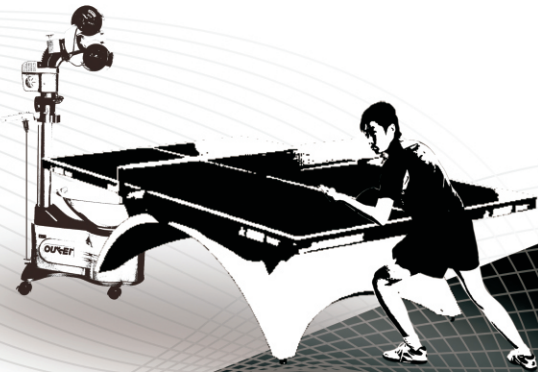




乒乓球发球机
Serving Robot For Table Tennis
使用手册
Instruction Manual

OUKEI®
奥奇



TW-2700-E6



HTTP://WWW.OUKEI.CN
MADE IN CHINA

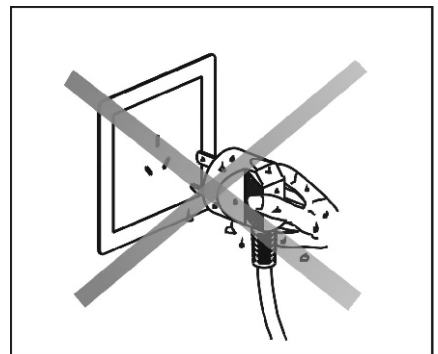
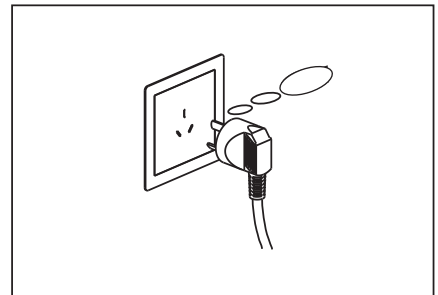
使用前请阅读此手册
Please read this manual before operation

Statement

1. Please read this manual carefully before you start operating the machine.
2. If you encounter problems, contact your supplier or our Product Support Department.
3. The company is not liable for any legal responsibility for any failure or damage due to improper use or handling of the machine.
4. The warranty does not cover any failure or damage due to improper operation, disassembling, or remodeling of the machine.
5. The manual cannot be copied and downloaded without our permission.
6. We reserve the rights to make any changes or modifications to the machine as well as the attachments without further notice.
7. Only 40 mm+ table tennis balls with international standard of one star or above should be used for the robot. (Reminder: Do not reuse the bad balls that are inflated by hot water trying to resume their original shape.)

Warnings

- ★ Make sure the local voltage is:
AC100V~240V,50/60Hz .
- ★ Do not plug in with wet hands as device may short circuit.
- ★ The power plug should be properly grounded to ensure safe operation.
- ★ Please disconnect the power supply when machine is not in use or during unfavorable weather conditions.
- ★ If abnormal conditions occur, please disconnect power supply and unplug the power socket of the machine. Contact your supplier or our product support department to rectify the problem before the machine restarts.
- ★ Please keep away from the serving head when On/Off is pressed. Balls served will cause physical damage to your body if you are close to the serving head.



Reminder: Please read the manual carefully prior to any operation to ensure the machine is operated safely, accurately and efficiently.

Basic Features And Functions of The Robot

- ★ Double spin technology ensures different degrees of speed, curve and spin are served. The technology can also set straight (no spin) serves that other robots with a single spin wheel are unable to provide.
- ★ Serves can be set to land on 1-9 points from left to right on the entire width of the table. Press the **Left** or **Right** button on the control panel to select the landing point(s) desired.
- ★ Self programming allows players to set the combination of serves based on the desired level of difficulty.
- ★ There are 3 mode selections to choose from:
 1. **Fixed mode** Various kinds of serves land continuously at one point to be chosen from 1-9 points.
 2. **Random mode** Balls land randomly in either long range or short range on 1-9 possible points across the table, with a choice of landings: a) on the entire width of the table (1-9 landing points), b) only the left side (1-5 landing points) , or C) only the right side (5-9 landing points).
 3. **Program mode** A combination of various landings can be set on the entire table as desired by the player. Serves will land on the points as last programmed.
- ★ Proper Service function Balls land on both sides of the court.
- ★ Equipped with a memory function that can restore the most recent setting for repeat training or use.
- ★ Enclosed with a ball collection net that helps to collect the returned balls into the collection dish of the robot, saving time and increasing efficiency.

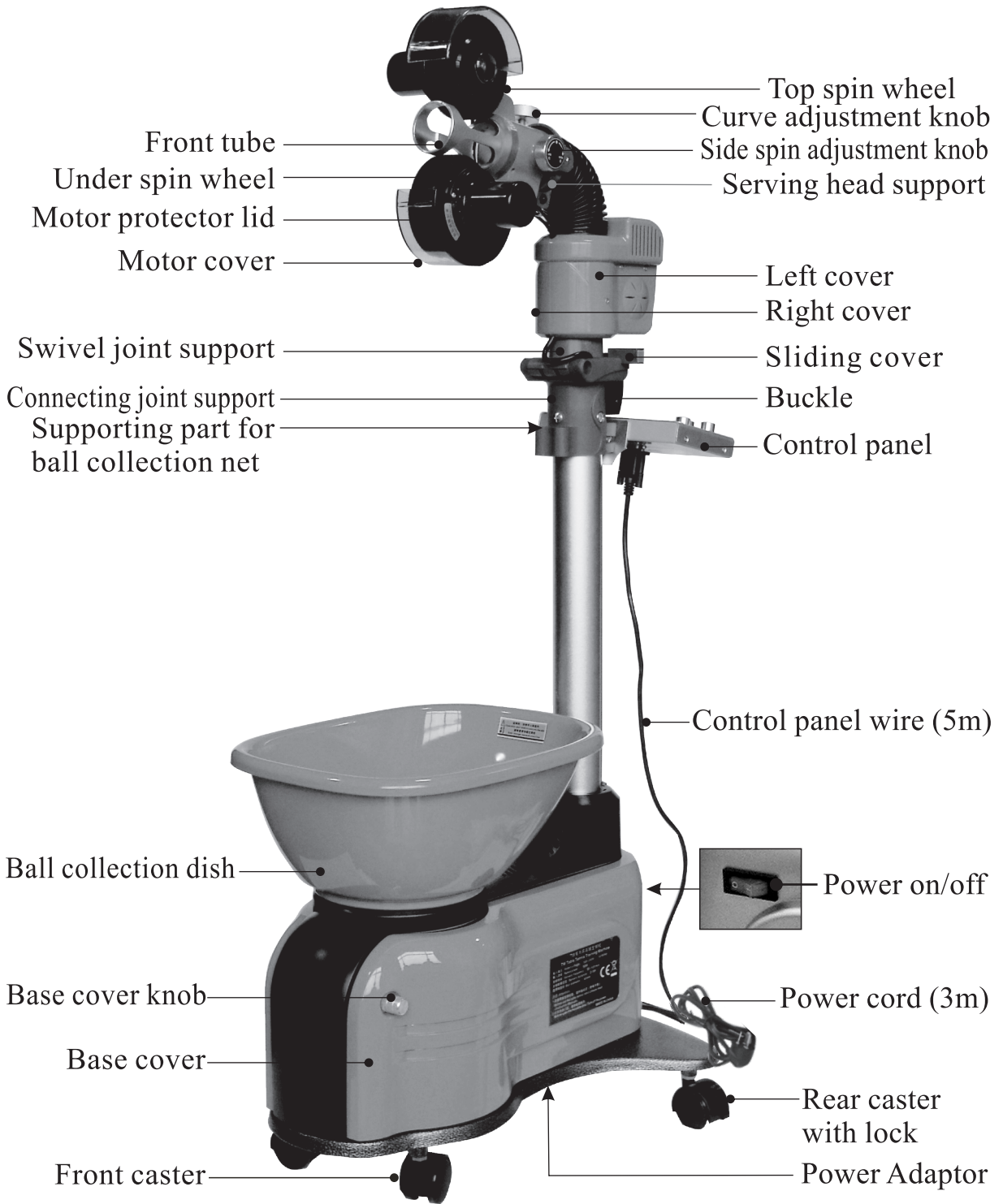
Factory Reset And Recommended Parameters

Type of Spin	Top Spin (Levels)	Bottom Spin (Levels)	Serving Frequency (Balls/Min)	Remarks	
Factory Reset	5	2	45		
Recommended Parameters	Top Spin	5-9	1.5-3	45-70	
	Left Side Top Spin	5-9	1.5-3	45-70	
	Right Side Top Spin	5-9	1.5-3	45-70	
	Left Side Under Spin	1.5-3	5-9	35-40	
	Right Side Under Spin	1.5-3	5-9	35-40	
	Under Spin	1.5-3	5-9	35-40	

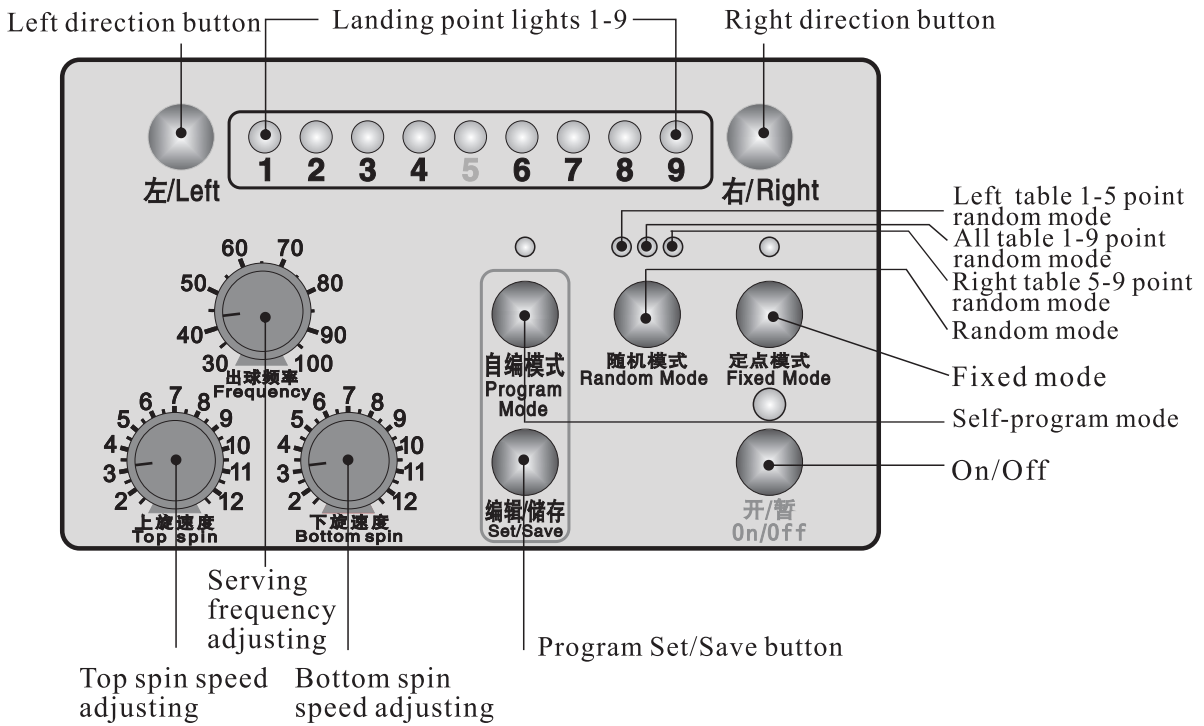
Hints: Please use the Factory Reset Parameters to have the robot start at the time of initial use. Press On/Off to confirm and operate. Users can adjust and set the parameters based on their level of technique.

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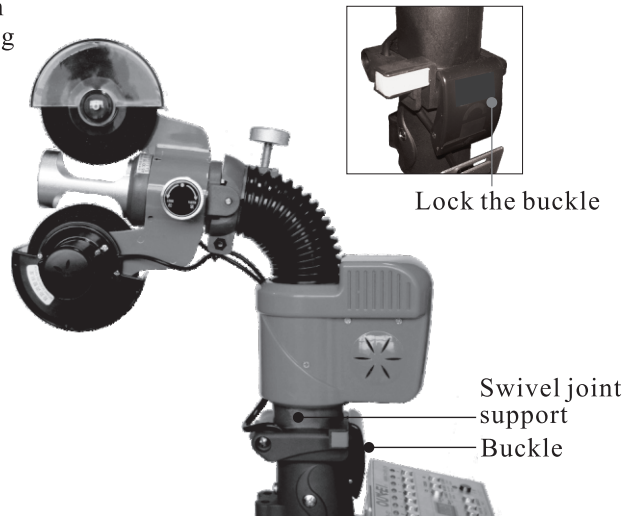
A. Parts



B. Operation box function various partial name



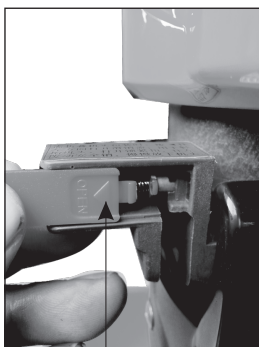
C. Installation



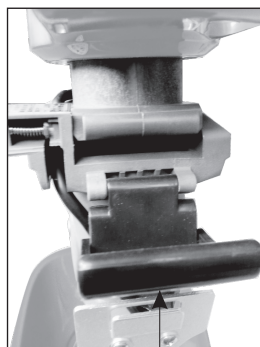
1. Open the carton, remove the cushioning foam and place the robot gently on the ground. Remove the transparent plastic bag and the cushioning foam for the connecting joint.

2. Gently lift the serving head all the way until it is automatically locked. While lifting the serving head a little bit further, flip and lift the buckle against the swivel joint support and press downward to have the serving head completely locked.

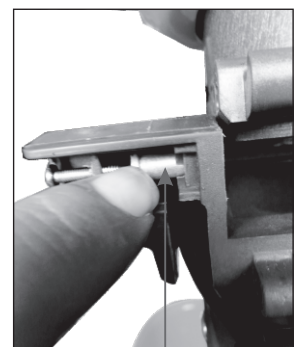
(2). Folding of The Serving Head



(1). Slide to open.

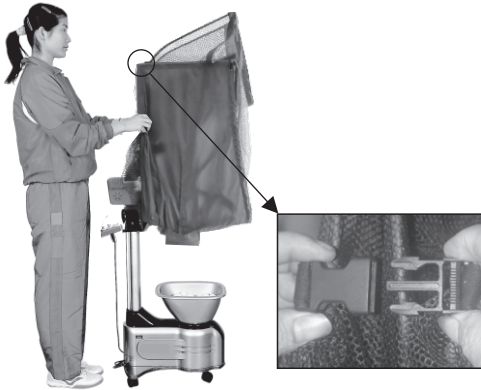


(2). Slightly lift the serving head and unlock the buckle.

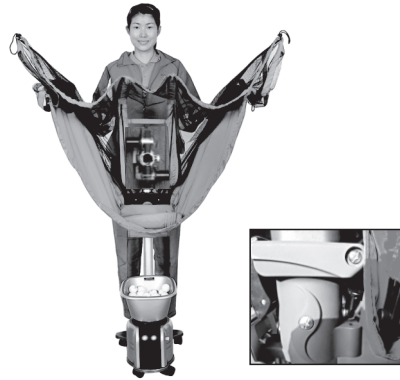


(3). While slightly holding up the serving head, release the safety lock (in red) by moving it to the left. Slowly let go the serving head, which will automatically be lower and stopped.

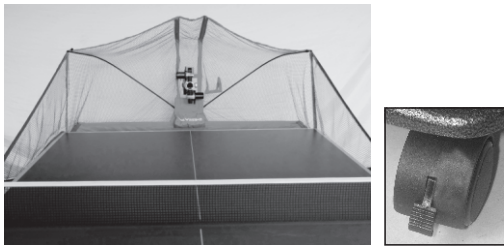
D. Installation of The Ball Collection Net



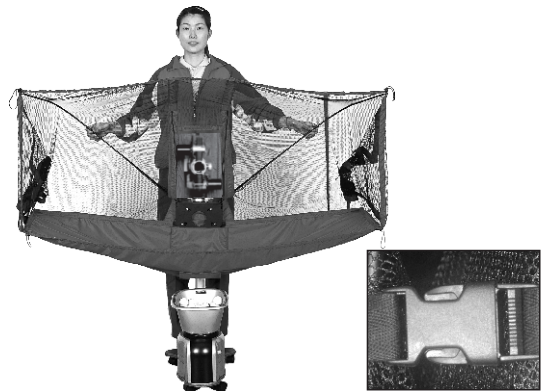
1. Unlock the buckle of the ball collection net.



2. Slightly unfold the ball collection net. Place the hole of the net onto the serving head. Insert the ball collection net into the net supporting part at the back of the robot.



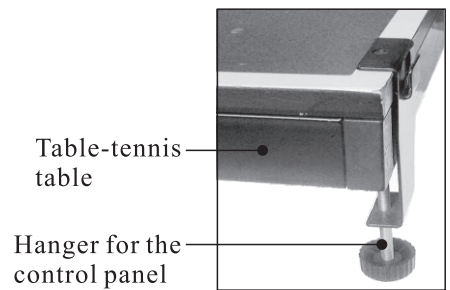
3. Move the robot close to the table and lock the casters. Fasten the velcro of the ball collection net to the middle net of the table.



4. After use, reverse the previous steps to fold the ball collection net. Lock the buckle, release from the robot and store.



Completed installation is shown in the picture above



★ The hanger can be placed anywhere on the side of the table. It is more convenient for the players to get access to the control panel when it is attached to the hanger.

E. Start And Stop for The Robot



1 Insert the plug into the power supply. Switch on the robot.

2 The light for the On/Off button on the control panel will turn red. One of the function mode lights and one of the landing point number lights will also illuminate. At this moment, set the spin level and serving frequency according to the factory reset and recommended parameters as shown below. Press the On/Off button. The light will turn green and the robot will start. Balls are served in accordance to the parameters set.

Type of spin	Top Spin (Levels)	Bottom spin (Levels)	Serving Frequency
Factory Reset	5	2	45

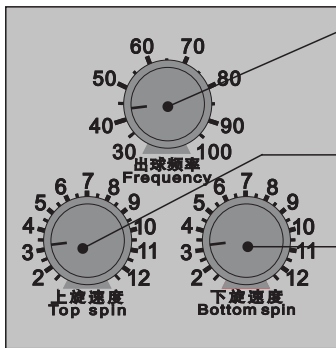
3 Press the On/Off button once again. The light for which will turn back to red and the robot will stop.

Caution

1. Please keep away from the serving head when On/Off button is pressed. Balls served will cause physical damage to your body if you are close to the serving head.
2. Please disconnect the power supply when the robot is not in use.

F. Functions And Use of The Control Panel

I. Adjustment of Serving Frequency, Top Spin and Under Spin



Adjustment of Serving Frequency

Turn the knob for Frequency clockwise and the number of serves will be increased from 30 to 100 balls per minute. The number marks for the knob indicate the number of balls served per minute.

Adjustment of Top Spin

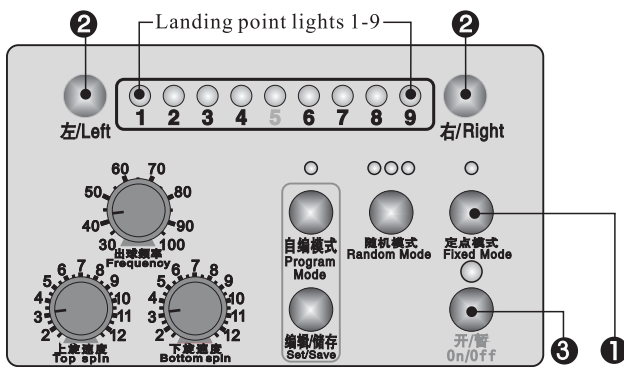
Turn the knob for Top spin clockwise, the level of the top spin will increase: the higher the number, the stronger the spin.

Adjustment of Under Spin

Turn the knob for Bottom spin clockwise, the level of the under spin will increase: the higher the number, the stronger the spin.

Hints: Please refer to the factory reset and recommended parameters.

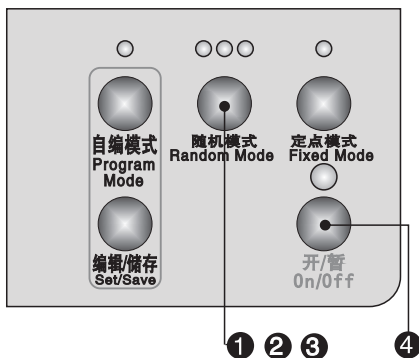
II. The Function Modes for The Robot



1. The setting of Fixed mode

- ① Press the Fixed mode button, the light for which will turn on.
- ② Press Left or Right button to select the landing point you desire. One of the landing point lights will turn on from left to right or right to left, indicating the landing point chosen.
- ③ Press the On/Off button, the light for which will turn from red to green. Balls will continuously land on the point that you have selected.

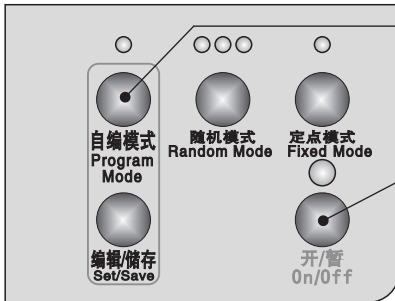
2. The Setting of Random Mode



- ① Press the Random mode button once. The middle light for the mode will turn on green. Balls served will land randomly on 1-9 points across the entire width of the table.
- ② Press the Random mode button once again. The right light for the mode will turn on red. Balls served will land randomly on 5-9 points at the right side of the court only.
- ③ Press the Random mode button once again. The left light for the mode will turn on red. Balls served will land randomly on 1-5 points at the left side of the court only.
- ④ Press the On/Off button and the random mode is activated in accordance with the above step ① ② or ③ selected.

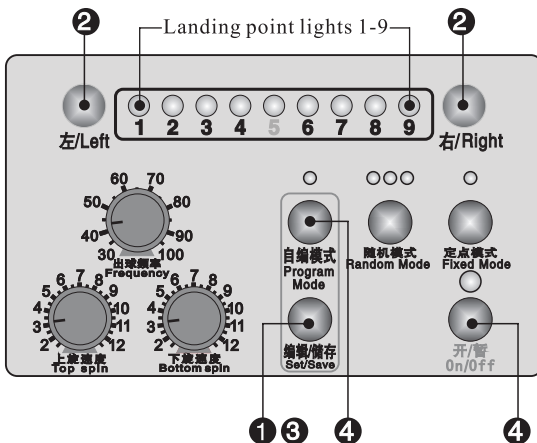
Hints: Change of function mode can be made whenever the robot is in operation.

3. The Setting of Program Mode



- ① Press the Program mode button once. The indication light for the mode will turn on.
- ② Press the On/Off button. Serves will land on the points as last programmed.

III. The Setting of Combination of Serves



- ① Press the Set/Save button once. The indication light for Program mode will blink. The robot is now in the mode for self-programming. (Note: While the robot is in operation and the Set/Save button is pressed, the robot will stop and enter automatically into the self-programming.)
- ② Press Left or Right button to select the landing point you desire.
- ③ Press once the Set/Save button. The first serve for the landing point selected under the above step 2. is set and saved. Repeat the above steps 2. and 3. to set and save the 2nd, 3rd up to the maximum 32nd.

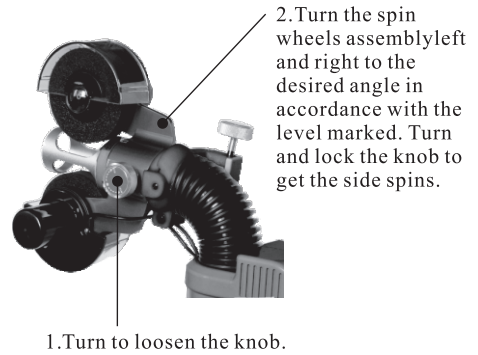
- ④ Press the On/Off or the Program mode button. The light for Program mode will stop blinking and stay lit and the light for On/Off will turn from red to green. The operation of the combination of serves is now activated. The current setting will override the last program previously set.

Hints

Change of function mode can be made whenever the robot is in operation.

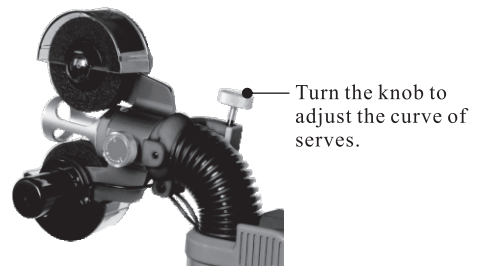
G. Choice of Spin Types

There are 9 spin modes to choose from: top spin, under spin, left side spin, left side top spin, left side under spin, right side spin, right side top spin, right side under spin and no spin (straight). Each type of spin can be obtained from the selection of top spin or under spin and/or from adjustment for the angle of the spin wheels assembly (as the picture on the right shows).



H. Serving Curve Adjustment

Use the knob at the top of the serving head (as the picture on the right shows) to adjust the curve of serves. Turn the knob counter-clockwise to lower the curve. Turn the knob clockwise to get a higher curve. When changing serving spin level causes serving balls to fall out of bounds or into the net, adjustment of the curve is required. Please also see chapter Q.



J. Capacity of Ball Collection Dish

Capacity: 90 pcs of 40mm-ball. Balls put in the dish should not exceed the black line on the inside of the dish.

Note: nothing other than table tennis balls should be placed in the dish. Otherwise, it may cause machine failure or damage to the parts.



K. Maintenance

1. The robot and the control panel should be prevented from strong vibration and from getting wet. Failure to do so will cause short circuit or electricity leakage resulting in damage to the electrical and electronic components.
2. After a period of use, there will be wear and tear on the spin wheels, causing slower serving speeds than usual. Adjust the distance between the two wheels to resume the effectiveness of the serves. Please see chapter N.
3. After use for 1 to 2 months, dust and dirt might gather in the ball running track. Remove all balls from the ball running track. Clean the track with a wet cloth and spray some car cleansing wax (spray type) in the track from the ball entrance and exit.
4. When the robot is not in use for a longer period of time, please disconnect the power supply and cover the robot with cloth or a plastic bag.

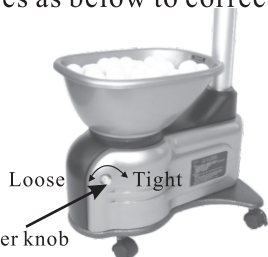
L. Troubleshooting

Problem	Characteristic	Solution
The robot doesn't work	1. Lights on the control panel are not lit.	Check if the power plug is properly connected.
		Check if the power on/off is switched to 'On'.
		Check if the plug of the control panel wire is completely connected to the control panel.
		Disconnect the power supply. Check if the fuse (3.15A) connected to the computer board is broken. See P.11
	2. Lights on the control panel are lit but all motors don't work.	Check if the On/Off button on the control panel is pressed to switch on (corresponding light is green).
		Disconnect the power supply. Check if the fuse (3.15A) connected to the computer board is broken. See P.11
3. Lights for 3 function modes and On/Off on the control panel all blink.	Check all plugs for control panel and computer board are completely connected.	
	Disconnect power supply. Check if there is a jam. See the same page below. (Note: Please don't let damaged balls come into the ball running track.)	
Control panel doesn't work	1. Lights on the control panel blink.	Disconnect the power supply. Restart the robot after 10 seconds.
	2. On/Off button is out of order.	Disconnect the power supply. Check if the plug at the back of the control panel is loosened. Restart the robot.

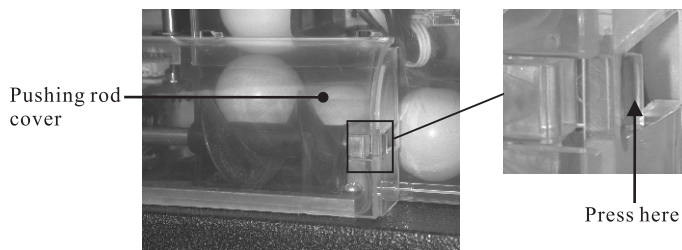
If the above can't solve the problems, please contact your supplier or our Product Support Department.

M. Fixing A Jam

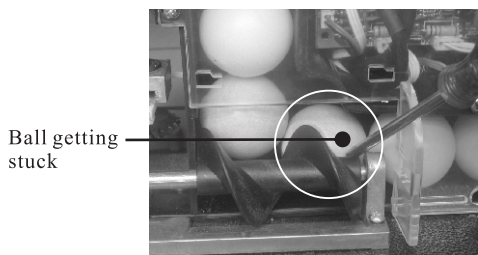
A ball getting stuck is mainly attributable to damaged balls or other items that may be blocking the ball running track. If the problem occurs, disconnect the power supply and follow the procedures as below to correct:



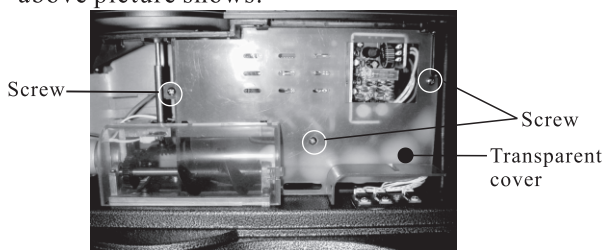
1 Turn and loosen the knob to open the base cover.



2 Press the lock for the pushing rod cover and release the cover by pushing it to the left as the above picture shows.



3 Use a screw driver to lift the stuck ball so that it won't cause a jam. Rotate and push forward the pushing rod a little to make sure it is movable. Replace the pushing rod cover and close the base cover. Restart the robot.

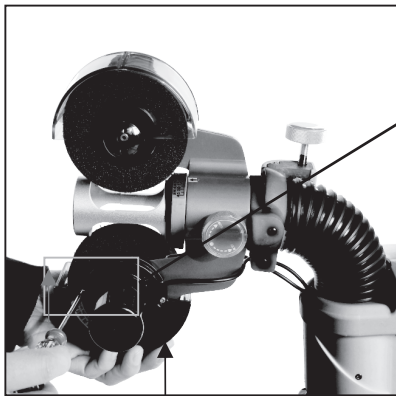


★ If the procedures above don't solve the problem, remove the transparent cover by loosening the 3 screws as the above picture shows. Take away the bad balls or other objects. Replace the transparent cover and restart the robot.

N. Adjustment And Replacement of Spin Wheel

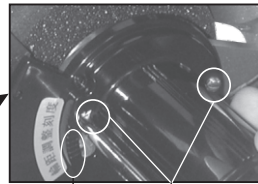
I. Adjustment of spin wheel

After a period of use, there will be wear and tear on the spin wheels causing slower serving speeds than usual. Adjust the distance between the two wheels to resume the effectiveness of the serves.

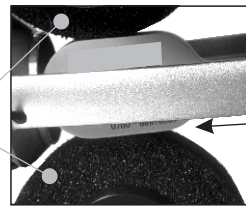


Under spin wheel assembly

Picture1

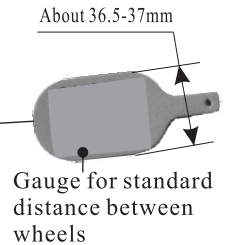


Scale mark for the distance between wheels
Motor screw



Top and under spin wheels

Picture2



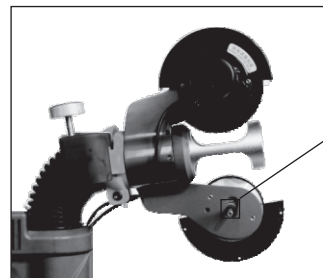
About 36.5-37mm
Gauge for standard distance between wheels

Disconnect the power supply. Use the screwdriver to loosen the 2 motor screws a little (see picture 1). Lift the under wheel assembly up about 2-3 mm (one level of the scale mark), or lift until the gauge fits in perfectly (see picture 2). Tighten the screws and the robot is ready for operation.

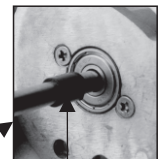
Note: The above adjustments will allow the robot to continue to serve properly, within a certain range of wear and tear. It is recommended that the wheel should be replaced when the diameter of the wheel reduces to 70mm due to wear and tear.

II. Replacement of spin wheels

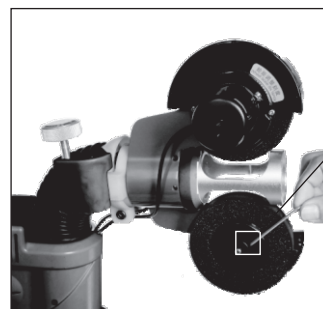
1. Disconnect the power supply. Remove the wheel cover of the under spin wheel by using the screwdriver which is enclosed with the package to unscrew the 3 screws of the cover.
2. Use the allen wrench to remove the under spin wheel. While removing the wheel, make sure the small blocking sleeve (see picture 1) that separates the wheel and the motor is still on the axis of the motor. Install the new wheel onto the axis of the motor. Use the allen wrench to tighten the screw of the wheel (see picture 2). Slightly loosen the 2 motor screws to adjust the distance between the 2 wheels to about 36.5 -37 mm in which the gauge for standard distance between wheels can perfectly fit. Tighten the screws.
3. Reinstall the wheel cover of the spin wheel and the replacement is completed.
Repeat the above 3 procedures if the top spin wheel needs to be replaced.



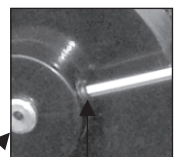
Picture1



Blocking sleeve



Picture2



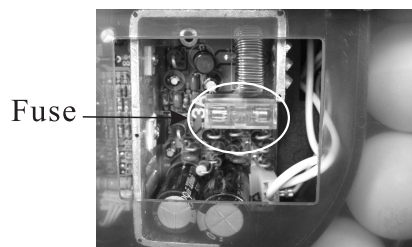
Allen wrench

Notes

1. When the landing points and speed of serves do not meet the standard, adjust the distance between wheels to get the best result.
2. Please replace the spin wheel under the supervision of your local supplier.

P. Fuse Replacement

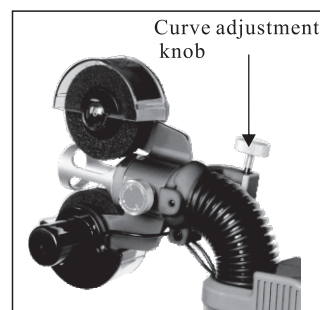
Disconnect the power supply before the fuse is replaced. Open the base cover. At the window of the transparent cover, pull out the fuse cover. Replace the bad fuse with a qualified one of the same standard (3.15A). Replace the fuse cover.



Q. Correction for Serves Falling out of Bounds Or into The Net

When serves fall out of bounds or into the net, adjust the top and under spin levels according to the factory reset and recommended parameters as described in the instruction manual.

1. When serves fall out of bounds, turn the curve adjustment knob counter-clockwise to lower the curve.
2. When serves fall into the net, turn the curve adjustment knob clockwise to get a higher curve.



R. Packaging Information

Gross weight	20 Kg
Net weight	11 Kg
Dimensions	97X55X41 cm

We reserve the rights to make any changes or modifications to the machine as well as the attachments without further notice.