CONSTRUCTING A SIMPLE BOFFER:

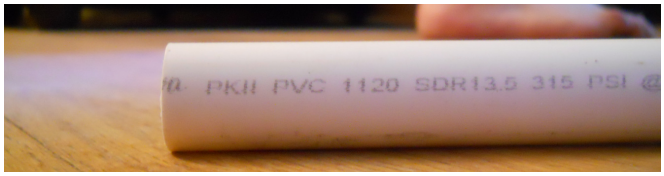
A simulated weapon, also called a "boffer" is not difficult to make if you know what you are doing and have the materials at hand. However, since safety is everyone's concern, it is important to construct them correctly. Each LARP has their own standards, Middlehaven's might be similar or different to others, however our designs for weapons have been in use for decades and are proven to be both sturdy and safe.

Materials: **Agnew and Taylor Hardware in Ronkonkoma LI is a rare store that understands the unique materials required for boffer construction.*

a) 5/8" OPEN CELL pipe insulation is both "squishy" and thick. We use CL-50 (50 means "half inch hole in the middle" to fit on 1/2" copper pipe). This stuff is a little rare to find, you will likely have to special order it.
(True Value Code: 418-632)

b) Wacky Noodle Foam can also work. It is much thicker, and that makes it heavier. We'll often use it for two handed weapons. Being thicker means you can cut into it to shape the foam, but all parts must be covered by 5/8" inch of material and the strike surface (any part of the weapon that most often makes contact with a person) should be its full thickness.

c) For one handed weapons, you want a pipe that is light but still flexible. We use a special type of rare 1/2" PVC which has a SDR value of 13.5 Hardware stores only carry standard PVC, so you will need to special order it (True Value Code: 232-322)



d) For TWO handed weapons the light PVC is too "whippy" so we either go with standard ½" PVC (making the weapons rather heavy) or a new material; Carbon Fiber Kite rods. *Note: this new technology is experimental for us.* The rods are ultra light weight and strong, but simply are not flexible enough for 1 handed weapons (not enough 'give' on a strike). However, for two handed boffers they are working out quite well. The rods have a very thin 'wall thickness' and can cut into the foam, so we wrap electrical tape around it to blunt the sharp 'edge'. You can find this stuff at: http://www.goodwinds.com Product code: 007040, it is FL-745 with an outer diameter of .745" It fits the "CL-50" insulation or Noodle Foam better than the PVC, and is durable and light. However it is only good for two handed boffers, and is also a bit pricey. Only use the new .745" outer diameter rods, some LARPS allow the old "pencil" thickness ones which punch through the foam.

e) Tape: 3M brand Duct Tape works well without being too heavy. Fiberglass Strapping Tape is strongly recommended for any boffer, and is a *must* for Axes and Hammers (the heads fly off if not properly secured). You'll need a good pair of scissors to cut it. Hokey grip, or other tape, can be used for the hilt. Some boffer crafters use Nylon Kite Tape instead of duct tape. It is expensive, and difficult to work with but creates an ultra-light boffer. (**Update- some LARPers have found very INexpensive nylon tape as SAIL REPAIR TAPE for a boat. I haven't seen it myself yet however but it should work)*

For our LARP, "Chrome Silver" Duct tape represents a "Silver" weapon (which is very expensive and has special properties in the game).

f) Tip Foam: 'Couch Cushion' foam of the type used for inexpensive mattresses works well. It should be 'squishy' but also slightly firm. "Tip" foam can be found in any fabric store.

Now on to the Sacred Art of Boffer Crafting:

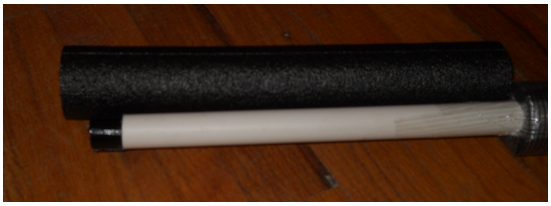
Step#1: To plug up the holes on both ends of the pipe, wrap a strip of duct tape around the top and bottom and twist it closed. Tuck the 'twist' inside the holes to plug them up.

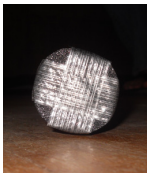
Step#2: Slice off a section of pipe foam and place it on the boffer just above where you want your hand to go for the grip. This is going to be the 'anchor', and it is attached to the pipe by three "half width" strips of strapping tape on each side. The strips of tape attach the 'anchor foam' to the pipe by running off the foam and onto the pipe (parallel to the pipe- refer to the figure on the right). In other words: Take three pieces of tape, cut them in half length-wise so you have six pieces of tape. Use 3 to tape the top of the anchor to the pipe, and use the other 3 to tape the bottom of the anchor to the pipe.

The purpose of the 'anchor' is to prevent the foam from 'wiggling' up and down on the pipe during use. When it comes time to 're-tip' your boffer (after many battles when the top becomes too soft and you can feel the pipe inside), you will cut off the old foam and remove everything from the anchor up.

Step#3: Since the ½" foam does not fit well on PVC pipe, you will have to pinch shut the 'seam' and apply small squares of strapping tape over it. This also prevents the boffer from tearing open on the foam's seam during use. Position the seam of the foam to be *away* from the side of the boffer you eventually will be striking people with.

Step#4: Cut a section of foam to be the 'strike surface'. Make sure it is an inch longer than the pipe. Slide it on, and also 'pinch-seal' the seam with more strapping tape and also attach it to the anchor. Then cut a small "peg" of foam to go inside the insulation, and seal it in there with more strapping tape.





Step #5: Making the Hilt: Cut a good length of foam in half length wise. Fold it to find the center, and cut a hole for the pipe. Then make two "strips" of foam to fill in the little 'channels' on either side of the hilt. Before you place it on the boffer cover it in duct tape first, and use strapping tape to help secure it on both sides.

Step #6: Slice off a small piece of foam to make the 'pommel' and attach it to handle with three more strips of strapping tape. Also cut a 'peg' for it just like we did for the other end. After that, use some of the "couch cushion" or "tip" foam to make a 1" padded end for the "pommel" and a 2" padded end as the thrusting tip.

Step #7: Attach the two padded tips to the boffer sword using more strapping tape. Afterward, go over the entire boffer with duct tape and apply some grip tape to the hilt. *NOTE: Do not "spiral wrap" the tape!* That would compress the foam and also adds too much weight. Use long thin strips for the most part. Additionally, if you have a vice, crushing the PVC pipe *very carefully* into an oval shape helps it conform to the shape of your hand better.

Step #8: Final step; poke some holes in the "thrusting tip" so that it compresses easily. Be careful not to 'cut' or split the tip in the process (holes only).

Shields: Use thick foam board from a hardware store. Apply fiberglass strapping tape in a "grid" pattern. Make sure to overlap the tape at least 6 inches and try to evenly space the grid. This will give your shield AMAZING sturdiness. Use any foam insulation for the edging, the wide closed cell stuff with the pull off sticky strip is a good pick. Old Belts can be used for handles, cover your shield with dark *cloth* to make it look better and reduce weight. If you are very clever, turn the cloth cover into a shield sized "pocket" for carrying items. *I have also written a "How to Construct a Simple Shield" guide which could help you further.

Storage and Maintenance: 1) In the summer cars heat up enough to deform or melt a boffer.

2) The 'thrusting tip' sections are fragile. Do not store the boffer tip side down and generally don't allow the tip to even touch the ground if you can avoid it. Dirt and broken glass getting trapped in the trusting tip is a mild irritant, especially if you accidentally catch someone in the eye.

3) You'll know when it is time to 're-tip' your boffer when the strike surface feels "soft". If you can push a finger into the foam and feel pipe at all it is time to replace it.

4) Direct sunlight will break down the duct tape holding a boffer together over time. Cover your boffers or store then out of the sun.

5) Boffer making materials can be a little expensive. If possible, get a batch of materials and share them with friends. If you are part of Middlehaven LARP on Long Island, NY; The Agnew and Taylor True Value in Ronkonkoma has become adept at ordering the special "13.5 SDR PVC" pipe, and the "CL-50" pipe insulation that is so hard to get otherwise.