Construction of an Introductory Practice Weapon (V1.2)

Introduction:

Here is the construction guide for building the Introductory practice weapon that is being proposed as a more period accurate replacement for Shinai. This design is based on the weapons used by ARMA (*http://www.thearma.org/Practice/weapons.htm)* but have some changes to make them more appropriate for Avalon beginner use. The design in this booklet has been developed by Sir Phaelan ap Aur Derwen and Dame Ruth Freebourne. Photographs and construction were taken by Sir Phaelan, and the booklet has been laid out and written by Sir Phaelan and Dame Aleska Andraitiene.

This construction is for a single-handed sword, but by using longer materials you can easily construct two-handed weapons.

So far, everyone who has actually held and handled these blades have been impressed by their ability to mimic the feel of historically accurate steel weapons, something the shinai does not do. This introductory practice weapon allows the use of pommel, guard, and thrust movements as well as edge blows. They allow for historically accurate movement and stances. The main addition to shinai armor is a gorget, since thrusts are allowed and the neck should be protected against, otherwise most have been satisfied with their shinai gambesons/gear.

Anyone with an interest in historical combat is encouraged to produce one or two of these and try them out themselves! Then go the Avalon-Combat board to discuss your findings and opinions. *(http://groups.yahoo.com/group/avalon-combat)*

Materials:

Most of the materials can be purchased over the counter at any general hardware store. We chose to use Tri-State locally in the Moscow area, but several other hardware and home building supply stores also carried the materials. Once you have the materials, they go a long way and many many fine weapons.

The only material that required a bit of leg work was the Landau padding. Landau padding is a very particular kind of foam, and its important to not skimp on this material in favor of other foams. Laundau padding is very dense and will take the abuse a combat sword goes through, as well as giving the weapon padding. Don't let the fact that you have to special order Landau padding intimidate you. It's very inexpensive per weapon, and its easily shipped. If several combatants go in together you can save on shipping too. The weapons are easy enough to make, its worth buying enough foam to make several swords.

Landau padding can be purchased from upholstery suppliers. You can also mail order from Seattle Fabrics *(http://www.seattlefabrics.com/neoprene.html)* They have a toll free order line: 1-866-925-0670. If you want to call them with questions, then use this number: (206) 525-0670. You can also contact Jacobs' Upholstery in Spokane, Washington. *(http://www.jacobsupholstery.com/)* Local number is (509) 926-4230, Toll free is 1 800-481-6033.Feel free to use these suppliers, or to find ones local to you.

Materials List:

Saw, for cutting metal and wood
2 Oak Slats 1 1/2” wide 1/4” thick
Make it the length you want your sword to be.
2 Aluminum Bars 1” x 1/8” *any length*
Duct Tape *(any color(s))*
Landau Padding 1/4” thickness
Laundau Padding Adhesive
Suggestion: DAP High-Strength Spray Adhesive or 3M Foam Spray Adhesive
Closed Cell Foam 1/2” to 2” Thick
Open Cell Foam
Canvas *(painters’ drop cloth works well)*
E-6000 Glue *(craft or hardware store)*

Construction:

Before you begin, take two strips of Laundau padding and use the DAP spray to make a panel that is 1/2 inch thick and 60” long. You will cut 1/2” thick slices from this panel, so make it as wide as you need to get enough straight strips for the sword(s) you will be making. While this dries, move on to sword construction.

Take two oak slats 1 1/2 inches wide 1/4 inch thick. In this case since I am making a one handed sword, I am using 36 inch long slats, a typical length for one handed swords in period. Tape the two slats together at or near the ends and at or near the middle

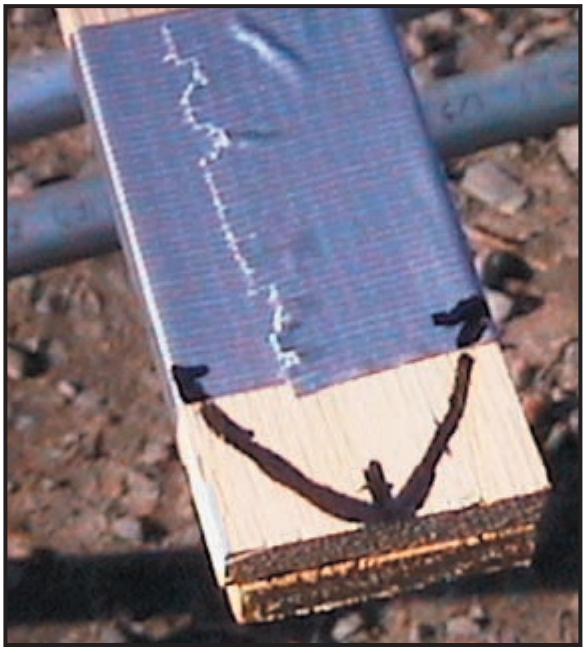
Its very important to only tape these three spots. This allows the two planks to move independently, which gives it flexibility on the combat field. These swords will actually flex impressively during thrusts, which helps avoid injury.

Mark on one end the spot you want to use for the pommel. On this weapon I’m making it 1 1/2 inches

Mark out the area you wish to use as the grip and location for the guard. In this instance I am using the width of my hand and extended thumb or approximately 5 3/4 inches.

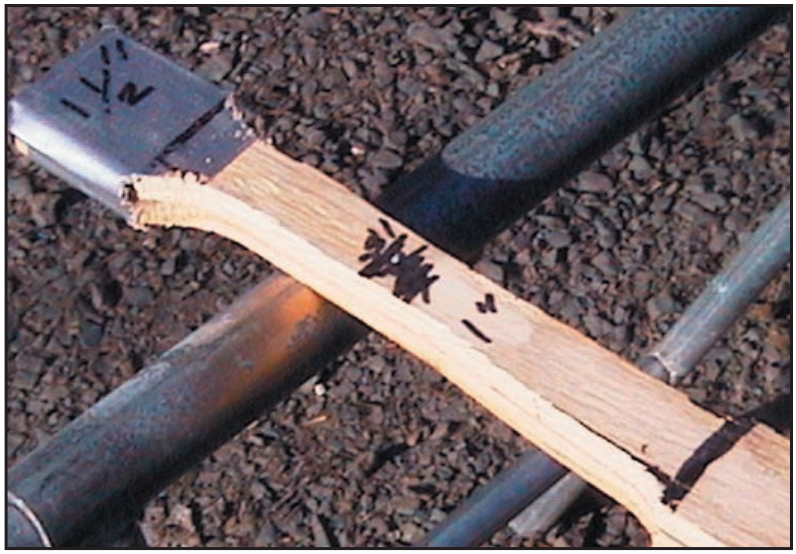
Mark the areas to cut away in making the grip. Make sure you leave at least a one inch wide section for the handle of the weapon.

Depending the weapon you are modeling your sword on, you may choose to add shape to the grip, such as an hour-glass shaped grip for an arming sword.



Mark out the rounding for the tip of the weapon. Don't make it too point since there will be thrusting in combat.

Cut away the marked areas of the tip and grip.



The weapon being made here has a blade length of about 29 inches (rounding the numbers up makes figuring out lengths of aluminum in the next step simpler).

Cut a section of aluminum bar 1 inch by 1/8 inch to a length 50% of the length of the blade section. In this sample, 50% of 29 inches equals 14 1/2 inches.

Tape the bar on the weapon with one end at the pomel line but not covering covering the pomnmel. The rest of the bar will extend past the bottom of the grip area and into the blade section. Flip the sword over to the other side, to put on the second aluminum bar.

Cut another section of aluminum bar into a length 20-25% the length of the blade section. (*I made this one 20% or 6 inches.)* Tape the shorter bar so that part of it extends into the blade area. The bar can be slid back or forward to affect the balance of the weapon. A little trial and error with practice swings will help you decide. When you fasten it in place, just make sure that some of the aluminum is on the grip and some on the blade. This will ensure that the blade is less likely to snap at the hilts.

For the next steps , I used a great adhesive called E 6000

From your glued Laundau Padding panel, cut a strip 1/2” thick by by 1/2” wide. Using E6000, glue this strip around the striking edge of the weapon, from guard to around the tip to the other guard.

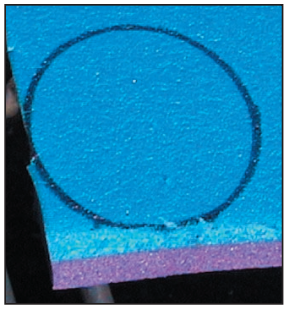
Next mark and cut some open cell foam to glue on the end of the blade for a thrusting tip. Make sure that there is 2 inches of foam at the end of the weapon. I used the end of the blade as the pattern to trace on the foam.Glue the foam to the tip of the weapon.

Take Landau padding 1/4 inch thick and trace the outline of the blade twice. Add 1/2 inch at the tip of the blade outline.

Cut and glue the two sections of Landau padding to the two sides of the blade .

For those who wonder, the name of Phaelans' black cat is 'Gandalf". Foam scraps make great cat toys.

Put one layer of duct tape on the entire blade and the grip areas of the weapon. Take care not to wrap the blade too tightly, or it will become too hard. For show and identification, we like to use black or brown duct tape for the grip.



Take closed cell foam and mark and cut out a pommel shape that is larger than the wood portion. Make sure you have at least 1 inch of foam on the striking ends (edge) of the pommel, and 1/2 inch of foam on the flats of the pommel. In this case I'm using 2 inch thick closed cell foam which I then cut in half to make two sides of the pommel. This is the same foam we use to make combat arrows. If you have 1/2 inch thick closed cell foam, then mark and cut two pieces to equal the thickness.

Out of closed cell foam mark and cut out the guard of the weapon. In this case the guard is 6 inches by 1 1/2 inches, and 2 inches thick. Again, if you have thinner foam, use multiple pieces to make it thick enough. You probably want the guard to be fairly thick to take abuse and stop oncoming blows.

Glue and duct tape the two halves of the pommel and guard to the weapon. You may shape and size the guard how you wish, be creative! If you wanted to make, for example, a German zweihander, then you would also use close celled foam for the protusions of the blade guard, and add them to the weapon at this time.

Take cloth and mark out three outlines of the blade area of the weapon in such a way that the three outlines can be cut as a single piece. In this case I'm using an inexpensive canvas painters drop cloth.

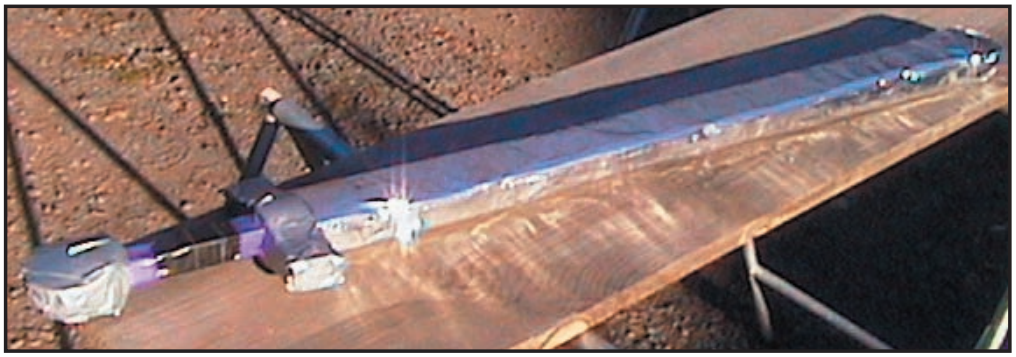
Draw a second line around the first, which will add 1/2 inch at the tips of the outlines.

Cut and glue the fabric onto the blade of the weapon using E6000. Do not be tempted to skip adding the fabric. Without the canvas, the sword gets chewed up *very* quickly.

At this point the piece is completed. On this one I took an extra step or two to improve it's appearance. I added some colored tape to the grip for identification.

Total elapsed time on this sword was about an hour, including many stops for taking pictures. Without a camera, however, this same sword takes only a half hour to make. Cost of materials in this sword: $12, making it far cheaper than the average shinai. Buying materials in bulk saves money on material and shipping both, so pool with other combatants to order stuff.

Here we covered the sword with aluminum tape to improve its canvas appearance. We found that with use, the tape crumpled and looked terrible. It was durable, but the sword ended up looking like a corn dog in foil.



Below is a two-handed sword made in the same process, modeled off of a historical sword. We adjusted the aluminum bars to balance the piece. We used foam to sculpt the thrusting tip into a realistic looking point. And we covered the canvas with silver lame fabric. Overall, the piece looks very good. Remember that you can shape the foam tips, guards, and pommels to model any sword you see in books, and even make matching sets of sword and daggers. Be creative in manufacturing the arms you want to use!

Play! Test! Have Fun!

And don't forget to go online to talk about your experiences with this weapon:

http://groups.yahoo.com/group/avalon-combat