



Tennis Simulator

USER MANUAL

The Best Tennis Simulator in The World with AI Data Analysis



BALL MACHINE

Ball Machine Installation

※ List of Tools Needed for Installation



- 1.Impact drill (or electric drill)
- 2.Allen wrench set (Hex key set)
- 3.Wrench set
- 4.Long Phillips drill bit
- 5.M8 hex socket bit
- 6.Nippers (wire cutters)
7. Large cable ties

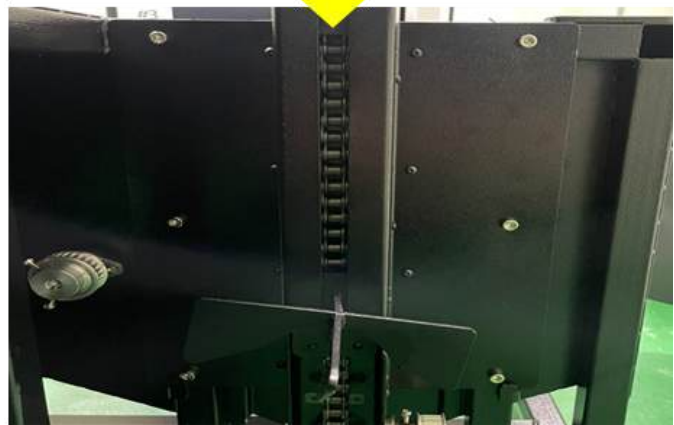
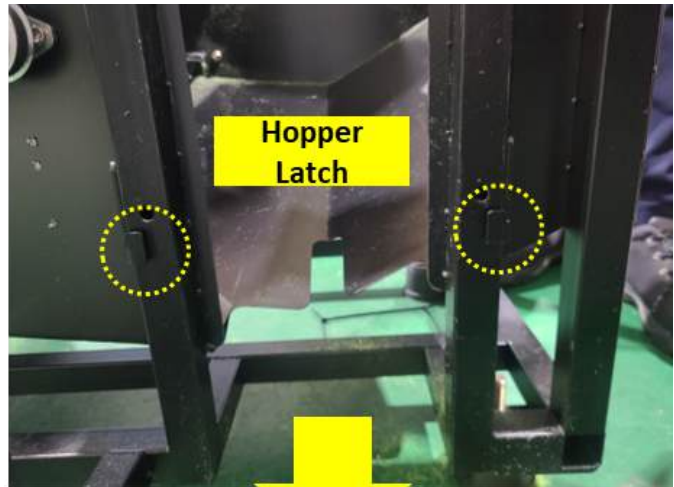
Installation Guide – Components



◆ Component List

- 1.Main frame
- 2.Shooter Assembly (Ass'y)
- 3.Bearing Shaft Assembly (Ass'y)
- 4.Pan Actuator
- 5.Controller
- 6.Lift Assembly (Ass'y)
- 7.Lift Cover Assembly (Ass'y)
- 8.Hopper Hose Bracket (BKT)
- 9.Lift Return Hose Bracket (BKT)
- 10.Two Types of Lift Brackets (BKT)
- 11.Shooter Hose
- 12.Lift Return Hose
- 13.Hose Tension Bracket (BKT)
- 14.Three Motor Cables (Hopper, Lifter, Lifter Cover)
- 15.Lift Case

Installation Guide – Lift Assembly (Ass'y) Assembly



1. Hold the Lift Assembly (Ass'y) with both hands and place it onto the Hopper Latch area of the Main Frame to secure it.

- While lifting the Lift Assembly, place it over the **yellow circular** Hopper Latch section.

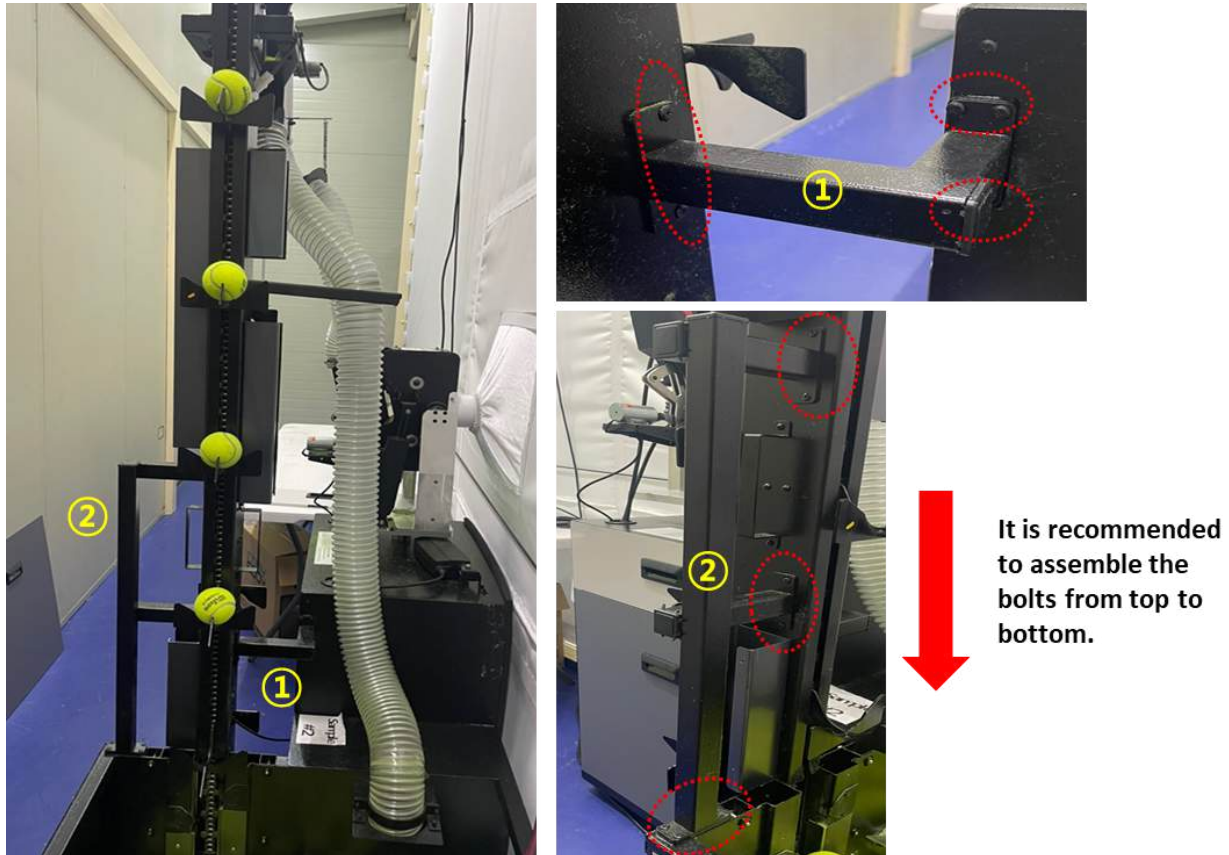
2. Use the Sam's Wrench Bolts (M5 x 40L_6ea) to assemble the Lift Assembly

- Fasten the bolts at the **red circular** markers.

 Caution

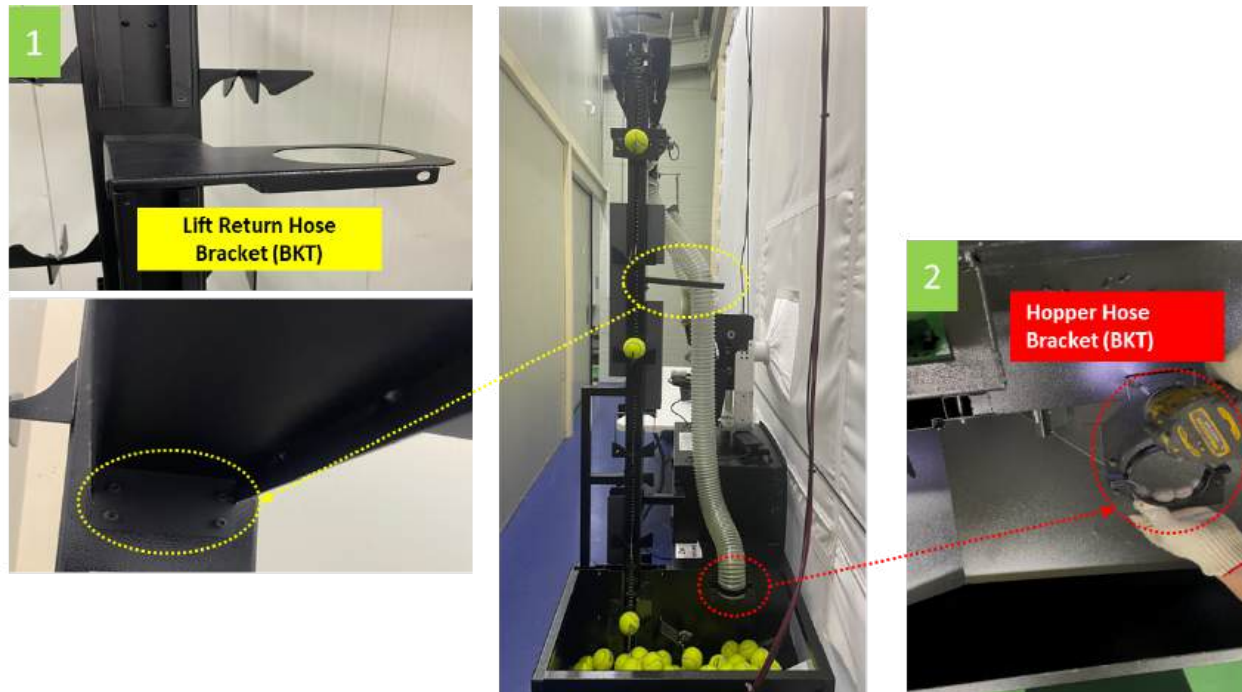
- **Align the Lift Assembly with the groove on the Main Frame mounting area before securing it with bolts.**

Installation Guide – Assembly of Two Types of Lift Brackets



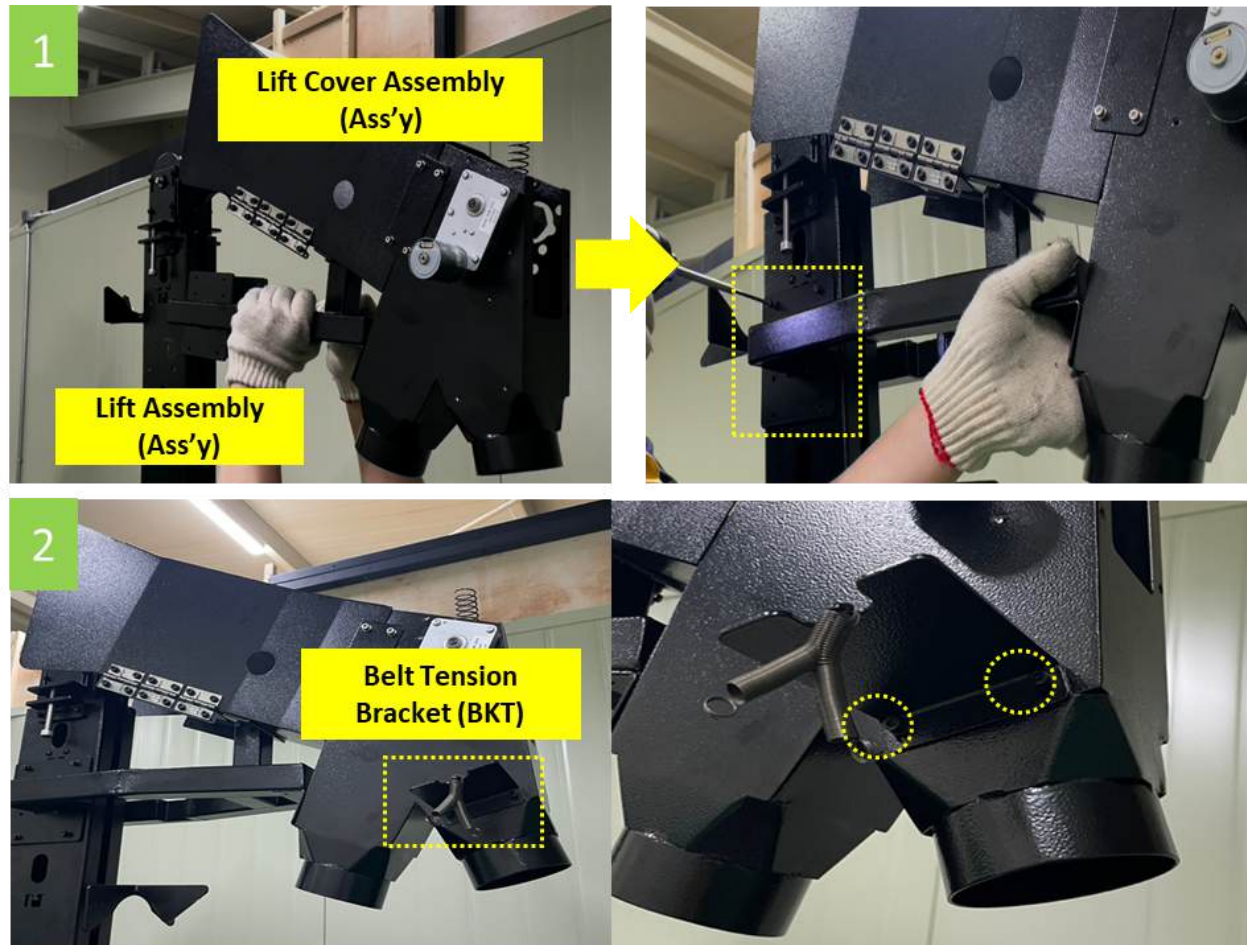
1. Fix the two types of Lift Brackets (BKT) onto the Lift Assembly (Ass'y) and Main Frame using flat head Phillips bolts (M4x8L_4ea, M4x8L_8ea).
 - For Lift Bracket No. ②, it is easier to assemble the bolts from top to bottom.

Installation Guide – Assembly of Two Types of Ball Hose Brackets (BKT)



1. Fix the Lift Return Hose Bracket (BKT) (**yellow circle**) to the center of the Lift Assembly (Ass'y) using Sam's Wrench Bolts (M4x10L_4ea).
2. Fix the Hopper Hose Bracket (BKT) (**red circle**) to the hopper section of the Main Frame using flat head bolts (M4x8L_2ea).

Installation Guide – Lift Cover Assembly (Ass'y) Installation

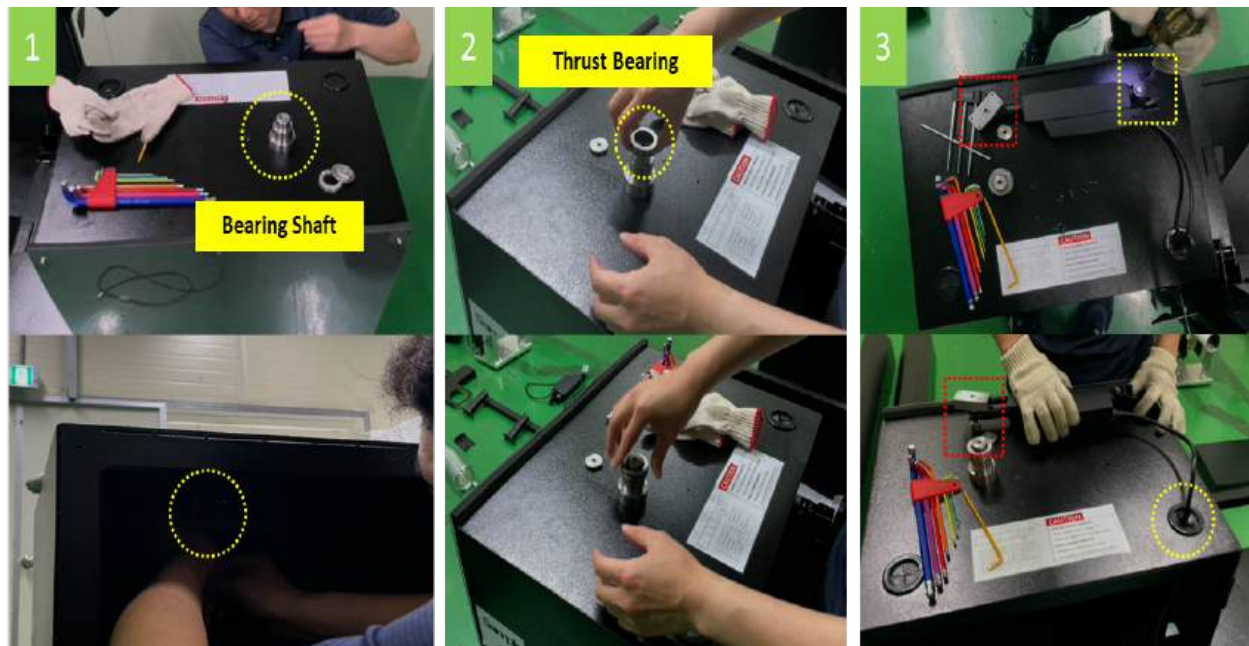


1. Assemble the Lift Cover Assembly (Ass'y) onto the Lift Assembly (Ass'y) using Sam's Wrench Bolts (M4x10L_8ea).

2. Assemble the Hose Tension Bracket (BKT) using Sam's Wrench Bolts (M4x10L_2ea).

- Make sure that the **two springs** on the Hose Tension Bracket are not missing.

Installation Guide – Shooter Assembly (Ass’y) Step 1

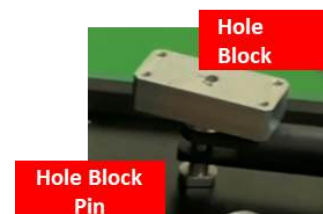


1. Place the **Bearing Shaft** on top of the Main Frame, then secure it from the bottom of the Main Frame using **Wrench Bolts (M6x12L, 4ea)**.

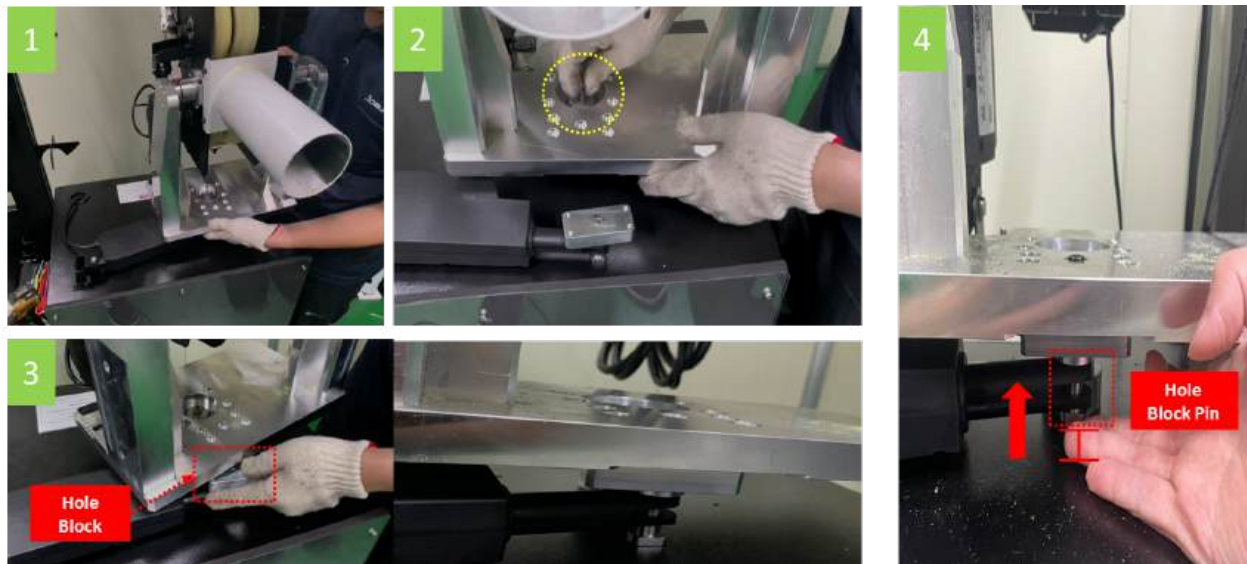
2. Assemble the **Thrust Bearing** onto the **Bearing Shaft**.

3. Assemble the **Pan Actuator** onto the Main Frame using **Sam's Wrench Bolts (M4x10L, 4ea)**.

- Lower the **Pan Actuator cable** down through the inspection opening.
- Make sure that the **Hole Block and Hole Block Pin** (red box) are **not missing** and are properly assembled to the Pan Actuator.



Installation Guide – Shooter Assembly (Ass’y) Step 2



1.Place the Shooter Assembly (Ass’y) onto the Bearing Shaft.

- When fitting the Shooter Assembly onto the Bearing Shaft, make sure that the **ball bearings are properly assembled in the shooter frame** and not missing.

2.Temporarily assemble the Housing Cover using a Wrench Bolt (M6 x 15L) + M6 Spring Washer (1ea).

3.Align the Hole Block with the bolt holes on the Shooter Assembly, and temporarily fasten it using:

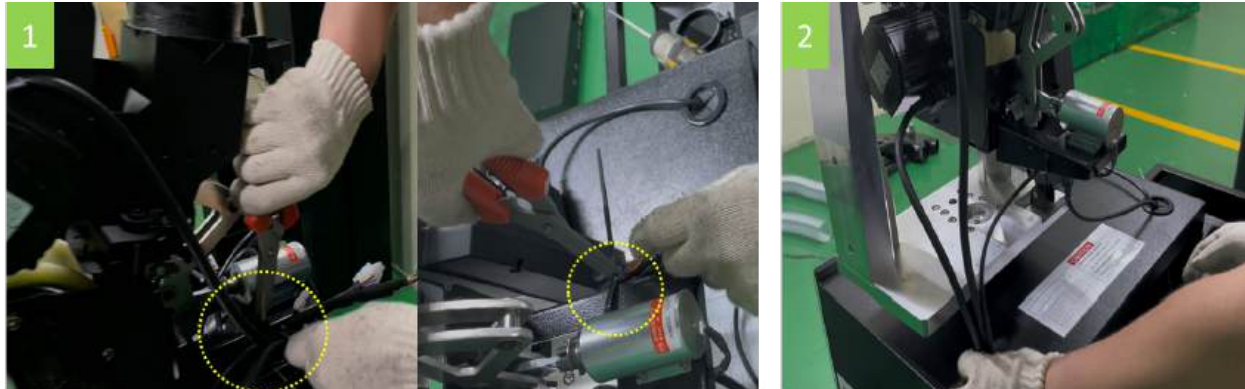
- Wrench Bolts (M5 x 15L, 4ea)
- M5 Spring Washers (4ea)

4.Temporarily assemble the Hole Block Pin onto the Shooter Assembly using a Wrench Bolt (M6 x 15L) + M6 Spring Washer (1ea).

- When assembling the Hole Block Pin, **slightly lift the lower part** as shown in the photo.

5.Tighten all temporarily assembled bolts to complete the step.

Installation Guide – Shooter Assembly (Ass’y) Step 3

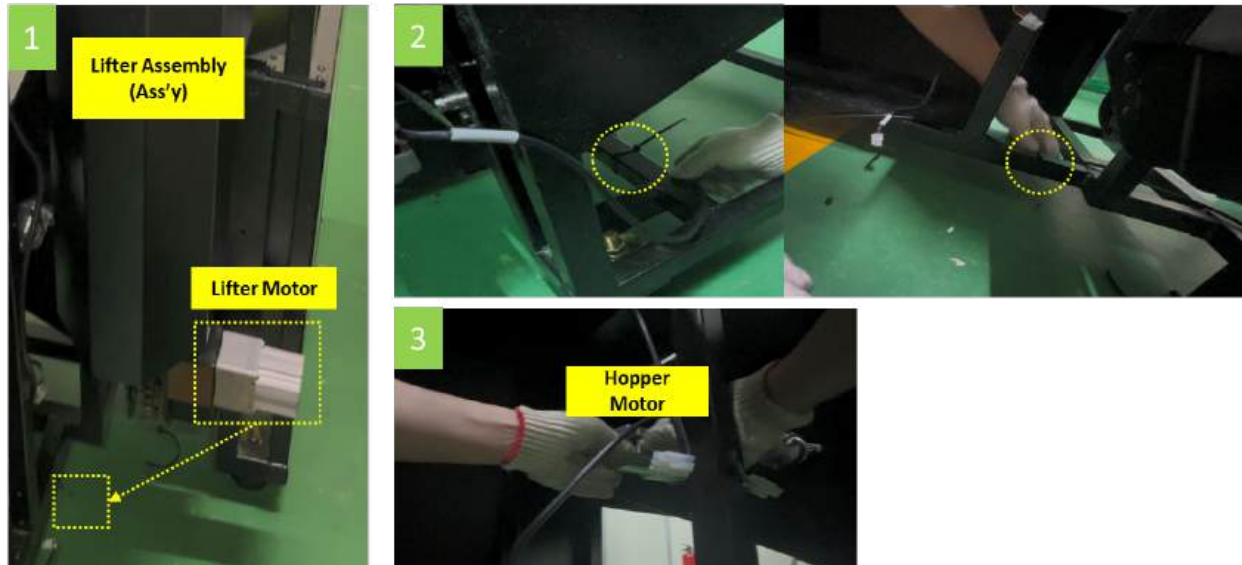


1.After completing the assembly, remove the **cable tie** fixed to the Shooter Assembly cable.

2.After removal, lower the cables into the inspection openings.

- The **Up & Down motor cable** and **solenoid cable** should be lowered into the **left inspection opening**.
- The **Pan & Tilt actuator cable** should be lowered into the **right inspection opening**.

Installation Guide – Controller Setup – Step 1



1.Connect the Lifter Motor cable to the Lifter Motor.

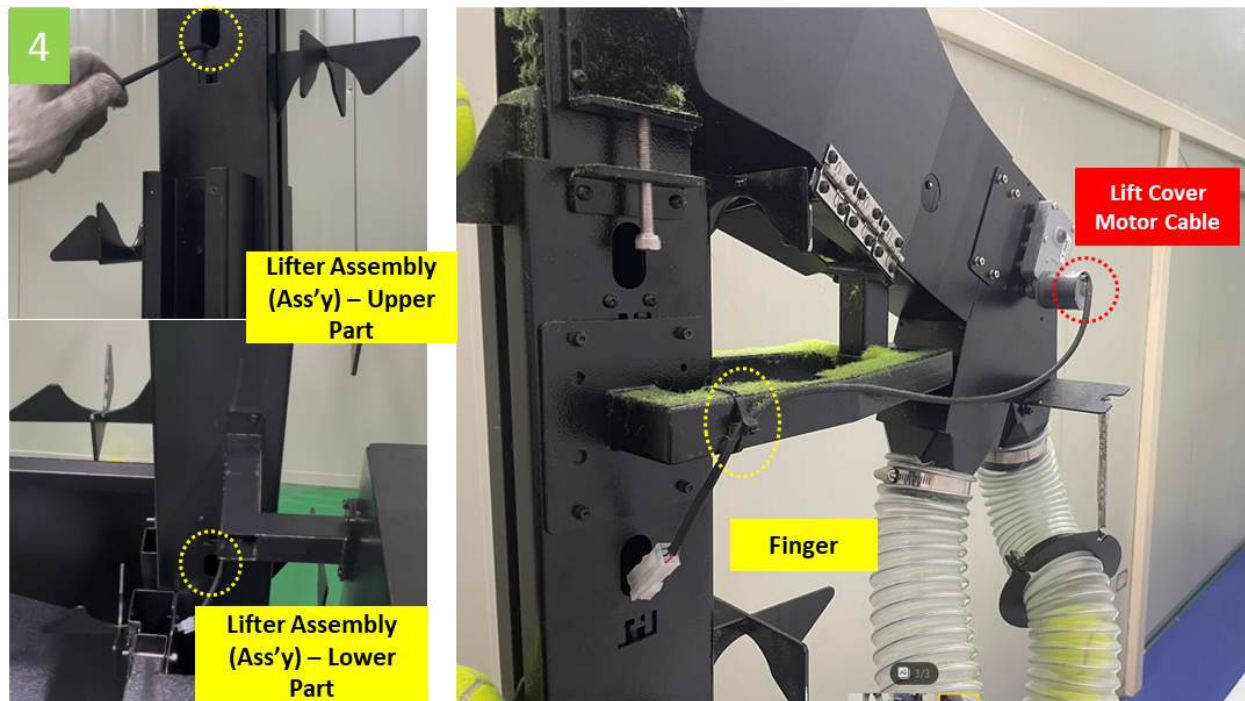
2.After connecting the Lifter Motor cable, organize and secure the wiring with cable ties so that it does not interfere with the fingers.

- After connecting the Lifter Motor cable to the motor, arrange the cables as shown in the photo above to prevent interference with the fingers.

3.Connect the Hopper Motor cable to the Hopper Motor.

- Connect the Hopper Motor cable to the Hopper Motor located at the bottom of the Main Frame.
- Check that the lock part of the cable housing is properly engaged during the connection.

Installation Guide – Controller Setup Step 1



Connect the Lift Cover Motor Cable to the Lift Cover Motor.

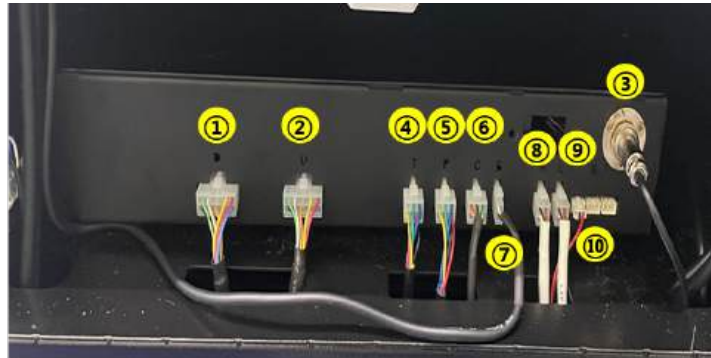
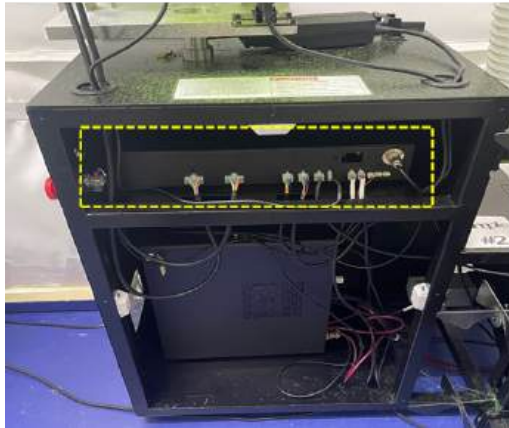
- Insert the Lift Cover Motor Cable into the escape hole of the Lift Assembly (Ass'y).
- Organize the Lift Cover Motor Cable coming out from the bottom so that it can be connected to the controller.
- Connect the Lift Cover Motor Cable coming out from the top to the motor and secure it with a **yellow cable tie**.

※ **Caution:**

Fix the cable in a position where it does not interfere with the moving fingers.

Refer to the photo to confirm the correct position and secure it with a cable tie.

Installation Guide – Controller Setup – Step 2



1.Set the controller at the center of the main frame.

2.Connect each connector to the controller:

- ① DOWN Wheel Motor
- ② UP Wheel Motor
- ③ RS232 Communication Cable
- ④ Tilt Actuator
- ⑤ Pan Actuator
- ⑥ Lift Cover Stirrer Motor
- ⑦ Solenoid
- ⑧ Hopper Motor
- ⑨ Lifter Motor
- ⑩ Emergency Switch (S/W) Cable

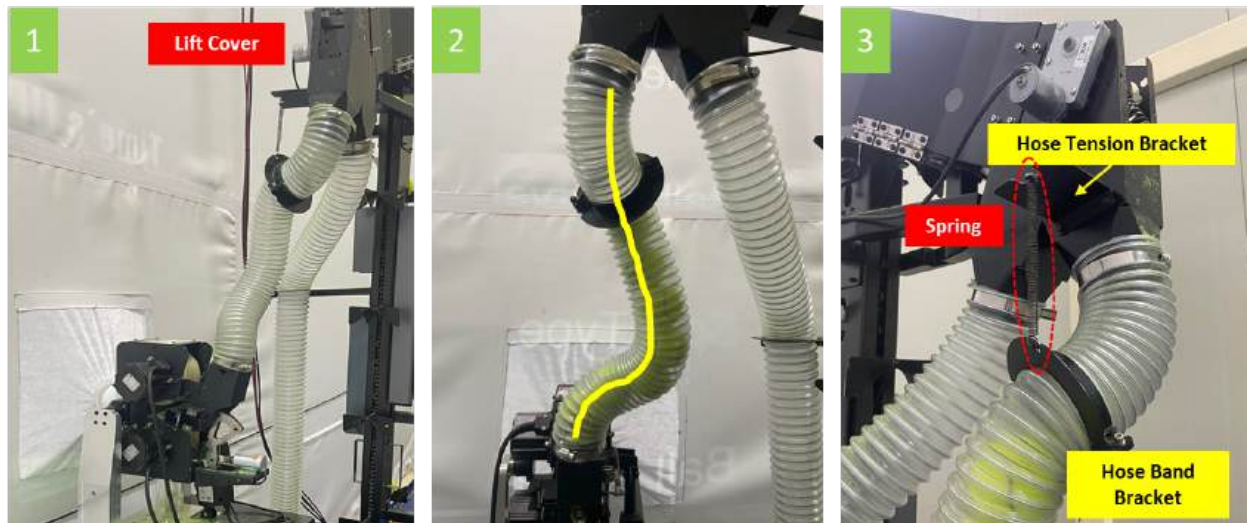
3.After connecting the connectors, check that the hooks are securely fastened, then connect the power cable.

4.Apply power and confirm that the Shooter Assembly (Ass'y) moves to the home position (front), then finish the setup.

※ **Caution:**

- If the Shooter Assembly (Ass'y) does **not** set to the home position (front) when power is first applied:
 1. Turn off the controller power.
 2. Manually set the Shooter Assembly (Ass'y) to face the front.
 3. Turn the controller power back on and check if it moves to the home position (front).

Installation Guide – Shooter Hose Connection



1. Fix the shooter hose to the lift cover using a band.

- Use a + screwdriver or 8mm socket wrench to secure it.

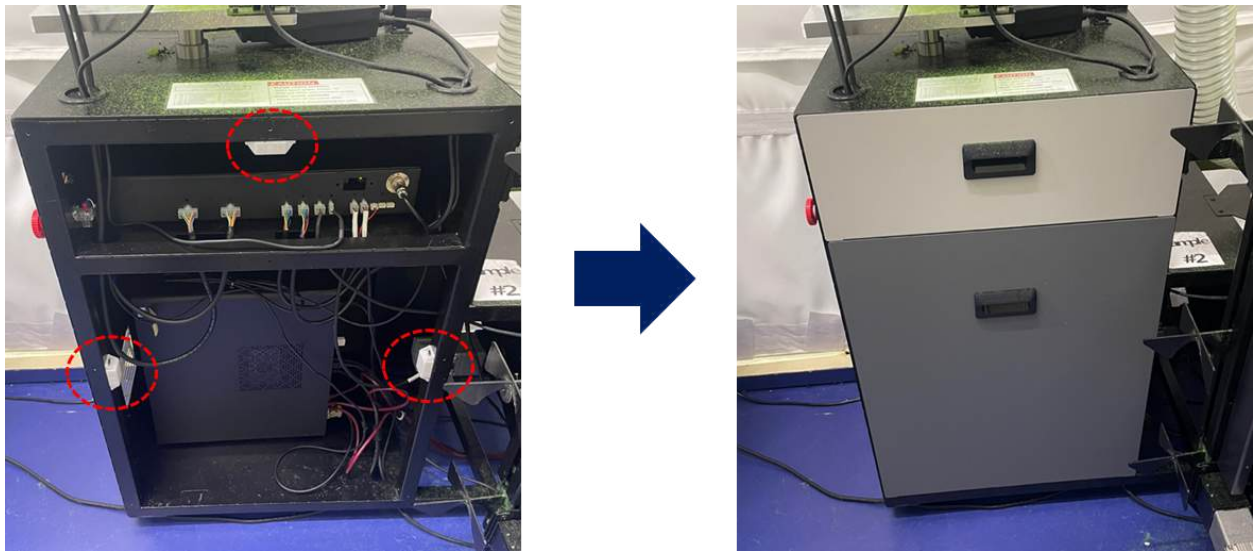
2. Twist the hose half a turn to create an S-shape (yellow line) and secure the band to the Shooter Assembly (Ass'y).

3. Assemble 2 springs onto the Hose Band Bracket and Hose Tension Bracket attached to the shooter hose

※ Caution:

- The shooter hose must maintain the S-shape (step 2) to prevent internal blockage and allow the balls to freely drop into the shooter.

Installation Guide – Shooter Frame Cover Assembly



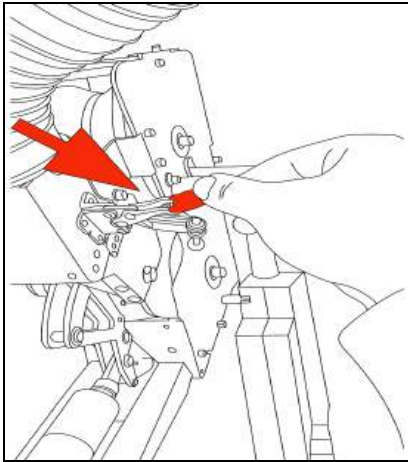
1. Assemble the upper and lower covers as shown above.

- Since the shooter frame has magnets (marked in red), the cover will automatically attach and secure itself when placed as shown in the photo

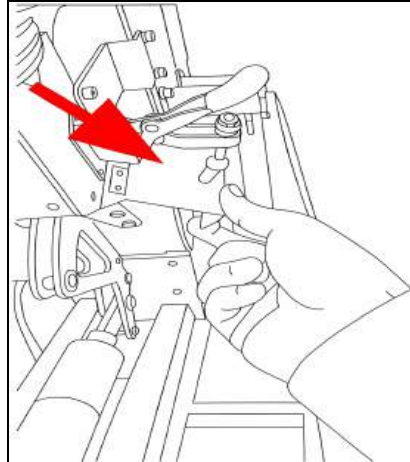
Ball Jamming — Step-by-Step Troubleshooting & Fix Guide

Safety first

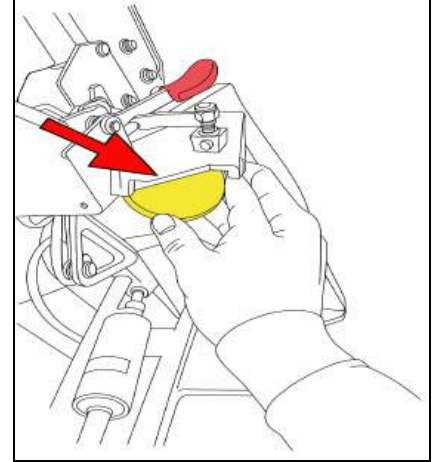
Power off and unplug the machine before opening panels or touching moving parts.



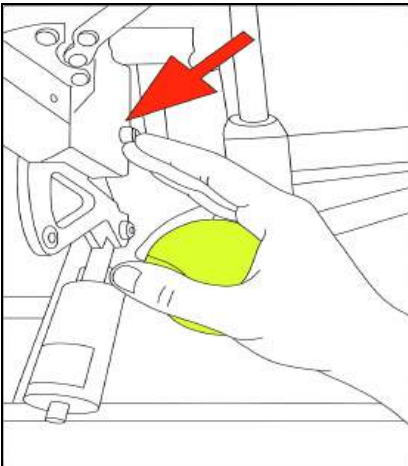
1. Press the red latch on the toggle clamp toward the right side of the device wall to release and open the clamp.



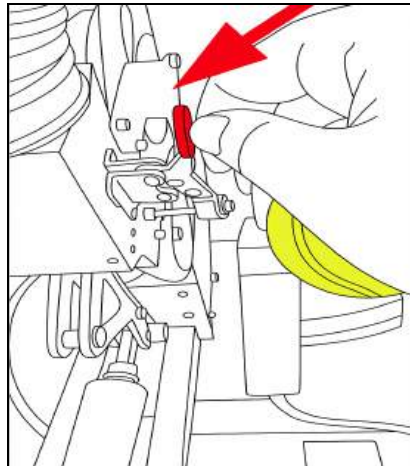
2. Pull the locking plate upward to release the upper section of the clamp.



3. After lifting the locking plate carefully remove the jammed ball.



4. After confirming the ball has been removed lower the locking plate back into position.



5. Press the toggle clamp upward until it locks firmly.

Caution !

Ball Pitching Machine Maintenance

Dust Generation: When using tennis balls, fiber-like dust may be generated and may accumulate on the areas shown in the image below.

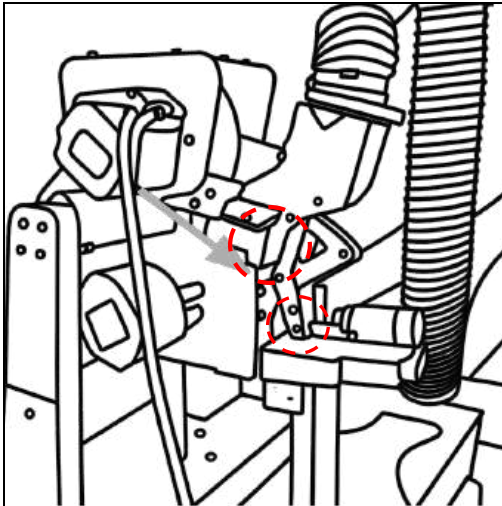
Cleaning Method: Regularly clean the indicated areas (1, 2) using WD-40 cleaner or a soft brush.

Risk of Not Cleaning: Failure to remove dust may cause the following issues:

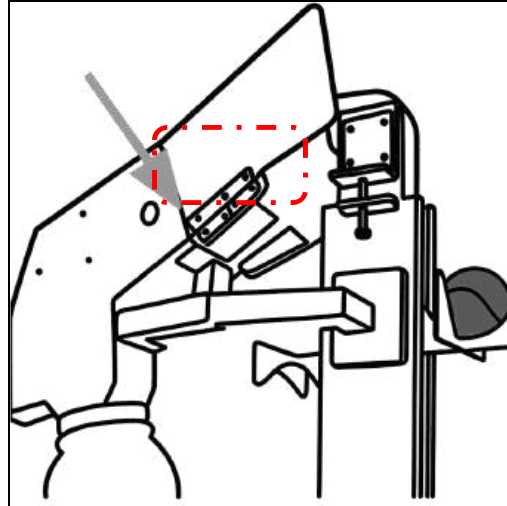
1. Pistol malfunction or overload due to foreign substances (ball jamming)
2. Hinge malfunction due to foreign substances (ball accumulation)

Recommendation: For smooth operation, inspect and clean the machine once a month.

1.



2.



**Caution**

“This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.”

“This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.”

Joeun VnC



<https://www.joen59.co.kr/>