

Designing Rep Weave – One Method

1. Threading. In this method, the threads in each block are threaded as far apart as possible. Divide the pattern shafts in half. Thread the first block with pattern on shaft 1 and background on the first shaft in the second half. See table at right. For a 4- shaft loom, blocks A and C differ only in color. You can not weave pattern in both blocks at the same time. That is the difference between 4-shaft 2-block Rep and 4-shaft 4-block Rep. The number of ends in each block is determined by the sett and the picks per inch. Colors can change to create more design possibilities. See *The Best of Weaver's Thick 'n Thin* book for Rosalie Neilson's method. Another choice is to thread in pairs. See *Rep Weave and Beyond* by Joanne Tallarovic. If you only thread the first four blocks on an 8-shaft loom, the blocks are independent. If you thread all eight blocks, the blocks are dependent—you can not weave pattern in both A and E blocks at the same time.

4-shaft loom blocks:			8-shaft loom blocks:		
Block	Pattern	Background	Block	Pattern	Background
A	1	3	A	1	5
B	2	4	B	2	6
C	3	1	C	3	7
D	4	2	D	4	8
			E	5	1
			F	6	2
			G	7	3
			H	8	4

To create a profile draft:

2. Threading order of blocks. Blocks can be threaded in any order. No restrictions.
 3. Treadling. Can be 'woven-as drawn-in' or in any order. No restrictions. Repeats can be long. For designing, only the thick pick is shown.
 4. Tie-up. Limited. With this threading, the tie-up is limited to the combinations that choose one shaft from each pair of shafts. There are four possibilities for a 4-shaft loom, those of a 2/2 twill. For an 8- shaft loom there are 16 possibilities, those for a 4/4 twill and a 1/1/2/1/1/2 twill. The tie-up for the profile draft and for actual weaving is the same. Very nice little thing to notice.
 7. Examine the tie-up to determine the number of shafts needed to weave the profile draft as rep weave. Figure 1 shows the tie-up for a 2-block profile woven on 2-shafts. If the profile draft also uses either of the two additional treadles in figure 2, then the profile draft requires 4-shafts. Look at the first two rows in the 4-shaft tie-up (figure 3) and you will see the 2-shaft possibilities.
1. 2-blocks, 2-shafts 2. 2-blocks, 4-shafts 3. 4-blocks, 4-shafts
 4. 6-blocks, 6-shafts 5. 8-blocks, 8-shafts

In the examples on the next page, look at the tie-up to check how many shafts are needed to weave the profile draft in rep weave. Unless you are weaving on a table loom, use all of the shafts on the loom to make it easier to open the sheds.

1.

	2
1	

2.

	2		2
1			1

3.

		4	4
	3	3	
2	2		
1			1

4.

			6	6	6		6
		5	5	5		5	
	4	4	4			4	
3	3	3				3	
2	2			2		2	
1			1	1	1		

5.

			8	8	8	8		8		8	8	8	8
		7	7	7	7		7		7		7		7
		6	6	6	6		6		6		6		6
		5	5	5	5		5		5		5		5
4	4	4	4				4	4	4		4		4
3	3	3				3	3	3			3		3
2	2				2	2	2	2			2	2	2
1				1	1	1	1		1		1	1	1

Examples:

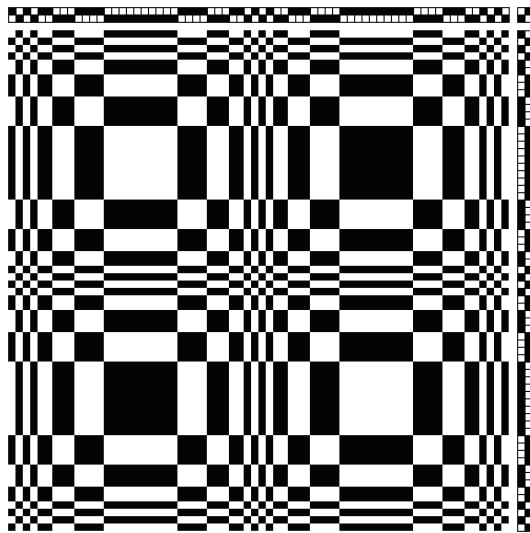
Profile 1. This draft can be woven in rep weave on two shafts. Design is Four O'clock , #156, Shuttle Craft Book.

Profile 2. This draft is also a two block profile, but with rep weave it requires 4 shafts to weave. In order to weave both blocks as pattern or background at the same time, they must be on different pairs of shafts. The A block would be threaded on shaft 1 and 3, while the B block would be threaded on 2 and 4.

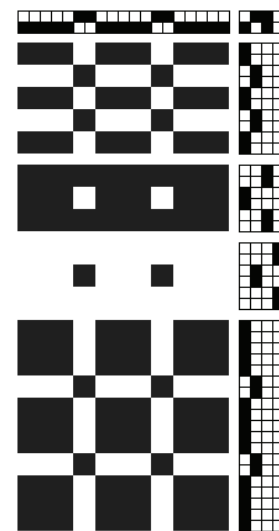
Profile 3. This design can be woven on 4 shafts because the tie-up square uses the blocks 2 at a time just like a 2/2 twill. See Tie-up 3.

Profile 4. Looking at just the 4-shaft tie-up for this design, note that some treadles are tied to 3-shafts, 2-shafts, and 1 shaft. So it requires at least 6-shafts. Look at tie-up 4 and it is easy to see that the tie-up can be changed to a 6-shaft version.

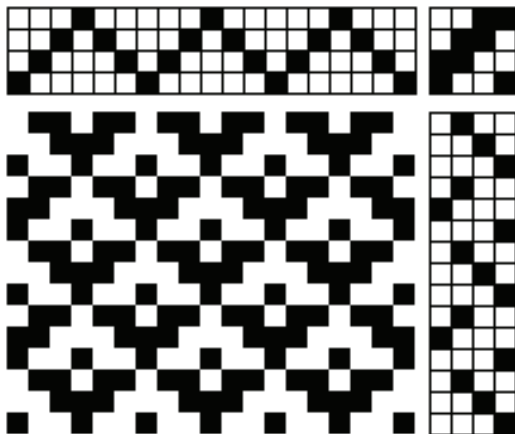
Profile 1. 2 blocks



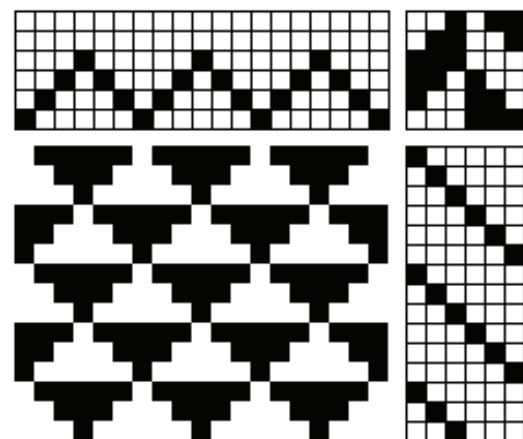
Profile 2. 2 blocks



Profile 3. 4 blocks



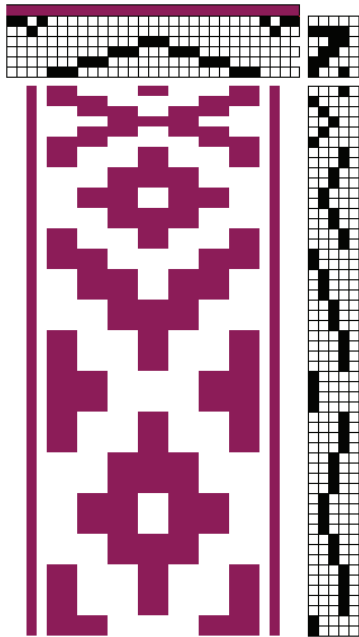
Profile 4. 4 blocks



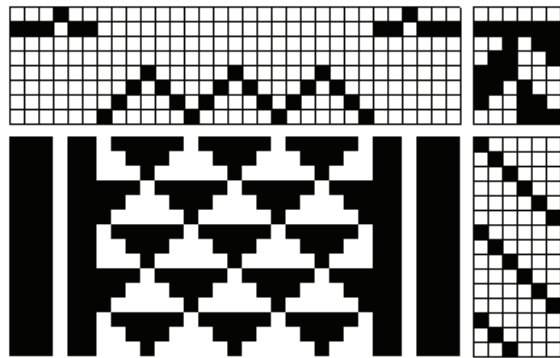
8. Computer helps.

- a. Some software programs have a rep weave display feature. Very nice.
- b. If you leave warp, weft, and tie-ups blank – how does your software save and reload. Some lose unused treadles or shafts when saving or opening a wif format. Some programs will not allow you to use a blank.
- c. Profiles 5 and 6. Border stripes have been added to the edges of the draft. Warp stripes can be added to any rep weave. Thread the stripes using any pair of shafts with all of the warp ends the same color. To make them show up on the computer draft, add two shafts to the draft. For a stripe in the pattern color, add the first extra shaft in the threading and add that shaft to all treadles in the tie-up. For a stripe in background color add the second extra shaft, do not add the shaft to any of the treadles. In this case the extra shafts are used to design and not for weaving. If you are using pencil and graph paper, you can just draw these. But it is fun to have a trick that makes them appear on the computer screen and printouts.

Profile 5. 4 blocks



Profile 6. 4 blocks

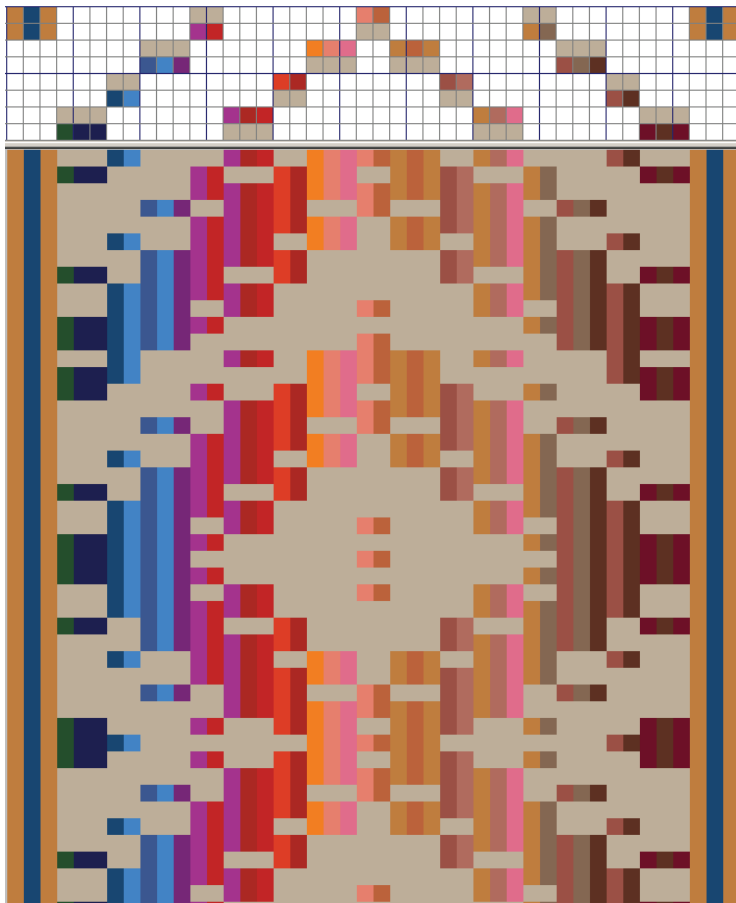


9.

									8	
	7	7	7	7						
	6	6	6	6						
	5	5		5	5					
									4	
	3	3	3	3						
	2	2		2	2					
	1		1	1		1				

9. A skeleton tie-up can be used for 8-shaft drafts and needs 10 treadles. The skeleton tie-up in figure 6 can be used to make all of the combinations in figure 5. The treadles are arranged to make it easier to weave. The treadles are arranged in pairs to make it easier to follow a thick pick with a thin pick.

10. For a computer assisted loom all picks must be entered in the treadling. Since the rep weave is not often included in block substitution features, this may be possible in those programs that let you define your own blocks to substitute.



									7	8
6	6	6	6	6						
5	5	5	5	5						
4	4	4	4	4						
3	3	3	3	3						
2	2	2	2	2						
1	1	1	1	1						

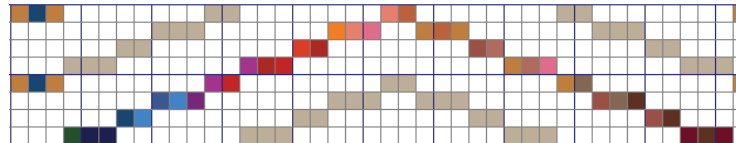
		6							1
	4							0	1
2								0	1
		7						0	1
2								0	0
		6						0	0
		7						0	0
		5						0	0
3								0	1
3								0	1
1								0	1
1								0	1
		6		8				1	1
2	4							0	1
		7						0	1
2								0	0
		6						0	0
		7						0	0
		5						0	0
3								0	1
3								0	1
1								0	1
1								0	1
		5						0	0
		6						0	0
2								0	0
		7						0	1
2								0	1
	4							0	1
		8						0	1
2	4							0	1
		7						0	1
2								0	0
		6						0	0
		7						0	0
		5						0	0
3								0	0
3								0	0

pixeLoom now adds a new warp or weft compound color drafting system. WeaveIt has a taqueté editor that will help in designing color blocks. Other programs such as cross stitch programs are also useful.

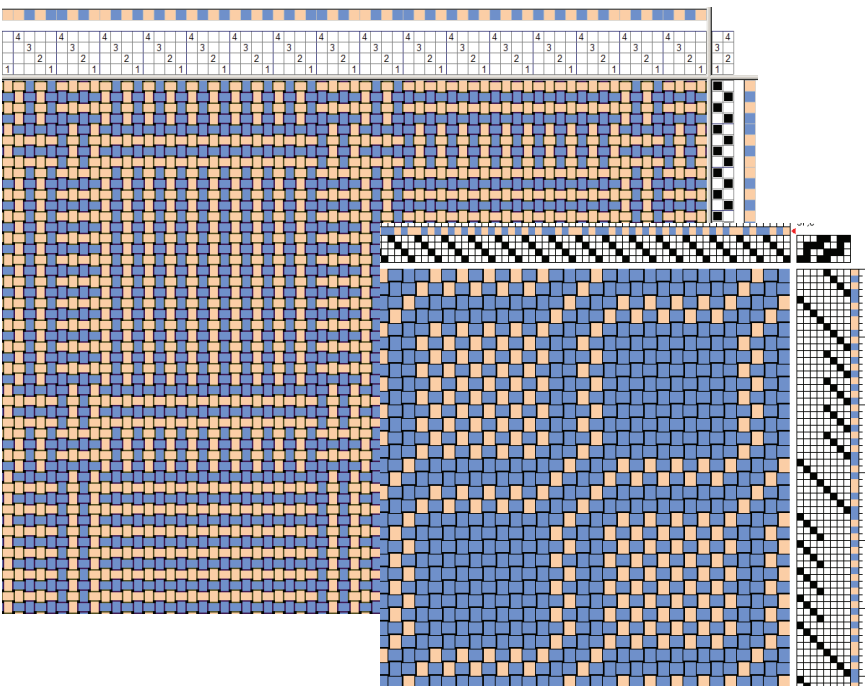
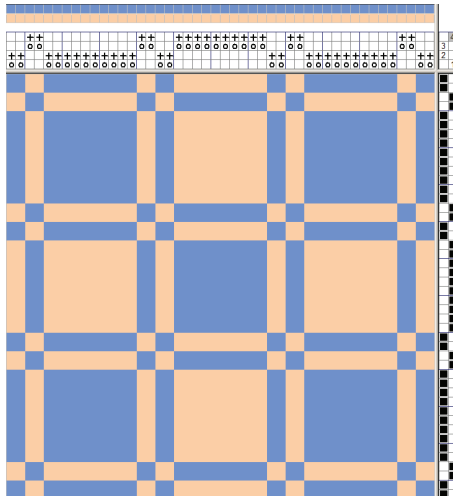
If your program does not have this ability, do two drafts. Do a pattern draft and a background draft. You may have graphics software that will allow you to layer the two drafts. This question is more important when designs have more colors and the background is not the same color throughout the design.

Use the shaft shuffler to change to the other threading method. Notice the change in the tie-up that occurs at the same time.

Tables and spread sheet programs are good choices for color order charts.



										8
7	7	7	7	7						
6	6	6	6	6						
5	5	5	5	5						4
3	3	3	3	3						
2	2	2	2	2						
1	1	1	1	1						



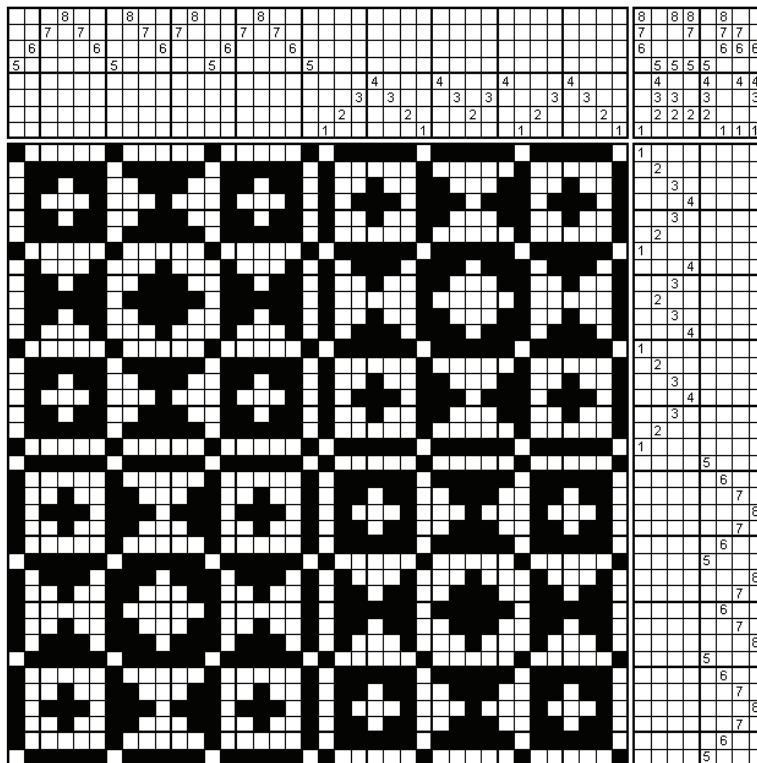
Weaving notes.

Ripsmatta translates to ridged rug. It is plain weave except at the block changes. Warp faced. Carpet warp setts. 16 epi to 48 epi. After about 30, use doubled in heddles for tighter setts. Width in reed. No draw-in. 12.5 to 13 inches makes a nice placemat. Width shrinkage less than 5%. Length. 35% shrinkage and takeup in length. About 17% shrinkage/collapse after weaving. Placemats. 63 to 80 thick picks. Thick weft – Use 2 – 1" strips of quilting fabric. Use mop cord. Use cotton rope – 80 yds/lb. Don't ball rags. Use 24 to 32 yards for a placemat. Thread on as many shafts as you have. Except table loom. This spreads the warp and makes it easier to open a shed. For one color stripes – thread as a block. Change at color break, never in middle of stripe. Inkle weaving ideas – source for 2-shaft designs. Profile designs. Block size should be the number of ends it takes to make a square with a thick and a thin pick. For example: 'carpet warp' and cotton rope weft, to about 3 thick ppi. Three blocks/inch in the warp works well. 30 epi gives 5 pattern and 5 background ends per block.

Laila Lundell, *Rep Weaves*, *Weaver's #9* Rep on 4-shafts, *Weaver's #11* Rep on 8-shafts.

Edge trick.

Tie bow on shaft that outside thread is on. When both shuttles are on the same side, open the shed, then look at the bow on that side. If it is up, first shuttle goes over (up) the second shuttle. If it is down, first shuttle goes under (down). Keep thin weft turning nicely, flip threads if needed. Keep thick weft in good turn. Should be wider than warp in reed. Hems. 1 3/4 inches with thin weft. Weave in cutting line. Use glue.



Challenge: How many blocks? How many shafts?

While 8 is a correct answer, it can be done with fewer blocks and shafts.