Texas Holdem Calculator 1.5.0.0 (stable)

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# Introduction

The Texas Holdem Calculator (THC) application aides in the calculation of pot/hand odds for Texas Hold’em players. There is also in the ability to replay hands from various sources as well as save the auto-generated hands for later review.

# Installation and Running

* Downloaded and extract the .cab from the following URL:
* <https://sourceforge.net/project/showfiles.php?group_id=239546&package_id=291930> upload to your PPC, double-click and follow the on screen instructions.
* Double-click the provided shortcut in the programs menu. Alternatively you can run the executable from “/Program Files/TexasHoldemCalculator.exe”.
* Included is the .NET 3.5 redistributable or alternatively you can go to: [***http://www.microsoft.com/downloads/details.aspx?FamilyID=E3821449-3C6B-42F1-9FD9-0041345B3385&displaylang=en***](http://www.microsoft.com/downloads/details.aspx?FamilyID=E3821449-3C6B-42F1-9FD9-0041345B3385&displaylang=en)

# Application Features

A splash screen will display while the calculator initializes. Once the splash ends you will be at the main calculator tab (labeled “Hand”). The application consists of the following tabs:

* Hand – For current pot odds/hand odds and hand simulation.
* History – The ability to review hand history for a given engine.
* Stats – Contains additional statistics, etc.
* Hands – Some common starting hands to play.
* Hole Odds – Odds for pocket pairs against various hands.
* Options – With sub tabs: Hand History, Holdem Calculator, General.

# Main Tab

The main tab consists of the following areas:

* 5 pre-drawn game cards (burn cards have been removed), including the flop, turn and river.
* Pot size text box, this can be changed by clicking on it.
* Bet size text box, this can be changed by clicking on it.
* Number of outs text box, as with the pot and bet size this can be changed.
* Pot/Bet percentage label
* Hand odds ratio label.
* Flop/Turn/River percentage labels.
* Hole cards (displayed)
* New hand button.



## Pot Odds Calculator

By clicking the pot size textbox an input dialog is displayed. You can enter a new value and click OK to accept or cancel to return to the previous one. The same is true for the bet size textbox and outs textbox. However, the total number outs will be adjusted to a max of 45/46/47 (depending on where you are in the hand) for outs greater than that amount, i.e. it’s not possible to have more than 47 outs.

After entering any value the labels are adjusted accordingly:

1. Pot size shows the pot to bet ratio for example, pot of 10 and bet of 1 is a 10:1 ratio.
2. Bet size label is the maximum bet you can call based on your outs and the pot size.
3. The hands odds label is your hand ratio showing how likely you are to draw to a hand with the number of outs selected. For example with 4 outs, and precision set to 0, you are a 5:1 underdog to make your hand.
4. The make flop label is the hand odds as a percentage, for example with 4 outs and being a 5:1 underdog you will make your hand on the flop 16% of the time.
5. Similarly to the flop the turn shows how likely you are to make your hand by percentage. Using the flop numbers you will make your hand 9% of the time.
6. On the turn using the flop ratios you will make your hand 9% of the time.

When the percentage that you are likely to draw your out yields a positive expectation, the Flop, River or Turn percentage label will show a green back color. If it is negative it will show as red. This is an indicator that you will lose money in the long run so you in most cases should not continue betting.

Similar to the hand odds back color the bet size textbox will be red if you the bet you need to make is more than the maximum that you can call. For example with 4 outs and a Pot size of 500 with a bet to call of 125 you are a 5:1 underdog and will only hit your hand 16% of the time, with precision set to 0. Your maximum callable bet is 82 so in this case you will lose money in the long run so the bet label would be red. However, if the bet was less than or equal to 82 in the worst case you would break even so your expectation is at worst zero. Any bet less than the maximum would show a green label.

## 



## Hand Simulations

The 5 pre-drawn cards, flop, turn and river and hole cards are generated based on a simulated deal. A randomized set of cards is dealt every time the “New Hand” button is pressed. Depending on the number of players dealt to, the default is 9, based on the menu setting; you will receive two consecutive cards or the first card and the n + 1 card. For example for a two player deal you receive card one and card 3.

When the flop, turn and river are dealt a burn card is removed to simulate an actual Texas Hold’em game. By simulating hands you can practice making decision based on your pot odds to see if your skills are getting better or worse. For convenience a preview checkbox, in the Hand History options sub-tab, has been added. If you do not want to simulate a card for card game check the “Preview” checkbox, in the Holdem Calculator sub tab for Options, to show all cards simultaneously. On every hand thereafter, the flop, turn and river cards will be shown. The cards can be clicked in order to reveal them, as a convenience by clicking the river card, all of the cards are revealed.

* + 1. Generated Hand History

Handy history is saved to a file, by default it’s “HoldemHandHistory\_YYYY\_MM\_dd”, located in “\Program Files\Texas Holdem Calculator\HandHistory\”. If necessary the location can be changed by setting the hand history directory in the Hand History sub-tab of the options menu. Only one file per day is created in order to minimize the number of files on disk. Every time a hand is generated, it is stored until application exit. When the application closes the hand history is saved to the file, this includes previous history stored in the file. As a convenience a ReplayEngine ( HandHistoryReplayEngine ) is created and made selectable in the “Selected Engine” dropdown of the Hand History sub-tab in the options menu. However, there are no statistics since this is an auto-generated hand.

## Context Menu Options

The context menu can be seen by pressing and holding in any part of the application. The menu structure is as follows:

1. Exit. – Exits the application.

# Hand History Tab

The Texas Hold’em Calculator has the ability to playback hands from popular online poker sites or any file depending on the engine. For this release you can playback hands from games you have played at both PokerStars and PokerStars.Net as well as the auto-generated hands. Although there is a Fulltilt Poker option, it is included for developers to use as a template. The history tab contains the following areas:

* 5 game cards (as they appeared in the hand history), including the flop, turn and river.
* Hole cards (displayed)
* Game description with Tournament Id label appended.
* Game Id label.
* Date and time label.
* Hand number, i.e. Hand 1 of 121, 39 for this game.
* Navigation slider for reviewing any of the hands.
* Skip to hand button for navigating to a specific hand.
* Load button, for loading a single file or directory.
* Stats button, for reviewing statistics for the current game and all hands combined.

Clicking the “Load” button brings up a dialog where you can choose either a folder(s) or file(s). The file dialog automatically selects folders and allows you to select any number of folders and files. If the recursive search is on, see the options section under Hand History, when a folder is selected each file with the given filter type is checked for hand history detail depending on the engine selected, again in the options tab. As a convenience the last loaded directory is stored for the next file load. If any hand history is found the last hand is loaded and the hole cards are displayed. If the preview checkbox, found in the Hand History options sub-tab, is selected the Flop/Turn/River are displayed as well. The cards can be clicked in order to reveal them, as a convenience by clicking the river card; all of the cards are revealed. By using the navigation slider each hand history can be shown from first to last. Clicking on the slider increments the hand by the skip value defined in the Hand History sub-tab of the options menu. Alternatively you can use the scroll wheel or navigation pad to skip one hand at a time. The “Skip To Hand” button allows you to navigate to a specific hand. Currently the username is used to determine if the selected user won the hand. If this is the case the “Stats” button will turn green. By default you cannot click the “Stats” button until at least on hand history has been loaded.

The “Stats” button allows you to view current statistics from the current game and all games collectively. You can view the following in the “Hand History Stats” window:

* Amount won [Game]
* Amount won [All]
* Amount won per hand [Game]
* Amount won per hand [All]
* Amount won per hand [Won]
* Hands won [Game]
* Hands won [All]

The [Game] tag indicates the current game or tournament if that is the case. Whereas the [All] is for every hand history that has been loaded. Finally [Won] indicates this statistic is based on only winning hands. Closing the window brings you back to the Hand History tab.

# Stats Tab

The stats tab offers two additional statistics that can come into consideration when playing Texas Hold’em. Runner-runner odds and the chance that your hole hand, containing an Ace, is up against a bigger Ace.



## Runner-Runner Odds

This is simply the probability of making your hand with two consecutive outs being drawn. You simply make sure the outs on the “Hand” tab are set appropriately. For example with 4 outs you are a 179:1 underdog, with precision set to 0, to draw two consecutive outs to make your hand.

## Ace against a Bigger Kicker

This statistics is based on hole cards only. Simply change the player’s textbox by clicking and setting the appropriate number of players. The textbox will automatically adjust to 23 players if more are selected since it is impossible to deal to more with only 52 cards per deck. After changing the number of outs, select your next whole card 2 – King and the probability, ratio and percent labels will automatically be calculated. For example, a set of hole cards A2 with 9 players has a probability of .65 or 65% chance of facing an Ace with a larger kicker.

## Pair against a Bigger Pair

This statistics is based on hole cards only. Simple change the kicker dropdown box or the player textbox (number of players), to calculate the new value. The static shows the probability that the pocket pair faces a bigger pair. For a detailed explanation visit: [Poker Probability: Pocket Pairs](http://en.wikipedia.org/wiki/Poker_probability_%28Texas_hold_%27em%29#Pocket_pairs). Currently Pma, (see previous link), is not used in the calculation, however, the statistics should be used as a guideline and are provided as-is.

# Hands Tab

The hands tab contains two sets of recommended hands based on David Sklansky’s work. The default is the modified which shows a tighter set of hands versus the basic which is a list of all playable hands but not necessarily best in all positions.

# Hole Odds Tab

The Hold Odds tab shows a list of hole cards against various opposing hand rankings. For example a High pocket pair versus a lower is an 80.3% favorite to 19.7% underdog. These are useful in determining whether or not to call an All-In bet.



# Options Tab

There are three sub-tabs for options: “Holdem Calculator”, “Hand History” and “General”.



## Hand History

* Selected Engine – Choose the hand replay engine to use.
* Skip Scale Change – Change the skip amount when using the hand slider.
* Search Filter – Which type of file to display when selecting hand to replay.
* Player UserId – UserId for the player who’s hole cards are displayed.
* Select Hand History Directory – The directory to save auto-generated hands to.
* Select Replay Engine Directory – Where replay engines are located.
* Preview – When selected Flop, Turn and River are displayed.
* Recursive search – When checked, sub-directories are searched.
* Write Hand History – When checked save the auto-generated hand history.



## Holdem Calculator

* Calc Precision – Whether to use 0, 1 or 2 digits when showing statistics.
* Deck Theme – The theme for cards displayed in history and the calculator.
* Players To Deal – The number of players to deal to for hand simulations.
* Preview – When selected Flop, Turn and River are displayed.
* Selected Theme Directory – Directory where themes are stored.

## General

* Suppress Popups – Suppresses any popup windows, excluding statistics.

# Replay Engine

The Texas Hold’em Calculator has the ability to allow anyone to customize the way hand history is determined. That is to say that anyone wishing to add a custom engine to the application can do so. All that is required is following the ReplayEngine API. For those wishing to do so, the Fulltilt and PokerStars Replay Engines can serve as a guide. After creating the satellite assembly, simply drop it in the ReplayEngine directory. This is “\Program Files\Texas Hold’em Calculator\ReplayEngineAssemblies\”, by default. However, the configuration, “Holdem.Configuration.dll.config” houses a key that defines where this directory, which can be changed. The API will be described in full during future releases if any.



# Card Themes

All card images can be changed by selecting the appropriate theme option in the Holdem Calculator sub-tab of the options menu. These themes are located in the directory specified by the Theme Directory textbox; it can be changed if desired. By default there is one embedded theme “Border” which is always displayed at the end of the list. If no additional themes are available or if any images are missing for the selected theme the default ones will be used.



## Adding Custom Themes

Adding a custom theme is simply a matter of adding images in a static directory structure using static image names. For example, adding a theme named “Smoke” needs to have a directory named “Smoke” in the Theme folder, if the theme directory is “Program Files/Texas Holdem Calculator/CardThemes” then add a top level folder:

“Program Files/Texas Holdem Calculator/CardThemes/Smoke”

The following directories may be added depending on the desired image to update:

* “Program Files/Texas Holdem Calculator/CardThemes/Smoke/Backs”
* “Program Files/Texas Holdem Calculator/CardThemes/Smoke/Club”
* “Program Files/Texas Holdem Calculator/CardThemes/Smoke/Diamond”
* “Program Files/Texas Holdem Calculator/CardThemes/Smoke/Hands”
* “Program Files/Texas Holdem Calculator/CardThemes/Smoke/Heart”
* “Program Files/Texas Holdem Calculator/CardThemes/Smoke/Spade”

## Custom Theme Folder Content

Each folder that is specified must follow the specified naming convention if the desired images are to be used by the Theme Manager.

Backs Folder:

Contains one image:

* CardBack.jpg

Club:

Contains 13 images, where 0c is 2 of clubs and 12c is Ace of clubs:

* 0c.jpg
* 1c.jpg
* 2c.jpg
* 3c.jpg
* 4c.jpg
* 5c.jpg
* 6c.jpg
* 7c.jpg
* 8c.jpg
* 9c.jpg
* 10c.jpg
* 11c.jpg
* 12c.jpg

Diamond:

Contains 13 images, where 0d is 2 of diamonds and 12d is Ace of diamonds:

* 0d.jpg
* 1d.jpg
* 2d.jpg
* 3d.jpg
* 4d.jpg
* 5d.jpg
* 6d.jpg
* 7d.jpg
* 8d.jpg
* 9d.jpg
* 10d.jpg
* 11d.jpg
* 12d.jpg

Heart:

Contains 13 images, where 0h is 2 of hearts and 12h is Ace of hearts:

* 0h.jpg
* 1h.jpg
* 2h.jpg
* 3h.jpg
* 4h.jpg
* 5h.jpg
* 6h.jpg
* 7h.jpg
* 8h.jpg
* 9h.jpg
* 10h.jpg
* 11h.jpg
* 12h.jpg

Spade:

Contains 13 images, where 0s is 2 of spades and 12s is Ace of spades:

* 0s.jpg
* 1s.jpg
* 2s.jpg
* 3s.jpg
* 4s.jpg
* 5s.jpg
* 6s.jpg
* 7s.jpg
* 8s.jpg
* 9s.jpg
* 10s.jpg
* 11s.jpg
* 12s.jpg

Hands:

Consists of 2 images, where StartingHandsA is adjusted and StartingHandsB is the basic starting hands:

* StartingHandsA.bmp
* StartingHandsB.bmp

Currently the card names are case sensitive and any additional images will be ignored. There is currently no limit to the number of themes that can be added. After selecting the theme in the options menu all cards will be updated.