

Everything you need to know about NERO boffer weapons!

Weapon Construction

All weapon construction is viewed with the idea of safety foremost. Note however that even the safest weapon could cause injury if improperly used. Therefore, in addition to weapon construction, practice in the use of the weapon is needed to allow optimal enjoyment for all players.

Weapon construction does take some practice, and it is highly likely that your first few attempts will be rejected by the marshals at check-in. Although NERO endeavors to have weapons available for loan or sale, we cannot guarantee that any will be available at the local chapter. The NERO Intl Office (914-628-9497) can sell you a weapon or a shield at a reasonable price. It will be shipped to you within 14 days, as well.

There are a number of types of weapons that can be made to simulate weapons available in medieval and fantasy situations. NERO allows experimentation with weapon types as long as they conform to the basic standards of safety. However, you should check with the Marshals before and during construction so that you do not end up wasting time and materials on a weapon that will not be allowed in the game.

All tips must be rendered safe with tape and padding. In a melee, it is possible to accidentally hit someone with the pommel or crossguard—so even these parts must be protected.

All weapon tips and crossguards high up on the weapon must have a *Thrusting Tip*. A "Waylay Tip" (the tip closest to the handle) is considered a Thrusting tip for the purposes of Weapon Construction, whether or not the player wielding the weapon actually has the Waylay skill.

A Thrusting Tip consists of at least two inches of open cell foam padding beyond the end of the pipe insulation. If the foam tip is too small, opponents could get hurt with a stiff thrust. If the tip is too large, it could easily break off or fold over, making it useless. However, crossguards that do not contain a core do not need the 2 inches of open cell foam. All thrusting tips do, in fact, count towards the weapon's overall length. This is a matter of safety and is not negotiable by any means. This rule may not be changed by individual chapter variant. All NERO chapters are instructed to fail all weapons that do not comply with these guidelines.

No thrusting tip should be longer than its diameter. The tip must collapse about 50% of its length when pressure is applied. The tip should also be at least 2 inches across.

All blade areas or areas of the weapon that may come in contact with another player must be protected with at least 5/8 pipe insulation. This includes the shaft areas of weapons such as axes, hammers, maces, etc.

All weapons must be fairly rigid so as not to act as a whip when swung quickly. Because of this rule, ½ inch CPVC tends to be unacceptable for weapons over 32 inches long in total length. Consult the table for more information on recommended piping materials for various weapon sizes.

Under most circumstances, a weapon tip should not bend more than 6 inches from true when a moderate weight is applied to the tip and the grip is held level.

To increase a weapon's rigidity, first try using fiberglass reinforced strapping tape applied lengthwise along the pipe. If this does not reduce the whippiness, a larger pipe may be needed.

Conversely, all weapons must also have some give to them when contact is made. The pipe should flex somewhat. To insure this, you should make the weapon out of the appropriate materials. If the pipe does not flex, then you may be required either to use a smaller diameter pipe or add more open cell foam padding to insure that the weapon is safe. This is often the case with metal pipes or when the pipe diameter is too large for the weapon type.

Metal pipes—even lightweight aluminum and copper pipes—are usually not allowed. Some exceptions may be made, but will require the permission of the weapons marshal before you begin construction.

If you bring a weapon to an event that has been made with materials other than those listed under construction materials, be prepared to have the weapon fail if you have not first received permission. Wood is also not allowed as a core.

If the pipe insulation on the shaft or blade is always compressed, the weapon will hit harder than desired and will fail a weapons check. One common mistake leading to this problem is to use foam of a smaller diameter than the pipe being used, forcing the foam over the pipe. Another common mistake is to wrap the duct tape around the foam too tightly, or even in a spiral pattern up the blade. This tends to make the insulation too stiff and gives unwanted weight.

The pipe insulation can be split lengthwise and a section of insulation added if necessary to insure the foam will fit. The insulation should slide easily over the pipe, but fit snugly so that the weapon will not rattle if the pipe is shaken.

The foam should be taped lengthwise, using 2 inch wide duct tape and overlapping about ¼ inch. This will use the least amount of tape, keeping the weapon lighter and safer than if the weapon is spiral wrapped in tape or taped with electrical tape. Vinyl electrical tape is thicker and has less give than duct tape; however, it is acceptable for use on non-contacting areas of the weapon as decoration.

Any additions to the striking surface of a weapon must be made with open-cell foam. Please note that local safety marshals may deem any weapon with additions to the striking surface unsafe, and decide not to pass it.

In addition, you may want to cover your weapon with cloth after it is completed. You should keep in mind that it is a weapon and not use paisley prints or other silly colors. The cloth should be sewn very tightly.

All blade lengths are measured from the front of the main crossguard to the end of the thrusting tip. Note that if a sword is to have a weighted pommel, that pommel must be thickly padded since it could potentially do more damage than a normal weapon blade.

Every weapon will have attached to it a safety tag and a tag which shows the valid event dates. Any player found to be using an unchecked weapon will be given a warning. Depending on the severity of the infraction, a player may be removed from game.

A player who notices another player without the proper tag should report the infraction to a marshal and should not accept any damage from the weapon if it is used. (In fact, for your own safety, you should call a "Hold" immediately and not even let the unchecked weapon come near you.)

Take this point very seriously! If you do not have your weapon checked and you hit someone and your weapon breaks and hurts them, it will be your responsibility. The legal release you sign does not cover you if you do not follow our safety rules.

Using the guidelines on the next page is a good way to make your first weapon.

How to Make a Weapon

Materials needed for creating a NERO-safe one handed weapon:

3/4 inch PVC pipe (white in color) or anodized aluminum pipe (for two handed weapons only!)

5/8 inch thick pipe insulating foam (light green in color)

Open cell foam

Grey duct tape

Electrical tape

Hacksaw

Scissors

Razor blade

Ruler or yardstick

1. Using the hacksaw, cut the PVC pipe into the desired weapon length.
 2. Using the scissors, cut the pipe foam into the desired blade length.
 3. With duct tape, cover the ends of the PVC pipe so that there are no open ends.
 4. Slide the pipe foam over the PVC pipe so that one inch of foam hangs over one end of the PVC pipe.
 5. Measure a section of pipe foam for the crossguard. Cut a hole in the middle of the crossguard and slide it onto the end of the PVC pipe. Secure the crossguard to the blade using two strips of duct tape.
 6. Stuff the ends of the crossguard with open cell foam to strengthen the crossguard. Close off the ends of the crossguard with duct tape.
 7. Cut off one inch from the pipe foam and cut it into two equal halves. Compress one of the halves and stuff it into the end of the blade end. Using the duct tape, cover the blade end.
 8. Cut three inches to be used as the butt end (the "Waylay tip"). Place the butt end over the end of the weapon so that the foam hangs one inch over PVC Pipe. As with the blade tip, place a half circle compressed into the end of the butt end and cover it with duct tape. Secure the butt end to the PVC pipe with duct tape.
 9. Cut a three inch thick section of open cell foam to cover the thickness of the pipe foam. Secure the open cell foam to the pipe foam with a few layers of duct tape (but not too many layers, as the tip will become too stiff and unpassable).
 10. Repeat this process for the butt end.
 11. Poke a few holes into the tips to allow air to flow more freely.
 12. Place the duct tape lengthwise to cover the blade, butt end and crossguard.
 13. Wrap electrical tape in a spiral around the hand grip.
- Your weapon is now complete! Check it for safety. (Is it too stiff? Too whippy? Is the pipe protruding? etc.)

Weapon	Blade/Head		Overall Length		Recommended Pipe Diameter	Max Grip	Min. Tip	Base Dam-age
	Min	Max	Min	Max				
Arrow	-	-	12"	-	-	-	2"	3
Bludgeon	8"	17"	12"	26"	½" CPVC	6"	2"	1
Bolt	-	-	12"	-	-	-	2"	3
Dagger	8"	17"	12"	26"	½" CPVC	6"	2"	1
Hatchet	8"	17"	12"	26"	½" CPVC	6"	2"	1
Javelin	-	-	36"	40"	-	-	2"	2
Long Axe	12"	18"	34"	46"	¾" CPVC	14"	2"	2
Long Hammer	12"	18"	34"	46"	¾" CPVC	14"	2"	2
Long Mace	12"	18"	34"	46"	¾" CPVC	14"	2"	2
Long Sword	25"	36"	34"	46"	¾" CPVC	14"	2"	2
Polearm	18"	24"	60"	72"	1" PVC	36"	3"	3
Sap	8"	17"	12"	26"	½" CPVC	6"	2"	1
Short Axe	12"	18"	26"	34"	½" or ¾" CPVC	14"	2"	2
Short Hammer	12"	*	26"	34"	½" or ¾" CPVC	14"	2"	2
Short Mace	12"	*	26"	34"	½" or ¾" CPVC	14"	2"	2
Short Sword	18"	24"	26"	34"	½" or ¾" CPVC	14"	2"	2
Spear	8"	8"	48"	58"	¾" PVC	30"	2 ½"	2
Staff	-	-	60"	72"	¾" PVC or ¾" Conduit	2 x 9"	2"	2
Throwing Dagger	-	-	12"	18"	-	-	-	1
Two Handed Blunt	18"	*	48"	62"	¾" PVC or 1" PVC	36"	2"	3
Two Handed Sword	40"	48"	50"	62"	¾" PVC	22"	2 ½"	3