



Contents

The Contents lists Help topics available for Casino Vérité Blackjack. Use the scroll bar to see entries not currently visible in the Help window. Select any topic in green to jump to help for that topic. To learn how to use Help, press F1 or choose Using Help from the Help menu. Note: Casino Vérité Blackjack will be referred to as CV.

Features

Basic Blackjack Rules

Advanced Theory and Play

Quick Start

Who are you screen

Bankrolls

Sessions

Seats, Hands, Chips

Normal Play

Keyboard

Options

Player Options

Odd Options

Environment Options

Table Formats and Sizes

Casinos

Maps

Statistics

Graphs

Statistic Tables

Log Maintenance

Strategies

Select/Display

Define Strategy

Modify Tables

Table Modification

Betting Strategy

Counting Drill

Flashcard Drill

Error Tables

Peek at Count

File Menu

Shuffle

Last Hand

New Session

Markers

Tournament Play

Casino Search Function

Edit Casino

Memory Considerations

Features

The main thrust of CV is practice under realistic casino conditions. Toward this end, many unusual features have been implemented. This section gives a brief rundown of some of these features.

Rule variations - 77 Blackjack rule and play variations exist that can be independently set in trillions of combinations.

Casinos - A casino file exists containing 548 rule sets in 338 actual casinos. You can set the game's rules by selecting a casino instead of setting each of the rules manually.

Maps - Simple maps of Las Vegas and Atlantic City allow casino rule display or selection by casino location.

Search Function - A casino file search function is provided to locate actual casinos with unusual rules.

Statistics - Extensive logs, graphs and statistics, including dynamic update of graphs and statistics tables during play are supported.

Counting Drill - You can practice **card counting** with cards thrown at you in different combinations of number of cards, card placement and orientation.

Flashcard drill - The Flashcard Drill presents you with selectable situations to which you must respond correctly according to the selected strategy. This drill is designed to practice strategic play.

Strategies - You can select from basic or card counting strategies. The Flashcard drills and actual play can be tested against these strategies.

Customized Strategies - You can modify one of the standard strategies or define your own.

Warning on strategy error - This option allows testing of your play against the selected strategy.

Tournament play - This feature simulates a Blackjack tournament. Here, you play against the other players, not against the dealer.

Unusual Games - New variations of Blackjack, like Multi-action, Over/Under 13, Double Exposure, and Bust Out are supported.

Improving the odds - Expert methods, like peeking at the dealer down card, "Wonging" and team play, are supported.

Voice commands - If you have the Microsoft Sound System, support is included for play by voice command.

Unusual features - To increase realism, features like tipping, dealer errors, face up or down dealing, players coming and going, and the dealer playing for you in obvious situations are included.

Table formats - To increase realism, different table orientations are provided. You can sit at the center or at either end of the table. The table is rotated and cards are dealt sideways and upside down to give you a more realistic perspective.

Normal movements - To increase realism, play can be performed with natural casino hand movements instead of using buttons.

Full table support - A full seven seats and split up to four hands is supported with all hands on the table displayed at once. Also, up to 18 chip stacks in one seat can be displayed for unusual betting situations.

Window sizes - Three window sizes are supported. Graphics are NOT stretched; but, are generated at different resolutions.

Player File - Multiple people can be registered as users of CV. 103 parameter, option and status settings are saved for each player. Separate logs are also kept by user and **session**.

Blackjack Rules

The popularity of casino Blackjack has increased greatly over the last twenty years since it was discovered that this is the only casino game that can be regularly beaten with expert play. Despite this, the casinos have profited handsomely because very few players have the patience to practice sufficiently to beat the casinos. Interestingly, Blackjack also provides the greatest advantage for the casino when a bad player plays. This section contains a brief description of the basic casino Blackjack rules. You can skip this section if you know how to play casino Blackjack.

Basic Rules

Note, since play varies enormously casino by casino, there exist exceptions to all of the following rules. Blackjack rule variations are described in later chapters.

Objective

A casino Blackjack game consists of a dealer and one to seven players. You do NOT play Blackjack against other players; You play against the dealer. In fact, other players are not relevant to your play. They are mainly a distraction. You are betting that you have a better hand than the dealer. The better hand is the hand where the sum of the card values is closer to 21 without exceeding 21. A hand that is greater than 21 is referred to as "busted" and automatically loses.

Card values

The value of cards two through ten is their pip value (two through ten). Face cards (Jack, Queen and King) are all worth ten. Aces can be worth one or eleven. A hand's value is the sum of the card values. Soft hands and hard hands exist. A soft hand contains an Ace that is being counted as eleven. (Remember, an Ace can count as one or eleven.) For example, if a hand has an Ace and a Six, this is a soft 17. This hand cannot be busted by drawing another card. If a ten is drawn, the Ace would be counted as one instead of eleven, and the hand would still have a value of 17. However, this would now be a hard 17, because the Ace now counts as one and an additional draw could cause a bust.

The play

Once players have placed their bets, the deal begins. Players are each dealt two cards, face up or down depending on the casino and the table at which you sit. The dealer is also dealt two cards, normally one up (showing) and one down (hidden). The players are allowed to draw additional cards ("hit" their hand) to improve their hands. When all of the players have finished, the dealer's hand is completed. The dealer plays by strict rules set by the casino. Generally, the dealer will draw additional cards until the dealer hand is above hard 16. In some casinos, the dealer will hit a hand with 17 if it is a "soft" hand.

Note, the dealer has an advantage because the players play first. If the player busts, then the dealer does not need to risk a bust. On the other hand, players also enjoy an advantage because they get to see one of the dealer's cards and are allowed to vary their play accordingly. Other player advantages will be explained below:

Blackjack

If the player's first two cards add to 21 (an Ace and a ten value card), this is called a "Blackjack" or

"natural". As long as the dealer does not also have a Blackjack, the player is guaranteed to win the hand and the payoff is 3:2 instead of the normal 1:1. This is a valuable bonus that occurs about every 20 hands. If the dealer also has a Blackjack, the hand is "pushed". That is, there is a tie and the player's chips remain in the bet box.

Hitting and Standing

Hitting refers to drawing additional cards. You may draw as many cards as you wish as long as you do not pass 21. Standing refers to staying with the cards that you have.

Splitting Pairs

If your first two cards have the same value, you may split them into two hands. For example, two eights can be split into two hands each having one eight. You can then play the two hands separately. You must add an additional bet for the second hand. If you draw yet another card of the same value, some casinos allow you to split into three hands (or even four with an additional eight). This is called a resplit. Most casinos impose limitations when splitting two Aces. You can only draw one card to each Ace, and you cannot get a Blackjack.

Doubling Down

An additional option, "double down", allows you to double your bet on your first two cards. You draw exactly one card with double down. This is common practice if you have a good hand that cannot be busted and the dealer has a bad hand. Remember, because face cards all count as ten, there exist more cards with a value of ten than any other value. If the dealer has a six showing, there is a good chance that the dealer has a 16. Since a dealer must draw to a 16, there is a good chance that the dealer will draw a card that carries the dealer hand over 21 causing a dealer bust. If you have an eleven (say a seven and a four), you cannot bust with one card. You are likely to end up with a good hand. This option allows you to double your bet when you have a better than even chance of winning.

Insurance

If the dealer's up card (the card that is showing) is an Ace, you are allowed to make an "insurance" bet. This is a side bet that the dealer has a ten value card as the down card giving the dealer a Blackjack. The dealer will ask for insurance bets from all players before the first player plays. You make this bet by placing chips equal to half of your current bet on the "insurance line" just above your cards. If the dealer has a ten, the insurance bet pays 2:1. In some casinos, the dealer then peeks at the down card and pays or takes the bet immediately. In other casinos, the payoff waits until the end of the play.

Surrender

A few casinos allow an option referred to as "Surrender". In these casinos, you can Surrender a lousy hand before you have drawn any additional cards. You will lose half of your bet. You should avoid this bet if you are not using an advanced strategy as it makes sense in only a few cases.

Advanced Theory and Play

A few words on advanced play. Although CV supports complex strategies and allows online strategy selection and display, this manual makes no attempt to teach these sophisticated Blackjack strategies. If you wish to correctly learn advanced Blackjack strategies, do not attempt to gain this knowledge from any PC game. If you play primarily for fun, simple strategies can reduce your losses and extend your play. If you wish to become an expert Blackjack player, do not be fooled by simple explanations of Blackjack strategy. Keep in mind that effective play with advanced strategies requires months of practice before playing, additional continuous practice between games and a complete denial of gambling instincts. Several excellent texts on the subject written by the true Blackjack experts exist. Some of these follow with brief editorialism:

Braun, Julian H. How to Play Winning Blackjack Data House Publishing Co., 1980 (Pioneering work in strategy development)

Carlson, Bryce Blackjack for Blood CompuStar Press, 1992, rev. 1994 (Recent thinking from one of the biggest moneymakers) [Note: The systems in this book are supported by CV.]

Humble, Lance and Carl Cooper The World's Greatest Blackjack Book Doubleday & Company, 1980 (Includes the high-efficiency Hi-Opt I strategy) [Note: The systems in this book are supported by CV.]

Revere, Lawrence Playing Blackjack as a Business Lyle Stuart, 1980 (The late Lawrence Revere, who brought me into the game, trained many a card counter, and a few casinos.)

Roberts, Stanley Winning Blackjack Gambling Times Inc., 1971, rev. 1981 (One of the earliest easy-to-use systems. A best seller in the field in terms of dollar sales.) [Note: The systems in this book are supported by CV on an optional disk.]

Snyder, Arnold Blackbelt in Blackjack RGE Publishing, 1983 (Publisher of Blackjack Forum, contains probably the easiest to learn honest card counting system) [Note: The systems in this book are supported by CV.]

Thorp, Edward Beat the Dealer Random House, 1966 (Dr. Thorp was not the first card counter; but, this is probably the first serious text on the subject. Still a good read.)

Uston, Ken Million Dollar Blackjack Gambling Times Inc., 1981 (The late Ken Uston was one of the first big moneymakers at Blackjack.) [Note: The systems in this book are supported by CV on an optional disk.]

Uston, Ken The Uston SS Count Gambling Times Inc., 1993 (Blackjack expert Ken Uston's last system) [Note: The systems in this book are supported by CV on an optional disk.]

Wong, Stanford Professional Blackjack Pi Yee Press, 1975, rev. 1994 (Covers simple to expert card counting) [Note: The systems in this book are supported by CV.]

Many Blackjack publications can be ordered from RGE publishing (510-465-6452) or Gambler's Book Club (800-522-1777) or Gambling Times Incorporated (818-781-9355).

Who Are You?

The first screen that you see is used for player identification. You may register any number of players. CV will remember over 100 options and settings for each player. This allows you to exit CV (or trip over the power cord) and then to restart it later and continue from where you left it. Normally, when you start CV, the name of the last person using CV will appear at the top of the player list. Clicking the mouse on PLAY (or pressing the ENTER key) will continue that **session**. If you want to register a new player, type the name of the player and click on NEW PLAYER. Pressing NEW SESSION will start the game with the selected player with a new Blackjack session. RESET will reset all options for the selected player and start the game over. If you are a new player, type your name now and press NEW PLAYER.

Bankroll

Your chips are in the lower right corner for seat 3 and 4 play and the dollar value of these chips is displayed at the left of the chips. Other table formats place the chips at the far left or right of the screen. The denominations of chips provided depend on the table limits. For example, if the minimum bet is \$100, the game will not display \$1 and \$5 chips unless it must. As you play, change is made automatically to ensure that you do not have empty stacks. If necessary, half dollar coins will also be displayed and can be bet. If you have more than \$18,000, only \$18,000 in chips will be shown. However, the number in the chip box will show your actual bankroll. If you run out of chips, a MARKER button will appear in the chip box for borrowing money. You can also select menu FILE - MARKERS to buy and sell multiple markers.

Sessions

Blackjack play is divided into sessions. There may be several sessions in one execution of CV or one session covering several executions over months. Logs are kept by session, by player. Selecting FILE - LOG MAINTENANCE provides tracking and controlling of these logs. New sessions are created from the startup screen or from menu FILE - NEW SESSION.

Seats, Hands, Chip Stacks

You can play zero, one or two seats and up to five computer players can use the other seats. Other players are set from menu OPTIONS - ENVIRONMENT (explained further below). Each of your seats can be split into up to four hands. Each of these hands can have up to ten cards. As a result, a huge number of cards can be placed on the table at one time. As in a real casino, the dealer may move cards around to make certain that all cards are visible in crowded conditions. Your seat can also have up to 14 chip stacks for each hand including: original bet, double down bet, win stack, double down win stack, Blackjack bonus stack, side bet stacks, tip, tip win, insurance and multi-action bets. These will all be described later. Additional stacks can exist at a seat for split hands including split bets, split payoffs, double down after split bets and payoffs and tips on split hands. These can exist for up to eight of your split hands. Again, as in a real casino, the dealer may move around chip stacks when conditions become very crowded.

Normal Play

You may control play with buttons, the mouse, or voice (more on this later). The game was designed to work primarily with the mouse as this is the quickest, easiest and most realistic. Besides, when was the last time that you saw a casino table with buttons. If you do wish to use buttons, they will be provided by using the "Show buttons" option on the OPTIONS - ENVIRONMENT menu. Showing the buttons, even if you do not use them, does have an advantage for novice players as they indicate which plays are valid at any given time.

Mouse actions are designed to mimic normal casino movements as follows:

You bet by moving chips from the **chip box** to one of the player bet boxes. The bet boxes are the light green semicircles with a small black "\$0". You can bet in either of your two seats, in both, or in neither. Click on the chip that you wish to move, drag it to the player box by moving the mouse while pressing the left mouse button, and then release the chip by letting go of the button. You may grab several chips at once by selecting into the chip stack instead of selecting a chip from the top of the stack. The chip stack that you are creating is the original bet chip stack. You can add more chips by repeating the above. To keep the chip stack at a reasonable height, change will automatically be made to the smallest number of chips possible. You can also drag chip stacks from one spot to another.

To remove a chip stack from the table - just click it with the mouse once. Dragging is not necessary.

To hit a hand, scratch the table vertically. That is, push down the mouse button somewhere on the table and drag the mouse vertically up, down or both then release the mouse button. The distance moved can be anywhere from one inch up to the full screen.

Standing is performed by waving the hand - push the mouse button and move the mouse horizontally, once or back and forth, and then release.

Double down and split are performed by adding more chips from the **chip box** to the bet box. When a double down or split is allowed, press the mouse button anywhere in the chip box and the correct number of chips will be grabbed. Drag these to the desired bet box and release.

Insurance is handled in the same way; but, drag the chips to the Insurance line of the bet. This is the line that says "2 TO 1 - INSURANCE PAYS - 2 TO 1". The bet must be released directly above the player bet box on this line. You can insure both of your hands quickly by clicking on the black box that says "Insurance?"

Surrender is performed by clicking once on the bet to be surrendered.

At the end of play, many chip stacks may be left on the table. You can take them off of the table by clicking on them, or you can add to the original bet chip stack. You can also drag chips from one spot to another. When the deal is started, all stacks that are left will be combined into one stack per seat.

To begin deal, just wait, or click the shoe, or double-click the table. Note, if you do not wish to have the dealer deal automatically, you can turn this feature off by de-selecting the "Dealer doesn't wait for bet" option on the OPTIONS - ENVIRONMENT menu. The feature is temporarily turned off whenever you select any menu. You must click the shoe or double-click the table to restart play.

Note, the reason that hand movements are required in a casino instead of voice commands has little to do with the noise level. Casino play is monitored via closed-circuit monitors and catwalks above the ceiling. The observers can read hands; but, not lips.

This is the end of the Quick Start section. You now have enough information to play basic Blackjack. The

next section describes the online Help function which may come in handy during play. The remainder of the manual discusses over 100 additional features and options.

Keyboard

Although CV was designed for use with a mouse or trackball, you can use the keys as follows:

G	Go, deal a hand
B	Bet, increase the bet for the selected hand by the minimum bet
0	Zero the bets for the selected hand
1	Select the first player hand
2	Select the second player hand
H	Hit, draw a card
S	Stand
P	Split pairs
D	Double Down
Q	Quit, Surrender the hand
Y/N	Yes or No, Respond to Insurance or Bust Out

New Player Introduction

For new players, an introduction screen is displayed. This screen allows you to preview some of the features of CV. You can preview features by pressing buttons at the left. This will enter the selected feature and allow you to experiment. Sample data is provided for the graphs and statistics tables. Descriptions of the features can be found by clicking on the question mark on each screen. If you are tired of the New Player start up procedure, select PLAY at the bottom of the screen with the mouse.

Player Options

The more common rule variations can be found on the Player Options screen. Select one of the following option groups:

Double Down Options

Split Options

Safety Options

Limits

Dealer Actions

Double Down Options

The following options can be set on the OPTIONS - PLAYER OPTIONS menu.

Double down after split - Selecting this option allows doubling down on hands that have been created by splitting a pair. This is common in Atlantic City, sporadically available in Las Vegas and available at about 30% of the world's casinos. Most strategies are affected by this rule and the related strategy tables will automatically be updated when this option is changed. (See Strategies Section for more information.)

Double down on soft count - This common option allows doubling down on any first two cards, even if one of the cards is an Ace.

Double down on 10, 11 - Almost universal, this option allows doubling down on two cards totaling 10 or 11 without using an Ace. On extremely rare occasions, you might find a casino that only allows double down on 11. That option is not included as there is no reason to play such a disadvantageous game.

Double down on 9 - This option adds two cards totaling nine to the double down options.

Double down on 8 - This option adds two cards totaling eight to the double down options.

Double down any hard count - This option adds all other totals without an Ace.

Double down on three cards - This rare option allows doubling down on two or three cards.

Double on any number of cards - This rare option allows doubling down in almost any circumstance.

Split Options

The following options can be set on the OPTIONS - PLAYER OPTIONS menu.

Resplit - This very common option allows splitting pairs in one hand up to three times. As a result, up to four hands can be created from one. This option does NOT allow resplitting of Aces.

Resplit Aces - Adding this option allows resplitting of a pair of Aces to the above option. This option is fairly rare.

Multiple draw after split Aces - Most casinos will only allow one card drawn to each split hand after splitting Aces. This option allows additional draws.

Split tens must be same value - In most casinos, tens, Jacks, Queens and Kings all count as ten and can be considered the same for splitting rules. In other words, you can split a Jack and a King. A few casinos demand that the cards be exact pairs.

Safety Options

The following options can be set on the OPTIONS - PLAYER OPTIONS menu.

Insurance - This nearly universal option allows an insurance bet against a dealer face up Ace. Note: This option cannot be turned on if you are playing Double Exposure (described later).

Insure Blackjack only - Some casinos in Europe allow insurance bets only when the player has a Blackjack. Note: This option cannot be turned on if you are playing Double Exposure (described later).

Late Surrender - The common form of insurance is allowed by setting this option. The player can Surrender a hand (throw it in) for half of the bet after the dealer has checked for Blackjack. If the dealer is not allowed to peek and does not know if there is a dealer Blackjack (see peek options) then a Surrender chip is placed on your bet and the Surrender occurs only after the dealer checks for Blackjack and finds that it does not exist.

Early Surrender - This less and less available option allows Surrender of a hand before the dealer checks for Blackjack. If you can find a casino that allows it, this is one of the most valuable options in the game.

Early Surrender vs. 10 - This option is the same as Late Surrender, except that you can also Surrender against a dealer up card of ten even if the dealer has a Blackjack.

Macao Surrender - This, currently obsolete, rule allows Surrender of an unbusted hand with five cards.

Limits

The following options can be set on the OPTIONS - PLAYER OPTIONS menu.

Available Table Limits - The Casino File contains the lowest and highest allowed bet in each casino. This table is initialized according to the casino that you have selected. Although the lowest and highest numbers are taken from actual casino observation, guesses are made at the different ranges between the lowest and highest limits. In practice these ranges often change for different days, and sometimes different hours of casino operation. You may change the current limit table here and select one of the low/high pairs by clicking the Limit sign on the table.

Double low limit with 2 hands - Generally, casino rules insist that the minimum bet be doubled if you are playing two hands at once. This option is defaulted off because casinos do not seem to be enforcing this rule as much as they once did.

Dealer Actions

The following options can be set on the OPTIONS - PLAYER OPTIONS menu.

The play and resolution of insurance, Surrender, and double down and split bets when the dealer has a Blackjack varies significantly from casino to casino depending on the combination of the next six options.

Dealer peeks on 10 - With this option, the dealer will peek at the down card to check for Blackjack when the dealer up card is a ten. This option is becoming more common as newly developed optical devices for peeking at the down card are being installed on casino tables.

Dealer peeks on Ace - Normally, the dealer will peek at the down card when an Ace is showing as there is a good chance that a Blackjack exists. Some casinos do not check to prevent cheating.

Busted bets remain if no peek - If the above peek options are turned off, then there is no way to know if there is a dealer Blackjack until after all hands have been played. This means that a player could split a hand into two hands and bust the second hand losing twice as much. If the dealer had peeked and seen the Blackjack, then the bust would never have occurred. This option keeps the busted hand and its bet on the table until all hands are played and the dealer hand is shown. If the dealer has a Blackjack, then the second player bet (on the busted split hand) is left on the table instead of taken by the dealer. The player can leave the bet up for the next hand or click on it to remove it.

Dealer Blackjack wins all - This option worsens the players' chances. If the dealer does not peek and then discovers a dealer Blackjack after all players have played, all player split hands and double down bets lose when this option is on. When the option is off, splits and double downs are considered as never having occurred and the player retains the bets. This option is set on whenever you select a casino that has the "No dealer hole card dealt" option. However, you can override the casino section by turning the option off here.

No dealer hole card dealt - With this option, seen in many European casinos, the dealer does not receive a second card until after the players have played their hands. With this option, the dealer cannot peek to check for Blackjack.

Insure then Surrender allowed - In some situations, depending on the options set above, you may want to insure a hand and then Surrender the same hand. In a casino, this can cause some interesting conversations with the dealer or pit boss. Casinos will often argue that a hand that has been insured cannot be surrendered because it no longer exists. You might argue that Insurance is purely a side bet. This option allows this betting combination when the situation arises.

Cards dealt face down - Typically, the cards are dealt face up in five deck and larger games and face down in four deck and smaller games. Exceptions exist and the known exceptions are stored in the Casino File. You can override the casino rule here. This option substantially changes the way the game is displayed; but not the way in which you physically play the game. For card counters, the option substantially changes the way cards are counted by CV. Cards are counted as soon as they are seen by the player for the first time for any reason.

Dealer hits soft 17 - With this option, the dealer will hit a soft 17 (e.g. Ace, 6 or Ace, 3, 3). With the option off, the dealer stands. This option is common in downtown Las Vegas and at about 50% of the world's casinos. It lowers the player's advantage and is one of the more important options. Note: Changing this option automatically changes the strategy tables in effect. (See Strategy Section for more information.)

Dealer shows burn cards - Some casinos discard (burn) one to five cards off of the top of the deck after shuffling. With this option on, the cards are shown. Otherwise, the hands are discarded face down. This option is only of interest to card counters.

Odd Options

The options on this screen are less common than the options on the Player Options screen. However, the use of unusual rules has recently increased greatly as casinos have proliferated in the U.S. These rules should be avoided until you are used to the game. Select one of the following option groups:

Win Variations

Unusual Games/Side Bets

Bonuses

Improving the Odds

Win Variations

The following options can be set on the OPTIONS - ODD OPTIONS menu.

Player 21 ties dealer 10 up BJ - If the dealer has a ten up and an Ace down and the player has any 21, there is a push.

Dealer wins tied 17 - This awful option causes tied 17 hands to be lost instead of pushed.

Dealer wins ties - With this option, you lose your bet on a tied hand. This awful option sometimes is added to counteract another unusual option that heavily favors the player.

Five cards unbusted wins - With this option, the player always wins when five cards have been drawn without busting.

Six cards unbusted wins - With this option, the player always wins when six cards have been drawn without busting.

Seven cards unbusted wins - With this option, the player always wins when seven cards have been drawn without busting.

Unusual Games/Side Bets

The following options can be set on the OPTIONS - ODD OPTIONS menu.

All of the options in this group make modifications to the table format. The options are mutually exclusive - you may only select one. Side bets cannot exceed the size of the original bet.

Over/Under 13 - This option, very slowly gaining popularity in Las Vegas and Atlantic City, adds a side bet to the game. When on, small circles will appear at the sides of each of your player boxes. You can bet that your first two cards will total 14 or greater by placing a bet in the circle labeled "O" or you may bet that the first two cards are under 13 by placing a bet in the circle labeled "U". The house wins all totals of 13. Aces count as one for this side bet only. The bets are resolved immediately after the dealer up card is shown. If you win, the bet will be doubled and then moved to your **chip box**. You cannot bet against yourself.

Red/Black - This new side bet is very like Over/Under 13 except that you bet on whether the dealer upcard is red or black by placing a bet in the "R" or "B" circle. The dealer wins on all twos. Play is the same as with Over/Under 13 described above.

Royal Match - Available in only a few casinos, this option allows a different side bet on the first two cards. By placing a bet in the circle labeled "RM", you can bet that your first two cards are in the same suit. If they are, the bet pays 3:1. If they are the Queen and King of the same suit, this is a Royal Match which pays 10:1. The bet is resolved as soon as the dealer up card is shown and any winnings are immediately moved to your **chip box**.

Super 7's - This option exists in a few casinos with a few variations. The version included here appears to be the most common. You can make a side bet of only \$1 that you will be dealt consecutive sevens. The side bet is placed in the circle labeled "S7". If you are dealt two sevens, you will be dealt a third card, even if the dealer has a Blackjack. If you split sevens, you will be paid for only the first two sevens. Payoff occurs after the second or third card is dealt according to the following table:

First card any 7	\$3
First two cards any 7's	\$50
First two cards 7's same suit	\$100
First three cards any 7's	\$500
First three cards 7's same suit	\$5000

Double Exposure - In this unusual game, both dealer cards are dealt face up. Obviously, this gives the player an enormous advantage. To counteract this advantage, the "No Blackjack bonus" and "Dealer wins ties" options are automatically turned on. You can turn them back off if you wish. Also, there is no Insurance bet in Double Exposure. This is a very different game with entirely different playing strategies. I would not suggest this option in a casino if you have not fully studied the game.

Multiple Action - This game is very slowly appearing in various forms in additional casinos. The table format is quite different and the game is not compatible with several other options. In this game, the player has only one seat, the center seat in the table. However, the player can place two or three bets. Three betting boxes exist for this purpose for each seat. You must place bets in at least the first two boxes. Relative bet size rules exist; but are not enforced here since they vary by casino. Your play is normal, except that the dealer has no hole card. After you have made all of your playing decisions, the dealer gets three hands. First, the dealer hand is finished and the first bets for all players are resolved. All dealer cards except for the first are then discarded and the dealer hand is again completed using the original first dealer card as a start. All player hands remain as they were. Then the second bets are resolved. This process is repeated again for the third dealer hand. If you double down or split your hand, double down and split bets are added in all three bet boxes. If you take insurance, then the insurance bet is

placed in the normal spot and resolved dealer hand by dealer hand. If you Surrender, then Surrender bets are resolved hand by hand. The best way to learn this game is to try it.

Bust out - This new Blackjack side bet is rather like insurance. After the dealer turns over the hole card, and before the dealer hand is finished, this bet is available if the dealer has a stiff hand. A dealer stiff hand is a hand that must be hit and will bust if the dealer draws a ten. (Hard 12 through hard 16.) If this situation occurs, and the Bust Out rule has been selected, then a box will appear in the middle of the screen asking for Bust Out bets. You can bet on either or both of your hands that the dealer will draw a ten. If the dealer then draws a ten, you will be paid two to one. You place the bet exactly like an insurance bet. Drag chips from the **chip box** to the insurance line above one or both of your hands (or click on the "Bust Out?" box). The bet will always be the same as your original bet for that hand. If you win, the payoff will be added to the Bust Out bet, and then the chips will be moved to your chip box.

Bonuses

The following options can be set on the OPTIONS - ODD OPTIONS menu.

Suited AJ pays 2:1 - With this favorable option, an Ace and a Jack in the same suit pay 2:1 instead of the normal 3:2.

Ace, Jack of Hearts pays 2:1 - As it says, an Ace, Jack of Hearts Blackjack pays 2:1 instead of 3:2.

777 pays 2:1 - In the highly unusual case that you receive three sevens, you get a few extra dollars.

777 pays 3:2 - Even lower bonus than above.

Suited 777 pays 10:1 - Three sevens of the same suit pays 10:1. Good luck!

Blackjack pays 2:1 - This valuable bonus pays 2:1 on Blackjack instead of 3:2.

Five card 21 pays 2:1 - Five cards totaling 21 pays 2:1. Small gain; but, keep it in mind.

Six card 21 pays 2:1 - Six cards totaling 21 pays 2:1. Even smaller gain.

No Blackjack bonus - Blackjack pays 1:1, not 3:2. This is a very painful option sometimes used to counteract options favorable to the player. Be careful, this option is highly disadvantageous to the player.

Improving the Odds

The following options can be set on the OPTIONS - ODD OPTIONS menu.

Peek at dealer down card always - With this option, the dealer down card flashes on the screen for a half second. You will occasionally find that you can see the dealer down card as it is dealt. Whether or not this is considered cheating in a casino depends on how much effort that you put into seeing the card. Laws against using optical devices exist.

Peek when dealer peeks - Peek at the dealer down card as above; but, only when the dealer checks for a Blackjack.

Team Play - Team Play refers to the practice of sitting down at a Blackjack table only if the card count is favorable. A few team members bet low at different tables. When one of the tables has a good card count, the team member at that table signals another player who wanders from table to table making large bets. In this manner, the large bettor will always be playing at a good table. When this option is set on, the message "Looking for a good table" is displayed and CV will play without showing any cards until a good card count is reached. At this point, the shoe will be set to the remaining decks and you will be allowed to bet. You can leave the table at any time by selecting menu FILE - SHUFFLE. CV will then look for a new table with good odds. Note: This option will be ignored in tournament play or if a basic strategy has been selected. Warning: It can take quite awhile to find a good table on a slow PC.

Wonging - "Wonging", named for Blackjack expert Stanford Wong, is a single person version of team play. Here, the player observes a table, counting cards but not playing, until the count becomes acceptably positive. The player then begins playing with an immediate advantage. The CV implementation is the same as team play except that the exact count is displayed when the table becomes positive. You can then start playing and counting with the displayed value.

Environment

Select one of the following option groups on the Environment Options screen:

Options

Speeds

Testing

Environment Settings

Environment Options

The following options can be set on the OPTIONS - ENVIRONMENT menu.

Sound - The PC will provide simple sounds to indicate an error or to call attention actions. This option turns off the speaker. Sound effects via sound cards are not supported as casino Blackjack is generally a silent game.

Logging - Logs are kept of all player hands played. Turning off this option will turn off logging to conserve disk space. Note: Logs are used for graphs and statistics tables.

Auto delete logs - To conserve space without turning off logging, set this option. Logs will be kept; but, the previous log will be deleted whenever a new **session** starts. You will be able to view graphs and statistics tables for the current session; but, not prior sessions.

Dealer makes obvious plays - You will find that some dealers will not wait for you to signal a hit or stand if you are a good player and the play is obvious. This option will cause the dealer to play for you in these situations to speed the game. In tournament play, this option is suspended during the last few hands in a round.

Dealer doesn't wait for bet - With this option set, the dealer will start dealing after a period of time whether or not you have bet. Without the option, you must click the shoe or double click the table. Note: Whenever you click on any menu items, this option is temporarily turned off. Turn it back on by clicking on the shoe or double-clicking the table.

Player must bet - If this option is set, the dealer will not deal if you have no money in either of your bet boxes even if you click on the shoe.

Allow 100% penetration - When set, you can set the penetration to 100%. This means that the dealer will deal every card before shuffling. This is a very rare option and will be found in games with other options that are advantageous to the house. Note for card counters: 100% penetration will commonly force shuffles in the middle of a hand. When such a shuffle occurs, the count is reset and the cards left on the table that have already been seen by the player are recounted to create a starting count for the new shuffle.

Players come and go - This option means that, occasionally, other players will appear or leave. The maximum number of other players is set with the OTHER PLAYERS field in menu OPTIONS - ENVIRONMENT. This is one of the more annoying distractions in a real casino.

Tipping Allowed - When this option is selected, a tipping line will appear on the table. You can place tips for the dealer by dragging chips from the **chip box** to this line. You can also track the total amount lost with tipping with the graph feature. This is important as you may find that you may be tipping more than you are winning.

Tipping on D. D. & Split - When this option is set, any tips that you have made will be increased whenever you double down or split.

Color printing - When this option is set, all print features will print in color. When not set, graphs that are printed will be converted to black and white patterns.

Suppress Lose/Win/Bust signs - This option improves reality by suppressing the signs that appear during hand evaluation.

Dealer makes errors - This is another attempt at casino realism. When set, on very rare occasions, the dealer will make an error in hand payoff. The amount is never wrong. However, sometimes the dealer will not pay at all on a close hand that you have won. When this option is set, a new button appears on the table labeled ERROR. Press it if you think that you saw an error. If you miss an error, at the beginning of the next hand, you will be notified and shown the error. If you do find an error, CV will change history by correcting the log entries for all hands since the error and re-display statistics and dynamic graphs if turned on. You can track your success at catching errors with the GRAPHS function.

Warning on strategy error - This option signals when you have violated the current strategy as set by the STRATEGIES feature. A red box will appear briefly with the suggested play. The

suggested play will be one of the following: HIT, STAND, DD (Double Down), SPLIT, SURRE. (Surrender), INSURE, B.O. (Bust Out) or PASS (do not insure or Bust Out). Both basic strategy and **card counting** strategies can be used.

Display error rate - When this feature is set, a black box will appear at the bottom of the screen that will contain the percentage of times during this execution of CV that you have made the correct play according to the selected strategy. You can reset this percentage by selecting menu FILE - NEW SESSION. This will also start a new log.

Show Buttons - If you do not like using the mouse to indicate your play, select this option. Buttons will appear that can be used to play the game. Each button is enabled only when the corresponding play is allowed. For example, if splitting is not valid, the SPLIT button will be dimmed.

Voice Commands - If you do not like the mouse or buttons, and you have the Microsoft Sound System, you can use voice commands with this option set. To make use of this feature, you need to add the Blackjack vocabulary to the Voice Pilot. This is done by adding the following line "cvbj=C:\CVERITE\CVBj" to the [apps] section of the VOICEPIL.INI file in your Windows directory. To place bets, say "First seat" or "Second seat" to indicate in which bet box you are betting and say "Bet" to increase the bet by the minimum limit. "Bet" may be said repetitively to increase the bet. Other voice commands include the following:

Down	Remove the bets in the selected seat
Hit me	Draw a card
Stand	Stand
Deal	Start the hand
Split	Split pairs
Double	Double Down
Surrender	Surrender the hand
Yes/No	Respond to Insurance or Bust Out
Help	Topic Help

Felt table - The table appears more like a felt table when this option is set. WARNING: This option will significantly slow down initialization and table format changes. It should only be used on 486 systems or by very patient people.

Show Discards - When this option is set, a discard tray is displayed. Cards which are removed from the table will be placed in the discard tray. This option is useful to card counters who estimate the played cards by looking at the height of the discard stack. This option cannot be selected with the Show Buttons option.

Small memory - Selecting this option reduces the amount of memory required by CV. Select this option if the game is paging heavily (i.e., the hard drive light is constantly blinking. The background graphics in 800x600 and 1024x768 mode will appear somewhat fuzzy when this option has been selected. However, all other graphics (cards, chips, fonts, the shoe, etc.) will appear as normal.

Speeds

The following options can be set on the OPTIONS - ENVIRONMENT menu.

Default speeds are set fairly slow irrespective of the Speed of the PC model that you have. You can change the speeds as follows:

Dealer - This option sets the speed at which the dealer deals cards and resolves bets.

Players - This option sets the speed at which the other plays bet and make decisions.

Bet/Insure - With this option you can set the amount of time that you have to make an insurance or Bust Out decision. Also, if the "Dealer doesn't wait for bet" option is set, the amount of time that you have to bet before the deal starts. This is not a fixed speed, but is extended if you are moving your chips with the mouse. The movement of chips back to the chip box also is affected by this setting.

Testing

The following option can be set on the OPTIONS - ENVIRONMENT menu.

Stacking the Deck - This option was originally implemented for testing. It has been left in the production version to allow the user to see how different casinos handle specific hands. When this feature is selected, whenever a card is to be dealt, a small window will be displayed that will allow you to specify the card to be dealt. You can move this window to any part of the screen and it will stay there. Click on a suit and a card. The suit does not need to be selected each time.

Environment Settings

The following options can be set on the OPTIONS - ENVIRONMENT menu.

Penetration - This option sets the percentage of the cards that will be dealt before the dealer shuffles. The option is set from the Casino File according to the casino that you select. You can override the penetration here. However, it will be reset if you select another casino. The penetration is limited depending on the number of decks unless you set the "Allow 100% penetration" option.

Decks - You can change the number of decks in the shoe by clicking on the white box at the right. Note: The strategy tables set by the STRATEGIES feature will automatically be changed to the correct values for the number of decks selected according to the currently selected strategy. Strategies are discussed later.

Other Players - Click on the white box to the right to change the number of computer players sitting at your table. Other players play a mediocre game unless you are in Tournament mode.

Burn Cards - After shuffling the deck, the dealer may burn (discard) a few cards. Click on the box to the right to change the number of cards. This value has meaning to card counters.

Starting Money - You can change the size of your bankroll at the beginning of a **session** by typing a new number in the box at the right.

Table Format

There are eight overall table formats from which you can select, six general and two special. The setting of some options can also make additional modifications to the six general formats. The format is selected by clicking the mouse on the desired picture. The general and special formats are described below:

General formats - In all of the general formats, you can play one or two hands. Your hands are always at the lower center of the screen. The screen location of the dealer and other players depends on the format selected. The top three formats are six seat tables and the second row has seven seat tables. Cards are dealt differently on six and seven seat tables. The formats at the left are the normal style seen in a Blackjack game. Your seats are in the middle of the table with players to your right and left and the dealer at the top. The players at the far right and left have their cards dealt sideways. In the upper middle formats, you are sitting at the far left of the table. However, instead of moving you, the table is rotated. The dealer is to your left, some of the other players are sideways to you at your right and you are facing some other players. The formats on the right reverse this.

Special formats - Two special formats can be selected at the bottom of the screen. The first is multiple action and is described under the Multiple Action option of the Odd Options Section. The second special format is tournament play and is described in the section on Tournament Play.

Table Size

Three screen sizes are supported: VGA (640x480), SuperVGA (800x600) and 1024x768 (sometimes called UltraVGA). You may want to select a screen size smaller than your actual screen and keep the Dynamic Graphs or Statistics tables alongside the table. Note, the larger the screen size, the better the resolution.

Face Cards

If you have grown tired of the Middle Ages European Jack, Queen and King on the face cards, you can use this option to select past images from other cultures. This option has no effect on play.

Casinos

CV contains 548 Blackjack rule sets for 338 casinos. (Many casinos have more than one set of rules depending on the table.) The rules have been reproduced by permission from the September 1993 issue of Blackjack Forum magazine. (Colorado casinos are from the June 1993 issue.) Blackjack Forum is a quarterly forum containing the most recent thinking of the experts in casino Blackjack. If you wish to obtain more information on Blackjack Forum you can contact the publisher at:

RGE Publishing
41 Santa Clara Ave.
Oakland CA 94610
(510) 465-6452

A casino can be selected by one of two methods. The upper part of the casino selection screen allows selection by map. Maps are described in the next sub-section. The bottom of the screen allows selection by name. To select by name, first select the area of the world in which you are interested using the selection list at the bottom left by clicking the mouse on the desired area name. Once you have selected a geographic area, all of the casinos in the Casino File in that area will appear in the list at the right. You can now select a specific casino from this list. When the location of the casino is not obvious, the name of the city will appear in the box below the casino list. You can set the playing options for the game to the rules at the selected casino by clicking on the OK button. If you wish to examine the rules first, click on one of the RULES buttons. Note, the CANCEL button cannot be used if you are a new player and have never selected a casino.

Select Table - Most casinos provide more than one set of Blackjack rules. If you move from one table to another, the rules often change. This is particularly true if the number of decks changes. If the Casino File contains more than one set of rules for the casino that you have selected, then the Select Table screen appears. This screen displays the different rule sets. For each rule set, the number of decks, the penetration, the number of tables and any special conditions are shown. Penetration refers to the percentage of the deck dealt before shuffling. The larger the percentage dealt, the better. This is of interest to card counters. Special conditions includes unusual rules like multiple action or over/under. These rules are always restricted to specially allocated tables because the felt has different markings.

Maps

You can select a subset of the casinos known to CV by map location. First, select the desired map from the OPTIONS MAPS menu, or the OPTIONS CASINOS menu. The casinos are shown as red circles and listed in the lower left corner. If you click on a circle, the name of the casino will appear selected in the casino name list. If you select a casino by clicking the mouse on the name in the casino name table, then the corresponding circle will start blinking. You can examine the rules for the casino by clicking on the RULES buttons, or set the game's rules to the rules of the selected casino by clicking on OK.

Graphs

Menu STATISTICS - GRAPHS can be used to show different statistics graphically for the current **session**. You can also show past sessions graphically by using Log Maintenance discussed later. Graphs are limited to 1700 points. If you attempt to display a graph larger than 1700 points, you will be advised to start a new session. This can be done via menu item FILE - NEW SESSION. Six graph types are supported as follows:

Graph Type

Bankroll - If you select the Bankroll option, a graph of your total bankroll (current funds minus markers) over the last session will be shown. The graph will be shown as an area graph unless your funds go negative. In this case, the graph changes to a line graph.

Bankroll + Tips - This graph is the same as the Bankroll graph with the addition of tips shown over time above the bankroll graph. The sum of the bankroll and tips will show the size that your bankroll would have been without tips. Note: Do not take this too seriously. Tipping can be important.

Over/Under Red/Black - This graph can be used to track either Over/Under 13 or Red/Black side betting results. Note: These side bets are mutually exclusive. The Red line shows the overall total wins minus losses for Red or Under side bets; The Black line shows the wins minus losses for Black or Over side bets; and the Green line shows the total wins minus losses.

Error percentage rate - This graph shows the percentage of times that you played correctly according to the selected strategy. The "Warning on strategy error" option on the OPTIONS - ENVIRONMENT menu must be set on during your play for this graph to be produced.

Tournament Play - This graph is used to track your bankroll against the other tournament players at your table. Each of the five players is shown by a separate line. See the Tournament Play section for more information.

Multiple Sessions High/Low/End - This graph shows all sessions (current and past) for the current player. For each player, a single vertical line appears showing the high and low points of the bankroll during that **session**. A small horizontal line juts to the right at the bankroll value at the end of that session.

Print

The PRINT button is used to create a hard copy of the current graph. You will be allowed to select a printer and printer options. If you have a color printer, select the color printing option on the OPTIONS ENVIRONMENT menu. This option will be remembered for the current player between sessions. Otherwise, the colors will be converted to patterns.

Dynamic Graphs

The Dynamic Graphs feature is the same as the Graphs Feature except that you can continue playing the game without exiting the graph. If you have a 1024x768 or larger screen, you can set the Blackjack table size to 640x480 using menu OPTIONS - TABLE SIZE, move the table to one side of the screen and the graph to the other side and continue playing. At the end of each hand, the following graphs will be dynamically updated: Bankroll, Bankroll + Tips, Multiple Sessions High/Low/End and Over/Under Red/Black. Note: You should not use this option with slower PCs. Nearly all currently manufactured PC's are quick enough.

Tables

Menu STATISTICS - TABLES presents a set of statistics for the current **session**. The top of the screen summarizes your bankroll and betting. The middle of the screen presents a table that summarizes wins and losses. This table is separated into columns by bet size. When you start a session, it is natural to make your first bet your minimum bet. The column divisions will be based upon this bet.

The bet ranges are based upon the first bet in the current session. The contents of this array are controlled by the four buttons at the bottom left of the statistics screen as follows:

Show Dollars Won - This option summarizes wins minus losses of various kinds of bets divided by bet size. Note, in normal play, you will lose money in normal hands and make money with Double Downs and Blackjacks.

Show Hand Counts - When you press this button, the dollars in the array are replaced by the total number of hands played in each category.

Show Win % incl. Pushes - Pressing this button will give the percentage of hands that were won in each category.

Show Win % excl. Pushes - This is the same as the preceding chart except that pushed hands are ignored.

The PRINT button will print the displayed statistics. A dialog box will appear to allow printer and option selection. Selection of the Landscape option is suggested.

Dynamic Tables

The Dynamic Statistics feature is the same as the Statistics Feature except that you can continue playing the game without exiting the statistics table. If you have a 1024x768 or larger screen, you can set the Blackjack table size to 640x480 using menu OPTIONS - TABLE SIZE, put the table in one corner and move the statistics window to the other corner of the screen. The statistics table will be updated as you play. Note: You should not use this option with slower PCs. Nearly all currently manufactured PC's are quick enough.

Maintain logs

When you enter the Maintain Logs Screen, a list of all logs, past and present, is presented. For each log, the following information is presented: the name of the player, the **session** number, the number of log records, and the last date that the log was modified. You can select a log by clicking it with the mouse. By clicking on one of the buttons at the bottom of the screen you can then perform the following

Delete - The selected log will be removed after a warning is displayed. Note: Files often take more space than you might think. On older systems, files take at least 2,048 bytes irrespective of the amount of space that utilities like File Manager state. Systems with large disk drives or some data compression systems often have a minimum file size of 8K. Even if Windows File Manager says that a file is only 100 bytes in length, it could require 8,192 bytes of disk space.

Delete All - After a warning, all logs will be deleted except for the sample log and the current log.

Statistics - Clicking on this button will display the statistics table described earlier using the selected log.

Graphs - Clicking on this button will display the Graphs function described earlier using the selected log.

Strategies

There exist many published strategies for playing Blackjack. A few of these strategies are based upon thorough mathematical analyses and extensive computer simulation. Most are no better than throwing darts at a chart blindfolded. You must choose a strategy based upon your own study and available time for practice.

"Valid" strategies are divided into two categories: basic and **card counting**. Basic strategies consist of tables that tell you how to play dependent on the cards that you have versus the up card of the dealer. Card counting strategies are far more complex in that they require you to observe all of the cards as they appear, to track aberrations in the randomness of cards remaining to be dealt, and to bet and play accordingly.

No attempt will be made here to explain card counting. There exist several excellent texts on the subject by the experts in the field. To include a few pages in this document would serve to mislead more than to educate. However, if you do understand one of the strategies included here, CV will track your play against the system and provide practice drills. This section talks to these strategies and drills.

The strategy tables are used by CV for the following purposes:

The point count table for the selected strategy is used in the Counting Drill.

The tables are used for the Flashcard Drill.

The tables are used for the WARNING ON STRATEGY ERROR feature.

The tables are used for the DISPLAY ERROR RATE feature.

Computer players in Tournament Mode use the selected strategy for both play and betting.

The following strategies are supported:

Basic Strategy - A set of simple tables telling you when to hit, stand, double down, split, insure and Surrender depending on your cards and the dealer up card.

Complete Basic Strategy - Fine tuned tables including modifications based on the Blackjack rules in effect, the number of decks in play and including exceptions to the rules.

Red Seven Count - Probably the simplest of valid card counting strategies.

Zen Count - A relatively easy to learn advanced card counting strategy.

Complete Zen Count - A full card counting strategy including modifications for rule variations and decks in play.

Basic Omega II - A relatively easy to learn basic card counting system.

Advanced Omega II - A full card counting strategy including modifications for rule variations and decks in play.

Hi-Opt I - A high efficiency full card counting strategy including modifications for rule variations and decks in play.

Basic High-Low - A relatively easy to learn basic card counting system.

Complete High-Low - A full card counting strategy including modifications for rule variations and decks in play.

Halves - A high efficiency, more difficult variation of Complete High-Low.

High-Low with Aces - The Complete High-Low strategies adjusted for a side count of Aces.

Halves with Aces - The Halves strategies adjusted for a side count of Aces. Very complex.

User Strategies - You may define up to ten additional strategies.

Optional Strategies

The following strategies are available on an upgrade disk at a nominal charge from Gambling Times Incorporated to persons who already have the text containing the underlying systems or who have purchased the systems simultaneously with the disk. See Advanced Theory and Play for text information.

Disk 1 - Million Dollar Blackjack - contains the Simple Plus/Minus, the Advanced Plus/Minus and the Uston Advanced Point Count systems.

Disk 2 - The Uston SSCount - contains five simple strategies for single deck, double deck, 4 deck, 6 deck and 8 deck games.

Disk 3 - Winning Blackjack - contains the Stanley Roberts system.

For details, contact:

Gambling Times Inc.
16760 Stagg St, Suite 213
Van Nuys, CA 91406
(818) 781-9355

Note: Each of the above is a set of strategies. There can exist up to 16 sets of tables for each strategy set dependent on Blackjack options. Each table set contains 6 tables. Altogether, over 200 tables exist.

You can view the tables for all of the above strategies online. However, you should never attempt to use a Blackjack strategy without first reading the full strategy explanations. The basic, Red Seven and Zen Count strategies are explained in Blackbelt in Blackjack by Arnold Snyder. The Basic Omega II and Advanced Omega II strategies are explained in Blackjack for Blood by Bryce Carlson. The Hi-Opt I strategy is explained in The World's Greatest Blackjack Book by Dr. Lance Humble and Dr. Carl Cooper. The High-Low and Halves strategies are explained in Professional Blackjack by Stanford Wong. These strategies have been included with permission of their respective authors. The books can be found in many bookstores. Some of them can be ordered from:

RGE Publishing
41 Santa Clara Ave.
Oakland CA 94610
(510) 465-6452

Select/View

The Strategy Select/View screen allows selection of a pre-defined set of strategy tables and display of those tables.

Strategies - First, you need to select the strategy that you are using. From this screen, you can select a system from the list on the left side of the screen. Note; strategies generally differ by the number of decks in play. They can also vary by some options (e.g. double down after split, dealer hits soft 17, no hole card dealt). The correct version of the system selected will be loaded according to the current setting of relevant options. If you later change the options or change the casino at which you are playing, the correct version of the system selected will automatically be loaded. Selecting User Strategies brings up a screen that allows selection of a

previously defined custom strategy. User Strategy definition is described in the next section.

Tables - If you wish to see the tables loaded for the current system, press one of the buttons on the right of the screen. Again, no attempt is made here to describe strategy. If you have read any of the good texts on the subject, you will recognize the tables. In some cases, you will see an asterisk and a letter in a table location. In this case, there is an exception to the rule shown in the Special Actions table at the bottom of the screen. These special actions are tested by CV. Note: Early Surrender table modifications are NOT supported. Unless Early Surrender comes back, there is little reason to invest time in its play.

Options - When you select a system, the playing options that affect that system appear at the bottom of the screen. If you change any of these options here, the strategy tables will immediately be changed to reflect the new option set.

Index Range - Card counting system tables contain point count indices for determining playing strategy. If this field is set to 99, then the entire table is loaded. You may enter a smaller number to simplify the tables. For example, if you enter a '5', then only indices from -5 to 5 are loaded. This prevents warning messages on highly unusual cases.

Side Counts - To improve betting, playing or insurance decision accuracy, some players keep side counts of Aces and/or Tens in addition to the point count. CV supports side counts of Aces and Tens as follows:

Ace Side Count - If this field is checked, then a side count of Aces will be kept in addition to your primary count. You should not set this field unless you have read the instructions for counting Aces included with the strategy that you are using. The use of this side count and the actions taken by CV depend on whether your primary count counts an Ace as a high card or counts an Ace as zero. These two cases are discussed separately here:

Aces count as zero - Ace neutral strategies include Hi-Opt I, Hi-Opt II, Omega II, Uston APC, DHM, and Revere Advanced Plus-Minus. If you are using any of these systems, the true count is quite accurate for strategy purposes, but less accurate for betting purposes. If you have requested an Ace side count and the Ace counts as zero, then CV will adjust the true count as follows:

Calculate the number of excess Aces (may be negative) in the remaining cards

Multiply the number of excess Aces by the absolute value of the point count value assigned by the current strategy to Ten value cards

Temporarily add the result to the running count

Recalculate the true count according to the current strategy's instructions for betting purposes only

Aces counted in high group - Strategies which count Aces as high cards include Wong High-Low, Wong Halves, Red Seven, Zen Count, Braun/Thorp Plus-Minus, and Revere Point Count. Note: Setting this field in this case requires a different set of strategy tables. Therefore, this field is automatically set according to the selected strategy when the Ace is counted as non-zero. You cannot change the setting in this case. If you have requested an Ace side count and the Ace counts as non-zero, then CV will adjust the true count as follows:

Calculate the number of excess Aces (may be negative) in the remaining cards

Multiply the number of excess Aces by the absolute value of the point count value assigned by the current strategy to Ten value cards

Temporarily subtract the result from the running count

Recalculate the true count according to the current strategy's instructions for strategy decision purposes only

Temporarily subtract double the result from the running count

If you have **not** also checked Side Count of Tens, then recalculate the true count according to the current strategy's instructions for Insurance purposes only

CV will use the adjusted true counts for reporting strategy errors for all play including Insurance and Bust Out. The adjusted counts will also be displayed by the PEEK menu function on the main table, the PEEK button on the Card Counting Drill and will be used in checking decisions in the Flash Card Drill. Also, the other players will keep an Ace side count in Tournament mode if this option is selected.

Ten Side Count - If this field is checked, then a side count of Tens will be kept in addition to your primary count. A side count of Tens for insurance decision purposes is valid with any strategy. If this feature is selected, then a side count of Tens will be kept according to the instructions in Stanford Wong's Professional Blackjack. The Ten count will be used for reporting strategy errors for Insurance and Bust Out and will be displayed by the PEEK menu function on the main table and the PEEK button on the Card Counting Drill.

If you do manage to successfully keep a primary count and Ace and Ten side counts and play accordingly, you might consider giving up Blackjack and turning your efforts toward curing Cancer.

Complete Strategy List

Following is a complete list of the supported strategies. DAS stands for double down after split allowed, NHC indicates European no hole card and H17 indicates dealer hits on soft 17.

Basic Strategy with mods for DAS

Complete Basic single deck with mods for DAS and/or NHC

Complete Basic multiple deck with mods for DAS and/or NHC

Complete Basic single deck H17 with mods for DAS and/or NHC

Complete Basic multiple deck H17 with mods for DAS and/or NHC

Red Seven single deck with mods for DAS

Red Seven multiple deck with mods for DAS

Zen Count with mods for DAS

Complete Zen Count single deck with mods for DAS and/or NHC

Complete Zen Count multiple deck with mods for DAS and/or NHC

Complete Zen Count single deck H17 with mods for DAS and/or NHC

Complete Zen Count multiple deck H17 with mods for DAS and/or NHC

Basic Omega II single deck with mods for DAS and/or NHC

Basic Omega II multiple deck with mods for DAS and/or NHC

Basic Omega II single deck H17 with mods for DAS

Basic Omega II multiple deck H17 with mods for DAS

Advanced Omega II single deck with mods for DAS and/or NHC

Advanced Omega II multiple deck with mods for DAS and/or NHC

Advanced Omega II single deck H17 with mods for DAS and/or NHC

Advanced Omega II multiple deck H17 with mods for DAS and/or NHC

Hi-Opt I single deck

Hi-Opt I multiple deck

Hi-Opt I single deck H17

Hi-Opt I multiple deck H17

Basic High-Low with mods for DAS

Basic High-Low H17 with mods for DAS

Complete High-Low single deck with mods for DAS

Complete High-Low multiple deck with mods for DAS and/or NHC

Complete High-Low single deck H17 with mods for DAS

Complete High-Low multiple deck H17 with mods for DAS and/or NHC

Halves single deck with mods for DAS
Halves multiple deck with mods for DAS and/or NHC
Halves single deck H17 with mods for DAS
Halves multiple deck H17 with mods for DAS and/or NHC
High-Low with Aces single deck with mods for DAS
High-Low with Aces multiple deck with mods for DAS and/or NHC
High-Low with Aces single deck H17 with mods for DAS
High-Low with Aces multiple deck H17 with mods for DAS and/or NHC
Halves with Aces single deck with mods for DAS and/or NHC
Halves with Aces multiple deck with mods for DAS and/or NHC
Halves with Aces single deck H17 with mods for DAS and/or NHC

Optional Systems

Support for these systems is available from *Gambling Times Inc.*:

Uston SS Count Single Deck with and without H17 and mods for DAS
Uston SS Count Double Deck with and without H17 and mods for DAS
Uston SS Count Four Deck with and without H17 and mods for DAS
Uston SS Count Six Deck with and without H17 and mods for DAS
Uston SS Count Eight Deck with and without H17 and mods for DAS
Uston APC single deck with mods for DAS
Uston APC multiple deck with mods for DAS and/or NHC
Uston APC single deck H17 with mods for DAS
Uston APC multiple deck H17 with mods for DAS and/or NHC
Uston Simple Plus/Minus single deck with mods for DAS
Uston Simple Plus/Minus multiple deck with mods for DAS and/or NHC
Uston Simple Plus/Minus single deck H17 with mods for DAS
Uston Simple Plus/Minus multiple deck H17 with mods for DAS & NHC
Uston Advanced Plus/Minus single deck with mods for DAS
Uston Advanced Plus/Minus multiple deck with mods for DAS and/or NHC
Uston Advanced Plus/Minus single deck H17 with mods for DAS
Uston Advanced Plus/Minus multiple deck H17 with mods for DAS & NHC
Winning Blackjack single deck with mods for DAS
Winning Blackjack multiple deck with mods for DAS and/or NHC
Winning Blackjack single deck H17 with mods for DAS
Winning Blackjack multiple deck H17 with mods for DAS and/or NHC

Define Strategy

CV provides the ability to define ten user strategies. These strategies can be based on one of the built in strategies or created from scratch. The definition process appears very complex, but actually is quite brief for most strategies.

To begin, select the STRATEGIES - DEFINE STRATEGY menu. Then, follow the steps below. Note, your work is saved as you follow the process to prevent losses from a power failure.

Strategy Number - First, select which of the ten strategies that you wish to define or modify. Any previous work will be reloaded. If you have never defined a strategy, the basic strategies will be loaded.

Strategy Name - You may define a name here.

Based on - If you wish to start with the definition of a supported system, select a system in this option group. After selecting the system, you must click on the INIT button to load the tables. This requirement prevents accidental destruction of your strategy. Important: Pressing INIT will wipe out any previous table customization that you have performed for the selected User Strategy.

Affecting Options - If your strategy contains variations according to any of the listed options, you must specify which options. This will cause generation of the necessary tables. The more options selected, the more complex the system to specify (and learn).

Side Count - If this strategy requires that a side count of Aces be kept, check this option.

True Count Divisor - This option allows selection of the true count calculation method for card counting systems. Selection of "No Adjustment" causes the true count to be the same as the running count. This is used in unbalanced count systems and systems like Uston Simple Plus/Minus.

Insurance Rule - This option provides for insurance strategy. You can specify eight insurance numbers for single deck play through eight deck play. The Red Seven Rule provides for an unbalanced count insurance strategy. Decimals are allowed.

Point Count Table - For card counting systems, you may specify point values.

Starting Count - Most systems reset the count to zero after a shuffle. However, some unbalanced systems have a starting count. The starting count will be set to the number in the first box plus the number in the second box multiplied by the number of decks -1.

When you have specified all of the options, press OK to enter the table modification phase.

Modify Tables

The Modify Tables screen provides for the modification of from 6 to 32 tables. Shortcuts for specifying complex strategies will be described later. The tables that are generated depend on the selection of Affecting Options on the previous screen.

Full Table Buttons

The six types of tables are listed on the left of the screen. These are the typical tables found in valid Blackjack strategies. If there are no Affecting Options, you will see one column of red buttons. Each of these buttons represents a table that must be generated. If the second column of buttons appears, then you should specify separate tables for Single and Multiple deck play. Note: if the "Columns 1, 3 & 5 indicate 1 or 2 decks" option is selected, then the first column is used for single and double deck and the second column is used for shoe games. If third and/or fourth columns appear, you should specify these additional tables for Dealer hits soft 17 rules. Note, these first four columns of tables are complete tables. That is, one column of tables will be loaded depending on the options selected. Each of these tables is modified by clicking on the appropriate button. You will enter a table modification screen described later. When you return to this screen, the button representing the modified table will turn green.

Copy Table Buttons

To speed specification of multiple columns of tables, a copy table function is provided. Below the second, third and fourth columns (if they appear) are blue buttons. Pressing the blue button below the second column will cause the entire set of tables in the first column to be copied into the tables in the second column. The third blue column button copies the first column to the third column. The fourth column button copies the second column to the fourth column (not the first column). After copying the tables, the buttons representing the tables that have been copied to turn yellow to indicate that they have been loaded. Normally, you will modify all of the tables in the first column (turning each button green), then copy the first column to the second column (turning its buttons yellow), then modify each second column table, turning the yellow buttons green. Normally, there will be few modifications to the second, third and fourth columns. Note: if you do not need to modify a table, you do not need to turn the button green.

Modification Table Buttons

The Double Down after Split and No Hole Card tables are not full tables. These tables specify modifications to be applied to the previously discussed tables if DD after Split or No Hole Card options are in use. These tables usually contain very few entries. Note: DD after Split buttons only exist in the Split Tables row. Only one column of No Hole Card tables exists for both single and multi-deck play

Saving Strategies

User defined strategies are automatically saved in the CVERITE directory. User Strategies I, II, III, etc. are saved in files US8.BIN, US9.BIN, US10.BIN, etc., respectively. After defining a strategy, you may want to make backup copies of these files to avoid messing them up later..

Modifying a Table

The following describes modification of a strategy table. This table is entered from the Modify Tables screen.

When you press a button on the Modify Tables screen, you will enter a new screen that displays the selected table. The screen will look very like the screen displayed from the Select/View Strategy menu except that here it can be modified. To modify the table first select a color by clicking on the red, green or blue box at the bottom left of the screen. If you select red or green, you can now change any cell in the array to red or green by clicking on the desired cell. If you wish to turn several cells to one color, you do not need to re-select the color each time. If you select the blue color, you must specify a number for each cell in the array that you change to blue. If you do not select a number, a zero will be entered. The Split table contains two shades of blue buttons, one for splitting above a value and for splitting below a value.

The above describes modification of full tables. Modification tables are slightly different. When a modification table is displayed, most or all of the cells in the array will be black. Black indicates to CV that this table value is not affected by the option for which this table exists (DD after Split or No Hole Card). If you have loaded Complete Zen Count or Complete Basic Strategies, then some of the cells in some of the modification tables will already be set. Modification of these tables is the same as for the full tables except that a black color box also exists to allow turning a cell off.

Special Actions

Some strategies require unusual actions that cannot be specified in a normal manner. To specify an unusual action, press the asterisk key (*) instead of entering a number in the blue box. A table of special actions will be displayed. The special actions that are valid for the current table will be in black. Invalid options will be displayed in gray. Select an option and press OK. The code will be entered in the blue box and a footnote placed below the table describing the special action.

Strategy Loading Process

Once you have fully specified a strategy, you can make it the active strategy by pressing the appropriate button on the STRATEGIES - SELECT/VIEW screen. Depending on the Affecting Options and the options currently in effect, the correct column of tables will be loaded. If necessary, the modification tables will also be applied. Whenever you change an option or number of decks during play, the appropriate table changes will take place.

Betting Strategy

The following describes the Betting Strategy screen invoked from STRATEGIES - BETTING STRATEGY menu.

You may specify a betting strategy with the Betting Strategy feature. This feature has been designed for card counters and is activated by turning on the "Warning on Betting Error" switch near the bottom of the screen. Changing nearly any of the options on this screen will automatically set this switch. Betting Strategy checking is **not** active during Multi-Action or Tournament play.

Load/Save Betting Strategy

CV contains three sample sets of betting specifications and up to three additional sets of specifications that you can set. Clicking on one of the Load buttons will set the remainder of the screen to the corresponding pre-defined specification. You can then modify the settings if you wish.

Clicking on one of the Save buttons, will save all of the settings on the screen (except for the Switches section) to the desired User Specification. You can enter strategy names to the right of the buttons.

Bet Index Table

The Bet Index Table is used to look up a betting index dependent upon the current true count. This table contains percentages. The exact use of this table is determined by additional options described below.

Method

Three general methods of calculating the optimal bet are supported as follows:

Fixed Spread - The simplest point-based betting scheme is a fixed spread. When set, the true count is compared against the top row of the Bet Index Table, and the corresponding entry in the bottom row of the table is used to calculate the optimum bet. The optimal bet is set to the percentage of the starting bankroll indicated by this number. For example, if the starting bankroll was \$1000 and this number is 2.5, then the optimal bet is \$25. The starting bankroll can be changed by modifying the Starting Money field on the OPTIONS - ENVIRONMENT screen and starting a new session..

Stratified Spread - The Stratified Spread method is the same as Fixed Spread except that the bets will be changed if the bankroll varies beyond specified points. When this option is selected, the Stratification Triggers table is enabled. The triggers indicate where the changes in the spread will occur as a percentage of the bankroll. For example, suppose the starting bankroll is \$1000. At the beginning, optimal betting is calculated as with the Fixed Spread. If the Downward Revision is set at 50%, then optimal betting will be calculated differently if the bankroll falls below \$500. All bets will be calculated as if the starting bankroll had been \$500. If the bankroll falls by 50% again, to \$250, optimal betting is calculated as if the starting bankroll had been \$250. To return to the higher level of betting, the bankroll must now rise to the level indicated by the Upward Revision setting. For example, if you have dropped to \$500 and the Upward revision is set to 200%, you must increase the bankroll to 200% of \$500 (\$1000) to increase betting to the original level. Note: This is even true if you turn off your PC and then restart it. The betting level will remain where it last was until you begin a new session by clicking on New Session on the WHO ARE YOU screen or selecting FILE - NEW SESSION from the

menu.

Kelly Criterion - "Kelly" refers to a scheme first discussed by J. L. Kelly in an article named "A New Interpretation of Information Rate" in *IRE Transactions on Information Theory* in 1956. Kelly essentially acts like Stratified, but with constant changes in optimal betting calculation depending on the current bankroll. Instead of using the Bet Index Table to determine a percentage of the **starting** bankroll, a percentage of the **current** bankroll is used. This is more difficult because you must constantly estimate the size of your bankroll and you must take percentages of odd numbers instead of simple numbers like \$1000. On the other hand, most experts agree that you are less likely to lose your entire bankroll using this method. Because the calculation is more difficult, a 10% error is allowed by CV without triggering a warning.

Multiply Top

Normally, the top row of the Bet Index Table is set to -, 0, 1-11 and >11 indicating the entry to be used for a minus point count, a neutral point count, 1-11 and greater than 11. The count used to determine the correct entry is the true count optionally modified by an Ace side count. For some high-level point count systems, this is not a satisfactory spread. You can change the top row by placing a multiplier in the Multiply Top Box and then selecting any other option on the screen. The entire top row is multiplied by this number. For example, placing a "2" in this box will allow a spread to 22 instead of 11. For some unbalanced systems, the value of a specific running count is dependent on the number of decks. For example, a running count of 12 with one deck is more valuable than the same running count with six decks. For such systems, you can place a "P" in this field. The top row of Bet Index Table will automatically be adjusted whenever the number of decks is changed by any method. Instead of incrementing the columns of the top row by one, the top row is incremented by the selected systems pivot point divided by two. The pivot point is the amount of imbalance and is dynamically calculated by CV.

If you are using the Stanley Roberts "Winning Blackjack" system, you may place a "V" in the Multiply Top Box. This will set the top to the values for Very Poor, Poor, Rich, Very Rich and extrapolated higher values as per the number of decks in play and Table 19 in "Winning Blackjack." (Included by permission of the author.)

Multiply Bottom

This field is used to change the bottom row. This works differently from the Multiply Top button. Here, you specify a number and click on the Multiply Button (the button with the large "X".) The **current** values in the bottom row (as opposed to the **original** values as above) are multiplied by this number. This is merely a simpler method of changing every entry in the bottom row. A non-integer may be used.

Sensitivity

You may reduce the sensitivity of the betting warning mechanism by increasing the number in the Sensitivity Box. If this number is zero, you must get the optimal bet correct (+/- 10% with the Kelly Method.) If you place a "1" in this Box, there will be no warning if you specify a bet according to the correct column in the Bet Index Table, or the entry just before or after that column. A "2" will allow an error to exist within two column of the correct column. Etc.

Natural Betting Options

Unfortunately, if you always make the optimal bet in a casino, you will probably be quickly identified

as a card counter. When set, the following options will limit the correct bet to natural bets. You will then be warned when making an unnatural bet. An unnatural bet is a bet variation that would not appear natural if made by a typical gambler.

Rounding - With any of the methods, but particularly Kelly, the optimal bet will often end up an odd number. Betting exact numbers like \$23 is not natural. The optimal bet will be rounded, if this option is set, according to the following:

- If the bet is greater than \$15, round to nearest \$5
- If the bet is greater than \$75, round to nearest \$25
- If the bet is greater than \$300, round to nearest \$100

Note: If the Sensitivity Box is set to 1 or greater, the minimum bet allowed without a warning is rounded down, the maximum bet is rounded up and the optimal bet is rounded to the closest round number.

No Unnatural Raise after Push - If you have pushed a hand (neither won or lost), it is unnatural to raise the bet before the next hand is played. If this option is chosen, then the suggested bet will not increase, even if warranted by the updated True Count, after a push. If you raise the bet, a warning will be issued. There are exceptions. If you have doubled down or split and ended up with a push, you will be able to leave all or some of the already added money in your betting box if warranted by the True Count.

No Unnatural Raise after Loss - If you have lost a hand, it is unnatural to raise the bet before the next hand is played. If this option is chosen, then the suggested bet will not increase, even if warranted by the updated True Count, after a loss. If you raise the bet, a warning will be issued. If you surrendered the previous hand, you will be allowed to bring the bet up to the original level.

No Unnatural Leap - If you have won a hand, it is unnatural to raise the bet to more than double the original bet before the next hand is played. If this option is chosen, then the suggested bet will not increase above this level, even if warranted by the updated True Count, after a win. If you do, a warning will be issued. There are exceptions. If you have doubled down or split or obtained a Blackjack or bonus and, as a result, ended up with more than double your original bet in your betting box, you will be able to leave all or some of the added money in your betting box if warranted by the True Count.

Two Seat Play

This option determines optimal bet calculation when you are playing two hands as follows:

Independent - When selected, this option indicates that the two hands are treated completely independently. This is **not** natural for a card counter. Most counters will split to multiple hands only when the deck is rich. However, you may select this option if you are concentrating on play strategy and wish to speed the game.

Together - With this option, the **sum** of the bets for the two hands is compared against the optimal bet instead of checking each hand independently. The bets may be split between the hands unevenly. All of the "Unnatural Betting Options" apply to the bet sum including the exceptions. You may freely move money between the two hands.

The box to the right of the Together Option provides an additional variable when two hands are active. Some experts (e.g. Snyder, Wong) believe that when splitting to two hands, optimal bet calculation must be tempered by applying a multiplier. The optimal bet is multiplied by this number when two hands are active. The multiplier can be above or below 1.0. A setting below one is suggested to avoid large bankroll swings.

Switches

These switches are not part of the strategy, but are player options remembered in the player file by player.

Warning on Betting Error - When set, a yellow box will appear on the table with the suggested bet whenever you make a bet outside of the calculated valid range. If two hands are being played and the "Independent" switch is set, two warnings can occur. Only one warning error can occur if the "Together" option is set.

Show Camouflage Button - Occasionally, you will want to make a bet that you know is not within the valid range. This bet is made to camouflage your play as a counter, or because you think that you can get away with an unnatural bet, or because the count has changed too dramatically for you to ignore sensible betting. When this option is set, a small button with a "C" on it will appear on the shoe on the main table. Normally, you click on the shoe, or just wait for the dealer to start a new hand. If you wish to indicate a camouflage bet, click on this button to start the next hand. When you press this button, no warnings will be issued for that hand.

Counting Drill

STRATEGIES - COUNTING DRILL invokes the Counting Drill. The greatest problem encountered by card counters is failure in getting the count correct. The Counting Drill allows **card counting** practice with cards thrown at you in several different ways. After all, the dealer does not face all the cards on the table in nice lines pointing towards you. Select options as follows:

Cards - Cards are displayed one at a time, two at a time, or randomly one or two at a time according to the setting of this option.

Orientation - Cards are displayed Vertically, Horizontally (sideways), or randomly as specified by this option.

Placement - Pairs of cards are displayed one above the other, one at the side of the other, or one to the upper right of the other, or randomly as selected by this option.

Deal Until - When performing a counting drill, card counters often remove a card or two from the deck before starting the drill. When completed with the deck, they then use the count to determine the value(s) of the removed cards. This option simulates this action by pausing automatically near the end of the deck. Pressing CONTINUE will then display the remaining card(s). Note: True Count is meaningless at the end of the deck.

Note: The three above options can be combined in any combination to allow numerous display situations.

Speed - Moving the Speed bar up will increase the speed of the card displays.

Decks - Moving the Decks bar down will increase the number of decks.

Start - Pressing the START button will begin the drill. Cards will be displayed according to the selected options.

Peek - Pressing the PEEK button will stop the cards and display the current count, remaining decks, and true count according to the currently selected system. If Ace and/or Ten side counts are kept, then these counts are also displayed. Both the number of Aces dealt is shown and the number of excess Aces remaining. Adjusted betting, playing and/or insurance true counts are also shown according to the side counts kept. The PEEK button will change to CONTINUE when hit. Continuous display of the count is not supported while the drill is still moving as this would defeat the purpose. Press CONTINUE to hide the count and continue.

Stop - This will halt the drill.

Exit - This will exit back to the game.

Flashcard drill

STRATEGIES - FLASHCARD DRILL invokes the Flashcard Drill. The Flashcard Drill is designed to aid in resolving the second problem facing card counters - not playing accurately against the strategy tables. This drill can also be used by basic system players. The process consists of displays of dealer up cards and player cards followed by you selecting the correct move under the displayed circumstances according to the selected strategy and situations. The following describes the screen:

Count - If you are not using a **card counting** strategy, ignore this option. For card counters, the count affects the correct responses to the flash cards. You set the counts to be tested in the Count group. Zero means always test a true count of zero. Random will change the count for each flashcard pseudo randomly. The card count will be displayed in the center of the screen. The randomness is NOT evenly distributed over all counts. Instead, random true counts are generated in a bell curve centered on zero. You can also set a constant true count using the SET TO box.

Situations - Flashcards will be displayed to test for all of the situations that you have set. This is used in two ways. First, only flashcards that are relevant to the selected situations will be shown. Secondly, responses are valid only for the selected situations. For example, if you tell CV not to show flash cards for splits, then SPLIT is not a valid response. Even the obvious player 8,8 against dealer 5 is STAND instead of SPLIT if you do not select the SPLIT situation.

Start - When you press the START button, a flashcard is displayed. A flashcard consists of a dealer up card (and down card) displayed at the top of the screen, two player cards in the middle of the screen, and a true count between the cards. You must hit one of the response buttons in the lower middle of the screen to indicate the correct play in the described situation.

Error Indicator - The Error Indicator will flash Red and indicate the correct choice if you respond incorrectly. You must then hit the correct response button to continue. The drill will not continue until you hit the correct response button.

Stats - The Stats area tracks the hands tested, the percentage of situations answered correctly, the total time expired and the average time per flashcard.

Systems - You can change the counting or basic strategy being tested by pressing the SYSTEMS button. The system in effect is displayed at the top of the screen. Note, the system tables are dependent upon the number of decks selected on the OPTIONS - ENVIRONMENT menu and some additional player options.

Reset - The RESET button resets the statistics.

Exit - EXIT returns to the game.

Error Tables

If the "Warning on Strategy Error" option is turned on, strategy errors are recorded in tables that match the strategy tables. Flashcard Drill errors are recorded in the same tables. These tables can be used to point out areas where you need more study and practice.

The STRATEGIES - ERROR TABLES function can be used to display the Error Tables. Each time that you make a strategy error, CV determines which table cell contains the rule that was violated and increments the error count for that cell. For example, if you **Hit** an 8, 8 against a dealer 5, then the Split Table cell for 8, 8 vs. 5 is incremented. Also, if you **Split** a 10, 10 against a 2, then the Split Table cell for 10, 10 vs. 2 is incremented.

Peek at Count

The Peek at count option in the Strategies menu will display the current running count, the remaining decks, and the current true count as calculated according to the strategy in effect. Function Key 2 can be used as a short-cut to invoke this option.

If Ace and/or Ten side counts are kept, then these counts are also displayed. Both the number of Aces dealt is shown and the number of excess Aces remaining. Adjusted betting, playing and/or insurance true counts are also shown according to the side counts kept.

Shuffle

When selected, the SHUFFLE option in the FILE menu causes the decks to be reshuffled and the card counts to be reset.

Last Hand

Selecting FILE - LAST HAND will display all of the cards played in the prior hand. If the dealer is placing the discarded cards into the discard tray in the correct order, then they can be pulled back out and placed into their original positions. This will be done in good casinos if you challenge a dealer action. Note: In the rare case that a shuffle occurs in the middle of a hand, then only those cards after the shuffle can be recovered.

New Session

The FILE - NEW SESSION menu will perform the following actions:

A new log will be started. The previous log will be deleted if the "Auto delete logs" option on the OPTIONS - ENVIRONMENT screen has been selected. Otherwise, the log will be retained and can be later displayed using the menu STATISTICS - LOG MAINTENANCE..

All chip stacks are removed from the table.

The bankroll is reset to the STARTING MONEY value on the OPTIONS - ENVIRONMENT screen.

The deck is shuffled and card count reset.

If you have a Dynamic Graph and/or Statistics Table displayed, then all displayed data will be reset.

The strategy error rate will be reset.

Markers

You may borrow money from the Casino by buying markers (I.O.U.'s). The main table will show no indication of markers held. However, the logs, graphs and statistics tables will take into account markers. You can view or modify markers by selecting the menu item FILE - MARKERS. A window will appear displaying the current marker status and allowing the following actions:

BORROW - Clicking on the Borrow button will increase your bankroll and increase the money owed to the casino by the amount set in the STARTING MONEY box on the ENVIRONMENT - OPTIONS menu.

PAY OFF - If you win money back, you can pay off the markers by pressing PAY OFF.

Note: If you obviously need additional funds, a Marker button will appear in the **chip box** without selecting this function. You can press this button to buy one marker.

Note: Borrowing and paying off markers does NOT affect graphs and statistics tables. They, automatically, take into account markers held when displaying your bankroll.

Search

The FILE - SEARCH Function provides the ability to locate casinos with specific rules as follows:

Search - To perform a search, first, select a world region from the list on the left. You can specify ALL to search all regions. Next, click on the desired rules. If you click on multiple options, only casinos with all selected rules will be found. When you click on SEARCH, a list of the casinos from the selected region with the desired rules will be displayed in the box on the right. If the list does not fit in the box, a scroll bar will appear. Note: Only casinos will be shown that have all of the selected rules on a single Blackjack table. For example, Foxwoods casino allows Over/Under 13, Multi-action and Super 7's. But; they are not available on the same table. Separate tables are allocated for each rule. It is rare that you will find more than one of these rules on the same table.

Rules & Odd Rules - Once you have performed a search, you can examine the full rule set of one of the listed casinos by clicking on the desired casino in the box on the right and then pressing RULES or ODD RULES.

Select - You can load the rules into CV by selecting the desired casino and pressing SELECT.

Print - The PRINT function will perform the search and print the results in addition to displaying them. A dialog box will appear to allow printer and option selection.

Tournament play

Tournament Play is a simulation of a Blackjack tournament. Tournaments differ from normal play in the following ways:

Play is divided into rounds.

You are playing against the other players, not against the dealer. You must end a round with more money than the other players or tie for the highest bankroll in order to win. You must win all rounds to win the tournament.

The other players play much better in tournament play than they play in normal play. They are far more likely to double down or split. They will play according to the strategy selected. If the selected strategy is a **card counting** strategy, then they will count cards. They will vary their bets according to the count. If they find themselves behind near the end of a round, they will do their best to catch the leader through heavy betting.

You cannot borrow money. If you, or another payer, hits zero, you are out of the tournament.

The table is a five seat table. You play one seat, in the center.

The deal and play are still clockwise. However, the first person to receive a card and to play rotates to even the odds between players. Payoff order is the same as normal play.

The five player bankrolls are displayed in the upper right of the screen. Seat one is to the far right. You can graphically display the five bankrolls using GRAPHS. Dynamic Graphs are not supported for this graph as it reduces realism.

Once you have entered Tournament Mode, you cannot change any options. After all, you cannot change the rules in the middle of a tournament. Therefore, you must set all desired options, including speeds, before entering tournament mode.

The "Dealer makes obvious plays" feature will be suspended during the last few hands of a round to allow unusual plays. If you are behind near the end of a round, it might make sense to make desperate attempts to get ahead like doubling down on stiff's or splitting any pair.

A few options (e.g., Dealer makes errors, side bet options) are not allowed.

When you enter Tournament Mode, the Tournament Parameters screen will be displayed. These parameter settings are kept in the Player File to retain them between sessions. Set the parameters as follows:

Tournament Mode - Fixed # of Hands indicates that the tournament rounds contain a set number of hands. This is the common tournament version. Timed indicates that each round lasts a set number of minutes. This is much less common, but such tournaments do exist.

Limits - The lower and upper betting limits are set here. Unlike normal play, the limits cannot be changed during Tournament Play.

Rounds - Set the number of rounds here. Four is common.

Hands per round - If Fixed # of Hands is set, this field sets the number of such hands to be played in a round.

Minutes per round - If you select Timed, this field appears and allows you to set the time limit.

Buy in - This field is used to set the initial bankroll for each player.

OK - Clicking on this button will generate the tournament table.

Once the tournament table is displayed, you will see a control box in the upper left of the table. The Round number and Hands played or Time expired are displayed. Two buttons exist in the control

box. The names of these buttons will change to fill different functions determined by circumstances as follows:

Stop - The STOP button will halt the tournament and return to normal play. You can only press this button between hands. A new **session** log will be started. If you wish to leave the game but return later, do **NOT** hit this button. Instead, use FILE - EXIT or double-click the control box in the far upper left of the window. When you start CV again, the tournament will resume where you left off if you exit **WITHOUT** hitting the STOP button..

Start - This button has four possible captions. When set to START, pressing the button will begin the first round of the tournament.

Pause - When started, the START button changes to a PAUSE button. Pressing this button between hands will stop play and stop the clock if timed play was chosen. If you do not press this button, but just walk away from the PC, the other players will continue playing. Actually, not playing every hand in a tournament violates realism. CV will continue without you to allow observation of Tournament Play. You can use the "Player must bet" option on the OPTIONS - ENVIRONMENT screen to force the dealer to wait for you to bet.

Next - At the end of a round, you are either promoted to the next round or eliminated from the tournament if you do not have the highest bankroll. If you are promoted, the NEXT button appears. Pressing this button will begin the next round. If you have been eliminated, the START button reappears allowing the start of a new tournament.

Restart - If you exit the game and restart it at another time, this button will appear. You can restart the tournament from the last hand by pressing this button.

Note: If you exit CV during Tournament Play and restart it from the Windows Program Manager, CV will restart in Tournament Play where you left off. However, if you press the New Session button on the WHO ARE YOU screen when you restart CV, Tournament Play will be dropped.

Edit Casino

The Casino Data Base contains the rule and play definitions including 63 option settings each for 548 Blackjack games in 338 actual casinos. The Edit Casino Function can be used to make changes in the Casino Data Base. The command buttons will be described first followed by the parameter definitions. In all cases, the term 'current casino definition' refers to the set of rules last selected from the Casino, Maps, Search or Edit Casino functions.

Commands

Load Casino - Clicking on the Load Casino button will bring up the normal casino selection screen to allow changing to a different casino definition.

Delete Casino - Clicking on this button will remove the current casino definition from the Casino Data Base. If more than one set of rules for the current casino exists, only the currently selected set of definitions will be removed - not the entire casino. After the casino definition has been deleted, you will be asked to specify a new current casino.

Update Casino - The Update Function will modify the current casino definition. All of the fields on the Edit Casino screen as well as fields on the PLAYER OPTIONS and ODD OPTIONS screens will be copied to the Casino Data Base for the current casino definition. Note: If you change the casino name before clicking on the Update Casino button, a warning message will be issued to make certain that you are updating the casino name instead of attempting to add a new casino.

Add Casino - To add a new casino or an additional set of table definitions for a casino, use the Add Casino Function. A completely new casino definition will be added to the data base. Again, all of the fields on the Edit Casino screen as well as fields on the PLAYER OPTIONS and ODD OPTIONS screens will be copied to the Casino Data Base for the new casino definition. You may enter any number of table definitions for a single casino.

Update Casino - The Update Function will modify the current casino definition. All of the fields on the Edit Casino screen as well as fields on the PLAYER OPTIONS and ODD OPTIONS screens will be copied to the Casino Data Base for the current casino definition. Note: If you change the casino name before clicking on the Update Casino button, a warning message will be issued to make certain that you are updating the casino name itself instead of attempting to add a new casino.

Add Casino - To add a new casino or an additional set of table definitions for an existing casino, use the Add Casino Function. A completely new casino definition will be added to the data base. Again, all of the fields on the Edit Casino screen as well as fields on the PLAYER OPTIONS and ODD OPTIONS screens will be copied to the Casino Data Base for the new casino definition. You may enter any number of table definitions for a single casino.

Exit - The Exit Button exits this function with no additional effect.

Parameters

Name - The name of the Casino. There may be more than one set of rule definitions for the same casino and the same casino name can be used for different areas of the world.

City - You may enter a city, state and country name to further identify a casino.

Penetration - The percentage of the deck dealt at a particular set of casino tables is specified here.

Area - You may specify the area of the world in which this casino is located here. This is used to separate casinos into manageable groups on the Casino Selection and Search functions.

Decks - Specify the number of decks used in this rule set here.

Tables - You may indicate the number of Blackjack tables at the specified casino with this set

of rules. This field is for information purposes only.

Lower Limit & Upper Limit - The minimum and maximum bets that can be made is specified here. A set of different table limits within this range is generated whenever this casino definition is used.

Memory Considerations

So, you have purchased an amazing 4MB power PC system (1,000 times the memory of computers built 30 years ago), and you have loaded it up with all of the software that everyone says that you cannot live without. Now, you find that the popular, sophisticated spreadsheets and word processors that claim to run in two MB seem sluggish. Keep in mind, a fully loaded system can actually use nearly all of the available memory before you have started a single user application. For example: a popular disk maintenance scheduler uses 275,000 bytes when it is NOT doing anything; a popular communications card (FAX, voice management, etc.) requires 500,000 bytes while it is NOT active; a popular voice recognition card requires 1,100,000 bytes; new, sophisticated video accelerators can require over 400,000 bytes. Add to this fonts, cache, other device drivers and you can use up all of your memory without doing any work.

If you do experience memory problems when executing CV, try the following:

Terminate Windows and restart it. This will remove problems caused by previously run "dirty" applications (i.e., applications that do not release memory when completed). Note: Windows does not release memory used by applications that have terminated. That task is left to the application.

Terminate any other active Windows applications.

Reduce the Windows memory used by caching software. Most people use SMARTDRV for this purpose in the CONFIG.SYS or AUTOEXEC.BAT file. The second number following SMARTDRV.EXE should be 256 or smaller.

Create or increase permanent swap space. Select CONTROL PANEL from the Windows Program Manager, then 386 Enhanced, then VIRTUAL MEMORY, then CHANGE. Increase the swap space on this screen. You should have at least 3000KB. However, Windows will not use more than the recommended size. Note: Windows will often incorrectly state the recommended size. To get the correct value, set the new size to 0. Then reboot Windows and repeat the instructions in this paragraph. Windows should now show a higher recommended size. You can now set a higher size.

Set the CV SMALL MEMORY option at the bottom of the OPTIONS - ENVIRONMENT screen. This option reduces the amount of memory required by CV in high resolution mode (1024x768) by 800K. The background graphics will be fuzzier and other subtle graphics changes will occur. However, the cards, chips and other important graphics will remain high resolution.

If you are running at high resolution (1024x768), reduce the table size to 800x600 via the OPTIONS - TABLE SIZE menu.

If you have a 256 color graphics driver, consider switching to a 16 color driver.

Limit Sign

The Casino File contains the lowest and highest possible bet for each type of game in each casino. The limit table is initialized according to the casino that you have selected. Although the lowest and highest numbers are taken from actual casino observation, guesses are made at the different ranges between the lowest and highest limits. In practice these ranges often change for different days, and sometimes different hours of casino operation. You may select one of the low/high limit pairs by clicking the Limit sign on the table and then selecting the desired limits. You can override this table from the OPTIONS - PLAYER OPTIONS menu.

A session is a set of hands. A session can include hands from part of an execution of CV or can include several executions of CV. A new session is started when you select the New Session button from the Who are you screen at start up or from the FILE - NEW SESSION menu. A new session is also started when you start or stop a tournament.

Card counting strategies require you to observe all of the cards as they appear, to track aberrations in the randomness of cards remaining to be dealt, and to bet and play accordingly.

The chip box contains your bankroll in chips. Chips are in stacks according to denominations of \$.50, \$1, \$5, \$25, \$100, \$500 and \$1,000.

Glossary

Card counting	Card counting strategies require you to observe all of the cards as they appear, to track aberrations in the randomness of cards remaining to be dealt, and to bet and play accordingly.
Chip Box	The chip box contains your bankroll in chips. Chips are in stacks according to denominations of \$.50, \$1, \$5, \$25, \$100, \$500 and \$1,000.
Double down	Double your bet and draw exactly one card. This option is normally available only on the first two cards.
Insurance	A side bet that the dealer has a Blackjack. Offered if the dealer has an Ace showing.
Limits	The lowest and highest bet allowed. May be changed by clicking on the Limit box. The Limit Box is the box showing the current limits.
Logs	Logs are files that contain a play by play history of the game.
Markers	Markers are I.O.U.'s representing money borrowed from the casino.
Penetration	Penetration refers to the percentage of the cards that the dealer will deal before shuffling.
Sessions	A session is a set of hands. A session can include hands from part of an execution of CV or can include several executions of CV. A new session is started when you select the New Session button from the Who are you screen at start up or from the FILE - NEW SESSION menu. A new session is also started when you start or stop a tournament.
Soft hands	A soft hand is a hand that contains an Ace counting as 11. This hand cannot be busted by drawing a ten.
Split	Splitting a hand refers to creating two hands from one hand that contains a pair.
Stiff	A stiff is a hand that will bust if a ten

Surrender

is drawn.

Surrender is an option that allows you to give up a hand on the first two cards for half of your bet.

