

OWNER'S MANUAL Instructions

Lite-Flite® Machine for Baseball & Softball

Part No. Z7700



SAVE THIS MANUAL

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ATTENTION, Coaches and operators of this pitching machine:

This manual must be kept with the pitching machine at all times. Each coach and/or operator must read and understand this manual before using the JUGS Lite-Flite® Machine. Call 1-800-547-6843 or 503-692-1635 for additional copies if needed.

Introduction

Your new JUGS pitching machine has been checked for quality and craftsmanship. Its innovative design is backed by three 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. Call or write to JUGS, and let us know what you think.



Parts Inventory

The following parts come standard with your JUGS Lite-Flite® Machine. If you have any questions regarding any of these parts, please call JUGS Sports, toll free: 1-800-547-6843.



1 JUGS Lite-Flite® Machine



1 Baseball Chute & 1 Softball Chute



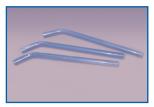
1 T-Handle & Leg Clamp



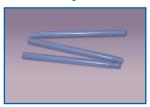
1 JUGS Lite-Flite® Machine Drill Book



1 JUGS Lite-Flite® Softball and 1 JUGS BULLDOG™ Poly Softball



3 Curved Legs for Softball



3 Straight Extension Legs for Baseball



3 Leg Crutch Tips



1 JUGS Lite-Flite® Baseball and 1 JUGS BULLDOG™ Poly Baseball

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.

A DANGER: Indicates an imminently hazardous situation which, if

not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations.

A WARNING: Indicates a potentially hazardous situation which, if not

avoided, could result in death or serious injury.

A CAUTION: Indicates a potentially hazardous situation which, If not

avoided, may result in minor or moderate injury. It may

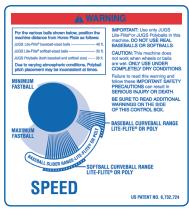
also be used to alert against unsafe practices.

Product Safety Signs and Labels

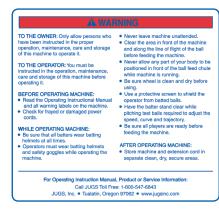
The purpose of product safety signs and labels is to draw your attention to possible dangers. The safety symbols, signal words, and the explanations with them, deserve your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instructions or warnings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

Safety Signs & Labels

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



CONTROL PANEL



DANGER

-SHOCK HAZARD- THIS MACHINE SHALL BE USED AND STORED IN DRY LOCATIONS ONLY.

WARNING

-PINCH POINT HAZARD- DO NOT PLACE HANDS OR OTHER BODY PARTS INTO AREA NEAR MOVING TIRE(S).

DANGER

-SHOCK HAZARD- ALWAYS UNPLUG MACHINE BEFORE CHANGING FUSES.

CJC-5a

CAUTION

-STABILITY HAZARD- "T" HANDLE MUST BE IN PLACE AND TIGHTENED BEFORE USING MACHINE.

WARNING: Abuse of this equipment can cause ball chute to weaken, crack, break, rust, etc. BEFORE using machine, hand check and examine ball chute and REPLACE it if any of these conditions exist.

IMPORTANT: If your machine is missing any of these safety sign decals or if the decals on your machine have worn off or faded, please call JUGS, Inc., at 1-800-547-6843 to receive a new set of decals.

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. Avoid 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 JUGS
 Lite-Flite® or JUGS Polyballs in
 this machine. DO NOT USE REAL
 BASEBALLS OR SOFTBALLS.





- Inspect extension cords periodically. Replace them 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 (AWG.) 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 the cord to disconnect it from a
 receptacle. Keep cord away from heat, oil, and sharp edges. Stay constantly
 aware of the cord's location, and keep it well away from the rotating tire.
- 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 tire.
- Always wear safety glasses and batting helmets while the wheels are rotating. Debris on the tires can fly off and cause physical harm. Everyday eyeglasses have only one-impact-resistant lenses; they are NOT safety glasses.
- Never touch rotating tire. Do not put hands or fingers into the ball feed chute. Hands and fingers should only go to the edge of the chute.
- Inspect the machine before every use. If damaged, have it repaired by a qualified JUGS service technician.
- **Inspect tire before every use.** Be sure tire is free of grit and debris before turning on the 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.
- Keep the 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 the machine.
- Tighten the T-Handle and Switch-and-Play[™] knobs securely after adjusting trajectory.
- Protect the operator. Place a pitcher's screen in front of the pitching machine.
- Operate and store this pitching machine only 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 become 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.
- Use only JUGS replacement parts when servicing. All repairs, whether
 electrical or mechanical, should be made by a qualified JUGS service
 technician.
- 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 the machine before disconnecting it from a power source.
 Never leave the machine running unattended. Turn the power off. Do not leave the machine until the tire has come to a complete stop.



A WARNING: Do not allow your familiarity with the machine to cause you to become 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 the electric current to reduce the risk of electrical shock. This product is equipped with a cord having an equipment-grounding plug. The plug must be connected to an appropriate 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 you do not completely understand the grounding instructions, or if you are 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 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 from a standard 110-voltage AC outlet.

This machine is intended for use on a circuit that has an outlet like the one shown in figure 1. It also has a grounding pin like the one shown.

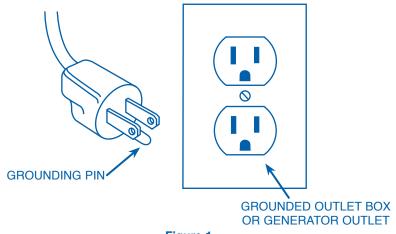


Figure 1

Terminology

Lite-Flite® Baseball Diagram

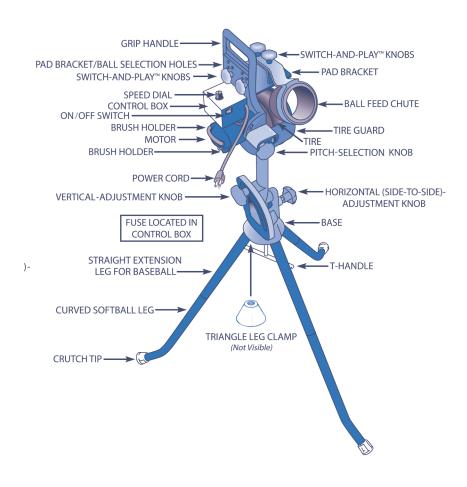


Figure 2

Terminology

Lite-Flite® Softball Diagram

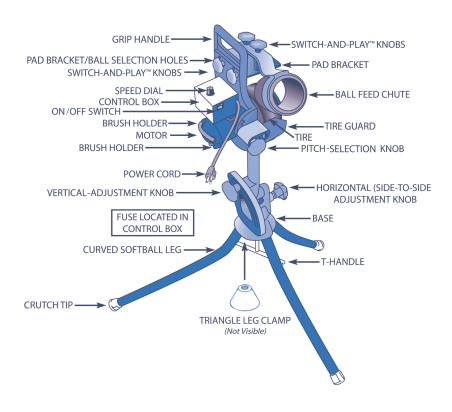


Figure 3

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 you are not using it.

- Carefully lift the machine from the carrying bag and place it on a level surface.
- Make sure you have all the parts (see nomenclature, pages 11 & 12). 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 the switch until the damaged or missing parts are obtained and are correctly installed.

Set Up

- 1. With machine upside down resting on grip handle, place the triangular leg clamp in the leg clamp casting.
- 2. Insert the threaded end of the T-handle through the center hole in the leg clamp casting, and start the threads.
- 3. Install one leg in each round hole in the center piece of the leg clamp casting. Tighten the T-Handle sufficiently to hold the legs very snugly in place as shown in figures 4 and 5.





Figure 4—Softball Legs

Figure 5—Baseball Legs

- 4. Place rubber crutch tips on the lower ends of the legs if JUGS is to be used indoors. **Crutch Tips are not recommended for outside use**.
- 5. Lift the pitching machine upright.

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 is facing back toward the operator.



Softball Set Up



Baseball Set Up

▲ WARNING: Before using the machine, the Switch-and-Play™ Knobs, T-Handle, Adjustment Knobs and Pitch-Selection Knob must be tightened securely.

Softball to Baseball

Instructions for Changing Machine from Softball to Baseball

 With machine upside down and resting on grip handle, loosen T-Handle and remove Softball Legs.



 Screw Baseball Extention Legs into Softball Legs as shown.



 Install one leg in each round hole in the center piece of the leg-clamp casting.
 Tighten the T-Handle sufficiently to hold the legs very snugly in place.



 Holding Softball Chute securely, loosen and remove both Switch-and-Play™ Knobs. Change chutes. Holding Baseball Chute securely, tighten both Switch-and-Play™ Knobs.



IMPORTANT: Holding Pad Bracket securely, loosen and remove both Switch-and-Play™ Knobs. Align Pad Bracket to desired Ball-Selection Holes (Poly BB or Lite-Flite® BB) and replace and tighten both Switch-and-Play™ Knobs.

NOTE: To switch from baseball to softball, simply reverse process.

Operation

- 1. Operators of Jugs Pitching Machines must wear safety glasses and batting helmets at all times.
- Check speed dial and make sure it is in the full counter-clockwise position (pointer at minimum setting) and the ON/OFF switch is in the OFF position.
- 3. Plug a heavy-duty, No.16-gauge three-prong, extension cord into a 110-volt AC outlet and connect it to the short cord on the pitching machine. Place the pitcher's screen in front of the pitching machine to protect the operator and the pitching machine from batted balls.
- 4. Position the machine to aim at the desired target. While grasping the grip handle on top of the machine, loosen the vertical adjustment knob on the left side of the machine and adjust the trajectory as desired. Tighten the vertical adjustment knob securely. (You will have to practice this targeting so you will know how to set the machine for each pitch.)
- 5. Turn the speed dial on your control panel to the pitch selection feature desired.
- 6. Place ON/OFF switch to the ON position.
- 7. Have all batters and observers stand well clear of the target as you throw practice balls to adjust the trajectory. Tighten the vertical-adjustment knob securely. (It is normal to throw five or six balls before arriving at the setting you desire.) Always have the batter and others stand clear while adjusting your JUGS pitching machine.
- 8. At the beginning of practice, or after any change in speed, curve, 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.
- 9. When throwing fastballs, throw balls at speeds the batter can learn to hit. As the batter's skills increase, you can throw faster pitches.

Operation (continued)

- 10. When you increase the speed of fastballs, you must lower the elevation of the aim; when you decrease speed, you must increase the aim elevation.
- 11. Space all pitches approximately six seconds apart. Try to get the batter to regard each pitch as a "separate" pitch—and not to be an "automatic" swinger.
- 12. Always "show" the ball to the batter. When you are certain the batter has acknowledged that he or she is ready, set the ball in the feed chute and release it. Do not drop the ball into the chute.
- 13. Do not permit more than one or two persons around the pitching machine during its operation.
- 14. Always turn the speed dial to the minimum position when throwing is completed or temporarily stopped. Then turn the ON/OFF switch to the OFF position.

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 pitching machine. Try many different pitch settings. 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.

IMPORTANT: If the machine becomes wet during practice, turn it off immediately, and transport it to a clean, dry location. Wipe off surface water with a soft, clean cloth and permit the machine to air dry completely before its next use.

Pitching to Hitters

Follow all safety performance instructions in this manual. Otherwise, physical harm to the operator (Ball Feeder) and/or the batter may result. The following feeding instructions should be used to insure accurate and efficient operation of the JUGS pitching machine.

IMPORTANT:

- Use the right ball. Use only JUGS Lite-Flite® or JUGS Polyballs in this
 machine. DO NOT USE REAL BASEBALLS OR SOFTBALLS.
- 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 the batter can
 time the ball correctly. The whole feeding operation should be smooth and
 without interruption.
- 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 balls into the pitching machine.
- Watch the ball into the wheel, then look up at the batter.
- Please use the chart below for the speeds based on the pitching distance.

DISTANCE FROM HOME PLATE TO MACHINE	APPROXIMATE MAXIMUM FASTBALL SPEED
40 feet	60-65 mph
35 feet	70-75 mph
These speeds are based on the fact that a 60	mph fastball will travel at .88 feet per second.

BATTING HELMETS MUST BE WORN AT ALL TIMES.

Throwing Different Pitches

IMPORTANT: For the various balls shown below, position the machine distance from Home Plate as follows:

JUGS Lite-Flite® baseballs	40 feet
JUGS Lite-Flite® softballs	35 feet

JUGS Bulldog™ Polyballs (both baseball and softball size) 35 feet



 Loosen the Pitch-Selection Knob and line up the arrow to the pitch desired. Refer to the decal on the machine (above the Pitch-Selection Knob, shown at right) for pitch abbreviations. Tighten the Pitch-Selection Knob.

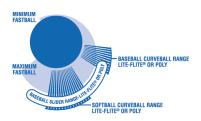
RHCB — Right-Handed Curveball RHS — Right-Handed Slider FB — Fastball LHS — Left-Handed Slider LHCB — Left-Handed Curveball

Turn dial on control panel to chosen pitch.

EXAMPLE: Before throwing a left-handed curveball for baseball, the machine and dials should be set as shown below.







NOTE: When throwing fastballs for baseball and softball, set Pitch-Selection Knob to Fastball and Speed Dial from Minimum to Maximum, depending on the skill level of the hitter.

Fielding Practice

An additional feature of your JUGS Lite-Flite® Machine is its use for fielding practice.

Flyballs and Pop-ups

 Loosen the Vertical-Adjustment Knob, adjust the trajectory of the machine upward to the desired position, and then tighten the Vertical-Adjustment Knob. The greater the upward angle, the steeper the angle the flyball or the pop-up will have. Loosen the Horizontal-Adjustment Knob. This will allow you to rotate the machine a full 360°.

Grounders

 Loosen the Vertical-Adjustment Knob, adjust the trajectory of the machine downward to the desired position, and then tighten the Vertical-Adjustment Knob securely. The greater the downward angle, the bigger the hop will be on the ground ball.







HORIZONTAL-ADJUSTMENT KNOB

WARNING: Keep hands and fingers away from the tire and tire-side edges of the ball chute. When throwing pop-ups, the operator must wear a catcher's mask as well as a batting helmet. When finished throwing flyballs, pop-ups and grounders, be sure to tighten Horizontal-Adjustment Knob securely.

Transporting

 The JUGS Lite-Flite® Machine is easily transported by loosening the T-handle and removing legs..

MARNING: Never leave the pitching machine unattended.

Maintenance

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

Cleaning

 Keep the machine clean and free of grit and dirt Always use a clean damp cloth when cleaning. Never use brake fluids, gasoline, petroleumbased products, or any other solvents to clean the machine.



Product Specifications

JUGS Lite-Flite® Machine Product Specifications:

Motor Specifications Variable Speed
Maximum Developed Horse Power
Volts
Amps 1.3 amps
Hertz
RPM (no load) 6000 rpm
Overload Protection yes
Frame Specifications:
Legs steel tubing
Motor Mount and Leg Clamp Casting cast aluminum
Ball Feed Chute cast aluminum
Overall Height–Baseball
Overall Height–Softball
Overall Width-Baseball
Overall Width–Softball
Overall Weight–Baseball
Overall Weight–Softball

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. Always use original factory replacement parts when servicing.

Recommended Balls JUGS Lite-Flite® and JUGS Polyballs only

Warranty

JUGS Sports guarantees that JUGS® Pitching Machines are well made; of good materials, and workmanship; and agrees that if, within three 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. 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 JUGS® products automatically limits this warranty to 30 days after date of shipment.

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 our judgment, affects its condition or operation.

JUGS Sports	Model: JUGS Lite-Flite® Machine
P.O. Box 365	Serial No:
Tualatin, Oregon 97062	Date Delivered:

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







NOW AVAILABLE: A <u>fully rechargeable</u> **Battery Pack**for your JUGS Lite-Flite® Machine

- The JUGS Rechargeable Battery Pack is self-contained in a heavy-duty nylon carrying case and weighs just 17 lbs.
- One-Year Guarantee.
- The JUGS Battery Pack runs your JUGS Lite-Flite® Machine for up to 3 hours of continuous use, and recharges in only 2 hours.

The JUGS Battery Pack comes complete with:

- 32-Inch Extension Cord
- Battery Recharger
- Heavy-Duty Nylon Carrying Case
- Nylon Shoulder Strap for easy transport

Contact manufacturer if further information is needed:



JUGS Sports P.O. Box 365 19333 S.W. 118th Ave. Tualatin, Oregon 97062

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Se habla español.