

Playing Strategy Tables

There are two tables used for playing strategy decisions. The first is called the Base Play Table. The other is called the Special Play Table. These tables are used to determine what the correct play should be. This is determined by finding the intersecting cell in the table and applying that decision. Decisions are Hit, Stand, Split, Double Down, and Surrender.

The current playing strategy tables in effect are used by the Hint Feature and the Auto Help System. Whatever decisions you have coded into the two strategy tables are used to provide Hint Button feedback as well as displaying the correct playing decision (Auto Help).

The strategy decision cells are arranged in a matrix format in which each row and column have specific meanings. Across the top of a table are the 13 possible "up card" values for the Dealer's Hand. Down the left side of a table are the 27 types of basic hand combinations the player may have.

To find the correct playing decision, start with correct "Dealer Shows" column and work your way down the "Players Hand" rows until you reach the one that represents your hand value. The intersecting cell contains the correct playing decision.

Base Play Table:

BASE PLAY TABLE - Ultima21.sgy													
	Dealer Shows:												
Your Hand:	2	3	4	5	6	7	8	9	10	J	Q	K	A
2 thru 7	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit
8	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit
9	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit
10	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit
11	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit
12	Hit	Hit	Std	Std	Std	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit
13	Std	Std	Std	Std	Std	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit
14	Std	Std	Std	Std	Std	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit
15	Std	Std	Std	Std	Std	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit
16	Std	Std	Std	Std	Std	Hit	Hit	Hit	Hit	Hit	Hit	Hit	Hit
17 thru 21	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std

The Base Play Table is the "default" decision table and is used when the Special Play Table's decisions do not apply. The Base Play Table contains only Hit and Stand decisions and are always available.

Special Play Table:

SPECIAL PLAY TABLE - Ultima21.sgy													
	Dealer Shows:												
Your Hand:	2	3	4	5	6	7	8	9	10	J	Q	K	A
2 thru 7	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	Dbl	Dbl	-	-	-	-	-	-	-	-
9	Dbl	Dbl	Dbl	Dbl	Dbl	-	-	-	-	-	-	-	-
10	Dbl	Dbl	Dbl	Dbl	Dbl	Dbl	Dbl	Dbl	-	-	-	-	-
11	Dbl	Dbl	Dbl	Dbl	Dbl	Dbl	Dbl	Dbl	Dbl	Dbl	Dbl	Dbl	Dbl
12	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	Sur	Sur	Sur	Sur	-
16	-	-	-	-	-	-	-	-	Sur	Sur	Sur	Sur	Sur
17 thru 21	-	-	-	-	-	-	-	-	-	-	-	-	-

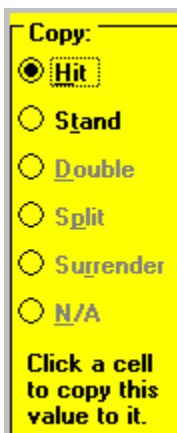
This table is always checked **first** to see if a Double Down, Split, or Surrender decision is coded. If no decision is coded ("-") appears in cell), or if the decision is not allowed for the current hand (e.g. cannot split an Ace-Two hand), the Base Play Table will be used (as the default).

A decision is not allowed when: (a) you have that feature turned off (e.g. no double down allowed) or (b) when there are too many cards in the hand for the feature (e.g. split on first two cards only).

Changing a Cell's Decision:

To change cell's decision, simply move the mouse pointer over the cell and click the left mouse button. This will place the currently selected "Copy Decision" in the cell. You may "click" as many cells as needed in order to change the current strategy table.

Normally, you would activate one of the available Copy Decisions and click all the cells that are to contain that decision. Then you would move on to the next Copy Decision and click all the cells that are to contain it.



The "current Copy Decision" is located in the group box in the upper right hand corner of the screen. Whichever Copy Decision is currently selected will be copied to each cell you click with the left mouse button. To change the current Copy Decision, just click one of the

available decisions.

Note: when editing the Base Play Table, only the Hit and Stand Copy Decisions are available. Similarly, when editing the Special Play Table, only the Double Down, Split and Surrender decisions are allowed. In the example above, only the first two decisions are available (Hit, Stand) and the other three are grayed out (not available).

Switching Strategy Tables:

To switch from the Base Play Table to the Special Play Table, press the



To switch from the Special Play Table to the Base Play Table, press the



button.

Each time you access the playing strategy section of the program, the last table you accessed (Base or Special) will be displayed first.

Saving Strategy Table Changes

After you have completed making your changes, you can save them into a strategy table

file. This is done by pressing the



button. Strategy table files always contain both the Base Play and Special Plays Tables cell decisions.

When this game first loads, it automatically loads the strategy table values stored in a file called ULTIMA21.SGY. This is the default strategy table file and it contains the cell decisions for both the Base Play and the Special Play Tables.

When you press the Save Button, a file selection window will appear asking you to select the strategy file name and directory to be used. The default file name is ULTIMA21.SGY and the default directory is where this game is located.

To save multiple strategy files, use the Save Button and specify different strategy file names before pressing the Ok Button on the file selection window. Once saved, you can

load them at a later time by using the



Undo All Changes Made To Strategy Table

Pressing the



button will undo all changes made to the current strategy table being edited. The Undo Button will reset all the cell decisions on the current table back to their original values.

IMPORTANT: the undo feature can only undo changes made since you first brought up this table. Once you exit or save this this table, the ability to Undo is lost forever. Therefore, be sure all changes are correct before saving the current table, switching to another table, or loading a new table.

Player Statistics

Player Statistics				
STATISTICS	PLAYERS			
	#1	#2	#3	Dealer
Total hands played:	8	8	8	8
Total hands won:	3	4	2	—
Total hands pushed:		2	1	—
Total hands lost:	5	2	5	—
Total blackjacks:		1		
Total 6 card winners:				—
Total double downs:				—
Total hands split:				—
Total hands busted:			1	1
Total surrendered:				—
Current win streak:				—
Current lose streak:	2	2	3	—
Longest win streak:	2	3	1	—
Longest lose streak:	2	2	3	—
Highest bank balance:	\$500.00	\$522.50	\$505.00	\$5,012.50
Lowest bank balance:	\$490.00	\$500.00	\$485.00	—
Average starting bet:	\$5.00	\$5.00	\$5.00	—

This window presents the Player Statistics kept during all games played. Each time a new game is started, these stats are reset back to zero. As each hand is played, the stats for each player are calculated and updated.

NOTE: stats are only maintained and displayed for active players (1-3).

NOTE: The Dealer's Highest Bank Balance amount reflects the current amount of chips in the Dealer's tray. If the Dealer's tray runs out of chips, the Casino Manager will halt play until the chip tray is restocked.

To reset the player stats at any time, press the Reset Button.

Card Count Statistics

Card Counts						
Cards:	Dealt:	Left:	Total:	Card Counts:	Number:	Percent:
Aces:	2	2	4	Aces Left:	2	50.00%
Twos:	2	2	4	Fives Left:	3	75.00%
Threes:	2	2	4	Faces Left (10-K):	7	43.75%
Fours:	2	2	4	2 thru 6's Dealt:	10	50.00%
Fives:	1	3	4	7 thru 9's Dealt:	6	50.00%
Sixes:	3	1	4	10 thru A's Dealt:	11	55.00%
Sevens:	2	2	4	Cards Dealt:	27	51.92%
Eights:	4		4	Cards Remaining:	25	48.08%
Nines:		4	4	Number of Decks:	1	
Tens:	3	1	4	Running-Count: (a)	-1	
Jacks:	1	3	4	True-Count: (a)	-2	
Queens:	2	2	4	User-Count: (a)	0	
Kings:	3	1	4	(a) Basis:		
Hearts:	7	6	13	These three card counts do not include any cards buried at the start of a new deck and their respective calculations are based on the "experts" generally accepted count formulas.		
Diamonds:	8	5	13			
Clubs:	8	5	13			
Spades:	4	9	13			

This window presents the accumulated statistics for all cards dealt since the last shuffle.

As each card is dealt from the deck, individual card stats are calculated and updated. The left side of this window shows the number dealt for each card (Ace thru King), the number remaining in the deck, and the total number in the deck. If you are playing with a single deck, the total for each card is four. If you are playing with 6 decks, the total will be 24. The total cards dealt plus total cards remaining should always equal the total cards in the deck (for each card and for all cards).

In addition, the left side shows stats for each suit (hearts...spades). Like individual cards, suit stats show the number dealt, remaining, and total in the deck. They too should always "add up" to the total available in the deck.

NOTE: The LEFT side of the window includes any cards "buried" at the start of a new deck (just after a shuffle).

The right side of the window displays card count stats which are provided for "card counters". It automatically accumulates and shows the most widely used card count stats needed by most card counting systems in use today.

NOTE: The RIGHT side of the window DOES NOT include any cards "buried" at the start of a new deck.

The Running Count, true counts, and user counts are normally calculated based on a +1, -

1, and 0 point values assigned to each card in the deck. As cards are dealt, the Running Count is tabulated on a point system and the True Count is the Running Count adjusted by the remaining cards in the deck.

Normally, 2's thru 6's equal a "+1", 7 thru 9's equal "0", and 10 thru A's are "-1". Therefore, if the Dealer deals an Ace, Two, Three, Five, Eight, and King, the Running Count will be a total of 1 (-1, +1, +1, +1, 0, and -1).

When the Running Count is a high positive number, this means the deck is "heavy" on tens because a lot of small cards have been dealt. The opposite is also true. When the Running Count is a large negative number, the deck is "light" on tens since more face cards and aces have been dealt.

NOTE: the term "tens" used above means 10s, Jacks, Queens, Kings, and Aces.

When the deck is "heavy", you normally increase your bet for a new hand since it is more likely you will get a higher starting hand since more face cards and aces are in the deck than low cards.

NOTE: when playing with more than one deck, the Running Count information must be adjusted to a basis of a single deck. Otherwise, the information can be misleading. This is due to the fact that multiple decks will produce higher "heavy" and "light" count values since there are more high and low cards in the total deck. This is where the True Count comes in.

The True Count is normally the Running Count adjusted by the remaining decks to be played. This adjustment helps offset the misleading higher Running Count values resulting from playing with multiple decks. If you are playing with 3 decks and you estimate that 2 decks remain (1 deck has been dealt so far), a Running Count of +8 is reduced by a factor of 2 (8 divided by 2) to yield a "True Count" of +4.

When playing with a single deck, the True Count and Running Count are the same.

When playing with multiple decks, the Running Count will normally be higher than the True Count.

Displaying Counts During Play

You have the option to display the Running Count and True Count during play. They will appear on the main playing table just above the command buttons at the bottom of the window. As each card is dealt, they will be updated to show the count values as they change.

To access the window to turn on/off the card count display feature, press the button at the bottom of the Card Count Window.



Display

Custom Card Count Systems

This window allows you to customize the Running Count, True Count, and User Counts used by this blackjack program.

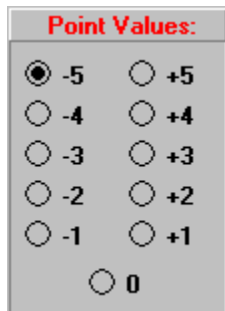
Cards:	Running	User	True
Aces:	-1	0	-
Twos:	1	0	-
Threes:	1	0	-
Fours:	1	0	-
Fives:	1	0	-
Sixes:	1	0	-
Sevens:	0	0	-
Eights:	0	0	-
Nines:	0	0	-
Tens:	-1	0	-
Jacks:	-1	0	-
Queens:	-1	0	-
Kings:	-1	0	-

In the upper left corner of the window, are the current settings for all three count systems. If a count system is based on individual card point values, these cells will contain a value from -5 to +5.

When this program first starts, it looks for the default card counts data file called ULTIMA21.CNT in the directory where this game was loaded from. If it finds this file, it will load it into memory and use it for the rest of the game. If you wish to use different values, you will need to access this window and change point values and/or calculation methods.

Changing Point Values

To change individual cell point values, simply move the mouse pointer over the cell you wish to change and press the left mouse button. This action causes the currently selected "point value" to be copied from the Point Values Group Box to the cell you clicked with the mouse.



The image shows a 'Point Values' group box with a title bar. Inside, there are 11 radio buttons arranged in two columns. The left column contains values from -5 to -1, and the right column contains values from +5 to +1. At the bottom center, there is a radio button for the value 0. The radio button for -5 is currently selected, indicated by a black dot inside the circle.

To change the currently selected point value, click on one of the 11 available values (-5 thru

+5) in the Point Values Group Box. Once selected, whatever cell(s) you click will receive the point value you selected.

NOTE: Unless the True Count Calculation Method is "by Individual Point Values", the True Count cells will be grayed out and you will not be able to change their point values.

Changing The True Count Calculation Method

Normally, the True Count is calculated by taking the Running Count and dividing it by the number of remaining decks. You can change the calculation method to be the Running Count divided by remaining half-decks or to be calculated "By Individual Point Values".

If you select "By Individual Point Values", the True Count's cells will become active and allow you to assign point values to them.


User Count

The User Count is provided to allow you to experiment with various point value combinations (or systems) without changing the Running and True Counts.

The User Count is always active and can be displayed on the Main Playing Table by turning on the Display Counts Feature.

Changing the User Count cell values is performed just like the Running Count. Just select a point value in the Point Values Group Box and click the cell(s) you wish to receive the point value.


Reverting Back To The Defaults

If you make changes to the Count Systems and decide you wish to change them back to the way they were before, press the  button.

This will reset the Running and True Counts back to their original values. Please note the default values are considered to be those values that existed before the Customize Window was last accessed or last saved.

NOTE: The Defaults Button does not affect the User Count point values. The User Count has no "default" set of values and therefore cannot be reset back.

Saving Customized Card Count Values

To save all changes you make to the card count values, press the  button. This will save all settings to a file called ULTIMA21.CNT and it will be located in the directory where this game was started from.

From then on, whenever this game starts, this file will be read into memory and its values will be used for card counting.

Including Buried Cards In the Counts

Normally, buried cards are NOT included in card counting calculations since these cards are never "seen" by the players at the table.

You may change this feature to include buried cards in the card counts by clicking on the "Yes" option in the Group Frame shown below.



Include Cards Buried in the Counts:

Yes No

If you are trying to "match" your counts to those maintained by this program, you should turn this feature OFF by selecting "No". Otherwise, the game will include buried cards in its count and you will not (since you never saw them). As a result, your counts will never match the game's.

Displaying Card Counts

You can have the card counts displayed on the Main Playing Table by selecting the Display Button on the Card Count Window. This will bring up a window which allows you to turn on/off the card count display. When on, the card counts will be displayed at the bottom of the Main Playing Table during play.

In Version 2.7+, we added a quick display feature for card counts. Pressing the "9" key on your keyboard will display a window which shows you the card count. This allows card counters to check their count against the Computer's without having to display card counts at all times.

Changing The Number of Players

This game allows 1 to 3 players and there are two ways to change the number of players.

The first method is to use the "Change Number of Players" option on the SET Menu. If you change the number of players during a hand, the change will be delayed until the start of the next hand.

The second method is a new feature in V2.7+. It allows you to quickly change the number of players simply by pressing the keys "1", "2", or "3" on your keyboard.

Unlike the first method above, the quick access keys only work when the DEAL Button is enabled (start of a new hand). When allowed, pressing the "1" changes you to 1 player, "2" changes to 2 players, and "3" to 3 players.

Shareware Registration

This Windows Blackjack Game (tm) is NOT FREeware nor IS IT PUBLIC DOMAIN SOFTWARE.

This copyrighted product is being offered in the shareware manner. We rely solely on honest shareware users for income from these products. You may copy and distribute this game to your friends but you MUST include all the files unzipped from the ULTIMA.ZIP master shareware file.

If you use this game after the 30 day free trial period, YOU MUST REGISTER IT!

The cost to register is \$29.95 (personal checks, Company checks, money orders, & certified checks accepted - do not send cash - credit cards not accepted)

ATTENTION COMPUSERVE and ZIFFNET users: you may register your copy of of this Windows game directly through CompuServe. To register on-line, use the go command GO CIS:SWREG & enter Registration ID #1415. The cost is the same and will be billed automatically to your Compuserve Account. You should still send us a completed registration form for our files.

If you register on-line thru CompuServe, please check your e-mail a couple days later to receive your license file from us. We will e-mail this file to you via CompuServe which will include all the professional features for Registered Users.

REGISTRATION FORM:

Please fill out and print the Registration Form. This form is located inside the Game Program & is accessed by clicking the Register Button on the About Window. This form is important and should be sent in with each registration.

NOTE: If you do not see the Registration Form button on the About Window, then you already have registered or you have purchased the retail version. You are licensed to use this software and there is no need to register.

Otherwise, send your check for \$29.95 and your completed Registration Form to:

Bitwise Software International, Inc.
901 West Hononegh Drive
Phoenix, Arizona 85027

WHAT YOU GET BY REGISTERING:

- a) A free copy of the Deluxe Version of this game which contains many additional features such as Save/Restore Games, Set Player Cards, Set Dealer Cards, Practice Drills, Save/Restore Custom Playing Strategies, and Custom Card Counting Systems.
- b) Access to additional wave sound files as they become available.
- c) Be placed on our preferred customer mailing list and receive priority notifications of new versions, new software, & special promotions.
- d) Registered users receive special discounts on all future versions of this game and on all new products. Example: Professional Video Poker for Windows or PC Video Poker (now

available!).

e) Free on-line support on CompuServe via e-mail as well as free call-in phone support (M-F 9am-4pm PST).

f) Piece of mind that you are an honest shareware user.

Please help keep the spirit of shareware alive! Registrations are the ONLY income from shareware products.

Thousands of hours of time & effort have gone into this software and we hope honest shareware users will show their support & appreciation through their registrations.

Other Products Available

Professional Video Poker for Windows is one of our other very popular casino gambling games. It is a full featured Video Poker Game for Windows with a few features you will not find anywhere else.

This game includes all the standard Video Poker features plus 50 special effects for dealing cards. You can select to have the cards "drip" into place on the screen or even "explode"! The 50 special effects will keep you entertained for months to come.

Our version of Video Poker does not stop there, it also allows you to play 14 different kinds of Video Poker. The game types available include Regular and Progressive Jackpots, Dueces Wild, and Jokers Wild. Add the Double-or-Nothing feature available for each game and you now can play 28 different kinds of games!

All games are available at the touch of a button and your bankroll follows you from game to game.

Look for our video poker game where you obtained this blackjack game. If your distributor does not have it, look for it on CompuServe in the Windows Fun Forum, Card Games Library. The packed file name to search for is called PVPOKE.EXE and the game is called Professional Video Poker for Windows.

You can always purchase our games directly from us. However, if you wish to obtain a free shareware copy, you must obtain it from a BBS like CompuServe or from a Shareware Distributor.

Basic Operation

This game is a true windows application which can be run and controlled by you just like any other windows application.

When first loaded, the game will display its opening window while it initializes itself. Next a photo of the Casino will appear.

Shortly after that, the Casino's Manager will appear and ask you to enter your name and then he will take you to a blackjack table.

When the game starts, it will load a file called "ULTIMA21.DEF" as the default table rules, player names, playing strategy, and other environment variables. If it cannot find this file, it will use its own pre-programmed default settings. See the the help section on Casino Defaults for more information regarding saving/restoring games and the default settings.

Next, the program will attempt to load the file ULTIMA21.CNT from disk. This file contains custom card count settings and will override those stored and loaded from the defaults file ULTIMA21.DEF. These count settings control the calculation of the running count, the true count, and the user count. If this file cannot be loaded, the program will use its own pre-programmed card count settings.

Finally, the program will attempt to load the default playing strategy file called ULTIMA21.SGY. This file controls how Auto Play, Auto Help, and Auto Focus operate. This file contains a set of playing option strategies (hit, stand, double, split) that should be made based on the dealer's up card and the player's current hand.

When the blackjack table is first displayed, you will notice several buttons at the bottom of the screen. Some of which will be disabled (grayed out) and some of which will be enabled. At the start of a new hand, the DEAL button will be the default button and should be used to deal the next hand. To deal, move the mouse pointer to the DEAL button and press the left mouse button.

The other buttons will be enabled/disabled depending on what is happening at the table. For example: the DOUBLE button will only be enabled when a player's hand is such that a double down is allowed.

The same is true for the SPLIT and SURRENDER buttons as well. The status of these two buttons is determined based on the double down and split rules for the table and on the cards currently dealt to the player.

The HIT and STAND buttons are always enabled during a hand. The HIT button will deal one card to the player. The STAND button will tell the dealer the current player's hand is done and play will transfer to the next player's hand. If there is not a next player, control will transfer to the dealer's hand.

The DOUBLE button will allow the player to double his/her bet and receive one card and one card only. Play will then transfer to the next player's hand. There are several double down rules you can customize and control.

The SPLIT button will break up a pair into two hands. This is normally allowed on like pairs (8 and 8 or A and A) or on a pair of face cards (J and Q). When a hand is split, one card is moved to second hand (split hand) and the player must match the bet of the original hand. There are several splitting and resplitting rules you can customize and control.

The other buttons on the screen and their functions are:

BETS: will prompt you for each player's bet and is available only at the start of a new hand.

SHUFFLE: will reshuffle the deck before the next hand.

PEEK: will allow you to peek (view) the next few cards to be dealt.

STRATEGY: will access the Playing Strategy Window where you may view, change, save, or load the playing strategy for this table. The playing strategy is used in conjunction with the automatic decision help.

A playing strategy consists of hit, stand, double, and split rules for a player's hand based on what the dealer is showing in his hand.

EXIT: will allow you quit playing the game.

SPEED: will access the Set Game Speed Window which allows you to control how fast the cards are dealt by the dealer.

STATS: will display the current playing statistics for each player and for the dealer.

COUNT: will display the current card counts. This shows the number of cards dealt (ace, two, three...) as well as other card counting information.

SAVE: will save the current game to disk.

HINT: will display a window that displays the correct play (hit, stand, double, split) based on the current playing strategy in effect.

REDRAW: updates the playing table and redraws all controls, cards, and messages.

Errors at Start Up

If you encounter either of the following two errors at startup:

- 1) "OVERFLOW"
- 2) "Invalid Control Index"

then the startup files (ULTIMA21.DEF, ULTIMA21.CNT, & ULTIMA21.SAV) may be corrupted or may be the wrong version. Try renaming these files to something else and restarting this game. The game will use its own internal game settings since it will not be able to find these files. All three of these files should be exactly the same length. If not, there is a problem.

You should first try renaming the ULTIMA21.DEF and restarting the game. 99% of the time this file is causing the problem.

Once the game has started successfully, use the FILE MENU and select the option to save the current settings as the default for a new game. This will create a valid (new) ULTIMA21.DEF file on disk.

There are other "Known problems" discussed later on. Please take a moment to read through the discussion.

If you still have problems after trying this procedure, please contact technical support.

MISSING FILE at STARTUP

If you receive a message like "Missing DLL file" or "Missing File", then you most likely do not have the VBRUN300.DLL on your system. It must be downloaded from your BBS and placed in the game program's directory or in the \WINDOWS\SYSTEM directory.

If you still have problems after trying this procedure, please contact the technical support.

Known Problems

Microsoft Visual Basic Versions 2.0 and 3.0 are not fully compatible with certain third party S3 Video Drivers (Windows Video Drivers for the S3 Graphics Chip soldered onto your accelerated video card).

You may experience "out of memory or resources" problems, "Object Was Unloaded" problems, as well as other unexpected application errors while using ANY Graphic Intensive Visual Basic program with these type of S3 video drivers.

These problems are NOT under the control of our program, Visual Basic, or Windows. ONLY the video driver Company can correct the problem. Please contact your video driver Company to get the latest copy of their Windows video drivers.

Most Companies will update their drivers every few months to fix bugs and add enhancements.

If you use the super or regular VGA Video Drivers supplied with Windows 3.1, these types of problems will most likely go away. To test your driver, install one of Microsoft's standard VGA Drivers that comes with Windows and see if your problem(s) go away. If so, then the other Company's Video Driver is the problem.

Contact the driver Company and report the problem. Tell them you tested it against Microsoft's standard VGA Windows driver and it has to be their driver (since the problem went away).

This game is shipped with the sound effects OFF as the default. If you experience problems when starting the game, be sure to set the default for sound effects to OFF.

If you delete the ULTIMA21.DEF file from the \ULTIMA21 directory, the game will reset all defaults including all Sound Effects (to OFF). This should then allow you to start the program successfully.

POSSIBLE "OUT OF MEMORY" ERROR SOLUTION

In the January 24, 1994 issue of Info World, Brian Livingston has written in his weekly Windows column on a cure for what he calls "the most important cause of Windows instability." The instability is reflected in messages such as "Out of memory", "This application has violated system integrity", or "Application error" which happen even when plenty of memory and resources are available.

It occurred to me that this may be related to some of the random problems that users are experiencing with WPWin 6.0, so I am summarizing his column here.

The solution to the problem is to insert a single line into the [386 Enhanced] section of your SYSTEM.INI file, reading:

MaxBPs=768

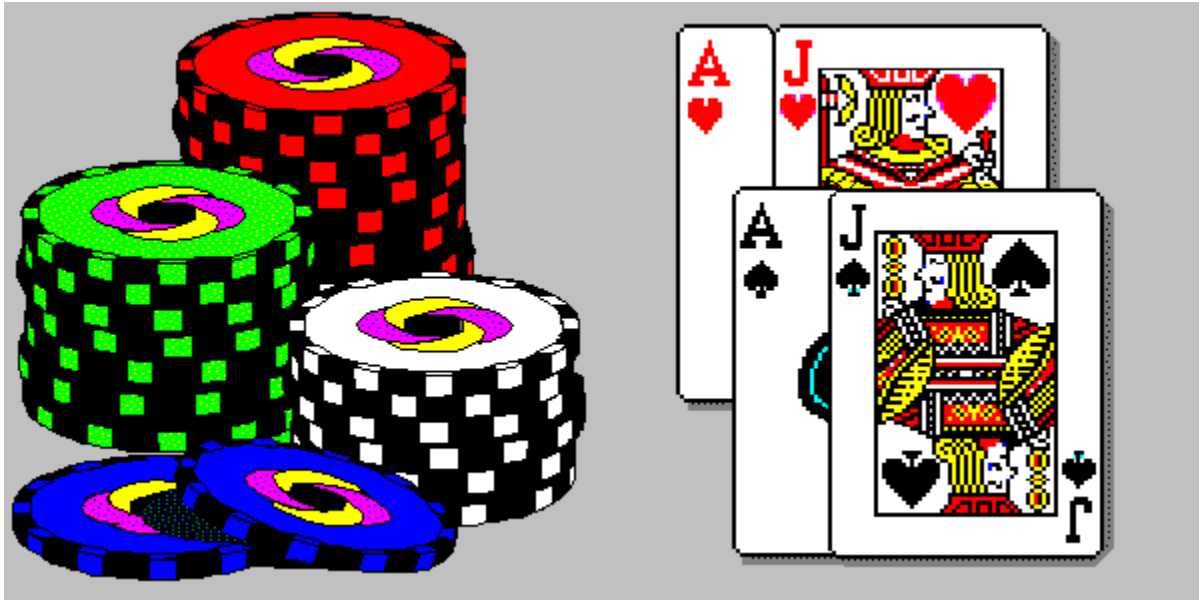
"MaxBPs" is an abbreviation for "maximum breakpoints." Breakpoints are small pieces of memory, about 10 bytes each, that Windows uses to save the state of a "virtual machine" (VM). All Windows applications run in a single VM, and each DOS session runs in its own VM. Windows applications may also create additional VMs for various reasons.

Normally, Windows allocates 4K of RAM for breakpoints, which means that 358 breakpoints

are set up when it starts. Windows immediately uses about 200 of these, leaving about 158 remaining. It is possible that in a long Windows sessions these could get used up, causing the strange errors described above.

Setting MaxBPs to any number from 359 to 768 uses an additional 4K of RAM. The number could be set higher (up to 1,177) at the cost of yet another 4K.

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About this Windows Blackjack Game

**Copyright (c) 1993-1994, All Rights Reserved
Bitwise Software International, Inc.
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Phoenix, AZ**

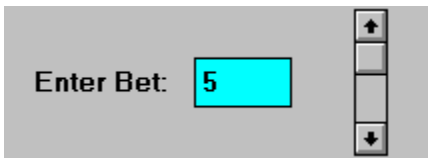
Entering Bets

There are several ways to change a player's bet. Most of which will bring up the Enter Bets Window as shown below.





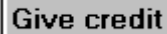
This window is used to enter a bet for a single player. The player's name is shown at the top of the window as well as his/her bank balance and the table's minimum and maximum bet limits.

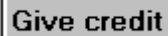
NOTE: You may only change your bet before the start of a new hand. Attempting to change your bet after a hand has started is considered cheating and you will be asked to leave the casino.



You may enter a bet manually in the blue text field in the center of the window. Just type in the amount you wish to bet and press Enter or the Ok Button to accept the bet. If you type in an amount greater than the player's bank balance, an error will result.

To the right of the bet field is a control which allows you to quickly increase or decrease the bet amount with the mouse. Just place the mouse pointer over the  or  arrow and click the mouse button. This will change the bet amount accordingly. Holding the left mouse button down will change the bet continuously until you release the mouse button.

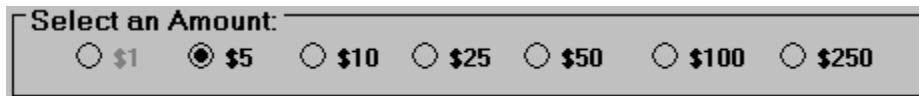


When the player runs out of money in his/her bank, the  Button will become active. Pressing this button allows the player to bet more than his remaining bank balance.

NOTE: Please be sure the bet complies with the minimum and maximum bets allowed for this table.

Selecting a Pre-Programmed Amount


To select one of the pre-programmed bet amounts shown on the Enter Bet Window, use the mouse and click on one of the options in the Select an Amount group box shown below:



Select an Amount: \$1 \$5 \$10 \$25 \$50 \$100 \$250

When you do, the bet amount field will change automatically. If any of the pre-programmed bet amounts are grayed out, this means that they do not conform to the table limits in effect and are not available for selection.

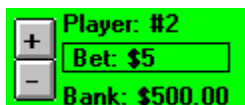
Accessing the Bet Window For All Active Players

To change the bets for all active players, press the  button located at the bottom of the Main Playing Table.

This will bring up the Enter Bet Window for each active player. When you select a bet for the first player and press the Ok Button, the Enter Bet Window will appear again for the next active player. This continues until all active players have been accessed.


Access the Bet Window For a Single Player

To access the Enter Bet Window for a single player, use the mouse pointer and click on the player's bet **square** on the Main Playing Table. Please see the example below:



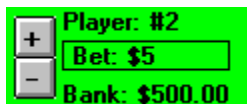
Player: #2
Bet: \$5
Bank: \$500.00



Doing so will bring up the Enter Bet Window for this player only.


As discussed earlier, to change bets for all active players, use the  button at the bottom of the Main Playing Table.

Quick Bet Change Feature

An advanced betting feature is provided on the Main Playing Table and is located just to the left of each player's bet square.



The  button will increase the player's bet by 1 "base unit". The  button will decrease the player's bet by 1 "base unit". To press either of these buttons, move the mouse pointer over them and press the left mouse button. Holding the left mouse button down will cause the increase/decrease action to be performed multiple times.

A Base Unit is the bet amount selected the last time the Enter Bet Window was accessed. For example, if you select a \$10.00 bet from the Enter Bet Window, each time you press the  button, the player's bet will increase by \$10.00. If the bet amount was \$25.00, the new bet amount will be \$35. Press it again and it will be \$45.

To change the Base Unit amount, just access the player's Bet Window and select a new bet amount. Each time a new bet amount is selected from the Enter Bet Window, the new amount becomes the Base Unit amount for that player. Each player has their own Base Unit amounts.

Why Does The Bet Amount Keep Doubling?

When you Double Down, your bet is doubled and you get one card. If you lose the hand, then you lose the entire bet and your bank balance is reduced accordingly.

If you win the doubled hand, your bank balance is increased and the doubled bet remains on the table in the bet square. Just like in the real casinos, if you do not remove/reduce your doubled bet, you are "letting it ride". The next hand will then start and you will be playing the full doubled amount as your bet.

There is a flag on the Double Down Option Window which you can set to control this. Set the flag to "Let it Ride" to have the Dealer leave the doubled bet on the table and play it the next hand.

Set the flag to "Add to Bank" to have the Dealer remove the doubled bet and play your original bet the next hand.

Installation Notes

NOTE: Be sure you are running Windows Version 3.1 or higher and your are running Windows in "386 Enhanced Mode" (not Standard Mode). Check your \WINDOWS directory and see if you have a WIN.BAT file. Be sure the WIN.COM or WIN command in the batch file DOES NOT include the /S switch. This causes Windows to start in Standard Mode. Be sure the command is followed by blanks or /E to insure you start in Enhanced Mode. Otherwise, this game may not operate correctly. If you cannot see the 386 Enhanced Program Item (icon = computer chip) on the Windows Control Panel, then you are not running Windows in the Enhanced Mode. Please see your Windows Users Manual for more information.

Also, once you are running Windows in 386 Enhanced Mode, you should set up as large a Permanent Swap File (not Temporary) as Windows will allow. This allows Windows to use free disk space as computer memory and it will allow you to run bigger programs. This is done from Windows Control Panel with the 386 Enhanced Icon.

NOTE: If you obtained a copy of this game from Compuserve or Ziff-Net, the file VBRUN300.DLL was not included in the packed file ULTIMA.EXE. This was done to save download time and related costs. The file VBRUN300.DLL is available in most BBS forums -- check with your forum's Sysop or search the BBS files by name. Some BBS Systems pack this file and call it VBRUN3.ZIP. To locate this file, perform a file name wildcard search such as VBRUN*.* or VB*.*. If you cannot find it by file name, try looking for it by is title "Visual Basic Runtime Library".

There have been several versions of Visual Basic (v1.0, 2.0 and 3.0) and as a result there are several versions of the Visual Basic Runtime Library that all Visual Basic programs require. This program REQUIRES VBRUN300.DLL not any other version of the Visual Basic Runtime Library.

Installation

To install this blackjack game from the distribution diskette, simply run the file "ULTIMA.EXE" to start the self-installation process. You can double click on this file from Windows File Manager or use the Program Manager's FILE/RUN menu option.

This is a self-installing packed file and running it will unpack and install all the needed files and programs. The installation program will ask you where you want the program files on your hard disk. You can specify and hard disk and directory you would like. If the specified directory does not exist, the install program will create it.

The install program also asks you which Windows Program Group you would like the game icon added to. Once added, double clicking on the game's icon will start the game.

Once self-installation is complete, this file (ULTIMA.EXE) can be removed (NOT ULTIMA21.EXE) from your hard disk. However, you should always retain a copy of this install file on diskette or tape just in case you need to reinstall it in the future.

If a message appears asking you whether or not you wish to replace an existing file in the ULTIMA21 directory, answer with a "Y". DO NOT USE OLD FILES WITH A NEW VERSION - FATAL ERRORS WILL RESULT.

To start the game, run the file ULTIMA21.EXE from Windows File Manager or double click on the game's icon from Windows Program Manager. It will be located in the Program Group you selected during installation.

The icon file ULTIMA21.ICO contains the icon for you to use if you wish to manually add this game program to your Games Program Group or set one up just for this game.

Please see your Windows Users Manual for instructions on adding Program Items and setting up Program Groups from the Program Manager. Also, the help file (ULTIMA21.HLP) that comes with this game also provides step-by-step instructions for setting up Program Groups and Items in Windows.

Files Required For This Program To Run

This program was written in Microsoft's Visual Basic V3.0 and REQUIRES the following files:

- BSISOUND.DLL Deal card sound effect routines.
- FXTLS200.DLL Special Effect Routines (Licensed).
- FXIMG200.VBX Licensed VB Control.
- FXLBL200.VBX Licensed VB Control.
- MHDES200.DLL Special Effect Routines (Licensed).
- MHRUN200.DLL Special Effect Routines (Licensed).
- QCARD.DLL Steven Murphy's Card Drawing Routines (Freeware).
- QPRO200.DLL Special Effect Routines (Licensed).
- VBRUN300.DLL Microsoft's Visual Basic Runtime Library (Licensed).
- RSW31.DLL RealSound Runtime Library (Licensed)

- READ.ME Last Minute Information You Should Read
- ULTIMA.ZIP Self-extracting packed distribution file.
- ULTIMA21.EXE Unpacked Windows Blackjack Game.
- ULTIMA21.HLP Help File for this program.
- ULTIMA21.ICO Icon for adding to Window's Program Manager.
- ULTIMA21.REC Pre-recorded Auto Play Macro for this game.

- ULTIMA21.CNT Custom card counts save file.
- ULTIMA21.DEF New game default settings file.
- ULTIMA21.SAV Saved "NEW" Game.
- ULTIMA21.SGY Default playing strategy file.
- BACKUP.CNT backup copy of file ULTIMA21.CNT.
- BACKUP.DEF backup copy of file ULTIMA21.DEF.
- BACKUP.SAV backup copy of file ULTIMA21.SAV.
- BACKUP.SGY backup copy of file ULTIMA21.SGY.

- AUTOPLAY.SAV Saved game for setting the game up for simulated Auto Play.

- *.WAV various digitized sound and speech files.

- CSGROUP.VBX Licensed VB Control.
- MHMQ200.VBX Licensed VB Control.

Be sure all of these files are all located in the **SAME** directory where you installed the game's files.

NOTE: Occasionally, Microsoft will release an updated VBRUN300.DLL file which will correct some bugs in their runtime modules. You should periodically compare the date/time/size of this file to the latest one available on CompuServe in the Microsoft MBASIC+ Forum. If a later one is released, please download it and place it in the game program's directory. This blackjack game will use it automatically from then on.

Placement of VBRUN300.DLL

When this game starts, it looks for all of its needed DLL and VBX files in the same directory where it was loaded from. If it cannot find a needed file, Windows takes over and looks for the needed file in its default system directory called \WINDOWS\SYSTEM.

Be sure all of the needed files like VBRUN300.DLL are located in the same directory as ULTIMA21.EXE or in the default directory \WINDOWS\SYSTEM.

CAUTION! We recommend you place all files that came with this program in the same directory (\ULTIMA21 is recommended). Do not blindly place unnecessary files in the Windows System Directory. There is one exception to this rule.

Since all Visual Basic V3.0 Programs require Microsoft's Visual Basic Runtime Library VBRUN300.DLL, you could end up with many copies of VBRUN300.DLL on your system (one for each VB 3.0 program).

Therefore, you may wish to MOVE the VBRUN300.DLL file from this game's startup directory to the \WINDOWS\SYSTEM directory. This way, all Visual Basic Programs on your system can share this single copy of VBRUN300.DLL. You could remove all other copies of it from your hard disk to save space.

By placing VBRUN300.DLL in the Windows System directory, all VB 3.0 programs will have access to it. Only one copy will be needed.

Casino (Game) Defaults

Each time this game starts, it looks for a Default File called ULTIMA21.DEF in the same directory this game was started from. If it finds this file, the settings stored in it become the "casino defaults" for all new games. If it does not find this file, it uses its own internal programmed settings as the casino defaults.

This game allows you to customize the game defaults and store them in this file. Some of the game defaults include: the table rules, number of players, bank balances, playing strategy, etc... **You can customize almost every feature** in this game and save them in this Game Defaults File.


THERE CAN ONLY BE ONE DEFAULT SETTINGS FILE

To save the current game settings as the defaults, click on the FILE menu & select the SAVE SETTINGS AS DEFAULT option.

This will save the current settings into a disk file called "ULTIMA21.DEF". Each time a new game is started, this game will read this file and set itself up according to the settings stored in this file.

Remember: in order for this game to locate and load this file automatically, it must reside in the same directory as this game. If it cannot find this file, it will revert back to its own "factory" or internal settings.

Starting This Game

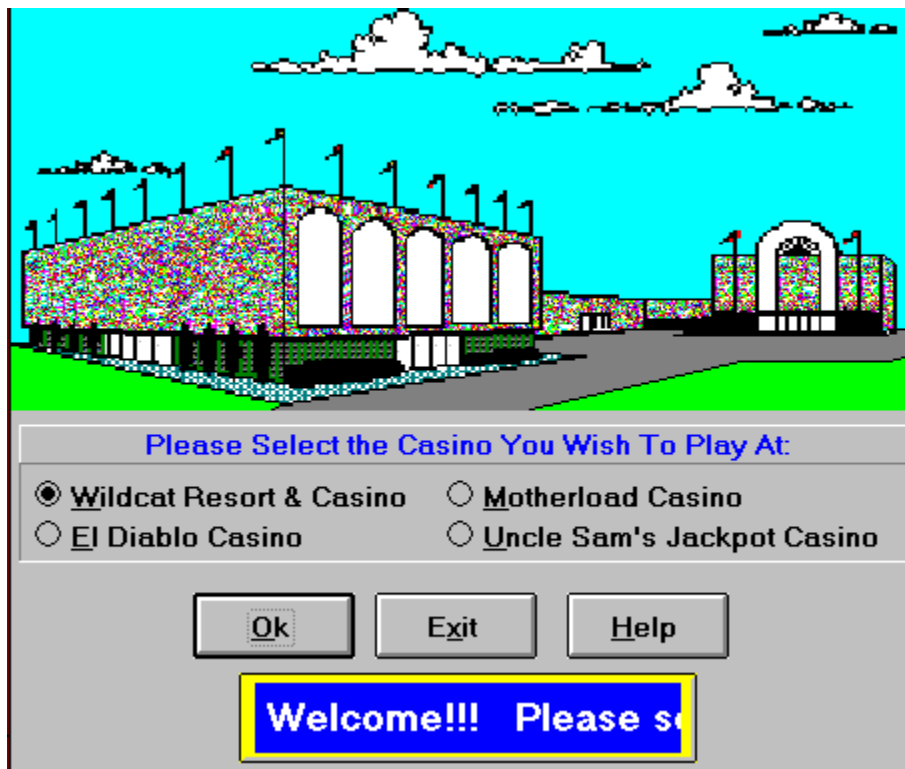
To start this game, locate and click on this game's icon  from Window's Program Manager.

The game's initial window will appear, followed by the parking garage picture, and then the Select a Casino Window will appear.

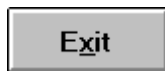
Selecting a Casino To Play At

When the following screen appears, select one of the four available casinos and press the

 button:




Once completed, the Casino Manager Window will Appear.

To exit this game and return to Program Manager, press the  Button.

Casino Manager Window



When the Casino Manager Window appears, you have the option to jump ahead and begin playing blackjack by pressing the  Button. Doing so will take you to the Main Playing Table.

Optionally, you may press the  Button and provide the Casino Manager with the names of the each player.

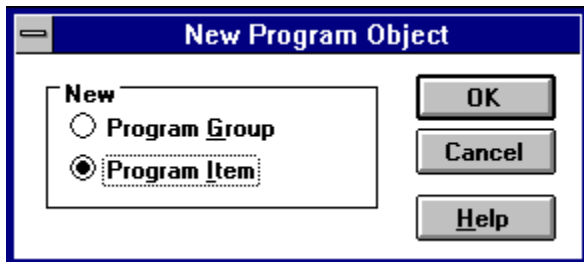
[Adding This Game to Program Manager](#)

To add this game to one of your existing Program Groups in Window's Program Manager, you will need to follow these few simple steps.

Be sure Program Manager is currently active on your screen.

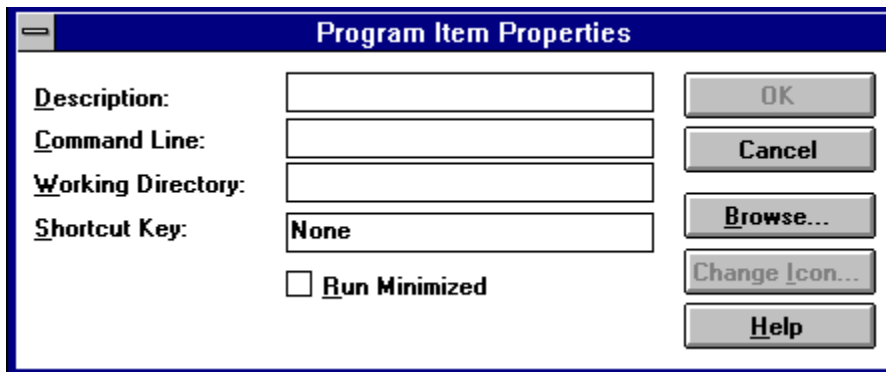
Then, click on the Program Group you wish to add this game to. This will make the Program Group the active group.

Next, select "NEW" on the "FILE" menu at the top of Program Manager. This will present the following window:



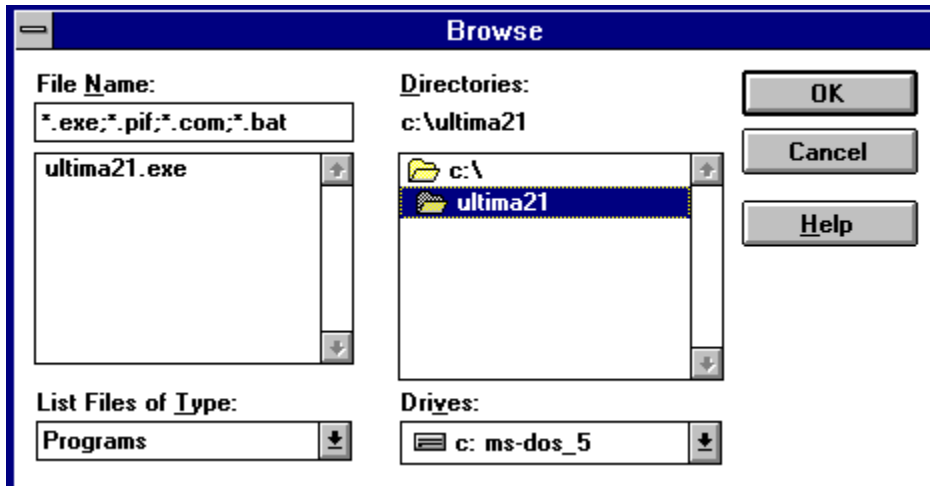
Be sure the Program Item Option is selected as shown and press the OK Button.

Next, the following window will appear:



Since the program fields are blank, we will ask Program Manager to assist us in filling them out. Press the "BROWSE" button to have Program Manager help us select a file (ULTIMA21.EXE) from your hard disk to be added to the Program Group.

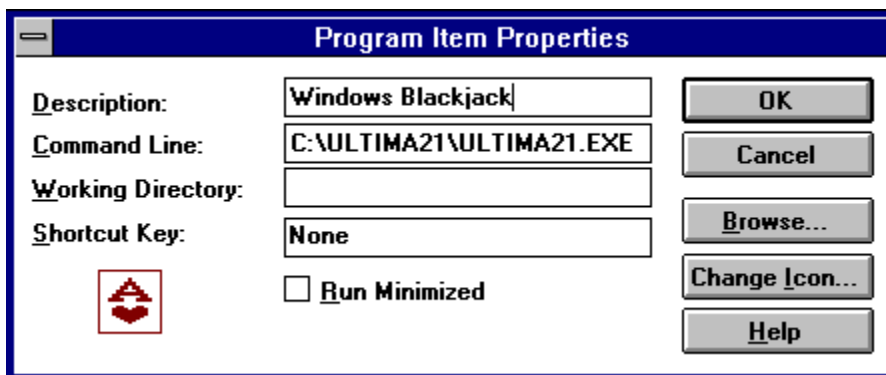
Next, navigate your hard disk directories until you have found the file "ULTIMA21.EXE" in the Windows Blackjack directory. The file select window should look something like the following:



Click on ULTIMA21.EXE and press the OK Button.


The previous window will be displayed with the fields filled in from the BROWSE function.

Now you need to give this game a title. In the example below, we filled in the first field with "WINDOWS BLACKJACK". You of course can call this game program whatever you would like. This title will appear under the icon we are adding to the Program Manager Group.



When this is done, be sure the icon that displays on this window is the  icon as shown above. If not, we need to select it manually from the ULTIMA21.EXE file.

To do so, click on the "CHANGE ICON" Button. A new window will appear and you should see

the icon  on it. If not, you may have selected the wrong file. It should have been "ULTIMA21.EXE".

Once you see the correct icon, press the OK Button. Now the previous window will reappear and the correct icon will be displayed as shown above.

Now click the OK Button and this game should appear on the Program Group we selected earlier.

If you have any problems, please consult your Window's Users Manual for more information on adding Program Items.

Main Playing Table Buttons

When the Main Playing Table is shown, there are a series of command buttons shown at the bottom. Some of which will be disabled (grayed out) and some of which will be enabled.

At the start of a new hand, the DEAL button will be the default button and should be used to deal the next hand. To deal, move the mouse pointer to the DEAL button and press the left mouse button.


The other buttons will be enabled/disabled depending on what is happening at the table. For example: the DOUBLE button will only be enabled when a player's hand contains two cards that allow for a double down.

The same is true for the SPLIT and SURRENDER buttons as well. The status of these two buttons is based on the double down and split rules for the table and on the cards currently dealt to the player.



HIT and STAND Buttons

The HIT and STAND buttons are always enabled during any player's hand. The HIT button will deal one card to the player. The STAND button will tell the Dealer the current player's hand is done and control will transfer to the next player's hand. If there is not a next player, control will transfer to the dealer's hand.

NOTE: the current player's hand with control is designated by the  arrow on the Main Table.

NOTE: Just like in the casinos, player #1 is the RIGHT most player at the table and play passes from each player RIGHT to LEFT.

DOUBLE DOWN Button

The DOUBLE button will allow the player to double his/her bet and receive one card and one card only. Play will then transfer to the next player's hand. There are several double down rules you can customize and control. They are accessed from the OPTIONS MENU on the Main Playing Table.

Note: When you Double Down, your bet is doubled and you get one card. If you lose the hand, then you lose the entire bet and your bank balance is reduced accordingly.

If you win the doubled hand, your bank balance is increased and the doubled bet remains on the table in the bet square. Just like in the real casinos, if you do not remove/reduce your doubled bet, you are "letting it ride". The next hand will then start and you will be playing the full doubled amount as your bet.

SPLIT Button

The SPLIT button will break up a pair into two hands. This is normally allowed on like pairs

(8 and 8 or A and A) or on a pair of face cards (J and Q). When a hand is split, one card is moved to a second hand (called the split hand) and the player must match the bet of the original hand (doubles the bet).

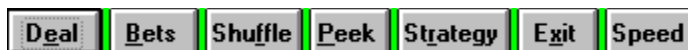
There are several splitting and resplitting rules which you can customize and control. They are available from the OPTIONS MENU on the Main Playing Table.

SURRENDER Button

The surrender button allows you to give up or surrender your hand to the Dealer when you have a "bad" hand (like 16 against a Dealer King). The cost is one-half your original bet and surrendering is normally only allowed while the player still has the first two original cards dealt to him.

The surrender rules are customized and controlled from the OPTIONS MENU on the Main Playing Table.

The Rest of the Buttons



DEAL: this button begins a new hand. At the start of a new hand, the DEAL button will be the default button and will deal two cards to each active player at the table.

BETS: will prompt you for each active player's new bet amount and is available only at the start of a new hand. For more information on betting, please see the [Entering Bets Help Section](#).

SHUFFLE: will request that the Dealer to reshuffle the deck before the very next hand.

PEEK: will allow you to peek (view) at the next few cards to be dealt from the deck.

STRATEGY: will access the Playing Strategy Window where you may view, change, save, or load the playing strategy tables for this casino. The playing strategy tables are used in conjunction with the automatic decision help and the HINT button.

A playing strategy table consists of hit, stand, double, split, and surrender decision rules for a player's hand. Playing decisions are based on what the Dealer is showing in his hand and what the player currently has in his hand. For more information, please see the [Playing Strategy Help](#).

EXIT: will allow you quit playing this blackjack game.

SPEED: will access the Set Game Speed Window which allows you to control how fast the cards are dealt by the dealer.



REDRAW: just updates the playing table and redraws all controls, cards, and messages.

HINT: will display a window that displays what the correct playing decision is. This is based on the current playing strategy tables in effect.

SAVE: will save the current game to disk. Saved games can be resumed later. Both the SAVE and RESUME game features are available from the FILE MENU on the Main Playing Table.

COUNT: will display the current card counts and statistics. This shows the number of cards dealt (ace, two, three...) as well as other card counting information. For more information, please see [Card Count Stats Help](#) or the [Custom Card Counting Systems Help](#).

STATS: will display the current playing statistics for each active player and for the Dealer. For more information, please see the [Player Statistics Help](#).

[Saving and Restoring Games](#)

This game allows you to save a game and resume playing it at a later time. This should not be confused with the saving of default settings explained in the [Casino Defaults Help Section](#).

You may save as many different games as you like and resume playing them at any time in the future.

Saving a game saves everything about the current game so you may resume playing exactly where you left off at a later time. When you save a game, it is normally stored in a disk file called "ULTIMA21.SAV". However, this game provides for multiple saved games by allowing you to override and specify the save file's name.

To save a game, click on the FILE menu and select either the SAVE or the SAVE AS option. The SAVE option will simply save the current game to the "current save file name" (normally ULTIMA21.SAV). This action is the same as pressing the Save Button at the bottom of the Main Playing Table.

If you choose the SAVE AS option, a file name prompt window will appear and you may select or enter a save file name you prefer. You will always be required to enter a file extension of ".SAV" when entering a save file name. The name you enter to SAVE AS will become the new "current save file name".

[Restoring a Saved Game](#)

At any time, you may resume a previously saved game by clicking on the FILE menu and selecting the RESUME GAME option.

You will be prompted for the name of the save file you wish reload and resume playing. The default is "ULTIMA21.SAV" but you may select any valid save file from the file list displayed. All saved game files end with the extension ".SAV".

When you resume a saved game, you will restart play exactly where you left off. All stats, cards, players, etc... will be just as you saved it previously.

Setting Up Multiple Casinos

This game only allows only 1 default settings file that can be used when a new game is started. The default settings file CANNOT be used to set up the rules of multiple casinos.

Instead, use the save/resume game features to do so. Normally, the save/resume features are used to save games already in progress so they can be resumed at a later time.

However, they can also be used to set up multiple casinos.

To use the save/resume features to set up multiple casinos, follow these steps:

1) Start a completely new game by selecting NEW GAME from the FILE MENU. This will clear the table, reset all game settings, and load the default settings file.

2) Set all the casino playing options as played at your favorite casino. When everything is set, use the SAVE AS option from the FILE MENU. Then enter the name of the casino followed by the .SAV extension. Be sure the casino name is no more than 8 characters long.

Do this for each casino you wish to set up. When you are finished, all your favorite casinos will be defined and saved in multiple "save" files.

3) Use the RESUME feature from the FILE MENU anytime you wish to switch play to one of your saved casinos. Just click on the file name saved in step 2, and you will begin a new game at that casino with that casino's rules.

Since this game allows you to save/resume as many games as you wish, you can use the steps above to save as many different casinos as you wish.

>>>> BE SURE that step 2 is done immediately after step 1 and before the DEAL BUTTON is pressed. This insures that when you resume the saved game, you will always be starting with a completely new game. In reality, you are actually resuming a previously saved game that was carefully done at the start of a new game. <<<<

[Auto Decision Help](#)

When this feature is active (see the OPTIONS MENU on the Main Playing Table), the Dealer will help you make playing decisions. That is, the Dealer will tell you whether you should hit, stand, double down, split, or surrender your hand.

Auto Help is always based on the current [playing strategy tables](#) in effect at the table. Since you can customize the playing strategy tables, you also control the Auto Help decisions that are displayed or required by the Dealer.

There are two types of Auto Help:

- a) Anticipation Help
- b) Correction Help

[Anticipation Auto Help](#)

Anticipation help will display the correct playing strategy for the current player's hand. This will be displayed just below the Dealer's cards and will be displayed at all times during the player's hand.

This feature "anticipates" or displays suggestions (like HIT, STAND...) to assist you in making correct playing decisions. You may still play the hand anyway you like since this type of help is only for assistance.

[Correction Auto Help](#)

Correction help will maintain a close watch on your play to insure you follow the current playing strategy tables. Instead of displaying the correct playing strategy at the top of the window, the Dealer will halt your play and inform you when you do not make the correct playing decision.

For example, if you click the Hit Button when doubling down is the correct decision, a window will appear telling you HIT is not correct and that DOUBLE DOWN is the correct choice.

This feature REQUIRES you to play along with the current playing strategy tables.

[Auto Focus Help](#)

Another feature available while Auto Help is active is called Auto Focus. An option button on the table has "focus" when it is the default button to be executed when the Enter Key is pressed.

Auto Focus sets the focus to the correct playing option button based on the current playing strategy tables. This way all you need to do is press the Enter Key and the correct decision will be made for you. Great for new blackjack players.

Simulated Auto Play

We are working on a new version which will allow you to set up and control Auto Play and Auto Betting Strategies. Until this version is complete, you may simulate Auto Play by using Window's Macro Recorder and Auto Focus.

To accomplish this, set the game features as follows:

- 1) Turn "Auto Help" ON (yes).
- 2) Set the "Auto Help Type" to ANTICIPATION.
- 3) Set "Auto Focus" to ENABLED (active).
- 4) Be sure double down bets do not remain on the table. Select "Add to Bank" on the Double Down Option Window.
- 5) Turn OFF Insurance Prompting.
- 6) Set "Game Speed" to FAST.
- 7) Turn all "Sound" OFF.
- 8) Turn OFF the display of the deck shuffle (see the Shuffle Point option).
- 9) Turn OFF either the "Dealer Card Bury" all together or just turn off the "display" of the cards being buried.
- 10) Use the "Active Dealer Controls" on the SET Menu and set the number of hands for a dealer to UNLIMITED.
- 11) Turn OFF "Waitress Interruption" for "Ordering Drinks".
- 12) Turn OFF "Who Playing Interruption" for "Entertainment".
- 13) Turn OFF all non-decision buttons (from the VIEW Menu).
- 14) AND FINALLY, use Windows Macro Recorder to Press the ENTER KEY on the Keyboard for you. Please see the Windows Manual and on-line help for more information on setting up Keyboard Macros.

The ENTER KEY macro will cause the game to operate all by itself as if you were sitting there pressing the ENTER Key. The automatic playing decisions are made from the "Base" and "Special Play" Strategy Tables. You set up and control these tables.

To assist you in this task, we have included a Macro Recorder File called ULTIMA21.REC. This pre-recorded file will simply press the Enter Key over and over until you stop the macro.

To use this file, first open the Macro Recorder Option on Window's "Main" Window. Then select FILE-OPEN and pick the ULTIMA21.REC file in the \ULTIMA21 directory. Next, Minimize the Macro Recorder Window and return to the game program.

Once the Main Table is displayed, press the CTRL-ENTER key combination to START the macro. Assuming the above items are all set properly, this will begin Simulated Auto Play.

To assist you in setting up game play for simulated auto play, we have included a game save file called AUTOPLAY.SAV. Resuming this saved game will cause the program to start a brand new game with all the options above set properly for Auto Play. Then, just open and start the ULTIMA21.REC macro file and the game will begin to run automatically.

To STOP the Macro, press CTRL-BREAK. You may have to press CTRL-BREAK a couple of times in order for the Macro to STOP.

Sound and Speech Effects

This blackjack game comes with several digitized sound and speech files which will enhance your enjoyment of this game.

Normally, digitized sound files (known as "wave" files) require the use of an expensive add-in sound card such as those available from Microsoft, Creative Labs, or Adlib. Users without one of these sound cards have had to do without the added pleasure of digital sound in their Windows Games and Application Programs.

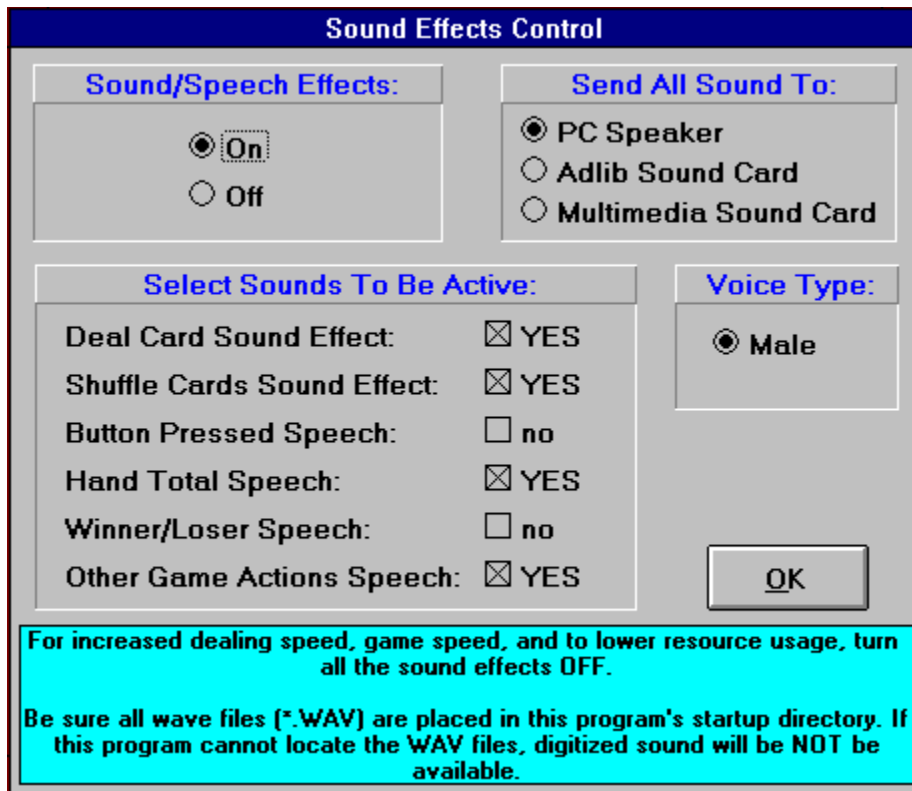
That is, UNTIL NOW.

We have taken great pride in providing a means for our digitized sound files to be played through BOTH an add-in sound card and thru your PC's speaker! This allows for digitized sound enjoyment for all Windows Users. Now everyone call play and hear our Blackjack game. No sound card is required.

This game is shipped with the sound effects OFF as the default. If you experience problems when starting the program, be sure to set the default for sound effects to OFF. If you delete the ULTIMA21.DEF file from the \ULTIMA21 directory, the game will reset all defaults including all Sound Effects (to OFF). This should then allow you to start the program successfully.

When this game is shipped, the default mode for sound play, if turned on, is through the PC Speaker. If you have a sound card, simply access the SOUND option on the main table's menu and select one of the two sound card sound output options.

Below is the Sound Effects Control Window that appears when you access the Sound Option from the Main Table's Menu System.



Sound/Speech Effects:

This option activates or deactivates the sound system built into this blackjack game.

Turning the sound OFF will disable all sound and speech effects throughout the game. When you click on this option, the other options on this window will disappear.

Turning the sound system ON makes the other options appear again and also allows you to customize how the sounds are played and which sound effects are active.

Send All Sound To:

There are 3 options for playing the sound and speech effects. Select one of the three options available. This tells the game program where you want sound to be played from.

PC Speaker:

If you do not have a sound card, then select the PC Speaker as the sound output device from the Sound Window. Almost all of the wave files shipped with this program can be played through your PC Speaker.

However, due to the limited design of the PC Speaker system, a couple of the wave files sound terrible (like the shuffle deck sound effect). Therefore, when sound is being sent to the PC Speaker, this game will display the deck shuffle instead of playing the shuffle deck sound effect.

Other Sound Card Options:

If you have an Adlib Sound Card installed and running in your system, then select the Adlib option as the sound output device from the Sound Window.

If you have one of the other types of multimedia sound cards, then select the last sound output option on this window. This one works with most sound cards from Creative Labs and Microsoft.

Which Sound Output Option Do I Choose?

If you do not know which sound card you have, then try all three of the sound output options and stick with the one that sounds the best to you. If you select the wrong choice, you will simply hear nothing (no sound effects) when the game is played. In this case, try another option.

Note: be sure this game can find the wave files (*.WAV) in it's startup directory. This is the directory where ULTIMA21.EXE is located and run from.

Note: be sure you have turned on any external speaker system that may be installed on your computer system. Otherwise, you won't hear anything.

Select Sounds To Be Active:

You have complete control over which sound and speech effects are active during game play.

Use the space bar or the left mouse button to toggle each option from YES (checked) to NO (unchecked). As you change each option, the YES and NO phrase next to the check box will change to identify each check box's setting.

Deal Card Sound Effects:

This option controls whether or not the "click" sound is generated for each card dealt. This is not a digitized wave file and turning this option off will NOT increase the game's speed very much. Normally, this sound is left active (YES).

Shuffle Cards Sound Effect:

When the Dealer shuffles the deck, the "shuffling cards" wave file will be played when this option is set to YES (on). If set to NO (off), then the game will display the deck shuffle instead of playing the sound effect.

Please note: If you are directing the sound output to the PC's Speaker, the game will NOT play the sound effect. Instead, it will display the card shuffle on the screen. This is required since the shuffle cards wave file sounds terrible when played through the PC Speaker. Therefore, we will display the card shuffle instead.

Buttons Pressed Speech:

There are five action buttons on the main playing table. They are HIT, STAND, DOUBLE DOWN, SPLIT, and SURRENDER. When you turn on this sound effect, the button's action will be spoken by the computer. For example, if you press the HIT button, the computer will say

"hit". Only these five buttons "action" are spoken by the computer.

If you do not want the action buttons speech active, set this check box to NO (off).

Hand Total Speech:

Set this option to YES (on) if you wish to have the computer announce the hand total for each active player's hand. When a hand is first dealt, the computer will say "Player 1 has..." and then the hand's total (like "17"). As the same player takes additional cards, the computer will just say the hand total (not "player 1 has...").

When this option is on, the computer will announce when any player or the Dealer has blackjack in their hand. If you "bust" (exceed 21), the computer will say "too many".

Turn this option off (NO) to disable all hand total speech.

Winner/Loser Speech:

When a hand is over and the Dealer has taken his/her cards, the computer can announce whether each player has won, lost, or pushed. This option controls this speech. Set the check box to YES to activate the hand results speech. If you do not want to hear the hand results, turn this feature off (NO).

Other Game Actions Speech:

Other areas of this game have speech associated with them. When this is active (YES), you will hear speech when you press the HINT or EXIT buttons, ask for drinks, or when the Dealer offers insurance to the players.

Turn this option off (NO) to disable other game actions speech.

GAME SPEED and SOUND EFFECTS:

When sound effects are active, this game must take time out to play the various wave files and this results in slower game speed and higher memory usage.

To reduce both of these, turn all sound effects OFF. On the other hand, setting only a couple of the sound effects on will save some memory and improve game speed in the disabled areas. You will need to experiment with each option to find the combination that best suits you and your system.

Since all WAV sound files must be read from your hard disk each time they are played, a slow hard disk will cause the game to slow noticeably during sound file reading and playback. Be sure you have a disk caching program like Smart Drive loading and running. All Windows programs will benefit from disk caching.

