

Dunk Tank Prize



Operation Manual



Design registration applied, utility model registration applied, and patent pending

Be sure to read this Operation Manual and understand the contents thoroughly before operating in order use the product correctly
After reading the Operation Manual, keep it in a safe place near the product for easy access whenever needed.

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1. INTRODUCTION

Thank you for purchasing the "BARBER CUT" game machine (hereafter referred to as the "machine")

This operation manual describes

- How to install, operate, transport, maintain and discard the machine safely and properly
- How to operate the machine correctly and make use of its full features
- How to ensure safety of players and bystanders

Inquiries regarding this machine and its repair

- For further information about the machine and its repair, contact your distributor

2. Safety Precautions

Before operating the product, read the following safety precautions carefully and use the product correctly. Be sure to observe the following instructions since they are important for ensuring safety.



CAUTION

This indication is shown when failure to observe the instructions can result in personal injury or property damage.

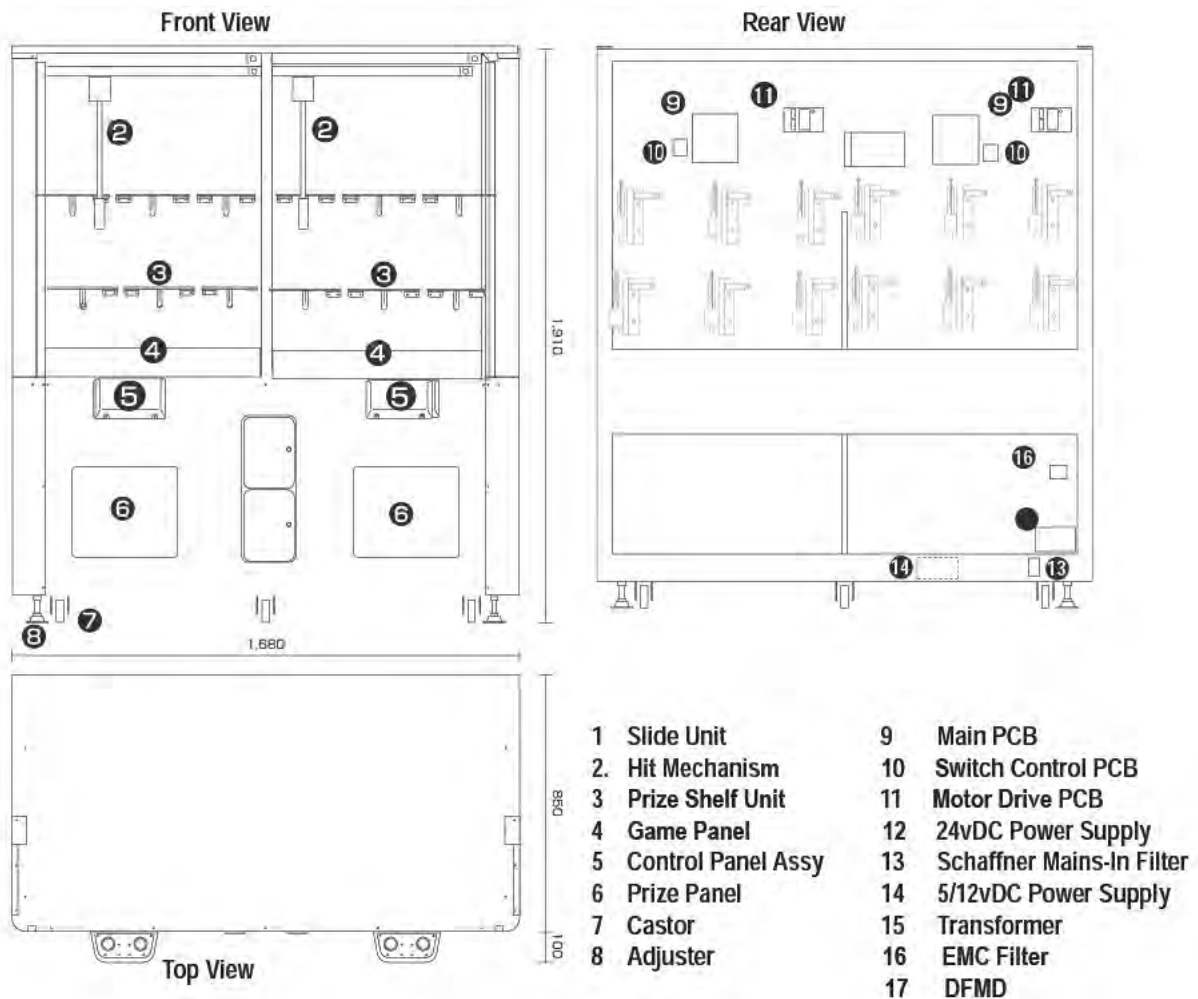


CAUTION

- When opening or closing the glass door, always hold the glass with one hand and move the door gently. If the glass door is opened or closed carelessly, your hand or fingers may get pinched or the glass may break.
- When moving the machine, do not push the glass section. Tempered glass is used, but it can still break if pressed hard. If the glass breaks, personal injury can occur to the players or bystanders.
- Do not allow players to mishandle or abuse the machine, such as tilting/lifting and dropping the machine. Such action can cause the machine to tip over or the glass to break, and personal injury may occur to bystanders.
- During the installation, be sure to use the adjusters to ensure that the machine cannot be moved easily. If the adjusters are not used, the machine can move easily when people touch it lightly and personal injury may occur to bystanders.
- Carefully turn the adjusters to prevent your fingers from being pinched. The machine is very heavy. Do not place your hands under the machine.
- Never use the machine outdoors. Operating the machine in rain or dusty place can cause short-circuiting or electric shock.
- The power cord plug has a ground lead. Be sure to connect the ground lead to the specified grounding terminal on the power outlet. If the machine is not grounded, electric shock can occur in case of electrical leakage.
- Route the power cord so that it will not be stepped on by people or pressed on by another machine. If the power cord becomes damaged, short-circuiting or electric shock can occur.
- Do not pull the power cord to disconnect the power plug from the power outlet. Pulling the power cord can cause the internal wires to break, resulting in short-circuiting.
- Do not use the power cord if it becomes damaged. If the internal conductors become exposed, replace the power cord in order to prevent short-circuiting and electric shock.
- Observe the specified power supply voltage. If the power supply voltage is higher or lower, overheating can occur and may lead to a fire.
- In you touch metal parts during maintenance or cleaning, carefully touch the parts and avoid rubbing against them. Carelessly touching metal parts can cause personal injury such as cutting.
- If you leave the machine unattended during maintenance, close the glass door, coin compartment door and rear panel. If they are left open, people nearby — particularly small children — can get injured.
- Never touch the machine while the slide unit or other drive systems are moving. Moving parts can cut or pinch your fingers.
- When removing the rear panel, carefully hold the panel with both hands. The rear panel is large and heavy, and it can cause injury if it is dropped on your feet.

3. SPECIFICATIONS

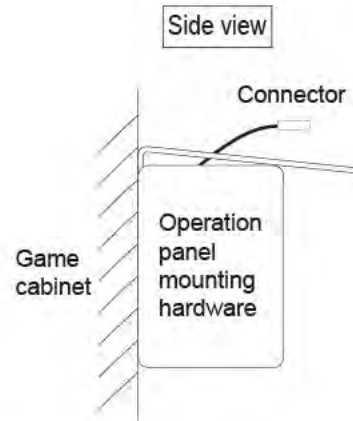
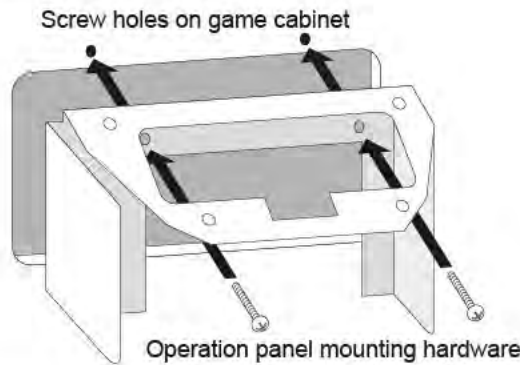
POWER SUPPLY:-	230Volts / 250watts AC		
AMBIENT OPERATING TEMPERATURE	+5°C to +35°C		
DIMENSIONS:	1680(w) x 1910(h) x 950(d)		
WEIGHT:-	200kg		
ACCESSORIES:-	Keys:	(Glass Doors)	2
		(Coin Door)	2
		(Cashbox Door)	2
	Operation Manual		1
	Mars Cashflow Manual		1
	IEC Mains Lead		1



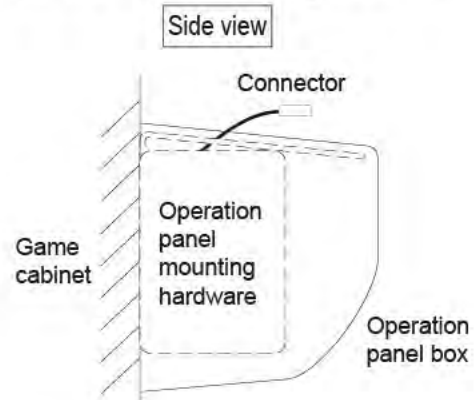
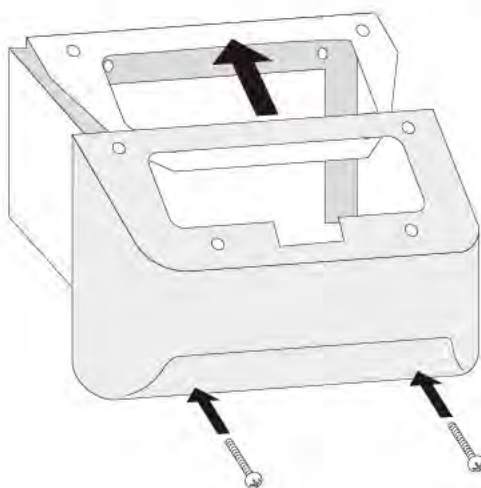
4. Installation of Operation Panels

- 1) Mount the two operation panels on the operation panel mounting sections on the front side of the game cabinet by using the operation panel mounting hardware and screws (4 x 20). In this step, put the three connectors through the hole in the mounting hardware in advance to make the subsequent installation work easier.

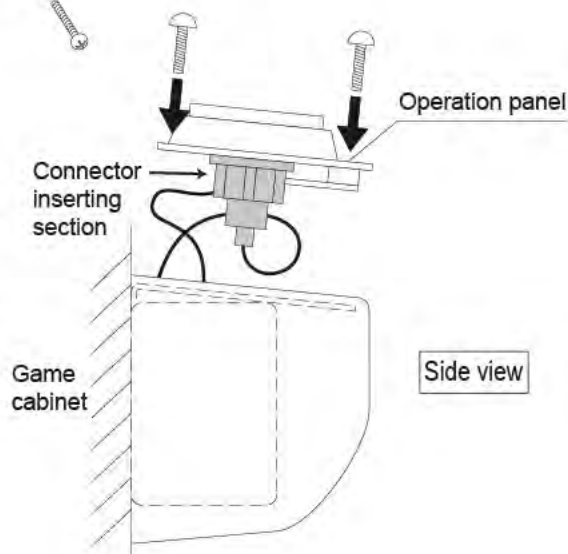
- * Left = White connector (for Left button)
- Middle = Long connector (for 7-SEG)
- Right = Red connector (for Right button)



- 2) Install each operation panel box by tightening two screws (4 x 20) into the screw holes in the game cabinet.



- 3) Connect the connectors, then secure the mounting hardware, operation panel box and operation panel using four hexagon-head screws (4 x 12) on each side.



WARNING

- Install the machine according to the instructions and procedures specified in this operation manual. Failure to follow the specified procedures may result in a fire, electric shock, injury, or machine malfunction.
- Insert the power cord plug firmly into the power outlet. Poor contact may cause overheating that can lead to fire or burns.
- Install the machine securely by using the level adjusters. Unstable machine installation can result in accident or injury (See "3-3 Adjusting the Level Adjusters")

4-1 Installation Conditions

Locations to avoid

WARNING

- The machine is designed for indoor use. Never install the machine outdoors or at any of the following locations:
 - Place in direct sunlight
 - Place exposed to rain or water leakage.
 - Place where a water jet could be used.
 - Damp place.
 - Dusty place.
 - Close to heating devices.
 - Hot places.
 - Extremely cold places.
 - Place where moisture condensation may occur due to temperature differences.
 - Place where the machine may become an obstruction in emergencies (such as near emergency exits) and place where fire extinguisher or similar equipment is installed.
 - Unstable place or location where vibrations are produced.
- The quality of prizes may deteriorate, depending on installation conditions and prize types.
 - * The temperature inside the upper doors can be much higher than the temperature of the surrounding area since the upper doors block ventilation and the fluorescent lamps are used to illuminate the prizes. If the machine is installed where it is exposed to direct sunlight, the temperature inside the glass doors becomes extremely high.

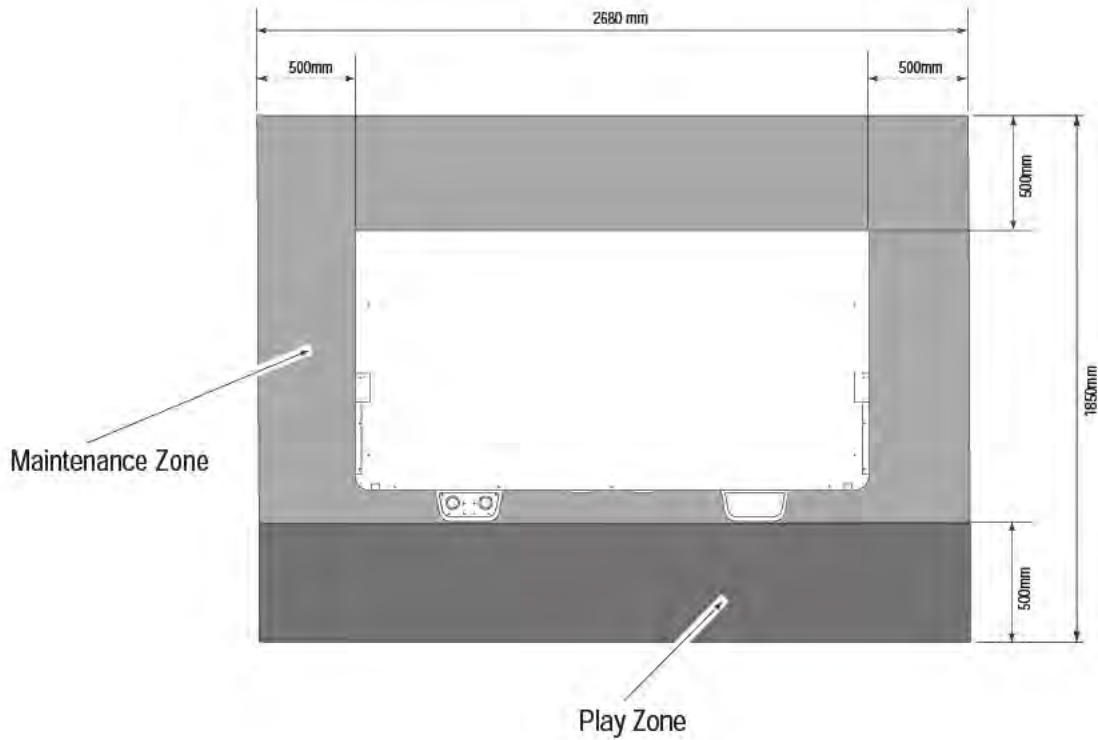
4-2 Play Zone of Installed Machine

CAUTION

- Set a play zone as shown below so that players can move away from the machine without bumping into observers or passersby.

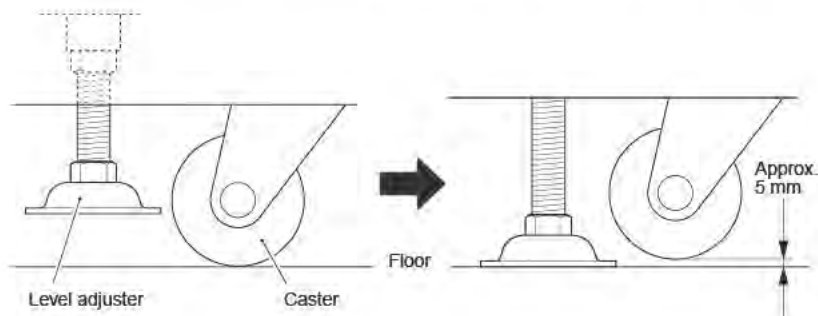


- Provide a space of at least 500mm between the machine and wall or other machines. This space is necessary for maintenance and service.



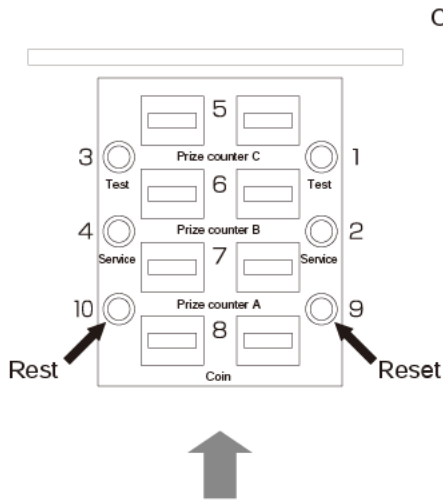
4-3 Adjusting the Level Adjusters

Set the machine at the required location and lower the Level Adjusters (four positions) so that the castors are raised from the floor by approximately 5mm. Make sure that the machine is level and stable and does not wobble.



5. Parts Installed near Coin Compartment Door

[Counters and button switches]

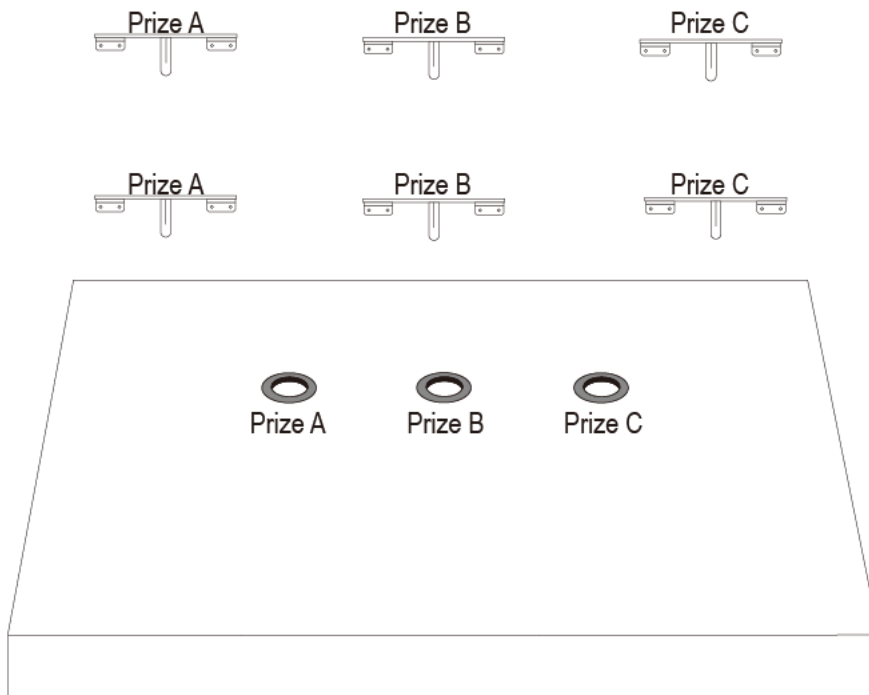


- 1. 1-P Test switch *1
- 2. 1-P Service switch
- 3. 2-P Test switch *1
- 4. 2-P Service switch
- 5. Prize C counter
- 6. Prize B counter
- 7. Prize A counter
- 8. Coin counter
- 9. 1-P Reset switch *2
- 10. 2-P Reset switch

- 1. Main PCB
(Refer to page 2 for the layout of main parts.)
- 2. Payout Management PCB
(Refer to page 7 for the diagram and explanation of functions.)
- 3. Power switch (circuit breaker) *3

*1 Executes the Skip function for the confirmation of set positions.
 *2 Serves both reset and memory functions.
 *3 The machine does not operate for 10 seconds after power ON. Wait until the machine starts up.

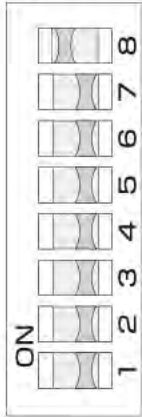
< Holes on the game panel and prize positions >



6. DIP Switch Settings

[Main PCB DIP switch setting table] The settings indicated in bold are factory settings.
The Main PCB is located in the rear of the machine once you have removed the upper panel.

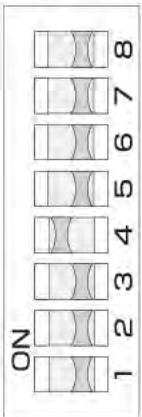
(8-way) DIP switch 1



(Specified position)		(A)	(B)	(C)	
SW1-1	OFF	ON	OFF	ON	* Keep these switches OFF unless specifying hole positions.
SW1-2	OFF	OFF	ON	ON	
SW1-3	OFF				ON
SW1-4	OFF				ON
SW1-5	OFF				ON
SW1-6	OFF				ON Uses debug information.
SW1-7	OFF	Enables the Automatic Position Correction function.		ON	Disables Automatic Position Correction function.
SW1-8	OFF	Skill only play (See Note)		ON	Managed play (See Note)

Note: Setting machine to Management Play will remove the machine from a skill setting and realign the machine as a Non Complex D machine. This should then be updated to comply with max prize applicable to category D machines.

(8-way) DIP switch 2



When using debug information, set Switches No. 6 and No. 8 on the 8-way DIP switch 1 to ON, and use Switches No. 1 through No. 3 on the 8-way DIP switch 2 to select the positions.

SW2-1	OFF			
(Debug)	(No. of game plays)	(No. of prizes)	(Payout setting)	
SW2-2	ON	OFF	ON	
SW2-3	OFF	ON	ON	
SW2-4	OFF Disables Tilt function.	ON	Enables Tilt function.	
SW2-5	OFF			
SW2-6	OFF			
(Bar descending distance setting)	High	Medium	Low	Low
SW2-7	OFF	ON	OFF	ON
SW2-8	OFF	OFF	ON	ON

* Keep Switches No. 2 and No. 3 on the DIP switch 2 in the OFF position.

[Debug]

- No. of game plays** The number of games played in the set number of game plays (this will be cleared to 0 when the set number of game plays is reached).
- No. of prizes** The number of prizes dispensed at the time when the set number of game plays is reached. This indicates whether the number of prizes dispensed is appropriate in relation to the number of games played. Note that (-1) and (0) indicate normal, while (1) means that prizes are dispensed excessively.
- Payout setting** This indicates the number of games to be played before the payout management is set to disengage.

[Tilt function] (tamper prevention)

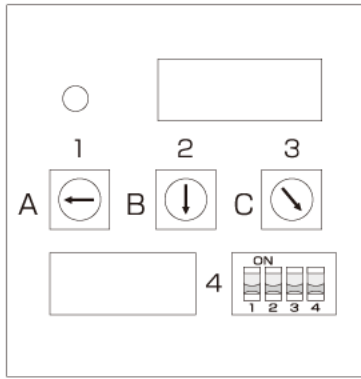
When the tilt function is set to ON, the machine displays "E5" and stops operation if it detects a certain amount of vibration.

To cancel, press Reset switch. The machine also automatically returns to normal condition after 30 seconds.

7. Dispensing Mechanism

[Payout Management PCB] (Located behind the coin compartment door on the right side of the coin chute)

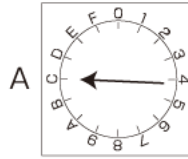
* If the management function is not used, set Switch No. 8 on the DIP switch 1 to OFF.



- 1. Rotary switch A → Manages the payout of prize A.
- 2. Rotary switch B → Manages the payout of prize B.
- 3. Rotary switch C → Manages the payout of prize C.
- 4. 4-way DIP switch

* Enter the setting of the number of games to be played before prize dispense for each type of prizes A, B and C. Using a slotted screwdriver, turn each rotary switch (dial). Then, press the Reset switch. Pressing the Reset switch registers the setting value in the memory. The Reset switch is located at "9" in the diagram shown in the section "Counters and button switches."6

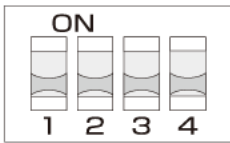
* The factory payout settings are as follows:
 Prize A = Dial C (400 games)
 Prize B = Dial 8 (200 games)
 Prize C = Dial 5 (100 games)



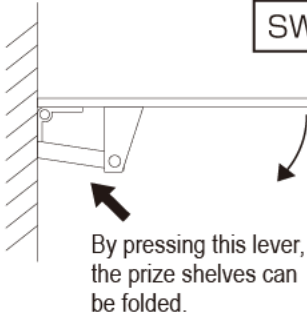
Example: Setting for prize A (dial setting)
 To dispense one prize item per 400 games, set the arrow to the position C by using a small slotted screwdriver. Then, press the Reset switch.

* Regarding the setting range, refer to the section "Payout Management PCB - Rotary switch settings, 16 steps."

[Payout Management PCB DIP switch setting table] The settings indicated in bold are factory settings.
 (4-way) DIP switch 3 (Game fee setting and demo management)



(Game fee setting)	(1 credit)	(2 credits)	(3 credits)	(4 credits)
SW3-1	OFF	ON	OFF	ON
SW3-2	OFF	OFF	ON	ON
SW3-3	OFF Normal wing movement	ON Double-wing fold simultaneously		
SW3-4	OFF No demo	ON Demo		



● **Double-wing setting (2-in-1 specification)**

When Switch No. 3 on the 4-way DIP switch on the Sub-PCB is set to ON, the prize shelves for prizes A and B fold simultaneously. This setting is useful for wide prize items.

* The lower prize shelves fold first.

For tall prize items, fold the upper prize shelves to provide more room above the prize items.

* Be sure to place the "Do Not Enter" cards on the prize B holes to prohibit their use.

* When the double-wing setting is enabled, place prize items by taking heed of weight balance.

[Payout Management PCB - Rotary switch settings, 16 steps]

Switch scale	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
No. of game plays	20	30	40	60	80	100	120	160	200	250	300	350	400	600	800	999

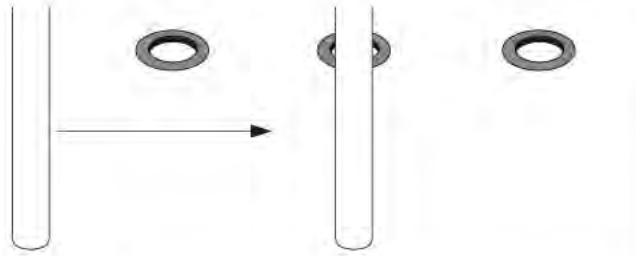
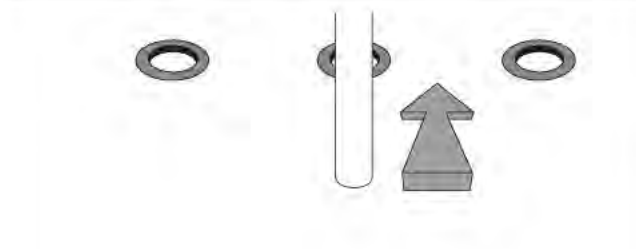
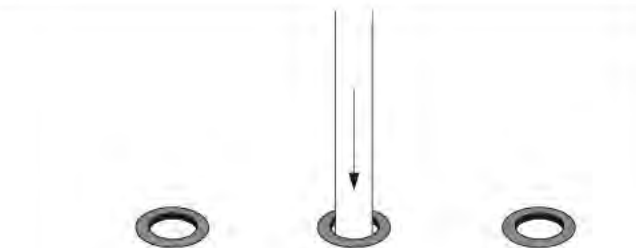
For example, when the rotary switch dial is set to "4," the Payout Management function stops temporarily when the number of games played reaches 80, and the game condition is set so that the result is 100% dependent on the player's skill. This condition remains until the player obtains a prize item.

* The number of game plays can be confirmed by "payout setting" of the debug information.

This is for checking whether each set number of game plays corresponds with the number of game plays indicated on the switch scale.

* Overpay may result even within the set price range, due to swinging of the bar or other reasons.

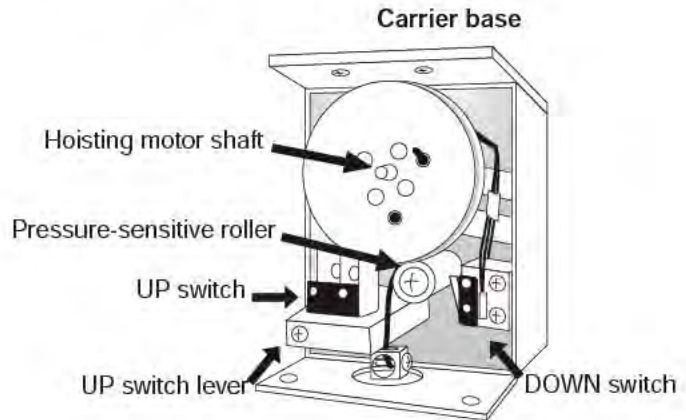
Use the above setting values as a guideline and allow a sufficient margin in settings.

	<ul style="list-style-type: none">● Press the Left button to move the clear bar to the right. Release the button when the clear bar reaches the position in line with the target hole.
	<ul style="list-style-type: none">● Press the Right button to move the clear bar toward the back.
	<ul style="list-style-type: none">● Release the Right button at the moment when the clear bar reaches the position immediately above the target hole. When the Right button is released, the clear bar starts to descend.● If the bar enters the hole, a prize item will drop and be dispensed to the player.

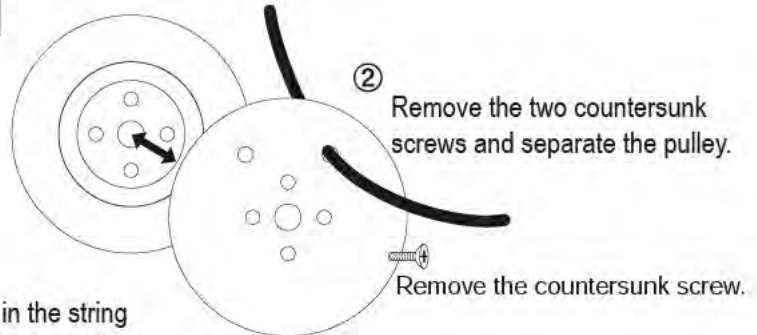
8. Push bar Unit

[How to replace the string]

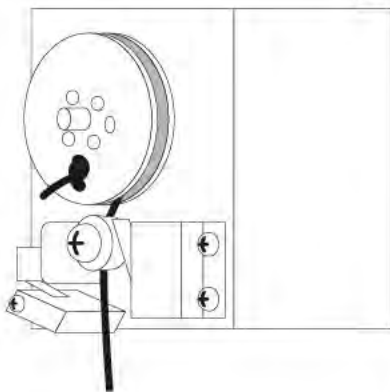
- ① Remove the four screws and remove the carrier cover.



Pulley side



- ③ Untie the knot in the string and pull the string out of the pulley.

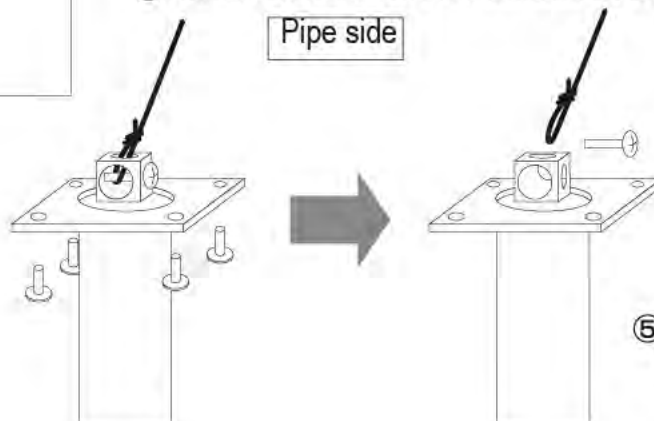


⚠ CAUTION

- Be careful of sharp edges when touching sheet-metal parts in order to prevent injury such as cutting.

- ④ Remove the four screws and dismount the Z-axis pipe.

Pipe side

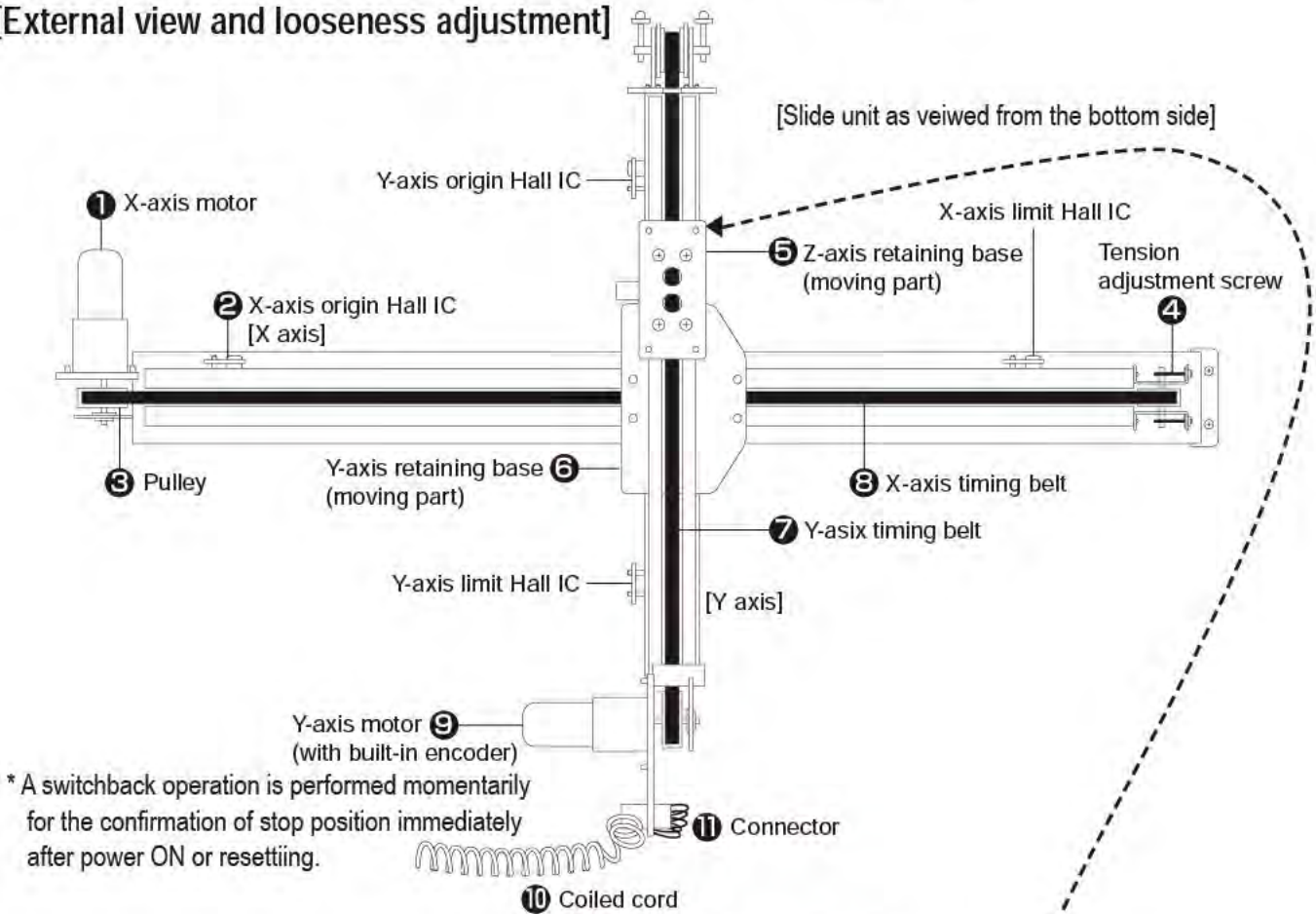


- ⑤ Loosen the screw and detach the string.

- ⑥ After replacing the string, follow the above procedures in reverse to reinstall the parts.

9. Slide Unit (Crisscross Type)

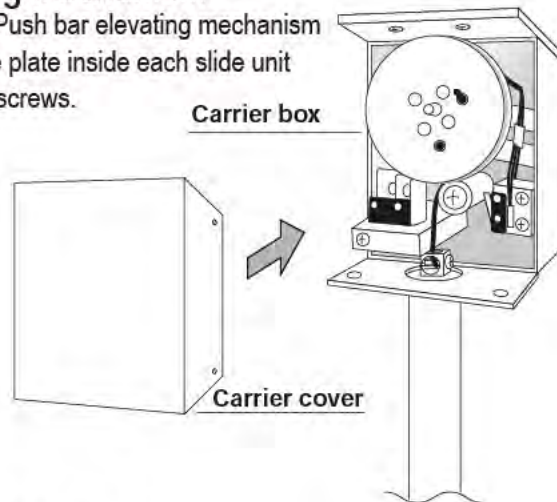
[External view and looseness adjustment]



* A switchback operation is performed momentarily for the confirmation of stop position immediately after power ON or resetting.

■ How to install the Push bar elevating mechanism

Install the Push bar elevating mechanism to the base plate inside each slide unit using four screws.



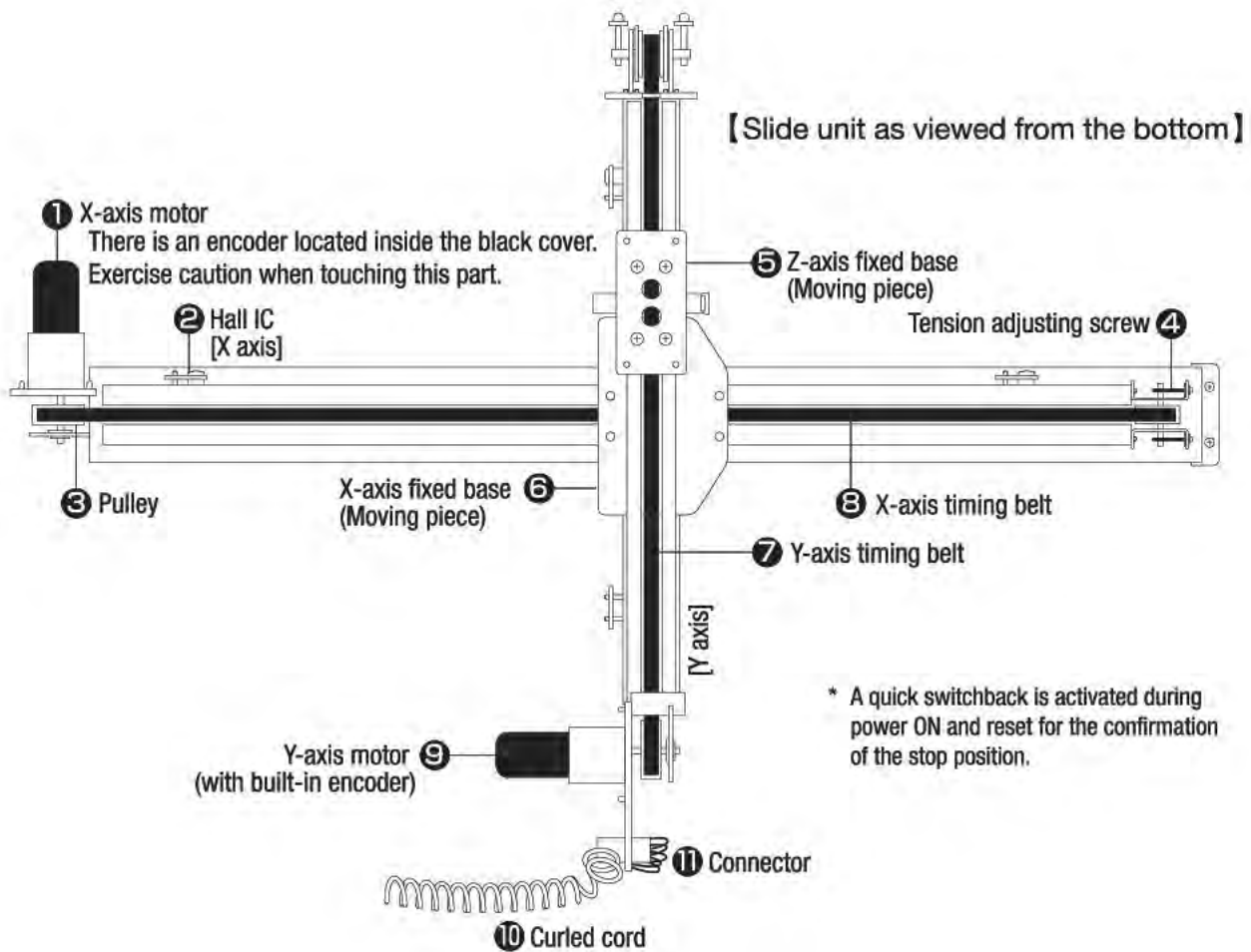
⚠ CAUTION

- Never touch the slide units while they are in operation. Touching a slide unit in operation can cause personal injury by catching your arm or hand between the base plate and Y-axis mechanism or pinching your fingers between the belt and pulley.

9-1 Slide Unit

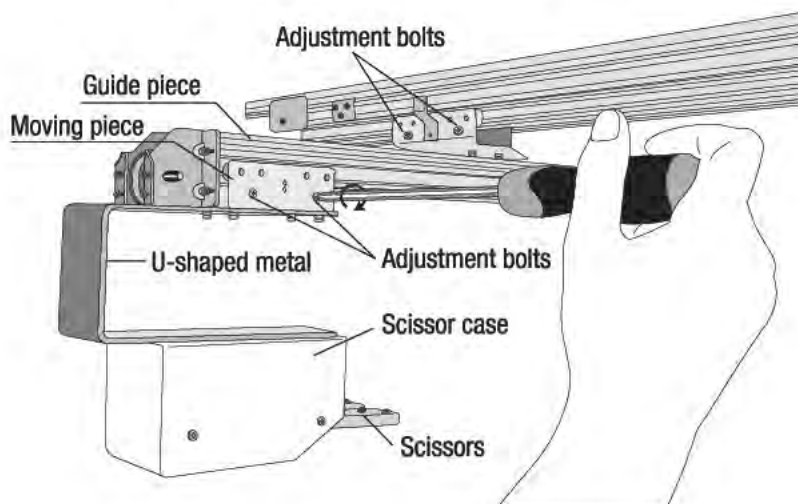
CAUTION

Never touch the slide unit while it is in operation. Otherwise, your arm or hand can get caught between the base plate and the Y-axis mechanism or your fingers may be caught by the belt and pulley, thus resulting in personal injury.



9-2 Adjustment

In the slide unit (see diagram below), parts become loose over time. When moving parts become loose, tighten the specified screws as required.



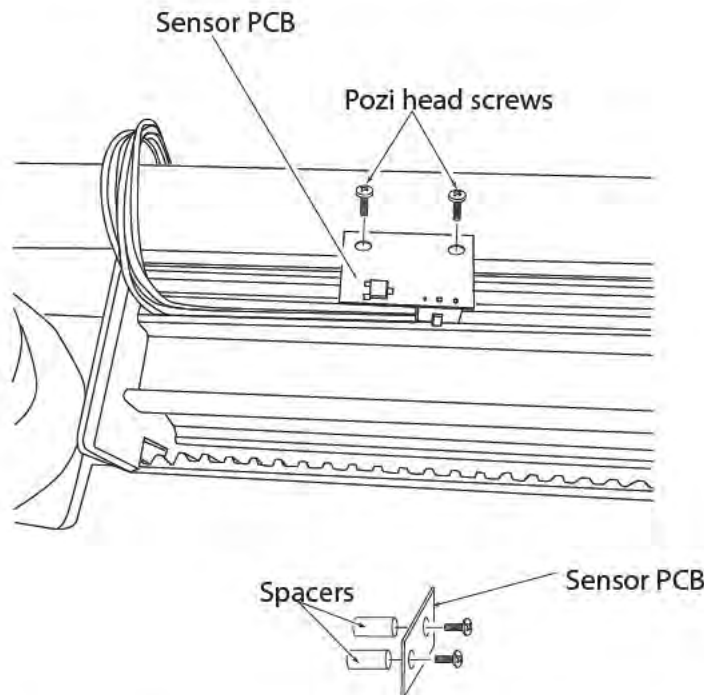
- Turn the screws in the direction of the arrow, as shown in the diagram, to eliminate looseness.
- Do not overtighten the screws to prevent excessive load being applied to the motor.
- If the screws are turned too far (overtightening), the moving speed may reduce or the motor may generate abnormal noise.
- Tighten and loosen the adjustment screws repeatedly until the position is reached where there is minimum looseness and the moving parts move smoothly.

9-3 Replacing the Sensor PCB

⚠ CAUTION

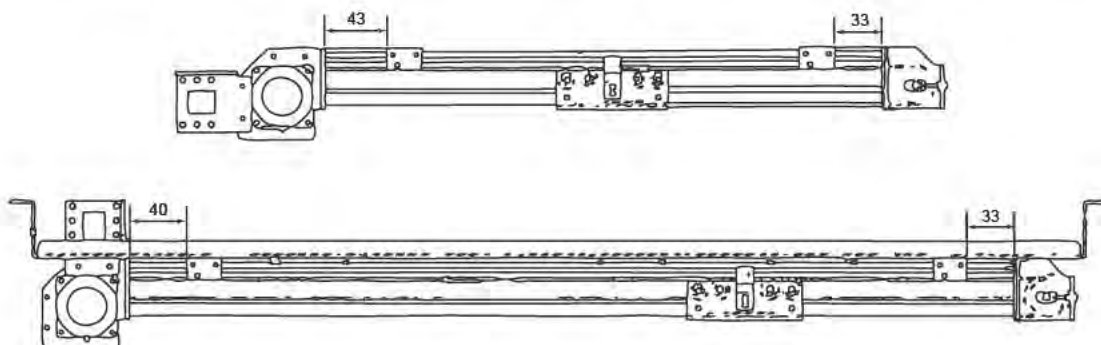
Never touch the slide unit while it is in operation. Otherwise, your arm or hand can get caught between the base plate and the Y-axis mechanism or your fingers may be caught by the belt and pulley, thus resulting in personal injury.

1. Remove 2 off pozi head screws. (Take care not to lose the 2 off spacers)



2. Disconnect the connector.
3. Replace the Sensor PCB.
4. Re-assemble in reverse order.

Note: Ensure that the distance of the sensor from the end of the carriage is as shown in the diagram below. **8-3**



10. BE AWARE!

[Payout management] (The Payout Management function can be disabled by DIP switch setting.)

When enabling the Payout Management function, take note of the following:

- When the machine is installed or relocated, be sure to conduct the position confirmation. If necessary, conduct position adjustment.
- After operating any of the rotary switches on the Payout Management PCB, be sure to press the Reset switch or turn off the Power switch and restart the machine.
- To check whether the position settings are correct, conduct the position confirmation process at least once a week (everyday if possible) by pressing the Test switch and activating the Position Confirmation mode.

The Payout Management function operates more accurately and effectively when the above instructions are observed closely.

[Troubleshooting for malfunction of Payout Management function]

■ 1: Investigation of cause based on DIP switches and debug information

First, check to make sure that Switch No. 8 on the DIP switch 1 is set to ON.

If the above switch is ON, check the overpay count in the Debug mode.

* Note that clearing the number of game plays also clears the overpay count, thus disallowing the use of data for troubleshooting.

When the overpay count is "0" or "-1," the Payout Management function is operating properly.

■ 2: Position Confirmation Skip

Execute the Position Confirmation Skip. If the clear bar descends at a location away from the target hole, the cause of overpay is most likely due to a faulty position adjustment. In that case, conduct the position adjustment process to rectify the overpay condition.

< If the position is still displaced after position adjustments >

If the position is still displaced when the Position Confirmation Skip is executed even though position adjustments have been completed, check the following:

- If there is a deviation between the clear bar inclination at the time of position adjustment and the current clear inclination, the clear bar descending location will change even if the position adjustment is not altered. Note that accidentally pressing the clear bar during the replacement of prize items can cause the bar to bend or change the tilting angle.
- If the machine is relocated, the clear bar inclination may change due to the horizontal level of the machine. After the machine is moved, be sure to conduct the position confirmation process, and readjust the positions if necessary.

11. Position Adjustment

[Position adjustment procedure]

To ensure accurate payout management, it is necessary to conduct the position adjustment process.

■ 1: Activate the Position Adjustment mode from the normal mode.

Make sure that Switches No. 1 through No. 5 on the DIP switch 1 are set to OFF. Then, while holding the Test switch pressed, push the Reset switch. This activates the Position Adjustment mode (the machine is ready for position adjustments) from the normal mode.

* Regarding the positions of switches, refer to page 7.

■ 2: Move the clear bar to the adjustment position for the target hole.

To move the clear bar, use the Service switch, Test switch, and the Right and Left buttons on the operation panel.

[X-axis movement = Right/left movement]

When the Service switch is pressed in the Position Adjustment mode, the 7-SEG unit displays “— —”.

In this condition, pressing the Right button on the operation panel moves the clear bar toward the right, and pressing the Left button moves the clear bar toward the left.

[Y-axis movement = Forward/backward movement]

When the Test switch is pressed in the Position Adjustment mode, the 7-SEG unit displays “| |”.

In this condition, pressing the Right button on the operation panel moves the clear bar toward the back, and pressing the Left button moves the clear bar toward the front.

* Switch the clear bar operation between the X-axis movement (Service switch + Right/left button) and Y-axis movement (Test switch + Right/left button) a number of times until the clear bar is positioned immediately above the target hole.

* Note that the motor operates at slower speed than normal during position adjustment. The machine is programmed to operate the motor slowly for easier adjustment, and it does not denote a malfunction.

■ 3: Press the Reset switch to lower the clear bar.

When the clear bar is positioned above the target hole, press the Reset switch.

The clear bar will start descending.

After the clear bar descends and enters the hole, it returns to the origin and stores the position data in the memory.

If the clear bar does not enter the hole, it returns to the position prior to the operation of the Z axis for lowering the clear bar.

Move the X and Y axes again so that the clear bar is positioned immediately above the hole.

■ 4: Repeat the procedures described in ■ 2 and ■ 3 for all holes.

■ 5: Turn off the Power switch on the machine, then restart it.

When the procedures from ■ 1 to ■ 4 are finished, position adjustments have been completed.

When the machine is turned off and turned on again, the machine will exit the Position Adjustment mode and return to the normal mode.

■ 6: Execute the Position Confirmation Skip.

After returning to the normal mode (game mode), press the Test switch and use the Position Confirmation Skip function to make sure that the position adjustments have been completed successfully.

* The machine automatically checks the set positions starting from the leftmost hole. Confirm that the clear bar enters each hole.

12. Automatic Position Correction Function

The Automatic Position Correction function automatically rewrites position information if a prize item is dispensed when the prize dispensing condition is not met.

This function stores the data of coordinates at which a prize item was dispensed.

* Note *

If you dispense a prize item by lowering the bar at a random location (coordinates) and pressing the prize dispense button in order to check the folding of prize shelves during game, the Automatic Position Correction function may store those coordinates in the memory.

To disable this function, set Switch No. 7 on the DIP switch 1 to ON.

If a machine abnormality occurs, test plays are usually conducted a number of times to locate the cause of the problem. After such tests are conducted, be sure to follow the procedure described below.

The Payout Management will not function correctly if this procedure is not conducted.

1. Hold down the Service switch and press the Reset switch:

This clears the number of coins and the number of prizes for Prize A.

2. Hold down the Left Play Panel button and press the Reset switch:

This clears the number of coins and the number of prizes for Prize B.

3. Hold down the Right Play Panel button and press the Reset switch:

This clears the number of coins and the number of prizes for Prize C.

The number of coins and the number of prizes cannot be cleared by simply turning the power off. The above procedure **MUST** be followed to clear the data.

13. Troubleshooting

[Troubleshooting based on error indication]

When E1/E2 error is displayed

The E1 error is generated when the X axis (right/left movement) does not operate properly, while the E2 error occurs when the Y axis (forward/backward movement) does not function properly. These errors generally occur when any of the following symptoms is generated.

- **When error occurs during origin return operation**

When an origin return operation is performed during the initial movement or for another reason, this error can occur if the Hall IC at the origin is skipped.

When the X and Y axes return to their respective origins, check to make sure that they have stopped at the Hall IC positions. If the Hall IC has been skipped, bend the metal part attached with a magnet slightly toward the Hall IC so that the magnet is closer to the Hall IC. The distance between the Hall IC and magnet should be 1 to 2 mm.

- **When motor is spinning freely**

The setscrews on the timing pulleys with the belt may be loose, allowing the motor to spin freely.

If this is the cause of the problem, you can hear the motor operating sound. Listen carefully to see if the motor is operating.

If the motor is operating, tighten the setscrew on each pulley using a hexagon wrench.

If the motor is not operating, refer to the following section.

- **When motor or Slide Mechanism PCB is faulty**

If the motor does not operate, switch the Slide Mechanism PCBs between the right and left sides to see if the same symptom appears. If the opposite side does not operate properly after switching the PCBs, one of the Slide Mechanism PCBs is faulty. If the same side continues to malfunction, the motor is suspected to be faulty.

When E3 error is displayed

The E3 error is generated when the Z axis does not operate properly.

To examine the detail of the malfunctioning condition, perform the following check.

- ① Remove the cover from the carrier box.
- ② Lower (or raise) the clear bar to a position that is not the upper-limit or lower-limit position.
 - * In this step, do not pull the clear bar, but rotate the pulley to move the clear bar. If the clear bar cannot be moved manually, the hoisting motor may be faulty. In that case, replace the motor.
 - * If the pulley can be rotated without exerting any force, the hoisting motor may be spinning freely. Tighten the setscrew on the pulley (at two locations) using a hexagon wrench. If the string is wrapped around the pulley, the setscrew may not be visible. In that case, unwind the string in order to tighten the setscrew. (See page 9.)
- ③ Turn off the Power switch, then restart the machine.
- ④ Check the timing of error generation.
 - The error is generated without machine operation.
 - The error is generated after the clear bar reaches the upper-limit position and stops moving
 - The error is generated after the clear bar descends.

< The following shows the error generating timings and countermeasures >

- **When the error is generated without machine operation**

The problem may be caused by a faulty hoisting motor or Slide Unit PCB. Turn the pulley by hand. If the pulley cannot be moved by hand, the motor may be faulty. If it can be rotated by hand, the Slide Unit PCB may be faulty. If the Slide Unit PCB is suspected to be the cause of the problem, switch the right and left PCBs to see if the problem will be corrected.

- **When the error is generated after the clear bar reaches the upper-limit position and stops moving**

The UP switch that detects the clear bar reaching the upper-limit position may be defective. Open the carrier box cover and check the UP switch. Also, check to make sure that the clear bar presses the UP switch lever completely.

- **When the error is generated after the clear bar descends**

Check to see if the DOWN switch for detecting the clear bar reaching the lower-limit position operates reliably. The DOWN switch is operated by the pressure-sensitive roller. Check to make sure that the pressure-sensitive roller presses the DOWN switch firmly and the switch is released completely when the string slackens. Also, check to see if the string is wound in the wrong direction on the pulley. In that case, wind the string in the correct direction by hand. When the string is wound on the correct direction, the pulley rotates in the counterclockwise direction when the clear bar rises.

When E4 error is displayed

The E4 error is generated when there is an abnormality in the position data. If there is no position information on which control operations are based, this error is generated when a coin is inserted or the Service switch is pressed. This error is sometimes caused by the effect of uneven electric current generated when the power is shut off.

The above condition can be rectified by conducting the position adjustment process again.

When E5 error is displayed

The E5 error is generated when the Tilt function is activated.

When the Tilt function is enabled by setting Switch No. 4 on the DIP switch 2 to ON, it will be activated when a certain amount of vibration is detected.

To cancel this error, press the Reset switch. The machine also returns to normal operating condition after 30 seconds.

[Malfunctions without error indication]

If the machine does not operate properly but no error indication appears, check the following.

The Payout Management function does not operate accurately.

< Check the position adjustment data >

First, make sure that position adjustments have been completed correctly by executing the Position Confirmation Skip.

• **About Position Confirmation Skip**

The Position Confirmation Skip function confirms position adjustments.

To execute the Position Confirmation Skip, press the Test switch when the machine is in normal mode.

When this function is executed, the clear bar moves to the adjusted position for each hole. Make sure that the clear bar moves to the correct positions.

< Positions are adjusted correctly but overpay occurs >

If the positions are adjusted correctly, then check the following.

< Sub-PCB for difficulty-level management >

When the management function fails to operate properly after a certain number (20 times) of game plays even if the positions are adjusted correctly, the Sub-PCB for difficult-level management may be defective. In the Debug mode, check to make sure that the number of game plays are set properly on the dial. Also, check to make sure that the harness is firmly connected to the Sub-PCB.

< Position confirmation not possible >

(The arriving positions during the Position Confirmation Skip operation are not consistent and the clear bar sometimes travels all the way to the end.)

Position data may be lost.

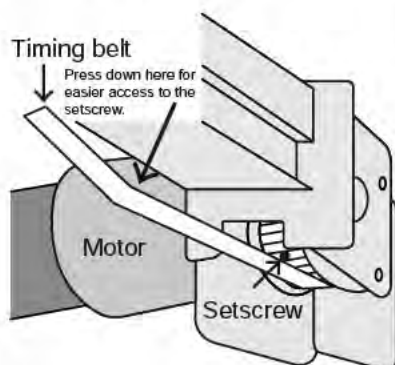
Refer to the troubleshooting procedure for "When E4 error is displayed" in the section, "Troubleshooting based on error indication."

X-/Y-axis related errors

If the X-/Y-axis does not operate properly, malfunctions and inaccurate payment management may occur.

Faulty X-/Y-axis operation that does display any error indication can be caused by free spinning of motor due to a loose setscrew.

If the arriving positions during the Position Confirmation Skip operation are not consistent, suspect the above condition as a possible cause.



< Confirmation method >

Grasp the belt for the X axis or Y axis and pull it in the direction opposite to normal traveling direction. If the belt slips by more than 2 or 3 mm, the pulley may be loose.

< Correction method >

- (1) By operating the button, move the slide unit to a location where it is easily accessible.
- (2) Disconnect the power supply cord from the PCB or turn off the power to the machine.
- (3) By pulling the belt, position the setscrew to a location where it is easily accessible.
(Remove the black connector is removed from the back side of the motor, and then pull the motor. This reduces the motor resistance and allows easier movement of the belt.)
- (4) Tighten the setscrew using a 2-mm hexagon wrench. It is also necessary to check that the setscrew is aligned with the indentation on the shaft and that the setscrew is not in contact with any other section. If the setscrew is resting on an incorrect location, the end of the setscrew can protrude above the pulley surface. Be sure to tighten the setscrew at the correction location.

14PARTS . DISCARDING THE MACHINE

WARNING

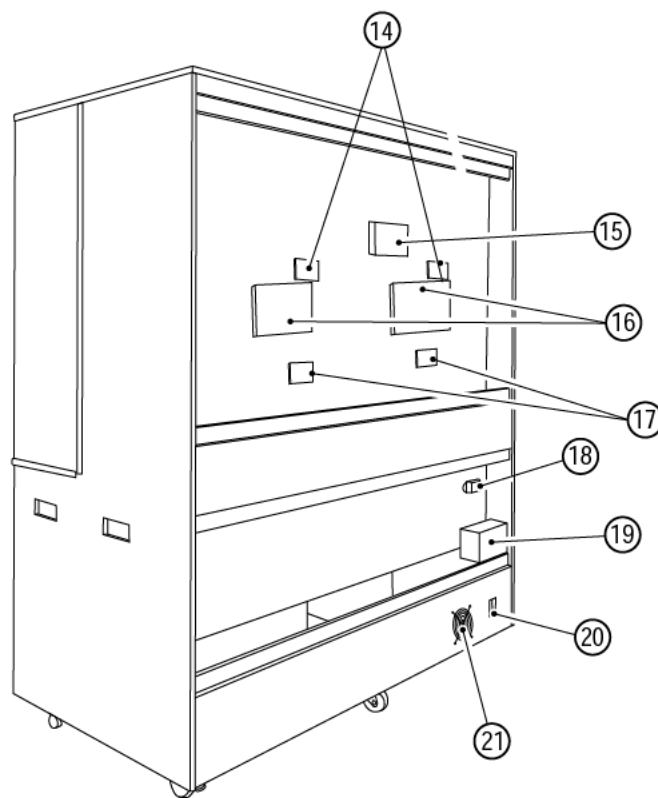
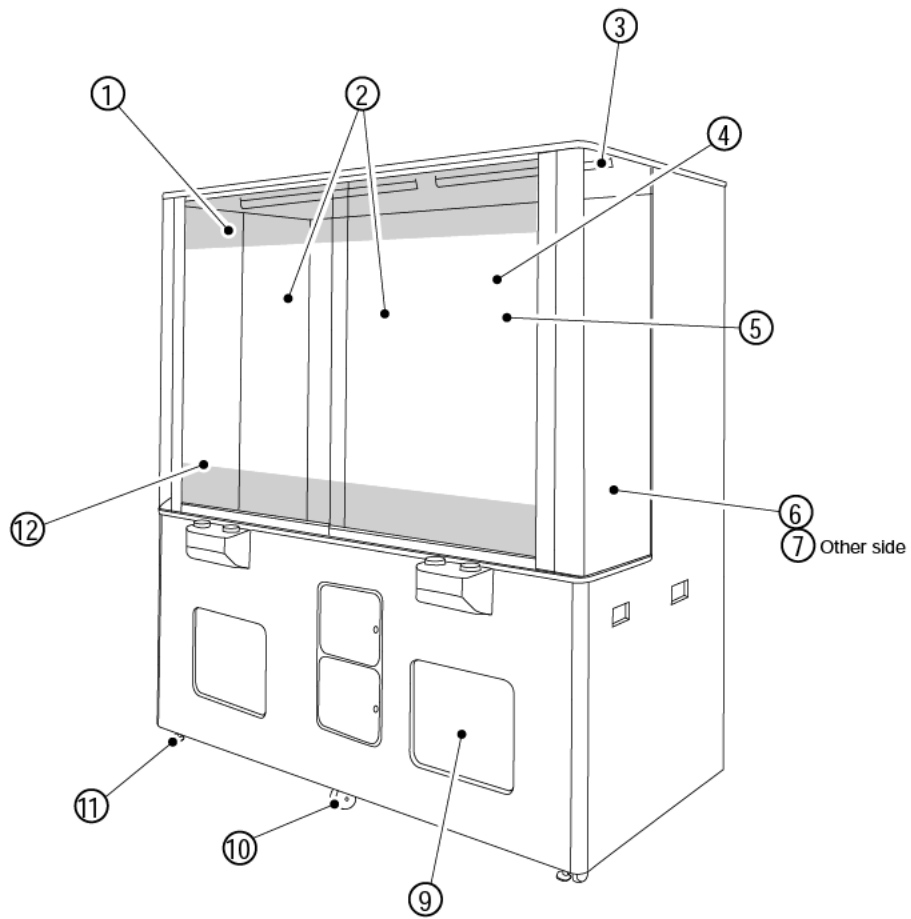
- **The machine must be collected, transported and discarded in accordance with the local laws and regulations.**
- **When entrusting a third party to collect, transport and discard the machine, be sure to use specialist companies to perform the task**

NOTICE

- **Compliance with WEEE regulations**
The machine must be collected, transported and discarded in accordance with the local laws and regulations.
When entrusting a third party to collect, transport and discard the machine, ensure that they are authorised to do so.
- **The software used in this game machine is protected by copyright laws. It is forbidden to copy, adapt, distribute publicly, or use the software for purposes other than the operation of this machine.**
Infringement of the copyright laws may subject persons to criminal penalties.
Do not use the recording media containing the software in a machine other than the specified game machine. Doing so can result in equipment malfunction.

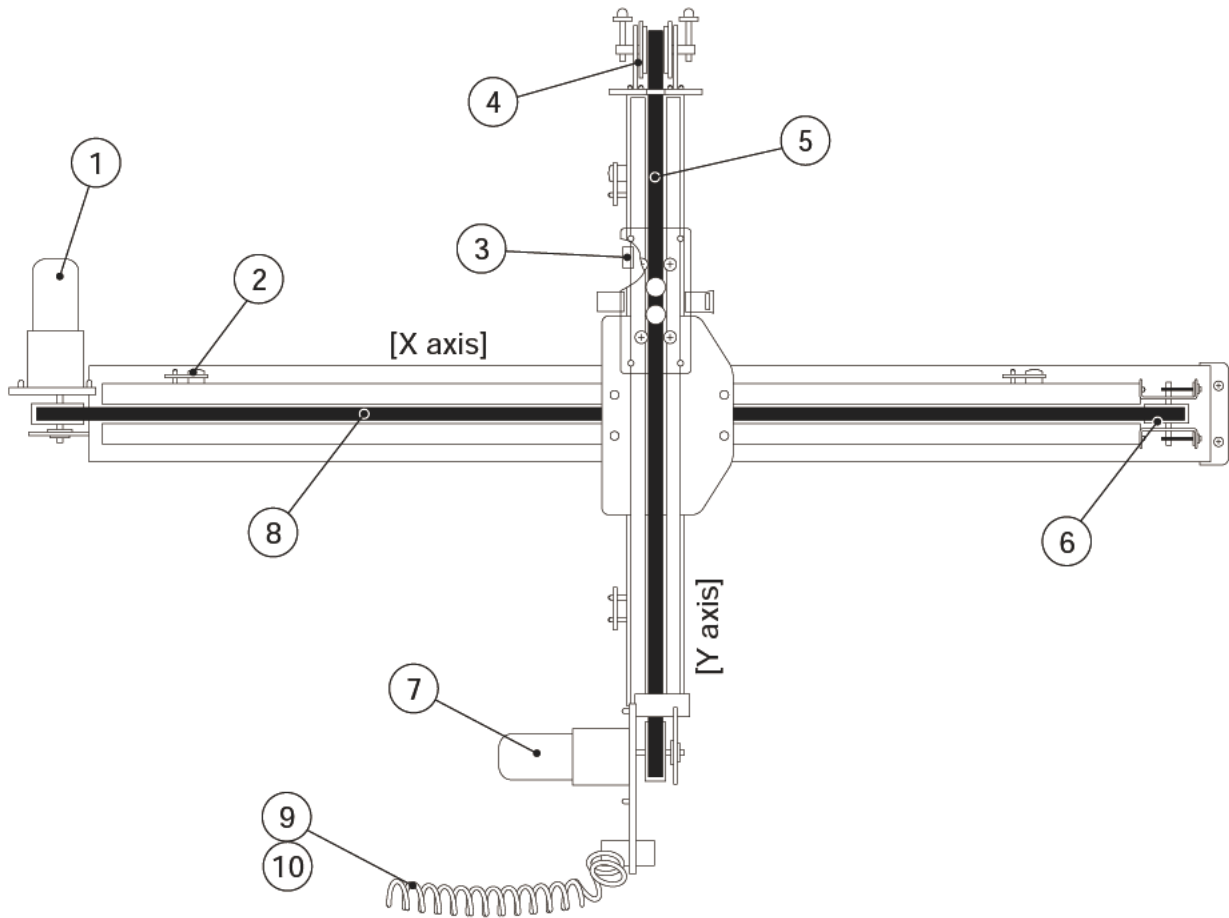
15. PARTS

15-1 Cabinet



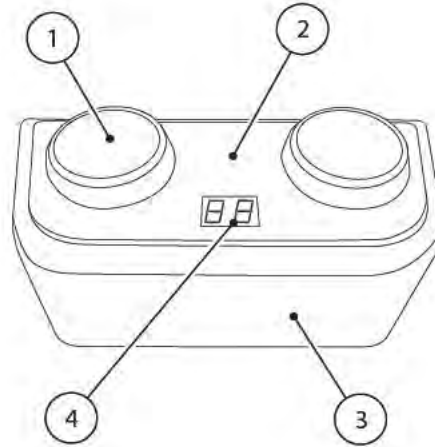
Item	Description	Part No
1	DunkTankPrize Decal	40000938
2	Glass Door 5mm Safety	31000039
3	Fluorescent Assy 1200mm	64500051
4	Internal Rear Decal	40000936
6	Corner Acrylic - Right	30000252
7	Corner Acrylic - Left	30000251
9	Payout door Decal	40000937
10	Swivel Castor 75mm	59000005
11	Adjustable Foot M16x95	88300079
12	Glass Bottom Decal	40000939
14	Motor Drive PCB	XDTP-MOTORDRIVE
15	SMPSU	83000065
16	Game PCB DunkTankPrize	XDTP-GAMEPCB
17	Switch Control PCB	XBC-SWITCHPCB
18	Chassis Filter FN2090-3-06	62500013
19	230v Isolation Transformer	67700052
20	Shaffner Mains-inFilter	62500010
21	SMPSU 300V FSP3000	83000025
Not shown		
5	Fluorescent Assy 900mm	64500055
13	Fluorescent Assy 600mm	64500053
8	Target Button Acrylic Cover	30000253
22	Curly Cable Set	69200122/124
23	Prize Tray Solenoid Assy	XDTP-SOLENOIDASSY

15-2 Carriage Assembly



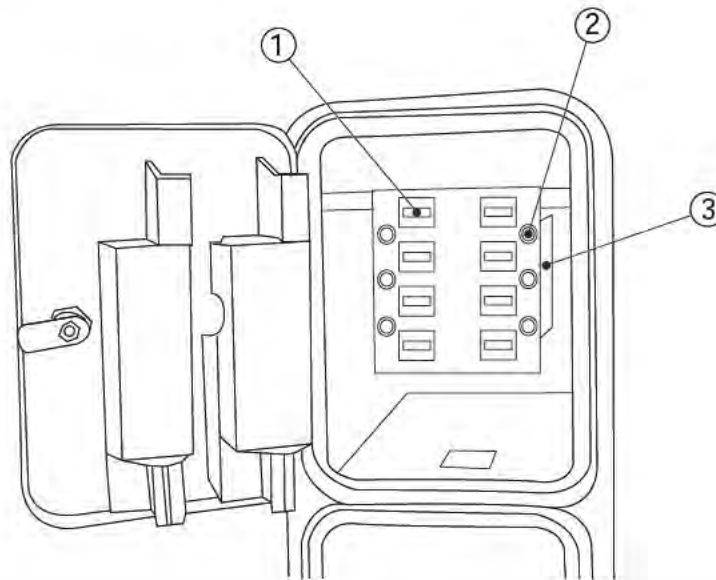
Item	Description	Part No
1	Linear Motion Motor-X Axis TG-47C-AMD-150-F340	XBC-LinearmotorX
2	Linear Motion Sensor PCB GP1A73AJ000F	XBC-Linearsensor
3	Linear Motion Bearing C1019	XBC-Linearbearing
4	Linear Motion Pulley-Y Axis C1008	XBC-LinearpulleyY
5	Linear Motion Timing Belt-Y Axis C1009B	XBC-LinearbeltY
6	Linear Motion Pulley-X Axis C1007	XBC-LinearpulleyX
7	Linear Motion Motor-Y Axis TG-47C-AMD-180-F341	XBC-LinearmotorY
8	Linear Motion Timing Belt-X Axis C1009A	XBC-LinearbeltX
9	Curley Cable - Linear Motor Assy	69200124
10	Curley Cable - Hit Assy	69200122

15-3 Switch Panel Assembly14



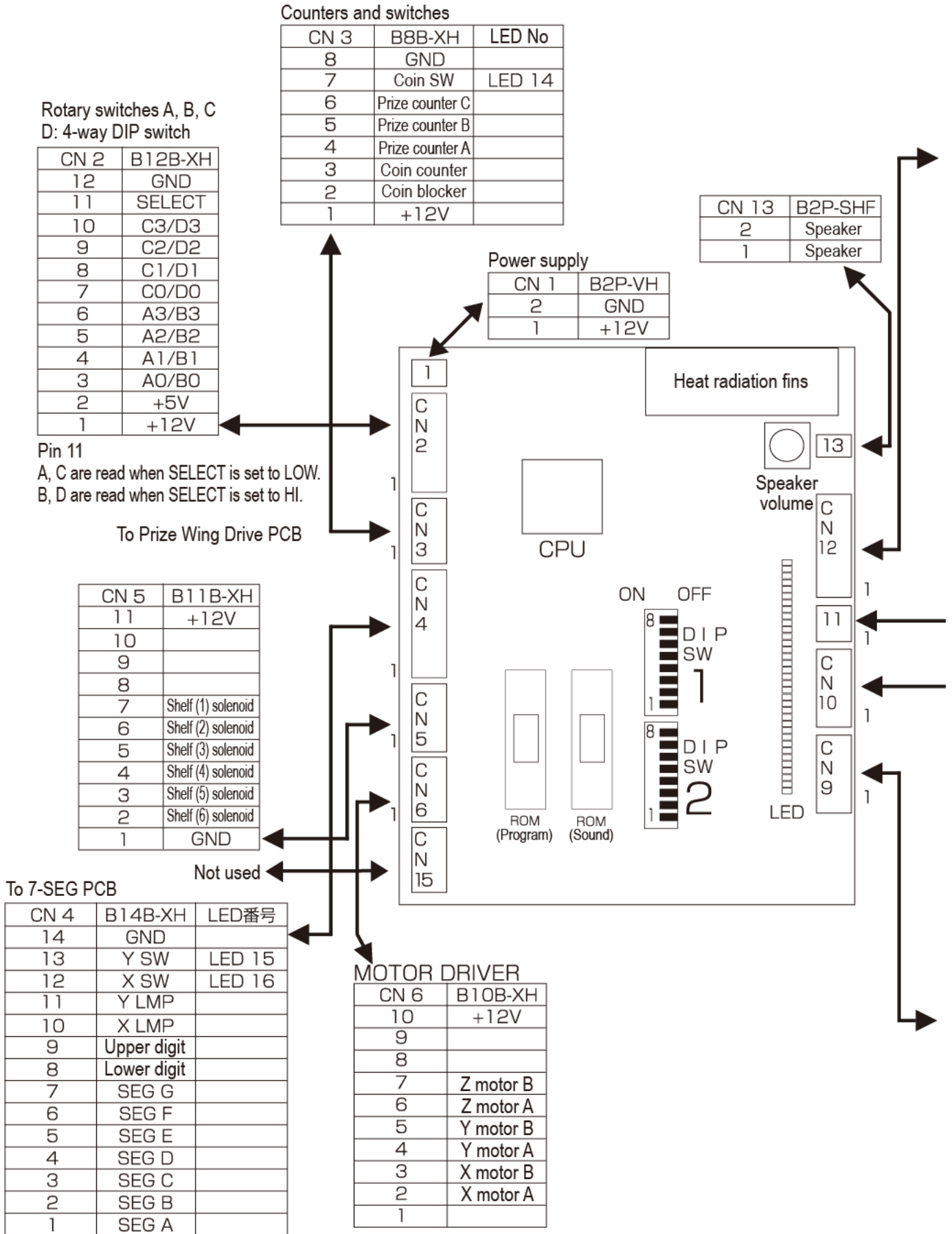
Item	Description	Part No
1	Switch Panel Pushbutton	60500021
2	Switch Panel Acrylic	30000250
3	Switch Panel Vac-Form	47000873
4	7-Segment Display PCB	XBC-Display 1515

15-4 Door Assembly



Item	Description	Part No
1	Panel Meter 12	65000004
2	Pushbutton Switch	60000029
3	Diode PCB	

15. Circuit Board Wiring Diagram



LEDs No. 2, 4, 5, 9, 10 light when the sensor is OFF.

CN 12	B12P-SHF	LED No
12	GND	
11	Y stop sensor	LED 9
10	X stop sensor	LED 10
9		LED 1
8	Z lower-limit SW	LED 2
7	Z upper-limit SW	LED 3
6	Y origin sensor	LED 4
5	X origin sensor	LED 5
4		LED 6
3	Y position sensor	LED 7
2	X position sensor	LED 8
1	+5V	

Inputs from front panel

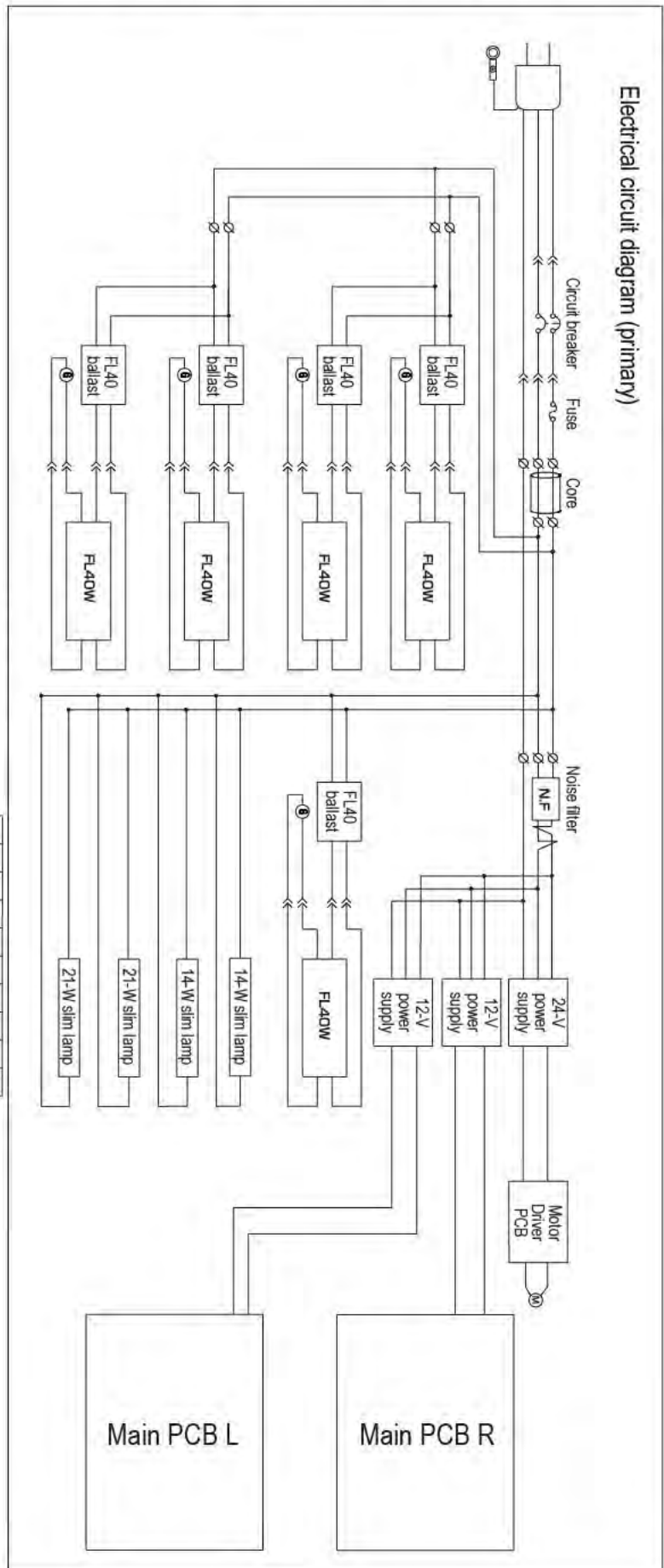
CN 11	B4P-SHF	LED No
4	GND	
3	Reset SW	LED 11
2	Service SW	LED 12
1	Test SW	LED 13

Inputs from Shelf Solenoid PCB

CN 10	B9P-SHF	LED No
9	GND	
8		LED 17
7		LED 18
6	Shelf (1) SW	LED 19
5	Shelf (2) SW	LED 20
4	Shelf (3) SW	LED 21
3	Shelf (4) SW	LED 22
2	Shelf (5) SW	LED 23
1	Shelf (6) SW	LED 24

Prize dispensing switch input from Game Board Sub-PCB

CN 9	B10P-SHF	LED No
10	GND	
9		LED 25
8		LED 26
7		LED 27
6		LED 28
5		LED 29
4	Hole (3) SW	LED 30
3	Hole (2) SW	LED 31
2	Hole (1) SW	LED 32
1	+5V	



Specifications, wiring methods, etc. are subject to change without notice due to improvements in product.