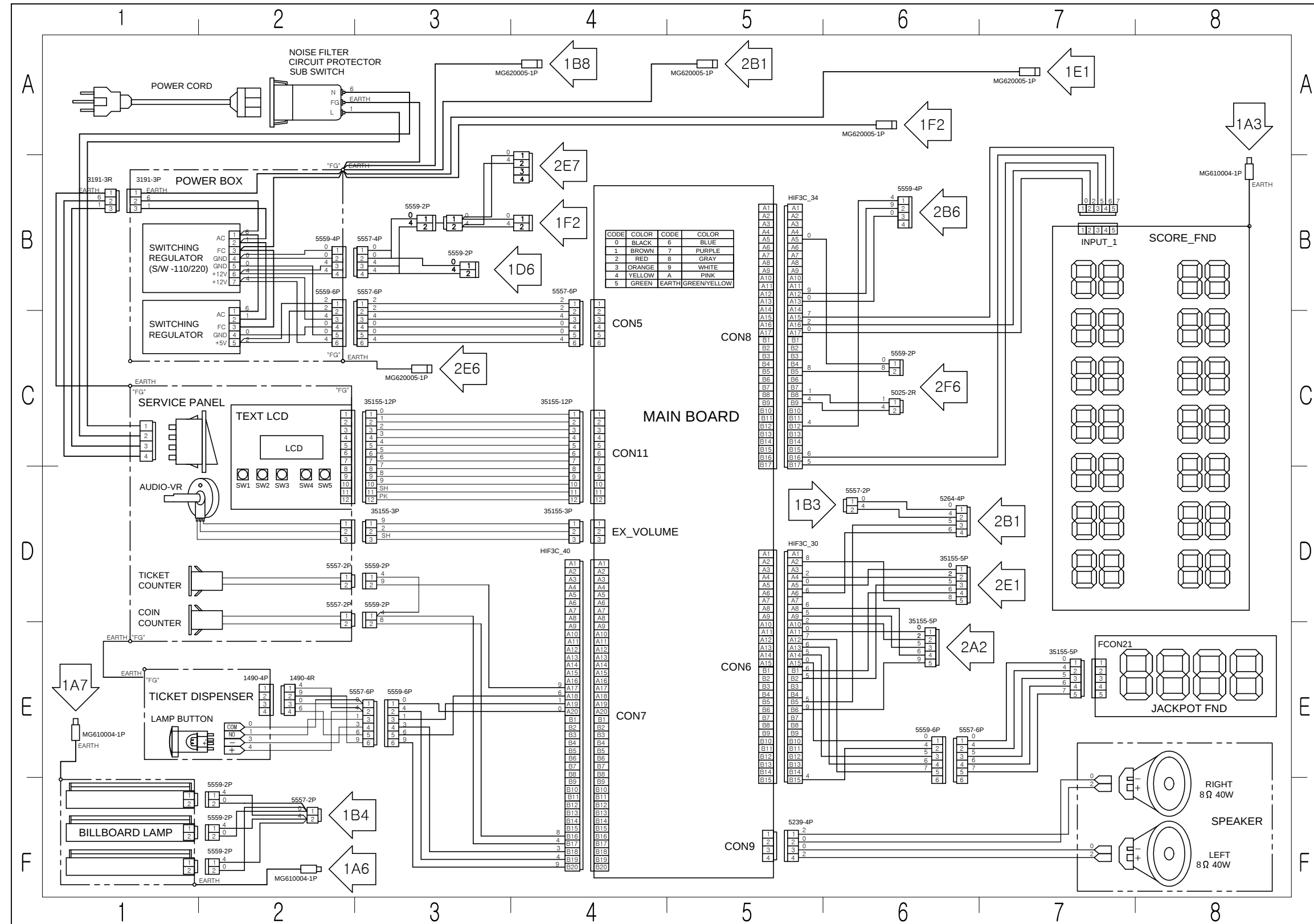
4-5. HOW TO SET PSU SWITCH

No.	Picture and Target Point	Method
1		1. Unscrew 4 bolts and open the PSU's cover.
2		1. Move and set the PSU Switch as the local voltage. (230V/115V)
3		1. Screw up the PSU's cover with 4 bolts.

5. WIRING DIAGRAM

D72141101B BLACK HOLE WIRE DIAGRAM

Specificatons for regions using 110/220 voltage area. 1/2



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D72141102B BLACK HOLE WIRE DIAGRAM Specifications for regions using 110/220 voltage area. 2/2

