

How to Make a Zia

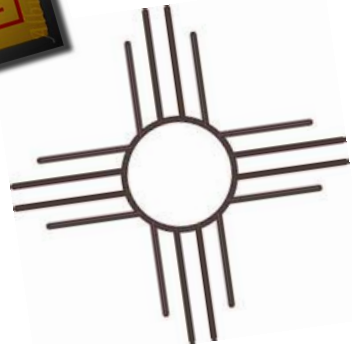
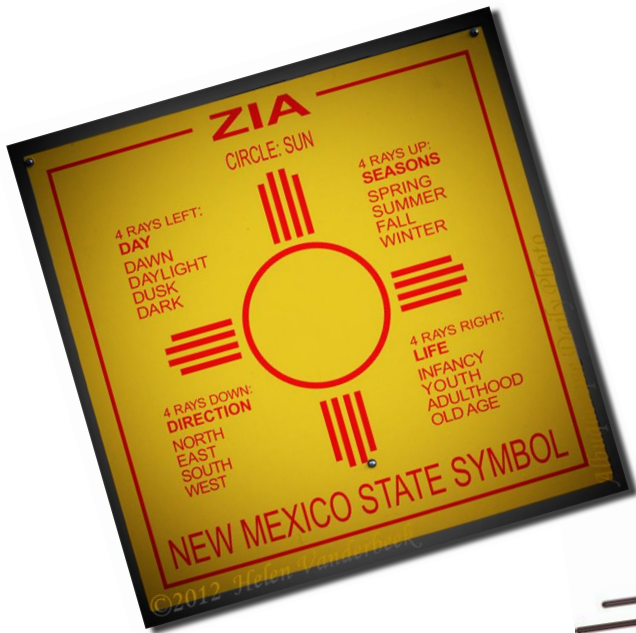
(should you ever be inclined to do such a thing)



What is a Zia ?

- The **Zia** are an indigenous tribe centered at **Zia Pueblo**, an Indian reservation in New Mexico, U.S.A.. The **Zia** are known for their pottery and use of the Sun symbol. The people are a branch of the large Pueblo community.
- New Mexico's distinctive insignia is the Zia Sun Symbol, which originated with the Indians of Zia Pueblo in ancient times. Its design reflects their tribal philosophy, with its wealth of pantheistic spiritualism teaching the basic harmony of all things in the universe.
- Four is the sacred number of Zia, and the figure is composed of a circle from which four points radiate. These points made up of four straight lines of varying length personify the number most often used by the Giver of all good gifts.
- To the Zia Indian, the sacred number is embodied in the earth, with its four directions North, South, East and West; in the year, with its four seasons; in the day, with the sunrise, noon, evening, and night; in life, with its four divisions-- childhood, youth, manhood, and old age. Everything is bound together in a circle of life and love, without beginning, without end.
- The Zia believe, too, that in this great brotherhood of all things, man has four sacred obligations: he must develop a strong body, a clear mind, a pure spirit, and a devotion to the welfare of his people.

Zia Pics

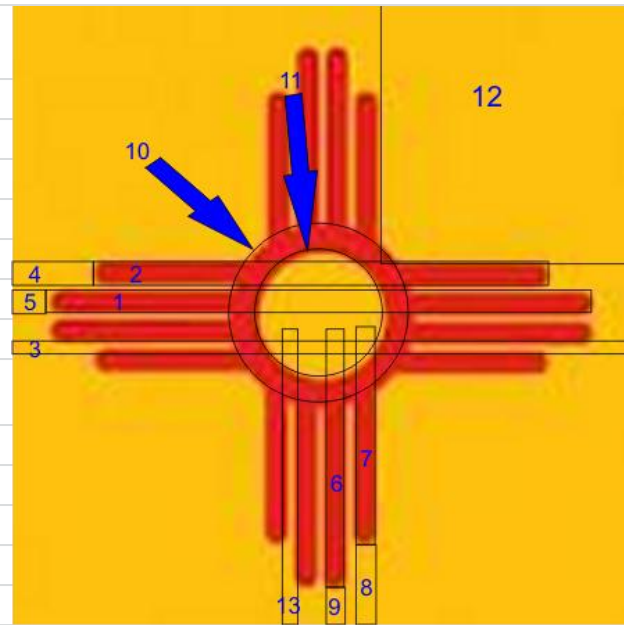


Balloon Turning w/Zia Feature Ring



- This will make a Zia approximately 1.5" square.
- You will need to make adjustments for larger or smaller ones.
- I had to add a small vertical strip on each side to make mine a little wider to suit my feature ring. It would have been nice if I had planned better to allow some extra margin around the assemblies.
- I had to have a checklist to make these, hence the detail.
- There is a high failure rate when constructing the central round parts. In section 4 step 3, leave a good shoulder at the base of the yellowheart dowel so the base of bloodwood block can be glued to it as well as inside the hole. Make dry fit not too tight. When gluing, get the grain orientation right when you push the pieces together and push quickly. The glue will grab almost immediately and it will twist in two easily if you try to turn it. Make sure to get glue on the shoulder of the yellowheart as well as on the dowel part. If you don't, it likely will snap in two at step 6.
- Use a centering bit in section 5 to start the holes.
- Plan on making several extra units. Some will break, some will have centering problems in section 5.....etc.
- Although not labelled, page 6 is the cut list and some supporting documentation.

		from pic	reduce	adj size	rounded	
	pic size	2.35	43%	43%		
	zia circle	0.7	43%	0.29787	0.45	
	inner zia dia	0.5	43%	0.21277	0.376	
	long arm hor	0.67	43%	0.28511	0.29	
	long arm vert	0.67	43%	0.28511	0.29	
	short arm hor	0.53	43%	0.22553	0.22	
	short arm vert	0.53	43%	0.22553	0.22	
	thickness of space between arms	0.05	43%	0.02128	0.03	
	thickness of arms	0.1	43%	0.04255	0.03	0.21875



		color	cut list	Q/Zia	dimension			TOTAL	combined &w/extras	# of Zias	stock dimension	# of slices
					L	H	W	Q "s		10		
H O R	1	Red	long stripe	2h	1.3	0.037	1	3	7	70	5x12x1	12
	2		short stripe	2h	1.1	0.037	1	3				
	3	Yellow	full stripe	5h	1.5	0.037	1	8	13	130	5x12x1	22
	4	Yellow	short mid stripe	4h	0.4	0.037	1	2				
	5	Yellow	shorter mid stripe	4h	0.2	0.037	1	2				
V E R T	6	Red	long stripe	4v	0.037	0.6	1	4	7	70	5x12x1	14
	7		short stripe	4v	0.037	0.525	1	2				
	13	Yellow	full stripe	6v	0.037	0.84	1	6	11	110	5x12x1	22
	8	Yellow	short stripe	4v	0.037	0.42	1	2				
	9	Yellow	shorter stripe	4v	0.037	0.33	1	2				
M i s c	10	Red	circle	1	0.45 x 2 (turn to fit .45 hole)							
	11	Yellow	circle	1	0.376 x 2 (turn to fit .376 hole)							
	12	Yellow	blocks	4	0.62	0.87	1					

ZIA

Steps

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1

H
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S
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a
c
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- 1 Cut and number all pieces per Cut List.
- 2 The pairs of #1s and #2s must be identical in length.
- 3 Locate and mark the center on the edge of all pieces #1, #2, and #3.
- 4 Protect one side of 4 - #3s with blue tape.
- 5 Glue up 2 each of #1s, #5s, and 3 - #3s. **Make sure to align centers and ends of reds EXACTLY. Insert #5s last, while glue is still wet. Make sure to fully seat them.** Allow to dry.
- 6 Wipe off any wet glue before removing blue tape. Add 1 - #2, #3, and #4 to one side of each stack. **Align centers, and ends of reds EXACTLY. Insert #4 last, while glue is still wet. Make sure to fully seat them.** Allow to dry and repeat this step on other side of this stack.

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V
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- 1 The pairs of #6s and #7s must be identical in length.
- 2 These 2 stacks don't center, but align at one end.
- 3 Protect one side of 4 - #13s with blue tape.
 - a. Shorten all #6s to = 1/2 of stacked #1 length minus 1/2 of the horizontal stack thickness.
 - b. Shorten all #7s to = the length of completed #6s from previous step minus 1/2 the difference between stacked #1s and #2s.
- 4 Glue up 2 sets of 2 - #6s, 2 - #9s, & 3 - #13s. **Insert #9s last while glue is still wet. Make sure to fully seat them.**
- 6 Add a #8, #7, & #12 to one side of stacks. **Insert #8s last while glue is still wet. Make sure to fully seat them.** Repeat for the other side of each assembly.

S e c t i o n 3	S t a c k i n g s	S t e p s	1	Find and mark the centers of the red pieces in the horizontal stack. Mark them on both sides. DOUBLE CHECK!
			2	Touch sand the bottom of the vertical stacks to clean and align the edge of the #12s (yellow corner blocks) only . Don't worry about the middle part of the stack as it will be drilled away later.
			3	Touch sand both faces of the vertical block assemblies to expose the center (yellow) stripe.
			4	Mark the center of the center yellow stripe on both sides of the vertical assembly.
			5	Glue one vertical stack to the horizontal assembly. CAREFULLY align center marks on both sides during clamping.
			6	Repeat the previous step for the other vertical assembly. Allow both to dry.

S e c t i o n 4	B u i l d i n g	D o w e l s	1	Grain Orientation is ACROSS the dowels.
			2	Drill a 3/8" hole in red block. !Grain Orientation!
			3	Turn a yellow dowel 1' long to fit hole from the previous step. The turned sides must be parallel and flat. Don't make it TOO tight. !Grain Orientation!
			4	Glue yellow dowel into hole in red block and allow to dry well. !Grain Orientation!
6	Turn assembly round to ~ 1/2 in diameter. The turned sides must be parallel and flat.			

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5

A
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- 1 Touch sand the Zia assemblies to remove any wobble caused by glue squeeze out left from Section 3.
- 2 Mark the **EXACT** center (of the ZIA design) and drill a 1/4" hole in the **EXACT** center of the Zia
- 3 Glue in a hardwood dowel to fit and allow to dry.
- 4 Mark the **EXACT** center (of the ZIA design) on the hardwood dowel and carefully punch the center.
!DOUBLE CHECK Centering!
- 5 Using drill press vise or other clamps to allow ZERO movement, drill a small pilot hole through the marked center. **RECHECK CENTERING** on both sides of the assembly! Adjustments can be made if needed by repeating steps 2 - 5.
- 6 Drill a 7/16" hole in the Zia assembly using the perfectly centered pilot hole from the previous step as a guide.
- 7 Turn the assembly from Step 6 of the Section 4 to fit the hole in the Zia assembly. **Don't make it TOO tight.**
- 7 Glue dowel assembly into the Zia assembly. **!Grain Orientation!**