



OWNER'S MANUAL

Instructions

JUGS PS50™ Pitching Machine

Part No. M1150



SAVE THIS MANUAL

ATTENTION
Coaches and Operators
of the JUGS PS50™

This manual must be kept with the pitching machine
AT ALL TIMES.

Each coach and/or operator must read and
understand the instructions in this manual
BEFORE USING the **JUGS PS50™**

Call 1-800-547-6843 or 503-692-1635
if you need additional copies.

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Introduction

Your new JUGS pitching machine has been checked for quality and craftsmanship. It's innovative design is backed by four decades of research, development and manufacturing experience. It has many features designed to make your practices more efficient and enjoyable. Safety, performance and dependability have been given top priority in the design of all JUGS pitching machines, making them easy to operate and maintain. With proper care, your JUGS pitching machine will give you many years of enjoyable service.


At JUGS, we are committed to providing our customers with safe, dependable products. Your comments are always welcome and they help us to continue to be the #1 producer of ball-throwing machines in the world. Please call or write to JUGS with your suggestions.




Product Safety Signs & Labels

Safety Alert Symbols

Safety Alert Symbols indicate **DANGER**, **WARNING** or **CAUTION**. These symbols may be used in conjunction with other symbols or pictographs. Failure to obey a safety warning will result in serious injury to yourself or to others. Always follow the safety precautions to reduce the risk of electric shock and personal injury.

 **DANGER:** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations.

 **WARNING:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

 **CAUTION:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

Product Safety Signs and Labels

The purpose of product safety signs and labels is to attract your attention to possible dangers. The safety symbols, signal words and the explanations with them, deserve your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instructions or warnings they give are not substitutes for proper accident prevention measures.

Safety Signs and Labels

Carefully read all safety sign decals affixed to machine before operating your JUGS pitching machine. See examples below.

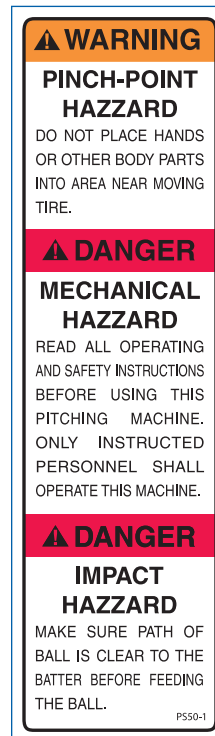
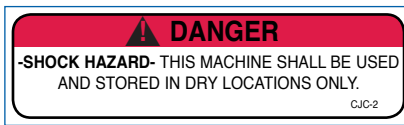
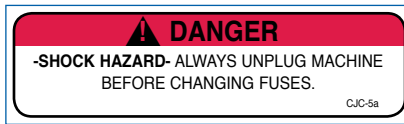





Figure 1

Rules For Safe Operation

-  **WARNING:** JUGS pitching machines are intended for use by operators who are at least 18 years of age and who have been instructed in their use.
-  **WARNING:** Do not attempt to operate this machine until you have read thoroughly and understand completely all instructions, safety rules, machine labels, etc. contained in this manual. Failure to comply can result in accidents involving electric shock or serious personal injury. Save this Owners Manual and review frequently for continuing safe operation, and for instructing others who may use this machine.
-  **WARNING:** Do not connect your pitching machine to a power source until you have assembled and adjusted the machine as described in this manual and have read and understood all precautions and operating instructions in the manual and printed on the machine.

READ THIS MANUAL:

- **Know Your Pitching Machine.** Read the Owner's Manual carefully. Learn the machine's capabilities, features and limitations as well as the specific potential hazards related to this machine.
- **Guard against electrical shock** by preventing body contact with grounded surfaces. For example: radiators, pipes, fences, or other enclosures.
- **Keep the operator's area free of clutter.** Pick up all loose balls around the machine and keep ball supply in a pail, bucket or other suitable container. Cluttered operating areas invite accidents.
- **Do not allow children to operate the pitching machine. You must be at least 18 years of age or older** and instructed in the proper operation, maintenance, care, and storage of this machine before operating it. Close supervision is necessary when this machine is used near children.

- **Use the right ball.** Use only Official PS50 Dimpled Baseballs and Softballs, JUGS Pearl®, Lite-Flite®, Softie®, Bulldog™ poly, or high-quality leather 9" baseballs or 12" softballs in this machine.
- **Inspect extension cords periodically** and replace if damaged.
- **Use the proper extension cord.** Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your machine will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. A wire gauge size (A.W.G.) of at least 16 is recommended for an extension cord 25 feet or less in length. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.
- **Do not abuse the cord.** Never yank cord to disconnect it from receptacle. Keep cord away from heat, oil, and sharp edges. Stay constantly aware of cord location and keep it well away from the rotating tires.
- **Dress properly.** Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry. They can get caught and draw you into the moving parts. Long hair should be tied up and tucked under hats and helmets. Severe physical harm may result if loose clothing, jewelry or hair is caught in rotating tires.
- **Always wear safety glasses and batting helmets while the wheel is rotating.** Debris on the tire can fly off and cause physical harm. Everyday eye-glasses have only impact-resistant lenses; they are NOT safety glasses.
- **Never touch rotating tire.** Do not put hands or fingers into ball feed chute. Hands and fingers should only go to the edge of the chute (or the edge of the sleeve in the case of fly ball or pop-up practice).
- **Inspect machine before every use.** If damaged, have repaired by a qualified JUGS service technician (1-800-547-6843).
- **Inspect tire before every use.** Be sure tire is free of grit and debris before turning on machine.
- **Do not use machine if ON/OFF switch does not work.** In the unlikely event that the switch becomes defective, have it replaced by a qualified JUGS service technician (1-800-547-6843).

- **Keep machine clean, and free of grit and dirt.** With the machine unplugged, use only a clean damp cloth for cleaning. Never use brake fluids, gasoline, petroleum-based products, or any solvents to clean machine.
- **Tighten T-Handle securely** after adjusting trajectory.
- **To protect the operator,** a pitcher's screen must be placed in front of the pitching machine.
- **Only operate and store this pitching machine in a clean, dry location.** Do not use outdoors if it is raining. If machine becomes wet, do not use. A potential shock hazard exists if this machine is used while or after it has been exposed to water. Hand dry surface water from machine with a clean cloth and allow the machine to completely air dry before its next use.
- **Avoid awkward operations and hand positions** where a sudden slip could cause your hand to move into the rotating tire. **ALWAYS** make sure you have good footing and balance.
- **Replacement parts.** All repairs, whether electrical or mechanical, should be made by a qualified JUGS service technician (1-800-547-6843). When servicing, use only JUGS replacement parts.
- **Do not operate this machine under the influence of drugs, alcohol, or any medication.**
- **Stay alert and exercise control.** Watch what you are doing and use common sense. Do not operate this machine when you are tired. **DO NOT RUSH.**
- **Avoid accidental starting when reconnecting to a power supply.** Always turn off machine before disconnecting it from power source. Never leave machine running unattended. Turn the power off. Do not leave machine until tire comes to a complete stop.

⚠ WARNING: Do not allow your familiarity with the machine to cause you to be careless. Remember that a careless fraction of a second is enough time to inflict severe injury to yourself or others.

SAVE THIS MANUAL. Refer to it often and use it to instruct other users. Do not loan your pitching machine to anyone who has not been instructed in its use. If you do loan your machine, be sure this manual goes with it.

Electrical

Grounding Instructions

This product must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be connected to an appropriate GFCI outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided. If it will not fit the outlet, have the proper outlet installed by a qualified electrician. Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the pitching machine is properly grounded.

Extension Cords

Use only 3-wire 16 AWG or larger grounding type extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the machine's plug. When using the machine at a considerable distance from a power source, use an extension cord heavy enough to carry the current that the machine will draw. An undersized extension cord will cause a drop in line voltage, resulting in a loss of power and causing the motor to overheat. Only round jacketed cords listed by

Underwriter's Laboratories (UL) should be used.

When working with the machine outdoors, use an extension cord designed for outside use. This is indicated by the letters "WA" on the cord's jacket. Before using the extension cord, inspect it for loose or exposed wires and cut or worn insulation.

⚠ WARNING: Keep the cord away from the rotating tire area. Repair or replace a damaged or worn cord immediately.

Electrical Connection

Your JUGS PS50 pitching machine is powered by a 90-volt motor. Do not operate this machine on direct current (DC). A substantial voltage drop will cause a loss of power and the motor will overheat. If the machine does not operate when plugged into an outlet, double check the power supply. Your pitching machine will operate under a standard 110-voltage AC outlet. Do not use an adapter with this product.

This machine is intended for use on a circuit that has an outlet like the one shown in *Figure 2*. It also has a grounding pin like the one shown.

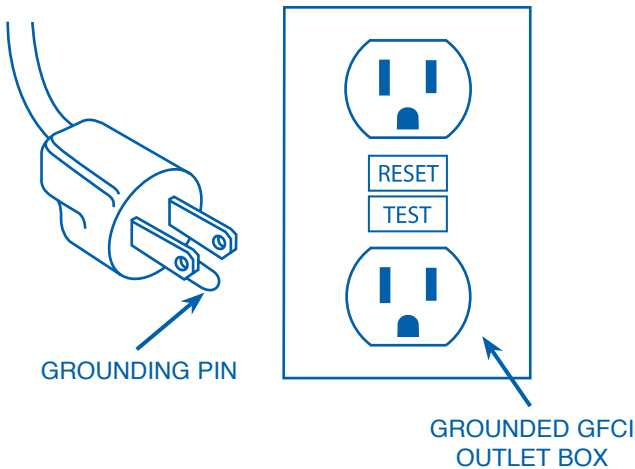
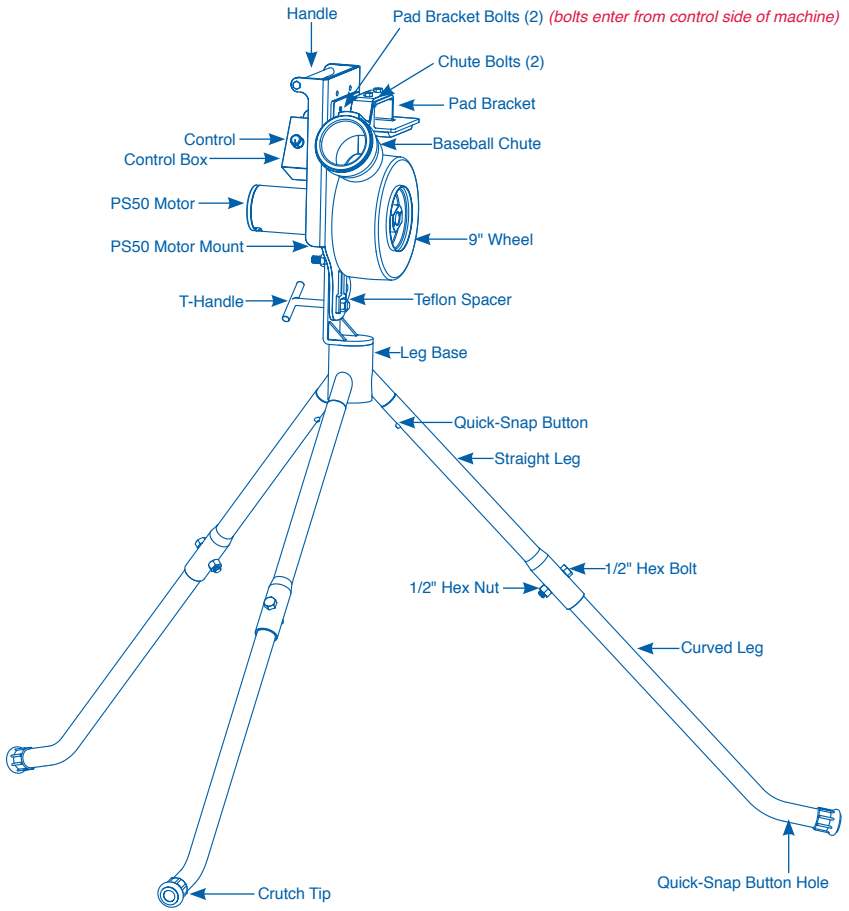


Figure 2

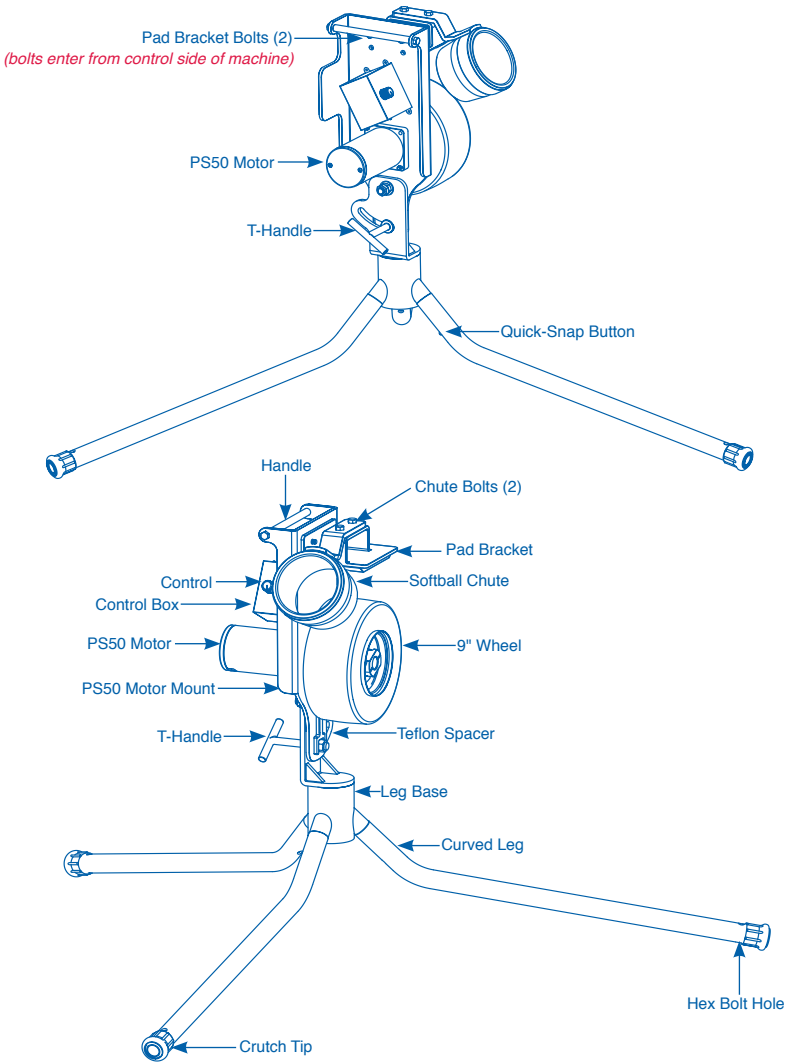
Terminology



Baseball Assembly

Figure 3

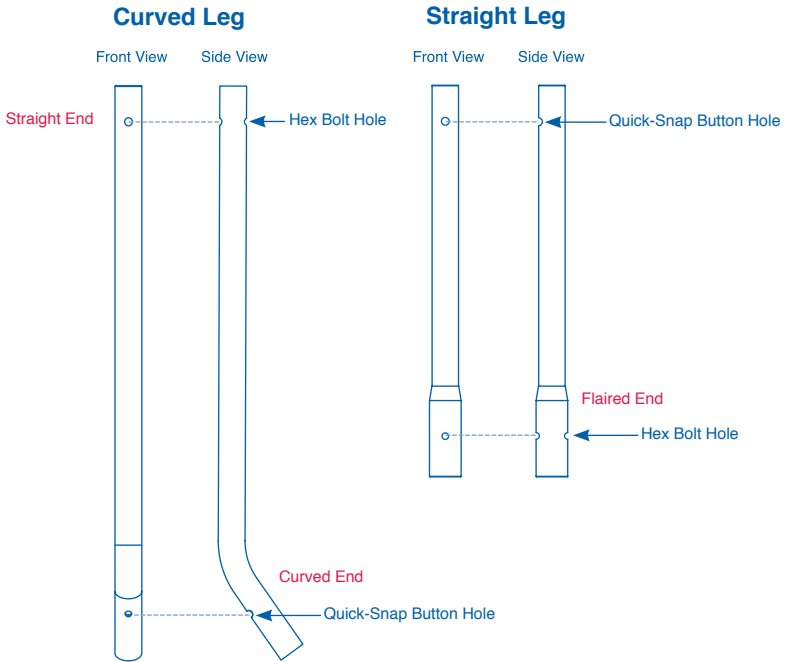
Terminology



Softball Assembly

Figure 4

Terminology



PS50 Baseball Leg Assembly:

Insert straight end of curved leg into flaired end of straight leg. Line up hex bolt holes and insert 1/2" hex bolt through the hex bolt hole. Thread hex nut onto bolt and tighten. Place crutch tip on curved end of the joined leg assembly. Slide open end of leg assembly onto leg base until Quick-Snap button engages Quick-Snap button hole. Repeat for other legs (See figure 3 for proper assembly).

PS50 Softball Leg Assembly:

Slide curved end of curved leg onto leg base until Quick-Snap button engages Quick-Snap button hole. Place crutch tip on straight end of curved leg. Repeat for other legs (See figure 4 for proper assembly).

Unpacking

⚠ WARNING: To prevent accidental starting or electrical shock that could cause possible serious injury, assemble all parts to your machine before connecting it to the power supply. The pitching machine should never be connected to a power supply when you are assembling parts, making adjustments, cleaning, servicing, or when not in use.

- Carefully lift machine from carton and place on level surface.
- Make sure you have all the parts (See Figure 3 and 4 on pages 10 and 11). If any parts are missing, do not operate the machine until the missing parts are replaced. Failure to do so could result in possible serious personal injury.
- Do not discard the packing materials until you have carefully inspected the machine, identified all the parts, and satisfactorily operated the machine.

NOTE: If any parts are damaged or missing, do not attempt to plug in the power cord and turn on switch until the damaged or missing parts are obtained and are installed correctly.

Set Up

For Baseball Use: The JUGS PS50 comes assembled for baseball use.

1. Assemble legs as explained on page 12, **Baseball Leg Assembly** (shown in figure 3, page 10).
2. Tighten T-Handle hand-tight.

For Softball Use:

1. Remove pad bracket bolts with 1/2" wrench and move pad bracket to upper holes (Softball Position). Reinstall and tighten pad bracket bolts (always from control side of machine).

Set Up (cont.)

2. Remove chute bolts and replace baseball chute with softball chute (larger chute). Replace bolts and tighten with 1/2" wrench.
3. Assemble legs as explained on page 12, **Softball Leg Assembly** (shown in figure 4, page 11).
4. Tighten T-Handle hand-tight.

IMPORTANT: Always set up the pitching machine so that the two legs are positioned in front, facing the pitching screen and batter, and one leg facing back toward the operator.

Make sure control is in off position and plug heavy-duty, 16-gauge three-prong, extension cord into 110-volt GFCI outlet and connect to short cord on pitching machine. Place the pitcher's screen in front of the pitching machine to protect the operator and the pitching machine from batted balls.

⚠ WARNING: T-Handle must be tightened securely before using the pitching machine and throwing pitches.

Transporting

- To move the pitching machine, loosen the T-Handle and pull machine back to the fly ball position. Tighten T-Handle and slowly tip machine over until tire rests on the ground. Lift two legs and roll on wheel to new position as you would a wheelbarrow. The JUGS PS50 pitching machine will fit in the trunk of a car by removing its legs and lifting by handle on top.
- Do not roll tire on surfaces that might damage the tire. If the tire becomes deformed, flat, or damaged, it must be repaired before using the machine. (See tire specifications, Page 20.)

⚠ WARNING: Never leave pitching machine unattended.

Operation

Pitching to Hitters

Follow all safety performance instructions in this manual. The following feeding instructions should be used to insure accurate and efficient operation of the JUGS PS50 Pitching Machine.

IMPORTANT PITCHING MACHINE FEEDING INSTRUCTIONS:

1. Have all hitters and observers stand well clear of the target as you throw test balls to adjust trajectory and aiming point.
2. **VERY IMPORTANT:** Before you place the ball in the feeding chute, you should look up at the batter and make absolutely sure the batter is watching you and is ready to receive the pitch. It is **extremely important** that you make sure that the immediate area in front of the pitching machine and the flight path of the ball is clear before you feed the ball into the pitching machine.
3. When the batter has taken his/her stance and indicates he or she is ready to hit, hold the ball high in the air where the batter can see the ball. Then bring the ball down to the chute simulating live action so that the batter can time the ball correctly. Set the ball in the feed chute and release. Do not drop the ball into the chute. Watch the ball into the wheels, then look up at the batter. The whole feeding operation should be smooth and without interruption.
4. Every batter, after taking his/her stance, as well as between pitches, goes through a personal readiness routine. The ball feeder should adjust the pitch spacing to each hitters' habits accordingly. This will assure that the batter is ready to receive the pitch and will also help to simulate live action. The batter can then regard each throw as a separate pitch and avoid becoming an "automatic swinger". Generally speaking, pitches can be spaced between 6 and 10 seconds apart.
5. To adjust the height of the pitch or trajectory, loosen the T-Handle, (located underneath the motor) a half turn. Grab the handle on the top of the machine

Operation (cont.)

and pull toward you (the operator) to raise the height or push away from you to lower the height and tighten the handle securely. (You will have to practice this targeting so you will know how to set the machine for each pitch.)

6. Out-of-round, soft, mushy, or wet balls will affect accuracy of pitches and must not be used. Mixing different types of JUGS balls or leather balls will affect consistency of pitches. For best accuracy, throw only one type of ball at a time.
7. Use only Official PS50 Dimpled Baseballs and Softballs, JUGS Pearl[®], Lite-Flite[®], Softie[®], Bulldog[™] poly, or high-quality leather 9" baseballs or 12" softballs in this machine.
8. When feeding the machine with leather balls, hold the ball the same way every time. Across the seams is best.
9. Do not permit more than one or two persons around the pitching machine during its operation.

BATTING HELMETS MUST BE WORN AT ALL TIMES.

10. Operators of JUGS Pitching Machines must wear safety glasses and batting helmets at all times.

⚠ WARNING: A pitching screen must be used to protect the operator and the machine from batted balls.

NOTE:

We suggest that each operator spend a couple of hours experimenting with the JUGS PS50 pitching machine. Try many different speed settings. **Turning control knob clockwise increases speed.** Do not be afraid that any setting you make will harm the pitching machine; however, you should use a wide backstop when experimenting with faster speeds.

Operation (cont.)

- At the beginning of practice, or after any change in speed, or trajectory, have the batter stand well clear while at least one test ball is thrown to make sure the ball is thrown at the desired target. If you move the machine for any reason, repeat this process.
- Throw balls at speeds the batter can learn to hit. As the batter's skills increase you can throw faster pitches. Always pitch balls at a speed suitable for the age and skill level of the batter. Pitches thrown too fast will be counterproductive and dangerous.

Figure 5. Control Panel



- When you increase speed of any pitch, you must lower the elevation of aim. When you decrease the speed, you must increase the aim elevation.
- Do not permit the pitching machine to fall on its wheel. This could result in non-warranty damage.
- Check tightness of all bolts and nuts at regular intervals. If any looseness, vibration, or rattle is noticed, correct immediately before further use.
- Always turn the speed dial to the full counter-clockwise position when throwing is completed or temporarily stopped (see figure 5). Then turn the on/off switch to the **OFF** position.

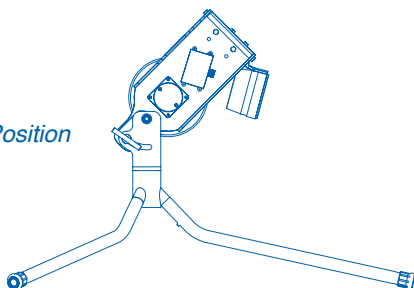
CAUTION: The wheel will continue to spin for up to two minutes after the power has been shut off. Stay clear of the wheel until it has come to a complete stop before stepping into the line of flight of the pitch or transporting the pitching machine.

Operation (cont.)

Slowpitch Softball Use

Your JUGS PS50 pitching machine can be used for slowpitch softball by loosening the T-Handle which will allow you to tip the top of the pitching machine back. Turn the speed down to get the correct trajectory you desire. See figure 6.

Figure 6. Slowpitch Softball Position



Fielding Practice

Fielding Practice

Your JUGS PS50 pitching machine can be locked in one position or you can loosen the T-Handle which will allow you to tip the pitching machine up and down.

Grounders

Position the wheel so it points downward. The greater the downward angle, the bigger the hop will be on the ground ball.

Flyballs

Position the wheel pointing upward. The greater the upward angle, the steeper the angle of the flyball will be.

⚠ WARNING: Keep hands and fingers away from tire side edges of ball chute.

Maintenance

Review the following instructions carefully to maintain maximum accuracy with your JUGS PS50 Pitching Machine.

- Maintain tire pressure at 20 psi.

Cleaning

- **Keep machine clean, and free of grit and dirt.** Always use a clean damp cloth when cleaning. Never use brake fluids, gasoline, petroleum-based products, or any solvents to clean machine.
- Periodically, you must clean the tires to help maintain their maximum performance. A dirty tire can easily be distinguished by either a dark ring around the tire surface or when the surface itself has turned yellow and has a very glossy or shiny finish.

Take medium grade sandpaper (sometimes an even coarser grade is necessary depending on the amount of soil buildup) and begin to **scrub** the tire surface as you would a very dirty frying pan. This process can be very tedious and could take up to 10 minutes per tire. However, it is necessary in order to completely clean the rubber of all foreign substances, as well as prepare it for better machine performance. You should sand the tires whenever you notice the soil build-up forming. **Always sand tires with the power switch OFF and the machine unplugged.**

Once you complete this operation the tire surface will, in most cases, take on the white color it was originally. Maintaining the tire in this fashion will not only maximize the performance and accuracy of your machine, but it will extend the life of the tire.

Storage

- Always store machine and extension cord in separate, clean, dry secured areas. Cover the machine with a suitable dust cover that does not retain moisture. Do not use plastic.

Product Specifications

JUGS PS50 Product Specifications:

Motor Specifications:

Variable Speed	
Maximum developed horse power	1/4 hp
Volts	90v DC
Amps	6 amps
Hertz	50/60 Hz
RPM (no load)	4,500 rpm
Overload protection	yes

Tire Specifications:

Size	.9 x 3.50/4.00
Pressure	20 lbs.

Frame Specifications:

Legs	steel tubing
Motor Mount and Leg Base	steel
Ball Feed Chute	steel
Overall Height—Baseball Position	48 in.
Overall Height—Softball Position	32 in.
Overall Width	60 in.
Overall Weight	50 lbs.
Recommended Generator	Yamaha® EF1000iS

Recommended Balls:

Use only Official PS50 Dimpled Baseballs and Softballs, JUGS Pearl®, Lite-Flite®, Softie®, Bulldog™ poly, or high-quality leather 9" baseballs or 12" softballs in this machine.

IMPORTANT:

Servicing requires extreme care and knowledge of the machine and should be performed only by JUGS. For service, we suggest you return the machine to JUGS for repair (1-800-547-6843). Always use original factory replacement parts when servicing.

Operator Notes

Warranty

JUGS Sports guarantees that the JUGS Pitching Machines are well made; of good materials, and workmanship; and agrees that if, within two years after shipment thereof, any part so guaranteed should fail because of defective material or workmanship in its manufacture, the Company will repair or replace such part, free of charge F.O.B. to its factory in Tualatin, Oregon; provided, however, that upon request, the Buyer shall return the allegedly defective part to the Company's factory with transportation charges thereon prepaid. **Commercial use of the JUGS PS50 automatically voids this warranty.**

This warranty shall not be effective if the equipment has been subject to misuse, negligence or accident, nor if the equipment has been repaired or altered outside of our Tualatin factory in any respect which, in judgement, affects its condition or operation.

JUGS SPORTS
P.O. Drawer 365
Tualatin, Oregon 97062

• RETURN PERFORATED CARD BELOW TO JUGS SPORTS •

WARRANTY RECORD

JUGS Serial No. _____

Date Delivered: _____

Model: **JUGS PS50**

Name: _____

Address: _____

Zip: _____

Phone: () _____

Purchased From: _____



In the USA and Canada, call toll free: **1-800-547-6843.**

Internationally, call collect: **0-503-692-1635.**

Our fax number is: **503-691-1100.**

jugssports.com

Model: **JUGS PS50**

Serial No: _____

Date Delivered: _____

• **SAVE THIS PORTION FOR YOUR RECORDS** •

PLACE
STAMP
HERE

JUGS SPORTS
P.O. Drawer 365
Tualatin, Oregon 97062

**Contact Manufacturer
If Further Information Is Needed:**



JUGS Sports
P.O. Drawer 365
19333 S.W. 118th Avenue
Tualatin, Oregon 97062

Toll-Free:

1-800-547-6843

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0-503-692-1635

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