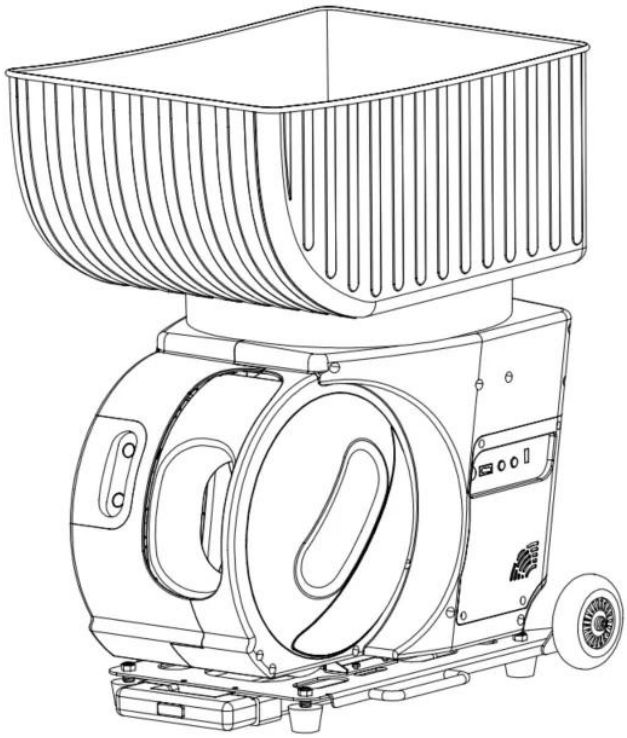
PACE S SERIES

User Manual

V1.2 2025.09



Version	Date	Content
V1.1	2025.06	1.Added introduction to smart training competition challenges and extreme running arena functions. 2.Added introduction to offline functions. 3.Added introduction to self-compiled combination single-ball presets. 4.Corrected errors in V1.0 version.
V1.2	2025.09	1. Updated the function descriptions for programmed drills and custom drills; 2. Updated the function descriptions for the remote control; 3. Updated the function descriptions for the padel tennis function; 4. Updated the descriptions for fault codes; 5. Corrected errors in V1.1 version.

User Manual

Reading Guide

Note on Symbols

Only applicable to PACE S PRO	⚠ Important Notes	ⓘ Pay attention to the extended notes

Usage Suggestions

Before using the PACE S series equipment, please read this instruction manual carefully and follow the operation steps for the installation, connection and use of the equipment to avoid equipment damage or safety accidents caused by incorrect operation. If you encounter any problems during the use process, you can refer to the troubleshooting section in the instruction manual. Or you can contact us through the following email address:service@pongbotsports.com

APP Download

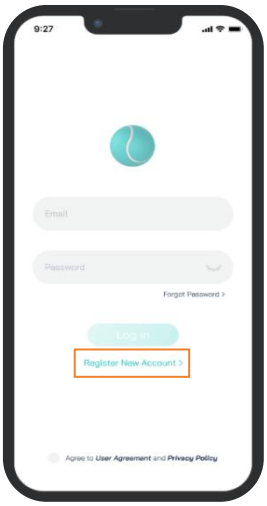
Go to Google Play or the Apple Store to search for and download Pongbot Tennis.

Download the Pongbot Tennis through the following address:

https://pongbotsports.com/app-download/

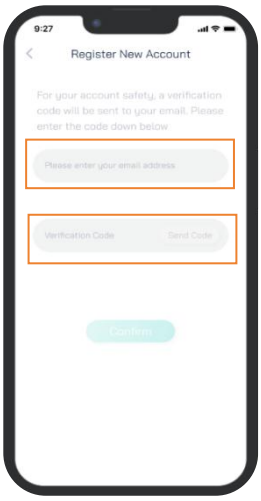
⚠ *When installing the APP or during its usage, in case of* prompts to enable *Bluetooth or location services, please select to enable them.*

Register an Account

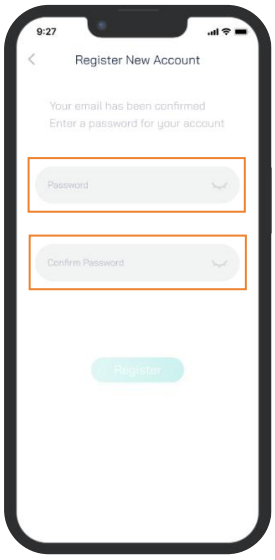


Open the Pongbot APP.

On the login page, click "Register

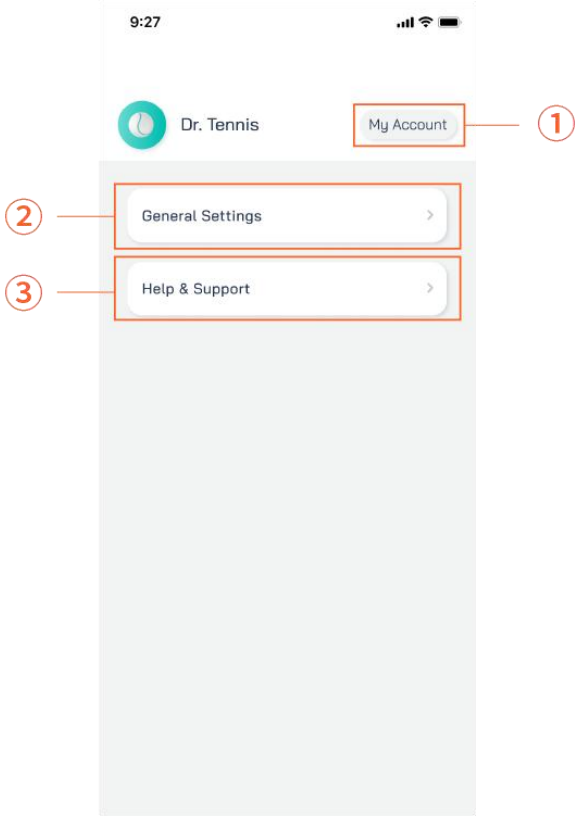


Enter your email address, and click the "Send Code" button. At this time, you will receive a verification code sent by Pongbot in your email. Enter the verification code into the



On the redirected page, set your password. After entering it, click "Confirm" to complete the registration of a new account.

System Settings



Code	Function	The functions after clicking to enter
①	My Account	**Account:** View or cancel your current account. **User Name:** View or change username. **Profile Photo:** Change account profile photo. **Change Password:** Change account password. **Log Out:** Log out of current account.
②	General Settings	**Current Version:** Check the current and latest versions. If the latest version is available, upgrade is possible. **About Us:** Check the brief introduction of PongBot. Legal Information:View the User Agreement and Privacy Policy.
③	Help&Support	**After-sales Service Email:** Send an email to the after-sales team of PongBot. **User Manual:** Check the user manual of the robot.

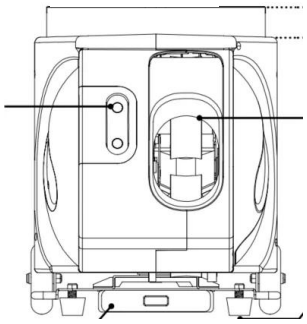
Introduction

The PONGBOT PACE S series of intelligent tennis ball serving robots integrates a high-performance ball serving system and intelligent training algorithms, and is specially designed for professional players and training institutions. This series includes two models, the PACE S and the PACE S PRO. Among them, the PACE S PRO further upgrades the intelligent training function. Equipped with the Smart Tracker Set, it can achieve advanced training modes such as adaptive landing points, adaptive rhythms, and intelligent battles. It can track the player's position in real time during the training process, and intelligently adjust the ball serving strategy according to the movement trajectory, making the training more targeted and of practical combat value.

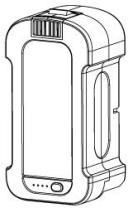
The PACE S series boasts powerful ball serving performance. The maximum ball serving speed can reach 130 km/h, and it is capable of serving a high-pressure ball up to 8.1 meters, simulating a professional-level match environment. The maximum rotation speed can reach 60 revolutions per second, and it supports seamless switching between topspin and backspin, matching training needs with realistic ball trajectories. The ball serving landing points cover the entire half court, which can meet all-round training needs ranging from basic practice to intense confrontations. The seamless ball serving system can complete the rotation change within 1.5 seconds. There is no need to wait, and it can be used immediately upon activation, comprehensively improving training efficiency.

Parts List

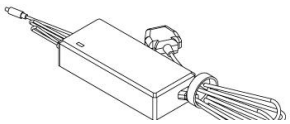
❶ Robot



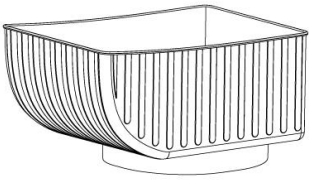
❷ Portable Battery



❸ Portable Battery Charger

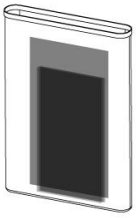


❹ Ball Hopper

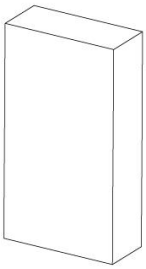


❺ P-CONTROL S PRO
(Robot Remote Control)

❼ Paper Documents (product operation manuals and warranty, etc.)



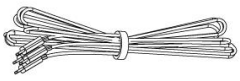
❻ Smart Tracker Set



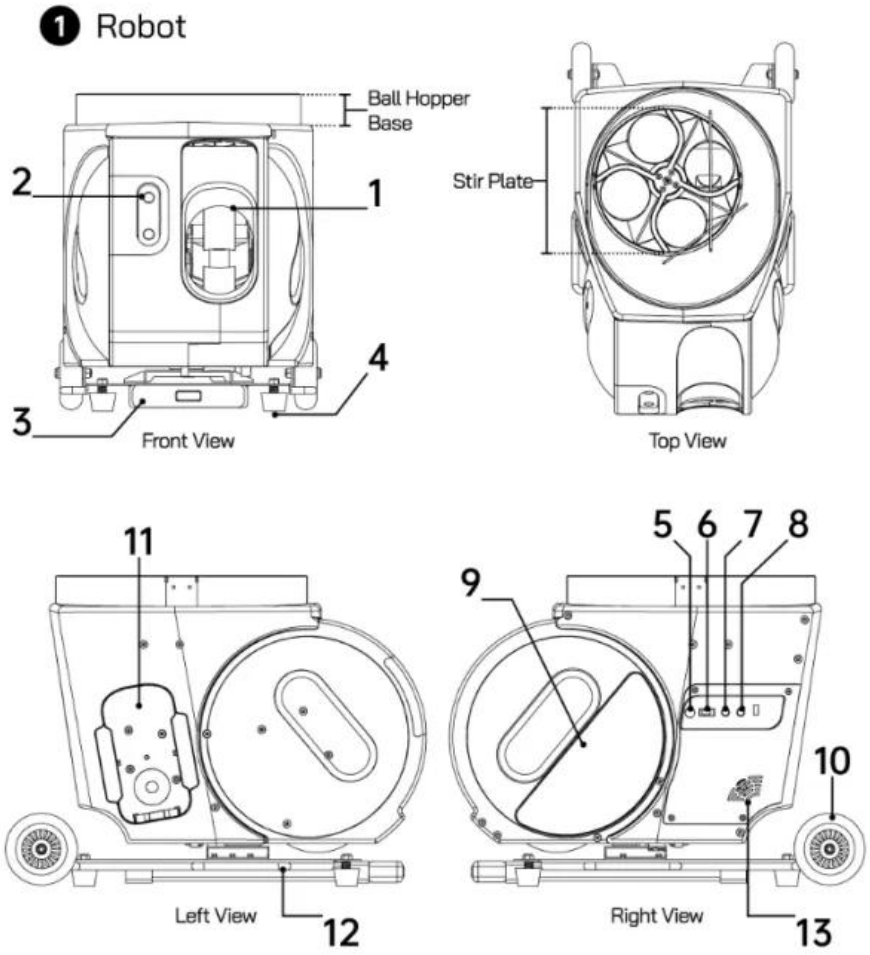
6.1 P-STATION S ×2

6.2 P-TAG S

6.3 Multi 4 in 1
Charing Cable



Robot Instructions



1. **Ball Export Portal:** The position from which the tennis ball is accelerated and ejected by the robot.

2. **Front LED Indicators:** Different colors and flashing frequencies of the indicator light represent different states of the robot.

3. **Lever:** It is convenient to move the robot and can be extended or retracted.

4. **Feet x 4:** It supports the robot and keeps the robot level.

5. **Side LED Indicator:** Different colors and flashing frequencies of the indicator light represent different states of the robot.

6. **Power Button:** Turn the robot on or off.

7. **Quick Start/Stop:** Quickly start the last training session or quickly stop the current ball serving.

8. **Connection Key:** Press it twice briefly. After entering the Bluetooth pairing mode, you can manually pair it with the remote control via Bluetooth.

9. **Cabin Door:** After opening the cabin door, you can quickly deal with the ball jammed inside the robot.

10. **Castors x 2:** Cooperating with the lever, it can move the robot conveniently.

11. **Battery Holder:** Install the Portable Battery here.

12. **Side Handles x 2:** It is convenient to carry the robot.

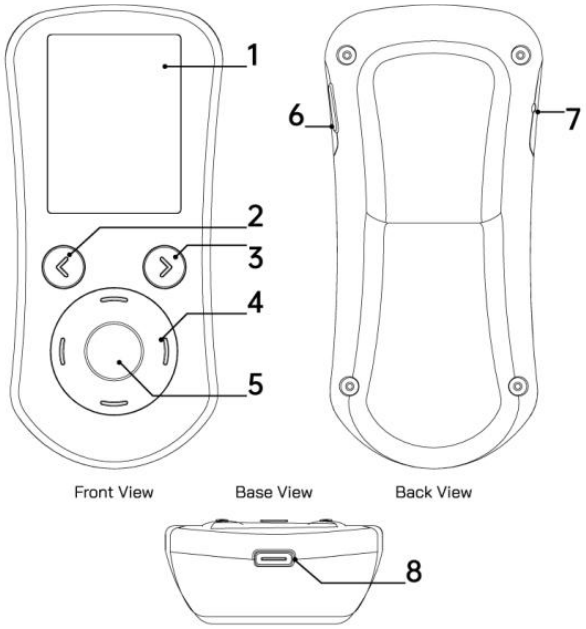
13. **Buzzer:** Buzzing sounds at different frequencies indicate different states of the robot.

PS：The USB port on the interface board can be used to charge external devices.

Remote control Instructions

Used for remote robot control. Features multiple function buttons for easy adjustment of serving parameters like speed and angle, allowing operation without approaching the device.

❶ P-CONTROL S SERIES

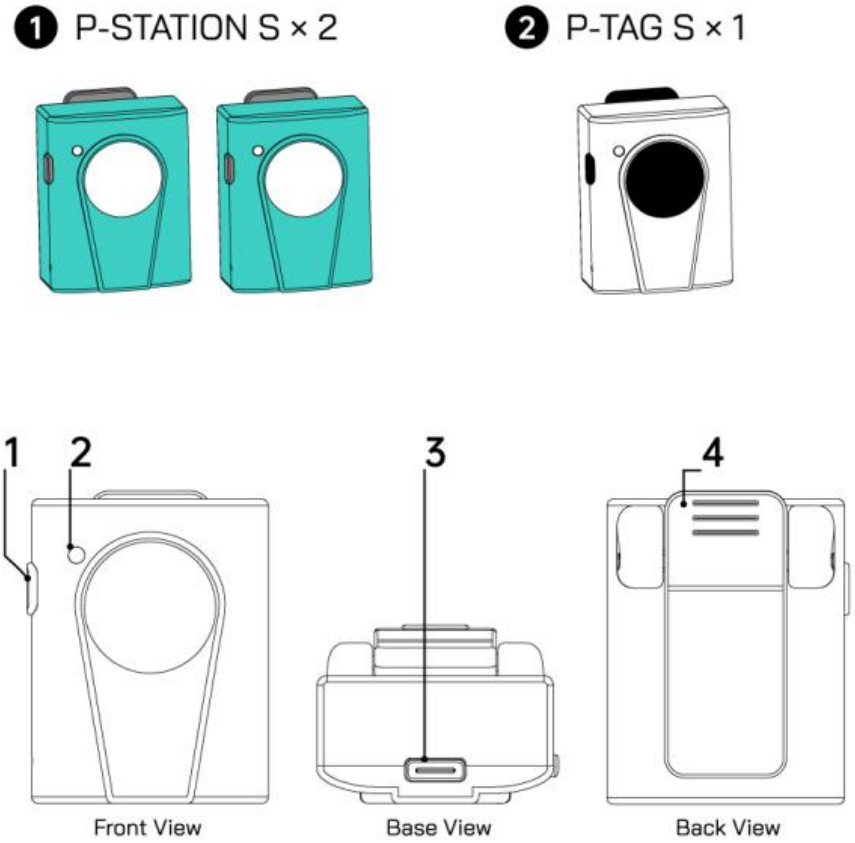


1. **Screen:** Displays UI interaction information.
2. **Multifunction Button(L):** Corresponding to the relevant function according to the prompt at the lower left corner of the display screen.
3. **Multifunction Button(R):** Corresponding to the relevant function according to the prompt at the lower right corner of the display screen.
4. **Direction Button:** Move the cursor within the display screen.
5. **Confirm Button:** Confirm and execute the content of the selected cursor.
6. **Power Button**: Long press for 2 seconds to turn on or off the power of the remote control; Short press once to wake up or turn off the screen.

7. Reset Key: Forcefully restore the remote control to its factory settings. Long press the reset button with a SIM card ejector pin to restore the factory settings.

8. Charging Portal: Charge the remote control via Type-C.

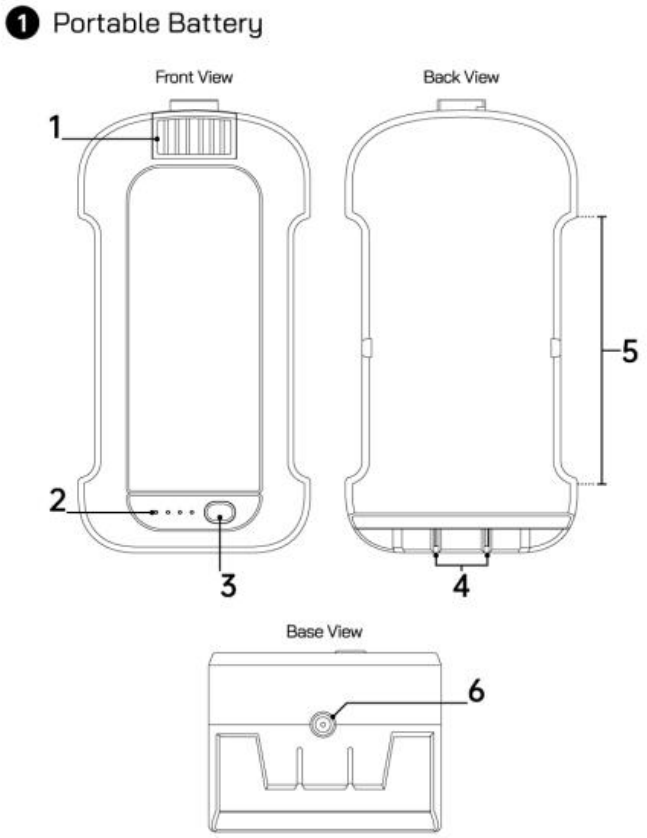
Smart Tracker Set Instructions



1. **Power Button:** Used to turn on and off the Smart Tracker Set.
2. **LED Indicator:** Displays the connection status of the Smart Positioning Magic Cube.
3. **Charging Portal:** Charge it with a Type-C data cable.
4. **Clip:** Used to fasten it to positions such as the collar.

Portable Battery

The PACE S series portable battery is a device with a capacity of 7800 mAh, a rated voltage of 25.5 V, and it features a charging and discharging management function. This portable battery is equipped with high-energy battery cells and utilizes an advanced portable battery management system.



1. **Retract Button:** Used for detaching and installing the mobile power bank.
2. **LED Indicator:** Allows you to check the remaining battery capacity.
3. **Power Button:** Press it to check the battery level indicator.
4. **Connection Notch:** Used to fix the installation position of the mobile power bank.
5. **Indented Grip:** Hold here when loading or unloading the mobile power bank.
6. **Charging Portal:** Connect here for charging.

Usage Instructions of the portable battery

1. **Battery Level Display:** The portable battery is equipped with battery level indicator lights, which can show the current battery level of the portable battery.
2. **Overcharge Protection:** Overcharging can severely damage the portable battery. It will automatically stop charging once it is fully charged.
3. **Overdischarge Protection:** Overdischarging can severely damage the portable battery. When the portable battery is not in use, it will cut off the output when the voltage drops to a certain level. The overdischarge protection will not be activated during use.
4. **Short-circuit Protection:** In case of a detected short circuit, the portable battery will cut off the output to protect itself.

Check the battery level (while in use)

When the portable battery is turned off, briefly press the power switch of the portable battery once to check the current battery level.

The battery level indicator lights can be used to display the battery level of the mobile power bank during the discharging process. The definitions of the indicator lights are as follows:

LED 1	LED 2	LED 3	LED 4	Battery Level
☀	☀	☀	☀	76%-100%
☀	☀	☀	○	51%-75%
☀	☀	○	○	26%-50%
☀	○	○	○	0%-25%

ⓘ **(☀: ON; ○ : OFF)**

Precautions for Use in Low Temperatures

1. The discharging capacity of the portable battery will decrease when it operates in a low-temperature environment (below 5℃).

2. In a low-temperature environment, due to the output power limitation of the portable battery, the ultimate performance of the robot will be weakened.

Instructions for Charging

It is recommended to fully charge the portable battery before each use. It is advisable to use the charging device officially provided by PongBot.

1. Take out the portable battery from the portable battery slot of the robot.

2. Connect the charger to the AC power source (100-240 V, 50/60 Hz; please use a power cord with appropriate specifications for charging. If needed, use a power conversion plug).

3.Connect the portable battery to the charger.

4.When charging, the indicator light of the portable battery charger is red. The indicator lights of the portable battery will stay on continuously, and the number of lit lights indicates the current battery level.

5. When the indicator light of the portable battery charger turns green, it means the portable battery is fully charged. Please disconnect the portable battery from the charger to finish the charging process.

⚠ *If the robot is not used for an extended period, it is advisable to recharge the portable battery roughly once every three months to keep it in good condition. The portable battery that hasn't undergone maintenance (charging and discharging) for over three months will not be eligible for warranty.*

Check the battery level (while in use)

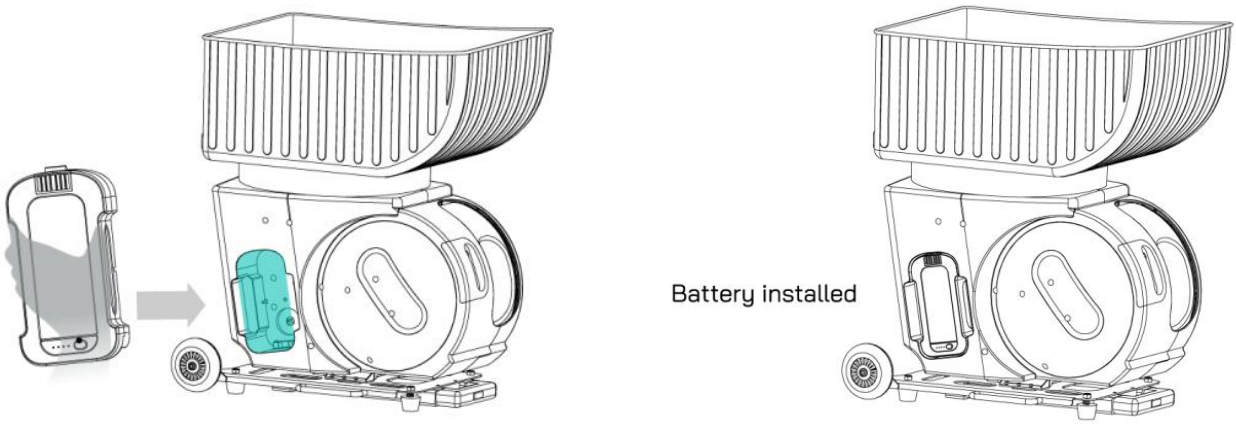
During the charging process, the battery level indicator lights are as follows:

LED 1	LED 2	LED 3	LED 4	Battery Level
☀	○	○	○	0%-25%
☀	☀	○	○	26%-50%
☀	☀	☀	○	51%-75%
☀	☀	☀	☀	76%-100%

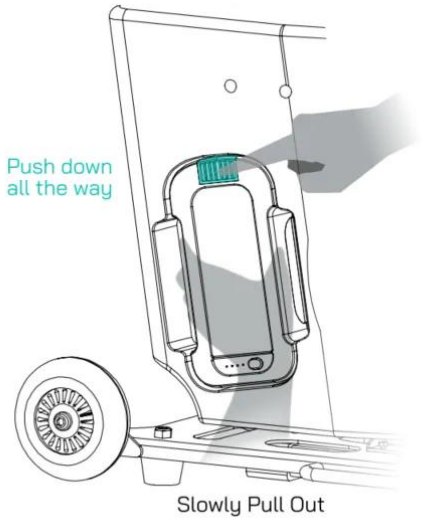
ⓘ (☀: ON; ○ : OFF)

Install/Remove the portable battery

Install the portable battery correctly according to the direction shown in the diagram. Pay attention to locking the buckle of the portable battery in place. There should be a "click" sound when pushing it in.



Press the textured part of the buckle of the portable battery to remove the portable battery.



⚠ *Do not install or remove the portable battery while the power is turned on.*
Ensure that the portable battery is properly installed.

Robot light signals and Buzzer definitions

The meaning of the Side LED Indicator (Normal Status)

Color of the lights	State of the lights	Corresponding situation
	Blue Light Flash slowly	Not connected to the APP or the P-Control S Pro
	Blue Light Flash quickly	Entered the Bluetooth pairing mode
	Blue Light Keep shining	Connected to the APP or the P-Control S Pro
	White Light Flash slowly	Robot firmware is upgrading
	White Light Keep shining	Robot firmware has been successfully upgraded
	White&Red Lights Flash alternately and rapidly	Robot firmware upgrade has failed.

The meaning of the Side LED Indicator（Warning State）

Color of the lights	State of the lights	Corresponding situation
	Red Light Keep shining	Cabin door is not closed

The meaning of the Side LED Indicator（Abnormal State）

Color of the lights	State of the lights	Corresponding situation
	Red Light Flash slowly	Robot has malfunctioned

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The meaning of the Front LED Indicators (Normal Status)

Color of the lights	State of the lights	Corresponding situation
	Purple Light Keep shining	Power-on self-test in progress
	Blue Light Flash slowly	Initialization not completed
	Blue Light Keep shining	Initializing

	Yellow Light Flash slowly	Standby mode
	Yellow Light Keep shining	Serve pause
	Green Light Flash slowly	Serving countdown in progress
	Green Light Keep shining	Execute the cabin door opening command
	Cyan Light Flash slowly	Serve pause
	Cyan Light Keep shining	Power off due to power failure

The meaning of the Front LED Indicator（Warning State）

Color of the lights	State of the lights	Corresponding situation
	Red Light Keep shining	Cabin door is not closed

The meaning of the Front LED Indicator（Abnormal State）

Color of the lights	State of the lights	Corresponding situation
	Red Light Flash slowly	Robot has malfunctioned

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The meaning of the Buzzer (Normal Status)

Buzzer	State of the sounds	Corresponding situation
• ———	1short 1long	The robot is powering on
• • • • • • •	continuous short	Entered the Bluetooth pairing mode
••	2short(with an interval of 0.1 seconds)	Connected to the APP or the P-Control S Pro
•	1short	Ready to serve.

The meaning of the Buzzer（Abnormal State）

Buzzer	State of the sounds	Corresponding situation
• • •	3short	Robot has malfunctioned
▬▬▬▬▬▬	continuous short	Cabin door is not closed

The meaning of the Buzzer（Warning State）

Buzzer	State of the sounds	Corresponding situation
• •	2short(with an interval of 0.1 seconds)	The robot is out of balls；The Portable Battery has insufficient drive； The Smart Tracker Set has malfunctioned

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The meaning of the Smart Tracker Set (Normal Status)

Color of the lights	State of the lights	Corresponding situation
	Red&Green&Blue lights flash alternately and rapidly	Powering on
	Green Light Keep shining	Connected to the Robot
	Blue Light Flash slowly	Not connected to the Robot
	Green Light Flash slowly	Charging
	White Light Keep shining	Full Charge
	Red Light Flash quickly	Low Battery

The meaning of the Buzzer（Abnormal State）

Color of the lights	State of the lights	Corresponding situation
	Red Light Keep shining	Device has malfunctioned

Usage and Safety

Before using the product, select an appropriate site and weather environment in accordance with the following usage requirements. Additionally, carefully assess your physical condition prior to use to avoid physical harm and potential life-threatening situations. Be sure to read the following contents before use.

Requirements for the Usage Environment

1. Do not use the product in adverse weather conditions, such as high temperatures, strong winds, rain, snow, fog, etc.
2. Select a suitable sports venue for using the product.
3. If using the product at night, the venue should have sufficient lighting facilities to ensure clear visibility and avoid potential safety hazards.
4. The surrounding environment should be quiet and safe to avoid external interference and potential safety risks.
5. An internet connection is required when using the Ponbot Tennis APP.
6. Do not use the product in flammable and explosive environments.

Check before use

1. Check battery levels of the Robot, P-Control, and Smart Tracker Set before use.
2. Ensure the Portable Battery is correctly installed in the slot.
3. Confirm the robot's cabin door is properly closed.
4. After power - on, check for abnormal indicator lights on the robot.

5. After power - on, verify the normal operation of the robot's motor.
6. Check if the PongBot APP and the P-Control are functioning properly.
7. After power - on, check the normal operation of the Smart Tracker Set .
8. Ensure the Smart Tracker Set is placed in the designated position.
9. Use only original accessories. Non - original ones may endanger product safety.

Health Assessment

1. Individuals with chronic diseases or health issues like heart disease and hypertension should use this product under medical or professional coaching guidance.
2. Those lacking long - term exercise should start with simple workouts and gradually increase intensity, avoiding direct strenuous exercise.
3. Master proper exercise techniques before use to prevent injuries from improper form.
4. Maintain a good mental state. Avoid strenuous use during emotional distress or high stress.
5. Wear suitable sports gear to minimize injury risks.

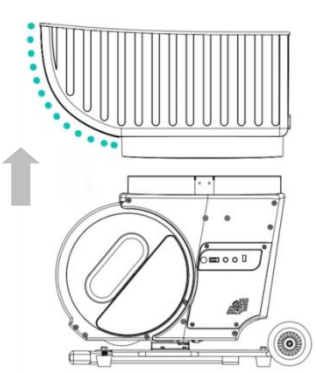
Safety Tips

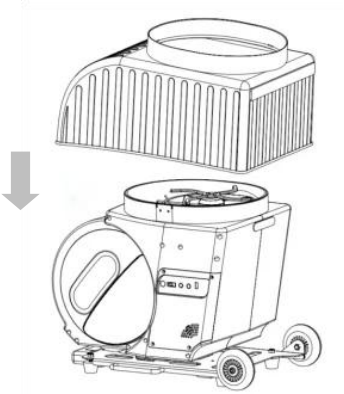
1. Do not insert your hands into the robot in any way while it's in use.
2. After powering on the robot, keep away from the area directly in front of the ball outlet at close range.
3. Do not try to open the robot's hatch in any manner during its operation.
4. Do not force open the robot's cabin door. Use the remote control or APP to open it when necessary.

5. Do not store the robot or the mobile power supply outdoors.
6. Do not expose the robot to the vicinity of high-temperature or heat-emitting devices like heaters, microwave ovens, ovens, or water heaters.
7. Do not damage the robot's portable battery.

Storage and Movement

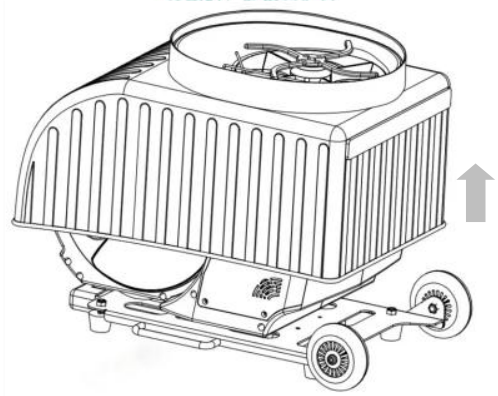
After use, remove the tennis balls from the ball hopper, take off the ball hopper, keep the curved end facing forward, rotate it and attach it to the robot.





When moving the robot, first pull out the bottom lever and then move the robot with it.

Grasp the left and right bottom handles with your hands and lift upwards for easier handling.



Use for the first time

Charge the Robot

Charge the portable battery

1. Connect the charger to an AC power supply (100-240 V, 50/60 Hz). Use a power cord of suitable specifications for charging. If needed, use a power conversion plug.
2. Connect the mobile power supply to the charger.
3. During charging, the indicator light of the portable charger is red. The indicator lights of the mobile power supply stay on, and the number of lit lights indicates the current battery level.
4. When the indicator light of the portable charger turns green, the mobile power supply is fully charged. Disconnect the mobile power supply from the charger to finish charging.

Charge the P-Control/Smart Tracker Set

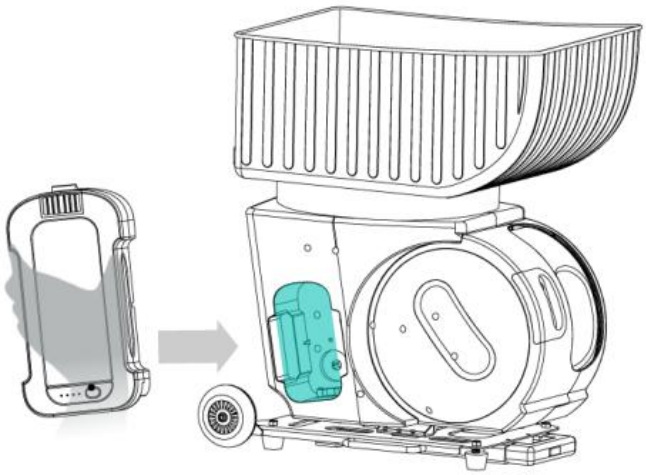
5. The Type-C charging cable is included as a standard accessory of PongBot. There is no charger provided, so you need to prepare a charger with an appropriate power rating by yourself.
6. Connect the USB end of the charger to the charger you prepared, and connect the Type-C end to the P-Control and the Smart Tracker Set.
7. Connect the charger to an AC power supply (100-240 V, 50/60 Hz). Use a power cord of suitable specifications for charging. If needed, use a power conversion plug.

8. A 100% battery level display on the remote control indicates that the remote is fully charged.
9. When the indicator light of the Smart Tracker Set stays white constantly, it means it is fully charged.

Install the Portable Battery and the Ball Hopper

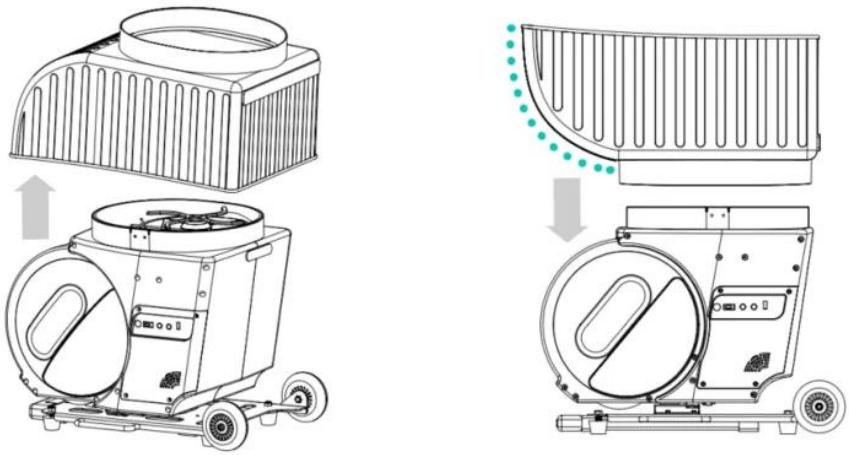
Install and Remove the Portable Battery

Install the portable battery in the direction shown. Ensure the buckle is locked tightly; you should hear a "click" when pushing it in.



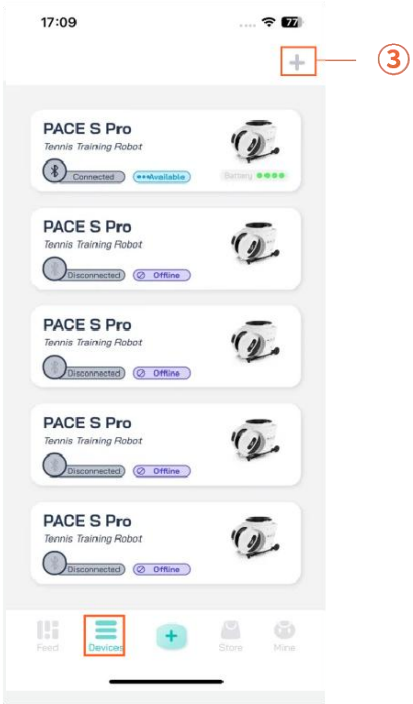
Install the Ball Hopper

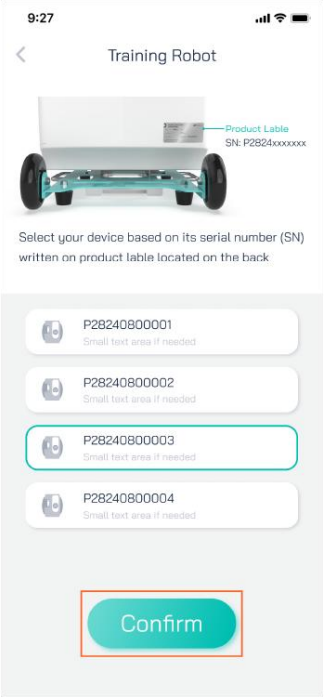
Separate the ball hopper from the robot. After rotating it to an upright position, install it above the robot. Note that the arc end of the ball hopper should face forward.



Activate the Robot and connect the Robot to the APP

1. Slide the switch of the robot to the "|" position to turn on the robot.
2. Turn on the Bluetooth and location functions of the mobile phone/tablet on which the PongBot Tennis APP is installed. Internet access is required during the use of the APP.
3. Open the Pongbot Tennis APP, tap "Devices" at the bottom, then tap the "+" icon in the top-right corner of the redirected page. Select the corresponding robot model, and the APP will automatically search for nearby robots.
4. Select the searched robot, click "Connect", and then click "Confirm" again after the connection is successful.
5. After the robot is connected to the APP for the first time, it will automatically complete the device activation and record the activation time, which will serve as the starting date of the quality guarantee period.





Connect the remote control

After the robot is activated, the p-control will auto - pair with it via Bluetooth. Use it directly when the robot icon shows up in the top - left corner of the p-control. If not auto - paired, manually pair as follows.

1. Power on the robot and double - press the left - side interface board's pairing button. When the board's LED changes from steady to rapidly - flashing blue, the robot enters Bluetooth pairing mode.
2. For the p-control, press and hold the front - right power switch for 2 seconds to wake it. Then press the connection button. On the confirmation page, press "Next Page" and wait for pairing.
3. Once the robot icon shows in the home page's upper - left corner, press "Complete" to return to the remote's home page. Press "Enter" to enter the robot control page.

Upgrade

1. Keep the robot and the mobile phone APP connected, and open the main interface of the APP.
2. The APP will automatically detect whether there is an available device upgrade version. If there is, an upgrade prompt will pop up.
3. Click "Upgrade" and follow the steps prompted by the APP, then wait for the upgrade to be completed.

⚠ *During the upgrade process, make sure the device has sufficient battery power and the Bluetooth signal is stable to avoid upgrade failure due to interruptions.*

Offline Mode

After the robot is first added to the APP, if the APP fails to maintain a Bluetooth connection with the robot during subsequent use, the offline mode can be used to enable normal query and setting of most functions.

Functional module	Function	Support	Not support
Programmed Drills	Single ball information	√	
	Calibration		√
	Start		√
Custom Drills	Add&edit custom drills	√	
	Test		√
	Manage	√	
Drill Library	View&Add	√	
	Try		√
Synchronized Drills	All functions		√
PACE Group	Combination information	√	
	Calibration		√
	Start		√
Smart Pace	Combination information	√	
	Calibration		√
	Start		√
	Device connection details		√
	View records of match challenge	√	
	View the arena leaderboard	√	

Tennis Mode

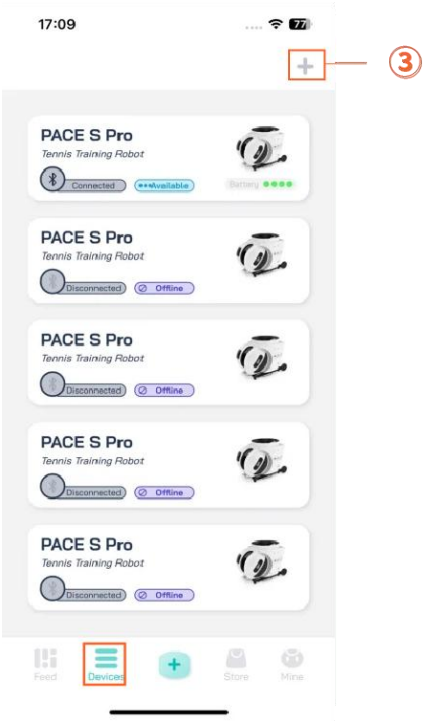
Connect the Robot to the APP

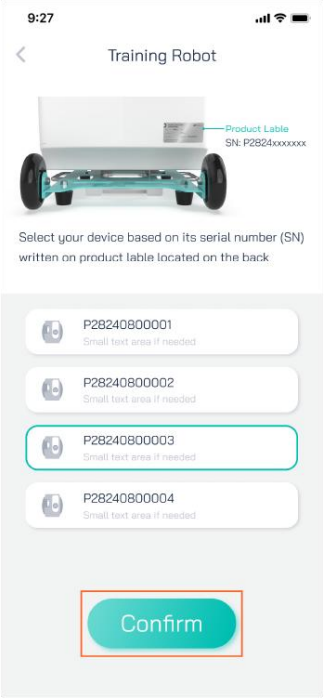
1. Slide the switch of the robot to the "|" position to turn on the robot.

2. Turn on the Bluetooth and location functions of the mobile phone/tablet on which the PongBot Tennis APP is installed. Internet access is required during the use of the APP.

3. Open the Pongbot Tennis APP, tap "Devices" at the bottom, then tap the "+" icon in the top-right corner of the redirected page. Select the corresponding robot model, and the APP will automatically search for nearby robots.

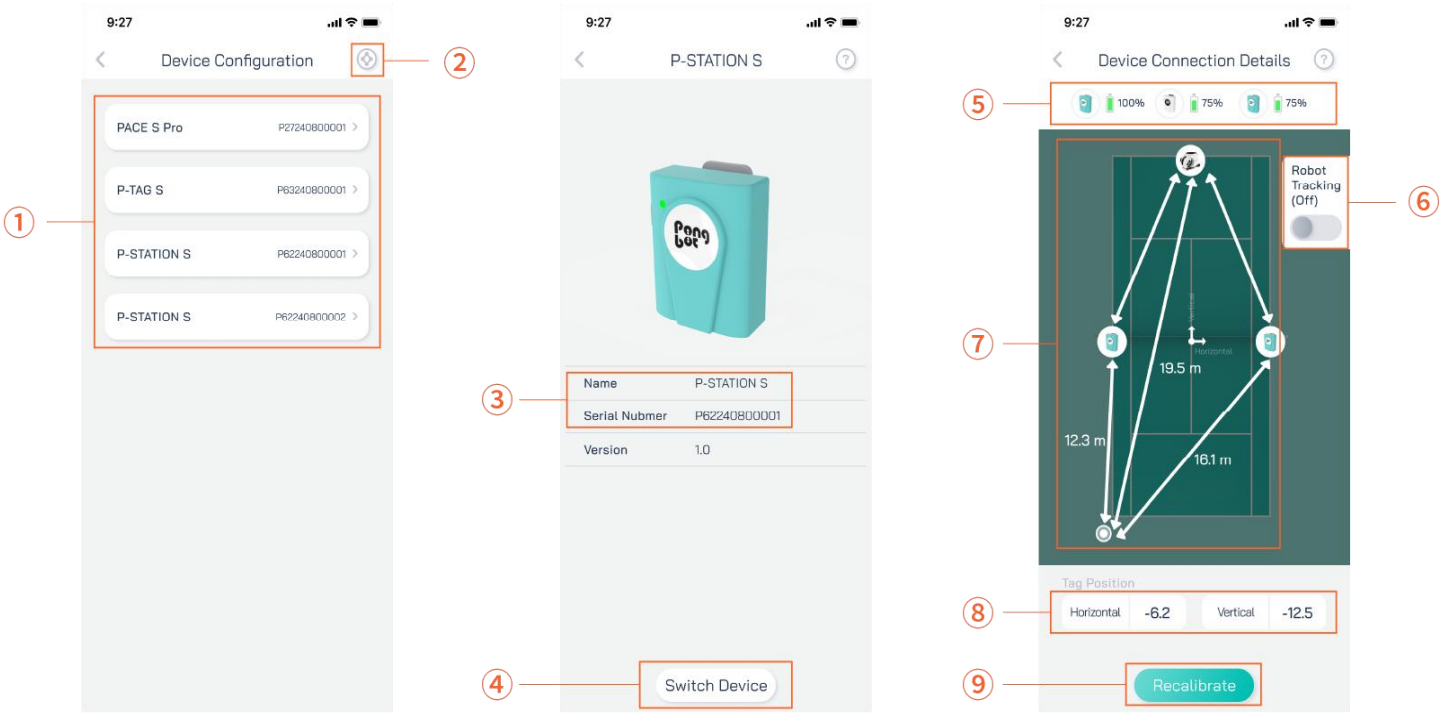
4. Select the searched robot, click "Connect", and then click "Confirm" again after the connection is successful.





Settings

1. Selection of Sports Mode: Tennis or Paddel Tennis
2. Device Name:View or modify the device name
3. Device Configuration:



①	Device List	View the SN information of the robot,P-Station S , and P-Tag s.
②	Device Connection Details	View the connection details of the robot and the smart tracker set.
③	Device Information	View the device name and SN code.
④	Switch Device	Scan the QR code on the nameplate of the smart tracker set to add the device. The intelligent positioning smart tracker set included with the new machine in the package has already had the device added at the factory.
⑤	Smart Tracker Set.	Check its connection status and remaining battery.
⑥	Robot Tracking	Enable/disable this function. Introduction: After enabling it and placing the robot and P-Station S in position, the robot's head will follow the P-Tag S.
⑦	Animation Effect	Show the P-Tag S position and distance relative to the robot/ P-Station S in real time.
⑧	P-Tag S Position	Display the P-Tag S data based on the coordinates with the court center as the origin.

⑨	Recalibrate	Re-start calibrating the relative position between the smart tracker set and the robot. Refer to "Connect Devices" in intelligent training for the steps.

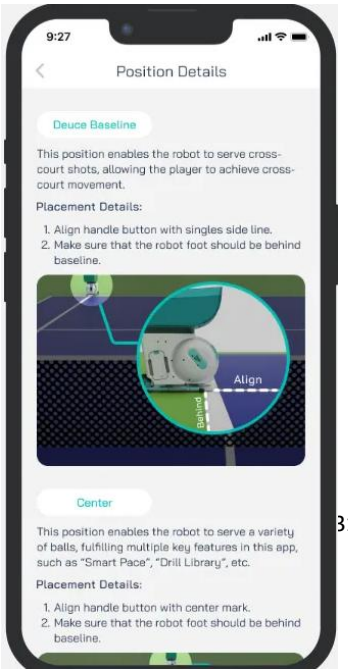
4. Firmware Upgrade：Upgrade robot firmware (page prompts for new versions).
5. Preferences：Set system parameters as per your preference..
   - Open Cabin Door： Open the cabin door. Drive system stops when open; re - initialize after closing and confirming manually.
   - Unit：Set page length measurement unit.
   - Programmed Drill Calibration：Adjust programmed drill landing points by filtering content, test, and save confirmed settings.
   - Serve Count Down：Toggle service countdown function and set time if on.
   - LED Setting：Set different LED modes.
   - Buzzer：Set different buzzer modes.
   - Robot Mode：Set different robot operating modes.
6. Help & Support：Get product tech docs or email PongBot after - sales. Check device warranty and extended warranty (if bought).
   - Delete Device：Unbind APP and current robot via Bluetooth.

Programmed Drills

Robot Position

Select the corresponding machine position according to different serving angles.

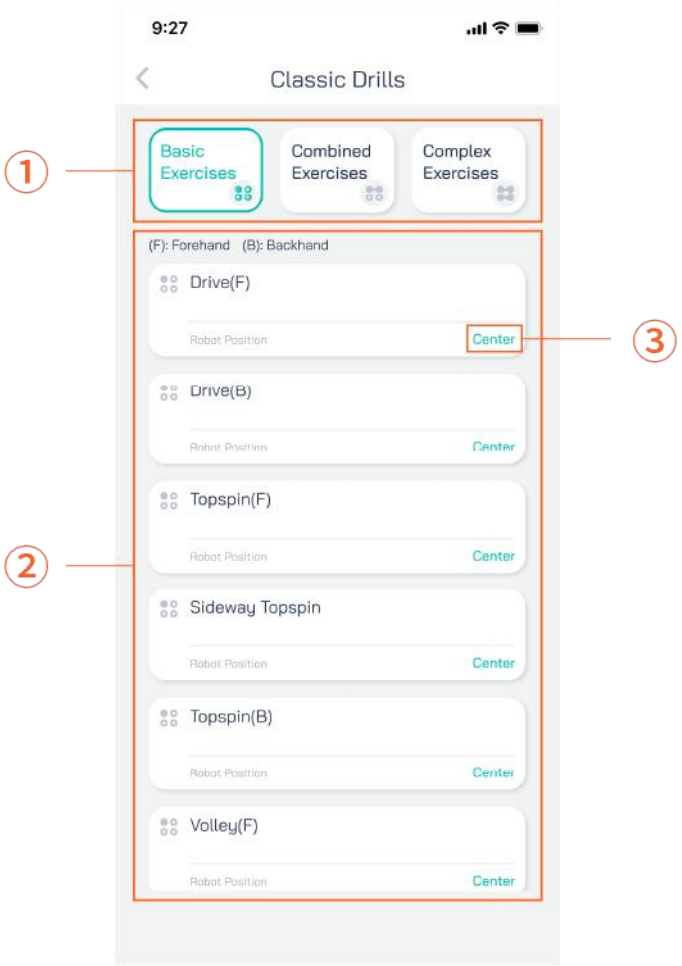
Click on "See Position Details" to view the placement



requirements and ball trajectory preferences of different machine positions.

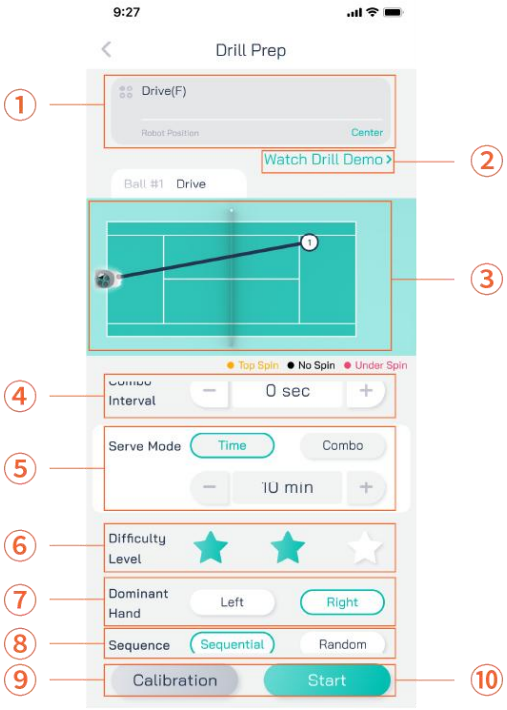
Classic Drills

The combinations in Classic Drills are preset in PongBot Tennis APP. Select one to start exercising quickly.



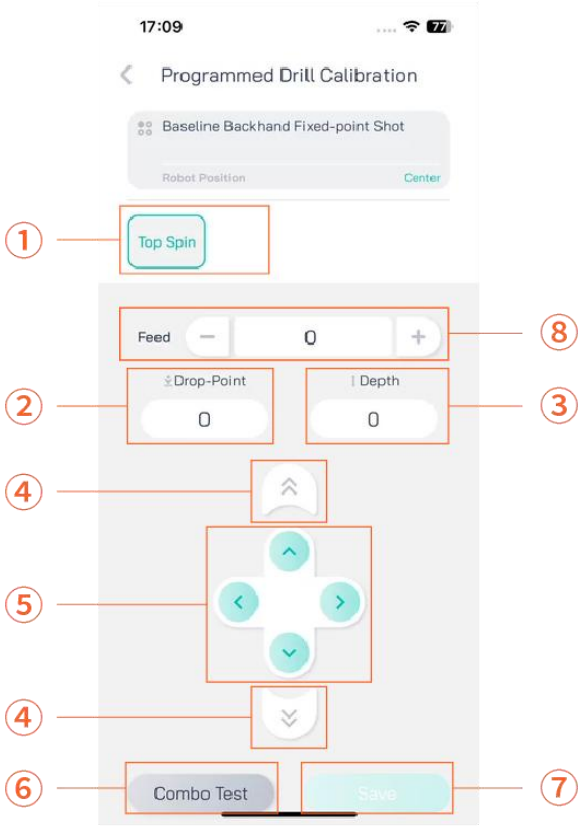
①	Combination Selection	You can choose basic,combined and complex exercises (classified by the number of single balls in the combination).
②	Combination List	Show all preset combinations, which are named comprehensively based on relevant technical labels, left/right hand information, landing positions, etc. Scroll the screen up and down to view more preset combinations. (The pictures in the instruction manual are for reference only. Refer to the actual combination list in the APP.)
③	Position information	Indicate the placement position information of the currently selected robot.

Combination Parameter Settings



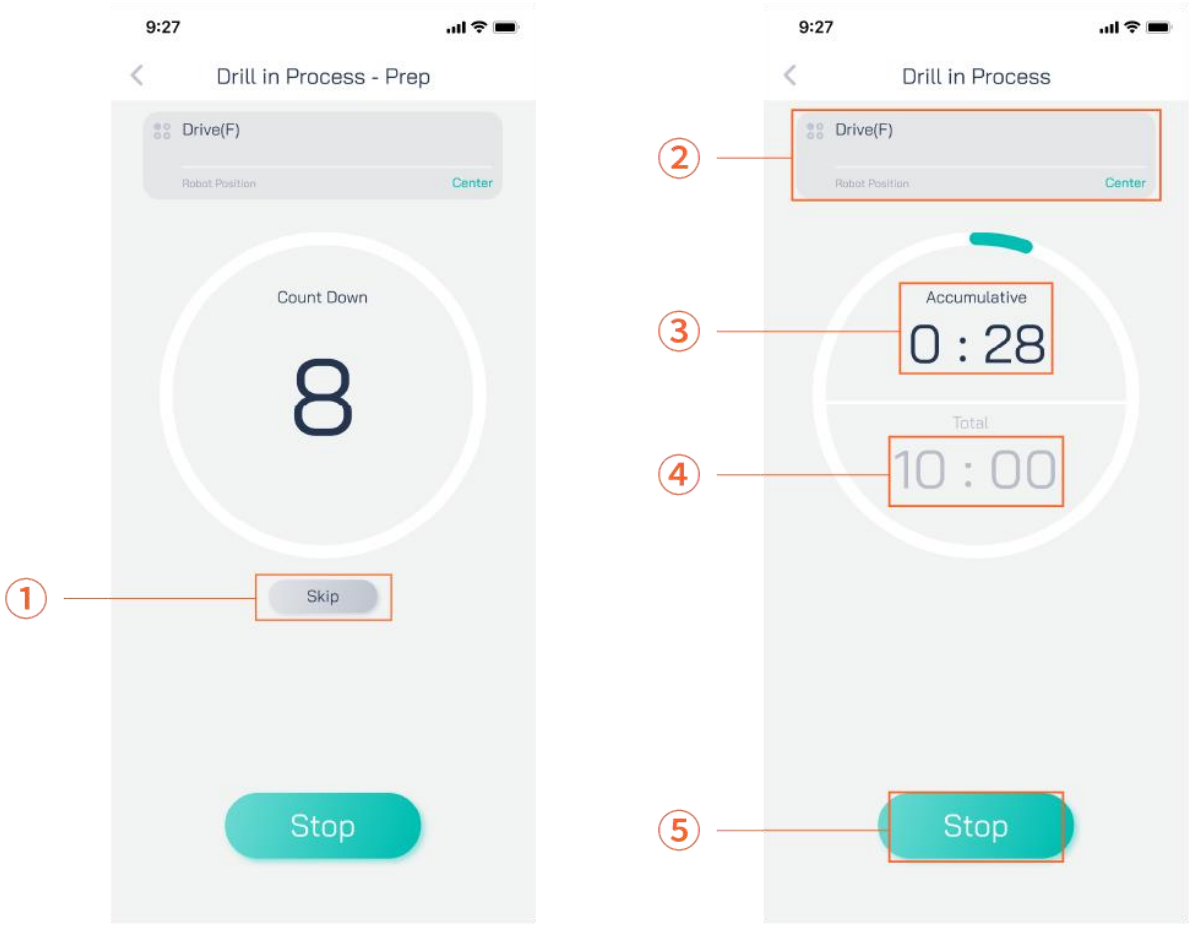
①	Combination Information	View the combination name and the placement position information of the currently selected robot.
②	Watch Drill Demo	View the introduction video of the combination (this function is currently not available).
③	Information of Single Balls in the Combination	View the landing points, spins, and sequence information of single balls in the combination.
④	Combo Interval	Set the interval time between two adjacent groups of balls to better restore the position.
⑤	Serve Mode	Select the time and set the serving duration in minutes. Select the Number of Groups: Set the number of balls served, measured in groups. This parameter has a memory function and will use the settings from the last use.
⑥	Difficulty Level	Set the difficulty star rating of the combination. Different star ratings will vary in parameters such as serving speed, spin level, and serving frequency.
⑦	Dominant Hand	Set the dominant hand. Different dominant hand will change the corresponding forehand and backhand areas.
⑧	Sequence	Set the serving sequence mode of single balls in the combination. In the sequential mode, single balls will be served repeatedly in order. In the random mode, the probability of all single balls being served is equal each time.
⑨	Calibration	Adjust the landing positions of balls in the combination in different directions. Each single ball in the combination can be adjusted individually.
⑩	Start	After confirming all the above parameters, click "Start" to begin the exercise.

Calibration



①	Single Ball	Select different single balls for adjustment.
②	Drop-Point	Displays the current value of the landing point. Taking the robot as a reference, a negative number adjusts the landing point to the right of the default landing point, and a positive number adjusts it to the left of the robot.
③	Depth	Displays the current value of the depth parameter. Taking the robot as a reference, a negative number adjusts the landing point closer to the robot, and a positive number adjusts it farther away from the robot.
④	Quick Adjustment Button	Quickly adjust the depth parameter, with each adjustment having an amplitude of 10.
⑤	Adjustment Buttons	Use the left and right keys to adjust the left-right parameter, and the up and down keys to adjust the depth parameter.
⑥	Combo Test	After adjusting the parameters, test whether the landing points of all single balls in the combination meet the expected targets.
⑦	Save	Save the adjusted combination parameters.
⑧	Feed	Adjust the frequency of the corresponding individual balls as a whole, with the unit in seconds.

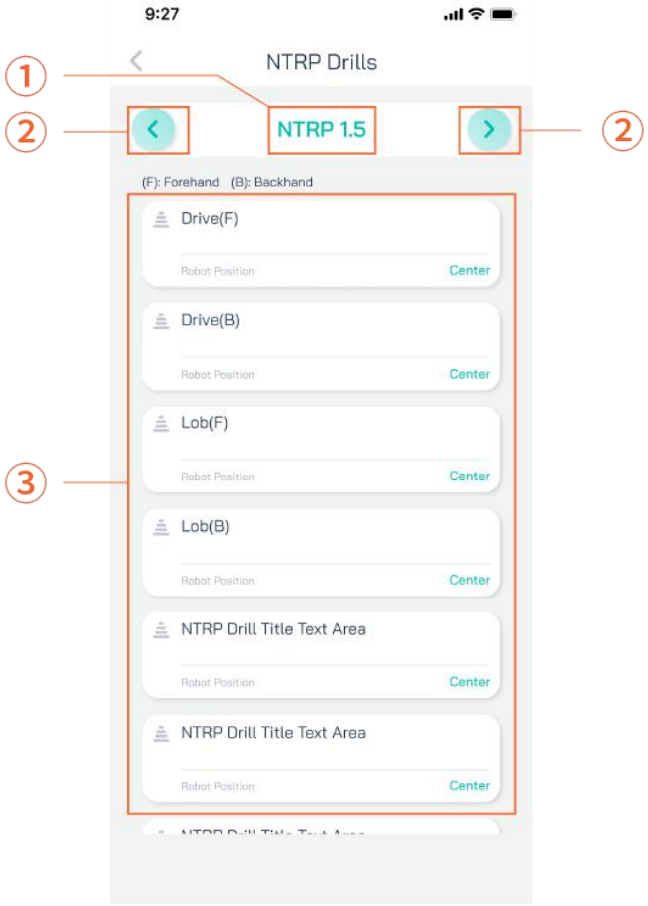
Operating page



①	Skip	Skip the waiting time for serving and start serving directly.
②	Combination Information	View the combination name and the placement position information of the currently selected robot.
③	Training Duration/Number of Groups	The current training duration or the number of completed groups.
④	Target Duration/Number of Groups	The set target training duration or the number of target groups.
⑤	Stop	Stop the current training.

NTRP Drills

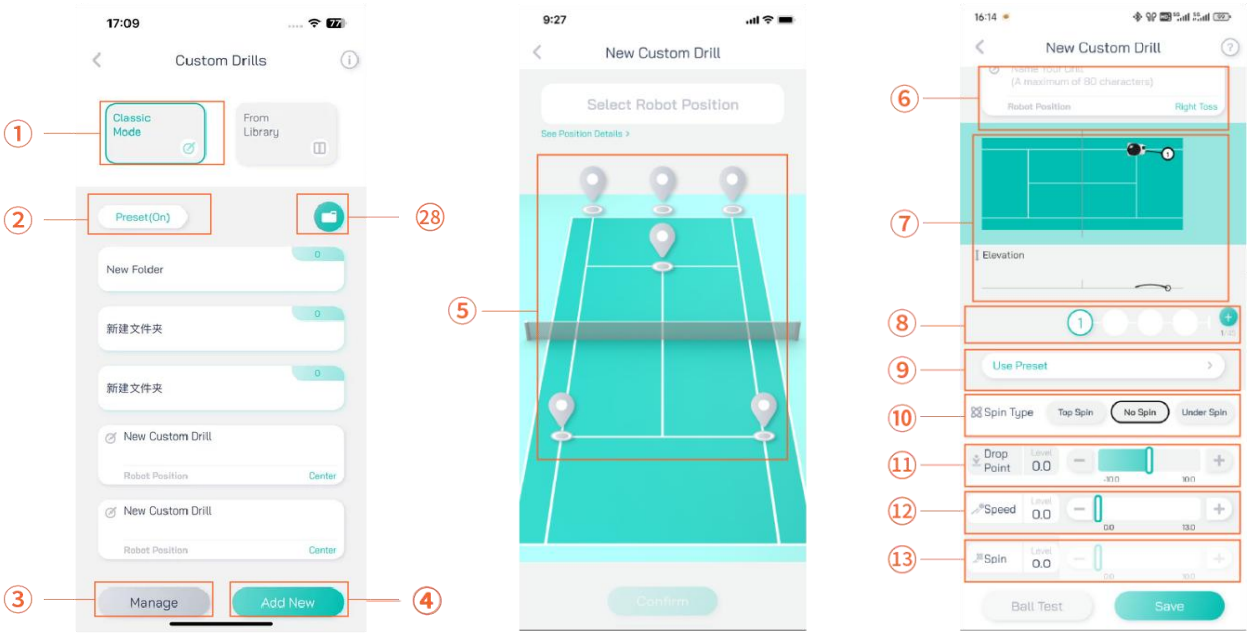
NTRP Drills consists of combinations with corresponding difficulties set for people at different levels. This mode is only available when the center position at the baseline is selected.



①	NTRP Level	View the currently selected NTRP level.
②	Adjustment Buttons	Adjust the NTRP level. The left button lowers the level, and the right button raises it.
③	Combination List	Display all preset combinations, which are named comprehensively based on relevant technical labels, left/right hand information, landing positions, etc. Scroll the screen up and down to view more preset combinations. (The pictures in the instruction manual are for reference only. Refer to the actual combination list in the APP.)

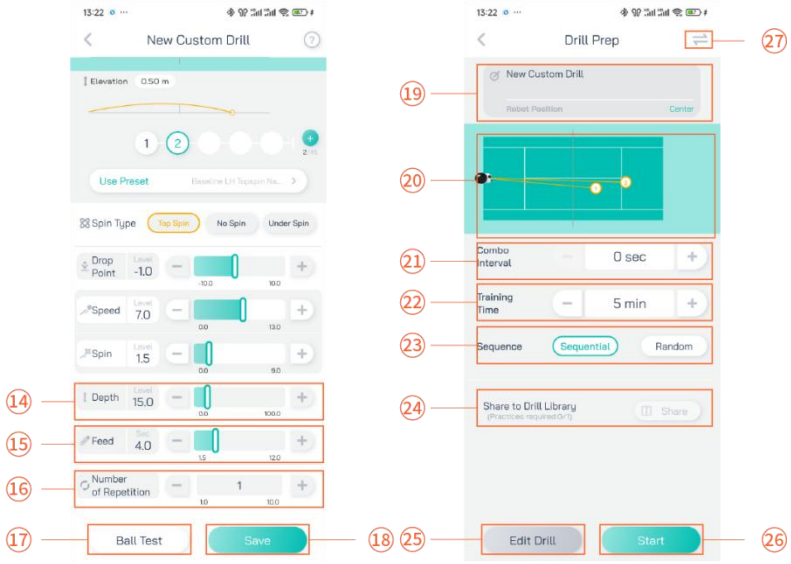
ⓘ*The setting method of NTRP combination parameters refers to the classic combination.*

Custom Drills



①	Classic Mode	When creating a custom combination in Classic Mode, you can set parameters for all single balls, such as ball spin type, speed, spin, depth, frequency, etc.
②	Preset	Enabled for quick reference to preset single ball parameters.
③	Manage	Delete unwanted custom combinations from the custom list. After selecting the custom combination, you can move it to the target folder.
④	Add New	Create a custom drill.
⑤	Placement Position	Select and confirm the robot's placement in Classic Mode. Place the robot at the corresponding position when using this combination next time.
⑥	Combination Naming	Name the custom drill. It's recommended to use labels like technical features, left/right hand, and landing position.
⑦	Animation Effect	Assist in quickly editing custom combination parameters. Different parameters show the landing positions and trajectories on the court through fitting. The animation is for reference only.
⑧	Use preset	Quickly reference suitable single balls based on their technical features. Parameters can be modified after selection.
⑨	Single Ball List	Click the "+" on the right to add a single ball, up to 45 in total. Long - press a single ball and drag it to the delete area below to remove it. Swipe left or right on the single ball list to quickly find a ball.
⑩	Spin Type	Set the spin type of a single ball to topspin, no - spin, or underspin.
⑪	Drop point	Set the landing position of a single ball on the court. Taking the user as a reference, if the parameter level is negative, the landing point will be in the left court area of the user; if the parameter level is positive, the landing point will be in the right court area of the user.
⑫	Speed	Set the speed at which the tennis ball is shot out between the robot's rollers. The higher the parameter level, the faster the ball.
⑬	Spin	Set the spin intensity of the ball shot from the robot's rollers. Higher parameter

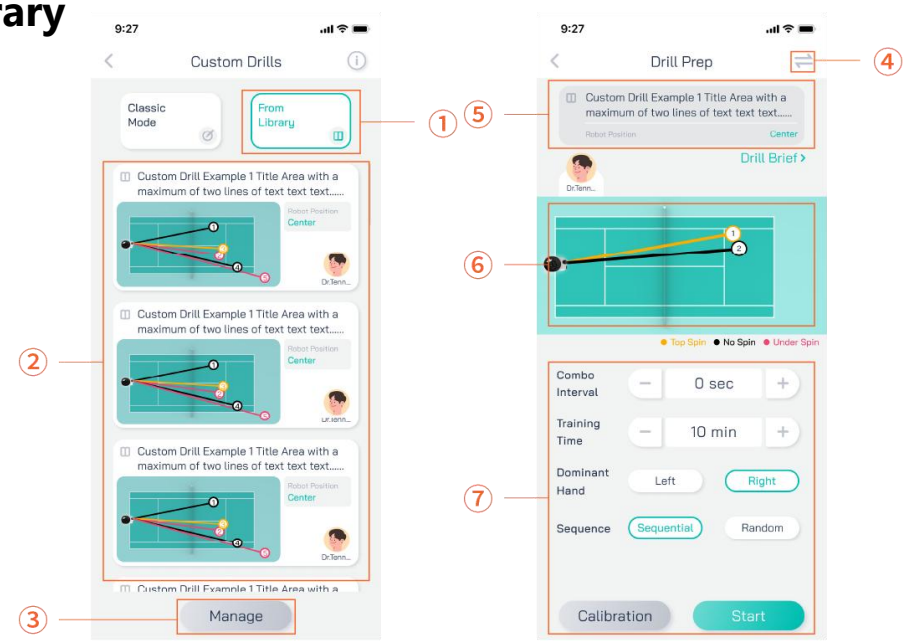
		means stronger spin. This parameter is un - settable for no - spin balls. Also, to balance speed, the spin parameter's max level varies with different speeds.



⑭	Depth	Set the front-back landing position of the tennis ball on the court under this parameter. The larger the parameter, the farther the ball is from the robot.
⑮	Feed	Set the serving frequency of this single ball, in seconds.
⑯	Number of Repetition	Set the number of times this single ball is served repeatedly. For example, if the parameter is set to 2, during the serving process, this single ball will be served continuously 2 or 2N times. (N is a natural number greater than 0)
⑰	Ball Test	Check whether the serving quality of the ball meets the expected target under the set single ball parameters.
⑱	Save	Save the parameters of the custom combination. After saving, jump to the serving setting page.
⑲	Combination Information	View the combination name and the currently selected robot placement position information.
⑳	Information of Single Balls in the Combination	View the landing position, spin, and sequence information of single balls in the combination.
㉑	Combo Interval	Set the interval time between two adjacent groups of balls to better restore the position.
㉒	Training Time	Set the training time, in minutes. This parameter has a memory function and will use the setting from the last use.
㉓	Sequence	Set the serving order mode of single balls in the combination. In the sequential mode, single balls will be served repeatedly in order. In the random mode, the probability of all single balls being served is equal each time.
㉔	Share to Drill Library	After saving and trying out a custom combination once, it can be shared to the Drill library so that other users can train with the shared custom combination.
㉕	Edit Drill	Return and re-edit the parameters in the custom combination.
㉖	Start	After confirming all the above parameters, click "Start" to begin the exercise.

㉗	Sync	Sync the saved custom combination to the synchronized training list of the P-Control's APP.
㉘	Folder	Create a new folder and name it as you like.

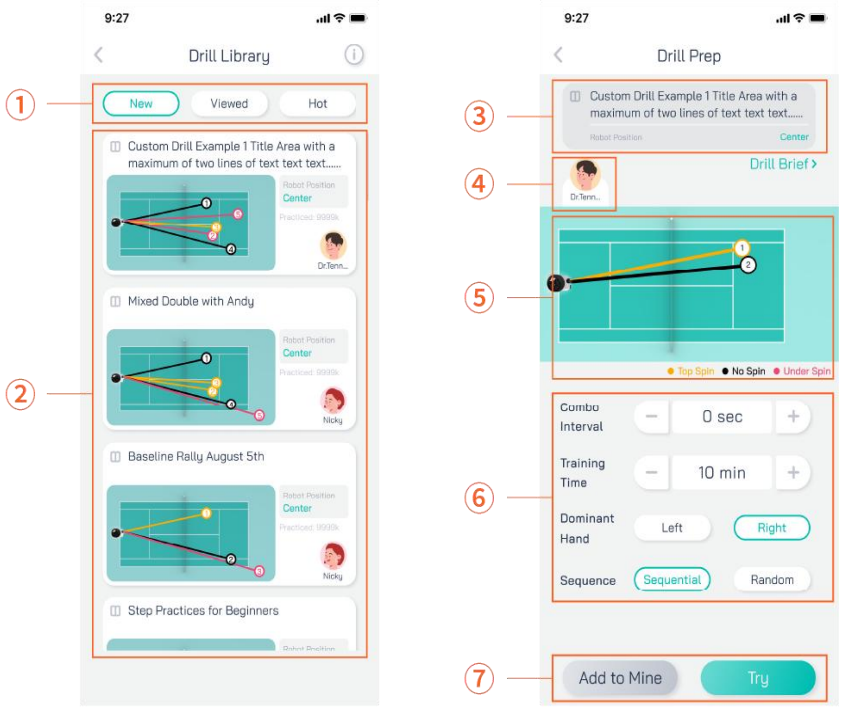
From Library



①	From Library	In this mode, by default, there are no combinations. Combinations need to be added to the list of this mode from the Drill Library. The adding method will be introduced in 1.5 Drill Library. This chapter introduces the operations after adding to the list of this mode.
②	Combination List	View the introduction of each combination, the robot's placement position, the landing position, trajectory, and spin information of single balls, as well as the information of the sharer.
③	Manage	Delete unwanted custom combinations from the list.
④	Sync Combination	Sync this combination to the synchronized training list of the P-Control's APP.
⑤	Combination Introduction	View the sharer's explanation and introduction of the combination.
⑥	Animation Effect	View the robot's placement position, the landing position, trajectory, and spin information of single balls.
⑦	Other Parameters	The setting method of other parameters is the same as that of the combination settings in the Classic Mode.

Drill Library

The PongBot Drill Library platform allows and encourages all users to share their custom-edited combinations. Of course, you can also search for and directly use excellent custom combinations shared by other users in the Drill Library. We hope that through the Drill Library platform, all users can use the PongBot robot efficiently and conveniently.



①	Tags	Select different tags to filter corresponding Drill Library combinations.
②	Drill Library List	In the list, view combination introductions, landing positions, trajectories, spins of all single balls, robot placement, and sharer information.
③	Combination Introduction	View detailed combination introductions. If not fully displayed, click "Drill Brief".
④	Sharer	Display sharer information.
⑤	Animation Effect	View robot placement, landing positions, trajectories, and spins of single balls.
⑥	Parameter Settings	Other parameter settings are the same as in the Classic Mode.
⑦	Add and Try	Add combinations to the "From Library" list in custom combinations; test the actual serving effect of combinations.

APP Synchronized Drills

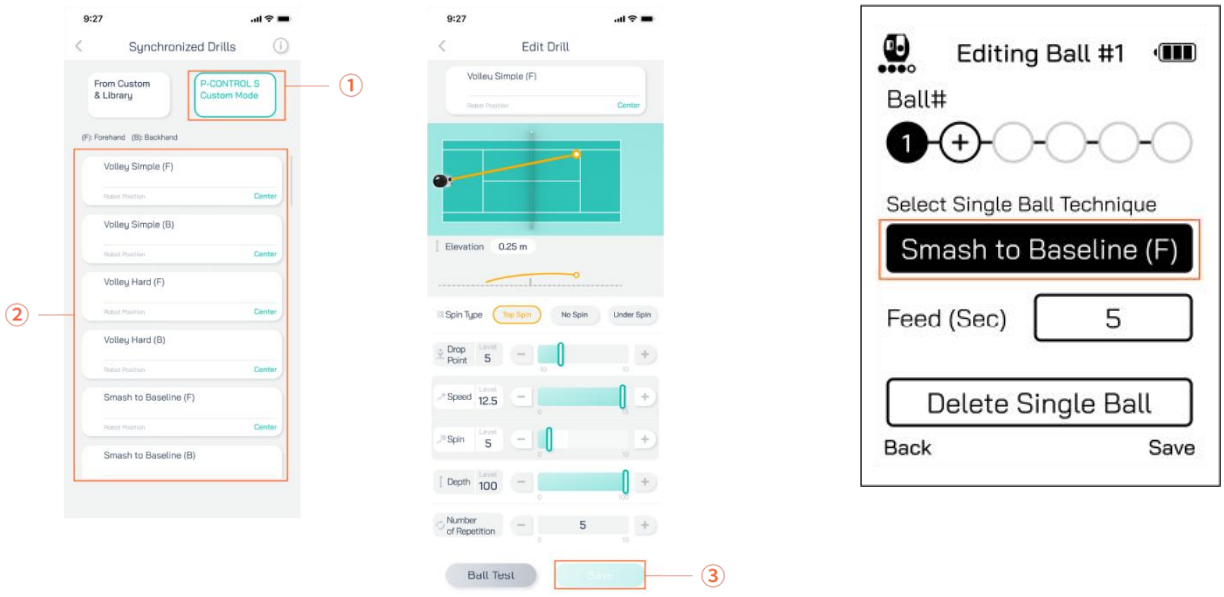
Syncing combinations is divided into two major sections. The first section manages the classic - mode combinations and those from the Drill Library under the custom combinations synced to the P-Control APP's synced combinations. The second section manages the technical - action combinations of single balls in the P-Control's custom training.

①	From Custom&Library	The entry for managing the synced training combinations in the APP of the P-Control.
②	P-Control Custom Mode	The entry for managing the technical-action combinations of single balls in the custom training of the P-Control.
③	Number of Groups Prompt	Check the number of synced combinations and the maximum number that can be synced.
④	Sync Combination List	Check the information in the synced combinations, such as combination names, landing positions, trajectories, quantities, spins of single balls, etc., as well as the robot's placement position.
⑤	Manage	Delete unwanted combinations from the sync list.

P-control Custom Mode

The value of PongBot's custom mode lies in pre - setting common basic single - ball technical parameters in the APP. Users can directly select technical - action tags during the remote - control custom training to quickly complete the combination and sequencing of technical actions.

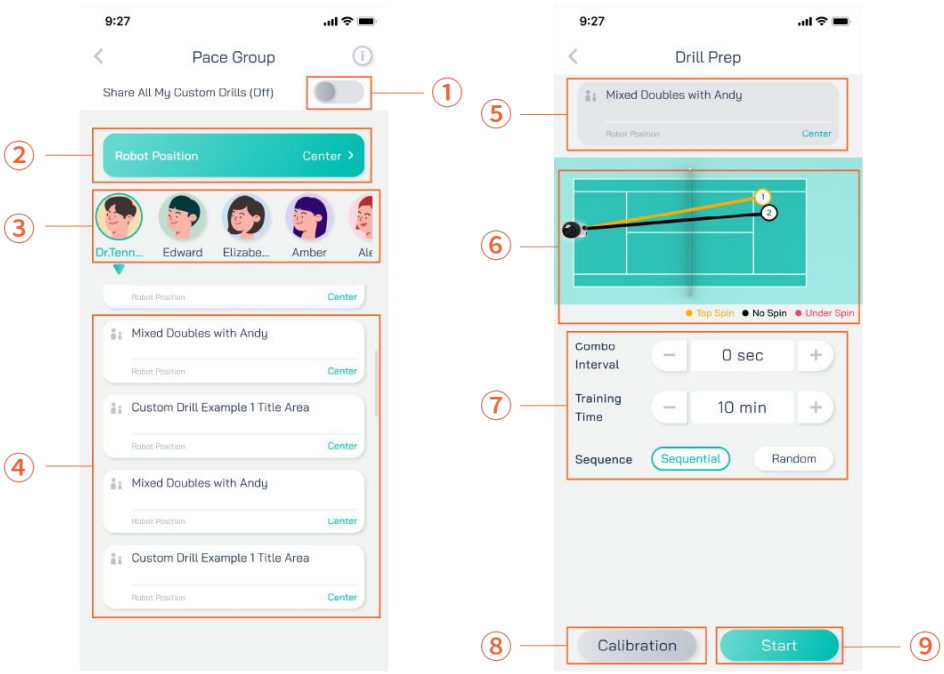
To provide a better experience, PongBot allows users to modify single - ball parameters at their own discretion. (This mode only supports modifying and testing single - ball parameters when the robot is at the center position of the baseline.)



①	P-Control Custom Mode	The entry for managing the technical-action combinations of single balls in the custom training of the P-Control.
②	Combination List	View all technical actions of single balls. Swipe up on the screen to view more combinations.
③	Save	The method of modifying the technical actions of single balls is the same as that in the Classic Mode of custom combinations. Save after completing the modification. After saving, the P-Control will automatically update the parameters once it is connected to the robot.

Pace Group

Pace Group uses the robot as a shared storage platform for all users. After a user activates the Pace Group function, other users can share all the custom combinations stored in the robot.

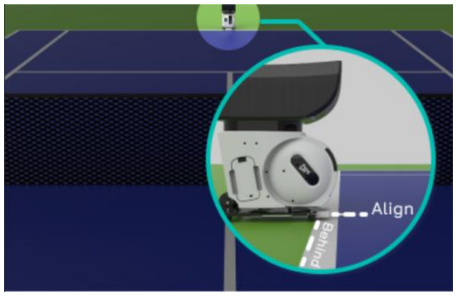


①	Sharing Switch	Turn on/off the custom drills function.
②	Robot Position	Filter all shared combinations according to different placement positions of the robot. After confirming the filtered position, the actual robot needs to be placed at the corresponding position.
③	User	Filter the corresponding custom combinations by selecting different users.
④	Combination List	Select a combination from the combinations filtered by different conditions, and then you can perform the next operation.
⑤	Combination Name	View the combination name and the currently selected robot placement position information.
⑥	Animation Effect	View the landing position, spin, and sequence information of single balls within the combination.
⑦	Combination Parameters	The method of setting the combination parameters is the same as that in the Classic Mode.
⑧	Calibration	Adjust the landing position within the combination in different directions. Each single ball in the combination can be adjusted individually.
⑨	Start	After confirming all the above parameters, click "Start" to start the movement.

Smart Pace

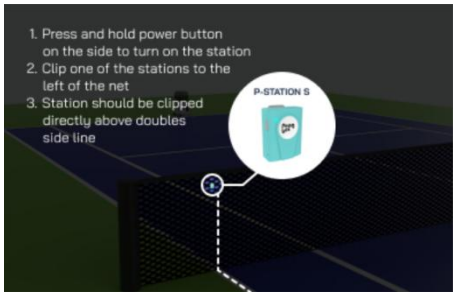
PongBot Smart Pace is equipped with self-developed intelligent AI algorithms and combines intelligent positioning and sensing hardware to create a realistic match scenario for users. In intelligent training, the robot will adjust the serving rhythm, landing position or difficulty in real time according to the user's position.

Device Connection Tutorial



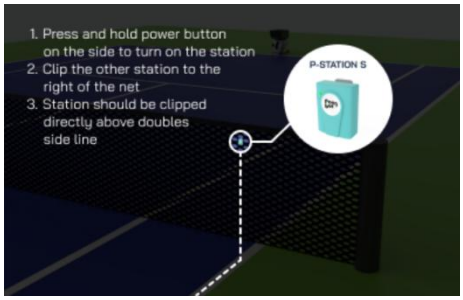
Step 1:

Place the robot at the center position of the baseline and turn it on.



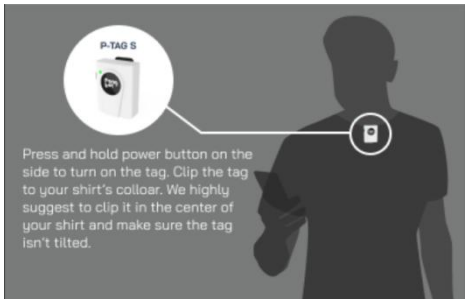
Step 2:

The Smart Tracker1 is clipped onto the tennis net above the intersection of the left side's doubles sideline and the net.



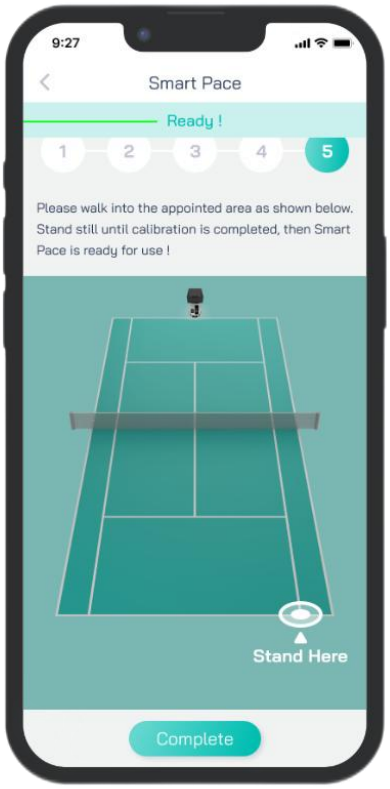
Step 3:

The Smart Tracker2 is clipped onto the tennis net above the intersection of the right side's doubles sideline and the net.



Step 4:

Clip the Smart Tracker3 in the middle position of the collar.



Step 5:

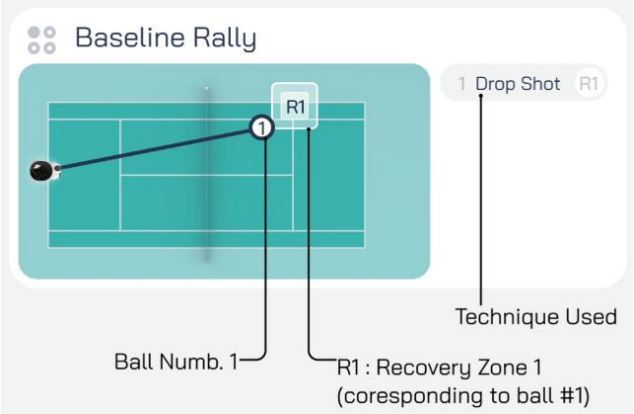
1. The person with the Smart Tracker3 stands at the position shown in the diagram and waits for calibration.
2. Confirm and start the intelligent training.

⚠ *Before use, please fully charge the Portable Battery and Smart Tracker Set.*
If the position calibration cannot be completed after a long time, you can go to Settings - Device Configuration to check the connection status among the smart tracker set and robot, and perform the calibration again.

Smart Pace-Adaptive Variable Rhythm

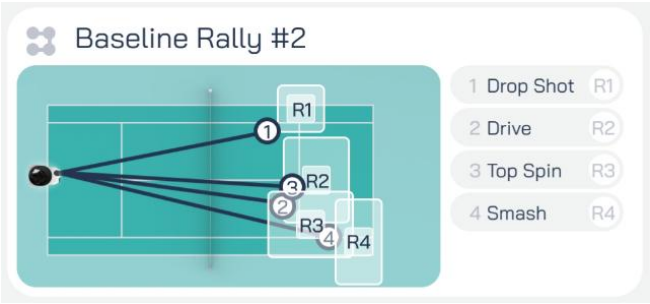
Under this function, the system automatically matches the user's movement rhythm. When the user enters the first return area R1, triggers the first serve and return, they must move to the next area R2. The system serves the next ball only after detecting their arrival in R2, and so on.

Basic Exercises



users must return to the designated area (return zone) after catching the ball to trigger the next serve. Users can adjust and calibrate each ball and its corresponding return zone as needed.

Complex Exercises



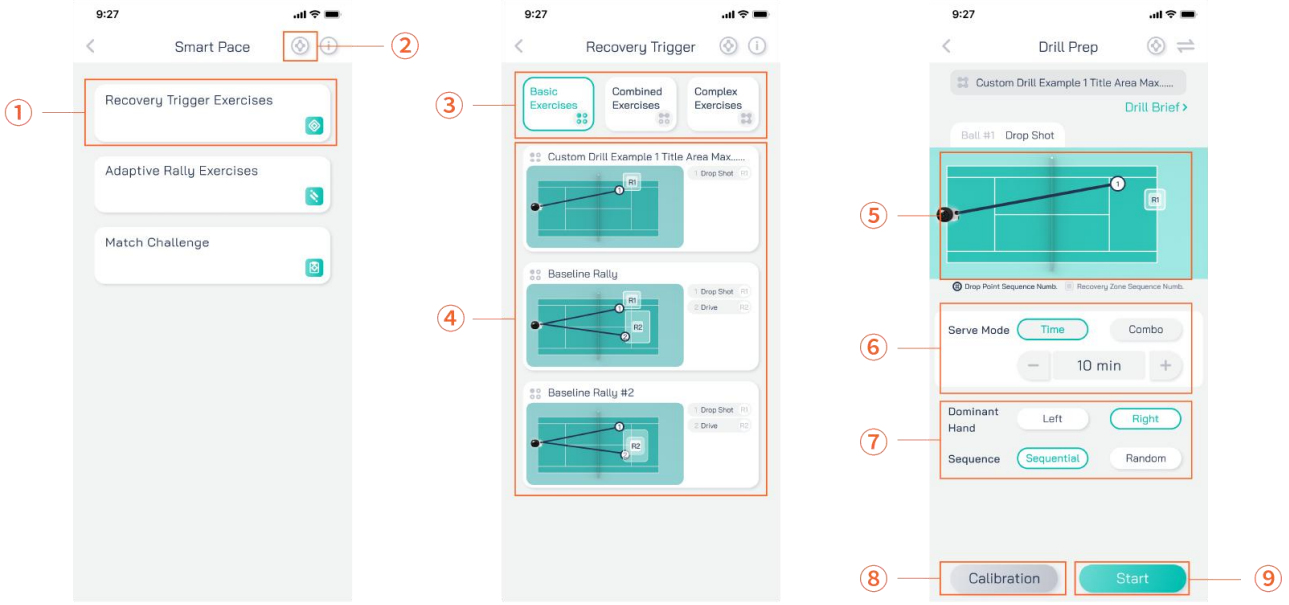
A training set may include multiple balls and their corresponding return areas.

Sequential & Random

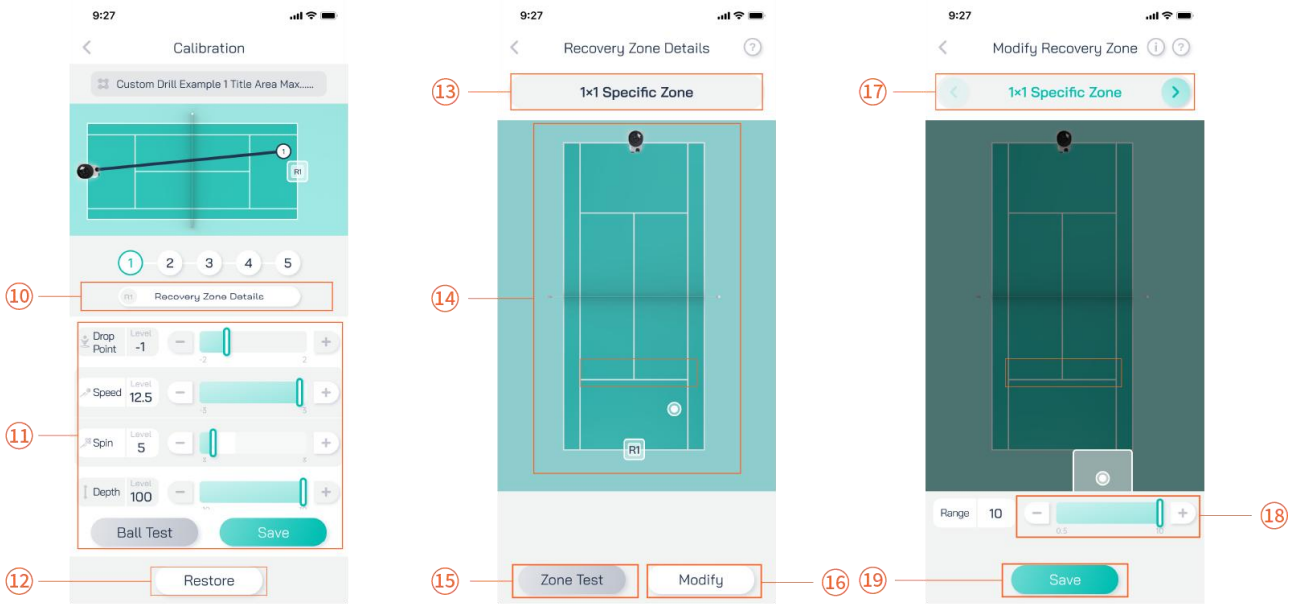
On the Drill Prep page, you can choose between "Sequential" or "Random".

Sequential:Return each ball in numerical order and move to the next return area to trigger the next ball. For example, after returning the 1st ball, move to Area 2 (R2) to trigger the 2nd ball, and so on.

Random:Return balls randomly. Returning to a specific area will trigger the corresponding ball. For example, after returning the 1st ball, moving directly to Area 4 (R4) will trigger the 4th ball, skipping the 2nd and 3rd balls.



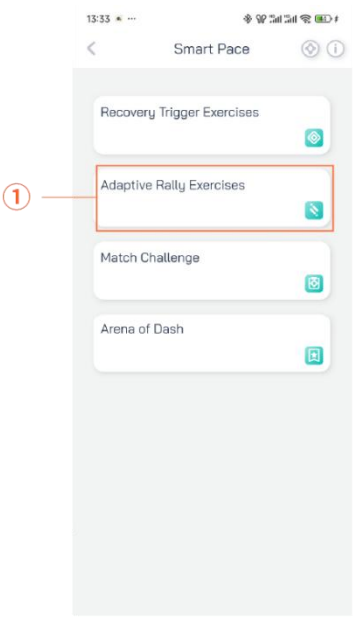
①	Recovery Trigger Exercises	Select and activate
②	Device Connection Details	Check the connection details of the robot and smart tracker set. The operations after entering are consistent with the corresponding functions in the settings.
③	Basic Combinations	You can choose basic,combined and complex exercises (classified by the number of single balls in the combination).
④	Combination List	Presents all preset combinations. You can view information such as the landing position of each single ball in the combination, the return area, technical tags, spin, etc. Slide the screen up and down to view more preset combinations. (The pictures in the instruction manual are for reference only, subject to the actual combination list in the APP.)
⑤	Animation Effect	You can view information such as the landing position of each single ball in the combination, the return area, technical tags, spin, etc. Slide the screen up and down to view more preset combinations. (The pictures in the instruction manual are for reference only, subject to the actual combination list in the APP.)
⑥	Serve Mode	Select the time and set the duration of ball serving in minutes. Select the number of groups and set the number of ball servings in groups. This parameter has a memory function and will follow the settings from the last use.
⑦	Dominant Hand	Set the dominant hand. Different dominant hand will change the corresponding forehand and backhand areas.
⑧	Calibration	Adjust the landing position within the combination in different directions. Each single ball in the combination can be adjusted individually.
⑨	Start	After confirming all the above parameters, click "Start" to start the movement.

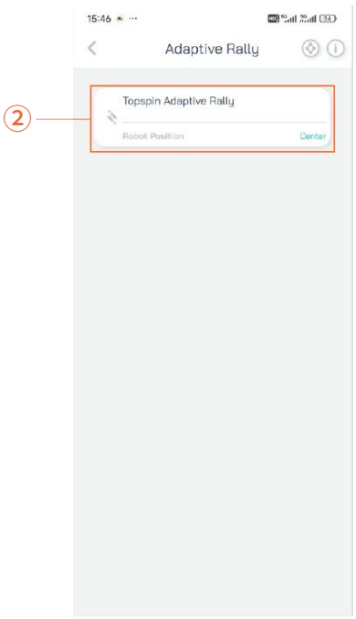


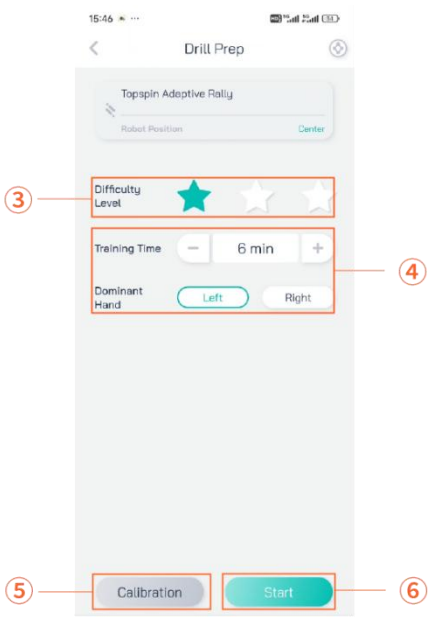
⑩	Recovery Zone Details	Set parameters for the recovery zone.
⑪	Calibration	Set different parameter values.
⑫	Restore	Restore parameters to factory defaults.
⑬	Recovery Zone Information	View the current settings of the recovery zone.
⑭	Animation Effect	View the serving landing positions and recovery zone information in the area test.
⑮	Zone Test	Test the effect of adaptive variable rhythm under current single - ball parameters.
⑯	Modify	Modify the parameters of the recovery zone.
⑰	Specific Zone	Set parameters for a specific area. The shape of the specific area varies with different parameters.
⑱	Zone Parameter Multiplier	Increase or decrease specific area parameters by a multiplier.
⑲	Save	Save the modified parameters.

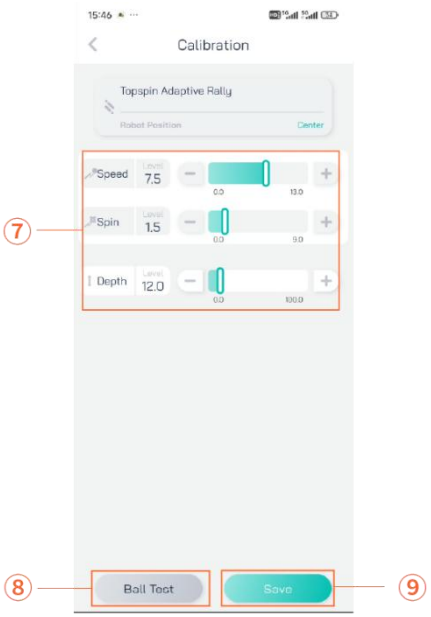
Smart Pace-Adaptive Rally Exercises

In this mode, the robot uses the P-tag to detect position in real-time. Once the user stops running and stands still, the robot turns to their position and serves, enabling fixed-point hitting training after running into position. During continuous running, the robot only detects movement position and direction, serving only when the user is ready.





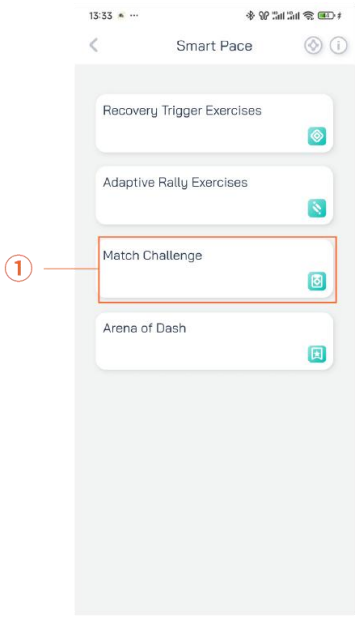


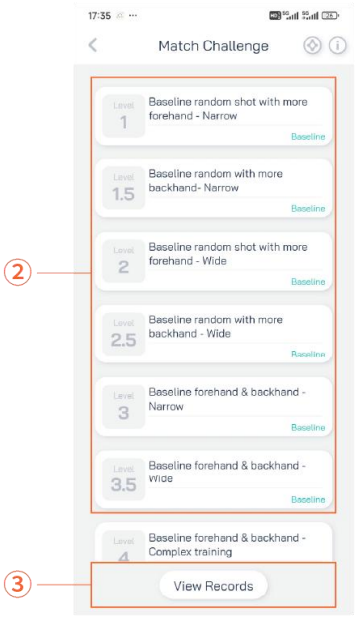


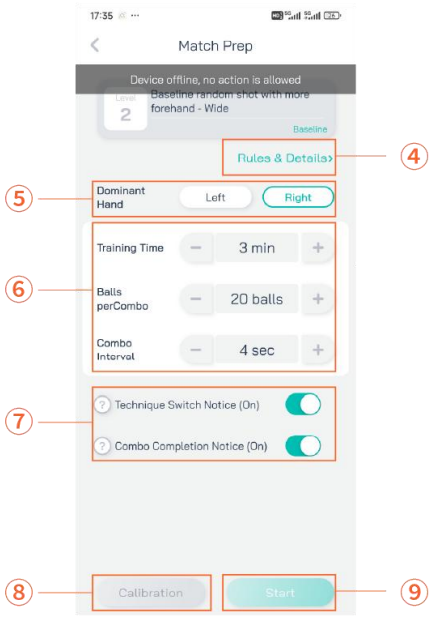
①	Adaptive Rally Exercises	Select and enter this page.
②	Combination List	View all preset combinations and check follower zone details. Scroll up/down to browse more. (Images in this manual are for reference only; refer to the actual app interface for the combination list.)
③	Animation Effects	View follower zone details in the combination.
④	Combination Parameters	Set training time and dominant hand.
⑤	Calibration	Adjust the parameters of individual balls in the combination.
⑥	Start	Tap Start to begin exercising.
⑦	Parameter Settings	Select the difficulty level and set the values of different parameters.
⑧	Ball Test	Test if individual ball params work.
⑨	Save	Save modified parameters.

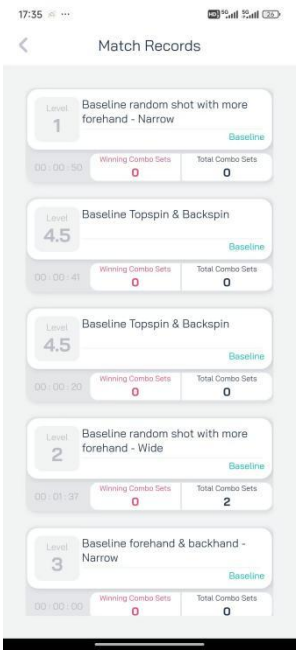
Smart Pace-Match Challenge

This mode is a simulated match sorted by difficulty levels. The robot deploys training content based on the level, evaluates movement ability via user hitting positions, and uses an AI model to auto-match training pace and generate level-appropriate content. Different levels feature distinct technical moves and ball trajectories, making each match a fresh challenge.





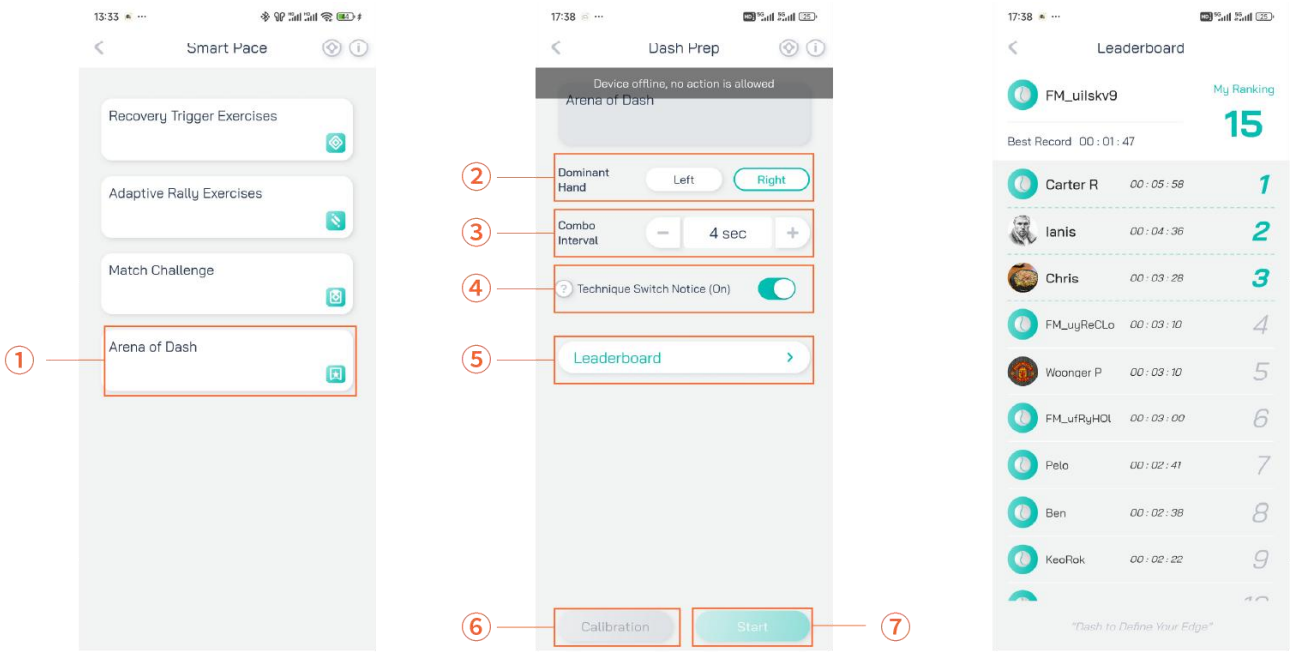




①	Device Connection Details	View the connection details of the robot, P-station, and P-tag. The operations after entering are consistent with the corresponding functions in the settings.
②	Combination List	Combinations with Different Difficulties and Technical Features
③	View Records	View match challenge records.
④	Rules&Details	Rules Introduction
⑤	Dominant Hand	Set preferred hitting hand. For different hands, the forehand and backhand zones will change accordingly.
⑥	Parameter Settings	Set different serving parameters.
⑦	Buzzer Prompt Tone	Toggle the buzzer prompt tone during challenge transitions.
⑧	Calibration	Adjust parameters for each individual ball in the combination.
⑨	Start	Start serving.

Smart Pace-Arena of Dash

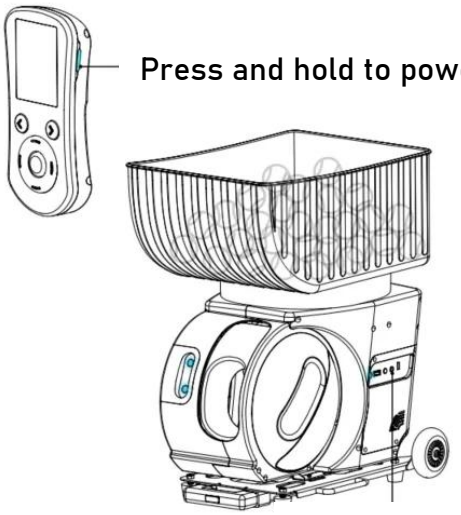
This mode enables intelligent and random tennis movement training based on technical action frameworks of different drills. The robot continuously increases training difficulty and intensity according to the user's movement status. After each session, a leaderboard ranking is generated based on total training duration—the longer the duration, the higher the ranking.

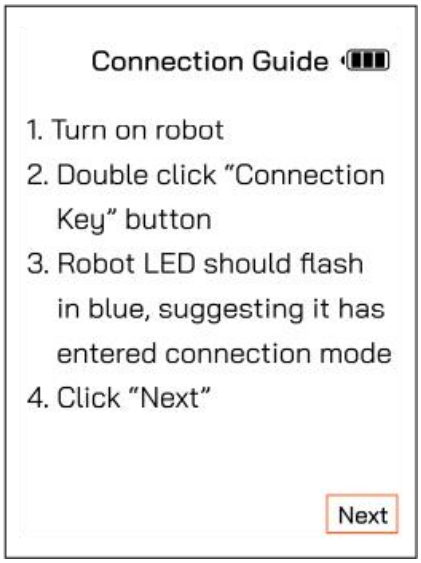


①	Arena of Dash	Select and enter this page.
②	Dominant Hand	Set preferred hitting hand. For different hands, the forehand and backhand zones will change accordingly.
③	Combo Interval	Set the interval between two adjacent ball groups to better restore position.
④	Buzzer Prompt Tone	Toggle the buzzer prompt tone during challenge transitions.
⑤	Leaderboard	Query the leaderboard ranking in this mode. The leaderboard shows only data within the last 30 days.
⑥	Calibration	Adjust parameters for each individual ball in the combination.
⑦	Start	Start serving.

Connect the remote control to the Robot

Once the robot is activated, the remote control will automatically pair with it via Bluetooth. When the robot icon shows up in the top left corner of the remote control, you can start using it right away. If the remote control fails to pair with the robot automatically, please manually complete the Bluetooth pairing according to the following steps.



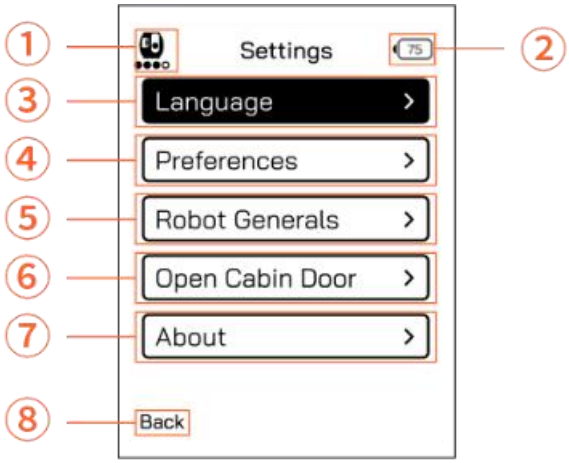


1. After the robot is powered on, quickly press the pairing button on the interface board on the left side of the robot twice. Once the LED light on the interface board changes

from slow blue flashing to fast blue flashing, the robot will enter the Bluetooth pairing mode.

2. Press and hold the power switch on the front - right of the remote control for 2 seconds to wake up its screen. Then, press the connection button. On the information confirmation page, press the "Next Page" button and wait for the Bluetooth pairing to complete.
3. When the robot icon shows up in the top - left corner of the home page, press the "Complete" button to return to the remote control's home page. Then, press the "Enter" button to access the robot's control page.

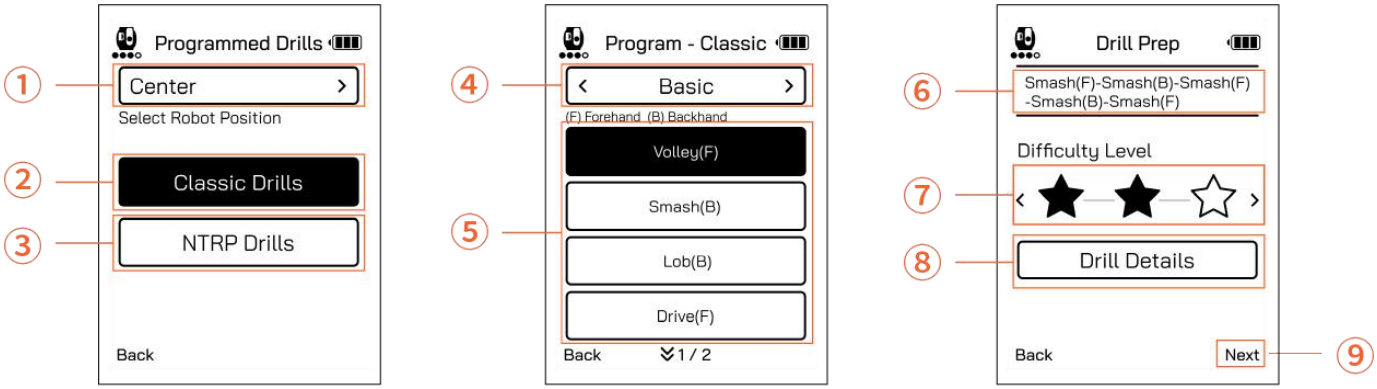
Settings



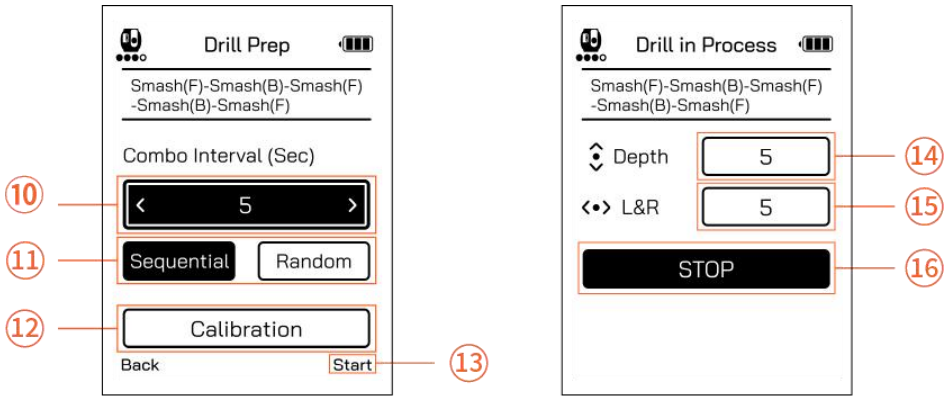
①	Robot Icon	Check if the Bluetooth connection between the remote control and the robot is successful. The icon will only be displayed after a successful connection. Additionally, the dot below the icon indicates the remaining battery level of the robot. Refer to the data on the remaining battery level of the power bank under different indicator lights.
②	Battery Display	Check the remaining battery percentage of the remote control.
③	Language	Switch between different languages. (Currently supports Chinese and English)
④	Preferences	Screen Auto-Lock：Set the time for the remote control to automatically turn off the screen when there is no operation. Dominant Hand： Set your preferred holding hand. The landing points of forehand shots on the court will vary depending on the holding hand. Serve Count Down(sec)：Set the countdown time for serving to allow sufficient time to prepare for receiving the ball. Auto Power-Off: Set the time for the remote control to turn off automatically when idle.
⑤	Robot Generals	Training Mode ·Time:Set the duration of serving, with the unit in minutes. ·Combo:Set the number of serving combos. ·This parameter has a memory function and will use the settings from the previous use.
⑥	Open Cabin Door	Open the cabin door to facilitate the handling of internal faults or abnormal situations of the robot. When the door is opened, the robot's drive system will stop running. You need to manually close the door and confirm before re - initializing the robot.
⑦	About	·Restore Calibration：Reset all parameters in the Programmed Drills to the factory settings. ·Restore all Settings：Reset all parameters in the remote control to the factory settings. ·Device Info：View the version information and SN information of the robot and the remote control.

⑧	Back	Return to the previous page.

Programmed Drills



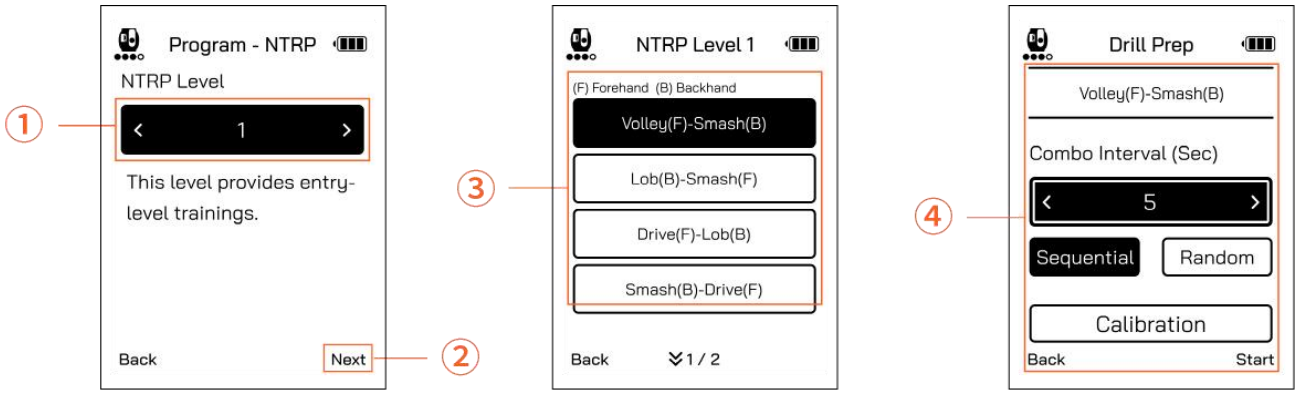
①	Select Robot Position	Select the placement position of the robot. Confirm and then use the left and right keys to make the selection.
②	Classic Drills	The combinations in the Classic Mode are preset in the remote control. After selecting a combination, you can quickly start the exercise.
③	NTRP Drills	The NTRP Mode sets corresponding combinations of difficulty levels according to people of different skill levels. This mode can only be used when the center position at the baseline is selected.
④	Basic Combinations	You can select Basic, Combined, and Complex combinations (classified according to the number of individual balls in the combination). Switch between them using the left and right keys.
⑤	Preset Combinations	Show all preset combinations. The combinations are named based on technical labels, handedness, landing positions, etc. Use the up and down keys to view more. (Pictures in the manual are for reference only. Refer to the actual combination list on the remote control.)
⑥	Combination Name	View the name of the combination.
⑦	Difficulty Level	Set the difficulty star rating of the combination. Different star ratings will vary in parameters such as serving speed, rotation level, serving frequency, etc. Use the left and right keys to switch.
⑧	Drills Details	View the landing positions, rotations, and sequence information of individual balls within the combination.
⑨	Next	Jump to the next page and continue to set the serving parameters.



⑩	Combo Interval(Sec)	Set the interval time between two adjacent sets of balls to better regain position. Adjust the value using the left and right keys.
⑪	Sequential	Set the serving order mode for individual balls in the combination. In sequential mode, individual balls will be served repeatedly in order. In random mode, all individual balls have an equal probability of being served each time.
⑫	Calibration	Adjust the landing positions and serving frequencies within the combination in different directions. After adjustment, the changes apply to all individual balls in the combination.
⑬	Start	After confirming all the above parameters, click "Start" to begin the exercise.
⑭	Depth	During serving, use the up and down keys to adjust the distance of the landing point from the robot in real - time.
⑮	L&R	During serving, use the left and right keys to adjust the landing point horizontally. Based on the direction facing the robot, when the parameter is negative, the landing point deviates to the left from the default; when it's positive, the landing point deviates to the right.
⑯	Stop	Stop the current serving task of the robot.

NTRP Drills

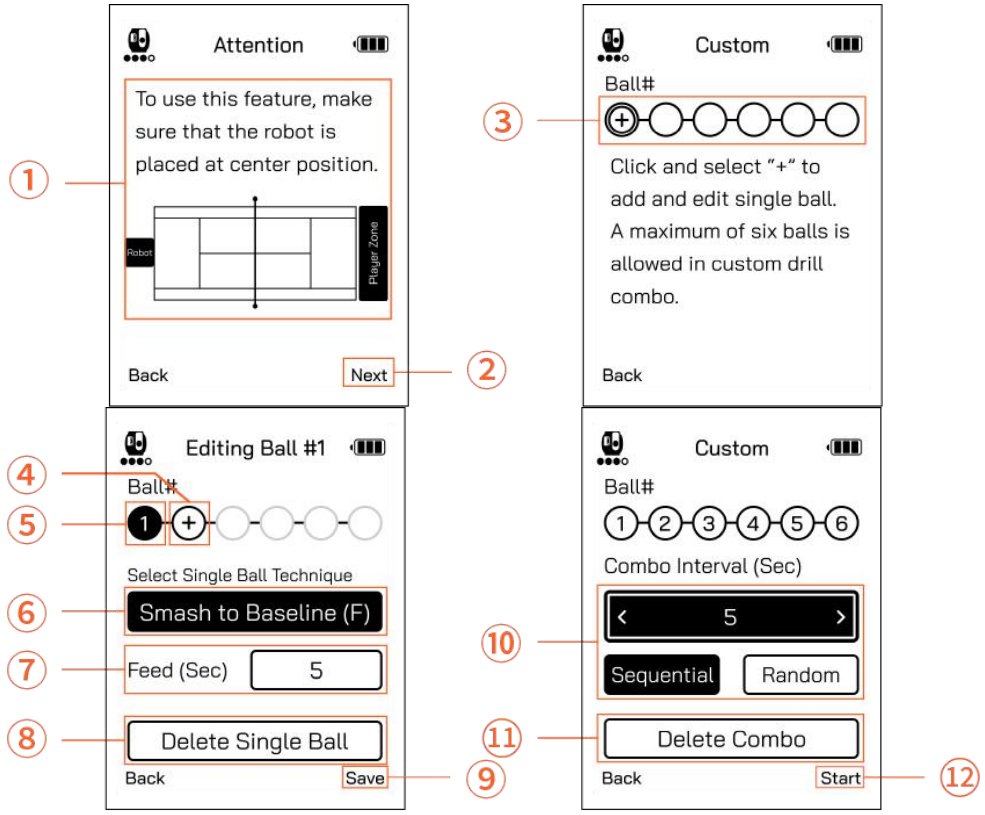
The NTRP Drills are combinations set with corresponding difficulty levels according to people of different skill levels. This mode can only be used when the center position at the baseline is selected.



①	Adjustment Button	Adjust the NTRP level. Press the left button to lower the level and the right button to raise it.
②	Next	Jump to the combination list on the next page.
③	Combination List	Display all preset combinations, named based on technical labels, handedness, landing positions, etc. Use the up/down keys to browse additional combinations. Note: Manual images are for reference; consult the remote control's actual combination list.
④	Calibration	Refer to the Classic Mode for setting NTRP combination parameters.

Custom Drills

In this mode, combine and arrange single balls of different technical moves to quickly create your custom training combinations.

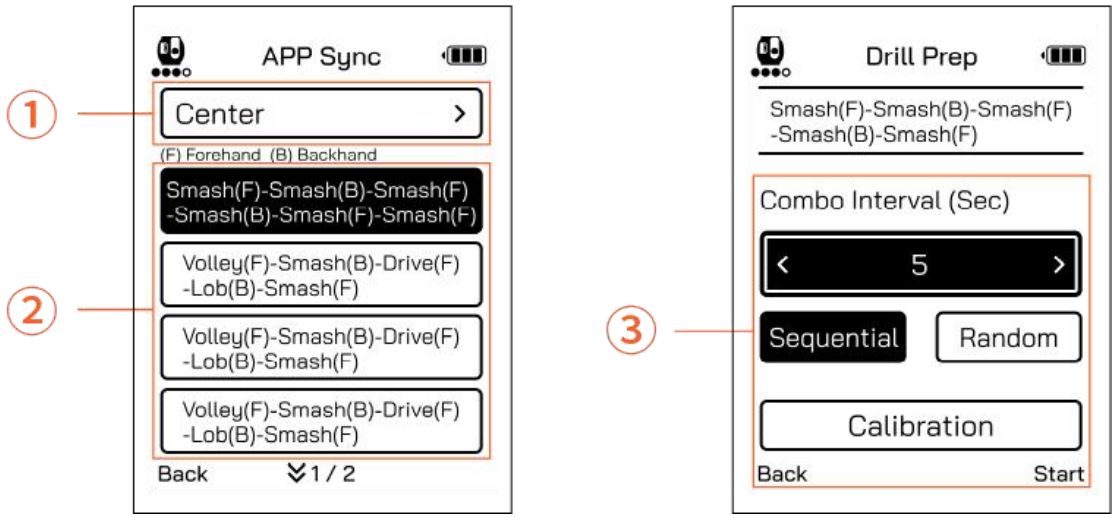


①	Robot Position	When using the custom training function of the remote control, place the robot at the center of the baseline.
②	Next	After confirming the robot's placement, go to the single - ball editing page.
③	Custom Combination	Press the confirm button to start editing the parameters of the first single ball.
④	Add Single Ball	Add a new single ball to the custom combination. A maximum of 6 single balls can be added.
⑤	Select Single Ball	To modify the parameters of a single ball, first select it. The background will change from white to black.
⑥	Technical Move	Set the technical move for the single ball. After confirmation, use the up and down keys to view more technical moves.
⑦	Feed(Sec)	Set the serving frequency of the single ball in seconds. The frequency parameter of each single ball can be set individually.
⑧	Delete Single Ball	Delete the selected single ball.
⑨	Save	Save the customized combination and go to the serving parameter setting page.

⑩	Serving Parameters	Set the serving parameters for the combination. The method is the same as that for Programmed Drills.
⑪	Delete Combo	Delete the edited combos.
⑫	Start	After confirming all the above parameters, click "Start" to begin the exercise. During serving, you can adjust the depth and left - right parameters in real - time, using the same method as in Programmed Drills.

APP Synchronized Drills

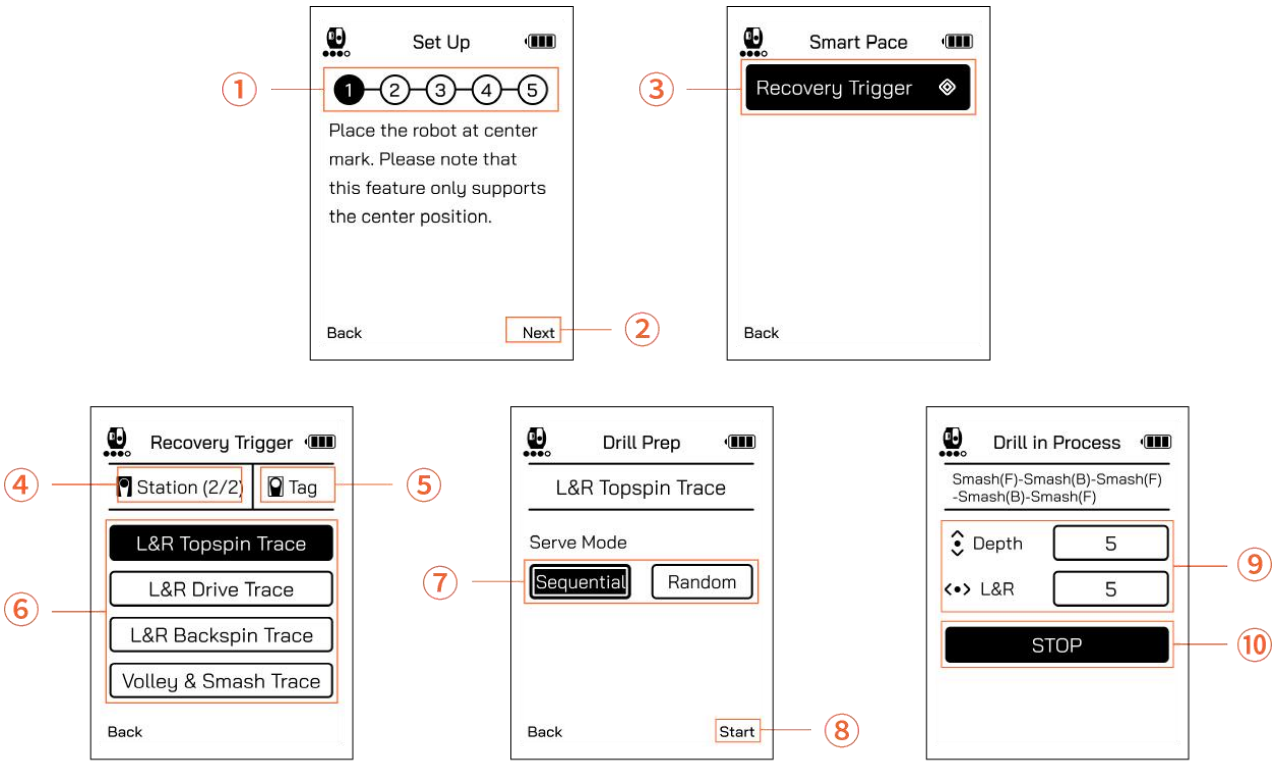
The APP synchronization training is designed to provide users with more options for custom combinations in special scenarios (such as without an Internet connection, or without a mobile phone/tablet, etc.). The sources of the synchronized combinations can be the custom combinations in the classic mode of the APP or the Drill Library.



①	Robot Position	Set different placement positions of the robot to filter out the corresponding synchronized combinations. After confirmation, use the left and right keys to select the robot's position.
②	Synchronized Combinations List	Display all synchronized combinations. Use the up and down keys to view more synchronized combinations. (The pictures in the instruction manual are for reference only. Please refer to the actual synchronized combinations list on the remote control page.)
③	Serving Parameters	Set the serving parameters for the combination, using the same method as that for the built-in combinations.

Smart Pace

The training combination must first be synchronized to the remote control via the APP before it can be used.

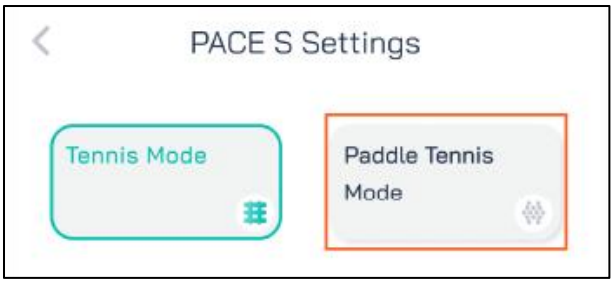


①	Preparation	· When Smart Pace training,the robot can only be placed at the center position of the baseline. · Power on the both P-STATION Sand clip them respectively on the tennis net above the intersection of the net and the doubles sideline. · Power on the P-TAG S and it is recommended to clip it in the middle of the collar. · The user stands at the designated position (the intersection of the right singles sideline and the baseline) and waits for the device to complete the calibration.
②	Next	Jump to the next operation. After the calibration is completed, click "Complete" to enter the Smart Pace..
③	Recovery Trigger	Experience the return run function.
④	P-STATION S	Display the number and status of the connected.
⑤	P-TAG S	Display the connection status of the tag.
⑥	Combination List	The list of available combinations under the “Recovery Trigger”.
⑦	Serve Mode	Set the serving order mode of individual balls within the combination. In sequential mode, individual balls will be served repeatedly in order. In random mode, all individual balls have an equal probability of being served each time.
⑧	Start	After confirming all the above parameters, click "Start" to begin the exercise.

⑨	Landing Point Adjustment	· During serving, use the up and down keys to adjust the distance of the landing point from the robot in real time. · During serving, use the left and right keys to adjust the landing point horizontally in real time. With the direction facing the robot as the reference, a negative parameter makes the landing point deviate left from the default, while a positive parameter makes it deviate right.
⑩	Stop	Stop the current serving task of the robot.

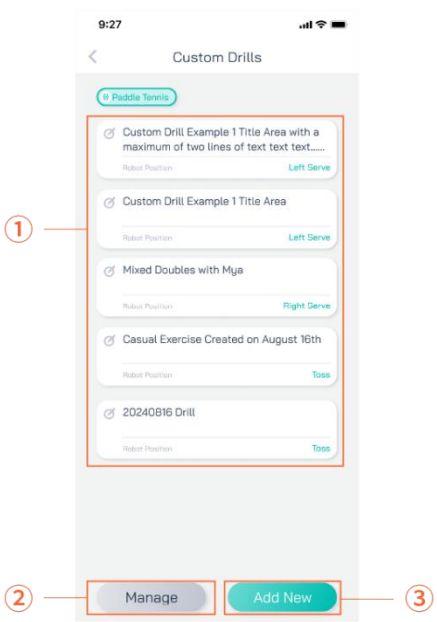
Padel Tennis

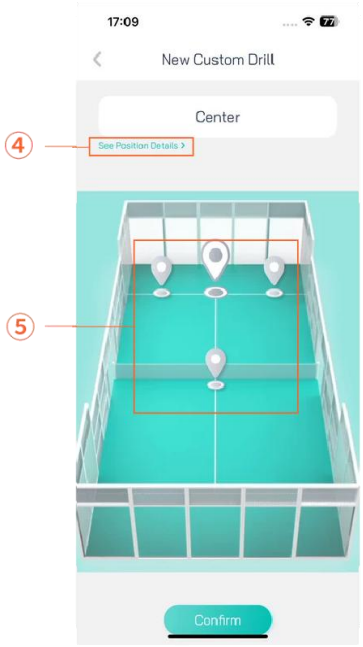
Custom Drills



Mode Selection:

When using the Padel Tennis ball serving machine function, set the mode to "Padel Tennis" in the





①	Custom Drills	View all the saved combinations. By default, there are no combinations on this page, and you need to edit and save them on your own.

②	Manage	Delete unwanted combinations.
③	Add New	Add a new custom combination.
④	Robot Position	See Position Details.
⑤	Placement Position	Select and confirm the placement position of the robot.
⑥	Combination Parameter Settings	The method for customizing parameters is the same as that for custom combinations in the tennis ball - serving machine.

Product Specifications

Robot

Category	Subcategory	Version
Product	Model	Pace
	Full Product Name	Pongbot Smart Tennis Training Robot
Technical Parameters	Feeding Mechanism	Free fall to the ground
	Serve Mechanism	Dual-Wheel Drive
	Serve Speed	8～34m/s (total of 27 levels)
	Spin Types	topspin, backspin,no spin
	Spin Speed	60 rounds/sec max(total of 21 levels)
	Ball Interval	1.5~12s adjustable(total of 22 levels)
	Combo Interval	0~9s adjustable(total of 19 levels)
	Placement	Position 1: Middle position of the baseline (default)
		Position 2: Right position of the baseline
		Position 3: Left position of the baseline
		Position 4: Middle position of the center line
		Position 5: Right position for ball tossing
		Position 6: Left position for ball tossing
	Horizontal Movement	Auto, Sequential

	L&R Swing Angle (Refer to the recommended installation positions for Positions 1, 2 and 3)	Position1：34°（-17°~17°）
		Position2：34°（-25°~9°）
		Position3：34°（-9°~25°）
		Position4：34°（-17°~17°）
		Position5：34°（-25°~9°）
		Position6：34°（-9°~25°）
	Elevation Movement	Auto, Sequential
	Elevation Movement Angle	40°（10°～50°）
	Net Weight	21KG
	Gross Weight	25KG
	Product Dimensions	590*350*440mm
	Packaging Dimensions	700*440*580mm
	Rated Voltage	DC25V
	Accessory	Portable Battery/Portable Battery Charger/Remote Control/Smart Tennis Tracker Set
	APP	Android/ IOS
	Wireless Communication	Bluetooth/WiFi
	Countdown	Yes
	Open Cabin Door Feature	Yes
	LED Settings Feature	Yes
	Performance Mode Settings Feature	Yes
	Buzzer Notify Feature	Yes
	Switch/Button	Yes.Power switch / Network configuration, pairing button (WIFI, Bluetooth) / Quick start,stop button
	Battery Notify Feature	7800mAh
	Smart Pace	Position verification / Return movement / Follow-up battle, etc.
	Dual control supported	Yes .(Start with the remote control and stop with the APP; Start with the APP and stop with the remote control)
	Certification	FCC/CE

(Continued)

Remote control

Model	P-CONTROL S
Full Product Name	Pongbot Smart Robot Remote Control
Compatible	Standard configuration
Remote control type	Button - type
Screen Size	30*40mm(2-inch)
Wireless Communication	Bluetooth
Battery	2100mAh Lithium-Ion Battery
Charging Portal	USB Type-C
Programmed Drills	300 groups
APP Synchronized Drills	Support synchronization of 30 groups
	Single - ball synchronization: Support synchronization of 15 units
Dominant Hand	L&R hand selection
Operation	Set the running time ,sequence, configure the random mode；adjust the combined difficulty level and arc in real time.
Quick Start	Supported
Languages	Chinese/English
Firmware Upgrade	Upgrade the firmware via the mobile phone APP

Smart Tracker Set

Product	Smart Tracker Set
Battery	2100mAhLithium-Ion Battery
Charging Portal	USB Type C
Rated Voltage	3.7V
Rated Current	100mA
Product Size(Single Unit)	47*36*27mm
Net Weight(Single Unit)	0.03Kg

Portable Battery

Product	Portable Battery
Nominal Voltage	25.5V
Input	29.4VDC 3A Max
Output	25.5VDC 10A Max
Capacity	7800mAh 198.9Wh(@25.5V)
Battery Charger	AC/DC adapter
Charger Input	100-240V 50/60Hz 2.0A
Charger Output	29.4V, 3A 88.2W

Device Upgrade

Robot Upgrade

Upgrade the robot using the PongBot Tennis APP.

The upgrade steps are as follows:

1. Launch the PongBot Tennis APP, log in to your account and enter the main page of the APP.
2. Power on the robot and wait until the indicator light of the robot switches to flashing yellow.
3. Tap "Devices" at the bottom of the APP, then tap the "+" icon in the top-right corner of the redirected page, select the PACE S series model. After the APP searches for the

standby robot, select the robot with the correct SN and click "Connect". After a successful connection, click "Confirm" to enter the device list.

4. Select the connected robot, click "Start" and wait for the robot to complete the initialization.
5. Click "Settings" at the upper right corner of the robot's main page. In the settings page, select "Firmware Upgrade". The APP will automatically check the current version information of the robot. If there is the latest version, click "Upgrade" and wait for the robot's firmware to complete the upgrade.

Remote Control Upgrade

Upgrade the remote control using the PongBot Tennis APP.

The upgrade steps are as follows:

1. Launch the PongBot Tennis APP, log in to your account and enter the main page of the APP.
2. Press and hold the power button for 2 seconds to turn on the remote control.
3. Tap "Devices" at the bottom of the APP, then tap the "+" icon in the top-right corner of the redirected page, select the P - Control S series model. Wait for the APP to detect the remote control with its screen awakened. Select the remote control with the correct SN and click "Connect". After a successful connection, click "Confirm" to enter the device list.

4. Select the connected remote control. The APP will automatically check the current version information of the remote control. If a new version is available, click "Upgrade" and wait for the firmware upgrade to complete.
5. After the upgrade is finished, the latest version information will be displayed on the remote control's main page.

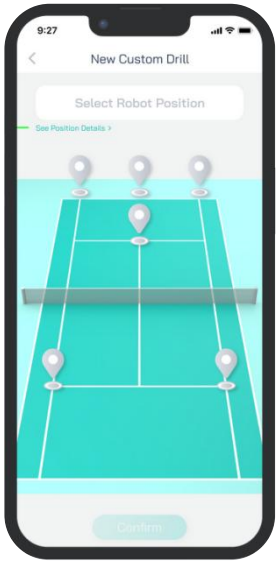
Error Code Definition

Status code type	Status code	explain	Recommended treatment measures
Warning	1001	Instruction doesn't conform to business logic. Rejected.	Re - issue the instruction according to business logic.
	1002	Instruction parameters are abnormal. Execution rejected.	Just re - issue the correct instruction.
	1003	Ball shortage	Check if there is a ball shortage at the ball - feeding position. If so, replenish the balls.
	1004	Serving parameters not supported. More power from mobile power supply needed.	The serving parameters require more power. Change the serving parameters or the portable battery, or charge the portable battery before using these parameters.
	1005	Warning: Abnormal P-Tag S in Smart Pace	Enter the “Device Configuration” page to confirm the P-Tag S connection and power status.
	1006	Warning: Abnormal left P-Station S in Smart Pace	Enter the “Device Configuration” page to confirm the left P-Station S connection and power status.
	1007	Warning: Abnormal right P-Station S in Smart Pace	Enter the “Device Configuration” page to confirm the right P-Station S connection and power status.
Error	2001	Abnormal control in previous round	Check if there are tennis balls stuck inside the channel. If so, open the cabin door to remove the balls and re - initialize the robot.
	2002	Abnormal control in next round	Check if there are tennis balls stuck inside the channel. If so, open the cabin door to remove the balls and re - initialize the robot.
	2004	Abnormal pitch angle sensor	Check if the pitch position is at the maximum/minimum angle. If so, manually move the pitch joint to the middle position after power - off.
	2005	Abnormal left - right angle sensor	Check if the left - right position is at the maximum/minimum angle. If so, manually move the left - right joint to the middle position after power - off.

	2006	Failed to read SN code	Power off and re - initialize.
	2007	Ball jamming fault	Check if there are tennis balls stuck inside the channel.
	2008	Abnormal pitch control	Power off and re - initialize.
	2009	Abnormal left - right control	Power off and re - initialize.
	2010	Abnormal cabin door opening	Power off and retry opening the cabin door. Try to pull the hatch to assist in opening it 5 seconds after clicking to open the cabin door.
	2011	Low battery	Replace the portable battery or charge it.
	2012	Over - current protection of ball - feeding motor	Check if there is a ball jam at the ball - feeding position. Re - initialize the device after eliminating the jam.
	2013	Ball Feeding Sensor Abnormality	Check if there is a ball in the sound-detecting ball feeding channel, whether the ball feeding sensor is detached/invalid, and if there is interference in the ball-pinching module (e.g., ball-pinching wheel degumming).
	2101	Upper Wheel Sensor Abnormality	Reconnect the sensor connector.
	2102	Lower Wheel Sensor Abnormality	Reconnect the sensor connector.
	2201	Upper Wheel Power Abnormality	Reconnect the power cable connector.
	2202	Lower Wheel Power Abnormality	Reconnect the power cable connector.
	2301	Upper Wheel Lock-up Abnormality	With the device powered off, manually rotate the upper wheel to check for jamming or interference, and inspect if a ball is stuck in the upper wheel.
	2302	Lower Wheel Lock-up Abnormality	With the device powered off, manually rotate the lower wheel to check for jamming or interference, and inspect if a ball is stuck in the lower wheel.

Typical Usage Guide

How to use Custom Drills?



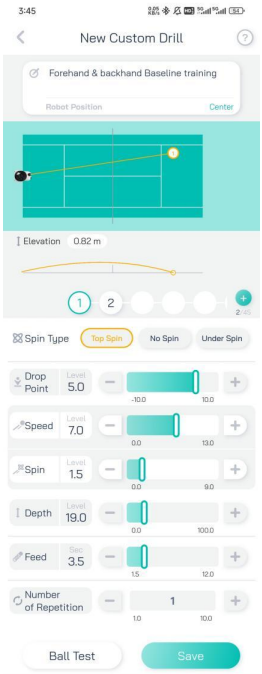
First, you need to select the preset placement positions for the device. The robot supports six placement positions：Center、Ad Baseline、Deuce Baseline、Service Box T、Right Toss、Left Toss.

After confirming the device's position, you can start editing the training for each individual ball in the training content. The training editing page has multiple functional areas:

【Top】Training Name Editing

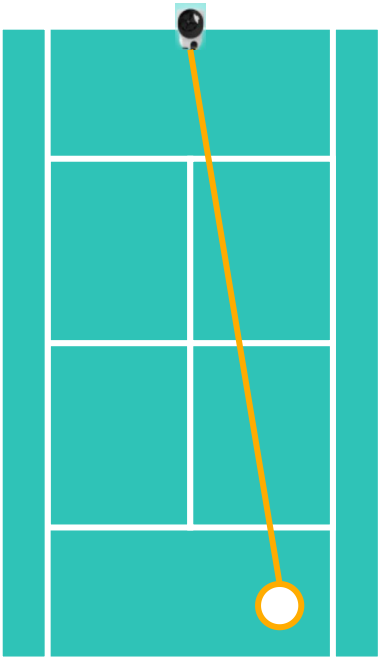
【Upper Middle】Individual Ball Trajectory Display

【Middle】Individual Ball Serial Number Selection

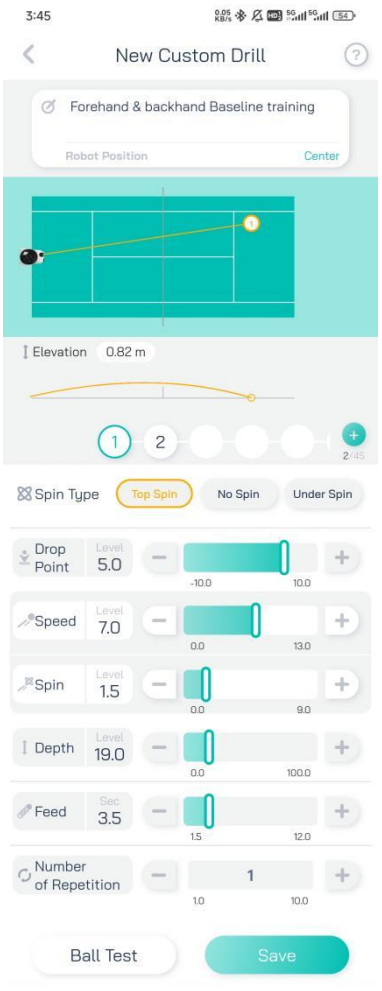


Custom Drill Editing Example:

Forehand baseline top spin

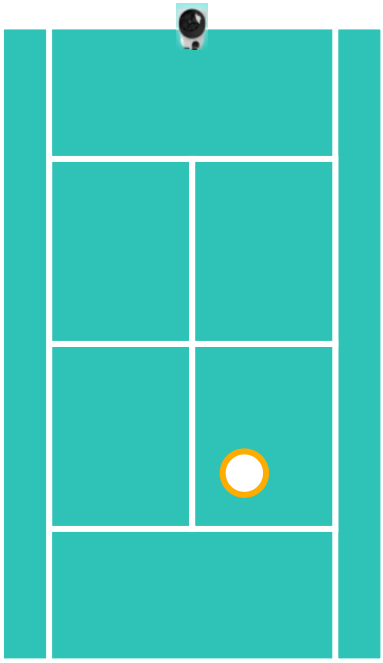


Top spin forehand shot in the deep area of the baseline

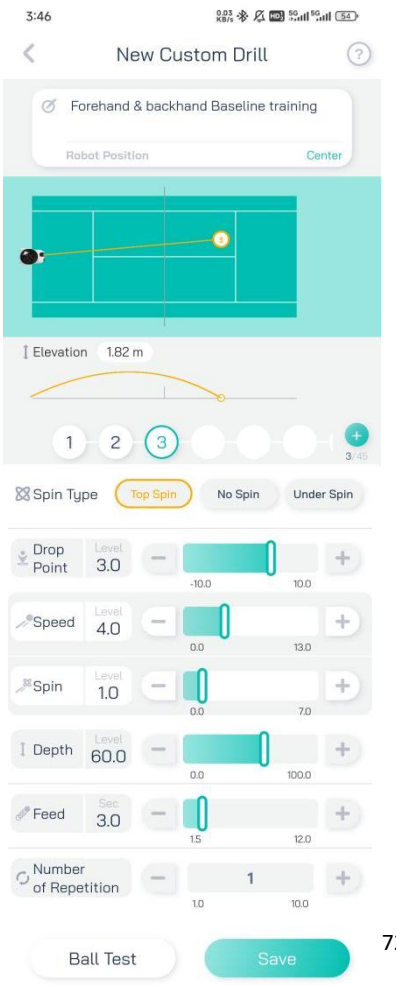


Backhand baseline under spin

Forehand shot in the midfield



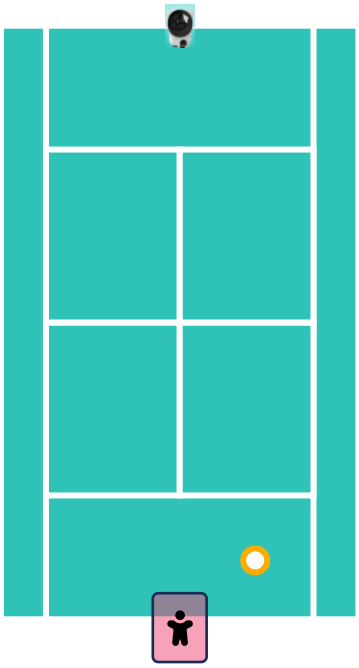
Forehand shot in the midfield



How to use the adaptive variable rhythm?

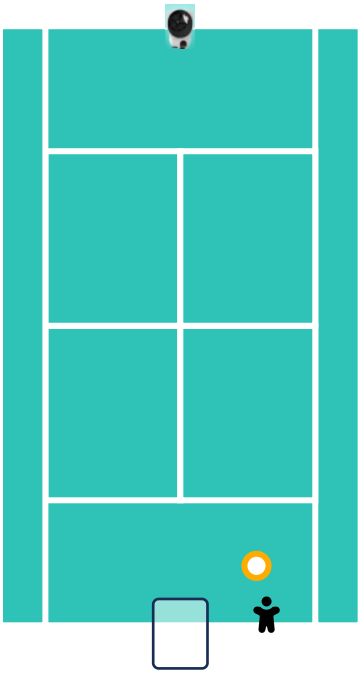
Functional Overview:

In a tennis match, according to the game strategy, players need to return to a relatively appropriate position after each shot to be ready for the next incoming ball. This repositioning movement is of vital importance. The "Adaptive Variable Rhythm" function of the PACE S PRO product is developed precisely based on the significance of repositioning. When the adaptive variable rhythm training is activated, the robotic coach will default to provide the area of the repositioning position required for each training session. During the training process, after the user completes a shot, they must return to the target repositioning area before the robot sends out the next training ball. This is the process of determining whether the user has effectively repositioned. From the perspective of training, the repositioning running training mode can particularly emphasize to the user the key significance of repositioning after each shot. In terms of training rhythm, the repositioning running mode can automatically match the repositioning rhythm of each user. If the user repositions quickly, the ball serving rhythm will be fast; if the repositioning is slow, the ball serving rhythm will slow down accordingly. This makes the training rhythm conform to the individual's actual situation, greatly enhancing the training effect.



Target repositioning area

When the training starts, you are required to stand within the target repositioning area to trigger the robot to send out the first ball.



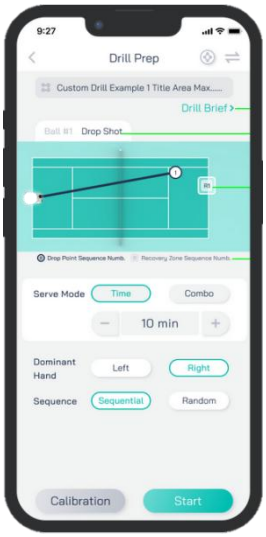
Target repositioning area

When you go to hit the ball, the robot will continuously collect your position and determine whether you have entered the target repositioning area.

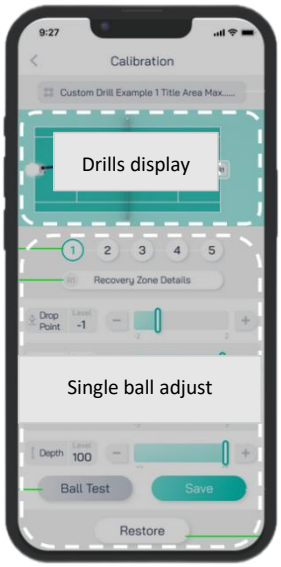
Target repositioning area

When the robot detects you've re-entered the target area, it sends the next ball. This cycle repeats, with the robot adjusting serve timing based on your repositioning speed.

Demonstration of training fine-tuning



According to your training needs, you can fine-tune and set the training ball serving parameters and the repositioning area through the [Calibration] entry.



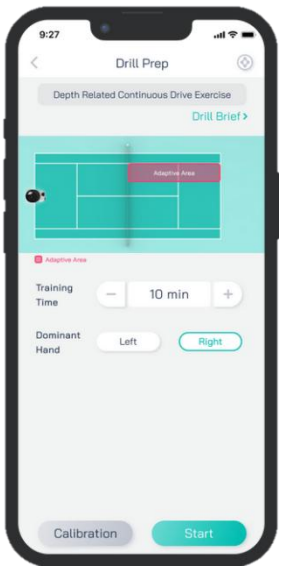
The training fine-tuning is divided into a training demonstration display area and a ball serving parameter adjustment area. The ball serving parameter adjustment area includes an entry for modifying the repositioning area.

When adjusting the position and coverage area of the repositioning zone, the robot will display the location of the user wearing the P-Tag device in real time. At this time, you can adjust the shape of the repositioning zone at the top of the page, and adjust the size of the corresponding shape at the [Range] position at the bottom. After the adjustment is completed, simply click "Save".

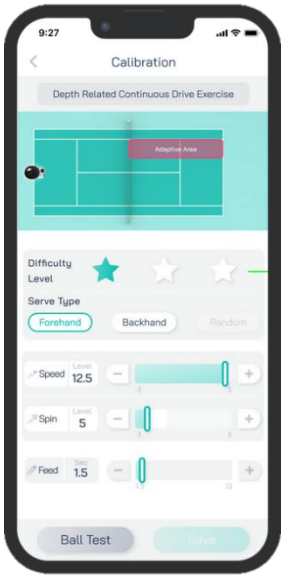
How to use the adaptive variable landing point?

Function Overview:

Function Overview: In the "Adaptive Variable Landing Point" mode, based on the user's position collected by three positioning sensors, the robot can adjust the ball serving direction in real time according to the user's position. Users can also independently adjust the training difficulty and control the degree of deviation variation of the ball serving following.



Select your desired training content from the "Adaptive Variable Landing Point" training list. On the training prep page, adjust the training duration and dominant hand. Click to start the "Adaptive Variable Landing Point" training. During the training, the robot will track the trainee's position in real time and conduct the ball serving training according to the preset serving interval.



If the preset training content fails to meet your training needs, you can adjust the training difficulty and ball serving parameters through [Calibration].

Increasing training difficulty enlarges the deviation of ball - serving follow - up to meet the need for more running during training.

In the training mode, you can choose to favor the forehand, the backhand, or have a random bias. Each time the ball is served, the deviation of the follow-up will be adjusted to lean more towards the target direction according to your bias selection.

If the robot's ball serving fails to meet your training needs, you can adjust the parameters in the ball serving parameter area.

After-sales service policy and extended warranty service

For more product after - sales policies and extended warranty services, please visit the official website of Pongbot.

https://pongbotsports.com/wp-content/uploads/2025/03/PONGBOT-PACE-S-AND-PACE-S-PRO-WARRANTY-STATEMENT.pdf

If you have any questions or suggestions regarding the instruction manual, please contact us via the following email address:

service@pongbotsports.com。

There will be no separate notice in case of any update to this manual.

You can download the latest version on the official website of Pongbot.

https://pongbotsports.com/operation-manual/