

AERIAL ATTACK™

FOOTBALL MACHINE



AERIAL ATTACK™ FOOTBALL MACHINE
PATENTS APPLIED FOR

INSTRUCTION MANUAL

Includes: OPERATION · SETUP · USE & CARE · SERVICE

REV03092018



SPORTS ATTACK LLC.
800.717.4251
www.sportsattack.com

FOOTBALL

WARRANTY STATEMENT

What is most important to Sports Attack is that your machine meets your expectations of quality and performance. We stand behind the material and workmanship of our machines for five (5) years from the date of original purchase for institutional and residential use and one (1) year for commercial environments, with the following exceptions:

- Throwing Wheels are warranted for two (2) years;
- Electronic Controller is warranted for two (2) years; and,
- Throwing Wheel Motors are warranted for two (2) years.

This warranty excludes any cosmetic issues or normal wear and tear of the unit, and is not in effect if the machine has been misused, misapplied, improperly assembled, or modified without the express written permission of Sports Attack. In addition, this warranty does not apply to damage in transit, in any accident unrelated to the direct operation of the equipment, or by fire, flood or act of God.

If you encounter any issues during the warranty period, Sports Attack will quickly get your machine back in working order. If the warranty repair involves a replacement part, we will make sure you get both the part and easy instructions for replacement at no cost to you. If a service person is needed, Sports Attack will pay the pre-approved labor charge to get your machine back in working order.

Please know that any problem can quickly be resolved with a phone call to our experienced, responsive customer service department at 800.717.4251. We are here to answer your questions and to make sure your machine provides you years of service.

RETURNS

Sports Attack manufactures the highest quality sports training equipment in the world. If for any reason you are not satisfied, a machine can be returned within 30 days of receipt for any reason for a full refund less a 10% restocking fee. Cost of shipping the unit back to Sports Attack will also be the responsibility of the purchaser. Please note that the refund amount may be reduced by any non-cosmetic damage to the machine.

If you have any questions or concerns, please give our experienced, responsive customer service department a call at 800.717.4251.

SHIPPING DAMAGE CLAIMS PROCEDURE

NOTE: For your protection, please note that equipment in this shipment was carefully inspected and packaged by skilled personnel before leaving the factory.

Upon acceptance of this shipment, the transportation company assumes full responsibility for its safe delivery.

IF SHIPMENT ARRIVES DAMAGED:

- 1. VISIBLE LOSS OR DAMAGE:** Be certain that any visible loss or damage is noted on the freight bill or express receipt, and that the note of loss or damage is signed by the delivery person.
- 2. FILE CLAIM FOR DAMAGE IMMEDIATELY:** Regardless of the extent of the damage.
- 3. CONCEALED LOSS OR DAMAGE:** If damage is unnoticed until the merchandise is unpacked, notify the transportation company or carrier immediately, and file "CONCEALED DAMAGE" claim with them. This must be done within fifteen (15) days from the date the delivery was made to you. Be sure to retain the container for inspection.

Sports Attack, LLC. cannot assume liability for damage or loss incurred in transit. We will, however, at your request, supply you with the necessary documents to support your claim.

To register the Warranty,
please go to our website:

www.sportsattack.com/warranty

For repairs and service after
the Warranty period, please
call:

Sports Attack
Customer Service Dept.
Ph 800-717-4251
Fx 775-345-2883

RETURNS

To return an item, please
contact our Customer Service
Department at 800-717-4251.

A 15% restocking fee will be
charged for any items accepted
for return. It is the customer's
responsibility to handle the
repacking and shipment (as
well as all associated fees) back
to Sports Attack.

No returns will be accepted
after 30 days of receiving
this product.

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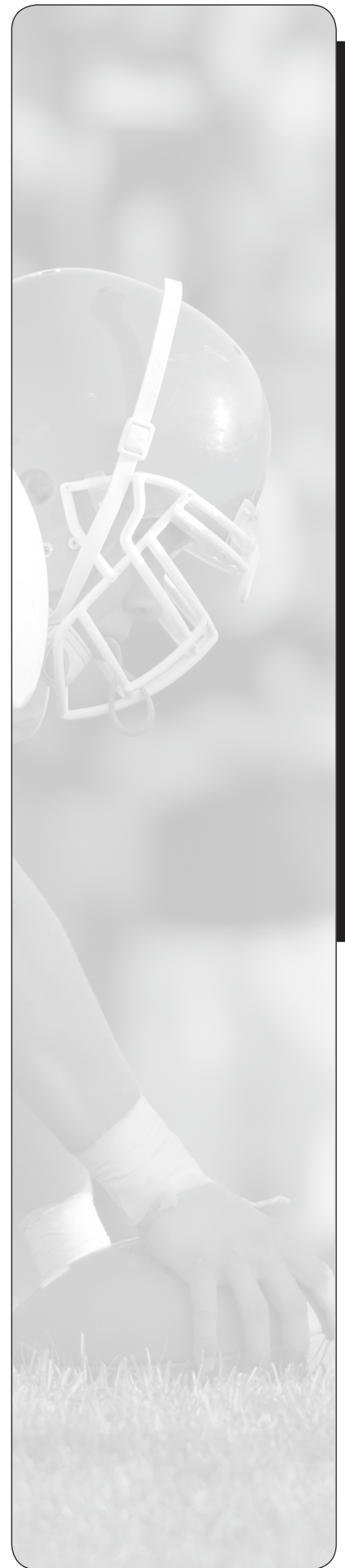
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INTRODUCTION

Thank you for purchasing this Sports Attack, LLC. equipment. **Your Aerial Attack™ will be shipped in the right-hand spiral position.**

Proper assembly, careful operation and consistent maintenance of this equipment will ensure that it gives you the very best performance and a long, economical service life.

This manual contains the information needed to properly set up the Aerial Attack Football Machine, and to use, care for and maintain the Aerial Attack in a manner which will ensure its optimum performance.



SAFETY INSTRUCTIONS

ELECTRICAL SAFETY

Use a 115 volt single phase 3-wire grounded power source.

Up to 200 ft. from power source, use a minimum #14/3 grounded 3-wire extension cord.

Over 200 ft. from power source, consult a licensed electrician for required power cord size.

OPERATING SAFETY

CAUTION: Never reach down near moving throwing wheels for any reason! If it is necessary to reach into the throwing wheels, **ALWAYS:**

1. Turn speed dial to "0".
2. Turn the power switch "OFF".
3. Unplug Aerial Attack™ from power source.
4. Wait until the throwing wheels have come to a complete stop before reaching hands or fingers anywhere near the throwing wheels.

CAUTION: Carefully check Aerial Attack for completeness and condition before connecting to electrical power:

Carefully check the throwing wheels frequently for cleanliness, chips and cracks. Do not use the machine if the throwing wheels are damaged, or if chips or cracks appear in the wheels. (For damage within warranty period, see Warranty Statement, page xi.)

ALWAYS set the speed control to "0" before connecting the machine to power. Check that the speed control is at "0" before turning the throwing wheels "ON".

Do not allow anyone to walk in front of the Aerial Attack Football Machine if it is connected to electrical power.

CAUTION: DO NOT plug in or energize this equipment until all assembly instructions and operation instructions are read and followed.

BALL SELECTION

Balls must be official size and consistent in type to produce repeatability.

Never use wet or damp balls! Ball air pressure must be between 10-12 lbs.



Distance	Air Pressure
70-90 yds.	9-11 lbs.
55-70 yds.	7-8 lbs.
40-55 yds.	5-6 lbs.

Slippage occurs at higher wheel speeds with lower air pressure. We recommend higher air pressure to prevent slippage.

WARNING

PERSONAL INJURY HAZARD

Carefully read all instructions in this manual, and all labels and warnings on Aerial Attack before using this machine.

Use machine only under adult supervision. Failure to operate Aerial Attack as described in this manual can result in severe personal injury or death.

ELECTRICAL SHOCK HAZARD

The Aerial Attack must be connected to a properly grounded electrical receptacle.

Do not operate on wet ground.

CAUTION

PERSONAL INJURY HAZARD

Keep hands away from throwing wheels anytime the machine is connected to a power source.

Carefully check the Aerial Attack for completeness and condition before connecting to electrical power.

EQUIPMENT ELECTRICAL DAMAGE

Keep hands away from throwing wheels anytime the machine is connected to a power source.

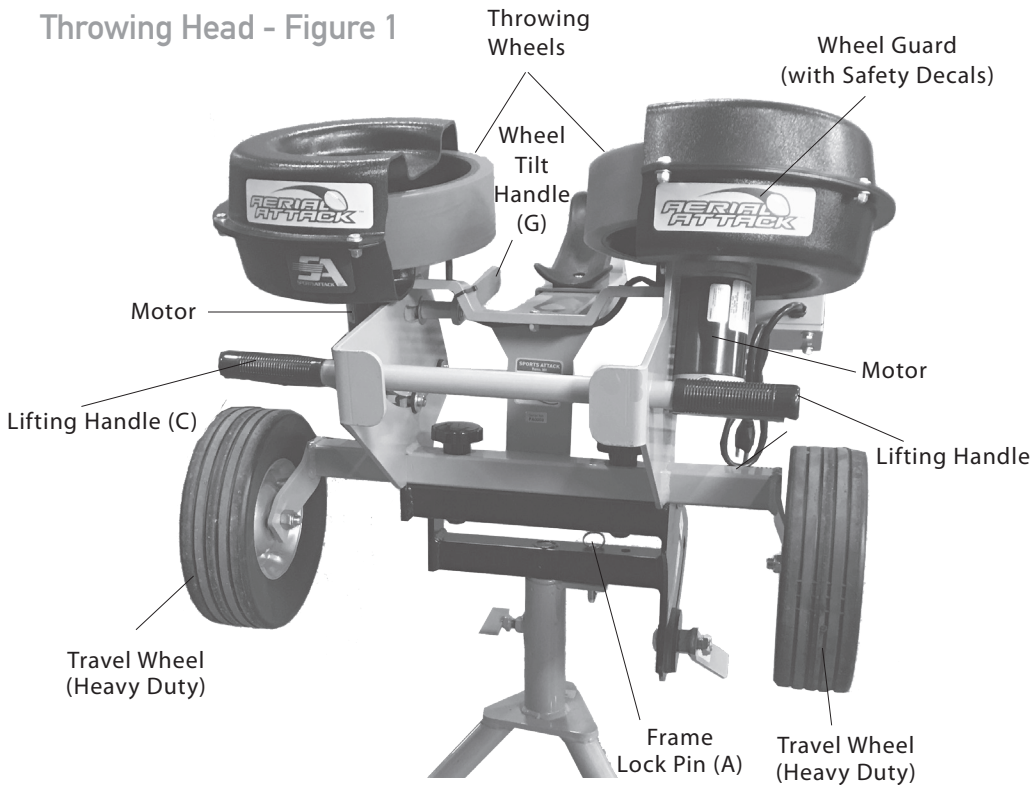
Carefully check the Aerial Attack for completeness and condition before connecting to electrical power.

BALL REQUIREMENT

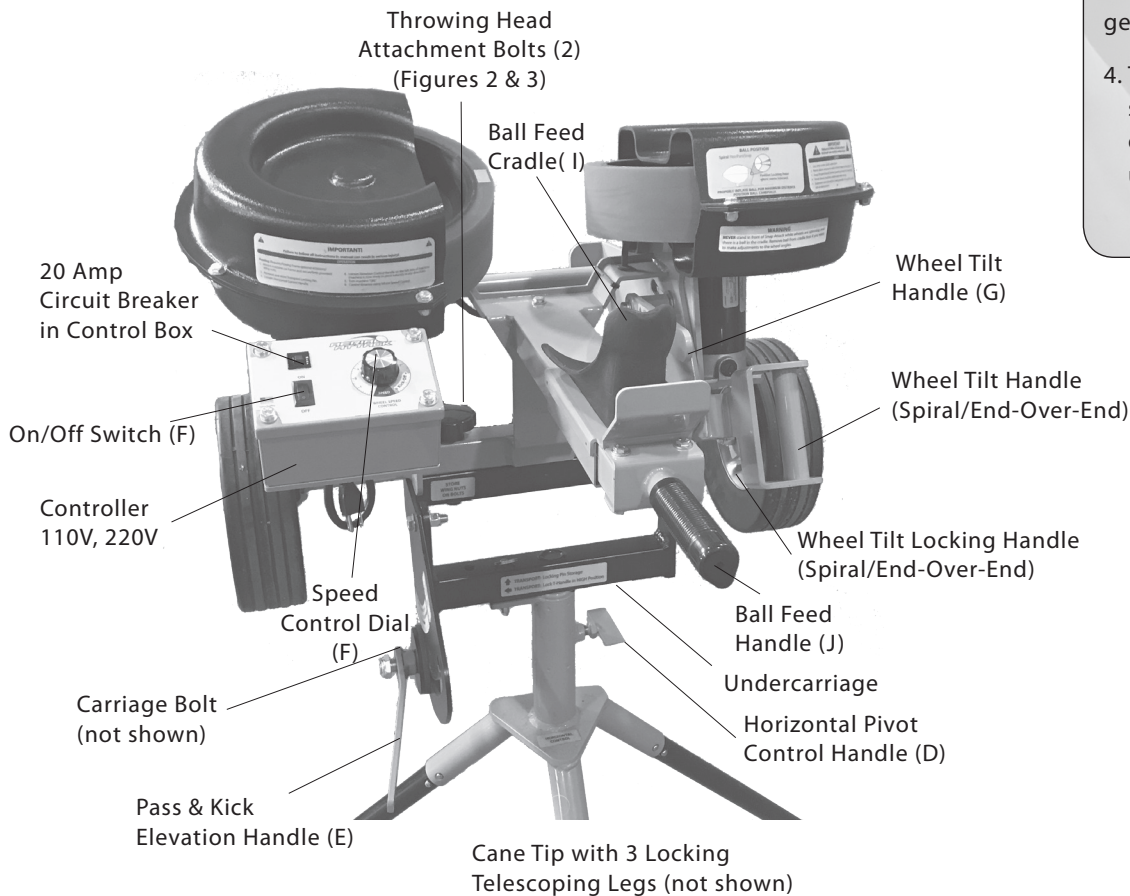
Do NOT use synthetic leather footballs. We recommend full grain leather.

COMPONENT VIEW

Throwing Head - Figure 1



Throwing Head & Undercarriage view- Figure 2



ADDITIONAL INFORMATION

If you have any questions regarding the safe operation of the Aerial Attack, please call:

Sports Attack Customer Service Department
Ph 800-717-4251
Fx 775-345-2883

GENERATOR INFORMATION

1. Aerial Attack requires a generator capable of providing clean electricity (inverter technology) of a minimum 1000 watts at 120 volts 60hz.
2. Be sure the power switch is "OFF" before plugging Aerial Attack into the generator.
3. Start the generator and allow it to reach full speed before turning the power switch "ON".

IMPORTANT: Generator speed fluctuations can damage the electronic speed control. Maintain adequate fuel in the generator at all times.

4. Turn the Aerial Attack power switch "OFF" before shutting off the generator and before unplugging the Aerial Attack.

SET-UP & PREPARATION USING THE AERIAL ATTACK ON THE STAND TO THROW PASSES, PUNTS AND KICKS OFFS

IMPORTANT: Lock pin (A) must be removed (See Figure 2) and stored in adjacent hole to left. This will allow machine to pivot horizontally.

IMPORTANT: For maximum distance, balls must be properly inflated. See chart at bottom of page 2.

A. Setting machine up

1. Using wing nuts (See Figures 2 & 3) which are stored on bolts, attach throwing head to undercarriage (See Figure 2), tighten wing nuts (B) securely to undercarriage
2. Insert 3 legs into sockets. (See Figure 2)
3. Using lifting handles (See Figure 1) tilt machine up onto all three tripod legs.
4. Remove lock pin (A) and store in adjacent hole to left (See Figure 2 & 4).
5. Loosen horizontal control handle (D) (See Figure 2 & 4).
6. Loosen pass and kick elevation handle (E) (See Figure 2).
7. Plug machine into power source. (110v)
8. Turn power switch "ON".
9. Loosen wheel tilt handle (G) (See Figure 2) .
Over time this wheel tilt handle (G) will have to be adjusted. To adjust loosen bolt until handle angle be changed to new proper position. Then tighten bolt securing handle in adjusted position
10. Using wheel tilt angle handle (H) (See figure 2) push forward for end-over-end or pull back for passes and punts.
11. Dial wheel speed (F) to approximate speed
12. Continue throwing test balls and adjusting speeds until desired distance and speed is achieved.

NOTE: Maximum post height should not exceed 34" with the stand on the ground.
See page 18.

SAFETY HINT

When lowering or lifting, Aerial Attack keep your back straight and lift with your legs. Be ready to grab the wheel guard and guide Aerial Attack into the upright position.

WARNING HAZARD FROM HIGH-SPEED PROJECTILES

Being struck by a thrown ball can cause serious injury or death. Make sure that no one steps in front of Aerial Attack while it is connected to electric power.

Clear everyone away from machine before connecting Aerial Attack to electric power.



Figure 3 Remove wing nuts.

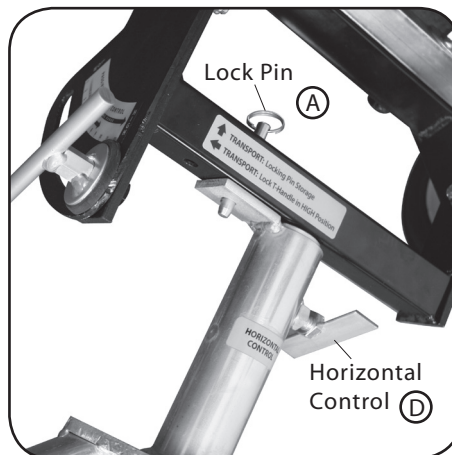


Figure 4 Lock pin inserted to lock throwing head into position for transporting.



Figure 5 Loosen stand elevation handle.

SHUTTING DOWN & TRANSPORTING

TURNING AERIAL ATTACK "OFF"

1. Turn the power switch "OFF".
2. Unplug Aerial Attack from the power source.

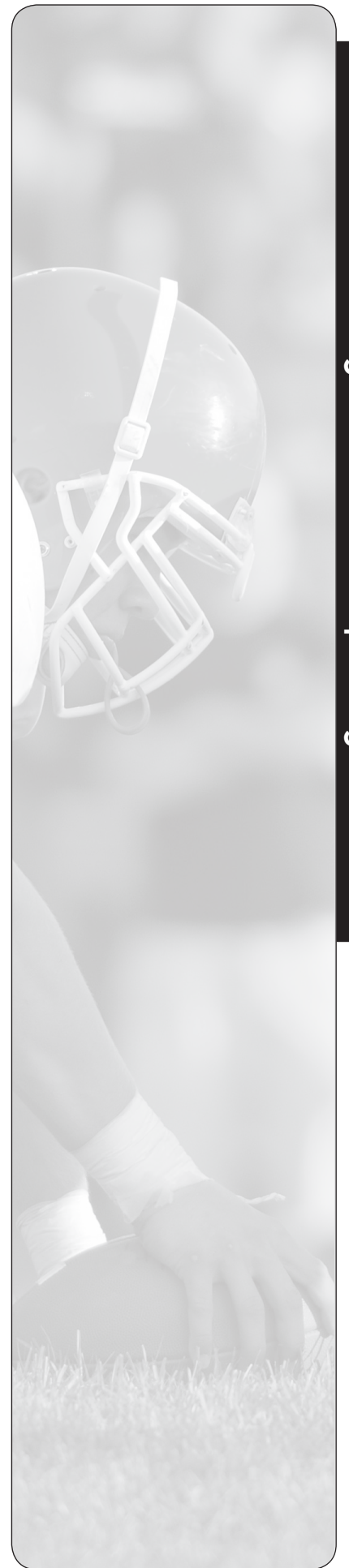
WITH PASS AND PUNTING STAND

Transporting with stand

1. Be sure machine is turned "OFF" and wheels are not turning.
2. Unplug cord from extension cord, standard outlet or generator.
3. Frame lock pin (A) (See Figures 2 & 4) must be inserted in hole to right, locking head into position for transporting.
4. Using the elevation control, tilt the throwing head up (to high position) and lock into place (See Figure 4). This will facilitate transporting.
5. Using handles (C) (See Figure 1) tip machine up and over onto the wheel guards. Unsocket two lower (front) legs, leaving upper (rear) leg in socketed position.
6. Lift rear leg and roll machine (See Figure 5).



Figure 5 Lift rear leg and roll. Shown being used with pass and punting stand.



PASSING, PUNTING & KICKOFF

The Aerial Attack is able to simulate right-hand spins only.

FOR RIGHT-HAND SPIN

1. Loosen lever clamp (H) and push down.
2. Using wheel tilt handle (H) (See Figure 2) push throwing wheel down.
3. Pull handle (H) (See figure 2) and lock in place.

FOR KICKOFF & END-OVER-END

1. Loosen handle (H) and pull throwing wheel up.

FEEDING BALL INTO THROWING WHEEL

See Figure 6.

IMPORTANT: Be sure cradle is pulled all the way back.
Use ball feed handle (J) (see figure 2)

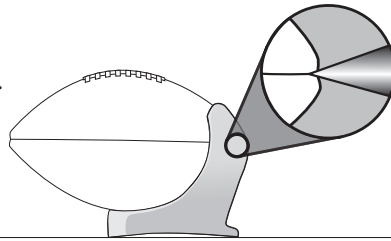
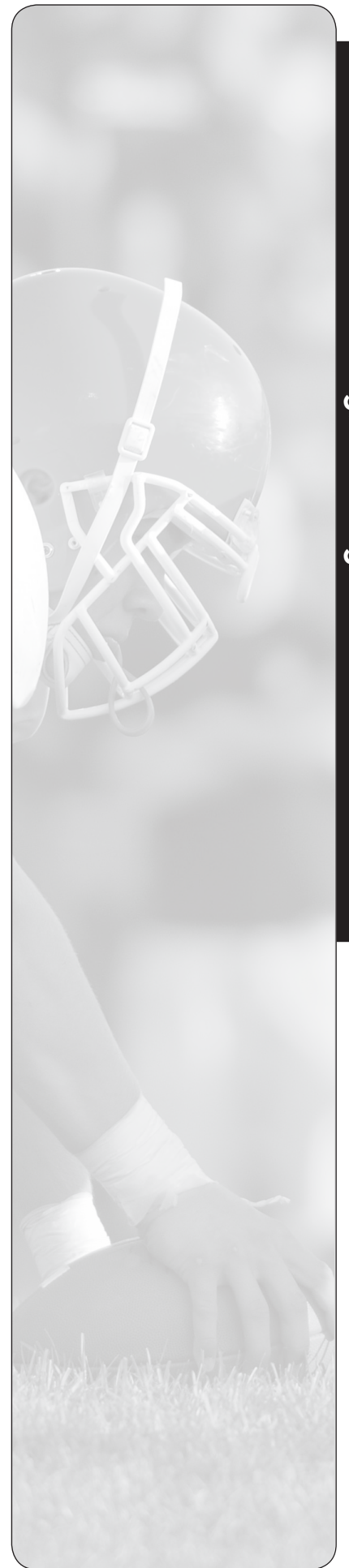


Figure 6: Spiral Pass/Punt/Snap
Position the locating point where seams intersect



CARE, CLEANING & MAINTENANCE

LUBRICATION (once per season, or as required):

1. **Pass & Kick Elevation Control Handle** **(E)** (See Figure 2)

Apply fresh grease to threads.

2. **Horizontal Swivel Lock**

- Completely remove the horizontal pivot control handle. Clean all old grease, dirt, etc. from the threads.
- Wipe the threads with a very small amount of fresh grease.
- Reinstall.

3. **Throwing Wheel Motors**

Motors are sealed and require no lubrication.

THROWING WHEEL MOTORS

Motors are sealed and require no lubrication.

Check bolts for tightness once a season. Tighten bolts securely, but do not over-tighten. See page 11.

CLEANING THE throwing wheels

The throwing wheels must be kept clean to maintain accuracy. Clean the wheels periodically to control the build-up of grass and dirt.

- Turn the power switch "OFF" and allow the wheels to come to a complete stop. Unplug Aerial Attack from electric power.
- Dampen a rag with soap and water. Turn the throwing wheel by hand and scrub the wheel until the build-up is removed. For very heavy build-up, a synthetic scouring pad, such as a Scotch-Brite® scouring pad, may be used sparingly.

EXAMINE THE MACHINE

Examine Aerial Attack for condition and completeness before every use:

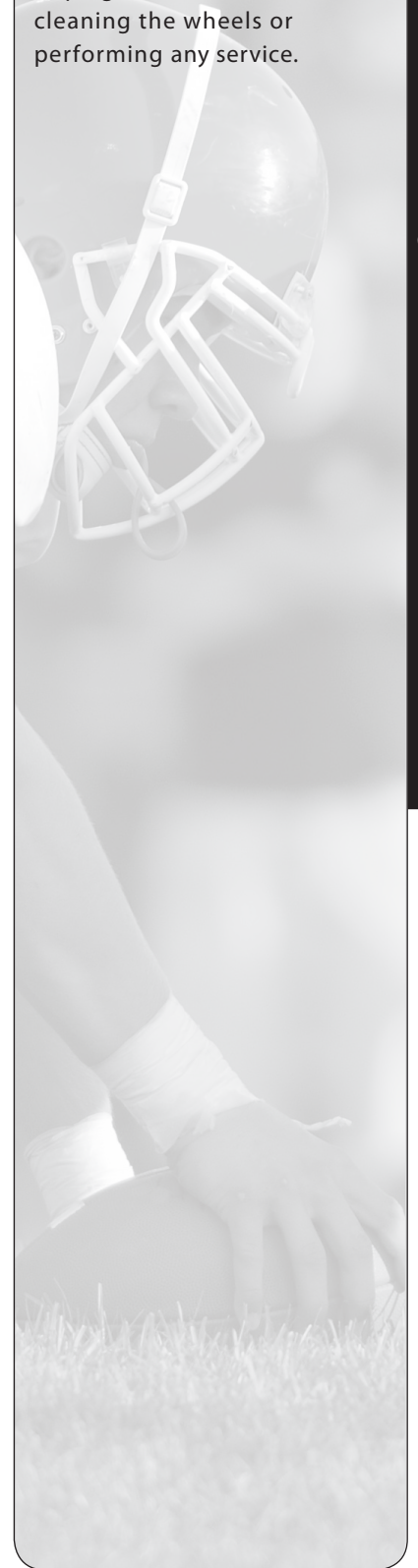
- Throwing wheels must be tight on the motor shafts. Check that the four bolts holding the motor to the throwing head assembly are tight.
- Wheel guard and ball cradle must be securely fastened.

CAUTION

PERSONAL INJURY HAZARD

Never attempt to clean the throwing wheels while they are turning. Rags or implements caught in spinning wheels can cause serious injury.

Unplug the machine before cleaning the wheels or performing any service.



COMPONENT REPLACEMENT

THROWING WHEEL REPLACEMENT

1. Turn the throwing wheels "OFF" and unplug the power cord. Remove 4 bolts holding the top wheel guard to the bottom wheel guard.
2. Hold the wheel so that it cannot move. Turn the keyway retaining bolt counter-clockwise using a box end wrench (See Figure 10).
SUGGESTION: If the bolt is too tight, give the opposite end of the wrench a series of light taps with a hammer making sure the wrench remains on the bolt.
3. Remove the bolt and washers.
4. Work the wheel off of the motor shaft. Be sure to catch the key as it is freed from the keyway.
5. Ball throwing wheels are machine balanced. Small holes in the side of the wheel are applied at the factory and are normal.

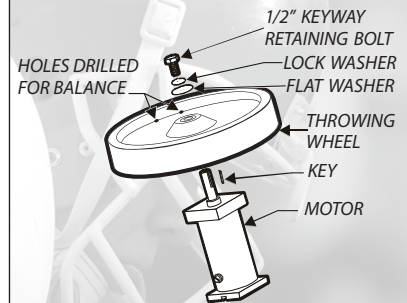
Reassemble in reverse order.

- a. Install wheel to motor shaft with key slots aligned.
- b. Be sure the key is in place, and inserted so that it is flush with the boss at the wheel center.
- c. Be sure the Washer and Lock Washer are installed in the right order, and that the keyway retaining bolt is tightened.
- d. Test the wheel by spinning it by hand and making sure that it spins freely without wobble before turning the unit "ON".
- e. Be sure the top wheel guard is properly and securely reinstalled.

NOTE: Check bolts for tightness once a season. Tighten bolts securely, but be sure not to over-tighten.



Figure 10 Hold wheel in place while loosening bolts.



COMPONENT REPLACEMENT (cont'd)

MOTOR REPLACEMENT

1. Turn the power switch "OFF" and unplug the power cord.
2. Remove top wheel guard.
3. Remove the throwing wheel (See page 11).
4. Remove bottom wheel guard.
5. Remove four screws holding the controller into the control box. Note the position of the motor wires on the controller, then disconnect the wire for the motor to be replaced.
6. Note the routing of the motor wires. Loosen wire clamps and pull wire away from machine.
7. To remove motor, remove the 2 - $\frac{1}{4}$ " x $\frac{3}{4}$ " coarse Allen flat socket cap screws using a $\frac{5}{32}$ " Allen wrench. Then remove the 2 - $\frac{5}{16}$ " x 1" coarse thread bolts using a $\frac{1}{2}$ " socket.
8. Reassemble in reverse order.

NOTE: Check bolts for tightness once a season. Tighten bolts securely, but be sure not to over-tighten.



COMPONENT REPLACEMENT (cont'd)

CONTROLLER REPLACEMENT

1. Turn the **power switch "OFF"** and unplug the power cord.
2. Remove knob from the controller.
3. Remove four screws holding controller faceplate into main casting. Note the position of the main power and motor wires on the controller, then disconnect the wires. See Figure 14 for the two motor wires. See Figure 13 for the main power cord wires.
4. Loosen the nuts holding the speed control shaft (potentiometer) to the faceplate, then remove the controller.

Reassemble in reverse order.

Be sure wires are correctly reinstalled. Motor wire connectors are different sizes. Be sure they are installed on the correct size terminal. See Figure 14 for the two motor wires and Figure 13 for the power cord wires.

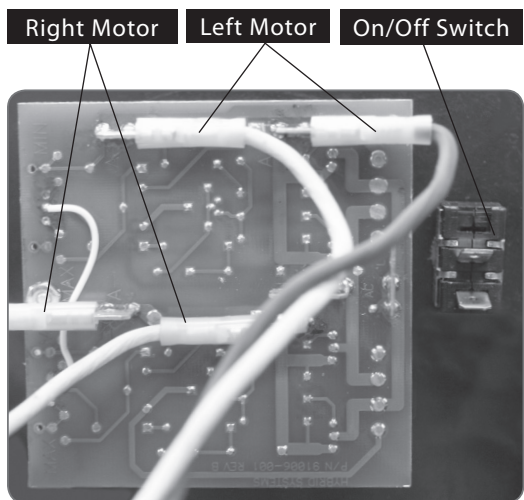


Figure 14 Wiring diagram for all two motors.

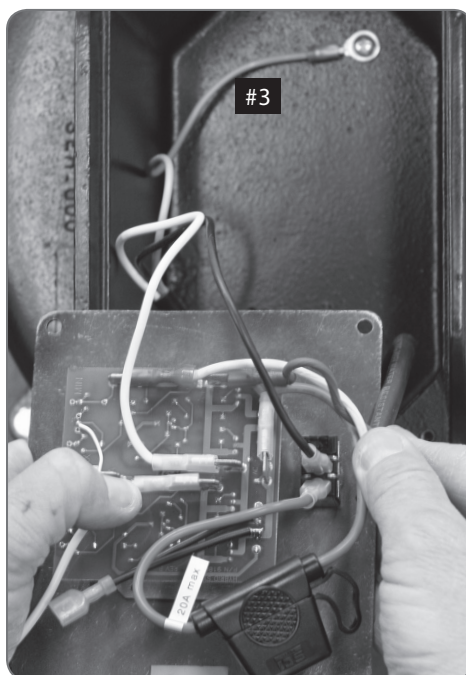


Figure 15 Wiring for all two motors.

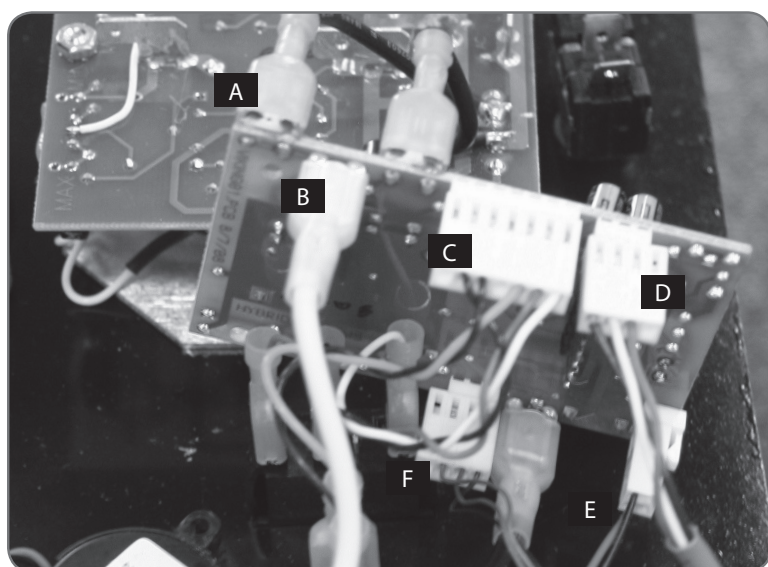


Figure 16 Wiring diagram for Automatic Model.

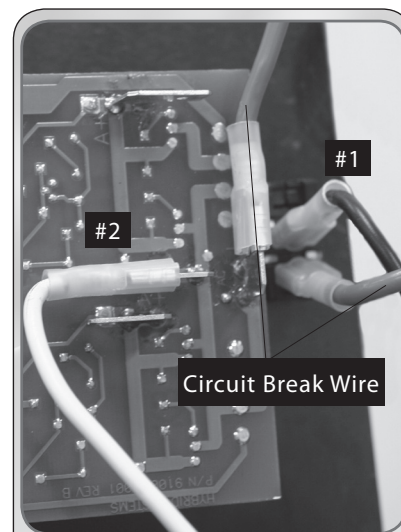


Figure 13

Power Cord Wire

- Black (#1)
On/Off switch
- White (#2)
N on green control board
- Green (#3)
Grounds to machine

Connecting Wires

Motor	Black Wire	White Wire
Right	A-	A+
Left	A+	A-

Left is the side with the Control Plate as you stand behind

Black motor wires are $\frac{3}{16}$ " female disconnect and white wires are $\frac{1}{4}$ " female disconnect.

PARTS LIST

PART NO.	DESCRIPTION	QTY PER
100-3006	Cane Tip, Set of 3, Heavy Duty	1
532-0007	Leg	1
533-2025	Swivel Assy	1
533-2015	Handle Horizontal Swivel Lock	1
340-2009	Locking Pin Frame to Swivel	1
533-2014	Undercarriage Assy	1
533-2026	Handle, Elevation	1
410-0040	Bolt, Carriage	1
430-1041	5/8" Nylon Nut	1
533-2027	Disc, Elevation	1
340-2019	Elevation Clutch	1
510-0085	Throwing Head Assy	1
530-1012	Motor 110V	2
530-1013	Motor 220V	2
533-2038	Motor Mount Plate	2
531-0009	Throwing Wheel	2
280-4001	Wheel Guard, Inside	2
280-4002	Wheel Guard, Outside	2
530-0053	Controller (110V/220V) - Specify	1
533-2016	Handle Lifting	2
533-2042	Slide, Lower Cradle Slide	1
280-2012	Ball Cradle	1
280-2000	Throwing Head to Yoke Knob	2
281-0010	Travel Wheel	2
530-0053	Coupler, Handle, Lock, Assy	2
533-6010	Wheel Stiffener	2
280-2003	Control Knob	1
280-7028	Plastic Film	1
533-2044	Coupler Lock Handle	1
533-2014	Undercarriage Assy	1
Cart Clamp Kit (optional)		
130-3004	Universal Cart Clamp	1

To order additional parts,
please contact:

Sports Attack
Customer Service Dept.
Ph 800-717-4251
Fx 775-345-2883



Parts List

ATTACHING OPTIONAL CART CLAMP

Designed to fit 2 ½ to 4 inch round or square post

1. Insert clamp bolt through top plate. Loosely attach washer and nut. Finger tighten.
2. Put 3 bolts through sides of clamps. Slide unit over post, then attach fourth bolt.
3. Center top plate to post. Begin tightening 4 clamps to top plate, but do not completely tighten.
4. Begin to secure the 4 side bolts. Completely tighten.
5. Completely tighten 4 clamp nuts to top plate.

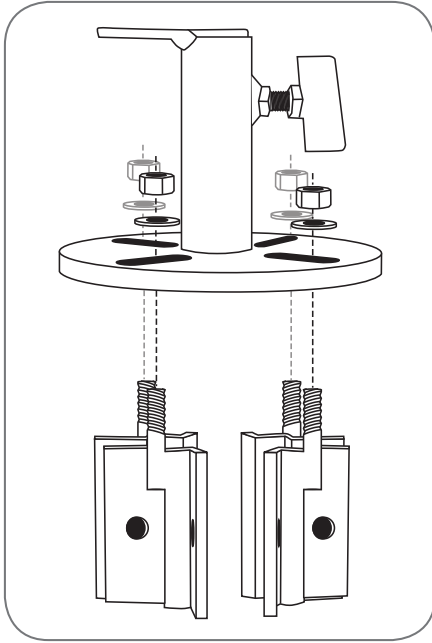


Figure 22 Insert clamp bolt through top plate.

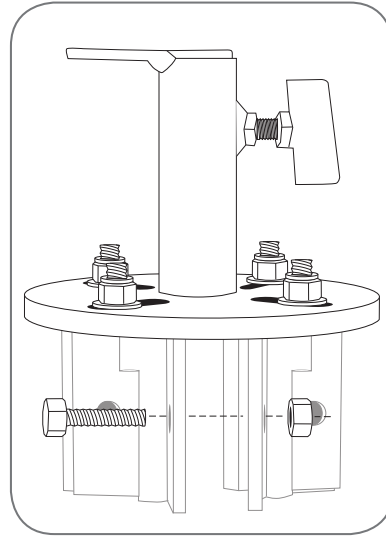


Figure 23 Put 3 bolts through sides of clamps.

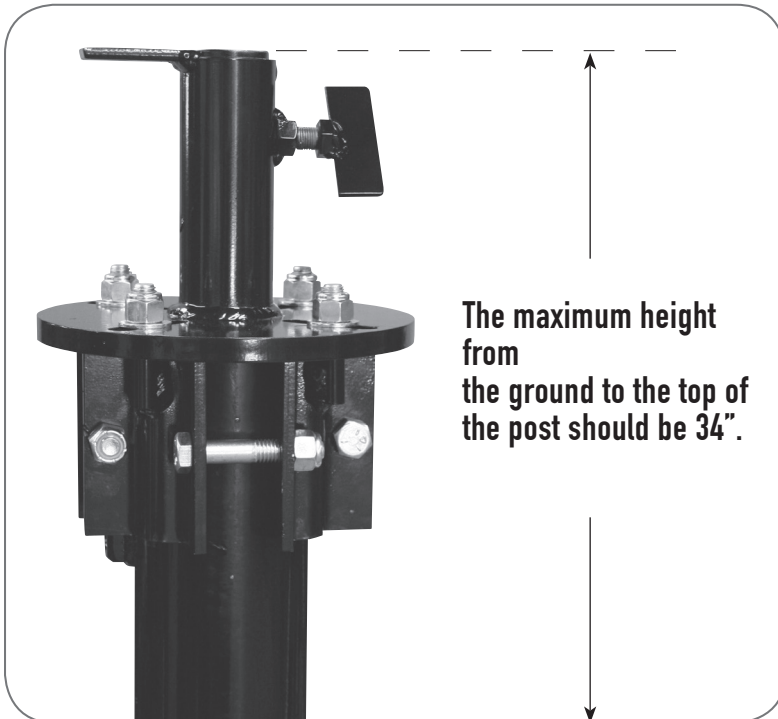


Figure 24 Slide unit over post and attach 4th bolt.

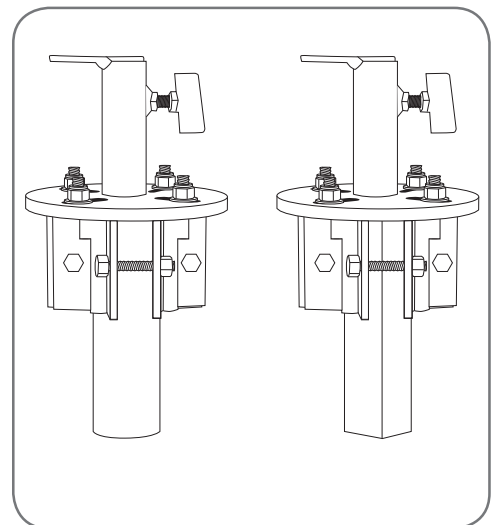


Figure 25 Clamp can be used on round or square posts.

CART CLAMP KIT

Item	Qty
Clamp	4
Top Plate	1
½-13x3 ½ Bolts	4
½-13 Nylon Lock Nuts	8
½ SAE Plain Washers	4

Tools needed are either a ¾ wrench or socket wrench.

Note: Maximum post height should not exceed 34" with the stand on the ground. When attaching the option cart clamp, slide unit over post and dry fit to ensure that maximum post height from ground to top of the post does not exceed 34". If your post height exceeds 34", you should cut your post so that it complies with this measurement.

DRILLING PRACTICE

A. TYPICAL USES WITH STAND

1. Passing

- a. Passing including deep passes, sideline routes, curls, hook and slants
- b. Drills including interception, tip and defensive
- c. Versus zone defenses
- d. Prevent
- e. Versus "Hail Mary"

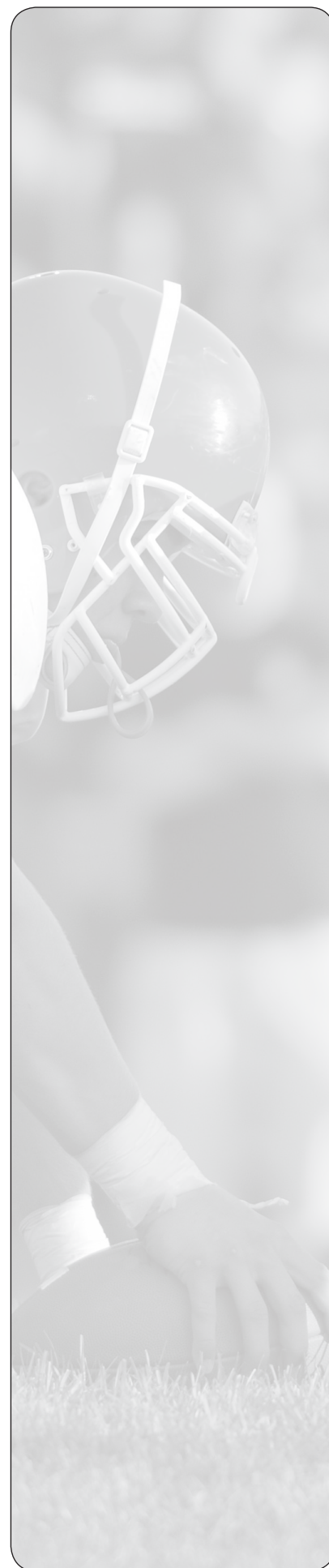
2. Kicking

- a. Long punt
- b. Punt return
- c. Kickoffs
- d. Kicks including squib and onside

B. TYPICAL USES WITHOUT STAND

Transporting with stand

1. As a center when practicing in the shotgun or similar formation.
2. When practicing extra points/snapping to holder/to kick field goals.
3. When punting.



BASEBALL



HACK ATTACK



JUNIOR HACK ATTACK

SOFTBALL



HACK ATTACK SOFTBALL



JUNIOR HACK ATTACK SOFTBALL (shown with optional solo feeder)



Please visit our web site www.sportsattack.com for information about Sports Attack sports training products, or call 800-717-4251 for complete information and specifications.

TENNIS



TENNIS ATTACK

SOCCER



NEW!

STRIKE ATTACK

VOLLEYBALL



ATTACK (shown with optional ball bags)



ATTACK II (shown with optional ball bags)



SKILL ATTACK



Please visit our web site www.sportsattack.com for information about Sports Attack sports training products, or call 800-717-4251 for complete information and specifications.