

## How to Increase Your Earnings with the Red 7 – Part II

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[I would like to thank ET Fan for reviewing Conrad Membrino's initial work and providing invaluable early guidance and assistance to him. ET Fan has not reviewed the final articles, however, so there may be errors. If any readers find errors in these articles, please post your comments for Conrad on our Blackjack Main discussion board. Thank you -- A.S.]

### Shifted Red 7 Running Count

This paper will cover the “shifted” variation where you start your count at -2 times the number of decks, plus information on how to true the Red 7 in 2-deck games. Both the table of critical running counts method (as described in Part I) and the shifted Red 7 method produce the same result so the reader can choose whichever method he finds easier. In the Library section of Blackjack Forum On-Line is my paper called *Shifted Red 7 Count*, which provides a much more detailed analysis along with mathematical proofs of statements made in this paper, examples on how to use the shifted Red 7 and its equivalency to the technique outlined in *How to Increase Your Earnings with the Red 7 – Part I*, where playing strategy changes were made when the Red 7 running count was greater than or equal to the critical running count found in the table of critical running counts by true count and decks played.

### Shifted Red 7 Running Count used with the Six and Eight Deck games

The shifted Red 7 running count is started at -2 times the number of decks in play at the beginning of the shoe. So for the six deck game the count is started at -12 instead of zero and for the eight deck game, the count is started at -16 instead of zero.

If the shifted Red 7 is to be used with the six and eight deck game, my suggestion is not to start the Red 7 count at -2 times the number of decks, but to start back-counting with the Red 7 count starting at zero as usual. Then table departure for the six-deck game occurs at -3, 0, 3 and 6 and for the eight deck game at -6, -3, 0, 3, 6 and 9, as described in *How to Increase Your Earnings with the Red 7 – Part I*. If the Red 7 count later exceeds twice the number of decks, which indicates table entry, then the Red 7 running count can be converted to the shifted Red 7 running count by subtracting 12 from the running count in a six-deck game, or 16 from the running count in an eight-deck game, at the end of the round when the Red 7 running count first exceeds 12 for the six deck game or 16 for the eight deck game. This essentially converts the Red 7 running count to the shifted Red 7 running count which can now be used for the remainder of the shoe with betting and playing strategy decisions as shown below.

For the six and eight deck game, units bet is one plus (the shifted running count divided by decks remaining). Note that since the true count is two plus (the shifted running count divided by decks remaining), then the suggested units bet is basically the true count minus one. A strategy change is made if the shifted running count is greater than or equal to the (index minus two) times the decks remaining.

Below is a summary of the shifted Red 7 running count. The betting strategy outlined below assumes back counting and so playing only for Red 7 true counts greater than or equal to 2:

### Six or Eight Deck back counted game:

6 decks:  $src = rc - 12$

8 decks:  $src = rc - 16$

units bet =  $1 + (src/dr)$ , maximum bet = 4 units

Playing Strategy Change if  $src \geq (Idx - 2)*dr$

$src$  = shifted running count

$rc$  = running count

$Idx$  = index number in strategy chart

$dr$  = decks remaining

So for the six and eight deck games, the shifted running count is an option to use instead using the Red 7 directly with the tables of critical running counts shown in Part 1. Also the Hi-Low indices give a good approximation to the Red 7 indices, so the Hi-Low indices may be used for "Idx" in the above formula for playing strategy variations.

## Shifted Red 7 Running Count used with the Two Deck game

With the two-deck game there is no back counting and so every hand needs to be played. The table of running counts that was constructed for back-counting the shoe game had entries for true counts of 2, 3, 4 and 5 only. This would not be appropriate for the two-deck game where every hand is played and true counts have a large range of values that quickly change. So the shifted Red 7 running count must be used with the two-deck game.

The shifted Red 7 running count is defined as the Red 7 count minus twice the number of decks. With the two deck game using the shifted Red 7 running count, the count is started at -4 at the beginning of the deal. If less than one deck is played, then one unit is bet when the shifted running count is less than 0, and bets start to increase for shifted running counts of 0 or higher. If more than one deck has been played, then one unit is bet when the shifted running count is less than -1 and bets start to increase when the shifted running count is greater than or equal to -1.

So for the two deck, play all, one-and-a-half decks dealt, one-to-six bet spread game the number of units to bet is the shifted running count plus two, if less than one deck has been played. If more than one deck has been played, then the number of units to bet is the shifted running count plus three.

The chart below summarizes the two-deck play-all game:

2-deck play all game with	shifted running count
Start the running count at -4	<b>Units Bet:</b>
If < 1 deck has been played:	$src + 2$ , max bet = 6
If > 1 deck has been played:	$src + 3$ , max bet = 6
<b>Playing Strategy Change if</b>	$src \geq (Idx - 2)*dr$

Values of “index” used in the formula above may be taken as the corresponding Hi-Low index for the particular strategic situation under consideration, as mentioned above. More precise Red 7 indices for the two deck game can be found in the *Truing the Red 7 count* paper.

## Shifted Seven Unbalanced Count for the Two-Deck Game

If additional gain is desired, the level one Red 7 count can be replaced with the level two Seven Unbalanced count. The Seven Unbalanced count is similar to the Red 7 but instead of counting the red 7's as plus one and the black 7's as zero, all sevens are counted as plus one-half. Both counts have a pivot at a true count of 2, which corresponds to a shifted running count of 0 where the shifted running count is started at -4. The Seven Unbalanced count increases the betting, insurance and playing efficiency of the Red 7 but at a cost of introducing a slightly more complicated level two count.

The Seven Unbalanced count may be used interchangeably with the Red 7 count without any playing strategy, insurance or betting changes just as if it were the Red 7 count. The betting correlation of the Red 7 in the 2-deck S17, DAS game is 96.83%. The Seven Unbalanced Count has a betting correlation of 98.00%.

The shifted Seven Unbalanced count for the two deck game starts at -4, similar to the shifted Red 7 count. The extra effort in keeping this Seven Unbalanced count is recommended for the two-deck game but is not recommended for shoe games.

The two-deck insurance index for the shifted Red 7 Count is +2.38, and for the shifted Seven Unbalanced count is +2.31. Notice how close these indices are. This is typical of Red 7 and Seven Unbalanced playing strategy indices and is why the counts may be used interchangeably. The Seven Unbalanced count also correlates slightly better to the insurance decision, 79.5%, as opposed to the Red 7's correlation of 78.5%. In all cases, the Seven Unbalanced index is approximately the Red 7 index which is approximately the Hi-Low index. The chart above that summarizes the betting and playing strategy for the Red 7 count may also be used for the Seven Unbalanced count.

Applying the generalized playing strategy change formulas to insurance and using the insurance indices shown above, we can see that in the 2-deck game, starting our running count at -4, with the Red 7 count we would take insurance at any plus count. Since the Red 7 count can only be integers, this means to take insurance whenever the Red 7  $\geq 1$ . With the Seven Unbalanced count, we have slightly greater accuracy and insurance is again taken at any plus count, but with the Seven Unbalanced count, the count can take on “half” values as well as integers, so a count of  $+\frac{1}{2}$ , for example, is possible with the Seven Unbalanced count. So for the Seven Unbalanced count, the insurance rule is to insure whenever the Seven Unbalanced Count  $\geq \frac{1}{2}$ . With either the Red 7 or Seven Unbalance count, insurance is *not* taken when the shifted running count is zero, which indicates a true count of 2, since a true count of 2 is below the insurance index of 2.38 for the Red 7 and 2.31 for the Seven Unbalanced count.