

HITTING AID FOR BASEBALL, TENNIS & GOLF

FOR HOME, GYM, CLUB, OR SCHOOL.

You can make this Hitting Aid for baseball, tennis, or golf, and use it with a standard patio umbrella stand, or attach it to a fence post, or your garage/gym/club wall.

It's made from heavy duty plastic and nylon cord for long service.



When the ball is hit cleanly, it will rotate up and around the horizontal part.

It looks like it would be real easy to do that.

But, if it was that easy, everyone would be an expert hitter.

After just a few sessions, you will start to hear that "click" that says you hit the ball cleanly, or your racket will start "singing" to you.

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You will need to spend some dollars at a hardware store for the parts to make one.

You will also need to have some basic household hand tools such as a wood-saw or hack-saw,

hand drill, 1/8th inch drill bit, 1/4 inch drill bit, screw driver, claw hammer and pliers.

Read the parts list and instructions below, to see what you will need to get.

Print out and take the parts list and assembly instructions with you, when you go to the hardware store.

You don't have to be a skilled "do it your-self-person" to make the few cuts and drill the few holes that are needed. Just be careful and take your time.

We had a hitting aid attached to a fence post in our back yard. It lasted out in the sun, rain, and snow for over 5 years.

Here is a picture of it.



Along with the parts list and assembly instructions, there is information and rules on how to play a game using the hitting aid.

CAUTION

Because sports can be dangerous, the Hitting Aid Parts List and Assembly Instructions come without warranty of any kind. And there is no warranty, guarantee, or promise of any kind regarding your results or the use of the Hitting Aid.

Baseball hitters in particular, should use some type of batting helmet to limit the chance of injury and help the hitter get used to wearing safety gear.

The cord may be a hazard for a small child, so it should be secured around the horizontal part when the the Hitting Aid is not in use.

A "stay-behind-me" safety line for hitters/players to stand behind when not hitting, or an "on deck" circle, should be designated.

A responsible adult should be present and in charge to make sure that good safety practices are followed.

Further any user of this information, assumes any and all responsibility for any and all results.

If you do not agree with this, please do not make/use the hitting aid.

PARTS LIST AND ASSEMBLY INSTRUCTIONS:



You will need to have some basic household hand tools to make and assemble your Hitting Aid: a wood-saw or hacksaw, a hand drill, 1/8th inch drill bit, 1/4 inch drill bit, PVC plastic glue, screw driver, pliers, a few rubber bands, and some duck tape.

Read through these instructions, to determine what you will need.

Note: Schedule 40 (or equivalent) PVC plastic pipe should be used. Less sturdy pipe is available, but should not be used.

PLASTIC PIPE PARTS:

Pipe usually comes in lengths that are longer than those listed.

1 - 5 foot long piece of 1 1/4 inch pipe.

2 - 1 1/4 inch pipe joints/unions, or 1 - 1 1/4 inch pipe joint/union and 1 - 1 1/4 inch by 1 inch T joint. (See the assembly instructions below for more info.)

1 - 90 degree elbow that reduces from 1 1/4 inch to 1 inch.

1 - 5 foot long piece of 1 inch pipe.

1 - 1 inch end cap.

OTHER PARTS:

3 plumbing slip joint nuts (used for making sink drain pipe connections), with an inlet/outlet size of 1 1/2 inches.

6 feet of strong braided nylon cord.

1 small size alligator clip for clipping onto the nylon cord. See the illustration below.

1 hardball, or 1 golf ball sized "wiffle" type ball made of strong plastic.

If you use a standard weight baseball/tennis ball/golf ball with a holed drilled thru it, it will be too heavy for use with the equipment, and it may damage it and/or cause injury.

PARTS NEEDED FOR WALL MOUNTING:

3 - 3 inch long by 1/4 inch wood screws, or 3 - 3 inch long lag screws (lag screws have a bolt head for tightening with a wrench or pliers).

9 - 1/4 quarter inch lock washers.

ASSEMBLY INSTRUCTIONS

CUTTING THE PARTS FOR ASSEMBLY:

Make all cuts as straight up and down as possible. Take your time and let the saw do the work.

1. Take the 5 foot long piece of 1 inch pipe, and measure and cut off one piece that is 30 inches long. Then, if you plan to attach the aid to the standard fence wire used at play fields and ballparks (for more info on this, see below.), cut off three 1 inch pieces of pipe.

You should end up with:

1 thirty inch long piece of 1 inch pipe,

1 left over piece,

and possibly 3 - 1 inch pieces of pipe.

2. Take the 5 foot long piece of 1 1/4 quarter inch pipe, and measure and cut it in half.

You should end up with:

2 pieces of 1 1/4 inch pipe of equal length.

DRILLING HOLES:

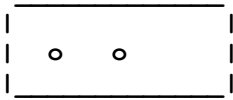
Use the 1/8th inch drill bit to make pilot holes that can be enlarged with the use of the 1/4 inch drill bit.

Before drilling, carefully mark where the holes will be, and use a nail or other pointed object to make a small indentation in the pipe where you are going to drill. That will keep the drill from sliding away from the spot where you want the hole drilled. You also can mark that spot with an X made with a knife. Drill as straight up and down as possible.

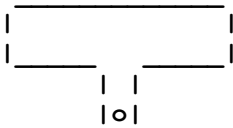
The drawings below are not drawn to scale. They show approximately locations where holes should be drilled.

1. Take one of the 1 1/4 inch pipe joints/unions, and drill a hole in the center and another about 3/4

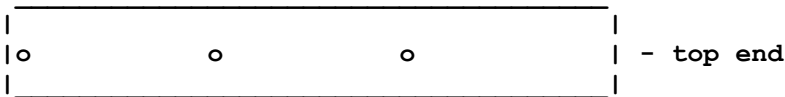
of an inch from the first. See the picture below. The cord with the ball attached to it should come out of the center hole.



A 1 1/4 inch x 1 inch T joint can be used in place of the pipe joint/union if you wish. (See the pics above.) If so, take the 1 1/4 inch x 1 inch T joint and mark and drill a hole in the 1 inch portion that is 1/2 inch up from the lower end of that portion. Drill all the way thru it.



2. For wall mounting only, take one of the 1 1/4 inch pieces of pipe and mark and drill holes thru it at the following places from one end: 1/2 inch, 11 1/2 inches, and 22 1/2 inches. The holes should be in the center of the pipe.



ASSEMBLY:

1. Put a line of plastic glue around the inside lip of the 1 inch opening in the reducing elbow, or put a small rubber band around the top of the 30 inch section of pipe. Then slide/twist the 30 inch section of 1 inch pipe into the 1 inch part until it is firmly seated. The pipe should slide 1/2 inch or more into the opening.

It is very important that the bonding is strong to insure that the 1 inch pipe will stay attached to the elbow.

2. Take the 6 foot nylon cord which is used to attach the ball to the pipe joint/union or tee joint.

2a. Take about six inches of the cord at one end and double it over, and make a knot in the doubled over portion. (See pic below.)

2b. Put a small piece of Scotch tape or masking tape over the other end of the cord to help thread the cord up through the one hole in the joint/union and down through the center hole, or through the holes in the T joint if one is being used.

2c. Then, tie a knot in that end of the cord.



3. Take the 30 inch piece of 1 inch pipe and slide the following parts onto it in the order listed (see pic below):

- heavy rubber band or rubber O ring used as a hose washer(duck tape can be used later)
- 1 plumbing slip joint nut (small hole first).
- 1 plumbing slip joint nut (large hole first).
- the joint/union or tee joint (with cord and ball).
- 1 plumbing slip joint nut (small hole first).

then, gently push the end cap on, but not tightly.

3a. Now slide the parts just added up against the end cap, but leave about 1/4 inch of space so that the tee joint will be able to rotate easily. Use the rubber band, O ring, or tuck tape to fix them in position.

3b. Use a rubber mallet or tap/jam the end cap onto the pipe. Do not hit the pipe with a metal hammer or bat as it may shatter or break.

Once jammed on, the end cap will be very difficult to remove. See below on how that may be done.

The assembled arm can be attached to the 1 1/4 inch pipe with the use of a rubber mallet to tap/jam it onto the pipe.

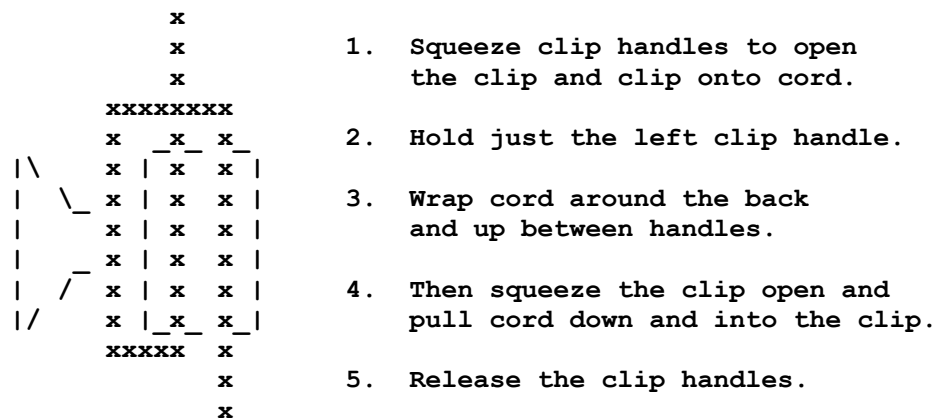
Depending on how tightly it has been jammed on, it may be able to be removed.

It also can be glued together, or a rubber band can be added around the top of the 1 1/4 inch pipe before the arm is jammed onto the pipe.

Also, to keep the arm from rotating once it is attached to the 1 1/4 inch pipe, a hole can be drilled from one side to the other of the 90 degree reducing elbow. Drill the hole 1/4 inch up from the lower end of the reducing elbow. Then thread a 2 1/2 inch by 1/4 inch carriage bolt thru the holes, add a lock washer and 1/4 inch nut, and tighten the nut.

FOR USE WITH A PATIO UMBRELLA STAND:

- A. Push the 1 1/4 inch pieces of pipe into the 1 1/4 inch pipe joint/union. **ALWAYS USE BOTH** vertical parts to limit the chance of a ball rotating up and back, and hitting the hitter. That will happen if only one section of pipe is used.
- B. Slide the left over piece of 1 inch pipe into the patio umbrella stand, and tighten it securely. 1 foot or so of the pipe should be above the top of the patio umbrella stand.
- C. Slide one or 2 small rubber bands onto the top portion of the 1 inch pipe.
- D. Slide the 1 1/4 inch pipe over and onto the 1 inch pipe. (If you find that the rubber band does not prevent the whole assembly from rotating, a 1/4 inch hole can be drilled a few inches above the top of the umbrella stand, and a 2 1/2 inch carriage bolt can be threaded thru the holes and secured by a nut. A wrap or two of duck tape will also prevent the assembly from rotating.
- E. Pull down on the ball to where it is at a good height. Secure it by adding a knot in the "other" cord where it feeds into the joint/union, or by using the alligator clip. Here is how to secure it with the clip. The clip is shown larger than needed, for purposes of showing how it's clamped onto the cord.



FOR USE ON A POST OR WALL:

To attach THE HITTING AID to a post or wall, only the drilled piece of 1 1/4 inch piece of pipe is needed.

Place the top of the pipe about 5 1/2 to 6 feet up on the post or wall. Attach the pipe piece at that height to reduce the chance of a ball rotating up, or coming back, and hitting the hitter.

Using the three holes in the pipe as a guide, mark the post/wall to show where the screws will be screwed into the post/wall.

Start the three screws into the post/wall to determine if you will be able to screw them into the post/wall without first drilling 1/8th inch pilot holes in the post/wall. If needed, drill 1/8 inch pilot holes to aid in screwing the 1/4 inch screws into the post/wall.

Add a lock washer to one of the screws and thread it through the upper most hole in the 1 1/4 inch pipe. Add two more lock washers to the screw and just start it into the post/wall.

Do the same with the other two screws.

Screw in all three screws.

In the picture of the hitting aid attached to the fence, a piece of metal strapping tape with holes in it and two roofing nails, were used to more firmly attach the pipe to the fence post.

Also, a piece of wood 24 inches long, by 1 inch thick, by 6 inches wide, can be used as a mounting board for attaching the hitting Aid to a wall. The top of the board should be positioned so it will be 3" below the top of the vertical pipe piece. Attach it securely to the wall about 6 feet high.

FOR A GOLF APPLICATION:

A piece of carpet can be used as a hitting surface to protect the club head and floor.

USING THE HITTING AID AT A PLAY FIELD OR BALLPARK:

The Hitting Aid (in two or three main pieces), can be taken along with a patio umbrella stand to a play field or ballpark and assembled.

Alternatively, the drilled piece of 1 1/4 inch pipe and the arm of the aid with a ball attached to it, can be taken to a play field or ballpark and attached to the wire fencing for use.

For that you will need 3 one inch long pieces of 1 inch pipe cut from the original length of 1 inch pipe, each with a hole drilled thru it at the center, and three 1/4 inch by 4 or 5 inch long eye bolts, 3 one quarter inch washers and 3 one quarter inch nuts.

The eye part of the eye bolts should be opened up some so that the eye part forms a hook that can hook onto the standard fence wire used at play fields and ballparks.

It can be difficult to open up the eye part. The claw part of a hammer which is used for nail pulling, can be placed where the eye meets the shaft, and then by applying pressure on the shaft, the eye part can be opened up some.

Attach the arm of the aid the drilled piece of 1 1/4 inch pipe, push the Hitting Aid arm onto the 1 1/4 inch drilled pipe while matching up the holes in the reducing elbow and the pipe.

Then take on of the modified eye bolts and hook onto one of the fence wire strands and slide one of the 1 inch pieces of 1 inch pipe onto the shaft of the modified eye bolt. Then slide the drilled piece of 1 1/4 inch pipe onto the shaft using the top holes. Add a lock washer and nut, and "loosly" tighten it. The top of the drilled piece of 1/4 inch pipe should be 5 1/2 or six feet up.

Using the 2 other eye bolt-hooks and the other 2 holes in the drilled piece of 1 and 1/4 inch pipe, attach that pipe to the fence in the same manner.

Then tighten the three nuts.

To make a better or tighter fit between the 1 inch pieces of pipe and the 1 and 1/4 inch drilled piece of pipe, a rounded wood rasp can be used to make a rounded depression in one end of the 1 inch pieces of pipe.

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HIT IT GAME & RULES:

Challenge a friend to a game of HIT IT.

Each player gets 5 swings at a time. Misses count.

Beginning Players Advanced Players

Single loop hits = 1 Single loop hits = 0

Double loop hits = 2 Double loop hits = 1

First player to reach 11 wins the game.

The winner gets to be first next game.

First player to win 2 games wins a Set.

First player to win 2 Sets wins a Match.

No count is allowed unless both the ball and cord return to the starting position after being hit.
Hang-ups don't count.

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TIPS: If the Hitting Aid leans forward, put a piece of wood or other shim under the edge of the base so it stands straight up.

Also, do not use a large rubber band on the support pipe. If you do, it will be very difficult to slip the vertical pipe onto it, and you may not be able to get them apart again.

HOW TO PULL THE PIPE PIECES APART:

If you want to take the 2 vertical pipe pieces apart and they are stuck in the pipe joint, put the pipe pieces on a chair seat. Then, holding one of the pieces down firmly with your foot. Wiggle the other pipe piece up and down a bit and twist at the same time. Latex or rubber gloves can help in gripping the pipe.

When you push the vertical 1 1/4 inch pipe onto the support pipe in the patio umbrella stand, the rubber band will get chewed up and wedge the two pieces tightly together. So, when you take aid apart, the support pipe piece may remain stuck inside the 1 1/4 inch pipe part. If you want to extract it, use a pliers to grab the end of the support pipe and pull it straight out.

A rubber mallet can be used as an aid in assembling and taking the aid apart. If you use a regular hammer, tap do not hit the plastic pipe with a hard blow, as it can break. Also, do not smack the pipe with a baseball bat.

Lastly, remember that hitting a ball is vigorous exercise. So, have fun but don't overdo.

This information donated to the public domain by John Veit.