

3. Card Counting

Once you have mastered basic strategy, you are ready to begin learning to count cards. By counting cards and using this information to properly vary your bets and plays, you can get a statistical edge over the casino. This means that you will be playing with a positive expectation⁷, and should make money in the long run.

The basic concept of counting cards in blackjack is simple: each rank is assigned a value, and the player keeps a running total as cards are dealt or exposed. This one total, the running count, is used to determine bets and/or vary plays from basic strategy. The values assigned to card ranks can be positive or negative, and vary greatly depending on the count system the player is using. Level-one systems only use the integers -1, 0 and 1, while more advanced systems can use larger integers or fractional values. Although there are many subtle differences in different count systems, our software is designed to handle most popular methods.

Generally, the higher the count, the better. In blackjack, a player has an advantage when there are more ten value cards and aces left in the deck. This is why 'small' cards are typically given a positive value, while 'large' cards are assigned a negative value. The details vary for every count system, but the basic principal is the same.

Note: If you are new to the concept of counting cards in blackjack, you can download a free tutorial from our web site: www.deepnettech.com/bjdocs.pdf. This is a beginner's guide to card counting, and explains the basic concepts involved. This guide is also part of the Blackjack Counter download. You will need [Adobe Acrobat](#) 4.0 or higher to read this PDF format guide.

There are a number of superb online resources as well that provide excellent blackjack information as well. We recommend the following web sites:

- www.bj21.com: Popular message board and forums for Blackjack players. Some of the world's most noted blackjack authorities post at this web site.
- www.bjmath.com: Great articles, especially in the 'Novice' section. Excellent Basic Strategy tables for many games.

3.1. Software configuration

To follow this chapter, you need to have [Blackjack Counter](#) 3.0 or higher installed and registered. *Blackjack Counter* is currently available for Palm OS only. Please check our [web site](#) for the latest releases and platforms.

Although the screen shots in this book are for the Palm OS version, all of products have identical functionality on each platform. Simply choose the corresponding features in your version.

⁷ The expectation is the percentage of each bet you should win back or lose on average, given a specific set of casino conditions. Expectations printed in this book are computed using our advanced Blackjack simulator, [Blackjack Audit](#).

Count System

To start, you must select a count system that identifies the card values. For this book, we recommend you use the High-Low count system. This very popular and efficient system is easy to learn. If you use a different count system, you can still use the tutorials in this chapter. Simply select your count system and follow along.

The High-Low system assigns the following values to each card rank:

Card:	2	3	4	5	6	7	8	9	Ten	Ace
Value:	1	1	1	1	1	0	0	0	-1	-1

Begin by selecting the Tamburin High-Low count system in *Blackjack Counter*:

- Start *Blackjack Counter*.
- Tap on 'C' along the top to switch to Count mode.
- Tap on the 'Options' button near the top.
- Configure the setting exactly as shown in Figure 11.

Note: if you have purchased and installed the [High-Low count system database](#), you can select the 'High-Low' system instead. The two count systems are identical for the purpose of these exercises.

Tap on 'OK' and return to count mode.

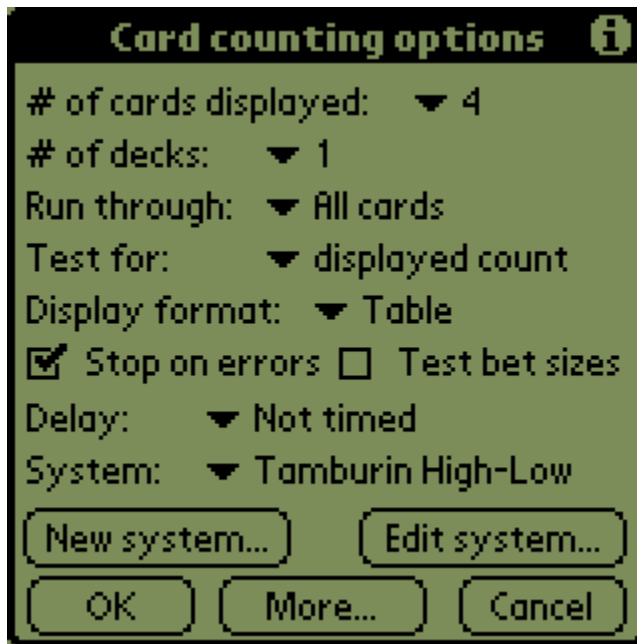


Figure 11: Card counting options

3.2. Displayed counts

The first counting exercise runs through a deck of cards four at a time, asking you to enter the displayed count each time. Don't add up the count between rounds... just enter the count of the four cards on the screen.

Use the buttons along the bottom of the screen to enter the count. If the count is negative, tap on one of the bottom buttons. If the count is positive, tap on one of the top-row buttons. Tap on '0' in either row for a count of zero.

If the count is greater than 9, tap a digit on one row, then the other. Tap a digit on the top row first if the count is positive, or the bottom row first if the count is negative. If you choose an incorrect digit, simply tap on it again to deselect it. More information about entering counts and using Count mode is available in the main product documentation for *Blackjack Counter*.

If you make a mistake, an error dialog is displayed and you must re-enter the correct count. If you are unsure what it is, you can click on the 'Stats' button to peak at the current information.

Exercise # 4: Displayed count test

Program: *Blackjack Counter*

Practice time: 5 minutes

Time to perfect: 20-45 minutes

Learn: basic card counting

Steps:

1. Tap on 'C' along the top to switch to Count mode.
2. Make sure the Count options are set as in Figure 11 on page 19.
3. Tap on 'Start' to begin the test.
4. Calculate the displayed count (not the run count), and enter it.
5. Repeat step 4 until the shoe is done.

Fail: If you made any mistakes, start again from step 3.

Pass: Move to the next exercise when you can complete 3 tests in a row in under 30 seconds each, without any errors.

3.3. Run counts

Once you can complete Exercise # 4 a few times without errors, it's time to start practicing run counts. The run count is simply the sum total of the count for each round.

To start, you need to change only one Count option for this test. Tap on 'Options' in Count mode, and switch the 'Test for' button to 'run count'. Tap 'OK' and return to Count mode.

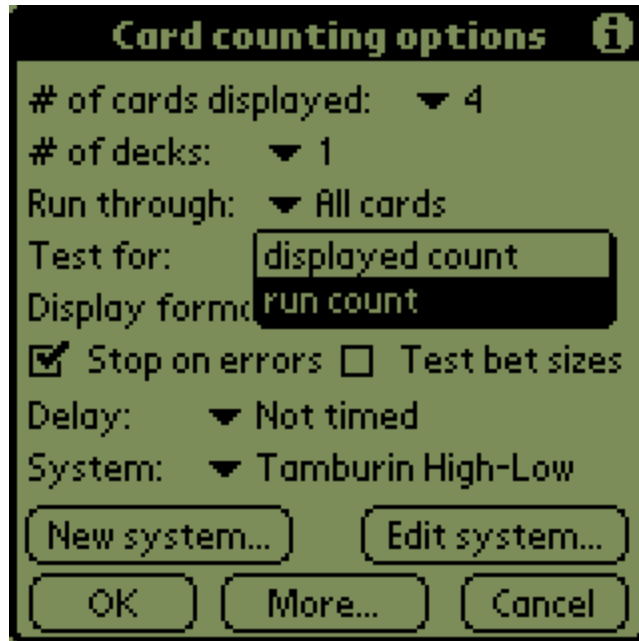


Figure 12: Run count test

Exercise # 5: Run count test

Program: *Blackjack Counter*

Practice time: 5 minutes

Time to perfect: 30-60 minutes

Learn: tracking the run count

Steps:

1. Tap on 'C' along the top to switch to Count mode.
2. Make sure the Count options are set as shown in Figure 12.
3. Tap on 'Start' to begin the test.
4. Calculate the cumulative running count from round to round and enter it.
5. Repeat step 4 until the shoe is done.

Fail: If you made any mistakes, start again from step 3.

Pass: Move to the next exercise when you can complete 3 tests in a row in under 30 seconds each, without any errors.

Master: Consistently error-free, 25 seconds or less.

3.4. Hand counts

Once you are able to complete Exercise # 5 without errors, it's time to practice with real blackjack hands. When you are counting in the casino, cards will be dealt in actual blackjack hands. It is important to make sure you can keep track of the running count in a variety of different formats.

For this test, you need to make a few changes to the Count settings. Compare your settings carefully to Figure 13.

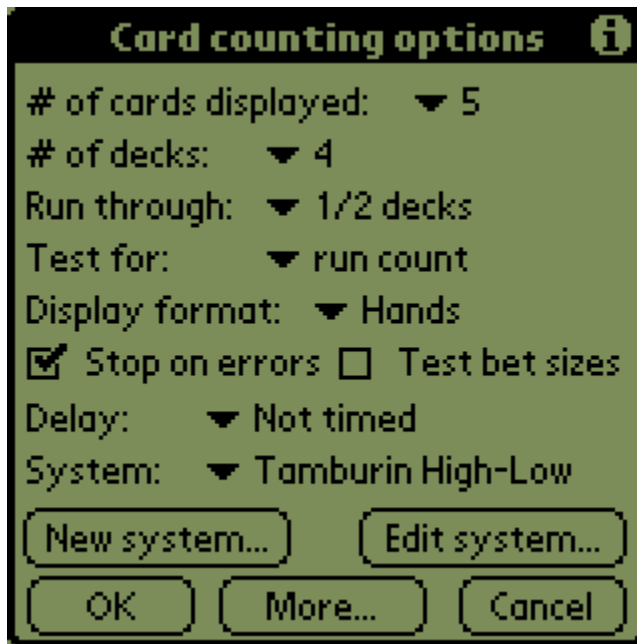


Figure 13: Hand display options

You may have noticed that Exercise # 5 always ended in a run count of zero. The High-Low system starts with a run count of zero, and is balanced (there are equal numbers of -1 valued and 1 valued cards). In this next test, we using 4 decks but only running through 1/2 of the shoe; this will result in a random ending count, which more closely matches casino play. Figure 14 shows a typical screen layout for Exercise # 6. The hands are played according to basic strategy, with double cards displayed sideways, and the dealer's hand shown on the left side of the screen.

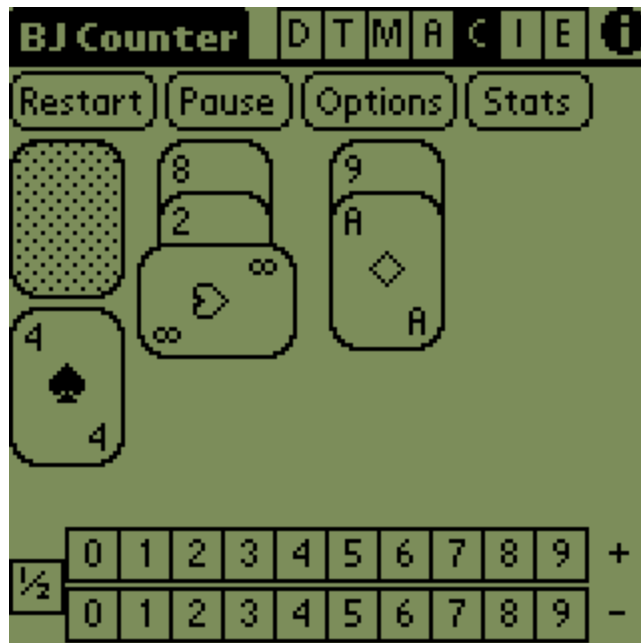


Figure 14: Hand display test

Exercise # 6: Hand display test

Program: *Blackjack Counter*

Practice time: 5 minutes

Time to perfect: 25-60 minutes

Learn: keeping the run count with actual blackjack hands

Steps:

1. Start *Blackjack Counter*.
2. Tap on 'C' along the top to switch to Count mode.
3. Make sure the Count options are set as shown in Figure 13.
4. Tap on 'Start' to begin the test.
5. Calculate the running count from round to round and enter it.
6. Repeat step 5 until the shoe is done.

Fail: If you made any mistakes, start again from step 4.

Pass: Move onto the next exercise when you can complete two tests in a row in 54 seconds or less each, without any errors.

Master: two error-free tests in a row, 50 seconds or less each.

3.5. Let's play Blackjack!

At this point, you may be getting tired of practicing these simple drills. An important part of any training system is to keep the process simple, fast and fun. Now is a good time to switch to *Blackjack Expert* and play some blackjack and practice your skills so far.

To complete this exercise, you need to install and run [Blackjack Expert](#). In this test you will only use basic strategy without betting. You can keep track of the count and see how well you fair while actually playing.

Select 'Preferences' from the Command menu in *Blackjack Expert* and make sure the settings are exactly as shown in Figure 15.

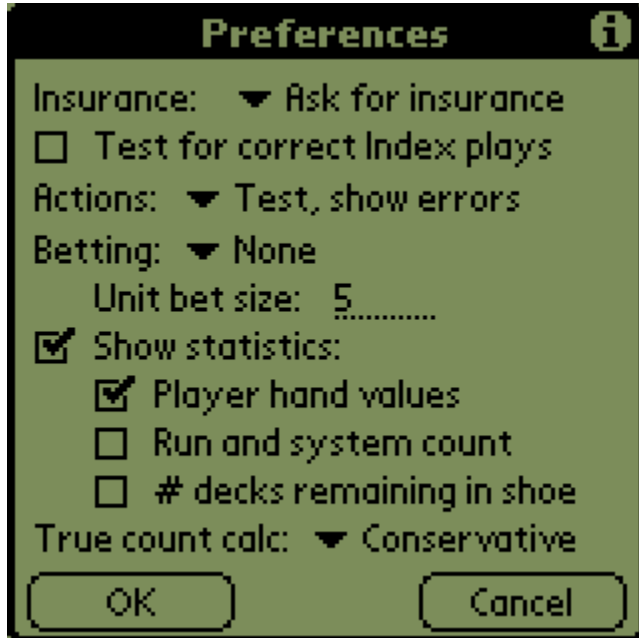


Figure 15: Play-test, preferences

Since you are only playing basic strategy in this exercise, you never take insurance. The goal is to combine your knowledge of the action tables while actually playing. In addition, you will keep track of the count, but not use it to vary your plays or make bets.

Next, select 'Casino settings' from the Commands menu and make sure the settings are exactly as shown in Figure 16.



Figure 16: Play-test, casino settings

Lastly, select 'Count system' from the Command menu and make sure the settings are exactly as shown in Figure 17. Note: if you are using the High-Low system database, you can select the 'High-Low' Count System instead of the 'Tamburin High-Low' system.

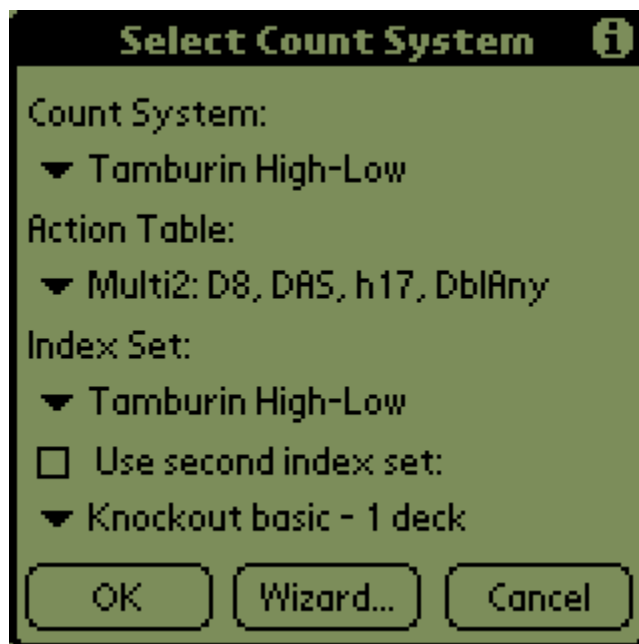


Figure 17: Play-test, system options

Now you are ready to play blackjack. Tap on the 'Deal' button in the lower right. A round of blackjack is displayed as shown below (the shoe is randomly shuffled, so your hand will most likely be different).

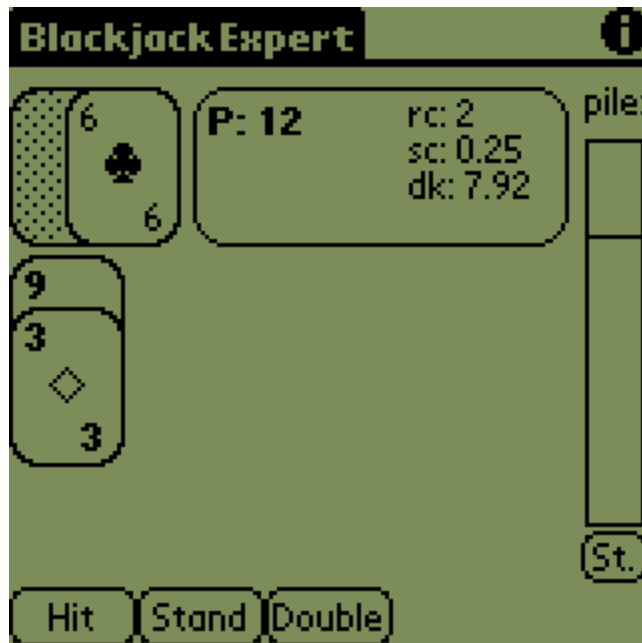


Figure 18: Play-test, a dealt round

Enter the correct plays according to basic strategy using the action buttons along the bottom. If you want to see the current run count, tap on the 'St.' button; the count (and other statistics) are displayed in the rounded-edged box. The run count is displayed next to the text 'rc:' (ignore the other Statistics for now).

Exercise # 7: Basic play-test

Program: *Blackjack Expert*

Practice time: 10 minutes

Time to perfect: 30-45 minutes

Learn: Play blackjack using basic strategy

Steps:

1. Start *Blackjack Expert*.
2. Configure the program as per this section.
3. Select 'Deal new shoe' from the Command menu to start a new game.
4. Enter the basic strategy play for each round.
5. Repeat step 4 until the shoe is done.
6. Keep mental track of the running count. Occasionally, tap on the 'St.' button and check to see if you were correct (3 to 5 times per shoe).

Fail: If you made any basic strategy mistakes, start again from step 3.

Hint: Check the count after a particularly difficult round (after splits or doubles, or when you make a strategy error). Learning to apply both strategy and counting skills at the same time is the goal of this exercise. Lessen the number of times you use the 'St.' button as your skills improve.

Pass: Start the next exercise when you can complete three shoes in a row without any errors. Don't worry if your counting is not too accurate yet.

Master: No basic strategy errors, and no more than 1 mistake per shoe when guessing the run count.

3.6. Real-time test

Exercise # 6 is a very important test to get right before moving to these next trials. The tests so far improved your ability to count a fixed display of cards. The next test focuses on counting cards as they are dealt in real-time.

Each player keeps track of the count differently; some wait until the round is dealt, others count as the cards are dealt. In the former case, you wait until the dealer has dealt all of the initial two-card hands to each player, then calculates the count of the exposed cards on the table. In the latter case, you sum the count as each card is dealt. We recommend counting as the cards are dealt or exposed, since a player rarely has the time to scan the table as people hit their hands. Further more, you can learn to count the cards in 'batches', rather than individually.

This exercise teaches you to count the cards in batches of two, in real-time. We recommend using this exact method as the dealer deals exposed cards: adjust the count in your head for every two cards dealt. It is important when using batch counting to perform only one sum, not two independent calculations. For example, if a batch is '4, Ace', you add zero (no change), rather than -1 and +1. Likewise, 'Jack, Ten' is -2, not -1 and -1. This technique will get you counting cards faster, making it easier to keep up to a fast dealer. There will always be constant distractions in the casino, so it's important to be able to follow the count with as little mental energy as possible. Rigorous practice and batch counting are the two ways to get to this ideal level of skill.

Once you have mastered two-card batch counting, you can try out three or four card batches. We don't recommend doing this, as the extra effort to learn this skill is not that important: two-card batch counting can be done fast enough to keep up with most dealers. Note though that different players may find alternative strategies more effective; experiment with the options below once you have mastered two card batches.

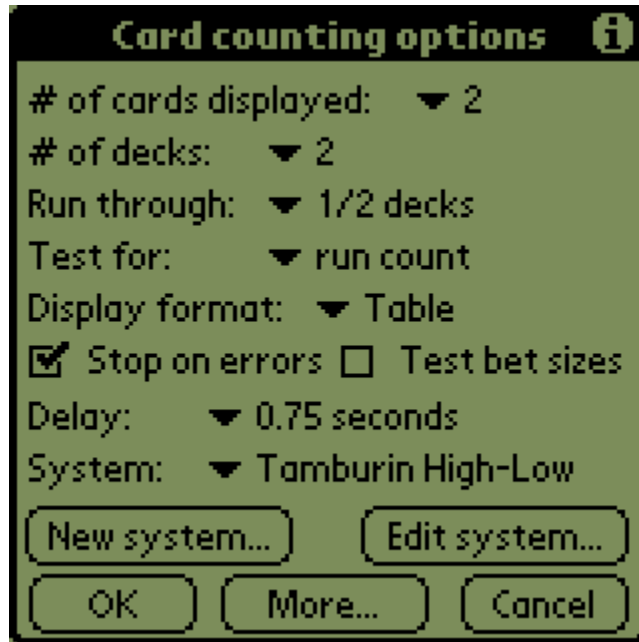


Figure 19: Real-time test

In this test, the cards are displayed two at a time for 3/4 of a second. Once 1/2 of a two-deck shoe is played out, the program stops and asks you to enter the run count.

How fast do I need to count?

Exercise # 8 is designed to help you master counting down a single deck in 20 seconds. Generally, experts suggest that players should be able to count down two decks in 40 to 45 seconds. If you decrease the time delay to 0.5 seconds, this is equivalent to counting down two decks in 26 seconds.

The level of skill you need to achieve depends on the dealer and table conditions. When there are more players at a table, more exposed cards will be dealt initially by the dealer. The initial deal of a round happens quickly, and taxes your skills more as additional cards are dealt. Once the play of hands begins, you will have plenty of time to track the count as players make decisions.

Dealer speed varies enormously. Very fast dealers can deal up to three or four cards a second, which can lead to costly errors in your counting if you cannot keep pace. Casinos generally encourage dealers to deal as fast as they can without making errors, since this increases the number of hands played.

Using a 3/4 second delay in Exercise # 8 is more than sufficient if you are playing head-to-head blackjack (i.e. no other players). If the dealer is very fast and there are more than three players at the table, then you should practice with a 0.5 second delay. There is

quite an increase in difficulty to master the shorter delay, but it will have a very positive impact on your ability to track the count with fewer errors.

Exercise # 8: Real-time test

Program: *Blackjack Counter*

Practice time: 5 minutes

Time to perfect: 1 to 3 hours

Learn: keeping track of the count while the cards are dealt

Steps:

1. Start *Blackjack Counter*.
2. Tap on 'C' along the top to switch to Table mode.
3. Make sure the Count options are set as in shown Figure 19.
4. Tap on the 'Start' button to begin the test.
5. Keep mental track of the running count as cards are displayed.
6. When the shoe is done, enter the run count.

Fail: If you made any mistakes, start again from step 4.

Hint: If you are having problems keeping up, start with a delay of 1 second. You will need to master this exercise at 0.75 seconds to keep up with an average blackjack dealer. For fast dealers, 0.5 second delay may be required.

Pass: Move onto the next exercise when you can complete three tests in a row without any errors.

Master: Three error-free tests in a row using 0.5 seconds delay.

3.7. Summary

The exercises in this chapter are designed to help you track the run count as cards are dealt.

- These exercises correspond to deck 'count-down' drills. Passing these tests is equivalent to counting down a single deck in 30 seconds or less.
- In the casino, you will need to be to track the count as the initial round is dealt, and as players complete their hands. These exercises focus on both skills.
- **Exercise # 4: Displayed count test**, page 20
- **Exercise # 5: Run count test**, page 21
- **Exercise # 6: Hand display test**, page 23
- **Exercise # 7: Basic play-test**, page 27
- **Exercise # 8: Real-time test**, page 29