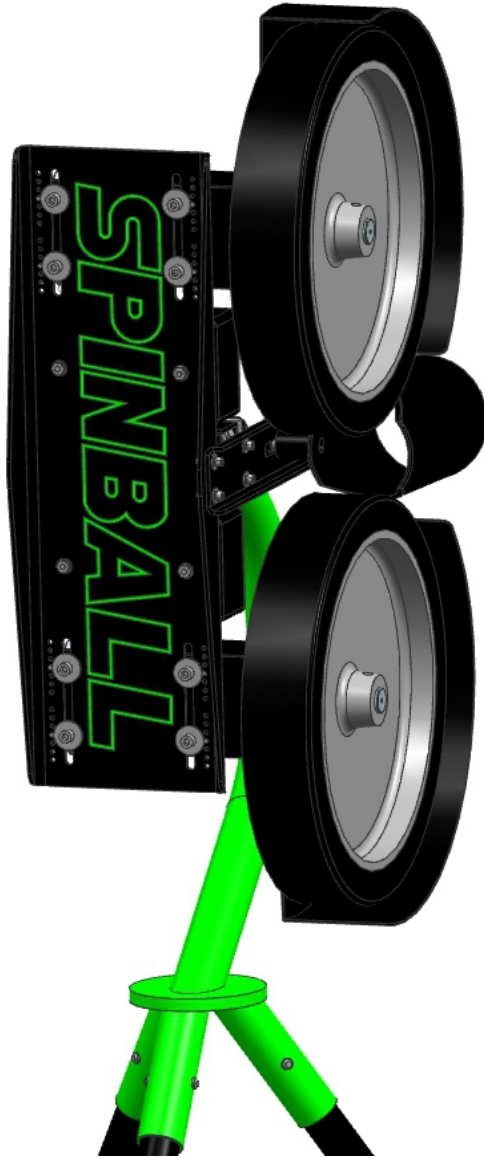


SPINBALL

Spinball Wizard Two Wheel Pitching Machine



Owner's Manual

CAUTIONS

- This machine is not a toy! Use under adult supervision only.
- Machine will throw balls and strikes- batters must stay alert and always wear a helmet.
- Use only regulation sports balls, or balls specifically designed for machine use.
- Hold machine steady when loosening ball joint for adjustments. The machine is not fully balanced on the ball joint and may move under its own weight if not held in place.
- Use a grounded (3 prong) electric outlet only. Use a GFCI outlet when machine is operated outdoors. Do not use the machine in wet conditions.
- Do not store the machine with the urethane wheel tread compressed against the ground. Flat spots will develop.
- Never use a machine with a bent or deformed aluminum wheel.
- Machine operator (person feeding balls into machine) should stay behind a protective screen.

FAST, FREE, FRIENDLY HELP

For assistance assembling or using your machine, please view our videos online, call us at 618-244-4587, or email us at info@spinballsports.com.



ASSEMBLY / SET UP

LEGS Slide the legs into the sockets on the tripod base until the spring loaded buttons pop up and set the machine upright.

BALL FEEDER TUBES Use the 3" tube for baseballs, tennis balls, or cricket balls, and the 4" tube for softballs. Attach the tube to the machine using the two included thumb screws. Position the feeder tube to clear the wheels by approximately 1/4-1/2". Placing the tube in contact with the wheels can damage the tube and wheels, and may cause the tube to be grabbed and thrown. Placing the tube too far away from the wheels will diminish the machine's accuracy.



Figure 1: Machine upright, with ball feeder tube installed.

WHEEL INSTALLATION To prevent shipping damage, the machine is shipped with the wheels uninstalled. A 3/16" Allen wrench is included with the machine to install the wheels and adjust motor position. It is stored in a small black clip on the back side of the frame. To install the wheels, first install the legs and ball feeder tube as described above and as shown in Figure 1.

The wheels are installed on the motor shafts using four setscrews (two per wheel, one each side) that are pre-installed in the wheels. We highly recommend the use of the included threadlocker (Loctite) on these screws, but it requires 4 hours to dry, so if you want to try out the machine without waiting, you can skip the threadlocker until after the trial. If you apply the threadlocker, then run the machine before it dries, it will sling out from centrifugal force and not work. To add the threadlocker, remove the setscrews from the wheels, add 2 drops to each one, then re-install them about halfway back into the threaded holes. (You will install them the rest of the way once the wheels are in position on the motor shafts.) Do not apply additional or extra threadlocker. Excessive amounts can run down the threaded hole and end up adhering the wheel to the motor shaft, making it difficult to replace the wheel in the future.

As a product of the molding process, most wheels will have one tread edge more rounded than the other. For appearance only, we recommend that the more rounded edge face away from the machine. This also places the balancing weight, if any was required, on the inside face of the wheel. Rotate each wheel so that the setscrews align with the flat portion of the motor shaft, then slide the wheel onto the motor shaft until it is centered on the ball feeder tube - this is important for pitch accuracy. See Figures 2 & 3.

Once the wheel is positioned, tighten the two setscrews on each wheel using the included 3/16" Allen wrench. For the inside screws, where the motor interferes, you may want to insert the long end of the Allen wrench into the setscrew and use a wrench or pair of pliers to turn it. The machine may be used after the threadlocker hardens in approximately four hours. It will reach full strength in 24 hours.

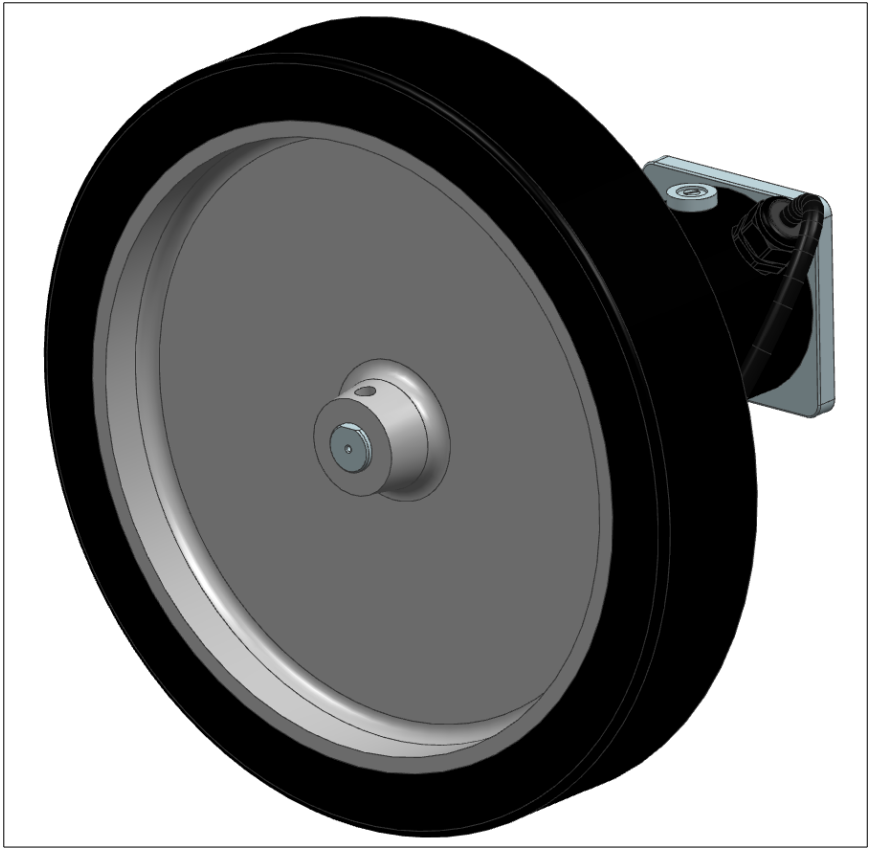


Figure 2: Rotate the wheel so that the setscrews line up with the flat section of the motor shaft before sliding it onto the shaft.

Do not slide the wheels all the way against the motor housing. The wheel will rub on the housing and not be fully centered, resulting in lower accuracy. Instead, slide each wheel so that it is centered on the ball feeder tube. This normally leaves about 1/16" of motor shaft extending beyond the wheel.

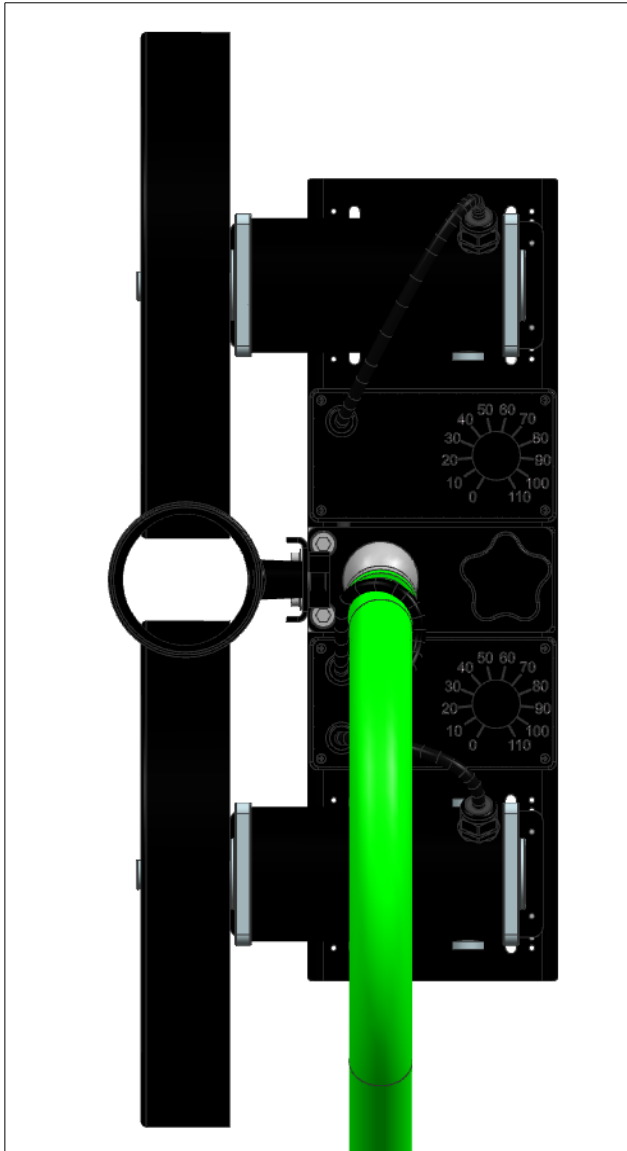


Figure 3: Slide each wheel onto the motor shaft so that it is centered on the ball feeder tube.

WHEEL GUARD INSTALLATION To prevent shipping damage, the machine is also shipped with the wheel guards uninstalled. The same 3/16" Allen wrench used to install the wheels fits the socket head cap screws used to install the guards. The guards are labeled top and bottom. Install the guards using 3 screws each, as shown in Figure 4,

placing the included rubber washers between the guards and the motors.

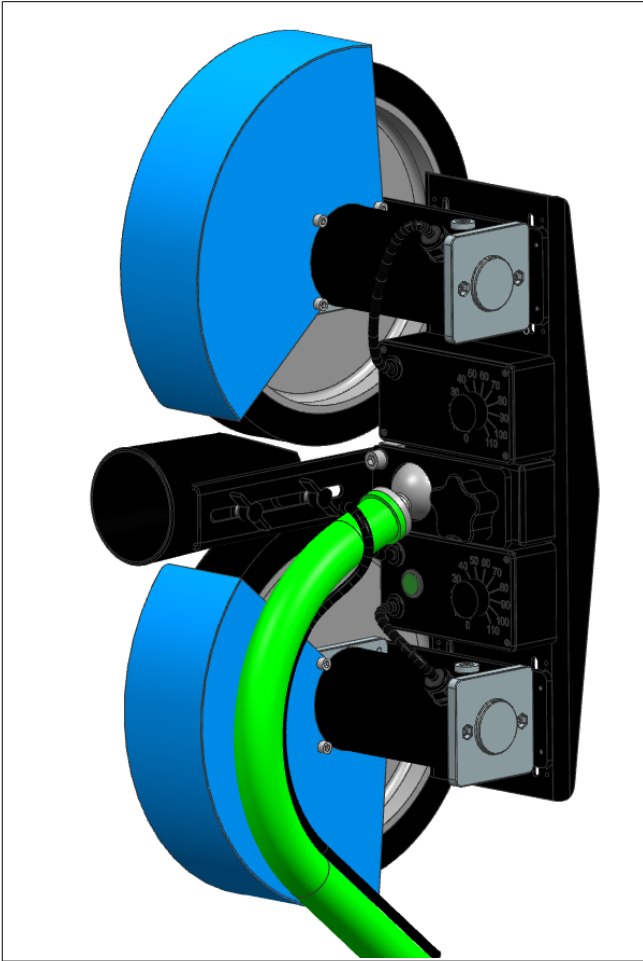


Figure 4: Install the wheel guards (shown in blue for clarity) onto the square motor flanges using 3 socket head cap screws each.

MOTOR / WHEEL POSITION The gap between wheels is a critical adjustment to maximize pitch speed and accuracy. The optimal distance between wheels depends on the size and compressibility of the ball being used. Softer, more compressible balls require a smaller gap than harder balls do. Too small of a gap will slow the wheels when pitches are thrown, producing a loud “thunk”. Too large of a gap will not generate enough squeezing force on the ball, and pitches will be too slow, without enough spin. As a general rule, when the gap is correct, you should be able to feed a ball through an unpowered machine by rotating the wheels by hand with a moderate effort.

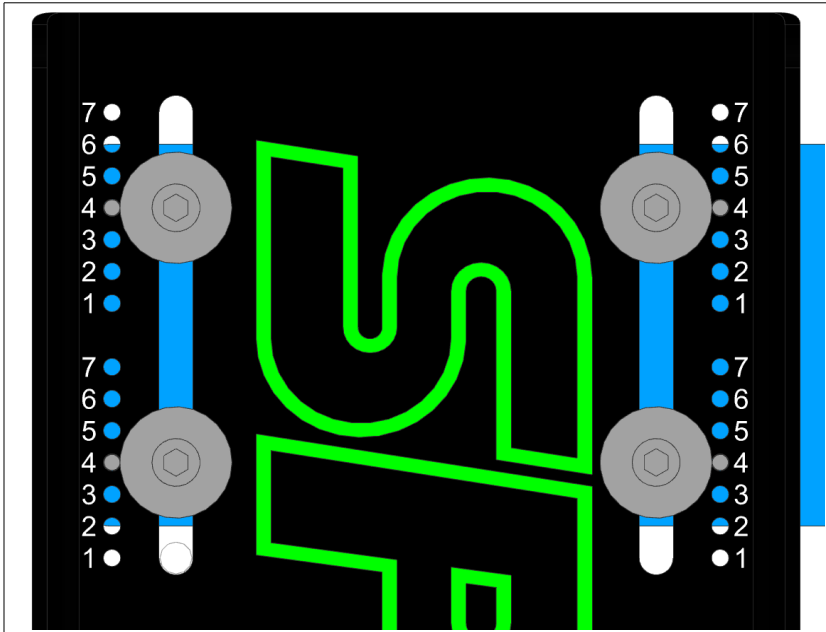


Figure 5: Top motor position numbering system. Motor sled pins shown in location 4 of 7. Motor sled shown in blue for clarity.

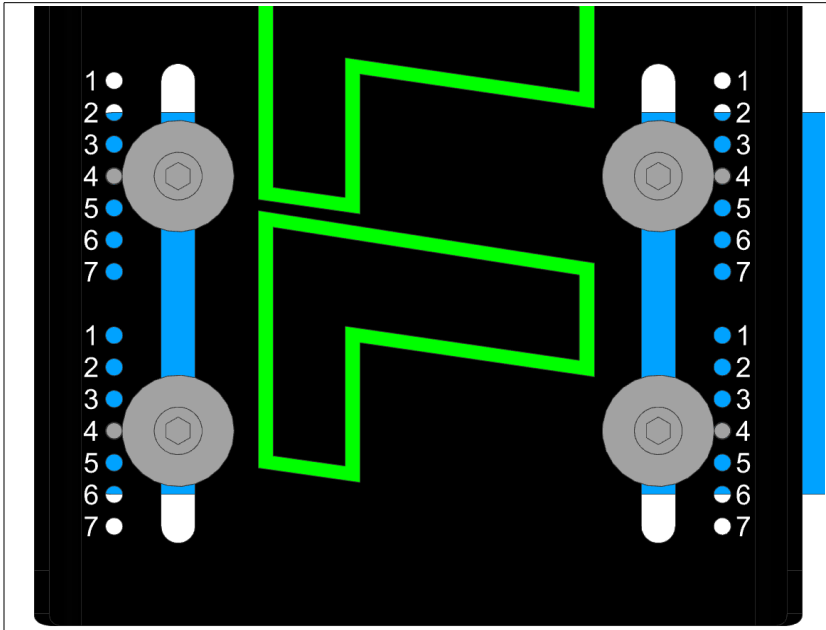


Figure 6: Bottom motor position numbering system. Motor sled pins shown in location 4 of 7. Motor sled shown in blue for clarity.

The Spinball Wizard uses a pegboard type system to ease wheel alignment and spacing. A grid of mounting holes provides a fixed number of positions for motor placement and automatically aligns the motor and wheel in each of those positions. See Figures 5 & 6 for a typical dimpled baseball setup.

The wheels are moved by removing the four socket (Allen) head cap screws that hold each motor sled to the frame. The 3/16" Allen wrench is the same one used for installing the wheels and guards. Be sure to support the motor / wheel assembly when removing the screws – do not let the motor fall or hang by its cord. Reposition the motor & wheel assembly as desired, then re-install the four screws. (The screws don't necessarily need to be fully removed during this process - you can just back them off enough to be able to move the motor.)

Table 1 provides guidelines on where to position the motors for various types of balls. Top and bottom motors do not need to be at the same location, but they should not be more than one setting apart. Feel free to experiment and deviate from these locations to determine the optimal wheel gap for your particular situation. For example, cold weather will cause both the balls and wheels to harden, requiring a larger wheel gap than when the same machine is used in hot weather. Also, once the wheels wear down, they will need to be moved closer together to compensate.

Ball Type	Top Motor / Wheel Pin Location	Bottom Motor / Wheel Pin Location
Soft Dimpled Baseballs < 85 mph	4	4
Soft Dimpled Baseballs > 85 mph	4	3
Real Baseballs	5	4
Soft Dimpled Softballs	6	6
Real Softballs	6	7

Table 1: Typical motor / wheel location setups for a new machine. A ball is considered “soft” if you can push your thumb into it 1/16” or more. To get technical, “soft” is a durometer or 70A or less.

This system is unique to Spinball pitching machines. Adjusting the wheel gap may seem like extra work, but the improved performance is well worth the effort.

OPERATION

SPEED CONTROLS The wheel speeds are individually controlled by rotary knobs. The actual pitch speed for baseballs will be the average of the two wheel speeds - see "Throwing Different Pitches" below. Because softballs are heavier than baseballs, they are thrown roughly 15% slower than baseballs. A small deadband, where the motor clicks but doesn't actually turn, is normal below a speed setting of 10-15mph.

ADJUSTING MACHINE ORIENTATION The machine is positioned by use of a single ball and socket joint. The joint is locked by turning the clamping knob clockwise until tight. To adjust the machine, grasp the machine's frame and turn the clamping knob counterclockwise until the joint is loose enough to move. Then rotate the machine to the desired position and lock the joint in place. The best practice is to loosen the joint just enough that you can adjust the machine with a little effort, but not loosen it enough that it can flop around on its own. For small horizontal adjustments, it is often easier to rotate the entire machine slightly instead of adjusting the ball and socket joint a tiny amount.

THROWING DIFFERENT PITCHES Thrown balls will tend to curve in the direction they are spinning, and the greater the spin, the more the curve. Spin is imposed on the ball by setting one wheel to turn faster than the other- the ball will spin & curve away from the faster wheel. By rotating the machine on its ball joint, you can set the curve in any direction. The speed of the pitch will be the average of the wheel speed settings. For example, setting one wheel at 60 and the other at 90 will result in a 75 mph pitch. A laminated chart is included for guidance, but it should only be considered a starting point. Please feel free to call or email us with questions.

The most common mistake for new users is to set both wheels to the same speed to throw a fastball. However, if both wheels are set to the same speed, the ball will have no spin and the pitch will actually be a knuckleball. A fastball has backspin, so the lower wheel must be set to a higher speed (by 20-40 mph) than the top wheel to throw it.

ACCURACY The primary factor behind pitch accuracy is the consistency of the balls. While you can use many types of balls (real or dimpled / high or low seam / compressible or hard) you can not mix them in one setup and get consistent results. Balls must be dry and in good condition. Dimpled machine balls will be more accurate than leather baseballs, especially after use. Softer balls tend to be more accurate than harder balls because the wheels grip them better. Low seams are better than high seams (and cause less wear). Rolling the ball into the

feeder tube so that the wheels grab across the seams is better than along the seams (4 seam is better than 2 seam). The more consistent the balls are, the more consistent the pitches will be.

Another key factor for top accuracy is setting the proper distance between wheels - see "Motor / Wheel Position" earlier in this manual for a full discussion.

A third factor is the cleanliness of the wheels. After use, especially with new plastic balls (both dimpled and laced), the wheels can accumulate a residue from the balls. The residue is slick and prevents the wheel from grabbing the ball sufficiently. The wheels can easily be cleaned with solvent cleaners such as MEK and lacquer thinner. Cheap synthetic leather baseballs wear quickly and leave excessive residue, so we strongly discourage their use.

If pitches seem to wander during use, check that the ball and socket joint is tight. Also check that the entire machine is not moving from recoil. When used on a hard slick flooring surface such as hardwood or cement, the machine should be set on a carpet scrap or nonslip mat. Finally, wheels must be centered on the feeder tube - see "Wheel Installation" and Figure 3 earlier in this manual.

SPEED The speed displays are very close to actual pitch speeds, but they are not exact. There is no economical way to compensate for the different types, weights, and conditions of the variety of balls that might be used. The speed settings are, however, very consistent and repeatable, so that once a machine is set, it will deliver consistent speed and accuracy.

MISCELLANEOUS

WHEEL BALANCING Our wheels are balanced 10X more accurately than a typical car tire. Should your wheels require re-balancing for any reason we will rebalanced them for you for free. Shipping each way is not covered. Bent or deformed aluminum wheels must be replaced.

GENERATORS This machine may be powered by a standard household outlet or a portable gas generator. The machine will pull a maximum continuous load of 4 Amps (480 Watts) at 120V AC, but we recommend a generator capacity of 800W minimum. Be sure when selecting a generator that you check the actual electric output power rating, not the gas engine output, which is often how they are advertised.

INVERTERS You can also power your machine with a 12V marine battery with a 120V AC inverter. However, only true sine wave inverters, which are much more expensive than modified sine wave (MSW) or square wave inverters, will work. 1000W is the minimum recommended output due to high startup currents.

MAINTENANCE If stored outdoors, always keep the machine covered to protect it from rain. Tarps are available at any local hardware store, but even a large black trash bag will work. Do not leave the machine outside during storms. High winds can blow the machine over and damage the wheels and/or motor shafts. This is not normal use, and is therefore not covered by warranty. Ball residue may be cleaned from the wheel tread with a rag and a solvent cleaner such as lacquer thinner or MEK.

WARRANTY If your machine doesn't perform like you expect, please contact Spinball and we will attempt to diagnose the problem for you. If a part fails during the warranty period and you feel confident you can install it yourself, we will send you the replacement part and provide technical support for the installation for free. If something goes wrong during the first 30 days you have the machine, you can also choose to exchange it for a new one. After 30 days, if you need to return the machine for repairs, you will have to pay for shipping. We will repair the machine and return the machine back to you at our expense. All components of your machine are covered for non-commercial use for five years from the date of purchase, but wheels are wear items which are prorated. For example, if a wheel only lasts 3 years (60% of its rated life), you will receive 40% off the price of a new one. The warranty does not cover cosmetic issues, normal wear, or misuse of the product, including knocking it over or dropping it. For commercial use, the warranty period is one year.

THANK YOU! Thank you for buying from Spinball Sports. We hope you will enjoy your new pitching machine for many years to come. If you have any questions or comments please email us at info@spinballsports.com or call us at 618-244-4587. And thanks again!

