



# **ROBO-PONG<sup>®</sup>** **3050XL**

**OWNER'S MANUAL**

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# WELCOME!

## ***Congratulations on Purchasing a Newgy Robo-Pong 3050XL!***

Thank you for choosing Newgy! Newgy Industries, Inc. takes pride in developing high quality, smartly engineered table tennis products that are easy to use, while also being challenging and exciting.

The Robo-Pong 3050XL table tennis robot was developed to create the most human-like playing and training experience for you. The life-like features enable you to perfectly simulate any opponent - from recreational beginner player to Olympic Gold Medalist, and everything in between. With the simple touch of a button, you can decide to have a basic playing session, advanced training session, design your own training session, or a full-body aerobic workout session.

The easy-to-use App and Bluetooth® technology allows you to navigate easily from drill to drill. The Robo-Pong 3050XL really is the table tennis tool for everyone - easy enough for a beginner yet challenging enough for a pro!



Mr. Joseph E. Newgarden, Jr.  
*Founder / Inventor*

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***“For the last 21 years, I have traveled to Europe, Asia and throughout North America training and competing against the world’s best table tennis players. I know exactly what an Olympic-level training session should be.***

***With the development of the Robo-Pong 3050XL, robot training has “come to life” for me. With human-like combinations of different spins, deceptive serves, powerful smashes, no-spin balls, spinny loops and excellent variations, I can now get an Olympic training session from the convenience of my own home.***

***The best aspect of the robot is that it is designed for everyone. With the simple touch of a button, my wife, my five year-old daughter and I can all use the same robot to fit our different playing levels and training needs in the same session. Just select the drill and press play! I’m overjoyed by the simplicity - no adjustments necessary! I look forward to continuing to improve my table tennis skills with the Robo-Pong 3050XL as I train for the Olympics, and as I train my five year-old daughter to be a future Olympic champion!”***



**-Samson Dubina, U.S. National Team Member**



# QUICK START

1

## Verify All Parts

First, unpack your robot and all parts from the box and verify that everything is present. If a part is missing, please contact Newgy immediately (see back page for contact info).

- Robot
- Balls (U.S. Only)
- Rubber Tips
- Plastic Clips
- Transformer
- Device Holder
- Pong-Pal (U.S. Only)
- Tell-A-Friend/Warranty Flyer (U.S. Only)
- Quick Start Guide



2

## Preparing the Mounting Bracket

Place the robot on the table with the open front side facing you. *Gently* lift the robot's head and pull the mounting bracket towards you. Using the rubber tip packet - select and install the correct rubber tips for the thickness of your table so the trays stay level.



3

## Lift the Back Net Tubes

Turn the robot around 180° so the net support tubes are now facing you. Grasp the second tube from your right and pull up, removing it from its storage hole. Place the bottom of this tube into the top of the first tube on your right as shown. Repeat on the left side.



4

## Attach the Robot to the Table

Pick up the robot by the center base and secure it to the table by angling it downward and against the table. The support legs should be as wide as possible before they go underneath the table and the front support triangle sits on top of the table.



5

## Lower the Ball Trays

Grasp one of the ball return trays and lift straight up to unlock it. Now grasp the adjacent net support tube, and slowly lower it into position. Be careful not to let the tray or support tube slam down. Repeat on the other side.



# QUICK START

## 6 Attach the Side Nets

Attach the side nets to your table tennis table net by slipping the red flexible band over your table net support base and looping it over the table net clamp screw. Adjust each side nets tension to “lock” the trays firmly against the table, which reduces vibration and increases accuracy.



## 7 Pour in the Balls

Make sure that you use only recommended balls for the Newgy Robo-Pong 3050XL - Newgy Robo-Ball 2-Star 40+mm, or any ITTF-approved 2 or 3 star 40+mm balls. Do not mix 40+mm balls with other size balls. Extra Robo-Balls can be purchased at [www.newgy.com](http://www.newgy.com).



## 8 Plug-In the Robot

Plug the black power cable into the back of your robot.



## 9 Attach the Device Holder to Table

The included Personal Device Holder is for your convenience to safely hold your smart phone or tablet while playing and be within easy reach to adjust settings in the App. It is optional to use. To install, use the holder knob to attach the bracket to the Device Holder. Then slide the bracket under the table and adjust the bracket knob until it secures tightly to the table. This will function vertically or horizontally.



## 10 Download the Newgy App

Using your own personal electronic device (ie: tablet, smartphone or laptop), download and install the Newgy App from your device's App Store. For the Windows App visit <https://www.newgy.com/pages/downloads>



## 11 Connecting your Robo-Pong 3050XL to the Newgy App

### Android Users

- 1) Go to your Settings to turn on your Bluetooth® feature on your device.
- 2) Within your Bluetooth® settings, under Available Devices, select your robot (ie: NWGYC441).
- 3) Launch the Newgy App.
- 4) Press the “Play” button
- 5) There will be an automatic calibration process that your 3050XL will automatically execute (LED lights on the robot head will blink—it is also normal if the lights do not blink, top and bottom motors will run in turn). This will take approximately 30 seconds while connecting to your 3050XL.
- 6) You will be notified that your connection is successful.

### iOS Users

- 1) Go to your Settings to turn on your Bluetooth® feature on your device.
- 2) Launch the Newgy App.
- 3) Press the “Play” button
- 4) Select your robot (ie: NWGYC441).
- 5) Press “Pair” in pop-up window.  
*(This step is only necessary on initial set-up.)*
- 6) There will be an automatic calibration process that your 3050XL will automatically execute (LED lights on the robot head will blink—it is also normal if the lights do not blink, top and bottom motors will run in turn). This will take approximately 30 seconds while connecting to your 3050XL.
- 7) You will be notified that your connection is successful.

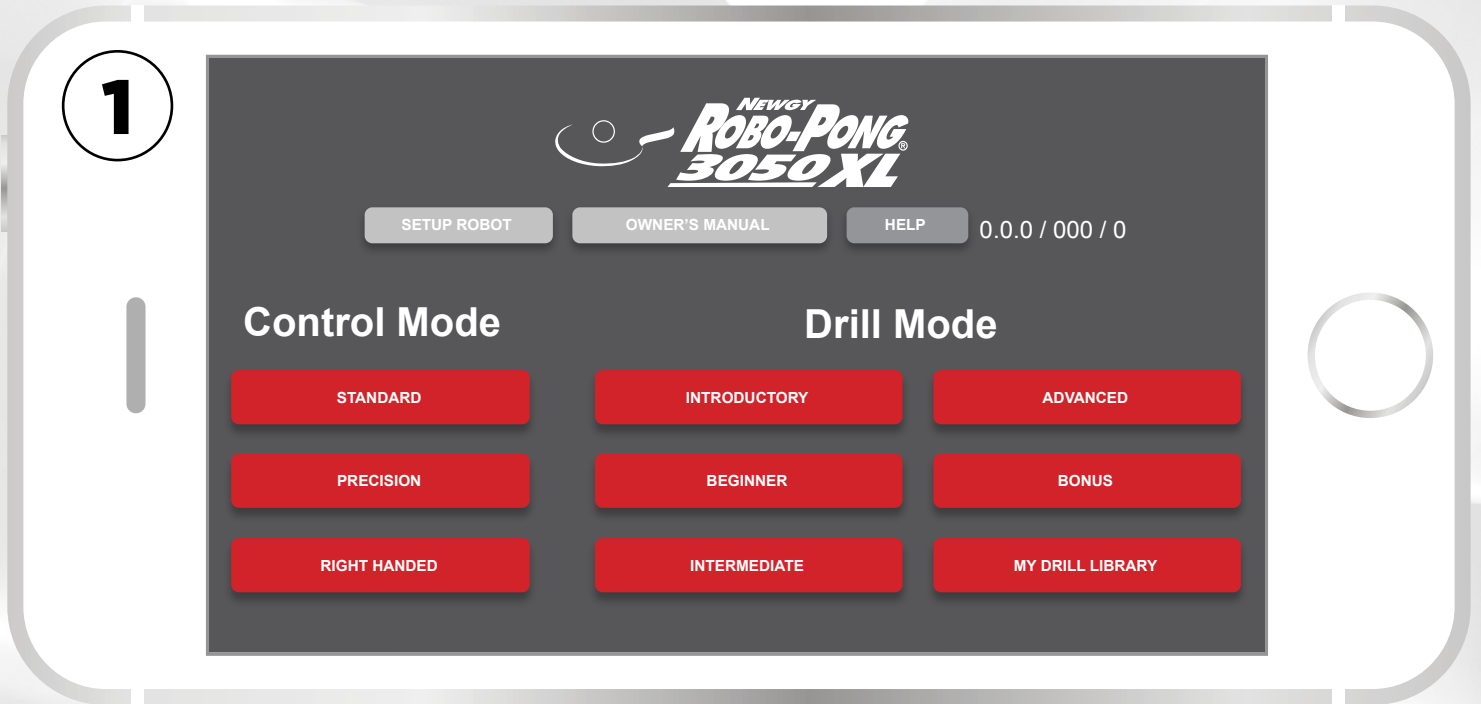
### Windows Users

To download the Newgy Windows App, go to <https://www.newgy.com/pages/downloads>. Note: the Windows App may or may not have all the features of the Android and iOS Apps.

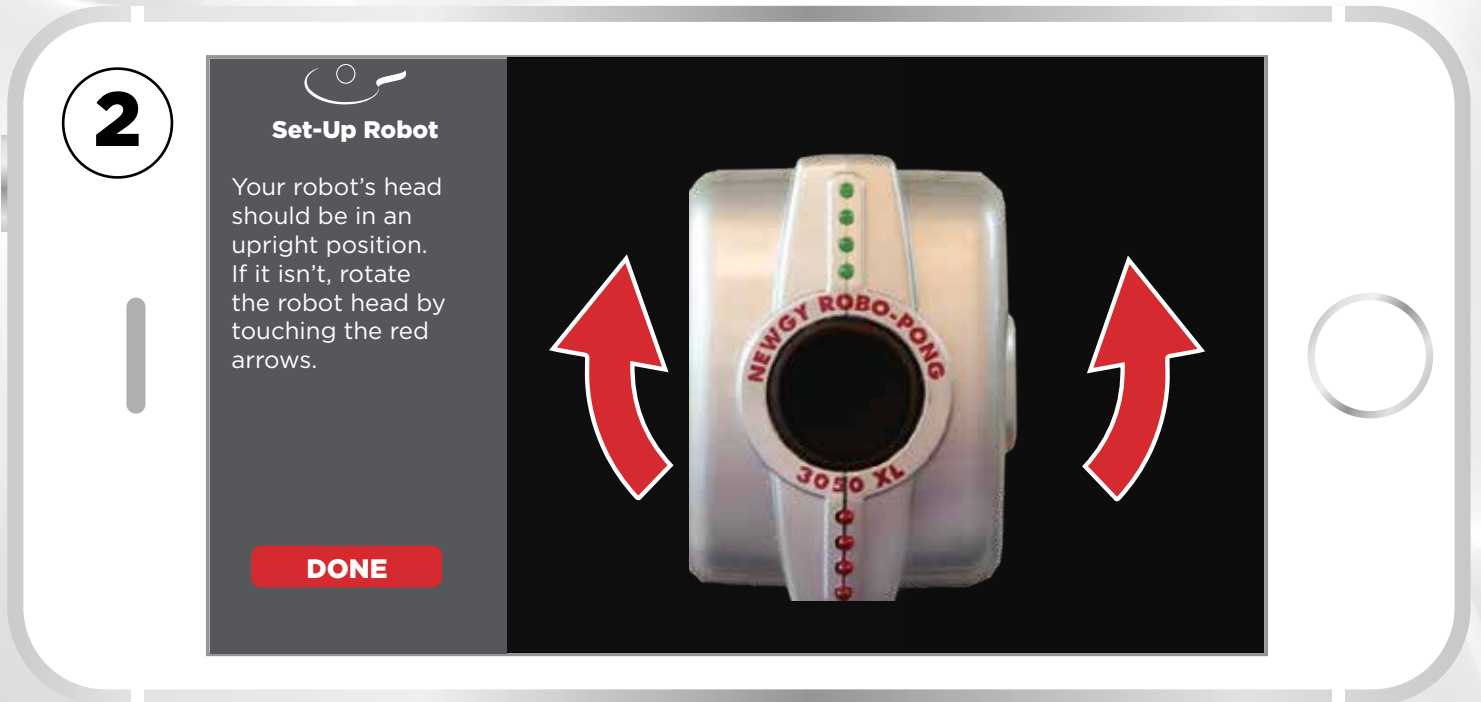
# QUICK START

## 12 **IMPORTANT** - Calibrate Your Robot

The calibration step is **required** to make sure your robot functions properly. This step will ensure all drills perform correctly.



1. To start the calibration process, press the gray SET-UP ROBOT button on the upper left of your screen (see image 1 above).
2. Adjust your robots head angle. The LED lights on your robot should be as close to verticle as possible (see image 2 below). Once you are finished with this step, press done.

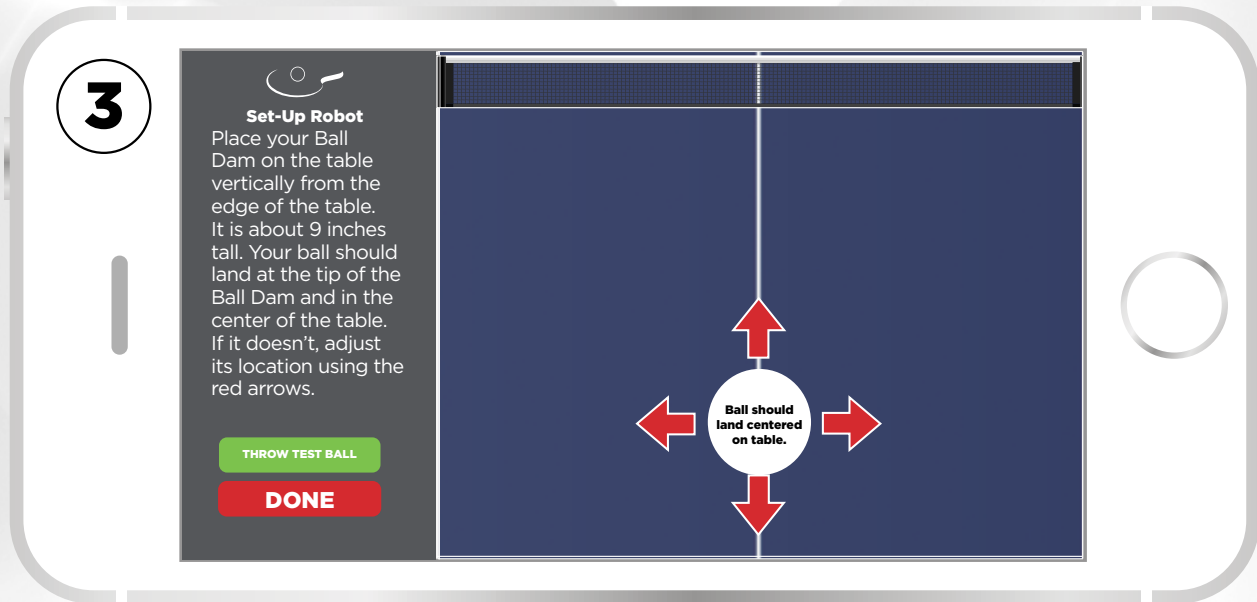




# QUICK START

## 12 **IMPORTANT** - Calibrate Your Robot (continued)

The calibration step is **required** to make sure your robot functions properly. This step will ensure all drills perform correctly.



3. This step is important to make sure all robot functions including drills run correctly. Place your robot's ball dam at the center edge of player's side of the table (see image 3A below). Use the arrows on the App to adjust placement of the ball (see image 3 above). Adjust the throw until the ball lands in a roughly 6" area in front of the ball dam (see image 3A below). Once you have the ball set it is helpful to throw a couple more balls to make sure of placement. Once this step is complete press done on your App to return to the home screen.



You are now ready to begin using your Newgy Robo-Pong 3050XL robot!\*

**Once Set Up is complete, the settings are saved and this step will not need to be completed the next time the 3050XL is operated. If you are experiencing position or height issues during play, the Set Up command can be used to re-calibrate your robot and correct ball placement issues.**

**\*If once you start playing *after calibration*, you are still having balls hit the net or throw off the table, start calibration again and complete step 4.**

**Operation Note:** Once your Robo-Pong 3050XL is plugged-in on you may hear a slight humming from the robot. This is normal during operation and will not affect the operation of your Robo-Pong 3050XL. It is always advisable to unplug your Robo-Pong 3050XL when not in use.

# QUICK START



4. **PLEASE SKIP THIS STEP ON INITIAL SET UP!** The Head Home Position was set at the factory and should be ready to use. However, if after you have completed the Set Up then find a large number of balls are hitting the top of the net or are off the table, start the SET UP sequence again and use this Head Height Adjustment to raise or lower the Home Position. Each touch of the arrow will cause a slight movement of the head, pushing the arrow quickly **will NOT** move the head faster, please allow a break between each touch of the arrow for the best control.



# OPERATING YOUR ROBOT

All robot functions are controlled by the Newgy App. This App will be periodically updated, so please check for new versions to experience the latest features. The contents in the “Operating Your Robot” section of this manual may vary in the future due to App updates.

## Home Screen



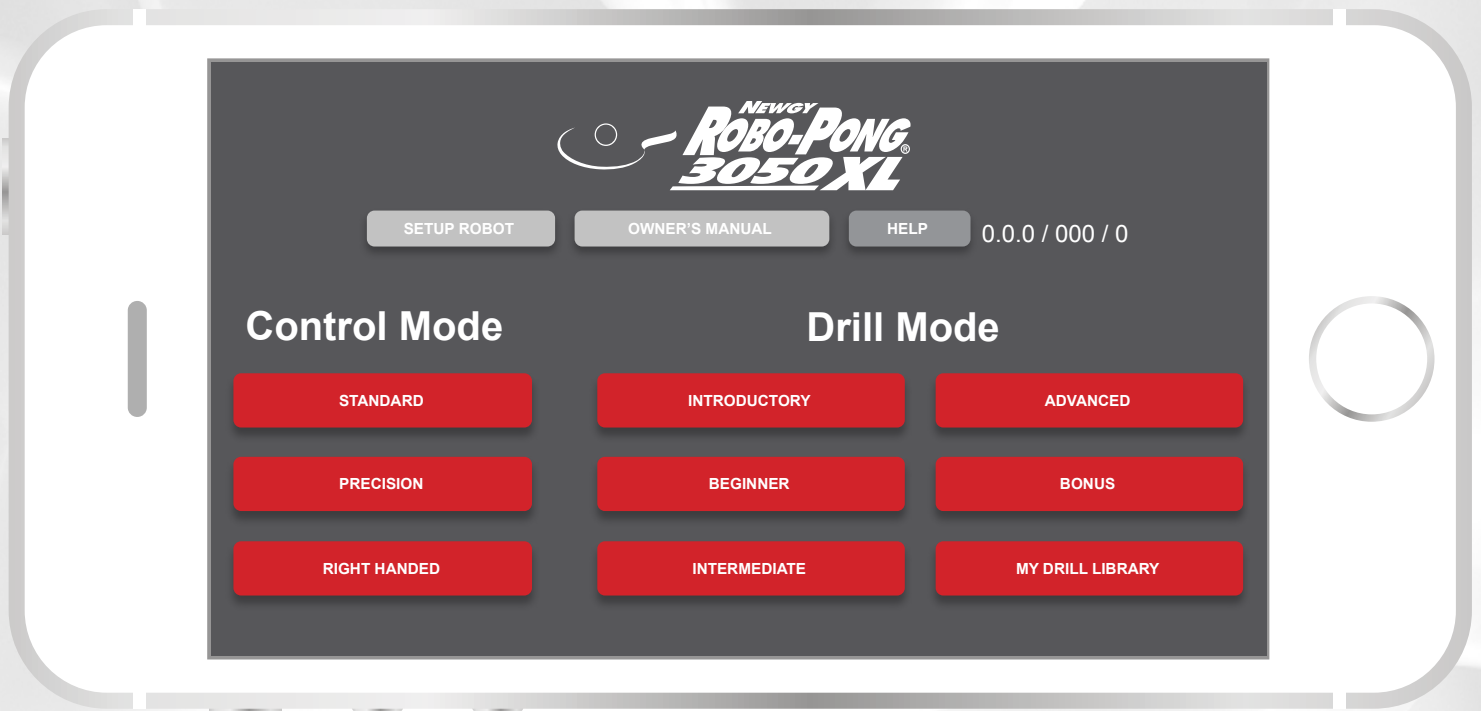
**PLAY:** Press this button to launch the Newgy Robo-Pong 3050XL experience.

**SHOP:** Press this button to navigate to [www.newgy.com](http://www.newgy.com) with a large inventory of table tennis equipment.

**SUPPORT:** Press this button to navigate to a wide-range of support information.

**CONTACT:** Press this button to navigate to Newgy’s contact information.

## Main Interface Overview



### Control Mode

**Standard:** Press this button to launch a mode of play with basic ball control options.

**Precision:** Press this button to launch a mode of play with a wide-range of ball control options.

**Hand Setting:** The App default is for Right Handed players. If you are left handed, change this setting to 'Left Handed' and all drills and settings will reverse to be applicable to a left handed player.

### Drill Mode

**Introductory:** Press this button to launch a mode of play with introductory-level drills.

**Beginner:** Press this button to launch a mode of play with beginner-level drills.

**Intermediate:** Press this button to launch a mode of play with intermediate-level drills.

**Advanced:** Press this button to launch a mode of play with advanced-level drills.

**Bonus:** Press this button to launch a mode of play with bonus drills.

**My Drill Library:** Press this button to launch your library of your custom saved and favorited drills. You can also Export and Import drills in My Drill Library.

**Set-Up Robot:** Press this button to launch your robot's set-up process. This can also be used if your robot needs re-calibration (see page 7 for further explanation).

**Owner's Manual:** Press this button for the Newgy Robo-Pong 3050XL Owner's Manual for more detailed information on your 3050XL.

**Help:** Press this button to launch help for your 3050XL, if needed.

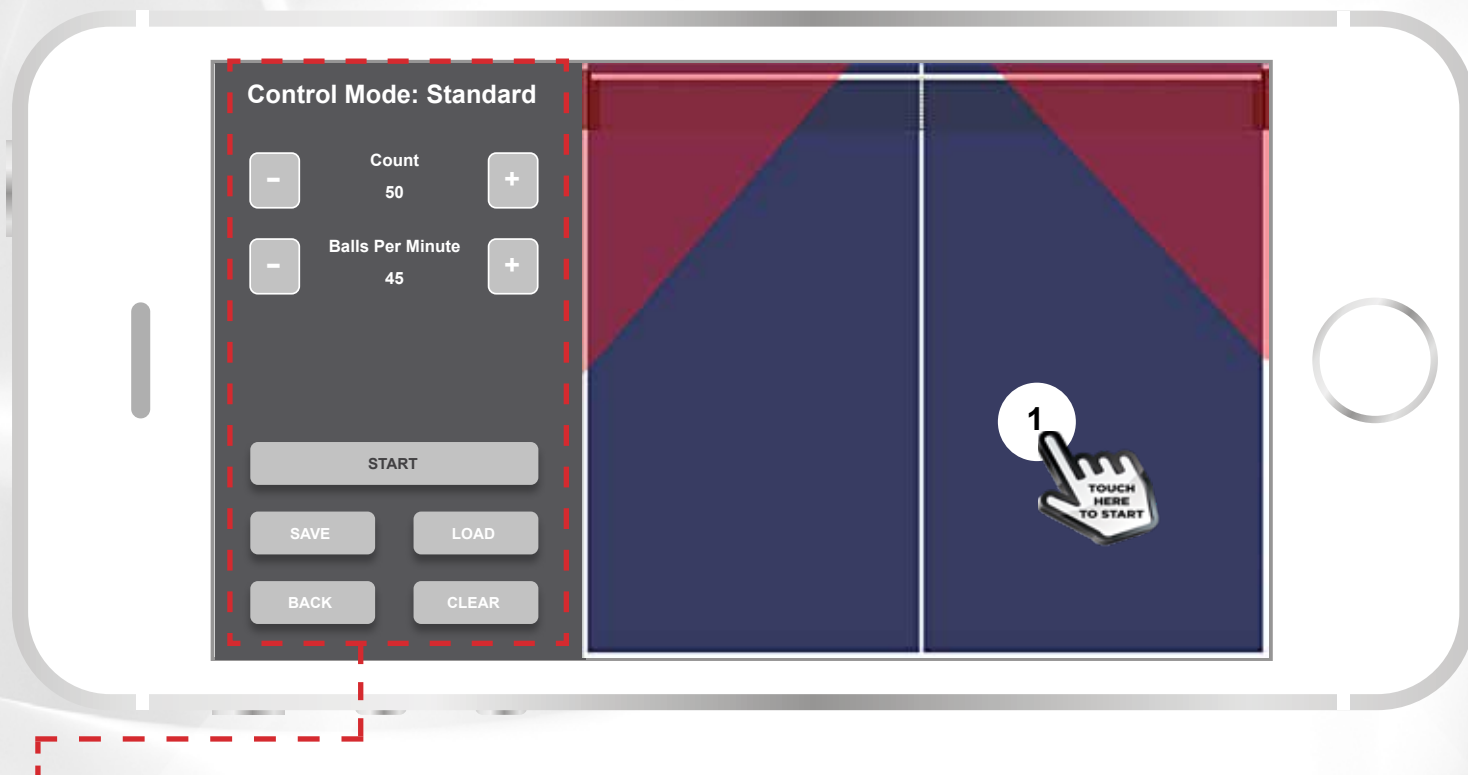
**App Version Number:** This number indicates the version of your Newgy App if needed for reference.  
(example in the above picture would be 0.0.0 / 000 / 0)

## Control Mode: Standard

In the Standard Mode, the user interface allows you to indicate where and what types of ball(s) the robot should throw. You select the landing position and properties of each ball and the 3050XL robot calculates the settings needed to deliver the ball(s) to each position.

You can specify 1 to 10 different balls in any Standard Mode drill. You can also specify the number of balls thrown before the drill stops (Count). **Examples:** a drill with 5 balls and a Count of 4 will stop the drill after 4 balls even though the drill is unfinished. A drill with 5 balls and a Count of 50 will run the drill 10 times and stop after the 50th ball. You can also specify the Balls Per Minute to adjust the frequency of ball delivery. For example 30 Balls Per Minute is one ball every 2 seconds and 90 Balls Per Minute is one ball every 3/4 seconds.

The main interface depicts your side of the table and 3 options for setting up a drill. These options are; the number of balls you set on the table, “Count” and “Balls Per Minute”.



**Count:** The total number of balls thrown before the drill stops.

**Balls Per Minute:** This is the frequency of ball delivery. The range is 1 to 120.

**Start:** Press this button to play your drill.

**Save:** Press this button to save your drill in My Drill Library with a custom name for future use.

**Load:** Press this button to load any of your favorited or saved drills that have been previously saved.

**Back:** Press this button to go back to the previous screen.

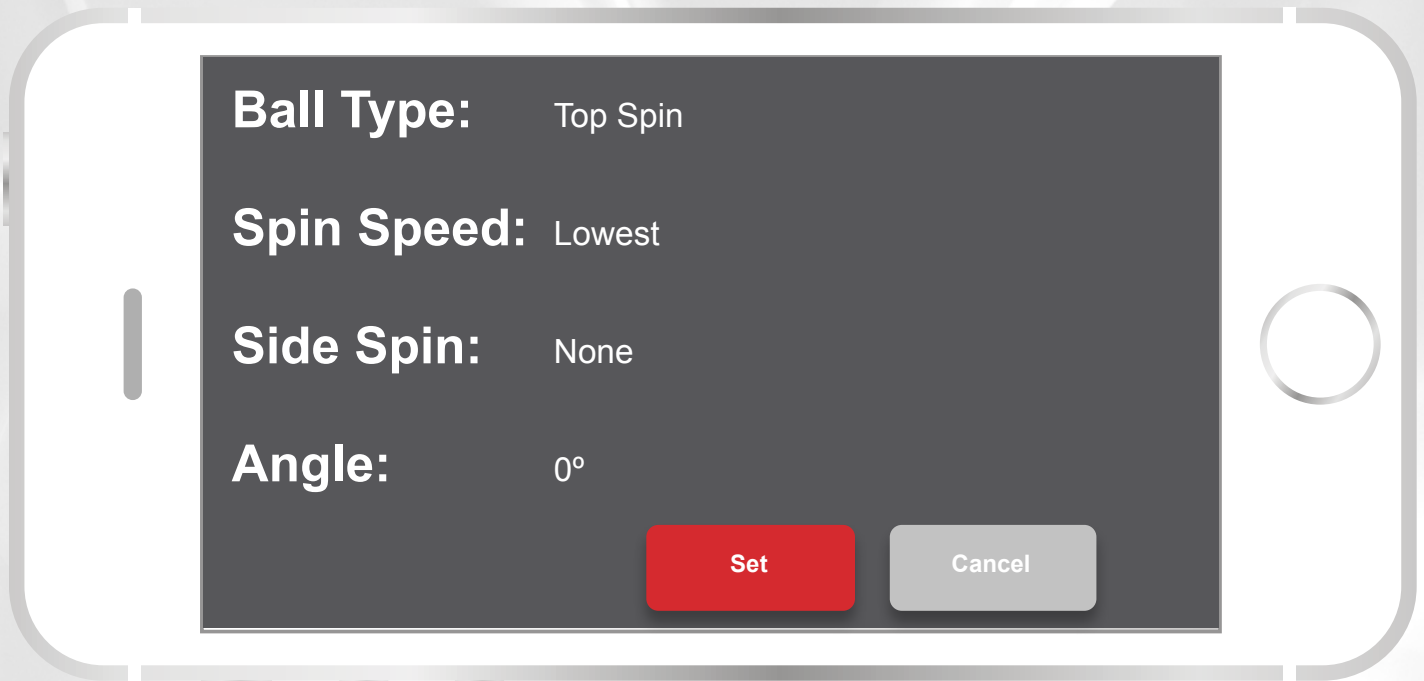
**Clear:** Press this button to clear all settings and ball placement.

When you “Touch here To Start”, a screen will open allowing you to touch and scroll through the settings to select the characteristics you want on the ball:

<b>Ball Type</b>	5 options	Top Spin or Top Spin Serve - Back Spin or Back Spin Serve - and No Spin
<b>Spin Speed</b>	7 options	Select from Lowest to Highest
<b>Side Spin</b>	3 options	None, Left, Right
<b>Angle</b>	7 options	0°, 15°, 30°, 45°, 60°, 75°, and 90°

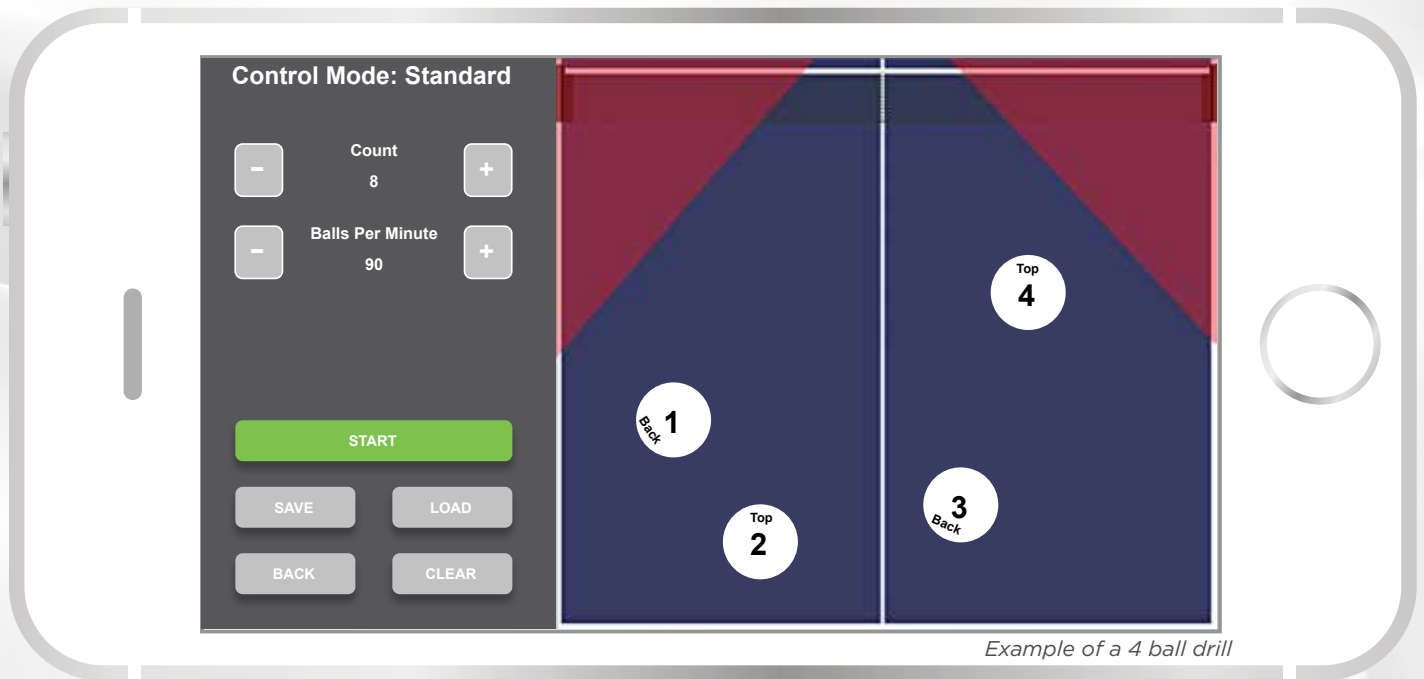


## Control Mode: Standard



Once you select the characteristics you want, press SET and the ball will appear on the table.

Each ball on the table is “draggable”, which means you can touch it and move it to a new location. You can also double touch it to change its characteristics. When the ball icon is moved, if color of the ball changes to red, the robot is judging that the ball that has been set cannot be delivered, and the robot will intelligently move it to a position where it can be delivered.



Notice that the Ball icon has a visual indicator of the spin. Top Spin balls have **Top** on the upper part of the Ball icon to indicate it is a top spin ball. Back spin balls will have **Back** on the bottom of the Ball icon. The words Top and Back will be angled to the left or right if you have added left or right sidespin to a ball. The location of the words Top or Back reflect the amount of sidespin angle selected.

Pressing the “Start” button will prepare the robot for the drill. There will be a delay of 3 seconds before the drill begins. To stop the drill at any time, press STOP on the device screen.

Once you have created a drill you like, you can save it as a custom drill to use at a later date. The robot also comes with several pre-programmed drills you can choose from in Drill Mode. If you wish you can share the drill using the Export feature in My Drill Library. You can also receive drills from other 3050XL owners and coaches by using the Import feature in My Drill Library.

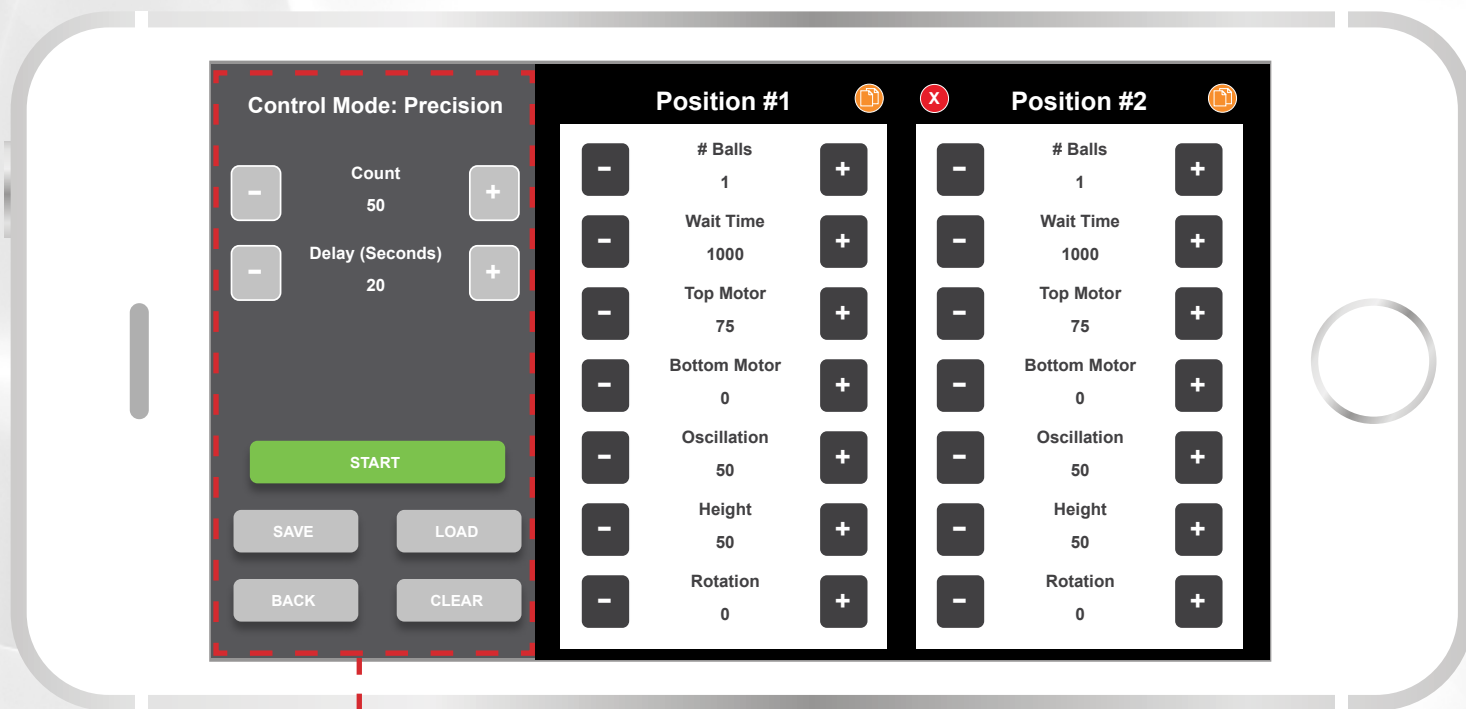
## Control Mode: Precision

In the Precision Mode, the interface uses a “Position” to define where the ball(s) will be delivered. In this mode it is the user (not the 3050XL) that controls and calculates the 7 attributes which are applied to all balls in each Position. You can specify the number of balls from 1 to 10 that are sent to that Position,

Once you create a Position, you can duplicate it, add another Position or delete a Position if needed. You can also make adjustments to any Position as you create drills.

You can also specify the number of balls thrown before the drill stops (Count). Examples: a drill with 5 Positions of 1 ball each and a Count of 4 will stop the drill after 4 balls even though the drill is unfinished. A drill with 5 positions of 1 ball each and a Count of 50 will run the drill 10 times and stop after the 50th ball.

When you are satisfied with a Precision Mode drill, you can save it as a custom drill in My Drill Library. If you wish you can share the drill using the Export feature in My Drill Library. You can also receive drills from other 3050XL owners and coaches by using the Import feature in My Drill Library.



**Count:** The total number of balls thrown before the drill stops.

**Delay (Seconds):** This is the duration of time, in seconds, before the drills starts over. (Example: In the image above, the delay time after Position #2 has completed will be 20 seconds before Position #1 runs again.)

**Start:** Press this button to play your drill.

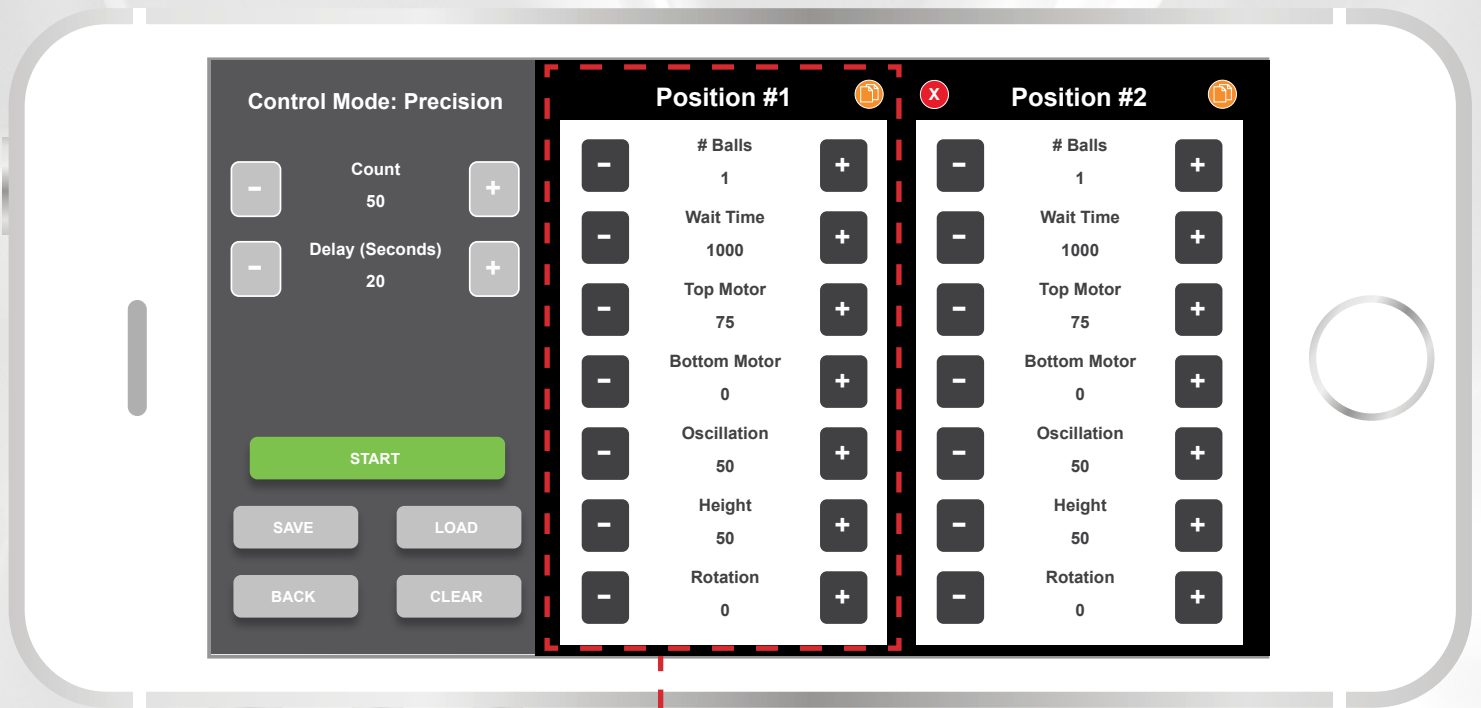
**Save:** Press this button to save your drill in My Drill Library with a custom name for future use.

**Load:** Press this button to load any of your favorited or saved drills that have been previously saved.

**Back:** Press this button to go back to the previous screen.

**Clear:** Press this button to clear all settings and positions

## Control Mode: Precision



Each position in the interface gives you 7 attributes to control each ball:

**Number of Balls:** This is the number of balls you want in each ball Position.

**Wait Time:** This is the time between balls in each Position. Note that the Wait Time also affects the time between the last ball in a Position and the first ball in the next Position. (Example: In the image above, when transitioning between Position #1 to Position #2, the Wait Time between these two Positions will be 1 second, because Position #2's Wait Time is 1 second. *In the example above a wait time of 1000 = 1 second.*)

**Top Motor (Wheel):** This is the speed of the top motor. Positive numbers to 100 (1 to 100) will turn the wheel forward and increase the amount of top spin. Negative numbers to 100 (-1 to -100) will turn the wheel backwards, adding more spin to the back spin effect. At number 0, the wheel does not spin.

**Bottom Motor (Wheel):** This is the speed of the bottom motor. Positive numbers to 100 (1 to 100) will turn the wheel forward and increase the amount of back spin. Negative numbers to 100 (-1 to -100) will turn the wheel backwards, adding more spin to the top spin effect. At number 0, the wheel does not spin.

**Motor (Wheel) Notes:** One of the main benefits to having two motors is you can now achieve more spin without having to increase the speed at the same time.

For even more spin on your ball, use both the top and bottom motors and set them to counter each other. Example: Set your top motor at -50 and your bottom at 50.

If you desire no spin on your ball, set both the top and bottom motors to the same speed. Example: Set your top motor at 50 and your bottom motor at 50.

**Oscillation:** This controls the robot from left to right. Numbers 0 to 49 will turn the robot head to the player's left, and numbers 51 to 100 will turn the robot head to the player's right, with the centerline of the table being 50.

**Height:** This controls the robot head tilting up and down. This value ranges from 0 to 100. At number 50, the robot head stays at a level position.

**Rotation:** This controls the rotation of the robot head that creates your desired side spin. Range is -90 to +90, with 0 being a vertical robot head. Negative numbers (-1 to -90) rotate it to the players left, positive numbers (1 to 90) rotate it to the players right.

Pressing the green "+" button allows you to add a Position to your drill. Pressing the red "x" button removes the Position from your drill. Pressing the yellow "copy" button copies the Position to your drill.

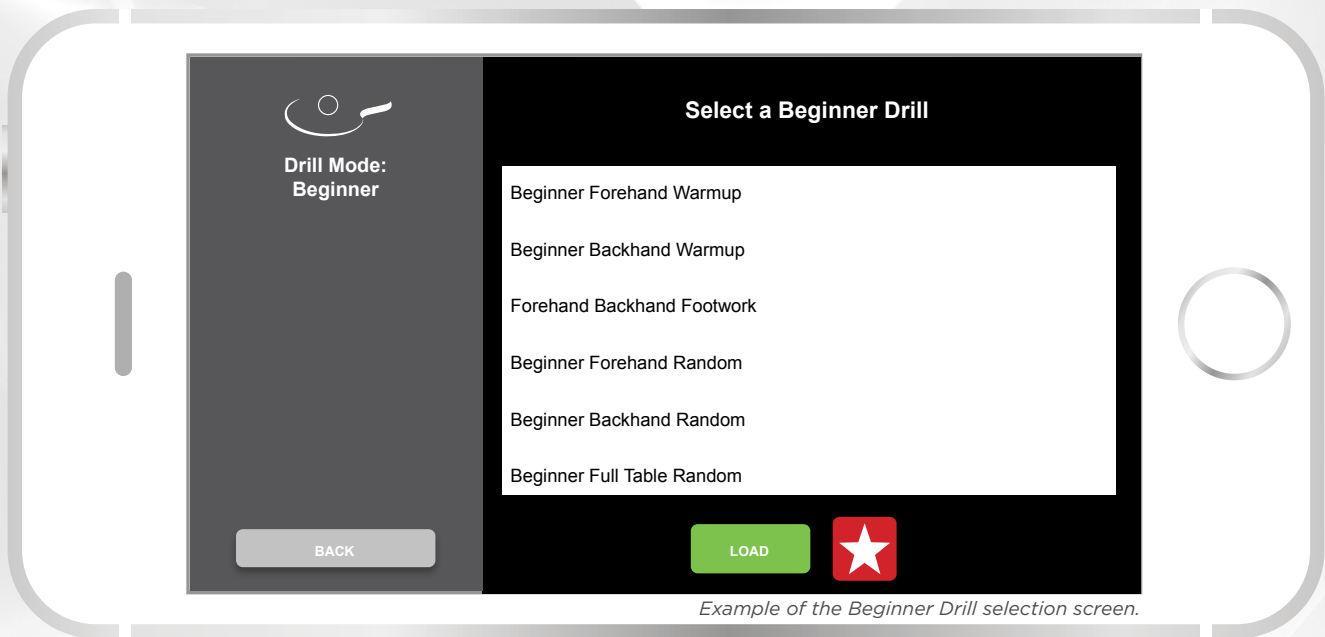
Once you have chosen the 7 attributes for each of the Positions, press the Start button to activate your Precision Mode drill.



## Drill Mode

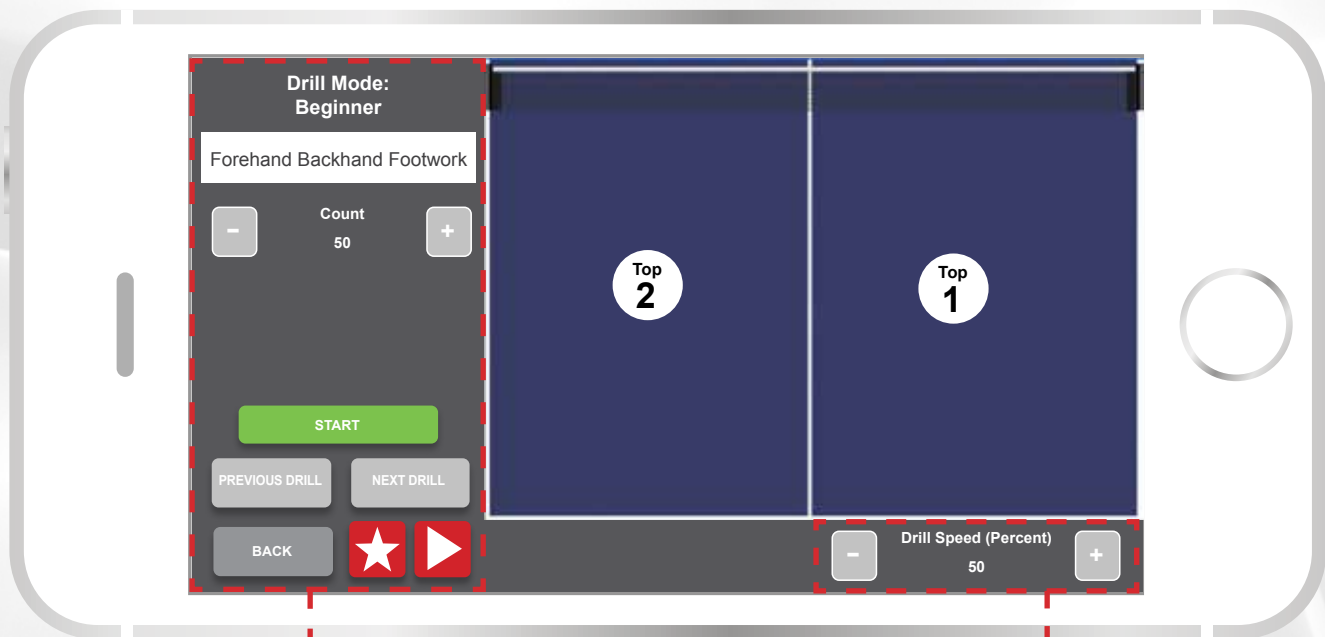
Your Robo-Pong 3050XL comes pre-programmed with several table tennis drills. These drills are divided up into skill levels (including Introductory, Beginner, Intermediate and Advanced - plus Bonus Drills), giving you the flexibility to choose your training based off your experience, skill level and goals. Please refer to the Newgy App to access the pre-programmed drills.

In Drill Mode you can select a skill level (Beginner, Introductory, etc.). Then press and highlight any drill. Press Load to prepare the drill for playing.



Example of the Beginner Drill selection screen.

Once loaded, the Drill Mode skill Level is displayed along with the drill name selected. Other settings are:



**Count:** Sets the number of balls thrown before the drill stops.

**Start:** Starts the selected drill.

**Previous Drill / Next Drill:** moves through the list of drills in the selected skill level.

**Drill Speed (Percent):** Allows you to slow a drill down as you learn, and then increase the drill speed as you become more proficient. Range is 50% to 125%.



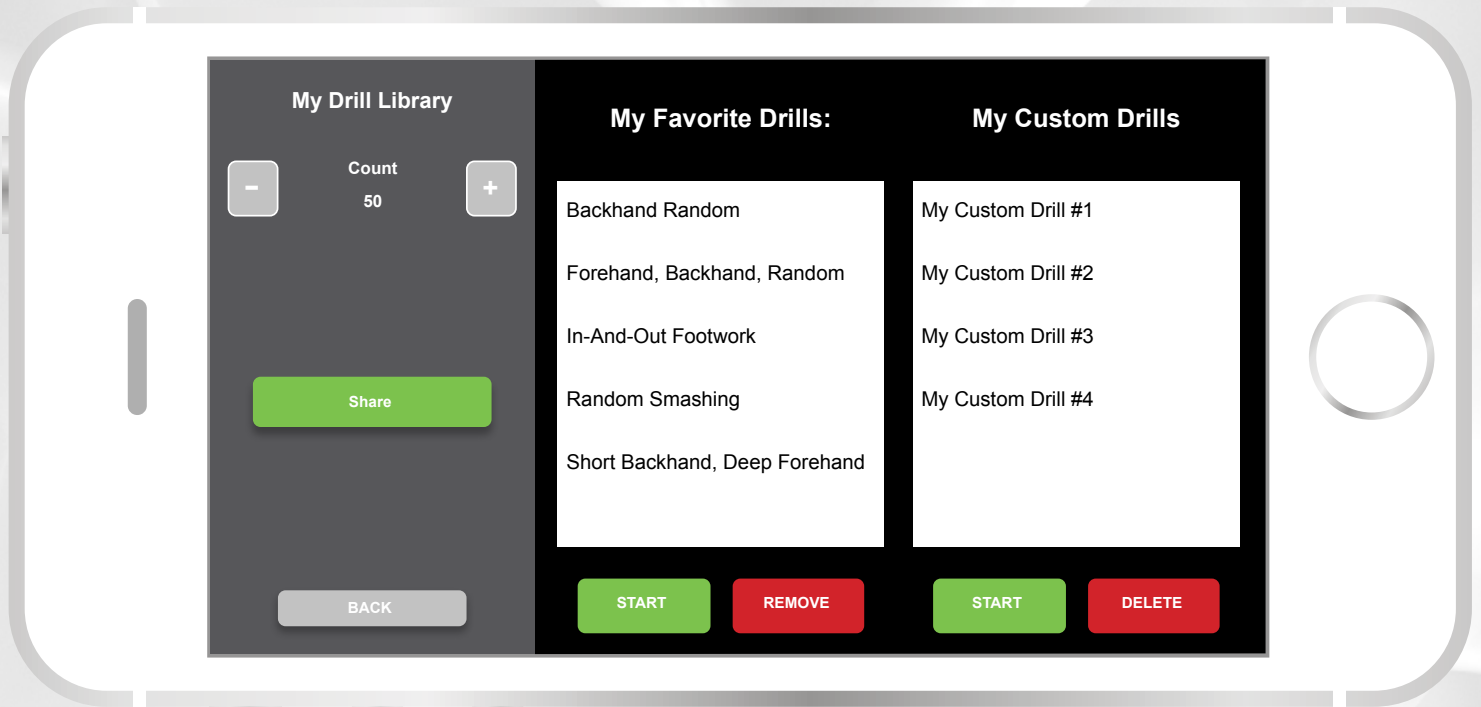
Marks a drill as one of your favorites and lists the drill in 'My Drill Library'.



Plays a sample video\* of the drill (\* May not be available in all countries or regions).

## My Drill Library/Saving/Sharing/Importing

Easily save, store, import, export and access your Favorite and My Custom Drills here.



### Creating and saving a Newgy Robo-Pong 3050XL Drill - **Android**

Using an Android device with a Newgy 3050XL robot and the Newgy App, users can create custom drills in the Newgy 3050XL Android App in either the Standard Mode or Precision Mode.

Once a drill is created, press SAVE to save the drill to My Drill Library.

Enter a name for the drill in the Drill Name text field, and optionally enter details about the drill in the Description text field.

Select Save and note that the drill is now saved in My Drill Library under My Custom Drills. Newgy Drills are saved as .XML files.

### Sharing Drills

In My Drill Library under My Custom Drills, press the “Share” button on the left of the screen.

On the Share Drills screen select the drill(s) you wish to share by pressing the toggle button, red means the drill is ready to share, white means the drill will not be shared.

Press Share on the bottom right of the screen. In the pop-up window select the method you want to use to share the drill. You can also save the drill(s) to your device files from this window.

Complete the sharing process by sending the drill(s) via the selected method.

A copy of the drill(s) that were shared can be found in your file manager. This location will vary by device.

### Importing Drills

To Import a drill with email select the shared drill(s) that were sent and the Newgy APP will be opened. Select the drill(s) you wish to Import and press the Import button. The drills will now be saved to your device.

To Import a drill with WeChat select the drill(s) that were sent, In the window that opens select “open with other app” and the Newgy APP will be opened. Select the drill(s) you wish to Import and press the Import button. The drills will now be saved to your device. You will see a confirmation message that says Drills Imported.

## My Drill Library/Saving/Sharing/Importing (Continued)

### Creating and saving a Newgy Robo-Pong 3050XL Drill - [Apple iOS](#)

Using an Apple iOS device with a Newgy 3050XL robot and the Newgy App, users can create custom drills in the Newgy 3050XL Apple iOS App in either the Standard Mode or Precision Mode.

Once a drill is created, press SAVE to save the drill to My Drill Library.

Enter a name for the drill in the Drill Name text field, and optionally enter details about the drill in the Description text field.

Select Save and note that the drill is now saved in My Drill Library under My Custom Drills. Newgy Drills are saved as .XML files.

### Sharing Drills


In My Drill Library under My Custom Drills, press the “Share” button on the left of the screen.

On the Share Drills screen select the drill(s) you wish to share by pressing the toggle button, green means the drill is ready to share, white means the drill will not be shared.

Press Share on the bottom right of the screen. In the pop-up window select the method you want to use to share the drill. You can also save the drill(s) to your device files from this window.

Complete the sharing process by sending the drill(s) via the selected method.

### Importing Drills

To Import a drill with email select the shared drill(s) that were sent and the .xml file will open in another window. Press the share/save icon  at the top right of the screen and select “Copy to Newgy” in the pop-up window. The Newgy APP will open, select the drill(s) and press Import. You will get a confirmation that your drill(s) were imported.

To Import a drill with WeChat select the drill(s) that were sent, In the window that opens select “open with other app”. Select “Copy to Newgy” in the pop-up window. The Newgy APP will open, select the drill(s) and press Import. You will get a confirmation that your drill(s) were imported.

### Creating and saving a Newgy Robo-Pong 3050XL Drill - [Windows 10](#)

Using a Windows 10 device with a Newgy 3050XL robot and Newgy Windows App, users can create custom drills in the Newgy 3050XL Windows App in either the Standard Mode or Precision Mode.

Once a drill is created, press SAVE to save the drill to My Drill Library.

Enter a name for the drill in the Drill Name text field, and optionally enter details about the drill in the Description text field.

Select Save and note that the drill is now saved in My Drill Library under My Custom Drills. Newgy Drills are saved as .XML files.

### Exporting Drills

In My Drill Library under My Custom Drills, highlight the drill(s) to Export and click on the EXPORT button.

The drill file(s) will be exported and saved into your Windows device under Documents>Newgy3050>Drills.

The drill(s) can then be sent as an email attachment or through WeChat to another 3050XL owner for download and import into their Newgy 3050XL App. (also see USB Drive Transfer below)



## My Drill Library/Saving/Sharing/Importing (Continued)

### Importing Drills

In email, select and download the attached drill(s) to a Windows 10 device. The drill(s) will be saved to the device in the default location for downloads. Newgy suggests to save drills to ThisPC>Downloads>drill name.

Connect the Windows 10 device to a Newgy 3050XL robot, power on the robot, open the Newgy App and connect to the 3050XL robot.

Go to My Drill Library, select IMPORT and My Documents will open on the Windows device.

Go to Downloads and select one file at a time to be imported. Press open for each drill to be saved into the App. The drill(s) will be saved in My Drills Library under My Custom Drills. The drill(s) can now be played on a Newgy 3050XL robot.

### USB Drive Transfer

Drills may also be Exported from the Newgy App to a Windows 10 device and then transferred to a USB drive, as well as downloaded from a USB drive and imported to the Newgy App. However, Newgy does not currently support Export and Import sharing other than through Email transfer as noted above.

## Indicator Lights

The Newgy Robo-Pong 3050XL has excellent spin variation in the rallies, just like playing against a real opponent in a tournament! The green and red indicator lights will let you know the exact spin on the ball so that you can choose the correct stroke to use.

- 1 green light = light topspin
- 2 green lights = medium topspin
- 3 green lights = heavy topspin
- 4 green lights = very heavy topspin
- No lights = no spin
- 1 red light = light backspin
- 2 red lights = medium backspin
- 3 red lights = heavy backspin
- 4 red lights = very heavy backspin



As in a real match, there are also sidespin variations as well. The robot's head will turn clockwise or counterclockwise before throwing a sidespin ball. The direction of the lights is the direction of the sidespin. For example, if you see the indicator lights pointing to the left, that signifies that the opponent's racket went to the left (similar to a backhand sidespin serve). If the indicator lights point to the left and down, that signifies that the opponent's racket went to the left and down (similar to a backhand backspin/sidespin serve).

In order to return the spin, touch the same side of the ball as the lights are indicating. If you see lights on the bottom of the robot's head, touch the bottom of the ball. If you see lights on the right, touch right. If you see lights on the top-right, then touch top right. Using the 3050XL to return the various spins is really the best way to learn how to counter the spin and impart your own spin!

## Notice:

In the event that your Bluetooth® connection is lost or the robot unpairs from your device, follow these steps to begin a new connection:

- 1) Exit and restart the Newgy App
- 2) Turn your device's Bluetooth® capability off and then back on again
- 3) Reconnect your Robo-Pong 3050XL to your device using the Newgy App

# DRILL DESCRIPTIONS

## INTRODUCTORY DRILLS

### Forehand Warmup

This drill gives you a steady no-spin ball, slowly to your forehand.

### Backhand Warmup

This drill gives you a steady no-spin ball, slowly to the backhand.

### Forehand 2-Step Footwork

2 Positions: to the middle and forehand, move your feet.

### Backhand 2-Step Footwork

2 Positions: middle and backhand, move your feet.

### Forehand Push

Light underspin to learn spin control.

### Backhand Push

Steady light underspin to backhand to learn spin control.

### Forehand Push With Footwork

This drill gives you a very light backspin ball, one to the middle and one to the forehand.

### Backhand Push With Footwork

This drill gives you a very light backspin ball, one to the middle and one to the backhand.

### Forehand Topspin

Direct light topspin to your forehand.

### Backhand topspin

Direct light topspin to your backhand.

### Forehand Topspin With Footwork

Light topspin to the middle and forehand, move your feet.

### Backhand Topspin With Footwork

Light topspin to the middle and backhand, move your feet.

### Forehand Backspin

This drill gives you a very light backspin ball directly to your forehand.

### Backhand Backspin

This drill gives you a very light backspin ball directly to your backhand.

### Forehand Backspin With Footwork

Light backspin to middle and forehand, move your feet.

### Backhand backspin With Footwork

Light backspin to middle and backhand, move your feet.

### Three Balls

Topspin, underspin & no spin to test your spin ready skills.

### No Spin Forehand

Deep with no spin, so return with maximum spin!

### No Spin Backhand

Deep with no spin, so choose which spin you want to return.

## BEGINNER DRILLS

### Beginner Forehand Warmup

Warm-up your basic forehand stroke by keeping your angle set at 90 degrees and stroking forward on the ball.

### Beginner Backhand Warmup

Warm-up your backhand stroke by controlling the ball to different locations – sometimes hitting to the forehand, sometimes middle, and sometimes backhand.

### Forehand Backhand Footwork

Link the strokes together by hitting one forehand and one backhand! Use a mini-step to move from one ball to the next.

### Beginner Forehand Random

This drill is a bit more challenging. The robot will move the ball around in the forehand zone; watch the robot's head and look for the subtle variations!

### Beginner Backhand Random

This drill will give you balls in the backhand zone. Keep your racket in front, move into position, and control the ball sometimes hitting a bit harder, sometimes giving a slow variation!

### Beginner Full Table Random

Now this feels more like a game! Just like playing a real opponent, the balls will go anywhere on the table. Work on adjusting to the ball, while still maintaining good ball placement on all of your shots.

### Serve Then Two Random

This drill gives you a serve then two balls anywhere, then a break, just like a game.



### **In-And-Out Footwork**

Move in for the short forehand, then move back for the deep forehand. Next, move in for the short backhand, then move back a bit for the deep backhand. Stay on your toes, leaning forward, and contact the ball in-front of your body.

### **Three Middle, One to Either Corner**

Pay Attention! The first three balls go to your middle, then suddenly the fourth ball goes surprisingly to either corner. Watch the robot's head and be ready to make the adjustment!

### **Forehand Random**

Within the forehand side of the table, you will get medium speed balls. Move quickly, get in position, and turn your shoulders as you make contact with the ball!

### **Backhand Random**

Within the backhand side of the table, you will get medium speed balls. Lean forward, creating space for your backspin, and brush the ball forward using your wrist and forearm to generate spin on your backhand stroke.

### **Fast Random**

Be ready to quickly adjust, these balls will be coming anywhere on the table. Keep your racket in front and be ready to make fast transitions from middle to forehand to backhand!

### **Short Forehand, Deep Backhand**

The first ball will be short to your forehand, then the follow-up ball will be deep to your backhand. If you are right handed, step forward with your right foot to get you closer to the ball.

### **Short Backhand, Deep Forehand**

Attack the first ball with your backhand, then quickly get back for the deep forehand.

### **Backhand Rally, Surprise Forehand**

This is just like a game. It starts with a serve, then gives a backhand rally of one to five balls, then suddenly it surprises you to the forehand. After the sequence, it gives a short break for you to physically and mentally recover for the next ball.

### **No-Spin Serves**

This drill gives you no-spin serves. You can choose whether to chop or attack each of these balls. Whichever you choose, make sure that you keep a relaxed grip and brush the ball to impart maximum spin.

### **Serve, Two Speed Balls**

After returning the serve, get ready for two fast balls. Just meet the ball and focus on keeping it low!

### **Serve, High Forehand, High Backhand**

After returning the serve, you will get a high ball

to your forehand then a high ball to the backhand. Get in position and smash both high balls with your powerful forehand!

### **Serve, Then Speed**

After returning the serve, be ready for three fast balls - one to the forehand, one to the middle, then one to the backhand.

### **Forehand Game Situation**

First, you will get a backspin serve to the forehand, push it. Next you will get a deep backspin ball to the forehand, get down low and loop it up and over the net. Finally, you will get a deep topspin ball to the forehand, start your hand high and drive through the ball forward.

### **Backhand Game Situation**

First, you will get a backspin serve to the backhand, push it. Next you will get a deep backspin ball to the backhand, get down low and loop it up and over the net. Finally, you will get a deep topspin ball to the backhand, start your hand high and drive through the ball forward.

### **Short Serve Then 10 Balls**

You will get a short serve, step forward and push or flip this ball. Next, you will have a marathon rally of 10 topspin balls anywhere on the table. You will then have a short rest before the next rally.

### **No Spin, Topspin**

Watch out for the tricky spin variations. The robot will alternate between no-spin serves and topspin serves! Pay attention and adjust your swing slightly for each ball!

### **Left Sidespin Serve Return**

Regardless if you choose to hit with your forehand or backhand, touch the right side of the ball to control it onto the table.

### **Right Sidespin Serve Return**

If you contact the back of the ball, it will fly off your racket far to the left. In order to counter the spin, touch the left side of the ball.

### **No-Spin Serve Return**

Against these serves, float the ball controlled over the net with a steady chop.

### **Topspin Serve Return**

Using a controlled stroke, contact the ball with a relaxed grip and a 60 degree racket angle.

### **Lefty Sidespin Serve Anywhere**

Be ready to adjust in-and-out as well as side-to-side for these very spinny left sidespin serves.

### **Right Sidespin Serve Anywhere**

Prepare for the long sidespin serve, but always be ready to move in slightly with the right foot for the surprise short one! To control the spin, touch the left side of the ball.

### **Left Sidespin Topspin Serve**

To return this combo serve, contact the top right of the ball. If you imagine that the ball is a globe with the United States facing you, you will touch the state of Maine.

### **Right Sidespin Topspin Serve**

To return this combo serve, contact the top left of the ball. This serve is a simulation of a right handed player doing a backhand serve.

### **Backspin, Topspin**

After getting a backspin serve, you will then get five topspin balls anywhere. Try to keep score against the robot. Every time you get all 6 balls back, it is 1 point for you. Every time you miss during the six ball sequence, it is a point for Robo-Pong. Games to 11. Loser buys lunch.

## **INTERMEDIATE DRILLS**

### **Intermediate Forehand Warmup**

Contact the top of the ball and swing forward toward the top of the net.

### **Intermediate Backhand Warmup**

Use a quick, short stroke and get ready for a series of quick balls to your backhand.

### **Two Backhands, Two Forehands**

Practice varying your spin a bit. Hit the first ball at medium speed, then the next a bit faster. Alternate speeds between each hit - medium backhand, hard backhand, medium forehand, hard forehand.

### **Forehand, Middle**

What a workout! Continuously move for every ball, playing one forehand from the forehand side then one forehand from the middle!

### **Backhand, Middle**

Backhand footwork is one of the most neglected aspects of the game! Use your backhand from the backhand side then quickly move and use your backhand from the middle of the table.

### **Backhand, Middle, Backhand, Forehand**

This systematic drill alternates between backhand and forehand with a unique pattern - backhand, middle, backhand, forehand!

### **One or Two Backhands, One or Two Forehands**

I love this semi-systematic drill. Watch the robot's head to see where the ball is going, then focus on

the ball as it approaches.

### **Middle, Corner**

This is one of the world's most popular drills! Play a forehand from the middle, then be ready to adjust for the surprise to either corner. The pattern continues, one middle then one to either corner. See if you can last for three full minutes!

### **Wide Faulkenberg**

This drill gives you two balls to the backhand then one ball to the wide forehand. Play the first ball with your backhand, play the second ball with your forehand from the backhand side, play the final ball with your forehand from the forehand side.

### **Forehand Random**

You will be getting speed balls anywhere in the forehand side of the table. Take mini-steps and continue to move for every ball!

### **Backhand Random**

Your choice, you can use all backhand or you can choose to use both backhand and forehand for this drill. As you improve, you can also vary the speed, spin, and placement of your shots!

### **Random**

The fast topspin balls will now go anywhere on the table. Be ready to move, especially for the tricky middle ball. Keep your feet active, stay on your toes, and be ready to adjust!

### **Short Forehand, Deep Backhand**

After getting a short backspin ball to the forehand, you will then get two quick topspin balls to the backhand. Push or flip the short one, then loop the two deep ones.

### **Serve Then Footwork**

After getting a short backspin ball to the backhand, you will then get three deep topspin balls - one to the forehand, one to the middle, and one to the backhand. After these four balls, you will get a short rest before the next sequence.

### **Three Ball Drill**

You will get a short backspin serve to the middle, followed by a heavy backspin ball to either corner, followed by a spinny topspin ball back to the middle!

### **Three Ball Random**

This is the same as the previous drill, but now all three balls are random! Short backspin then long backspin then long topspin!



### **Twelve Ball Rally**

It all starts with a short backspin serve followed by a long backspin push, then the marathon begins – ten fast topspins anywhere. It's like playing a blocker who never misses!

### **No Spin, Topspin, High Ball**

This is what the 3050 XL is all about... Game-like variations! You will get a sequence of a no-spin balls, then a topspin ball, then a high ball.

### **Left Sidespin Then Rally**

After returning the left sidespin serve, be prepared for three or four or five fast topspin balls. Keep track of the score, every time you have a perfect rally, you get one point. Every time you miss a ball during the rally, the robot gets one point! Games to 11! I never said he was an easy opponent!

### **Serve Then Backhand Random**

After returning the right sidespin serve, you will then get a tough rally of ten balls randomly to your backhand!

### **Serve Then Speed**

Attack the topspin serve then block the next two speed balls. To control your block, relax your grip and keep your hand in-front of your body and cushion the ball with a pillow grip.

### **High Spins**

This difficult five ball drill gives you a serve, then a high backspin, high topspin, high backspin, high topspin. Smash the backspin by going up and forward. Smash the topspin by going down and forward.

### **High Backhand, High Forehand**

Use your forehand to smash both balls – one high ball from the backhand side and one high ball from the forehand side.

### **High Spins**

Smash the high topspin ball by hitting slightly down and forward. Smash the high backspin ball by hitting slightly up and forward. This drill has a lot more spin than you might guess – it is like playing a high level chopper!

### **Forehand Speed**

The lightening speed balls to the forehand come fast and with a bit of topspin. Get close to the table and contact the ball early, on the rise.

### **Backhand Speed**

To block these speed balls, crouch low in your ready position, keep your racket in front of your body, and block with control keeping the ball low.

### **Left Sidespin Topspin Serve**

The left sidespin topspin serve is like a right handed player serving a forehand pendulum serve. To return this difficult spin, touch the top right side of the ball.

### **Right Sidespin Topspin Serve**

The right sidespin topspin serve is like a left handed player serving a forehand pendulum serve. To return this difficult spin, touch the top left side of the ball.

### **Left Sidespin Backspin Serve**

To return this serve, you can either push it with control or loop it with spin. Touch the bottom right side of the ball.

### **Right Sidespin Backspin Serve**

To return this serve, push or loop with spin. It is vitally important to impart your own spin so that your opponent's spin will have less effect on your rubber. Work on stroking through the ball slightly.

### **Smash, Topspin, Lob**

You will first get a speed ball, block it with control. Next, you will get a normal topspin ball, loop it with good topspin. Finally, you will get a high ball, smash it with every ounce of energy you have left!

### **Spinny Serves**

This drill will give you very spinny serves anywhere long! Look at the lights to tell the direction and amount of spin. The more lights that are on, the stronger the spin.

## **ADVANCED DRILLS**

### **Advanced Forehand Warmup**

These balls to the forehand are not only fast, but also have placement, speed, spin, height, and depth variations. Be ready to make quick adjustments!

### **Advanced Backhand Warmup**

With fast and slightly random balls to the backhand, the advanced backhand warmup is both a fun and challenging beginning to any practice drill. Warmup for one minute, take a break, recover, then warmup for another minute.

### **Forehand, Middle, Backhand**

Within the forehand, middle, and backhand zones, the robot will add subtle variations. Sometimes challenge yourself to see if you can play all forehands the entire time!

### **One or Two Forehands, One or Two Backhands**

Using all forehand, make quick adjustments to hit forehand from the wide angle and forehands from the center of the table.



### **One or Two Backhands, One or Two Middle**

You can use backhand or forehand for this drill, just make sure that you are moving for every ball. Also, watch the robot's head to see where the next ball will be thrown.

### **One Middle, One Random**

First you will get a speed ball to the middle, next you will get a speed ball anywhere, the pattern continues, one middle, one random.

### **Forehand, Backhand, Random**

This is called a semi-systematic drill. First a simple forehand then backhand followed by a surprise anywhere!

### **Six Balls**

It starts with a backhand, middle, forehand, then goes random for three balls anywhere. The pattern continues without a break. Try to survive for two full minutes before taking a needed water break!

### **Backhand, Random**

This drill alternates between a backhand then a random ball anywhere. Remember, the random ball might just be to the backhand; in that case, you would get three backhands in a row.

### **Nine Balls**

Three backhands, three forehands, then three random. Try your best to change locations when hitting, sometimes hit to the wide forehand, sometimes wide backhand, and sometimes try to jam your opponent in the middle.

### **Medium Random**

This drill always keeps you guessing, it gives excellent variations in placement and actually feels like you are playing a real game!

### **Wild Random**

This tough drill gives you placement, speed, spin, height, and depth variations. Be alert and ready to make the adjustments. Start off with just doing twenty balls, before taking a break. As you develop the ability to adjust, then challenge yourself with longer drills.

### **Serve, Backspin, Topspin**

First, the serve will come with slight backspin sidespin, next a very spinny backspin, followed by a very spinny topspin ball. Be ready to adjust to the extreme spin!

### **Serve, Forehand, Backhand**

This is a great drill for defense. It gives you a backspin serve, followed by a topspin ball to your forehand then a topspin ball to your backhand.

### **No-Spin Serve then Backhand, Forehand**

After pushing the no-spin serve, use a controlled stroke and block with your backhand then block with your forehand. Try to keep your blocks as low to the net as possible!

### **Serve Then Middle Random**

After a heavy backspin serve, the footwork drill begins - middle then random, middle then random, middle then random. Try to play most of the middle balls with your forehand.

### **Block Training**

After returning the no-spin serve, you will then get five to ten topspin balls anywhere, simply block the ball with control. See if you can last the entire drill without missing a single block!

### **Mega Backspin, Ten Topspins**

After pushing the very spinny serve, endure the ten ball rally with your steady defense. Instead of reaching for the balls, move your feet into position for each shot - it is tiring, but worth the effort!

### **Two Ball Speed**

This is the quickest drill on the robot. After a left sidespin serve, it will immediately give you a quick topspin ball.

### **Serve Then Rally of One-Ten Balls**

After returning the left sidespin serve, be ready for a variable rally of one to ten balls. Sometimes it will just give one, sometimes six, sometimes maybe ten. Prepare for the ten every time.

### **No-Spin Serve Then Speed**

This is one of the most entertaining drills! After returning the no-spin serve, the robot will pound you hard with the next shot. Just try to make contact with the ball. As you become more advanced, then you can begin taking a small swing.

### **Serve Then Ten Lobs**

You will be winded, guaranteed! After returning the topspin serve, you will get ten lobs. Get in position, and smash down and forward with full power!

### **Speed Forehand, Speed Backhand**

The robot will give you one speed ball randomly in the forehand zone then one speed ball randomly in the backhand zone. Move into position and block the ball with good placement.

### **Random Smashing**

Speed balls will be coming anywhere on the table. Instead of merely guessing, you should keep your racket neutral in-front, move into position, and try to touch every ball. Even if you can't block it on, try to make contact.

### **Random Lobbing**

The most difficult part about these lobs is the depth variation. Be ready to move out and smash or be ready to charge the table and smash. As the ball leaves the robot's head, try to judge the depth and move accordingly!

### **Spin Lobs**

This drill will give you a topspin lob, backspin lob, then a no-spin lob. Instead of lobbing, it will sometimes be a bit low and short, in this case, give it a controlled stroke. If it is high, try to use your most powerful smash!

### **Sidespin Lobs**

Move the furniture aside! This drill requires a bit of space! The sidespin lobs will be curving at very wide angles! Read the spin, adjust with your feet, and smash all the balls using your forehand!

### **Short and Long**

The robot will give you one to four short backspin balls followed by one deep backspin ball followed by three deep topspin balls to the backhand then one deep topspin ball to the forehand.

### **Short Ball Training**

After one to ten short backspin balls, the robot will surprise long with a backspin ball anywhere, followed by a long topspin ball anywhere.

### **Backspin, No-Spin Serve**

This drill alternates between a short backspin serve and a short no-spin serve. Push the backspin and flip the no-spin. Also, work on placement by sometimes returning short, sometimes long, sometimes to the middle, sometimes use the angles.

### **Heavy Topspins**

This drill gives you heavy topspin balls to your forehand on half of the table. Practice your blocking placement to various locations. As you perfect your control, then begin an active block or even a counterloop!

### **Low Lobs**

This drill gives you lower lobs – one topspin, one backspin, then one no-spin. Move into position and smash all of them using your forehand.

## **BONUS DRILLS**

### **Topspin to Either Corner**

This drill gives you deep topspin balls randomly to the corners.

### **Backhand Topspin Rally, the Surprise Forehand**

This drill give you topspin balls continuously to the backhand and occasionally surprises with a deep topspin ball to the middle or wide forehand.

### **Topspin Small Movements**

This topspin drill give you steady topspin balls from the backhand side to the forehand side then back to the backhand side with slight gradient movement between each ball.

### **Forehand Topspin Moving Towards Backhand**

This topspin drill starts with the wide forehand and gradually fans toward the backhand side, suddenly, it surprises to the wide forehand and begins the same pattern.

### **Spinny Variation Short Serves**

This drill gives extremely spinny short serves with many different spin variations.

### **Very Spinny Backspin Serves**

This drill gives extremely heavy backspin serves short or half-long anywhere on the table.

### **One Topspin, One Sidespin**

This drill gives one topspin ball then one sidespin ball to the middle of the table. Be careful, the sidespin ball can be sidespin either direction. Be sure to check the lights so that you know which way the sidespin is going.

### **Random Placement One Topspin, One Sidespin**

This drill gives one topspin ball then one sidespin ball randomly on the table. Be careful, the sidespin ball can be sidespin either direction. Be sure to check the lights so that you know which way the sidespin is going.

### **Weird Sidespin Rally**

This drill gives sidespin balls anywhere on the table.

### **Chaos**

This drill gives any variation of spin – be ready for anything!



# QUICK TAKE-DOWN, STORAGE & TRANSPORT

Your Robo-Pong 3050XL is quick and easy to take-down, store and transport.

## 1 Unplug Power Cable and Place Side Nets in Trays

First, unplug the power cable from the back of the robot. Then detach the Side Nets and place them in the trays.



## 2 Place Robot on Corner of Table

Remove the robot from the end of the table and place on top of your table at the corner to easily access both the front and back of the robot.



## 3 Remove Ball Dams

From the front of the robot, raise each tray slightly and remove the Ball Dams from their storage positions. Don't raise too much or the balls will fall out.



## 4 Insert Ball Dams

Push the balls into the Center Trough and place the Ball Dams in their retaining slots.



## 5 Place Cord in Center Trough

Unplug the power cable from the wall outlet and coil to place it on top of the balls in the Center Trough. Place the ends of the Side Nets just inside the Ball Dams.



## 6 Fold Back Support Assembly

Swing the Support Legs inward and fold the whole support leg assembly up and into the robot. You may need to *gently* lift the robot head up. Hold up the Trap Net while folding the assembly so it does not interfere with the folding process.





7

**Fold Trays Up**

Fold the Ball Return Trays closed by lifting carefully until they lock into their vertical position.



8

**Place Net Tubes in Storage Holes**

From the back of the robot, detach the left and right Curved Net Support Tubes from their associated Straight Net Support Tubes. Place the curved tubes into their storage holes on top of the Net Support Plate.



9

**Robot Properly Folded**

When the robot is fully folded, all components should be stored in the Center Trough.



10

**Buckle Carrying Strap**

Pull the tops of the Ball Return Trays together by buckling the free ends of the Carrying Strap together.

**If You Purchased a Robo-Tote carrying case:**

11

**Place Robot in Robo-Tote**

If you own the optional Robo-Tote carrying case, your Robo-Pong 3050XL will now fit inside the case. The Robo-Tote protects the exterior of the robot during movement or storage. Robo-Tote has a shoulder strap for easy transport.



12

**Ready for Storage or Transport**

With your Robo-Pong 3050XL inside the Robo-Tote, it's ready to go anywhere you go. Carry it on your back, store it in your closet, or take it in your car to your friend's house or local table tennis club. Your robot will be protected and you won't have to worry about losing any components of your robot system.



# ROBOT ADJUSTMENTS

## LEVELING ADJUSTMENT

Robo-Pong 3050XL is designed to sit level when attached to the table. In proper position (Figure 1), the CT Support Legs fit underneath the table and the CT Front Support Plate sits on top of the table. If the robot does not sit level, balls will not feed properly. If this condition occurs, it is necessary to make some leveling adjustments.

If the robot does not sit level, then it will be necessary to make adjustments to the robot itself. The Support Legs come with 3 sizes of Rubber Tips and 4 rubber spacer-washers to accommodate different table top thicknesses, and cause the Center Trough to sit level. The Rubber Tips are marked on their top with the table thickness they are used with. The longest is used for 1/2" (13mm) tops. The mid-size one is used on 3/4" (19mm) tops and comes pre-installed. The shortest tip is used for 1" (25mm) tops.

In addition to these different sized tips, there are 4 rubber spacer-washers which are used with the Rubber Tips for finer adjustments. Either one or two of these spacer-washers (depending on how much adjustment you need) are placed inside the Rubber Tips before the tips are placed on the end of the Support Legs.

Another reason why your robot may not sit level is that it is not properly seated on the locating tab. When seated correctly, the Support Flange of the Back Panel sits flush on the Locating Tab that protrudes from the top of the Center Trough (see Figure 2). Your robot serial number is located on top of this Support Flange.

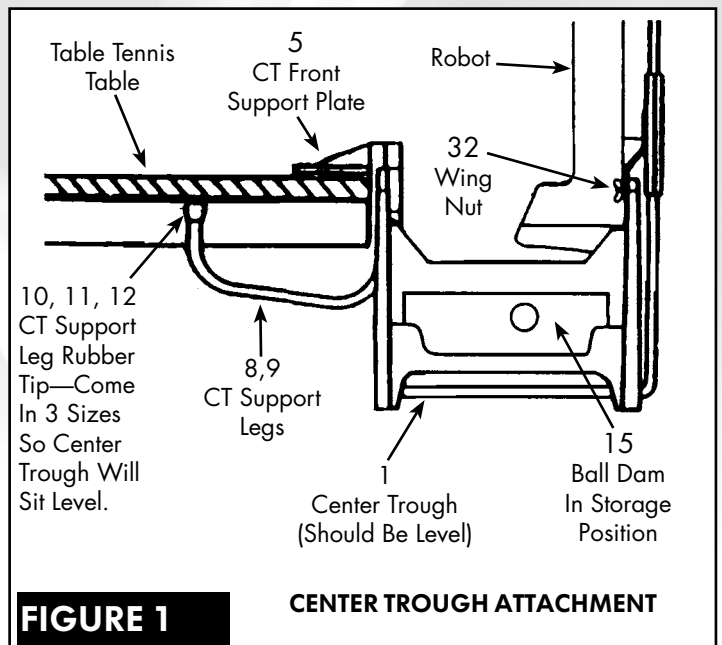
**TIP:** If it is possible to adjust the level of the robot's half of the table independently from the player's half, you may choose to purposely give a slight slope to the robot's half so balls that end up on the table roll into the robot's trays. If you make the table unlevelled, make sure the robot sits level by adjusting the Rubber Tips as described above. In this case, it may be necessary to use the Rubber Tip one size larger than normal and/or the rubber spacer washers to level the robot.

## ADJUSTING NET TENSION

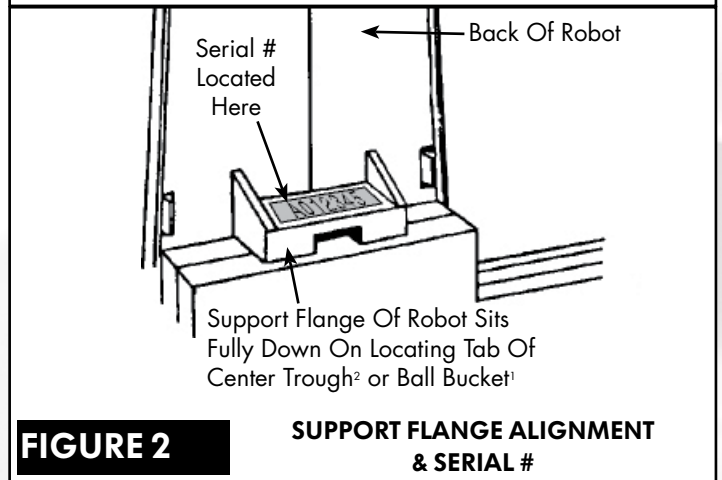
The Ball Return Trays should sit level at or just below the level of your table top. If the tension of the Main Net is too tight, the trays will be pulled up into a slight "V" shape with the top edge of the trays above the level of the table top. To correct this situation, loosen the adjustment straps shown in Figure 3 until the trays sit level. If this adjustment is insufficient, stretch the net by grabbing it with two hands and pulling gently apart to relax the net fabric.

The Trap Net (the black net with large holes) slows down your returns so more of them are captured. The size of the holes is slightly smaller than the diameter of a ball. Hard hit shots force the ball through the net and the ball becomes trapped between the Trap Net and the Main Net. When slowly hit balls contact the Trap Net, they do not have enough force to go through the net, so they immediately drop down into the trays.

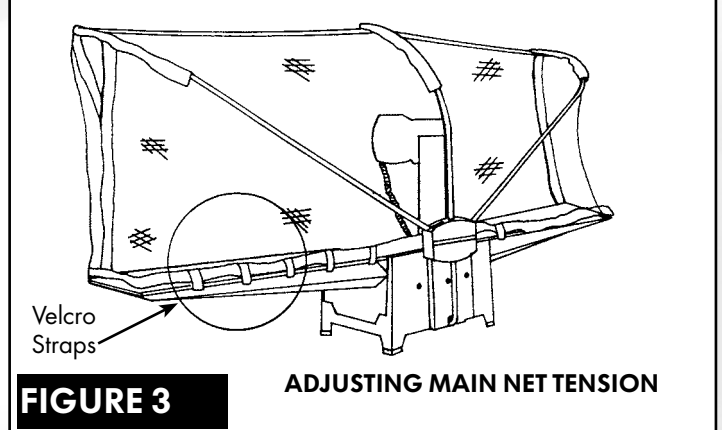
Side Nets - Adjust each side nets tension to "lock" the trays firmly against the table, which reduces vibration and increases accuracy.



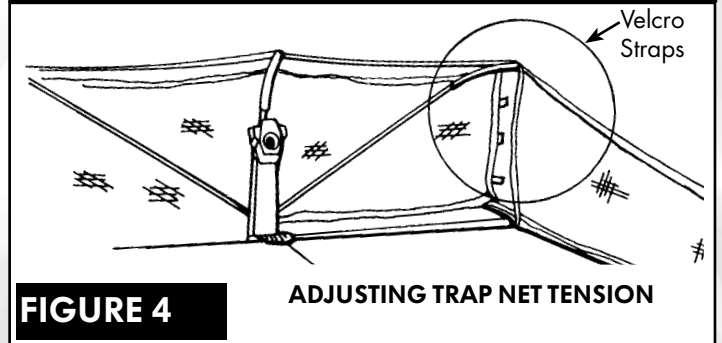
**FIGURE 1**



**FIGURE 2**



**FIGURE 3**



**FIGURE 4**



# CARE AND MAINTENANCE

Robo-Pong robots are easy to maintain. The only maintenance that our robots require is an occasional cleaning. The Drive Wheels are prone to dirt build-up. Periodically inspect parts and clean with Rubber Drive Cleaner (available in USA only) or a general purpose cleaner and a cloth. One indicator that these parts are dirty is reduced ball speed or erratic delivery— where balls are occasionally ejected sideways, down into the net, or popped up.

It's possible to clean these parts without disassembling the robot head. The following steps show how it is done using Rubber Drive Cleaner and a cloth. This cleaner is terrific for removing dirt from rubber surfaces and restores the natural grip to these parts.

To reduce the amount of dirt that enters your machine, keep the table, balls, and playing area clean. Dust, pet hairs, carpet fibers, and other fibrous material can wrap around the motor shafts and literally strangle the Ball Speed Motors and stop them from functioning. When wiping off the outside of your robot, use a damp cloth. Do not use any petroleum based solvent, cleaner, or lubricant as these chemicals are corrosive to the plastic. Be careful not to get any water on the motors.

## 1 Remove Robot Body

First, remove the robot body from the Center Trough. Loosen the two Wing Nuts and disengage the black Clip Washers (parts 32 and 34 on the net assembly diagram). Pull straight up on the robot body to remove it. Then lay it on a flat work surface.

## 2 Clean Upper Drive Wheel

Wet your cloth with a small amount of Rubber Drive Cleaner. Insert one finger into the hole to hold the side of the wheel and keep it from turning. Now, insert the wet cloth with your other finger and firmly rub the rubber surface of the Wheel. After you clean the initial exposed section of the wheel, rotate the wheel a little with your first finger to expose the next section of wheel for cleaning. Keep cleaning a small section of wheel at a time until you've cleaned the entire wheel. Using a dry, clean section of the cloth, wipe the Upper Drive Wheel lightly to remove any remaining cleaner and dirt this will dry the wheel off.



## 3 Clean Lower Drive Wheel

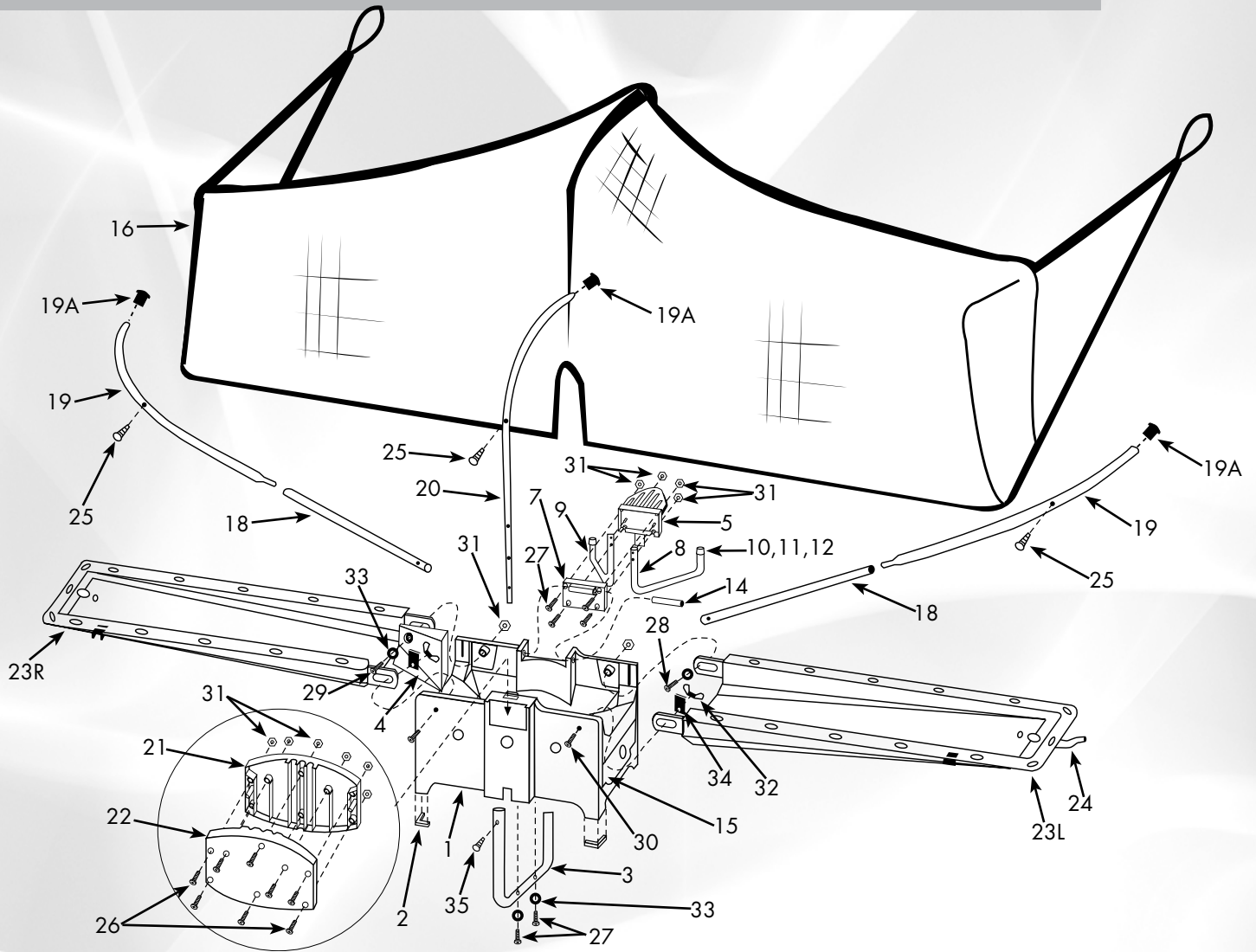
To clean the Lower Drive Wheel, wet a clean section of the cloth with the cleaner. Insert one finger into the hole to hold the side of the wheel and keep it from turning. Now, insert the wet cloth with your other finger and firmly rub the rubber surface of the wheel. After you clean the initial exposed section of the wheel, rotate the wheel a little with your first finger to expose the next section of wheel for cleaning. Keep cleaning a small section of wheel at a time until you've cleaned the entire wheel. Then use a dry section of cloth to lightly dry off the wheel.



## 4 Lastly, reattach the robot body by reversing Step 1.



# PARTS LIST FOR NET ASSEMBLY

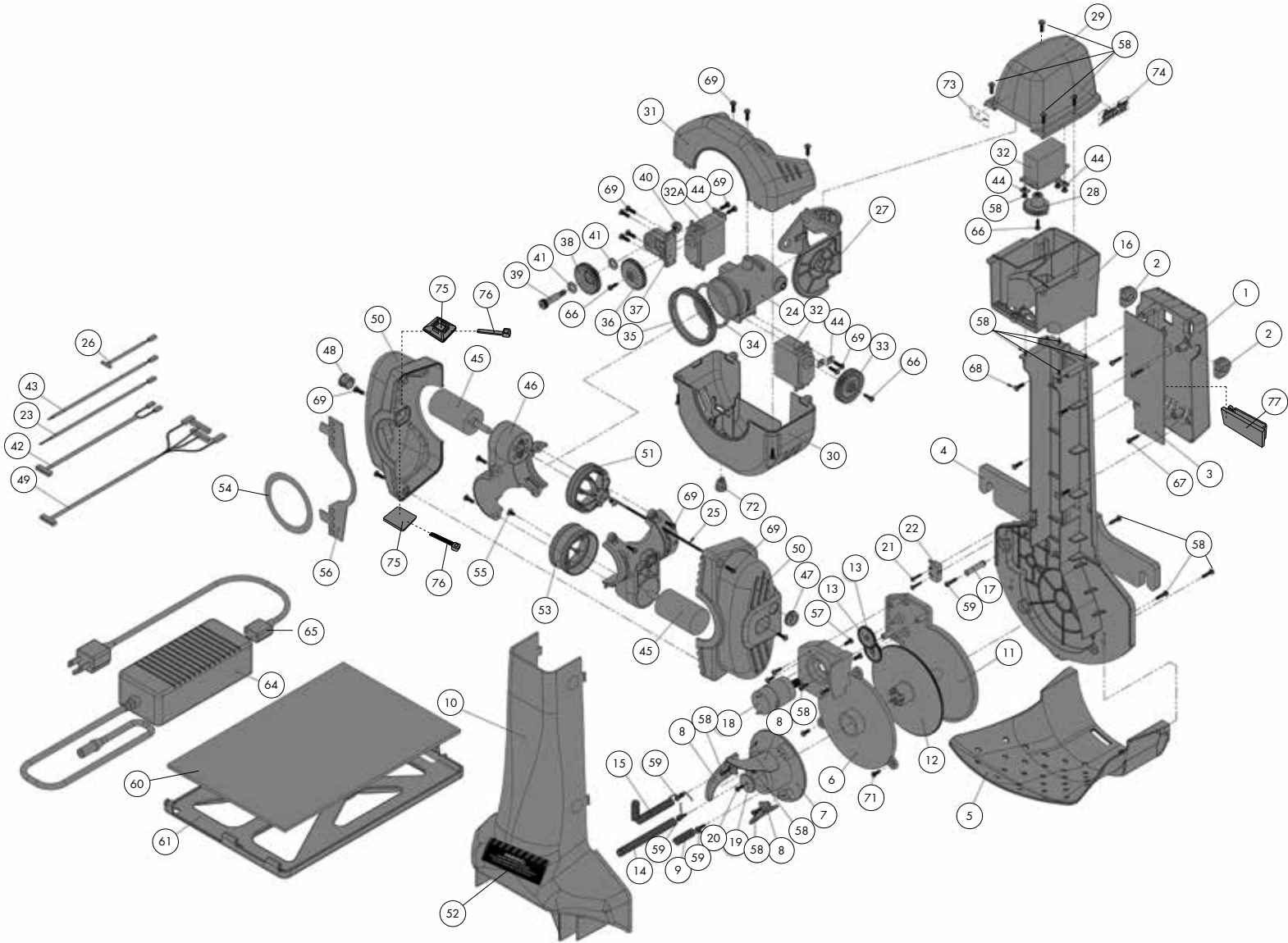


**NOTE:** The key numbers on this parts list correspond to the numbers used to identify parts in this manual.

Key#	Part #	Item	Qty.
1	2000-100	<b>Center Trough</b>	1
2	2000-101	CT Rubber Feet	4
3	2000-102	CT U-Shaped Support Tube	1
4	2040-103	CT Wedge Filler	1
5	2000-104A	CT Support Plate, Front	1
6	2000-106A	CT Front Support Plate Pad (not shown)	1
7	2000-108A	CT Support Plate, Back	1
8	2000-110	CT Support Leg, L	1
9	2000-112	CT Support Leg, R	1
10	2000-114	CT Support Leg Rubber Tip, 1/2"	2
11	2000-116	CT Support Leg Rubber Tip, 3/4" (std.)	2
12	2000-118	CT Support Leg Rubber Tip, 1"	2
13	2000-120	CT Rubber Spacer-Washer (not shown)	4
14	2000-122	CT Pivot Pin	1
15	2050-124C	CT Ball Dam, Or., 40+mm	2
16	2040-126D	Black Net, 40mm	1
17	18022-219	Plastic Clip (not shown)	2
18	2000-128	Net Support Tube, Straight	2

Key#	Part #	Item	Qty.
19	2000-130	Net Support Tube, Curved, L & R	2
19A	2000-131	Net Support Tube Plug	3
20	2000-132	Net Support Tube, Curved, Center	1
21	2000-134A	Net Support Plate, Front	1
22	2000-136A	Net Support Plate, Back	1
23R	2000-138R	Ball Return Tray, Right	1
23L	2000-138L	Ball Return Tray, Left	1
24	2000-140A	Carrying Strap	1
25	2000-300	Net Retaining Screw	3
26	2000-302	#8 x 1" Machine Screw	8
27	2000-304	#8 x 3/4" Machine Screw	6
28	2000-306	#8 x 1/2" Machine Screw	1
29	2040-307	#8 x 5/8" Machine Screw	1
30	2000-308	#8 x 1" Hex Bolt	2
31	2000-310	#8 Hex Nut	16
32	2000-312	Wing Nut	2
33	2000-314	Large Washer	4
34	2000-315A	Clip Washer	2
35	2000-316	#8 x 3/8" Machine Screw	1

# PARTS LIST FOR ROBOT BODY ASSEMBLY



Key#	Part #	Item	Qty.
1	3050-402	Logic Board Cover	1
2	3050-404	Logic Board Cover Grommet	2
3	3050-400	Logic Board PCB	1
4	2050-142B	Ball Feed Back Panel, 40+	1
5	2000-144B	BF Collector Plate	1
6	2040-147A	BF Top Cap, 40+	1
7	2040-151C	BF Pickup Wheel	1
8	2040-153A	BF Pickup Finger	3
9	2040-161C	BF Spring, Short	1
10	2040-162B	BF Clear Front Cover	1
11	2050-145	BF Mounting Plate	1
12	2050-149	BF Main Gear	1
13	2050-155	BF Transfer Gear	2
14	2050-157B	BF Spring, Long	1
15	2050-159B	BF Spring, Medium	1
16	2050-164C	BF Upper Guide, 40+	1
17	2050-169	BF Check Valve Spring	1
18	2050-158	BF Motor w/ Gear	1
19	2050-313	BF Pickup Wheel Washer	1
20	2050-317	BF Pickup Wheel Screw (LH Thread)	1
21	2050-327	BF Ball Sensor Screw	2
22	3050-143	BF Ball Sensor	1
23	3050-160	BF Power Wire	1
24	3050-166	BF Discharge Tube	1
25	3050-170	BF Retention Spring	1
26	3050-171	BF Sensor Power Wire	1
27	3050-196	Oscillation & Tilt Guide	1
28	3050-199	Osc Servo Horn	1
29	3050-204	Osc Servo Cover	1
30	3050-179	Lower Housing	1
31	3050-176	Upper Housing	1
32	3050-209	Tilt/Osc Servo	2
32A	3050-209A	Rotation Servo	1
33	3050-180	Tilt Servo Horn	1
34	3050-168	Rotation Retainer Ring	2
35	3050-167	Rotation Ring Gear	1
36	3050-259	Rotation Servo Horn	1
37	3050-154	Rotation Servo Post	1
38	3050-255	Rotation Transfer Gear	1
39	3050-253	Rotation Transfer Gear Bolt	1
40	3050-322	Rotation Transfer Gear Locknut	1
41	3050-256	Rotation Transfer Gear Washer	2
42	3050-212	Servo Harness	1
43	3050-210	Servo Power Wire	1
44	3050-313	Servo Centering Washer	7

Key#	Part #	Item	Qty.
45	3050-184	Ball Speed Encoder Motor	2
46	3050-173	BS Housing	2
47	3050-175	BS Motor Cover, Grommet	1
48	3050-177	BS Motor Cover, Plug	1
49	3050-186	BS Motor Harness	1
50	3050-188	BS Motor Cover	2
51	3050-190A	BS Upper Drive Wheel	1
52	2000-274	Warning Label	1
53	3050-192	BS Lower Drive Wheel	1
54	3050-260	3050 Newgy Head Label	1
55	3050-306	BS Discharge Wheel Screw	2
56	3050-261	Ball Spin LED Indicator	1
57	2000-330	#2 x 1/4 Machine Screw	6
58	2000-328A	#5 x 3/8" Self Drilling Screw	20
59	2050-319	BF Spring Screw	4
60	3050-225-1	Device Holder Pad	1
61	3050-225	Device Holder	1
62		Not Available For Order	
63		Not Available For Order	
64	3050-222	3050 Transformer Main Body	1
65	3050-223	3050 Transformer Socket Cord	1
66	3050-257	Servo Horn Screw	3
67	3050-392	Logic Board PCB Screws	3
68	3050-390	Logic Board Cover Screw	4
69	3050-310	310 Machine Screw	21
70		Not Available For Order	
71	2000-318	BF #4 x 5/16 Machine Screw	4
72	3050-178	Harness Lock	1
73	3050-288	Paddle Logo Label	1
74	3050-286	Robo-Pong XL Label	2
75	3050-700	Wire Mounting Pad	2
76	3050-701	Wire Tie	2



# GLOSSARY OF TABLE TENNIS TERMS

**Antispin** - An inverted rubber sheet that is very slick so that spin does not take on it. It usually has a very dead sponge underneath. It is mostly used for defensive shots. Also known as "anti."

**Backhand** - A shot done with the racket to the left of the elbow for a righthander, the reverse for a lefthander.

**Backspin** - A type of spin used mostly on defensive shots. When you chop the ball, you produce backspin. The bottom of the ball will move away from you.

**Blade** - The racket, usually without covering.

**Block** - A quick, off the bounce return of an aggressive drive done by just holding the racket in the ball's path.

**Blocker** - A style of play where blocking is the primary shot.

**Chop** - A defensive return of a drive with backspin, usually done from well away from the table. (See backspin.)

**Chop Block** - A block where racket is chopped down at contact to create backspin.

**Chopper** - A style of play where chopping is the primary shot.

**Closed Racket** - If the racket's hitting surface is aimed downward, with the top edge leaning away from you, it is closed.

**Counterdrive** - A drive made against a drive. Some players specialize in counter-driving.

**Counterloop** - To loop a loop.

**Counter-smash** - To smash a smash.

**Crosscourt** - A ball that is hit diagonally from corner to corner.

**Crossover** - A style of footwork that require you to cross your feet.

**Dead** - A ball with no spin.

**Deep** - A ball that will not bounce twice on the opponent's side of the table if given the chance.

**Default** - Being disqualified from a match for any reason.

**Double Bounce** - A ball that hits the same side of the table twice. The person on that side loses the point.

**Down-the-Line** - A ball that is hit along the side of the table, parallel to the sidelines, is hit down the line.

**Drop Shot** - Putting the ball so short that the opponent has trouble reaching the ball. Done when the opponent is away from the table.

**Flat** - A ball that has no spin, usually traveling with good pace. A shot where the ball hits the racket straight on, at a perpendicular angle.

**Flip** - An aggressive topspin return of a ball that lands near the net. (A short ball.)

**Footwork** - How a person moves to make a shot.

**Forehand** - Any shot done with the racket to the right of the elbow for a righthander, to the left for a lefthander.

**Free Hand** - The hand not holding the racket.  
**Game-Situation** - A drill that starts with a serve and simulates an actual game.

**Hard Rubber** - A type of racket covering with pips out rubber but no sponge underneath. It was the most common covering for many years until the development of sponge rubber.

**Heavy Spin** - A ball that is rotating more than 40 rotations per second.

**High Balls** - A slow high-trajectory ball that clears the net by more than 15"

**High Toss Serve** - A serve where the ball is thrown high into the air. This increases both spin and deception.

**Hitter** - A style of play where hitting is the primary shot.

**Inverted Sponge** - The most common racket covering. It consists of a sheet of pips out rubber on top of a layer of sponge. The pips point inward, so the surface is smooth. This is the opposite of pips-out sponge, where the pips point outward.

**Kill shot** - See smash.

**Let** - If play is interrupted for any reason during a rally, a let is called and the point does not count.

**Light Spin** - A ball that is rotating less than 5 rotations/second.

**Loaded** - A ball with a great deal of spin.

**Lob** - A high defensive return of a smash. Usually done with topspin or sidespin.

**Long** - See deep.

**Long Pips** - A type of pips out rubber where the pips are long and thin and bend on contact with the ball. It returns the ball with whatever spin was on it at contact and is very difficult to play against if you are not used to it.

**Loop** - A heavy topspin shot usually considered the most important shot in the game. Many players either specialize in looping or in handling the loop.

**Looper** - A style of play where the primary shot is the loop.

**Match** - A two out of three or three out of five games contest.

**Open Racket** - If the hitting surface of the racket is aimed upwards, with the top edge leaning towards you, it is open.

**Pips** - The small conical bits of rubber that cover a sheet of table tennis rubber.

**Pips-out** - A type of racket covering. It consists of a sheet of pips out rubber on top of a layer of sponge. The pips point outward, the opposite of inverted.

**Playing Surface** - The top of the table, including the edges.

**Push** - A backspin return of backspin. Usually defensive.

**Racket** - What you hit the ball with. The blade plus covering.

**Racket hand** - The hand that holds the racket.

**Rally** - The hitting of the ball back and forth, commencing with the serve and ending when a point is won.

**Random** - A drill that the ball can be hit anywhere within a random zone or random zones on the table

**Rating** - A number that is assigned to all tournament players after their first tournament. The better the player the higher the rating should be. The range is from about 200 to about 2900.

**Receive** - The return of a serve.

**Rubber** - The racket covering. Sometimes refers only to the rubber on top of a sponge base.

**Rubber Cleaner** - Used to keep the surface of inverted rubber clean.

**Sandwich Rubber** - A sponge base covered by a

sheet of rubber with pips, with the pips pointing either in or out. If pointed in, it is inverted sponge. If pointed out, it is pips out sponge.

**Serve** - The first shot, done by the server. It begins with the ball being thrown up from palm of hand and struck by the racket.

**Shakehands Grip** - The most popular grip. It gives the best balance of forehand and backhand.

**Short** - A ball that would bounce twice on the opponent's side of the table if given the chance.

**Sidespin** - A ball that is spinning right to left or left to right.

**Smash** - A putaway shot. Ball is hit with enough speed so opponent cannot make a return.

**Speed Balls** - a fast shot like a loop or power smash that is 50-90 mph

**Spin** - The rotation of the ball.

**Sponge** - The bouncy rubber material used in sandwich covering. It is used under a sheet of rubber with pips. It revolutionized the game and ended the hard rubber age in the 1950's.

**Systematic** - A drill that uses specific locations on the table in an exact pattern

**Stroke** - Any shot used in the game, including the serve.

**Topspin** - A type of spin used on most aggressive shots, with an extreme amount being used in the loop shot. When you topspin the ball, the top of the ball moves away from you.

**Two-Step Footwork** - The most popular style of footwork.

**Underspin** - See backspin.

**Variation Spin** - an unspecified type or amount of spin



# ROBO-PONG® 3050 XL

Thank you for purchasing a Newgy Robo-Pong table tennis robot. We pride ourselves on extensive research and development, high quality manufacturing and thorough testing of our products. However, if an issue should arise or you need technical support, please contact our Technical Support Department at 1-800-556-3949. The warranty information below is applicable only to Newgy customers in North and South America. If you are in another part of the world, please contact the distributor for your area for service policies that apply to your country. A list of distributors can be found here.

Please call us for a return authorization number before you send in your robot for repair. Often, repairs can easily be handled over the phone. You can also visit <https://www.newgy.com/pages/support> to find answers to common questions. When you do call, please have your serial number (located on the back of your robot body and/or control box) and Owner's Manual handy. If, after talking with our Technical Support, you need to send in your robot, include a brief note describing the problem and list your daytime phone number and shipping address, as well as your return authorization number given by your Newgy representative.

If you know which part you need to order, you may order it by phone or request by email <https://www.newgy.com/pages/contact-newgy>. Parts are not available for purchase on Newgy.com.

## LIMITED 1 YEAR WARRANTY\*

**Manufacturer warrants to the original retail purchaser of this product to be free from defects in material and workmanship for a period of 1 year from date of purchase.**

**Should this product become defective due to material or workmanship during the warranty period, contact our Technical Support Department describing the defect. Always provide your serial number. We will provide you with a return authorization number and shipping instructions. If you are asked to return the product, pack it securely and ship it PREPAID.**

**If defective as provided by the terms of this warranty, we will, at our discretion, repair or replace the product and return it prepaid to a continental U.S. address. Shipping charge may apply for other areas.**

**This warranty is not transferable and does not cover normal wear and tear, or damage caused by improper handling, installation, or use. This warranty is void if the product is in any way abused, damaged, or modified from its original state.**

**This warranty gives you specific legal rights, and you may have other rights that may vary from state to state.**

## SERVICE POLICY

Newgy will repair any normal wear and tear to the robot for a flat fee (depending on robot model), plus shipping and handling (for Contiguous U.S., other areas carry additional fees) for a period of 5 years from date of purchase. This policy does not cover damage due to abuse, misuse, or improper handling and applies only to the original retail purchaser of Newgy robots bought from an authorized Newgy USA dealer.

Please visit <https://www.newgy.com/pages/robo-pong-warranty-form> for current pricing.

## OUT OF WARRANTY/SERVICE POLICY REPAIRS

When your 1 Year Limited Warranty and Service Policy expires, Newgy will repair any normal wear and tear to the robot for our current hourly service charge, plus the cost of parts and shipping and handling (for Contiguous U.S., other areas carry additional fees).

Your Warranty Card should be registered on line within 15 days of purchase. Go to <https://www.newgy.com/pages/robo-pong-warranty-form> to register. A place to copy the warranty information is given below. Be sure to keep your purchase receipt. We suggest you keep your receipt with this manual and record the following information:

Date Purchased \_\_\_\_\_ Serial # \_\_\_\_\_  
Store Name \_\_\_\_\_ City, State \_\_\_\_\_

\*Warranty and service valid only in territory of original sale.



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