

## **How to Build a Breast Plate**

**(Please read this in its entirety before you begin.)**

Over the last twelve to fifteen years, I have assembled about the same number of breast plates. Does that make me an expert? Absolutely not! But, anytime you do something two or three times, you begin to learn from past mistakes, and by the time you have done it several times you should have a pretty good list of do's and don'ts. In the paragraphs that follow, I hope to share some ideas that will save you time and money building a breast plate and hopefully help you wind up with an end product that you will be proud of.

Before we jump in to assembling the breast plate, there are a few things that should be considered first. Some of these things are the breast plate's cost, its weight, its length, the style, etc. Let's consider some of these things right now. Also throughout these instructions, I will speak of "pipes". Pipes are the tube like beads used for constructing a breast plate.

First, let's consider cost. Your typical material choices for the pipes are bone, horn, or plastic. The cost of bone and horn are generally about the same. Bone might be slightly more. Plastic will be the least expensive – perhaps a third the price of bone or horn. Rarely will anyone be up close and personal when looking at your breast plate. Typically it will be seen at a distance in low light. As the saying goes, "15 feet away and across the fire", no one can tell whether it is bone or plastic.

As for decorative or Crow beads – glass, brass or plastic? Bead choice is much like pipes – glass is more expensive than plastic; at least two or three times as expensive. If you are looking to save money, plastic is the way to go. The exception is brass. If you want some brass beads for trim purposes, there is not a good substitute.

So what kind of cost are we talking about? For a breast plate of bone or horn with glass or brass trim beads, plus lacing and side pieces I would estimate the cost to be \$125.00 to \$150.00. I would estimate a breast plate of the same size in plastic to be \$60.00 to \$75.00. If you are able to find materials on sale, you may be able to make it cheaper. Several years ago I found some horn pipes for less than half price on a close out. You just can't count on finding such sales.

Second, let's consider the weight of the breast plate. If you are to wear it for four to perhaps as long as six hours, extra weight does make a difference. Some costume builders are purist and want their outfit to be as nearly authentic as possible. Thus they

want their breast plate built of bone or at least horn. Their rationale may be, "I'm only going to make one of these things, and I want to do it right". That's great, but remember bone or horn are heavier, and yes, substantially heavier when fully assembled.

If you decide to go with the heavier material, one way to help overcome the additional weight and have comfort for the wearer is by using a wider neck strap. Here you can substitute a neck strap of  $\frac{3}{4}$ " to 1' wide deer skin in place of the traditional leather lace or thong.

A third rather significant consideration is length. There is really not a right or wrong when it comes to length. Some authentic Native American breast plates are quite long. For ease of lacing, I would suggest an even number of rows. We'll talk about lacing more, later. A good rule of thumb would be 48 to 52 pipes in length. (NOTE: that is one side, so you would buy 96 to 104 pipes. The price break on the pipes will probably be at 100, so 48 or 50 in length might be a good number.) Length somewhat should be dictated by your height. If you are over say 6'-2" or 6'-3", you may want to consider the longer length, perhaps 52-56. I would suggest trying on some finished breast plates and see what size you prefer. Remember, it is easy to shorten, but harder to lengthen.

Another consideration, before you start buying material, is breast plate style. Normally, a breast plate will have two rows of long pipes, one on each side, and a row of short pipes and/or beads in the middle. Normally the long pipes are 3", 3  $\frac{1}{2}$ ", or 4" in length. The center short pipes (if used) are generally 1  $\frac{1}{2}$ " in length. The size of pipes may be dictated to some extent by your body size. If you are a particularly slender individual, your breast plate might appear huge if you used 4" side pipes and 1  $\frac{1}{2}$ " center pipes. With trim beads plus the leather it is going to easily be 12" – 13" wide.

Another style, if you are ambitious, is to incorporate a beaded strip or strips, with the pipes. I first saw this in a breast plate at the Prairie Edge Gallery in Rapid City, S.D. The particular example I saw there had a beaded strip about 2" – 2  $\frac{1}{2}$ " in width down each side. They then used two long pipes with no short pipes in the center. I have personally constructed two breast plates with a single beaded strip down the center. The instructions that follow will be for the traditional breast plate. If however, you wish to construct one with a beaded strip or strips, contact me and I'll give you directions on attaching the beading. NOTE: My contact e-mail is [thecraftguy1945@gmail.com](mailto:thecraftguy1945@gmail.com).)

Unless you have purchased a kit, you will need a supply list or shopping list for materials. If possible, we do NOT want to get in to construction and realize we are missing a critical component.

Yet another consideration, before we start buying material, is what am I going to lace the breast plate with? One possibility is imitation sinew. Another is a heavy cord of some type. The third choice would be Greek Thong. Cord and imitation sinew are relatively cheap. Greek Thong is rather expensive. This is one area where I would suggest that you NOT go cheap. Imitation sinew may tend to break at stress points, over time. Cord tends to fray as you work with it and will be very hard to thread through pipes and beads. Probably two (2) mm Greek Thong would be your best choice.

As I make the material list, I am going to make some assumptions. First, the breast plate will be 50 pipes or less in length. Second, we will use all Crow beads in the center, as opposed to Crow beads and 1 ½” pipes. Third, we will lace with Greek Thong. Also, you can buy 3/8” or ½” leather strips to punch and use for side pieces. That’s a lot of work for a small savings. Buy pre-punched side pieces.

Finally, before we start our material list, what color of Crow beads (trim) will you use? Bare in mind, Native Americans were individuals. They did NOT pattern their outfit after that of a friend. They used bright colors. The colors that you use as breast plate trim may not be colors that you would wear as a shirt to school – yellow, bright green, or pink. Used with a proper accent color, this will be the difference between a “blaa” breast plate and one that really stands out. I believe using the right color combination is much more important than whether you use bone or plastic pipes.

**Material List:**

*(Page numbers are Crazy Crow reference.)*

4- Pre-punched leather side pieces

100 – Pipes (your choice of type) (pg. 16-17)

15 Yds. Greek Thong (pg. 34)

750 (Approximately) Crow Beads total - divided into 2 or 3 colors. (pg. 7) (NOTE: This assumes five (5) Crow bead rows in the center. If you want to use seven (7) beads, add 100 beads.)

1 – 3”-3 ½” Rosette to match the Crow beads

1 or 2 leather boot laces (Wal-mart)

1 harness snap or clip and “D” ring (Farm Supply store)

1 Bottle of white Leather glue (Fiebing’s) (Bob Glue)

1 Roll Deerskin lace (pg. 34) - Side Trim – *OPTIONAL*

1 Bottle Leather Dye (pg 35) – *OPTIONAL*

**INSTRUCTIONS:**

1. Cut about ten (10) pieces of Greek Thong about 18” long each. **DO NOT CUT ALL THE GREEK THONG.**
2. Lay out your four leather side pieces – side by side.

NOTE: In the Material List, I included Leather Dye. If you would like to dye your side pieces – perhaps a darker brown, now is the time to do it.

3. You can start lacing from left to right or from right to left. Your choice. In any case your 18” piece of Greek Thong is going to lace two rows. *If it should break, the maximum number of loose beads you can have in two rows.*
4. **IMPORTANT: Start lacing at the second hole from the top.** Leave the top hole open. We’ll deal with it later.
5. I prefer to use Crow beads in combination with the pipes. Put your Greek Thong through the second hole down on the first outside leather strip. Add a Crow bead of color #1, then a Crow bead of Color #2, add a pipe, then a Crow bead of color 2 and a Crow bead of color #1. Now run your Greek Thong through the second leather strip (remember, skip the top hole). In the middle we want five (5) Crow beads – all the same color. *(An option would be to use seven (7) Crow beads in the center. This would allow for a larger design.)* Now run your Greek Thong through leather piece #3 – once again, the second hole from the top. Now repeat the bead lay out from the first section – Crow bead color #1, Crow bead color #2, pipe, crow bead #2, Crow bead #1. Now run the Greek Thong through the fourth and last leather side piece – remember, second hole from the top.
6. Assuming that you started lacing on the left, leave the Greek Thong extended past the leather strip about 4”-6” on that side.
7. Now take the Greek Thong and stick it through hole #3 of strip #4 on the right. Now duplicate the Crow beads and the pipe on row #1. After pushing the Greek Thong through the leather strip #3, we will do a variation in the center. Add two Crow beads of one color followed by one of a different color and then two more

like those you started with. Over the next few rows this will become a diamond in the center. After adding these five beads in the center, take the Greek thong through the leather. Add the two inside trim beads – Color #1 and #2, a pipe, and Crow beads #2 and #1.

8. When you put the Greek Thong through the left and fourth leather side piece you have completed two rows. *DO NOT TIE THEM YET*. I prefer to wait until I get at least four (4) or six (6) rows completed before I tie them.
9. Take another piece of Greek Thong and go through the left leather side piece. Repeat the previous rows with the exception of having three center beads of the same color in the center section to form your diamond. When you come back on row four, the section with the long pipes will be just the same. The center will have two, a different center and two that you started with – this completed the top half of your diamond. In subsequent rows you, will reverse your colors for the lower point of the diamond. I would then have a solid center row followed by another diamond.
10. The outside with the long pipes and trim Crow beads do not change for the length of the breast plate. Only the center changes from row to row to form the series of diamonds

NOTE: #1 - Once you tie your Greek Thong you will note that you have a nice little loop formed on each side of the outside leather strips. If you choose to add the leather trim down the sides, this is where they attach.

NOTE: #2 – When you tie your Greek Thong (ie Rows 1 and 2), DO NOT pull them real tight. You want the pipes and beads to be flexible. You want your knot tight, just not the beads. Tie it with a square knot. Once you are all done and are sure you have the proper length, go back and put a drop of white glue (Bob glue) on each knot – then trim off the excess Greek Thong.

11. If you are to use the diamond center design as I have suggested, figure out how many diamonds you will have in the length you will want. You may want to have two rows between or only three beads wide to get them to work out right with the length that you want.
12. Remember, we left a hole open at the top. We are also going to leave a hole open at the bottom. At the top, you will make a loop of beads from the left leather strip #1 to the center leather strip #2. This loop can be made from Greek

Thong or you may use one of the leather boot laces. I prefer the leather boot laces. On this loop you will have Crow beads of some color configuration – using the same colors you used with the pipes and center – do not introduce a new color. Make the top of the loop about three inches from your first row of pipes. In the middle of the loop you will attach another boot lace which will form one side of your neck tie. Now take the lace that formed the loop between leather strip #1 and #2. String five Crow beads on it and lace between leather strip #2 and #3. Finally, make a loop between leather strips #3 and #4 with Crow beads – once again the top of the loop being about three inches from your first row of pipes. Attach another boot lace in the center of the right loop and you have your neck tie completed.

13. Your bottom loops will be similar to those on the top, but they are purely decoration. 2-2 ½” loops are probably adequate for the bottom. With BOTH the top loop and the bottom loop, secure them at each end of the side strips with an overhand knot.

14. Now you can cut the deerskin lace in to approximately 12” lengths and tie them on the sides for decoration. Center the strip on the loop and once again tie with a square knot.

I recommend a breast plate length of 48-50 pipes. You should have enough material to make one that size. I suggest that you wear it a time or two. If you think it is too long, it is fairly easy to shorten. Just untie and take off. *REMEMBER YOUR BOTTOM LOOPS HOWEVER, BEFORE YOU CUT OFF THE SIDE PIECES.*

15. If you prefer 1” or 1 ½” pipes in the center, I would use Crow beads on each side as with the long pipes. Here however, each row will be the same.

16. Another addition that you will want is a waist tie. Without it the breast plate will flop out in front of you if you bend over. Waist ties can be made a couple of ways. One is to use leather boot lace – and either tie it on the side or have a piece attached to each side and tie it in the back. I prefer to use a harness clip or snap attached to leather boot lace on one side. This then attaches to a “D” ring attached to the other side of the breast plate. This waist tie should probably be about 5” to 6” up from the bottom or at a location you find comfortable.

17. The final adornment is to attach the Rosette top center. I prefer Rosettes, however, I have used discs that I cut from clam shells, or you can purchase other attractive discs to set off your creation. If you use a Rosette, take a piece of leather about 2" square and punch two holes in it about 1" apart. Loop a piece of Deerskin lace through the two holes. Glue the 2" square to the top center of the rosette. The pieces of Deerskin will tie to the center section of the breast plate.

A FINAL NOTE: Occasionally, after long and hard wear, I have seen lacing tear out of a hole – usually in a side strip. Take a piece of a side strip or if you do not have a piece, make one out of a piece of leather of similar thickness. I would make the piece about 2" long. With a sharp knife taper each end at approximately a 45 degree angle. Remove lacing in an area to be repaired to match the size of the patch. Punch holes in the patch to match those in the side piece. Glue the patch on the outside of the side strip with white glue (Bob glue). If you dyed the leather strips, dye your patch. Re-lace and the repair will never be noticed.

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