

Chapter Ten - n'Teraction Weapons Construction

Core Rules - Fighting Props

Combat is resolved with a staged system that uses props for weapons and spells. In order to ensure that these props are safe, certain guidelines on their construction are necessary. Weapons and packets must be checked at each and every event where they might be used. You are responsible for the safety of any prop you swing or throw in combat, so you should check them yourself during the course of an event.

Every player, both PC and NPC, is responsible for bringing their own weapons and packets. We will try to have weapons and packets to rent at our events, but we can make no guarantees about the availability of these props. We reserve the right to fail any weapon or packet we deem unsafe. It is not uncommon for weapons to fail or break, so you should try to bring a backup weapon and materials to repair your props.

Weapon Construction

Constructing a weapon requires time and patience, but it is not that hard once you have practiced a bit. We describe the steps to create the various weapons below, and include the details along the way. One problem with weapon materials is that they vary wildly, even within the same brand name. If you follow the suggestions, it is remotely possible that a weapon could fail because of a strange inconsistency in the core or foam.

1 - Choose Your Weapon

First, you have to figure out what type of weapon you are making and determine the length and construction requirements. The various weapon types are explained below. Two handed weapons are marked with a "*" in the length table. Each type requires its own skill, but anyone can use small weapons under 24" in length.

Blades

These weapons represent daggers and all types of swords. A bladed weapon has a striking surface that covers at least 2/3 of its entire length. The weapon may have a cross guard or hand guard, but the guard must be made entirely of pipe foam or the equivalent.

Weapon Lengths

Type	Minimum"	Maximum"
Dagger	18"	24"
Short Sword	25"	36"
Long Sword	37"	46"
Great Sword*	50"	64"

Axes

These weapons represent hatchets and all types of axes. An axe needs padding that covers at least 1/2 of its entire length. The striking surface is a head of open celled foam at least 8" in length that extends at least 4" from the shaft, and looks like an axe blade.

Weapon Lengths

Type	Minimum"	Maximum"
Hatchet	18"	24"
Short Axe	25"	36"
Long Axe	37"	46"
Great Axe*	50"	64"

Hammers

These weapons represent maces, hammers, and all types of smashing weapons with metal heads. A hammer needs padding that covers at least 1/2 of its entire length. The striking surface is a head of open celled foam at least 6" long that extends at least 4" from the shaft, although this could be 2" on both sides for a mace.

Weapon Lengths

Type	Minimum"	Maximum"
Blackjack	18"	24"
Short Hammer	25"	36"
Long Hammer	37"	46"
Maul*	50"	64"

Staves

Staves have a striking surface on both sides of the weapon. Each striking surface covers at least 1/3 its entire length. The middle section of the staff must also be padded, although you can use 3/8" padding for the grip of the staff so long as the full 5/8" is used for the striking surfaces. Because both ends of the staff are striking surfaces, the middle of the staff is aluminum and each end has PVC or CPVC. The staff has a thrusting tip on both ends.

Weapon Lengths

Type	Minimum"	Maximum"
Staff*	48"	64"

Spears

The spear is the only long weapon that may be used one handed. A spear can only be used to stab an opponent. It cannot be used to swing. A spear must have padding that covers down the striking end at least 1/2 of its entire length. You cannot fight a spear and another weapon if that weapon is longer than 36".

Weapon Lengths

Type	Minimum"	Maximum"
Spear	48"	64"

Polearms

Covering all types of longer pole weapons, polearms have the advantage of reach . A polearm must have padding that covers down the striking end at least 1/2 of its entire length. The striking surface must cover at least 12", and must include additional padding of open celled foam that extends at least 1" from the shaft or another layer of pipe foam cut in half.

Weapon Lengths

Type	Minimum"	Maximum"
Polearm*	60"	72"

Clubs

These weapons represent weapons made entirely from wood. A club needs padding that covers at least 1/2 of its entire length. The striking surface is at least 6" long. It may be open celled foam that extends at least 1" from the shaft, or it could be an additional layer of pipe foam.

Weapon Lengths

Type	Minimum"	Maximum"
Blackjack	18"	24"
Short Club	25"	36"
Long Club	37"	46"

Great Club*	50"	64"
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Claws

These weapons represent some kind of natural weaponry. A claw needs padding that covers at least 2/3 of its entire length. The striking surface is the padded area of the weapon above the grip. Claws are not affected by Fumble effects. If a claw is affected by a Destroy effect, the character will take a Maim effect to the limb holding the claw.

Weapon Lengths

Type	Minimum"	Maximum"
Short Claw	25"	36"
Medium Claw	37"	42"
Long Claw	37"	46"

Thrown Weapons

These weapons represent daggers, darts, and javelins. These weapons must be at least 2" in length, but larger thrown weapons such as javelins are allowed if the staff deems them safe. Larger thrown weapons may be weighted with birdseed, but at least 5/8" of foam must be between the birdseed and the surface.

Weapon Lengths

Size	Minimum"	Maximum"
Dagger	4"	12"
Dart	2"	12"
Javelin	8"	36"

Bows

These weapons use thrown type projectiles and a prop for the bow made from padded PVC. The arrows are round, open cell foam and tape projectiles with an 8" streamer. You must draw the arrow prop, touch it to the bow, and draw it back to your ear. You may then throw it to represent the arrow.

Weapon Lengths

Size	Minimum"	Maximum"
Bow	36"	48"
Arrow	2" + 8"	2" + 8"

Crossbows

These weapons use thrown type projectiles and a prop for the crossbow made from padded PVC. The bolts are round, open cell foam and tape projectiles with an 8" streamer. You must draw the bolt prop, touch it to the crossbow, and draw it back to your ear. You may then throw it to represent the bolt. The crossbow must have a length between 18" and 36" and a bow width between 18" and 24". We also allow NERF type crossbows if they meet the size requirements and the crossbow and bolts are painted so they are not brightly colored.

Weapon Lengths

Size	Minimum"	Maximum"
Crossbow	18" by 18"	36" by 24"
Bolt	2" + 8"	2" + 8"

Shields

Shields are defensive props used to block weapon blows. They cannot be used to strike another player. They are constructed from light wood or plastic, and all exposed edges must be protected with 5/8" thick foam piping. Most shields use a handle and an arm strap, but light shields might only have a single handle.

A buckler is a small shield that cannot be more than 24" at its longest dimension. A full sized shield cannot be more than 36" at its longest dimension.

Shield Maximum Dimensions

Size	Maximum Dimension
Buckler	24"
Shield	36"

2 - Create the Core

Next you must create the weapon core. For thrown weapons you skip this step. Your core materials depend on the length of the weapon, which you determined in step one. The weapon core will need to be 4" shorter than the overall length of the weapon. Each end must be capped with a coin or strapping tape so there is no hole at the end. Each pipe insulation overlap will need to be 1" and the foam thrusting tip must be 2" in length. The core materials we allow are described below.

3/4" PVC

This common core can be used for one handed weapons and is used with aluminum to make two handed weapons. You will want to find schedule 20 PVC pipe with a thin wall. There are schedule 40 pipes with thicker walls that are too heavy to make good weapons. This core can also be bent into bows by applying very hot water, or softening it if you are good with the heat of a stove or gas burner.

1/2" PVC

This core is too whippy to use for longer weapons, but weapons as long as 36" might be safe with a 1/2" core. This material is not good for any other type of weapon.

3/4" CPVC

This core can be used for one handed weapons and is used with aluminum to make two handed weapons. You will want to find schedule 20 CPVC pipe with a thin wall. There are schedule 40 pipes with thicker walls that are too heavy to make good weapons. This core can also be bent into bows by applying very hot water, or softening it if you are good with the heat of a stove or gas burner. CPVC has more whip than PVC, but it can be used for weapons up to 42" in length. Some types of CPVC might be stiff enough for slightly longer weapons, but you will have to watch the whip closely or the weapon will likely fail inspection. CPVC can be used with aluminum in two handed weapons as well.

Aluminum

This material has no give, so it cannot be used for one handed weapons. The purpose of aluminum is to give two handed weapons less whip. Two handed weapons use a 7/8" galvanized aluminum and 3/4" CPVC core. The cores should be picked so the CPVC fits snugly into the aluminum. They should overlap about three inches and be secured together with an adhesive like Plumber's Goop or with a good amount of strapping tape wrapped around the seam. I would suggest both the adhesive and a small amount of strapping tape. Suggested lengths for long weapons are as follows.

72" weapons should have 48" of aluminum and 23" of CPVC. With 3" of overlap you have a core that is 68" long. This leaves you room for the required 1" overlap of pipe foam on each end and a 2" thrusting tip.

64" weapons are a little shorter, so you can use a little more CPVC. You should use 36" of aluminum and 27" of CPVC. With 3" of overlap this gives you a core that is 60" long. This leaves you room for the required 1" overlap of pipe foam on each end and a 2" thrusting tip.

The staff should have aluminum in the middle of the weapon with CPVC on either side where the striking ends are. You will have to cut the core a full 6" shorter to give room for 1" of overlap and 2" of thrusting tip on both sides. The staff should use the ratio of half its length as aluminum in the middle and one fourth as CPVC on each side.

Two handed weapons of different lengths should use similar ratios so they are not too whippy but have give at the striking end.

.505 Ultralight

The core this refers to is actually called spiral wound fiberglass tubing and can be purchased from a company called Into the Wind. Intended to be used as a kite pole, the core is light, durable, and has give. One handed weapons use the .505 diameter pole that sells for under \$5.00. If you wish to order it, the part number is 4409.

.610 Ultralight

This core is a thicker version of the spiral wound fiberglass tubing that is purchased from the company called Into the Wind. It is almost twice as expensive as .505, but it is needed if you intend to make ultralight two handed weapons. Ultralight two handed weapons require extra padding down one side of blade consisting of 1" of open cell foam or an extra layer of 5/8" pipe foam.

Because ultralight weapons are so light, we are especially careful to insure that those using these weapons roleplay their swings properly. Though we allow the use of these cores, this is considered a privilege and players who perpetually swing from the wrist and machine gun will lose this privilege. Roleplay your swings.

3 - Pad the Striking Area

Next you will have to add the padding to the striking surface of the weapon. The padding should be 5/8" pipe insulation. Weapons have traditionally used 5/8" green Climatube 80 pipe insulation, but the parent company has discontinued that foam. Suitable replacement foam can be found through McMaster-Carr at 732-329-3200 or online at www.mcmastercarr.com. Search for polyethylene pipe insulation. The product numbers for un-slit foam that fits various cores are below:

Ultralight .410 and .505 core	Part #4530K161
Ultralight .610 core	Part #4530K162
Ultralight .750 core	
3/4" CPVC	
3/4" PVC	Part #4530K163
1" PVC and 7/8" Aluminum	Part #4530K165

All wall thicknesses are inch which will last longer and provide more safety padding than the Climatube 5/8".

For shield edges, use part #4734K151 which is a slit, self sealing foam that is easy to apply around the edges of a shield.

The pipe foam should fit snugly over the pipe without rattling. If the foam is too big, you may add a strip of weather insulation to the core or use strapping tape to pad out the core at three or four points. We prefer to use weapons with a diameter of around 2", but we allow a wedge to be removed from the pipe foam to be so long as the diameter of the weapon is no less than 1 and 3/4". We reserve the right to restrict such weapons if this proves to be problematic.

The pipe insulation must extend past the end of every core by at least 1" and the resulting hole must be filled with a rolled up bit of pipe insulation. Use strapping tape to hold in the filler.

Once the basic padding is added, you may add extra padding to two handed weapons using another layer of pipe insulation cut in half to fit over the foam. You may also use a narrow strip of open cell foam. Weapon heads are also made from open cell foam. Attach the extra padding with strapping tape to prepare it for the final layer of duct or kite tape.

It is suggested that two handed weapons, particularly staves, cover the grip area or at least most of the grip area with a thin walled pipe insulation to protect against accidental contact with the grip. This is not required unless a player is reported to hit opponents frequently with the grip of the weapon.

4 - Add Cross Guards

Cross guards and hand guards may be added to blades using pipe insulation or similar materials. All guards must have give and be deemed safe by the staff. We discourage cross guards on other types of weapons, but if the player can show us an example of a medieval weapon with a similar feature we might consider it if the cross guard is deemed safe. Other weapons may have a small hand guard if it only protects that hand.

5 - Add the Pommel

If the weapon is a blade it will need a pommel. Pipe insulation must extend past both ends of the core by at least 1” and the resulting hole must be filled with a rolled up bit of pipe insulation. Use strapping tape to hold in the filler.

6 – Add a Thrusting Tip

The tip of the striking surface must have a thrusting tip. This tip is 2” of open cell foam. Longer thrusting tips tend to bend. Cut the foam to cover the tip. Once the tip is in place, use duct tape or kite tape to cover the tip. Take a length of tape and place it so it goes across the end of the tip and down both sides, attaching the tip to the weapon. If the tip is round, use a razor to cut the corners so the tape conforms to the tip. Now add another piece of tape so it goes across the end and down the exposed sides of the foam tip. Use a razor to cut the corners so the tape overlaps slightly and conforms to the tip. Finally, poke many tiny holes all over the tip so the air can escape and the tip can contract and expand freely.

If the weapon uses other open cell foam, you might find that when the foam compresses that the tape wrinkles as it sticks to itself. You can prevent this by covering the open cell foam with plastic wrap used for food storage before taping over the foam.

7 - Cover with Tape

You may now cover the entire weapon with duct tape. Kite tape is also allowed. The tape should run down the length of the weapon and have a slight overlap. It should not be wrapped in a spiral around the blade. Even duct tape varies in weight and thickness, so you should look for a thinner, light tape. The majority of the weapon should be black or gray where there is metal, and black or brown where there is wood. Bright colors are not allowed as the primary color of the weapon, though decorations are allowed.

Packets

Packets are small bean bags that are thrown to represent magical attacks or special powers. They should be made of stretchable fabric and filled with birdseed. You should use only small birdseed with no larger or sharper seeds. A square of fabric is pulled around the birdseed and its corners are gathered together to form a “tail” and closed up with strapping tape. You may also sew a packet shut. Sealing the packet with rubber bands or other types of tape will be allowed on a case by case basis, and the packet should have give in any case. Packets with any other material inside will not be allowed.

The head of the packet should be between 1 and 1.5 inches in diameter, and the tail behind the tape should not be longer than 3 inches. The fabric must be stretchable and cannot be pulled so tight that it no longer has give. You should be able to squeeze the center of the packet and almost touch your fingers together.