

Jugger Weapons

by [savageinternet \(/member/savageinternet/\)](#)

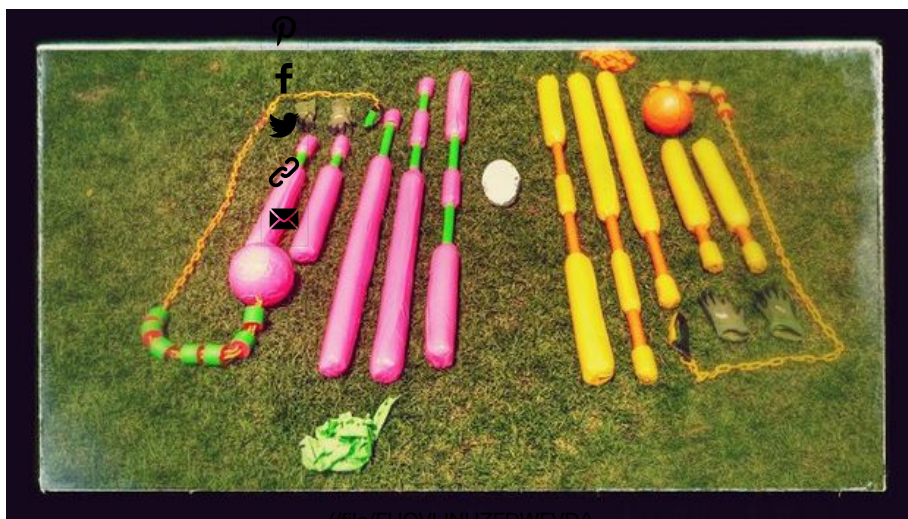


[\(id/Jugger-Weapons/\)](#)

8 Steps



Favorite



Imagine yourself as part of a post-apocalyptic battle team. The sun beating down on you, catching and glinting off your weapon. The ground soft beneath your feet. Your enemies across the field beginning to look worn down, their eyes betraying fear....

Now you can be. ;) In Germany some time ago, we learned of a sport called "Jugger" based on a post-apocalyptic movie from Australia (<https://www.youtube.com/watch?v=v6qckMHP7wU>). The sport has evolved somewhat from its depiction in the movie, with foam-padded weaponry and t-shirts replacing steel and armor. We finally agreed that we should make a set of pompfen to play.

Now we're done! We are hoping to start a jugger league here in California, so we can play against the clubs from Denver, Phoenix, New Hampshire, Halifax, I can tell you that we are strange out here in Cali, and this activity suits the area. Do let us know if you're interested in coming to play with us: we schedule weekly games in Berkeley on our Facebook page (<https://www.facebook.com/JuggerCalifornia>).

We made our weapons using a mix of the to the game's Australian-style (http://issuu.com/agodkingbleeds/docs/how_to_1_-_making_jugger_weapons) rules and Berlin-style (http://jugger.uhusnest.de/en_juggerbook.shtml) rules, and our play is a mixture of the two, as well. If you're not familiar with the game, you might want to watch a quick primer on how the game works (<https://www.youtube.com/watch?v=S3S2s0Xn3NQ>), or some non-stylized (https://www.youtube.com/watch?v=PJ8_ygFqg6w) matches (<https://www.youtube.com/watch?v=4pukFEdQLmc>) to know what to expect once you finish your pompfen.

This instructable will cover how to make two full sets of pompfen and a dog skull, which is everything you need for your first game of Jugger! The total cost (for us) of all the materials was around \$350. You may have stuff laying around that you can use for some parts, or you may not want to splurge on the neon duct tape (the gray kind will do just fine), and maybe you can find some things cheaper, but expect to spend somewhere in that neighborhood on your pompfen.

Step 1: Acquiring Supplies

We had some trouble following the directions exactly, because all the measurements are in metric (damn you, England!). We attempted to convert everything to standard, but it turns out that while a 20mm pipe will fit inside a 25mm pipe, a 3/4" pipe won't fit inside a 1" pipe. So....

Note that it really depends what lengths of pipe you can find how much you should get. We basically wrote out the lengths of the pieces we needed and did a fun knapsack problem (http://en.wikipedia.org/wiki/Knapsack_problem) to figure out the least number of pipes/pipe insulation sheaths to buy in the lengths that were available. It turns out that this is way easier to do in metric (damn you, England!). The lengths you're going to need (if you can't find the same lengths of supplies we got) are as follows:

Pipe:

- 2x1650mm
- 2x1600mm
- 2x1350mm
- 4x600mm

Pipe Insulation:

- 2x1100mm
- 2x1000mm
- 8x500mm
- 2x250mm
- 2x200mm
- 8x100mm

Once you've calculated what you need, get ready to go shopping!

Shopping lists:

Home Depot:

- plastic garden chain, 2 x 8ft
- high pressure (we got 460PSI) PVC pipe, 4x10ft (or whatever you calculated)
- rubber (not foam, it compresses) pipe insulation, 6x6ft (or whatever you calculated)

Ace Hardware:

- neon duct tape, 8+ rolls (120+ linear yards)
- paracord, 12m+

Local Foam Retailer???:

Ok, this is a weird one, but we actually have a local foam retailer in Berkeley. I'm not really sure what to suggest for other places, but you could probably find this kind of stuff at a mattress store or a custom upholstery store?

- stiff but fairly pliable foam, 36 ft² (3x(2'x6'))

Goodwill/Urban Ore/Rando stuff around your house:

- Nerf football
- woven belt material
- pool noodle
- spray paint

Amazon.de:

Unfortunately we couldn't find the right ball for the chain anywhere we looked, so I asked my old Jigger team what they use, and they pointed me at an Amazon.de item. Ironically, it shipped from Nevada with Amazon.it stickers on it, so who knows about that one.

- <http://www.amazon.de/Mondo-07-852-Softfu%C3%9Fball...>
(<http://www.amazon.de/Mondo-07-852-Softfu%C3%9Fball->

sortiert/dp/B000ALF630) (or any soft, non-inflated ball 20cm+ diameter)

Equipment list:

- pullsaw (chopsaw optional, but not necessary)
- scissors
- bread knife
- drill + large drill bit (1"+)

Step 2: Introduction to Regular Pompfen



Show All Items

You'll be making six Pompfen per set: Q-Tip, staff, long sword, two short swords, and chain. We'll cover chain-building in the next section. For now, let's focus on the first five, which all follow the same general method of construction:

- cut PVC pipe
- mark padded and unpadded sections on PVC pipe
- cut rubber insulation for padded sections
- wrap rubber insulation around padded sections, leaving some extra on the ends: 5cm for handle ends, 10cm for striking ends
- stuff those extra bits with foam (pool noodle or similar)
- cut more foam for striking sections
- wrap foam around striking sections, and tape into place
- apply duct tape

As an example, let's start with the short swords. They use the least material, so the cost of messing up is lower. First, mark off 600mm of PVC pipe and cut

using the pullsaw. Put duct tape or a bit of leather over the ends of the PVC pipe: this will help keep the sharp end from tearing through your foam (we learned this the hard way after a few weeks of playing...). Next, it calls for two sections of rubber pipe insulation, one 600mm and the other 100mm. The 100mm piece is for the handle end. For handle ends, we leave 5cm extra on the end, so we have 5cm on top of the pipe and 5cm off the end. The 600mm piece is for the striking end. For striking ends, we leave 10cm extra on the end, so we have 50cm on top of the pipe and 10cm off the end:

Next up is the foam. We don't need to cover the 100mm handle, only the 600mm striking section. What about the other dimension? The foam has to wrap around both pipe and insulation. We used a width of 23.5cm, but you should measure the circumference yourself. (It took us a couple of weapons to get this width right anyways, and it doesn't have to be exact.)

To hold the foam in place, apply duct tape. We don't want to compress the foam, so we always tape down the length of the pipe, leaving some extra to tape over the end.

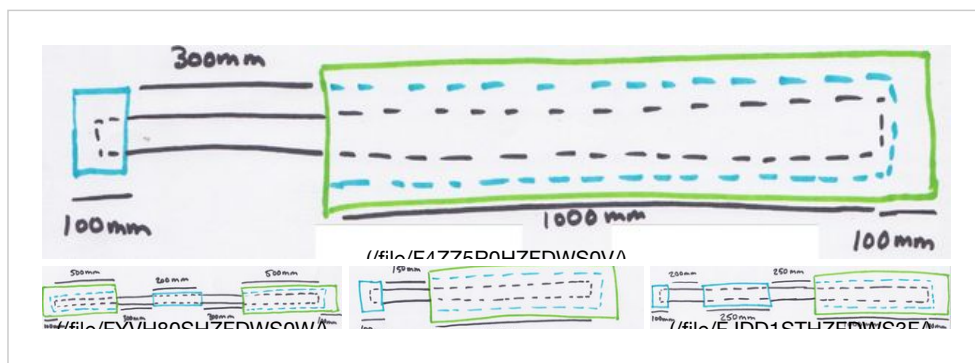
With the foam held in place, apply tape around the whole Pompfe. Again, always tape down the length of the pipe, and leave extra to tape over the end. Once you finish taping around, wrap around the handle part. Repeat taping procedure for the handle end:

And that's it! All normal Pompfen use the same process.

Step 3: Normal Pompfen: Strike Testing

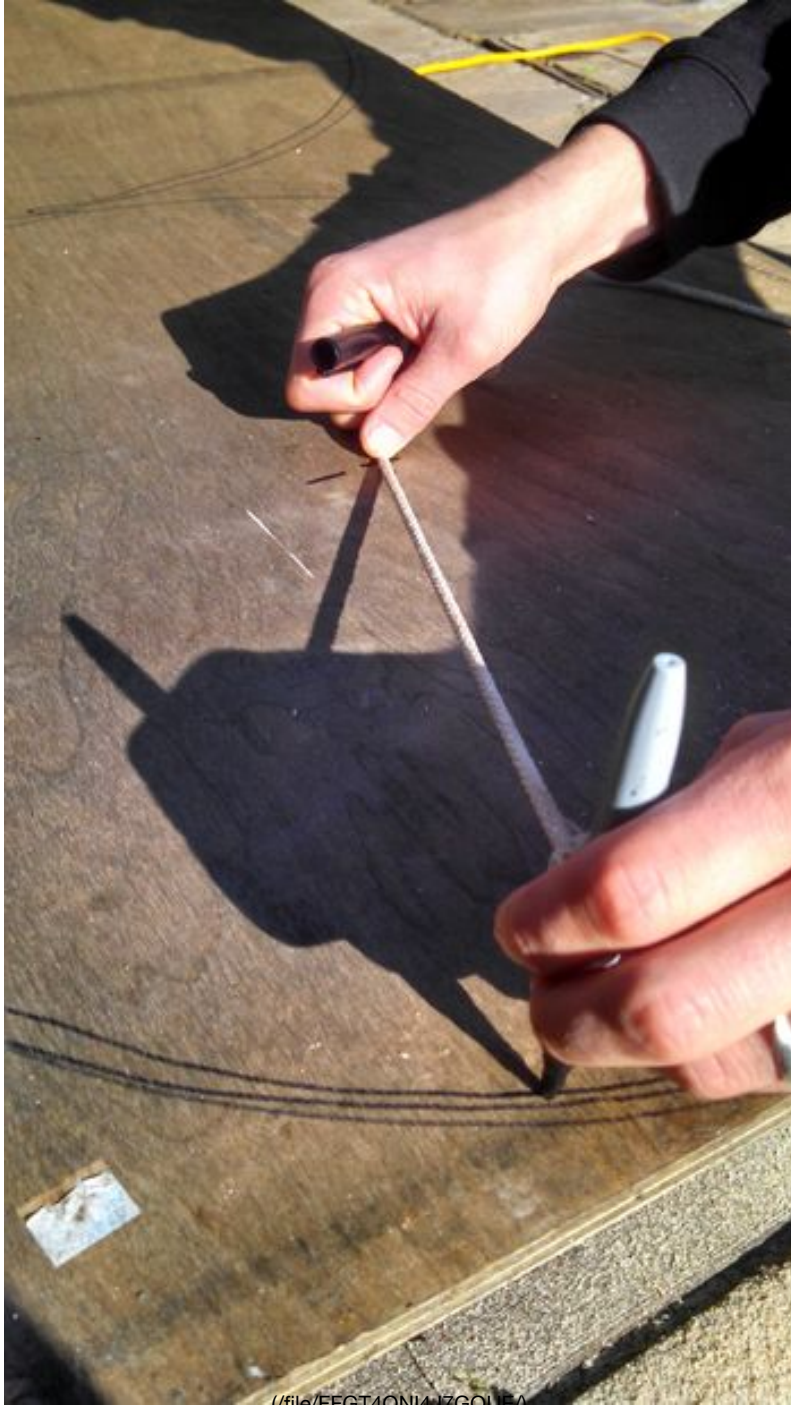
STOP! Before you continue: ALWAYS, ALWAYS, ALWAYS strike-test your weapons on yourself before having others use them. **DO NOT USE POMPFEN YOU HAVE NOT STRIKE-TESTED TO PLAY JUGGER.** Grab your first weapon and have a friend swing at you: start with soft hits, and gradually increase force from there. You should be comfortable taking moderately strong hits to all parts of the body except head and groin. If you aren't comfortable with that, you need more padding, better padding, or both.

Step 4: Normal Pompfen: Schematics



All normal Pompfen use the same construction process described in Step 2. In this step, we've provided schematic diagrams for each Pompfe, with pipe and padding lengths marked clearly. The black is PVC pipe, the blue is the rubber pipe insulation, and the green is the softer foam.

Step 5: Making the Shields



[Show All Items](#)

To make a shield, you need the following materials:

- Plywood board from which you can cut a 60cm diameter circle (or 75cm, depending which rules you want to use)
- Strap material (we used a strap from an old swim-aid floaty belt)
- Nuts 'n' bolts (long enough to go through your plywood)
- Foam enough to cover a 60cm circle in 2 layers
- Pipe insulation to protect the edges
- A bit of pool noodle
- Duct tape

To measure out the circle on your plywood, get a piece of rope and tie a permanent marker to the end of it. Sweep it around in a circle, drawing your pattern as you go. Sure, you could use real tools, but what fun is that? The board is going to be covered in so much padding that it doesn't need to be a perfect circle now, anyway.

Get your Rotozip! Rotozips are probably my favorite tool. Anyway, cut along the pattern you just drew. Again, doesn't matter if your line-following is exact: you're going to cover the edges, anyway.

Lay your arm down on the back of the shield. Where is going to be comfortable to put straps? How long do the straps need to be? These are questions only you can answer: once you get everything laid down, make some marks with your marker so you can put it in the right spot later. Cut your straps to length, and figure out where on the straps you want to fasten.

Drill through both the straps and the board with a bit large enough to accommodate your bolts through the hole. Your drill should be able to make it through your strap material, but feel free to drill separately if you're concerned about it. Just be sure to mark where it will line up with the holes in your board.

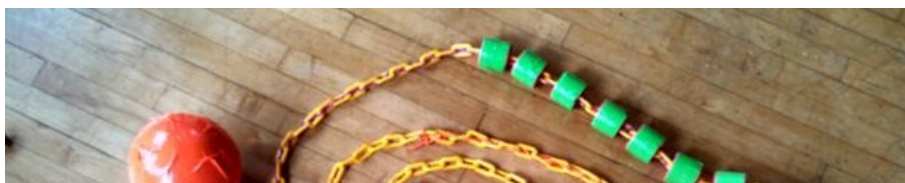
Now, the bolts! Put the bolt heads on the front of the shield, so the backs come through the strap last. This will mean less stuff sticking out on the front of the shield, which is safest! To protect the wielder of the shield, put some Sugru (self-curing rubber) on the ends of the bolts in back.

Cut foam and layer it on the face of the shield. Poke around the parts of the shield where the bolt heads are to make sure you can't feel them too much through the foam (a little is ok, but just remember that people could get hit by this). If you can still feel them, add a bit more foam. Tape it all down. For the edges of the shield, use pipe insulation: this should fit nicely over everything you've laid down so far. You'll want to tape it down, too, though. If you have gaps in your insulation (see images), then you can fill them with bits of pool noodle.

For maximum comfort of the wielder, you can add extra bits of foam on the back of the shield where the arm rests in the straps. Just make sure to tape them down, and don't add so much foam that you can't get your arm in anymore!

This shield is pretty heavy, being made out of plywood. We have seen that others use different substrates for their shields, including plastic disc sleds and corrugated plastic. You can certainly use a different base material depending on what you want from your shield.

Step 6: Making the Chain





Still with us? Good. Now for the fun part: the chain! Of all the Pompfen, the chain is arguably hardest to use well. It makes up for this with a reach of nearly 3m, a longer time penalty against players it hits, and the sheer awesomeness factor of swinging it around at high speed.

You'll need the following materials and equipment:

- foam soccer ball
- plastic garden chain
- paracord or soccer ball trainer net
- pool noodle
- material for chain handle (we used basically life jacket strap)
- duct tape

We've updated this section! The first thing we tried, which was passing a single loop of paracord through and around the ball, eventually led to the foam ball being slowly cut in half over time of using it. Because everything is soft, there wasn't exactly a catastrophic failure at the end, but the ball did detach from the chain, then fall apart into 2 halves. We didn't notice this because of the duct tape. Anyway, don't do it that way. New plan!

You need to have several stress points to even out the force on the ball as it spins around. You can accomplish this in several ways: one is to buy a soccer ball trainer net (<http://www.amazon.com/Soccer-Ball-Kicking-Black-Handle/dp/B00C44QAV8/>), but if you want to really go the DIY route you can either wrap the ball several times in paracord or do what we did, which is weave a net. We basically followed a YouTube tutorial for net-weaving (<https://www.youtube.com/watch?v=JAMqZA27iA0>) (there are many Instructables for this, also), then wrapped that net around our ball. It's not pretty (though with more practice it could be), but it certainly gets the job done!

Once your net is around your ball, loop a piece of paracord around the end of it. This needs to be a long piece: you're going to weave it between all the links of the chain (see photos) to make sure the ball stays attached.

To make the chain a bit safer, cut several 50mm sections of pool noodle and feed them onto the chain, placing them up near the ball. This is the part that swings fastest (aside from the ball itself), so it's best to pad it a bit.

Wrap the ball and pool noodle sections in duct tape. With the ball, take care not to compress the foam too much. Also, be sure to puncture a few holes in the duct tape on the ball: this makes hits a little softer because it lets the air escape more easily.

Finally, attach a belt or fabric handle to the end by feeding it through the final link in the chain and duct taping it closed. Straps or other strong fabric materials work well. You don't want anything too heavy, as the chain can slip out of its wielder's hands.

Step 7: Making the Dog Skull



This step requires a little bit of creative flair, and we can't really provide clear directions of how to do it. There are also many alternatives that are both more and less fancy: in Germany, the official "skull" used in Jugger matches is a simple cardboard cylinder wrapped in duct tape. We wanted to have something that resembled a skull at least a little bit, so we use our Nerf football as a canvas to carve something dog skull-like.

Take your bread knife and cut into the football from the front, top, and sides to get something that resembles the shape of a dog skull (you can look at photos for inspiration if you want). Any colorful plastic coating (ours was blue and orange) should peel off during this process. Once you have a shape that you're happy with, spray several layers of white spraypaint over the exposed foam to serve as a bit of a protective layer. There are certainly fancier techniques that could be used (latex coating, for example) to make a really durable and nice skull, but this has worked ok for us so far. Unfortunately our skull is already kind of dirty in the photos... but such is the price of jugger. :)

Step 8: 3... 2... 1... JUGGER





With two complete sets of pompfen, you're ready to play! Check out the rule sets linked in the intro for more details, but the basic rules of the game are as follows:

1. Each team is made of 5 players.
 1. 4 of those players have weapons, selected from all weapons. Only one chain per team! These people are called Enforcers.
 2. 1 person has no weapons. This person is called the Qwik. She is the only one who is permitted to touch the skull with her hands.
2. The goal of the game is to get the skull from the middle of the field into the goal/cup at the opposite end (that is, you have to get it past the other team's enforcers)
 1. This is mostly done by having the Qwik pick up the skull
 2. Enforcers may also use their weapons to sweep the skull down the field, but they may not score this way
3. If you are hit/touched/poked by a weapon
 1. By a normal pompfe (longsword, short sword, staff, or qtip), you go down for 5 seconds
 2. By the chain, you go down for 8 seconds
 3. In the head, the person who hit you must go down for 8 seconds
 4. In the hands while holding a normal pompfe, it does not count (being hit in the hands when you are a Qwik or using a chain *does* count)
 5. By someone who is not holding her weapon correctly (for example, she only has one hand on a two-handed weapon or is not holding it in the correct location), it does not count
 6. And someone holds his weapon to you before you get up, you must wait until he lets go before you can move
 7. You cannot do anything while you are down (you cannot pin another player, for example)